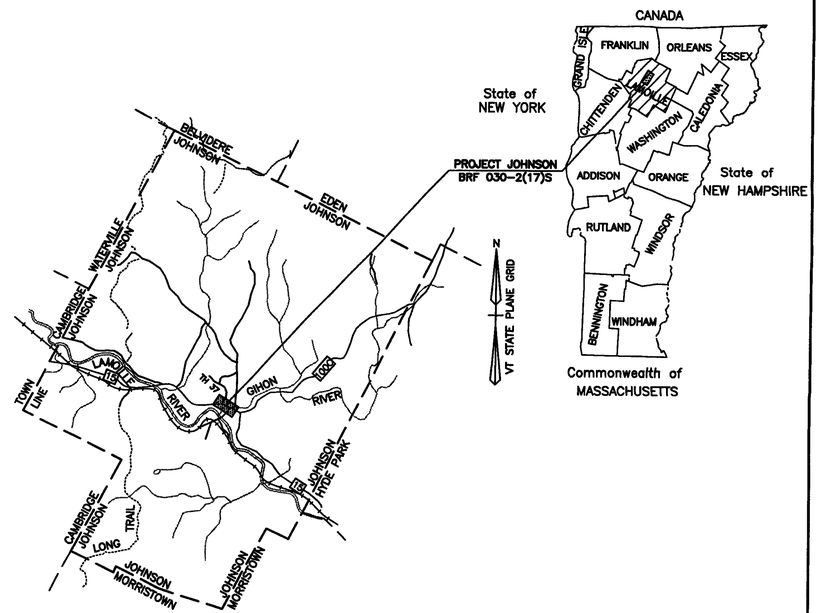
INDEX OF SHEETS

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 CONSTUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN

BY _____ RESIDENT ENGINEER

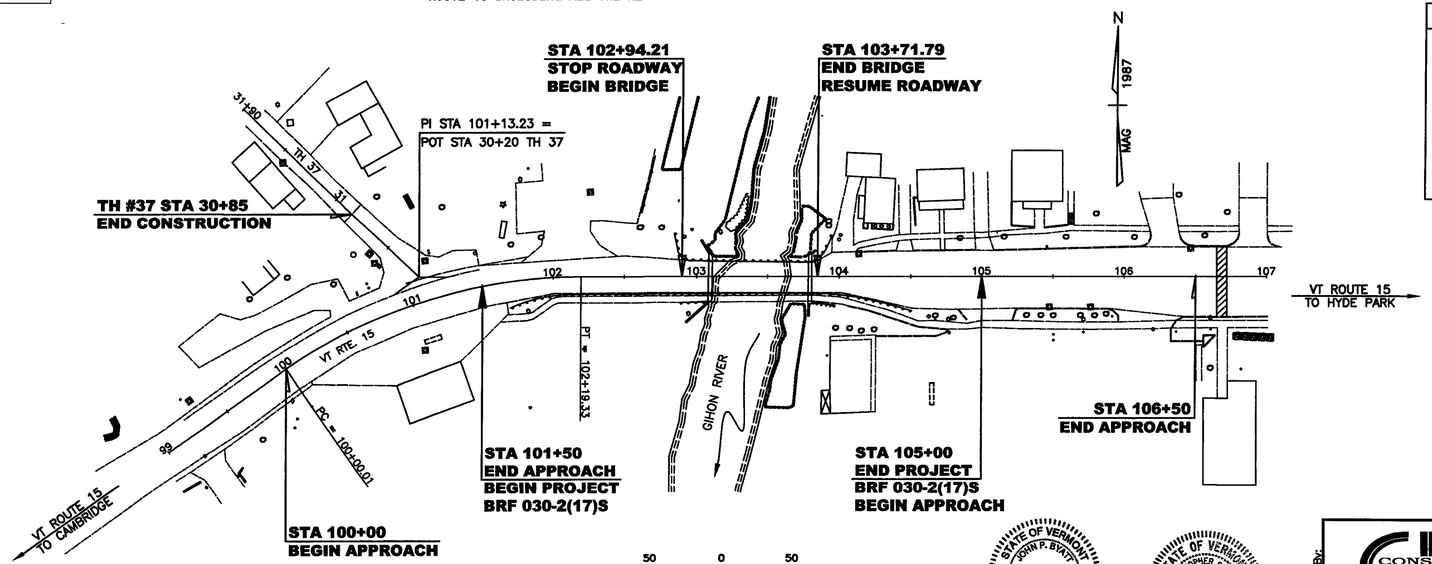
DATE 12-20-10

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

		1999	2019
ADT	=	7170	9730
DHV	=	900	1100
ADTT	=	460	580

D = 51% WB
T = 5%
V = 35 M.P.H.

1999 - 2019 ESALS = 5,846,000
2019 - 2039 ESALS = 14,552,000

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.

CONVENTIONAL SIGNS

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

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

JOHN P. STATT NO 8478 Structural LICENSED PROFESSIONAL ENGINEER

CHRISTOPHER R. DEAD No 5523 REGISTERED PROFESSIONAL ENGINEER

Plans Prepared By:

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

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE 2/13/07

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
23) WASTEWATER DETAILS
24) UTILITY RELOCATION AND LIGHTING PLAN
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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
34) EROSION PREVENTION & SEDIMENT CONTROL DETAILS DITCH AND SLOPE PROTECTION
35) EROSION PREVENTION & SEDIMENT CONTROL DETAILS TURBIDITY CURTAIN
36) BLANK
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40) SIGN DETAIL SHEET
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42) TRAFFIC CONTROL PLAN - PHASE I CONSTRUCTION
43) TRAFFIC CONTROL PLAN - PHASE II CONSTRUCTION
44) TRAFFIC CONTROL PLAN - PHASE III & IV CONSTRUCTION

BRIDGE SHEETS

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47) BRIDGE QUANTITY SHEET
48) GENERAL PLAN AND ELEVATION
49) BORING INFORMATION SHEET
50) BORING LOGS
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52) FRAMING PLAN AND GIRDER ELEVATION
53) GIRDER AND CONNECTION DETAILS
54-55) MISCELLANEOUS DETAILS
56) BEARING DETAILS
57-58) ALUMINUM BRIDGE RAILING DETAILS
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60) APPROACH RAIL DETAILS
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62) ABUTMENT NO. 1 DETAILS
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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
79-85) CROSS SECTIONS - CHANNEL
R1) REFERENCE SHEET 1

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

STATE OF VERMONT
AGENCY OF TRANSPORTATION

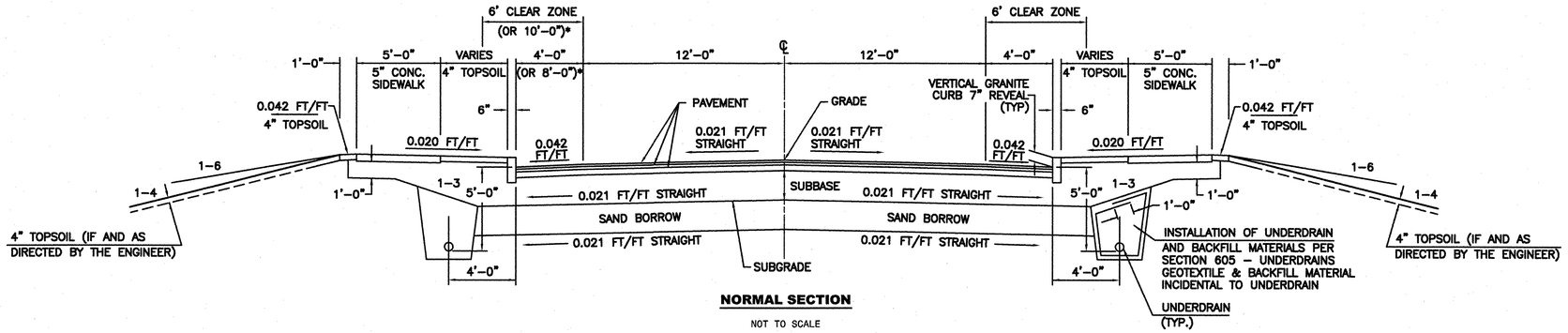
Town Of JOHNSON	Bridge No. 37
	Log Sta.
Highway No. VT ROUTE 15	Surv. Sta.
VT ROUTE 15 OVER THE GIHON RIVER	
INDEX OF SHEETS	
Designed By J. Warner	Drawn By. T. Starr
Checked By J. Warner Date 11/06	Bridge Design Supervisor J. Byatt Date 11/06
PROJECT **JOHNSON**	PROJECT NO. **BRF 030-2(17)S**
I.G.C.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

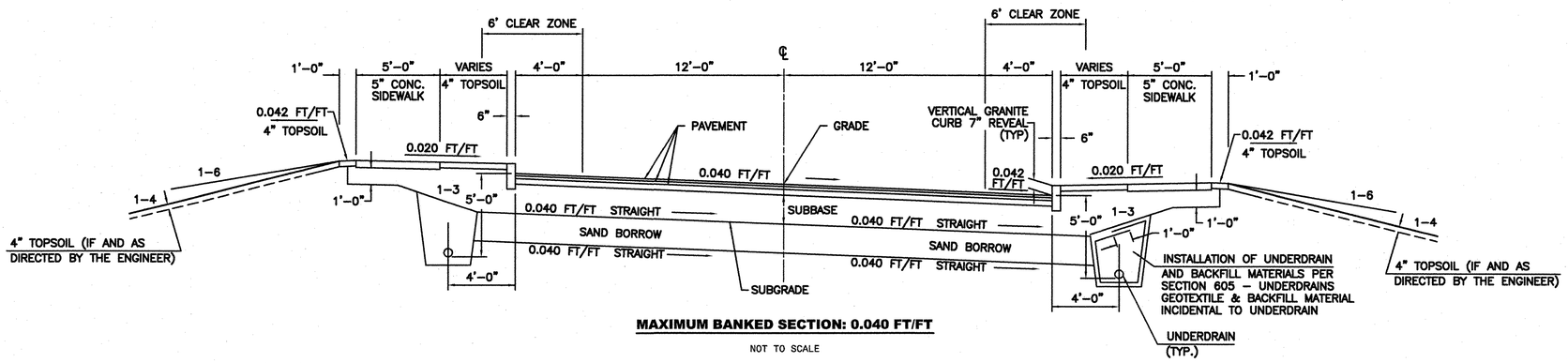
TYPICAL SECTIONS

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



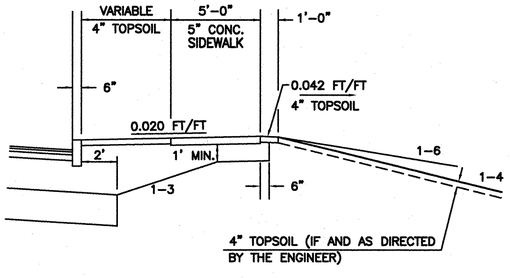
NORMAL SECTION

NOT TO SCALE



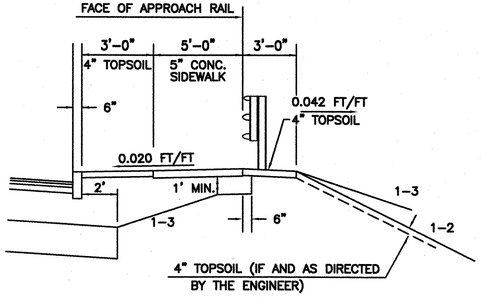
MAXIMUM BANKED SECTION: 0.040 FT/FT

NOT TO SCALE



DETAIL OF VARIABLE WIDTH GRASS PANEL WITH CONCRETE SIDEWALK

NOT TO SCALE



DETAIL OF APPROACH RAIL WITH CONCRETE SIDEWALK

NOT TO SCALE

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 J. Warner Date 11/06	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 3 Of 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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
			1260							1260		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	9	32		ROUNDING
									1050	1050		CY	SAND BORROW	203.31	44	2750	CY	TOTAL
			40							40		CY	GRANULAR BORROW	203.32	-			BITUMINOUS CONCRETE PAVEMENT (PG 58-34)
				270	270	15			1250	1805		CY	TRENCH EXCAVATION OF EARTH	204.20	-	424		APPROACHES
				20	5				75	100		CY	TRENCH EXCAVATION OF ROCK	204.21	-	468		VT ROUTE 15
				60						60		CY	STRUCTURE EXCAVATION	204.25	-	43		BRIDGE
			1610	270	270				100	2250		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	-	78		DRIVES
			2040							2040		CY	COFFERDAM EXCAVATION,EARTH	208.30	8	110		DETOUR
			120							120		CY	COFFERDAM EXCAVATION,ROCK	208.35	7	42		TH #37
			1							1		LS	COFFERDAM (STA 102+95)	208.40	-	10		ROUNDING
			1							1		LS	COFFERDAM (STA 103+70)	208.40	-	1175	TON	TOTAL
									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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS					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 - ALUMINUM/PEDESTRIAN (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		CY	STONE FILL, TYPE I (MOD. - INLET PROTECTION)	613.10	EST			
						50				50		CY	STONE FILL, TYPE I	613.10	-			
						10				10		CY	STONE FILL, TYPE I (MOD. - CHECK DAM)	613.10	EST			
						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
PROJECT MANAGER: JPB
DESIGNED BY: JAW
QUANTITY SHEET #2

PLOT DATE: 02/12/2007
DRAWN BY: MWS
CHECKED BY: PTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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	ALUMINUM 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	-			

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

FILE NAME: 06-0246_QSS.xls
PROJECT MANAGER: JPB
DESIGNED BY: JAW
QUANTITY SHEET #3

PLOT DATE: 02/12/2007
DRAWN BY: MWS
CHECKED BY: PTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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	-			

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

FILE NAME: 06-0246_QSS.xls
PROJECT MANAGER: JPB
DESIGNED BY: JAW
QUANTITY SHEET #4

PLOT DATE: 02/12/2007
DRAWN BY: MWS
CHECKED BY: PTS
SHEET 7 OF 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 5

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
								2		2		EACH	FOUNDATION FOR TUBULAR STEEL POSTS	675.43	-			
								3	28	31		EACH	REMOVING SIGNS	675.50	-			
								3	2	5		EACH	ERECTING SALVAGED SIGNS	675.60	-			
									1	1		LS	STREET LIGHTING	679.15	-			
									1	1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			

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

FILE NAME: **06-0246_QSS.xls**
PROJECT MANAGER: **JPB**
DESIGNED BY: **JAW**
QUANTITY SHEET #5

PLOT DATE: **02/12/2007**
DRAWN BY: **MWS**
CHECKED BY: **PTS**
SHEET 8 OF 85

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ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	PCCSP EL TH	PIPE ELBOW NO-DIA	ES EA	CB	EXCAV	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	GUARDRAIL ITEMS 621.15	621.20	621.505	621.60	621.74	621.74 ALUMINUM APPROACH RAILING (MOD.)	621.80 REMOVAL AND DISPOSAL OF GUARDRAIL	621.81	REMARKS
30+50	30+24	LT/RT																										6	5																				
30+75	30+50	LT																										8																				REMOVE EXISTING DI & PIPE
30+75		LT		-/DI						12	4	.064																																			REMOVE EXISTING PIPE
30+75	100+75	LT		DI/DI						18	36	.064	.060									5.0	3.03	257	D			34					4		6												CONNECT TO EXISTING PIPE
100+75	101+28	LT		DI/DI						18	58			III		SL						4.4	3.20	237	2-D			57					7														
100+97.5	101+86	RT																										84	11																		REMOVE EXISTING DI & PLUG PIPE
101+15	101+60	LT																										28																		CONSTRUCT SPECIAL DITCH. GRADE TO DRAIN
101+17	100+97.5	LT/RT																										16	6																		REMOVE EXISTING DI & PIPE
101+22	101+28	RT/LT		DI/DI						24	48			III		SL						7.0	3.85	303	D			40					7		5											
101+22	102+50	RT		DI/DI						24	122			III		SL						7.5	4.11	323	D			93					18														
102+25	102+85	LT																										32																		CONSTRUCT SPECIAL DITCH. GRADE TO DRAIN
102+50	102+65	RT		DI/SF						24	36	.064	.060									10	5.38	418	D			34					5			3	II		1							CONSTRUCT 4'X8' STONE FILL, TYPE II, @ OUTLET
103+60	103+93	RT		CB/SF						24	54	.064	.060							1								84					7														
103+76	104+13	LT																										4	7																		REMOVE EXISTING DI & PIPE
103+93	104+58	RT		DI/CB						24	64			III		SL						8.5	4.58	361	D			56					9														W/ CAST IRON GRATE TYPE D
104+13		LT																											8																		REMOVE JUNCTION BOX
104+13	106+47	LT																										83	16																		
104+58	104+58	RT/LT		DI/DI						24	32			III		SL						8.0	4.36	342	D			28					5														
104+58	105+47	RT		DI/DI						18	88			III		SL						6.0	3.34	265	D			35					11														
104+58	106+45.5	LT		DI/DI						24	188			III		SL						7.0	4.97	365	D			187					27														PLUG EXISTING 8" OUTLET PIPE
105+47		RT																											9																		REMOVE EXISTING DI
105+76		RT																											13																		REMOVE EXISTING DI
106+45.5		LT		-/DI						18	4			III																																CONNECT TO EXISTING PIPE
				GUARDRAIL ITEMS																																												
101+67	103+05	RT																											139																		
101+72	102+89	RT																																													WINGWALL 2
102+50	103+00	LT																																													WINGWALL 1
102+84	103+08	LT																											37																		
102+88	103+08	RT																											20																		
103+66	104+16	RT																																													WINGWALL 4
103+77	104+00	LT																																													WINGWALL 3
103+80	103+96	RT																											16																		
103+80	104+49	RT																											71																		
103+82	103+94	LT																											25																		
										18	4			III																																		
										18	36	.064	.060																																			
										24	90	.064	.060																																			
TOTALS										12	4	.064																																			
										18	146			III		SL				1		36.82	2871	10-D			909	75			100		II	3	II	1					267	308						
										24	454			III		SL																														

UNDERDRAIN

STA.	STA.	POSITION	TYPE	D	L	TR EXCAV EARTH	TR EXCAV ROCK	GRAN BKF	FB		MKR PST
100+75	101+22	RT	U	6	50	15			1		
100+75	102+60	LT	U	6	194	79			1		
101+22	101+80	RT	U	6	60	19			1		
103+86	104+58	RT	U	6	75	26			1		
104+09	104+58	LT	U	6	50	18			1		
104+58	105+75	RT	U	6	120	55			1		
104+58	105+75	LT	U	6	120	60			1		
102+60	102+95	LT	C	6	45	9					1
ESTIMATED UNDERDRAIN			U	6	100	37			1		1
			C	6	50	19					
TOTALS			U	6	769	309			8		1
			C	6	95	28					1

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

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES: ELEVATION ON TANGENT	GRADES: ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK: AREA	TOTAL EXCAVATION EARTH AND ROCK: CU. YDS.	ROCK EXCAVATION: AREA	ROCK EXCAVATION: CU. YDS.	EMBANKMENT: AREA	EMBANKMENT: CU. YDS.		
		VT ROUTE 15												
		100+36					11		0		0			
						14		12		0		0		
		100+50					34		0		0			
						0		0		0		0		
		100+50					3		31		0			
						50		71		56		0		
		101+00					74		30		0			
						37.5		134		42		5		
		101+37.50					119		30		7			
						12.5		55		14		3		
		101+50					119		30		7			
						50		244		54		33		
		102+00					144		28		29		C	1067
						44		238		45		94	F	285
		102+44					148		27		86		FFAC	1.15
						6		34		6		19		
		102+50					158		26		84		EXC	740
						44		279		41		131		
		102+94					185		24		77			
		BRIDGE												
		103+72					306		20		2			
						28		289		25		2		
		104+00					252		29		2			
						50		397		64		3		
		104+50					177		40		1			
						50		356		74		1		
		105+00					207		40		0			
						12.5		96		19		0		
		105+12.5					206		41		0			
						37.5		219		58		2		
		105+50					109		42		3		C	1458
						50		101		81		3	F	11
		106+00					0		45		0		FFAC	1.15
													EXC	1445

*** VOLUME CALCULATED FOR ROCK EXCAVATION, IS ACTUALLY PORTLAND CEMENT CONCRETE UNDER EXISTING PAVEMENT ON VT ROUTE 15. THIS VOLUME OF CONCRETE IS ASSUMED TO BE UNSUITABLE FOR FILL MATERIAL.

CARRIED FORWARD														
COLUMN FOOTINGS					2525		579		296					

V. C.	% GRADE	STATION	GRADES: ELEVATION ON TANGENT	GRADES: ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK: AREA	TOTAL EXCAVATION EARTH AND ROCK: CU. YDS.	ROCK EXCAVATION: AREA	ROCK EXCAVATION: CU. YDS.	EMBANKMENT: AREA	EMBANKMENT: CU. YDS.		
		TH 37												
		30+29					0				0			
						14		10				0		
		30+43					38				0		C	59
						7		9				0	F	0
		30+50					32				0		FFAC	1.15
						21		25				0		
		30+71					31				0		EXC	59
						4		5				0		
		30+75					31				0			
						10		10				0		
		30+85					24				0			
		DRIVES						134				0	C	134
													F	0
													FFAC	1.15
													EXC	134
		UNDERDRAIN						202				0	C	202
													F	0
													FFAC	1.15
													EXC	202
		TRENCH EXCAVATION FOR DITCHES						60				0	C	60
													F	0
													FFAC	1.15
													EXC	60

CARRIED FORWARD					2525		579		296					
COLUMN FOOTINGS					2980		579		266					

SUMMARY AND BALANCES

STATION TO STATION		TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES: CUT	EXCESSES: FILL	ACCUMULATIVE EXCESSES: CUT	ACCUMULATIVE EXCESSES: FILL
100+25	102+94	1067		285	740			
							740	
103+72	106+50	1458		11	1445			
							2185	
MAINLINE TOTAL		2525		296				
							2185	
TH 37		59		0	59			
							2244	
DRIVES		134		0	134			
							2378	
SUBTOTAL		2718		296				
							2378	
UNDERDRAIN		202		0	202			
							2580	
TRENCH EXCAVATION FOR DITCHES		60		0	60			
							2640	
COFFERDAM EXCAVATION		408		0	408			
							3048	
PROJECT TOTAL		3388		296			3048	

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION: TOTAL CY	EXCAVATION: ROCK CY	EMBANKMENT: CY		

REMARKS

EARTH AND ROCK EXCAVATION	2718
SOLID ROCK EXCAVATION	
EARTH EXCAVATION	2718
PLANIMETERED FILL	296
LESS FACTORED SOLID ROCK (1.30)	
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	
NET PLANIMETERED FILL	296
FACTOR (0.15)	44
PLANIMETERED FILL INCLUDING FACTOR	340
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	2718
CHANNEL EXCAVATION	–
UNDERDRAIN EXCAVATION (337 x 60%)	202
STRUCTURE EXCAVATION	–
TRENCH EXCAVATION FOR DITCHES	60
PORTLAND CEMENT CONCRETE (579 x 0%) (579)	0
COFFERDAM EXCAVATION (2040 x 20%)	408
TOTAL MATERIAL AVAILABLE FOR FILL	3388
TOTAL FILL INCLUDING FACTOR	340
TOTAL MATERIAL FOR FILL	3388
BORROW	–
EXCESS EXCAVATION	3048

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

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
1	SAUVE, PAUL J.	9	100+00 CL	103+16 CL	0.27A±		ALL R. T. & I.			JOHNSON			VT. RTE. 15-HWY EASEMENT
			100+20 RT.										DRIVE 30' PAVED M.M. 0388
			100+82 RT.	102+97 RT.			CONST. (T) 3270 S.F.±						
			100+94 RT.	101+87 RT.			REMOVE (T)						18" METAL PIPE/ DROP INLET
			100+99 RT.	101+12 RT.			ALL R.T. & I.						ISLAND WITH LIGHTED SIGN
													AND CONCRETE BASE WITH
													LUMINAIRE
			101+00 RT.	101+07 RT.			REMOVE (T)						CONCRETE BASE
			101+24 RT.										DRIVE 12' PAVED M.M. 0390
			102+00 RT.	102+82 RT.			SLOPE (P) 280 S.F.±						
			102+64 RT.	102+72 RT.			CUL., DIT. & DR. (P)						
			102+79 RT.	103+04 RT.			CHANNEL (P) 720 S.F.±						
2A	POMERLEAU FAMILY PARTNERSHIP	9	103+54 RT.	106+50 RT.	0.30A±		ALL R. T. & I.			JOHNSON			VT. RTE. 15-HWY EASEMENT
	(LESSOR)												
	LESSEES:												
	JOHNSON PHARMACY												
	CHAMPLAIN OIL COMPANY INC.												
	GRAND UNION STORES, INC. OF VERMONT												
	UNITED STATES POSTAL SERVICE												
	THE MERCHANTS BANK												
2B		9	103+43 RT.	103+83 RT.	1470 S.F.±								
			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-	9	100+00 CL	100+77 CL	3035 S.F.±		ALL R. T. & I.			JOHNSON			VT. RTE. 15-HWY EASEMENT
	ROBERT MOBBS, TRUSTEE		100+55 LT.										12' GRAVEL DRIVE M.M. 0389
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
			100+55 LT.	100+69 LT.			CONST. (T) 120 S.F.±						
			100+66 LT.	100+70 LT.			SLOPE (T) 5 S.F.±						

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
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.
2	6, 9	PARCEL NO. 2 POMERLEAU. REMOVE DETOUR (T) FOR TEMP. SIDEWALK. PER C.O. 9047.	06-18-99	R.M.W.	L.W.B.
3	7, 9	PARCEL NO. 6. THE UNION BANK. ADD TRANSPLANT (T) TO THE FOLLOWING: STA. 101+73 LT. - SHRUBS STA. 101+94 LT. - HARDWOOD BUSH STA. 102+60 LT. - HARDWOOD SHRUB STA. 102+75 LT. - FLOWERING CRAB PER C.O. 9048.	06-18-99	R.M.W.	L.W.B.
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.
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.
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.
7	7, 9	PARCEL NO. 5 WESTOVER. CHANGE OWNER TO: CHARETTE, TROY J. & MILLER, VERONICA J. PER C.O. 9100.	03-16-00	M.J.R.	L.W.B.
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.
		PAPER PRINT AND ELECTRONIC FILES TO STRUCTURES. 1/11/07			

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
(P) PERMANENT EASEMENT
(T) 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
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

ACCT. gshangraw
M:\Projects\84e046\RightOfWay\re046d.dgn
DATE PLOTTED 11-JAN-2007

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
5	CHARETTE, TROY J. &	9	100+91 LT.	101+62 LT.	2740 S.F.±		ALL R. T. & I.			JOHNSON			VT. RTE. 15-HWY EASEMENT
	MILLER, VERONICA J.		101+18 LT.	101+66 LT.			CONST. (T) 200 S.F.±						
			101+34 LT.	101+63 LT.			SLOPE (T) 50 S.F.±						
6A	UNION BANK	9	101+38 CL	103+38 LT.	0.16A±		ALL R. T. & I.	WD	08-03-01	JOHNSON	90	190-	VT. RTE. 15-HWY EASEMENT
			101+62 LT.	101+73 LT.			SLOPE (T) 15 S.F.±					191	
			101+63 LT.	101+78 LT.			CONST. (T) 75 S.F.±						
			101+71 LT.				TRANSPLANT (T)						SHRUB
			101+94 LT.				TRANSPLANT (T)						HARDWOOD BUSH
			102+12 LT.				DRIVE (T)						29' PAVED M.M. 0392
			102+30 LT.	102+86 LT.			CONST. (T) 270 S.F.±						
			102+30 LT.	102.79 LT.			SLOPE (T) 125 S.F.±						
			102+60 LT.				TRANSPLANT (T)						HARDWOOD SHRUB
			102+58 LT.	102+60 LT.			REMOVE & RESET (T)						CHAIN LINK FENCE
													LENGTH= ±5 FT
			102+75 LT.				TRANSPLANT (T)						FLOWERING CRAB
6B		9	102+71 LT.	103+49 LT.	2610 S.F.±					JOHNSON			
7A	VIEUX, RODNEY F.	9	103+58 LT.	104+46 LT.	3110 S.F.±		ALL R. T. & I.			JOHNSON			VT. RTE. 15-HWY EASEMENT
			104+03 LT.				DRIVE (T)						16' GRAVEL M.M. 0395
			104+15 LT.	104+37 LT.			EXCEPT & RESERVE						STONE WALL
7B		9	103+66 LT.	104+00 LT.	990 S.F.±					JOHNSON			
			103+67 LT.	104+00 LT.			CONST. (T) 330 S.F.±						
			103+67 LT.	103+98 LT.			INSTALL (T)						FILTER CURTAIN

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

ACCT. gshangraw
M:\Projects\84e046\RightOfWay\re046d.dgn
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
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 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
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-	VT. RTE. 15-HWY EASEMENT
												532	
			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												ELECTRIC UTILITY
	WATER & LIGHT DEPT.												
	MAINTENANCE AGREEMENT AREA NO. 1	9	101+07 LT.	100+91 LT.									TH#37 LENGTH 48'

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

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 SR SLOPE RIGHTS
P PROPERTY LINE
L
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 8 OF 9 SHEETS
SHEET 14 OF 85

ACCT. gshangraw
M:\Projects\84e046\RightOfWay\re046d.dgn
DATE PLOTTED 11-JAN-2007

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.

STA 101+13.23=
101+06.11, &
POT STA 30+20 TH #37

CHARETTE, TROY J. &
MILLER, VERONICA J.

HAY BALES AND EROSION
MATTING AROUND DROP INLET

PLACE EROSION
MATTING IN DITCH

SILT FENCE

HAY BALES ALONG
DITCH (TYP)

STA 30+85, TH 37
END CONSTRUCTION

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 , LT (3' WIDE)
STA 105+31 – 105+94, RT

8" PORTLAND CEMENT CONCRETE SIDEWALK
STA 100+54 – 101+13, RT
STA 101+89 – 102+38, 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

EROSION MATTING
STA 100+75, LT (DI)
STA 101+28, LT (DI)
STA 102+25 – 102+85, 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+06 – 101+24, 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 – 16'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 – 13'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

N 1987 MAG

STA 102+94.47
STOP ROADWAY
BEGIN BRIDGE

STA 103+71.53
END BRIDGE
RESUME ROADWAY

POT STA 102+75=
STA 104+00 CHANNEL LINE
ANGLE TO TANGENT = 90°

VIEUX, RODNEY F.

LIBRETT, BERNARD E. & JULIE A.

JENNISON, WILLIAM H.

THE UNITED CHURCH OF JOHNSON, INC.

ROBERT & GLORIA MOBBS

THE GLORIA MOBBS, REVOCABLE TRUST, ROBERT MOBBS, TRUSTEE

UNION BANK

BANK PAVED PARKING LOT

CHANNEL LINE

CUL.,DIT.& DR.(P)

CH.(P)

SAUVE, PAUL J.

POMERLEAU FAMILY PARTNERSHIP (LESSOR)
LESSEES:
- GRAND UNION STORES, INC. OF VERMONT
- JOHNSON PHARMACY
- THE MERCHANTS BANK
- CHAMPLAIN OIL CO., INC.
- UNITED STATES POSTAL SERVICE

CITGO SERVICE STATION

CITGO

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

FISH HABITAT BOULDER CLUSTER

TWO WAY TEMPORARY BRIDGE

TEMPORARY PEDESTRIAN BRIDGE

PAVED PARKING

PAVED PARKING LOT

GRAVEL PARKING

GRAVEL DRIVE & PARKING LOT

LAUNDRY MAT

EXCEPT & RESERVE

RESET (T)
STA 104+02, RT

STA 100+00
BEGIN APPROACH

STA 100+00
40.5 RT.

STA 101+05 RT
REMOVE EXISTING POLE
AND LUMINAIRE

WATERLINE CONSTRUCTION LIMITS

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

STA 105+00
END PROJECT
BEGIN APPROACH

STA 106+50
END APPROACH

END R. O. W. PROJECT
BRF 030 2(17) S
STA. 106+50 45.5' RT.

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

N/F VILLAGE OF JOHNSON

EDGE OF WETLAND

GIHON RIVER

SILT FENCE IN STREAM (TYP)

FILTER CURTAIN (TYP)

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.

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.

COMMON AREA FOR
"JOHNSON SHOPPING CTR"

STONE FILL, TYPE IV

CONTAMINATED SOILS

○INSTALLED BOUNDRY MARKERS BY VAOT SURVEYERS

SCALE: IN FEET
0 20 40

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

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.	
ROW SHEET 9 OF 9	SHEET 15 OF 85

NOTE BOOK ALIGNMENT CHECKED
NO. RT. OF WAY CHECKED

F:\Pcc190-94\91396_Johnson\Hwy\ACAD\ROW-PL 6-10-98 1:48:26 pm EST

RT. OF WAY CHECKED

NO.

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+38,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

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

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
STA 101+20,LT

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

POT STA 102+75=
STA 102+94.21 ON CHANNEL LINE
ANGLE OF TANGENT = 90°

STA 102+94.21
STOP ROADWAY
BEGIN BRIDGE

STA 103+71.79
END BRIDGE
RESUME ROADWAY

TYPE IV STONE FILL TO STA 104+88 RT

STA 104+80 LT

CONSTRUCTION LIMITS

CHANNEL LINE

N 46°25'30" W
TH 37
31

N 54°54'30" E
VT ROUTE 15
TO CAMBRIDGE

VT ROUTE 15

N 90°00'00" E

VT ROUTE 15
TO HYDE PARK

N 00°00'00" E

78°40'0"

MAILBOX TURNOUT

EXISTING ROW

WATERLINE CONSTRUCTION LIMITS

STA 99+80
~~STA 100+00~~
BEGIN APPROACH

PC = 100+00.01

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

PT = 102+19.33

DETOUR CONSTRUCTION LIMITS

TYPE IV STONE FILL STARTS @ 9+20 LT

FISH HABITAT BOULDER CLUSTER

GIHON RIVER

EDGE OF WETLAND

STA 9+23 RT

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

STA 106+65
~~STA 106+50~~
END APPROACH

PAVED PARKING LOT

3' x 15' GAS PUMP ISLAND (3 PUMPS)

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.

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

STONE FILL, TYPE IV

APPROXIMATE LOCATION OF PETROLEUM CONTAMINATED SOILS

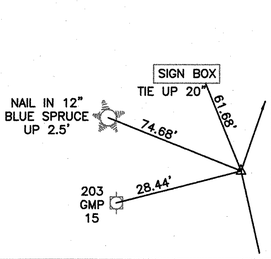
SCALE: IN FEET
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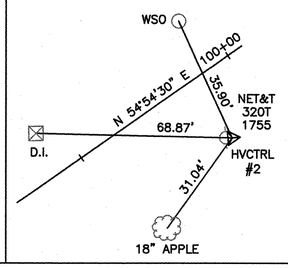
STATE OF VERMONT
AGENCY OF TRANSPORTATION

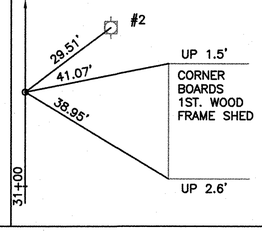
Town Of JOHNSON	Bridge No. 37
Highway No. VT ROUTE 15	Log Sta. / Surv. Sta.
VT ROUTE 15 OVER THE GIHON RIVER	
GENERAL PLAN	
Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	Bridge Design Supervisor J. Byatt Date 11/06
PROJECT **JOHNSON**	PROJECT NO. **BRF 030-2(17)S**
I.G.C. Info.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

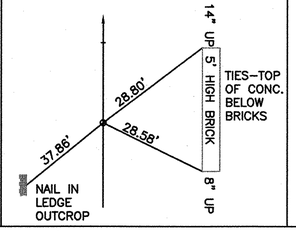
SURVEY LINE TIES

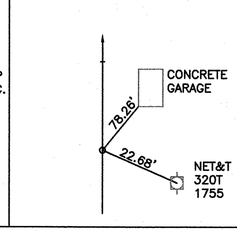
HVCTRL #1 (P.I.)	HVCTRL #2 PKSET IN UP 320T/1755	TH 37 P.O.T. 31+50.00	VT. ROUTE 15 P.O.T. 99+00	VT. ROUTE 15 P.C. 100+00.00	VT. ROUTE 15 P.I. 101+13.23 BK = 101+06.11 AHD	VT. ROUTE 15 P.T. 102+19.32	VT. ROUTE 15 P.O.T. 106+50.00
N 10122.583	N 10034.44		N 10000.000	N 10057.493	N 10122.583	N 10122.583	
E 50174.472	E 50083.04		E 50000.000	E 50081.829	E 50174.472	E 50287.695	
ELEV. 496.16	ELEV. 499.04						

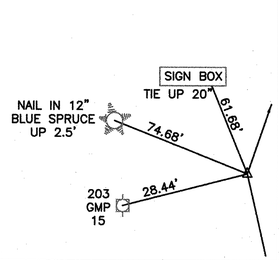


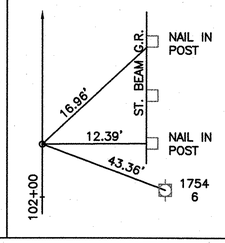


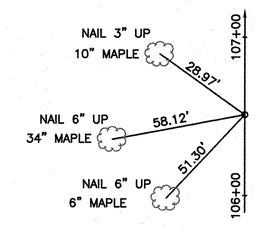










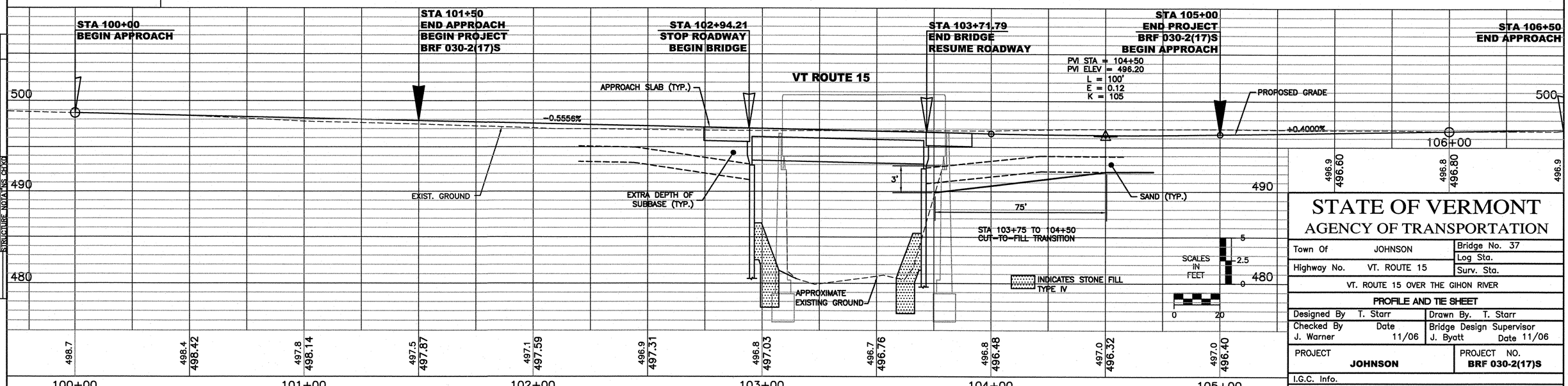


NOT TO SCALE

DATUM

VERTICAL NGVD 1929

HORIZONTAL N/A



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

PROFILE	BY	DATE
NOTE BOOK		
NO.		
SURVEYED		
PLOTTED		
GRADES CHECKED		
B.M.'s NOTED		
STRUCTURE NOTATIONS CHKD		

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

PROFILE AND TIE SHEET

Designed By T. Starr	Drawn By. T. Starr
Checked By J. Warner Date 11/06	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 17 Of 85

AREAS REPAIRED DUE TO DAMAGED PAVEMENT DURING INSTALLATION AND REMOVAL OF FILTRATION TANKS FOR CONTAMINATED SOIL REMEDIATION.

N

ASSUMED

STA 103+83.8
25' LT
STA 103+80
24.5' LT
STA 103+87.7
25.5' LT
8' 15 R
5'
8'
+92

TH 37
N 46°25'30" W
+85 MATCH EXISTING
+78
+75
+50
+46.5
+45
+88
+72
+55
+25
+92
+34
+79
+58
+74
+92
+05
+66
+15
+50
+54
+66
+69
+72
+55
+45
+20
+10
+00
+25
+50
+75
+85
+78
+46.5
+45
+88
+72
+55

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)

N 46°25'30" W

N 54°54'30" E

N 90°00'00" E

VT ROUTE 15

TH 37

EXISTING ROW

LIMITS OF CONTAMINATED SOIL

PIPE LEFT IN PLACE FILLED W/ FLOWABLE FILL

PIPE WAS FILLED WITH FLOWABLE FILL

DRAINAGE CONSTRUCTION LIMITS

DETOUR CONSTRUCTION LIMITS

DETOUR CONSTRUCTION LIMITS

TYPE II STONE SWAIL

TYPE IV STONE FILL TO STA 10+88 RT

YIELDING MARKER POST

STA 102+65 RT

STA 102+60 LT

STA 102+65 LT

22½° COUPLING STA 104+07 RT

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

ASSUMED

24" TO 18" COUPLING STA 106+14

STA 106+54 LT

SEE NOTE #1

FLUSHING BASIN NOT INSTALLED

UNDERDRAIN AND FLUSHING BASIN NOT INSTALLED DUE TO CONTAMINATED SOIL

UNDERDRAIN NOT INSTALLED DUE TO CONTAMINATED SOIL

PIPE WAS PLUGGED WITH FLOWABLE FILL @ APPROX. THIS LOCATION

REMOVE PIPE

REMOVE DI AND PIPE

REMOVE JCT BOX AND PIPE

REMOVE DI AND PLUG PIPE

REMOVE DI AND PIPE FLOWABLE FILL

REMOVE DI AND PIPE

REMOVE DI AND PLUG PIPE

30+75 LT(TH 37) – 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

100+75 LT – 101+28 LT
NEW 18"X56' RCP(CLASS III) OR CPEP(SL)
NEW 4'X6' RCDI W/ DOUBLE CI GRATE, TYPE D

101+15 LT – 101+60 LT
CONSTRUCT SPECIAL DITCH
GRADE TO DRAIN

100+75 LT – 101+22 RT
NEW 6'X150' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN

101+22 RT – 101+28 LT
NEW 24"X48' RCP(CLASS III) OR CPEP(SL)
NEW 4'X4' RCDI W/ CI GRATE, TYPE D

101+22 RT – 102+50 RT
NEW 24"X122' RCP(CLASS III) OR CPEP(SL)
NEW 4'X4' RCDI W/ CI GRATE, TYPE D

101+22 RT – 101+80 RT
NEW 6'X60' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN

102+25 LT – 102+85 LT
CONSTRUCT SPECIAL DITCH
GRADE TO DRAIN

102+50 RT – 102+85 RT
NEW 24"X36' PCCSP (.064) OR CAAP(.060)
NEW 4'X4' RCDI W/ CI GRATE, TYPE D
CONSTRUCT 4'X8' STONE FILL PAD,
TYPE II, AT OUTLET

102+60 LT – 102+85 LT
NEW 6"X164' UNDERDRAIN
W/ 45° ELBOW
W/ 6"X164' UDOP

102+60 RT – 103+83 RT
NEW 24"X54' RCP(CLASS III) OR CPEP(SL)
NEW 6'X6' RCDB W/ CI GRATE, TYPE D

103+86 RT – 104+58 RT
NEW 6"X75' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN

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+09 LT – 104+58 LT
NEW 6"X60' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN

104+58 LT – 104+88 RT
NEW 24"X32' 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

104+58 RT – 105+47 RT
NEW 18"X68' RCP(CLASS III) OR CPEP(SL)
NEW 4'X4' RCDI W/ CI GRATE
NEW 6"X10' VCP, EXTRA STRENGTH
CONNECT TO EXISTING PIPE

104+58 LT – 105+75 LT
NEW 24"X188' RCP(CLASS III) OR CPEP(SL)
NEW 18"X4' RCP(CLASS III) W/
CONNECT TO EXISTING PIPE

STONE FILL, TYPE IV

APPROXIMATE LOCATION OF PETROLEUM CONTAMINATED SOILS

SCALE: IN FEET
0 20 40

STATE OF VERMONT
AGENCY OF TRANSPORTATION

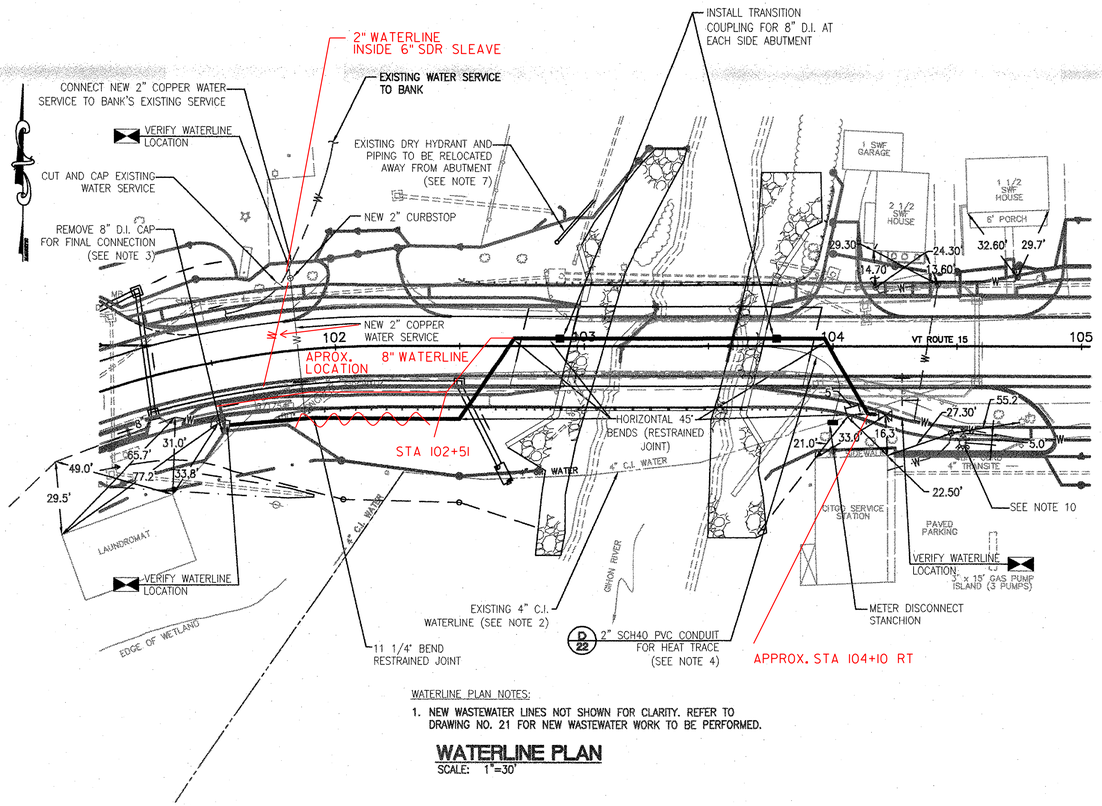
Town Of JOHNSON	Bridge No. 37
	Log Sta.
Highway No. VT ROUTE 15	Surv. Sta.

VT ROUTE 15 OVER THE GIHON RIVER

DRAINAGE PLAN

Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	Bridge Design Supervisor J. Byatt Date 11/06
PROJECT **JOHNSON**	PROJECT NO. **BRF 030-2(17)S**
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Bridge Sheet No.	Sheet 19 Of 85

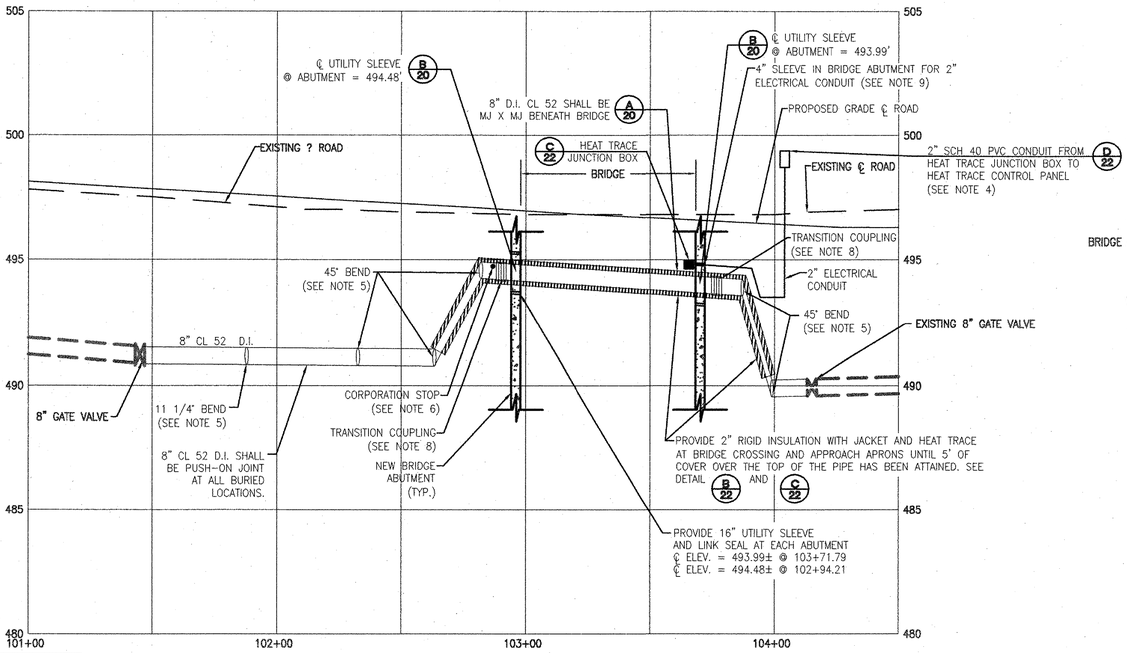
NO. RT. OF WAY CHECKED



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'

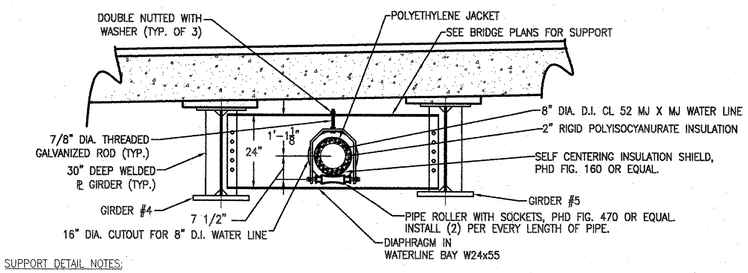


WATERLINE PROFILE
SCALE: HORZ.= 1"= 30'
VERT.= 1"= 3'

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

NEW WATERLINE CONSTRUCTION

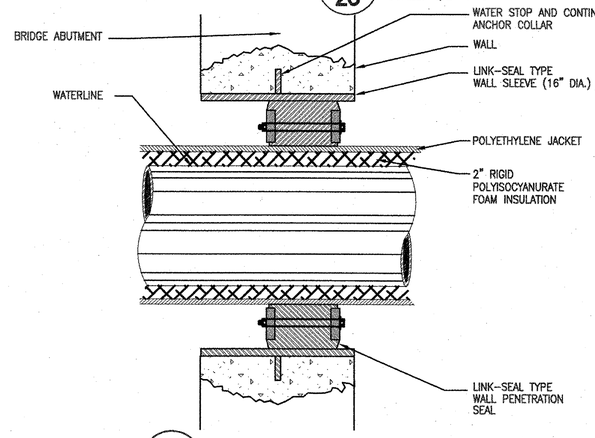
1. CONTRACTOR SHALL CONTACT DIG-SAFE AND THE JOHNSON WATER & LIGHT DEPARTMENT TO LOCATE UTILITIES AND TO COORDINATE ALL INTERCONNECTIONS OF WATERLINES PRIOR TO THE START OF CONSTRUCTION.
2. A TEMPORARY WATERLINE SHALL BE CONSTRUCTED BY THE VILLAGE OF JOHNSON PRIOR TO THE START OF THIS CONTRACT. IT IS 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 ACCOMODATE 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.
3. THE NEW 8" D.I. WATERLINE SHALL BE COMPLETELY CONSTRUCTED FROM 101+45 TO 104+15 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).
4. 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.
5. 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)
6. 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.
7. 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.
8. INSTALL THE TRANSITION COUPLING WITHIN 4'-0" OF THE BRIDGE ABUTMENT ON BOTH SIDES. INSTALL VERTICAL 45° BENDS AFTER THE TRANSITION COUPLING.
9. 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.
10. 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:

1. THREADED 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.
2. PROVIDE TWO (2) PIPE SUPPORT ASSEMBLIES FOR EACH PIPE LENGTH SUSPENDED UNDER THE BRIDGE SPAN.
3. 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.
4. REFER TO SHEET 24 FOR ADDITIONAL DIMESIONAL INFORMATION CONCERNING THE LAYOUT AND SUPPORT OF THE WATERLINE UNDER THE BRIDGE STRUCTURE.

BRIDGE CROSSING SUPPORT DETAIL (TYP. OF 10)
A 20
SCALE: 1/2"=1'-0"



LINK-SEAL DETAIL-WATERLINE
B 20
SCALE: NONE

LINK-SEAL NOTES:

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

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

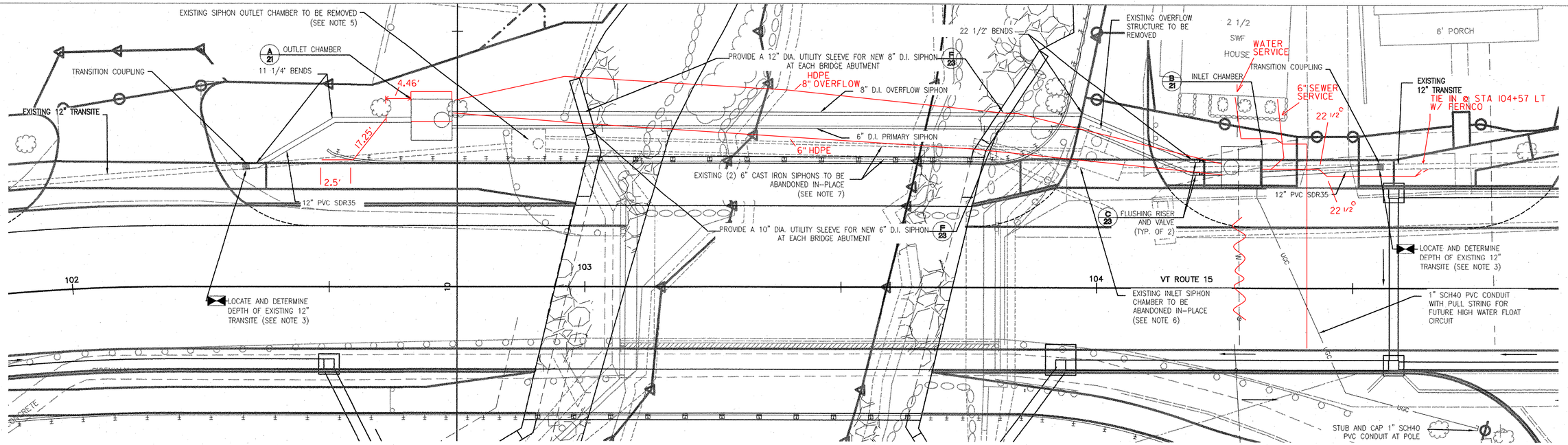
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT ROUTE 15	Surv. Sta.	

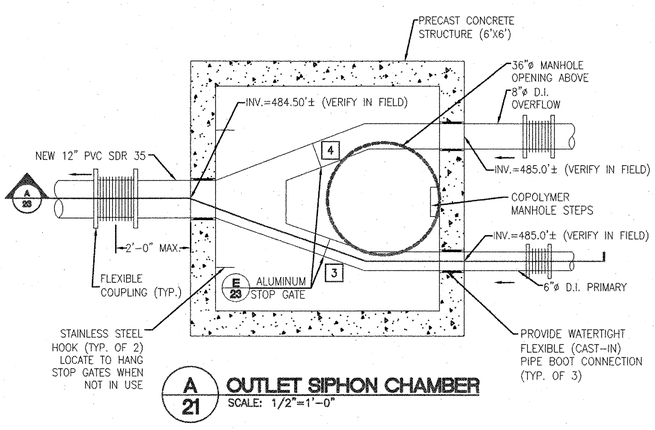
VT ROUTE 15 OVER THE GIHON RIVER

8"Ø WATERLINE REPLACE. - STA. 101+48 TO 104+13

Designed By	JJD	Drawn By.	JEB/JEN
Checked By	Date	Bridge Design Supervisor	
JJD	1-07	J. Byatt	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet 20 Of 85	

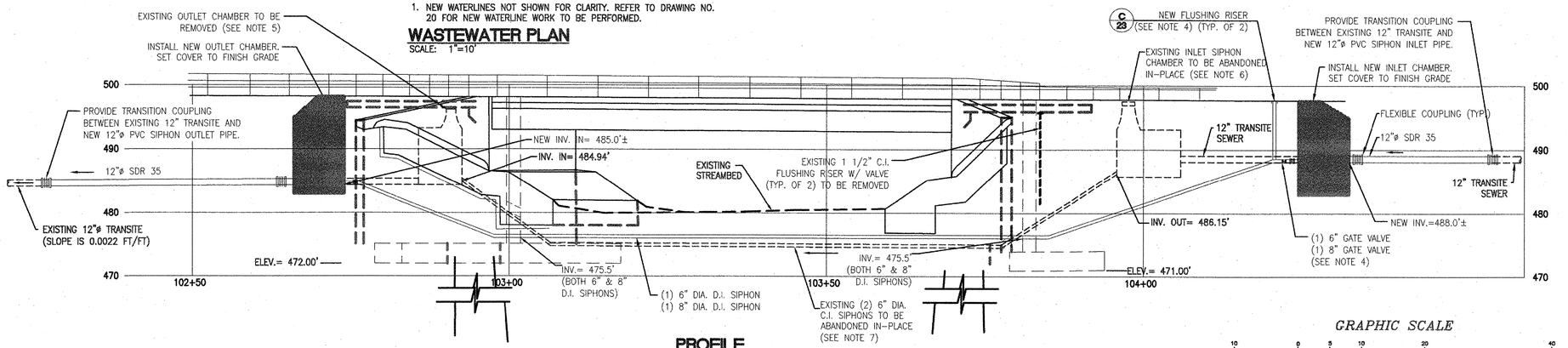
BRADLEY F. ALDRICH No. 5254 CIVIL LICENSED PROFESSIONAL ENGINEER STATE OF VERMONT

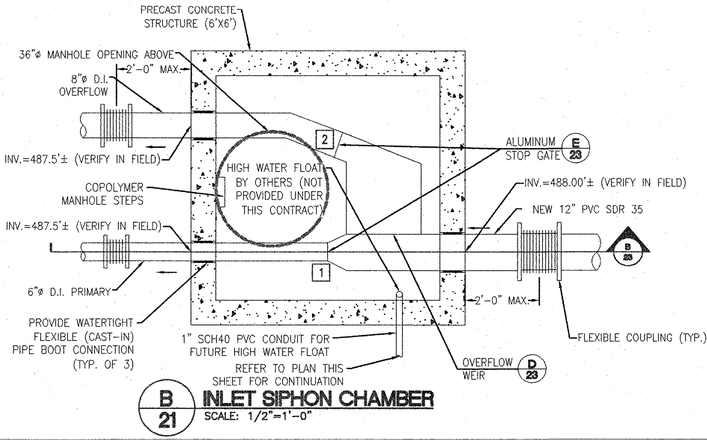




WASTEWATER PLAN NOTES:

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





GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)

WASTEWATER SIPHON CONSTRUCTION NOTES

1. 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"ø C.I. SIPHON PIPES SHALL BE LOCATED AND PROTECTED ALONG WITH THE (2) 1-1/2"ø 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).
2. 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.
3. 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.
4. 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.
5. REMOVE EXISTING OUTLET SIPHON STRUCTURE IN ITS ENTIRETY (PAY ITEM 204.21). REFER TO NOTE 2 FOR PHASING REQUIREMENTS.
6. REMOVE EXISTING SIPHON INLET STRUCTURE IN ITS ENTIRETY (PAY ITEM 204.21). REFER TO NOTE 2 FOR PHASING REQUIREMENTS.
7. 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).

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

FA&A Forcier Aldrich & Associates
Consulting Engineers
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Essex Junction, VT 05495 (802) 879-1742 (Fax)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

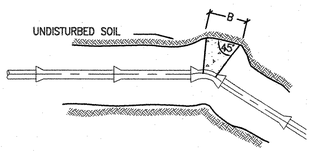
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT ROUTE 15	Surv. Sta.	

VT ROUTE 15 OVER THE GIHON RIVER

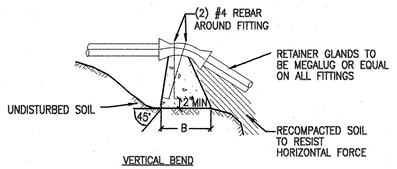
SEWER SIPHON CHAMBER REPLACEMENT

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

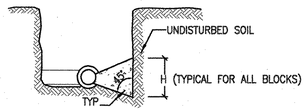
BRADLEY J. BYATT No. 5254 CIVIL LICENSED PROFESSIONAL ENGINEER



HORIZONTAL BEND



VERTICAL BEND



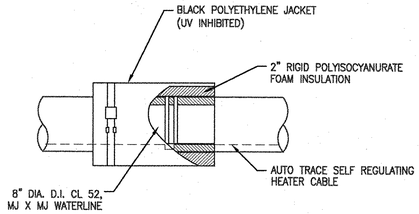
SECTION A–A

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.

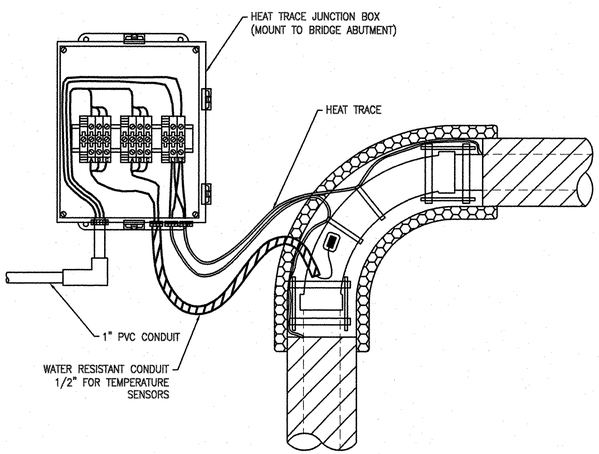
A 22 WATER LINE THRUST BLOCK DETAILS
SCALE: NONE



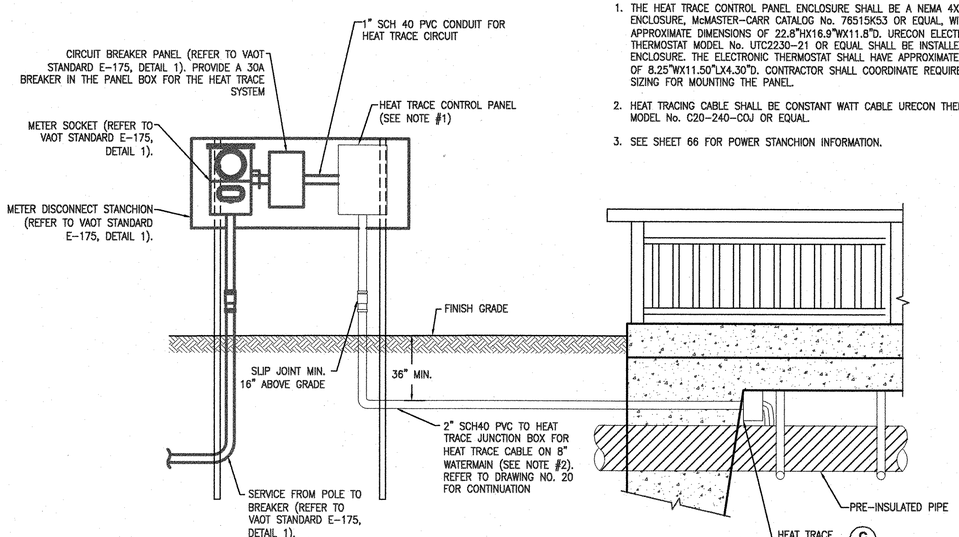
WATERLINE INSTALLATION NOTES:

1. WATERLINE INSULATION COMPONENTS SHALL BE EQUIVALENT TO URECON U.I.P. PRE-INSULATED PIPE.
2. PROVIDE JOINT INSULATION WRAP AT ALL PIPE JOINTS.

B 22 PRE-INSULATED WATERLINE
SCALE: NONE



C 22 HEAT TRACE JUNCTION BOX 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.

D 22 HEAT TRACE ELECTRICAL DETAIL
SCALE: NONE

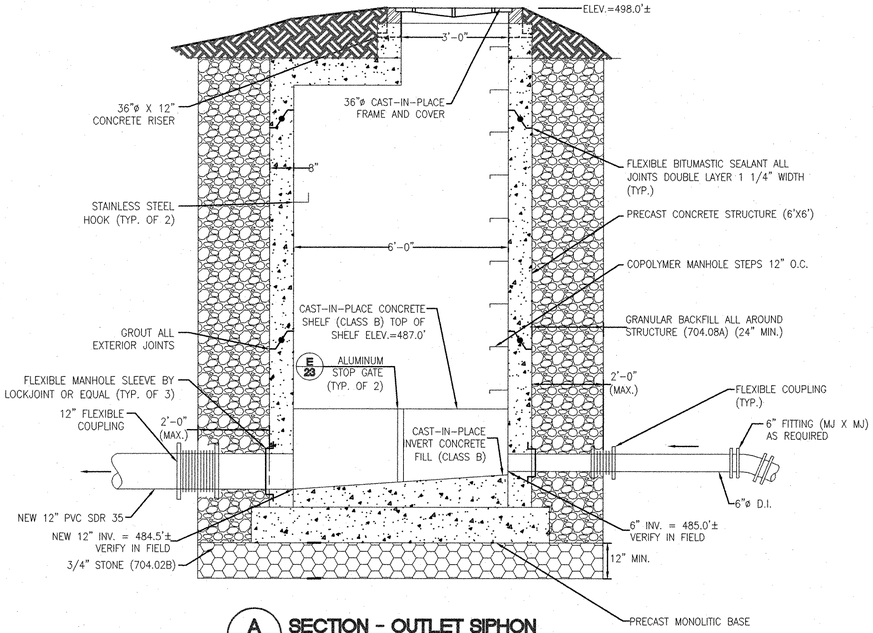
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

STATE OF VERMONT
AGENCY OF TRANSPORTATION

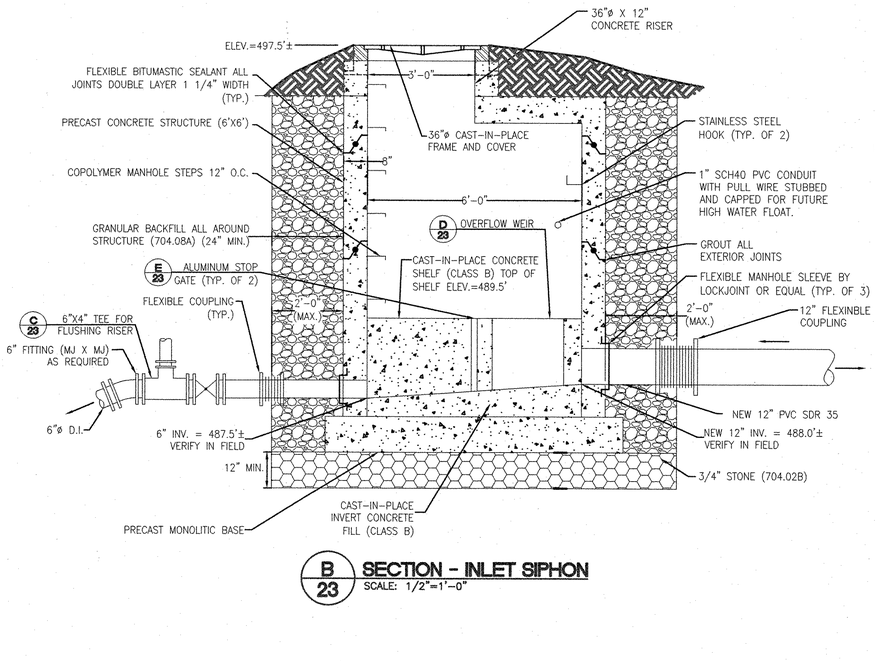
Town Of JOHNSON	Bridge No. 37
	Log Sta.
Highway No. VT ROUTE 15	Surv. Sta.
VT ROUTE 15 OVER THE GIHON RIVER	
WATER DETAILS	
Designed By JJD	Drawn By. JEB/JEN
Checked By JJD Date 1-07	Bridge Design Supervisor J. Byatt Date 11/06
PROJECT **JOHNSON**	PROJECT NO. **BRF 030-2(17)S**
I.G.C. Info.	
Bridge Sheet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

Forcier Aldrich & Associates
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6 Market Place, Suite 2 Essex Junction, VT 05495
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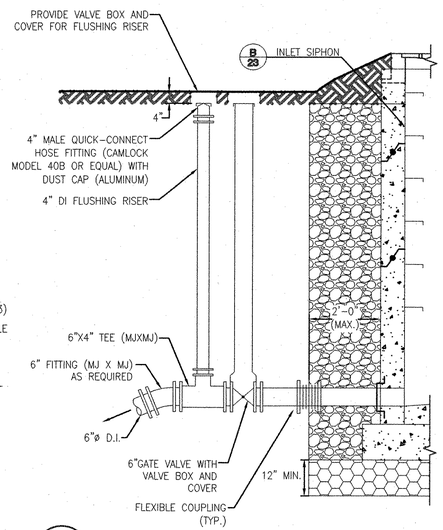
STATE OF VERMONT DEPARTMENT OF PROFESSIONAL ENGINEERS BRADLEY F. ALDRICH No. 5254 CIVIL LICENSED



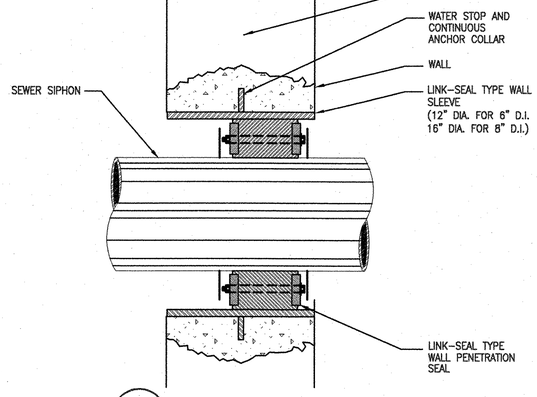
A 23 **SECTION - OUTLET SIPHON**
SCALE: 1/2"=1'-0"



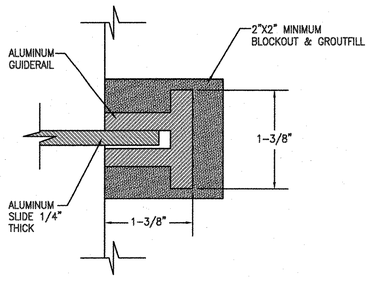
B 23 **SECTION - INLET SIPHON**
SCALE: 1/2"=1'-0"



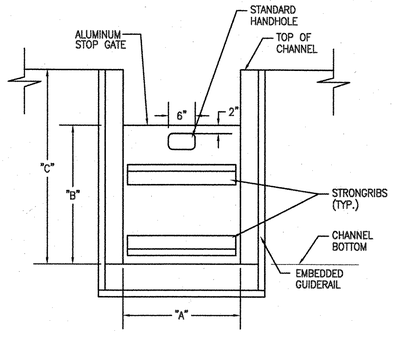
C 23 **FLUSHING VALVE AND RISER DETAIL**
SCALE: 1/2"=1'-0"



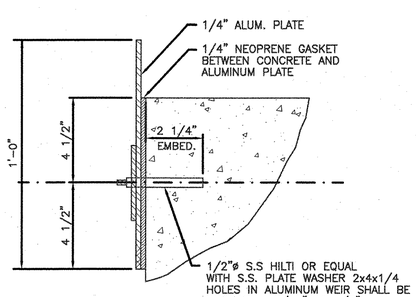
F 23 **LINK-SEAL DETAIL-SEWER SIPHON**
SCALE: NONE



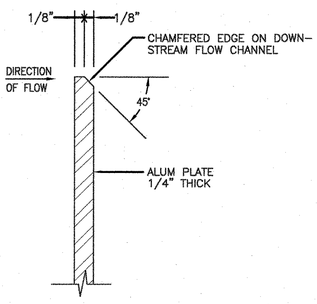
EMBEDDED GUIDE SECTION



STOP GATE SECTION



MOUNTING DETAIL-TOP VIEW
SCALE: NONE



ALUMINUM PLATE SECTION
SCALE: NONE

STOP GATE AND FRAME SCHEDULE

GATE NO.	LOCATION	FRAME "A"	FRAME "B"	FRAME "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 23 **STOP GATE DETAILS**
SCALE: NOT TO SCALE

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

D 23 **OVERFLOW WEIR DETAIL**
SCALE: AS NOTED

STATE OF VERMONT
BRADLEY F. ALDRICH
No. 5254
CIVIL
LICENSED
PROFESSIONAL ENGINEER

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Consulting Engineers
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Essex Junction, VT 05495 (802) 879-1742 (Fax)

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			
WASTEWATER DETAILS			
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	23 Of 85

NOTE BOOK ALIGNMENT CHECKED
RT. OF WAY CHECKED
NO.

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)

N
ASSUMED

2" WATERLINE INSIDE 6" SDR SLEEVE
METER STANCHION DISCONNECT
RELOCATED POLE BY TOWN OF JOHNSON
6" ELECTRICAL CONDUIT SLEEVE, TYPICAL PER VTRANS STANDARD SPECIFICATION 710.06.
NEW POLE FOR EXISTING SERVICES
TIES TO END OF CONDUIT
CONDUIT FOR HEAT TAKE CABLE POWER & THERMOSTAT
2" CONDUIT FOR FUTURE USE
POWER POLE
CONDUIT EXPANSION JOINT COUPLING PER VAOT STANDARD E-181
PUSH BRACE
RELOCATED POLE #6/1754
RELOCATED POLE #3/1751
METER DISCONNECT STANCHION PER VAOT STANDARD E-175, DETAIL 1
RELOCATED TO IN FRONT OF WING WALL #3
RISER AT UTILITY POLE PER VAOT STANDARD E-175, DETAIL 1
ELECTRIC SERVICE RELOCATED TO OTHER SIDE OF STREET
CAP CONDUIT UNDERGROUND, TYP.
10"x 15"x 24" DEEP, OPEN BOTTOM JUNCTION BOX, TYP. PER VAOT STANDARD E-173
ORNAMENTAL STREET LIGHT, TYP. SEE LIGHTING DETAILS (SHEET 66 OF 85)
CORNER OF MERCHANTS BANK

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

P-OHW — APPROXIMATE PROPOSED OVERHEAD RELOCATION
REMOVAL OF EXISTING POLE
STONE FILL, TYPE IV
E(F) — UNDERGROUND ELECTRICAL CONDUIT FOR FUTURE STREET LIGHTING – 2" PVC WITH PULL CORD
E — UNDERGROUND ELECTRICAL CONDUIT – 2" PVC WITH 3#6, 1#6G. CONDUCTORS
ES — UNDERGROUND ELECTRICAL SERVICE ENTRANCE CONDUIT – 3" PVC CONDUIT WITH 3#2 CONDUCTORS

SCALE: IN FEET
0 20 40

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 GIHON RIVER

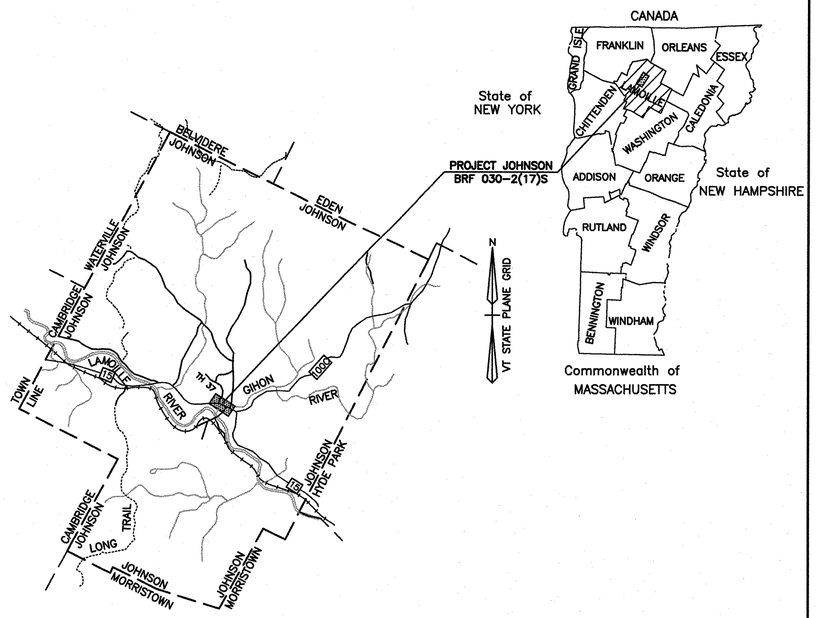
UTILITY RELOCATION AND LIGHTING PLAN

Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	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 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

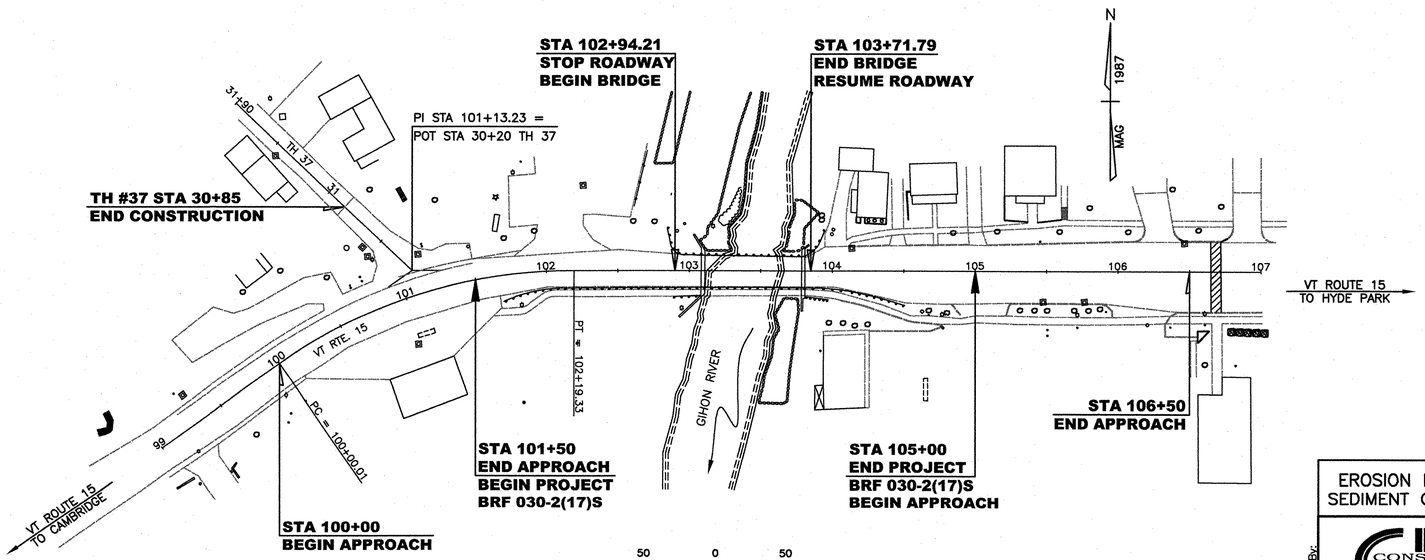


PROPOSED IMPROVEMENT
TOWN OF JOHNSON
COUNTY OF LAMOILLE
VT ROUTE 15 (MINOR ARTERIAL)

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
FENCE LINE
STONE WALL
TRAVELED WAY
GUARDRAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

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

Plans Prepared By:

CLD CONSULTING ENGINEERS Inc.
540 Commercial Street • Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cld@cldengineers.com • www.cldengineers.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
ONDAWA FINE SANDY LOAM	0'-60'	NOT HIGHLY ERODIBLE
UDIFLUVENTS, FREQUENTLY FLOODED	0'-60'	NOT HIGHLY ERODIBLE

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 / WIDTH 2:1			
				L	W	L	W
Q(gpm)	Q(m3/s)	(ft2)	(m2)	(ft)	(ft)	(m)	(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 MINIMIZES 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 THAT 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

PLAN	BY	DATE
SURVEYED		
NOTE BOOK		
ALIGNMENT CHECKED		
RT. OF WAY CHECKED		
NO.		

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

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

EXISTING OUTFALL: FLAT, GRASSED OUTFALL LEADING TO STEEP, STABLE STONE LINED SLOPE TO RIVER.

EXISTING OUTFALL: STEEP, STONE LINED SLOPE

N

ASSUMED

CHANNEL LINE

TH 37

N 46°25'30" W

31

EXISTING ROW

N 54°54'30" E

PC = 100+00.01

PT = 102+19.35

CLASS II WETLAND
50' BUFFER

EDGE OF
CLASS II WETLAND

EXISTING OUTFALL: STABLE, FLAT DITCH. VEGETATED WITH DENSE BRUSH TO THE RIVER.

RIPARIAN BUFFER

GIHON RIVER

N 00°00'00" E

VT ROUTE 15

N 90°00'00" E

101 102 103 104 105 106

10 11 8

EXIST. 12" CMP
EXIST. 12" CMP
EXIST. 12" CMP
#2
JCT BOX
6" ROUND GRATE
GRAVEL DRIVE
PAVED APRON
1 SWF SHED
1 1/2 SWF HOUSE
1 SWF
2 SWF HOUSE
PORCH
EXIST. 12" CMP
EXIST. 4" CIP
EXIST. 12" CMP
LAWN
EXIST. 10" CIP
EXIST. 15" CMP
EXIST. 16" RCP
EXIST. 15" CMP
METAL LIGHT POLE
COMBO SERVICE DROP #16
12" MAPLE
12" BLUE SPRUCE
STAIRS
4" RED MAPLE
0.020
D.I.
CHAIN LINK FENCE
8' x 6' POSTS
UP
BANK
0.010
PAVED PARKING LOT
FLAT
HEAVY W
GRASS
LAWN
LIGHTED PLANTER BOX W/ SIGN
HARDWOOD BUSH
SHRUB
HARDWOOD SHRUB
SIPHON CHAMBER OUTLET
12" TRANSITE
SMH
MB
D.I.
PVC TRUNK
HYDRANT
G.R.
SEWER M.H. OVERFLOW
12" TRANSITE
STORM DRAIN OUTLET
DRY HYDRANT
8" TRANSITE
STONE FILL
BRUSH
6" PVC
STONE FILL
WOODS
GRAVEL DRIVE
STAIRS
SIPHON INLET CHAMBER
OSMH
D.I.
DRAIN MANHOLE
1 SWF GARAGE
EXIST. 12" ACCMP
EXIST. 6" METAL
2 1/2 SWF HOUSE
GRASS DRIVE
CONC. RET. WALL
1 1/2 SWF HOUSE
6' PORCH
GRAVEL DRIVE
2 1/2 SWF HOUSE
0.050
ST. WALL
1–10
ST. WALL
EXIST. 18" RCP
GRAVEL DRIVE & PARKING LOT
34" MAPLE
LAWN
BIT. DRIVE
12" CRAB
FLAT
BIT. SIDEWALK
110' MAPLE
12" TRANSITE
CONC. CURB
D.I.
BIT. SIDEWALK
CONC. CURB
12" TRANSITE
18" SOFT MAPLE
PAVED
SMH
2–MB
CONC. CURB
34" MAPLE
34" MAPLE
1 1/2 SWF HOUSE
PORCH
BUSH
LAWN
203 GMP 15
LAWN
3–MB
GUY
BUSH
GRAVEL DRIVE
EXISTING ROW
4" ELM STUMP
D.I.
MB
SMH
PVC TRUNK
HYDRANT
LAWN
1–5
1–4
1–3
1–2
12" TRANSITE
WSO
PAVED YARD
D.I.
0.020
0.050
0.040
GAS PUMP ISLAND
GRAVEL PARKING
UP
BRUSH
4" STEEL STANDPIPE (24" REVEAL)
4" C.I. WATER
GUY
GUY
PROPANE FILLER
DELI
NET & T 3201
WV
0.040
GRAVEL PARKING
D.I.
HYDRANT
WV
#2
WV
WV
PUSH POLE
18" APPLE
BIT. CONC. SIDEWALK
EDGE OF WETLAND
EXIST. 18" METAL
4" STEEL STANDPIPE (36" REVEAL)
STEEL BEAM G. RAIL
BIT. CONCRETE SIDEWALK
6/1754
#1753
4 1/2"
28"
4" C.I. WATER
48" DIA. HARDWOOD SHRUBS
BIT. CURB
D.I.
D.I.
48" DIA. HARDWOOD SHRUBS TYP.
WV
BIT. SIDEWALK
FIRE HYDRANT
4
752
GUY
BIT. CURB
WV
BIT. CURB
WSO
HYD.
GUY
1–10
36" SIDEWALK
BIT. CURB
PAVED DRIVE ENTRANCE
4" TRANSITE
FLAT
CITGO SIGN
FUEL FILLER PIPE
CITGO SERVICE STATION
GRASS
STONE FILL/ BRUSH
PAVED PARKING
3' x 15' GAS PUMP ISLAND (3 PUMPS)
PAVED PARKING
EXIST. 6" VCP
EXIST. 6" VCP
PAVED PARKING LOT
CONC. PAD
0.010
SMH
4" TRANSITE
0.010
4" PVC
4" CONC. S.W.
48" DIA. HARDWOOD COMBO POLE NET&T 3/1751
TYP.
4" CONC. GUY
WOOD POST
SMH
8" TRANSITE
WOOD POST
4" TRANSITE
EXIST. 6" CIP

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

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

NOTES:

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

SCALE: IN FEET
0 20 40

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

EPSC - EXISTING CONDITIONS SITE PLAN

Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	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 27 Of 85

PLAN	DATE
SURVEYED	
NOTE BOOK	BY
ALIGNMENT CHECKED	
NO.	RT. OF WAY CHECKED

CHECK DAM AND EROSION MATTING AROUND DROP INLET (TYP.)

PLACE EROSION MATTING IN DITCH

PLACE EROSION MATTING IN DITCH

CHECK DAM ALONG DITCH (TYP)

CHANNEL LINE

RIPARIAN BUFFER

DRAINAGE CONSTRUCTION LIMITS

RIPARIAN BUFFER

N

ASSUMED

CHECK DAM AND EROSION MATTING AROUND DROP INLET (TYP.)

MAILBOX TURNOUT

TH 37

N 46°25'30" W

31

COMBO SERVICE DROP #16

UP

HVCTRL #2

EXISTING ROW

101

102

103

104

VT ROUTE 15

105

N 90°00'00" E

106

FLAT

0.030

0.020

PT = 102+19.33

N 54°54'30" E

NET&T 3/1755

EXISTING ROW

PC = 100+00.01

CHECK DAM (TYP)

SILT FENCE TO PROTECT WETLAND

CLASS II WETLAND 50' BUFFER

EDGE OF CLASS II WETLAND

DETOUR CONSTRUCTION LIMITS

RIPARIAN BUFFER

FILTER CURTAIN IN RIVER (TYP)

N00°00'00"E

10'-15' TYP.

25' MIN.

FISH HABITAT BOULDER CLUSTER

GIHON RIVER

DETOUR CONSTRUCTION LIMITS

RIPARIAN BUFFER

752T

COMBO POLE NET&T 1/175

STONE FILL, TYPE IV

NOTES:

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

LEGEND

FC	FILTER CURTAIN
PDF	PROJECT DEMARCATION FENCE
	SILT FENCE
	PERMANENT SLOPE LIMITS
	CHECK DAMS
	EROSION MATTING

SCALE: IN FEET

0 20 40

STATE OF VERMONT
AGENCY OF TRANSPORTATION

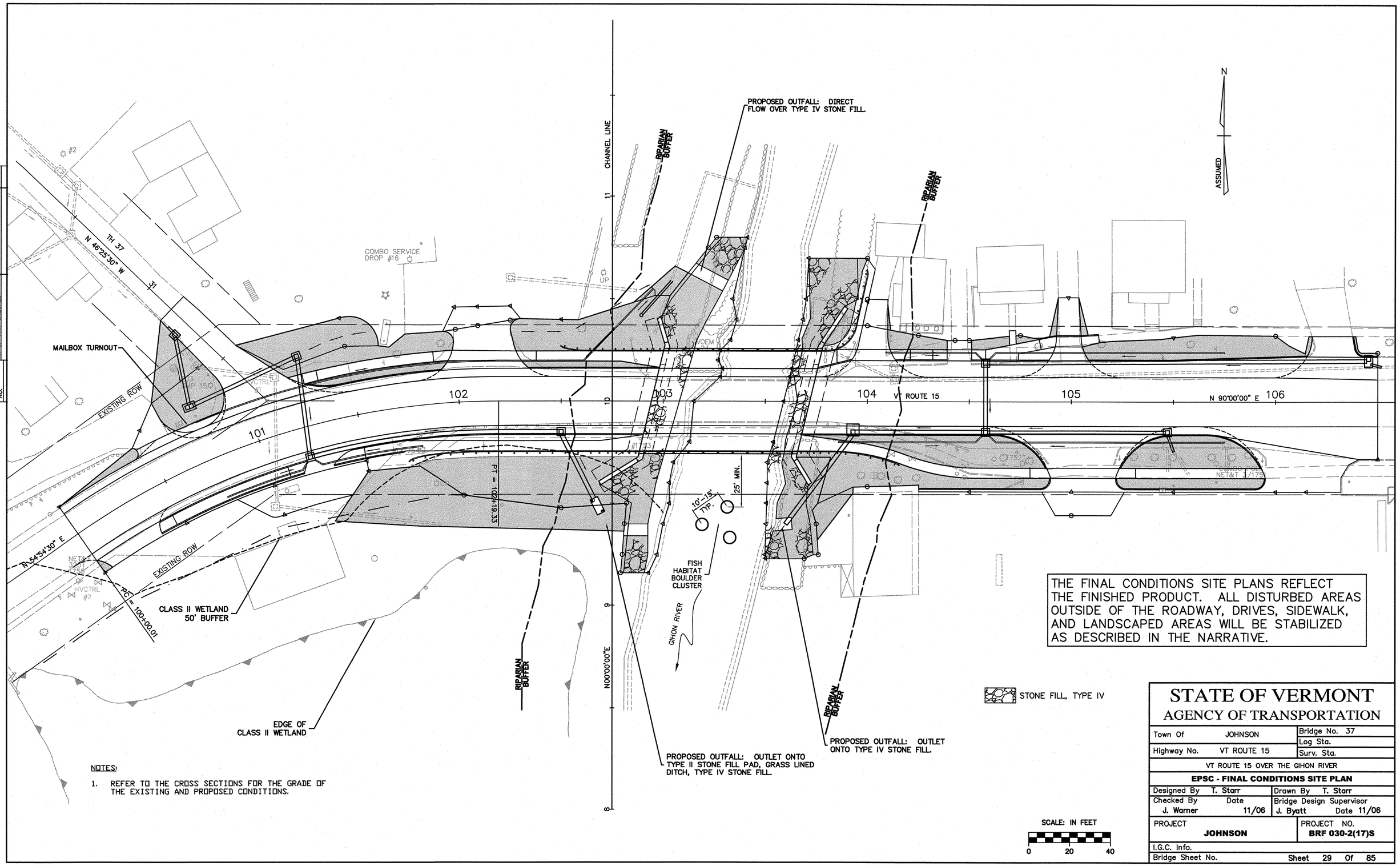
Town Of JOHNSON	Bridge No. 37
Highway No. VT ROUTE 15	Log Sta.
	Surv. Sta.

VT ROUTE 15 OVER THE GIHON RIVER

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	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 28 Of 85

PLAN	BY	DATE
NOTE BOOK	SURVEYED	
NO.	ALIGNMENT CHECKED	
	R.O.W. CHECKED	
	R.I. OF WAY CHECKED	



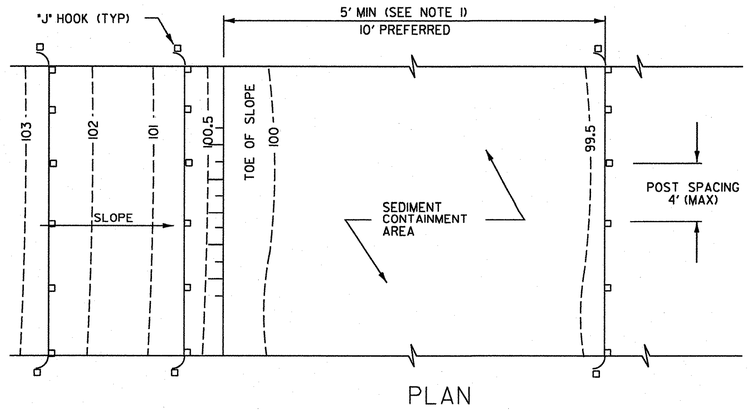
THE FINAL CONDITIONS SITE PLANS REFLECT THE FINISHED PRODUCT. ALL DISTURBED AREAS OUTSIDE OF THE ROADWAY, DRIVES, SIDEWALK, AND LANDSCAPED AREAS WILL BE STABILIZED AS DESCRIBED IN THE NARRATIVE.

NOTES:

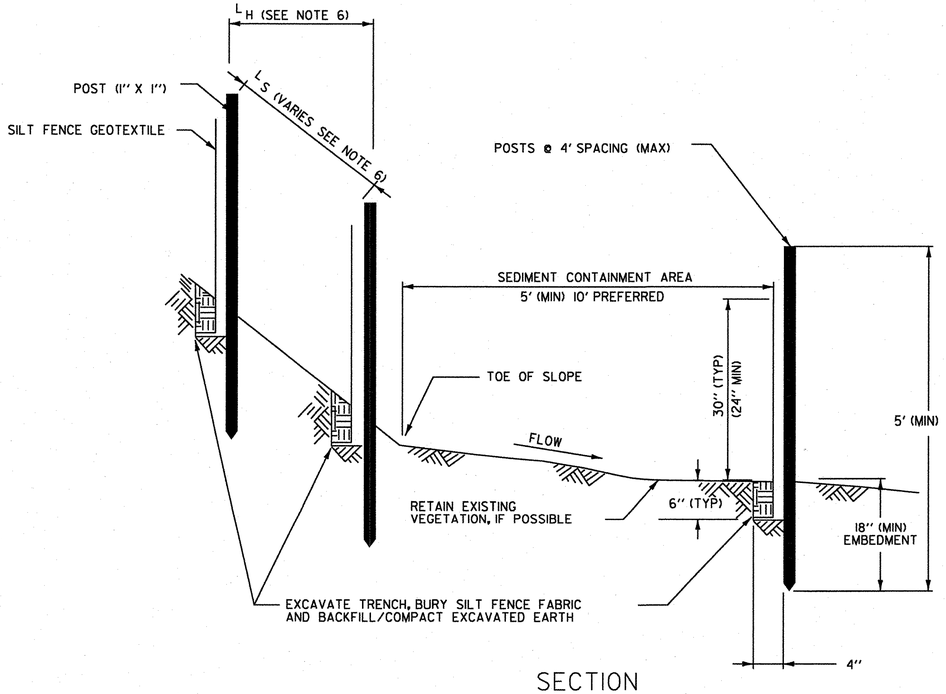
1. REFER TO THE CROSS SECTIONS FOR THE GRADE OF THE EXISTING AND PROPOSED CONDITIONS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 37
Highway No. VT ROUTE 15	Log Sta.
	Surv. Sta.
VT ROUTE 15 OVER THE GIHON RIVER	
EPSC - FINAL CONDITIONS SITE PLAN	
Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	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 29 Of 85



PLAN



SECTION

SILT FENCE - TEMPORARY

SILT FENCE

APPLICATION NOTES:

A. 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.

B. 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.

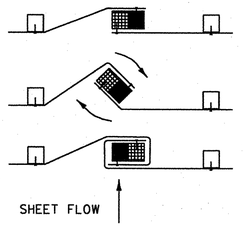
C. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

1. 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.
2. ALL ENDS SHALL BE "J" HOOKED TO TRAP SEDIMENT.
3. IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
4. THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6 INCHES BELOW GROUND, AND KEYED IN 4 INCHES. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
5. MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FEET OF SILT FENCE SHALL BE 0.25 ACRES.
6. 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

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 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.
9. 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.
10. PAYMENT FOR INSTALLATION AND REMOVAL OF SILT FENCE SHALL BE MADE UNDER THE GEOTEXTILE FOR SILT FENCE ITEM.
11. PAYMENT FOR MONITORING SILT FENCE SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
12. 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.



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

SPLICING DETAIL

REVISIONS AND CORRECTIONS

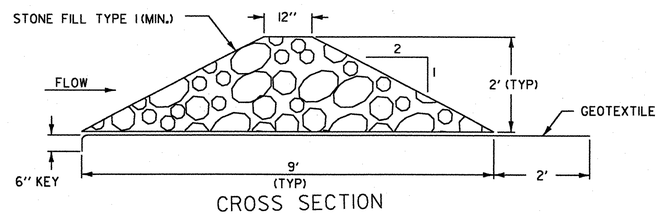
MAY 18, 2004 N. GARBACIK

EROSION PREVENTION & SEDIMENT CONTROL DETAILS SILT FENCE

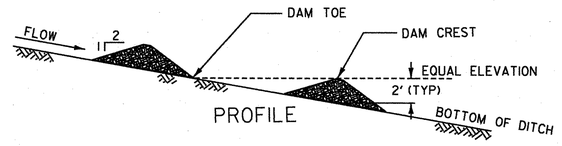
VERMONT AGENCY OF TRANSPORTATION

DETAIL

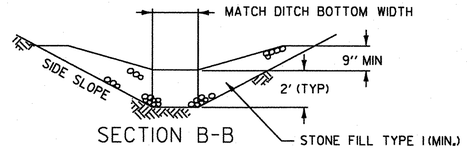
EPSC-1



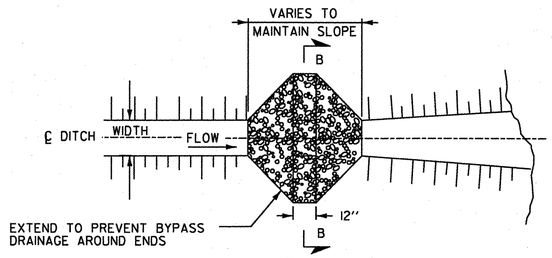
CROSS SECTION



PROFILE



SECTION B-B



PLAN

CHECK DAM - TEMPORARY
(STONE)

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

CHECK DAMS

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF A CHECK DAM IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY.

B. CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAM DUE TO DECREASED VELOCITY.

C. CHECK DAMS ARE NOT INTENDED TO FILTER SEDIMENT FROM TURBID WATER.

D. DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.

E. PREFABRICATED DAMS ARE NOT TO BE USED ON SLOPES GREATER THAN 5% OR PER MANUFACTURER'S SPECIFICATIONS.

F. PREFABRICATED DAM SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

1. 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.

2. CORE MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF STONE FILL TYPE I (MIN.). STONE SIZE SHOULD BE INCREASED WITH INCREASED SLOPE AND VELOCITY.

3. 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 MANUFACTURERS LITERATURE.

4. 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.

5. 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.

6. AT TIME OF REMOVAL OF THE CHECK DAMS, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.

7. PAYMENT FOR INSTALLATION AND REMOVAL OF CHECK DAMS SHALL BE MADE UNDER APPLICABLE ITEMS INCLUDED IN THE CONTRACT PLANS.

8. PAYMENT FOR MONITORING CHECK DAMS SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.

9. 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.

REVISIONS AND CORRECTIONS

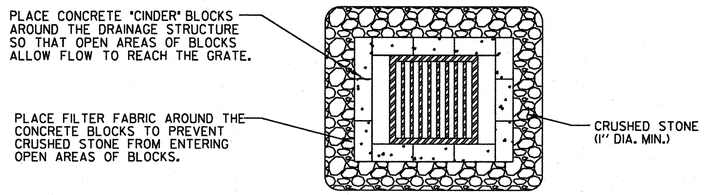
MAY 18, 2004 N. GARBACIK

EROSION PREVENTION & SEDIMENT CONTROL DETAILS CHECK DAMS

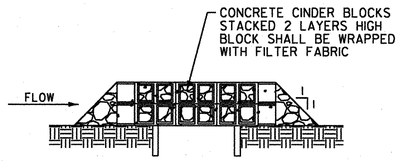
VERMONT AGENCY OF TRANSPORTATION

DETAIL

EPSC-2

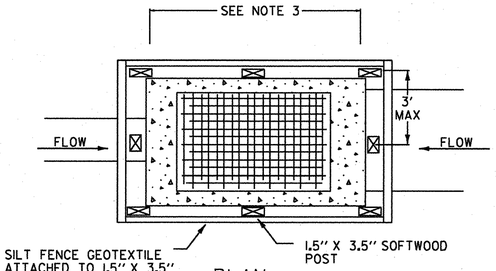


PLAN

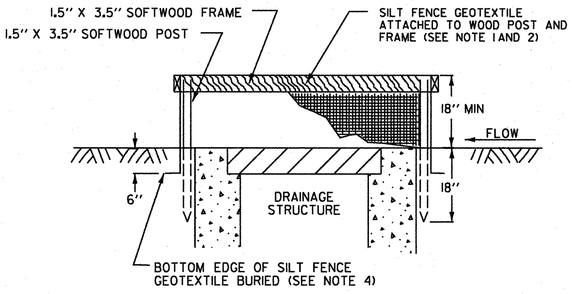


SECTION

ROCK BARRIER DROP INLET PROTECTION TEMPORARY PAVED AREAS

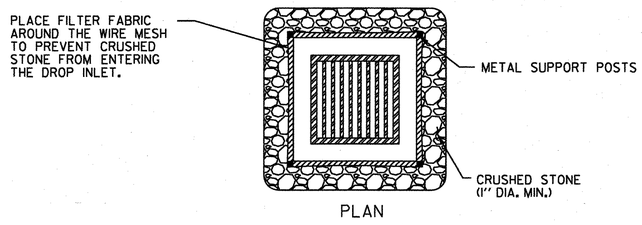


PLAN

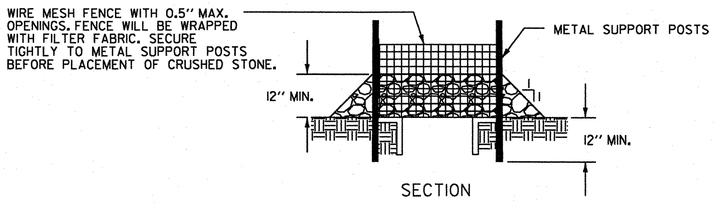


SECTION

SILT FENCE DROP INLET PROTECTION



PLAN



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

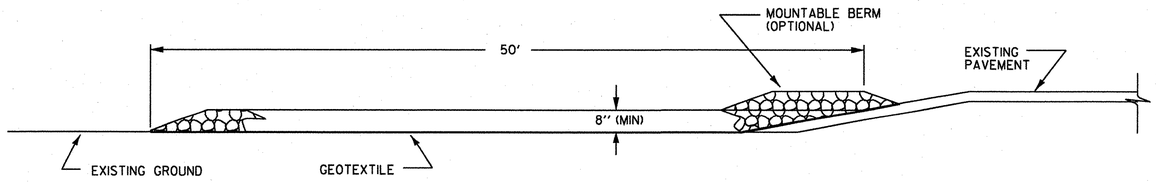
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EROSION PREVENTION & SEDIMENT CONTROL DETAILS DROP INLET PROTECTION

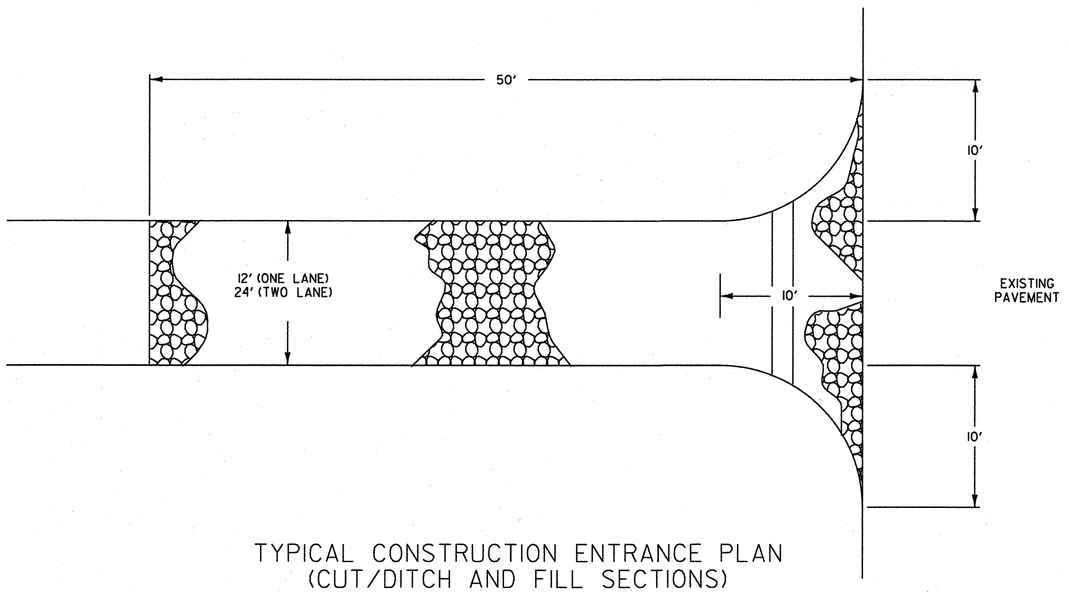
VERMONT AGENCY OF TRANSPORTATION

DETAIL

EPSC-3



TYPICAL CONSTRUCTION ENTRANCE PROFILE
(CUT AND DITCH SECTIONS)



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

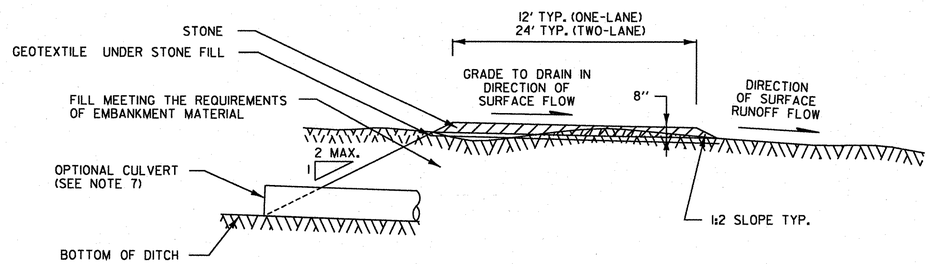
STABILIZED CONSTRUCTION ENTRANCE

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

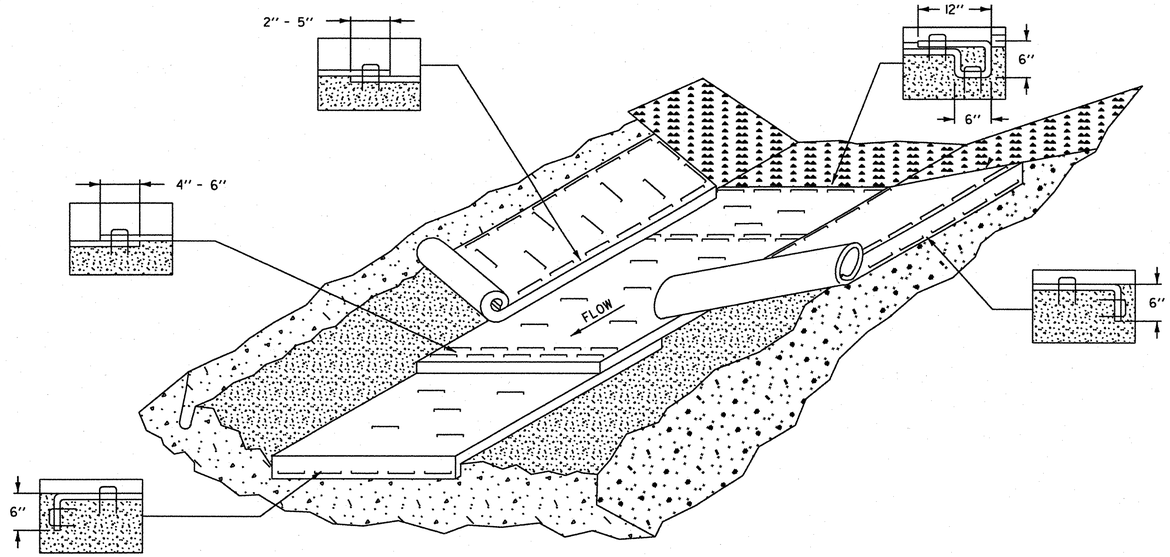
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EROSION PREVENTION & SEDIMENT CONTROL DETAILS CONSTRUCTION ENTRANCE

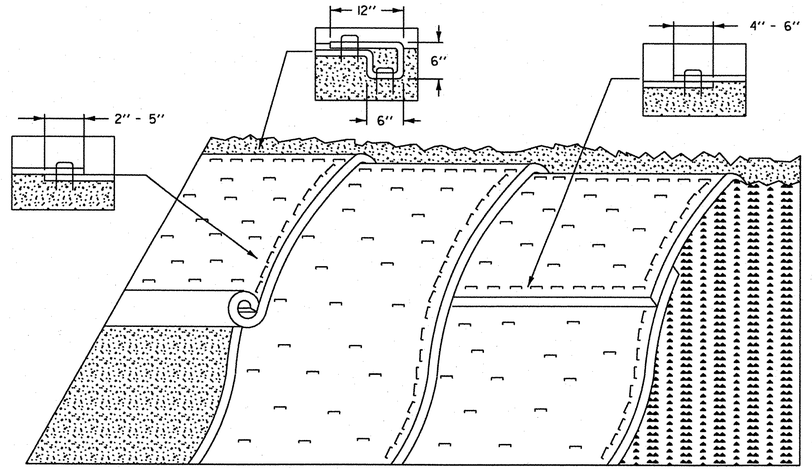
VERMONT AGENCY OF TRANSPORTATION

DETAIL

EPSC-4



EROSION PREVENTION FOR DITCHES



EROSION PREVENTION FOR SIDE SLOPES

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.

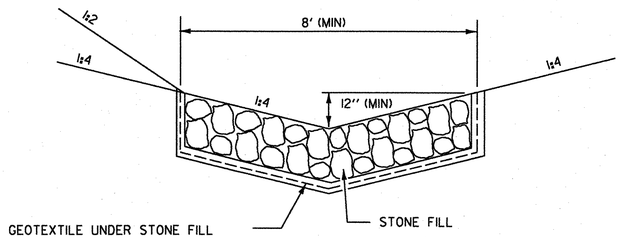
B. THE FOLLOWING CHARTS SHALL BE USED TO DETERMINE THE APPROPRIATE EROSION CONTROL MEASURE:

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 INTALLATION 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.



TEMPORARY
STONE LINED
DITCH

APPLICATION NOTES:

A. THE PURPOSE OF MATTING ON SIDE SLOPES IS TO REDUCE EROSION AND AID THE STABLISHMENT 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 INTALLATION 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.

REVISIONS AND CORRECTIONS

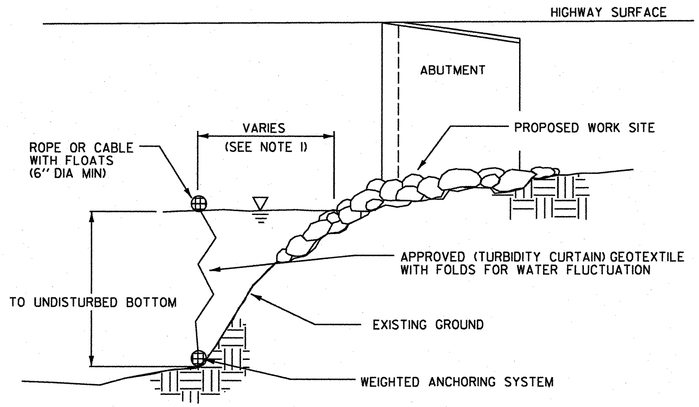
MAY 18, 2004 N. GARBACIK

EROSION PREVENTION & SEDIMENT CONTROL DETAILS DITCH & SLOPE PROTECTION

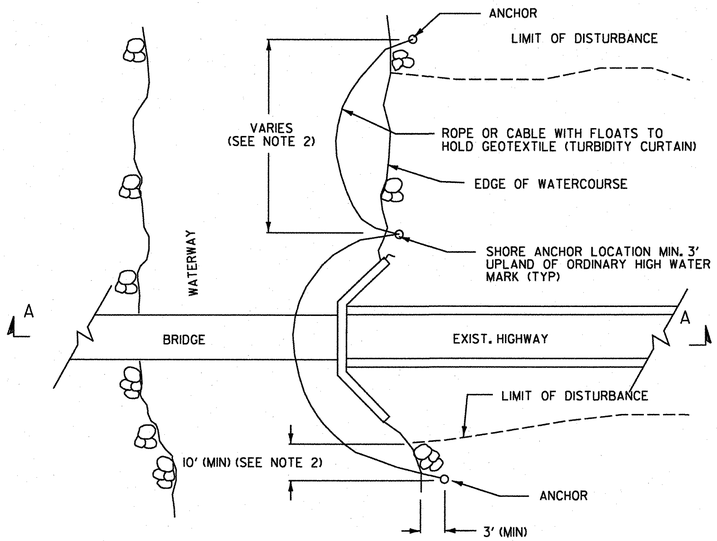
VERMONT AGENCY OF TRANSPORTATION

DETAIL

EPSC-5



SECTION A-A



PLAN

TURBIDITY CURTAIN - TEMPORARY

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 MINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

REVISIONS AND CORRECTIONS

MAY 18, 2004 N. GARBACIK

EROSION PREVENTION & SEDIMENT CONTROL DETAILS TURBIDITY CURTAIN

VERMONT AGENCY OF TRANSPORTATION

DETAIL

EPSC-6

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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

STA 30+50,LT — GOULD HILL RD / STOP — NEW (2)
STA 30+50,LT — STOP — REMOVE
STA 30+49,RT — LEGAL LOAD LIMIT 24,000 POUNDS / SPEED LIMIT 25 — NEW (2)
STA 30+49,RT — LEGAL LOAD LIMIT 24,000 POUNDS / SPEED LIMIT 25 — REMOVE (2)
STA 30+50,LT — GOULD HILL RD — REMOVE
STA 101+66,LT — NEW
STA 101+66,LT — REMOVE
STA 103+07,LT — REMOVE
STA 103+84,LT — NEXT 3,000 FT — REMOVE (2)
STA 103+84,LT — NEXT 3,000 FT — NEW (2)
STA 103+89,LT — BRIDGE 37 VT 15 — NEW
STA 103+80,LT — REMOVE
STA 104+12,LT — RODNEY F. VIEUX ATTORNEY — REMOVE & RETURN TO OWNER
STA 105+70,LT — 1 A.M. - 6 A.M. NOV. 1 - APR. 15 / END / 2 HR PARKING 8:00 AM TO 8:00 PM — REMOVE (4)
STA 105+70,LT — 1 A.M. - 6 A.M. NOV. 1 - APR. 15 / END / 2 HR PARKING 8:00 AM TO 8:00 PM — NEW (4)
STA 99+95,LT — SPEED LIMIT 35 / NO PARKING ON TRAVELED LANES — RETAIN
STA 99+75,RT — HIDDEN DRIVE RIGHT — RETAIN
STA 101+76,RT — SPEED LIMIT 25 — NEW
STA 101+76,RT — SPEED LIMIT 25 — REMOVE
STA 102+63,RT — SALVAGED (3) — T.I.S. / T.I.S. / T.I.S.
STA 102+63,RT — R&S (3) — T.I.S. / T.I.S. / T.I.S.
STA 102+81,RT — BRIDGE 37 VT 13 — NEW
STA 103+07,RT — REMOVE
STA 103+81,RT — REMOVE
STA 104+45,RT — REMOVE (4) — 1 A.M. - 6 A.M. NOV. 1 - APR. 15 / BEGIN / 2 HR PARKING 8:00 AM TO 8:00 PM
STA 104+45,RT — NEW (4) — 1 A.M. - 6 A.M. NOV. 1 - APR. 15 / BEGIN / 2 HR PARKING 8:00 AM TO 8:00 PM
STA 104+76,RT — NEW (2) — DO NOT ENTER / ONE WAY
STA 104+80,RT — REMOVE — DO NOT ENTER
STA 105+27,RT — REMOVE — DO NOT ENTER
STA 105+33,RT — NEW (2) — DO NOT ENTER / ONE WAY
Ⓐ SALVAGED (2) — ENTRANCE — STA 105+30,RT / STA 105+87,RT
Ⓑ R&S (2) — ENTRANCE — STA 105+24,RT / STA 105+94,RT

TH 37
N 46°25'30" W
31
R45'
R18'
30' R
DDYL
DSWL
EXISTING ROW
NEW
EXISTING ROW
N 54°54'30" E
VT ROUTE 15
TO CAMBRIDGE
POC = 100+00.01
PT = 102+19.33
EXIST. STRIPING
EXIST. STRIPING
102
103
104
VT ROUTE 15
105
N 90°00'00" E
106
101
COMBO SERVICE DROP #16
UP
SEWER M.H.
OVERFLOW
12" TRANSITE
SIPHON OUTLET CHAMBER
SIPHON INLET CHAMBER
SMH
12" TRANSITE
4" C.I. WATER
4" TRANSITE
8" TRANSITE
8" PVC
6" C.I.
#1
#2
HVCTRL
GMP 15
GMP 7524
GMP 7525
GMP 7526
GMP 7527
GMP 7528
GMP 7529
GMP 7530
GMP 7531
GMP 7532
GMP 7533
GMP 7534
GMP 7535
GMP 7536
GMP 7537
GMP 7538
GMP 7539
GMP 7540
GMP 7541
GMP 7542
GMP 7543
GMP

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 / 2.30	2.0 / 2.65	2.5 / 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 / 1.3	4.0 / 1.7	4.0 MOD / 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAMED REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
STA 101+66 LT		1	30"	30"	6.25						1			14' X		X		X															W11-8		
STA 101+76 RT	SPEED LIMIT 25	1	24"	30"	5.00						1			14' X		X		X															R2-1		E-142
STA 102+63 RT	T.I.S.	1	72"	16"			1																2	10 11" X 10 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
	T.I.S.	1	72"	16"			1																												E-125
	T.I.S.	1	72"	16"			1																												E-125
STA 102+81 RT	BRIDGE 37 VT 15	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		
	NEXT 3,000 FT	1	24"	18"	3.00																												W16-4		
STA 103+89 LT	BRIDGE 37 VT 15	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 A.M. - 6 A.M. NOV. 1 - APR. 15	1	12"	6"	0.50																												R8-3E	19	
	BEGIN	1	12"	8"	0.67																												M4-11	19	
	2 HR PARKING 8:00 AM TO 8:00 PM	1	12"	18"	1.50																												R7-108	19	
STA 104+76 RT	DO NOT ENTER	1	30"	30"	6.25						1			14' X		X		X															R5-1		E-143
	ONE WAY	1	36"	12"	3.00																												R6-1R		E-142
												LF	LF	LF 85 90	LF	LF 85	LF	LF	LF	LB	LB	LB		LB 247	LB	LB	LB								
TOTALS					SF 34.08	SF	EA. 3	SF				LF		85 90	LF		85				LB			EA. 2		LB 169.1 LBS				EA.	EA.	LB				
																									247										

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."

PROJECT: JOHNSON	PROJECT NO. : BRF 030-2(17)S
DESIGN FILE NAME: 91296SGN.dwg	
IPARM FILE NAME:	PLOT DATE:
SURVEYED BY: N/A	SURVEY DATE: N/A
SQUAD LEADER: JAW	DRAWN BY: SMC
	SHEET: 38 OF 85

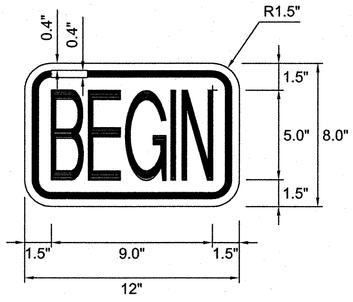
STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

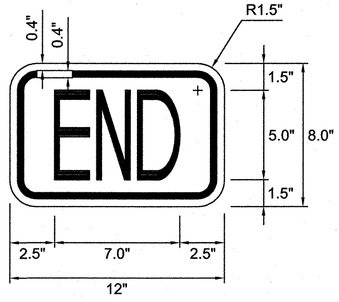
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																					SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLIP SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			FOUND-ATION	TUBULAR STEEL Ø (in) lb/ft				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN REFRAMED	REMARKS	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.12	2.0	3.0	1.75	2.0	2.5			3.0	4.0	4.0 MOD		7.6	9.0	10.8	14.6	24"	30"						
															2.30	2.65	3.35			1.3	1.7	1.7													
STA 105+30 RT	ENTRANCE	1	24"	6"			1			X																								
STA 105+33 RT	DO NOT ENTER	1	30"	30"	6.25						1			14' X		X		X														R5-1		E-143
	ONE WAY	1	36"	12"	3.00																											R6-1L		E-142
STA 105+70 LT		1	12"	12"	1.00						1			X		X		X														R8-3a		E-143
	1 A.M. - 6 A.M. NOV. 1 - APR. 15	1	12"	6"	0.50																											R8-3e	19	
	END	1	12"	8"	0.67																											M4-12	19	
	2 HR PARKING 8:00 AM TO 8:00 PM	1	12"	18"	1.50						1			16' X		X		X														R7-108	19	
STA 105+87 RT	ENTRANCE	1	24"	6"			1			X																								
GOULD HILL STA 30+49 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24"	30"	5.00						1			16' X		X		X														VR-017		E-141
	SPEED LIMIT 25	1	24"	30"	5.00																											R2-1		E-142
STA 30+50 LT	STOP	1	30"	30"	6.25						1			X 14'		X		X														R1-1		E-143
	GOULD HILL RD	1	36"	6"	1.50		1																									D3-1 SIGN TO BE INSTALLED USING TOP MOUNTING BRACKET, MOUNTED 12" FROM AND PERPENDICULAR TO TOP OF STOP SIGN		E-123
												LF	LF	LF 58	LF	LF 58	LF	LF	LF	LB	LB	LB		LB	LB	LB	LB						
SHEET TOTALS		SF 30.67	SF	EA. 3	SF							LF 58			LF 58					LB			EA.	LB				EA.	EA.	LB			
PROJECT TOTALS		64.75		6								~~145~~ 150			145								2	~~247~~ 169.1									

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."

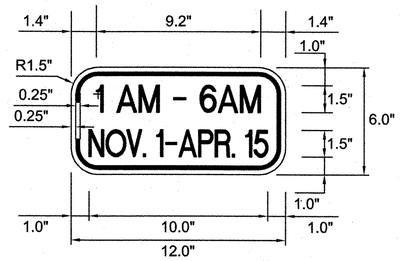
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DESIGN FILE NAME: 91296SGN.dwg	
IPARM FILE NAME:	
SURVEYED BY: N/A	PLOT DATE:
SQUAD LEADER: JAW	SURVEY DATE: N/A
	DRAWN BY: SMC
	SHEET: 39 OF 85



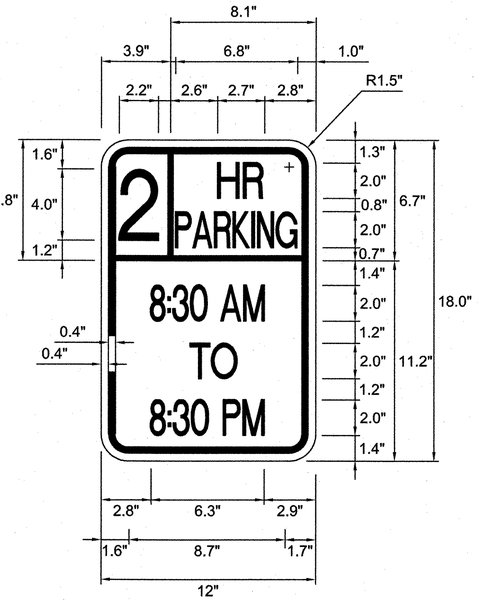
M4-11
(RED TEXT ON WHITE BACKGROUND)



M4-12
(RED TEXT ON WHITE BACKGROUND)



R8-3e
(RED TEXT ON WHITE BACKGROUND)



R7-108
(RED TEXT ON WHITE BACKGROUND)

GRAPHIC SCALE

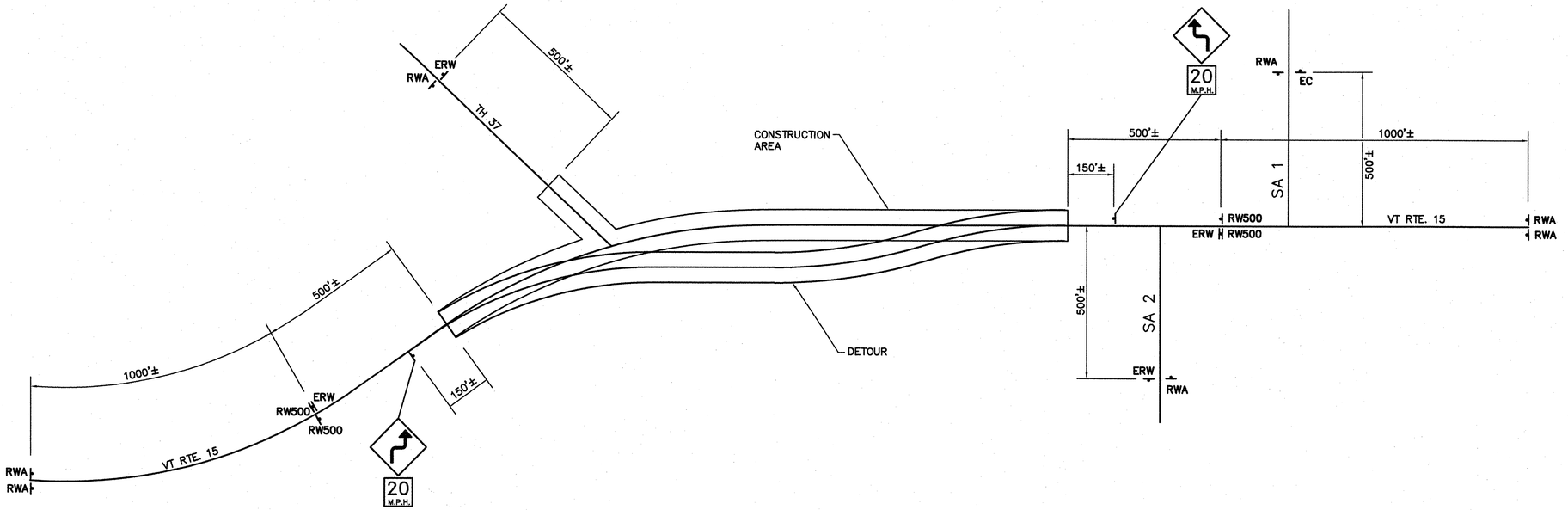
6 3 0 6 12 18

SCALE IN INCHES

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	
SIGN DETAIL SHEET	
Designed By T. Starr	Drawn By. T. Starr
Checked By Date J. Warner	Bridge Design Supervisor J Byatt Date
PROJECT **JOHNSON**	PROJECT NO. **BRF 030-2(17)S**
I.G.C. Info.	
Bridge Sheet No.	Sheet 40 Of 85

PLAN	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK ALIGNMENT CHECKED		
NO. R/L OF WAY CHECKED		



APPROACH SIGNING

NOT TO SCALE

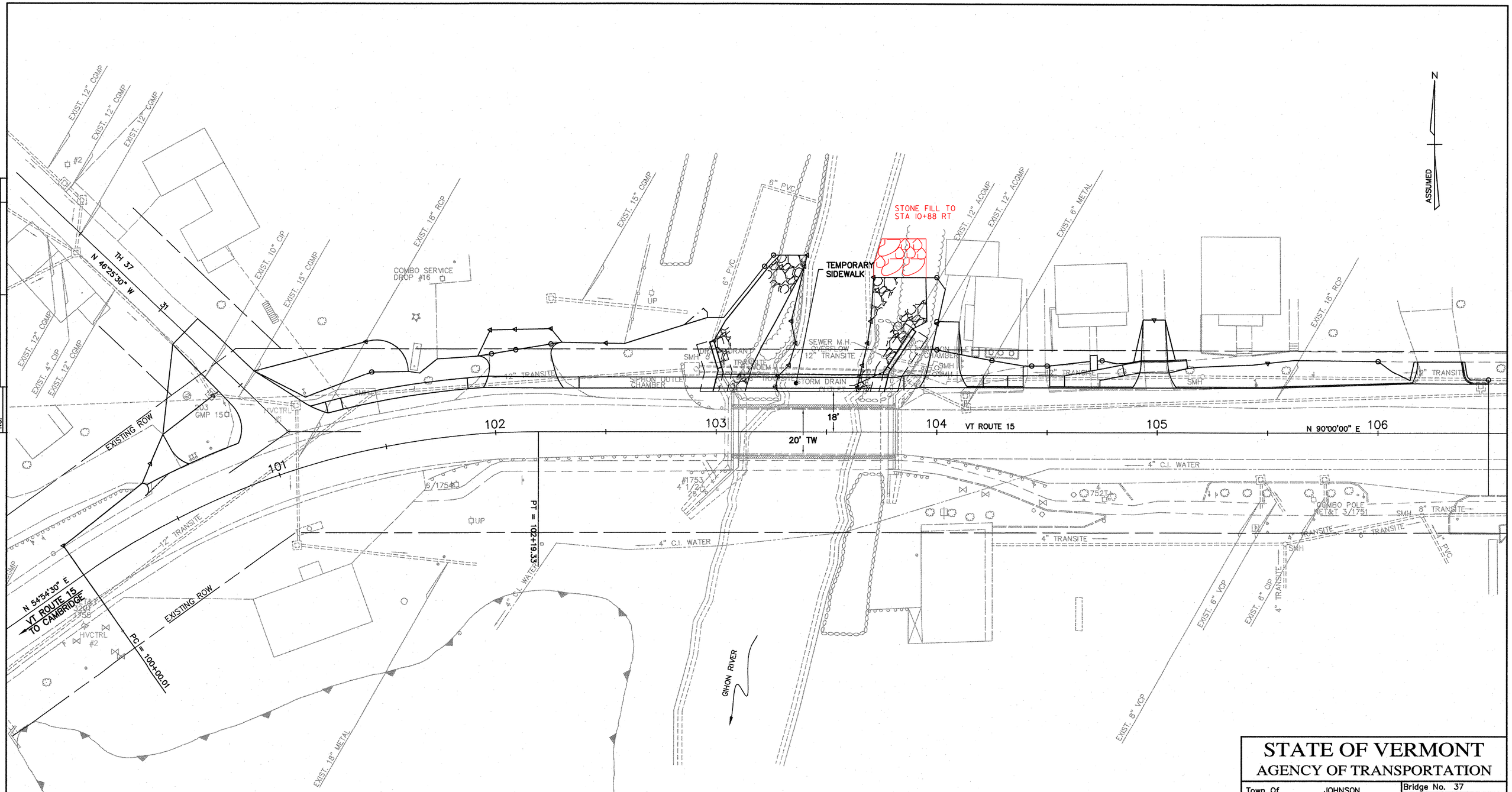
NOTE:
SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS WILL BE LOCATED IN THE FIELD BY THE ENGINEER OR AS INDICATED IN THE STANDARD DETAILS.

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 GIHON RIVER	
CONSTRUCTION APPROACH SIGNING	
Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	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 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.

SCALE: IN FEET
0 20 40

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 J. Warner Date 11/06	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 42 Of 85

NOTES:

1. 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.
2. 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.
3. 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.
4. SEE BRIDGE PRELIMINARY INFORMATION SHEET FOR TEMPORARY BRIDGE HYDRAULIC OPENING REQUIREMENTS.
5. ALL TEMPORARY STRIPING IS TO BE REMOVED UPON COMPLETION OF PHASE 2 CONSTRUCTION.
6. 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.
7. 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.
8. BARRIER USED IN MISCELLANIOUS AREAS IS INCLUDED IN PAY ITEM TEMPORARY TRAFFIC BARRIER. PRIOR APPROVAL BY THE ENGINEER IS REQUIRED FOR USE OF BARRIER IN MISCELLANEOUS AREAS.
9. 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.
10. 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.
11. ALL SIGNS THAT ARE NOT BEING USED SHALL BE COVERED APPROPRIATELY.
12. 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.
13. 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.
14. CARE SHOULD BE GIVEN TO THE BUSINESSES LOCATED ALONG THE PROJECT ROUTE. ACCOMMODATIONS TO ALLOW CUSTOMERS TO ACCESS BUSINESSES THOUGH THE PROJECT AREA WILL NEED TO BE DEVELOPED.
15. 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.
16. TYPE III BARRICADE WITH SIGNAGE TO GUIDE TRAFFIC THOUGH 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.

N

ASSUMED

DATE | BY | PLAN SURVEYED | PLOTTED | ALIGNMENT CHECKED | R.T. OF WAY CHECKED | NOTE BOOK | NO.

TEMPORARY 24" STOP BAR
TYPE III BARRICADES W/ ROAD CLOSED & ARROW RIGHT SIGN
G-1d TERMINAL
TEMPORARY TRAFFIC BARRIER
G-1d TERMINAL (TYP.)
TEMPORARY DOUBLE YELLOW LINE W/ RAISED PAVEMENT MARKINGS
TEMPORARY 4" WHITE LINE W/ RAISED PAVEMENT MARKINGS
REMOVE EXISTING STRIPING STA 100+00 – 101+50
TEMPORARY BRIDGE APPROACH BARRIER (TYP.)
DRAINAGE CONSTRUCTION LIMITS
TEMPORARY SIDEWALK
TYPE III BARRICADES W/ ROAD CLOSED & ARROW LEFT SIGN
TEMPORARY DRIVEWAY FOR HOUSE @ STA 104+25 LT
REFLECTORIZED PLASTIC DRUM (TYP.)
SEE NOTE #1
REMOVE EXISTING STRIPING STA 104+25 – 105+88
STA. 106+63 RT
STA. 106+63 LT
CITGO
STA 104+02,RT
STONE FILL, TYPE IV
DETOUR CONSTRUCTION LIMITS
DETOUR CONSTRUCTION LIMITS
EXTEND PIPE AND/OR CHANNEL (SUBSIDIARY TO ITEM 641.10)

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.

SCALE: IN FEET
0 20 40

STATE OF VERMONT
AGENCY OF TRANSPORTATION

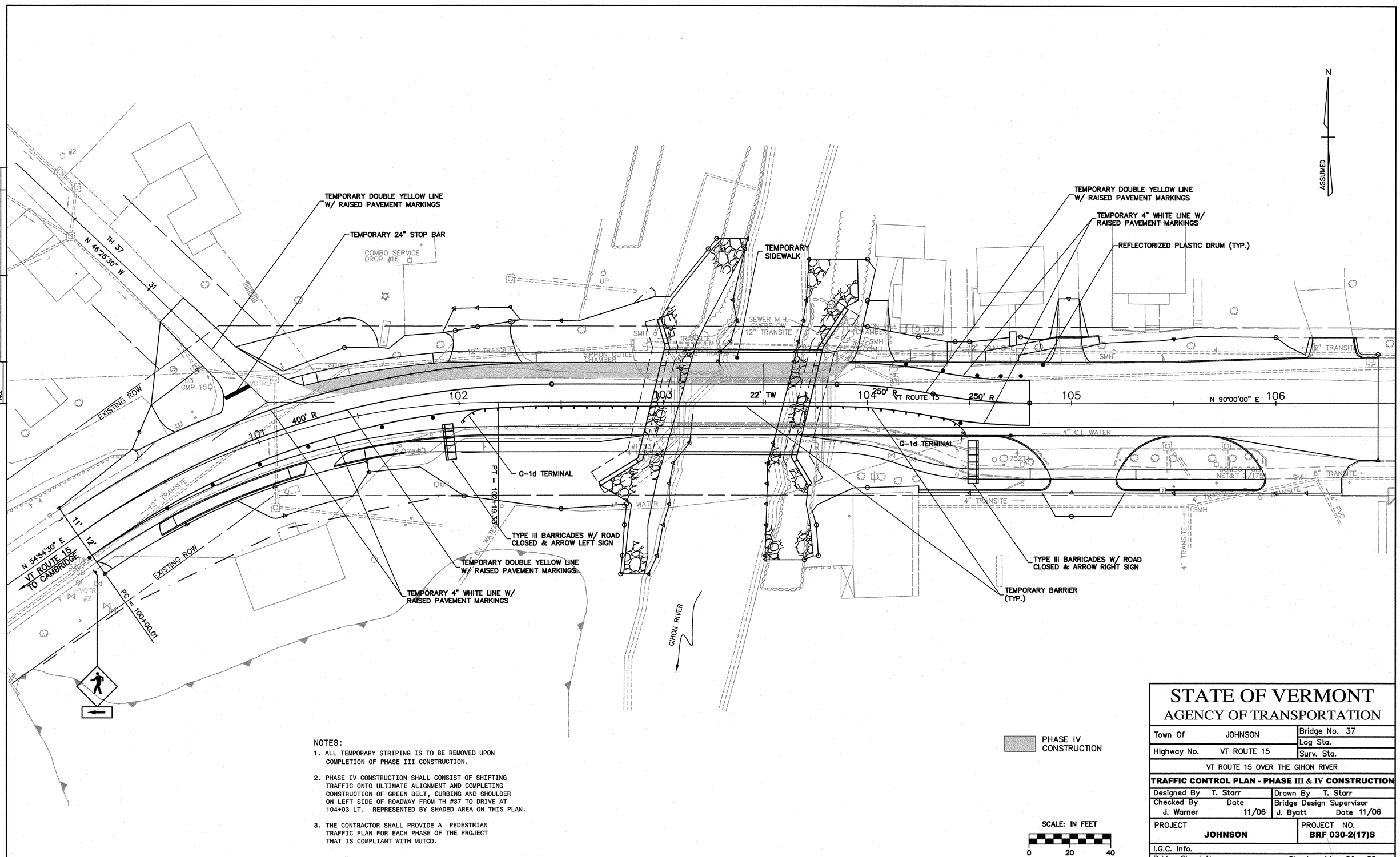
Town Of JOHNSON	Bridge No. 37
Highway No. VT ROUTE 15	Log Sta.
	Surv. Sta.

VT ROUTE 15 OVER THE GIHON RIVER

TRAFFIC CONTROL PLAN - PHASE II CONSTRUCTION

Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	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 43 Of 85

PLAN	BY	DATE
NOTE BOOK	SURVEYED	
NO.	ALIGNMENT CHECKED	
	RT. OF WAY CHECKED	



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

SCALE: IN FEET
0 20 40

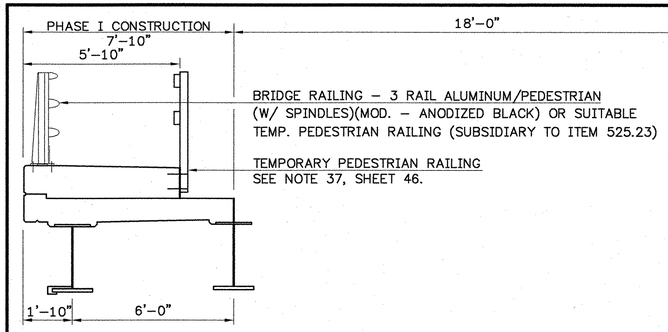
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 37
	Log Sta.
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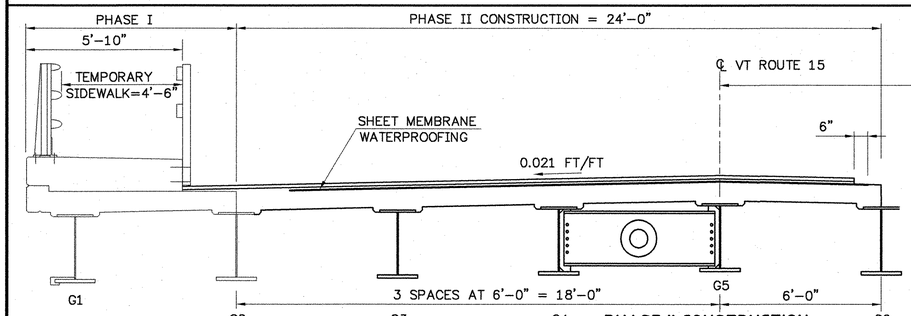
VT ROUTE 15 OVER THE GIHON RIVER

TRAFFIC CONTROL PLAN - PHASE III & IV CONSTRUCTION

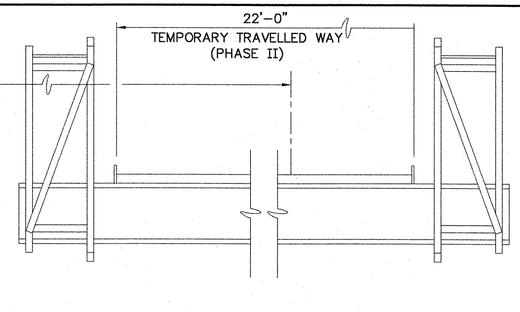
Designed By T. Starr	Drawn By T. Starr
Checked By J. Warner Date 11/06	Bridge Design Supervisor J. Byatt Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.	
Bridge Sheet No.	Sheet 44 Of 85



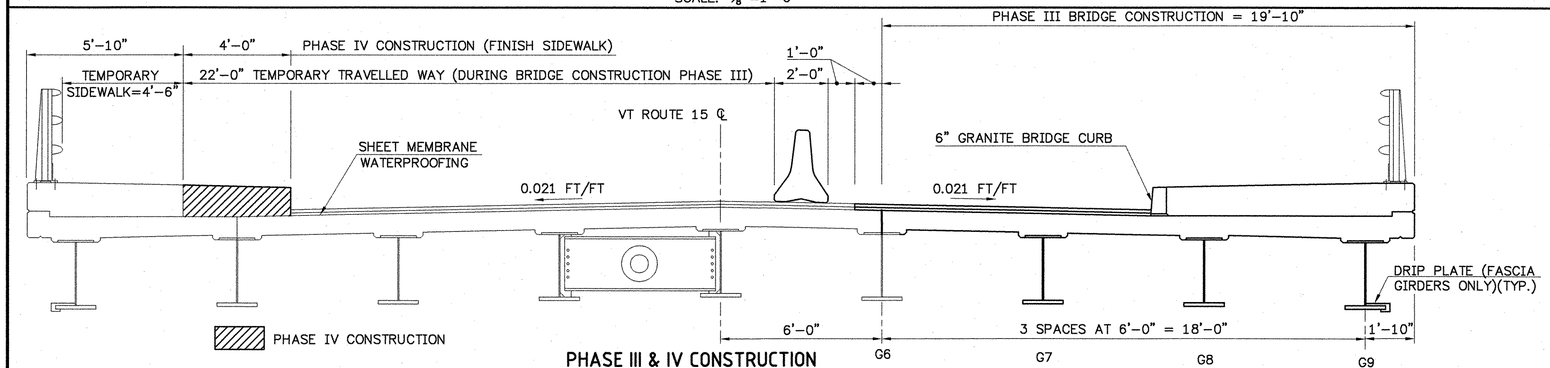
PHASE I CONSTRUCTION
SCALE: ⅜"=1'-0"



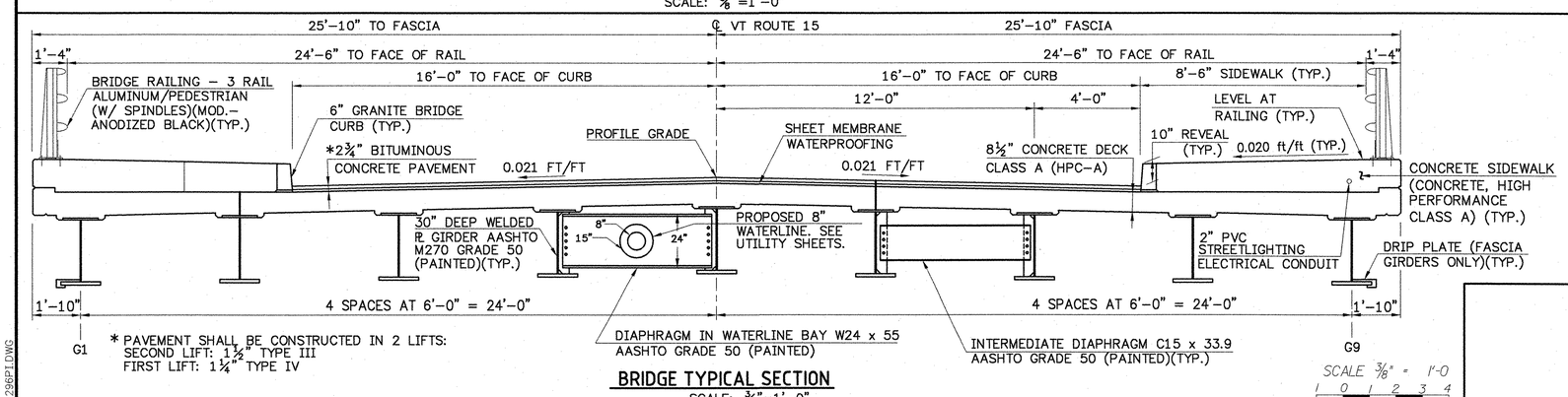
PHASE II CONSTRUCTION
SCALE: ⅜"=1'-0"



PHASE II TEMPORARY BRIDGE



PHASE III & IV CONSTRUCTION
SCALE: ⅜"=1'-0"



* PAVEMENT SHALL BE CONSTRUCTED IN 2 LIFTS:
SECOND LIFT: 1½" TYPE III
FIRST LIFT: 1¼" TYPE IV

BRIDGE TYPICAL SECTION
SCALE: ⅜"=1'-0"

SCALE ⅜" = 1'-0
0 1 2 3 4

HYDRAULIC DATA

1. DRAINAGE AREA 65 SQ.MI.
   CHARACTER OF TERRAIN STEEPLY 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 (497.72) = 14.7 fps (8.1 fps)
8. LONG TERM STREAM BED CHANGES: SINUOUS STREAM
9. IS THE ROADWAY OVERTOPPED BELOW THE Q100? NO FREQUENCY: SEE NOTE 2
10. RELIEF ELEVATION: SEE NOTE 2 DISCHARGE OVER ROAD @Q100: (1339 cfs)

PROPOSED STRUCTURE

STRUCTURE GEOMETRY:

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 2.33 486.38 @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 Q100? 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 ABUTMENT NO. 1 = 30 ft
   ASTM A36 (GRADE 36 STEEL) 192.6 KIPS TYPE HP 14 X 73 AVERAGE LENGTH ABUTMENT NO. 2 = 40 ft
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:

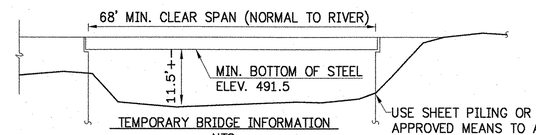
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE YES, DURING PHASE I
   OR ON TEMPORARY BRIDGE YES, DURING PHASE II
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED NO (SEE SKETCH BELOW)
   MINIMUM CLEAR SPAN SEE SKETCH BELOW MINIMUM CLEAR HEIGHT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



TEMPORARY BRIDGE INFORMATION
NTS

LOAD FACTOR LOAD RATING (TONS)

LOAD LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A.STR.	5A.SEMI
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	

REVISIONS		
NO.	DESCRIPTION	BY & DATE

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

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
I.G.C. Info.			
Bridge Sheet No.		Sheet 45	Of 85

91296PT.DWG

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, ⅞" DIAMETER, TYPE I BOLTS MEETING THE REQUIREMENTS OF AASHTO M164 (ASTM A325) HOLES SHALL BE $^{15}/_{16}$" 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: 2½" MIN. COVER FOR TOP REINFORCING, AND 1½" MIN. COVER FOR BOTTOM REINFORCING.

14. REINFORCING PLACEMENT TOLERANCES SHALL BE: SPACING +/– 1" CLEARANCE +/–¼" 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 ½" 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 ⅓ 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.

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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 GIHON RIVER
GENERAL NOTES

Designed By	R. RICARD	Drawn By	D. DUGAL/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 46	Of 85

9196P1.DWG

BRIDGE QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

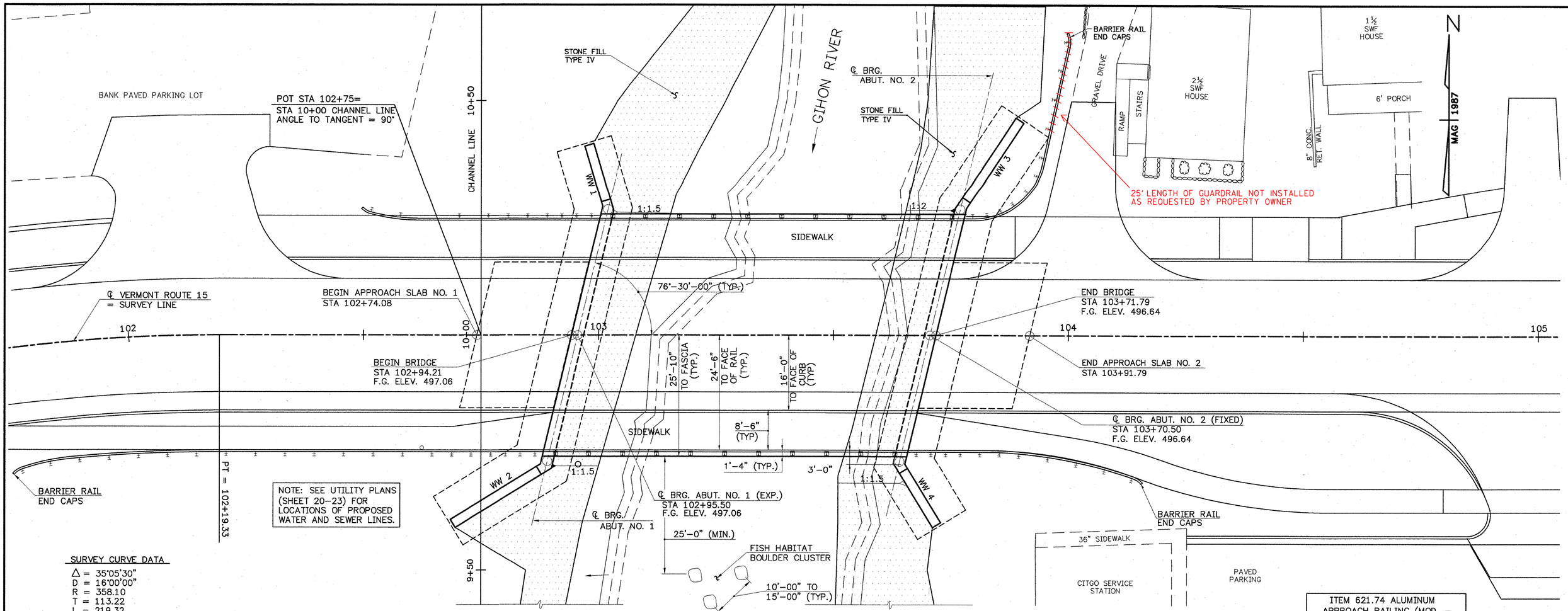
ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN: BRIDGE ALT. 1	BRIDGE ALT. 2	SUPER-STRUCT.	ABUT. NO. 1	ABUT. NO. 2	APPR. SLAB NO. 1	APPR. SLAB NO. 2	CHANNEL	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CY				830	430				1,260	
203.32	GRANULAR BORROW	CY				20	20				40	
204.30	GRANULAR BACKFILL FOR STRUCTURES	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								
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
CHECKED BY: B.WELCH/ S. BEAUMONT
CLD PROJECT MANAGER: J. BYATT

PROJECT: JOHNSON
BR 37
PROJECT NO: BRF 030-2(17) S
SHEET NO: 47 OF 85

90286BRQTY (1=1)

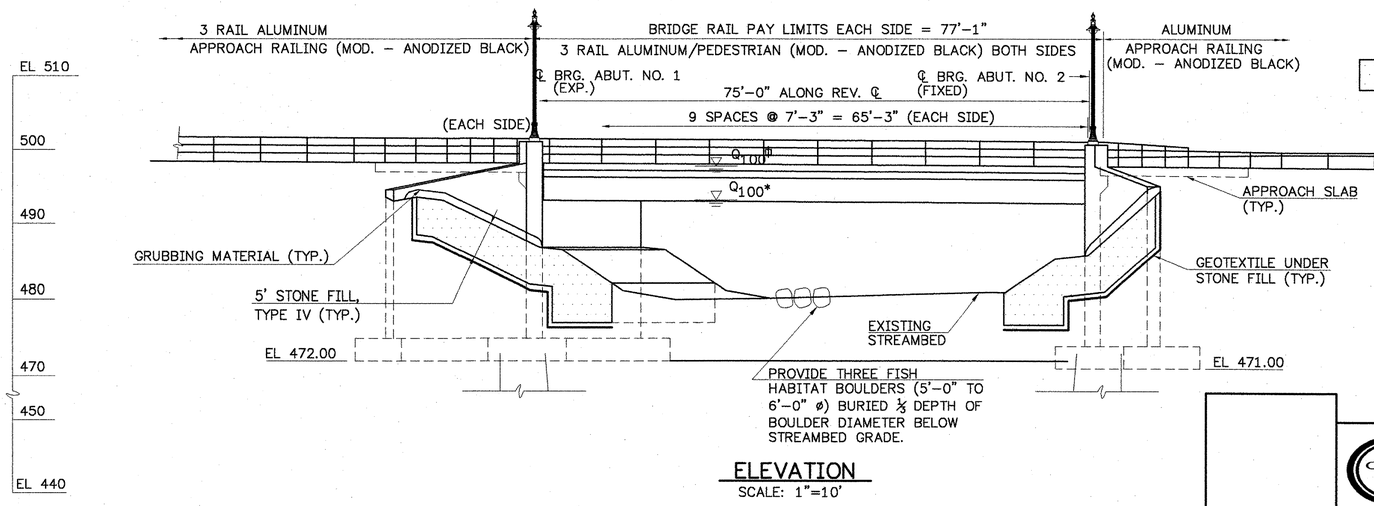


NOTE: SEE UTILITY PLANS (SHEET 20–23) FOR LOCATIONS OF PROPOSED WATER AND SEWER LINES.

PLAN
SCALE: 1"=10'

SURVEY CURVE DATA
- △ = 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.

SEE WATER AND SEWER DETAIL SHEETS FOR ADDITIONAL UTILITY RELOCATION REQUIREMENTS.



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.

ф 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.

10 0 5 10
GRAPHIC SCALE
1 inch = 10 ft.

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.

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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 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	

91296PE.DWG

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) N	DESCRIPTIVE TERM	CONSISTENCY (COHESIVE SOILS) 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
O	ROD SOUNDING
S	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.

BOULDER – A rock fragment with an average dimension > 12 inches.

COBBLE – Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL – Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND – Particles of rock < 0.0787" (#10 sieve) and > 0.0029"(#200 sieve).

SILT – Soil < 0.0029"(#200 sieve), non or slightly plastic and exhibits no strength when air–dried.

CLAY – Fine grained soil, exhibits plasticity when moist and consider–able strength when air–dried.

VARVED – Alternate layers of silt and clay.

HARDPAN – Extremely dense soil, cemented layer, not softened when wet.

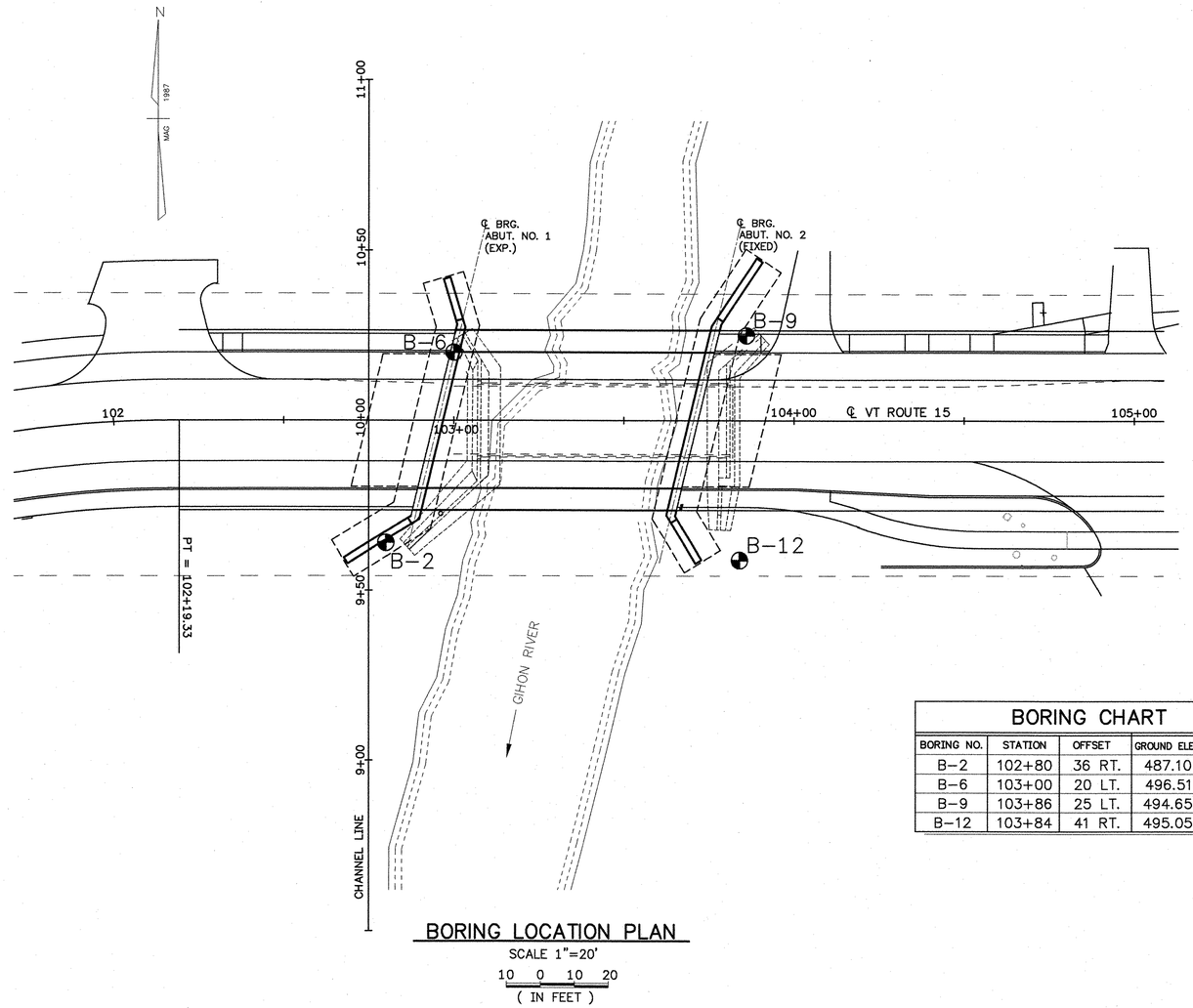
MUCK – Soft organic soil (containing > 10% organic material).

MOISTURE CONTENT – Weight of water divided by dry weight of soil.

FLOWING SAND – Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE – Angle from magnetic north to line of intersection of bed with a horizontal plane.

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

1. The subsurface explorations shown herein were made between 12–10–92 and 01–06–93 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on 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.
3. 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.
4. 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.
5. 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.

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

VT. ROUTE 15 OVER GIHON RIVER

BORING INFORMATION SHEET

Designed By R.RICARD	Drawn By. D.DUGAL
Checked By Date B.WELCH/R.ROONEY 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 49 Of 85

91296BORING.DWG

Johnson BRF 030-2(17)S

BORING NO. B-2

ELEV. 487.10'

DEPTH	BLOWS ON CASING	STANDARD PENETRATION	SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL	
	3			M	BRN	A-4 SiSa Rec 0.1	W=46.1
	5			MTW	BRN	A-1-b GrSa Rec 0.4	W=17.5
	31			W	BRN	A-1-a SaGr Rec 0.8	W=11.3
	28			W	BRN	A-1-a SaGr Rec 0.7 No Rec	W=12.8
10	13						
	24			MTW	BRN	A-1-b SaGr Rec 0.8	W=13.3
	10			MTW	BRN	A-2-4 Sa Rec 1.1	W=24.1
ELEV. 472.00 Abut. #1 Bottom of footing	11			W	GRY	A-4 SaSi Rec 1.5	W=32.1
	9			W	GRY	A-4 Si Rec 1.2	W=32.6
	17			W	GRY	A-4 Si Rec 1.0	W=24.8
20	36			MTW	GRY	A-4 GrSi Rec 0.2	W=17.5
	40					A-4 GrSi Rec 0.6	W=21.3
	52					No Rec	
30	48			M	GRY	A-4 Si Rec 1.1	W=25.5
	17			W	GRY	A-4 Si Rec 1.4	W=27.8
Pile Tip 40	R			MTW	GRY	A-1-b SaGr Rec 0.7	W=7.4
						Top of bedrock @40.5'	
						Run 1: BXDC 40.5-43.5 Rec 2.0	
						Run 2: BXMDC 43.5-48.5 Rec 4.5	
						Run 3: BXMDC 48.5-51.5 Rec 0.9	
50						Hole stopped @ 51.5' in bedrock.	
60						Core consists of black, moderately soft, quartz-sericite phyllite and schist. The rock is unweathered and competent.	
70						RUN REC ROD 1 67% 0 2 90% 56% 3 30% 15%	
80							
90							
100							

Johnson BRF 030-2(17)S

BORING NO. B-6

ELEV. 496.51

DEPTH	BLOWS ON CASING	STANDARD PENETRATION	SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL	
	9			M	BRN	A-1-b GrSa Rec 1.1	W=12.2
10	12			MTW	BRN	A-1-b GrSa Rec 1.0	W=11.7
	4					No Rec	
20						Wood Cribbing 18.5-19.0'	
						Concrete 19.0-22.5'	
ELEV. 472.00 Abut. #1 Bottom of footing	51			MTW	GRY	A-4 SaGrSi Rec 0.7	W=17.8
30	28			M	GRY	A-4 Si Rec 1.0	W=26.8
	26			M	GRY	A-4 Si Rec 1.1	W=25.5
40	30			MTW	GRY	A-2-4 SiSa Rec 1.1	W=26.7
	19			MTW	GRY	A-4 Si Rec 1.2	W=31.7
Pile Tip 50	R			W	BLK/GRY	A-1-a SaGr Rec 0.6	W=12.9
						Top of bedrock @51.0' Broken soft ledge 51-52'	
						Run 1: BXMDC 52.0-57.0 Rec 5.0	
						Run 2: BXMDC 57.0-62.0 Rec 4.9'	
						See Geologist Report	
60						Hole stopped @ 62.0' in bedrock	
70						RUN REC ROD 1 100% 84% 2 98% 90%	
80						Core consist of black, moderately soft, quartz-sericite phyllite and schist. The rock is unweathered and competent overall.	
90							
100							

Johnson BRF 030-2(17)a

BORING NO. B-9

ELEV. 494.65'

DEPTH	BLOWS ON CASING	STANDARD PENETRATION	SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL	
						Ground level @ 2.0 Elevation 494.65	
	WH					No Rec	
10	16			MTW	BRN	A-1-b SaGr	W=11.6
	R			MTW	BRN	A-3 Sa Rec 0.1	W=24.0
						Woodcribbing 15.5-16 Stone & Gravel	
20							
ELEV. 471.00 Abut. #2 Bottom of footing	14			MTW	BRN	A-4 Si Rec 0.6	W=28.8
30	40			M	GRY	A-4 SaSi Rec 1.1	W=24.9
	16			W	GRY	A-2-4 SiSa Rec 1.1	W=22.6
40	18			W	GRY	A-4 GrSi Rec 1.1	W=31.0
	32			W	GRY	A-4 SaSi Rec 1.5	W=24.9
50	R					No Rec	
Pile Tip	R					Top bedrock @ 56.0'	
						Run 1: BXMDC 56.0-60.0 Rec 3.3	
						Run 2: BXMDC 60.0-65.0 Rec 3.7	
						See geologist report	
60						Hole stopped @ 65.0' in bedrock	
70						Run REC ROD 1 83% 20% 2 74% 40%	
80						Core consists of black, moderately soft, quartz-sericite phyllite and schist. The rock is unweathered and competent overall.	
90							
100							

Johnson BRF 030-2(17)a

BORING NO. B-12

ELEV. 493.05'

DEPTH	BLOWS ON CASING	STANDARD PENETRATION	SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL	
	14			M	BRN	A-2-4 SiGrSa Rec 1.1	W=22.5
	11			W	BRN	A-2-4 SiSaGr Rec 0.5	W=21.1
	8			W	BRN	A-1-a SaGr Rec 0.1	W=12.1
	10			M	GRY	A-1-a Gr Rec 0.3	W=3.5
	6			MTW	BRN	A-1-b SiSaGr Rec 0.3	W=15.7
10	4			MTW	BRN	A-4 SaSi Rec 0.5	W=27.5
	2			W	GRY	Silty Sand 100PPM Rec 0.8 VOC	
	8			W	GRY	Silty Sand w/stones Rec 0.7 10PPM VOC	
	7			W	GRY	A-4 Si 7PPM VOC Rec 1.1	W=35.1
	12			W	GRY	A-4 SaSi 3PPM VOC Rec 0.4	W=25.8
20	11			W	GRY	A-4 Si Rec 0.7	W=31.8
ELEV. 471.00 Abut. #2 Bottom of footing	12			W	GRY	A-4 Si Rec 1.2	W=35.5
	15			W	GRY	A-4 Si Rec 1.2	W=31.3
30	19			W	GRY	A-4 Si Rec 1.2	W=26.7
	31			W	GRY	A-4 Si 2PPM VOC Rec 1.0	W=22.2
40	25			MTW	GRY	A-2-4 SiSa Rec 1.0	W=17.3
	18			W	GRY	A-4 SaSi 0 PPM VOC Rec 1.4	W=26.1
50	15			W	GRY	A-4 Si Rec 1.3	W=25.6
	19			W	GRY	A-4 Si Rec 1.9	W=22.8
60	25			W	GRY	A-4 Si Rec 1.5	W=34.6
Pile Tip						Top of bedrock @63.5'	
						Run 1: BXMDC 64.0-69.0 Rec 3.6	
						Run 2: BXMDC 69.0-74.0 Rec 3.9	
70						Hole stopped @ 74.0' in bedrock	
80						Core consists of black, moderately soft, quartz-sericite phyllite and schist. The rock is unweathered and competent.	
90						Run REC ROD 1 72% 45% 2 78% 8%	
100							

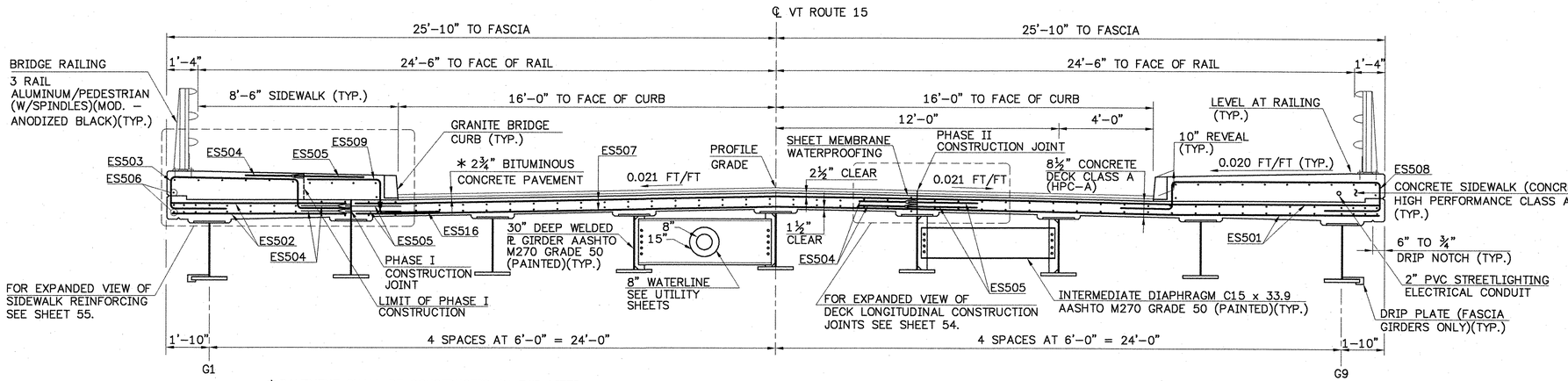
Estimated Pile Length
Abutment no.1: 30 ft.
Abutment no.2: 40 ft.

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

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Manchester, NH 03101
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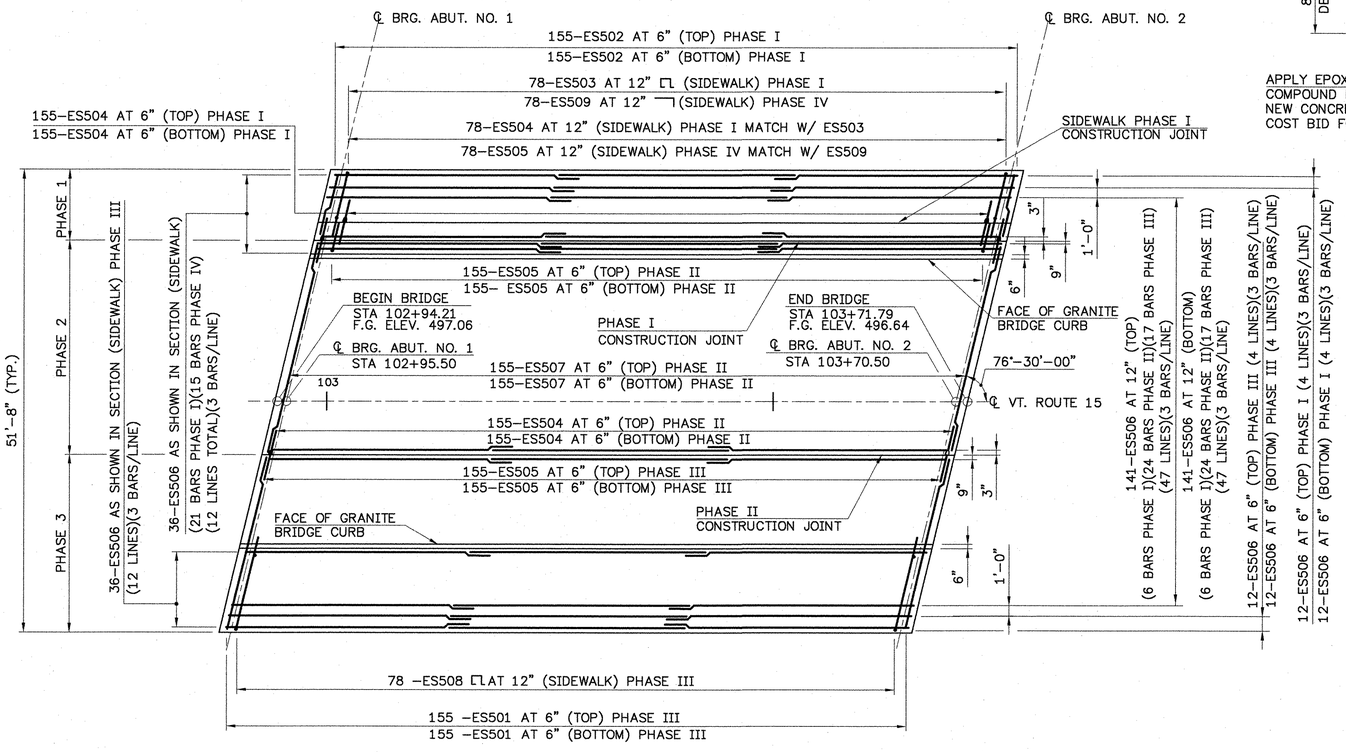
91296LOG (1=1)



* PAVEMENT SHALL BE CONSTRUCTED IN TWO LIFTS:
SECOND LIFT: 1½" TYPE III,
FIRST LIFT: 1¼" TYPE IV

BRIDGE TYPICAL SECTION

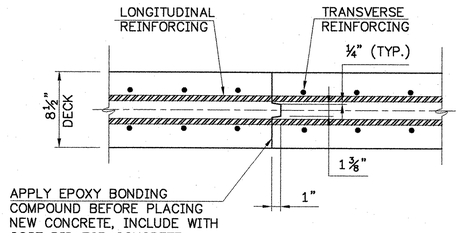
SCALE ⅜" = 1'-0



BRIDGE PLAN

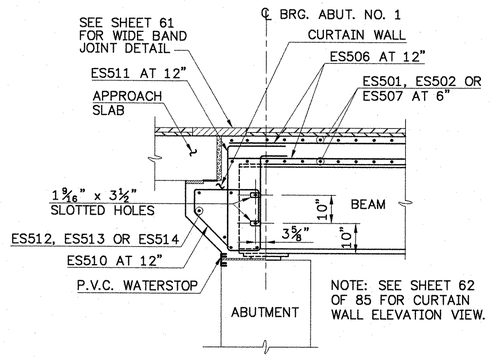
SCALE ⅛" = 1'-0

NOTE: MINIMUM REBAR SPLICE LENGTH IS 26".



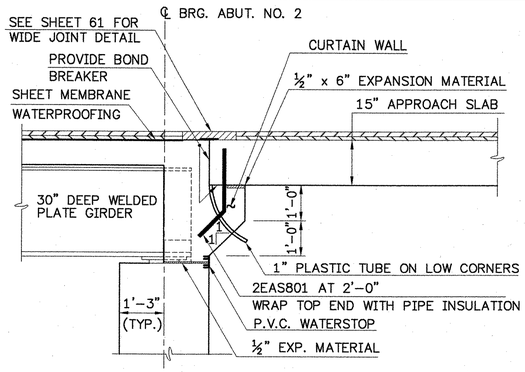
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS

NOT TO SCALE



BRIDGE END REINFORCING DETAIL

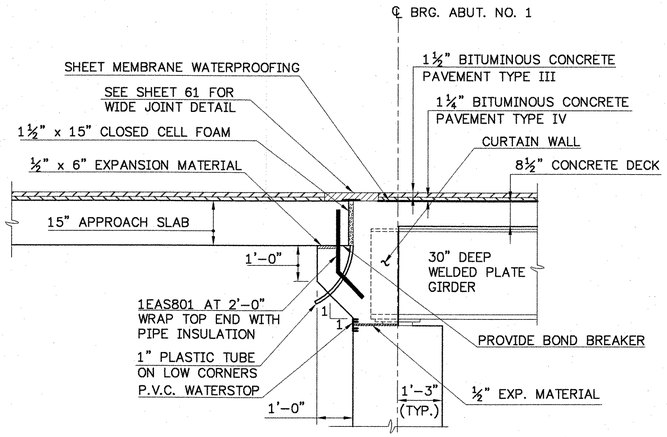
(EXPANSION END SHOWN, FIXED END SIMILAR)
SCALE: ½" = 1'–0"



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

FIXED END DETAIL – ABUT. NO. 2

SCALE: ½" – 1'–0"



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

EXPANSION END DETAIL – ABUT. NO. 1

SCALE: ½" – 1'–0"

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

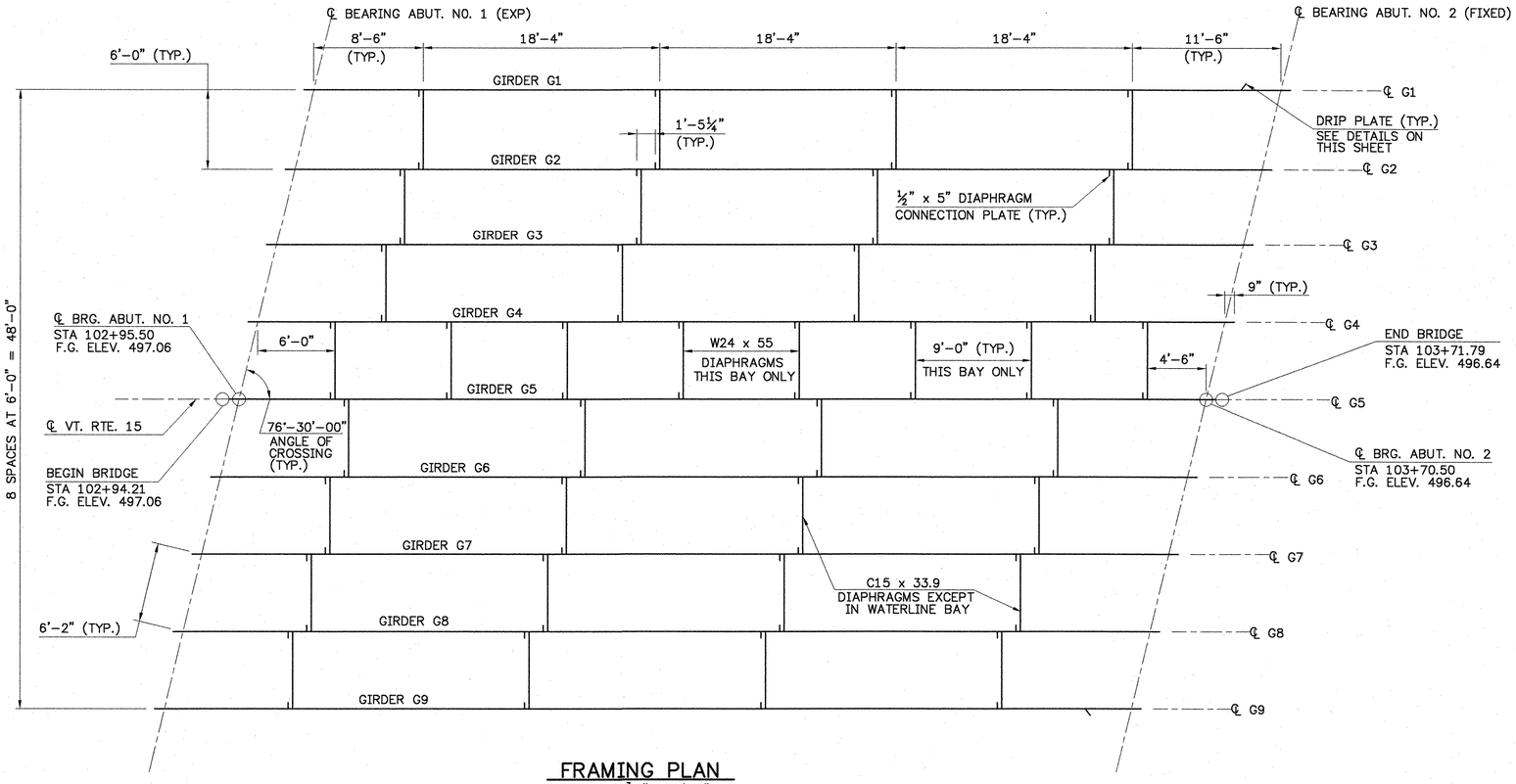
VT. ROUTE 15 OVER GIHON RIVER

DECK DETAILS

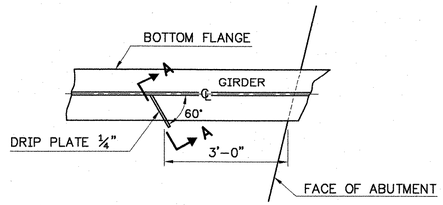
Designed By	R.RICARD	Drawn By.	D.DUGAL
Checked By	Date	Bridge Design Supervisor	
S. BEAUMONT	11/06	J. BYATT	Date 11/06

PROJECT JOHNSON	PROJECT NO. BRF 030–2(17)S
I.G.C. Info.	
Bridge Sheet No.	Sheet 51 Of 85

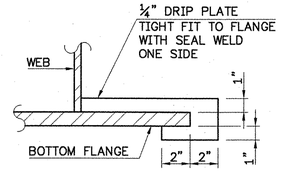
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FRAMING PLAN
SCALE: 3/16" = 1'–0"

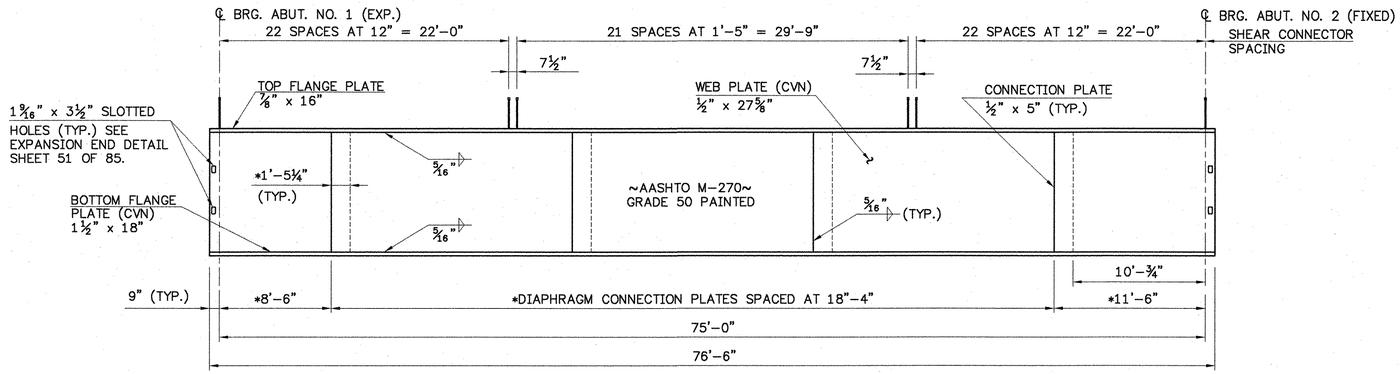


DRIP PLATE PLAN
NOT TO SCALE



SECTION A-A
NOT TO SCALE

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).

TYPICAL GIRDER ELEVATION
(LOOKING LEFT)
HORIZONTAL SCALE: 3/16" = 1'–0"
VERTICAL SCALE: ¾" = 1'–0"

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 3/16" = 1'-0
1 0 2 4 6 8

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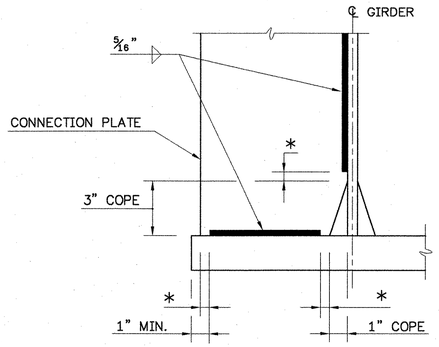
STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

VT. ROUTE 15 OVER GIHON RIVER
FRAMING PLAN AND GIRDER ELEVATION

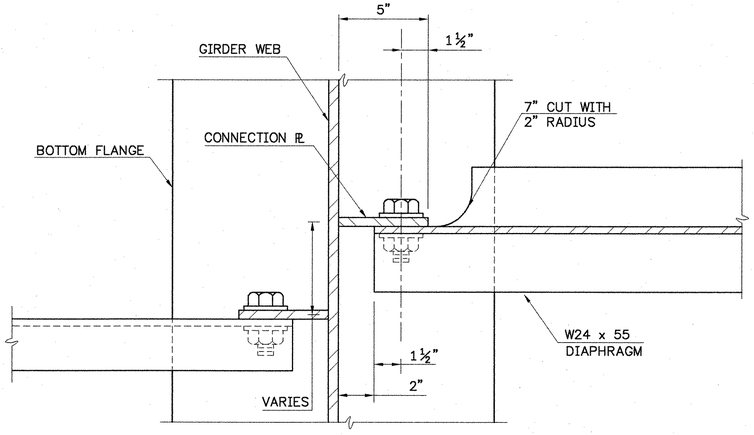
Designed By R.RICARD	Drawn By. D.DUGAL
Checked By R.ROONEY Date 11/02	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030–2(17)S
I.G.C. Info.	
Bridge Sheet No.	Sheet 52 Of 85

91296FRAME.DWG

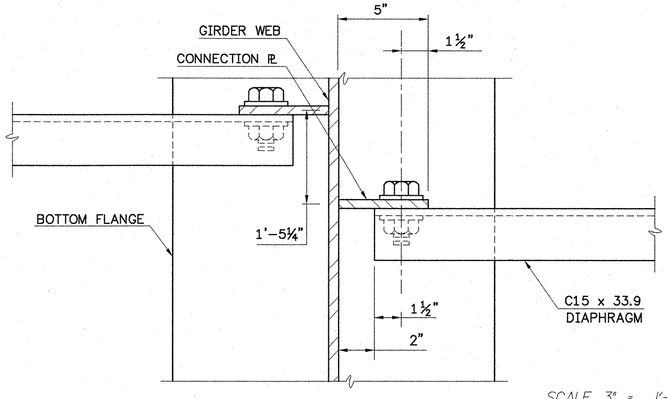


* NO WELD FOR ¼" MIN. ½" MAX.
(EXCEPT MUST MAINTAIN 1" MIN.
FROM EDGE OF FLANGE)

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

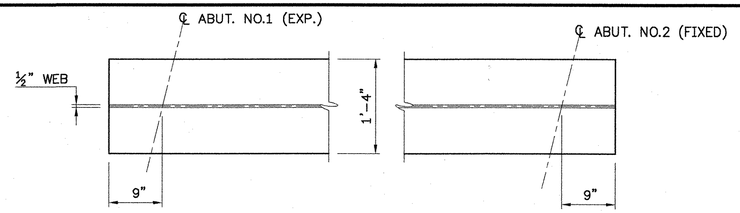


SECTION A-A
SCALE: 3"=1'-0"

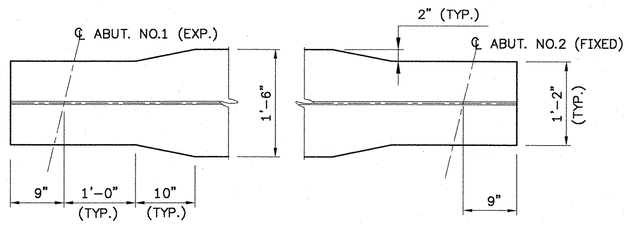


SECTION B-B
SCALE: 3"=1'-0"

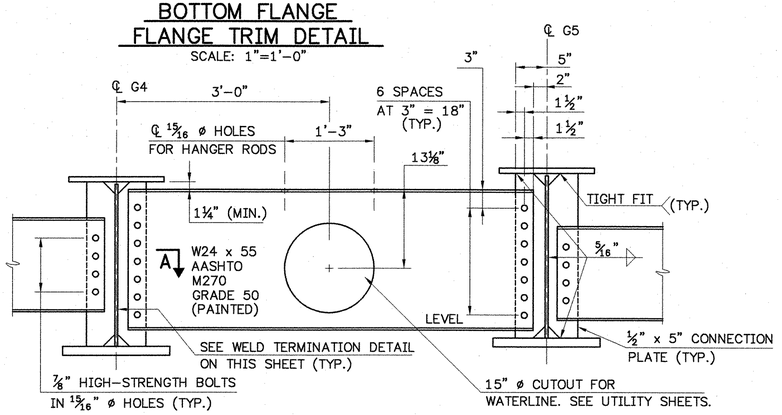
SCALE 3" = 1'-0
1 9 6 3 0 1



TOP FLANGE

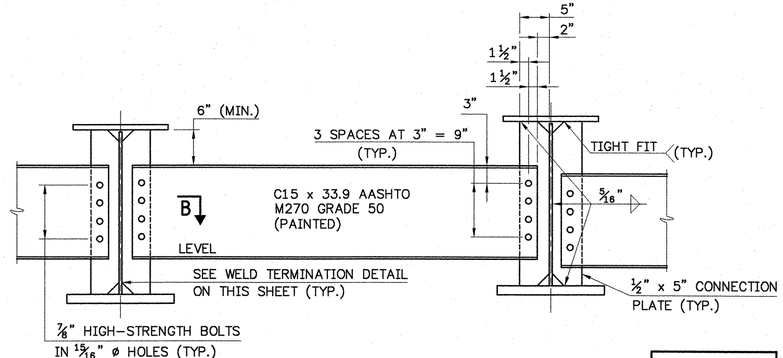


BOTTOM FLANGE
FLANGE TRIM DETAIL
SCALE: 1"=1'-0"



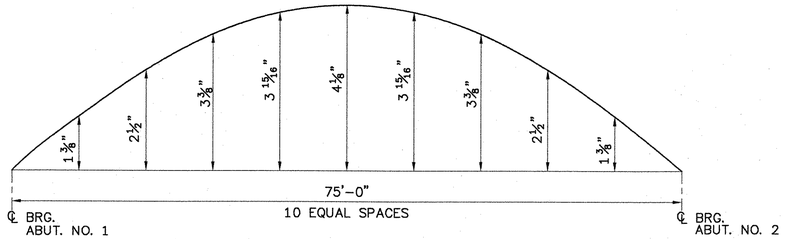
NOTE:
HI-STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO AASHTO DESIGNATION M164.

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

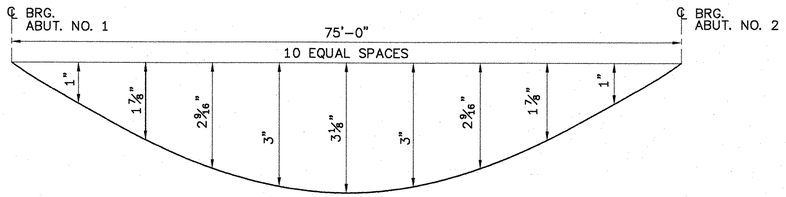


NOTE:
HI-STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO AASHTO DESIGNATION M164.

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

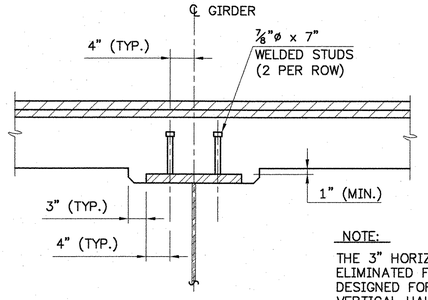


TOTAL CAMBER DIAGRAM
HORIZONTAL SCALE: ⅛" = 1'-0"



DEAD LOAD DEFLECTION DIAGRAM
NTS

NOTE:
EACH GIRDER SHALL BE CAMBERED A TOTAL OF 4⅛".
TOTAL DEAD LOAD DEFLECTION HAS BEEN CALCULATED TO BE 3⅛".
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.

SCALE 1" = 1'-0
1 9 6 3 0 1 2

STATE OF VERMONT
AGENCY OF TRANSPORTATION

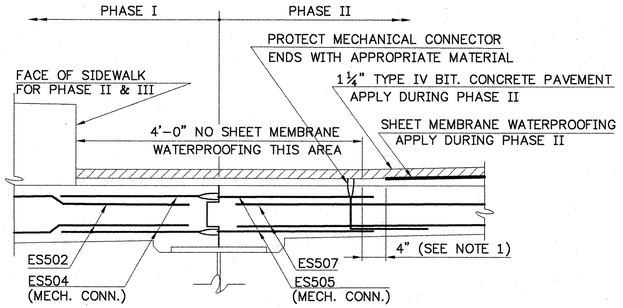
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT. ROUTE 15	Surv. Sta.	

VT. ROUTE 15 OVER 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	

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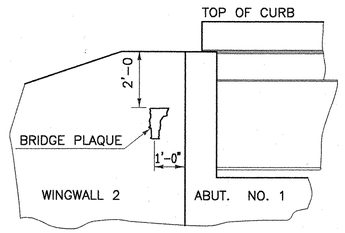
91296FRAME.DWG



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

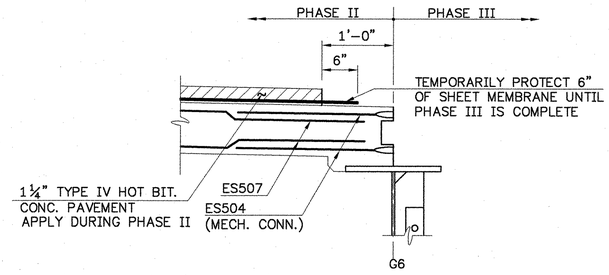
NOT TO SCALE

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)

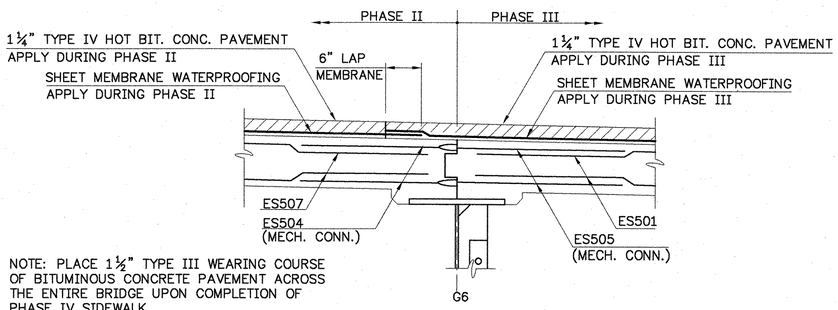
NOTES:

1. 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

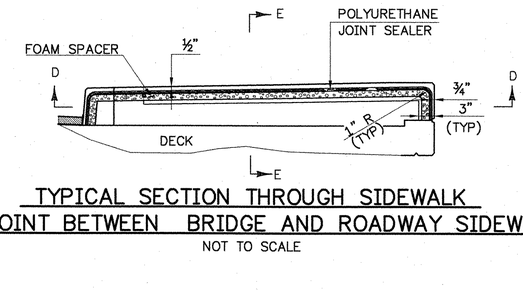
(UPON COMPLETION OF PHASE II)
SCALE: 1" = 1'-0"



NOTE: PLACE 1½" TYPE III WEARING COURSE OF BITUMINOUS CONCRETE PAVEMENT ACROSS THE ENTIRE BRIDGE UPON COMPLETION OF PHASE IV SIDEWALK.

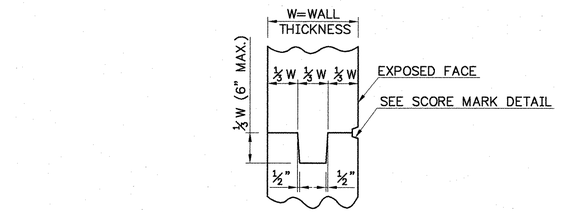
PHASE II –III CONSTRUCTION JOINT

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



TYPICAL SECTION THROUGH SIDEWALK JOINT BETWEEN BRIDGE AND ROADWAY SIDEWALK

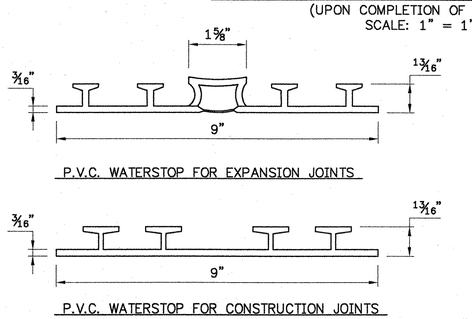
NOT TO SCALE



TYPICAL CONCRETE CONSTRUCTION JOINT

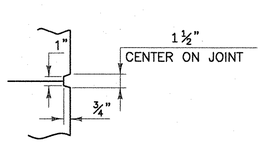
N.T.S.

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.



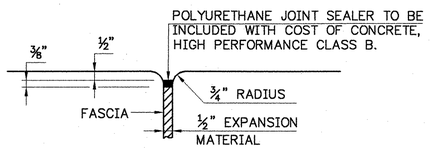
P.V.C. WATERSTOPS

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.



SCORE MARK DETAIL

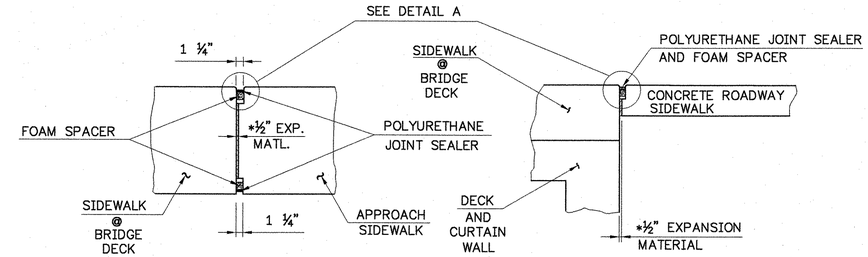
NOT TO SCALE



JOINT BETWEEN FASCIA AND WINGWALL

NOT TO SCALE

SCALE 1" = 1'-0
1 9 6 3 0 1 2



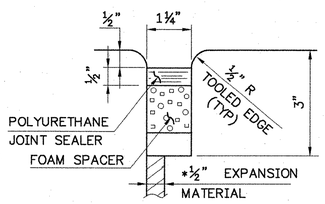
SECTION D – D

NOT TO SCALE

SECTION E – E

NOT TO SCALE

* FIXED END JOINT SHOWN
USE 1 ½" EXP. MATERIAL
AT EXP. END



DETAIL "A"

NOT TO SCALE

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

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

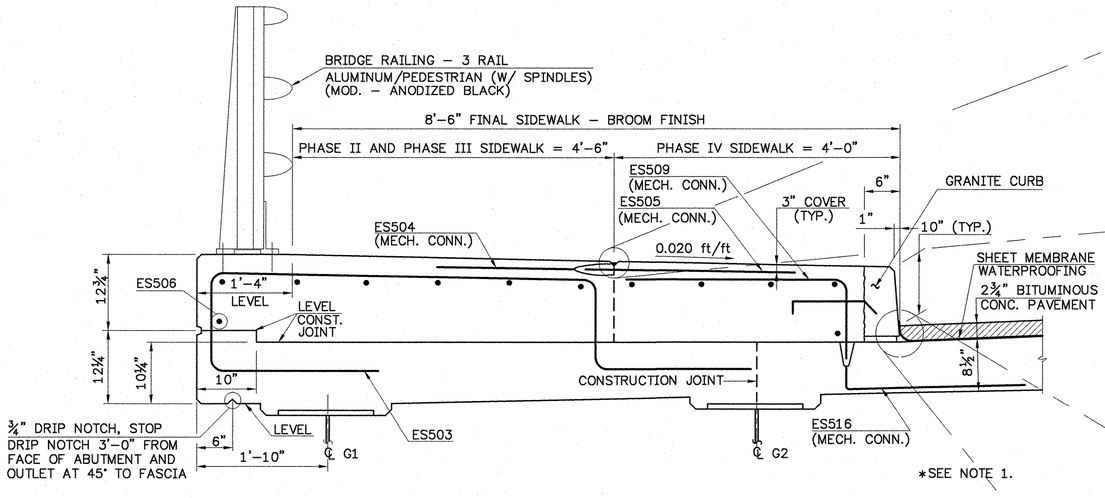
VT. ROUTE 15 OVER GIHON RIVER

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

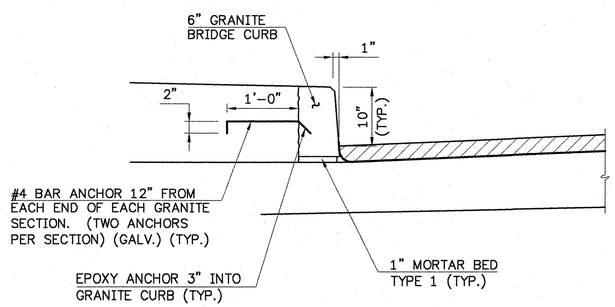
PROJECT: JOHNSON	PROJECT NO.: BRF 030-2(17)S
I.G.C. Info.	
Bridge Sheet No.	Sheet 54 Of 85

9129SCURB.DWG



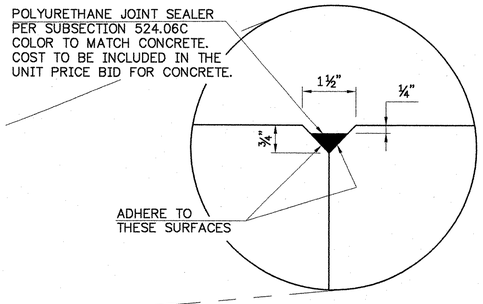
SIDEWALK SECTION – LEFT FASCIA

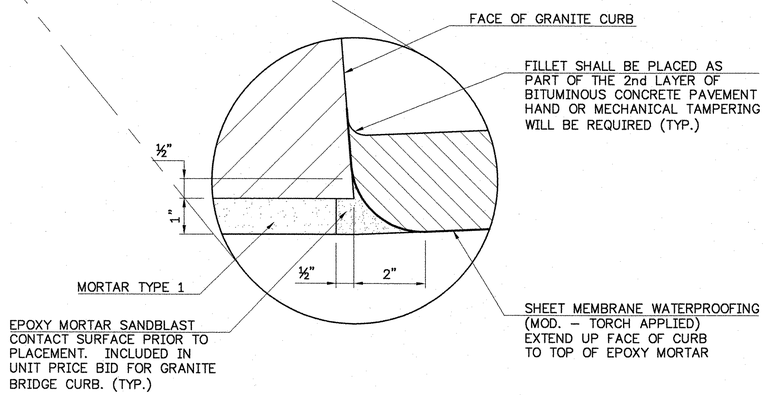
(RIGHT FASCIA SIMILAR)
SCALE: 1"= 1'–0"



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

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.

SCALE 1" = 1'-0

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

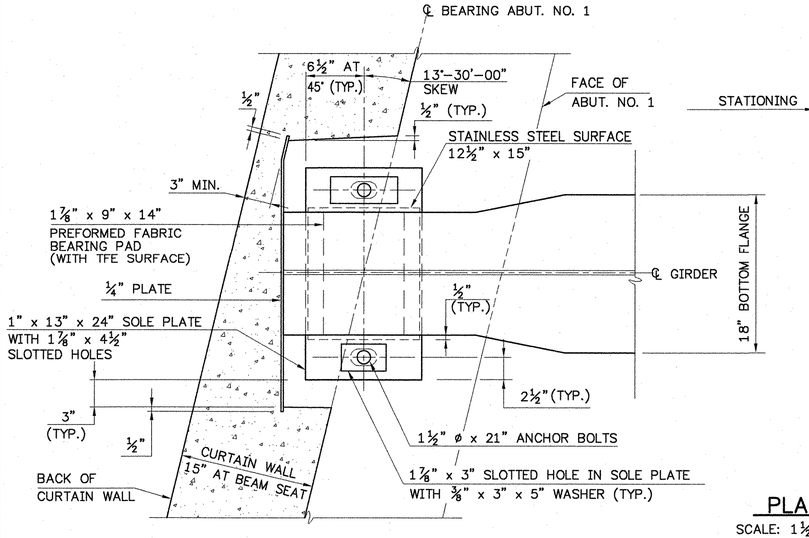
Town Of JOHNSON	Bridge No. 37
	Log Sta.
Highway No. VT. ROUTE 15	Surv. Sta.

VT. ROUTE 15 OVER GIHON RIVER

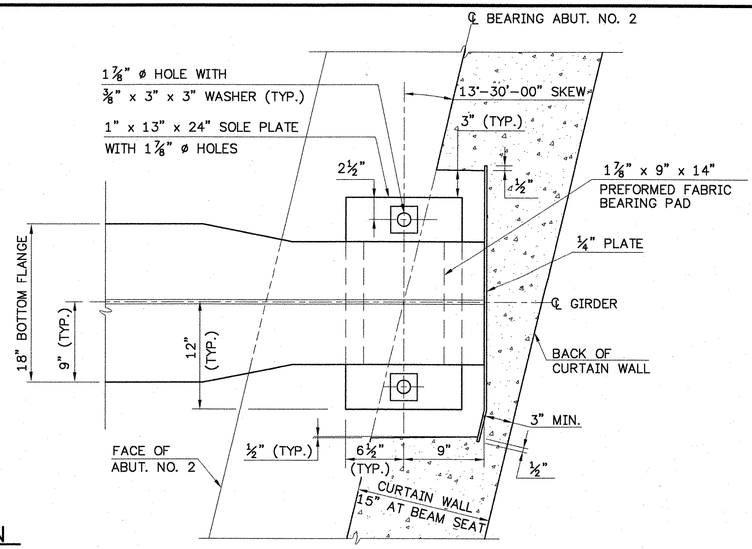
MISCELLANEOUS DETAILS (2 OF 2)

Designed By R.RICARD	Drawn By. M. SMITH
Checked By S. BEAUMONT Date 11/06	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 55 Of 85

91296CURB.DWG

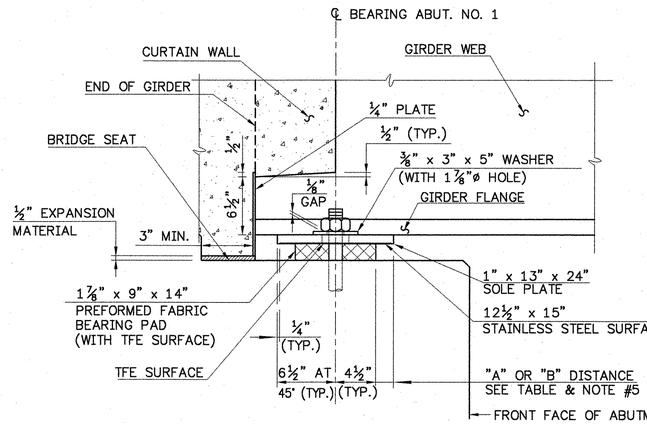


STATIONING



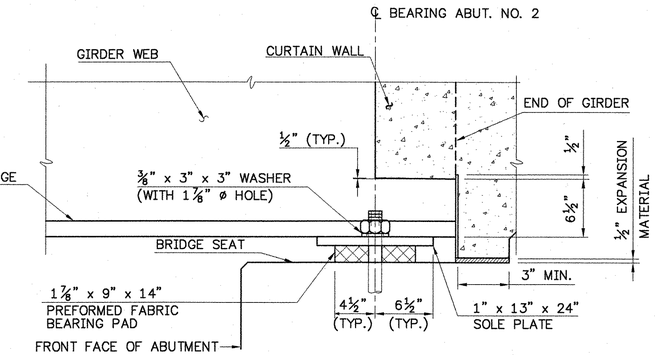
PLAN

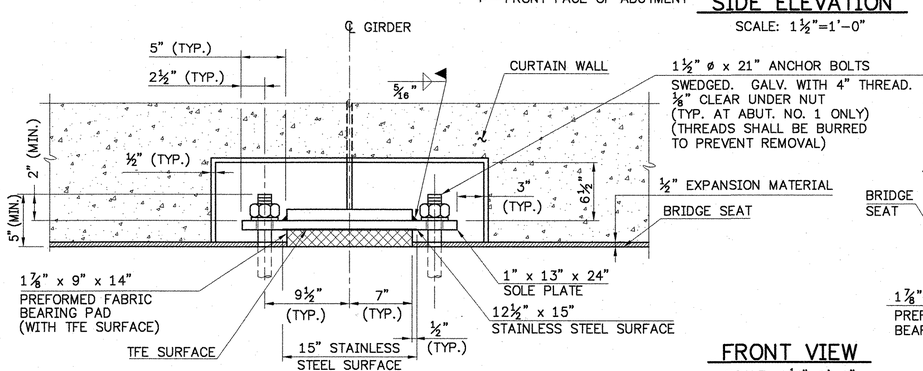
SCALE: 1½"=1'-0"



SIDE ELEVATION

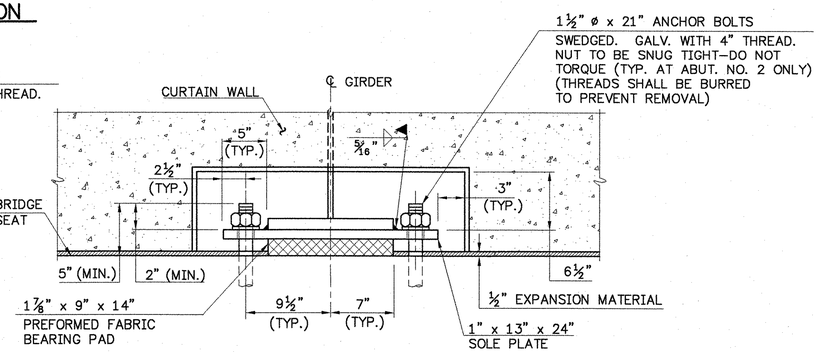
SCALE: 1½"=1'-0"





FRONT VIEW

SCALE: 1½"=1'-0"



EXPANSION BEARING DETAILS AT ABUT. NO. 1

FIXED BEARING DETAILS AT ABUT. NO. 2

BEARING NOTES:

1. 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.
2. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY".
3. SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 OF THE 2001 VAOT STANDARD SPECIFICATIONS SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
4. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
5. "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 ⅛".
6. DESIGN CRITERIA:
   A. AVERAGE BEARING PRESSURE = 1000 PSI MAXIMUM
   B. ROTATION LIMIT = 0.02 RADIANS
   C. HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 10% OF THE VERTICAL DESIGN LOAD (WITH IMPACT).
   D. DESIGN LOAD PER BEARING = 112 KIPS (DEAD LOAD PLUS LIVE LOAD WITH IMPACT).
7. ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M270 GRADE 36.
8. ANCHOR BOLTS SHALL HAVE A MINIMUM OF 15" EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO ASTM F1554-99 GRADE 55 (AASHTO M314).
9. 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.
10. ALL THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL BE ASTM F1554-99 GRADE 55 (AASHTO M314). ALL WASHERS SHALL BE ⅜" 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 ¼"	2 ⅝"
15°F	2 3/16"	2 ½"
30°F	2 1/16"	2 7/16"
45°F	2"	2 ⅜"
60°F	1 15/16"	2 ¼"
75°F	1 13/16"	2 3/16"
90°F	1 ¾"	2 1/16"
105°F	1 ⅝"	2"

SCALE 1 ½" = 1'-0

1 9 6 3 0 1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

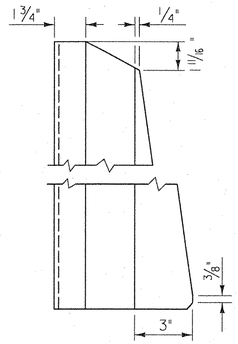
Town Of JOHNSON	Bridge No. 37
Highway No. VT. ROUTE 15	Log Sta. / Surv. Sta.

VT. ROUTE 15 OVER GIHON RIVER

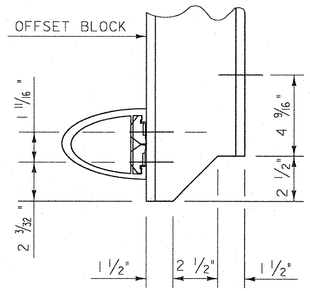
BEARING DETAILS

Designed By R.RICARD	Drawn By. D.DUGAL
Checked By Date B.WELCH/R.ROONEY 11/02	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030-2(17)S
I.C.C. Info.	
Bridge Sheet No.	Sheet 56 Of 85

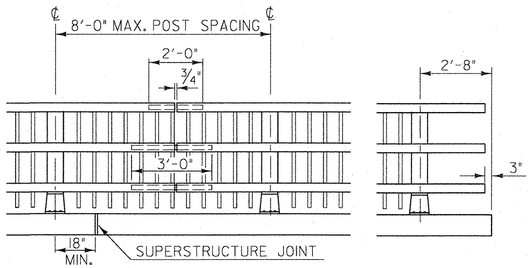
CLD CONSULTING ENGINEERS Inc.
540 Commercial Street - Manchester, NH 03101
(603) 668-8223 - Fax: (603) 668-8802
cld@cldengineers.com - www.cldengineers.com
Maine - New Hampshire - Vermont



POST SIDE VIEW

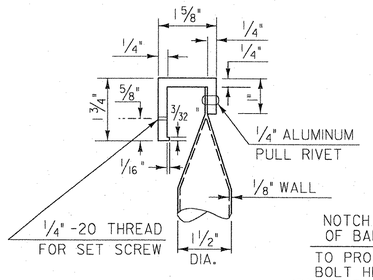


COPING DETAIL

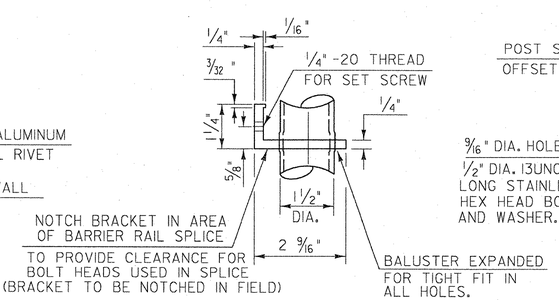


FRONT ELEVATION OF THREE RAIL WITH SPINDLES

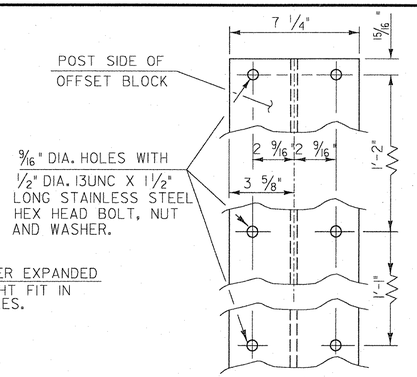
NOTE : RAIL POSTS ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS. ALL DIMENSIONS ARE TYPICAL UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS.



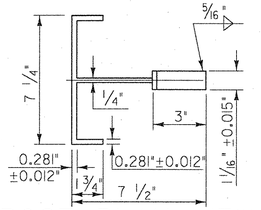
DETAIL A



DETAIL B



OFFSET BLOCK CONNECTION



POST PLAN VIEW

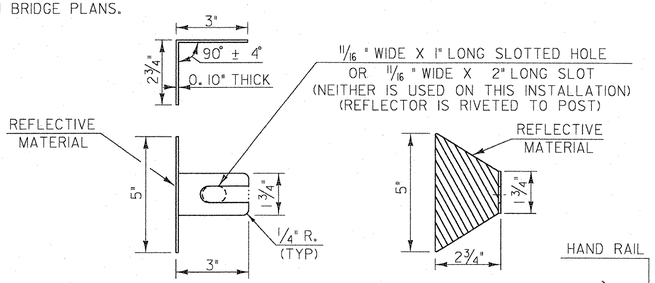
THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 30 FEET (OR CLOSEST POST) WITH 2 NO. 8 X 3/4" SELF-TAPPING SCREWS.

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.

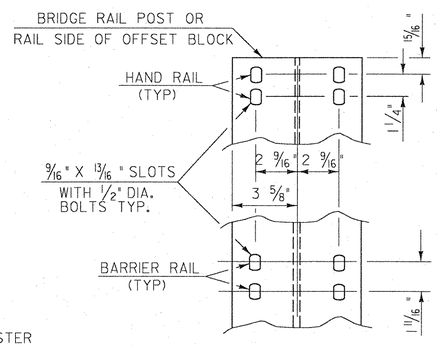


REFLECTOR DETAILS

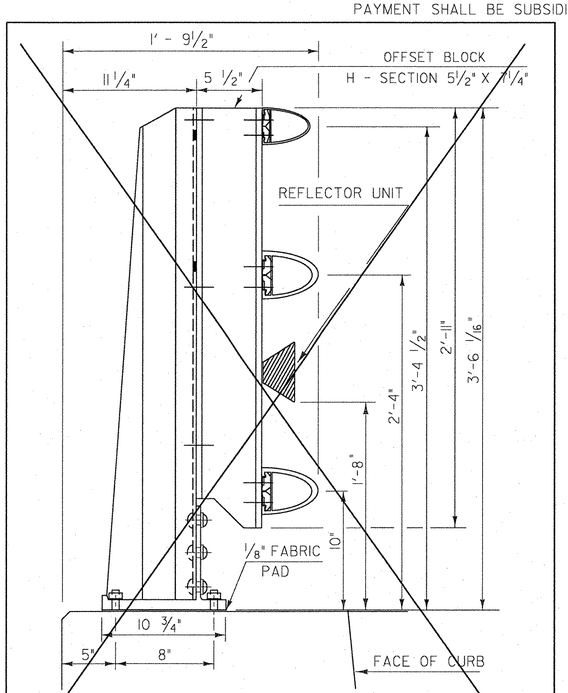
ALLOWABLE STRESSES:

RAILING : 21,000 PSI TENSION
22,000 PSI COMPRESSION

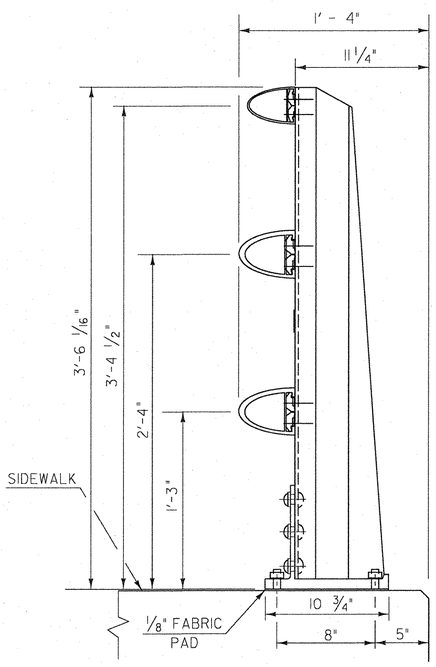
POSTS : 17,000 PSI TENSION
19,000 PSI COMPRESSION



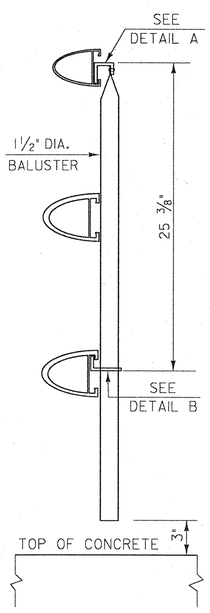
RAIL CONNECTION



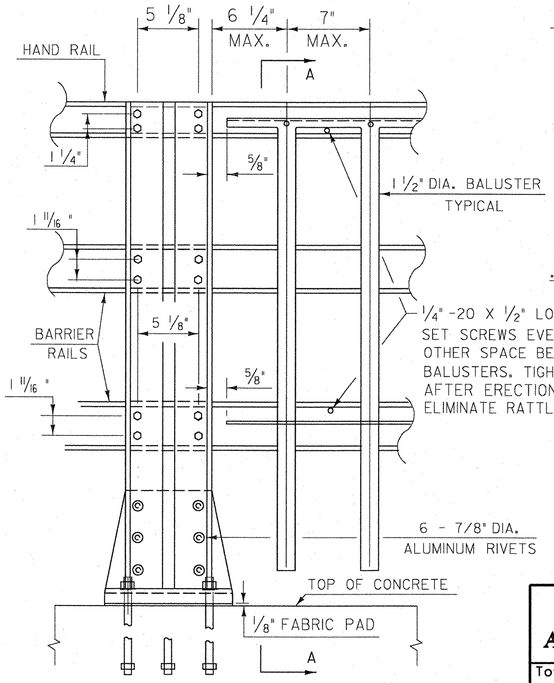
SIDE ELEVATION OF THREE RAIL TO BE USED ON CURB SIDE



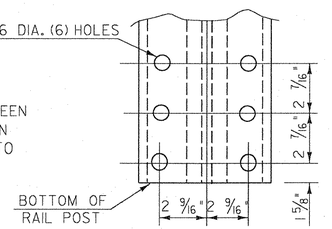
SIDE ELEVATION OF THREE RAIL TO BE USED ON SIDEWALK SIDE



SECTION AA



OUTSIDE ELEVATION OF THREE RAIL POST & SPINDLES



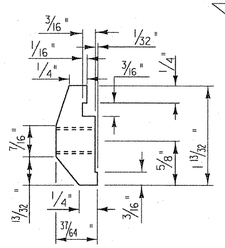
POST BASE BOLT HOLE DETAILS

RAIL POST DETAILS ON SUPERSTRUCTURE

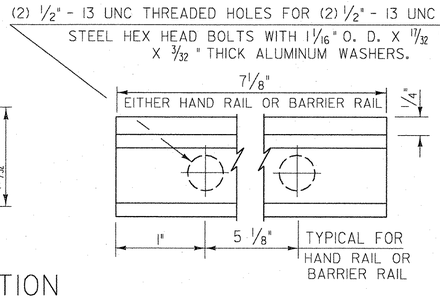
DETAILS OF SPINDLES FOR ALUMINUM RAILING

STATE OF VERMONT
AGENCY OF TRANSPORTATION

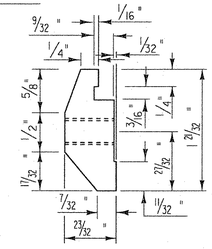
Town Of JOHNSON	Bridge No. 37
	Log Sta.
Highway No. VT ROUTE 15	Surv. Sta.
VT ROUTE 15 OVER THE GIHON RIVER	
ALUMINUM BRIDGE RAILING DETAILS	
Designed By VTRANS	Drawn By VTRANS
Checked By Date	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.	
Bridge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



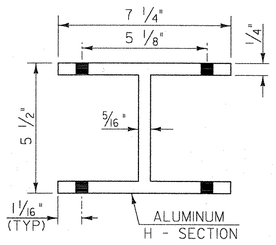
POST CONNECTION HAND RAIL SECTION



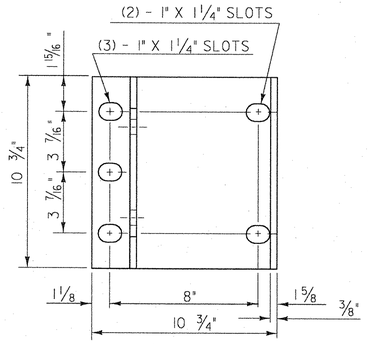
POST CONNECTION ELEVATION



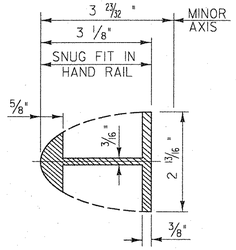
POST CONNECTION BARRIER RAIL SECTION



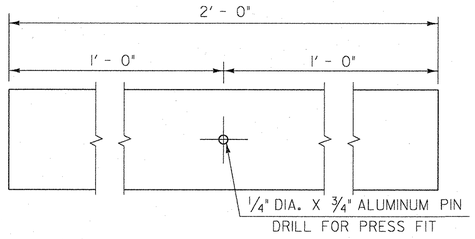
PLAN VIEW OF OFFSET BLOCK (TO BE USED ON SUPERSTRUCTURE ON CURB SIDE)



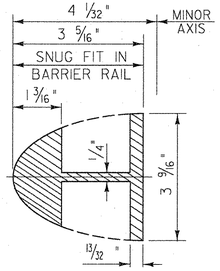
POST BASE PLAN



HAND RAIL SPLICE SECTION

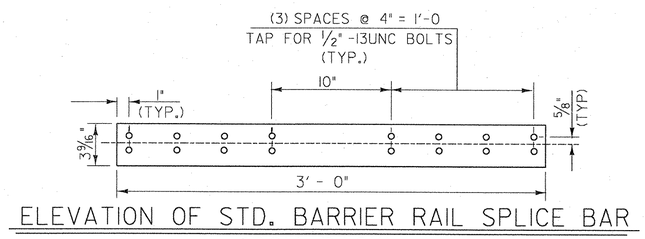


ELEVATION OF HAND RAIL SPLICE BAR

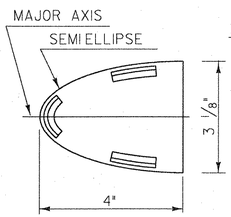


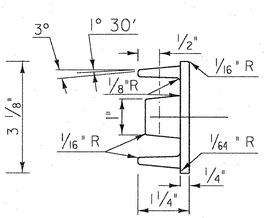
BARRIER RAIL SPLICE SECTION

(SEE SHEET ____ FOR ELEVATION OF BARRIER RAIL SPLICE BAR)

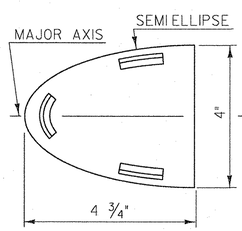


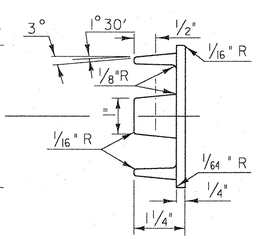
ELEVATION OF STD. BARRIER RAIL SPLICE BAR (FROM BACK)



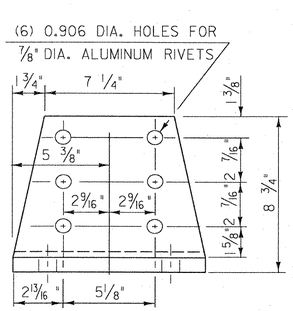


HAND RAIL END CAP

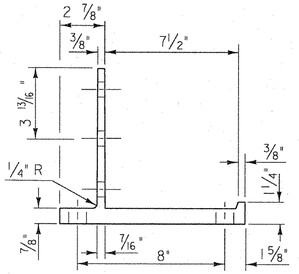




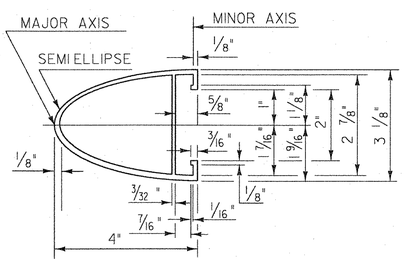
BARRIER RAIL END CAP



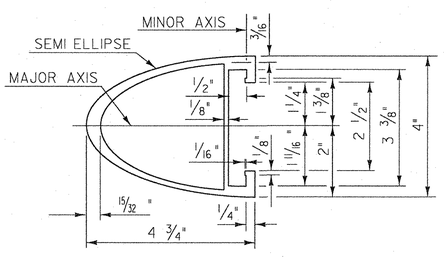
POST BASE FRONT ELEVATION



POST BASE SECTION

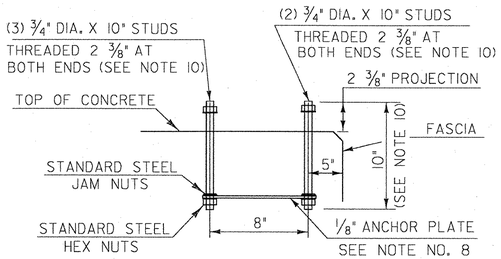


HAND RAIL SECTION

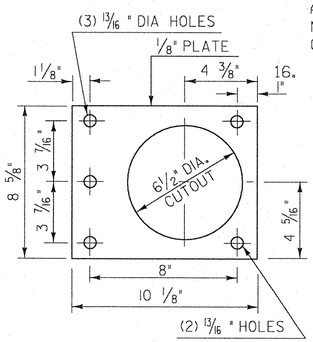


BARRIER RAIL SECTION

(SEE SHEET ___ FOR ELEVATION OF BARRIER RAIL)



POST ANCHOR ASSEMBLY



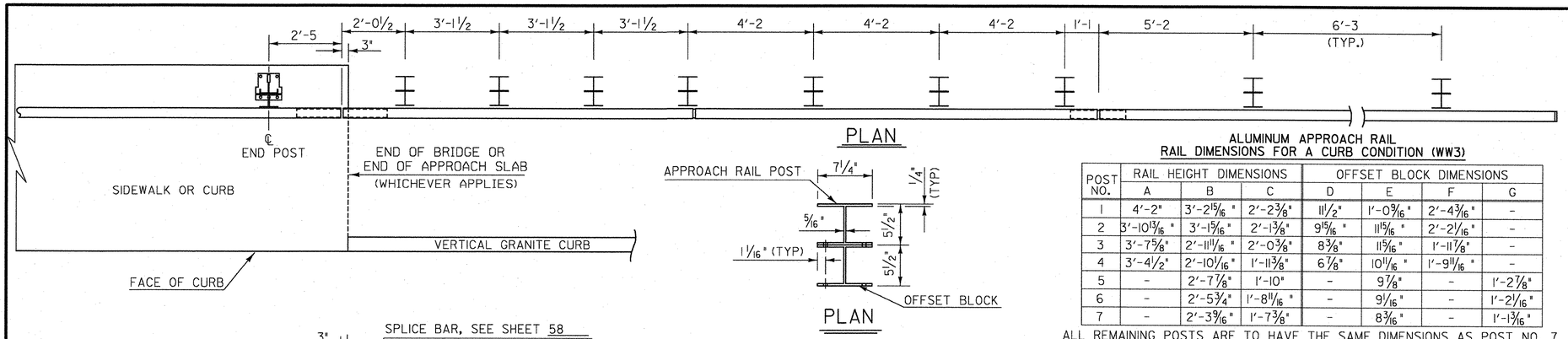
ANCHOR PLATE

NOTES

1. ANCHOR BOLTS, WASHERS AND HEAVY HEX NUTS MAY BE ANY OF THE FOLLOWING:
   - A. ASTM A449 GALVANIZED, OR
   - B. AASHTO M164 (ASTM A325) GALVANIZED
   - C. 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 8NA.
2. 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.
3. ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B210 ALLOY 6061-T5 OR 6063-T5.
4. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
5. 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.
6. SET SCREWS FOR ATTACHING BALUSTERS TO RAILING SHALL BE ASTM F880, TYPE 303 MATERIAL.
7. RIVETS SHALL BE COLD DRIVEN HIGH BUTTON HEAD "CONE POINT", CONFORMING TO ASTM B316 ALLOY 6061-T6.
8. THE ANCHOR PLATE FOR THE POST ANCHOR ASSEMBLY SHALL BE ASTM A36 STRUCTURAL STEEL.
9. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW-INERT GAS PROCESS AND AWS ER 5356 ELECTRODE WIRE.
10. UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
11. 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.
12. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
13. 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.
14. 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 B209 ALLOY 1100-0.
15. 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.
16. ALUMINUM WASHERS SHALL BE ASTM B209 ALLOY ACLAD 2024-T4.

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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



PLAN

PLAN

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 15/16"	2'-2 3/8"	11½"	1'-0 9/16"	2'-4 3/16"	-
2	3'-10 13/16"	3'-1 5/16"	2'-1 3/8"	9 15/16"	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 7/8"	-
4	3'-4½"	2'-10 1/16"	1'-11 3/8"	6 7/8"	10 11/16"	1'-9 11/16"	-
5	-	2'-7 7/8"	1'-10"	-	9 7/8"	-	1'-2 7/8"
6	-	2'-5 3/4"	1'-8 11/16"	-	9 1/16"	-	1'-2 1/16"
7	-	2'-3 9/16"	1'-7 3/8"	-	8 3/16"	-	1'-1 3/16"

ALL REMAINING POSTS ARE TO HAVE THE SAME DIMENSIONS AS POST NO. 7
ASSUME WW3 IS A CURB CONDITION DUE TO THE SHORT SIDEWALK.

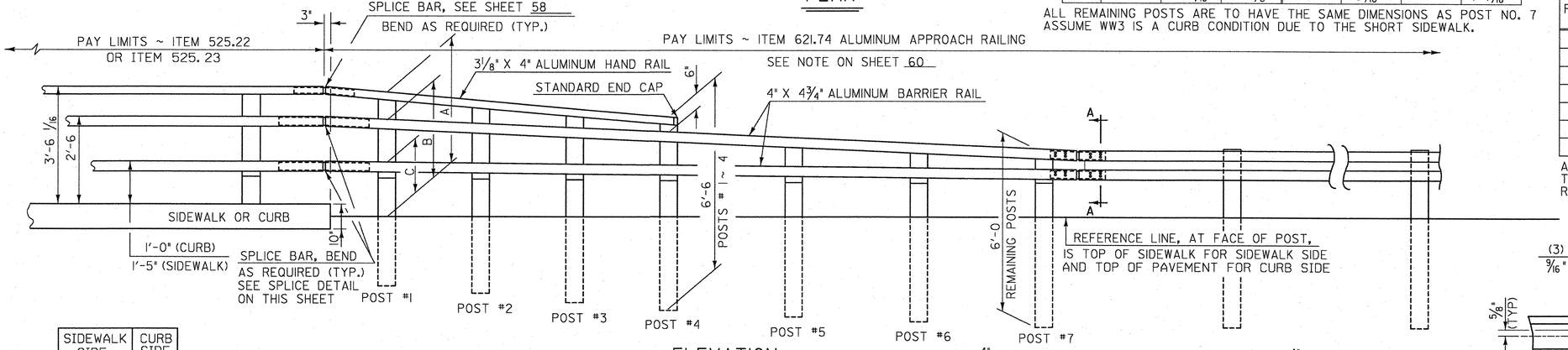
NOTES

1. POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE SHEETS 57 AND 58 FOR ALUMINUM BRIDGE RAILING DETAILS.
5. 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.
6. DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
7. 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)

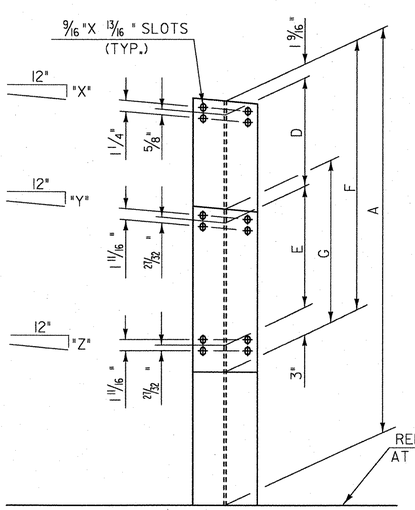
POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	3'-4 13/16"	2'-5 3/4"	1'-5 13/16"	11½"	1'-0 9/16"	2'-4 3/16"	-
2	3'-2 7/8"	2'-5 3/8"	1'-5 7/16"	9 15/16"	11 5/16"	2'-2 1/16"	-
3	3'-1"	2'-5"	1'-5 11/16"	8 7/16"	11 5/16"	1'-11 7/8"	-
4	2'-11 1/16"	2'-4 5/8"	1'-5 5/16"	6 7/8"	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 1/8"	1'-6 5/16"	-	8 1/4"	-	1'-1 1/4"

ALL REMAINING POSTS 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.

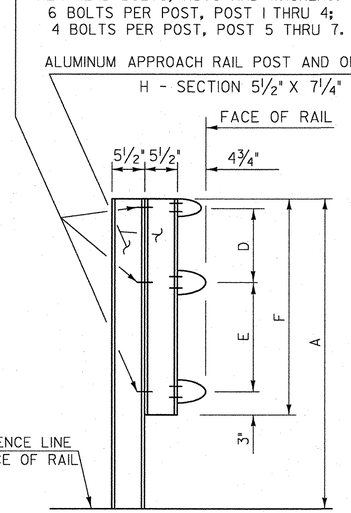


ELEVATION

	SIDEWALK SIDE	CURB SIDE
"X"	5/8"	1"
"Y"	1/8"	½"
"Z"	-1/16"	5/16"

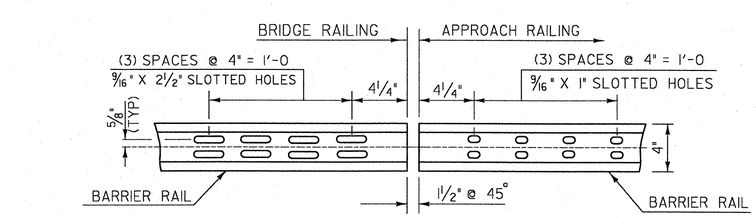


FRONT ELEVATION

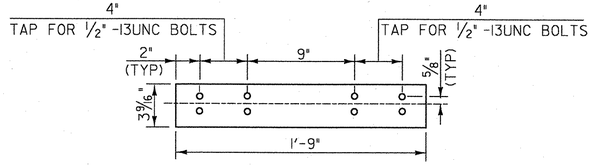


SIDE ELEVATION

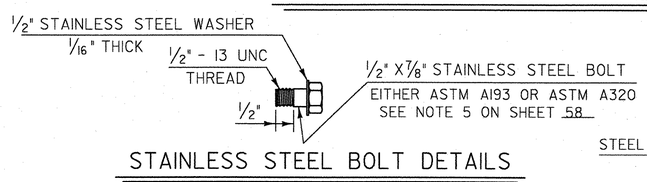
APPROACH RAIL DETAILS



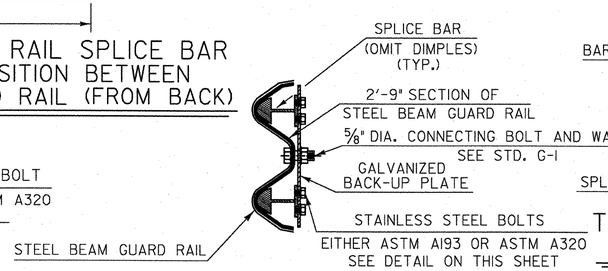
ELEVATION OF BARRIER RAIL (FROM BACK)

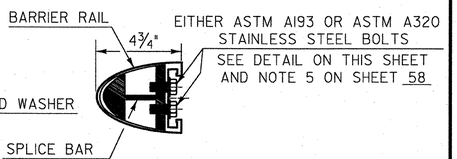


ELEVATION OF BARRIER RAIL SPLICE BAR TO BE USED AT TRANSITION BETWEEN APPROACH RAIL & GUARD RAIL (FROM BACK)

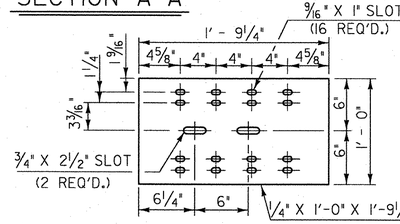


STAINLESS STEEL BOLT DETAILS

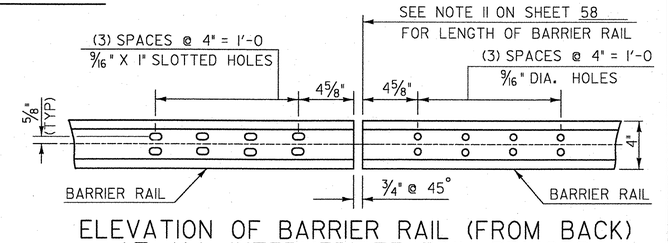




TYPICAL SECTION THROUGH BARRIER RAIL SPLICE



BACK-UP PLATE DETAILS

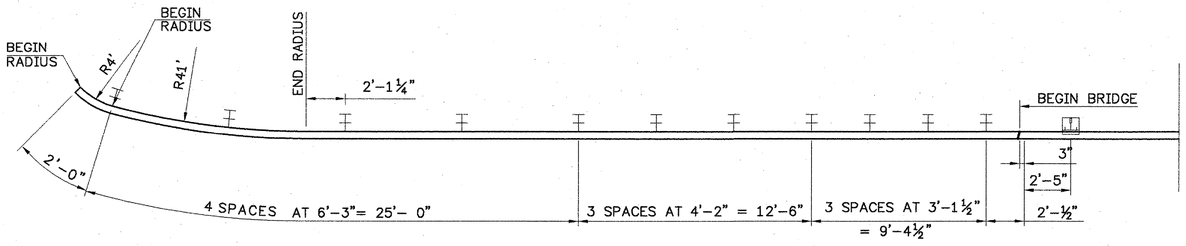


ELEVATION OF BARRIER RAIL (FROM BACK) AT ALL INTERMEDIATE RAIL SPLICES

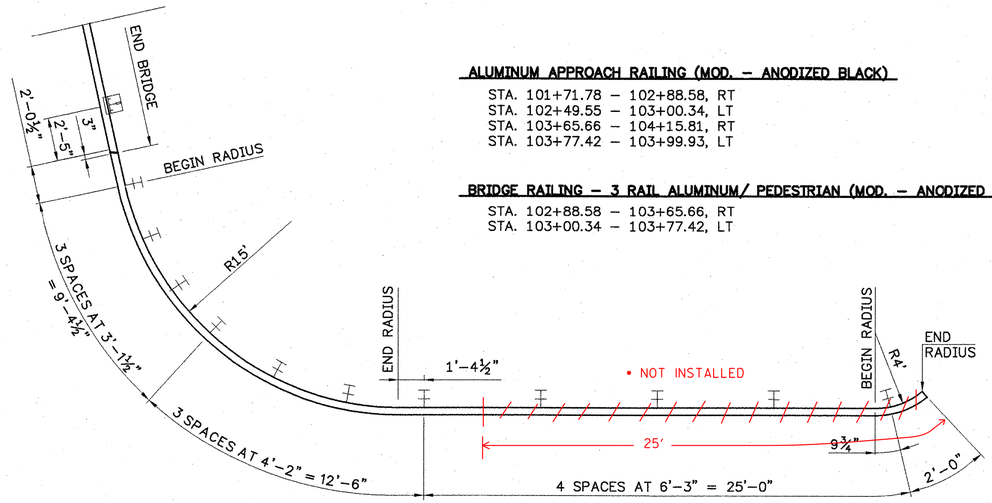
STATE OF VERMONT
AGENCY OF TRANSPORTATION

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
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GUARD RAIL TERMINAL DETAILS



NORTHWEST APPROACH



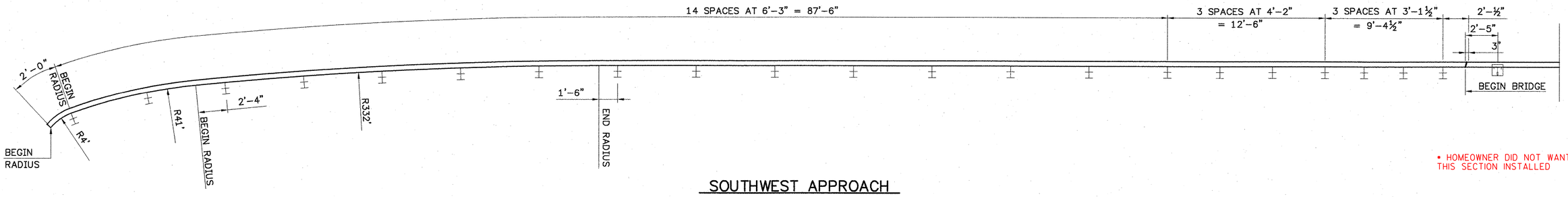
NORTHEAST APPROACH

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

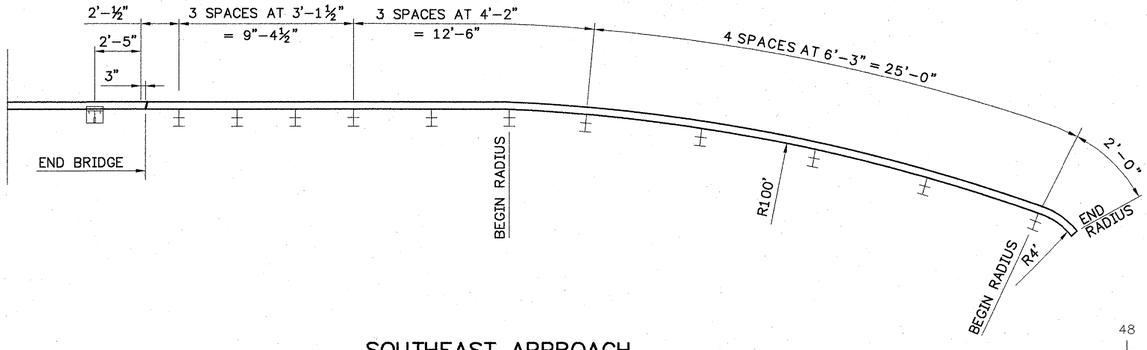
BRIDGE RAILING – 3 RAIL ALUMINUM/ PEDESTRIAN (MOD. – ANODIZED BLACK)

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



SOUTHWEST APPROACH

• HOMEOWNER DID NOT WANT THIS SECTION INSTALLED



SOUTHEAST APPROACH

48 24 0 48 96

SCALE ¼" = 1'-0"

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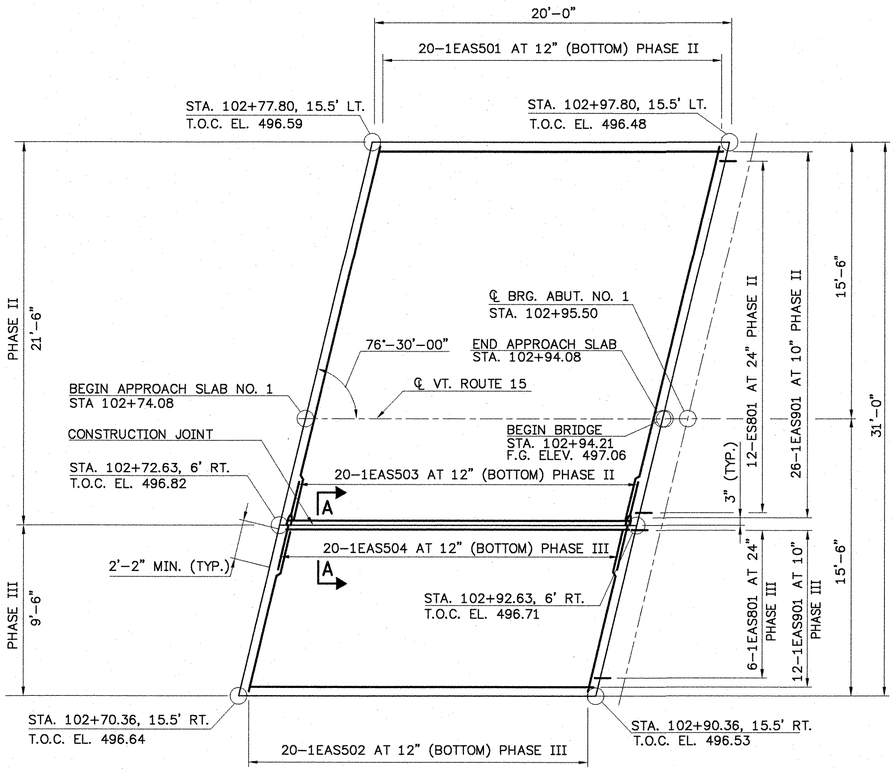
Town Of JOHNSON	Bridge No. 37
	Log Sta.
Highway No. VT. ROUTE 15	Surv. Sta.

VT. ROUTE 15 OVER GIHON RIVER

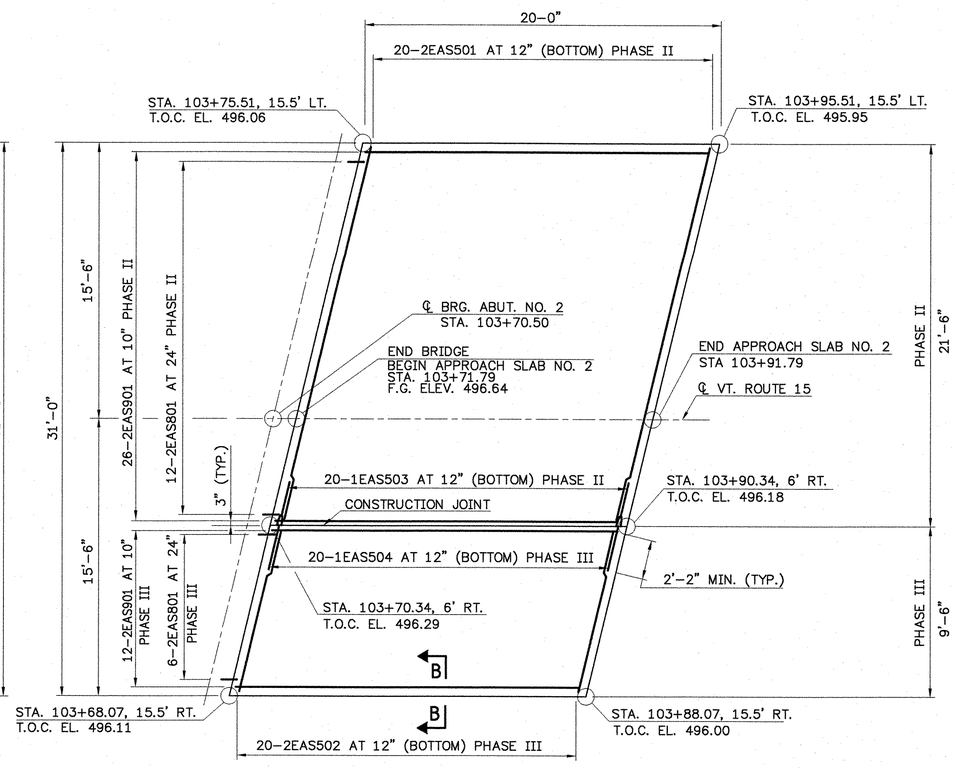
APPROACH RAIL DETAILS

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
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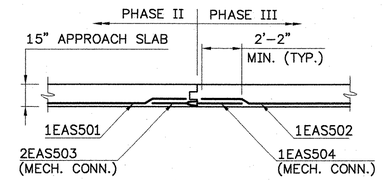
91296GFE.DWG



APPROACH SLAB NO. 1

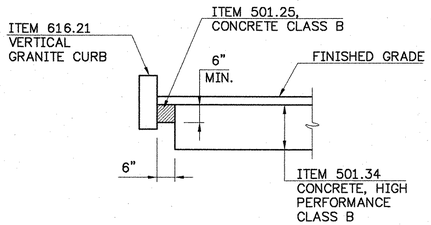


APPROACH SLAB NO. 2



SECTION A-A

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



SECTION B-B

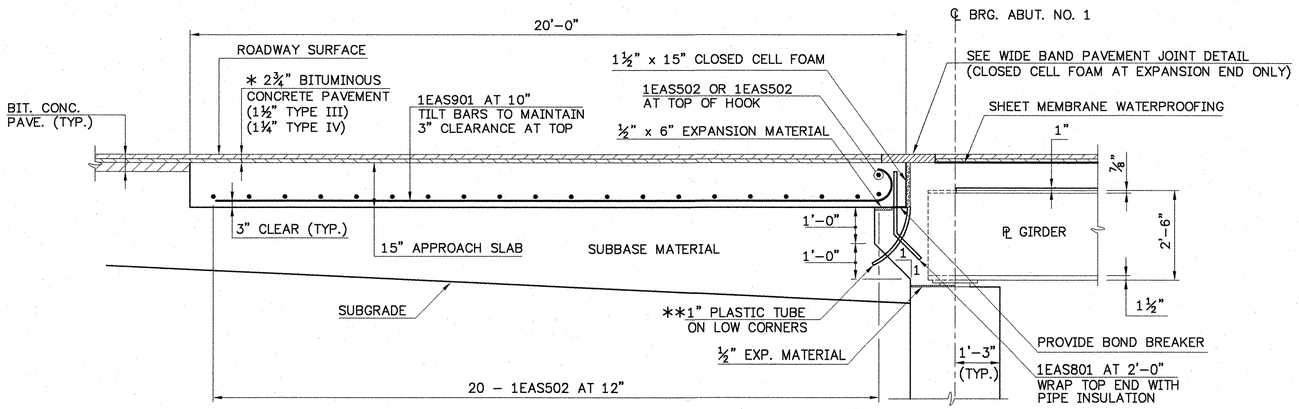
(APPROACH SLAB NO. 1 SIMILAR)
SCALE: 1/2" = 1'-0"

APPROACH SLAB PLAN

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

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

48 24 0 48 96
SCALE ¼" = 1'-0"

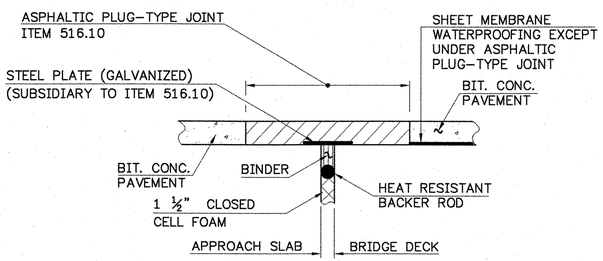


* PAVEMENT SHALL BE CONSTRUCTED IN TWO LIFTS:
SECOND LIFT: 1½" TYPE III,
FIRST LIFT: 1¼" TYPE IV

** 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: ½" - 1'-0"



WIDE BAND PAVEMENT JOINT DETAIL

SCALE: 1½" = 1'-0"

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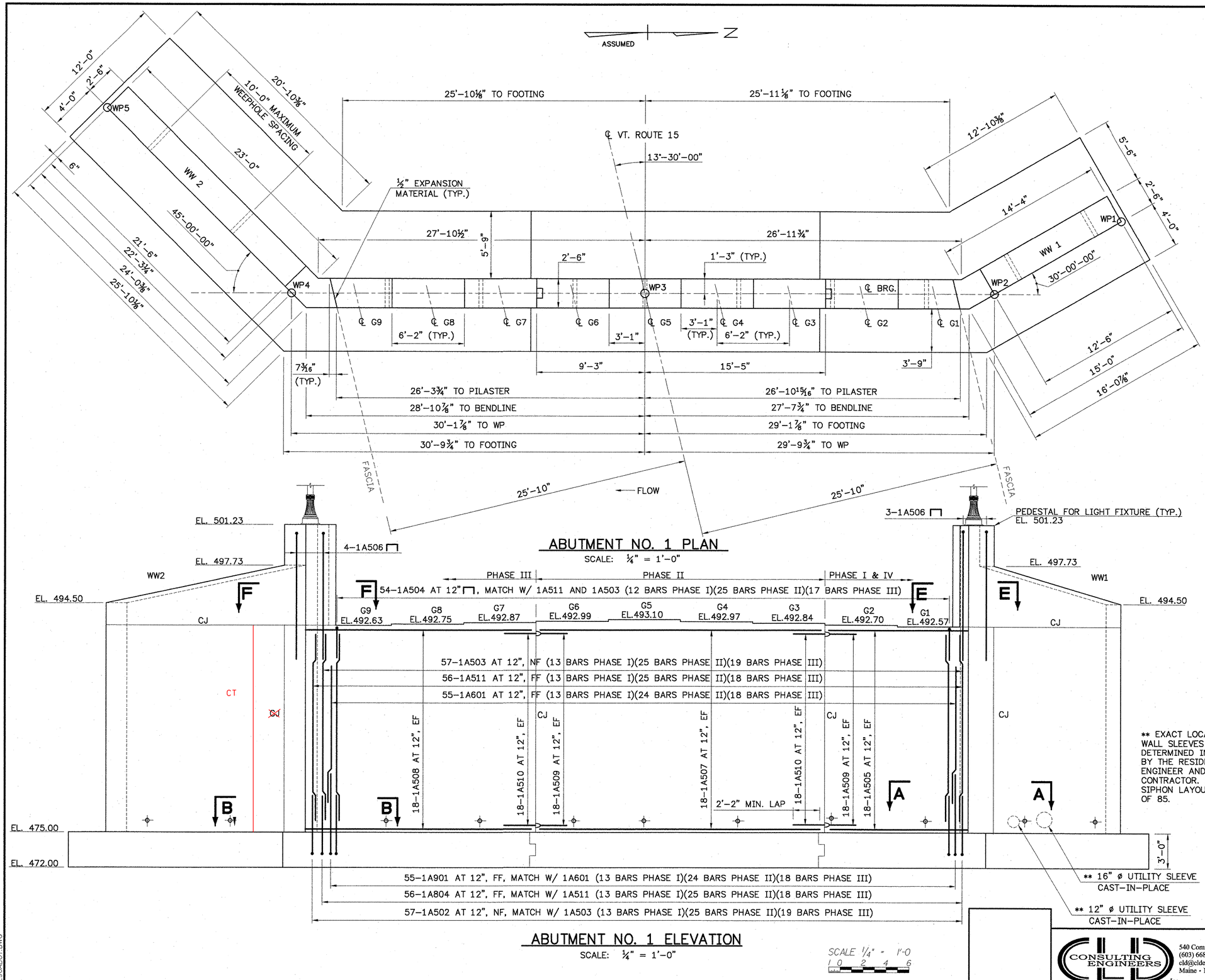
VT. ROUTE 15 OVER GIHON RIVER

APPROACH SLAB DETAILS

Designed By R.RICARD	Drawn By. D.DUGAL
Checked By S. BEAUMONT Date 11/06	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.	
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91296APP.DWG



ABUTMENT NO. 1 PLAN

SCALE: ¼" = 1'-0"

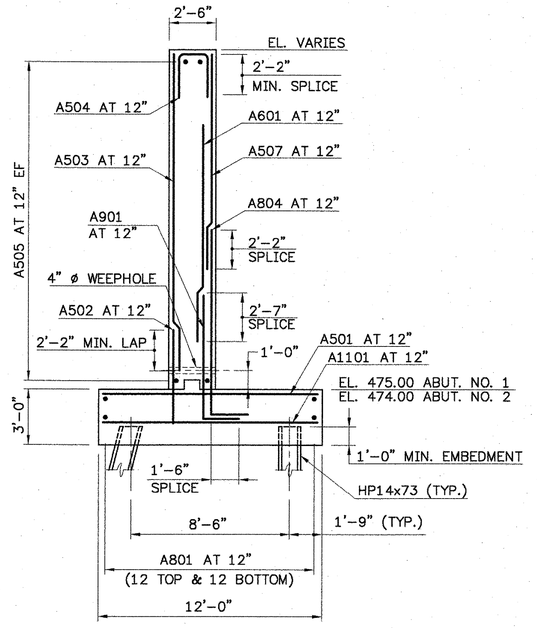
ABUTMENT NO. 1 ELEVATION

SCALE: ¼" = 1'-0"

SCALE ¼" = 1'-0
1 0 2 4 6

NOTES:

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



ABUTMENT TYPICAL SECTION

SCALE: ¼" = 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

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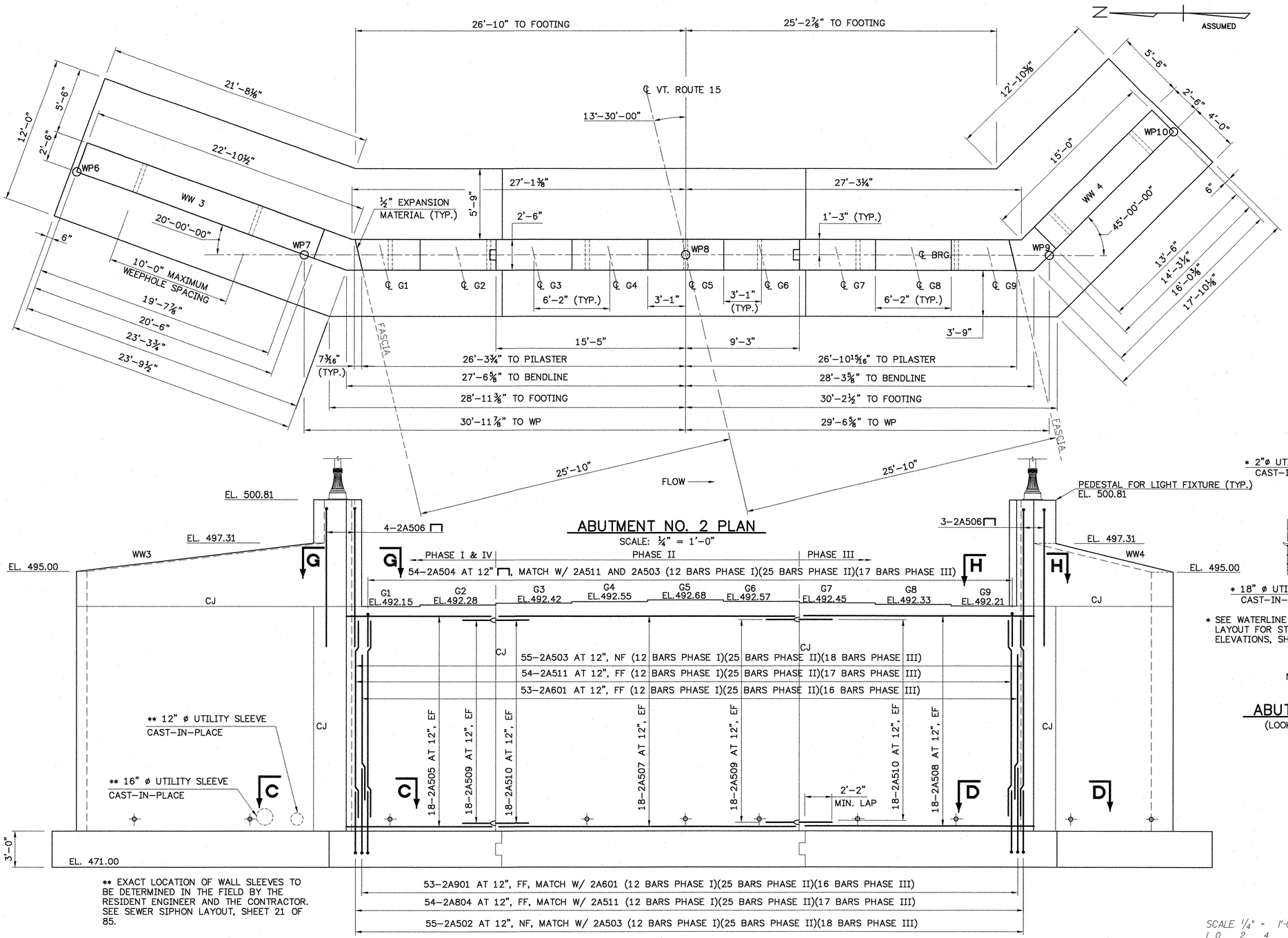
STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

VT. ROUTE 15 OVER GIHON RIVER

ABUTMENT NO. 1 DETAILS

Designed By R.RICARD	Drawn By. D.DUGAL
Checked By Date B.WELCH/R.ROONEY 11/02	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030-2(17)S
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ABUTMENT NO. 2 PLAN

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

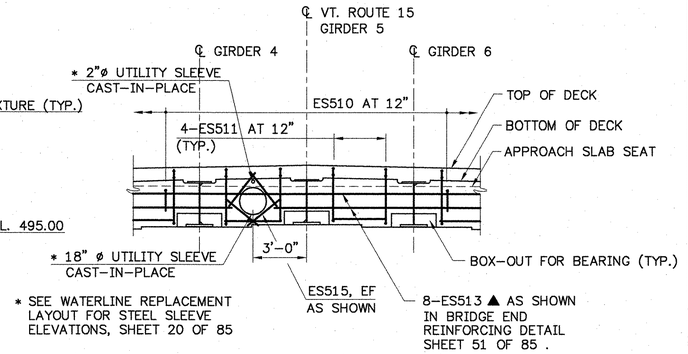
ABUTMENT NO. 2 ELEVATION

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.

NOTES:

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



PEDESTAL FOR LIGHT FIXTURE (TYP.)
EL. 500.81

* SEE WATERLINE REPLACEMENT LAYOUT FOR STEEL SLEEVE ELEVATIONS, SHEET 20 OF 85

NOTE: SEE SHEET 51 OF 85 FOR ADDITIONAL CURTAIN WALL DETAILS

ABUTMENT NO. 2 CURTAIN WALL ELEVATION

(LOOKING AT FRONT OF ABUTMENT, TYPICAL AT BOTH ABUTMENTS.)
SCALE: 1/4" = 1'-0"

NOTE: SEE SHEET 65 OF 85 FOR DETAILS: C-C, D-D G-G, H-H

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

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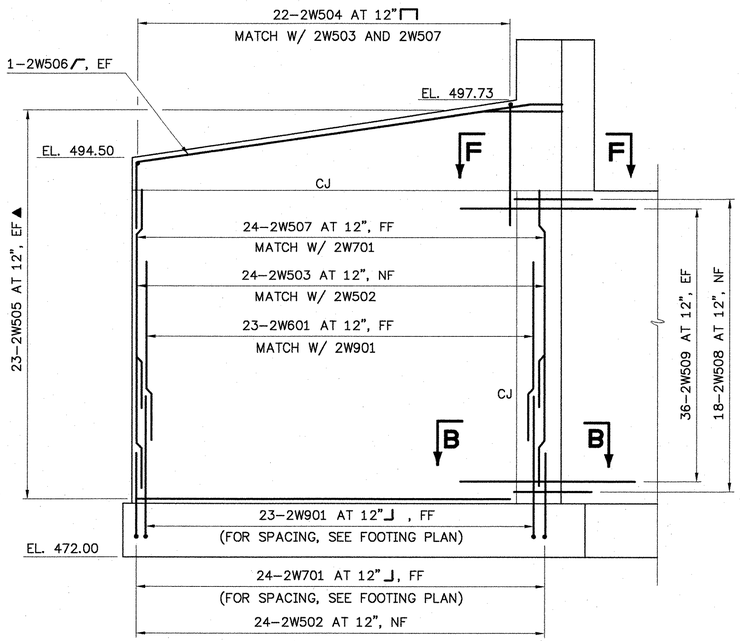
Town Of JOHNSON	Bridge No. 37
	Log Sta.
Highway No. VT. ROUTE 15	Surv. Sta.

VT. ROUTE 15 OVER GIHON RIVER

ABUTMENT NO. 2 DETAILS

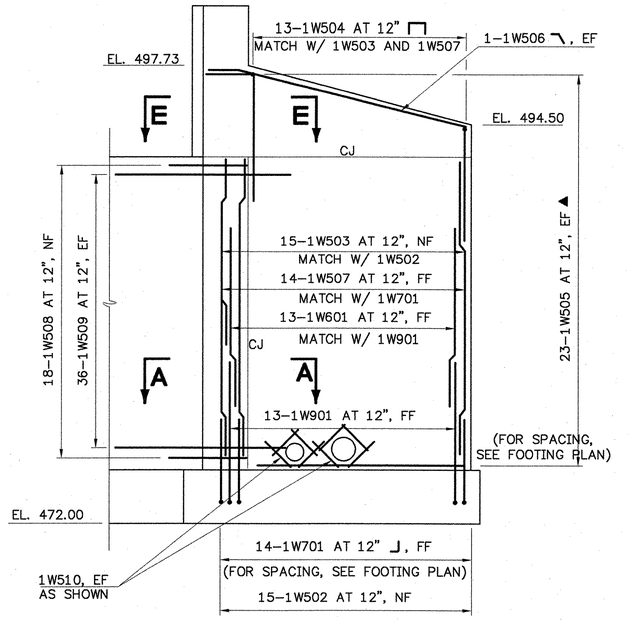
Designed By R.RICARD	Drawn By. D.DUGAL
Checked By Date B.WELCH/R.ROONEY 11/02	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.	
Bridge Sheet No.	Sheet 63 Of 85

9129648UT.DWG



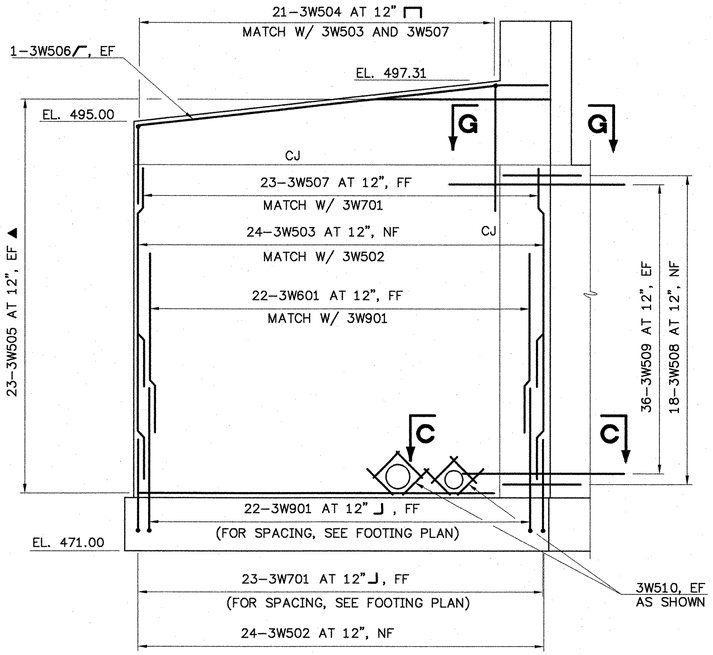
WINGWALL NO. 2 ELEVATION

SCALE: ¼" = 1'–0"



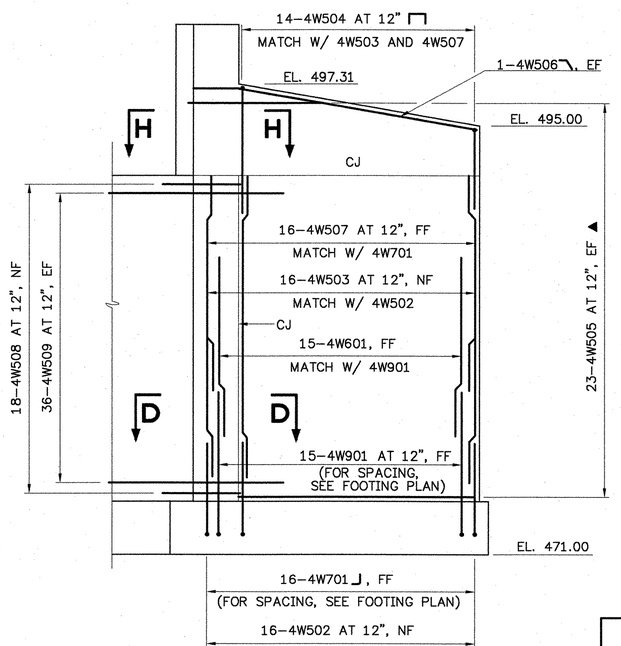
WINGWALL NO. 1 ELEVATION

SCALE: ¼" = 1'–0"



WINGWALL NO. 3 ELEVATION

SCALE: ¼" = 1'–0"

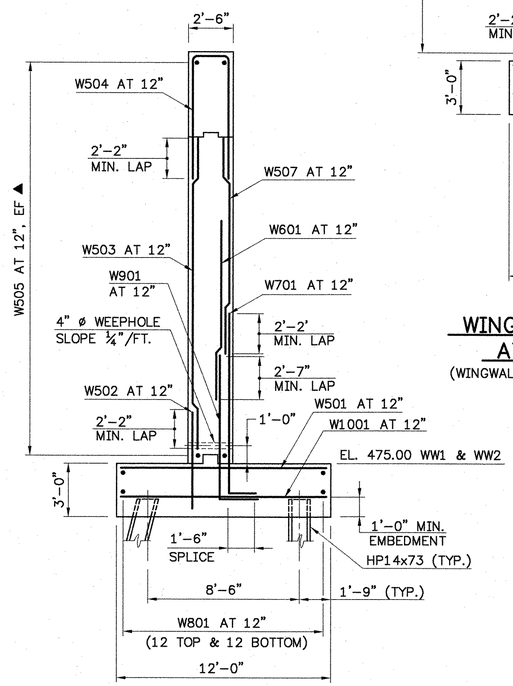


WINGWALL NO. 4 ELEVATION

SCALE: ¼" = 1'–0"

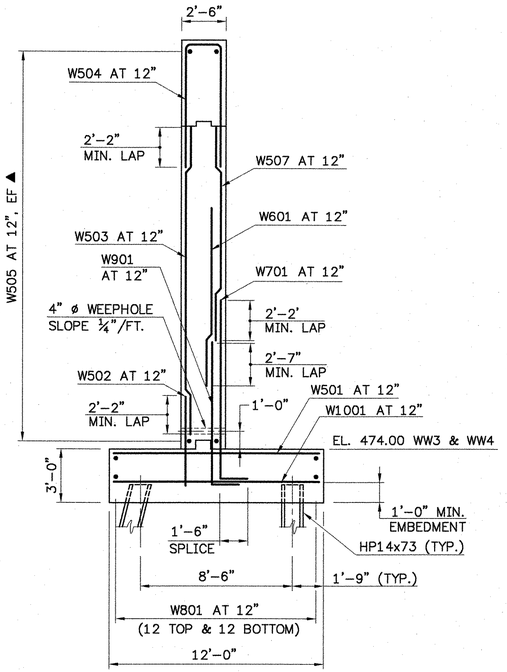
NOTES:

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



WINGWALL TYPICAL SECTION AT ABUTMENT NO. 1

(WINGWALL NO. 1 SHOWN, WINGWALL NO. 2 SIMILAR)
SCALE: ¼" = 1'–0"



WINGWALL TYPICAL SECTION AT ABUTMENT NO. 2

(WINGWALL NO. 3 SHOWN, WINGWALL NO. 4 SIMILAR)
SCALE: ¼" = 1'–0"

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

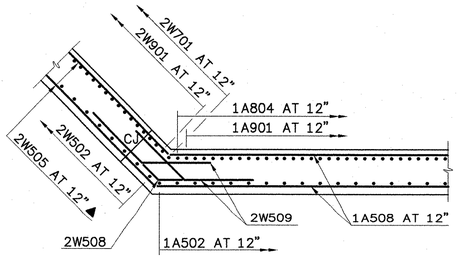
STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

VT. ROUTE 15 OVER GIHON RIVER
WINGWALL DETAILS

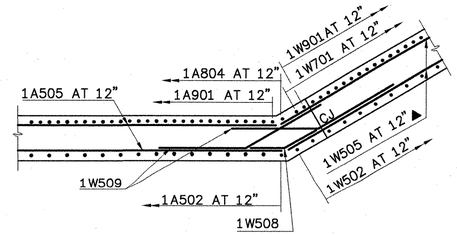
Designed By R.RICARD	Drawn By. D.DUGAL
Checked By Date B.WELCH/R.ROONEY 11/02	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030–2(17)S
I.G.C. Info.	
Bridge Sheet No.	Sheet 64 Of 85

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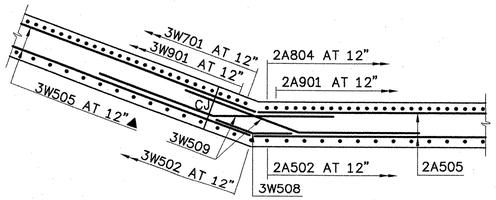
WINGWALL NO. 2 CORNER REINFORCING SECTION B–B

SCALE: ¼" = 1'–0"



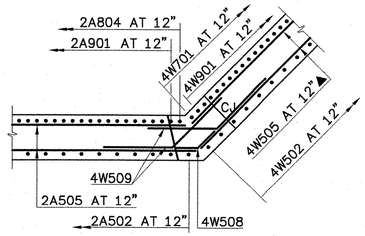
WINGWALL NO. 1 CORNER REINFORCING SECTION A–A

SCALE: ¼" = 1'–0"



WINGWALL NO. 3 CORNER REINFORCING SECTION C–C

SCALE: ¼" = 1'–0"

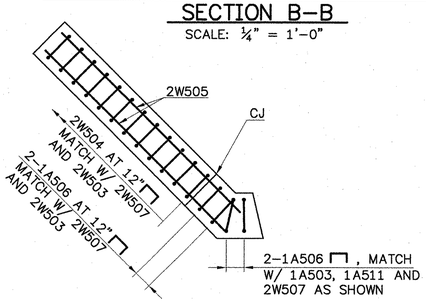


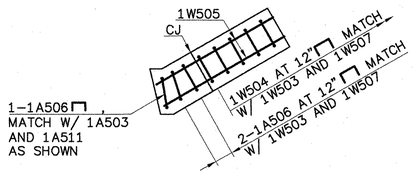
WINGWALL NO. 4 CORNER REINFORCING SECTION D–D

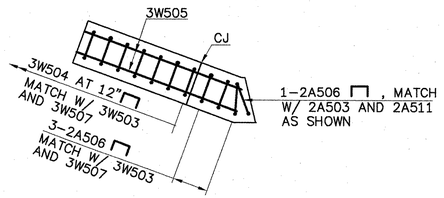
SCALE: ¼" = 1'–0"

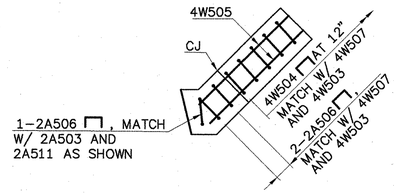
NOTES:

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









WINGWALL NO. 2 CORNER REINFORCING SECTION F–F

SCALE: ¼" = 1'–0"

WINGWALL NO. 1 CORNER REINFORCING SECTION E–E

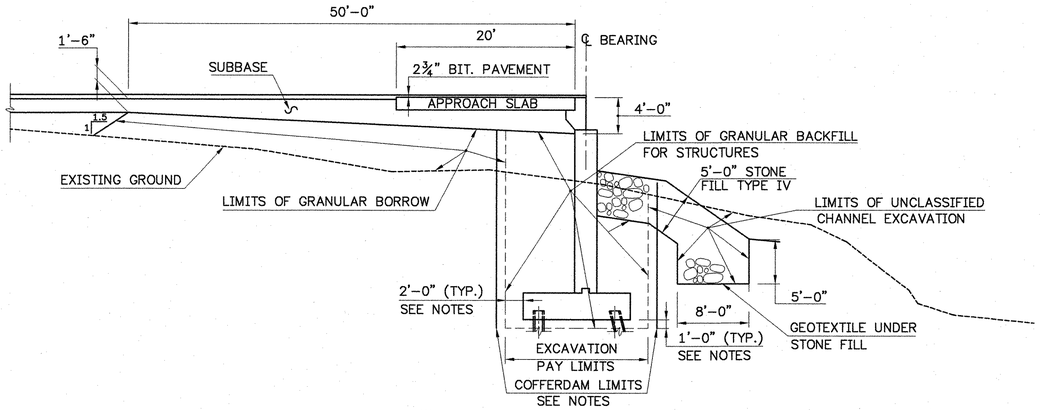
SCALE: ¼" = 1'–0"

WINGWALL NO. 3 CORNER REINFORCING SECTION G–G

SCALE: ¼" = 1'–0"

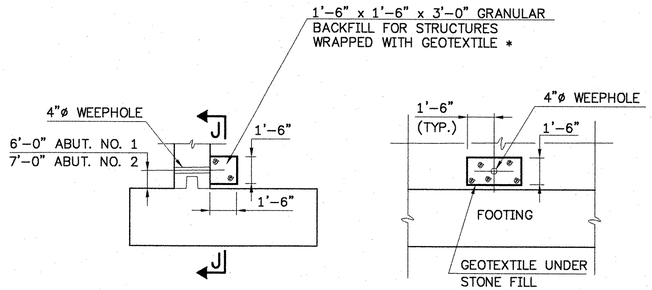
WINGWALL NO. 4 CORNER REINFORCING SECTION H–H

SCALE: ¼" = 1'–0"



TYPICAL ABUTMENT SECTION

SCALE: ⅛" =1'–0"



TYPICAL WEEPHOLE DETAIL

SCALE: ¼" = 1'–0"

SECTION J–J

SCALE: ¼" = 1'–0"

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

SCALE ¼" = 1'-0
1 0 2 4 6

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.

CLD CONSULTING ENGINEERS Inc.
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

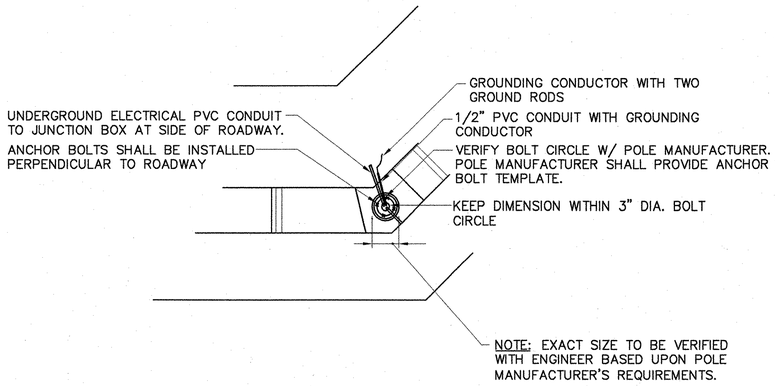
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT. ROUTE 15	Surv. Sta.	

VT. ROUTE 15 OVER GIHON RIVER

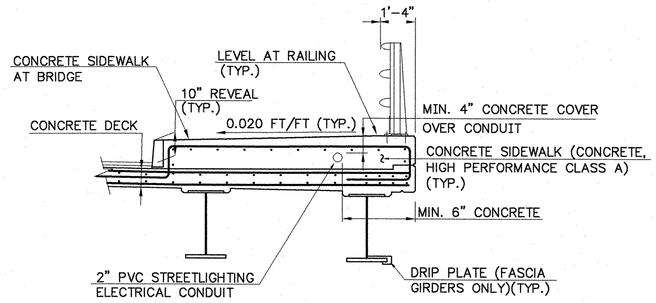
SUBSTRUCTURE DETAILS

Designed By R.RICARD	Drawn By. D.DUGAL
Checked By Date B.WELCH/R.RICARD 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 65 Of 85

912964BUT.DWG



PLAN



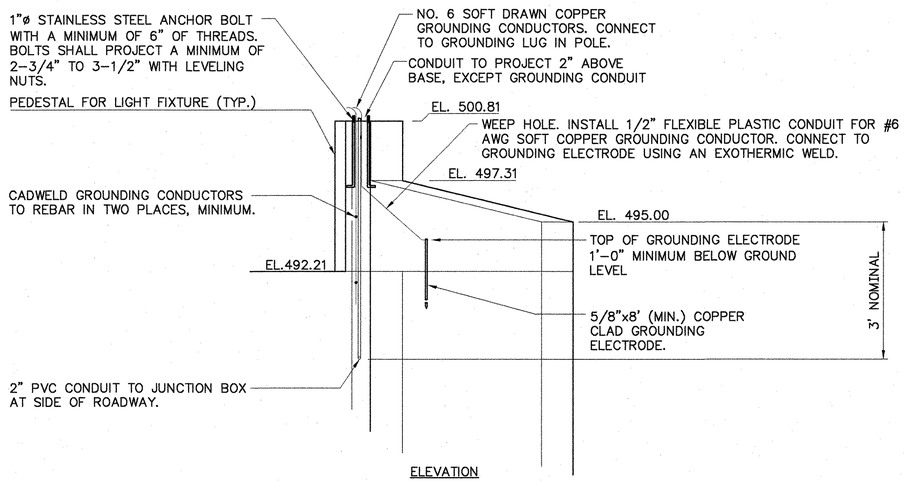
STREETLIGHTING ELECTRICAL CONDUIT IN SIDEWALK AT BRIDGE TYPICAL

REFER TO BRIDGE SHEET 23 OF 85 FOR LIGHTING PLAN

NOT TO SCALE

GENERAL NOTES AND SPECIFICATIONS

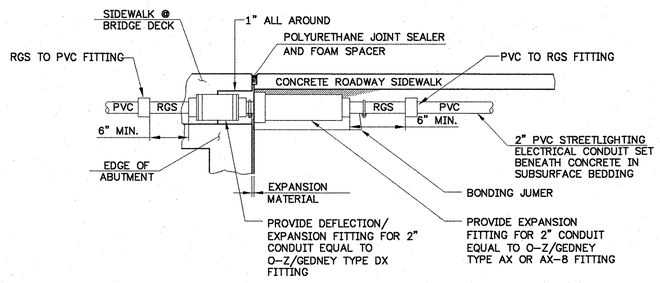
1. THE SCOPE OF WORK IS TO PROVIDE ALL LABOR, MATERIALS, SERVICES, SUPPLIES, TOOLS, EQUIPMENT, TRANSPORTATION, AND FACILITIES NECESSARY TO FURNISH AND INSTALL COMPLETE ELECTRICAL WORK AS CALLED FOR ON THE DRAWINGS, SPECIFIED, OR AS MAY REASONABLY BE IMPLIED AS BEING INCIDENTAL TO THIS WORK.
2. SECURE 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.



ELEVATION

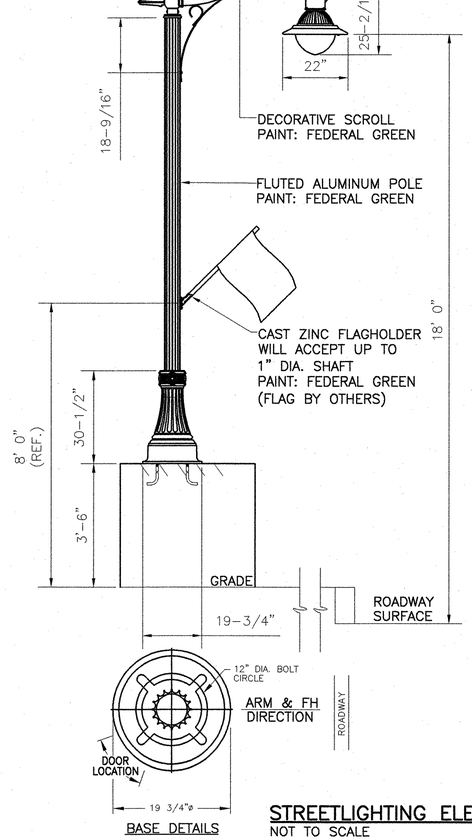
STREETLIGHTING ELECTRICAL CONDUIT AT ABUTMENTS

NOT TO SCALE (WW4 SHOWN, OTHERS SIMILAR)



STREETLIGHTING CONDUIT AT TRANSITION TO CONCRETE ROADWAY SIDEWALK

NOT TO SCALE



BASE DETAILS

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

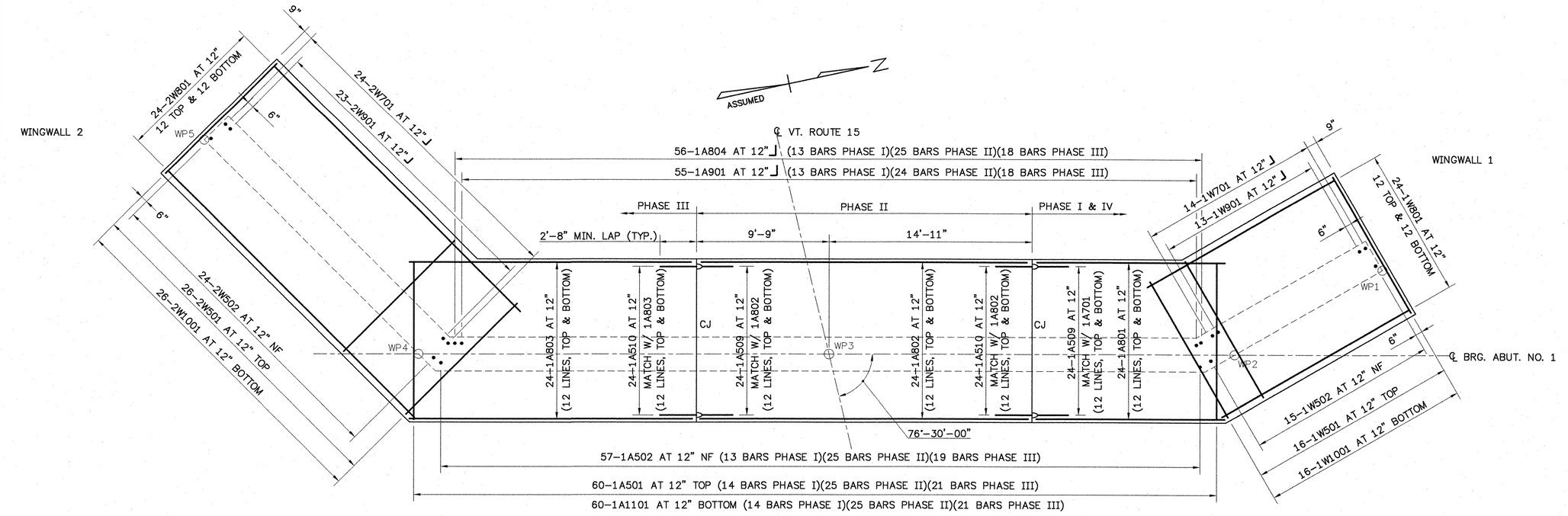
STREETLIGHTING ELECTRICAL CONDUIT AT ABUTMENTS

NOT TO SCALE

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	
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

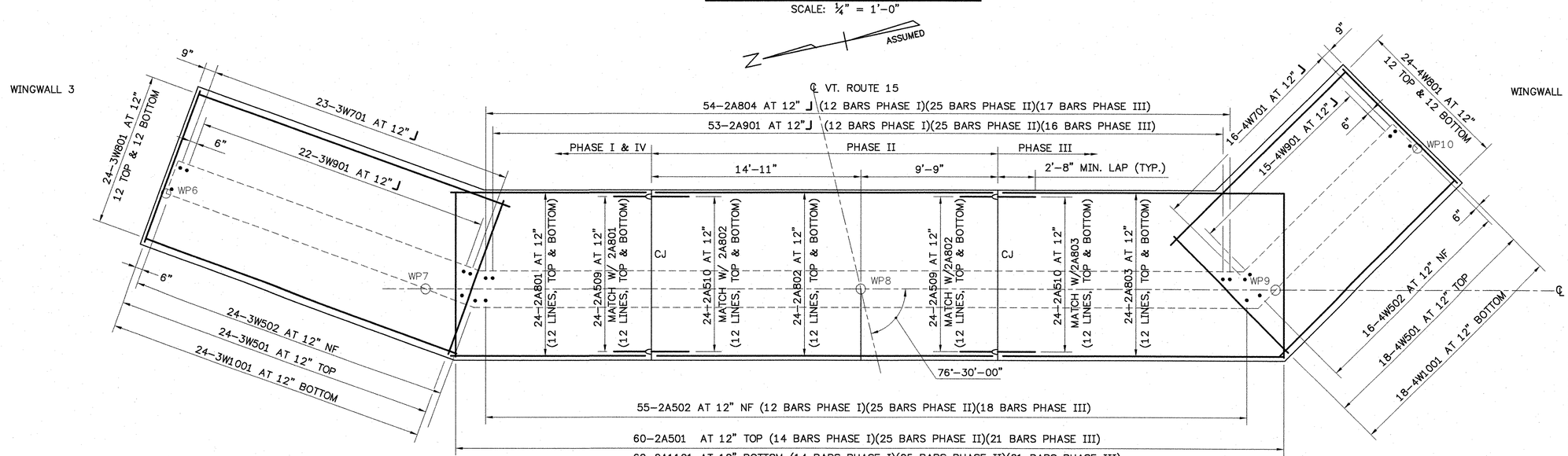
PLAN	NO.	NOTE BOOK	SURVEYED	BY	DATE
			ALIGNMENT CHECKED		
			R.O.W. CHECKED		



ABUTMENT NO. 1
FOOTING REINFORCING PLAN
SCALE: ¼" = 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: ¼" = 1'-0"

SCALE ¼" = 1'-0
1 0 2 4 6

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

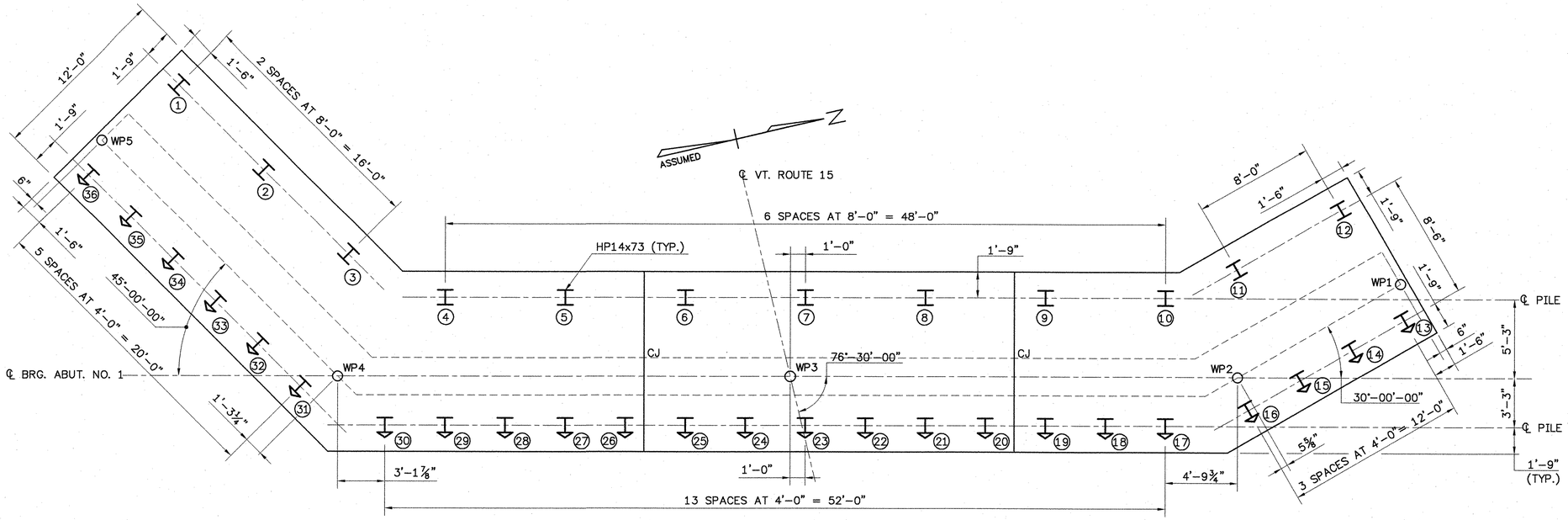
VT. ROUTE 15 OVER GIHON RIVER

FOOTING REINFORCING PLAN

Designed By R.RICARD	Drawn By. D.DUGAL
Checked By Date B.WELCH/R.ROONEY 11/02	Bridge Design Supervisor 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

CONSULTING ENGINEERS
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Inc.

91296FOOT.DWG



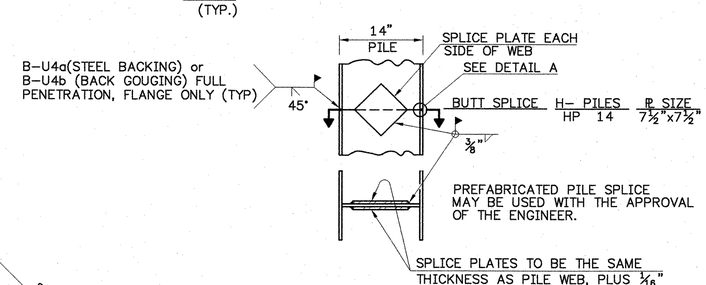
H-PILE LAYOUT
ABUTMENT NO. 1
SCALE: ¼" = 1'-0"

PILE NOTES:

1. PILES UNDER 20 FEET SHALL NOT BE SPLICED.
2. PILE CUTOFF ELEVATION: ABUTMENT NO. 1 = 473.00
   ABUTMENT NO. 2 = 472.00
3. SEE SHEET 46 of 85 FOR GENERAL PILE NOTES.

I INDICATES VERTICAL HP14x73 PILE DRIVEN TO ULTIMATE CAPACITY PER PILE OF 530 KIPS.

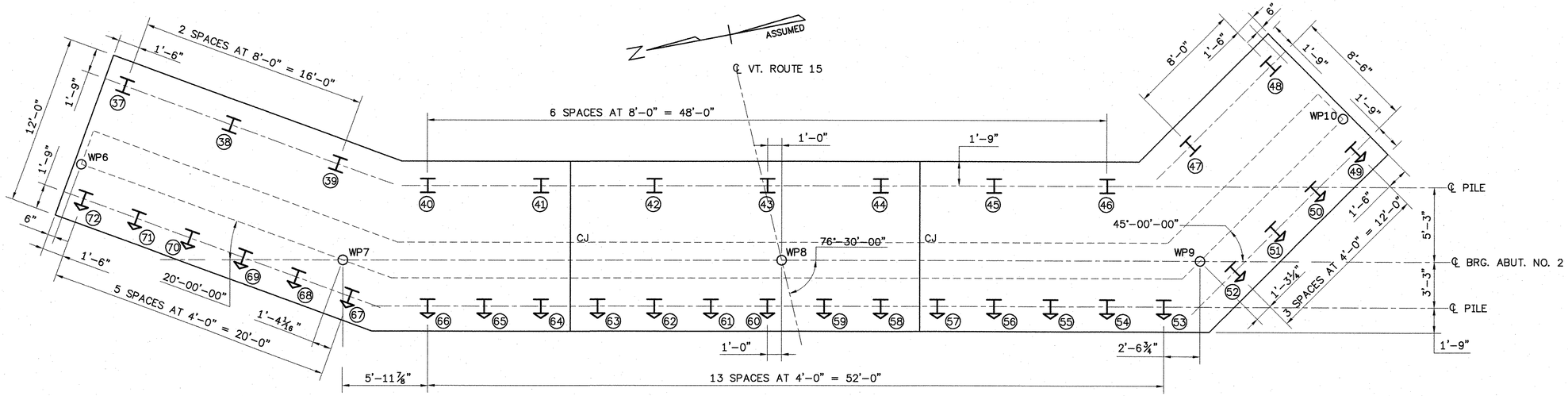
I INDICATES PILE BATTERED 3 ON 12



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



DETAIL A
NTS



H-PILE LAYOUT
ABUTMENT NO. 2
SCALE: ¼" = 1'-0"

SCALE ¼" = 1'-0
1 0 2 4 6

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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 GIHON RIVER	
PILE LAYOUT	
Designed By R.RICARD	Drawn By. D.DUGAL
Checked By B.WELCH/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 68 Of 85

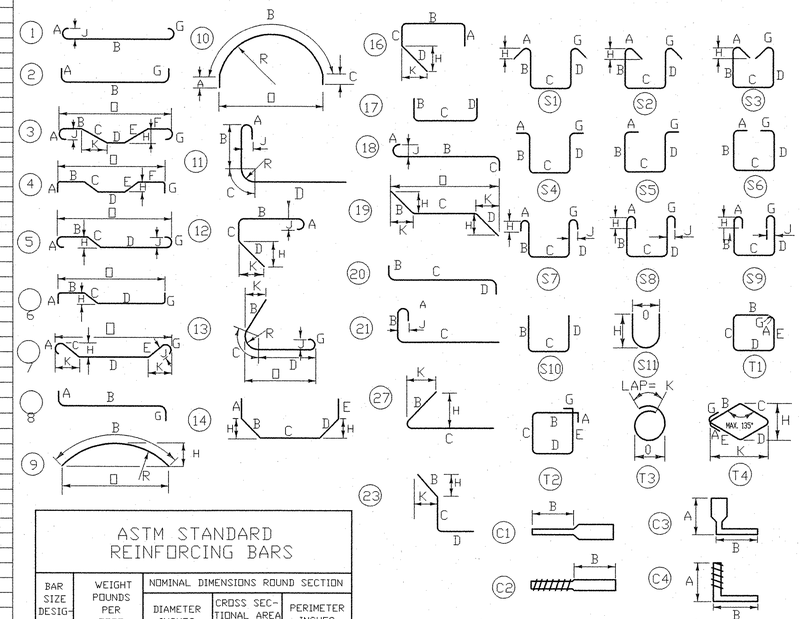
91296PILE.DWG

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	D
			DECK														
	310	5	19–10	ES501	STR												
	311	5	7–6	ES502	STR	*											
	78	5	12–8	ES503	S5	2–2	1–7	5–4	1–5			2–2					
	710	5	2–6	ES504	C1		2–6										
	710	5	2–6	ES505	C2		2–6										
	402	5	27–1	ES506	STR												
	310	5	24–2	ES507	STR												
	78	5	16–0	ES508	S5	2–2	1–7	8–10	1–3			2–2					
	78	5	3–9	ES509	C4	0–8	3–1										
	64	5	4–9	ES510	16	0–11	1–10	0–7	1–5				1–0		1–0		
	64	5	10–5	ES511	S5	2–2	2–10	0–9	2–6			2–2					
	7	5	10–4	ES512	STR	*											
	6	5	24–2	ES513	STR	▲											
	6	5	17–1	ES514	STR												
	16	5	2–4	ES515	STR												
	78	5	3–0	ES516	C3	0–6	2–6										
			APPROACH SLAB NO. 1														
	38	9	20–3	1EAS901	1	1–3	19–0					0–0		0–9			
	18	8	2–9	1EAS801	19			1–9	1–0				0–9		0–9		
	22	5	21–7	1EAS501	STR	*											
	21	5	9–3	1EAS502	STR												
	21	5	2–6	1EAS503	C1		2–6										
	21	5	2–6	1EAS504	C2		2–6										
			APPROACH SLAB NO. 2														
	38	9	20–3	2EAS901	1	1–3	19–0					0–0		0–9			
	18	8	2–9	2EAS801	19			1–9	1–0				0–9		0–9		
	21	5	21–7	2EAS501	STR												
	22	5	9–3	2EAS502	STR	*											
	21	5	2–6	2EAS503	C1		2–6										
	21	5	2–6	2EAS504	C2		2–6										
			ABUTMENT NO. 1														
	60	11	11–6	1A1101	STR												
	56	9	8–6	1A901	17	*	7–0	1–6	0–0								
	24	8	13–6	1A801	STR												
	24	8	24–2	1A802	STR												
	24	8	20–6	1A803	STR												
	56	8	12–0	1A804	17		10–6	1–6	0–0								
	55	6	11–7	1A601	STR												
	60	5	11–6	1A501	STR												
	57	5	5–0	1A502	STR												
	57	5	17–0	1A503	STR												
	54	5	6–8	1A504	17		2–4	2–0	2–4								
	36	5	11–7	1A505	STR												
	7	5	22–6	1A506	17		10–7	2–0	10–7								
	36	5	24–2	1A507	STR												
	36	5	19–1	1A508	STR												
	120	5	2–6	1A509	C1		2–6										
	120	5	2–6	1A510	C2		2–6										
	56	5	11–6	1A511	STR												
			ABUTMENT NO. 2														
	60	11	11–6	2A1101	STR												
	53	9	8–6	2A901	17		13–11	1–6	0–0								
	25	8	13–6	2A801	STR	*											
	24	8	24–2	2A802	STR												
	24	8	19–11	2A803	STR												
	54	8	12–0	2A804	17		10–6	1–6	0–0								
	53	6	11–7	2A601	STR												
	60	5	11–6	2A501	STR												
	55	5	5–0	2A502	STR												
	55	5	17–7	2A503	STR												
	54	5	6–8	2A504	17		2–4	2–0	2–4								
	36	5	11–7	2A505	STR												
	7	5	22–6	2A506	17		10–3	2–0	10–3								
	36	5	24–2	2A507	STR												
	36	5	18–6	2A508	STR												
	120	5	2–6	2A509	C1		2–6										
	120	5	2–6	2A510	C2		2–6										
	54	5	12–1	2A511	STR												

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	D
			WINGWALL NO. 1														
	16	10	11–6	1W1001	STR												
	13	9	9–6	1W901	17		1–6	8–0	0–0								
	24	8	15–7	1W801	STR												
	14	7	11–6	1W701	17		1–6	10–0	0–0								
	14	6	10–1	1W601	STR	*											
	16	5	11–6	1W501	STR												
	15	5	5–0	1W502	STR												
	15	5	16–5	1W503	STR												
	13	5	16–8	1W504	17		7–4	2–0	7–4								
	46	5	14–6	1W505	STR	▲											
	2	5	15–1	1W506	19		0–0	2–6	12–7					3–0		12–2	0–0
	14	5	11–7	1W507	STR												
	18	5	4–4	1W508	19		2–2	2–2						1–0		1–11	
	36	5	9–8	1W509	19		4–10	4–10						2–5		4–2	
	16	5	2–0	1W510	STR												
			WINGWALL NO. 2														
	26	10	11–6	2W1001	STR												
	23	9	9–6	2W901	17		1–6	8–0	0–0								
	24	8	25–4	2W801	STR												
	25	7	11–6	2W701	17	*	1–6	10–0	0–0								
	23	6	10–1	2W601	STR												
	26	5	11–6	2W501	STR												
	24	5	5–0	2W502	STR												
	24	5	16–5	2W503	STR												
	22	5	16–8	2W504	17		7–4	2–0	7–4								
	46	5	23–6	2W505	STR	▲											
	2	5	23–7	2W506	19		0–0	2–3	21–4					3–0		21–2	0–0
	24	5	11–7	2W507	STR												
	18	5	4–4	2W508	19		2–2	2–2						1–6		1–6	
	36	5	7–8	2W509	19		3–10	3–10						2–8		2–8	
			WINGWALL NO. 3														
	24	10	11–6	3W1001	STR												
	22	9	9–6	3W901	17		1–6	8–0	0–0								
	24	8	23–3	3W801	STR												
	23	7	11–6	3W701	17		1–6	10–0	0–0								
	22	6	10–1	3W601	STR												
	24	5	11–6	3W501	STR												
	25	5	5–0	3W502	STR	*											
	24	5	17–0	3W503	STR												
	21	5	16–6	3W504	17		7–3	2–0	7–3								
	46	5	22–9	3W505	STR	▲											
	2	5	23–0	3W506	19		0–0	2–9	20–3					2–3		20–2	0–0
	23	5	12–1	3W507	STR												
	18	5	4–4	3W508	19		2–2	2–2						0–9		2–0	
	36	5	13–6	3W509	19		6–9	6–9						2–3		6–4	
	16	5	2–0	3W510	STR												
			WINGWALL NO. 4														
	18	10	11–6	4W1001	STR												
	15	9	9–6	4W901	17		1–6	8–0	0–0								
	24	8	17–4	4W801	STR												
	16	7	11–6	4W701	17		1–6	10–0	0–0								
	15	6	10–1	4W601	STR												
	18	5	11–6	4W501	STR												
	17	5	5–0	4W502	STR	*											
	16	5	17–0	4W503	STR												
	16	5	16–6	4W504	17		7–3	2–0	7–3								
	46	5	15–6	4W505	STR	▲											
	2	5	15–3	4W506	19		0–0	2–0	13–3					2–3		13–2	0–0
	16	5	12–1	4W507	STR												
	18	5	4–4	4W508	19		2–2	2–2						1–6		1–6	
	36	5	7–8	4W509	19		3–10	3–10						2–8		2–8	

NOTES:

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



ASTM STANDARD REINFORCING BARS

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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

VT RTE 15 OVER THE GIHON RIVER

REINFORCING STEEL SCHEDULE

Designed By R. RICARD	Drawn By D.DUGAL
Checked By S. BEAUMONT Date 11/06	CLD Project Manager J. BYATT 11/06
PROJECT JOHNSON	PROJECT NO. BRF 030–2(17)S
I.G.C. Info.	
Bridge Sheet No.	Sheet 69 of 85

91296sch.dwg

MATCH TO EXISTING PC 100+06.01

+0.034 +0.040 +0.040

LT SIDE & SHOULDER

LT SIDE LT SHLDR. RT SHLDR. RT SIDE

-0.049 -0.040 +55 -0.040

100+00 100+50 101+00

SCALE: 0.05 FT/FT 25 FEET

BANKING TRANSITION

T GRATE FL SUMP

LAWN

E PAV SHLD

498.23

498.0

+0.040 +0.040

15" CGMP

10" CIP

494.3 494.7 494.1 494.3

100+75 LT – 101+28 LT
NEW 18"X58' RCP(CLASS III) OR CPEP(SL)
NEW 4'X6' RCDI W/ DOUBLE CI GRATE, TYPE D

100+75 LT – 102+60 LT
NEW 6"X194' UNDERDRAIN
W/ FLUSHING BASIN

+76 48" ELM STUMP

+56 36" MAPLE STUMP

12" TRANSITE SEWER

℄ 100+85
DROP INLET LT

DR E PAV SHLD E P

498.42

E DRIVE

+0.024 +0.040 +0.040 -0.040 -0.058

E P E PARK

DETOUR CONSTRUCTION LIMITS

E PAV PARK

GRAV PARK

A-4 W

12" TRANSITE SEWER

A-4 W NLTD 20' RT

℄ 100+50
GRAVEL DRIVE LT

+26 HOUSE

+12 HOUSE

E DRIVE E DRIVE E PAV SHLD E P

498.70

E P E SW

LIGHT POLE

12" TRANSITE SEWER

℄ 100+00

+87 NET&T 3207 1755

+82 GUY ANCHOR

+59 10" APPLE

E DRIVE E DRIVE E PAV SHLD E P

E P E SW

12" TRANSITE SEWER

℄ 99+50

M SISc(VIS) BRN CNPF BORING @ 100+15 16' RT

VERTICAL GRANITECURB
5' SIDEWALK
SLOPE VARIES
6"
1' 1'
SUBBASE

CONSTRUCTION DETAIL
N.T.S.

1-1/2" BCP TYPE III
3" BCP TYPE II
3-3/4" BCP TYPE I

21" SAND BORROW
21" SUBBASE OF CRUSHED GRAVEL (COARSE GRADED) (MODIFIED)

25 1

SCALE 10 INCHES 10 FEET

DEPTH TRANSITION

490 490 490

101+50 +37.5 +50 100+00 99+80

STA 100+28

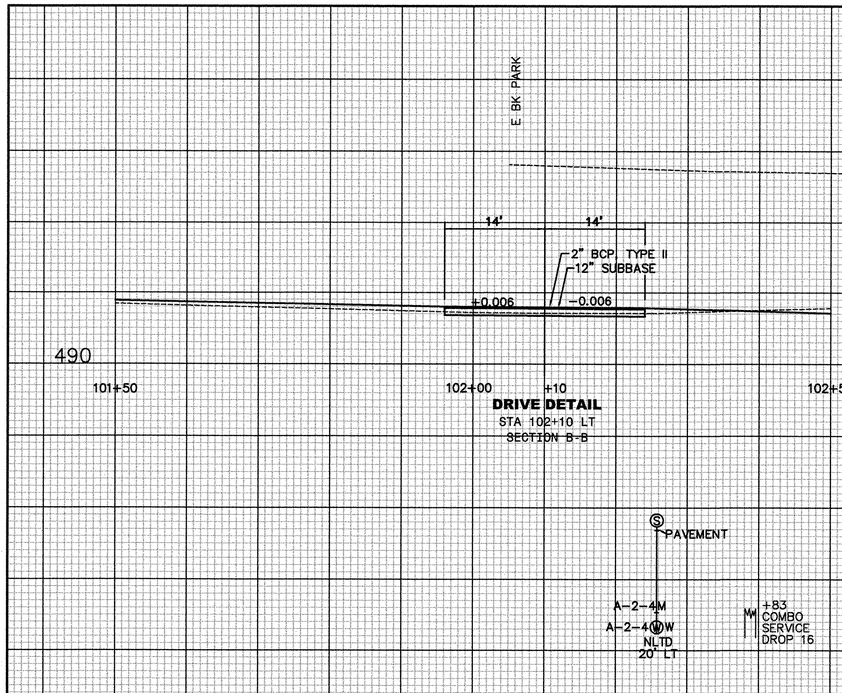
AREA TO BE COLD PLANED

EXISTING PAVEMENT ±
EXISTING PORTLAND CEMENT CONCRETE ±
EXISTING SUBBASE ±

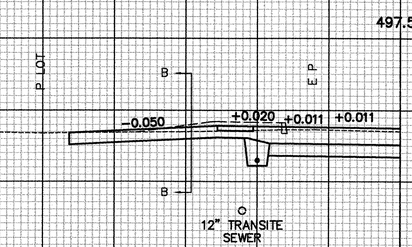
SCALE 10 FEET

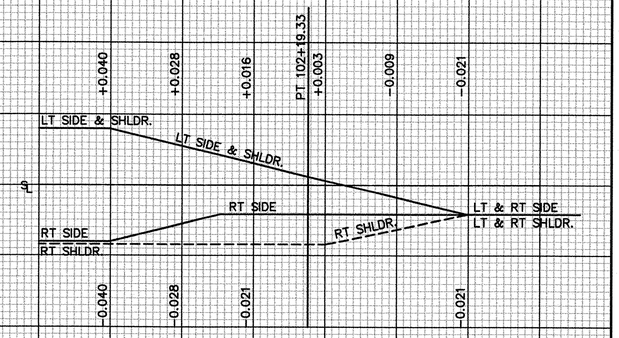
CROSS SECTIONS - ROUTE 15

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



DRIVE DETAIL
STA 102+10 LT
SECTION B-B

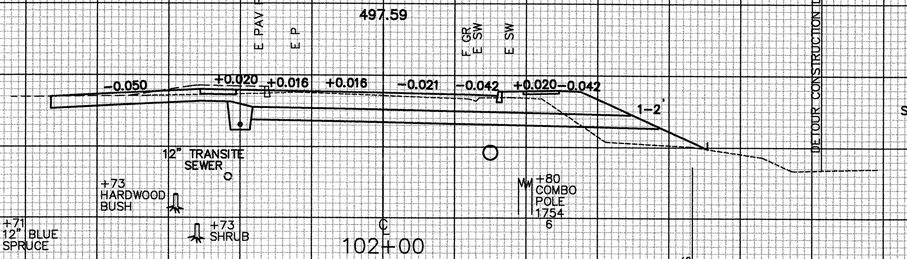


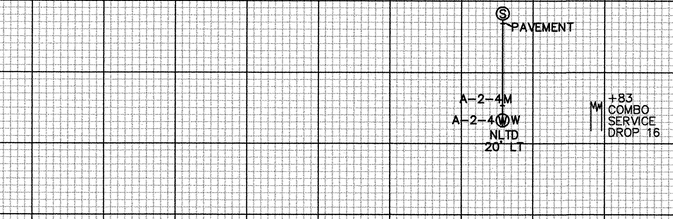


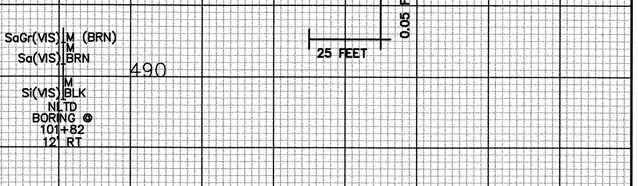
BANKING TRANSITION

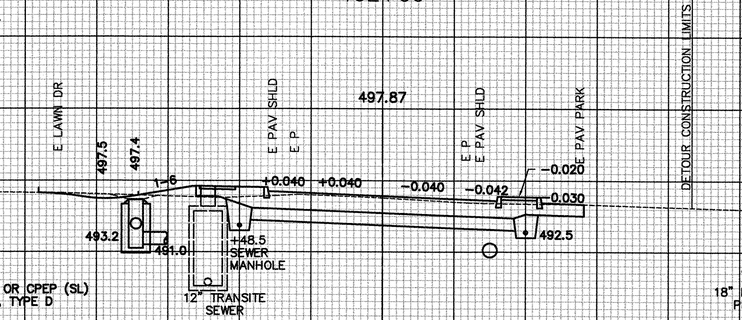
SCALE:
25 FEET
0.05 FT/FT

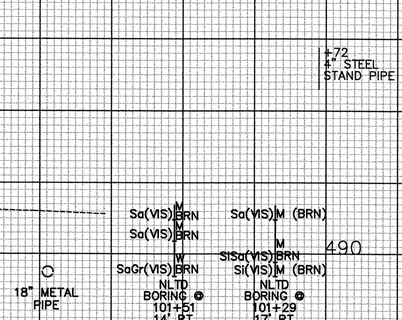
102+10
PAVED DRIVE LT





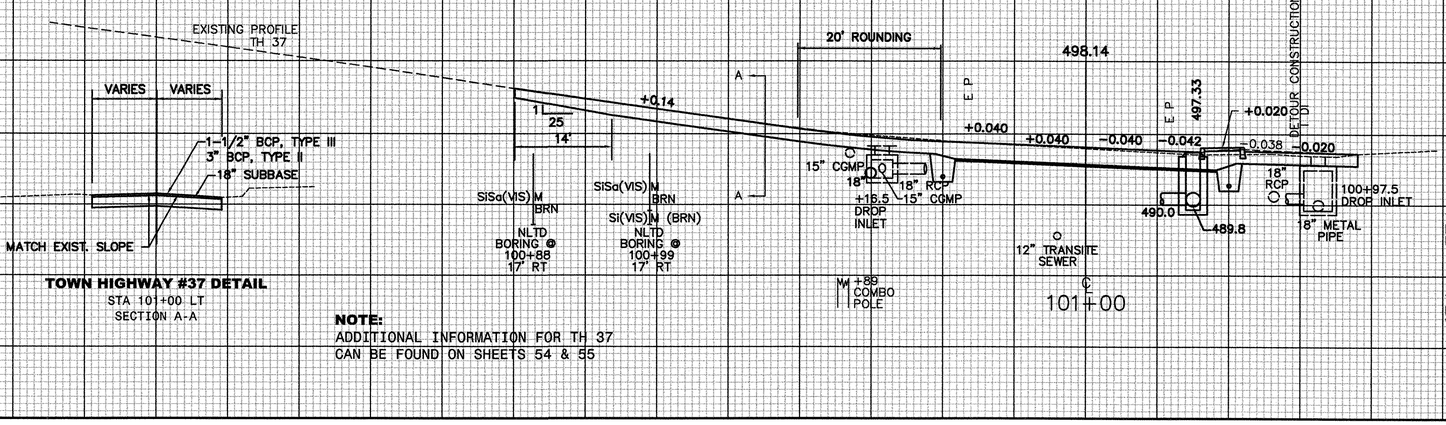






101+50

101+22 RT - 101+80 RT
NEW 6"X60' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN



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

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

101+00

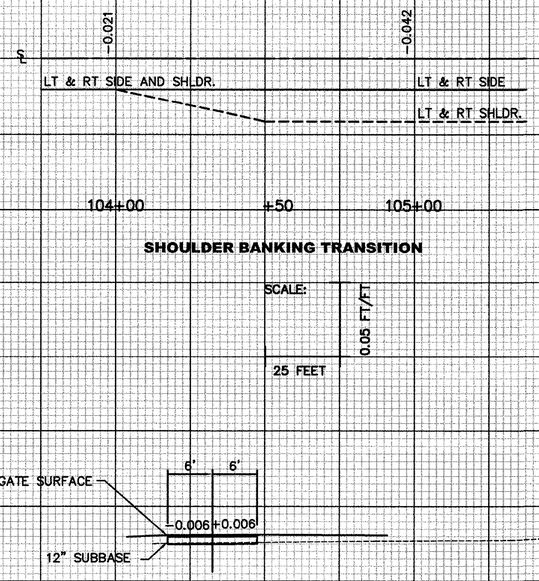
101+22 RT - 102+50 RT
NEW 24"X122 RCP (CLASS III) OR CPEP (SL)
NEW 4'X4' RCDI W/ CI GRATE, TYPE D

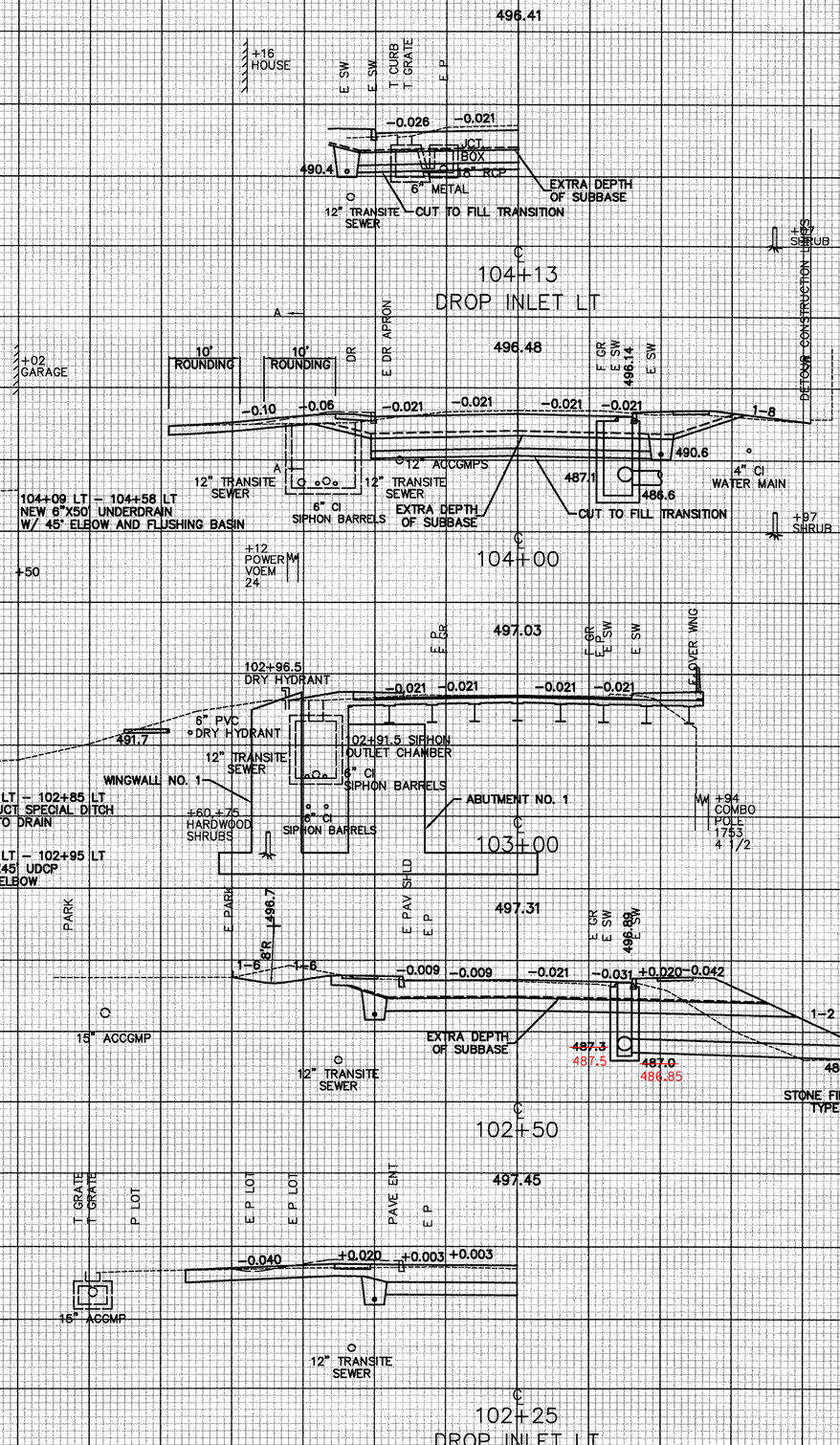
100+75 RT - 101+22 RT
NEW 6"X50' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN

SCALE 10 FEET

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		





SaSi(VIS) M BRN ± CONC.
SaSi(VIS) M BRN NLTD 20' RT

Sa(VIS) M BRN
Sa(VIS) MTW (BRN)

SaSi(VIS) W
SiSa(VIS) GR
SiSa(VIS) L
NLTD
BORING @ STA 103+85

103+60 RT – 103+93 RT
NEW 24"X54' PCCSP(.064) OR CAAP(.060)
NEW 6'X6' RCCB W/ CI GRATE, TYPE D

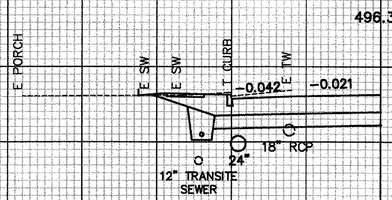
103+86 RT – 104+58 RT
NEW 6"X75' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN

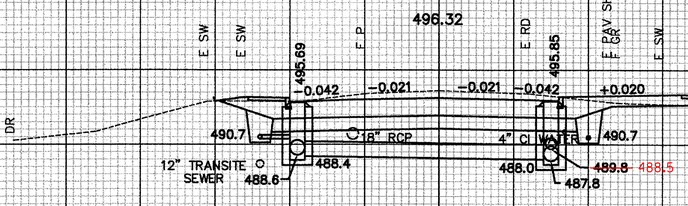
102+50 RT – 102+65 RT
NEW 24"X36' PCCSP(.064) OR CAAP(.060)
NEW 4'X4' RCDI W/ CI GRATE, TYPE D
CONSTRUCT 4'X8' STONE FILL PAD, TYPE II, AT OUTLET

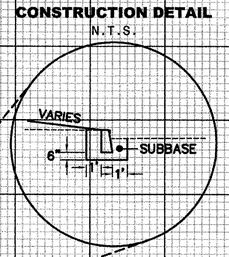
CROSS SECTIONS - ROUTE 15

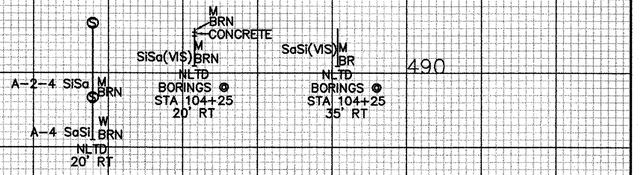
FROM STA.	102+25	TO	STA.	104+13	
PROJECT NAME		JOHNSON	VT ROUTE 15		
NO.	BRF 030-2(17)S			PLOTTED	12/30/87
SURVEYED BY		SARGENT			DEC. 1987
SHEET	72	OF	85	SHEETS	

SCALE 10 FEET









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

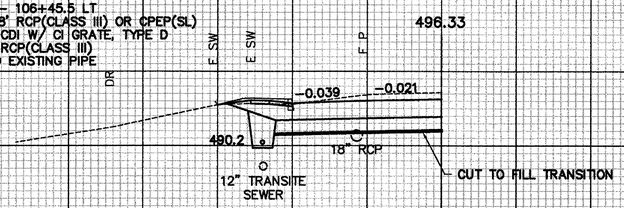
104+58 LT – 105+75 LT
NEW 6"X120' UNDERDRAIN
W/ 45° ELBOW AND FLUSHING BASIN

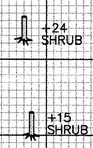
104+58 LT – 106+45.5 LT
NEW 24"X188' RCP(CLASS III) OR CPEP(SL)
NEW 4'X6' RCDI W/ CI GRATE, TYPE D
NEW 18"X4' RCP(CLASS III)
CONNECT TO EXISTING PIPE

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

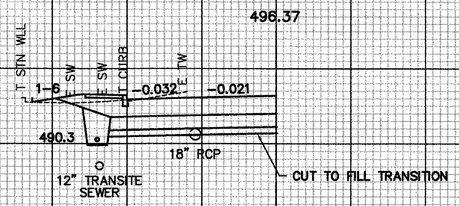
103+93 RT – 104+58 RT
NEW 24"X64' RCP(CLASS III) OR CPEP(SL)
NEW 4'X 4' RCDI W/ CI GRATE, TYPE D

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





104+43
GRAVEL DRIVE LT



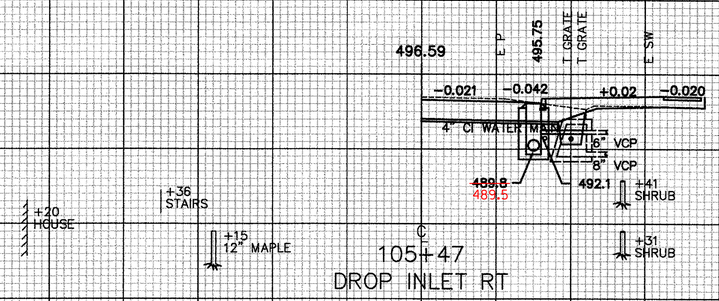
104+50

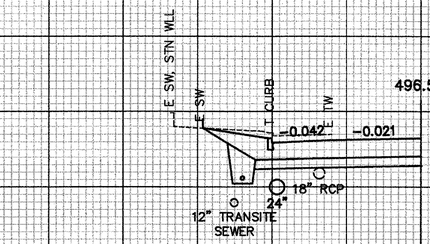
104+25

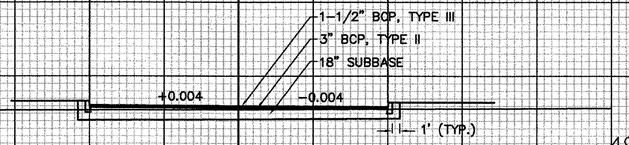
CROSS SECTIONS - ROUTE 15

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



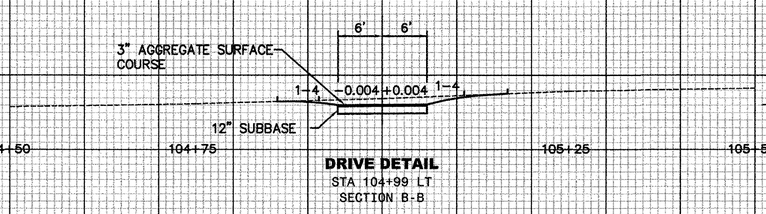




490

104+50 105+00 105+50

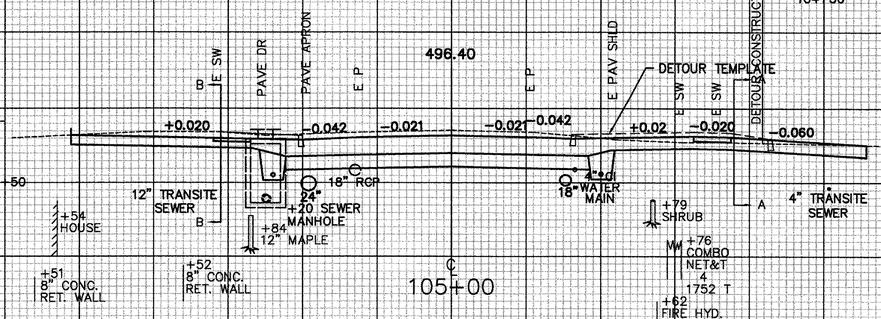
DRIVE DETAIL
STA 105+05 RT
SECTION A-A



490

104+50 104+75 105+25 105+50

DRIVE DETAIL
STA 104+99 LT
SECTION B-B



490

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 10 FEET

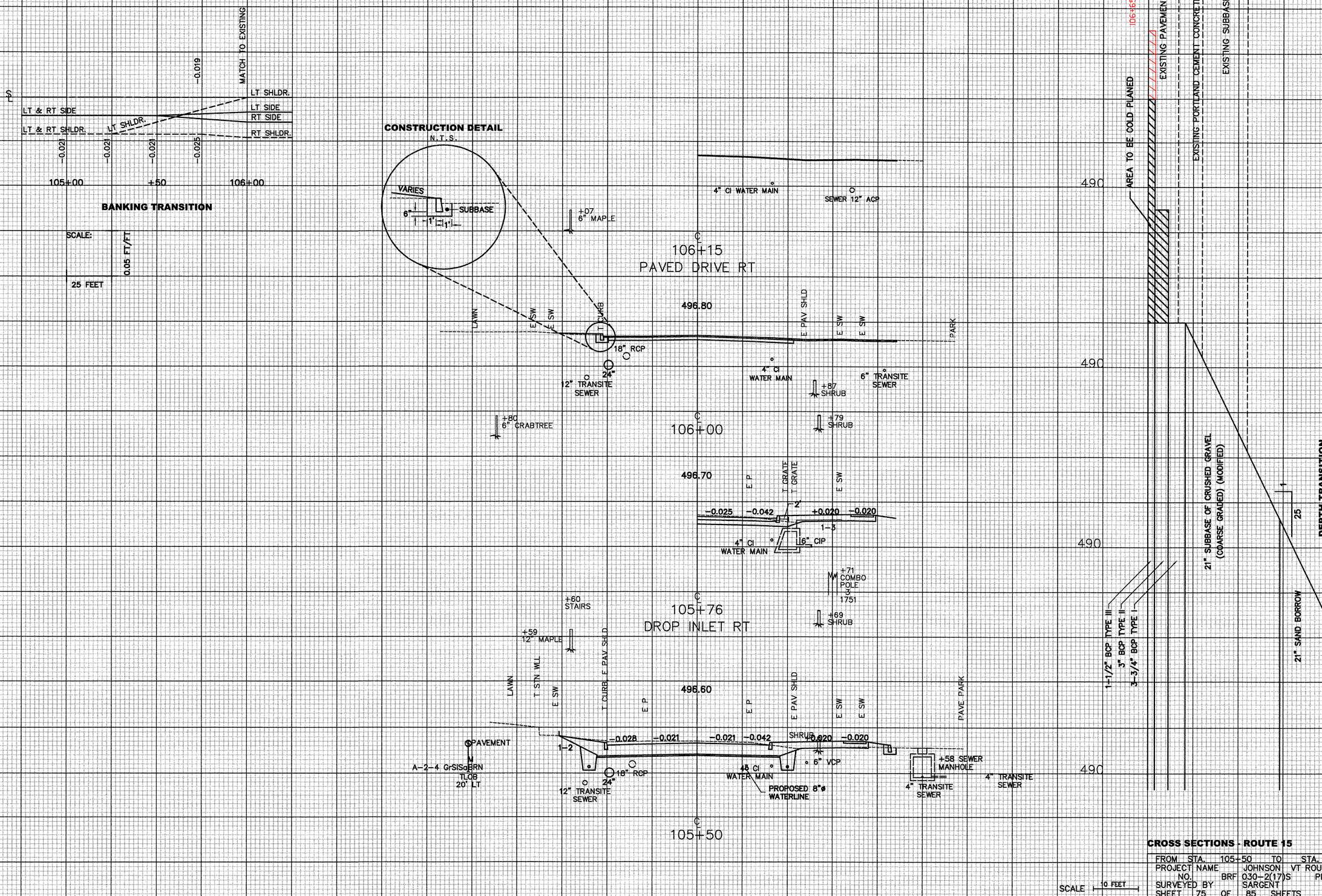
BANKING TRANSITION

SCALE: 0.05 FT/FT

25 FEET

CONSTRUCTION DETAIL

N.T.S.



CROSS SECTIONS - ROUTE 15

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

SCALE 10 FEET

E SW
E SW
PAV DR
E PAV APRN
E PAV SHLD
E SW
+76 TO +100
B. SHRUB ROW
+72 TO +92
BEGIN BANK
BUILDING
+60
COMBO POLE
320 T
1750 T
+55
STONE PLANTER
+60
6" MTN. ASH
+72
8" GRABTREE
+58
10" MAPLE
℄
107+00
490
E SW
E SW
T CURB
E PAV SHLD
E SW
T CURB
PAV PARK
18" RCP
℄
106+50
490
E SW
T CURB 496.43
T GRATE
18" RCP
18" RCP
489.5
489.94 IN
489.56 OUT
490
+38
34" MAPLE
℄
106+47
DROP INLET LT
NEW 106+54 LT
E SW
E SW
E PAV SHLD
18" RCP
24"
490
℄
106+28
PAVED DRIVE LT
+20
24" SMH

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

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

LAWN
504.33
E.P.
LAWN
12" PCCSP
~~501.2~~
500.75
~~498.1~~
499.6
500
+68
STAIRS
+58
STAIRS
℄
30+75

D.I.
E.P.
E.P.
LAWN
15" CGMP
10" CIP
DROP INLET
18"
500
℄
30+50
E. VT. ROUTE 15 PV.

.021
E.P.
D.I.
E.P.
LAWN
497.40
15" CGMP
18" RCP
DROP INLET
493.2
491.0
490
℄
30+25
E. VT. ROUTE 15 PV.
C. VT. ROUTE 15
E. VT. ROUTE 15 PV.

490
℄
30+00

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

MW +75
POLE
2

+60
15" CRATE

+55
SHED

+51
HOUSE

E BLDG
E P
E P
E DR. APRON
GRAV DR

510

+45
JCT.
BOX

℄
31+50

+35
SHED

BOT. SILL
LAWN
E P
E P
LAWN

510

+26
HOUSE

+18
HOUSE

℄
31+25

+02
HOUSE

E P
LAWN
E P
LAWN

500

+81
12" MAPLE

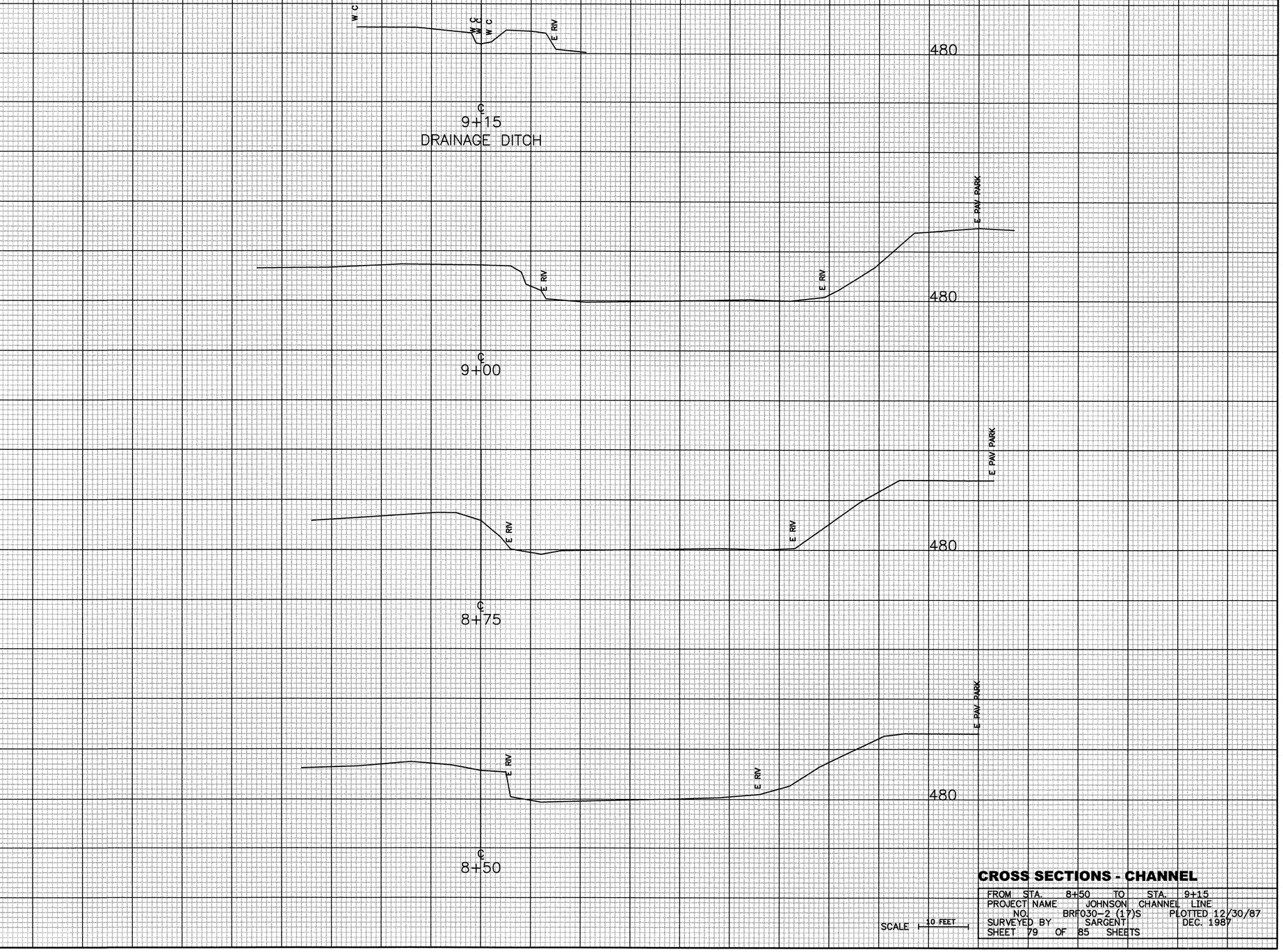
℄
31+00

CROSS SECTIONS - TH#37

FROM STA. 31+00 TO STA. 31+50
PROJECT NAME JOHNSON TH#37
NO. BRFD30-2 (17)S PLOTTED 12/30/87
SURVEYED BY SARGENT DEC. 1987
SHEET 78 OF 85 SHEETS

SCALE 10 FEET

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



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

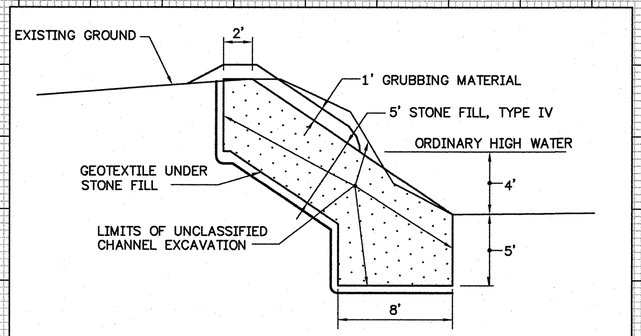
SCALE 10 FEET

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

9128B-05.DWG (1=10)

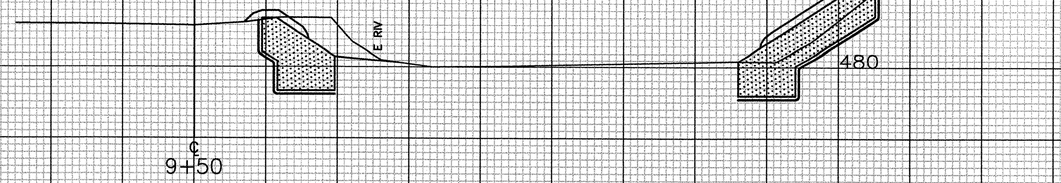
E:\Proj90-94\91296 Johnson\BRIDGE\91296xs1 12-26-97 10:44:17 am EST

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

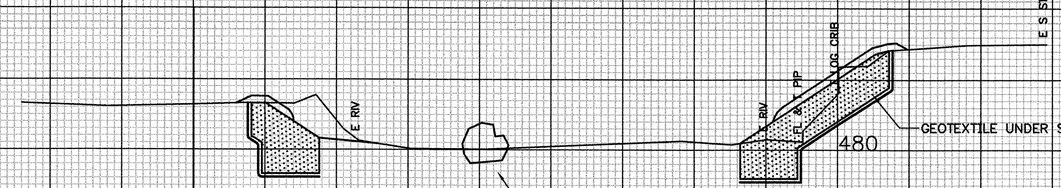


TYPICAL SECTION OF CHANNEL BANK WORK

SCALE: 1" = 5'



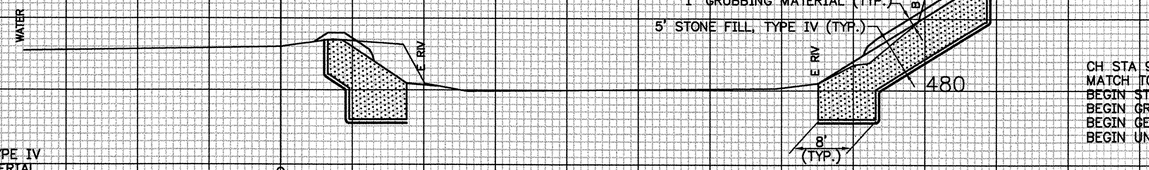
℄
9+50



PROVIDE THREE FISH HABITAT BOULDERS (5' TO 6' DIA.) BURIED 1/3 DEPTH OF BOULDER DIAMETER BELOW STREAMBED GRADE.

℄
9+40
18" RCP RT

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



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

℄
9+25

CH STA 9+23, RIGHT
MATCH TO EXIST.
BEGIN STONE FILL, TYPE IV
BEGIN GRUBBING MATERIAL
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION

CROSS SECTIONS - CHANNEL

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

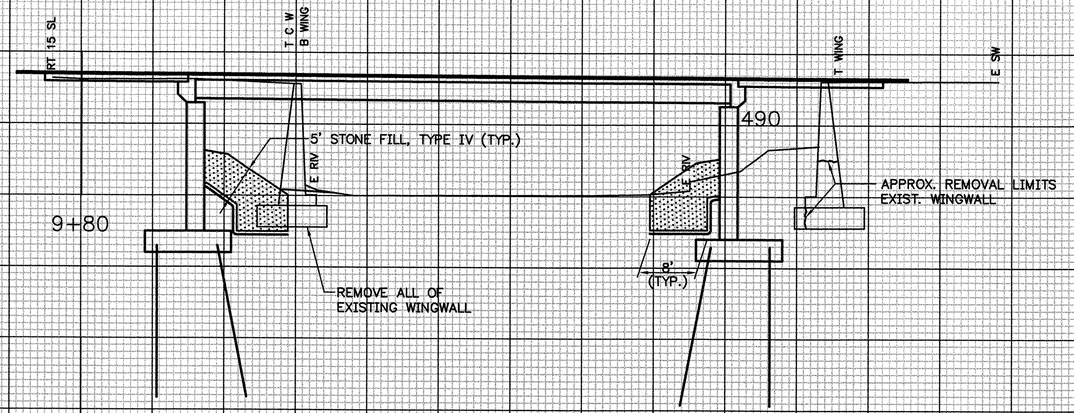
SCALE 10 FEET

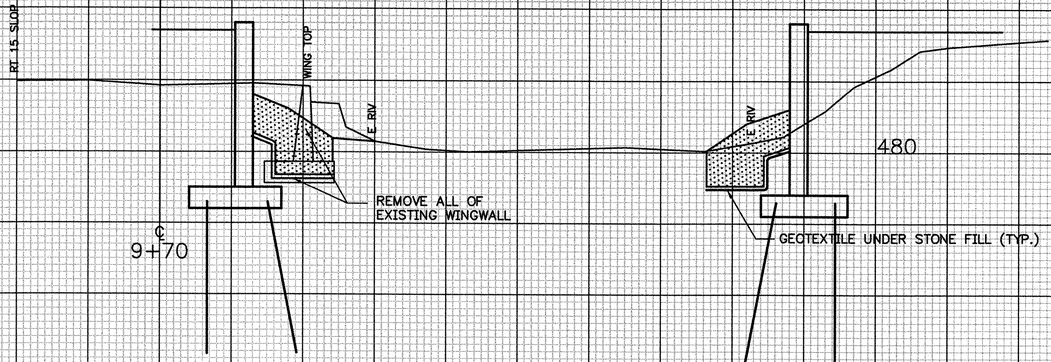
91328-05.DWG (1=10)

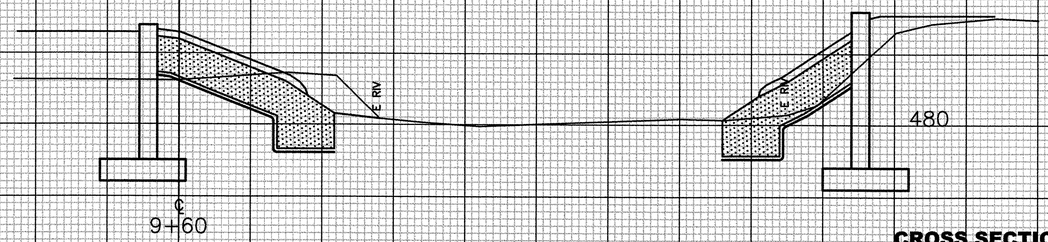
FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTEBOOK TEMPLATE		
NO. AREAS		
AREAS CHECKED		

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

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







CROSS SECTIONS - CHANNEL

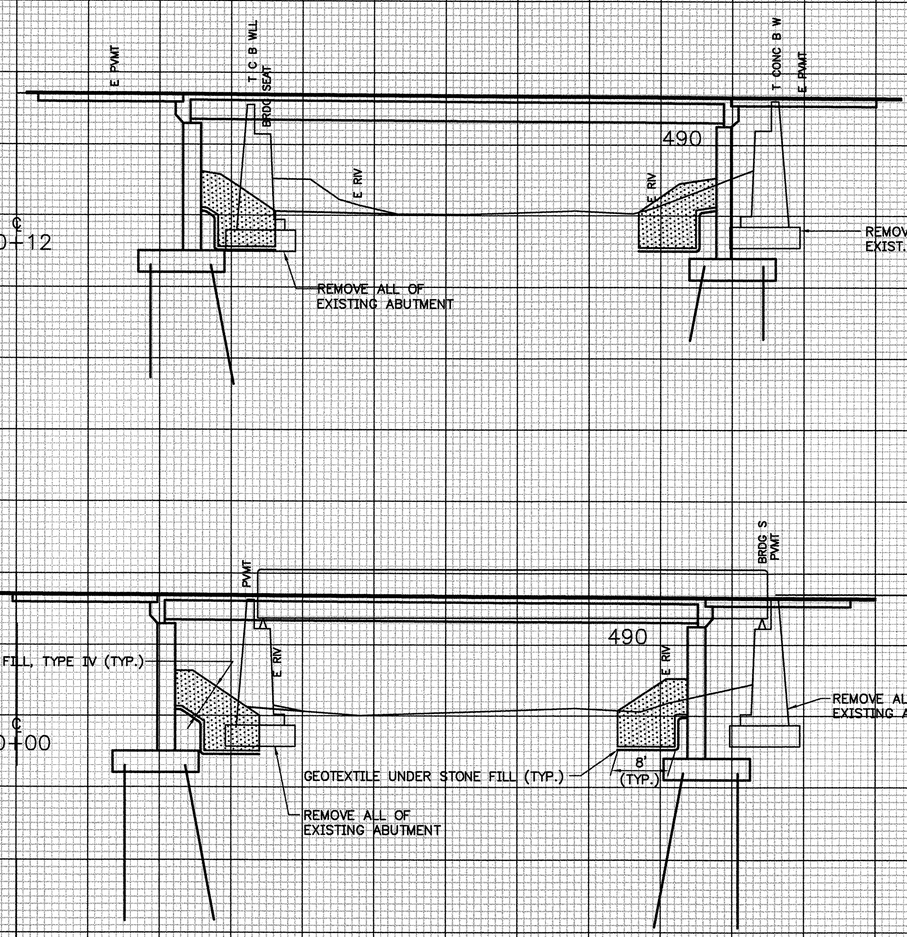
FROM STA.	9+60	TO STA.	9+80		
PROJECT NAME		JOHNSON CHANNEL LINE			
NO.	BRF030-2 (17)S			PLOTTED	12/30/87
SURVEYED BY		SARGENT			DEC. 1987
SHEET 81 OF 85 SHEETS					

SCALE 10 FEET

91358-XS.DWG (1=10)

FileName=90-241\91358_Johnson-CH\BR\91358-HI8960.dgn 10-16-97 10:14:17 on EST

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTEBOOK AREAS		
NO AREAS CHECKED		



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

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTEBOOK AREAS		
NO AREAS CHECKED		

CROSS SECTIONS - CHANNEL

FROM STA. 10+00 TO STA. 10+12
PROJECT NAME JOHNSON CHANNEL LINE
NO. BRF030-2 (17)S PLOTTED 12/30/87
SURVEYED BY SARGENT DEC. 1987
SHEET 82 OF 85 SHEETS

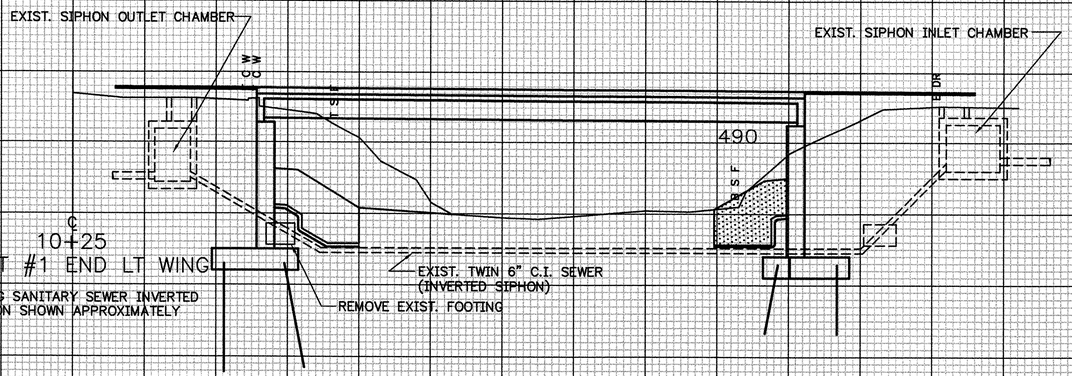
SCALE 10 FEET

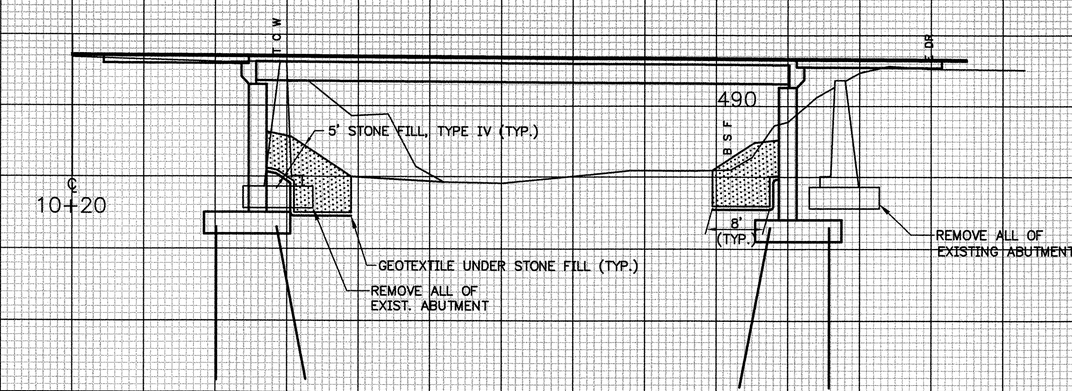
91290-XS.DWG (1=10)

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

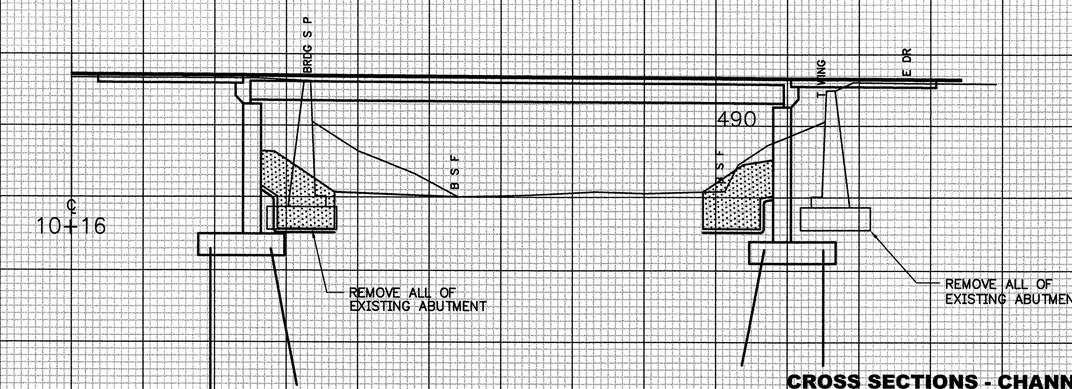
ORIGINAL SURVEY	BY	DATE
SURVEYED		
TRACED		
PLOTTED		
NOTEBOOK AREAS		
NO. AREAS CHECKED		

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

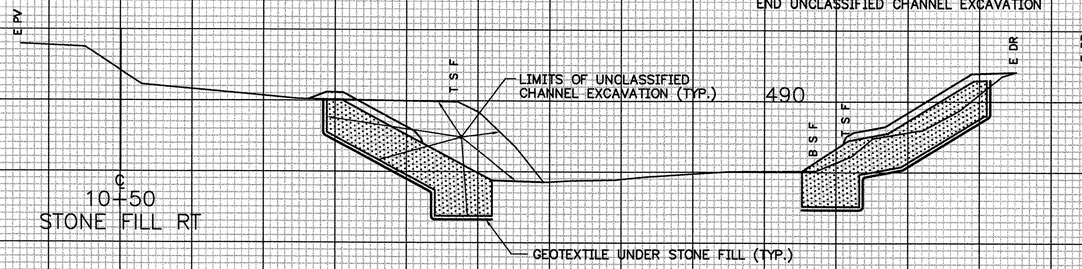
FROM STA. 10+16 TO STA. 10+25
PROJECT NAME JOHNSON CHANNEL LINE
NO. BRF030-2 (17)S PLOTTED 12/30/87
SURVEYED BY SARGENT DEC. 1987
SHEET 83 OF 85 SHEETS

SCALE 10 FEET

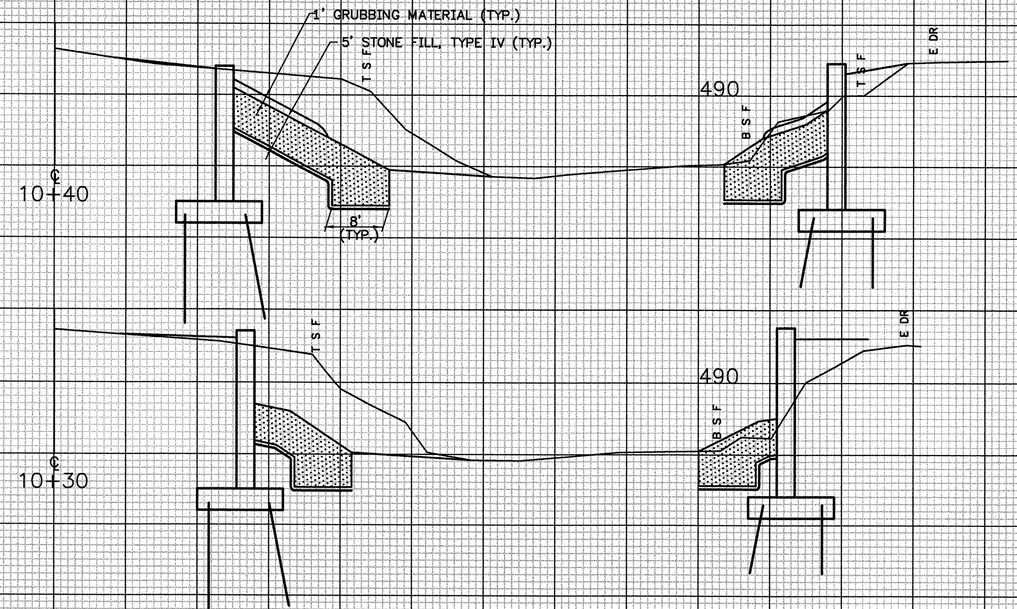
S128-25.DWG (1=10)

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

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



℄
10+50
STONE FILL RT



℄
10+40

℄
10+30

CROSS SECTIONS - CHANNEL

FROM STA.	10+30	TO	STA.	10+50	
PROJECT NAME		JOHNSON CHANNEL LINE			
NO.	BRF030-2-(17)S			PLOTTED	12/30/87
SURVEYED BY		SARGENT			DEC. 1987
SHEET 84 OF 85		SHEETS			

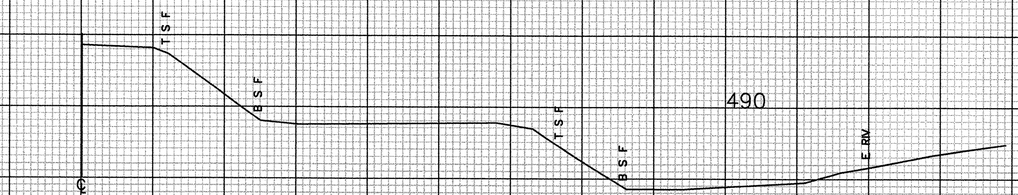
SCALE 10 FEET

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

8128R-35.DWG (1=10)

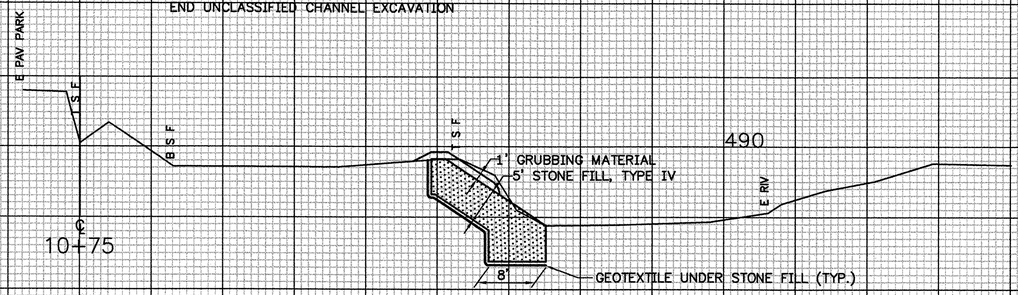
PLOTTED BY: JOHNSON ON 12-30-87 DRAFT ON ET

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





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



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

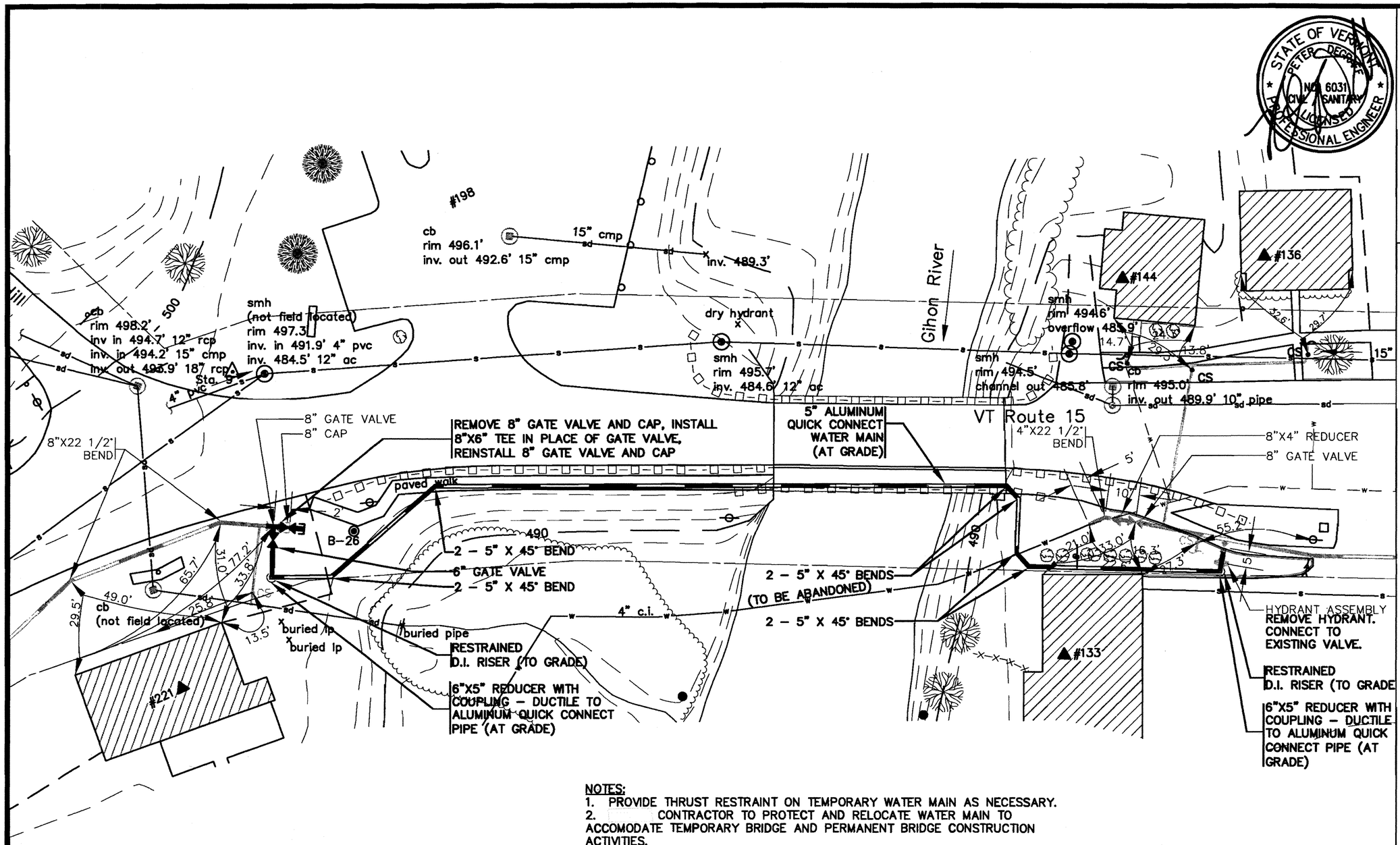
CROSS SECTIONS - CHANNEL

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

SCALE 10 FEET

81286-XS.DWG (u=10)

D:\proj\80-94\81286 Johnson\BRIDGE\81296+sl 12-29-87 10:44:17 am EST



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

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

STATE OF VERMONT
PETER DECOSTER
NO. 6031
CIVIL / SANITARY
LICENSED
PROFESSIONAL ENGINEER

SKETCH NO. **A**

CADD FILE: GIHON RECORD

PROJECT NO.: 181.001

OTTER CREEK ENGINEERING, INC.
404 East Main Street P.O. Box 712 East Middlebury, VT 05740
Telephone: 802 382- 8522 Fax: 802 382-8640 E-mail: ottercrk@ottercrk.com

VILLAGE OF JOHNSON, VERMONT

ROUTE 15 TEMPORARY WATER MAIN

SCALE:	DRAWN BY:	CHECKED BY:	DATE:
1" = 30'	RLH	PD	02/08/07

75 Spring Hill Road
Saco, Maine 04072
Phone: (207) 282-7360 Fax: (207) 282-1129

WELDING PROCEDURE SPECIFICATION

Material specification ASTM-709/A709M - Gr 36 (250), 50 (345), 50W (345W)
Welding process Submerged Arc welding
Manual or machine Machine
Position of welding Horizontal (2F)
Filler metal specification AWS A5-29
Filler metal classification E81T1-Ni1 Lincoln
Flux Lincoln 9ER FLUX WITH LA-75 Electrode
Shielding gas N/A Flow rate N/A
Single or multiple pass Single - Electrode Ex. 1 3/4" (25.4 mm)
Single or multiple arc Single
Welding current DC
Polarity DCEN
Welding progression See Joint detail
Root treatment AWS - SSPC - wire brush - grind - Blast (clean area
Preheat and interpass temperature Tr 3/4 (19) - 50° (10°) - 300° (149°) To 1 1/2 (38) 70° (20°) - 1 1/2 (38) To 2 1/2 (63) 150° (65°)
Postheat temperature N/A over 250 (63) - 225° (107°)
Heat Input Min 3 KJ/mm (1.2 KJ/mm) Max 40.1 KJ/in (1.9 KJ/mm) PQR #4-428 KJ/in (1.7 KJ/mm)

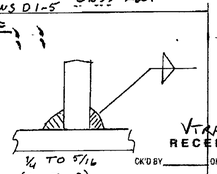
(METRIC)

WELDING PROCEDURE

Johnson VT
By: WO 37 - Proj no. BRF030 2(19)
CBS5 #22T

Pass no	Electrode size	Welding current Amperes	Volts	Travel speed
1	3/32	299	31	13 IPM
		269 To 329	29 To 33	11 To 15
	24	METRIC 299 269 To 329	31 29 To 33	380 MM 299 To 381

Fillet
AWS D1-5
2F



VTRANS RECEIVED JUN 21 2007

CK'D BY ____ OK'D BY JWC
RESUBMIT ____ APPROVED Y
BY ____ 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. 250
Revision no. ____
Form fit-2

Contractor Casco Boy Steel
Authorized By Paul E Goodale
Date 6-13-00

Casco Bay Steel Structures, Inc.
5 Industry Road
South Portland, Maine 04106
Phone: (207) 772-2533 Fax: (207) 772-0580

WELDING PROCEDURE SPECIFICATION

Material specification ASTM 709-Gr 36-50-50W (250-345-345W)
Welding process Shielded Metal Arc Welding (SMAW)
Manual or machine Manual
Position of welding Flat (1F), Horizontal (2F)
Filler metal specification AWS/AWS A5.1 - A5.5
Filler metal classification E7018 - E7018 A1/B3 - 7018
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass Single and multiple
Single or multiple arc Single
Welding current AC/DC
Polarity Straight / Reverse
Welding progression
Root treatment Meet AWS specification
Preheat and interpass temperature To 3/4(19) 50°(10°) 3/4(19) To 1 1/4(38) 70°(20°) 1 1/2(38) To 2 1/2(63.5) 150°(65°) over 2 1/2(63.5) 225°(110°)
Postheat temperature NA
Heat Input Min NA Max NA

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BY DATE

CK'D BY CK'D BY Jim
RESUBMIT APPROVED
BY DATE 6/29/07

Johnson VT
BY NO. 37 - Proj NO. BRF030 2(17)
CBSS#221

WELDING PROCEDURE (METRIC)

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed	Joint detail AWS D1.5 Fillet		
	7018				1F		
	1/8 (3.2)	70-170	22-26				
AS	5/32 (3.9)	120-225	22-26	AS			
REQ	3/16 (4.8)	170-300	24-27	REQ	3/16 To 3/8 (5 To 10)	3/8 To 1/2 (10 To 13)	1/2 To 5/8 (13 To 16)
	7018				2F		
	1/8 (3.2)	90-160	22-26				
	5/32 (3.9)	120-225	22-26				
	3/16 (4.8)	180-290	24-27				
	7028						
	5/32 (3.9)	170-270	22-26		3/16 To 5/16 (5 To 8)	3/8 (10)	7/16 To 5/8 (11 To 16)
	3/16 (4.8)	210-330	24-27				

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

Procedure no 401
Revision no
Form III-2

Contractor Casco Bay Steel
Authorized By Paul E. Hordale
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 A37M 709 Gr 36-50-50W (250-345-345W)
Welding process Submerged Arc Welding - AUTO (SAW)
Manual or machine Machine
Position of welding Flat (1F) Horizontal (2F)
Filler metal specification Aws A5.17 Aws A5.23
Filler metal classification ER49-EA1/EA1-A1 Lincoln
Flux 960 Flux - Lincolnweld - LA-75 Electrode
Shielding gas N/A Flow rate N/A
Single or multiple pass both
Single or multiple arc Single
Welding current Direct
Polarity Reverse Electrode Positive
Welding progression
Root treatment Meet Aws specification
Preheat and interpass temperature To 3/4"(19)-50°(10°) 3/4"(19) thru 2"(50.8)-70°(21°) over 2"(50.8) thru 2 1/2"(63.5)-150°(65°) over 2 1/2"(63.5)-225°(107°)
Postheat temperature N/A PQR# 1-59.5
Heat Input Min 41-65 Max 65.145

WELDING PROCEDURE (metric)

Johnson VT
By WO 37 - Proj no. BRF030.20
CBSS#221

Pass no	Electrode size	Welding current Amperes	Welding current Volts	Travel speed	Joint detail
					AWS D1.5 Fillet
					1F
	5/32	605	29.5	18.5	
		544.5 To 665.5	29.4 To 31.56	15.3 To 20.9	
					5/16 To 1/2 (8 To 12.7)
		Metric			
	3.9	605	29.5	469.2	2F
		544.5 To 665.5	29.4 To 31.56	389.6 To 525.8	
					1/4 To 5/16 (6 To 8)

VTRANS RECEIVED
JUN 2 2007
CK'D BY ____ OK'D BY JWC
RESUBMIT ____ APPROVED ✓
BY ____ DATE 6/29/07

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
Revision no
Form III-2

AWS D1.1 Prod. & Engineer Supervisor Class

Contractor Casco Bay Steel
Authorized By R. E. Woodside
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

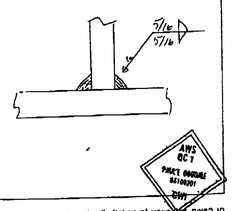
Material specification ASTM-709-Gr36-50-50W / A709M Gr 250-345-345W
Welding process Flux Cored Arc welding (FCAW)
Manual or machine Semi AUTO
Position of welding Flat - Horizontal
Filler metal specification AWS A5-29
Filler metal classification E81T1-Ni1-H4 E5AB
Flux NA
Shielding gas 75%AR-25%CO2 Flow rate 35 CFH #8-4
Single or multiple pass Single / Multiple Elec Ex 5/64 = 1/4
Single or multiple arc Single
Welding current DC
Polarity DCEP
Welding progression See detail
Root treatment wire brush - arm To be Freeze Flame Scale, Slag rust & moisture
Preheat and interpass temperature To 70° (21) 150(65) 300(149) to 400(204) 200(93) 400(204) to 600(316) 65°C (150°F) over 600(316) 110(225)
Postheat temperature NA
Heat Input Min 20.1 KJ/in Max 43.6 KJ/in PQR FCM#8 39.6 KJ/in

WELDING PROCEDURE

Johnson VT
Bx No. 37 - Proj no. BRF030-261
CBSS#221

AWS 5-3

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed	AWS D1-5 Joint detail FILLET
		287	29	13	
1/16		256 To 315	26.6 To 31	11.4 To 14	



VTRANS RECEIVED
JUN 21 2007

OK'D BY _____ OK'D BY JWC
RESUBMIT _____ APPROVED ✓
BY _____ DATE 6/21/07

AWS QC 7 FRACT. GOUGE & GROOVE DWI

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
Revision no. _____
Form BI-2

Contractor Casco Bay Steel
Authorized By J.W. Chadbourne
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:

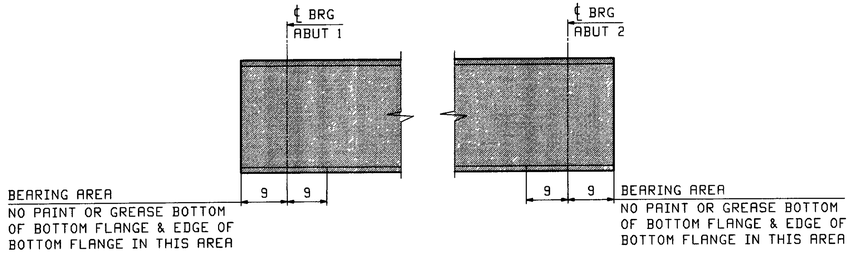
1). ALL STEEL SHALL BE BLAST CLEANED AS PER SSPC SP-10 PER SPEC. 506.14(a)

PAINTING:

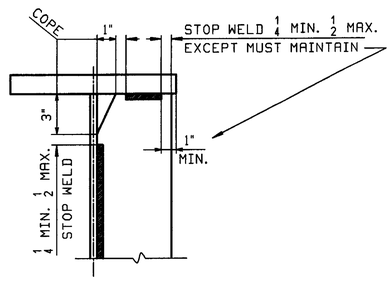
1). ALL STRUCTURAL STEEL SHALL BE PAINTED PER SUPPLEMENTAL SPECIFICATION 513. ALL FIELD CONTACT SURFACES AND THE TOP OF THE TOP FLANGE SHALL RECEIVE ONE COAT OF PRIMER ONLY. MASK ALL AREAS WITHIN 3" OF OPEN HOLES AFTER PRIME COAT HAS BEEN APPLIED. THE FOLLOWING 3 COAT PAINT SYSTEM SHALL BE USED. NO PAINT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

FEDERAL STANDARD 595
COLOR CHIP NO. 30059 (BROWN)

	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"



DETAIL "WS1"

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

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JUN 01 2007
RESUBMIT APPROVED
BY DATE 6/27/07

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN)	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50			

SURFACE PREP & PAINT:
SEE PAINT NOTES ON DWG GN1

DESCRIPTION: GENERAL NOTES

JOB: VT ROUTE 15 OVER THE GIHON RIVER
BRIDGE NO 37
TOWN OF JOHNSON, VT (LAMOILLE COUNTY)

TENSOR 2716

PROJ NO. BRF 030-2(17)S

CUSTOMER: VT A.O T

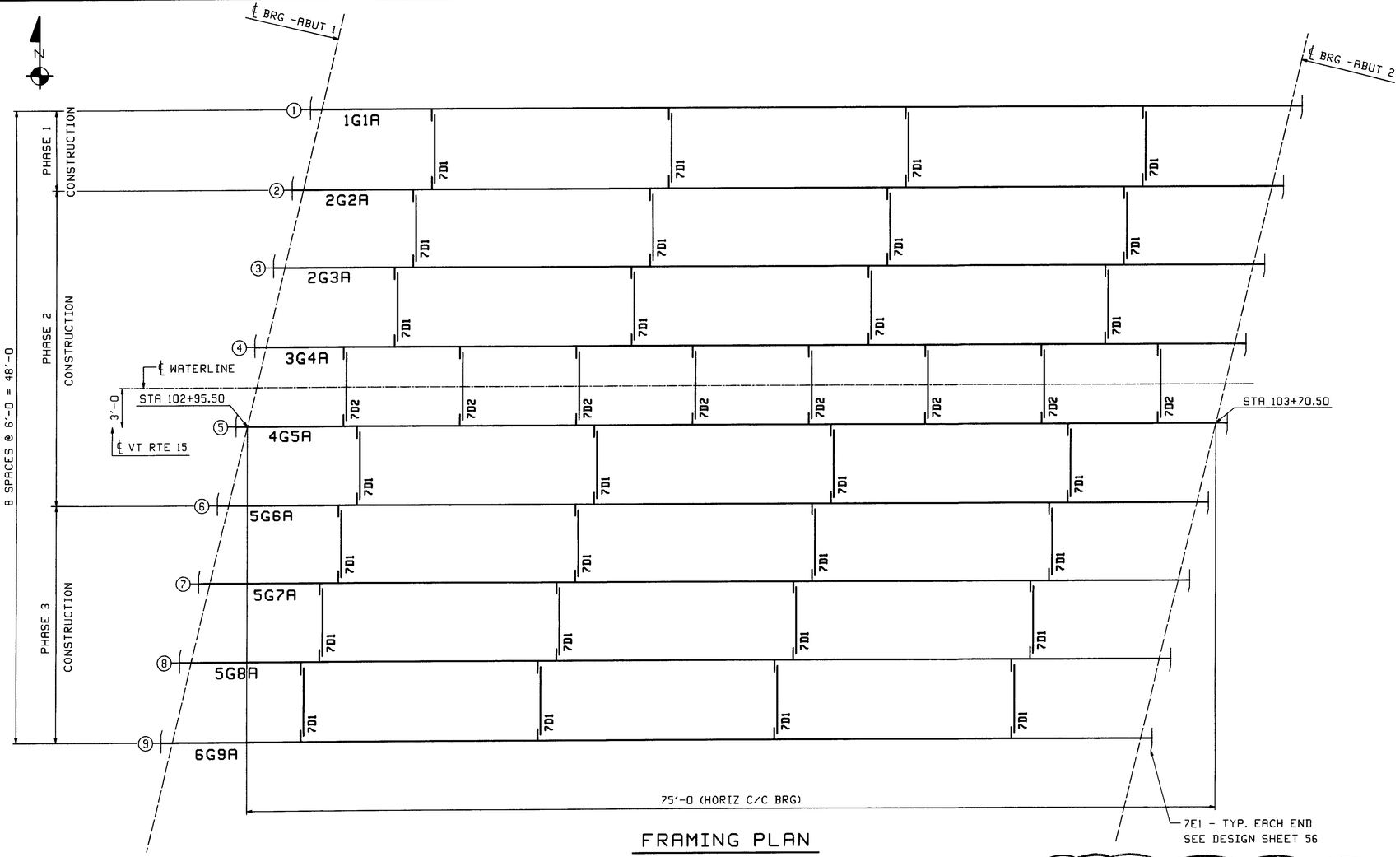
	DRAWN BY	DATE
	WL	05/12
	CHKD BY	
	PCP	05/14
	APPROV BY	
	SUPERVISOR	W J GATTI
	Q.A	

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

JOB NO	DRG. NO.
323	GN1
	REV △

91 # STRUCT STEEL

ML Tue May 15 2007 12:33:30 PM /users/jobs/2716/GN1 Rev0



FRAMING PLAN

ERECTOR NOTE
USE ONE TEMPORARY FINGER TIGHT BOLT AT EACH END OF DIAGRAM. 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 FABRICATOR 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							
LINE	NO REQ'D	BOLT DIAM	BOLT LEN	BOLTS /CONN.	# OF CONN	GRIP	THICKNESS OF PCS CONNECTED						WASH CODE	PIECES CONNECTED AND REMARKS
1														INT DIAPHRAGMS - 7D1
2	224	7/8	2 1/4	4	56	7/8	1/2	3/8					1	DIAPHRAGM WEB TO CONN PLATE
3														
4														INT DIAPHRAGMS - 7D2
5	112	7/8	2 1/4	7	16	7/8	1/2	3/8					1	DIAPHRAGM WEB TO CONN PLATE

WASHER CODES
1: 1 Hard Flat Washer

FIELD BOLT SUMMARY			2% ADDED, MIN 2 EXTRA			
LINE	NO OF BOLTS	BOLT DIAM.	TYPE	BOLT LEN	ACTUAL COUNT	REMARKS
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 ϕ BOLT				
4						
5						
6						

Update

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JUN 01 2007
RESUBMIT APPROVED As Noted
BY WJ DATE 6/27/07

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN):	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50			

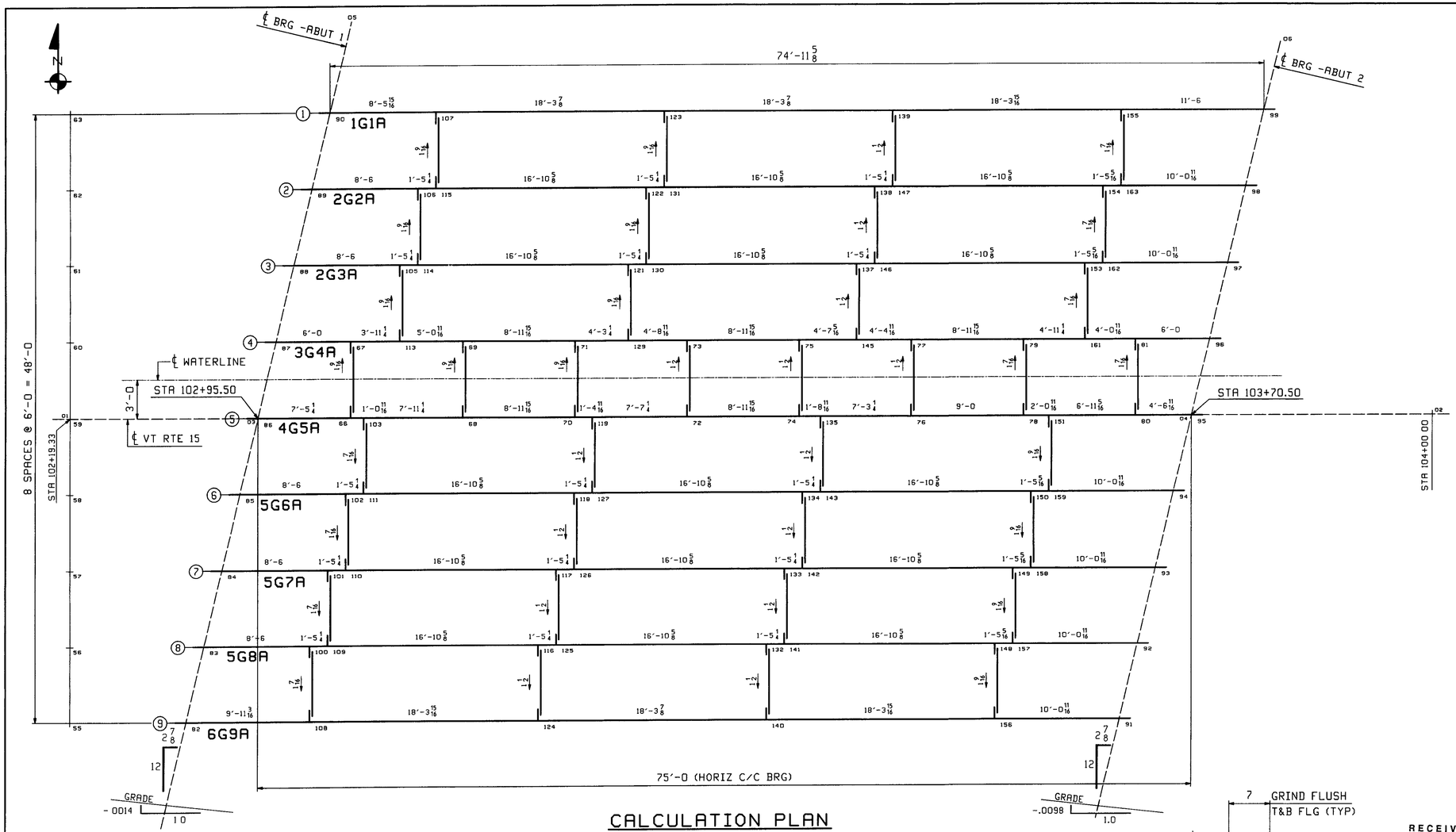
SURFACE PREP & PAINT:
SEE PAINT NOTES ON DWG GN1

DESCRIPTION	FRAMING PLAN	DRAWN BY	DATE
JOB: VT. ROUTE 15 OVER THE GIHON RIVER BRIDGE NO 37 TOWN OF JOHNSON, VT (LAMOILLE COUNTY)		WR	05/17
		CHKD BY	
		DO	05/22
TENSOR 2716		APPROV BY	
		SUPERVISOR	W. J. GATTI
PROJ NO. BRF 030-2(17)S		Q.A.	
CUSTOMER: VT A.O.T			

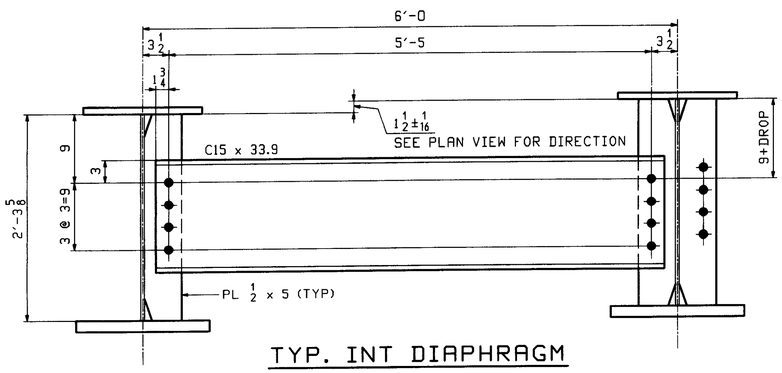
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO	DRG NO.
323	E1
	REV △

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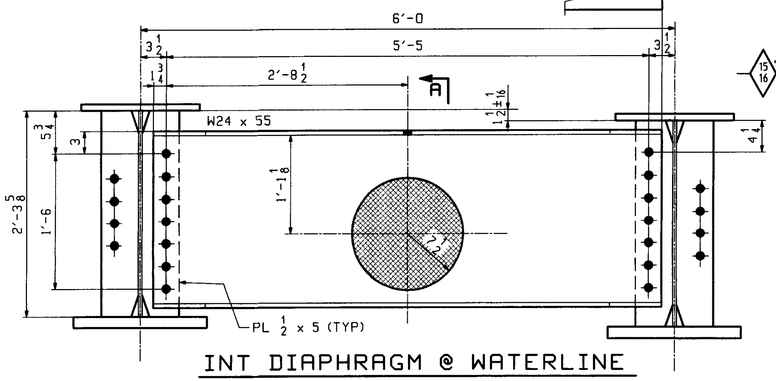


CALCULATION PLAN



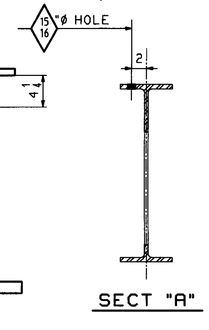
TYP. INT DIAPHRAGM

LOOKING BACK STATION



INT DIAPHRAGM @ WATERLINE

LOOKING BACK STATION



**** 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 BOTT OF 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. BOTT 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.

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JUN 0 1 2007
RESUBMIT APPROVED ✓
BY WJ S/ DATE 6/27/07

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN).	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50		15/16Ø (UN)	

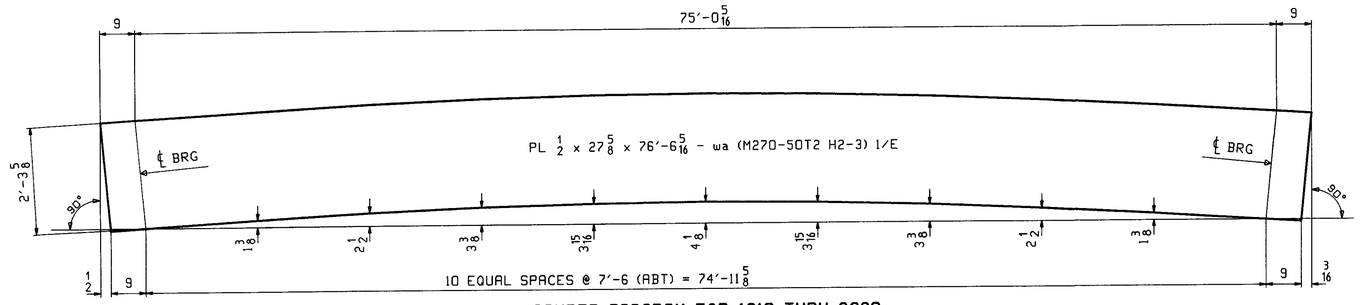
SURFACE PREP & PAINT.
SEE PAINT NOTES ON DWG GN1

DESCRIPTION: CALCULATION PLAN	DRAWN BY	DATE
JOB: VT ROUTE 15 OVER THE GIHON RIVER BRIDGE NO 37 TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	WL	05/11
	CHK'D BY	
	PCP	05/14
	APPROV BY	
TENSOR 2716	SUPERVISOR	W. J GATTI
PROJ NO. BRF 030-2(17)S	Q.A	
CUSTOMER: VT A.O T		

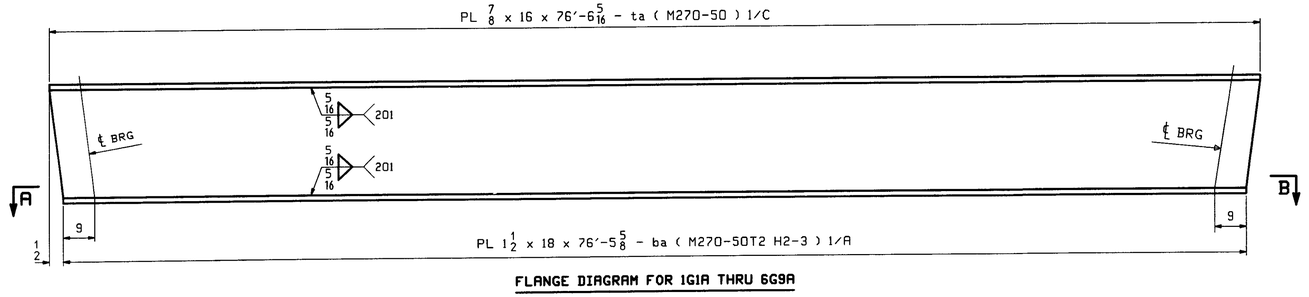
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO.	DRG. NO.
323	WS1
	REV. △

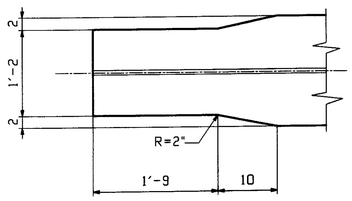
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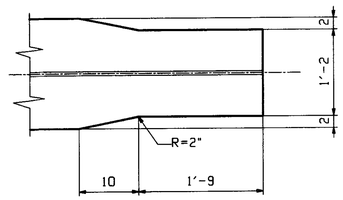
CAMBER DIAGRAM FOR 1G1A THRU 6G9A



FLANGE DIAGRAM FOR 1G1A THRU 6G9A



SECT "A"



SECT "B"

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JUN 0 1 2007
RESUBMIT APPROVED ✓
BY WJG DATE 6/27/07

NOTES:

1. FOR GENERAL NOTES SEE DWG GN1.
2. H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TEST AT H FREQ. FOR ZONE 2

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN)	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50			

SURFACE PREP. & PAINT

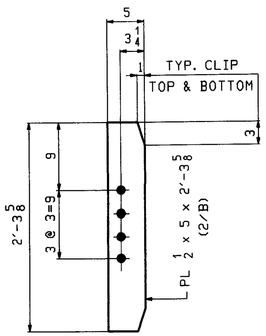
SEE PAINT NOTES ON DWG GN1

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	
	SUPERVISOR	W. J. GATTI
PROJ NO. BRF 030-2(17)S	Q.A.	
CUSTOMER: VT A O T		

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

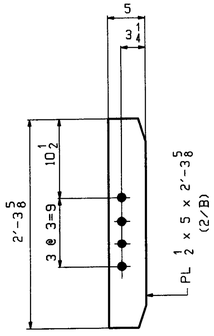
JOB NO	DRG NO.
323	C1
	REV. △

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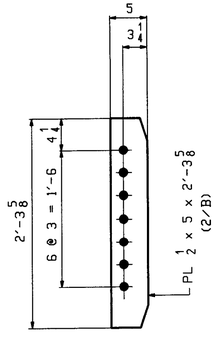
28 ~ x1a

CONN PL - LOW END



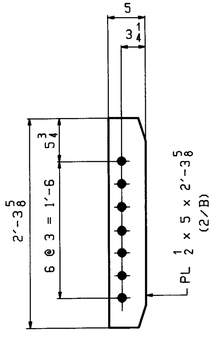
~~28~~ 24 ~ x1b

CONN PL - HIGH END



8 ~ x1c

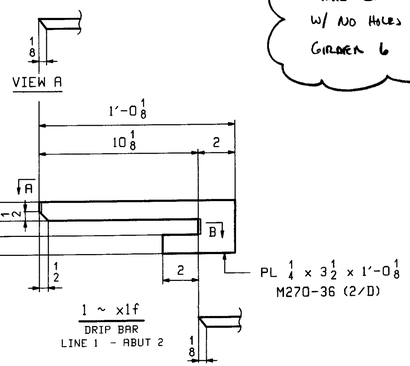
CONN PL - LOW END
WATERLINE



8 ~ x1d

CONN PL - HIGH END
WATERLINE

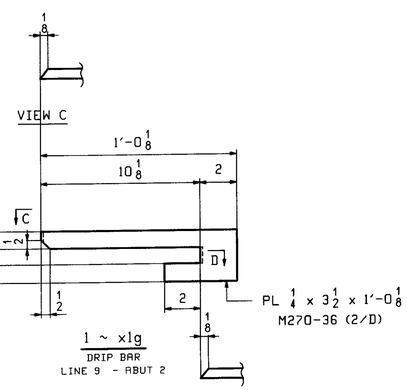
4 ~ x1b?
SAME SIZE BUT
W/ NO HOLES
GIRDER 6 ONLY



1 ~ x1f

DRIP BAR
LINE 1 - ABUT 2

SECTION B



1 ~ x1g

DRIP BAR
LINE 9 - ABUT 2

SECTION D

RECEIVED
CK'D BY _____ OK'D BY _____
JUN 0 1 2007
RESUBMIT _____ APPROVED As Noted
BY _____ DATE 6/27/07

NOTES:

ALL MATERIAL SHALL BE M270-50.

ALL BOLT HOLES SHALL BE $\frac{15}{16}$"Ø FOR $\frac{7}{8}$"Ø HSB.

FOR GENERAL NOTES SEE SHEET GN1.

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN)	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50		$\frac{15}{16}$Ø	NONE

SURFACE PREP & PAINT

SEE PAINT NOTES ON DWG GN1

DESCRIPTION. GIRDER STANDARDS	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	05/19
TENSOR 2716	APPROV BY	
	SUPERVISOR	W J GATTI
PROJ NO. BRF 030-2(17)S	Q.A.	
CUSTOMER: VT R O T		

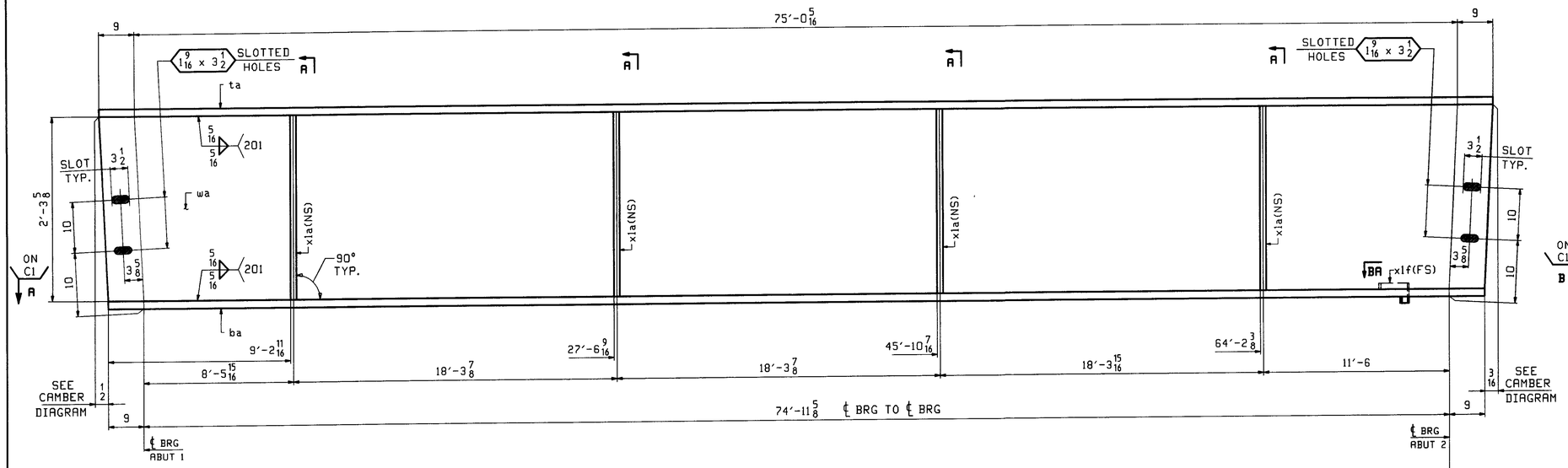
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

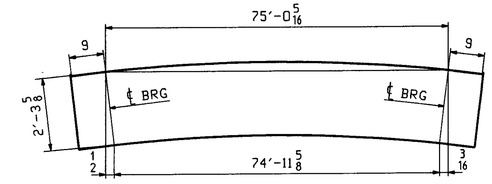
JOB NO.	DRG. NO.
323	X1
	REV. △

Tue, May 22 2007 09:08:03 AM //casco/jobs/2716/X1 Rev0

ABM INFO		SHIP	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
PAGE	LINE	MARK								
		1G1A	1		GIRDER				14349	
1	E		1	wa	PL $\frac{1}{2}$x27 $\frac{5}{8}$	76	6 $\frac{5}{16}$	(M270-50T2) (H2-3)		
1	C		1	ta	PL $\frac{7}{8}$x16	76	6 $\frac{5}{16}$			
1	A		1	ba	PL 1 $\frac{1}{2}$x18	76	5 $\frac{5}{8}$	(M270-50T2) (H2-3)		
2	B		4	x1a	PL $\frac{1}{2}$x5	2	3 $\frac{5}{8}$			
2	D		1	x1f	PL $\frac{1}{4}$x3 $\frac{1}{2}$	1	0 $\frac{1}{8}$	(M270-36)		

JOB NO 323 | DRAWING NO. 1 | REV

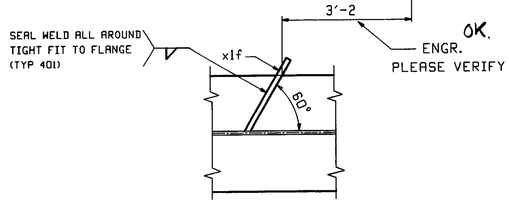




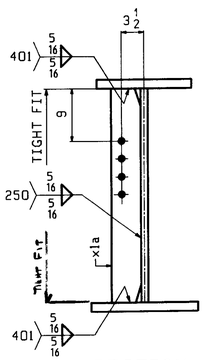
ORIENTATION DIAGRAM

ONE - GIRDER - 1G1A

FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



SECTION BA



SECTION-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)	NONE

SURFACE PREP & PAINT:
SEE PAINT NOTES ON DWG GN1

DESCRIPTION: GIRDER - 1G1A

JOB: VT. ROUTE 15 OVER THE GIHON RIVER
BRIDGE NO 37
TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)

TENSOR 2716

PROJ NO. BRF 030-2(17)S

CUSTOMER. VT A.O.T

DRAWN BY	DATE
WR	05/17
CHKD BY	
DO	05/21
APPROV BY	
SUPERVISOR	W. J GATTI
Q.A.	

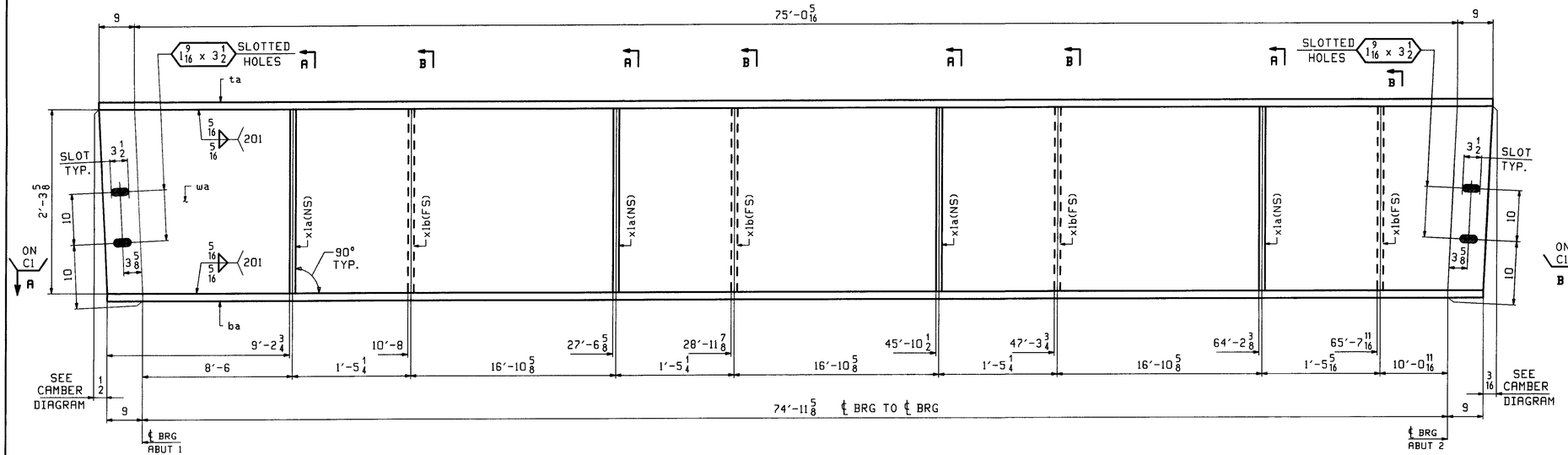
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO.	DRG. NO
323	1
	REV. △

RECEIVED
CK'D BY CLD OK'D BY
JUN 01 2007
RESUBMIT APPROVED AS NOTED
BY DATE

WR Tue May 22 2007 03:49:35 PM J:\users\jobs\2716\1 Rev0

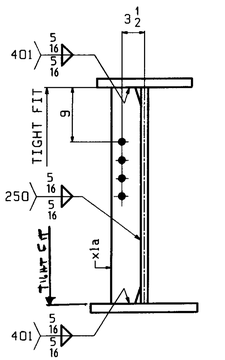
ABM INFO		SHIP	BILL OF MATERIAL					JOB NO	DRAWING NO	REV
								323	2	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		2G2A	1		GIRDER				14425	
		2G3A	1		GIRDER				14425	
1	E		2	wa	PL $\frac{1}{2}$x27 $\frac{5}{8}$	76	6 $\frac{5}{16}$	(M270-50T2) (H2-3)		
1	C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



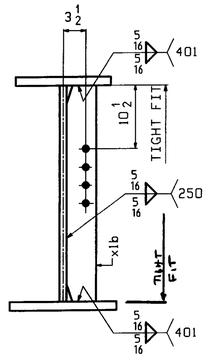
ORIENTATION DIAGRAM

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

FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



SECTION-A



SECTION-B

RECEIVED
CK'D BY CLD OK'D BY
JUN 01 2007
RESUBMIT APPROVED As Noted
BY WJG DATE 6/27/07

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN):	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50		15/16ø (UN)	NONE

SURFACE PREP & PAINT:
SEE PAINT NOTES ON DWG GN1

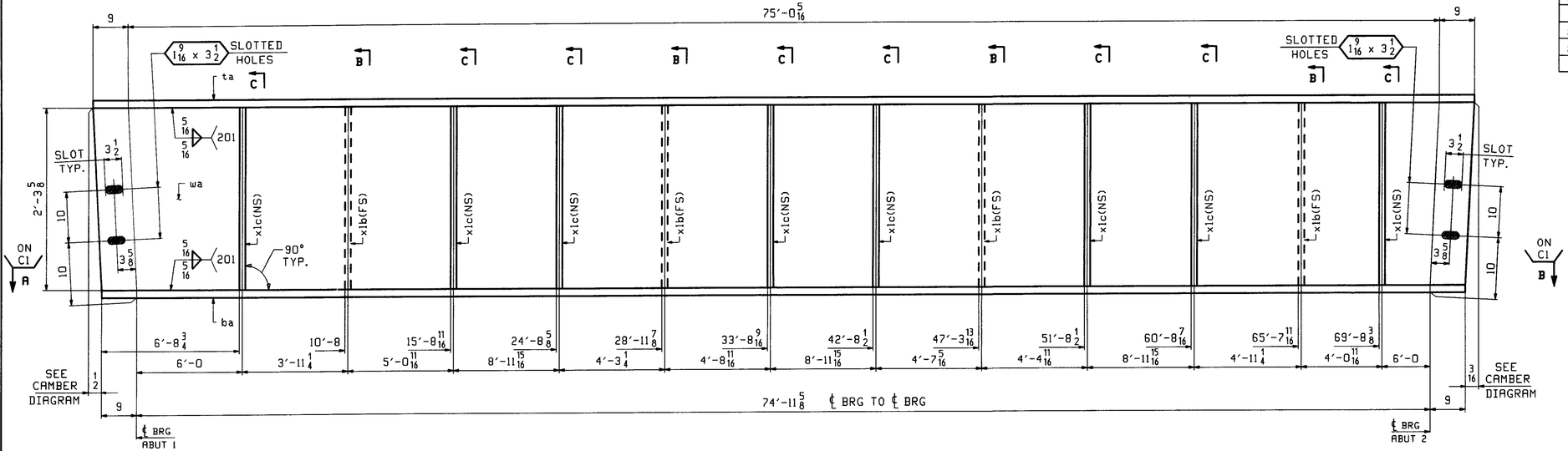
DESCRIPTION: GIRDER - 2G2A & 2G3A	DRAWN BY	DATE
JOB: VT ROUTE 15 OVER THE GIHON RIVER BRIDGE NO 37 TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	WR	05/17
	CHKD BY	
	DO	05/21
TENSOR 2716	APPROV BY	
	SUPERVISOR	W J GATTI
PROJ NO. BRF 030-2(17)S	Q.A.	
CUSTOMER: VT A.O.T		

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

JOB NO.	DRG. NO.
323	2
	REV. △

Tue, May 22, 2007 03:24:05 PM c:\users\jake\2716\2 Rev0
HR

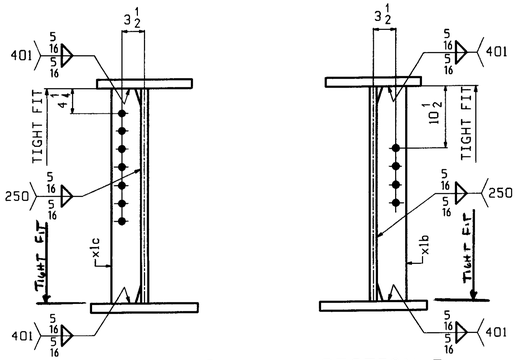
ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO		REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES	
								323	3		
		3G4A	1		GIRDER				14503		
1	E		1	wa	PL $\frac{1}{2}$×27 $\frac{5}{8}$	76	6 $\frac{5}{16}$	(M270-50T2) (H2-3)			
1	C		1	ta	PL $\frac{7}{8}$×16	76	6 $\frac{5}{16}$				
1	A		1	ba	PL 1 $\frac{1}{2}$×18	76	5 $\frac{5}{8}$	(M270-50T2) (H2-3)			
2	B		4	x1b	PL $\frac{1}{2}$×5	2	3 $\frac{5}{8}$				
2	B		8	x1c	PL $\frac{1}{2}$×5	2	3 $\frac{5}{8}$				



ORIENTATION DIAGRAM

ONE - GIRDER - 3G4A

FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



SECTION-C

SECTION-B

RECEIVED
CK'D BY CLD OK'D BY
JUN 0 1 2007
RESUBMIT APPROVED As Noted
BY DATE 6/7/07

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)	NONE

SURFACE PREP & PAINT

SEE PAINT NOTES ON DWG GN1

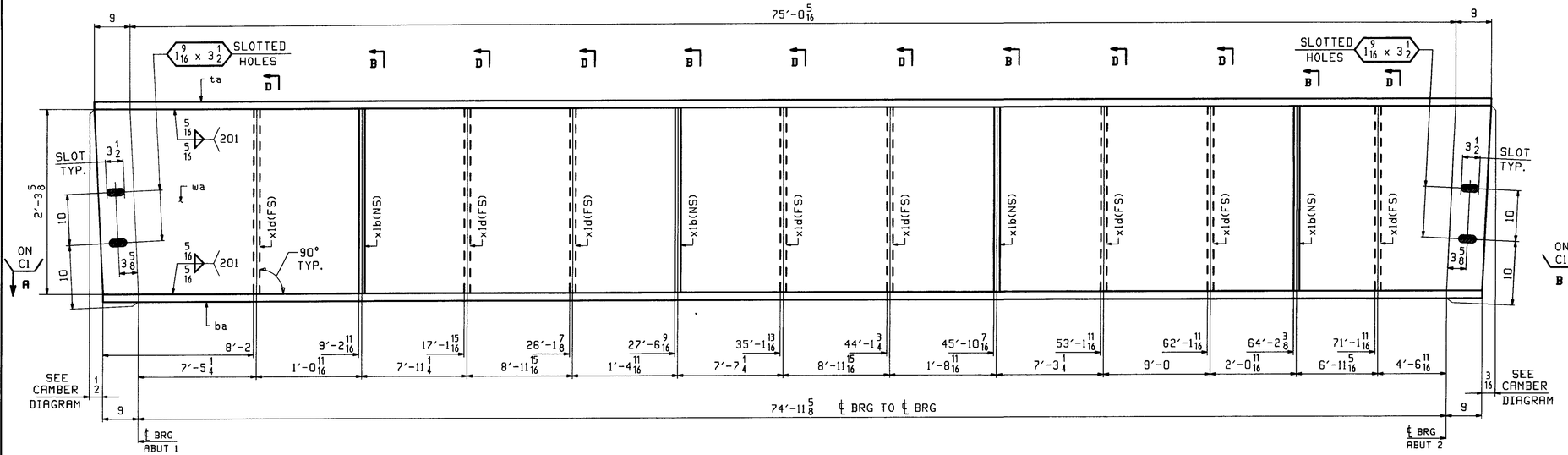
DESCRIPTION: GIRDER - 3G4A		DRAWN BY	DATE
JOB: VT. ROUTE 15 OVER THE GIHON RIVER BRIDGE NO 37 TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)		WR	05/17
		CHKD BY	
		DO	05/21
		APPROV BY	
TENSOR 2716		SUPERVISOR	W. J. GATTI
PROJ NO. BRF 030-2(17)S		Q.A.	
CUSTOMER: VT A.O.T			

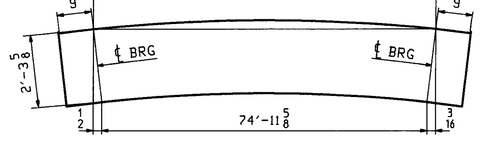
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO.	DRG. NO.
323	3
	REV. △

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ABM INFO		SHIP	BILL OF MATERIAL					JOB NO	DRAWING NO	REV
								323	4	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		4G5A	1		GIRDER				14503	
1	E		1	wa	PL $\frac{1}{2}$x27 $\frac{5}{8}$	76	6 $\frac{5}{16}$	(M270-50T2) (H2-3)		
1	C		1	ta	PL $\frac{7}{8}$x16	76	6 $\frac{5}{16}$			
1	A		1	ba	PL 1 $\frac{1}{2}$x18	76	5 $\frac{5}{8}$	(M270-50T2) (H2-3)		
2	B		4	x1b	PL $\frac{1}{2}$x5	2	3 $\frac{5}{8}$			
2	B		8	x1d	PL $\frac{1}{2}$x5	2	3 $\frac{5}{8}$			

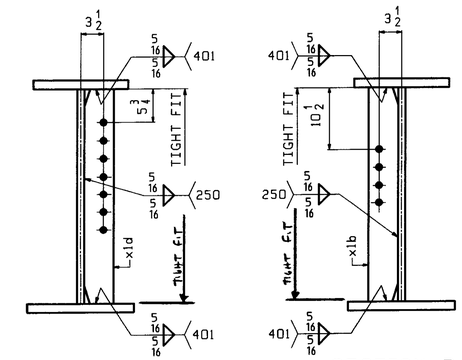




ORIENTATION DIAGRAM

ONE - GIRDER - 4G5A

FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



SECTION-D SECTION-B

RECEIVED
CK'D BY CLD OK'D BY
JUN 0 1 2007
RESUBMIT APPROVED As Noted
BY DATE 6/27/07

REV.	REMARKS	DATE	DWN	CHK	APP	Q A	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN)	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50		15/16ø (UN)	NONE

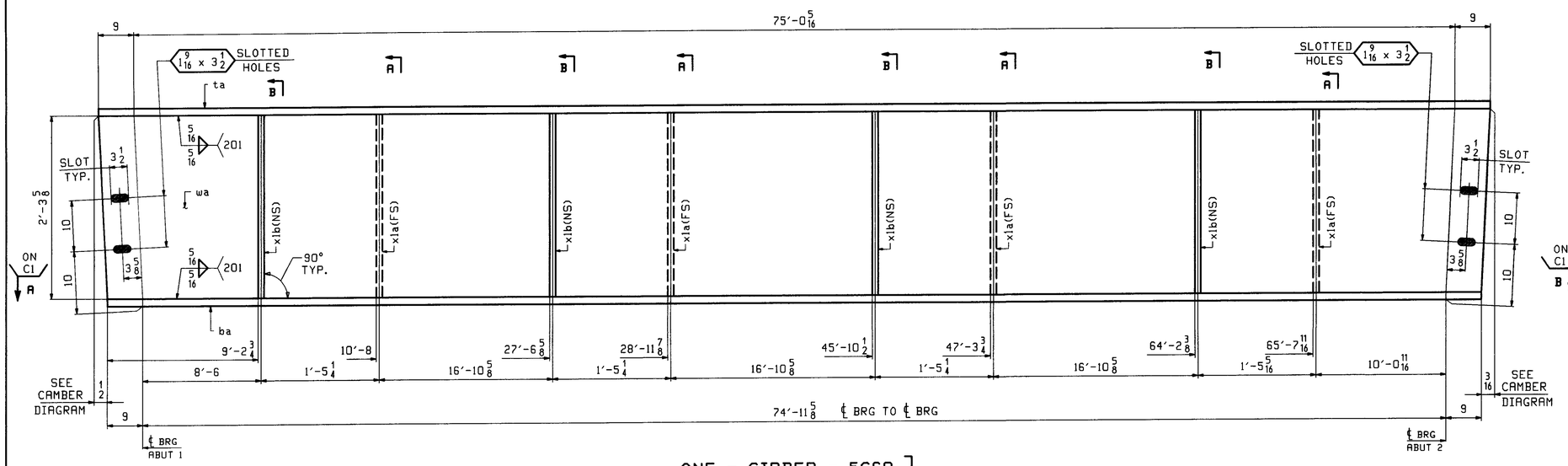
SURFACE PREP. & PAINT:
SEE PAINT NOTES ON DWG GN1

DESCRIPTION. GIRDER - 4G5A	DRAWN BY	DATE
JOB: VT ROUTE 15 OVER THE GIHON RIVER BRIDGE NO. 37 TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)	WR	05/17
	CHKD BY	
	DO	05/21
TENSOR 2716	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.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO.	DRG NO
323	4
	REV. △

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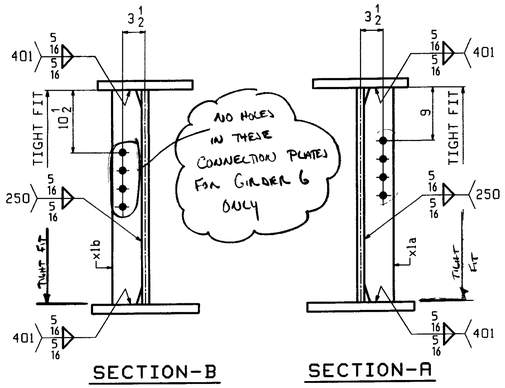


ORIENTATION DIAGRAM

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO	DRAWING NO	REV.
								323	5	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		5G6A	1		GIRDER				14425	
		5G7A	1		GIRDER				14425	
		5G8A	1		GIRDER				14425	
1	E		3	wa	PL 1/2×27 5/8	76	6 5/16	(M270-50T2) (H2-3)		
1	C		3	ta	PL 7/8×16	76	6 5/16			
1	A		3	ba	PL 1 1/2×18	76	5 5/8	(M270-50T2) (H2-3)		
2	B		12	x1a	PL 1/2×5	2	3 5/8			
2	B		12	x1b	PL 1/2×5	2	3 5/8			

ONE - GIRDER - 5G6A
ONE - GIRDER - 5G7A
ONE - GIRDER - 5G8A
} ALIKE EXCEPT * FOR MARK

FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN).	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50		15/16ø (UN)	NONE

SURFACE PREP. & PAINT:
SEE PAINT NOTES ON DWG GN1

RECEIVED
CK'D BY CLO CK'D BY
JUN 0 1 2007
RESUBMIT APPROVED As Noted
BY WJH DATE 6/27/07

DESCRIPTION: GIRDER - 5G6A 5G7A & 5G8A

JOB: VT ROUTE 15 OVER THE GIHON RIVER
BRIDGE NO 37
TOWN OF JOHNSON, VT (LAMOILLE COUNTY)

TENSOR 2715

PROJ NO. BRF 030-2(17)S

CUSTOMER: VT A O T

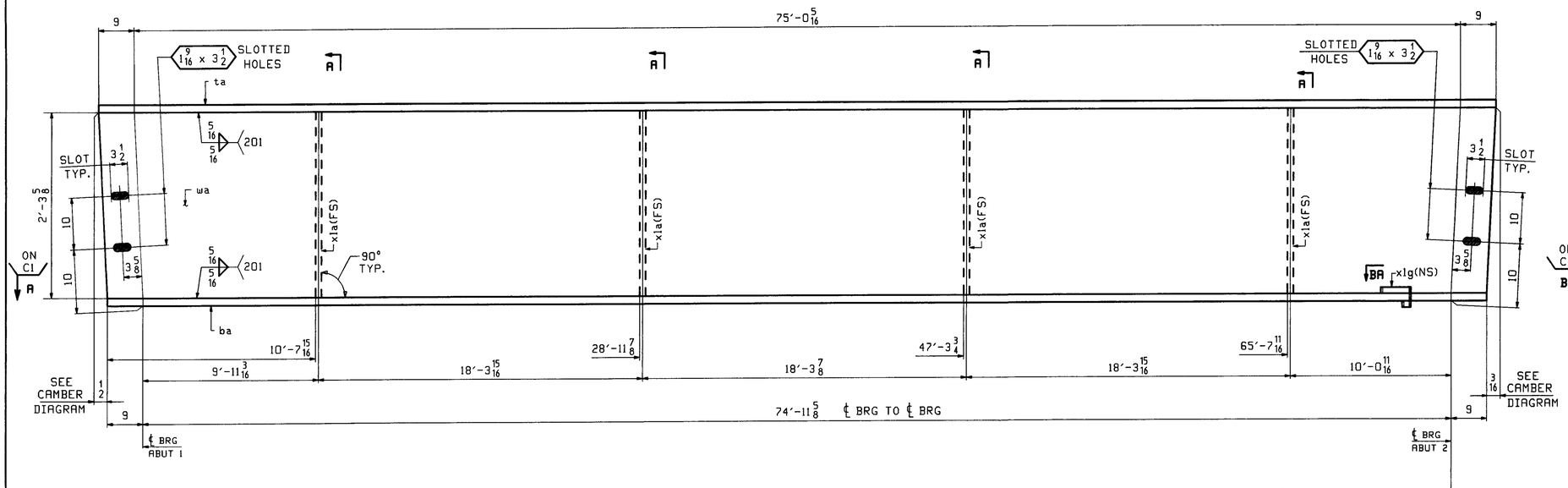
DRAWN BY	DATE
WR	05/17
CHK'D BY	
DO	05/22
APPROV BY	
SUPERVISOR	W. J GATTI
Q.A.	

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

JOB NO.	DRG. NO
323	5
	REV. △

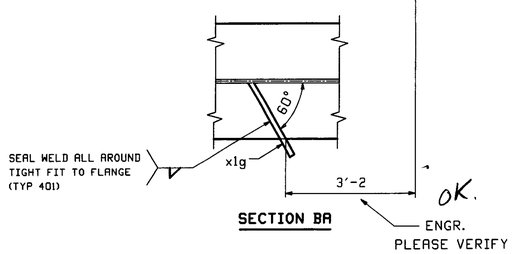
HR Tue May 22, 2007 09:14:57 AM c:\users\john\2715\5 Rev0

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO	DRAWING NO	REV
								323	6	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		6G9A	1		GIRDER				14345	
1	E		1	wa	PL $\frac{1}{2}$×27 $\frac{5}{8}$	76	6 $\frac{5}{16}$	(M270-50T2) (H2-3)		
1	C		1	ta	PL $\frac{7}{8}$×16	76	6 $\frac{5}{16}$			
1	A		1	ba	PL 1 $\frac{1}{2}$×18	76	5 $\frac{5}{8}$	(M270-50T2) (H2-3)		
2	B		4	x1a	PL $\frac{1}{2}$×5	2	3 $\frac{5}{8}$			
2	D		1	x1g	PL $\frac{1}{4}$×3 $\frac{1}{2}$	1	0 $\frac{1}{8}$	(M270-36)		



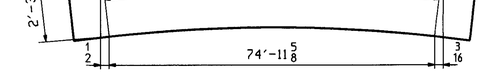
ONE - GIRDER - 6G9A

FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.

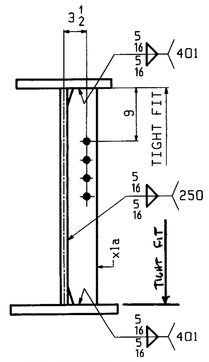


SECTION BA

OK.
ENGR. PLEASE VERIFY



ORIENTATION DIAGRAM



SECTION-A

RECEIVED
CK'D BY CLD OK'D BY
JUN 0 1 2007
RESUBMIT APPROVED As Noted
BY DATE 6/7/07

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN).	ELECTRODES	HOLES	SHOP BOLTS·
M270 GR. 50		15/16 Ø (UN)	NONE

SURFACE PREP & PAINT

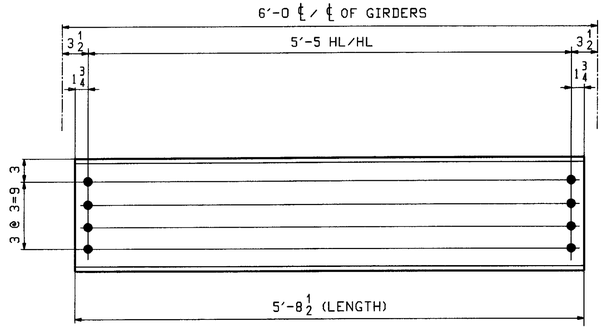
SEE PAINT NOTES ON DWG GN1

DESCRIPTION· GIRDER - 6G9A	DRAWN BY	DATE
JOB: VT ROUTE 15 OVER THE GIHON RIVER BRIDGE NO 37 TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	WR	05/17
	CHK'D BY	
	DO	05/22
	APPROV BY	
TENSOR 2716	SUPERVISOR	W. J. GATTI
PROJ NO. BRF 030-2(17)S	Q.A.	
CUSTOMER: VT A O T		

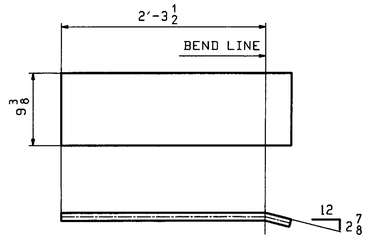
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO.	DRG NO.
323	6
	REV. △

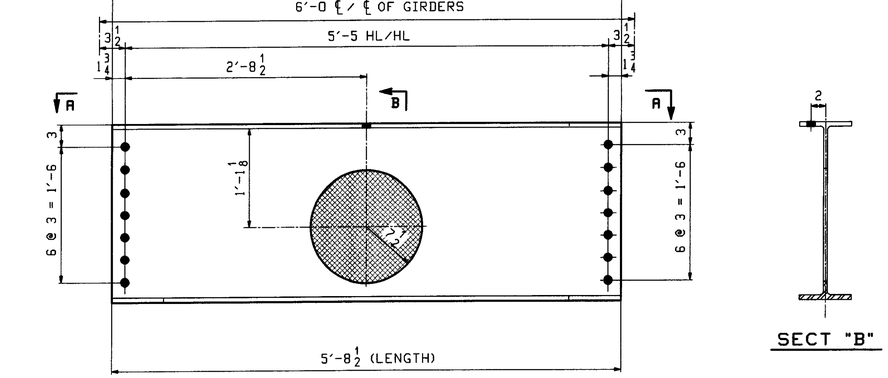
Tue, May 22, 2007 09:52:20 AM c:\users\jobs\2716\6 Rev0 WR



28 ~ INT. DIAPHRAGMS - 7D1



18 ~ ABUT END PLATES ~ 7E1
(GALV. AFTER FAB.)



8 ~ INT. DIAPHRAGMS - 7D2

SECT "B"

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO	DRAWING NO	REV
								323	7	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		7D1	28		INT DIAPHRAGM				194	
2	F		28		C 15x33.9	5	8 1/2	(M270-50)		
		7D2	8		INT DIAPHRAGM				314	
2	G		8		W 24x55	5	8 1/2	(M270-50)		
		7E1	18		ABUT END PLATES				21	
2	J		18		PL 1/4 x 9 3/8	2	7	(M270-36)		

RECEIVED
CK'D BY cld OK'D BY
JUN 0 1 2007
RESUBMIT APPROVED
BY DATE 6/27/07

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	5-24-07									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL (UN)	ELECTRODES	HOLES	SHOP BOLTS
M270 GR. 50 (UN)		15/16 ø (UN)	NONE

SURFACE PREP. & PAINT:
SEE PAINT NOTES ON DWG GN1

DESCRIPTION: DIAPHRAGMS

JOB: VT. ROUTE 15 OVER THE GIHON RIVER
BRIDGE NO 37
TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)

TENSOR 2716

PROJ NO. BRF 030-2(17)S

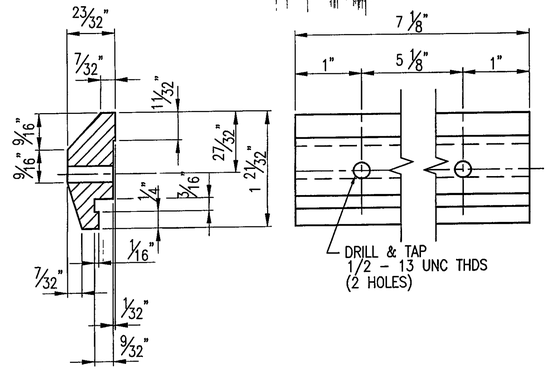
CUSTOMER: VT A.O.T

	DRAWN BY	DATE
	WR	05/17
CHKD BY		
DO		05/21
APPROV BY		
SUPERVISOR	W J GATTI	
Q A		

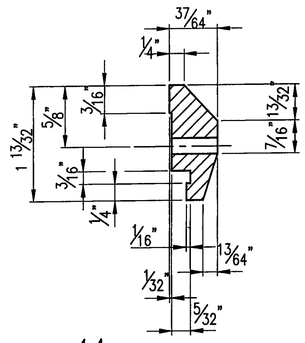
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO	DRG. NO.
323	7
	REV. △

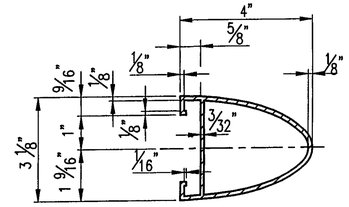
WR Tue May 22 2007 10:15:54 AM //casco/jobs/2716/7 Rev0



88 ~ REQ'D CLAMP BAR CB-03-A #19447
(BARRIER RAIL)



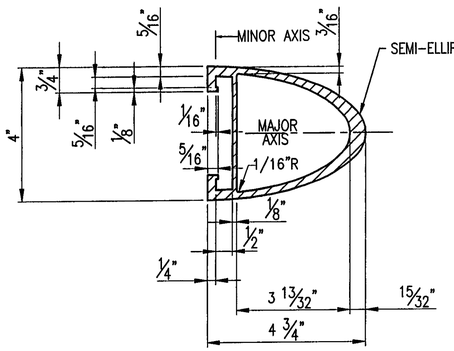
44 ~ REQ'D CLAMP BAR CB-01-H
(HANDRAIL)



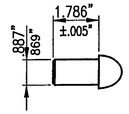
TYPICAL SECTION
(HANDRAIL)

ANODIZED

- ALL ALUM. COMPONENTS SHALL BE ANODIZED TO A BLACK (HARD SATIN FINISH) COLOR, FED. STD. COLOR No. 27038. THE ANODIC COATING SHALL BE ARCHITECTURAL CLASS I WITH A MIN. THICKNESS OF 0.7 mils AND A MIN. WEIGHT OF 35 mg/sq in
- ALL VISIBLE STN. STL. HARDWARE SHALL BE FIELD PAINTED BLACK TO MATCH THE ANODIZED RAIL. TOUCH UP PAINT SHALL BE PROVIDED.
- SAMPLES SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL.



TYPICAL SECTION
(BARRIER RAIL)



RIVET DETAIL 'rv1'
#19420

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001 AND ITS LATEST REVISIONS

DESCRIPTION	ASTM	ALLOY/GR.	REMARKS
RAILS, POSTS, BASES, SPLICES, CLAMP BARS, PINS, & BALUSTER FRAMES	B221	6061-T6 OR 6351-T5	MIN YIELD STRENGTH Fy = 35,000 psi.
BALUSTERS	B221	6061 OR 6063	T4 - USED FOR SUPERIOR EXPANDING QUALITIES
RIVETS	B316	6061-T6	BUTTON HD., CONE PT.
SET SCREWS FOR BALUSTERS	F880	TYPE 303	
STAINLESS STEEL BOLTS	A193	GRADE B8	
ANCHOR RODS	A449		GALV A153
STEEL HEX. NUTS	A563	GRADE DH	GALV. A153
STEEL WASHERS	F436		GALV. A153
ANCHOR PLATES	A569		COMMERCIAL QUALITY (PLAIN)
ALUMINUM WASHERS	B209	2024-T4	
PREFORMED PADS			SECTION 731 01 OR 731.02
ELECTRODES FOR WELDING	AWS A5.10 ER5356		

POSTS TO BE NORMAL TO GRADE AND RAILS SHALL BE PARALLEL TO GRADE. RAILS TO BE ATTACHED TO A MINIMUM OF THREE POSTS WHEN POSSIBLE

ALL RAILS AND WELDS TO BE FREE FROM ALL BURRS AND ROUGH EDGES. ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED GRIND ALL CUT EDGES SMOOTH.

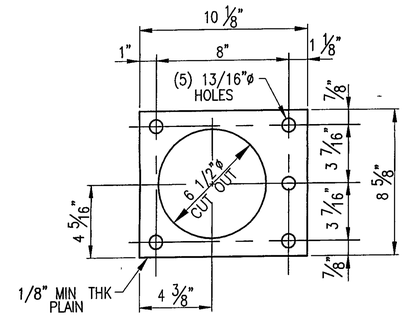
ALL THREADS TO BE UNC CLASS 2A/2B.

ALL EXTRUSION TOLERANCES NOT SHOWN SHALL BE IN ACCORDANCE WITH ASTM B221

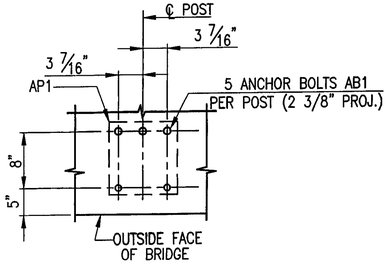
IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN THE ROOT DIAMETER OF THREADS

THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS: THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE FULLY THREADED WASHER FACED BOLTS, TIGHTENED SECURELY TO THE END OF THREADS, AND LEAVING A 1/8" GAP, THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT

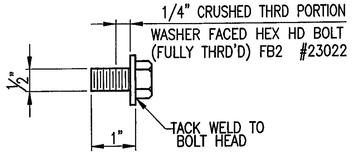
ALL NUTS SHALL COMPLY WITH AMERICAN HEXAGON ANSI SPECIFICATIONS B18.2



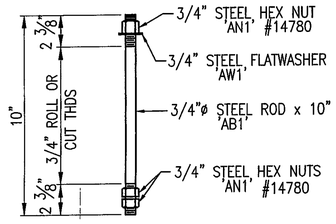
22 ~ REQ'D ANCHOR PLATE AP1
#31286



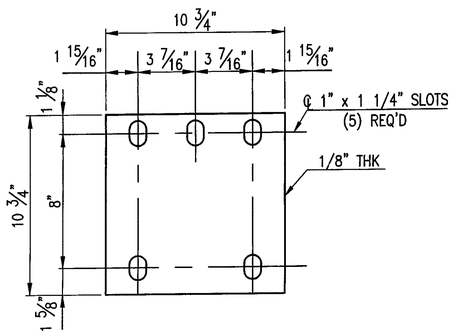
TYPICAL ANCHOR BOLT SETTING



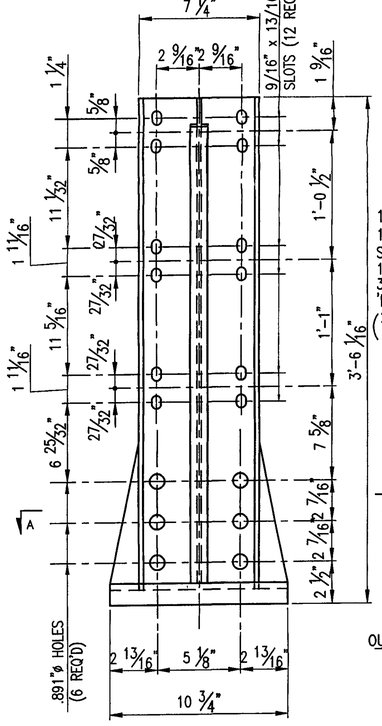
SPLICE BOLT DETAILS

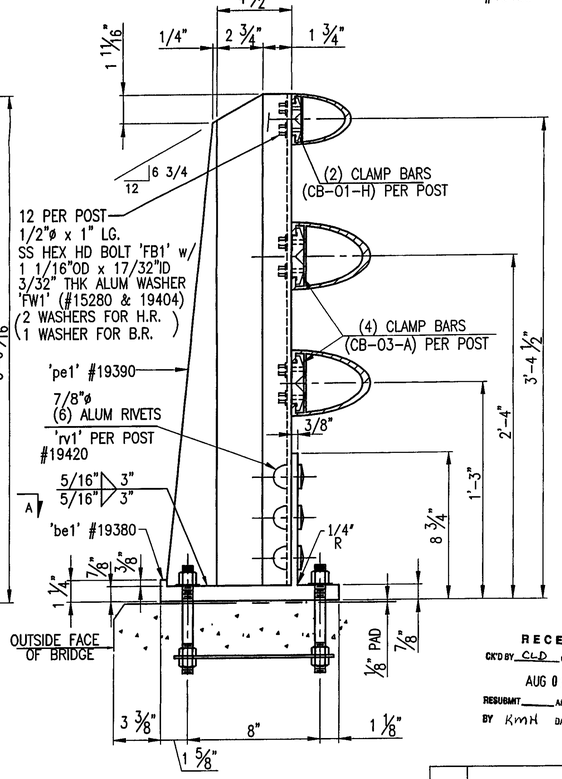


110 ~ REQ'D ANCHOR BOLTS AB1

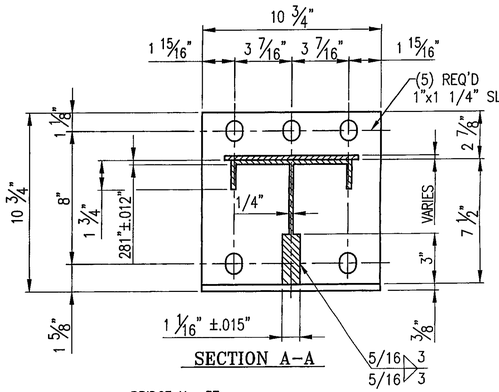


22 ~ REQ'D FABRIC PADS 'EP1'





22 ~ REQ'D FABRICATED RAIL POSTS P-301-K
(SIDEWALK)



SECTION A-A

RECEIVED
CK'D BY CLD CK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KMH DATE 8/13/07

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

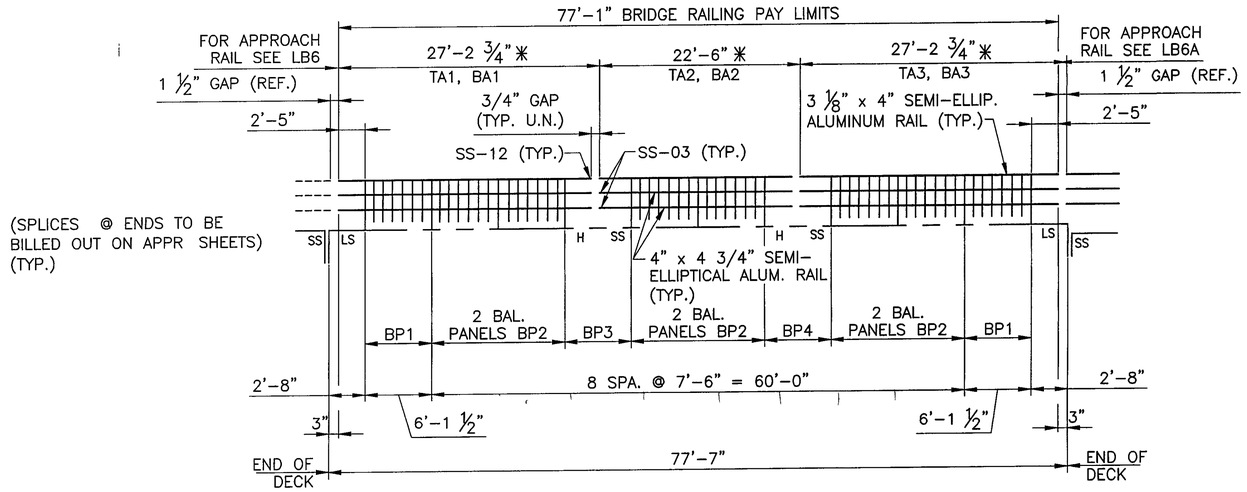
APPROVED: ____ REC'D APPROVAL ____ DRAWING ____

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
3L ALUM BRIDGE RAILING ~ GENERAL NOTES & TYP DETAILS

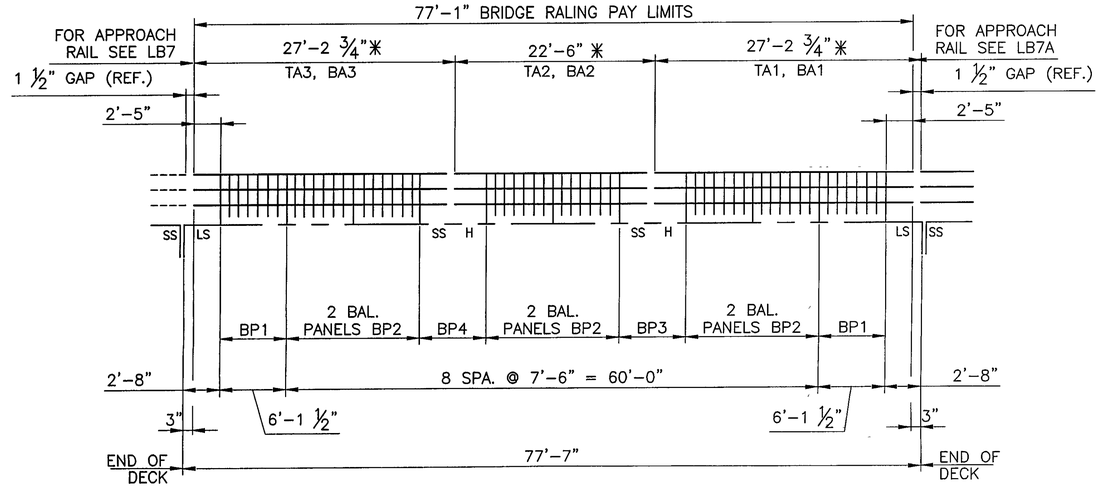
MADE CMS DATE 05/21/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB1 REV. No.

REV	DESCRIPTION	BY	DATE



INSIDE ELEVATION ~ NORTH RAIL

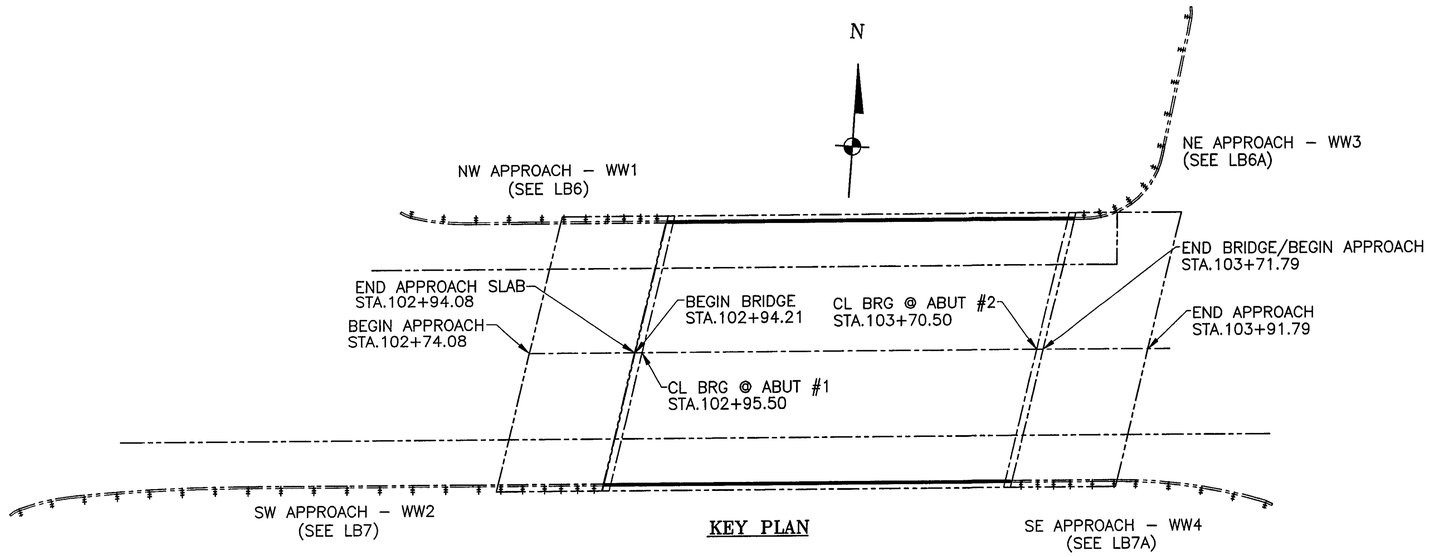
H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE



OUTSIDE ELEVATION ~ SOUTH RAIL

NOTE:

1. ● 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. 1



KEY PLAN

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
CK'D BY CLD CK'D BY GAS
AUG 0 3 2007
RESUBMT ____ APPROVED ✓
BY KMH DATE 8/13/07

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

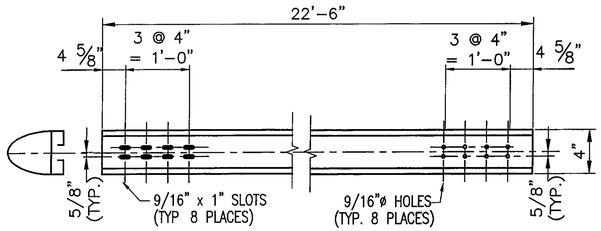
BRIDGE No 37
PROJECT No. BRF 030-2(17)S ITEM No· 525 23

APPROVED: ____ REC'D APPROVAL ____ DRAWING ____

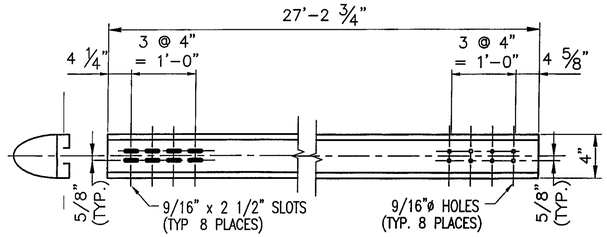
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

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

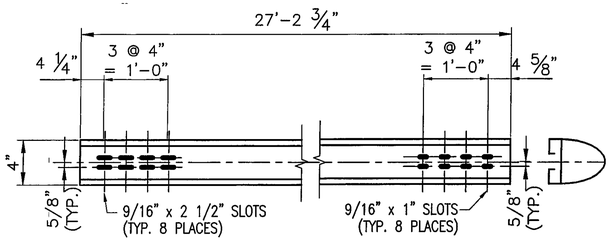
MADE CMS DATE 05/21/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB2 REV. No ONE



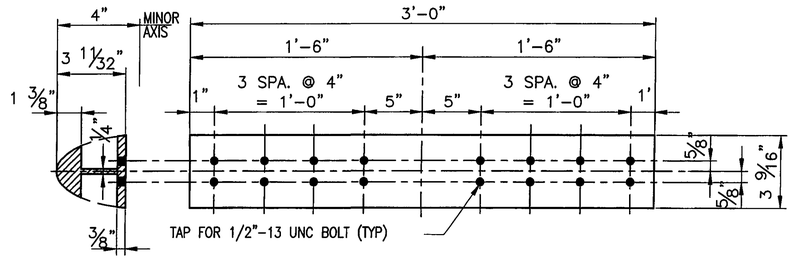
4 REQ'D. ~ RAIL 'BA2'
(BACK ELEVATION VIEW)



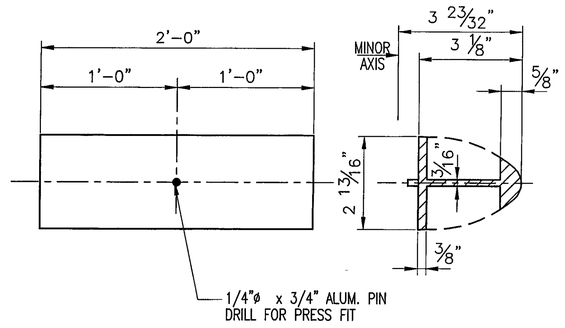
4 REQ'D. ~ RAIL 'BA1'
(BACK ELEVATION VIEW)



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
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KMH DATE 8/13/07

REV	DESCRIPTION	BY	DATE

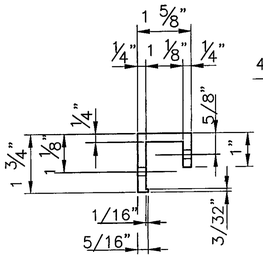
BRIDGE No. 37
PROJECT No. BRF 030-2(17)S ITEM No: 525 23

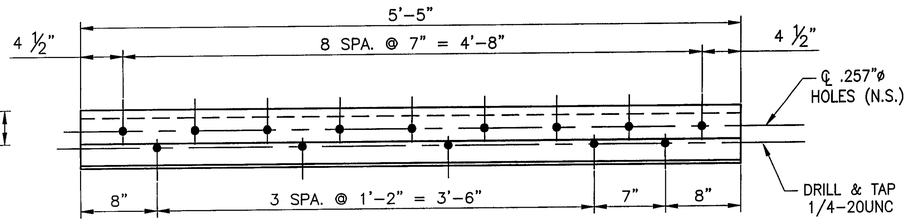
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L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

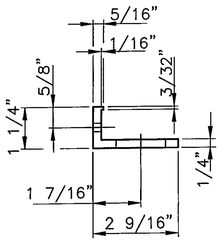
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3-LINE ALUM BRIDGE RAIL ~ MISC. RAIL DETAILS

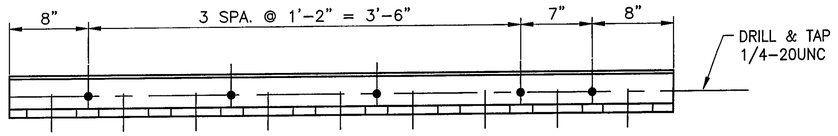
MADE CMS DATE 05/21/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB3 REV. No.

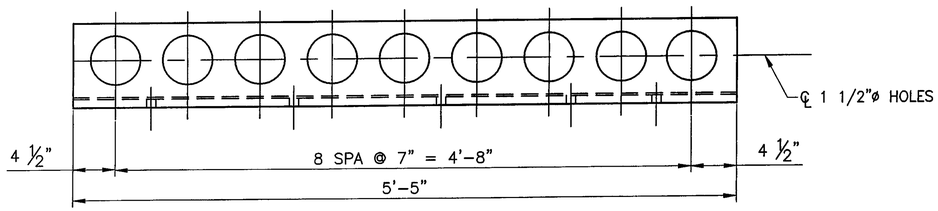




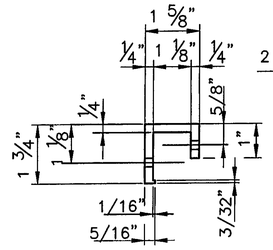
4 REQ'D. ~ TOP BALUSTER BARS ~ 'tb1' #19470
(BAL. PANEL BP1)

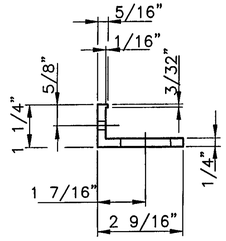


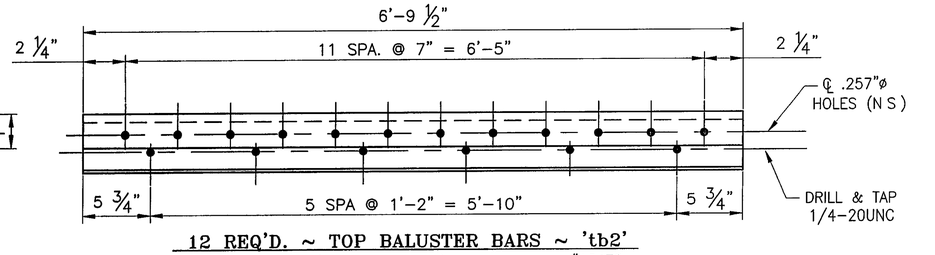




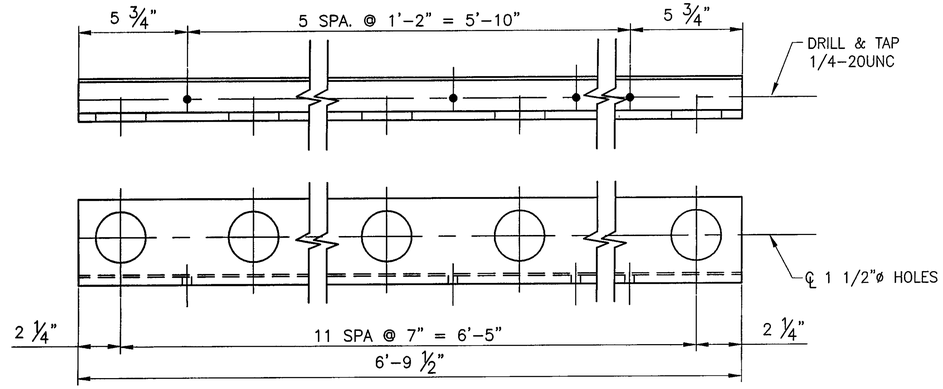
4 REQ'D. ~ BOTTOM BALUSTER BARS ~ 'bb1' #19471
(MATCH tb .257"ø HOLE SPACING FOR CL. 1 33/64"ø HOLES)
(BAL. PANEL BP1)



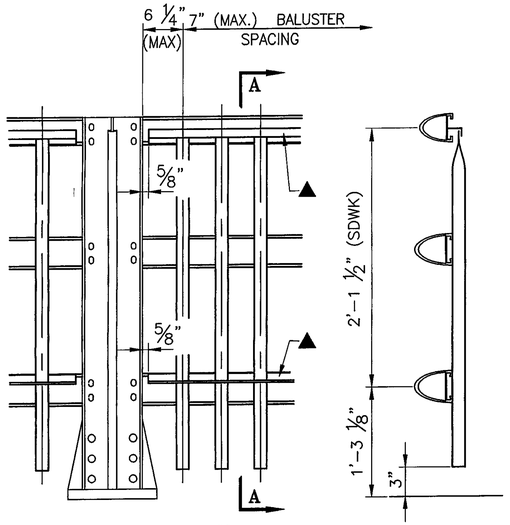




12 REQ'D. ~ TOP BALUSTER BARS ~ 'tb2' #19470
(BAL. PANEL BP2)



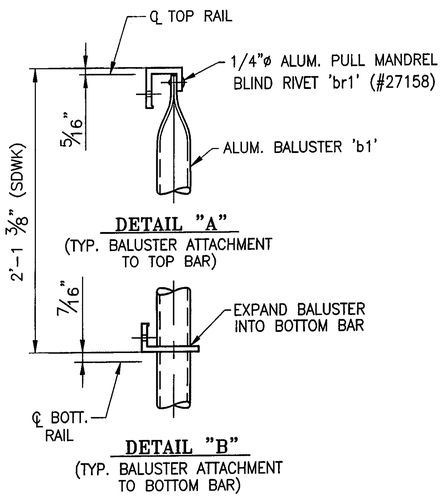
12 REQ'D. ~ BOTTOM BALUSTER BARS ~ 'bb2' #19471
(MATCH tb .257"ø HOLE SPACING FOR CL. 1 33/64"ø HOLES)
(BAL. PANEL BP2)



TYPICAL ELEVATION

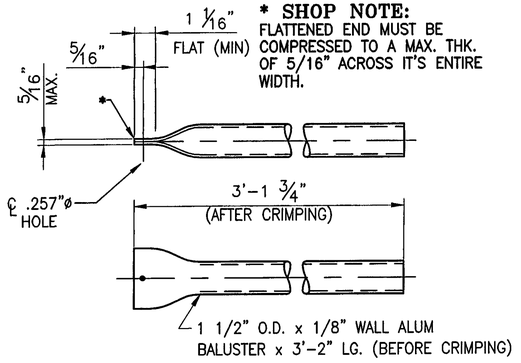
▲ 1/4"-20UNC S.S. SOCKET SET SCREW x 1/2" - 'SS1' (#22079) EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

SECTION A-A



DETAIL "A"
(TYP. BALUSTER ATTACHMENT TO TOP BAR)

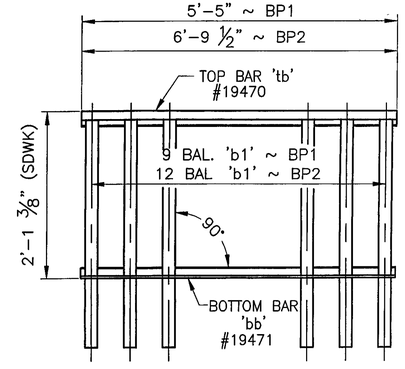
DETAIL "B"
(TYP. BALUSTER ATTACHMENT TO BOTTOM BAR)



*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

180 ~ REQ'D BALUSTERS 'b1' #19451

ANODIZED
(SEE NOTES ON LB1)



4 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP1'
12 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP2'

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

RECEIVED
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KmH DATE 8/13/07

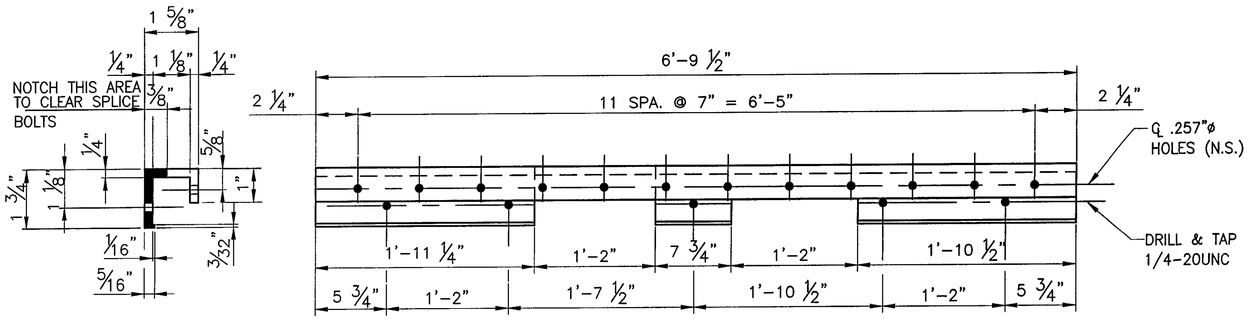
REV	DESCRIPTION	BY	DATE

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

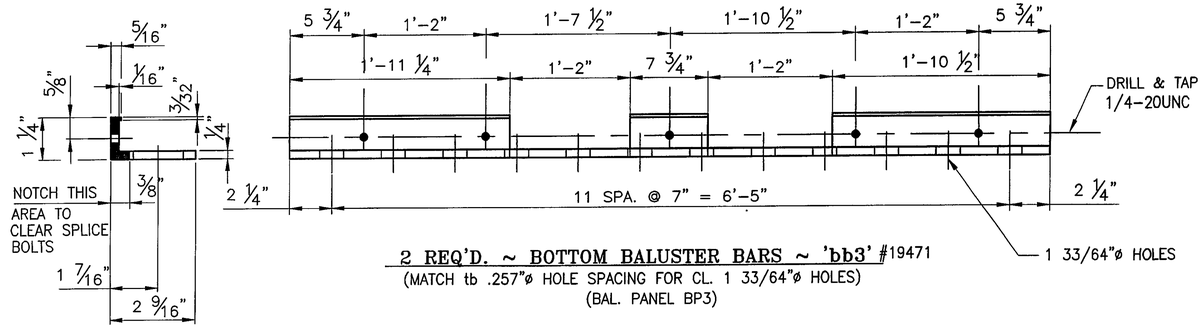
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

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 ~ BALUSTER PANEL DETAILS

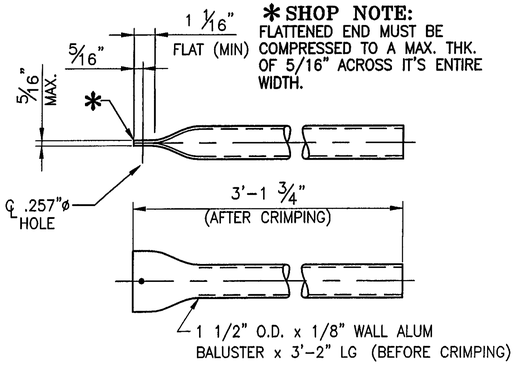
MADE CMS DATE 05/18/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB4 REV. No.



2 REQ'D. ~ TOP BALUSTER BARS ~ 'tb3'
(BAL. PANEL BP3) #19470



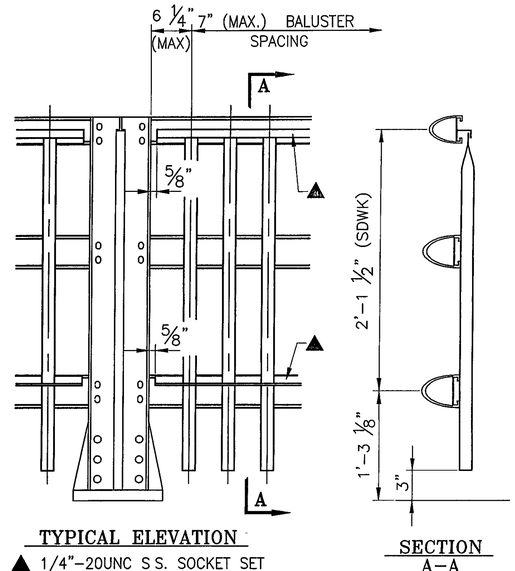
2 REQ'D. ~ BOTTOM BALUSTER BARS ~ 'bb3' #19471
(MATCH tb .257"ø HOLE SPACING FOR CL. 1 33/64"ø HOLES)
(BAL. PANEL BP3)



*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

48 ~ REQ'D BALUSTERS 'b1'
#19451

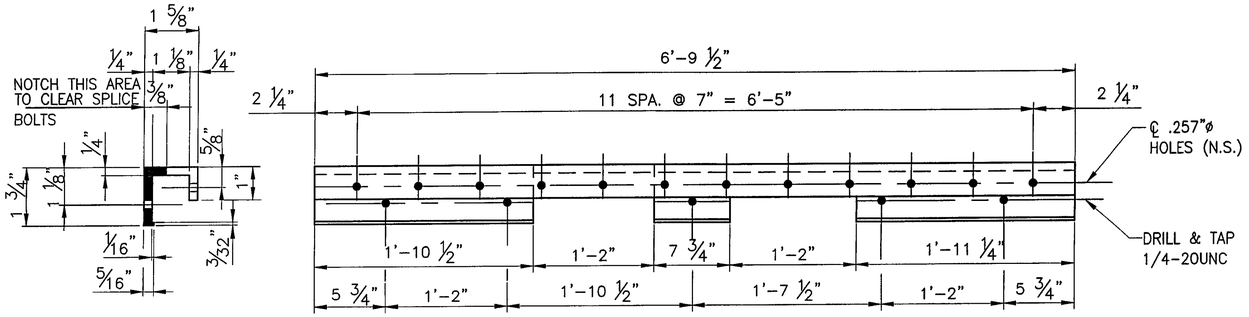
ANODIZED
(SEE NOTES ON LB1)



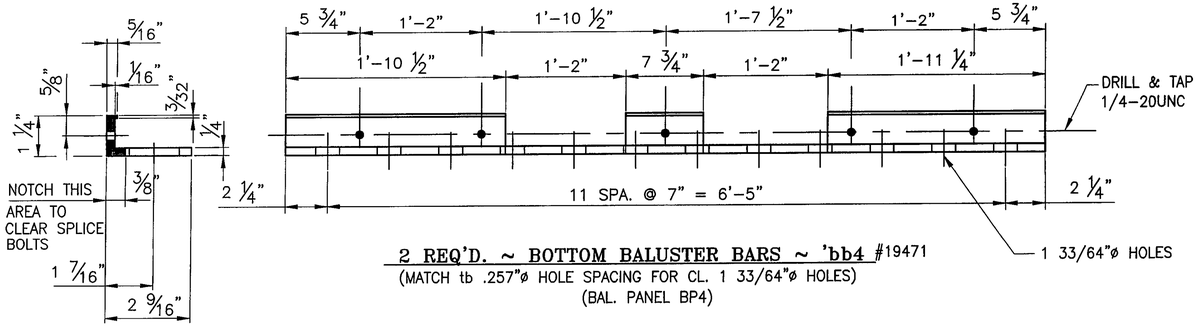
TYPICAL ELEVATION

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

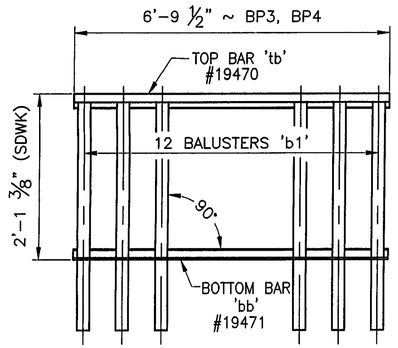
SECTION A–A



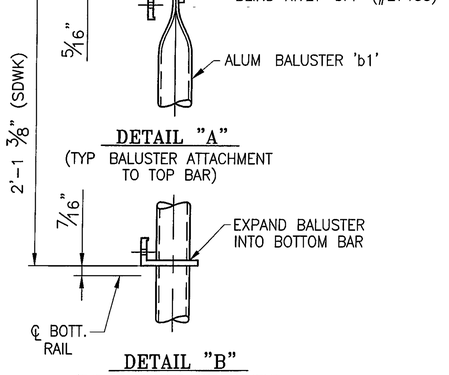
2 REQ'D. ~ TOP BALUSTER BARS ~ 'tb4'
(BAL. PANEL BP4) #19470



2 REQ'D. ~ BOTTOM BALUSTER BARS ~ 'bb4' #19471
(MATCH tb .257"ø HOLE SPACING FOR CL. 1 33/64"ø HOLES)
(BAL. PANEL BP4)



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



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

RECEIVED
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KMH DATE 8/13/07

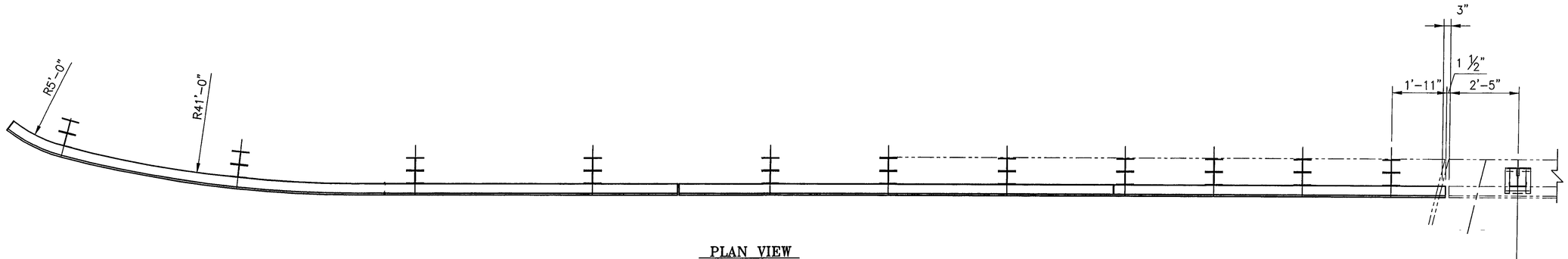
APPROVED: _____ REC'D APPROVAL ____ DRAWING ____

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

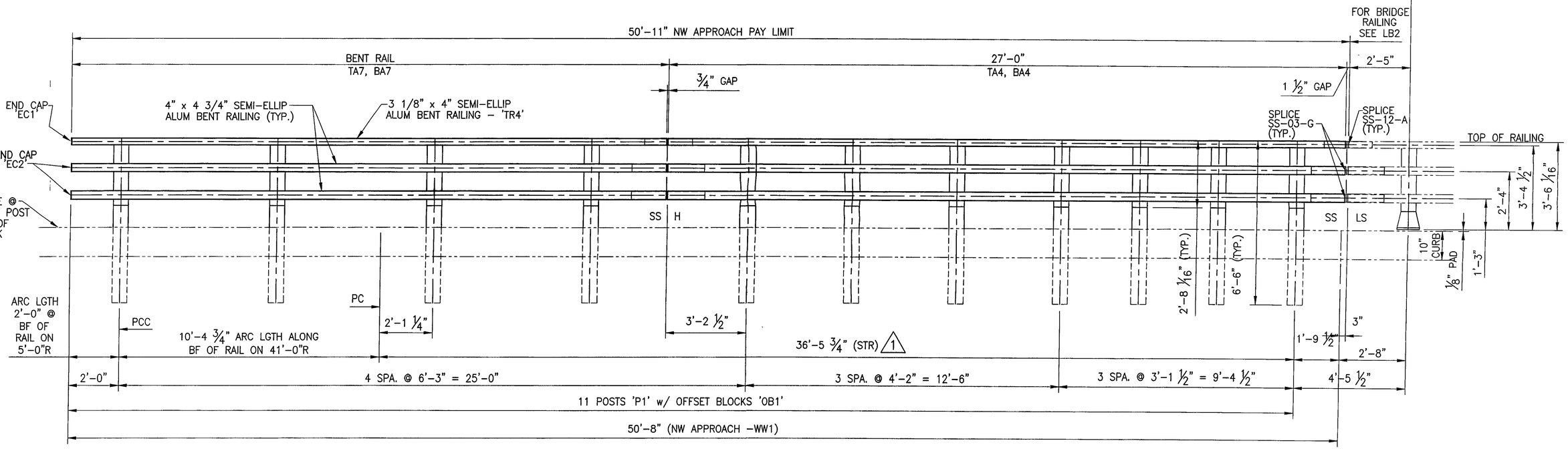
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3-LINE ALUM BRIDGE RAIL ~ BALUSTER PANEL DETAILS @ SPLICES

MADE CMS DATE 05/22/07 JOB No AR0395 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
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY RMH DATE 8/13/07

ANODIZED
(SEE NOTES ON LB1)

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

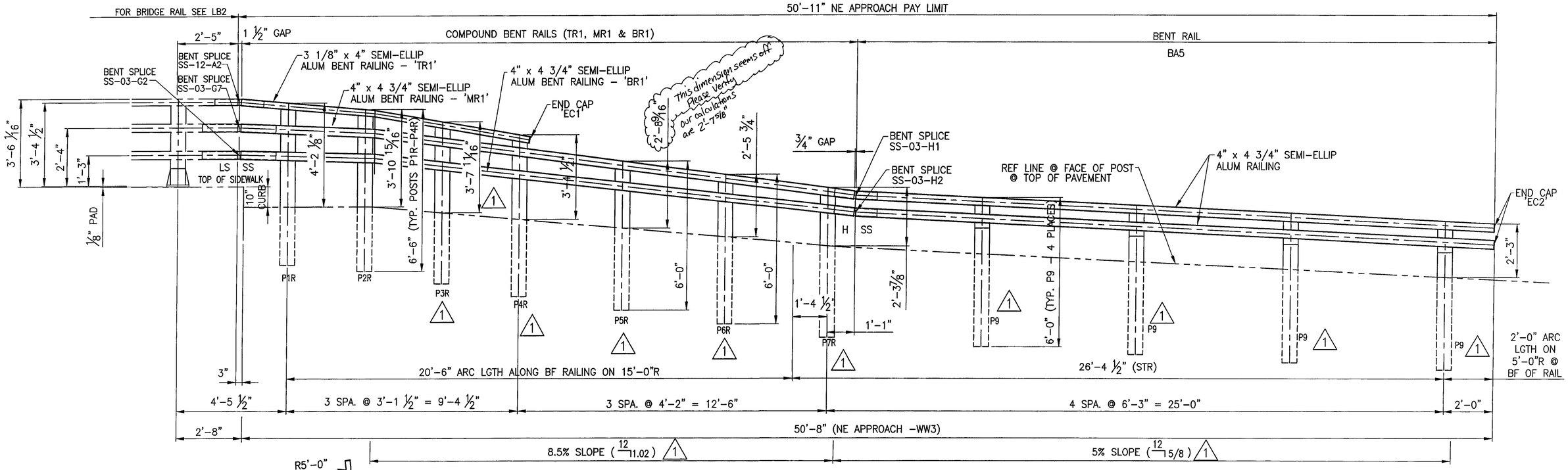
BRIDGE No. 37
PROJECT No BRF 030-2(17)S
ITEM No: 621.74

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
3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

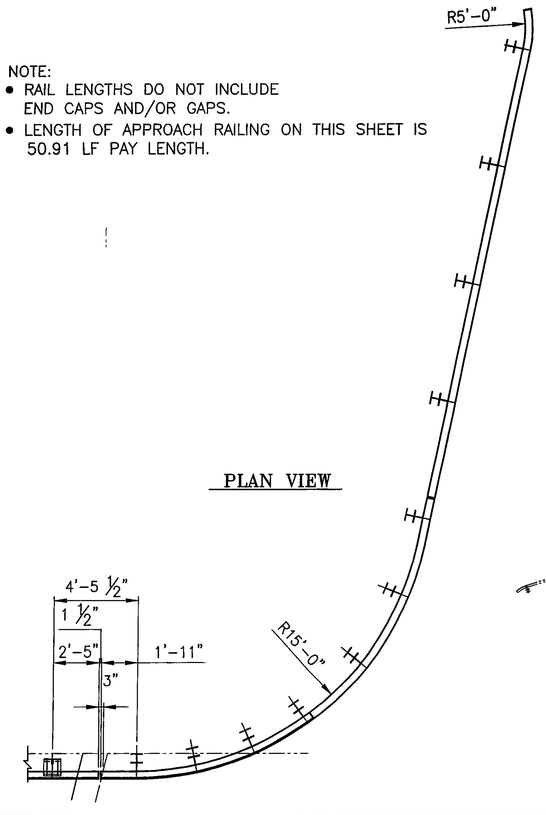
MADE CMS DATE 05/23/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB6 REV. No. ONE



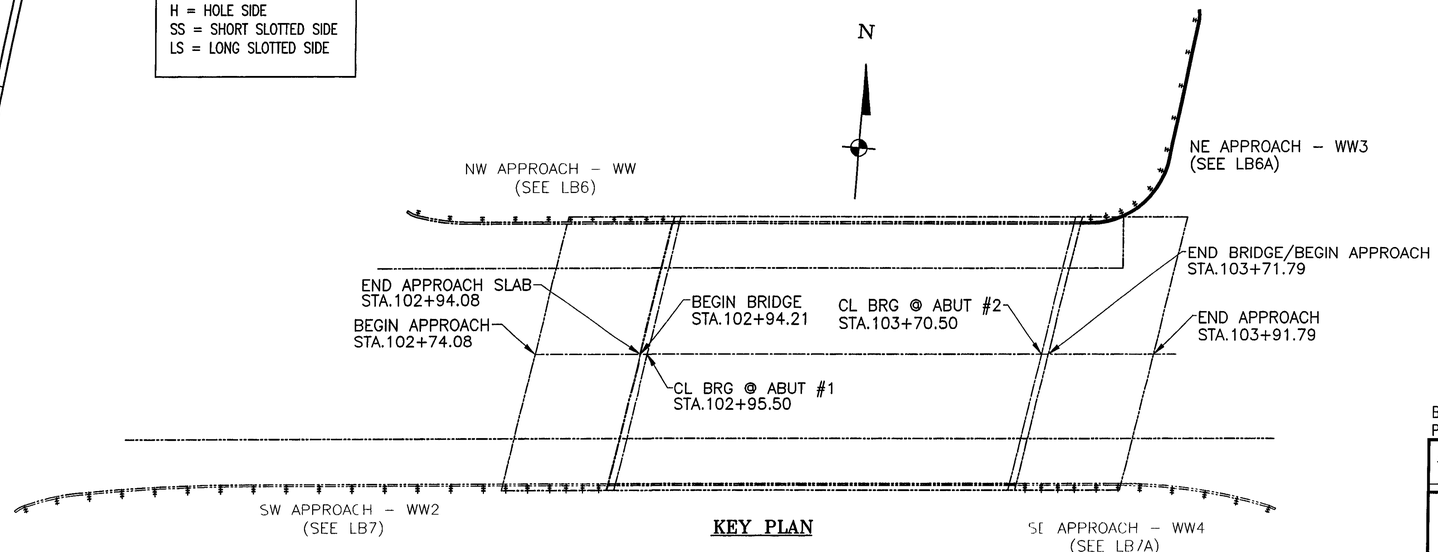
INSIDE ELEVATION OF NE APPROACH RAIL

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)

RECEIVED
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED AS NOTED
BY KmH DATE 8/13/07

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

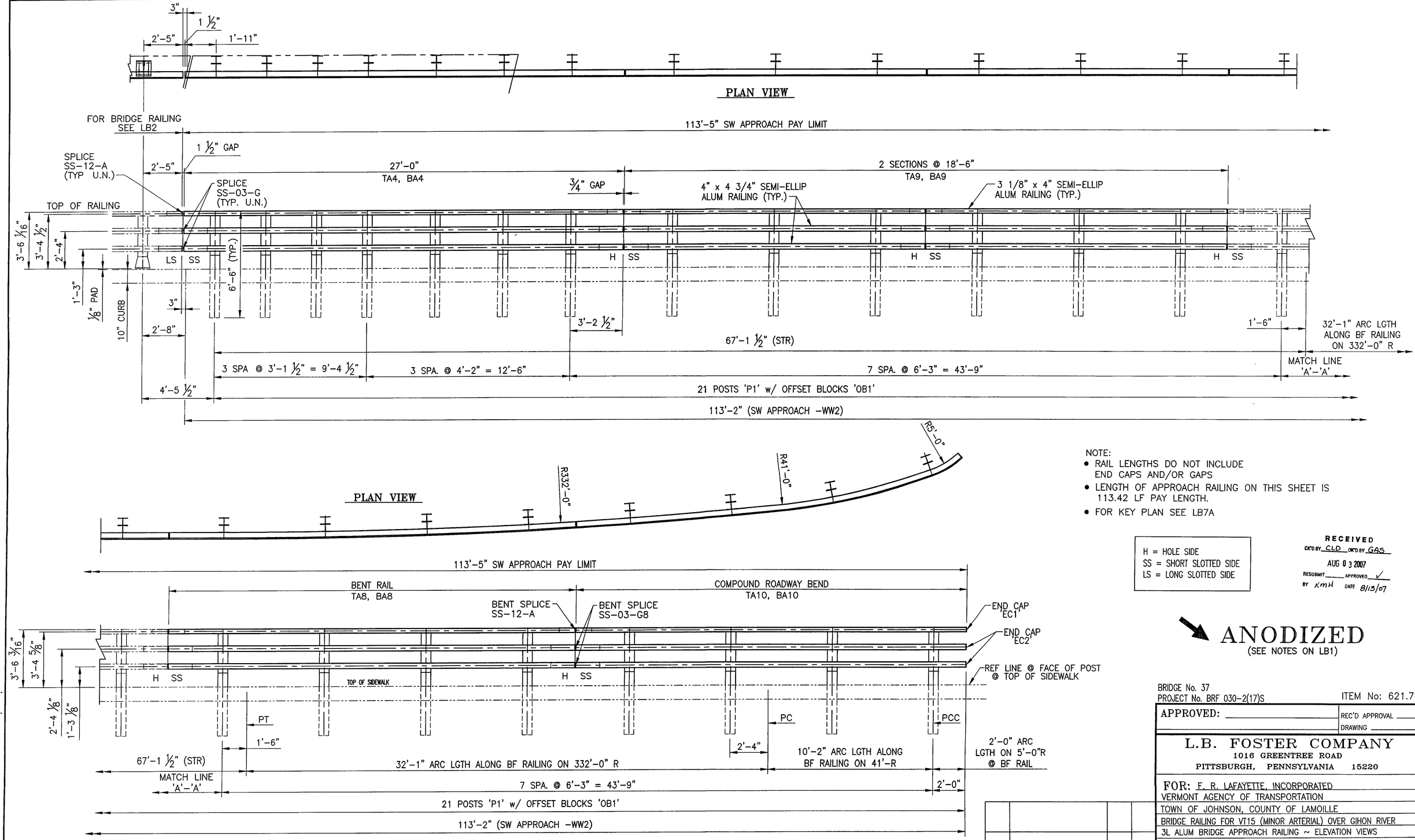
BRIDGE No. 37
PROJECT No. BRF 030-2(17)S
ITEM No: 621.74

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
3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

MADE CMS DATE 05/23/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB6A REV. No. ONE



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
CK'D BY CLD OK'D BY GAS
AUG 0 3 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

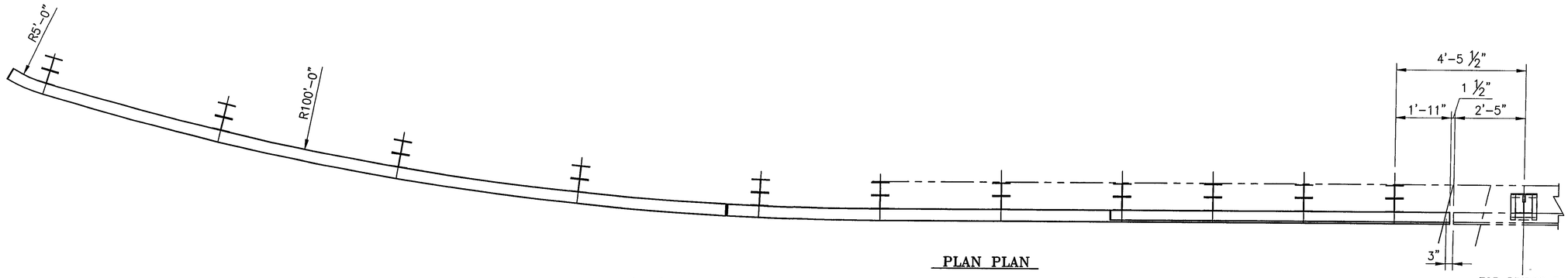
APPROVED: _____ REC'D APPROVAL ____ DRAWING ____

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

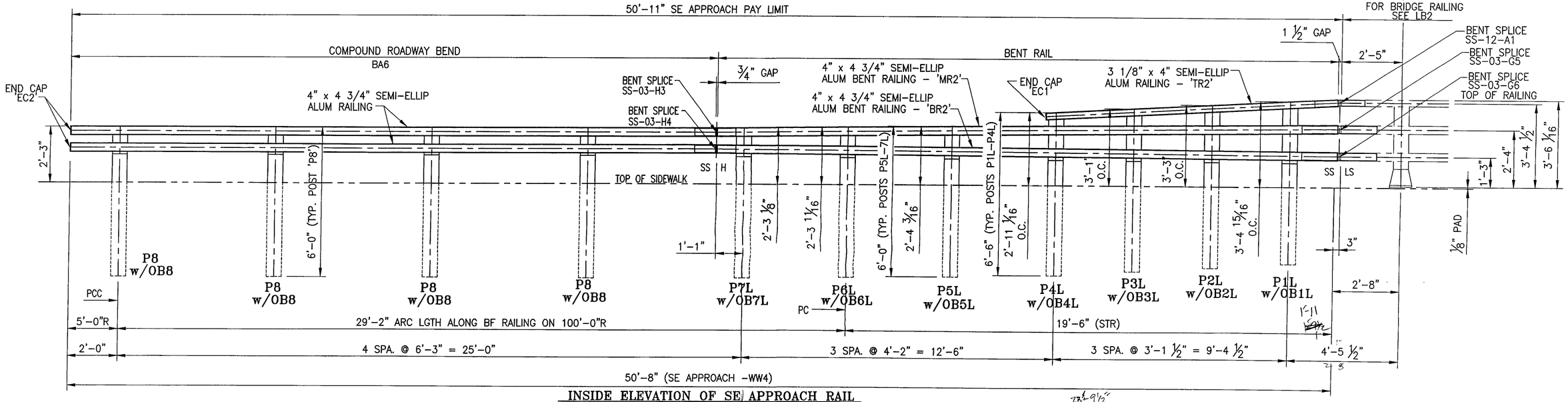
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

MADE CMS DATE 05/23/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB7 REV. No.

REV	DESCRIPTION	BY	DATE



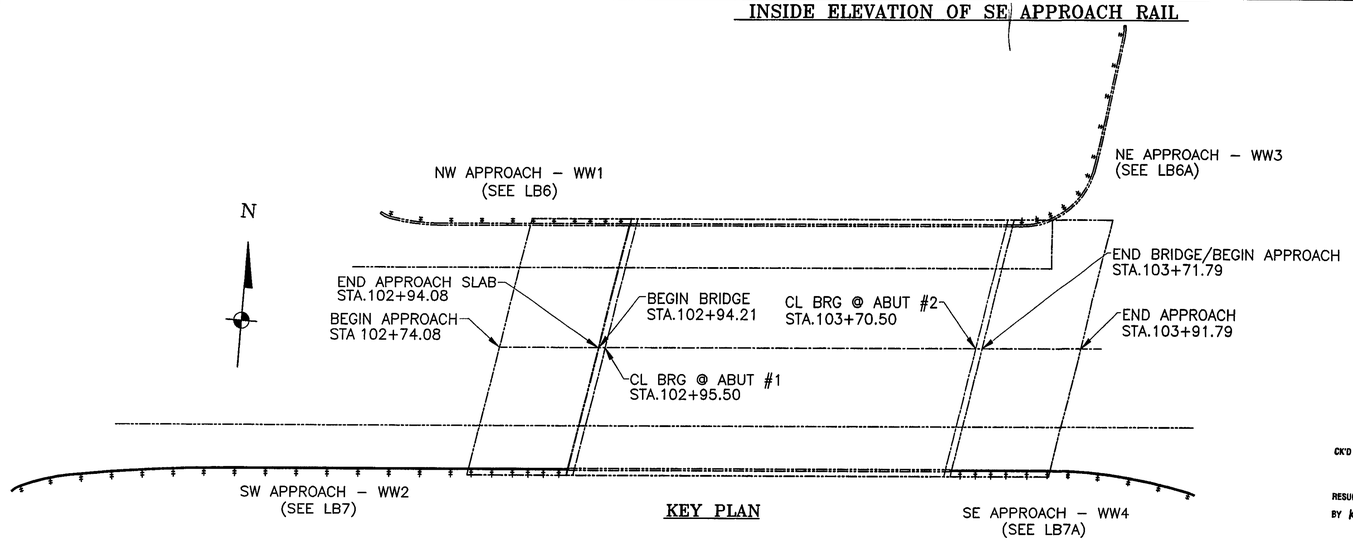
PLAN PLAN



INSIDE ELEVATION OF SE APPROACH RAIL

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

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



KEY PLAN

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMT ____ APPROVED ✓
BY KMH DATE 8/13/07

REV	DESCRIPTION	BY	DATE

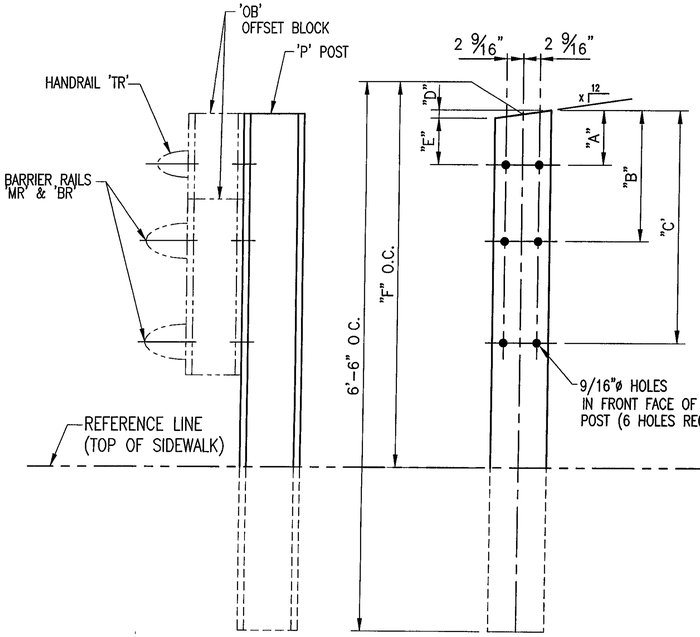
BRIDGE No 37
PROJECT No BRF 030-2(17)S
ITEM No: 621.74

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

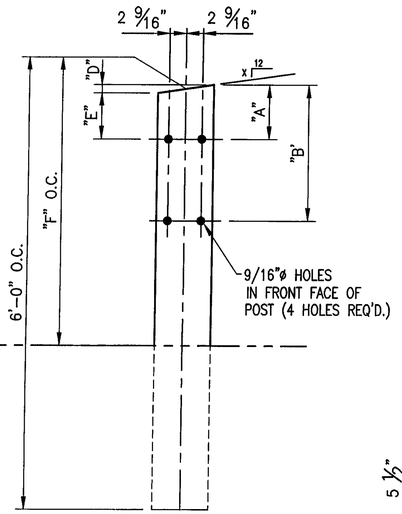
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

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 AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB7A REV. No.

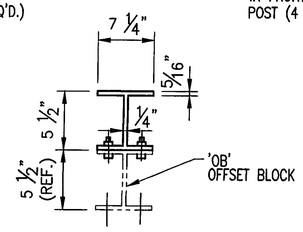


P1L – P4L

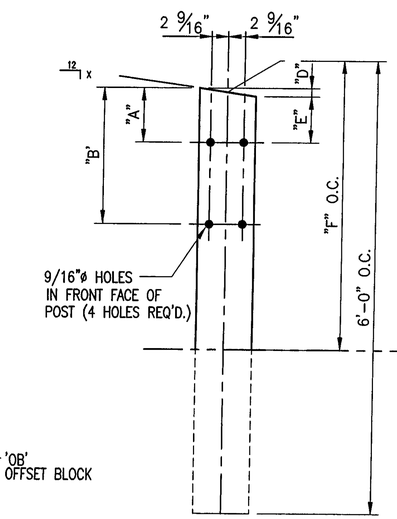


P5L – P7L

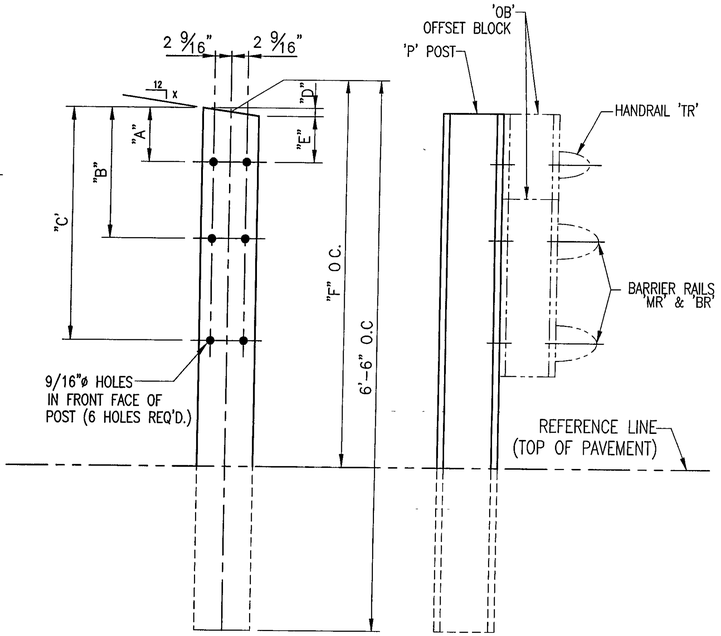
ANODIZED
(SEE NOTES ON LB1)



TYP. SECT. POST & OFFSET BLOCK



P5R – P7R



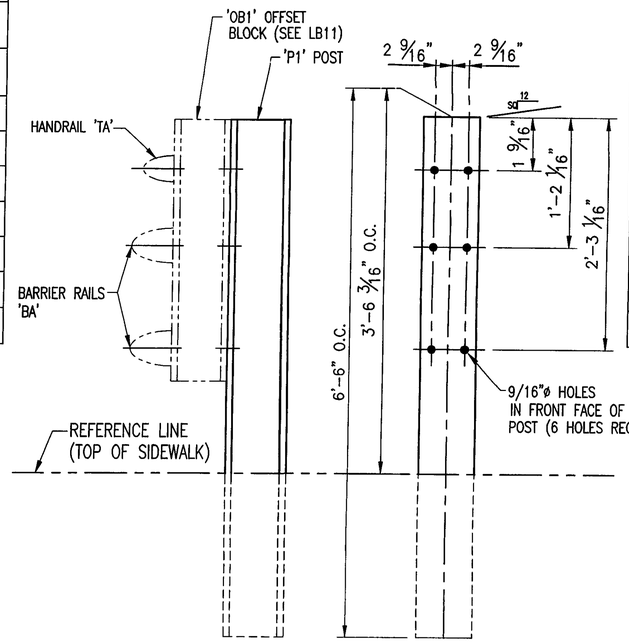
P1R – P4R

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

		OFFSET BLOCK MTG. DIMENSIONS						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P1L	1	1 3/4"	1'-1 1/4"	2'-1 7/8"	3/8"	1 3/8"	1 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

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"ø-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"ø-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)

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

		OFFSET BLOCK MTG. DIMENSIONS 1						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
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

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

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

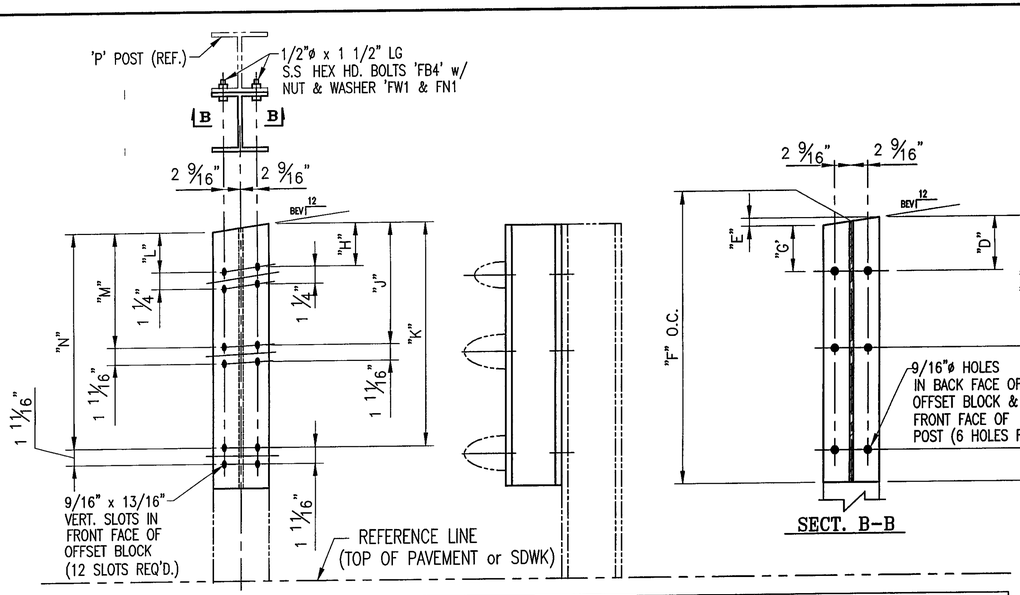
RECEIVED
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED AS NOTED
BY KMH DATE 8/3/07

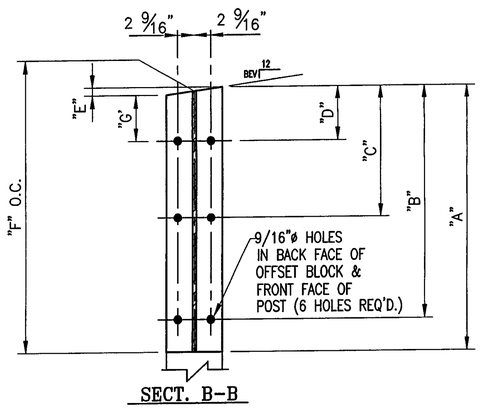
REV.	DESCRIPTION	BY	DATE
1	REVISED DIMENSION PER APPROVER MARKUP	CMS	07 24 07

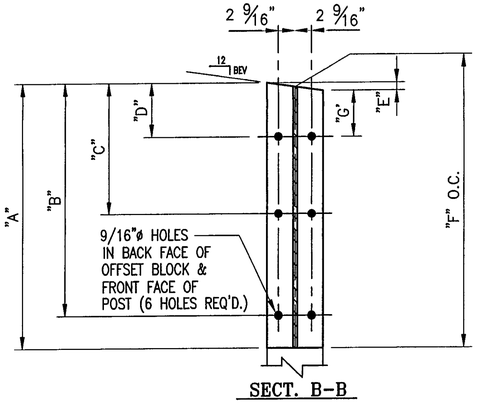
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

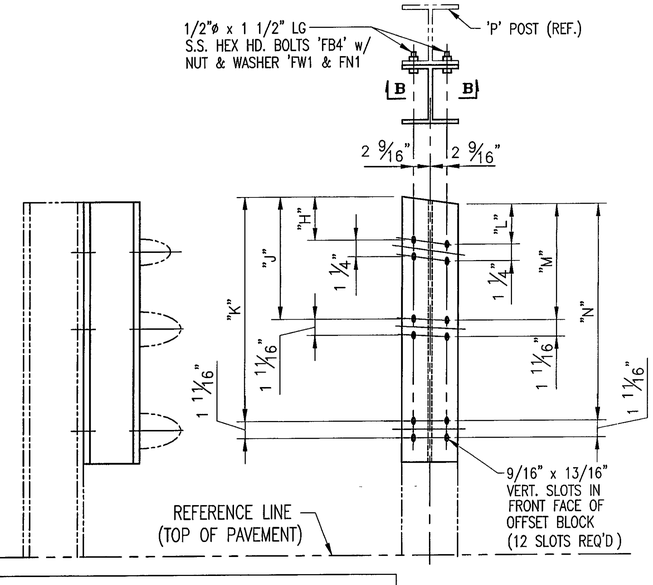
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3L ALUMINUM APPROACH RAIL POST DETAILS

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









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 (0.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 ~ 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"

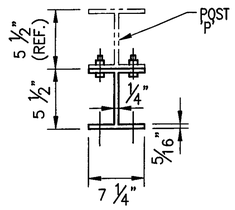
OFFSET BLOCK CHART FOR BRIDGE 37 NE APPROACH @ CURB CONDITION DUE TO SHORT SIDEWALK (WW3) – POSTS P1R – P4R

				OFFSET BLOCK ~ POST MTG. DIMENSIONS							BEV
	POST No.	OFFSET BLOCK	QTY.	A	B	C	D	E	F (0.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
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"
1	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
	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"
1	P3R	OB3R	1 1/8"	9 5/16"	1'-8 3/4"	13/16"	8 11/16"	1'-6 7/8"
1	P4R	OB4R	1 1/8"	7 5/8"	1'-6 1/2"	13/16"	7"	1'-5 13/16"

ANODIZED
(SEE NOTES ON LB1)

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"ø-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)



TYP. SECT. POST & OFFSET BLOCK

RECEIVED
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KMH DATE 8/13/07

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

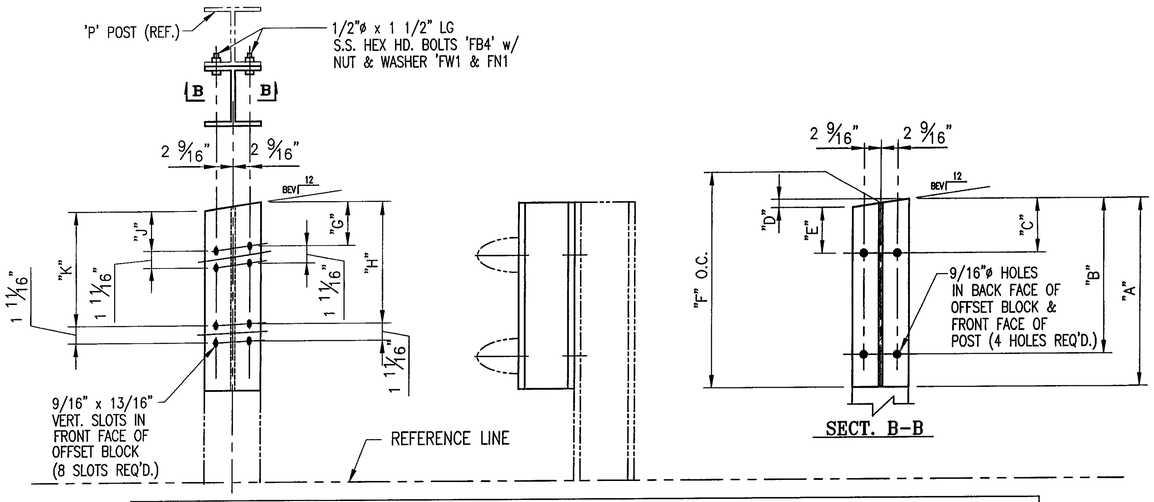
BRIDGE No. 37
PROJECT No BRF 030-2(17)S
ITEM No: 621.74

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

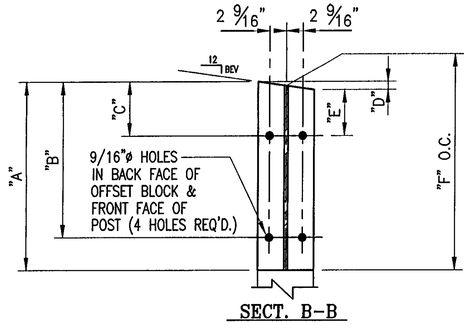
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

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

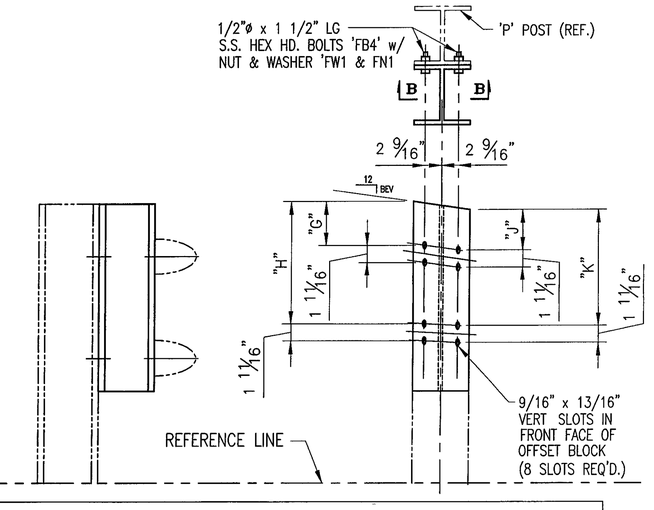
MADE CMS DATE 05/23/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB9 REV. No. ONE



SECT. B-B



SECT. B-B



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

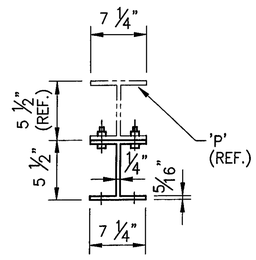
			OFFSET BLOCK ~ POST MTG. DIMENSIONS						BEV
POST No	OFFSET BLOCK	QTY.	A	B	C	D	E	F (0.C.)	X
P5L	OB5L	1	1'-2 15/16"	11 15/16"	2 1/16"	1/16"	1 15/16"	1'-2 7/8"	1/8
P6L	OB6L	1	1'-2 1/8"	11 1/16"	2 1/16"	1/16"	1 15/16"	1'-2 1/16"	1/8
P7L	OB7L	1	1'-1 5/16"	10 1/4"	2 1/16"	1/16"	1 15/16"	1'-1 1/4"	1/8

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS					
POST No.	OFFSET BLOCK	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

				OFFSET BLOCK ~ POST MTG. DIMENSIONS						BEV
	POST No.	OFFSET BLOCK	QTY.	A	B	C	D	E	F (0.C.)	X
1	P5R	OB5R	1	1'-3 1/2"	1'-0 1/2"	2 1/2"	15/16"	1 9/16"	1'-3"	1 1/2
1	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
1	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

	OFFSET BLOCK ~ RAIL MTG. DIMENSIONS					
	POST No.	OFFSET BLOCK	G	H	J	K
1	P5R	OB5R	1 5/16"	11 3/8"	1"	11"
1	P6R	OB6R	1 5/16"	10 5/8"	1"	10 1/4"
1	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"ø-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
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KMH DATE 8/13/07

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

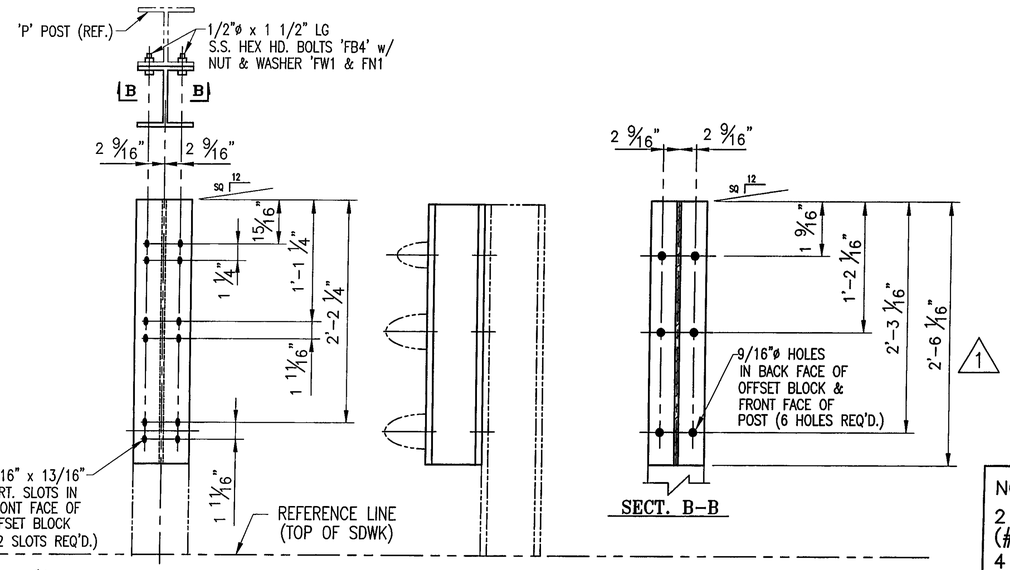
BRIDGE No. 37
PROJECT No. BRF 030-2(17)S ITEM No: 621.74

APPROVED: ____ REC'D APPROVAL ____ DRAWING ____

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

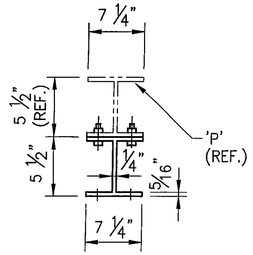
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
OFFSET BLOCK DETAILS

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

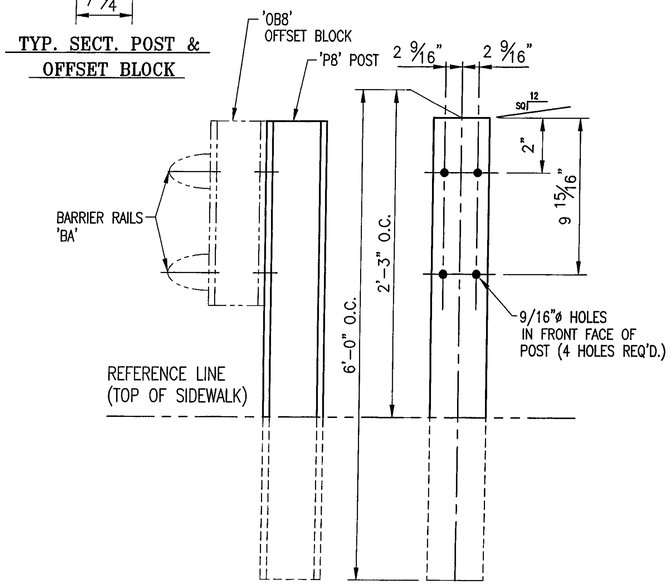


OFFSET BLOCK OB1 ~ 32 REQ'D.

(NW & SW APPROACHES ONLY)

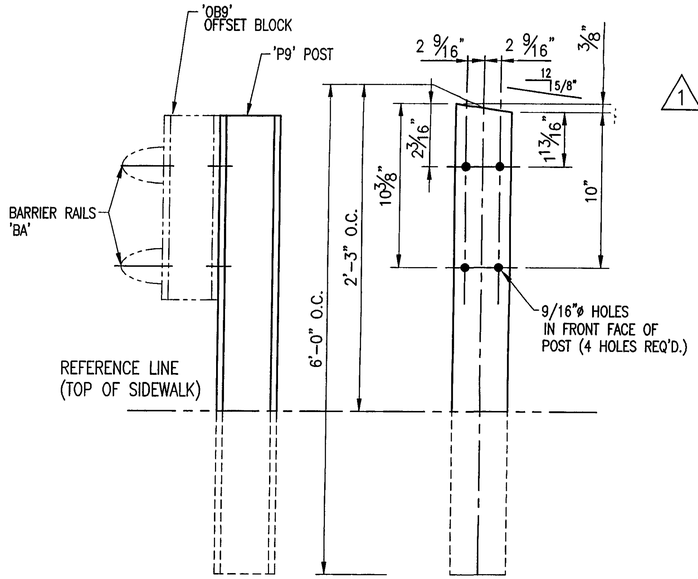


TYP. SECT. POST & OFFSET BLOCK



4 REQ'D. ~ POST 'P8' 1

SE (WW4) APPROACHE ONLY)



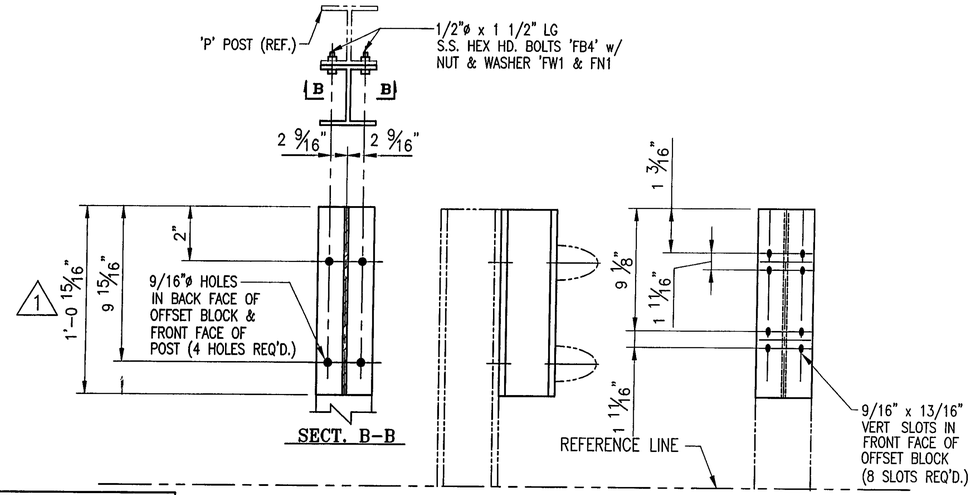
4 REQ'D. ~ POST 'P9'

(NE (WW3) APPROACHE ONLY) 1

NOTE:

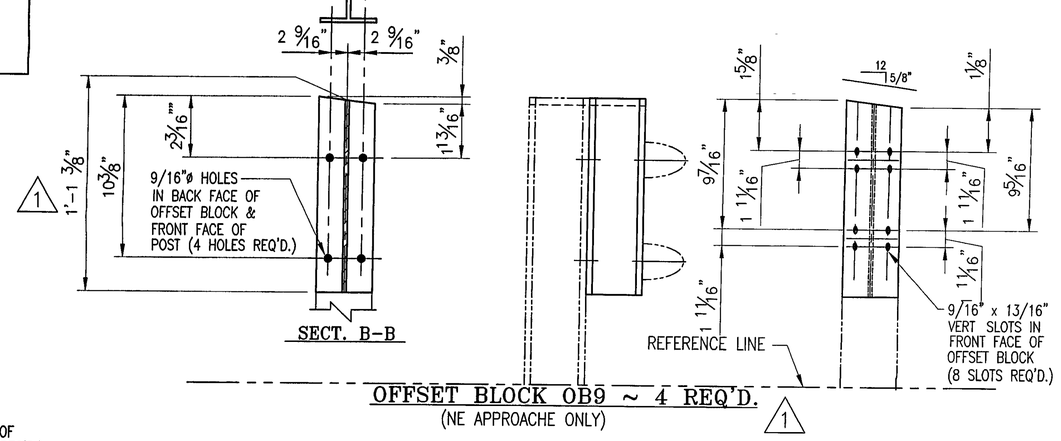
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P1

4 CLAMPING BARS CB-03-A (#19447) PER POSTS P1 & P8 w/ 1/2"ø-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. 1

(SE APPROACHE ONLY)



OFFSET BLOCK OB9 ~ 4 REQ'D. 1

(NE APPROACHE ONLY)

ANODIZED

(SEE NOTES ON LB1)

RECEIVED
CK'D 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: 621.74

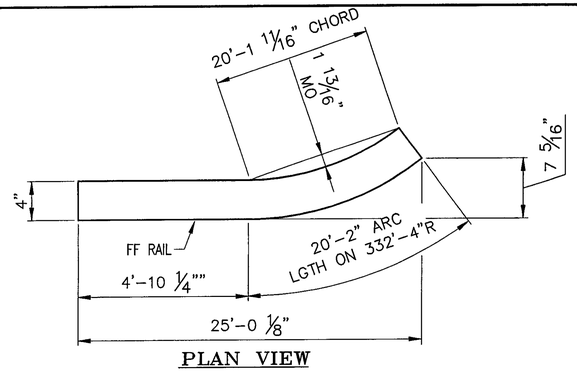
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

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

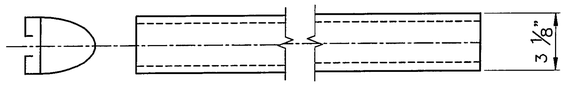
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
OFFSET BLOCK DETAILS

MADE CMS DATE 05/23/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB11 REV. No. ONE

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



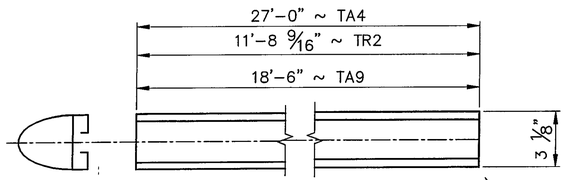
PLAN VIEW



ONE REQ'D – HANDRAIL 'TA8' 1

(FRT ELEVATION VIEW)

(LENGTH ALONG FF RAIL = 25'-0 1/4" + 2'-6" FOR BENDING (27'-6 1/4"))



2 REQ'D – HANDRAIL 'TA4'

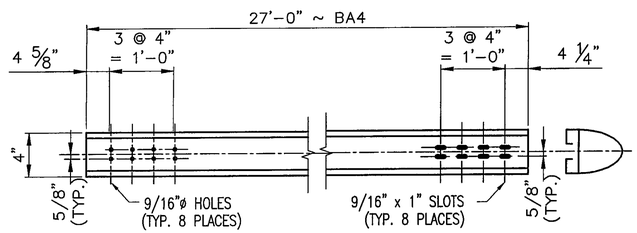
(BACK ELEVATION VIEW)

2 REQ'D – HANDRAIL 'TA9'

(BACK ELEVATION VIEW)

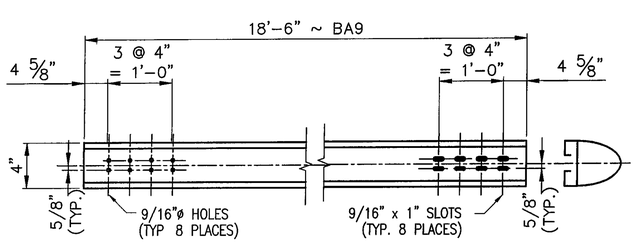
ONE REQ'D – HANDRAIL 'TR2'

(BACK ELEVATION VIEW)



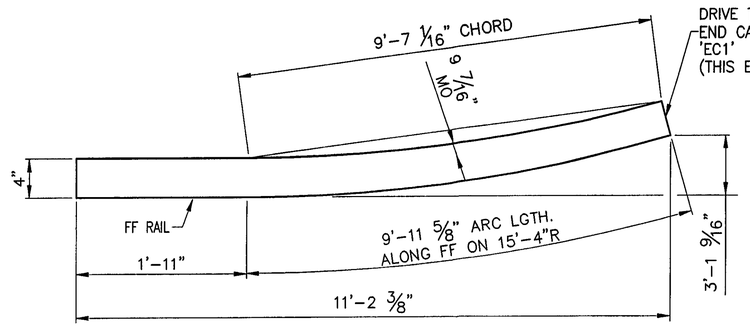
4 REQ'D. ~ RAIL 'BA4'

(BACK ELEVATION VIEW)

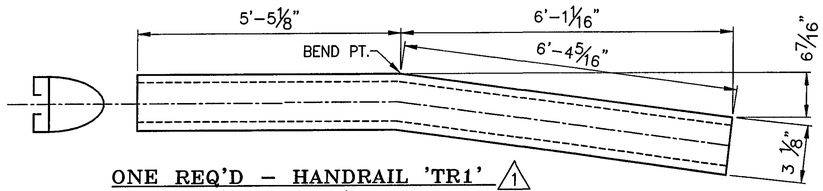


4 REQ'D. ~ RAIL 'BA9'

(BACK ELEVATION VIEW)



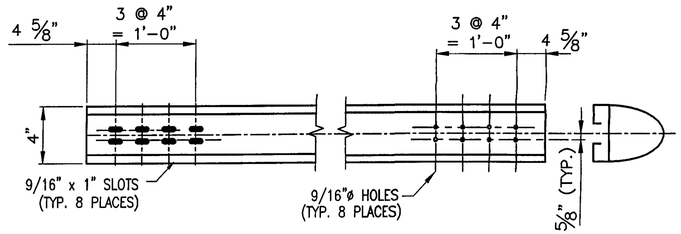
PLAN VIEW



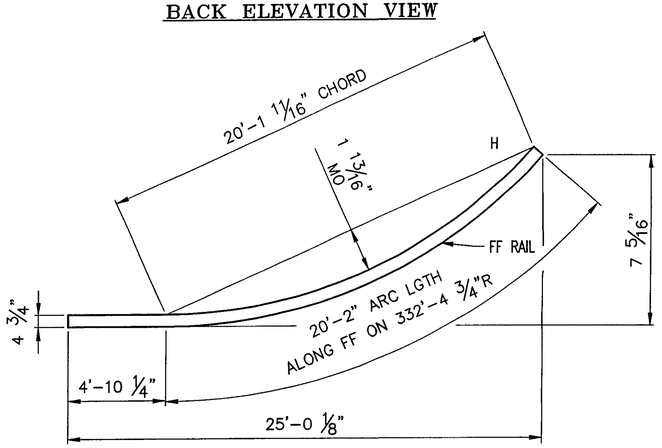
ONE REQ'D – HANDRAIL 'TR1' 1

(FRT ELEVATION VIEW)

(LENGTH ALONG FF RAIL = 11'-10 5/8" + 2'-6" FOR BENDING (14'-4 5/8"))



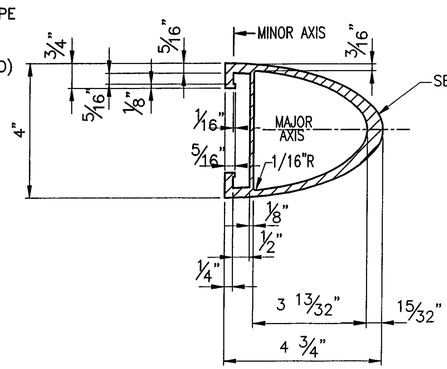
BACK ELEVATION VIEW



PLAN VIEW

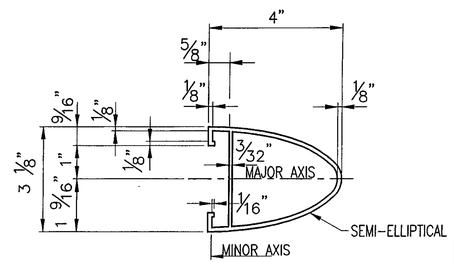
2 REQ'D – BARRIER RAIL 'BA8'

(LENGTH ALONG FF OF RAIL = 25'-0 1/4" + 2'-6" FOR BENDINGD (27'-6 1/4"))



TYPICAL SECTION

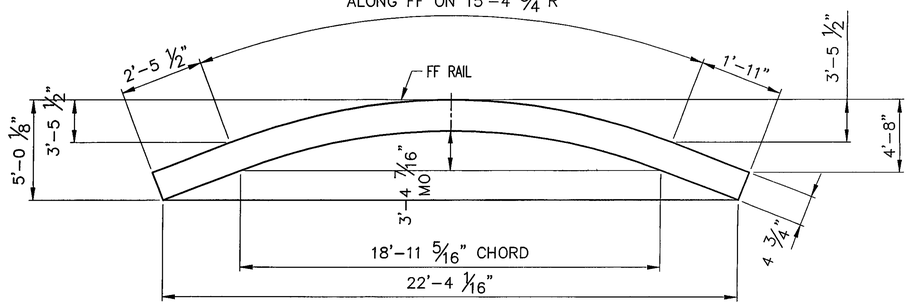
(BARRIER RAIL)

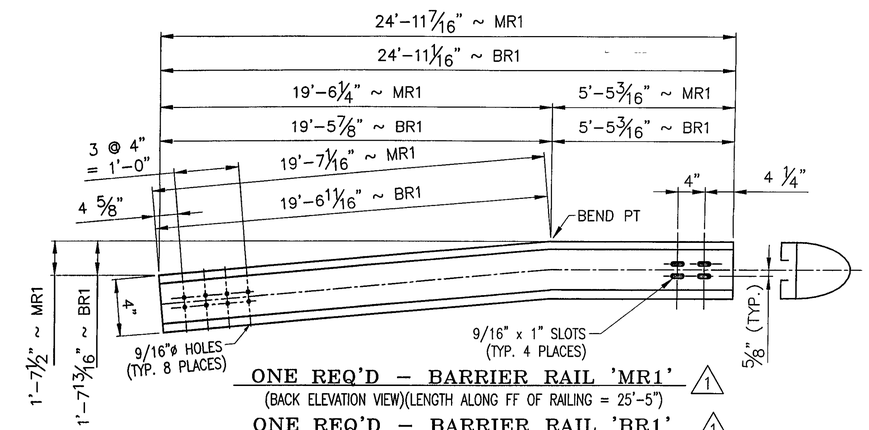


TYPICAL SECTION

(HANDRAIL)

21'-0 ½" ARC LGTH ALONG FF ON 15'-4 ¾"R





ONE REQ'D – BARRIER RAIL 'MR1' 1

(BACK ELEVATION VIEW)(LENGTH ALONG FF OF RAILING = 25'-5")

ONE REQ'D – BARRIER RAIL 'BR1' 1

(BACK ELEVATION VIEW)(LENGTH ALONG FF OF RAILING = 25'-5")

ANODIZED

(SEE NOTES ON LB1)

RECEIVED
CKD BY CLD DEPT OF GAS
AUG 0 3 2007
REQUIRED APPROVED
BY KMH DATE 8/13/07

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

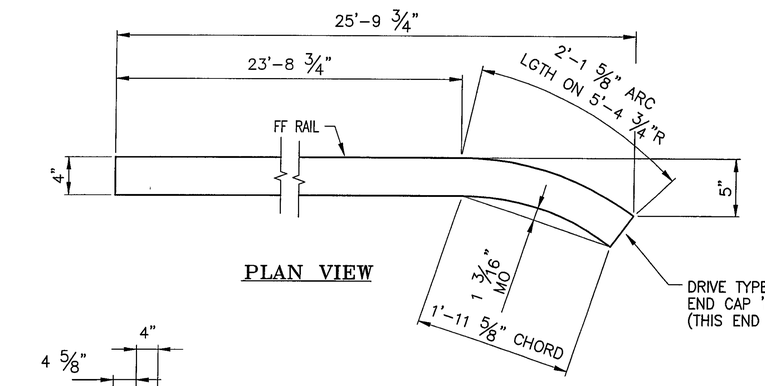
APPROVED: REC'D APPROVAL DRAWING

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

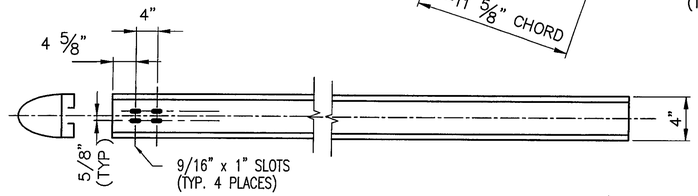
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

MADE CMS DATE 05/18/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB12 REV. No. ONE

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



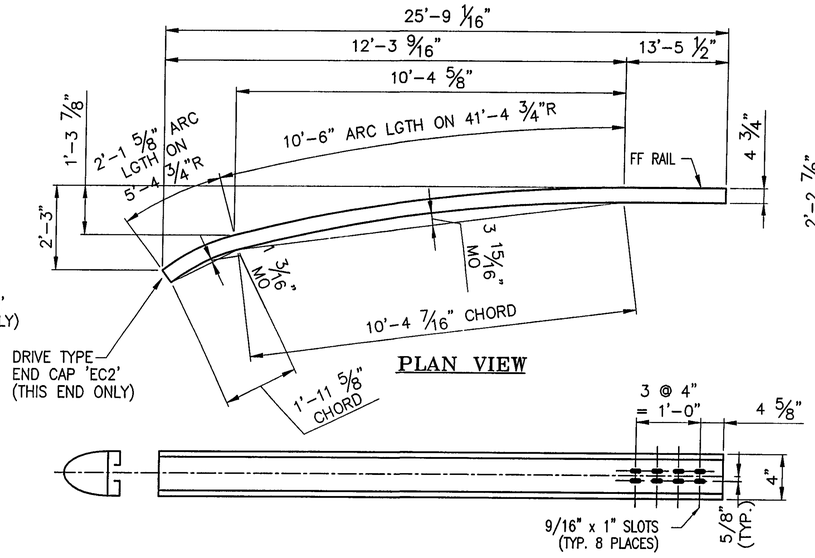
PLAN VIEW



2 REQ'D – BARRIER RAIL 'BA5' (1)

(FRT ELEVATION VIEW)

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

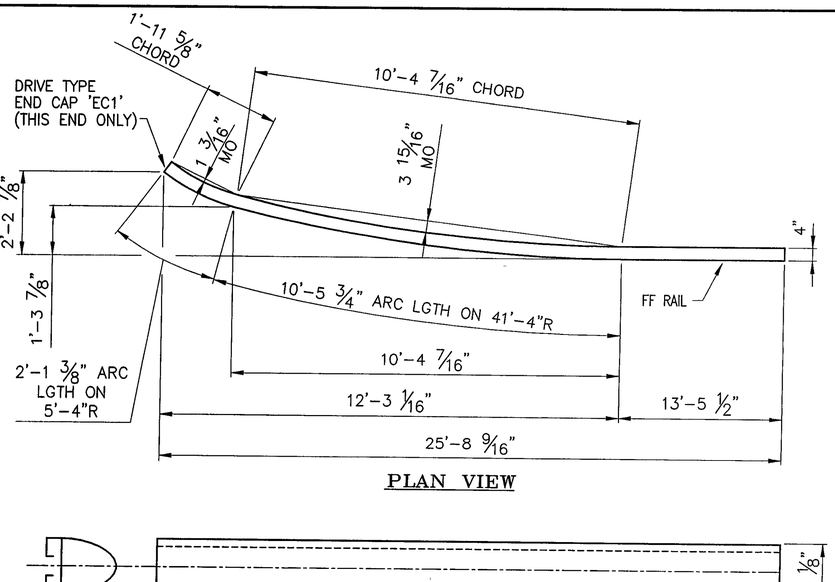


PLAN VIEW

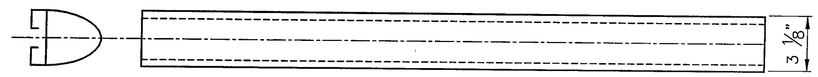
2 REQ'D – BARRIER 'BA7

(BACK ELEVATION VIEW)

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



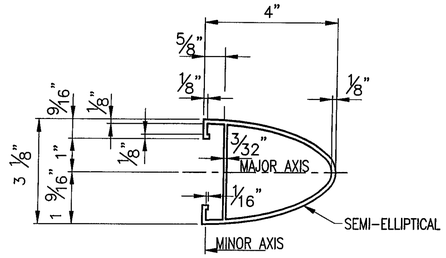
PLAN VIEW



ONE REQ'D – HANDRAIL 'TA7'

(FRT ELEVATION VIEW)

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

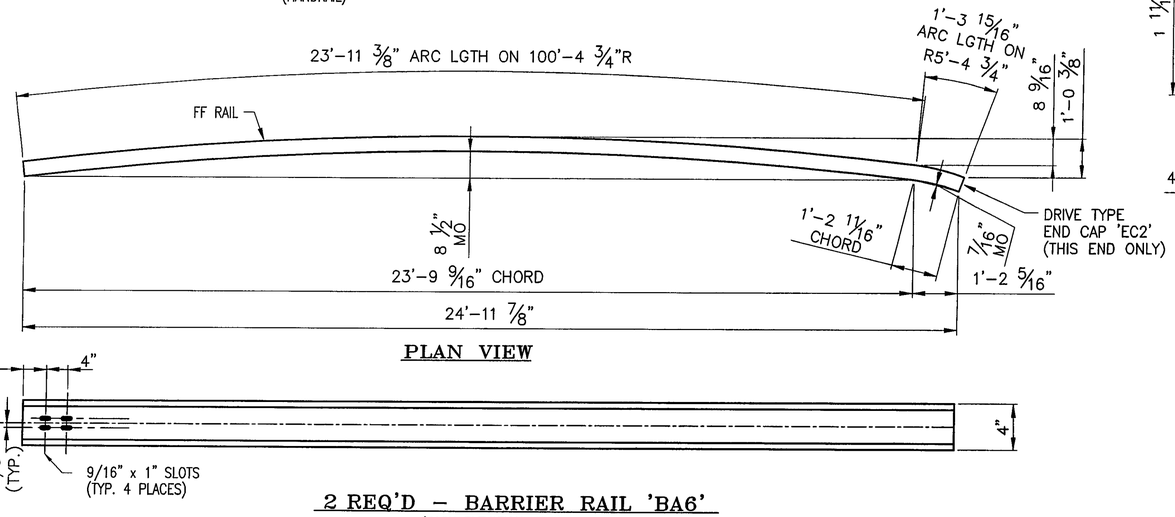


TYPICAL SECTION

(HANDRAIL)

ANODIZED

(SEE NOTES ON LB1)

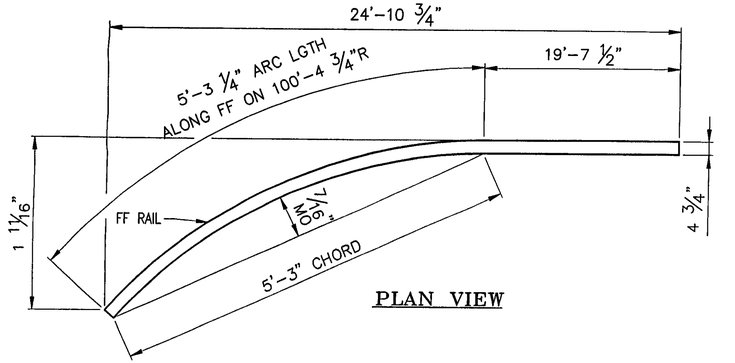


PLAN VIEW

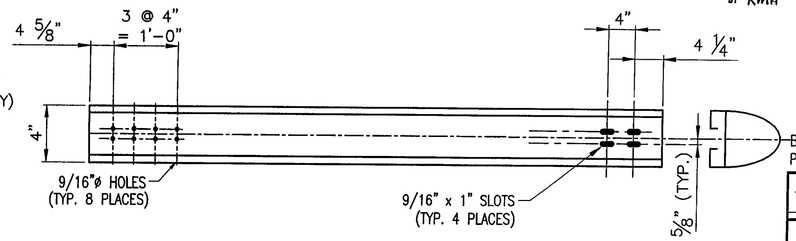
2 REQ'D – BARRIER RAIL 'BA6'

(BACK ELEVATION VIEW)

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



PLAN VIEW

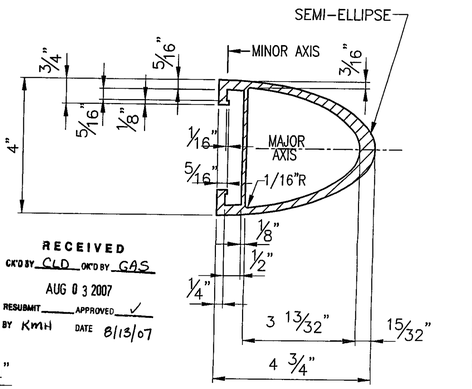


ONE REQ'D – BARRIER RAIL 'MR2'

(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
GK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KMH DATE 8/13/07

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

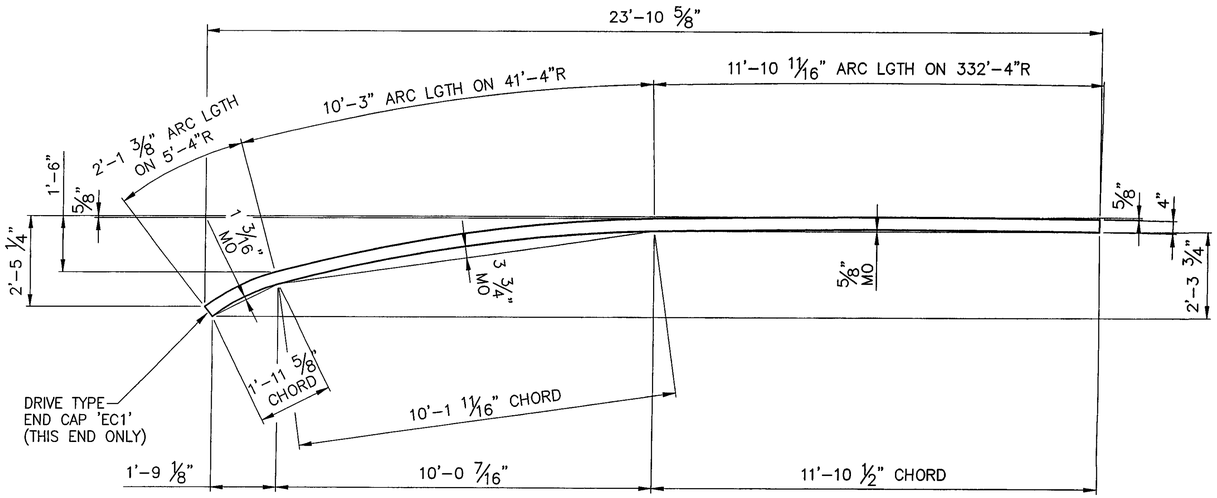
APPROVED: ____ REC'D APPROVAL ____ DRAWING ____

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

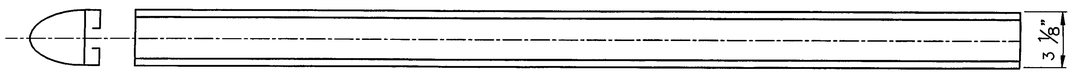
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

MADE CMS DATE 05/24/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB13 REV. No. ONE

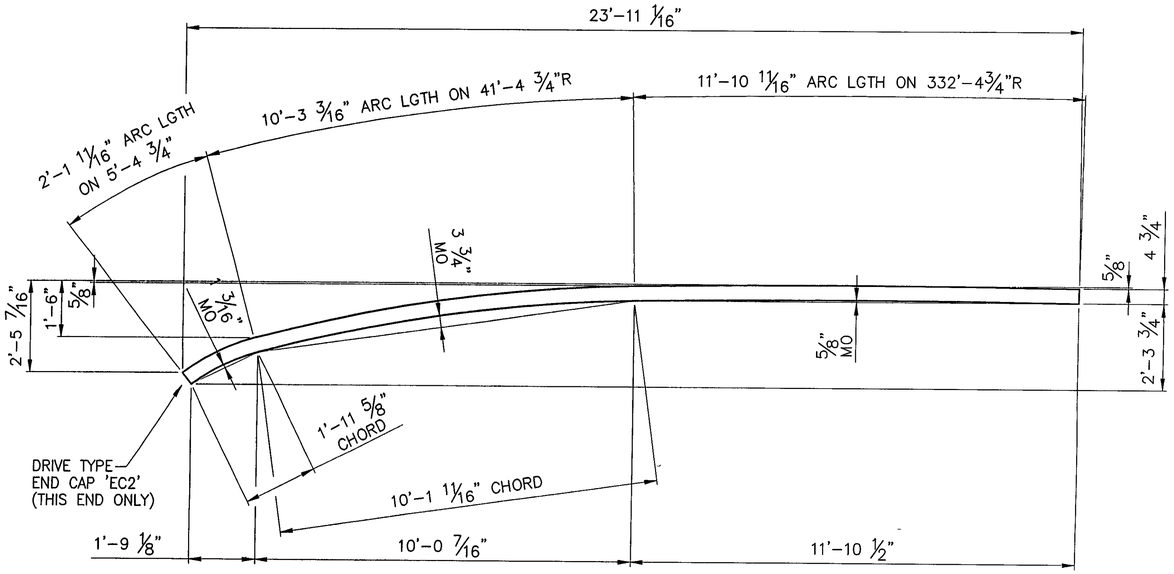
REV	DESCRIPTION	BY	DATE
1	REVISED PER RAMP NE ELEV CHANGES	CMS	08 01 07

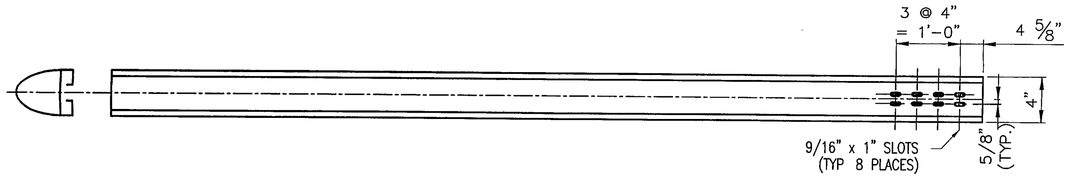


PLAN VIEW

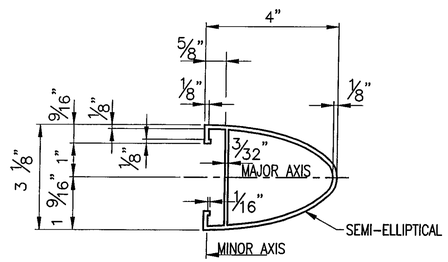


ONE REQ'D – HANDRAIL 'TA10'
(BACK ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 24'-3 3/16" + 5'-0" FOR BENDING (29'-3 3/16"))

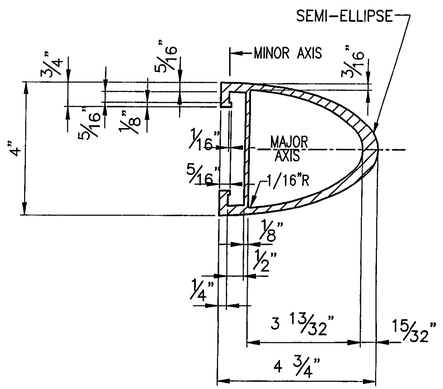




2 REQ'D – BARRIER RAIL 'BA10
(BACK ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 24'-3 9/16" + 5'-0" FOR BENDING (29'-3 9/16"))



TYPICAL SECTION
(HANDRAIL)



TYPICAL SECTION
(BARRIER RAIL)

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
CK'D BY CLD CK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED ✓
BY KMH DATE 8/13/07

REV	DESCRIPTION	BY	DATE

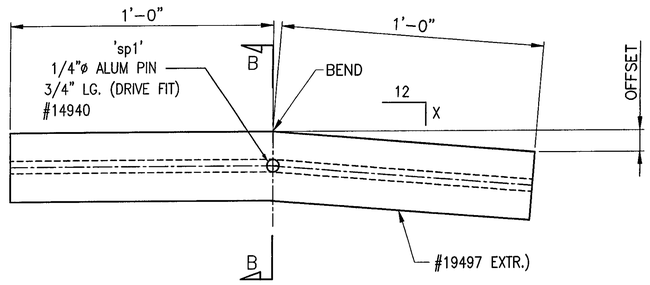
BRIDGE No 37
PROJECT No BRF 030-2(17)S ITEM No. 621 74

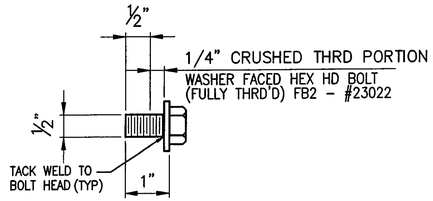
APPROVED: ____ REC'D APPROVAL ____ DRAWING ____

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

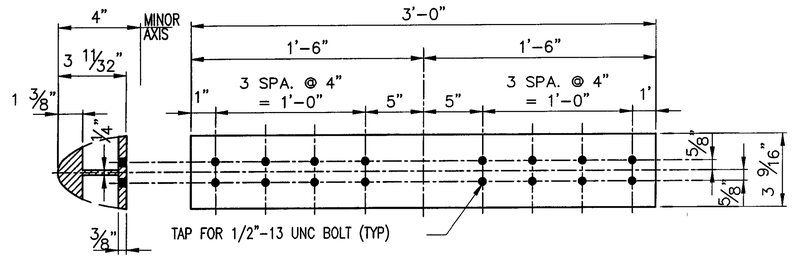
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

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

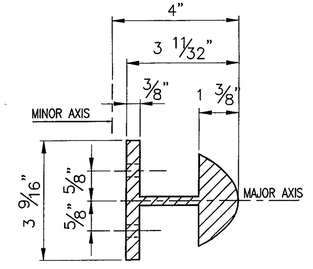




SPLICE BOLT DETAILS

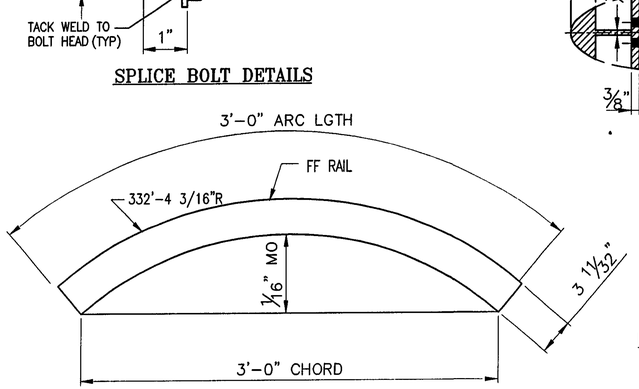


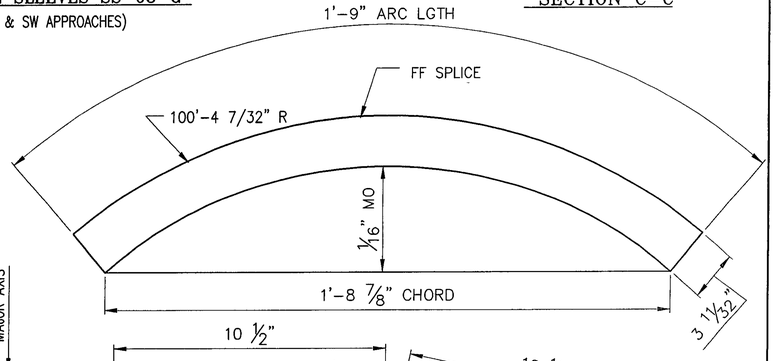
12 ~ REQ'D SPLICE SLEEVES SS-03-G
(BARRIER RAIL)(NW & SW APPROACHES)

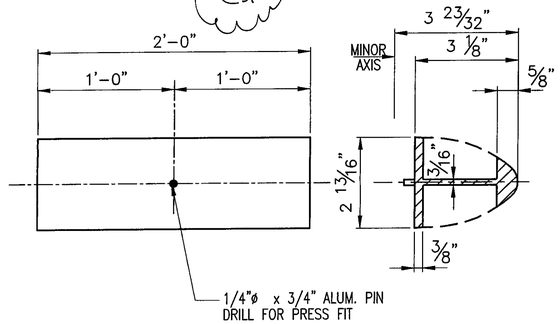


SECTION C-C

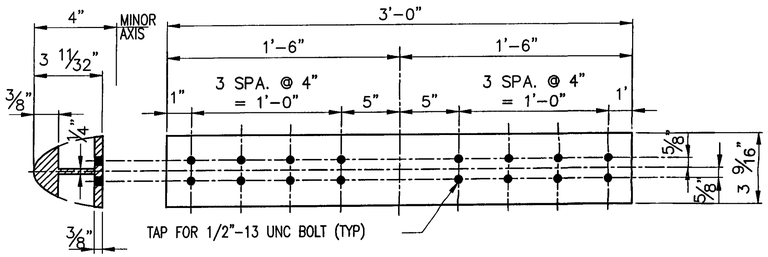
HANDRAIL SPLICES				
MK.	X	QTY.	OFFSET	LOCATION
SS-12-A1	1	1	5/8"	SE APPROACH
SS-12-A2	1	1	1"	NE APPROACH



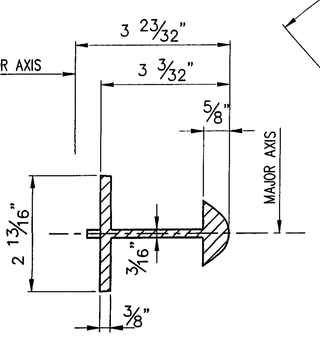




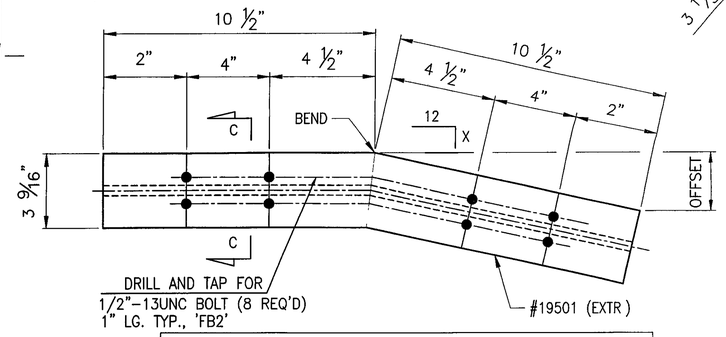
7 ~ REQ'D SPLICE SLEEVES SS-12-A
(HANDRAIL)(NW & SW APPROACHES)



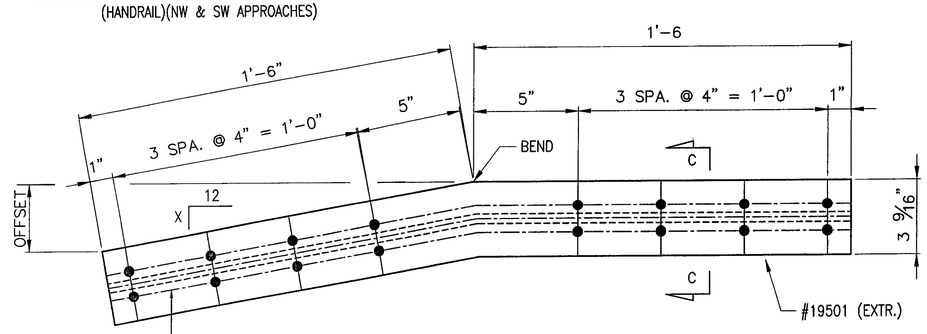
2 ~ REQ'D BENT SPLICE SLEEVES SS-03-G8
(BARRIER RAIL)(SW APPROACH)



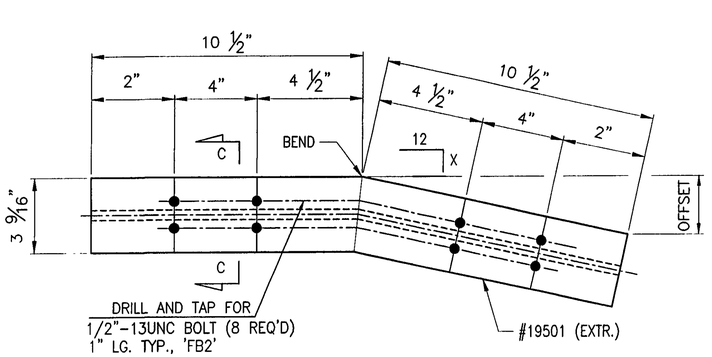
SECTION B-B



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
1 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" 1	NE APPROACH



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

SPLICE WILL BE ROTATED 180° IN FIELD

RECEIVED
CK'D BY CLD OK'D BY GAS
AUG 0 3 2007
RESUBMIT ____ APPROVED AS NOTED
BY KMH DATE 8/13/07

ANODIZED
(SEE NOTES ON LB1)

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

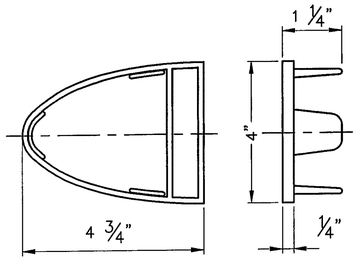
BRIDGE No 37
PROJECT No BRF 030-2(17)S
ITEM No 621.74

APPROVED: _____ REC'D APPROVAL ____ DRAWING ____

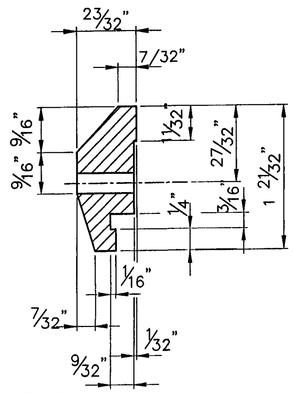
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

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

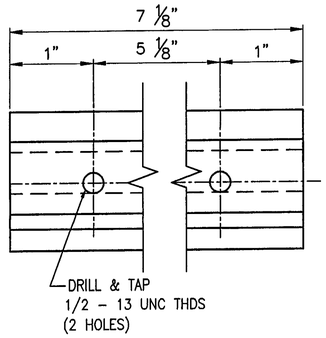
MADE CMS DATE 05/29/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB15 REV. No. ONE

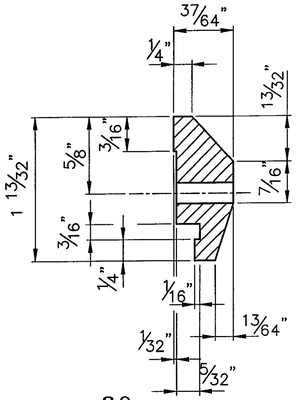


8 ~ REQ'D. ALUM
END CAPS EC2
#19345

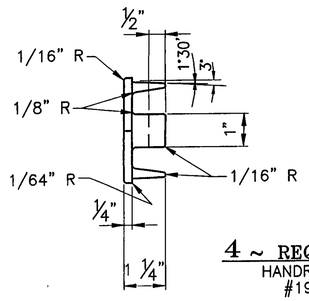


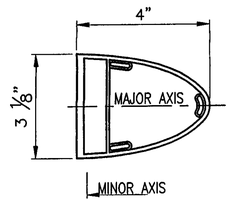
216 ~ REQ'D CLAMP
BAR CB-03-A
(BARRIER RAIL - 4 PER POST)
(#19447)





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 0 [illegible]
RESUBMIT ____ Apr
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 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.