STATE OF VERMONT
AGENCY OF TRANSPORTATION

INDEX OF SHEETS

1. MASTER TITLE SHEET
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BEGINNING AT A POINT APPROXIMATELY 1142.90 METERS WEST OF THE ENOSBURG-BERKSHIRE TOWN LINE AND EXTENDING EASTERLY 397.47 METERS

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REPLACEMENT OF BRIDGE # 26 OVER THE TROUT RIVER AND NECESSARY ROADWAY APPROACHES INCLUDING A NEW INTERSECTION FOR ACCESS TO T.H. #42

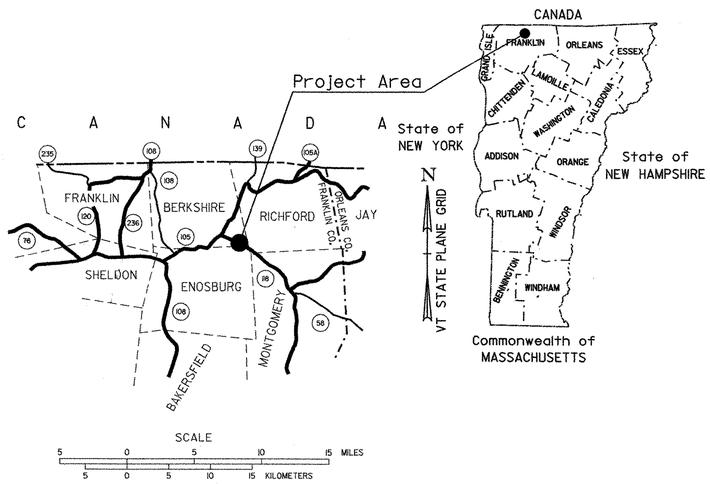
LENGTH OF STRUCTURE 45.40 METERS
LENGTH OF ROADWAY 352.07 METERS
LENGTH OF PROJECT 397.47 METERS

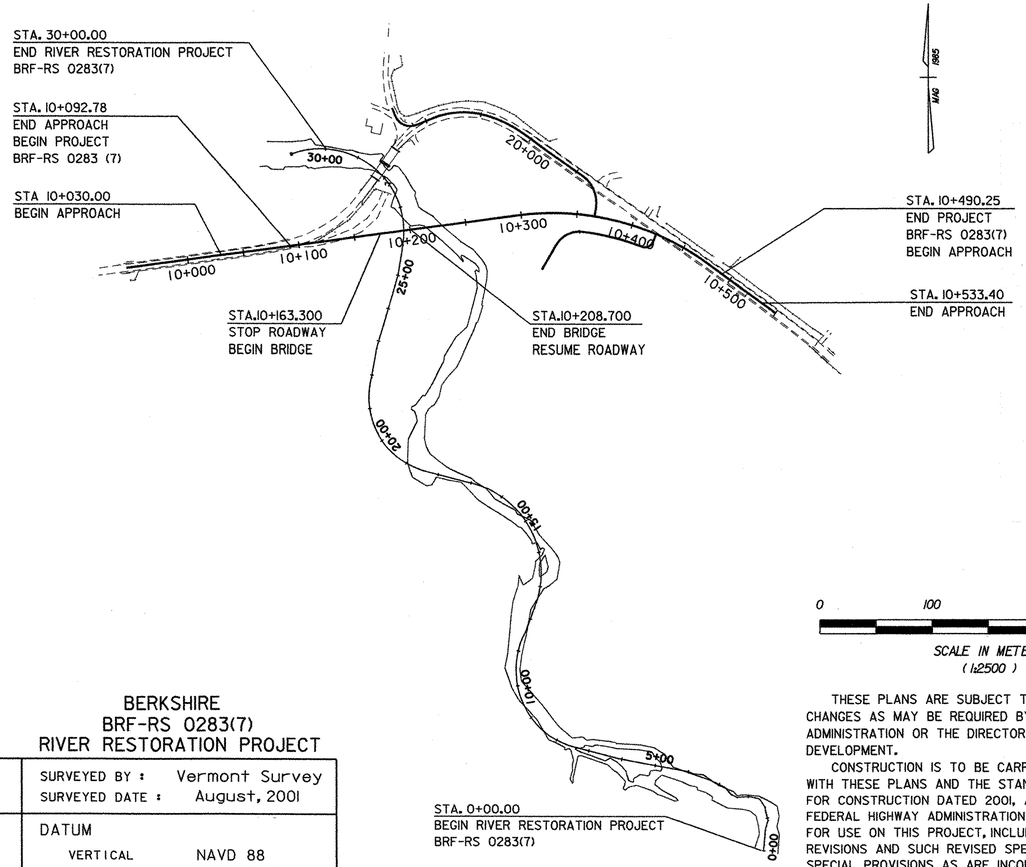
BEGINNING AT A POINT APPROXIMATELY 350 FEET DOWNSTREAM OF EXISTING BRIDGE #26 AND EXTENDING UPSTREAM 3190 FEET.

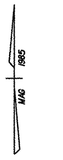
WORK TO BE PERFORMED UNDER THE RIVER RESTORATION PORTION OF THIS PROJECT INCLUDES STABILIZATION OF THE TROUT RIVER AND ESTABLISHMENT OF A RIPARIAN BUFFER ZONE.

LENGTH OF RIVER RESTORATION PROJECT 3190 FEET

PROPOSED IMPROVEMENT
TOWN OF BERKSHIRE
COUNTY OF FRANKLIN
VERMONT ROUTE 118 (F.A.S.)







TRAFFIC DATA	
1997 ADT = 1760	2017 ADT = 2390
DHV = 245	DHV = 335
ADTT = 130	ADTT = 150
% T = 5	% T = 5
% D = 56	
V = 80 km/h	
1997-2017(20YR) 18 K ESAL = 1,759,000	
FUNCTIONAL CLASSIFICATION : MAJOR COLLECTOR	

RECORD PLANS

CONTRACTOR: A.L.ST.ONGE CONTRACTOR,INC. – MONTGOMERY, VT

RESIDENT ENGINEER: RAY HAYES

CONSTRUCTION BEGAN: MAY 3, 2004

CONSTRUCTION COMPLETE: NOVEMBER 2, 2005

RECORD PLANS BY: RAY HAYES & N. GARBACIK

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

BY Raymond W. Hayes RESIDENT ENGINEER

DATE 03-08-07

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

CONVENTIONAL SYMBOLS

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

BERKSHIRE BRF-RS 0283(7) BRIDGE PROJECT		BERKSHIRE BRF-RS 0283(7) RIVER RESTORATION PROJECT	
SURVEYED BY :	R. Hayes	SURVEYED BY :	Vermont Survey
SURVEYED DATE :	1985	SURVEYED DATE :	August, 2001
DATUM		DATUM	
VERTICAL	NGVD 1929	VERTICAL	NAVD 88
HORIZONTAL	N/A	HORIZONTAL	NAD83 (1992)

0 100 200 300
SCALE IN METERS
(1:2500)

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.

VAOT Metric

UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED [signature] DATE 9/18/03

PROJECT MANAGER :

PROJECT NAME : BERKSHIRE
PROJECT NUMBER : BRF-RS 0283(7)

SHEET 1 OF 140 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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11. MISCELLANEOUS DETAILS
12. DRAINAGE DETAIL SHEET
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STANDARDS

B-5M	SLOPE GRADING, EMBANKMENTS, MUCK	01/03/2000
B-11M	UNDERDRAIN - ROCK SUBGRADE, SLOPE STABILIZ.	06/13/1997
B-71M	RESIDENTIAL AND COMMERCIAL DRIVES	03/01/2001
C-1M	TREATED TIMBER CURB	01/03/2000
D-1M	PRECAST RCP DROP INLET	06/13/1997
D-2M	C.R.M. HEADWALLS & RETAINING WALLS	06/13/1997
D-4M	END SECTION, ELBOWS	06/13/1997
D-16M	PRECAST CURB DI, GRATE, RCP END SECTION, ETC. CAST IRON GRATE,TYPE B CAST IRON GRATE,TYPE C REINFORCED CONCRETE PIPE END SECTION	06/13/1997
E-100M	CONSTRUCTION APPROACH SIGNS	06/13/1997
E-101M	CONSTRUCTION SIGN DETAILS	06/13/1997
E-102M	CONSTRUCTION SIGN DETAILS	06/13/1997
E-102AM	CONSTRUCTION SIGN DETAILS	06/13/1997
E-106M	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	06/13/1997
E-107M	DELINEATION, BARRICADES AND DETOURS FOR U-TURNS ON DIVIDED HIGHWAY	06/13/1997
E-107AM	BREAKAWAY BARRICADE DETAILS	06/13/1997
E-108M	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	06/13/1997
E-109M	TRAFFIC CONTROL DEVICES FOR TEMPORARY TERMINATION OF FREEWAY FACILITIES	06/13/1997
E-110M	MAJOR MAINTENANCE OPERATION LANE CLOSURE	06/13/1997
E-121M	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	06/13/1997
E-134M	BRIDGE NUMBER PLAQUE	06/13/1997
E-138M	MILEMARKER DETAILS - STATE & TOWN HIGHWAYS	06/13/1997
E-141M	REGULATORY SIGN DETAILS	06/13/1997
E-142M	REGULATORY SIGN DETAILS	06/13/1997
E-143M	REGULATORY SIGN DETAILS	06/13/1997
E-150M	WARNING SIGN DETAILS	06/13/1997
E-151M	WARNING SIGN DETAILS	06/13/1997
E-152M	WARNING SIGN DETAILS	06/13/1997
E-155M	WARNING SIGN DETAILS	06/13/1997
E-160M	FLANGED CHANNEL STEEL SIGN POST	06/13/1997
E-164M	SQUARE STEEL SIGN POST	06/13/1997
E-191M	PAVEMENT MARKING DETAILS	02/01/1999
E-193M	PAVEMENT MARKING DETAILS	06/13/1997
G-1M	STEEL BEAM GUARDRAIL (50MPH & OVER)	01/03/2000
G-1DM	ANCHOR FOR STEEL BEAM RAIL	01/03/2000
G-4M	PLANK GUARD RAIL STEEL MARKER POSTS	06/13/1997
G-5M	CEDAR LOG GUARD RAIL	06/13/1997
G-19M	GENERIC PLANS FOR GUARDRAIL END TERMINALS	11/15/2002
J-1M	PROJECT AND BOUNDARY MARKERS	06/13/1997
L-1M	SETTLEMENT PLATFORM	06/13/1997
L-2M	GEOTECHNICAL INSTRUMENTATION	06/13/1997

PROJECT NAME:	**BERKSHIRE**
PROJECT NUMBER:	**BRF-RS 0283(7)**
FILE NAME: **sf184ind.xls**	PLOT DATE: **10/06/2003**
PROJECT LEADER: **C. Keller**	DRAWN BY: **G. Shangraw**
DESIGNED BY: **McFarland-Johnson**	CHECKED BY:
INDEX OF SHEETS #1	SHEET **2** OF **140**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

Metric

SUMMARY OF ESTIMATED QUANTITIES

River Restoration	FULL E & C	EMPLOYEE TRAINING	LANDSCAPING	TEMPORARY EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
						1	1	L.S.	CLEARING AND GRUBBING (INCL. INDIV. TREES & STUMPS)	201.10	—
1							1	L.S.	CLEARING AND GRUBBING (MOD.)(RIVER RESTORATION WORK)	201.10	
						9900	9900	m^3	COMMON EXCAVATION	203.15	9.8
1							1	m^3	SOLID ROCK EXCAVATION (N.A.B.I.)	203.16	—
						2750	2750	m^3	UNCLASSIFIED CHANNEL EXCAVATION	203.27	8.3
						920	920	m^3	EXCAVATION OF SURFACES AND PAVEMENTS	203.28	7.0
						17000	17000	m^3	EARTH BORROW	203.30	18.0
						3000	3000	m^3	SAND BORROW	203.31	22.2
						3680	3680	m^3	GRANULAR BORROW	203.32	8.9
						8400	8400	m^2	FINE GRADING - SUBGRADE	203.40	32.5
						240	240	m^3	TRENCH EXCAVATION OF EARTH	204.20	9.60
						2	2	m^3	TRENCH EXCAVATION OF ROCK	204.21	—
					860	18	878	m^3	GRANULAR BACKFILL FOR STRUCTURES	204.30	3.3
					1135		1135	m^3	COFFERDAM EXCAVATION, EARTH	208.30	—
					100		100	m^3	COFFERDAM EXCAVATION, ROCK	208.35	—
					1		1	LS	COFFERDAM (STA. 10+164±)	208.40	
					1		1	LS	COFFERDAM (STA. 10+208±)	208.40	—
						350	350	m^2	COLD PLANING - BITUMINOUS PAVEMENT	210.10	9.2
						4100	4100	m^3	SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)	301.25	39.0
						90	90	m^3	AGGREGATE SURFACE COURSE	401.10	0.64
					45	465	510	kg	EMULSIFIED ASPHALT	404.65	1.5
						1600	1600	†	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	490.30	30.3
											—
											7.45
					390		390	m^3	CONCRETE, CLASS C	501.30	7.0
					130		130	m^3	CONCRETE, HIGH PERFORMANCE CLASS A	501.33	
					437	3	440	m^3	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
					1		1	L.S.	FURNISHING EQUIPMENT FOR DRIVING PILES	504.10	—
					690		690	m	STEEL PILING (HP 360 X 108)	505.17	—
						2650	2650	m^2	PERMANENT SHEET PILING (GRADE 50)	505.35	22
					87,400		87,400	Kg	STRUCTURAL STEEL (PLATE GIRDER)	506.55	—
					26,800	100	26,900	Kg	REINFORCING STEEL	507.15	67
					18,800		18,800	Kg	EPOXY COATED REINFORCING STEEL	507.17	72
					1		1	L.S.	SHEAR CONNECTORS (1128) 22mm DIA. X 175 mm LONG	508.15	—
					1		1	L.S.	STRUCTURE PAINTING, SHOP APPLIED	513.25	—

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
257.7	m^3	T.H. #42
926.1	m^3	VT. ROUTE 118
—		DRIVEWAYS
842.3	m^3	ABANDONED ROUTE 118
39.9	m^3	DRAINAGE
2820.0	m^3	WETLAND (UNAVAILABLE FOR FILL)
1898.0	m^3	WETLAND (AVAILABLE FOR FILL)
926.2	m^3	SURCHARGE
2180.0	m^3	UNDERCUT
9.8		ROUNDING
9900	m^3	TOTAL
		UNCLASSIFIED CHANNEL EXCAVATION
1168.7	m^3	VT. ROUTE 118 (UNAVAILABLE FOR FILL)
1573.0	m^3	VT. ROUTE 118 (AVAILABLE FOR FILL)
8.3		ROUNDING
2750	m^3	TOTAL
		SAND BORROW
429.4	m^3	T.H. #42
2548.4	m^3	VT. ROUTE 118
22.2		ROUNDING
3000	m^3	TOTAL
		FINE GRADING - SUBGRADE
1410.0	m^2	T.H. #42
6147.6	m^2	VT. ROUTE 118
809.9	m^2	DRIVEWAYS
32.5		ROUNDING
8400	m^2	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		TRENCH EXCAVATION OF EARTH
230.40	m^3	DRAINAGE
—		UNDERDRAINS
—		TEMPORARY EROSION CONTROL
9.60		ROUNDING
240	m^3	TOTAL
		SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)
445.51	m^3	T.H. #42
3294.89	m^3	VT. ROUTE 118
320.59	m^3	DRIVEWAYS
39.01		ROUNDING
4100	m^3	TOTAL
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34)
236.31	†	T.H. #42
1235.93	†	VT. ROUTE 118
10.51	†	DRIVEWAYS
87.00	†	BRIDGE
30.25		ROUNDING
1600	†	TOTAL
		STONE FILL TYPE II
915.0	m^3	EMBANKMENT STABILIZATION DETAIL I
15.18	m^3	DRAINAGE STRUCTURE
5.11		ROUNDING
935	m^3	TOTAL

NOTE: WHERE THE TERMINOLOGY "CONCRETE, CLASS A & B (HPC-A &B)" IS FOUND IN THESE PROJECT PLANS, ITS IS INTENDED THAT THESE TWO CLASSES OF CONCRETE MEAN "CONCRETE, HIGH PERFORMANCE CLASS A", & "CONCRETE, HIGH PERFORMANCE CLASS B"

PROJECT NAME : BERKSHIRE

PROJECT NO. : BRF-RS 0283(7)

DESIGN FILE NAME: 02837FRM.DGN
IPARM FILE NAME: QS01.I
SURVEYED BY:
SQUAD LEADER:

PLOT DATE: 18-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 3 OF 140

78f184/zf184qs1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

Metric

SUMMARY OF ESTIMATED QUANTITIES

	FULL E & C	EMPLOYEE TRAINING	LANDSCAPING	TEMPORARY EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
					1		1	L.S.	SURFACE PREPARATION, SHOP	513.40	—
					60		60	1	WATER REPELLENT	514.10	7.0
					10.5		10.5	m	BRIDGE EXPANSION JOINT	516.10	—
					535		535	m^2	SHEET MEMBRANE WATER PROOFING (TORCH APPLIED)	519.20	5.0
					105		105	m	BRIDGE RAILING - NETC 2 RAIL	525.33	3.0
					1		1	L.S.	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECT	527.10	—
					230		230	m^2	REMOVAL OF BRIDGE PAVEMENT	529.10	10.0
					1		1	EA	PARTIAL REMOVAL OF STRUCTURE (MOD)	529.20	—
					10		10	EA	BEARING DEVICE ASSEMBLY	531.10	—
									•••••••• BEGIN OPTION PIPES ••••••••		
						19	19	m	300 mm CSP 1.63mm (68mm x 12mm)	601.0005	0.7
						19	19	m	300 mm CAAP 1.52mm (68 mm x 12mm)	601.0205	0.7
						19	19	m	300 mm CPEP	601.0905	0.7
						12	12	m	300 mm CSP 1.63mm (68mm x 12mm)	601.0005	0.6
						12	12	m	300 mm CAAP 1.63mm (68 mm x 12mm)	601.0205	0.6
						50	50	m	450 mm CAAP 1.52mm (68 mm x 12mm)	601.0215	1.8
						50	50	m	450 mm PCCSP 1.63mm (68 mm x 12mm)	601.0415	1.8
						50	50	m	450 mm CPEP	601.0915	1.8
						75	75	m	750 mm CAAP 1.91 mm (68 mm x 12mm)	601.0236	1.5
						75	75	m	750 mm PCCSP 2.01 mm (68mm x 12mm)	601.0436	1.5
						75	75	m	750 mm CPEP	601.0925	1.5
					8		8	EA	300 mm CSP ELBOW 1.63mm (68mm x 12mm)	601.5005	—
					8		8	EA	300 mm CAAP ELBOW 1.52 mm (68mm x 12mm)	601.5205	—
					5		5	EA	450 mm CSPES 1.63 mm (68mm x 12mm)	601.6015	—
					5		5	EA	450 mm CAAPES 1.52 mm (68mm x 12mm)	601.6215	—
					5		5	EA	450 mm CPEPES	601.7015	—
					3		3	EA	750 mm CSPES 2.01 mm (68mm x 12mm)	601.6036	—
					3		3	EA	750 mm CAAPES 1.91 mm (68mm x 12mm)	601.6236	—
					3		3	EA	750 mm CPEPES	601.7025	—
									•••••••• END OPTION PIPES ••••••••		
						45	45	m	CLEANING EXISTING CULVERT PIPE (GREATER THAN 600mm DIA.)	601.996	0.9
						5	5	m^3	CEMENT RUBBLE MASONRY	602.15	1.86
						7	7	EA	PRECAST REINFORCED CONC. CURB DROP INLET W/CI GRATE	604.30	—
						1	1	EA	CAST IRON GRATE WITH FRAME, TYPE B	604.46	—
						5	5	HR	BULLDOZER RENTAL, TYPE 1 (NABI)	608.10	EST
						5	5	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE 1 (NABI)	608.25	EST
						5	5	HR	TRUCK RENTAL (NABI)	608.37	EST
						5	5	HR	LOADER RENTAL, TYPE 1 (NABI)	608.40	EST
						450	450	m^3	DUST CONTROL WITH WATER	609.10	EST

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME : BERKSHIRE

PROJECT NO. : BRF-RS 0283(7)

DESIGN FILE NAME: 02837FRM.DGN
IPARM FILE NAME: QS02.I
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SQUAD LEADER:

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DRAWN BY: C. MABY
SHEET: 4 OF 140

78f184/zf184qsz

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

Metric

SUMMARY OF ESTIMATED QUANTITIES

FULL E & C	EMPLOYEE TRAINING	LANDSCAPING	TEMPORARY EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
					1	1	t	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	EST
			10			10	m^3	STONE FILL TYPE I (MOD 1)	613.10	
			10			10	m^3	STONE FILL TYPE I (MOD 2)	613.10	
					935	935	m^3	STONE FILL TYPE II	613.11	0.4
				763	1747	2510	m^3	STONE FILL TYPE IV	613.13	8.8
					365	365	m	TREATED TIMBER CURB	616.35	4.7
					16	16	EA	BOUNDARY MARKERS	619.10	—
					13	13	EA	YIELDING MARKER POSTS	619.17	—
					4	4	EA	REMOVING & RESETTING PROPERTY MARKERS	619.20	—
					220	220	m	REMOVAL OF EXISTING FENCE	620.55	2
					5	5	m	PLANK RAIL	621.15	0.1
					552	552	m	STEEL BEAM GUARD RAIL	621.20	0.9
					5	5	m	STEEL BEAM GUARD RAIL (MOD)(WITH 2.4m POSTS)	621.20	EST
					6	6	EA	MANUFACTURED TERMINAL SECTION	621.505	—
					4	4	EA	ANCHOR FOR STEEL BEAM RAIL	621.60	—
					4	4	EA	GUARD RAIL APPROACH SECTION, NETC 2 RAIL	621.72	—
					43	43	m	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	—
				2		2	EA	SETTLEMENT PLATFORM, TYPE I	623.21	—
				3		3	EA	SETTLEMENT PLATFORM, VIBRATING WIRE	623.23	—
				3		3	EA	PIEZOMETER, VIBRATING WIRE	623.40	—
					125	125	HR	UNIFORMED TRAFFIC OFFICERS	630.10	1.0
					600	600	HR	FLAGGERS	630.15	—
	1					1	L.S.	FIELD OFFICE - ENGINEERS	631.10	—
	1					1	L.S.	TESTING EQUIPMENT - CONCRETE	631.16	—
	1					1	L.S.	TESTING EQUIPMENT - BITUMINOUS	631.17	—
	1					1	L.S.	TESTING EQUIPMENT - PROTECTIVE COATING	631.18	—
	1					1	LU	FIELD OFFICE TELEPHONE (NABI)	631.25	—
		1040				1040	HR	EMPLOYEE TRAINEESHIP	634.10	EST
					1	1	L.S.	MOBILIZATION	635.10	—
					310	310	m	100 mm WHITE LINE	646.20	10
					310	310	m	100 mm YELLOW LINE	646.21	10

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME : BERKSHIRE

PROJECT NO. : BRF-RS 0283(7)

DESIGN FILE NAME: 02837FRM.DGN
IPARM FILE NAME: QS03.I
SURVEYED BY:
SQUAD LEADER:

PLOT DATE: 18-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 5 OF 140

78f184/zf184qs3

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

Metric

SUMMARY OF ESTIMATED QUANTITIES

FULL E & C	EMPLOYEE TRAINING	LANDSCAPING	TEMPORARY EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
					1050	1050	m	DURABLE 100 mm WHITE LINE	646.40	2
					1040	1040	m	DURABLE 100 mm YELLOW LINE	646.41	10
					15	15	m	DURABLE 600 mm STOP BAR	646.46	1
					13	13	EA	DURABLE LETTER OR SYMBOL	646.50	—
					300	300	m	TEMPORARY 100 mm WHITE LINE	646.60	EST
					300	300	m	TEMPORARY 100 mm YELLOW LINE	646.61	EST
					15	15	m	TEMPORARY 600 mm STOP BAR	646.66	1
					13	13	EA	TEMPORARY LETTER OR SYMBOL	646.70	—
					60	60	EA	LINE STRIPING TARGETS	646.76	—
					10	10	m^2	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85	1.6
					525	525	m^2	GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR	649.11	3
				35	5165	5200	m^2	GEOTEXTILE UNDER STONE FILL	649.31	6
			1860			1860	m^2	GEOTEXTILE FABRIC FOR SILT FENCE	649.51	4
			75			75	kg	SEED	651.15	4
			1			1	kg	SEED (MODIFIED) (NORTHEAST WETLAND DIVERSITY MIX)	651.15	EST
			5			5	kg	SEED, WINTER RYE	651.17	EST
			575			575	kg	FERTILIZER	651.18	7
			5			5	t	AGRICULTURAL LIMESTONE	651.20	0.4
			5			5	t	HAY MULCH	651.25	0.4
			250			250	EA	HAY BALES FOR EROSION CONTROL	651.26	EST
					410	410	M^3	TOPSOIL	651.35	2
					2000	2000	M^2	GRUBBING MATERIAL	651.40	23
			1			1	LS	EROSION & SEDIMENT CONTROL PLAN	652.10	
			250			250	HR	MONITORING EROSION & SEDIMENT CONTROL PLAN	652.20	
			1			1	LU	FIELD MAINT. OF EROSION & SEDIMENT CONTROL PLAN (NABI)	652.30	
								•••••••• DECIDUOUS SHRUBS ••••••••		
		40				40	EA	CORNUS SERICEA (RED-OSIER DOGWOOD) (60-90 CM CONT.)	656.35	—
		20				20	EA	ILEX VERTICULATA (WINTERBERRY) (60-90 CM CONT.)	656.35	—
		20				20	EA	SALIX PURPUREA (STREAMCO WILLOW) (60 CM ROOTED CUTTINGS)	656.35	—
					5	5	m^2	TRAFFIC SIGNS, TYPE A	675.20	0.14
								—— BEGIN OPTION POSTS ——		
					80	80	m	FLANGED CHANNEL SIGN POSTS	675.301	6.2
					80	80	M	SQUARE TUBE STEEL POSTS AND ANCHORS	675.341	
								—— END OPTION POSTS ——		
					20	20	EA	REMOVING SIGNS	675.50	—

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME : BERKSHIRE	PROJECT NO. : BRF-RS 0283(7)
DESIGN FILE NAME: 02837FRM.DGN	
IPARM FILE NAME: QS04.1	PLOT DATE: 18-FEB-2000
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER:	DRAWN BY: C. MABY
	SHEET: 6 OF 140

78f184/zf184QS4

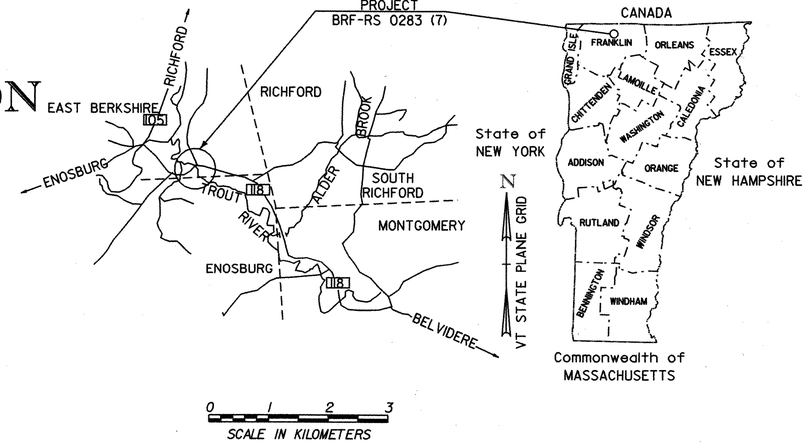
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5	MISCELLANEOUS DETAILS
6-9	QUANTITY SHEETS
10	DRAINAGE DETAIL SHEET
11	ITEM DETAIL SHEET
12	EARTHWORKS SHEET
13-16	ROW DETAIL AND PLAN SHEETS
17-18	PLAN SHEETS
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STATE OF VERMONT
AGENCY OF TRANSPORTATION



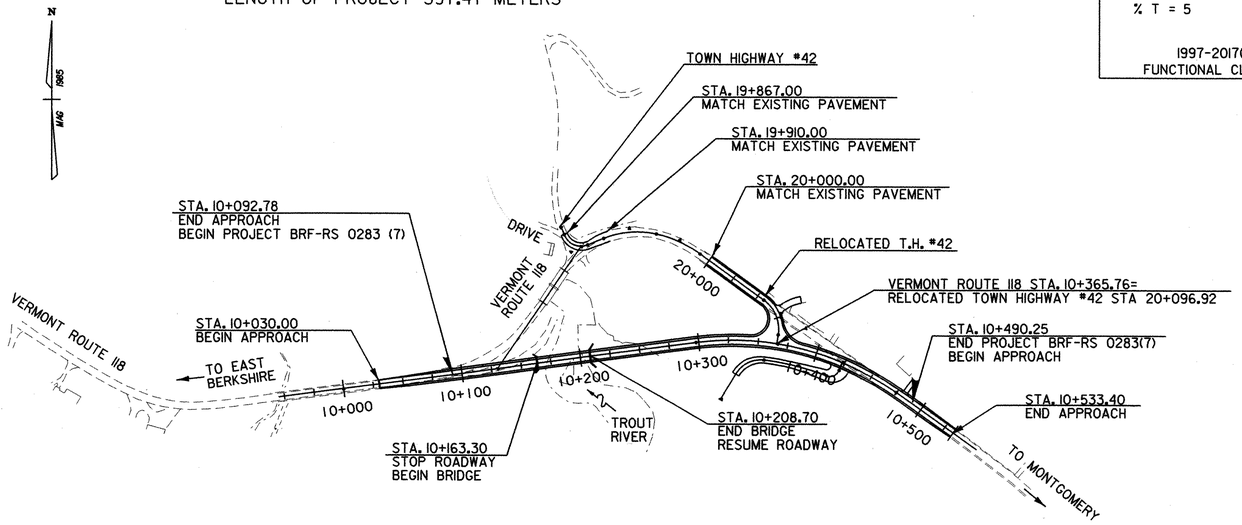
PROPOSED IMPROVEMENT
TOWN OF BERKSHIRE
COUNTY OF FRANKLIN
VERMONT ROUTE 118 (F.A.S.)

BEGINNING AT A POINT APPROXIMATELY 1142.90 METERS WEST OF THE ENOSBURG-BERKSHIRE TOWN LINE AND EXTENDING EASTERLY 397.47 METERS

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REPLACEMENT OF BRIDGE # 26 OVER THE TROUT RIVER AND NECESSARY ROADWAY APPROACHES INCLUDING A NEW INTERSECTION FOR ACCESS TO T.H. #42

LENGTH OF STRUCTURE 45.40 METERS
LENGTH OF ROADWAY 352.07 METERS
LENGTH OF PROJECT 397.47 METERS

TRAFFIC DATA	
1997 ADT = 1760	2017 ADT = 2390
DHV = 245	DHV = 335
ADTT = 130	ADTT = 150
% T = 5	% T = 5
% D = 56	
V = 80 km/h	
1997-2017(20YR) 18 K ESAL = 1,759,000	
FUNCTIONAL CLASSIFICATION : MAJOR COLLECTOR	



CONVENTIONAL SIGNS

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

STATE OF VERMONT
CHARLES F. WOOD JR.
#6398
REGISTERED
PROFESSIONAL ENGINEER
Charles F. Wood Jr. 2/22/2000

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

McFARLAND-JOHNSON, INC.
BINGHAMTON N.Y.

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROJECT 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.

VAOT Metric

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD
APPROVED _____ DATE 10/2/00
DIRECTOR OF ENGINEERING

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

PROJECT BRF-RS 0283(7)
BERKSHIRE
SHEET 7 OF 140 SHEETS

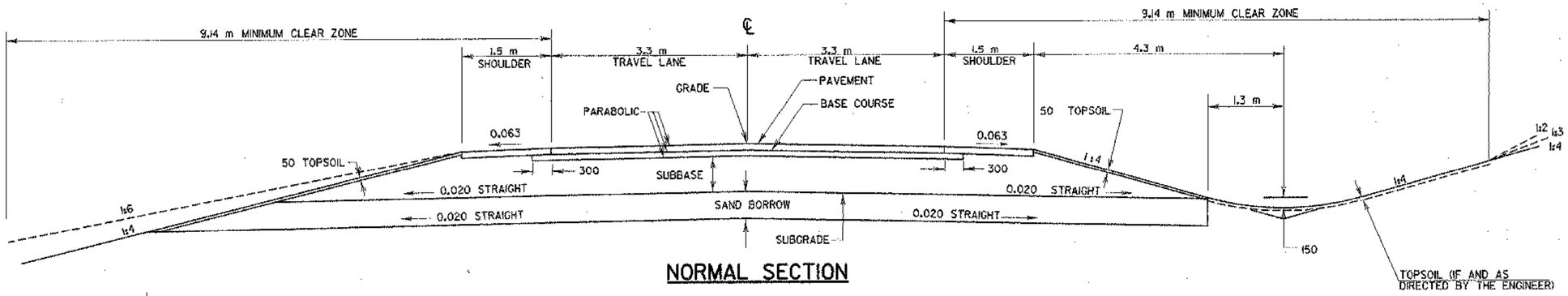
78f184/zf184TiT

TYPICAL SECTIONS
VERMONT ROUTE 118

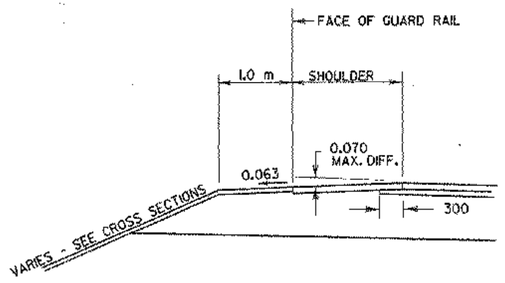
TRAVEL LANES: 115 ~~90~~ SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (40 TYPE II OVER 75 ~~50~~ TYPE II)
100 ~~75~~ BASE COURSE OF BITUMINOUS CONCRETE PAVEMENT (TYPE I, ONE LIFT)
610 SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)
460 SAND BORROW

SHOULDERS: 90 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

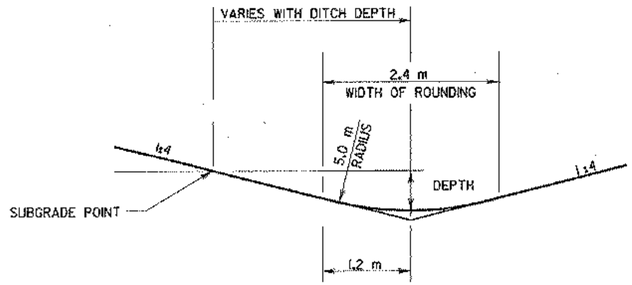
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	+/- 5
SUBBASE	+/- 30
SAND BORROW	+/- 30



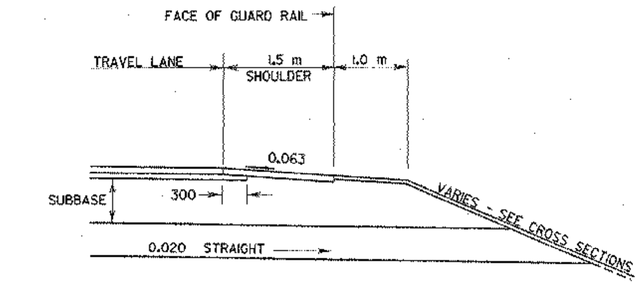
NORMAL SECTION



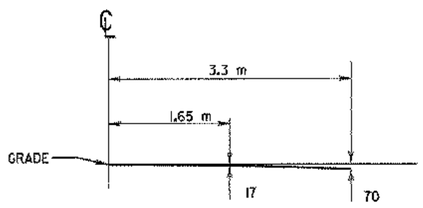
DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION



TYPICAL DITCH DETAIL



NORMAL SECTION WITH GUARD RAIL



PARABOLIC DETAIL

GENERAL NOTES

1. SEED - TO BE APPLIED PER SEEDING FORMULAS AS DIRECTED BY THE ENGINEER.
2. FERTILIZER - FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT THE RATE OF 560 kg/ha. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).
3. AGRICULTURAL LIMESTONE - TO BE APPLIED AT A RATE OF 4500 kg/ha OR AS DIRECTED BY THE ENGINEER.
4. HAY MULCH - TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4500 kg/ha OR AS DIRECTED BY THE ENGINEER.
5. TOPSOIL - TO BE USED WITH SEED, AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
6. MARKER POSTS - TO BE PLACED AS DIRECTED BY THE ENGINEER.
7. SLOPE ROUNDING - ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.
8. PAY LIMITS OF SAND BORROW WHEN USED IN CONJUNCTION WITH UNDERDRAIN - SEE STANDARD SHEET D-2
9. MILEMARKERS DISTURBED BY CONSTRUCTION SHALL BE RESET BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER WITH PAYMENT TO BE SUBSIDIARY TO OTHER ITEMS OF WORK.
10. TACK COAT - EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.07 l/m^2 BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.
11. BITUMINOUS CONCRETE PAVEMENT WILL REQUIRE PERFORMANCE GRADED ASPHALT, 58-34.

SEEDING FORMULA

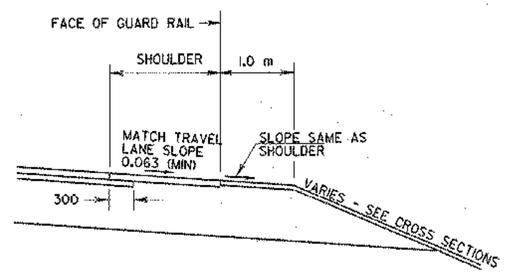
RURAL AREAS

% WT.	kg /ha	NAME	PUR. %	GERM %
37.5	26	CREEPING RED FESCUE	98	85
37.5	26	TALL FESCUE	95	90
5.0	4	RED TOP	95	90
15.0	10	BIRDSFOOT TREFOIL	98	85
5.0	4	ANNUAL RYEGRASS	95	85
100.0	70			

URBAN AREAS (LAWNS)

% WT.	kg /ha	NAME	PUR. %	GERM %
42.5	38	CREEPING RED FESCUE	98	85
10.0	9	PERENNIAL RYEGRASS	95	90
42.5	38	KENTUCKY BLUEGRASS	85	85
5.0	5	ANNUAL RYEGRASS	95	85
100.0	90			

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



DETAIL OF GUARD RAIL ON LOW SIDE OF BANKED SECTION

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

ALL DETAILS "N.T.S." (NOT TO SCALE)
ALL DIMENSIONS IN MILLIMETERS EXCEPT AS INDICATED

TYPICAL SECTIONS

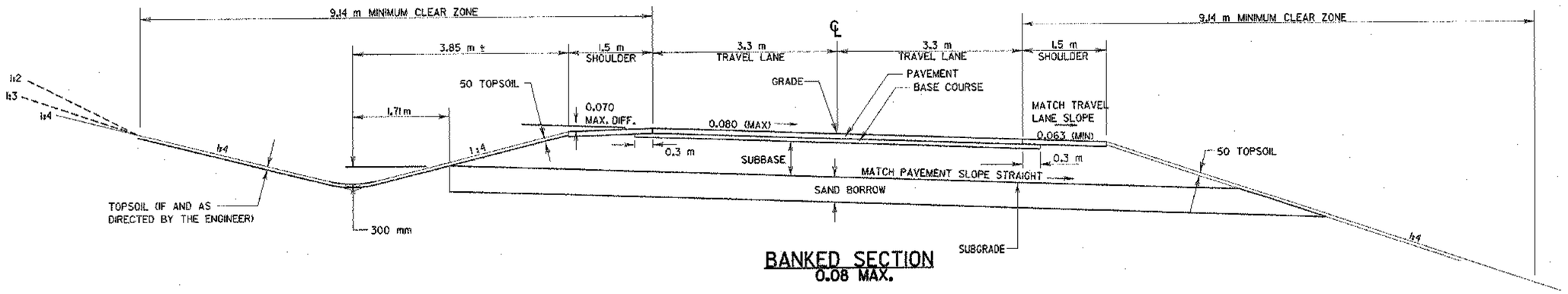
PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837FRM.DGN
IPARM FILE NAME: 02837TYI.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 18-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 8 OF 140

78f184/2f184TY1

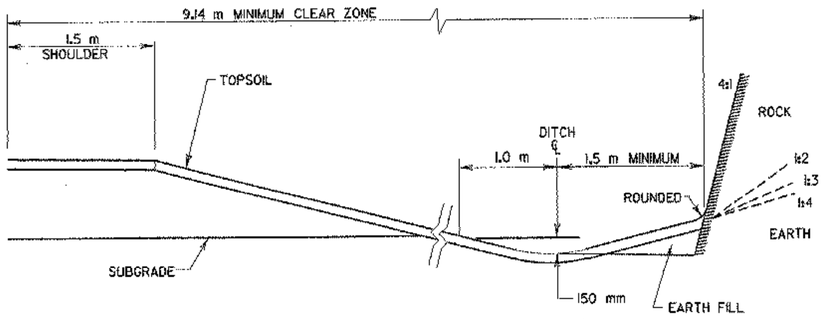
TYPICAL SECTIONS
VERMONT ROUTE 118

TRAVEL LANES: ~~90~~ 115 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (40 TYPE III OVER ~~50~~ 75 TYPE II)
100~~75~~ BASE COURSE OF BITUMINOUS CONCRETE PAVEMENT (TYPE I, ONE LIFT)
610 SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)
460 SAND BORROW

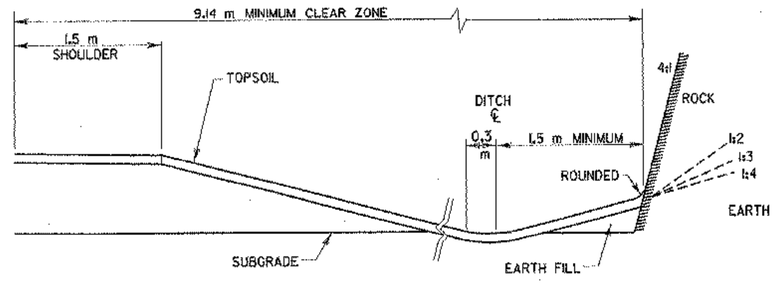
SHOULDERS: 90 SUPEREPAVE BITUMINOUS CONCRETE PAVEMENT



BANKED SECTION
0.08 MAX.



DETAILS OF DITCH AND BACKSLOPE FOR
LOW SIDE OF BANK < 0.042



DETAILS OF DITCH AND BACKSLOPE FOR
LOW SIDE OF BANK ≥ 0.042

ALL DETAILS "N.T.S." (NOT TO SCALE)
ALL DIMENSIONS IN MILLIMETERS EXCEPT AS INDICATED

TYPICAL SECTIONS	PROJECT: BERKSHIRE	PROJECT NO.: BRF-RS 0283(7)
	DESIGN FILE NAME: 02837FRM.DGN IPARM FILE NAME: 02837TY2.I SURVEYED BY: SQUAD LEADER:	PLOT DATE: 18-FEB-2000 SURVEY DATE: DRAWN BY: C. MABY SHEET: 9 OF 140

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

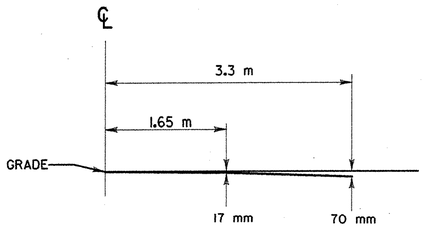
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TYPICAL SECTIONS
RELOCATED T.H. #42

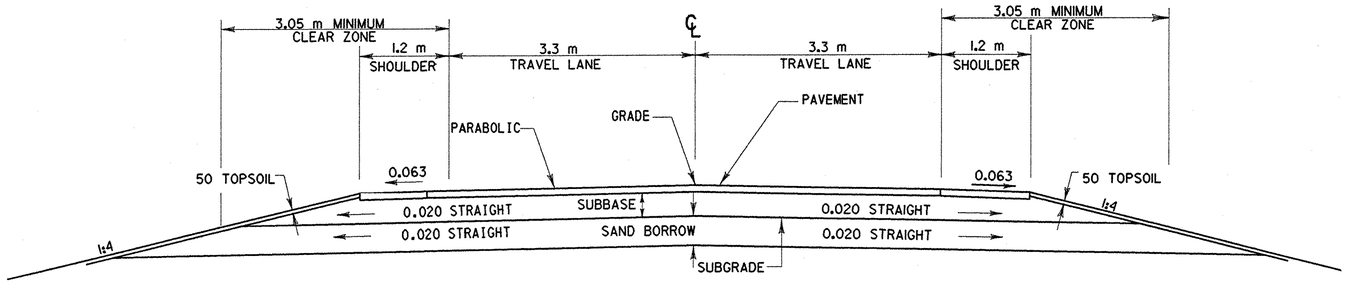
TRAVEL LANES: 90 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (40 TYPE III, OVER 50 TYPE II)
305 SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)
0-305 SAND BORROW (AS DIRECTED BY THE ENGINEER)

SHOULDERS: 90 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

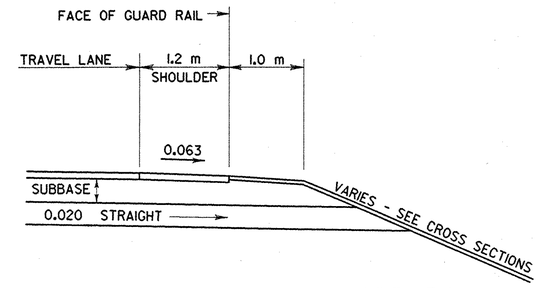
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT	± 5 mm
SUBBASE	± 30 mm
SAND BORROW	± 30 mm



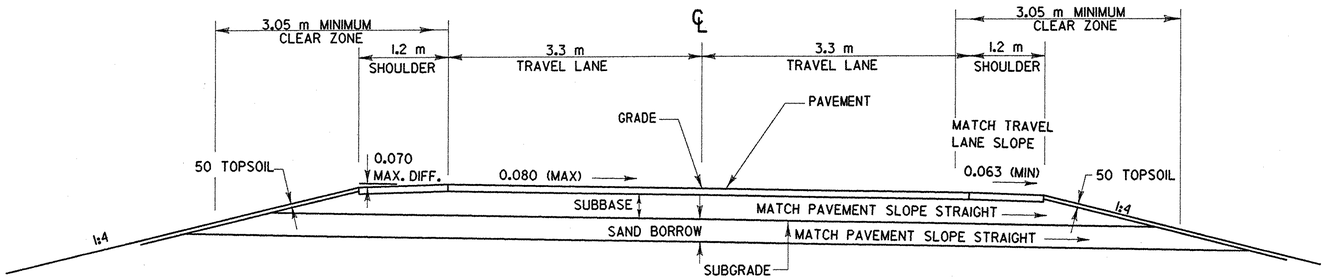
PARABOLIC DETAIL



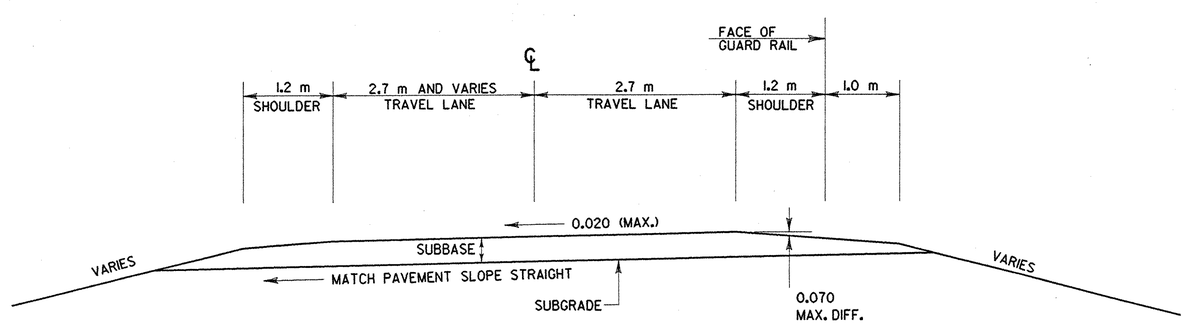
NORMAL SECTION



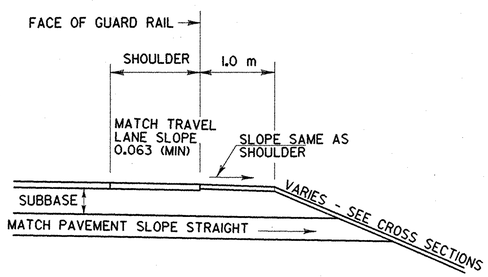
NORMAL SECTION WITH GUARD RAIL



BANKED SECTION
0.08 MAX.



STA. 19+867 TO STA. 19+910
0.02 MAX.



DETAIL OF GUARD RAIL ON LOW SIDE OF BANKED SECTION

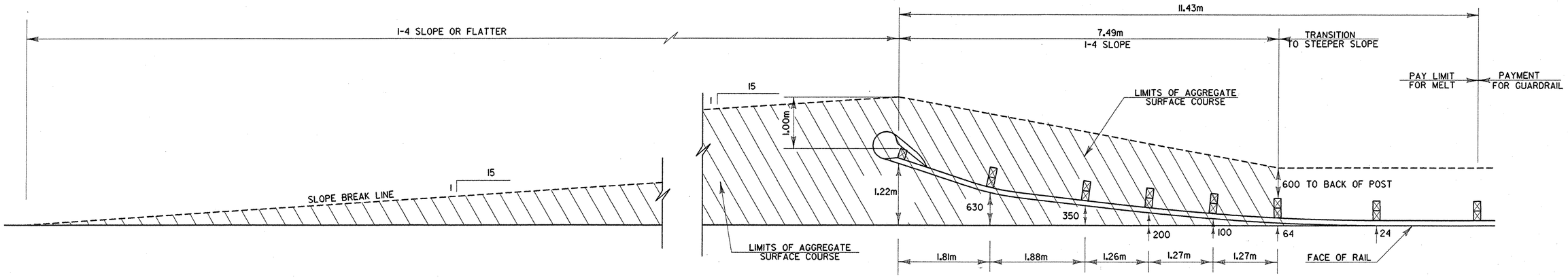
ALL DETAILS "N.T.S." (NOT TO SCALE)
ALL DIMENSIONS IN MILLIMETERS EXCEPT AS INDICATED

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

TYPICAL SECTIONS

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837FRM.DGN
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SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 18-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 10 OF 140

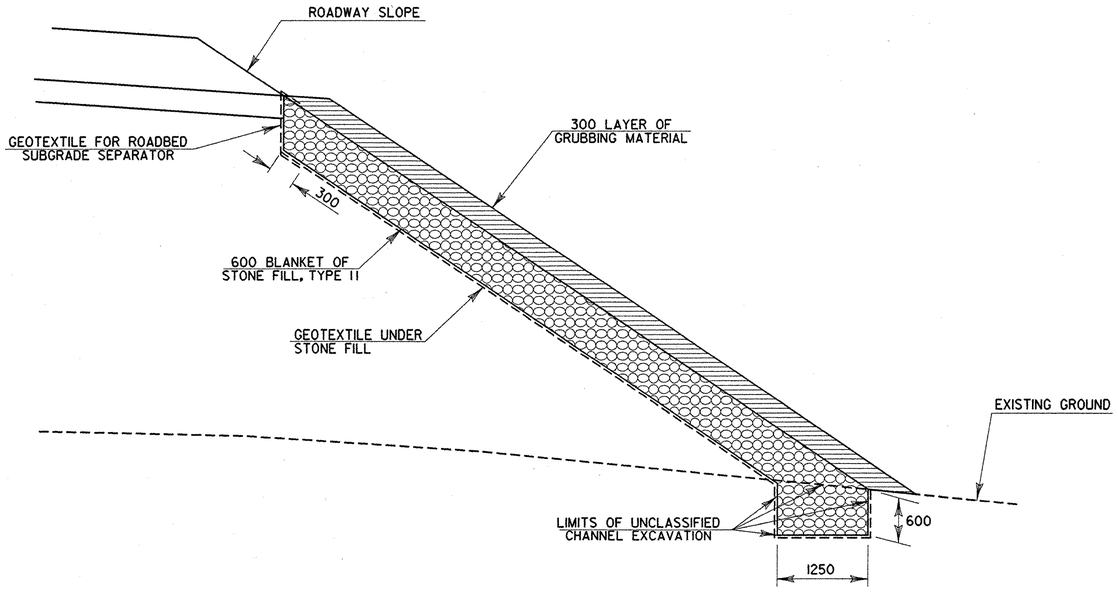
78f184/zf184TY3



AGGREGATE SURFACE COURSE AT Guardrail TERMINAL DETAIL

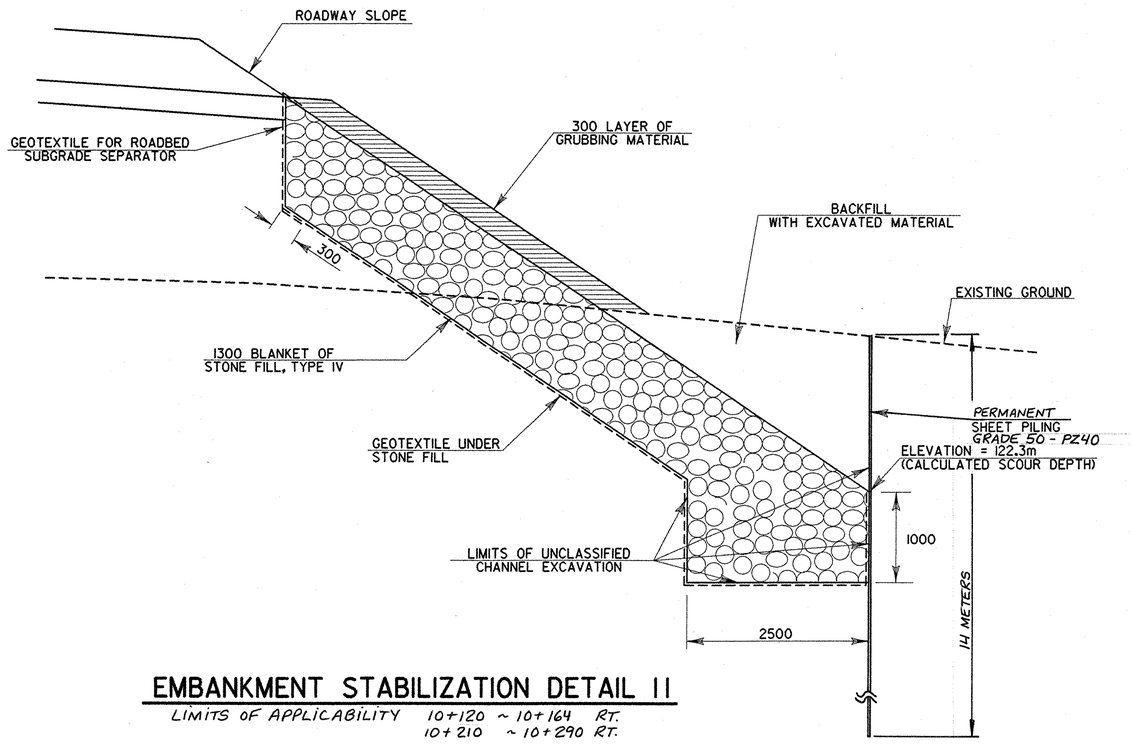
NOTE:

DESIRABLY A 1-4 OR FLATTER FILL SLOPE SHOULD BE USED, BUT IF THIS IS IMPRACTICAL, A MAXIMUM 1-3 SLOPE MAY BE USED.



EMBANKMENT STABILIZATION DETAIL I

LIMITS OF APPLICABILITY 10+290 ~ 10+350 RT.



EMBANKMENT STABILIZATION DETAIL II

LIMITS OF APPLICABILITY 10+120 ~ 10+164 RT.
10+210 ~ 10+290 RT.

ALL DETAILS "N.T.S." (NOT TO SCALE)
ALL DIMENSIONS IN MILLIMETERS EXCEPT AS INDICATED

REVISED
NOV 10 2003

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

MISCELLANEOUS DETAILS

PROJECT: BERKSHIRE	PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837FRM.DGN	
IPARM FILE NAME: 02837MIS.I	PLOT DATE: 18-FEB-2000
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER:	DRAWN BY: R. REMY
	SHEET: 11 OF 140

78f184/zf184mis

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

Metric

DRAINAGE STRUCTURES

STATION km + m	STATION km + m	POS.	ASKEW	INLET/OUTLET TYPE INLET	INLET/OUTLET TYPE OUTLET	DITCH IN	DITCH OUT	PIPE ARCH SPAN mm	PIPE ARCH RISE mm	PIPE ARCH L m	PIPE D mm	PIPE L m	ALLOWABLE OPTIONS PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP	PCCSP PL mm	PIPE ELBOW NO. DEG	ES EA	CB EA	PRECAST	DEPTH DI mm	CONC CL B m^3	REINF STEEL kg	DI GRATE TYPE	CHAN ELEV EA	CRM m^3	TRENCH EXCAVATION EARTH m^3	TRENCH EXCAVATION ROCK m^3	COMM EXC m^3	UNC CHAN EXC m^3	STRUCT EXCAV m^3	GRAN BKFILL STRUCT m^3	GRAN BORR m^3	EROS MATT m^2	STONE FILL m^3	STONE FILL TYPE	MARKER POSTS LT ea	MARKER POSTS RT ea	EARTH BORR m^3		REMARKS
VT. ROUTE 118																																											
10+120		LT									300	4.3		1.6		1.7	X					1									0.43							0.43	11		1			INCLUDES C.I. GRATE
10+140		LT									300	3.7		1.6		1.7	X					1									0.43							0.43	11	1				INCLUDES C.I. GRATE
10+220		RT									300	3.4		1.6		1.7	X					1																		1			INCLUDES C.I. GRATE
10+220		LT									300	5.5		1.6		1.7			2-28°			1									0.43							0.43	11	1				INCLUDES C.I. GRATE
10+260		LT		ELIMINATED							300	4.6		1.6		1.7			2-28°			1									0.43							0.43	11	1				INCLUDES C.I. GRATE
10+275		RT									300	5.2		1.6		1.7			2-28°			1									0.43							0.43	11		1			INCLUDES C.I. GRATE
10+290	10+280	RT/LT									750	28.0	2.1	2.0			X			2											4.14							4.14	11	1	1			
10+335		RT									300	3.0		1.6		1.7			2-28°			1									0.43							0.43	11		1			INCLUDES C.I. GRATE
10+423	10+410	LT/RT									750	45.5	2.1	2.0			X			1								3.14	97.11	2.0	4.14			16.69			4.14	11	1	1			REMOVE EXISTING PIPE
10+475	10+486	LT/LT									450	11.6	1.7	1.6			X			2									16.56														DRIVEWAY CULVERT BENEATH FILL / REMOVE EXISTING PIPE
T. H. #42																																											
19+880	19+876	LT/RT																											24.75												12.38		REMOVE EXISTING PIPE
19+888	19+890	LT/RT									450	19.1	1.7	1.6			X			1				1.55	67.5	B			75.42		4.32						4.32	11	1	1			INCLUDES INLET DITCH
20+062	20+076	LT/LT									450	17.5	1.7	1.6			X			2									16.56														DRIVEWAY CULVERT BENEATH FILL / REMOVE EXISTING PIPE
WETLAND																																											
10+225	10+237	LT/LT																													24.75						24.75	11					WETLAND CONTROL STRUCTURE (STONE SPILLWAY)
TOTALS											300	18.3		(3-WAY OPTION PIPE)					8-28°	8		7		1.55	67.5	1		3.14	230.40	2.0	39.93			16.69			39.93	11	6	7	12.38		
											450	48.2		(3-WAY OPTION PIPE)						5 - 450 E.S.																							
											750	73.5		(3-WAY OPTION PIPE)						3 - 750 E.S.																							
											300	11.4		(2-WAY OPTION PIPE)																															

PROJECT NAME : BERKSHIRE	PROJECT NO. : BRF-RS 0283(7)
DESIGN FILE NAME: 02837FRM.DGN	
IPARM FILE NAME: 02837DRN.I	PLOT DATE: 11-FEB-2000
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER:	DRAWN BY: C. MABY
	SHEET: 12 OF 140

78A84/2A84DDS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

Metric

GUARD RAIL

	BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	END TREATMENT BEGIN EA	END TREATMENT END EA
	VT. ROUTE 118					
10+107.3	~~10+076.5~~	10+087.9 118.7	——	——	MTS	——
10+118.7	~~10+087.9~~	10+152.7 153.0	——	~~64.8~~ 34.3	STEEL BEAM	
	10+152.7	10+160.3	——	——	APP. SECT. TYPE I	
10+114.9	~~10+076.5~~	10+087.9 126.3	——	——	MTS	——
10+126.3	~~10+087.9~~	~~10+152.7~~ 153.0	~~64.8~~ 26.7	——	STEEL BEAM	
10+153.0	~~10+152.7~~	~~10+160.3~~ 160.6	——	——	APP. SECT. TYPE I	
10+211.4	~~10+211.1~~	10+218.7 219.0	——	——	APP. SECT. TYPE I	
10+219.0	~~10+218.7~~	10+401.6 400.6	——	~~182.9~~ 163.8	STEEL BEAM	
10+400.6	~~10+401.5~~	10+413.0 412	——	——	——	MTS
10+432.2	~~10+432.0~~	10+~~443.4~~ 443.6	——	——	MTS	——
10+443.6	~~10+443.4~~	10+~~515.8~~ 478.6	——	~~34.3~~ ~~72.4~~	STEEL BEAM	
10+478.6	~~10+515.8~~	10+527.2 490	——	——	——	MTS
	VT ROUTE 118/T.H. #42					
10+211.4	~~10+211.1~~	10+~~218.7~~ 219.0	——	——	APP. SECT. TYPE I	
10+219.0	~~10+218.7~~	20+051.5	~~141.0~~ 163.8	——	STEEL BEAM	
	20+040.0	20+051.5	——	——	MTS	——
	RELOCATED T.H. #42					
	19+866.2		——	——	STD G-Id	——
19+867.0	~~19+866.2~~	~~19+885.8~~ 890.0	——	24.0	——	——
		19+885.8	——	——	——	STD G-Id
	OLD ROUTE 118					
	~~30+099~~	30+100	——	0.6	STEEL BEAM	
		30+100	——	——	——	STD G-Id
	~~30+099~~	30+100	0.6	——	STEEL BEAM	
		30+100	——	——	——	STD G-Id
	TOTALS			551.1m	STEEL BEAM RAIL	
				6 EA	MTS	
				4 EA	ANCHORS FOR STEEL BEAM RAIL	
				4 EA	G.R. APP. ANCHOR TYPE I	

NOTE: MTS IS MANUFACTURED TERMINAL SECTION

UNDERDRAIN

BEGIN STATION km + m	END STATION km + m	TYPE	POSITION	DIA. mm	LENGTH m	TRENCH EARTH m^3	TRENCH ROCK m^3	GRAN BKFILL m^3	FB EA	MKR PST EA

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	REMARKS

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	REMARKS

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	REMARKS

PROJECT NAME : BERKSHIRE

PROJECT NO. : BRF-RS 0283(7)

DESIGN FILE NAME: 02837FRM.DGN
IPARM FILE NAME: 02837ITM.I
SURVEYED BY:
SQUAD LEADER:

PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 13 OF 140

78f184/zf184ids

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

Metric

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m²	TOTAL EXCAVATION EARTH AND ROCK VOLUME m³	ROCK EXCAVATION AREA m²	ROCK EXCAVATION VOLUME m³	EMBANKMENT AREA m²	EMBANKMENT VOLUME m³	AREA m²	VOLUME m³
VT. ROUTE 118									
10+030		0.0				0.0			
	20		12.0				6.0	C = 392.0	
10+050		1.2				0.6		F = 660.0	
			122.0				7.0	F. FAC.= 0.15	
10+070		11.0				0.1		EX. F. = 367	
			181.0				7.0		
10+090		7.1				0.6			
			74.0				11.0		
10+110		0.3				0.5			
			3.0				95.0		
10+130		0.0				9.0			
	20						275.0		
10+150						18.5			
	14						259.0		
10+164	STOP ROADWAY BEGIN BRIDGE					18.5			
10+208	END BRIDGE RESUME ROADWAY					53.2			
	2						106.4	C = 0.0	
10+210						53.2		F = 6350.4	
	20						1080.0	F. FAC.= 0.15	
10+230						54.8		EX. F. = 7303	
							1168.0		
10+250						62.0			
							1277.0		
10+270						65.7			
							1352.0		
10+290						69.5			
							1367.0		
10+310						67.2			
	20						1170.0		
10+330						49.8			
	13						647.4	C = 6.0	
10+343						49.8 / 24.1		F = 5180.3	
	7						168.7	F. FAC.= 0.15	
10+350						24.1		EX. F. = 5951	
	20						444.0		
10+370						20.3			
	16						324.8		
10+386						20.3 / 40.1			
	4						160.4		
10+390						40.1			
	20						828.0		
10+410						42.7			
							869.0		
10+430		0.0				44.2			
			6.0				568.0		
10+450		0.6				12.6			
			89.0				138.0		
10+470		8.3				1.2			
			136.0				22.0	C = 528.1	
10+490		5.3				1.0		F = 170.0	
			155.0				10.0	F. FAC.= 0.15	
10+510		10.2				0.0		EX. C. = 333	
	20		189.0						
10+530		8.7							
	3		13.1						
10+533		0.0							

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m²	TOTAL EXCAVATION EARTH AND ROCK VOLUME m³	ROCK EXCAVATION AREA m²	ROCK EXCAVATION VOLUME m³	EMBANKMENT AREA m²	EMBANKMENT VOLUME m³	AREA m²	VOLUME m³
T.H. #42									
19+867		1.9							
	3		5.7					C = 257.7	
19+870		1.9						F = 2447.5	
	10		21.5					F. FAC.= 0.15	
19+880		2.4						EX. F. = 2557	
	10		48.0						
19+890		7.2							
	10		65.0						
19+900		5.8							
	10		43.5						
19+910		2.9 / 0.0							
	90		0.0						
20+000		0.0				0.0			
	20		37.0				57.0		
20+020		3.7				5.7			
			37.0				289.0		
20+040		0.0				23.2			
							655.0		
20+060						42.3			
	20						868.0		
20+080						44.5			
	13						578.5		
20+093						44.5			
OLD VT. ROUTE 118									
30+002		0.0							
	8		18.4					C = 842.3	
30+010		4.6						F = 0.0	
	10		97.0					F. FAC.= 0.15	
30+020		14.8						EX. C. = 842	
	20		355.0						
30+040		20.7							
	20		304.0						
30+060		9.7							
	7		67.9						
30+067		9.7							
DRIVEWAYS @STA 10+423 RT									
40+025						0.0			
	21						71.4	C = 0.0	
40+046						6.8		F = 1769.0	
	19						164.4	F. FAC.= 0.15	
40+065						10.5		EX. F. = 2034	
	19						306.9		
40+084						21.8			
	19						663.1		
40+103						48.0			
	19						456.0		
40+122						0.0			
@STA 20+070 LT							91.9		
@STA 10+482 LT							15.3		

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m²	TOTAL EXCAVATION EARTH AND ROCK VOLUME m³	ROCK EXCAVATION AREA m²	ROCK EXCAVATION VOLUME m³	EMBANKMENT AREA m²	EMBANKMENT VOLUME m³	AREA m²	VOLUME m³
WETLAND MITIGATION IMPACT AREA									
TOPSOIL			•620.0				620.0	C = 1898.0	
SILT			•620.0				620.0	F = 1240.0	
								F.FAC. = 0.15	
								EX. C. = 472	
MITIGATION AREA									
TOPSOIL			•790.0						
SILT			•790.0						
SUBSOIL			1898.0						
• UNAVAILABLE FOR FILL									
WETLAND MITIGATION MEASURES									

STOCKPILE	PLANTING AREA A m³	B m³	C m³	D m³	TOTAL m³	EXCESS m³
A - REQUIRED		273			273	
A - AVAILABLE					620	347
B - REQUIRED			165	106	271	
B - AVAILABLE					790	519
C - REQUIRED	450	273	165	106	994	
C - AVAILABLE					1410	416
					TOTAL EXCESS	1282

SURCHARGE			
10+209		14.5	
	34		493.0
10+243		14.5	
	23		332.4
10+266		14.4	
	7		100.8
10+273		14.4	

UNDERCUT UNAVAILABLE FOR FILL				
10+212		36		
	18		666	
10+230		38		C = 2180
	20		700	
10+250		32		
	20		700	
10+270		38		
	3		114	
10+273		38		

SUMMARY AND BALANCES

STATION TO STATION km + m	km + m	TOTAL EXC. EARTH+ROCK m³	ROCK EXCAVATION m³	EMBANKMENT m³	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
10+030	10+170	392.0		660.0		367		367
10+170	10+310			6350.4		7303		7670
10+310	10+450	6.0		5180.3		5951		13621
10+450	10+533	528.1		170.0	333			13288
VT. RTE 118	TOTAL	926.1		12360.7	333	13621		13288
TH #42		257.7		2447.5		2557		15845
OLD VT. RTE 118		842.3			842			15003
DRIVEWAYS				1769.0		2034		17037
DRAINAGE		39.9		12.4	28			17009
WETLAND		1898.0		1540.0	127			16882
		3964.0		18129.6	1330	18212		16882

REMARKS

EARTH AND ROCK EXCAVATION	3964.0
WETLAND SOIL UNAVAILABLE FOR FILL	2820.0
SURCHARGE	926.2
UNDERCUT UNAVAILABLE FOR FILL	2180.0
TOTAL EXCAVATION	9877.9
EMBANKMENT	18129.6
LESS FACTORED SOLID ROCK	0.0
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	0.0
NET EMBANKMENT	18129.6
FACTOR 0.15	2719.4
EMBANKMENT INCLUDING FACTOR	20849.0
SURCHARGE	926.2
TOTAL FILL	21775.2
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION •(AVAILABLE FOR FILL)	3964.0
CHANNEL EXCAVATION	1003.0
UNDERDRAIN EXCAVATION	0.0
STRUCTURE EXCAVATION	0.0
TOTAL MATERIAL AVAILABLE FOR FILL	4967.0
TOTAL FILL INCLUDING FACTOR & SURCHARGE	21775
TOTAL MATERIAL FOR FILL	4967
BORROW	16808
EXCESS EXCAVATION (WETLAND SOILS)	1282
WASTE (SURCHARGE)	926
(UNDERCUT)	2180
TOTAL WASTE	3106

NOTE: THE AREAS & VOLUMES SHOWN ON THIS SHEET ARE BASED ON THE 1985 GROUND SURVEY, AND DO NOT REFLECT THE RECENT CHANGES IN THE LOCATION OF THE TROUT RIVER.

PROJECT NAME : BERKSHIRE

PROJECT NO.: BRF-RS 0283(7)

DESIGN FILE NAME: 02837FRM.DGN
IPARM FILE NAME: EARTHWK2.I
SURVEYED BY:
SQUAD LEADER:

PLOT DATE: 11-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 14 OF 140

78f184/zf184EWK

Metric

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
1A	KINNEY, RAYMOND G. & VIRGINIA G.	14	10+030.0 LT.	10+191.0 LT.	0.263HA±		ALL R.T. & I.			WD	03-31-00	BERKSHIRE	48	343-344	HWY. EASE. VT. RTE. 118 (0.65A±)
			10+030.0 LT.	10+102.5 LT.			CONST.	(T)	306 SM±						3294 S.F.±
			10+050.0 LT.	10+089.0 LT.			SLOPE	(T)	65 SM±						700 S.F.±
			10+112.0 LT.	10+165.0 LT.			CONST.	(T)	161 SM±						1733 S.F.±
			10+124.5 LT.	10+157.5 LT.			SLOPE	(T)	113 SM±						1216 S.F.±
1B		14,15	10+060.0 RT.	10+474.87 RT.	1.811HA±										4.47A±
			10+030.0 RT.	10+171± RT.			CONST.	(T)	403 SM±						4338 S.F.±
			10+047.0 RT.	10+083.5 RT.			SLOPE	(P)	65 SM±						700 S.F.±
			10+130.0 RT.	10+164.5 RT.			SLOPE	(T)	18 SM±						194 S.F.±
			10+208.0 RT.	10+261.0 RT.			SLOPE	(T)	179 SM±						1927 S.F.±
			10+209.5 RT.	10+260.0 RT.			INSTALL	(T)	93 SM±						SHEET PILING (1000 S.F.±)
			10+211± RT.	10+264.5 RT.			CONST.	(T)	113 SM±						1216 S.F.±
			10+275.0 RT.				DRAINAGE	(P)							
			10+335.0 RT.				DRAINAGE	(P)							
			10+423.0 RT.				DRIVE	(T)							15.0M (49') GRAVEL
			10+437.0 RT.	10+535.0 RT.			CONST.	(T)	0.028 HA±						0.07A±
			10+438.0 RT.	10+532.0 RT.			SLOPE	(P)	0.035 HA±						0.09A±
			10+401.5 RT.	10+417.0 RT.			CONST.	(T)	98 SM±						1055 S.F.±
			10+407.5 RT.	10+416.5 RT.			CUL., DIT. & DR.	(P)							
1C		14	10+372.0 LT.	10+540.0 RT.	0.131HA±		ALL R.T. & I.								HWY. EASE. VT. RTE. 118 (0.32A±)
1D		14,15	OLD VT. RTE. 118 30+083.0 CL	10+376.0 LT.	0.179HA±		ALL R.T. & I.								VT. RTE. 118 (0.44A±)
2	KOTORMAN, DANIEL F. & HOLLY H.	14	OLD VT. RTE. 118 30+103.5 LT.	OLD VT. RTE. 118 30+111.0 LT.			CONST.	(T)	21 SM±	TU		BERKSHIRE			226 S.F.±
			OLD VT. RTE. 118 30+107.5 LT.	OLD VT. RTE. 118 30+110.5 LT.			REMOVE	(T)							CULVERT
3	LARIVEE, LARRY G. & MARY L.	14,15	RELOC. TH #42 19+876.0 LT.	RELOC. TH #42 19+893.0 LT.			CONST.	(T)	24 SM±	WDOE	07-19-99	BERKSHIRE	47	441-442	258 S.F.±
			RELOC. TH #42 19+890.0 LT.				CULVERT	(P)							
4	NESBITT, DANIEL M.	15	10+376.0 LT.	10+417.0 LT.	0.034HA±		ALL R.T. & I.			WDF	06-10-99	BERKSHIRE	47	342-343	HWY. EASE. VT. RTE. 118 (0.08A±)
			10+399.5 LT.	10+418.0 LT.			CONST.	(T)	45 SM±						484 S.F.±
			10+407.0 LT.	10+418.0 LT.			SLOPE	(T)	30 SM±						323 S.F.±
			10+417.0 LT.				RESET	(T)							WIRE FENCE LENGTH 8M± (26'±)
			RELOC. TH #42 20+008.0 LT.	RELOC. TH #42 20+067.0 LT.			CONST.	(T)	194 SM±						2088 S.F.±
			RELOC. TH #42 20+013.0 LT.	RELOC. TH #42 20+065.5 LT.			SLOPE	(T)	226 SM±						2433 S.F.±
			RELOC. TH #42 20+008.0 LT.	RELOC. TH #42 20+017.0 LT.			RESET	(T)							WIRE FENCE
			RELOC. TH #42 20+062.5 LT.	RELOC. TH #42 20+075.5 LT.			DITCH & CULVERT	(P)							
			RELOC. TH #42 20+069.0 LT.				DRIVE	(T)							5.5M (18') GRAVEL

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	1,7,8 9,12 13,14 15	PARCEL NO. 1 KINNEY. ADD SUB DIVISION LINES TO PLANS. REDESIGN FIELD DRIVE AT STA. 10+365. ADJUST RIGHTS ACCORDINGLY. PER C.O. 8986.	12-29-98	M. J. R.	L. W. B.
2	13,15	PARCEL NO. 6 STANKIEWICZ. REMOVE DOLORES AS CO OWNER. PER C.O. 9033.	03-16-98	R. M. W.	L. W. B.
3	12,14 15	PARCEL NO. 1 KINNEY. ADD PARCEL 1D. ALL R.T. & I. IN VT. RTE. 118. STA. OLD VT. RTE. 118 30+083.0 CL ~ 10+376.0 LT.; 0.179HA±; 0.44A± PER C.O. 9075.	10-08-99	M. J. R.	L. W. B.

MAR 11 2003

* 0283007 200 1805

ACCT.prop
/prop/78f184/rf184d.dgn
DATE PLOTTED 8-OCT-1999
/prop/78f184/rf184dl.l

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 SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

APPROVED: LAWRENCE W. BLISS DATE: 04-15-98
AGENT D. PLANS & TITLES

R. O. W. PLANS

BERKSHIRE
BRF RS 0283(7)

SHEET 15 OF 140

Metric

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
5A	RAMSAY, COLIN B. & LUCY B.	15	10+415.0 LT.	10+494.0 LT.	0.061 HA±		ALL R.T.& I.			WD	12-09-99	BERKSHIRE	48	202-203	HWY. EASE. VT. RTE. 118 (0.15A±)
5B		15	10+423.0 LT.	10+494.5 LT.	295 SM±										3175 S.F.±
			10+418.0 LT.	10+479.0 LT.			CONST.	(T)	194 SM±						2088 S.F.±
			10+418.0 LT.	10+479.0 LT.			SLOPE	(T)	258 SM±						2777 S.F.±
			10+418.0 LT.	10+496.0 LT.			RESET	(T)							WIRE FENCE
			10+420.0 LT.	10+424.0 LT.			CULVERT	(P)							
			10+480.0 LT.				DRIVE	(T)							3.6M (12') GRAVEL
			10+483.0 LT.	10+496.0 LT.			CONST.	(T)	12 SM±						129 S.F.±
			10+483.0 LT.	10+495.5 LT.			SLOPE	(T)	60 SM±						646 S.F.±
6	STANKIEWICZ, MICHAEL	15	10+494.0 CL	10+540.0 LT.	0.035 HA±		ALL R.T.& I.			WDF	05-24-99	BERKSHIRE	47	307	HWY. EASE. VT. RTE. 118 (0.09A±)
			10+494.0 LT.	10+534.0 LT.			RESET	(T)							WIRE FENCE
			10+494.0 LT.	10+532.5 LT.			SLOPE	(T)	343 SM±						3692 S.F.±
			10+496.0 LT.	10+534.0 LT.			CONST.	(T)	68 SM±						732 S.F.±
7	TOWN OF BERKSHIRE	14	RELOC. TH #42 19+867.0 CL.	RELOC. TH #42 19+883.5 LT.			APPROACH	(T)							TH #42
	RELINQUISHMENT AREA NO. I		OLD VT. RTE. 118 30+083.0 CL.	RELOC. TH #42 20+079.5 LT.			0.363 HA±								OLD VT. RTE. 118 (0.90A±)
	MAINTENANCE AGREEMENT AREA NO. 1		RELOC. TH #42 20+078.0 CL.	RELOC. TH #42 20+089.4 CL.			226 SM±			AGREE		BERKSHIRE			(2433 S.F.±) FORMERLY VT. RTE. 118
8	CITIZENS UTILITIES														UTILITY
9	BELL ATLANTIC - NEW ENGLAND														UTILITY
10	NORTH COUNTRY CABLE VISION														UTILITY

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

MAR 11 2000

0283007 200 1805

ACCT.prop
/prop/78f184/rf184d.dgn
DATE PLOTTED 15-MAR-1999
/prop/78f184/rf184d2.i

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

APPROVED: LAWRENCE W. BLISS DATE: 04-15-98
AGENT D, PLANS & TITLES

R. O. W. PLANS

BERKSHIRE
BRF RS 0283(7)

SHEET 16 OF 140

VAOT Metric

N

1985

MAG

RELOCATED T.H. #42 CURVE DATA CURVE 1
Δ=90° 43'42.5" LT
R=15.00 m
T=15.19
L=23.75
E=6.35
e_{MAX}=EXISTING X-SLOPE
ENTRANCE TANGENT S 21°17'32.5" E
EXIT TANGENT N 67°58'45.0" E

BEGIN RELINQUISHMENT NO. I

OLD VT. RTE. 118

STA. 30+083.0 ℄

BEGIN R.O.W. PROJECT

BRF RS 0283(7) STA. 10+030.0 ℄

APPROXIMATE AERIAL RELOCATION
ROUTE BY CITIZENS UTILITIES, NYNEX, AND NORTH COUNTRY CABLE

STA. 19+910.0
END REMOVAL OF EXISTING PAVEMENT SAWCUT SUBSIDIARY TO EXCAVATION OF SURFACES AND PAVEMENTS. MATCH EXISTING PAVEMENT

STA. 19+890.0 LT TO STA. 19+890.0 RT
450mm x 18.6m OPTION PIPE CAAP (1.6)/PCCSP (1.7)/CPEP W/ REINF. CONC. DI, W/ GRATE TYPE 'B' FOR DITCH AT INLET, 450mm END SECTION AND 2.4m x 3.0m x 0.6m STONE FILL TYPE II PAD AT OUTLET

RELOCATED T.H. #42 STA 19+885.391= OLD VT RTE 118 30+123.593

STA 19+867.000
BEGIN APPROACH CONSTRUCTION
MATCH EXISTING PAVEMENT

STA. 19+867.0 TO STA. 19+910.0
REMOVE PAVEMENT SURFACES. GRADE GRAVEL SURFACE TO MEET PAVEMENT.

KOTORMAN, DANIEL F. & HOLLY H.

STA. 19+880.0 LT TO STA. 19+876.0 RT
REMOVE EXISTING 305mm CGMP

STA. 30+099 RT TO STA. 30+113 RT
RETAIN EXISTING STEEL BEAM GUARD RAIL. PLACE TERMINAL END SECTION AND ANCHOR FOR STEEL BEAM RAIL AT STA 30+099, RT.

STA. 30+099 LT TO STA. 30+106 LT
RETAIN EXISTING STEEL BEAM GUARD RAIL. PLACE TERMINAL END SECTION AND ANCHOR FOR STEEL BEAM RAIL AT STA 30+099, LT.

10+180.0
67.5M (221.5') RT.

STA 30+099± TO STA 30+115±
REMOVE EXISTING PAVEMENT. GRADE GRAVEL FOR PARKING ACCESS FOR FISHERMAN. TOPSOIL AND SEED GRAVEL AREA ADJACENT TO PAVEMENT REMOVAL.

STA 30+067± TO STA 30+099±
REMOVE EXISTING BRIDGE SUPERSTRUCTURE. PIER TO BE CUT OFF AT 0.3m ABOVE STREAM BED.

STA. 30+050 LT TO STA. 30+067 LT
REMOVE AND DISPOSE GUARD RAIL

STA. 30+041RT TO STA. 30+067 RT
REMOVE AND DISPOSE GUARD RAIL

STA. 10+117 LT TO STA. 30+063 RT
REMOVE EXISTING FENCE

STA. 10+152.7, LT TO STA. 10+160.3 LT
GUARD RAIL APPROACH SECTION TYPE I(MOD.)

STA 30+002 ± TO STA 30+067 ±
REMOVE EXISTING PAVEMENT & WESTERN APPROACH EMBANKMENT. TOPSOIL AND SEED.

STA. 10+139.5, LT TO STA. 10+162.4, LT
TREATED TIMBER CURB

STA. 10+140, LT 300mm x 3.7m OPTION PIPE
CSP (1.7)/CAAP (1.6)/ CPEP
PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

STA. 10+120.0 TO STA. 10+160.0
STONE FILL TYPE II FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE

STA. 10+087.9, LT TO STA. 10+152.7, LT
STEEL BEAM GUARD RAIL

STA 10+092.780
BEGIN PROJECT BRF-RS 0283(7)
END APPROACH CONSTRUCTION

10+030.0
7.62M (25') LT.

STA. 10+076.5, LT TO STA. 10+087.9, LT
MODIFIED ECCENTRIC LOADER TERMINAL

STA. 10+030.0 TO STA. 10+046.0
COLD PLANE

STA 10+030.000
BEGIN APPROACH CONSTRUCTION
MATCH EXISTING PAVEMENT

50:1 TAPER

APPROX. EXIST. R.O.W.

VERMONT ROUTE 118

TO EAST BERKSHIRE

APPROX. EXIST. R.O.W.

153C ☼25 GUY

POLE 153C/25
9+021.5, 9.5m RT.

DRIVE

POLE 153C/26
9+082, 12.5m RT.

STA. 10+043, RT. & LT.
CLEAN EXISTING
1.5m x 0.9m PIPES (3)

50:1 TAPER

POLE 153C/27
10+042.2, 15.5m RT.

STA. 10+076.5, RT TO STA. 10+087.9, RT
MODIFIED ECCENTRIC LOADER TERMINAL

APPROXIMATE AERIAL RELOCATION
ROUTE BY CITIZENS UTILITIES, NYNEX, AND NORTH COUNTRY CABLE

10+030.0
7.62M (25') RT.

KINNEY, RAYMOND G. & VIRGINIA G.

KINNEY, RAYMOND G. & VIRGINIA G.

STA. 10+120, RT 300mm x 4.3m OPTION PIPE
CSP (1.7)/CAAP (1.6)/CPEP
PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

VT RTE 118 STA 10+130.139= OLD VT RTE 118 STA 30+000.000

STA. 10+120.0 TO STA. 10+167.5
STONE FILL, TYPE IV FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE EXTENDING FROM STA. 10+020.0 TO STA. 10+160.0

STA. 10+120.5, RT TO STA. 10+162.4, RT
TREATED TIMBER CURB

STA. 10+120, RT TO STA. 10+165, RT
INSTALL TEMPORARY SHEET PILING

STA. 10+152.7, RT TO STA. 10+160.3, RT
GUARD RAIL APPROACH SECTION TYPE I(MOD.)

10+060.0
7.62M (25') RT.

STA. 10+087.9, RT TO STA. 10+152.7, RT
STEEL BEAM GUARD RAIL

POLE 153C/28
10+102.5, 18.5m RT.

10+120.0
15.24M (50') RT.

STA. 10+163.300
STOP ROADWAY
BEGIN BRIDGE
ELEV. 129.417

POLE 153C/29
10+162.5, 21.3m RT.

VT ROUTE 118 STA 10+189.703=
TROUT RIVER BASELINE
STA 1+030.002

STA. 10+208.800
END BRIDGE
RESUME ROADWAY
ELEV. 130.191

STA. 10+211.1, LT TO STA. 10+218.7, LT
GUARD RAIL APPROACH SECTION TYPE I(MOD.)

STA. 10+209.0, LT TO STA. 10+258.0, LT
TREATED TIMBER CURB

STA. 10+220, LT 300mm x 5.5m OPTION PIPE
CSP (1.7)/CAAP (1.6)/ CPEP
WITH PIPE ELBOWS (2-28°), PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

STA. 10+211.1, RT. TO STA. 10+218.7 RT
GUARD RAIL APPROACH SECTION TYPE I(MOD.)

STA. 10+220, RT 300mm x 3.4m OPTION PIPE
CSP (1.7)/CAAP (1.6)/ CPEP
PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE. 0.6m W/O GRUBBING MATERIAL DOWN SIDESLOPE AT PIPE OUTLET.

LARIVEE, LARRY G. & MARY L.

3 NEW POLE TH 42 19+913.4, 35m LT.

7

LEDGE

STA 19+900 CONST. LEDGE (T)

CUL. (P)

WATERLINE (APPROX.)

APPROACH DRIVE

STA 19+890.79

(252.0M) [826.8']

P

L

19+900

12m

KINNEY, RAYMOND G. & VIRGINIA G.

REMOVE (T) STORY HOUSE PORCH

PC STA 19+867.045

RELOCATED T.H. #42 CURVE #1 WATERLINE (APPROX.)

STA 19+882.237

2

STA 19+894.6M

WETLAND BOUNDARY

1D

STA 19+921.6M

(221.6M) [727.1']

STA 30+117
REMOVE EXISTING DRIVE

STA 30+108.00
PLANK GUARDRAIL BARRICADE
10+191.0
56.5M (185') LT.

BM#2
CONC. POST
ELEV. 129.226

WETLAND BUFFER

STA. 10+214.5 TO STA. 10+340.0
STONE FILL, TYPE II FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE

300 MM ELM ☼ CONST. (T)

KINNEY, RAYMOND G. & VIRGINIA G.

ELM (SAVE)

*094 1 2

CLUMP MAPLES

STA. 10+209.0 LT TO STA. 10+311.9, LT
TREATED TIMBER CURB

WATER CONTROL STRUCTURE
STONE FILL, TYPE I AND GEOTEXTILE

(SAVE)610mm DIA. MAPLE

(REMOVE) 610mm DIA MAPLE (CLUMP) OF TREES)

2-205mm ASH (SAVE)

WETLAND BOUNDARY

1A

1B

TROUT RIVER BASELINE

OLD ROAD

N°34.27'E

N°7.37'32.1"W

89°59'56.9"

610mm DIA. MAPLE
150mm DIA. MAPLE
305mm DIA. MAPLE

610mm DIA. MAPLE
150mm DIA. MAPLE

WETLAND BOUNDARY

INSTALL T/T

INSTALL (T)

(PARCEL #4) 115.5 (A)

STA. 10+209.5, RT TO STA 10+260, RT
INSTALL TEMPORARY SHEET PILING

POLE 153C/31
10+243, 25.5m RT.

TROUT RIVER

STA. 10+209 TO STA. 10+273
PLACE SURCHARGE
SEE TRAFFIC CONTROL PLAN, PHASE 1

STA. 10+218.7, RT TO STA. 10+401.6, RT
STEEL BEAM GUARD RAIL

STA. 10+209.0, RT TO STA. 10+401.6, RT
TREATED TIMBER CURB

STA. 10+204.5 TO STA. 10+260.0
STONE FILL, TYPE IV FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE EXTENDING FROM STA. 10+214.5 TO STA. 10+260.0

STA. 10+218.7, LT TO
REL. T.H. #42 STA. 20+051.5, RT
STEEL BEAM GUARD RAIL

KINNEY, RAYMOND G. & VIRGINI

MATCHLINE STA 10+250

(177.64M) [582.9']

61.0M (200.1')

CENTERLINE TIES
VERMONT ROUTE 118
P.K. NAIL IN PAVEMENT P.O.T. 10+000.000

10+000

4.807m, 3.752m, 4.593m

CONC. NAILS 305mm FROM EDGE OF PAVEMENT

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

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.

0 10 20 3
SCALE 1:500

FOR ROW USE ONLY

PLAN

PROJECT: BERKSHIRE

PROJECT NO.: BRF-RS 0283(7)

DESIGN FILE NAME: /prop/78f184/rf184zzz.dgn
IPARM FILE NAME: rf184llr.i
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 8-OCT-1999
SURVEY DATE:
DRAWN BY: C. MABY

R. O. W. SHEET 17 OF 140 SHEETS

VT RTE 118 CURVE DATA CURVE 1	RELOCATED T.H. #42 CURVE DATA CURVE 2	RELOCATED T.H. #42 CURVE DATA CURVE 3	RELOCATED T.H. #42 CURVE DATA CURVE 4	FIELD DRIVE CURVE DATA CURVE 5
Δ=43°12'36.1" RT R=235.00 m T=93.07 L=177.22 E=17.76 e_{MAX}=0.0800 ENTRANCE TANGENT N 82°22'24.8" E EXIT TANGENT S 54°24'59.1" E	Δ=34°19'01.6" RT R=75.00 m T=23.16 L=44.92 E=3.49 e_{MAX}=EXISTING X-SLOPE ENTRANCE TANGENT S 67° 58'45.0" E EXIT TANGENT S 77°42'13.3" E	Δ=23°07'35.4" RT R=100.00 m T=20.46 L=40.36 E=2.07 e_{MAX}=EXISTING X-SLOPE ENTRANCE TANGENT S 77° 42'13.3" E EXIT TANGENT S 54°34'37.9" E	Δ=63°33'05.0" RT R=30.00 m T=18.58 L=33.28 E=5.29 e_{MAX}=0.0322 ENTRANCE TANGENT S 54°34'12.3" E EXIT TANGENT S 08°58'52.7" W	Δ=66°21'00.0" RT R=24.00 m T=15.69 L=27.79 E=4.67 e_{MAX}=0.0200 ENTRANCE TANGENT N 30°23'12.2" E EXIT TANGENT S 83°15'47.8" E

FIELD DRIVE CURVE DATA CURVE 6	FIELD DRIVE CURVE DATA CURVE 7
Δ=14°11'26.9" RT R=220.00 m T=27.38 L=54.49 E=1.70 e_{MAX}=0.0200 ENTRANCE TANGENT S 83°15'47.8" E EXIT TANGENT S 69°04'20.9" W	Δ=88°59'41.1" RT R=8.00 m T=7.86 L=12.43 E=3.21 e_{MAX}=0.0482 ENTRANCE TANGENT S 69°04'20.9" E EXIT TANGENT N 21°55'58.0" E

LARIVEE, LARRY G. & MARY L.

(3)

STA 19+974.0 EXIST. 305 MM CULVERT DO NOT DISTURB

RELOCATED T.H. #42 CURVE #3

RELOCATED T.H. #42 CURVE #2

LEDGE

Sta 19+928.46 PI

Sta 19+950.225 PCC

Sta 19+970.690 PI

[826.8'] [252.0M]

APPROXIMATE AERIAL RELOCATION ROUTE BY CITIZENS UTILITIES, NYNEX, AND NORTH COUNTRY CABLE

BM#1 914 mm MAPLE ELEV. 129.226

Sta 19+990.593 PT

914 mm MAPLE

STA. 20+000 MATCH EXISTING PAVEMENT

STA. 20+000.0 TO STA. 20+008.0 COLD PLANE

RESET (T)

STA. 20+040.0, RT TO STA. 20+051.5, RT MODIFIED ECCENTRIC LOADER TERMINAL

NESBITT, DANIEL M.

10+379.0 28.0M (92') LT.

RELOCATED T.H. #42 CURVE #4

CUL. & DITCH (P)

STA 20+070 LT REMOVE 380MM CGMP

STA. 20+062.5 LT TO STA. 20+075.5 LT 450mm x 17.5m OPTION PIPE CAAP (1.6)/PCCSP (1.7)/CPEP W/450mm END SECTION AT EACH END

VT RTE 118 P.O.C. STA 10+365.760= RELOCATED TH 42 P.O.T. STA 20+096.923

10+418.0 14.0M (46') LT.

RAMSAY, COLIN B. & LUCY B.

STA. 10+375, LT TO STA. 10+400, LT REMOVE EXISTING PAVEMENT TOPSOIL AND SEED

STA 10+423, LT TO STA 10+410, RT REMOVE EXISTING 610mm RCP 750mm x 45.5m OPTION PIPE CAAP (2.0)/ PCCSP (2.1)/ CPEP WITH CEMENT RUBBLE MASONRY STRAIGHT HEADWALL AT INLET, 750mm END SECTION AND 2.3m x 3.0m x 0.6m STONE FILL TYPE II AT OUTLET

10+423.0 7.62M (25') LT.

CUL. (P) VT RTE 118 P.O.C. STA 10+423.000= FIELD DRIVE STA 40+126.707

STA. 10+417, LT TO STA. 10+533, LT REMOVE EXISTING FENCE

VT RTE 118 CURVE #1

STA 10+480 LT REMOVE 380MM CGMP

STANKIEWICZ, MICHAEL

STA. 10+474.4 LT TO STA. 10+486.3 LT 450mm x 11.6m OPTION PIPE CAAP (1.6)/PCCSP (1.6)/PCCSP (1.7)/CPEP W/450mm END SECTION AT EACH END

10+494.5 12.62M (41') LT.

STA. 10+490.25 END PROJECT BRF-RS 0283(7) BEGIN APPROACH CONSTRUCTION

REMOVE & RESET (T)

STA. 10+517.0 TO STA. 533.4 COLD PLANE

10+494.0 7.62M (25') LT.

STA. 10+533.400 END APPROACH CONSTRUCTION MATCH EXISTING PAVEMENT

10+540.0 7.62M (25') LT.

END RELINQUISHMENT NO. I

RELOC. TH #42 STA. 20+079.5 13.0M (43') LT. = STA. 10+376.0 21.0M (69') LT.

DRIVEWAY TABLE			
DRIVEWAY LOCATION	RADIUS	WIDTH	REMARKS
T.H. #42 20+069, LT.	6m	5.5m	GRAVEL
VT RTE 118 10+423, RT.	3.6m LT., 2.5m RT.	15.0m	GRAVEL
VT RTE 118 10+480, LT.	3m	3.6m	GRAVEL

BEGIN MAINTENANCE AGREE. AREA NO. 1 RELOCATED TH #42 STA. 20+078 ℄

END MAINTENANCE AGREE. AREA NO. 1 RELOCATED TH #42 STA. 20+089.4 ℄ [LENGTH 11.4M (37')]

STA. 10+260, LT 300mm x 4.6m OPTION PIPE CSP (1.7)/CAAP (1.6)/ CPEP WITH PIPE ELBOWS (2-28°), PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

STA. 10+215.0 TO STA. 10+340.0 STONE FILL, TYPE II FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE

STA. 10+209.0, LT TO 10+311.9, LT TREATED TIMBER CURB

KINNEY, RAYMOND G. & VIRGINIA G.

STA. 10+218.7, LT TO REL. T.H. #42 STA. 20+051.5, RT STEEL BEAM GUARD RAIL

WETLAND BUFFER

WETLAND BOUNDARY

INSTALL EXIST. R.O.W.

150 mm ELM

10+372.0 14.0M (46') LT.

NEW POLE 10+341, 26.0m LT.

Sta 10+297.639 PC

Sta 20+089.422 PT

Sta 20+056.147 PC

Sta 20+105.621 PT

R=16.2 m

R=40.5 m

R=6 m

R=35 m

R=22.8 m

R=3.6m

R=2.5m

CONST. (T)

DRIVE (T)

DRIVE

SR (T)

RJ

CZ

105.2M

Sta 10+390.706 BK

Sta 10+381.799 AHD

Sta 20+074.730 PI

Sta 20+070.839 AHD

R=706.6m

47°26'45" RT

10+380 10+400 10+420 10+440 10+460 10+480 10+500 10+520 10+540

MATCHLINE STA 10+250

1B 1C 1D 5A 5B 6 7

(PARCEL #4) (15.5 A)

POLE 153C/32 10+326, 27.5m RT.

10+297.6

15.24M (50') RT.

INSTALL (T)

DR (P)

[177.64M (582.8')]

STA. 10+280 RT TO STA. 10+280 LT 750mm x 28.0m OPTION PIPE CAAP (2.0)/PCCSP (2.1)/ CPEP 750 END SECTION AT EACH END AND 2.3m x 3.0m x 0.6m STONE FILL TYPE II AT OUTLET

STA. 10+260.0 TO STA. 10+350.0 STONE FILL, TYPE II FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE

STA. 10+218.7, RT TO STA. 10+401.6, RT STEEL BEAM GUARD RAIL

STA. 10+275, RT 300mm x 5.2m OPTION PIPE CSP (1.7)/CAAP (1.6)/ CPEP WITH PIPE ELBOWS (2-28°), PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

STA. 10+209.0, RT TO STA. 10+401.6, RT TREATED TIMBER CURB

STA. 10+205.0 TO STA. 10+260.0 STONE FILL, TYPE IV FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE

STA. 10+209.5, RT TO STA 10+260, RT INSTALL TEMPORARY SHEET PILING

STA. 10+209 TO STA. 10+273 PLACE SURCHARGE SEE TRAFFIC CONTROL PLAN, PHASE I

KINNEY, RAYMOND G. & VIRGINIA G. (PARCEL #3) (10.3 A)

WETLAND BUFFER

APPROXIMATE AERIAL RELOCATION ROUTE BY CITIZENS UTILITIES, NYNEX, AND NORTH COUNTRY CABLE

STA. 10+335, RT 300mm x 3.0m OPTION PIPE CSP (1.7)/CAAP (1.6)/ CPEP WITH PIPE ELBOWS (2-28°), PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

FIELD DRIVE CURVE #5

FIELD DRIVE CURVE #6

FIELD DRIVE CURVE #7

POLE 153C/33 10+409.5, 8.3m RT.

CUL., DIT. & DR. (P)

10+337 15.24M (50') RT.

10+416.0 7.0M (23') LT.

10+439 11.24M (36.9') RT.

10+474.87 8M (26.2') RT.

STA. 10+401.6, RT TO STA. 10+413.0, RT MODIFIED ECCENTRIC LOADER TERMINAL

STA. 10+432.0, RT TO STA. 10+443.4, RT MODIFIED ECCENTRIC LOADER TERMINAL

STA. 10+443.4, RT TO STA. 10+515.8, RT STEEL BEAM GUARD RAIL

STA. 10+515.8, RT TO STA. 10+527.2, RT MODIFIED ECCENTRIC LOADER TERMINAL

KINNEY, RAYMOND G. & VIRGINIA G.

APPROXIMATE AERIAL RELOCATION ROUTE BY CITIZENS UTILITIES, NYNEX, AND NORTH COUNTRY CABLE

10+540.0 7.62M (25') LT.

POLE 153C/34 10+503.5, 12.7m RT.

10+494.0 ℄ 50:1 TAPER

MM 1180 0602 40040

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.

APPROX. EXIST. R.O.W.

VERMONT ROUTE 118

MONTGOMERY

DRIVE

300 mm ELM

END R.O.W. PROJECT

BRF RS 0283(7)

STA. 10+540.0 ℄

MAR 11 '03

153C 35

0 10 20 30

SCALE 1:500

FOR ROW USE ONLY

CENTERLINE TIES					
VERMONT ROUTE 118		RELOCATED T.H. # 42			
P.K. NAIL IN PAVEMENT PI 10+390.706 BK= PI 10+381.799 AHD.	P.K. NAIL IN PAVEMENT PT 10+474.866	P.K. NAIL IN PAVEMENT P.O.T. 20+000.000	P.K. NAIL IN PAVEMENT PC 20+056.147	P.K. NAIL IN PAVEMENT P. 20+074.730 BK= PI 20+070.839 AHD	PT 20+089.422 P.O.T. 20+096.923
CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT
5.752m 2.286m 3.627m 10+380 10+390	4.529m 3.405m 4.529m 10+470 10+480	4.410m 3.408m 4.560m 20+000 20+010	4.432m 3.594m 4.566m 20+050 20+065	4.724m 3.825m 4.980m 20+070 20+075	14.98m 2.48m 16.590m 22.576m 3.27m 20.656m

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

PLAN

PROJECT: BERKSHIRE

PROJECT NO.: BRF-RS 0283(7)

DESIGN FILE NAME: /prop/78f184/rf184zzz.dgn

IPARM FILE NAME: rf1841zr.i

SURVEYED BY:

SQUAD LEADER:

PLOT DATE: 8-OCT-1999

SURVEY DATE:

DRAWN BY: C. MABY

R. O. W. SHEET 18 OF 140 SHEETS

N

MAG 1985

RELOCATED T.H. #42
CURVE DATA CURVE 1

Δ=90° 43'42.5" LT
R=15.00 m
T=15.19
L=23.75
E=6.35
e_{MAX}=EXISTING X-SLOPE

ENTRANCE TANGENT
S 21°17'32.5" E

EXIT TANGENT
N 67°58'45.0" E

APPROXIMATE AERIAL RELOCATION
ROUTE BY CITIZENS UTILITIES, BELL ATLANTIC-NEW ENGLAND, AND NORTH COUNTRY CABLE

STA. 19+910.0
END REMOVAL OF EXISTING PAVEMENT
SAWCUT SUBSIDIARY TO EXCAVATION OF SURFACES AND PAVEMENTS.
MATCH EXISTING PAVEMENT

STA. 19+888.0 LT TO STA. 19+890.0 RT
450mm x ~~19.1m OPTION PIPE~~ 18.3m CSP
W/ REINF. CONC. DI. W/ GRATE TYPE 'B' FOR DITCH AT INLET,
450mm END SECTION AND 2.4m x 3.0m x 0.6m
STONE FILL TYPE II PAD AT OUTLET

RELOCATED T.H. #42 STA 19+885.39=
OLD VT RTE 118 30+123.593

STA 19+867.000
BEGIN APPROACH CONSTRUCTION
MATCH EXISTING PAVEMENT

STA. 19+867.0 TO STA. 19+910.0
REMOVE PAVEMENT SURFACES. GRADE GRAVEL SURFACE TO MEET PAVEMENT.

STA. 14+866.2 RT 19+870.8
GUARD RAIL APPROACH END
(3.8m, 5m RADIUS, STD. G-1d)
ANCHOR FOR STEEL BEAM RAIL

STA. 19+880.0 LT TO STA. 19+876.0 RT
REMOVE EXISTING 305mm CGMP

STA. 30+099 RT TO STA. 30+113 RT
RETAIN EXISTING STEEL BEAM GUARD RAIL.
PLACE TERMINAL END SECTION AND ANCHOR FOR STEEL BEAM RAIL AT STA 30+099, RT.

STA. 30+099 LT TO STA. 30+106 LT
RETAIN EXISTING STEEL BEAM GUARD RAIL.
PLACE TERMINAL END SECTION AND ANCHOR FOR STEEL BEAM RAIL AT STA 30+099, LT.

867.0 890.0
STA. 19+866.2, RT TO STA. 19+885.8, RT
STEEL BEAM GUARD RAIL

STA. 30+105 LT
BACKFILL EXISTING DITCH, SEE SHEET 79.

RELOCATED T.H. #42
CURVE #1

STA 30+099± TO STA 30+115±
REMOVE EXISTING PAVEMENT. GRADE GRAVEL FOR PARKING ACCESS FOR FISHERMEN. TOPSOIL AND SEED GRAVEL AREA ADJACENT TO PAVEMENT REMOVAL.

STA 30+067± TO STA 30+099±
REMOVE EXISTING BRIDGE SUPERSTRUCTURE. PIER TO BE CUT OFF AT 0.3m ABOVE STREAM BED.

STA. 30+050 LT TO STA. 30+067 LT
REMOVE AND DISPOSE GUARD RAIL

STA. 30+041 RT TO STA. 30+067 RT
REMOVE AND DISPOSE GUARD RAIL

STA. 10+117 LT TO STA. 30+063 RT
REMOVE EXISTING FENCE

10+153 ~~STA. 10+152.7~~, LT TO STA. 10+160.3 LT 160.6
GUARD RAIL APPROACH SECTION NETC 2 RAIL

STA 30+002 ± TO STA 30+067 ±
REMOVE EXISTING PAVEMENT & WESTERN APPROACH EMBANKMENT. TOPSOIL AND SEED.

10+137.8 STA. 10+~~139.5~~, LT TO STA. 10+162.4, LT 163.5
TREATED TIMBER CURB

STA. 10+140, LT 300mm x ~~3.7m OPTION PIPE~~ 6.1 CSP
PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

STA. 10+120.0 TO STA. 10+160.0
STONE FILL TYPE II FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE

10+126.3 STA. 10+~~087.9~~, LT TO STA. 10+~~152.7~~, LT 153
STEEL BEAM GUARD RAIL

STA 10+092.780
BEGIN PROJECT BRF-RS 0283(7)
END APPROACH CONSTRUCTION

10+114.9 10+126.3
STA. 10+~~076.5~~, LT TO STA. 10+087.9, LT
MANUFACTURED TERMINAL SECTION

STA. 10+030.0 TO STA. 10+046.0
COLD PLANE

STA 10+030.000
BEGIN APPROACH CONSTRUCTION
MATCH EXISTING PAVEMENT

50:1 TAPER

APPROX. EXIST. R.O.W.
VERMONT ROUTE 118
TO EAST BERKSHIRE
APPROX. EXIST. R.O.W.
DRIVE
GUY
153C
POLE 153C/25
9+021.5, 9.5m RT.

POLE 153C/26
9+082, 12.5m RT.

POLE 153C/27
10+042.2, 15.5m RT.

10+167.3 10+118.7
STA. 10+~~076.5~~, RT TO STA. 10+087.9, RT
MANUFACTURED TERMINAL SECTION

STA. 10+043, RT. & LT.
CLEAN EXISTING
1.5m x 0.9m PIPES (3)

APPROXIMATE AERIAL RELOCATION
ROUTE BY CITIZENS UTILITIES, BELL ATLANTIC-NEW ENGLAND, AND NORTH COUNTRY CABLE

118.7 153
STA. 10+~~087.9~~, RT TO STA. 10+~~152.7~~, RT
STEEL BEAM GUARD RAIL

POLE 153C/28
10+102.5, 18.5m RT.

STA. 10+120, RT 300mm x ~~4.3m OPTION PIPE~~ 5.5 CSP
PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET

VT RTE 118 STA 10+130.139=
OLD VT RTE 118 STA 30+000.000

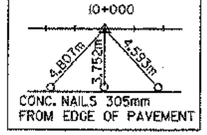
STA. 10+120.0 TO STA. 10+167.5
STONE FILL, TYPE IV FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE EXTENDING FROM STA. 10+020.0 TO STA. 10+160.0

10+118.7 STA. 10+~~120.5~~, RT TO STA. 10+~~162.4~~, RT 163.5
TREATED TIMBER CURB

STA. 10+120, RT TO STA. 10+165, RT
INSTALL PERMANENT SHEET PILING

153
STA. 10+~~152.7~~, RT TO STA. 10+~~160.3~~, RT 10+160.6
GUARD RAIL APPROACH SECTION NETC 2 RAIL

CENTERLINE TIES
VERMONT ROUTE 118
P.K. NAIL IN PAVEMENT
P.O.T. 10+000.000



CONC. NAILS 305mm FROM EDGE OF PAVEMENT

NOTE: SHEETS 20 & 21 HAVE BEEN REVISED TO REFLECT THE FACT THAT THE TROUT RIVER HAS MEANDERED. THE STREAMBANK IN THE AREA OF THE EASTERLY ABUTMENT HAS CHANGED. THE ONLY OTHER SHEETS REFLECTING THIS CHANGE ARE THE SECTIONS.

TRAVERSE #10	TRAVERSE #11
N. 1741.503	N. 1800.998
E. 1015.020	E. 1046.047
ELEV. 127.883	ELEV. 128.483

1st Post — 2nd Post — 3rd Post
27.610 — 29.695
IRON ROD w/DRILL HOLE — TIES TO TOP CENTER OF CONC. POSTS
1½ ST WF No. — TIES ON CORNER BOARDS — 1/4 DIA — IRON ROD w/DRILL HOLE

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

T.H. #42

NEW POLE
TH 42
19+913.4, 35m LT.

Sta 19+890.797
PI
LEDGE
LEDGE
19+900
19+880
19+860
19+867.045 STORY HOUSE
DRIVE
PC
Sta 19+882.237
PI
RELOCATED T.H. #42 CURVE #1
STA 30+117
REMOVE EXISTING DRIVE
STA 30+~~108.00~~
PLANK GUARDRAIL BARRICADE
WETLAND BUFFER
WETLAND BOUNDARY
BM#3 Ons.Ø
BRIDGE ABUT
ELEV. 128.358
886.2
STA. 19+~~885.8~~ RT
GUARD RAIL APPROACH END
(3.8m, 5m RADIUS, STD. G-1d)
ANCHOR FOR STEEL BEAM RAIL
2 TROUT RIVER
BM#2
CONC. POST
ELEV. 129.226
300 MM ELM
N 34° 27' 11" E
30.080
STA.10+214.5 TO STA. 10+340.0
STONE FILL, TYPE II FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE
(SAVE) ELM
208.7
STA. 10+~~209.0~~ LT
TO STA. 10+~~311.9~~, LT 260.9
TREATED TIMBER CURB
WATER CONTROL STRUCTURE (STONE FILL, TYPE II AND GEOTEXTILE
WETLAND BOUNDARY
CLUMP MAPLES
TRAV #10
TROUT RIVER BASELINE
OLD ROAD
(SAVE) 610mm DIA. MAPLE
(REMOVE) 610mm DIA. MAPLE (CLUMP OF TREES) 2-205mm AND
610mm DIA. MAPLE
610mm DIA. MAPLE
305mm DIA. MAPLE
610mm DIA. MAPLE
150mm DIA. MAPLE
MATCHLINE STA 10+250
89° 59' 56.9"
N 82° 22' 24.8" E
10+340
10+320
10+300
10+280
10+260
10+240
10+220
10+200
10+180
10+160
10+140
10+120
10+100
10+080
10+060
10+040
10+020
10+000
+092.78
+057.0
1.5 m
3.3m
CZ
28
26
STA 10+163.300
STOP ROADWAY
BEGIN BRIDGE
ELEV. 129.417
POLE 153C/29
10+162.5, 21.3m RT.
VT ROUTE 118 STA 10+189.703=
TROUT RIVER BASELINE
STA 1+030.002
STA 10+208.700
END BRIDGE
RESUME ROADWAY
ELEV. 130.191
PROPOSED NEW CHANNEL
10+211.4 STA. 10+~~211.4~~, LT TO STA. 10+~~218.7~~, LT 219.0
GUARD RAIL APPROACH SECTION NETC 2 RAIL
STA. 10+209.0, LT TO STA. 10+258.0, LT
TREATED TIMBER CURB
STA. 10+220, LT 300mm x ~~5.5m OPTION PIPE~~ 4.3 CSP
~~WITH PIPE ELBOWS (2-28°)~~, PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE, AND 0.6m x 1.2m x 0.6m STONE FILL TYPE II PAD AT OUTLET
10+211.4 STA. 10+~~211.4~~, RT. TO STA. 10+~~218.7~~ RT 10+219.0
GUARD RAIL APPROACH SECTION NETC 2 RAIL
STA. 10+220, RT 300mm x ~~3.4m OPTION PIPE~~ 3.7 CSP
PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE. 0.6m W/O GRUBBING MATERIAL DOWN SIDESLOPE AT PIPE OUTLET.
219.0
STA. 10+~~218.7~~, LT TO
REL. T.H. #42 STA. 20+051.5, RT
STEEL BEAM GUARD RAIL
STA. 10+209.5, RT
TO STA 10+260, RT
INSTALL PERMANENT SHEET PILING
POLE 153C/31
10+243, 25.5m RT.
STA. 10+209 TO STA. 10+273
PLACE SURCHARGE
SEE TRAFFIC CONTROL PLAN, PHASE 1
219.0 400.6
STA. 10+~~218.7~~, RT TO STA. 10+~~401.6~~, RT
STEEL BEAM GUARD RAIL
400.6
218.7 STA. 10+~~209.0~~, RT TO STA. 10+~~401.6~~, RT
TREATED TIMBER CURB
STA. 10+204.5 TO STA. 10+260.0
STONE FILL, TYPE IV FOR SLOPE STABILIZATION WITH GRUBBING MATERIAL AND GEOTEXTILE EXTENDING FROM STA. 10+214.5 TO STA. 10+260.0

0 10 20 30
SCALE 1:500

PLAN

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837BDR.DGN
IPARM FILE NAME: L01.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 18-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 20 OF 140

78/184/2184PL1

VT RTE 118 CURVE DATA CURVE 1	RELOCATED T.H. #42 CURVE DATA CURVE 2	RELOCATED T.H. #42 CURVE DATA CURVE 3	RELOCATED T.H. #42 CURVE DATA CURVE 4	FIELD DRIVE CURVE DATA CURVE 5
Δ=43°12'36.1" RT R=235.00 m T=93.07 L=177.22 E=17.76 e_{MAX}=0.0800 ENTRANCE TANGENT N 82°22'24.8" E EXIT TANGENT S 54°24'59.1" E	Δ=34°19'01.6" RT R=75.00 m T=23.16 L=44.92 E=3.49 e_{MAX}=EXISTING X-SLOPE ENTRANCE TANGENT S 67° 58'45.0" E EXIT TANGENT S 77°42'13.3" E	Δ=23°07'35.4" RT R=100.00 m T=20.46 L=40.36 E=2.07 e_{MAX}=EXISTING X-SLOPE ENTRANCE TANGENT S 77° 42'13.3" E EXIT TANGENT S 54°34'37.9" E	Δ=63°33'05.0" RT R=30.00 m T=18.58 L=33.28 E=5.29 e_{MAX}=0.0322 ENTRANCE TANGENT S 54°34'12.3" E EXIT TANGENT S 08°58'52.7" W	Δ=66° 21'00.0" RT R=24.00 m T=15.69 L=27.79 E=4.67 e_{MAX}=0.0200 ENTRANCE TANGENT N 30°23'12.2" E EXIT TANGENT N 83°15'47.8" E

FIELD DRIVE CURVE DATA CURVE 6	FIELD DRIVE CURVE DATA CURVE 7
Δ=14°11'26.9" RT R=220.00 m T=27.38 L=54.49 E=1.70 e_{MAX}=0.0200 ENTRANCE TANGENT S 83°15'47.8" E EXIT TANGENT S 69°04'20.9" E	Δ=87°58'53" LT R=8.073 T=7.793 L=12.397 E=3.148 e_{MAX}=0.0482 ENTRANCE TANGENT S 69°04'20.9" E EXIT TANGENT N 22°56'46" E

DRIVEWAY TABLE			
DRIVEWAY LOCATION	RADIUS	WIDTH	REMARKS
T.H. #42 20+069, LT.	6m	5.5m	GRAVEL
VT RTE 118 10+423, RT.	3.6m LT., 2.5m RT.	15.0m	GRAVEL
VT RTE 118 10+480, LT.	3m	3.6m	GRAVEL

CENTERLINE TIES					
VERMONT ROUTE 118		RELOCATED T.H. # 42			
P.K. NAIL IN PAVEMENT PI 10+390.706 BK= PI 10+381.793 AHD.	P.K. NAIL IN PAVEMENT PT 10+474.866	P.K. NAIL IN PAVEMENT P.O.T. 20+000.000	P.K. NAIL IN PAVEMENT PC 20+056.147	P.K. NAIL IN PAVEMENT PI 20+074.730 BK= PI 20+070.839 AHD.	PT 20+089.422 P.O.T. 20+096.923
CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT	CONC. NAILS 305mm FROM EDGE OF PAVEMENT

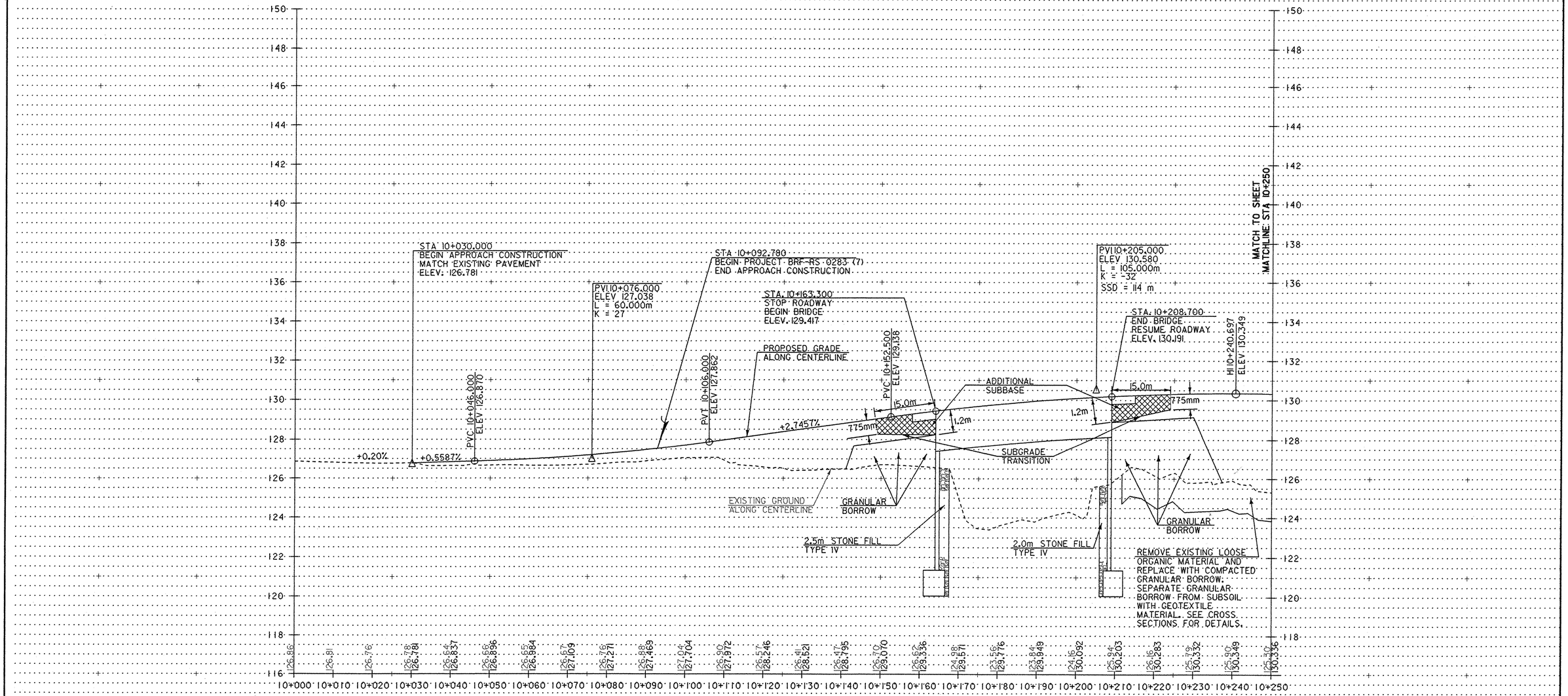
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SCALE 1:500

PLAN	PROJECT: BERKSHIRE	PROJECT NO.: BRF-RS 0283(7)
	DESIGN FILE NAME: 02837BDR.DGN IPARM FILE NAME: L02.I SURVEYED BY: SQUAD LEADER:	PLOT DATE: 18-FEB-2000 SURVEY DATE: DRAWN BY: C. MABY SHEET: 21 OF 140

78F184(21)84PL2

VAOT Metric



VERMONT ROUTE 118

DATUM

VERTICAL NGVD 1929

HORIZONTAL N/A

0 10 20
SCALE IN METERS

4 0
SCALE IN METERS

PROFILE

PROJECT: BERKSHIRE

PROJECT NO.: BRF-RS 0283(7)

DESIGN FILE NAME: /usr5/j9145620/02837bdr.dgn

IPARM FILE NAME: PR01.I

SURVEYED BY:

SQUAD LEADER:

PLOT DATE: 18-FEB-2000

SURVEY DATE:

DRAWN BY: C. MABY

SHEET: 22 OF 140

78f184/zf184PF1

MATCHLINE STA. 20+250
MATCH TO SHEET

PVT. 10+257.500
ELEV. 130.305

PVC. 10+260.000
ELEV. 130.292

LO. 10+274.686
ELEV. 130.254

PROPOSED GRADE
ALONG CENTERLINE

PVI 10+335.000
ELEV. 129.900
L = 150.000m
K = 28

VT. RTE. 118 STA. 10+365.760=
RELOCATED T.H. #42 STA. 20+096.923=
FIELD DRIVE STA. 40+044.980
ELEV. 131.730

PROPOSED GRADE
ALONG CENTERLINE

PVT. 10+400.000
ELEV. 133.514

VT. RTE. 118 STA. 10+423.000=
FIELD DRIVE STA. 40+126.707
ELEV. 134.491

PVC. 10+445.000
ELEV. 135.201

STA. 10+490.250
END PROJECT BRF-RS 0283(7)
BEGIN APPROACH CONSTRUCTION

PVI 10+485.000
ELEV. 137.129
L = 80.000m
K = -43
SSD = 150 m

STA. 10+533.400
END APPROACH CONSTRUCTION
MATCH EXISTING PAVEMENT
ELEV. 138.569

PVT. 10+525.000
ELEV. 138.369

-0.523%
+4.819%
+2.974%
+2.40%

EXISTING GROUND
ALONG CENTERLINE

REMOVE EXISTING LOOSE ORGANIC MATERIAL AND REPLACE WITH COMPACTED GRANULAR BORROW. SEPARATE GRANULAR BORROW FROM SUBSOIL WITH GEOTEXTILE MATERIAL. SEE CROSS SECTIONS FOR DETAILS.

10+250	10+260	10+270	10+280	10+290	10+300	10+310	10+320	10+330	10+340	10+350	10+360	10+370	10+380	10+390	10+400	10+410	10+420	10+430	10+440	10+450	10+460	10+470	10+480	10+490	10+500	10+510	10+520	10+530	10+540	10+550
25.39	25.41	25.42	25.36	25.18	25.14	25.44	25.64	25.58	26.97	27.71	28.55	28.81	29.08	29.44	29.86	30.52	31.71	32.74	33.46	34.17	34.88	35.54	36.21	36.85	37.40	37.88	38.12	38.48	38.72	39.04
130.336	130.292	130.258	130.259	130.296	130.368	130.476	130.620	130.799	131.014	131.264	131.550	131.872	132.229	132.622	133.050	133.514	133.996	134.478	134.960	135.439	135.898	136.334	136.747	137.137	137.503	137.847	138.167	138.468	138.72	138.91

VERMONT ROUTE 118

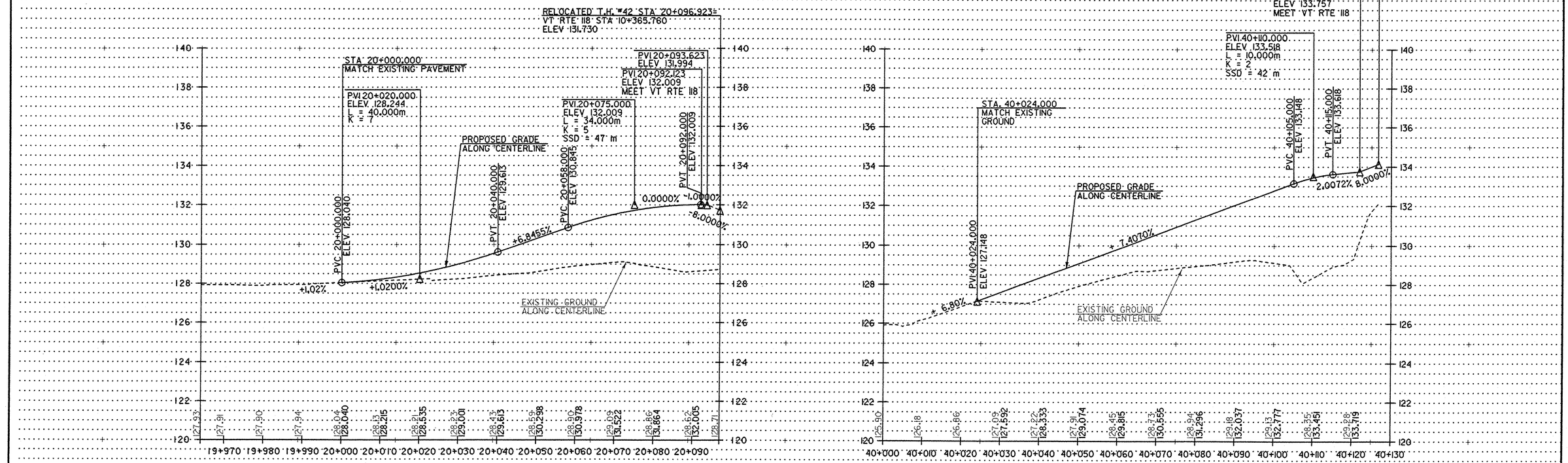
DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

SCALE IN METERS
0 10 20
4 0

PROFILE

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: /usr5/J9145620/02837bdr.dgn
IPARM FILE NAME: PR02.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 23 OF 140

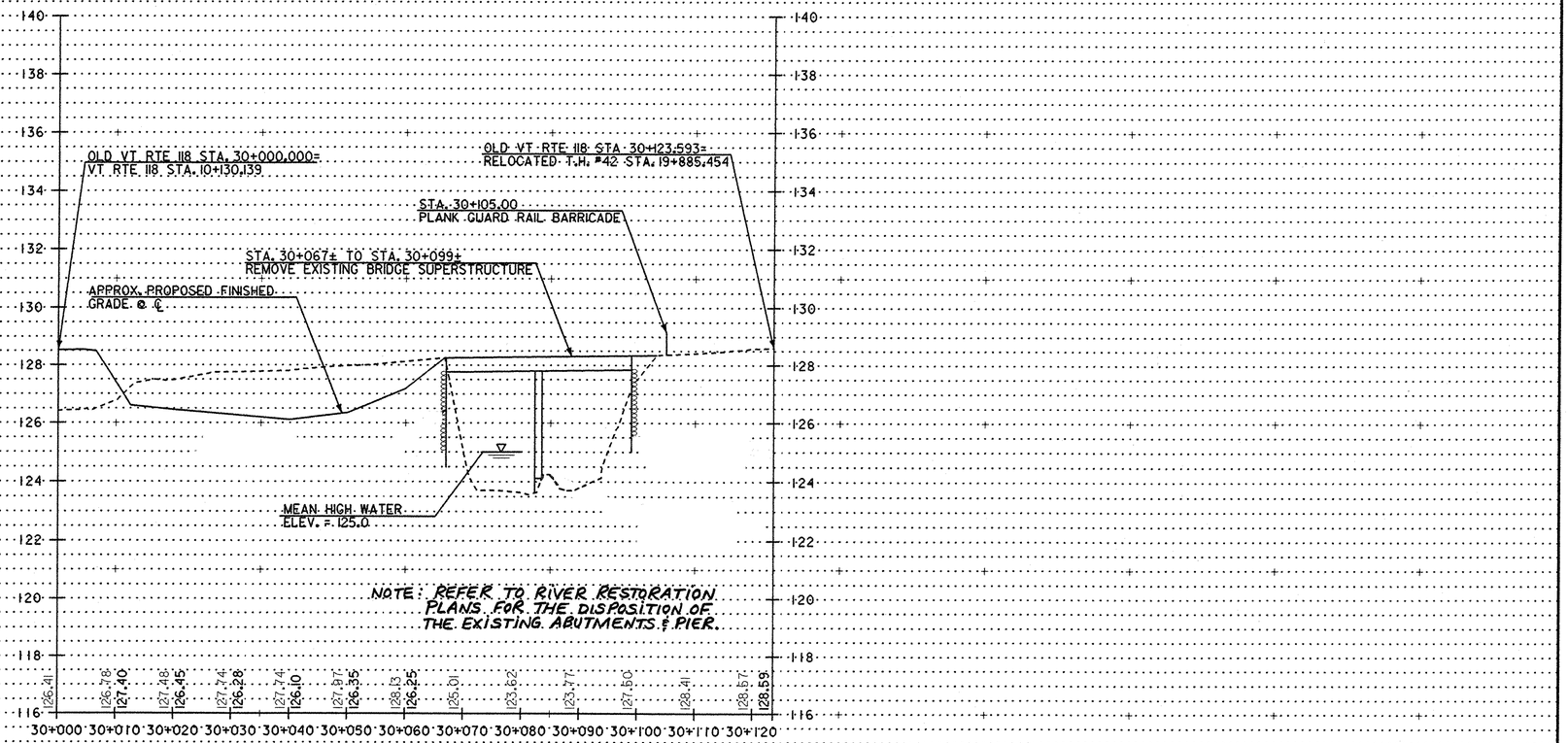
78f184/zf184PF2



DATUM		PROJECT:	PROJECT NO.:
VERTICAL	NGVD 1929	BERKSHIRE	BRF-RS 0283(7)
HORIZONTAL	N/A	DESIGN FILE NAME: p:\j9145620\02837bdr.dgn	
		IPARM FILE NAME: PR03.i	PLOT DATE: 16-FEB-2000
		SURVEYED BY:	SURVEY DATE:
		SQUAD LEADER:	DRAWN BY: C. MABY
		PROFILE	SHEET: 24 OF 140

78f184/zf184PF3

VAOT Metric



OLD VERMONT ROUTE 118

SCALE IN METERS
0 10 20
4 0

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

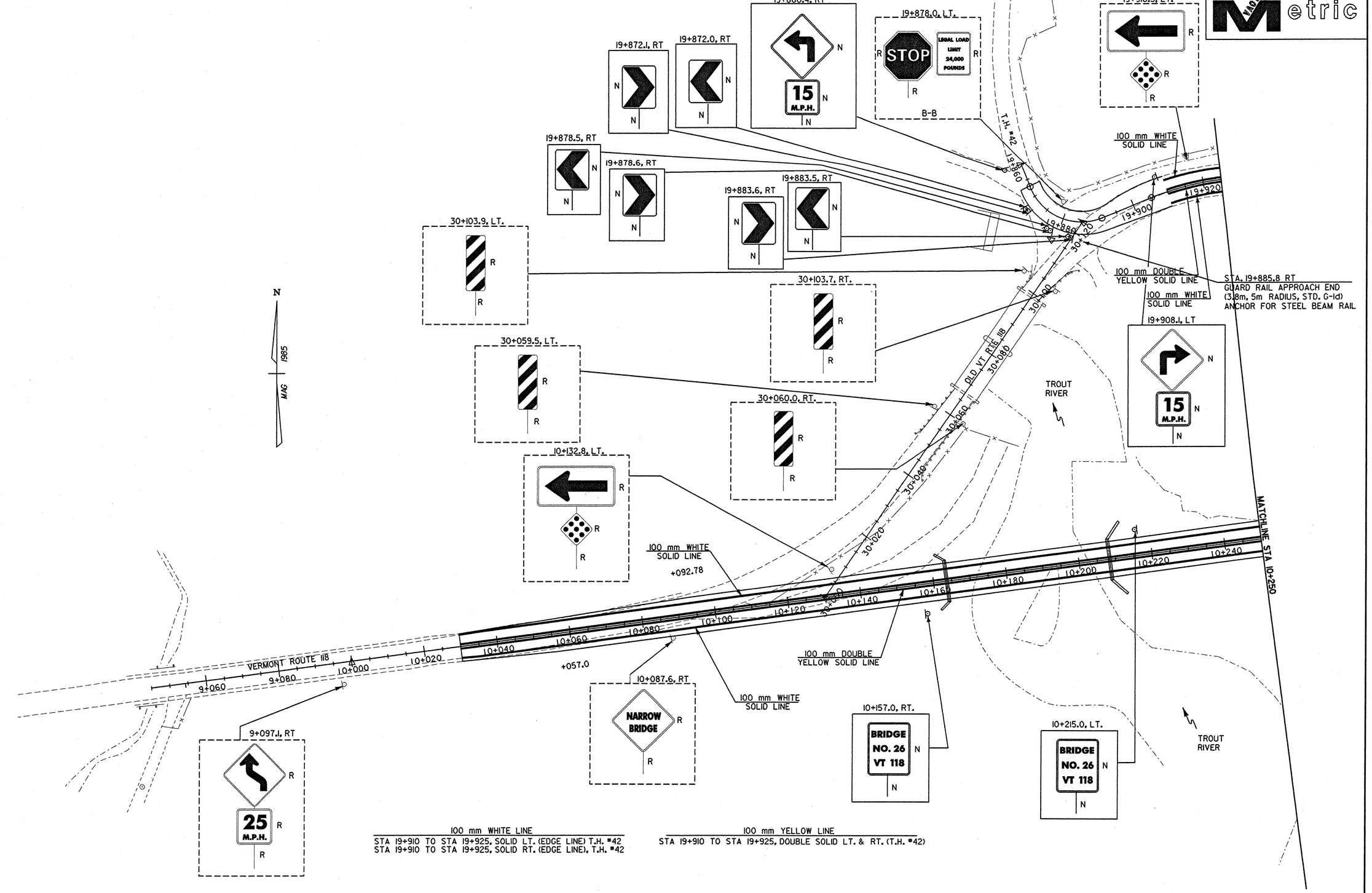
PROFILE

PROJECT: BERKSHIRE

PROJECT NO.: BRF-RS 0283(7)

DESIGN FILE NAME: p:\J9145620\02837bdr.dgn
IPARM FILE NAME: RPRTPROF.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 25 OF 140

781184/z184PF4



100 mm WHITE LINE
STA 19+910 TO STA 19+925, SOLID LT. (EDGE LINE) T.H. #42
STA 19+910 TO STA 19+925, SOLID RT. (EDGE LINE), T.H. #42

100 mm YELLOW LINE
STA 19+910 TO STA 19+925, DOUBLE SOLID LT. & RT. (T.H. #42)

TEMPORARY AND DURABLE 100 mm WHITE LINE
STA 10+030 TO STA 10+250, SOLID LT. (EDGE LINE)
STA 10+030 TO STA 10+250, SOLID RT. (EDGE LINE)

TEMPORARY AND DURABLE 100 mm YELLOW LINE
STA 10+030 TO STA 10+250, DOUBLE SOLID LT. & RT.

REMOVING SIGNS
AS SHOWN - 13

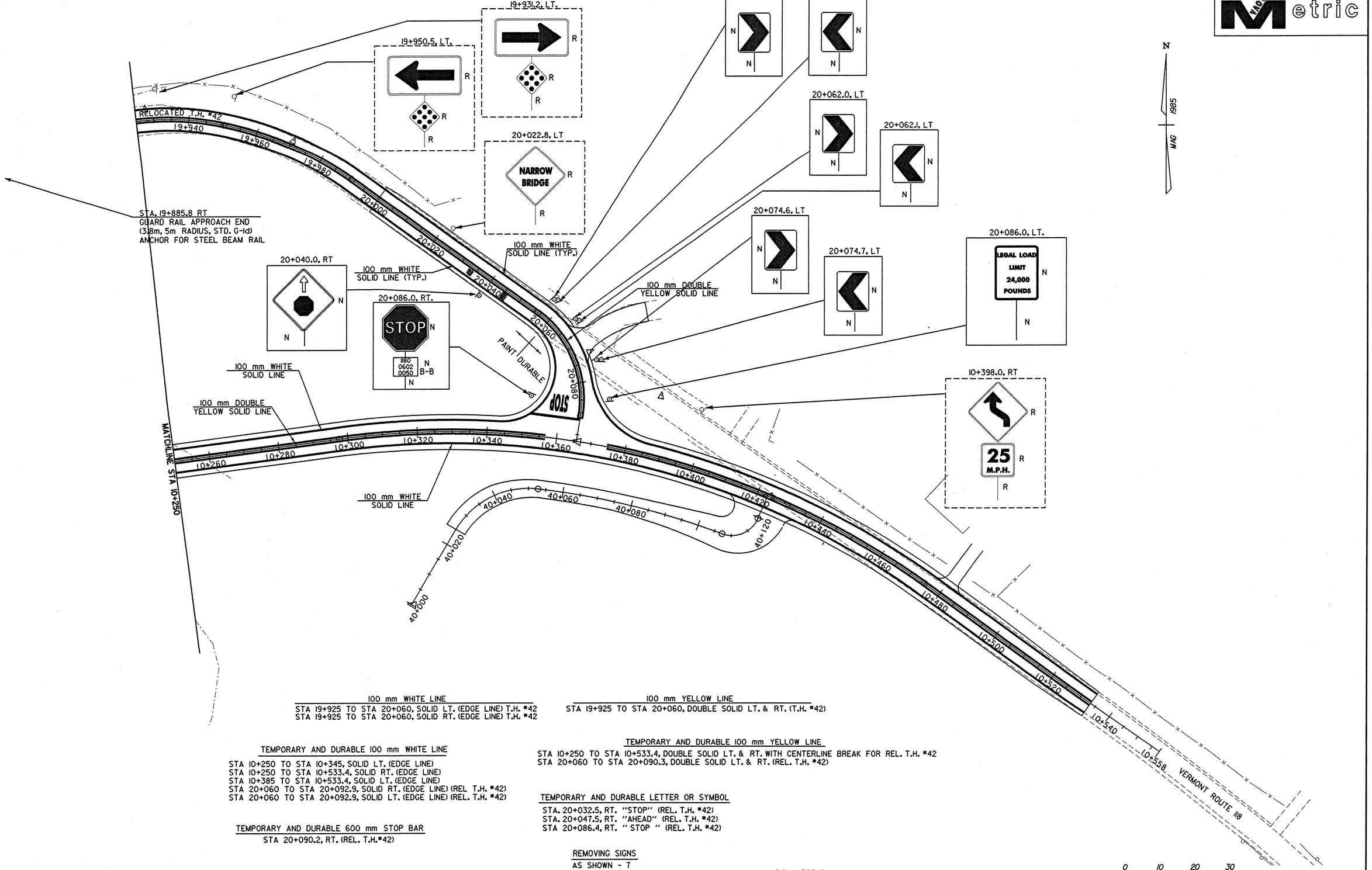
SIGN LEGEND
R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING = ------
NEW = ——————

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PAVEMENT MARKING AND SIGN LAYOUT

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837BDR.DGN
IPARM FILE NAME: SIGN01.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 26 OF 140

78F184/zf184PM1



100 mm WHITE LINE

STA 19+925 TO STA 20+060, SOLID LT. (EDGE LINE) T.H. #42
STA 19+925 TO STA 20+060, SOLID RT. (EDGE LINE) T.H. #42

100 mm YELLOW LINE

STA 19+925 TO STA 20+060, DOUBLE SOLID LT. & RT. (T.H. #42)

TEMPORARY AND DURABLE 100 mm WHITE LINE

STA 10+250 TO STA 10+345, SOLID LT. (EDGE LINE)
STA 10+250 TO STA 10+533.4, SOLID RT. (EDGE LINE)
STA 10+385 TO STA 10+533.4, SOLID LT. (EDGE LINE)
STA 20+060 TO STA 20+092.9, SOLID RT. (EDGE LINE) (REL T.H. #42)
STA 20+060 TO STA 20+092.9, SOLID LT. (EDGE LINE) (REL. T.H. #42)

TEMPORARY AND DURABLE 100 mm YELLOW LINE

STA 10+250 TO STA 10+533.4, DOUBLE SOLID LT. & RT. WITH CENTERLINE BREAK FOR REL. T.H. #42
STA 20+060 TO STA 20+090.3, DOUBLE SOLID LT. & RT. (REL. T.H. #42)

TEMPORARY AND DURABLE 600 mm STOP BAR

STA 20+090.2, RT. (REL. T.H. #42)

TEMPORARY AND DURABLE LETTER OR SYMBOL

STA. 20+032.5, RT. "STOP" (REL. T.H. #42)
STA. 20+047.5, RT. "AHEAD" (REL. T.H. #42)
STA 20+086.4, RT. " STOP " (REL. T.H. #42)

REMOVING SIGNS

AS SHOWN - 7

SIGN LEGEND

R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING = ------
NEW = ——————

DATUM

VERTICAL NGVD 1929
HORIZONTAL N/A

PAVEMENT MARKING AND SIGN LAYOUT

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837BDR.DGN
IPARM FILE NAME: SIGN02.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 27 OF 140

78f184/zf184PM2

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

Last Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW AND SALVAGED SIGNS "A"	"B"	SALV. SIGN	SALV. T.I.S.	EXIST. POST RETAIN	EXIST. POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) kg/m 44 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) kg/m 75 1.9	100 2.5	100 MOD. 2.5	TUBULAR STEEL Ø (mm) FOUNDATION	75 11.3	89 13.4	100 16.1	125 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
VT. ROUTE 118 10+157.0, RT.	BRIDGE NO. 26 VT 118	1	150	200	0.03						1		3.05 X			X		X															VD - 701		E-134
10+215.0, LT.	BRIDGE NO. 26 VT 118	1	150	200	0.03						1		3.05 X			X		X															VD - 701		E-134
T.H. #42 19+860.4, RT.		1	750	750	0.56						1			4.88 X			X	X															W 1 - 1L		E-151
	15 M.P.H.	1	450	450	0.20																												W 13 - 1 SPEED RECOMMENDATION TO BE VERIFIED BY CONSULTANT USING BALL BANK INDICATOR UPON COMPLETION OF CONSTRUCTION OF CURVE.		E-155
19+872.0, RT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
19+872.1, RT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
19+878.5, RT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
19+878.6, RT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
19+883.5, RT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
19+883.6, RT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
19+908.1, LT.		1	750	750	0.56						1			4.88 X			X	X															W 1 - 1R		E-151
	15 M.P.H.	1	450	450	0.20																												W 13 - 1 SPEED RECOMMENDATION TO BE VERIFIED BY CONSULTANT USING BALL BANK INDICATOR UPON COMPLETION OF CONSTRUCTION OF CURVE.		E-155
					m²	m²	EA.	m²			m	m	m		m	m	m		EA.	kg	kg	kg		kg	kg	kg	kg								
												28.4	9.3			21.2	7.5																		
				TOTAL THIS SHEET	2.42							37.7				28.7																				
				TOTALS	m² 2.42	m²	EA.	m²				m 37.7				m 28.7					kg			EA.					EA.	EA.	kg					

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 AND SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: p:\19145620\02837frm.dgn
IPARM FILE NAME: TRAFSUM.i
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 11-FEB-2000
SURVEY DATE:
DRAWN BY: C. TOWERS
SHEET: 28 OF 140

78f184/zf184ts1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

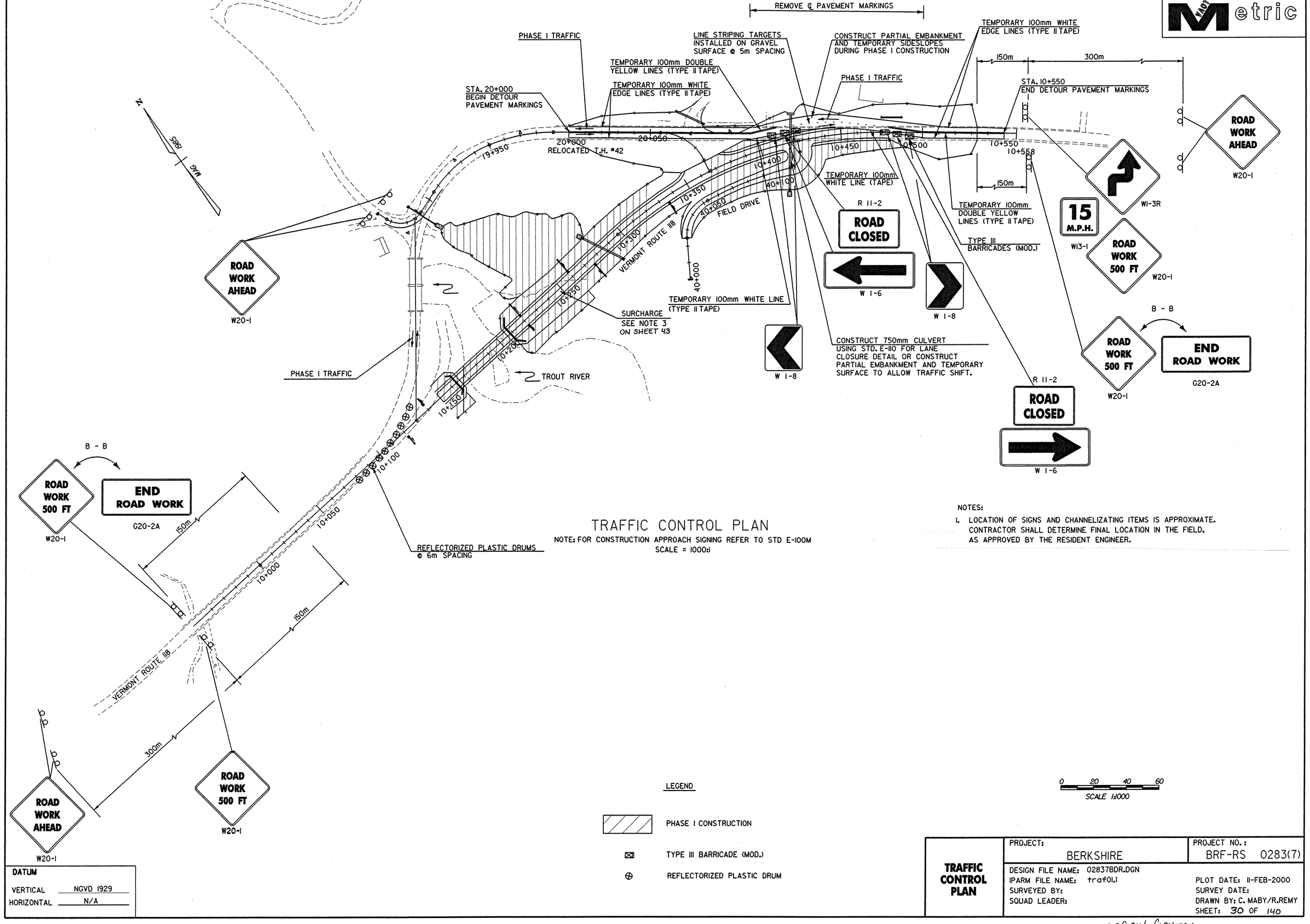
Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW AND SALVAGED SIGNS "A"	"B"	SALV. SIGN	SALV. T.L.S.	EXIST. POST RETAIN	EXIST. POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) kg/m 44 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) kg/m 75 1.9	100 2.5	100 MOD. 2.5	TUBULAR STEEL Ø (mm) FOUNDATION	kg/m 75 11.3	89 13.4	100 16.1	125 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
T.H. #42 20+040.0, RT.		1	750	750	0.56						1			4.27 X			X	X															W 3 - 1A		E-150
20+055.0, LT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
20+055.1, LT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
20+062.0, LT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
20+062.1, LT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
20+074.6, LT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
20+074.7, LT.		1	300	450	0.14						1		3.66 X			X		X															W 1 - 8		E-150
20+086.0, RT.		1	750	750	0.56						1			4.27 X			X	X															R 1 - 1		E-143
		1	150	200	0.03																											BACK-TO-BACK WITH ABOVE APPLICATION		E-138
20+086.0, LT.		1	600	750	0.45						1			4.27 X			X	X															VR - 017		E-141
TOTAL THIS SHEET					m^2 2.44	m^2	EA.	m^2				m	m 23.4	m 12.7	m	m 18.0	m 10.0	EA.	kg	kg	kg		kg	kg	kg	kg									
												36.1			28.0																				
TOTALS					m^2 4.86	m^2	EA.	m^2				m 73.8			m 56.7				kg			EA.	kg				EA.	EA.	kg						

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 AND SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: p:\J9145620\02837frm.dgn
PARM FILE NAME: TRAFSUM2.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 11-FEB-2000
SURVEY DATE:
DRAWN BY: C. TOWERS
SHEET: 29 OF 140

76+184/zf184TS2



TRAFFIC CONTROL PLAN

NOTE: FOR CONSTRUCTION APPROACH SIGNING REFER TO STD E-100M
SCALE = 1000:1

NOTES:

1. LOCATION OF SIGNS AND CHANNELIZATING ITEMS IS APPROXIMATE. CONTRACTOR SHALL DETERMINE FINAL LOCATION IN THE FIELD, AS APPROVED BY THE RESIDENT ENGINEER.

LEGEND

- PHASE I CONSTRUCTION
- TYPE III BARRICADE (MOD.)
- REFLECTORIZED PLASTIC DRUM

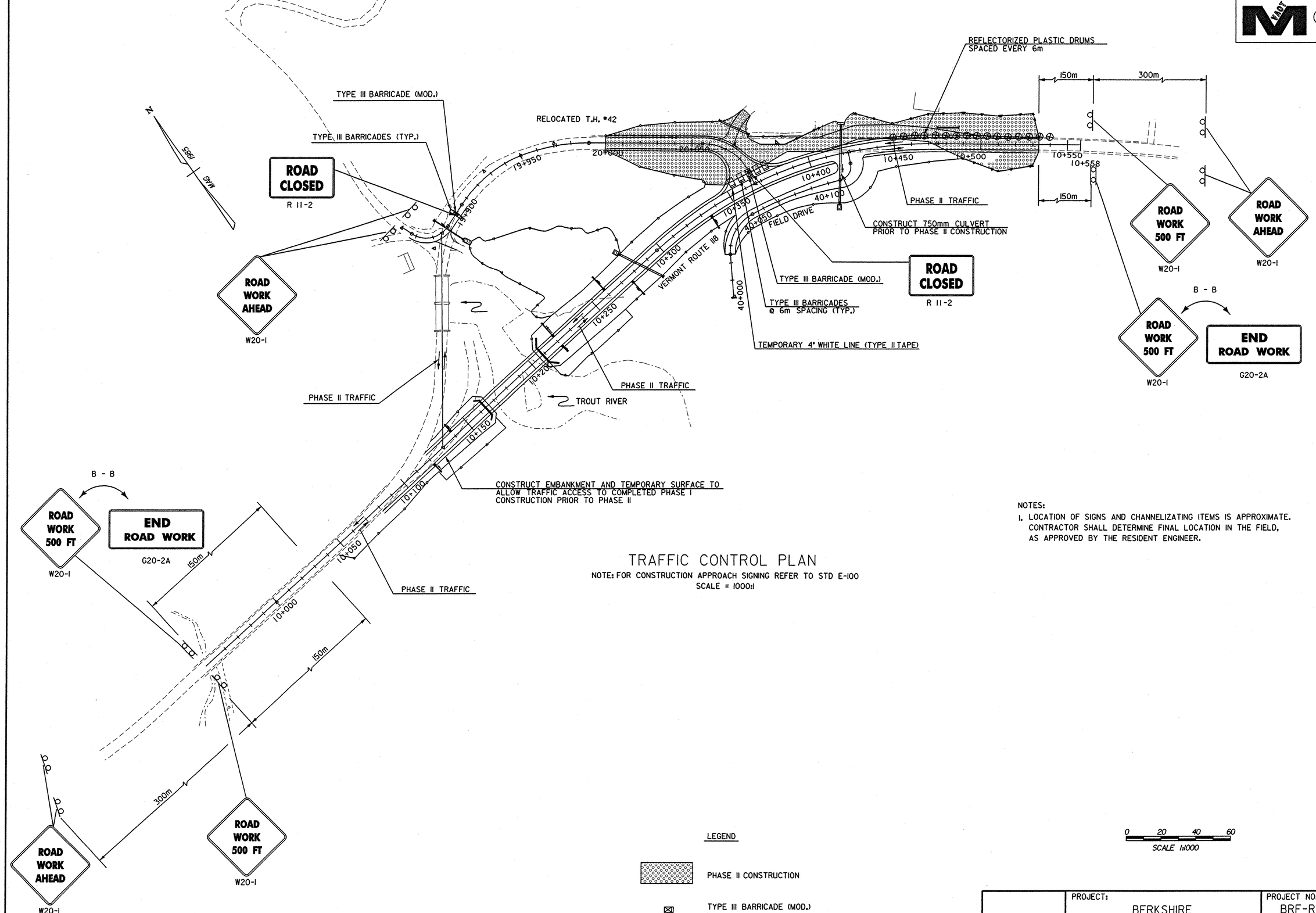
0 20 40 60
SCALE 1:1000

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

TRAFFIC CONTROL PLAN

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837BDR.DGN
IPARM FILE NAME: traf01.i
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 11-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY/R.REMY
SHEET: 30 OF 140

78f184/zf184TC1



NOTES:

1. LOCATION OF SIGNS AND CHANNELIZATING ITEMS IS APPROXIMATE. CONTRACTOR SHALL DETERMINE FINAL LOCATION IN THE FIELD, AS APPROVED BY THE RESIDENT ENGINEER.

TRAFFIC CONTROL PLAN

NOTE: FOR CONSTRUCTION APPROACH SIGNING REFER TO STD E-100
SCALE = 1000:1

LEGEND

- PHASE II CONSTRUCTION
- TYPE III BARRICADE (MOD.)
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM

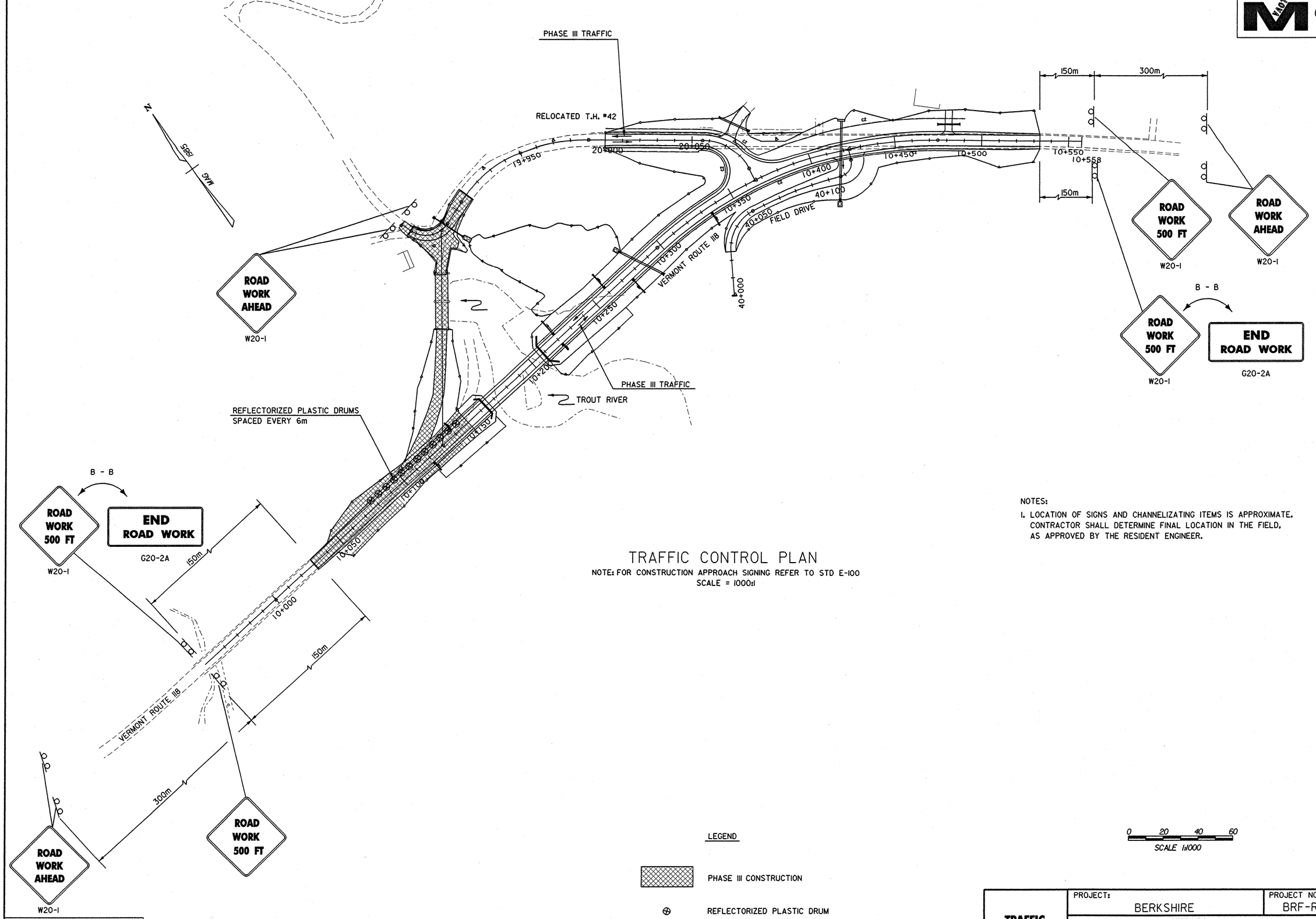
0 20 40 60
SCALE 1:1000

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

TRAFFIC CONTROL PLAN

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837BDR.DGN
IPARM FILE NAME: traf02.i
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 11-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY/R.REMY
SHEET: 31 OF 140

78f184/zf184tc2



TRAFFIC CONTROL PLAN

NOTE: FOR CONSTRUCTION APPROACH SIGNING REFER TO STD E-100
SCALE = 1000:1

NOTES:

1. LOCATION OF SIGNS AND CHANNELIZATING ITEMS IS APPROXIMATE. CONTRACTOR SHALL DETERMINE FINAL LOCATION IN THE FIELD, AS APPROVED BY THE RESIDENT ENGINEER.

LEGEND

PHASE III CONSTRUCTION

REFLECTORIZED PLASTIC DRUM

0 20 40 60
SCALE 1:1000

DATUM

VERTICAL NGVD 1929
HORIZONTAL N/A

TRAFFIC CONTROL PLAN

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: 02837BDR.DGN
IPARM FILE NAME: traf03.i
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 11-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY/R.REMY
SHEET: 32 OF 140

78f184/zf184tc3

RELOCATED CULVERT

CULVERT TO BE REMOVED

N

MAG 1985

DRIVE

1 STORY HOUSE

PORCH

TROUT RIVER

OLD ROAD

PROPOSED NEW CHANNEL

GULLY

SAVE

SEE DETAIL SHEET 33

REMOVE

SEE NOTE 2

WETLAND BUFFER

WETLAND BOUNDARY

AH-1

AH-2

AH-3

A

A'

B

B'

C

C'

CL

NOTES:

1) SOME VARIATION FROM THE PROPOSED CONTOURS SHOWN ON THIS PLAN IS ACCEPTABLE. HOWEVER, THE GRADING MUST CONFORM TO THE CONCEPT AND ELEVATIONS PRESENTED HERE; MUST PROVIDE AN IRREGULARLY SHAPED AND SLOPED BASIN; AND WILL BE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE VAOT.

2) THIS CROSS CULVERT IS A MAJOR WATER SOURCE TO THE CONSTRUCTED WETLAND AND THE LOCATION SHALL NOT BE REVISED WITHOUT APPROVAL OF THE VAOT.

LEGEND

125.25 — PROPOSED CONTOURS

A — A' — WETLAND CROSS SECTION LOCATION

AH-2 — AUGER HOLE

0 10 20 30

SCALE 1:400

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

WETLAND MITIGATION PLAN

GRADING PLAN

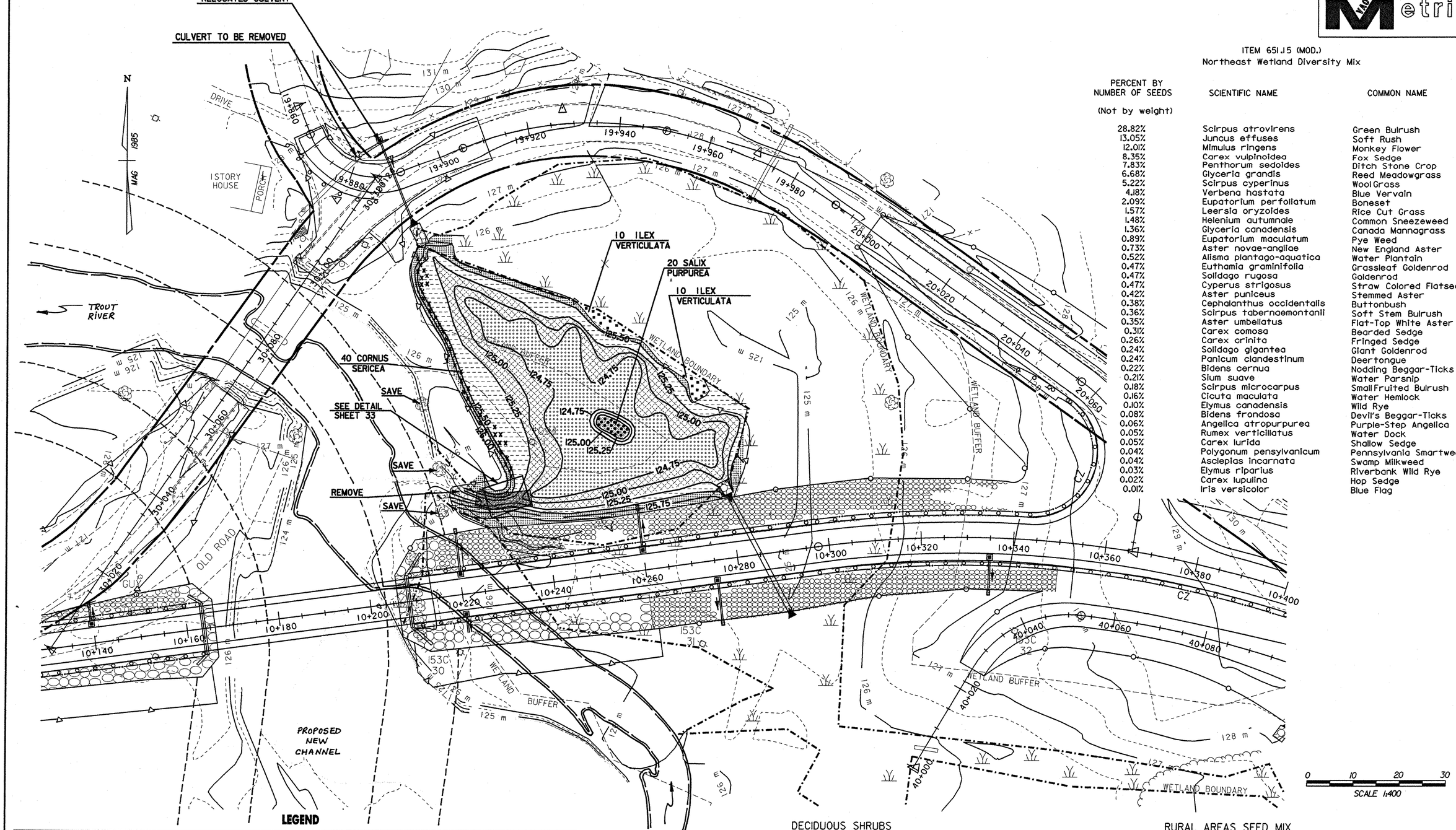
PROJECT: BERKSHIRE

PROJECT NO.: BRF-RS 0283 (7)

DESIGN FILE NAME: wetmitgr.dgn
IPARM FILE NAME: wetmitgr.i
SURVEYED BY:
SQUAD LEADER:

PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 35 OF 140

78f184/zf184wm1



ITEM 651.15 (MOD.)
Northeast Wetland Diversity Mix

PERCENT BY NUMBER OF SEEDS (Not by weight)	SCIENTIFIC NAME	COMMON NAME
28.82%	Scirpus atrovirens	Green Bulrush
13.05%	Juncus effuses	Soft Rush
12.01%	Mimulus ringens	Monkey Flower
8.35%	Carex vulpinoidea	Fox Sedge
7.83%	Penthorum sedoides	Ditch Stone Crop
6.68%	Glyceria grandis	Reed Meadowgrass
5.22%	Scirpus cyperinus	Wool Grass
4.18%	Verbena hastata	Blue Vervain
2.09%	Eupatorium perfoliatum	Boneset
1.57%	Leersia oryzoides	Rice Cut Grass
1.48%	Helenium autumnale	Common Sneezeweed
1.36%	Glyceria canadensis	Canada Mannagrass
0.89%	Eupatorium maculatum	Pye Weed
0.73%	Aster novae-angliae	New England Aster
0.52%	Alisma plantago-aquatica	Water Plantain
0.47%	Euthamia graminifolia	Grassleaf Goldenrod
0.47%	Solidago rugosa	Goldenrod
0.47%	Cyperus strigosus	Straw Colored Flatsedge
0.42%	Aster puniceus	Stemmed Aster
0.38%	Cephalanthus occidentalis	Buttonbush
0.36%	Scirpus tabernaemontanii	Soft Stem Bulrush
0.35%	Aster umbellatus	Flat-Top White Aster
0.31%	Carex comosa	Bearded Sedge
0.26%	Carex crinita	Fringed Sedge
0.24%	Solidago gigantea	Giant Goldenrod
0.24%	Panicum clandestinum	Deertongue
0.22%	Bidens cernua	Nodding Beggar-Ticks
0.21%	Sium suave	Water Parsnip
0.18%	Scirpus microcarpus	Small Fruited Bulrush
0.16%	Cicuta maculata	Water Hemlock
0.10%	Elymus canadensis	Wild Rye
0.08%	Bidens frondosa	Devil's Beggar-Ticks
0.06%	Angelica atropurpurea	Purple-Step Angelica
0.05%	Rumex verticillatus	Water Dock
0.05%	Carex lurida	Shallow Sedge
0.04%	Polygonum pensylvanicum	Pennsylvania Smartweed
0.04%	Asclepias incarnata	Swamp Milkweed
0.03%	Elymus riparius	Riverbank Wild Rye
0.02%	Carex lupulina	Hop Sedge
0.01%	Iris versicolor	Blue Flag

LEGEND

ZONE		SPECIES	TYPE / QUANTITY	ITEM NO.
A	OPEN WATER (> 300 mm)	[1] UNPLANTED	———	———
B	PERMANENTLY INUNDATED / SATURATED	[1] TYPHA LATIFOLIA/ PHALARIS ARUNDINACCA	TRANSPLANT WETLAND TOPSOIL	———
C	TEMPORARILY FLOODED / SEASONALLY SATURATED	[1,2] NORTHEAST WETLAND DIVERSITY MIX	2.2 kg/ha (2lb/ac)	651.15 (MOD.)
D	UPLAND	RURAL AREAS SEED MIX	33 kg/ha (30lb/ac)	651.15

DECIDUOUS SHRUBS

SPECIES	TYPE / QUANTITY	ITEM NO.
X CORNUS SERICEA (RED-OSIER DOGWOOD)	40; 60-90 cm (24-36 in.) CONT.; STAGGER ALONG BASE OF SLOPE AND AS SHOWN; 2 m (6 ft.) ON CENTER	656.35
■ ILEX VERTICULATA (WINTERBERRY)	20; 60-90 cm (24-36 in.) CONT.; 2 m (6 ft) ON CENTER	656.35
● SALIX PURPUREA (STREAMCO WILLOW)	20; 60 cm (24in.) ROOTED CUTTINGS; 2 m (6 ft) ON CENTER	656.35

RURAL AREAS SEED MIX

% WT.	kg/ha	NAME	PUR. %	GERM %
37.5	37.5	CREEPING RED FESCUE	98	85
37.5	37.5	TALL FESCUE	95	90
5.0	37.5	RED TOP	95	90
15.0	37.5	BIRDSFOOT TREFOIL	98	85
5.0	37.5	ANNUAL RYEGRASS	95	85
100.0	37.5			

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

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

[1] TO BE ADDITIONALLY SEEDED WITH WINTER RYEGRASS (ITEM 651.17) AT A RATE OF 5.6 kg/ha (5lb/ac) FOR TEMPORARY STABILIZATION.

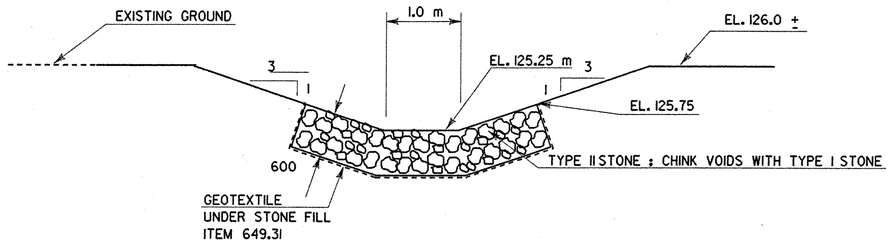
[2] AVAILABLE FROM SOUTHERN TIER CONSULTING, INC., WEST CLARKSVILLE, N.Y., OR SUBSTITUTE AS APPROVED BY VAOT.

WETLAND MITIGATION PLAN

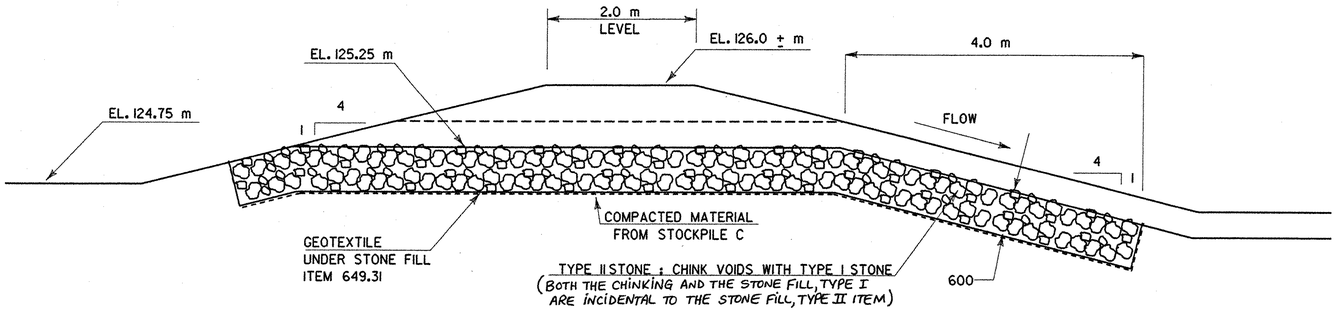
LANDSCAPE PLAN

PROJECT: BERKSHIRE
PROJECT NO.: BRF-RS 0283 (7)
DESIGN FILE NAME: p:\j9145620\wetmitpp.dgn
IPARM FILE NAME: wetmitpp.i
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 36 OF 140

78f184/zf184WM2



CROSS SECTION OF STONE SPILLWAY



PROFILE ALONG ℄ OF SPILLWAY

WETLAND CONSTRUCTION SEQUENCE [1, 2]

1. STAKE OUT EXISTING WETLAND BOUNDARIES. CONSTRUCTION EQUIPMENT IS PROHIBITED IN WETLANDS AREA BEYOND DEFINED SLOPE LIMITS.
2. STRIP 300 mm (12 in.) TOPSOIL FROM WETLAND IMPACT AREA AND STOCKPILE (STOCKPILE A).
3. EXCAVATE 300 mm (12 in.) SUBSOIL (SILT) FROM WETLAND IMPACT AREA AND STOCKPILE (STOCKPILE C).
4. STRIP 300 mm (12 in.) TOPSOIL FROM WETLAND MITIGATION AREA AND STOCKPILE (STOCKPILE B). TO BE USED AS TOPSOIL IN PLANTING ZONE C AND GRUBBING MATERIAL ON ROADWAY EMBANKMENT.
5. EXCAVATE 300 mm (12 in.) OF SILT FROM MITIGATION AREA AND STOCKPILE (STOCKPILE C).
6. COMPLETE OVEREXCAVATION OF MITIGATION AREA TO AN ELEVATION 600 mm (24 in.) BELOW FINISHED GRADE. THIS MATERIAL TO SPOIL OR AS NEEDED ON SITE.
7. INSPECTION BY VTRANS WETLAND SCIENTIST AND ENGINEER.
8. PLACE MATERIAL FROM STOCKPILE C IN PLANTING ZONES B, C, AND D TO A THICKNESS OF 300 mm (12 in.) AND TO A THICKNESS OF 600 mm (24 in.)IN PLANTING ZONE A. ANY SHORTFALL IN MATERIAL FROM STOCKPILE C MAY BE MADE UP FROM STOCKPILE B; HOWEVER, MATERIAL FROM STOCKPILE B SHOULD NOT BE PLACED IN PLANTING ZONE A. THIS MATERIAL SHALL BE PLACED IN 150 mm (6 IN.) LIFTS AND COMPACTED TO 95 PERCENT COMPACTION EFFORT USING VIBRATORY COMPACTION.
9. PLACE 300 mm (12 in.) OF MATERIAL FROM STOCKPILE A IN PLANTING ZONE B.
10. PLACE 300 mm (12 in.) OF MATERIAL FROM STOCKPILE B IN PLANTING ZONES C AND D.
11. INSPECTION BY VTRANS WETLAND SCIENTIST AND ENGINEER.
12. SEED AND PLANT SHRUBS ACCORDING TO LANDSCAPE PLAN. SEEDING SHOULD BE CONDUCTED AS FOLLOWS:
    A. SCARIFY AREA WITH YORK RAKE OR SIMILIAR IMPLEMENT.
    B. BROADCAST SEED AT PRESCRIBED RATES.
    C. RAKE LIGHTLY TO APROXIMATE DEPTH OF 12 mm (0.5 in.) TO INCORPORATE SEED INTO SOIL.
    D. COMPACT WITH HAND ROLLER.
13. INSPECTION BY WETLAND SCIENTIST AND ENGINEER.
14. CONSTRUCT WATER CONTROL STRUCTURE WITH COMPACTED MATERIAL FROM STOCKPILE C.
15. INSPECTION BY VTRANS WETLAND SCIENTIST AND ENGINEER.

[1] CONSTRUCTION OF THE MITIGATION AREA SHOULD BE UNDERTAKEN WHEN GROUNDWATER AND SURFACE WATER LEVELS ARE LOW. THE CONTRACTOR SHALL OBTAIN APPROVAL PRIOR TO INITIATING WORK ON THE MITIGATION AREA.

[2] SEE SHEET 36 FOR KEY TO PLANTING ZONES.

ALL DETAILS "N.T.S." (NOT TO SCALE)
ALL DIMENSIONS IN MILLIMETERS EXCEPT AS INDICATED

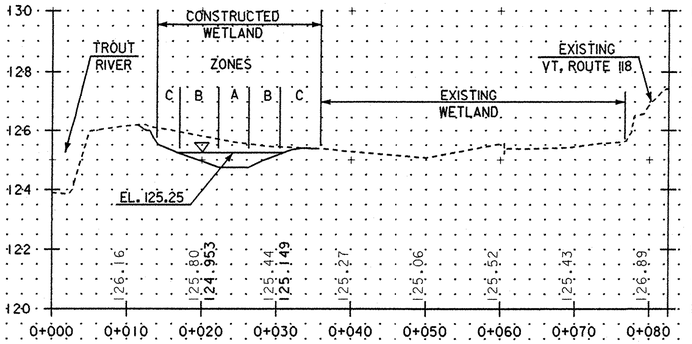
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HORIZONTAL _____

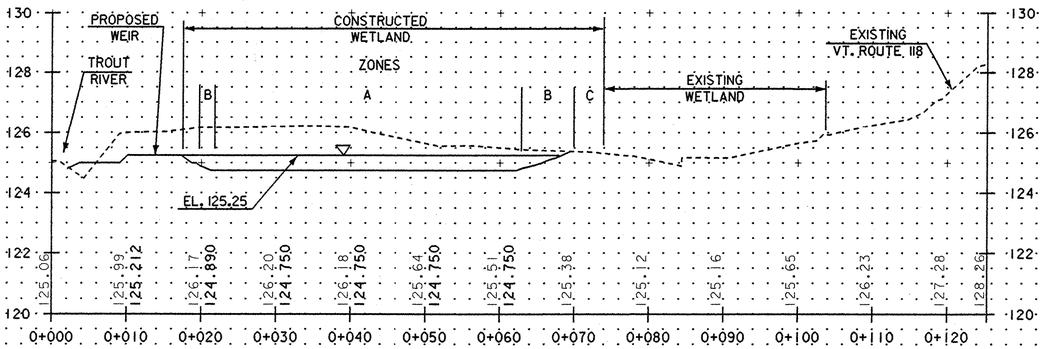
WETLAND MITIGATION PLAN

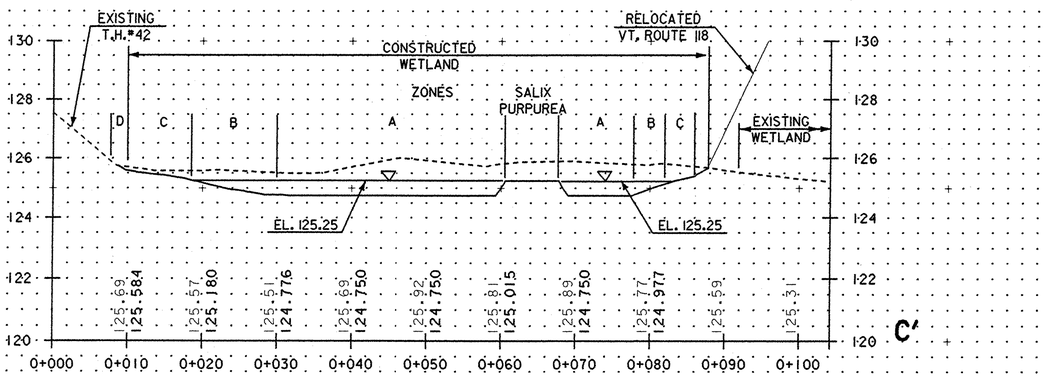
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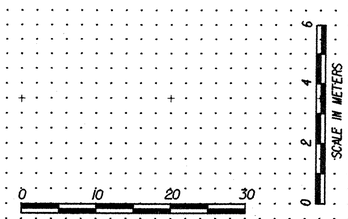
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PROJECT NO.: BRF-RS 0283(7)
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IPARM FILE NAME: 02837WDT.I
SURVEYED BY:
SQUAD LEADER:
PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 37 OF 140

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DATUM

VERTICAL NGVD 1929

HORIZONTAL N/A

RECORDS OF AUGER HOLES IN WETLAND MITIGATION AREA

NUMBER	DEPTH (cm)	DESCRIPTION
AH- 1 EL. = 125.93 m	0 - 53.3 53.3 - 66.0 66.0 - 71.1 71.1 - 183 SATURATED AT 104 cm	SILT SILT WITH TRACE OF SAND SILT FINE/MEDIUM SAND
AH-2 EL. = 125.82 m	0 - 71.0 71.0 - 76.2 76.2 - 86.4 WATER NOT ENCOUNTERED	SILT MEDIUM SAND MEDIUM SAND WITH SOME GRAVEL
AH-3 EL. = 126.08 m	0 - 101.6 101.6 - 170.2 170.2 - 185.0 WATER NOT ENCOUNTERED	SILT VERY FINE SAND GRADING TO FINE SAND MEDIUM SAND WITH SOME GRAVEL

WETLAND MITIGATION PLAN

CROSS SECTIONS AND SOIL DESCRIPTIONS

PROJECT: BERKSHIRE

PROJECT NO.: BRF-RS 0283 (7)

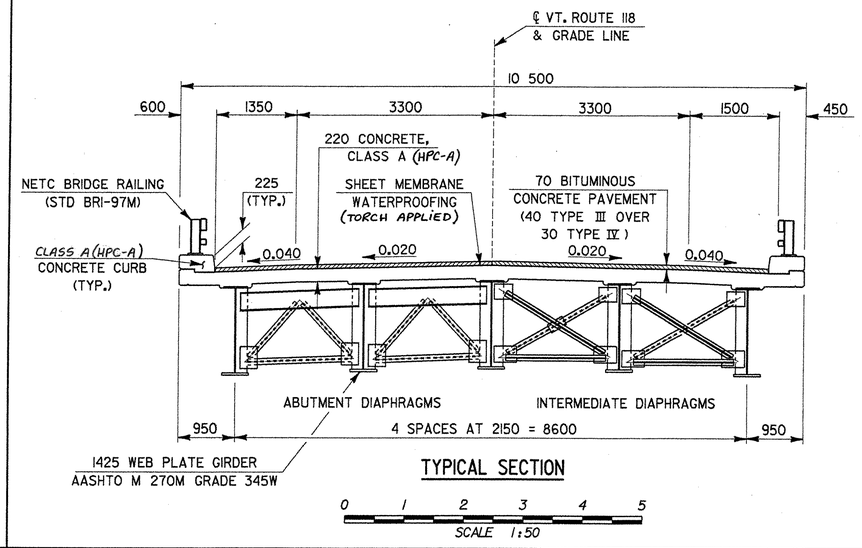
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SURVEYED BY:
SQUAD LEADER:

PLOT DATE: 16-FEB-2000
SURVEY DATE:
DRAWN BY: C. MABY
SHEET: 38 OF 140

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INDEX OF BRIDGE SHEETS

BR1	PRELIMINARY INFORMATION SHEET
BR2	BRIDGE QUANTITY SHEET
BR3	TYPICAL ABUTMENT AND WINGWALL SECTIONS
BR4	SETTLEMENT INSTRUMENTATION PLAN
BR5	BORING INFORMATION SHEET
BR6	BORING LOG SHEET - 1
BR7	BORING LOG SHEET - 2
BR8	BORING LOG SHEET - 3
BR9	BORING LOG SHEET - 4
BR10	BORING LOG SHEET - 5
BR11	PLAN AND ELEVATION
BR12	TYPICAL SECTION AND DECK PLAN
BR13	FRAMING PLAN AND GIRDER ELEVATION
BR14	CROSS FRAME DETAILS
BR15	SPLICE DETAILS
BR16	BEARING DETAILS
BR17	EXPANSION JOINT DETAILS SHEET - 1
BR18	EXPANSION JOINT DETAILS SHEET - 2
BR19	MISCELLANEOUS DETAILS
BR20	ABUTMENT NO. 1 & NO. 2 FOOTING LAYOUT
BR21	ABUTMENT NO. 1 & NO. 2 FOOTING REINFORCING
BR22	ABUTMENT NO. 1 PLAN AND ELEVATION
BR23	ABUTMENT NO. 1 REINFORCING
BR24	ABUTMENT NO. 2 PLAN AND ELEVATION
BR25	ABUTMENT NO. 2 REINFORCING
BR26	WINGWALL REINFORCING
BR27	APPROACH SLAB DETAILS
BR28	REINFORCING STEEL SCHEDULE



GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL STATIONS ARE IN KILOMETERS, ALL ELEVATIONS ARE IN METERS, AND ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION (DATED 2001 , AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (DATED 1996 , AND ITS LATEST REVISIONS.
3. DESIGN IS FOR MS-22.5 LOADING, USING LOAD FACTOR METHOD.
4. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH SECTION 506. OF THE STANDARD SPECIFICATIONS.
5. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF BEAMS SHALL BE TAKEN AS DIRECTED BY THE ENGINEER FOR USE IN DETERMINING FINAL GRADE.
6. ANY HOLES IN FASCIA BEAMS OR FASCIA GIRDER WEBS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS MEETING AASHTO M 164M, TYPE III. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SECTION 506.19. GALVANIZED TYPE I BOLTS SHALL BE USED IN PAINTED AREAS.
7. FASCIA OVERHANG BRACKETS SHALL BE SPACED AT A MAXIMUM OF 1220, AND SHALL BE DESIGNED BY THE CONTRACTOR.
8. ALL FIELD CONNECTIONS SHALL BE MADE WITH M22 DIAMETER BOLTS, MEETING ASTM DESIGNATION A-325M (AASHTO M 164M TYPE III). HOLES SHALL BE 24 DIAMETER. CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR. GALVANIZED TYPE I BOLTS SHALL BE USED IN PAINTED AREAS.
9. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".
10. MINIMUM COVER FOR REINFORCING STEEL IN SUBSTRUCTURES SHALL BE 50 ALONG BACK FACES OF WALLS AGAINST EARTH AND 75 ELSEWHERE, UNLESS OTHERWISE DESIGNATED ON PLANS.
11. REINFORCING PLACEMENT TOLERANCES SHALL BE:
    SPACING +/- 25
    CLEARANCE +/- 6
12. DECK CONCRETE SHALL BE "CONC. CL A(HPC-A)". CURBS AND HEADER OF ABUTMENT NO. 2 SHALL BE "CONC. CL A(HPC-A)". ALL OTHER CONCRETE SHALL BE "CONC. CL B(HPC-B)" UNLESS OTHERWISE DESIGNATED ON THE PLANS.
13. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 BY 25
14. THE FOLLOWING THICKNESS TOLERANCES SHALL BE ADHERED TO:

MATERIAL	THICKNESS TOLERANCE
	+/- 6
BIT. CONC. PAVEMENT (ON BRIDGE)	+/- 6/LIFT
BIT. CONC. PAVEMENT (OFF BRIDGE)	+/- 25
SUBBASE	+/- 25
GRANULAR BORROW	

15. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP BEADS.
16. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68°F, UNLESS NOTED.
17. TRAFFIC SHALL BE ALLOWED ON THE NEW BRIDGE ONLY AFTER THE SPECIFIED CURE PERIOD HAS EXPIRED AND THE 28 DAY DESIGN STRENGTH HAS BEEN REACHED AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS.
18. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
19. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.
20. DECK POURS ARE TO BE CONSTRUCTED IN ONE CONTINUOUS OPERATION WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A NINETY-SIX HOUR DELAY BETWEEN THE COMPLETION OF ONE DAY'S POUR AND THE BEGINNING OF ANOTHER DECK POUR SHALL BE OBSERVED.
21. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 4.2% TOWARD CENTER SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTHED WITH EITHER A WOOD OR MAGNESIUM FLOAT FINISH.
22. ALL STEEL PAID UNDER THE ITEM 506.55 "STRUCTURAL STEEL" (PLATE GIRDER) SHALL CONFORM TO AASHTO M 270M GRADE 345W UNLESS OTHERWISE NOTED.
23. ALL STRUCTURAL STEEL WITHIN 2450 OF ABUTMENT NO. 2 SHALL BE COATED WITH A PROTECTIVE PAINT SYSTEM AND GREASE AS SPECIFIED IN SUPPLEMENTAL SPECIFICATION 513. THE COLOR OF PAINT WILL BE BROWN, COLOR CHIP 20059. ALL COSTS SHALL BE INCLUDED IN ITEM 513.40, SURFACE PREPARATION, SHOP, AND ITEM 513.25, STRUCTURAL PAINTING, SHOP APPLIED.
24. STEEL HP 360 X 108 PILES SHALL BE DRIVEN TO A REQUIRED ULTIMATE CAPACITY EQUAL TO 2600 KN. PILE TIP REINFORCEMENT IS REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(E). THE CONTRACTOR'S DRIVING HAMMER WILL HAVE TO OVERCOME A FRICTIONAL RESISTANCE OF 980 KN DURING DRIVING.
25. PAYMENT FOR REMOVAL OF ALL EXISTING BRIDGE BITUMINOUS CONCRETE PAVEMENT SHALL BE MADE UNDER ITEM 529.10. THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY AT AN OFF SITE LOCATION.
26. ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE, SHALL INCLUDE THE REMOVAL OF THE ENTIRE SUPERSTRUCTURE AND REMOVAL OF THE PIER TO 300 ABOVE STREAM BED. THE EXISTING BEAMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. NO TEMPORARY FILL SHALL BE PERMITTED IN THE RIVER FOR REMOVAL OPERATIONS UNLESS THE CONTRACTOR OBTAINS THE REQUIRED PERMITS.
27. TRAFFIC WILL BE MAINTAINED ON THE EXISTING BRIDGE.
28. THE STRUCTURAL STEEL OF THE EXISTING BRIDGE ON THIS PROJECT IS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. SEE SPECIAL PROVISIONS.
29. SURCHARGING TREATMENT OF THE FOUNDATION SOILS PRIOR TO INSTALLATION OF PILES IS REQUIRED. FOR SURCHARGE TREATMENT AND GEOTECHNICAL INSTRUMENTATION SEE SHEET BR4.
30. AT ABUTMENT NO. 2, PAYMENT FOR GRANULAR BORROW USED AS SURCHARGE MATERIAL SHALL BE MADE UNDER ITEM 204.3. PAYMENT FOR THE REMOVAL OF SURCHARGE MATERIAL SHALL BE MADE UNDER ITEM 203.15.
31. THE CHARPY V-NOTCH TEST IS REQUIRED FOR MEMBERS DESIGNATED AS SUCH AND ONLY FOR SUCH MEMBERS, AS SPECIFIED IN SECTION 714.01.

FINAL HYDRAULICS REPORT

Metric

HYDROLOGIC DATA

DRAINAGE AREA= 22 015 HECTARE
CHARACTER OF TERRAIN: GENTLY ROLLING HILLS WITH SOME AREAS OF FLAT LAND
CHARACTER & TYPE OF STREAM: PERENNIAL STREAM, THE CHANNEL IS RELATIVELY SHALLOW AND MEANDERING WITH MODERATE TO SLOW FLOWAGE OVER GRAVELLY RAPIDS
NATURE OF STREAMBED: GRAVEL MATERIAL

Q2.33= 73.6 CMS Q50= 277.5 CMS
Q10= 147.2 CMS Q100= 344.0 CMS
Q25= 215.2 CMS Q500= 481.4 CMS

DATE OF FLOOD OF RECORD: NOT AVAILABLE
WATER SURFACE ELEV.: _____ ESTIMATED DISCHARGE: _____
NATURAL STREAM VELOCITY @ Q _____
ICE CONDITIONS: MODERATE DEBRIS: MODERATE
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? _____
IS ORDINARY RISE RAPID? _____
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO
IF YES, DESCRIBE. _____

WATERSHED STORAGE ____ HEADWATERS ____ UNIFORM THROUGHOUT WATERSHED X
IMMEDIATELY ABOVE SITE ____

EXISTING STRUCTURE

STRUCTURE TYPE: TWO-SPAN STEEL ROLLED BEAM YEAR BUILT: 1940'S
CLEAR SPAN (NORMAL TO STREAM): 32.000 ±
VERTICAL CLEARANCE ABOVE STREAMBED: 4.300 ±
WATERWAY OF FULL OPENING: 110.7 SQUARE METERS
DISPOSITION OF STRUCTURE: NORMAL TO FLOW

TYPE OF MATERIAL UNDER SUBSTRUCTURE: UNKNOWN

WATER SURFACE ELEV. @ Q2.33= 125.550 VELOCITY= 1.47 MPS
Q10= 126.330 " 2.03 MPS
Q25= 126.720 " 2.55 MPS
Q50= 126.880 " 3.08 MPS
Q100= 127.680 " 1.98 MPS

LONG TERM STREAM BED CHANGES: MINOR LATERAL MIGRATION OF STREAM PRESENT

IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q50
RELIEF ELEVATION: 126.600 DISCHARGE OVER ROAD @ Q100= 140.2 CMS

UPSTREAM STRUCTURE: TOWN: ENOSBURG DISTANCE: 20 440
HIGHWAY NO.: TH17 STRUCTURE NO.: _____
STRUCTURE TYPE: COVERED BRIDGE
CLEAR SPAN= 27.700 CLEAR HEIGHT= 4.100
YEAR BUILT= 1875 FULL WATERWAY= 89.3 SQUARE METERS

DOWNSTREAM STRUCTURE: TOWN: _____ DISTANCE: _____
HIGHWAY NO.: _____ STRUCTURE NO.: _____
STRUCTURE TYPE: _____
CLEAR SPAN: _____ CLEAR HEIGHT: _____
YEAR BUILT: _____ FULL WATERWAY: _____

PROPOSED STRUCTURE

STRUCTURE TYPE: SINGLE SPAN COMPOSITE PLATE GIRDER

CLEAR SPAN (NORMAL TO STREAM): 43.200
VERTICAL CLEARANCE ABOVE STREAMBED: 4.100
WATERWAY OF FULL OPENING: 155 SQUARE METERS

WATER SURFACE ELEV. @ Q2.33= 125.660 VELOCITY= 1.18 MPS
Q10= 126.520 " = 1.52 MPS
Q25= 127.020 " = 1.79 MPS
Q50= 127.320 " = 1.99 MPS
Q100= 127.710 " = 1.97 MPS

IS THE ROADWAY OVERTOPPED BELOW THE Q100? YES FREQUENCY: Q50
RELIEF ELEVATION: 126.700 DISCHARGE OVER ROAD @ Q100= 53.8 CMS

*AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 127.870
VERTICAL CLEARANCE @ Q100 = 0.160

SCOUR: PROTECTION AT ABUTMENTS REQUIRED
REQUIRED CHANNEL PROTECTION: TYPE IV STONE FILL
*MINIMUM ELEVATION OF BRIDGE AT WEST ABUTMENT = 127.50.

PERMIT INFORMATION

AVERAGE DAILY FLOW: 4.96 CMS
ORDINARY LOW WATER: 2.24 CMS DEPTH: 0.910
ORDINARY HIGH WATER: 30.38 CMS DEPTH: 1.520

ADDITIONAL COMMENTS

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO MS 22.5
2. DESIGN SPAN 44.000 METERS
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL _____ ON LEDGE 500 kPa
4. ULTIMATE LOAD FOR PILING 2600 KN TYPE HP 360 X 108 ESTIMATED LENGTH 19 000
5. STRUCTURAL STEEL AASHTO GRADE M 270M GRADE 345W
6. REINFORCING STEEL GRADE 420
7. CONCRETE CLASS A f'_c = 30 MPa (HPC-A)
   CONCRETE CLASS B f'_c = 25 MPa (HPC-B)
   CONCRETE CLASS C f'_c = 20 MPa

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE X OR ON TEMPORARY BRIDGE _____
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY _____ TRAFFIC CONTROL SIGNALS REQUIRED _____
   MINIMUM CLEAR SPAN (NORMAL TO STREAM): _____ VERTICAL CLEARANCE ABOVE STREAMBED: _____
   WATERWAY OF FULL OPENING: _____
   ARE SIDEWALKS REQUIRED? _____ IF SO, ON WHAT SIDE? _____
   STRUCTURE TYPE: _____

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	M	MS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A=2.17; B=1.00	40	42					
POSTED A=1.55; B=1.40	56	60	68		57	59	63
OPERATING A=1.30; B=1.67		71	82	86	68	70	

STRENGTH RF= $\frac{\phi M_N - 1.3\,M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF= $B\left[\frac{.95\,F_y S_{LL+I} - M_{DL}\frac{S_{LL+I}}{S_{DL}} - M_{SDL}\frac{S_{LL+I}}{S_{SDL}}}{1.67\,M_{LL+I}}\right]$

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
PRELIMINARY INFORMATION SHEET	
Designed By S.JOHNSON	Drawn By S.DELIA
Checked By S.JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9\4562\zf184mpl.dgn	IPARM:zf184mpl.I
Bridge Sheet No. BR1	Sheet 40 of 140

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BRIDGE QUANTITY SHEET

Metric

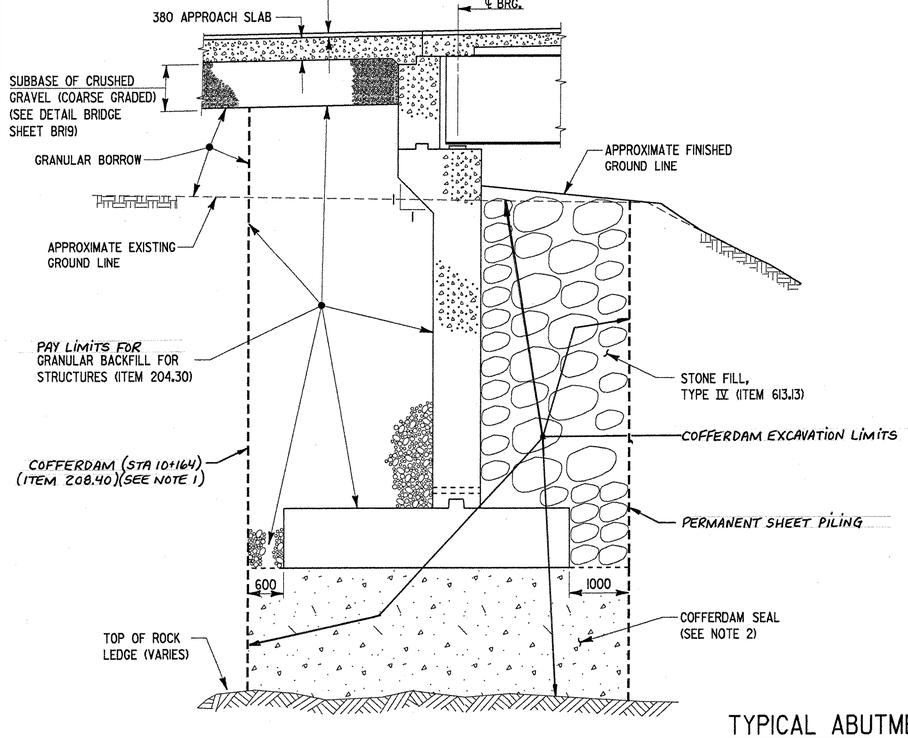
ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN: SUPER STRUCT	ABUT NO 1	ABUT NO 2	APPR SLAB 1	APPR SLAB 2	CHANNEL	TOTAL	FINAL
204.30	GRANULAR BACKFILL FOR STRUCTURES	m^3		280	580				860	
208.30	COFFERDAM EXCAVATION, EARTH	m^3		708	427				1135	
208.35	COFFERDAM EXCAVATION, ROCK	m^3		50	50				100	
208.40	COFFERDAM (STA 10+164)	LS		1					1	
208.40	COFFERDAM (STA 10+208)	LS			1				1	
404.65	EMULSIFIED ASPHALT	kg	35			5	5		45	
490.30	SUPERPAVE BITUMINOUS CONC. PAV'T. (PG 58-34)	ton	67			10	10		87 * (* ROADWAY QUANTITY)	
501.33	CONCRETE, CLASS A (HPC-A)	m^3	128		2				130	
501.34	CONCRETE, CLASS B (HPC-B)	m^3		176	217	22	22		437	
501.30	CONCRETE, CLASS C	m^3		390					390	
504.1	FURNISHING EQUIPMENT FOR DRIVING PILING	LS			1				1	
505.17	STEEL PILING (HP 360 X 108)	m			690				690	
506.55	STRUCTURAL STEEL (PLATE GIRDER)	kg	87 400						87,400	
507.15	REINFORCING STEEL	kg		11,143	15,657				26,800	
507.17	EPOXY COATED REINFORCING STEEL	kg	15 506		211	1496	1587		18,800	
508.15	SHEAR CONNECTORS (1335 - 22 DIA X 175 LONG)	LS	1						1	
513.25	STRUCTURAL PAINTING, SHOP APPLIED	LS	1						1	
513.40	SURFACE PREPARATION, SHOP	LS	1						1	
514.10	WATER REPELLENT	liter	18	13	29				60	
516.10	BRIDGE EXPANSION JOINT	m	10.5						10.5	
519.20	SHEET MEMBRANE WATERPROOFING (TORCH APPLIED)	m^2	421			57	57		535	
525.33	BRIDGE RAILING - NETC 2 RAIL	m	105						105	
527.10	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS	LS	1						1	
529.10	REMOVAL OF BRIDGE PAVEMENT	m^2	230						230	
529.20	PARTIAL REMOVAL OF STRUCTURE	EA	0.5					0.5	1	
531.10	BEARING DEVICE ASSEMBLY	EA	10						10	
613.13	STONE FILL, TYPE IV	m^3		326	437				763	
623.21	SETTLEMENT PLATFORM, TYPE I	EA			2				2	
623.23	SETTLEMENT PLATFORM, VIBRATING WIRE	EA			3				3	
623.40	PIEZOMETER, VIBRATING WIRE	EA			3				3	
649.31	GEOTEXTILE UNDER STONE FILL	m^2		9	26				35	

BRIDGE(S) AT STATION(S) _____
LOCATION(S) VT. ROUTE 118 OVER TROUT RIVER

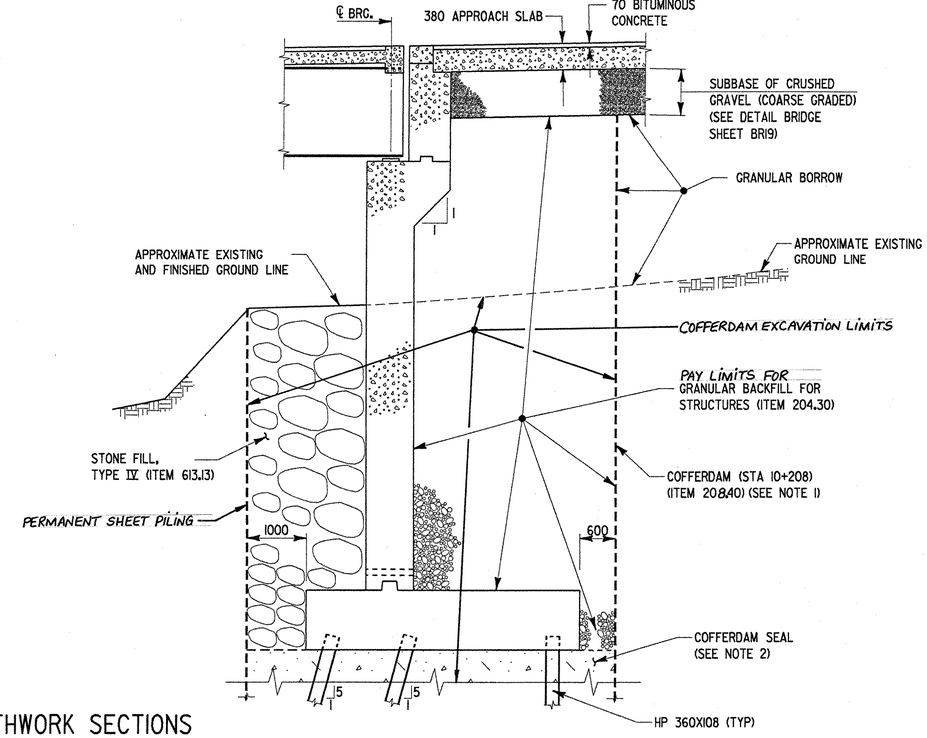
PREPARED BY: _____ CHECKED BY: _____
SUPERVISOR: _____

PROJECT: BERKSHIRE PROJECT NO: BDF-RS 0283(7)
BRIDGE SHEET NO: BR2 OF _____ SHEET NO: 41 OF 140

78f184/zf184BQS



ABUTMENT NO. 1

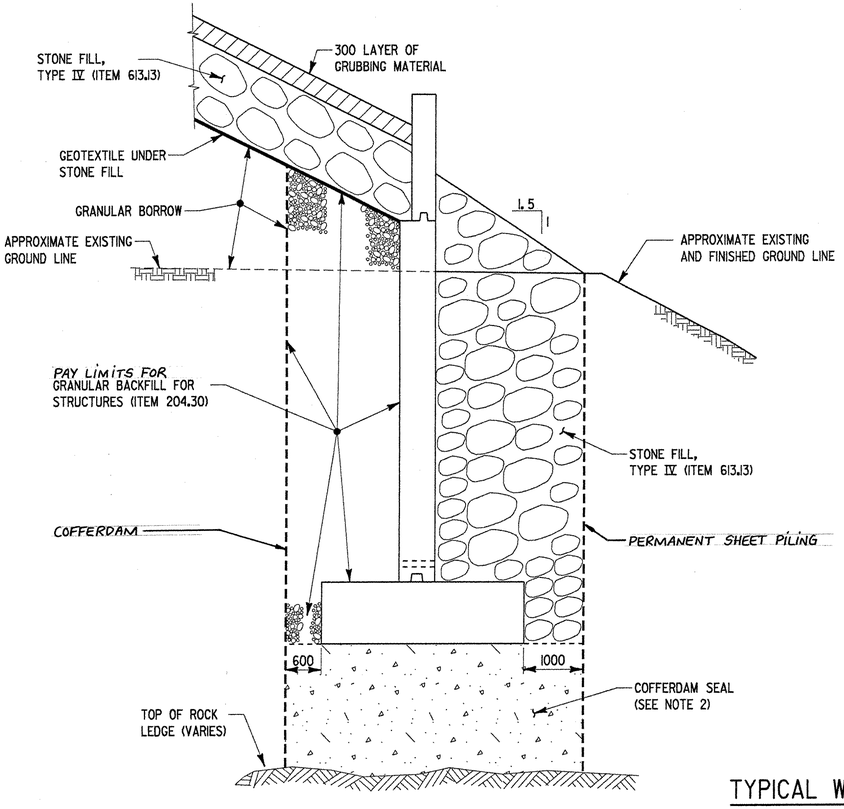


ABUTMENT NO. 2

TYPICAL ABUTMENT EARTHWORK SECTIONS

0 1 2 3 4 5

SCALE 1:50

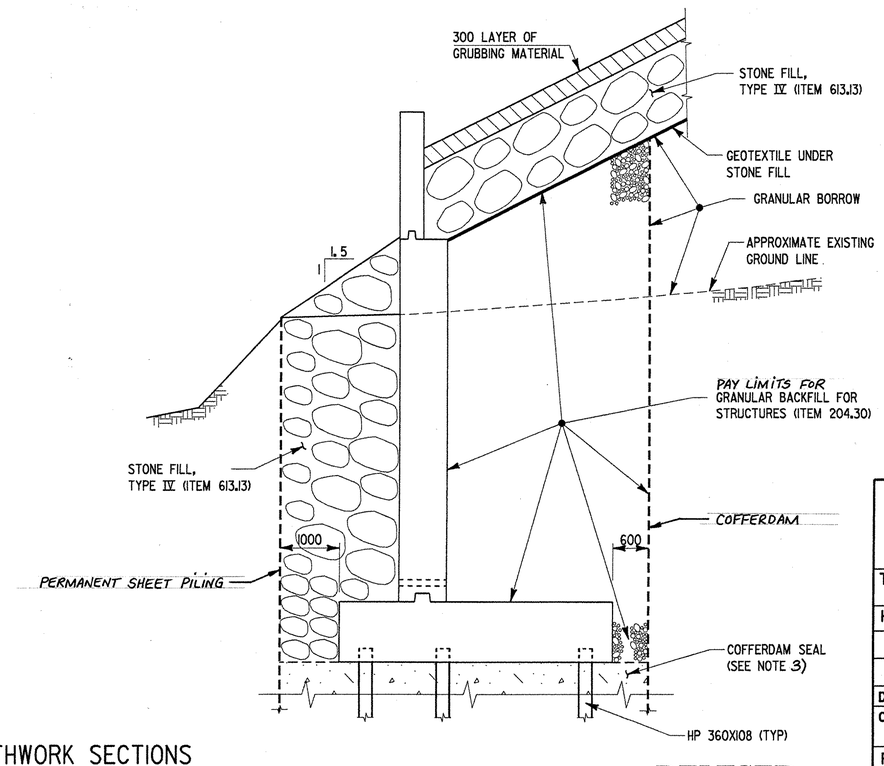


WINGWALL NO. 1 & NO. 2

TYPICAL WINGWALL EARTHWORK SECTIONS

0 1 2 3 4 5

SCALE 1:50



WINGWALL NO. 3 & NO. 4

REVISED
NOV 10 2003

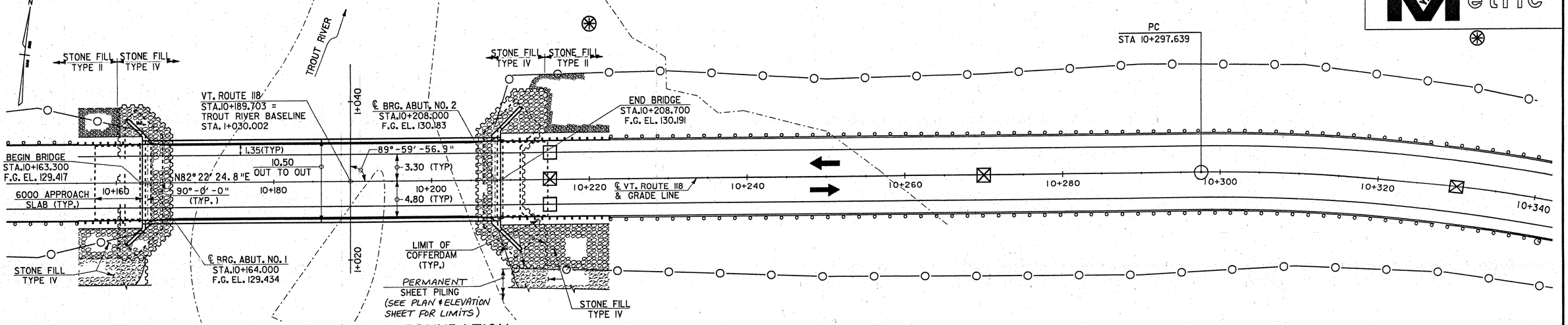
NOTES:

1. SEE BRIDGE SHEET BR11 FOR COFFERDAM LIMITS AND CONFIGURATION.
2. A COFFERDAM SEAL WIL BE REQUIRED AT ABUTMENT 1. THE SEAL SHALL EXTEND TO THE BEDROCK AND THE COST OF THE SEAL SHALL BE PAID FOR UNDER CONCRETE, CLASS C – ITEM 501.30. PRIOR TO PLACING THE SEAL , ALL LOOSE MATERILA SHALL BE REMOVED FROM THE BEDROCK SERFACE. AFTER PLACING THE SEAL AT ABUTMENT 1, THE SEAL SHALL BE CORED TO BEDROCK AT TWO LOCATIONS AS DETERMINED BY THE ENGINEER TO VERIFY THE INTERGRTY OF THE SEAL. COST OF THE CORES SHALL BE INCLUDED IN ITEM 501.30.
3. REQUIREMENTS FOR A COFFERDAM SEAL AT ABUTMENT 2 SHALL BE DETERMINED BY THE CONTRACTOR AND DESIGNED IN ACCORDANCE WITH SPECIFICATION 208.07. THE COST OF THE A SEAL AT ABUTMENT 2 SHALL BE INCLUDED IN COFFERDAM (10+208) ITEM 208.40.
4. SEE BRIDGE SHEET BR4 FOR SURCHAGE REQUIREMENTS AT ABUTMENT 2.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
TYPICAL ABUTMENT AND WINGWALL SECTIONS	
Designed By S.JOHNSON	Drawn By S.DELIA
Checked By S.JOHNSON	Date 02/00
Bridge Design Supervisor	Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9\4562\zf184dty.dgn	\PARM:zf184dty.j
Bridge Sheet No. BR3	Sheet 42 of 140

78f184/zf184ABT



SURCHARGE TREATMENT OF THE FOUNDATION

1. LIMITS OF SURCHARGE:
FULL HEIGHT SURCHARGE FILL SHALL BE PLACED BETWEEN STATIONS 10+208.000 TO 10+270.000 AND LEFT IN PLACE FOR THE DURATION STATED IN NOTE 3 BELOW.

THE REMAINDER OF THE ROADWAY EMBANKMENT WILL NOT REQUIRE SURCHARGE LOADING, BUT THE EMBANKMENT MUST BE CONSTRUCTED TO AT LEAST THE ELEVATION OF THE BOTTOM OF THE SAND LAYER AND BE LEFT IN PLACE FOR 90 DAYS PRIOR TO PAVING.

2. SURCHARGE CROSS SECTION:
THE FINAL EMBANKMENT AND STONE FILL SHALL BE PLACED TO THE BOTTOM OF THE ROADWAY SAND COURSE PER THE CONTRACT CROSS SECTIONS. SURCHARGE MATERIAL SHALL BE PLACED ABOVE THIS LEVEL TO THE LEVEL OF THE FINAL ROADWAY ELEVATION AT CENTERLINE AND GRADED AT A 2% NORMAL CROSS SLOPE (SEE SECTION THIS SHEET). THE COFFERDAM AT ABUTMENT 2 MAY NEED TO BE EXTENDED ABOVE THE EXISTING GROUND IN ORDER TO ATTAIN FULL SURCHARGE AT STATION 10+208.000 (SEE SECTION THIS SHEET). COSTS ASSOCIATED WITH INCREASING THE COFFERDAM HEIGHT OR RETAINING THE SURCHARGE AT ABUTMENT 2 SHALL BE INCLUDED IN THE COFFERDAM ITEM AT THAT LOCATION.

3. DURATION OF THE SURCHARGE LOAD:
SURCHARGE LOADING SHALL BE MAINTAINED FOR 142 DAYS OR UNTIL THE IN-SITU GEOTECHNICAL INSTRUMENTATION INDICATES THAT THE SETTLEMENT HAS REACHED THE ANTICIPATED SETTLEMENT SHOWN IN NOTE 4. THE CONTRACTOR MAY, AT HIS OPTION, CONSTRUCT THE SURCHARGE 1.5 METERS HIGHER THAN THE CROSS SECTION SPECIFIED AND MAINTAIN THIS LOAD FOR 92 DAYS; HOWEVER, NO ADDITIONAL PAYMENT SHALL BE MADE FOR PROVIDING, PLACING, OR REMOVING THE ADDITIONAL SURCHARGE MATERIAL.

4. MAGNITUDE OF SETTLEMENT:
THE MAXIMUM AMOUNT OF SETTLEMENT IS ANTICIPATED TO BE 0.2 METERS. IT IS ANTICIPATED THAT 80% OF THIS SETTLEMENT WILL OCCUR DURING THE SURCHARGE PERIOD STATED ABOVE. THE SURCHARGE PERIOD MAY CEASE AFTER 0.16 METERS OF SETTLEMENT HAS OCCURRED.

5. MONITORING/SETTLEMENT INSTRUMENTATION:
REGUARDLESS OF WHETHER OR NOT SURCHARGE IS USED, THE SETTLEMENT OF THE FOUNDATION WILL BE MONITORED USING TYPE I AND VIBRATING WIRE SETTLEMENT PLATFORMS INSTALLED ON THE NATURAL GRADE, AS WELL AS WITH THE USE OF PIEZOMETERS INSTALLED AT 4.5 METERS BELOW THE GROUND SURFACE. THE DESIGNATED LOCATIONS FOR THESE ITEMS ARE SHOWN ABOVE. BOTH SETTLEMENT PLATFORMS SHALL MEET THE GUIDELINES SPECIFIED IN STANDARD SHEETS L-1M AND L-2M RESPECTIVELY AND SECTION 623 OF THE SPECIAL PROVISIONS.

PORE PRESSURES SHALL BE MONITORED DAILY DURING FILL PLACEMENT AND IMMEDIATELY FOLLOWING THE COMPLETION OF EACH VERTICAL INCREMENT OF 0.6 METERS. RECORDS OF PIEZOMETER READINGS ALONG WITH FILL ELEVATIONS AT EACH PIEZOMETER LOCATION SHALL BE RECORDED WHENEVER THE MEASUREMENTS ARE MADE AND GIVEN TO THE ENGINEER ON A WEEKLY BASIS. IF PORES PRESSURES EXCEED 58.6 kPA, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND EMBANKMENT CONSTRUCTION HALTED UNTIL EXCESS PORE PRESSURES HAVE DISSIPATED BELOW 58.6 kPA OR, THE ENGINEER CAN EVALUATE THE STABILITY OF THE SLOPE USING THE APPROPRIATE MEANS.

FOR DETAILS OF SETTLEMENT PLATFORM, TYPE I, SEE STANDARD SHEET L-1M, FOR VIBRATING WIRE SETTLEMENT PLATFORM, SEE STANDARD SHEET L-2M.

THE FOLLOWING SETTLEMENT PLATFORM READINGS SHALL BE RECORDED AND PROVIDED TO THE ENGINEER: (FILL ELEVATIONS SHALL BE RECORDED WHENEVER READINGS ARE TAKEN)

a. INITIAL READINGS AT ALL SETTLEMENT PLATFORMS BEFORE ANY EMBANKMENT OR SURCHARGE LOAD IS APPLIED.
b. SETTLEMENT PLATFORM, TYPE I: SETTLEMENT READINGS SHALL BE TAKEN ONCE A DAY DURING EMBANKMENT OR SURCHARGE PLACEMENT OPERATIONS.
c. SETTLEMENT PLATFORM, VIBRATING WIRE: SETTLEMENT READINGS SHALL BE TAKEN FOR EVERY 600 TO 900 mm OF EMBANKMENT PLACED DURING SURCHARGE OPERATION.
d. UPON COMPLETION OF SURCHARGE PLACEMENT OPERATIONS, SETTLEMENT PLATFORM READINGS SHALL BE TAKEN ONCE EVERY OTHER DAY FOR THE DURATION OF THE SURCHARGE TREATMENT. (TYPICAL FOR BOTH TYPES).

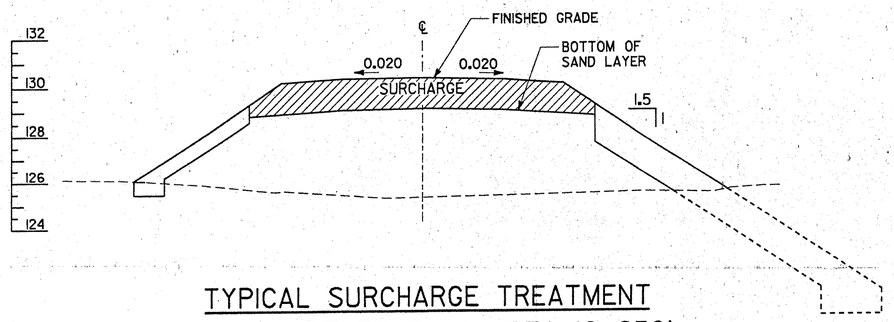
6. DRIVING PILES:
STEEL PILES FOR THE ABUTMENT 2 FOUNDATION SHALL NOT BE DRIVEN UNTIL 80% OF THE MAXIMUM ANTICIPATED SETTLEMENT STATED IN NOTE 4 IS REACHED.

GEOTECHNICAL INSTRUMENTATION

THIS WORK CONSISTS OF THE FURNISHING, INSTALLING, MAINTAINING SETTLEMENT PLATFORMS AND COLLECTING DATA. THIS INSTRUMENTATION WILL FOLLOW THE GUIDELINES SPECIFIED IN SECTION 623 OF THE SPECIAL PROVISIONS.

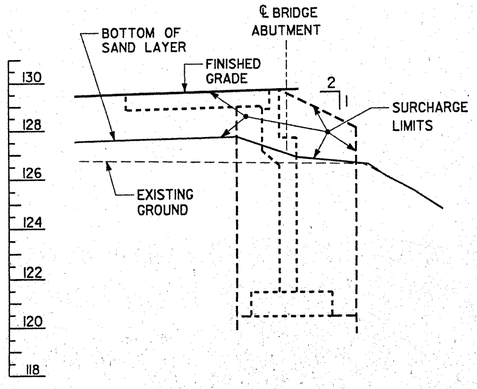
SETTLEMENT INSTRUMENTATION PLAN

0 5 10 20
SCALE: 1:250



TYPICAL SURCHARGE TREATMENT SECTION AT ROADWAY (STA 10+250)

NOT TO SCALE



TYPICAL SURCHARGE TREATMENT SECTION AT ABUTMENT 2

NOT TO SCALE

SETTLEMENT PLATFORM, TYPE I - LOCATION

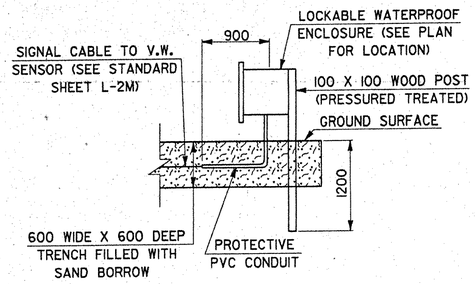
STATION	OFFSET
10+215	3.30 m Lt.
10+215	3.30 m Rt.

SETTLEMENT PLATFORM, VIBRATING WIRE & PIEZOMETER - LOCATION

STATION	OFFSET
10+215	CENTERLINE
10+270	CENTERLINE
10+330	CENTERLINE

LEGEND

- ☐ SETTLEMENT PLATFORM, TYPE I
- ☒ SETTLEMENT PLATFORM, VIBRATING WIRE, & APPROXIMATE PIEZOMETER LOCATION
- ⊛ APPROXIMATE READOUT BOX LOCATION STA 10+330, 19.000 LT AND STA 10+220, 19.000 LT PROTECT READOUT BOXES WITH BOLLARDS (SEE STANDARD SHEET L-2M). COST INCIDENTAL TO ITEM 623.23



READOUT BOX DETAIL

NOT TO SCALE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
SETTLEMENT INSTRUMENTATION PLAN	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J91\4562\zf184spl.dgn	IPAR\zf184spl.J
Bridge Sheet No. BR4	Sheet 43 of 140

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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

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 kPa	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

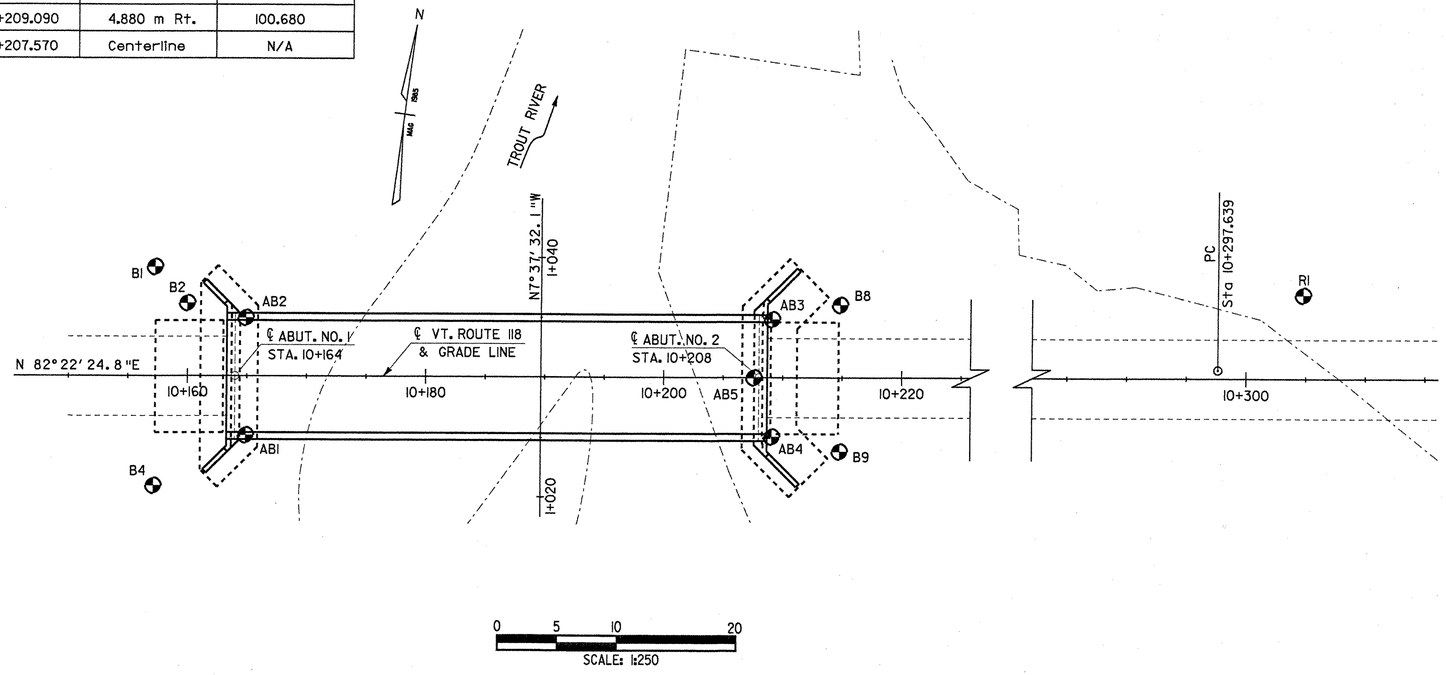
▼	Water Elevation
⊕	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per 300 mm For: 50.8 mm O.D. Sampler 35.0 mm I.D. Sampler Hammer Weight Of 63.5 kg. Hammer Fall Of 762 mm
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 30.1mm
BX	Core Size 42.0 mm
NX	Core Size 54.7 mm
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	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
ROD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR

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

STANDARD PENETRATION BORINGS

BORING NO.	STATION	OFFSET	BEDROCK ELEVATION
BI	10+157.270	9.140 m Lt.	116.030
B2	10+160.020	6.100 m Lt.	118.190
B4	10+157.270	9.140 m Rt.	115.850
B8	10+214.880	6.100 m Lt.	102.830
B9	10+214.880	6.100 m Rt.	100.390
RI	10+304.800	7.010 m Lt.	N/A
AB1	10+164.900	4.880 m Rt.	117.670
AB2	10+164.900	4.880 m Lt.	118.910
AB3	10+209.090	4.880 m Lt.	105.620
AB4	10+209.090	4.880 m Rt.	100.680
AB5	10+207.570	Centerline	N/A



STANDARD PENETRATION BORING

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 304.8 mm.

COBBLE - Rock fragments with an average dimension between 76.2 and 304.8 mm.

GRAVEL - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).

SAND - Particles of rock < 2 mm (#10 sieve) and > 75 μm (#200 sieve).

SILT - Soil < 75 μm (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable 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.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 11/16/94 and 03/03/95 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.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
BORING INFORMATION SHEET	
Designed By VAOT	Drawn By S.DELIA
Checked By S.JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9\4562\zf184bpl.dgn	IPARM:zf184bpl.J
Bridge Sheet No. BR5	Sheet 44 of 140

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Metric

BORINGS ARE IN ENGLISH UNITS WITH THE EXCEPTION OF THE METRIC ELEVATION COLUMN ON THE FAR LEFT OF EACH BORING LOG.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 1 OF 1
DATE STARTED: 11/15/94
DATE COMPLETED: 11/16/94

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 105+16.00
GROUND EL.: 414.68

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: -30.00
G.W. DEPTH: 13

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: MCGLYNN

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOT. OF FOOTING ELEVATION 120.4

METERS	DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.395									
125	5	No Rec., Stone at end of sampler	2						
11/16/94 ▼	10	A-1-b, SaGr, br, Moist, Rec.= 0.7'	40	7.1	51.8	29.2	19		
	15	A-3, Sa, br, Moist, Rec.= 0.1'	21	20.8	4.8	86.6	8.6		
120	20	A-4, SI, gr, MTW, Rec.= 1.3'	8	29.8	5.4	6.1	88.5		
	25	No Rec., Stone in end of sampler., SI & few STS	15						
	30	A-1-b, SaGr, Moist, Soft rock	25	9.8	54.3	26.1	19.6		
			Top of bedrock @ 34.0'						
	35	Run 1: BXMDC, 34.0'-39.0', Rec.= 4.5', See Geologist's Report.	Dip (d) 30	REC % 90	ROD % 50				
115	40	Run 2: BXMDC, 39.0'-44.0', Rec.= 3.7', See Geologist's Report.	70-90	74	58				
	45		Hole stopped @ 44.0'						
		Geologist's Report							
110	50	Run #1: The core consists of quartz - sericite - chlorite phyllite with abundant lenses of quartz. The rock is hard to moderately hard, unweathered, and competent.							
	55	0.5' not recovered.							
105	60								
	65	Run #2 : Same as Run #1.							
	70	1.3' not recovered							
100	75								
	80								
	85								
	90								
	95								

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-2
SHEET 1 OF 1
DATE STARTED: 11/21/94
DATE COMPLETED: 11/22/94

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 105+25.00
GROUND EL.: 415.28

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: -20.00
G.W. DEPTH: 12

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: MCGLYNN

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOT. OF FOOTING ELEVATION 120.4

METERS	DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.577									
125	5	A-4, SISa, MTW, br, Rec.= 0.4'	5	37.9	3.1	50.6	46.3		
11/22/94 ▼	10	A-1-a, SaGr, MTW, br, Rec.= 0.6'	30	8.8	61.7	29.5	8.8		
	15	No Rec.	16						
120	20	A-4, SI, Wet, gr, Rec.= 1.0'	6	20.5	0.6	10.2	89.2		
	25	A-2-4, SISa, Wet, gr, Rec.= 0.4'	9	15.8	2	66.1	31.9		
			Top of bedrock @ 27.5'						
	30	A-2-4, SISa, Wet, gr, Rec.= 0.4'	Dip (d) 30-70	REC % 70	ROD % 32				
	35	Run 1: BXMDC, 27.5'-32.5', Rec.= 3.5', See Geologist's Report.		100	92				
115	40	Run 2: BXMDC, 32.5'-37.5', Rec.= 5.0', See Geologist's Report.	Hole stopped @ 37.5'						
	45								
		Geologist's Report							
110	50	Run #1: Core consists of quartz, sericite, and chlorite phyllite. The core has abundant lenses of quartz. The rock is moderately hard to hard, unweathered, and competent.							
	55	1.5' not recovered							
105	60								
	65	Run #2 ; Same as Run #1.							
	70								
100	75								
	80								
	85								
	90								
	95								

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-4
SHEET 1 OF 1
DATE STARTED: 11/23/94
DATE COMPLETED: 11/26/94

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 105+16.00
GROUND EL.: 415.51

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: 30.00
G.W. DEPTH: 12

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: MCGLYNN

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOT. OF FOOTING ELEVATION 120.4

METERS	DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.647									
125	5	A-2-4, Sa, Moist, br, Rec.= 0.6'	6	20.1	11.5	70.8	17.7		
11/26/94 ▼	10	No Rec.	16						
		A-1-a, SaGr, Moist, br, Rec.= 0.5'	8	8	53.9	36.8	9.3		
	15	A-1-a, SaGr, Wet, br, Rec.= 0.4'	6	11.1	72.7	22.7	4.6		
		A-4, SI, Wet, gr, Rec.= 1.2'	2	36.5	3.6	4.2	92.2	29	2
	20	A-4, SI, Wet, gr, Rec.= 2.0'	4	39.8	18.1	1.5	80.4	24	2
		A-4, SI, Wet, gr, Rec.= 1.0'	5	38.4	2.8	8.1	84.1		
	25	A-4, SISa, Wet, gr, Rec.= 0.4'	5	25.1	1.2	61.7	37.1		
		A-4, SISa, Wet, gr, Rec.= 0.4'	4	28.9	0.2	24.9	74.9		
	30	A-4, SaSI, MTW, gr, Rec.= 1.0'	10	17.8	0	28.8	71.2		
		A-4, SaSI, MTW, gr, Rec.= 1.7'	14	17.4	0.4	30.7	68.9		
	35	A-4, SaSI, MTW, gr, Rec.= 1.0'	88	21.1	3.2	30.7	66.1		
		A-4, SaSI, MTW, gr, Rec.= 1.0'		17.7	2.8	38.4	58.8		
115	40	A-4, SaSI, MTW, gr, Rec.= 1.5'		20.3	0	33	67		
		A-4, SaSI, MTW, gr, Rec.= 1.3'		22.4	8.1	27.8	64.1		
	45	A-4, SaSI, MTW, gr, Rec.= 1.0'		10.9	36.8	33.6	29.6		
		A-2-4, SISaGr, MTW, gr, Rec.= 0.3'							
	50	Run 1: BXMDC, 35.4'-40.4', Rec.= 5.0', See Geologist's Report.							
		Run 2: Changed bit @ 40.4' BXMDC, 40.4'-45.4', Rec.= 5.0', See Geologist's Report.							
110	55								
	60	Geologist's Report							
	65	Run #1: Core consists of quartz, sericite, and chlorite phyllite. The rock is moderately hard, unweathered, and competent overall.							
105	70								
	75	Run #2 : Same as Run #1.							
	80								
100	85								
	90								
	95								

Top of bedrock @ 35.4'

Dip (d)	REC %	ROD %
30-70	100	0
	100	87

Hole stopped @ 45.4'

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE — Bridge No. 26
Highway No. VT. ROUTE 118 — Log Sta. — Surv. Sta.

VT. ROUTE 118 OVER TROUT RIVER

BORING LOG SHEET - 1

Designed By VAOT — Drawn By S.DELJA
Checked By S.JOHNSON — Date 02/00 — Bridge Design Supervisor — Date
PROJECT BERKSHIRE — PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J914562\zf184bl1.dgn — IPARM:zf184bl1J
Bridge Sheet No. BR6 — Sheet 45 of 140

78f184/zf184BL1

BORINGS ARE IN ENGLISH UNITS WITH THE EXCEPTION OF THE METRIC ELEVATION COLUMN ON THE FAR LEFT OF EACH BORING LOG.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-8
SHEET 1 OF 2
DATE STARTED: 11/30/94
DATE COMPLETED: 12/5/94

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 107+05.00
GROUND EL.: 415.38

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: -20.00
G.W. DEPTH: 12

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: POWERS

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METRIC ELEVATION (METERS)	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.608										
125	5		A-4, SlSa, Moist, br, Rec.= 0.7'	6	37.4	2.8	56.5	40.7		
12/05/94 ▼	10		A-1-a, SaGr, MTW, gr, Rec.= 0.5'	14	37.1	62.9	30.6	6.5		
	15		A-4, Si, Wet, gr, Rec.= 2.0'	3	35.6	2	4.7	93.3		
BOT. OF FOOTING ELEVATION 120.4	20		A-4, Si, Wet, gr, Rec.= 2.0'	5	39.9	0	5.2	94.8		
120	25		A-2-4, SlSa, Wet, gr, Rec.= 0.9'	13	15.2	6.8	64.6	28.6		
	30		A-4, Si, Wet, gr, Rec.= 1.5'	5	34	1.6	5.4	93		
	35		A-4, Si, Wet, gr, Rec.= 1.5'	3	31.6	0	4.1	95.9		
115	40		A-4, Si, Wet, gr, Rec.= 0.7'	13	27.6	0	4	96		
	45		A-4, SaSl, Wet, gr, Rec.= 1.8'	7	21.1	3.7	35	61.3		
	50		A-4, Si, Wet, gr, Rec.= 1.2'	8	16.6	8.5	16.3	75.2		
110	55		A-4, SaSl, MTW, gr, Rec.= 0.8'	43	18.1	9	26.9	64.1		
	60		A-2-4, SlSa, Moist, gr, Rec.= 0.9'	R	14.8	3.8	74.8	21.4		
	65		Sample 1: BXMDC, 65.0'-69.5', Rec.= 1.5', Poss. loose rock and boulders, No Geologist's Report.							
105	70									
	75		Sample 2: BXMDC, 69.5'-74.0', Rec.= 0, Poss. loose rock and boulders, No Geologist's Report.	Top of bedrock @ 78.0'						
EST. PILE TIP EL. 102.83	80			Dip (d)	REC %	ROD %				
	85		Run 1: BXMDC, 78.0'-83.0', Rec.= 5.0', See Geologist's Report.	75	100	7				
100	90		Run 2: BXMDC, 83.0'-88.0', Rec.= 5.0', See Geologist's Report.	70	100	54				
	95			Hole stopped @ 88.0						
	100		Geologist's Report							
95	105		Run #1: Core consists of quartz-sericite-chlorite phyllite with abundent lenses of quartz. The rock is moderately hard, unweathered and competent overall.							
			Run #2 : Same as Run #1							

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-9
SHEET 1 OF 2
DATE STARTED: 12/6/94
DATE COMPLETED: 12/12/94

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 107+05.00
GROUND EL.: 416.39

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: 20.00
G.W. DEPTH: 12

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: POWERS

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METRIC ELEVATION (METERS)	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.916										
125	5		A-2-4, Sa, Moist, br, Rec.= 0.8'	6	34.1	14.2	67.1	18.7		
12/12/94 ▼	10		A-1-b, SaGr, Moist, gr/br, Rec.= 0.8'	20	8.7	53.8	37.4	8.8		
	15		A-4, Si, Wet, gr, Rec.= 1.8'	2	29.1	0	0.9	99.1		
BOT. OF FOOTING ELEVATION 120.4	20		A-4, Si, Wet, gr, Rec.= 2.0'	2	42.8	0.7	2.9	96.4		
120	25		A-4, Si, Wet, gr, Rec.= 0.5'	11	43.6	3.5	16.9	79.6		
			A-2-4, SlGrSa, Wet, gr, Rec.= 0.5'		17.9	25.4	52	22.6		
	30		A-4, Si, Wet, gr, Rec.= 0.5'	2	30.3	0.5	3.6	95.9		
	35		A-4, Si, Wet, gr, Rec.= 2.0'	4	37.1	0	2.7	97.3		
115	40		A-4, SaSl, Wet, gr, Rec.= 2.0'	5	14.9	0	29.7	70.3		
	45		A-4, Si, Wet, gr, Rec.= 1.2'	17	19.3	0	15.7	84.3		
	50		A-4, Si, Wet, gr, Rec.= 1.8'	8	15.7	5.6	15.4	79		
110	55		A-4, SaSl, Wet, gr, Rec.= 1.7'	7	18.6	0	23.9	76.1		
	60		Loose rock, No rec.	40						
	65		Gr & bo's, No rec.	R						
105	70		No Rec.	R						
	75		A-4, SaSl, Moist, gy, Rec.= 0.5'	R	16.2	13.6	39.8	46.6		
	80			R	13	29.9	52.1	18		
EST. PILE TIP EL. 100.39	85		A-2-4, GrSa, Moist, gr, Rec.= 0.4'	Top of bedrock @ 87.0'						
100	90		Run 1: BXMDC, 87.0'-92.0', Rec.= 4.0', See Geologist's Report.	Dip (d)	REC %	ROD %				
	95		Run 2: BXMDC, 92.0'-97.0', Rec.= 5.0', See Geologist's Report.	30	80	13				
				60	100	60				
				Hole stopped @ 97.0'						

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-9
SHEET 2 OF 2
DATE STARTED: 12/6/94
DATE COMPLETED: 12/12/94

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 107+05.00
GROUND EL.: 416.39

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: 20.00
G.W. DEPTH: 12

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: POWERS

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Geologist's Report							
105		Run #1: Core consists of quartz-sericite-chlorite phyllite with abundent lenses of quartz. The rock is moderately hard and unweathered The rock is competent.							
110									
115									
120		Run #2 : Same as Run #1							
125									
130									
135									
140									
145									
150									
155									
160									
165									
170									
175									
180									
185									
190									
195									

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE — Bridge No. 26
Highway No. VT. ROUTE 118 — Log Sta. — Surv. Sta.

VT. ROUTE 118 OVER TROUT RIVER
BORING LOG SHEET - 2

Designed By VAOT — Drawn By S.DELIA
Checked By S.JOHNSON — Date 02/00 — Bridge Design Supervisor — Date
PROJECT BERKSHIRE — PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9\4562\zf184bl2.dgn — IPARM:zf184bl2.I
Bridge Sheet No. BR7 — Sheet 46 of 140

78f184/zf184BL2

BORINGS ARE IN ENGLISH UNITS WITH THE EXCEPTION OF THE METRIC ELEVATION COLUMN ON THE FAR LEFT OF EACH BORING LOG.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: AB-1
SHEET 1 OF 1
DATE STARTED: 11/18/96
DATE COMPLETED: 11/20/96

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 105+41.00
GROUND EL.: 415.48
PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: 16.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: KELLY .
BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METERS	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Descr/ption)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.638										
125	5		A-2-4, SiSa, Moist, br, Rec.= 1.0'	5	24.1	7.5	64.5	28		
	10		A-1-a, SaGr, MTW, br, Rec.= 0.8'	27	11.7	58.9	33.9	7.2		
	15		A-4, ClSi, Wet, gr, Rec.= 0.6'	5	34	0.9	2.8	96.3	29	8
BOT. OF FOOTING ELEVATION 120.4	20		A-2-4, Sa, sat, gr, Rec.= 0.5'	13	23.7	0.4	82.1	17.5		
120	25		No Rec.	16						
			Top of bedrock @ 29.5'							
	30		Run 1: BXMDC, 29.5'-34.5', Rec.= 5.0', See Geologist's Report.	Dip (d)	REC %	ROD %				
					70	100	80			
	35		Run 2: BXMDC, 34.5'-39.5', Rec.= 5.0', See Geologist's Report.		70	100	86			
115	40		Hole stopped @ 39.5'							
	45		Geologist's Report Run #1: Gray-green quartz sericite chlorite phyllite with lenses of quartz. Moderately hard, unweathered, and competent.							
	50									
110	55									
	60		Run #2 : Same as Run #1.							
	65									
105	70									
	75									
	80									
100	85									
	90									
	95									

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: AB-2
SHEET 1 OF 1
DATE STARTED: 11/20/96
DATE COMPLETED: 11/21/96

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 105+41.00
GROUND EL.: 415.33
PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: -16.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: KELLY .
BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METERS	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Descr/ption)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.592										
125	5		A-4, SaSl, MTW, br, Rec.= 0.4'	7	34.9	10.7	41.7	47.6		
	10		A-1-a, SaGr, Moist, br, Rec.= 0.9'	27	9.7	54.7	35.3	10		
	15		A-2-4, GrSiSa, Wet, gr, Rec.= 0.9'	11	19.8	20.8	48.2	31		
BOT. OF FOOTING ELEVATION 120.4	20		A-4, SaSl, Wet, gr, Rec.= 1.2'	8	27.8	11.2	34.2	54.6		
120	25		No Rec.							
			Top of bedrock @ 25.2'							
	30		Run 1: BXMDC, 25.2'-30.2', Rec.= 4.5', See Geologist's Report.	Dip (d)	REC %	ROD %				
					70	90	43			
			Run 2: BXMDC, 30.2'-35.2', Rec.= 5.0', See Geologist's report.		70	100	99			
115	35		Hole stopped @ 35.2							
	40		Geologist's Report Run #1: Gray-green quartz sericite chlorite phyllite with quartz lenses. Moderately hard, unweathered, and competent.							
	45									
	50		Run #2 : Same as Run #1.							
110	55									

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: AB-3
SHEET 1 OF 1
DATE STARTED: 11/22/96
DATE COMPLETED: 12/5/96

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 106+86.00
GROUND EL.: 412.23
PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: -16.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: KELLY .
BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METERS	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Descr/ption)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
126.647										
125	5		A-2-4, Sa, Moist, br, Rec.= 0.6'	5	22.8	4.5	85.6	9.9		
	10		No Rec.	18						
	15		A-4, ClSl, Wet, gr, Rec.= 2.0'	3	44.6	0	5.3	94.7	28	7
BOT. OF FOOTING ELEVATION 120.4	20		A-4, Sl, Wet, gr, Rec.= 2.0'	1	33.1	0.8	11.2	88	24	4
120	25		A-4, Sl, Wet, gr, Rec.= 2.0'	1	37	0	0.9	99.1	26	4
	30		A-4, Sl, sat, gr, Rec.= 2.0'	2	33.5	0.1	3	96.9		
	35		A-4, Sl, Wet, gr, Rec.= 1.9'	9	27.5	0	15.4	84.6		
115	40		A-4, SaSl, Wet, gr, Rec.= 2.0'	13	23.6	0.3	19.8	79.9		
	45		A-4, SaSl, Wet, gr, Rec.= 1.2'	8	22.2	9.3	25.4	65.3		
	50		A-4, GrSaSl, Wet, gr, Rec.= 1.0'	29	20.3	26.6	31.8	41.6		
110	55		A-3, Sa, Wet, gr, Rec.= 2.0'	25	15.7	0	91.5	8.5		
	60		A-1-a, SaGr, Wet, gr, Rec.= 1.0'	76	10.3	67	25.7	7.3		
	65		A-1-a, SaGr, MTW, gr, Rec.= 0.6'	R	11.8	52.5	37.2	10.3		
EST. PILE TIP EL. 105.62			Top of bedrock @65.7'							
105	70		Run 1: BXMDC, 65.7'-70.7', Rec.= 4.8', See Geologist's Report.	Dip (d)	REC %	ROD %				
					70	96	74			
	75		Run 2: BXMDC, 70.7'-75.7', Rec.= 5.0', See Geologist's Report.			100				
			Hole stopped @ 75.7'							
	80		Geologist's Report Run #1: Gray-Green quartz, sericite, chlorite phyllite with thin quartz veins. Moderately hard, unweathered, and competent.							
100	85									
	90		Run #2: Same as Run #1							
	95									

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT.ROUTE 118	Log Sta. / Surv. Sta.
VT.ROUTE 118 OVER TROUT RIVER	
BORING LOG SHEET - 3	
Designed By VAOT	Drawn By S.DELIA
Checked By S.JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
L.G.C. Info. y:\J9\4562\zf184bl3.dgn	IPARM:zf184bl3J
Bridge Sheet No. BR8	Sheet 47 of 140

78f184/zf184BL3

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: AB-4
SHEET 1 OF 2
DATE STARTED: 12/04/96
DATE COMPLETED: 12/12/96

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 106+86.00
GROUND EL.: 412.84

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: 16.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: TALLMAN .

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METRIC ELEVATION	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
125.834										
125	5		A-3, GrSa, MTW, br, Rec.= 1.8'	6	23.8	27.2	63.7	9.1		
	10		No Rec. (Gravel)	17						
BOT. OF FOOTING ELEVATION 120.4	15		A-4, ClSl, Wet, gr, Rec.= 1.8'	4	39.9	0	0.7	99.3	27	7
120	20		A-4, ClSl, Wet, gr, Rec.= 1.7'	2	32.6	0.1	2.4	97.5	25	6
	25		A-1-b, GrSa, Wet, gr, Rec.= 1.0'	11	14.5	22.3	61.5	16.2		
	30		A-4, ClSl, Wet, gr, Rec.= 2.0'	0	36.6	0	1.7	98.3	26	5
115	35		A-4, Sl, Wet, gr, Rec.= 1.0'	5	32.4	0	3.2	96.8		
	40		A-4, Sl, MTW, gr, Rec.= 0.8'	12	25.1	0	10.2	89.8		
	45		A-4, SaSl, Wet, gr, Rec.= 1.7'	5	18.6	10.2	22.5	67.3		
110	50		A-4, SaSl, Wet, gr, Rec.= 0.8'	14	21.3	14	23.3	62.7		
	55		A-1-b, GrSa, Wet, gr, Rec.= 0.4'	39	10.9	42.5	45.7	11.8		
	60		No Rec., BXDC, 60.3'-65.3', Boulders	R						
	65		No Rec., Bo's							
105	70		A-1b, GrSa, Moist, gr, Rec.= 0.9'	R	10.9	39.8	43.4	16.8		
	75		Unable to sample, Flowing sand							
	80		Unable to sample, Flowing sand	Top of bedrock @ 82.5'						
EST. PILE TIP EL. 100.68				Dip (o)	REC %	ROD %				
100	85		Run 1: BXMDC, 82.5'-87.5', Rec.= 4.2', See Geologist's Report.	70-80	84	50				
	90		Run 2: BXMDC, 87.5'-92.5', Rec.= 4.0', See Geologist's Report.		80	45				
	95			Hole stopped @ 92.5'						

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: AB-4
SHEET 2 OF 2
DATE STARTED: 12/04/96
DATE COMPLETED: 12/12/96

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 106+86.00
GROUND EL.: 412.84

PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: 16.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: TALLMAN .

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METRIC ELEVATION	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
95			Geologist's Report							
	105		Run #1: Gray-green, sericite, chlorite phyllite with quartz veins and magnetite porphyroblasts. Moderately hard, unweathered and competent.							
90	110									
	115									
	120									
	125		Run #2 : Same as Run #1 with lesser amount of magnatite.							
	130									
85	135									
	140									

BORINGS ARE IN ENGLISH UNITS WITH THE EXCEPTION OF THE METRIC ELEVATION COLUMN ON THE FAR LEFT OF EACH BORING LOG.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
BORING LOG SHEET - 4	
Designed By VAOT	Drawn By S.DELIA
Checked By S.JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J91\456\2\zf184bl4.dgn	IPARM:zf184bl4.i
Bridge Sheet No. BR9	Sheet 48 of 140

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VAOT Metric

BORINGS ARE IN ENGLISH UNITS WITH THE EXCEPTION OF THE METRIC ELEVATION COLUMN ON THE FAR LEFT OF EACH BORING LOG.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: AB-5
SHEET 1 OF 1
DATE STARTED: 12/17/96
DATE COMPLETED: 12/19/96

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 106+81.00
GROUND EL.: 412.99
PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: 0.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: TALLMAN .
BORING RIG: TRUCK
BORING TYPE: HOLLOW STEM
SAMPLE TYPE: SHELBY TUBE

METRIC ELEVATION (METERS)	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
125.879			No Rec., 0.0'- 6.0', (SaSl)							
125	5		No Rec., 6.0'- 12.0', (Gr)							
BOT. OF FOOTING ELEVATION 120.4										
120	10		Pushed tube 12.0'- 14.0', No Rec.							
	15		Pushed tube 14.0'- 16.0', Rec.= 1.3', (cl)		32.2	0	1.9	98.1	21	1
115			Vane shear @ 18.0', Reading 105, Rem 30, Pushed tube 18.0'- 20.0', No Rec.							
	20		Vane shear @ 22.0', Reading 85, Rem 14, Pushed tube 22.0'- 24.0', Rec.= 2.0',(SlSa in bottom of tube)							
110	25		Unable to push vane @ 24.0'- 26.0' because of gravel layer		28.8	0.8	1.7	97.5	31	9
			Pushed tube 26.0'- 28.0', Rec.= 2.0',(ClSl)							
	30		Vane @ 30.0', Reading 186, Rem 28, Pushed tube 30.0'- 32.0', Rec.= 1.4', (Sl)		31.3	0.7	1.1	98.2		
105	35				Hole stopped @ 32.0'					
	40									
100	45									

Vane Shear & Shelby Tube Report

Tube 14' to 16' Results :
Θo = 0.87 Cc = 0.14 Cr = 0.013

Vane Shear @ 18' Results :
Su (V.S.) = 459 psf Su (REM) = 131 psf

Vane Shear @ 22' Results :
Su (V.S.) = 372 psf Su (REM) = 61 psf

Tube 22' to 24' Results : Cu = 1179 psf
Θo = 0.70 Cc = 0.14 Cr = 0.021

Tube 26' to 28' Results : Cu = 792 psf
Θo = 0.73 Cc = 0.15 Cr = 0.035

Vane Shear @ 30' Results :
Su (V.S.) = 814 psf Su (REM) = 122 psf
Tube 30' to 32' Results :
Θo = 0.89 Cc = 0.13 Cr = 0.030

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: R-1
SHEET 1 OF 1
DATE STARTED: 3/3/95
DATE COMPLETED: 3/3/95

PROJECT NAME: BERKSHIRE
SITE NAME: VT RT 118
STATION: 110+00.00
GROUND EL.: 412.77
PROJECT NUMBER: BRS 0283(7)
SITE NO.: BR 26
OFFSET: -23.00
G.W. DEPTH: 0

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: MCGLYNN
BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

METRIC ELEVATION (METERS)	DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
125.812										
125	5		A-4, SaSl, Wet, br, Trace of Organics	0	94.4	0.2	24.8	75		
			A-4, SaSl, br, Wet, Rec.= 2.0' W/Organics	1	70.4	0.1	29	70.9		
	10		A-1-a, SaGr, br, Wet, Rec.= 0.6'	13	14	59.8	33.3	6.9		
	15		A-1-b, SaGr, gr, Wet, Rec.= 0.8'	43	13.2	43.6	41.2	15.2		
BOT. OF FOOTING ELEVATION 120.4										
120	20		A-1-b, GrSa, gr, Wet, Rec.= 0.8'	16	13	40.9	42.4	16.7		
	25		A-2-4, SlGrSa, gr, Wet, Rec.= 1.1'	42	11.5	27.4	46.3	26.3		
	30		A-4, GrSaSl, gr, Moist, Rec.= 0.7'	R	16.7	20	34	46		
115	35		A-4, SaSl, gr, Moist, Rec.= 0.2'	R	8.1	14.1	42.9	43		
	40				Hole stopped @ 35.5'					

STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
BORING LOG SHEET - 5	
Designed By VAOT	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J914562\zf184bl5.dgn	IPARM:zf184bl5J
Bridge Sheet No. BR10	Sheet 49 of 140

78f184/zf184BL5

END PERMANENT SHEET PILING

STONE FILL TYPE II | STONE FILL TYPE IV

1:1.5

1:1.5

WW1

1:1.5

1:1.5

WW2

1:1.5

STONE FILL TYPE IV

PERMANENT SHEET PILING (BEGINS @ 10+120, 15.0 Rt and ends @ 10+160, 9.5 Lt.

N

MAG 1985

N 7°37'32.1" W

1+040

1+020

BEGIN BRIDGE
STA.10+163.300
F.G. EL. 129.417

COFFERDAM

10+160

6000 APPROACH SLAB (TYP.)

1:10 MIN.

℄ BRG. ABUT. NO. 1
STA.10+164.000
F.G. EL. 129.434

90°-0'-0" (TYP.)

4650 FACE OF CURB (TYP.)

5250 TO FASCIA (TYP.)

N 82°22'24.8" E

℄ VT. ROUTE 118 & GRADE LINE

10+180

4800 TO FACE OF RAIL (TYP.)

89°-59'-56.9"

3300

3300

10+200

VT. ROUTE 118 STA.10+189.703 =
TROUT RIVER BASELINE STA. 1+030.002

Proposed New Channel

PERMANENT STEEL SHEET PILING (Begins @ 10+210, 11.2 Lt. and ends @ 10+290, 17.5 Rt.

TROUT RIVER

STONE FILL TYPE IV | STONE FILL TYPE II

END PERMANENT SHEET PILING

1:1.5

1:1.5

WW3

1:1.5

1:1.5

WW4

1:1.5

STONE FILL TYPE IV

℄ BRG. ABUT. NO. 2
STA.10+208.000
F.G. EL. 130.183

COFFERDAM

1:10 MIN.

END BRIDGE
STA.10+208.700
F.G. EL. 130.190

10+220

1000

1500

3300

3300

1500

1000

PLAN

0 2 4 8

SCALE: 1:100

PAY LIMITS GUARD RAIL APPROACH SECTION NETC 2 RAIL 7620

900 TYP | 1200 TYP | 1800 TYP

PAY LIMITS BRIDGE RAILING - 2 RAIL NETC

BRIDGE RAIL POST 18 SPACES @ 2390 = 43 020

50 820 EACH SIDE

PAY LIMITS GUARD RAIL APPROACH SECTION NETC 2 RAIL 7620

PAY LIMITS STEEL BEAM GUARDRAIL (TYP)

℄ BRG. ABUTMENT 1 (FIXED)

44 000
℄ BRG. TO ℄ BRG.

℄ BRG. ABUTMENT 2 (EXPANSION)

130
128
126
124
122
120
118
116
114

BASE OF KEY FOR EMBANKMENT STABILIZATION

EL. 120.400

APPROXIMATE TOP OF BEDROCK

Q2.33
EL. 125.660

Q50
EL. 127.320

Q100
EL. 127.710

EXISTING STREAMBED

APPROXIMATE FINISHED GROUND

APPROXIMATE EXISTING GROUND

BASE OF KEY FOR EMBANKMENT STABILIZATION

EL. 120.400

ELEVATION

0 2 4 8

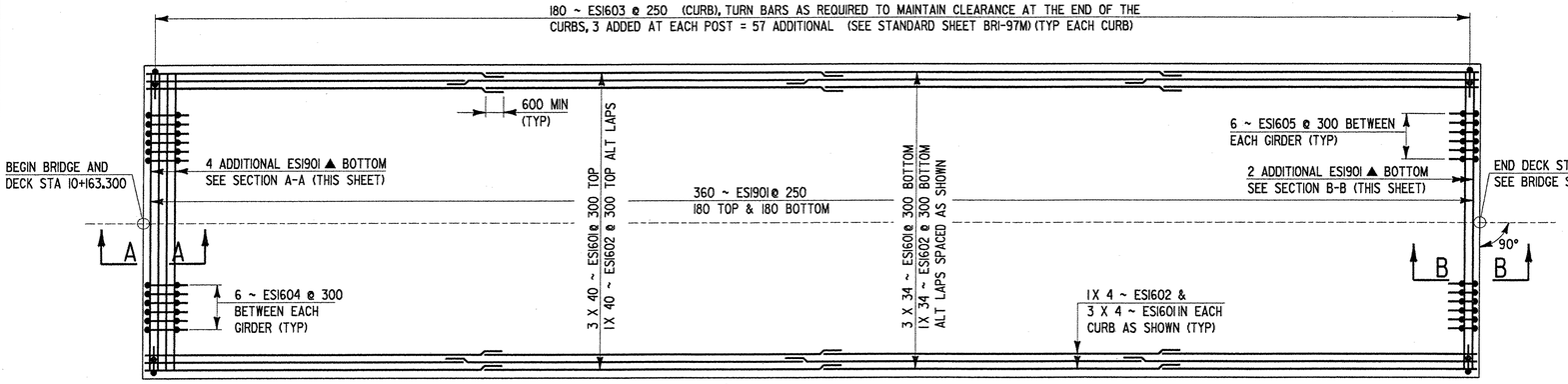
SCALE: 1:100

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
PLAN AND ELEVATION	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
L.G.C. Info. y:\J914562\zf184gpl.dgn	IPARM:zf184gplJ
Bridge Sheet No. BRII	Sheet 50 of 140

78f184/zf184PE

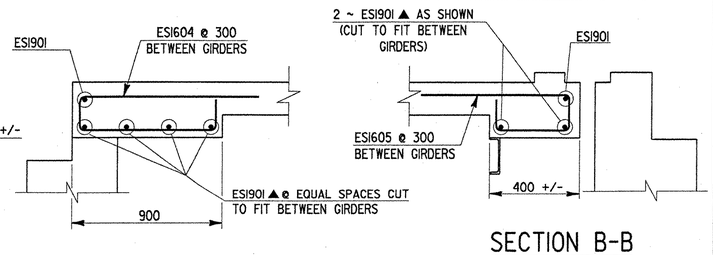
Metric



PLAN VIEW

0 2 4 6 8 10

SCALE 1:100

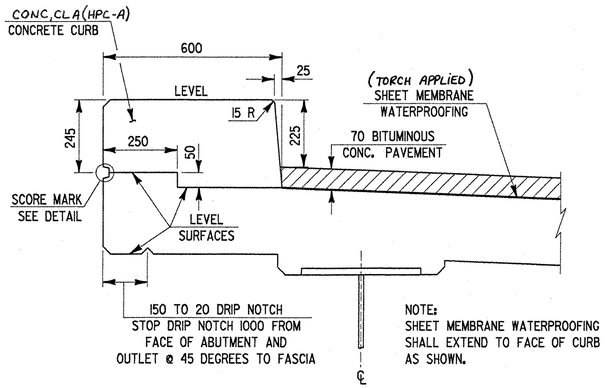


SECTION A-A

NOT TO SCALE

SECTION B-B

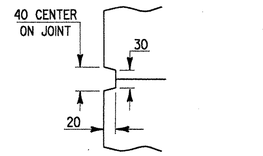
NOT TO SCALE



TYPICAL CURB SECTION

0 0.5 1

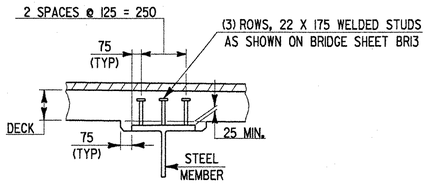
SCALE 1:10



SCORE MARK DETAIL

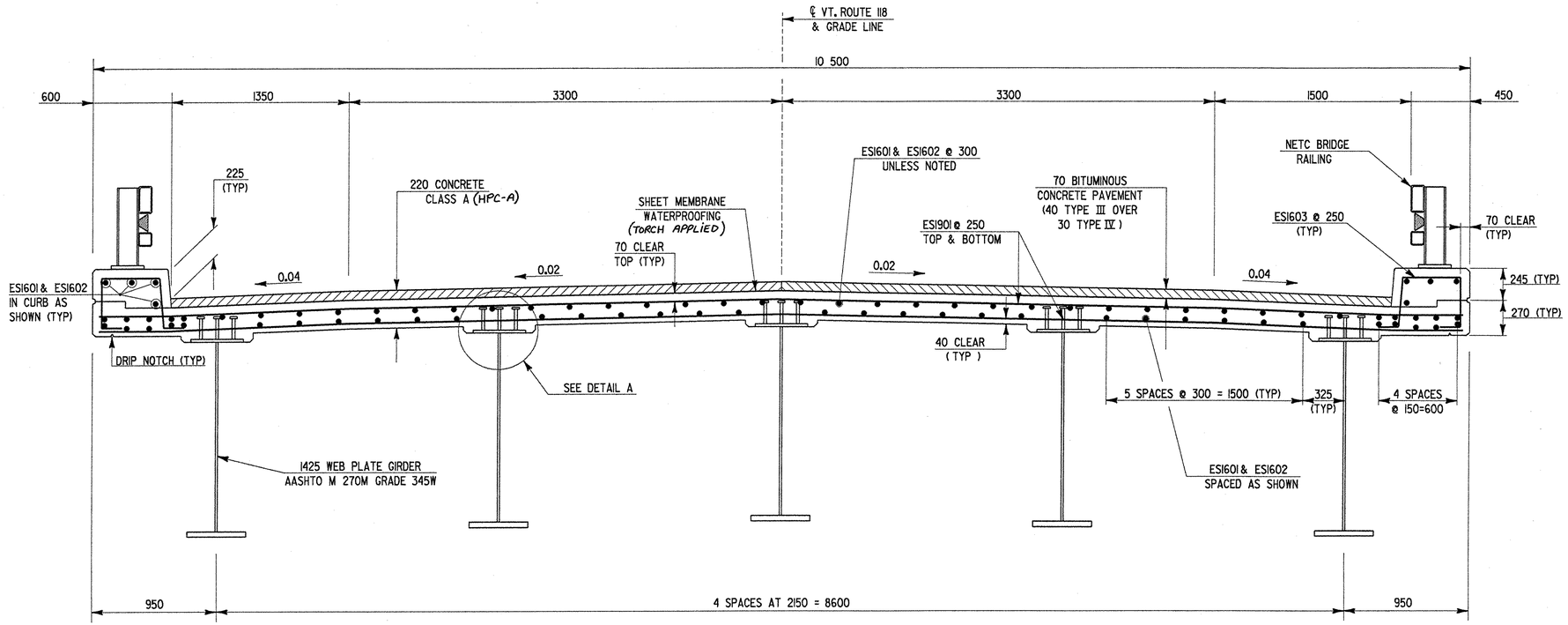
0 0.25 0.5

SCALE 1:5



DETAIL A

NOT TO SCALE



TYPICAL BRIDGE SECTION

0 1 2

SCALE 1:20

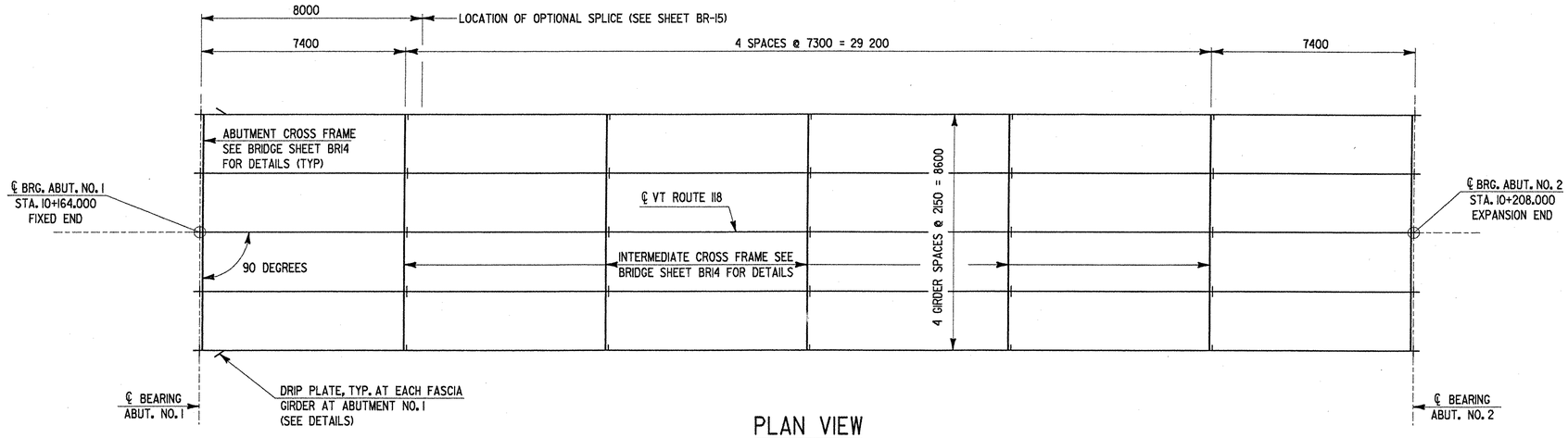
NOTE:

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

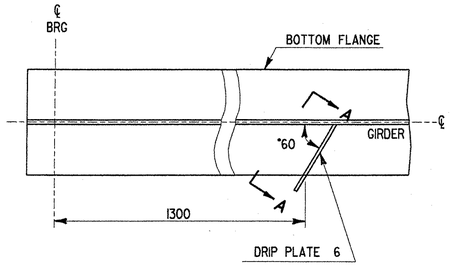
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
TYPICAL SECTION AND DECK PLAN	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
L.G.C. Info. y:\J914562\zf184dty.dgn	IPARM:zf184dtyJ
Bridge Sheet No. BRI2	Sheet 51 of 140

78f184/zf184DEC



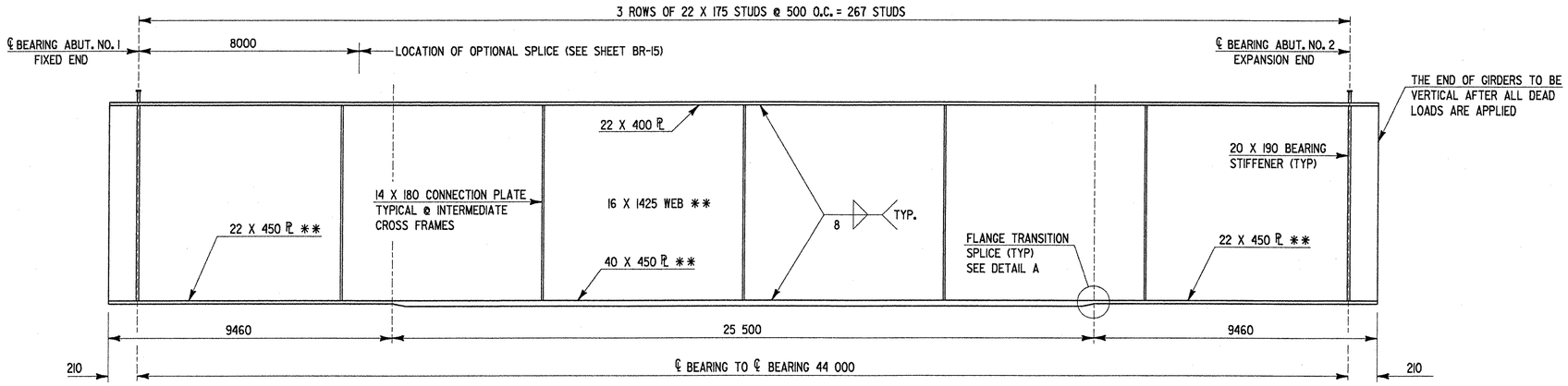
PLAN VIEW



PLAN DRIP PLATE

NOT TO SCALE

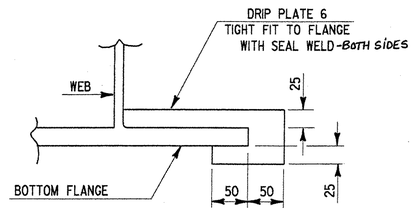
NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



GIRDER ELEVATION

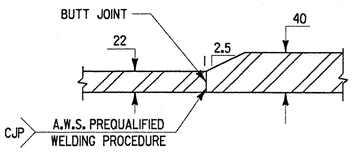
NOT TO SCALE

** INDICATES NEED FOR CHARPY V-NOTCH TEST (SEE NOTE 31, BRIDGE SHEET 1)



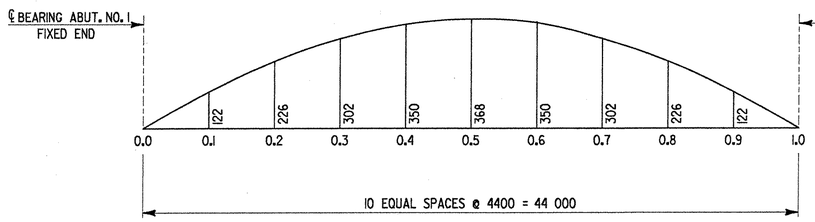
SECTION A-A

NOT TO SCALE



DETAIL A

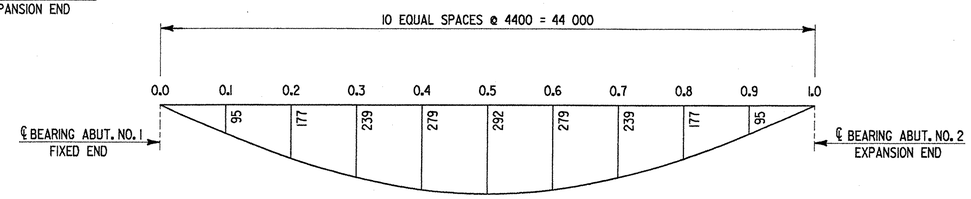
NOT TO SCALE



CAMBER DIAGRAM

NOT TO SCALE

NOTE: CAMBER DIAGRAM INCLUDES CAMBER FOR DEAD LOAD AND THE VERTICAL CURVE



DEAD LOAD DEFLECTION DIAGRAM

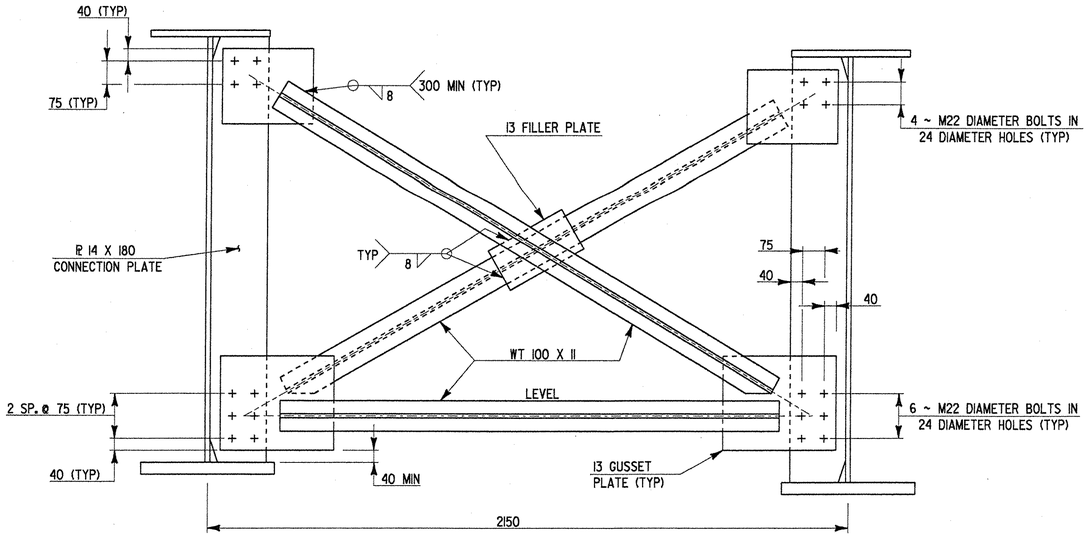
NOT TO SCALE

NOTE: DEAD LOAD DEFLECTIONS SHOWN ARE FOR ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS (INCLUDING GIRDERS & CROSS-FRAMES)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

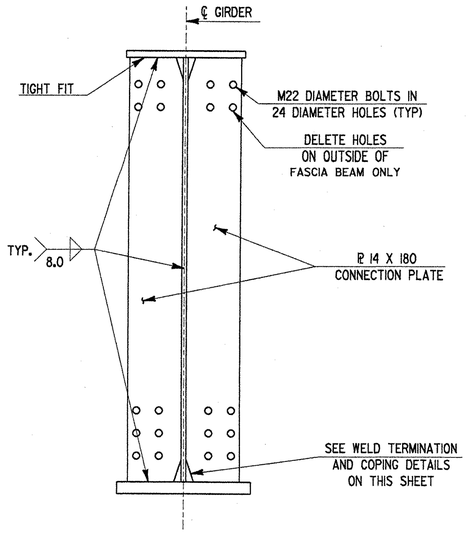
Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
FRAMING PLAN AND GIRDER ELEVATION	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON — Date 02/00	Bridge Design Supervisor — Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J91456\zf184fpl.dgn	IPARM:zf184fpl.I
Bridge Sheet No. BRI3	Sheet 52 of 140

78f184/zf184FRA



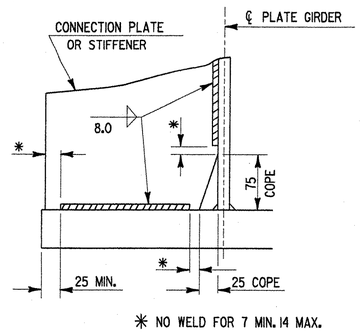
INTERMEDIATE CROSS FRAME CONNECTION PLATE DETAIL

0 0.5 1
SCALE 1:10



INTERMEDIATE CROSS FRAME CONNECTION PLATE DETAIL

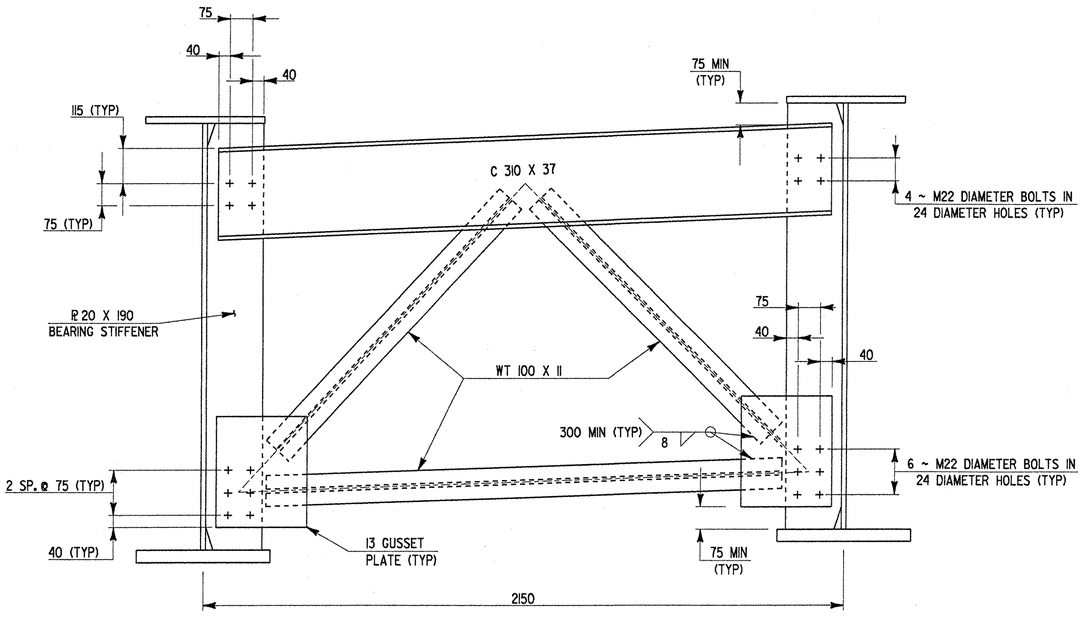
0 0.5 1
SCALE 1:10



* NO WELD FOR 7 MIN. 14 MAX.

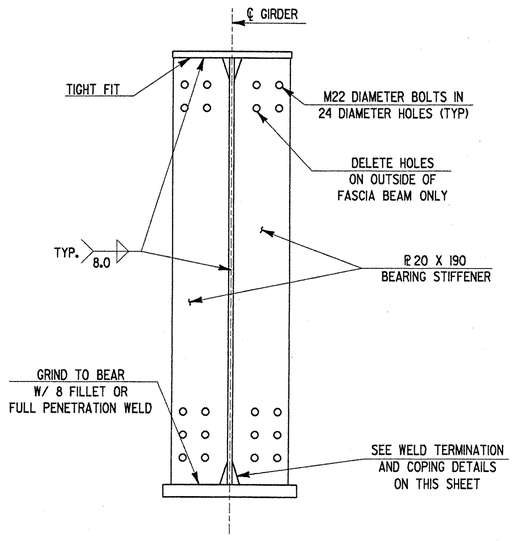
WELD TERMINATION AND COPING DETAILS FOR WELDED PLATE GIRDERS

0 0.5 1
SCALE 1:10



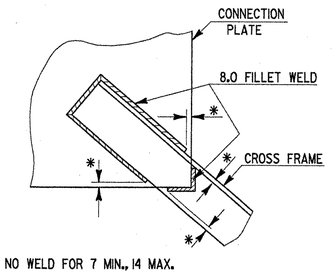
ABUTMENT CROSS FRAME

0 0.5 1
SCALE 1:10



BEARING STIFFENER & CONNECTION PLATE AT ABUTMENTS

0 0.5 1
SCALE 1:10



* NO WELD FOR 7 MIN., 14 MAX.

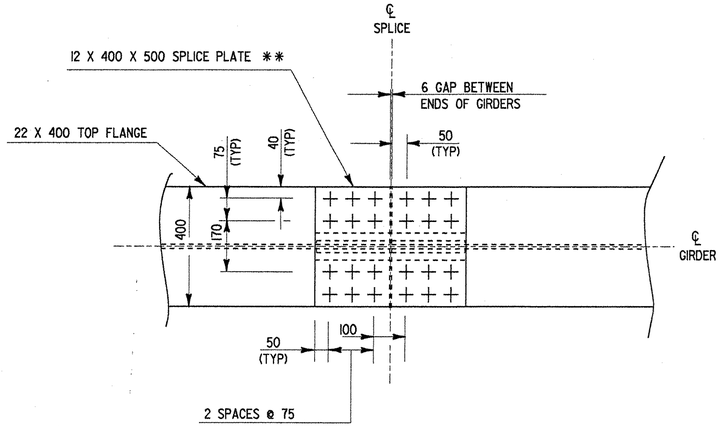
WELD LOCATION DETAIL AT CROSS FRAMES

NOT TO SCALE

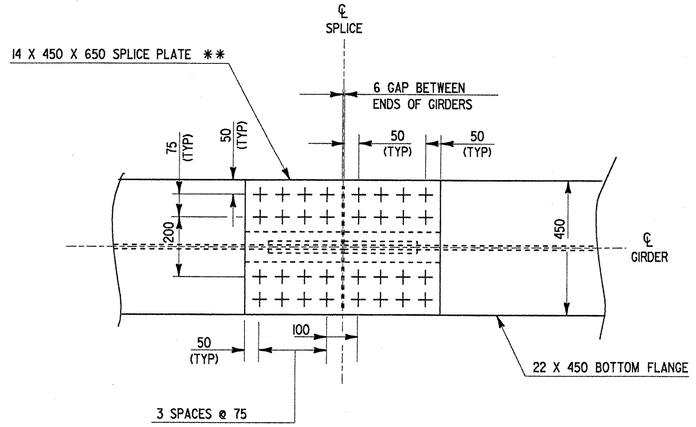
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
CROSS FRAME DETAILS	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON — Date 02/00	Bridge Design Supervisor — Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
L.G.C. Info. y:\J91456\zf184odt.dgn	IPARM:zf184odt.1
Bridge Sheet No. BRI4	Sheet 53 of 140

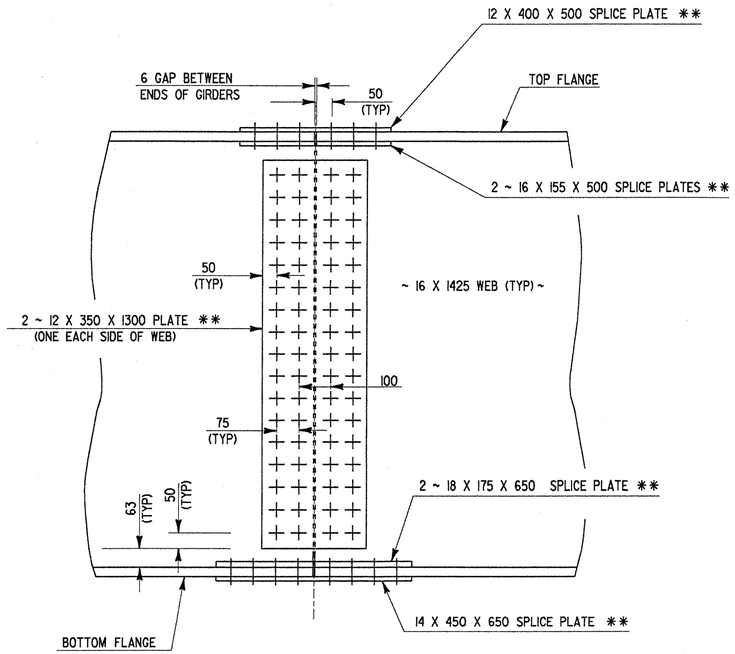
78f184/zf184XFM



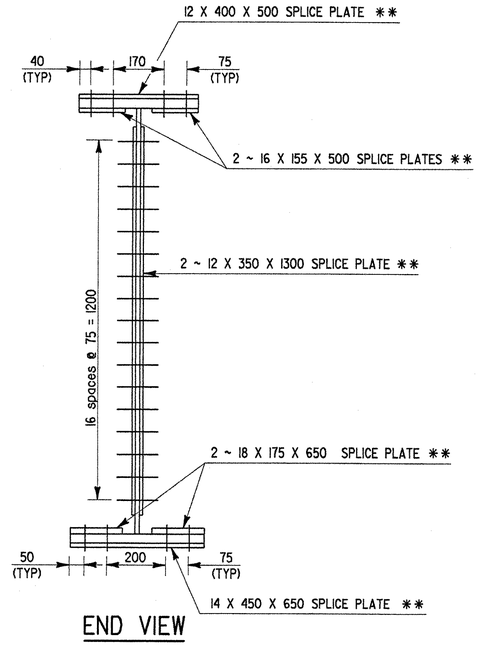
PLAN VIEW - TOP FLANGE



PLAN VIEW - BOTTOM FLANGE



ELEVATION VIEW



END VIEW

SPLICE NOTES

1. ALL SPLICE CONNECTIONS SHALL BE MADE USING M22 DIAMETER, AASHTO M 164M, BOLTS IN 24 DIAMETER HOLES.

2. SPLICE SHOWN IS OPTIONAL. IF THE CONTRACTOR ELECTS TO UTILIZE THE SPLICE, ALL COSTS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 506.55 STRUCTURAL STEEL (PLATE GIRDER).

SPLICE DETAILS

0 .5 1

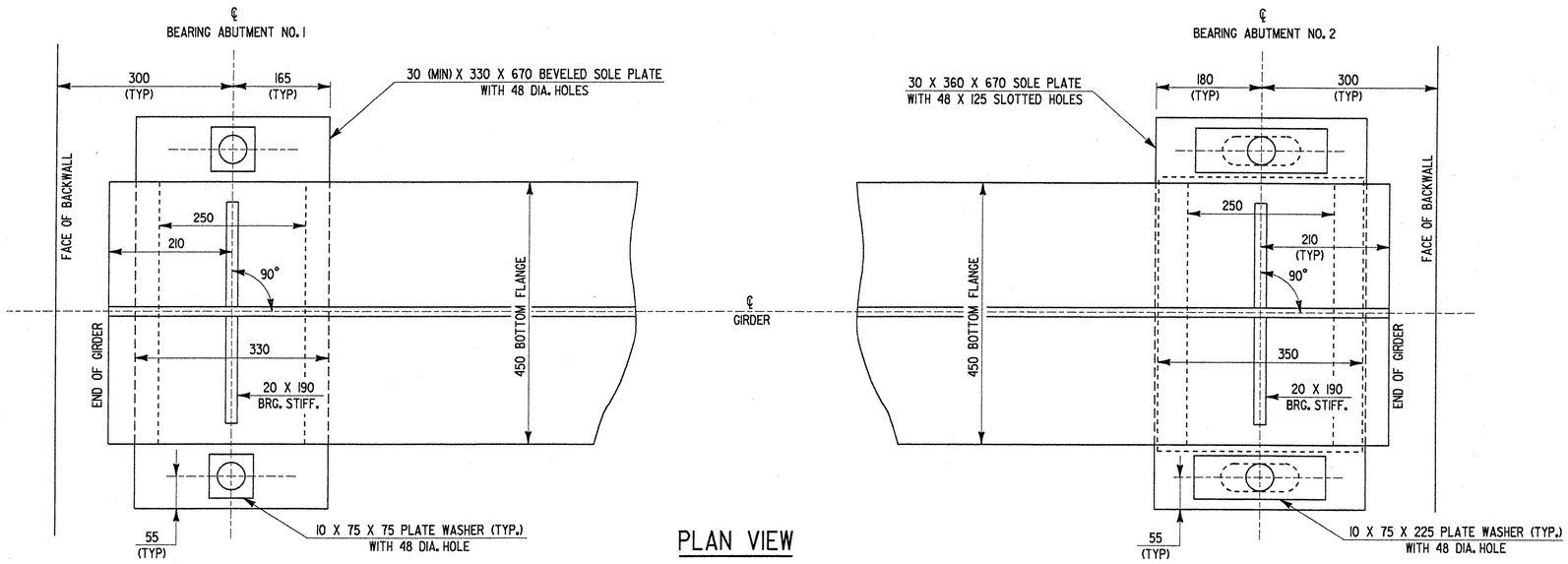
SCALE 1:10

** INDICATES NEED FOR CHARPY V-NOTCH TEST
(SEE NOTE 31, BRIDGE SHEET 1)

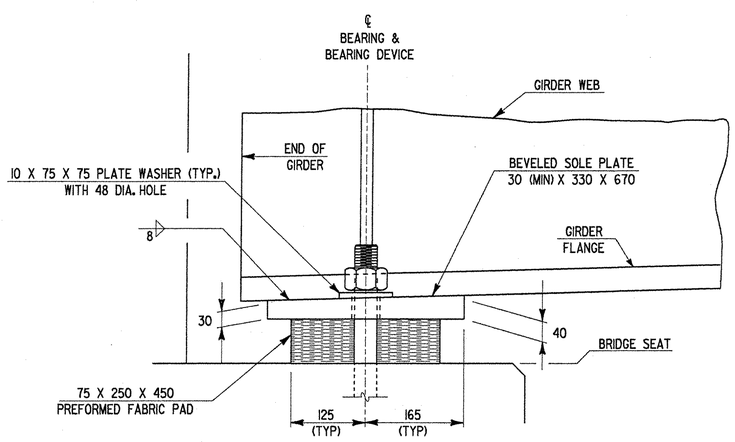
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
SPLICE DETAILS	
Designed By S.JOHNSON	Drawn By S.DELIA
Checked By S.JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J91456\2\zf184sdt.dgn	IPARM:zf184sdtJ
Bridge Sheet No. BRI5	Sheet 54 of 140

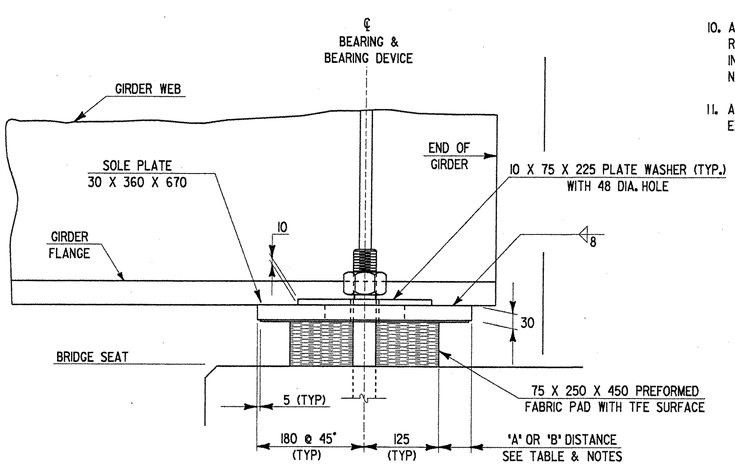
78f184/zf184SPL

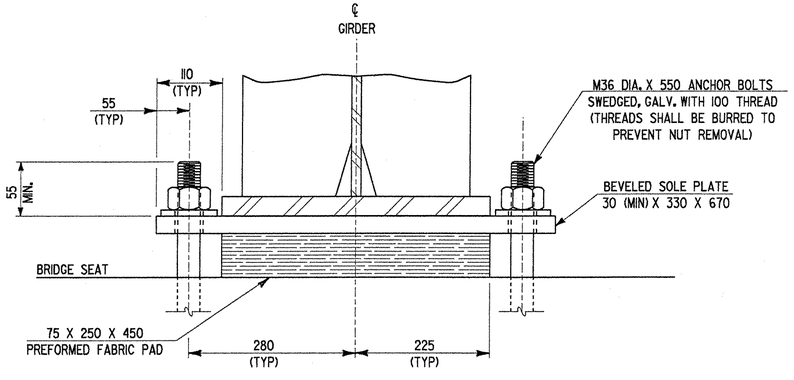


PLAN VIEW

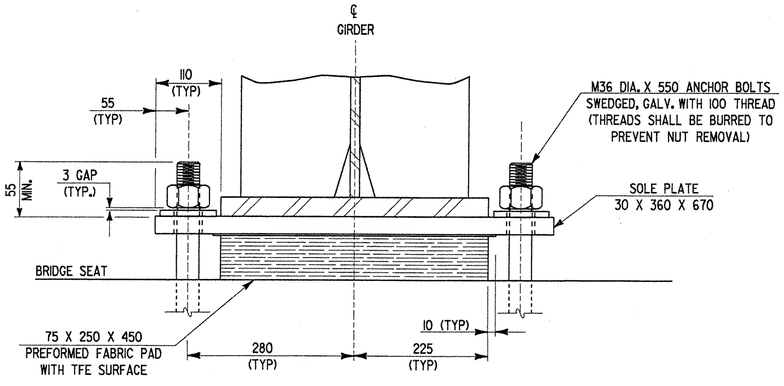


SIDE ELEVATION





FRONT VIEW



FIXED BEARING DETAIL AT ABUTMENT NO 1

0 0.25 0.5

SCALE 1:5

EXPANSION BEARING DETAIL AT ABUTMENT NO 2

0 0.25 0.5

SCALE 1:5

BEARING NOTES

1. BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731 OF THE VERMONT STATE SPECIFICATIONS DATED 1995.
2. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 'BEARING DEVICE ASSEMBLY'.
3. SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
4. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
5. ALL BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER SUBSECTION 531.04(B) AND 506.15(A) & (B). METALIZED SURFACES ARE TO BE COATED WITH AN APPROVED SEALANT PER 531.04 (b). AREAS OF DAMAGED METALLIZING OR GALVANIZING SHOULD BE REPAIRED PER SUPPLEMENTAL SPECIFICATION 513.
6. ALTERNATE CONFIGURATIONS FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE DESIGN LOADS AND CRITERIA SHOWN ON THIS SHEET, AND SHALL MAINTAIN THE ANCHORAGE SYSTEM SHOWN.
7. BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATE CONFIGURATION.
8. THE 'A' DISTANCE IS THE FINAL SETTING FOR THE BEARING PAD 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 DEAD LOAD DEFLECTION. THE FINAL 'A' DISTANCE AS SHOWN IN THE TABLE, MUST BE ATTAINED WITHIN 3 MM.
9. DESIGN CRITERIA:
   A. BASE PLATE TO CONCRETE DESIGN PRESSURE = 6.895 MPa MAXIMUM.
   B. MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS.
   C. HORIZONTAL CAPACITY SHALL BE A MINIMUM 10% OF VERTICAL LOAD.
   D. DESIGN LOAD PER BEARING = 776 kN.
10. ALL THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND CONFORM TO THE REQUIREMENTS OF SECTION 714.08. ANCHOR BOLTS SHALL HAVE A MINIMUM OF 400 EMBEDMENT INTO THE CONCRETE. ALL WASHERS SHALL BE 10 PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR 'BEARING DEVICE ASSEMBLY'.
11. ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS), SHALL BE AASHTO M 270M GRADE 345, EXCEPT ANCHOR BOLTS WHICH SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 183M.

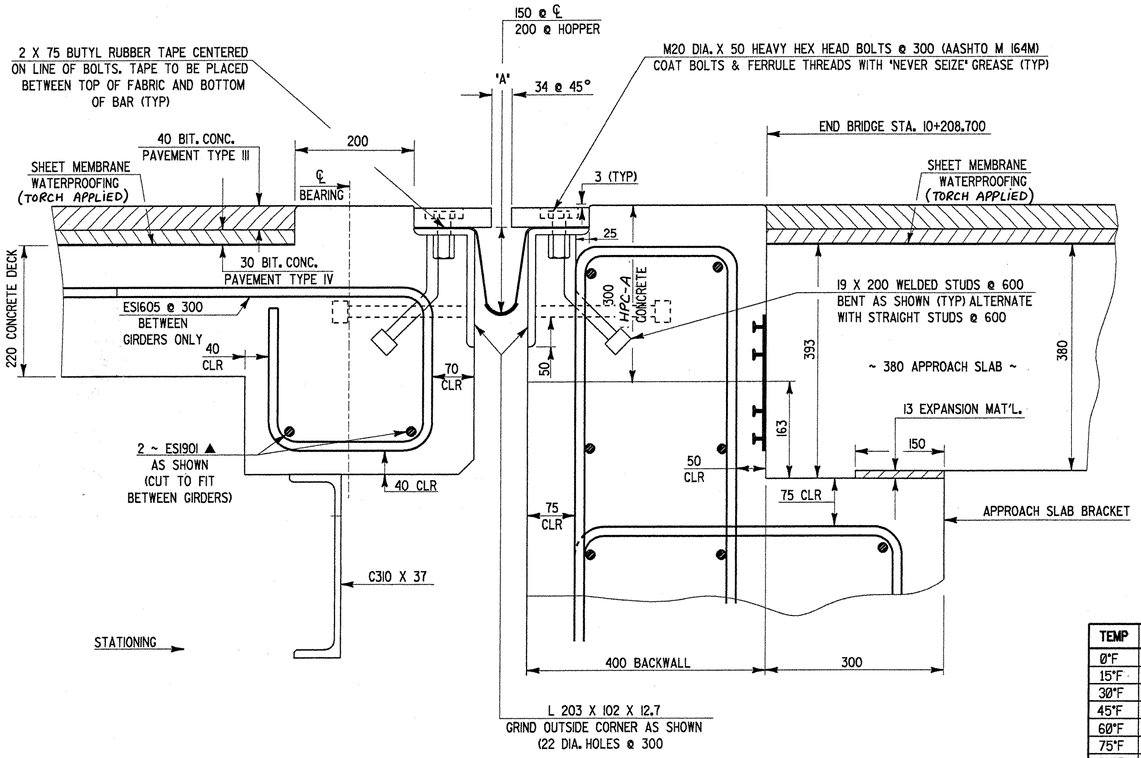
BEARING TEMPERATURE TABLES

ABUTMENT NO 2		
TEMP	'A' DIST	'B' DIST
0°F	42	10
15°F	46	15
30°F	51	19
45°F	55	23
60°F	59	28
75°F	64	32
90°F	68	36
105°F	72	40

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
BEARING DETAILS	
Designed By S.JOHNSON	Drawn By S.DELIA
Checked By S.JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. info. y:\J914562\zf184bdt.dgn	IPARM:zf184bdtJ
Bridge Sheet No. BR16	Sheet 55 of 140

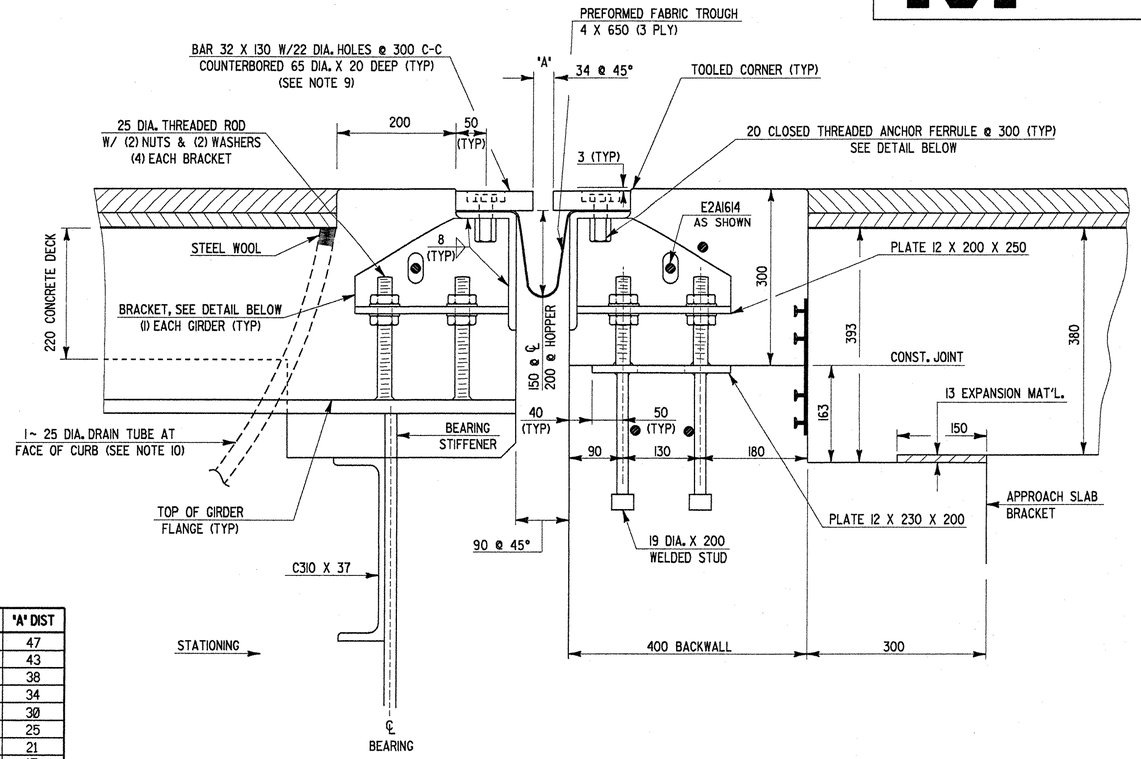
78f184/zf184BRG



TEMP	'A' DIST
Ø°F	47
15°F	43
30°F	38
45°F	34
60°F	30
75°F	25
90°F	21
105°F	17

TYPICAL SECTION BETWEEN GIRDERS AT ABUTMENT NO. 2

0 0.25 0.5
SCALE 1:5

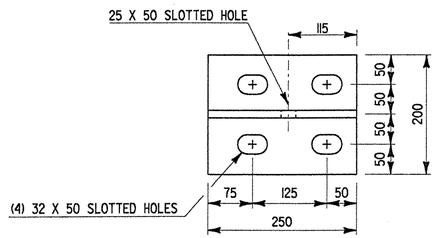


TYPICAL SECTION AT GIRDERS AT ABUTMENT NO. 2

0 0.25 0.5
SCALE 1:5

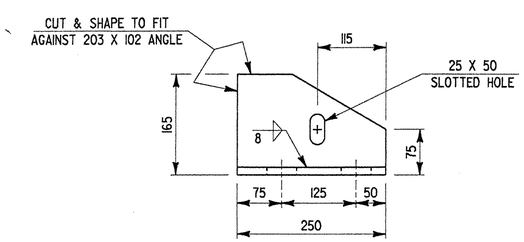
EXPANSION JOINT NOTES:

1. DETAILS ON THIS SHEET ARE FOR ITEM 516.10 'BRIDGE EXPANSION JOINTS'.
2. PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
3. BUTYL RUBBER TAPE SHALL CONFORM TO AASHTO SPECIFICATION M-198, TYPE B.
4. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK CONCRETE.
5. ALL STEEL COMPONENTS SHALL BE AASHTO M 270M GRADE 250 GALVANIZED OR METALIZED AS PER SUBSECTION 506.15 (a) OR (b) UNLESS OTHERWISE NOTED.
6. THE ITEM 'BRIDGE EXPANSION JOINT' SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL STEEL PLATES, DOWNSPOUTS, BRACKETS, ANGLES, WELDED STUDS OR RODS, PREFORMED FABRIC DRAIN TROUGH MATERIAL AND PLASTIC DRAIN TUBES, BUTYL RUBBER TAPE AND ANY OTHER MISCELLANEOUS MATERIAL.
7. THE 203 X 102 X 12 ANGLES SHALL BE FURNISHED AS ONE CONTINUOUS PIECE (NO SPLICES). THE 32 X 130 BARS SHALL BE PROVIDED IN TWO EQUAL LENGTHS.
8. COAT CONCRETE CONTACT SURFACES (EXCEPT THOSE DESCRIBED IN NOTE 9) WITH AN EPOXY BONDING COMPOUND MEETING THE REQUIREMENTS OF SUBSECTION 719.02. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516.10 'BRIDGE EXPANSION JOINTS'.
9. FILL COUNTERBORED HOLES WITH HOT POURED JOINT SEALER, (PER STD. SPEC. 707.04). PAYMENT FOR THIS WORK SHALL BE SUBSIDIARY TO ITEM 516.10.
10. A 25 DIAMETER PLASTIC DRAIN TUBE, (PER STD. SEPC. 707.06), SHALL BE INSTALLED AS SHOWN AT THE FACE OF CURB. THE UPPER END IS TO BE PLUGGED WITH STEEL WOOL AND THE LOWER END IS TO EXTEND BELOW THE BOTTOM OF THE ADJACENT GIRDER. THE DRAIN TUBES SHALL BE FASTENED TO THE GIRDERS USING A METHOD APPROVED BY THE ENGINEER.
11. PAYMENT FOR WATERSTOP SHALL BE SUBSIDIARY TO CONCRETE PAY ITEM.
12. A DRIP BEAD OF 6 X 180 STRIP OF PREFORMED FABRIC MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 25 FROM THE HOPPER END OF THE TROUGH.



BRACKET PLAN

0 0.25 0.5
SCALE 1:5



BRACKET ELEVATION

0 0.25 0.5
SCALE 1:5

ANCHOR FERRULE DETAIL

SCALE: 1:2

NOTE:
CLOSED THREADED FERRULE NUTS WITHOUT ANCHOR LOOPS MAY BE USED.

ALL PLATES 12

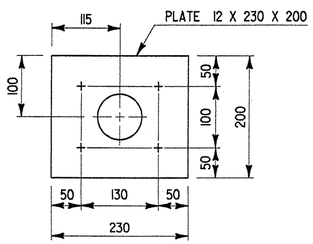
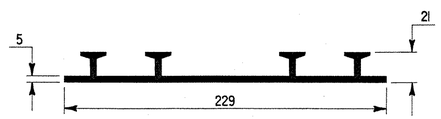


PLATE PLAN VIEW

0 0.25 0.5
SCALE 1:5



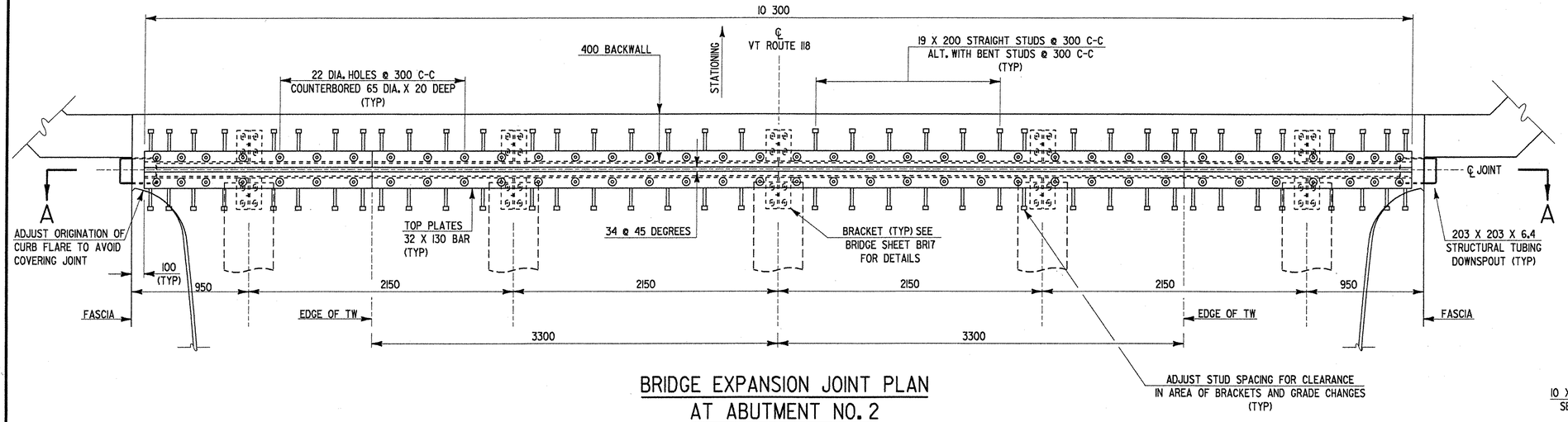
P. V. C. WATERSTOP FOR CONSTRUCTION JOINTS

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

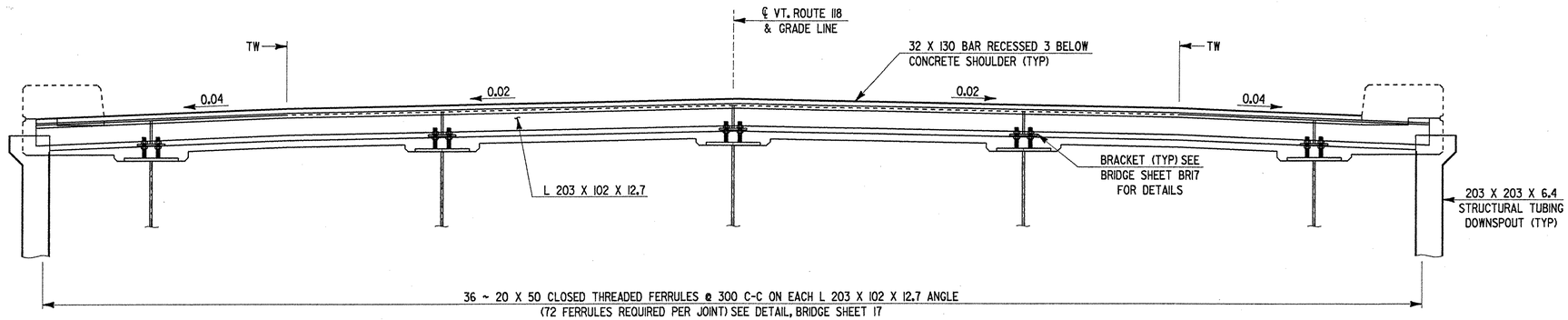
Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
EXPANSION JOINT DETAILS SHEET - 1	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J914562\zf184jdl.dgn	IPARMzf184jdlj
Bridge Sheet No. BR17	Sheet 56 of 140

78f184/zf184JT1



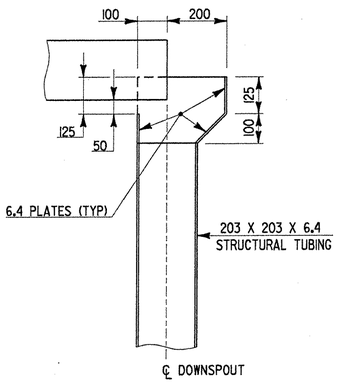
BRIDGE EXPANSION JOINT PLAN AT ABUTMENT NO. 2

0 1 2
SCALE 1:20



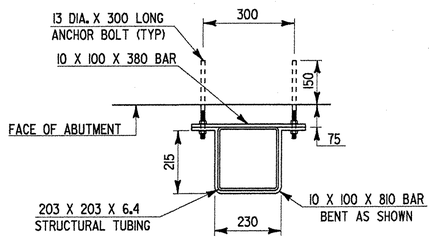
SECTION A-A

0 1 2
SCALE 1:20



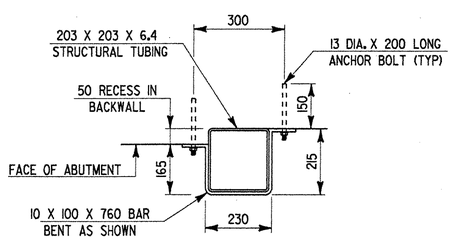
SECTION THROUGH DOWNSPOUT

0 0.5 1
SCALE 1:10



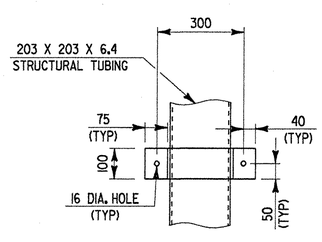
DETAIL FOR ATTACHING DOWNSPOUT TO ABUTMENT

0 0.5 1
SCALE 1:10



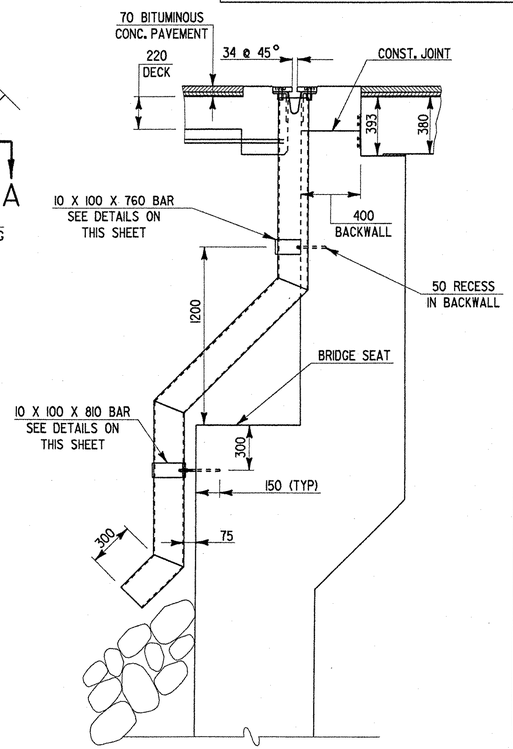
DETAIL FOR ATTACHING DOWNSPOUT TO BACKWALL

0 0.5 1
SCALE 1:10



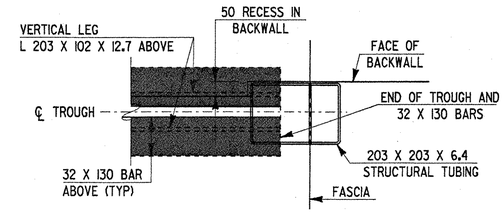
ELEVATION VIEW

0 0.5 1
SCALE 1:10



DOWNSPOUT DETAILS

0 1 2
SCALE 1:20



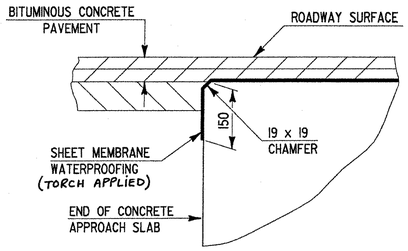
PLAN VIEW OF DECK BOXOUT FOR DOWNSPOUT

0 0.5 1
SCALE 1:10

STATE OF VERMONT
AGENCY OF TRANSPORTATION

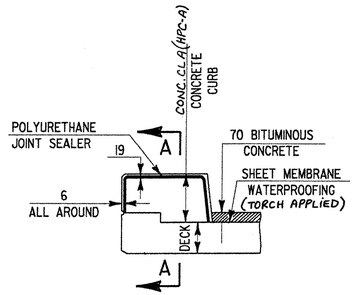
Town Of BERKSHIRE	Bridge No. 26
	Log Sta.
Highway No. VT. ROUTE 118	Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
EXPANSION JOINT DETAILS SHEET - 2	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. info. y:\J914562\zf184\d2.dgn	IPARM:zf184jd2j
Bridge Sheet No. BRI8	Sheet 57 of 140

78f184/zf184JT2



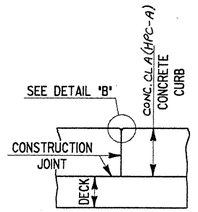
DETAIL FOR SHEET MEMBRANE AT APPROACH SLAB ENDS

NOT TO SCALE



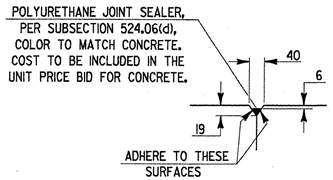
TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT

NOT TO SCALE



SECTION A - A

NOT TO SCALE

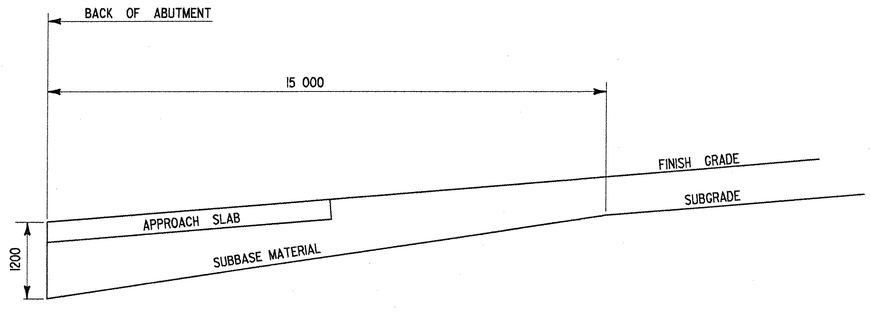


DETAIL "B"

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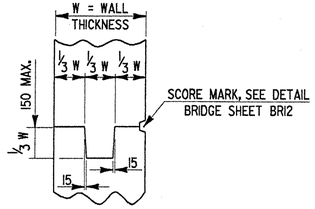
CONCRETE CURB CONSTRUCTION JOINT NOTES:

1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 4500 CENTER TO CENTER AND SHALL BE 500 MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.
3. POLYURETHANE JOINT SEALER AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 524.21.
4. SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN ABOVE LEFT.
5. ALL CONCRETE IN CURBS SHALL BE CONCRETE, CLASS A (HPC-A)



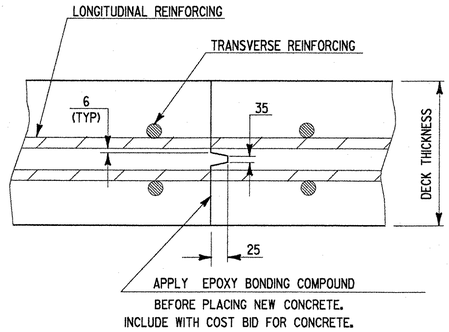
SUBBASE DETAIL AT ABUTMENTS

NOT TO SCALE



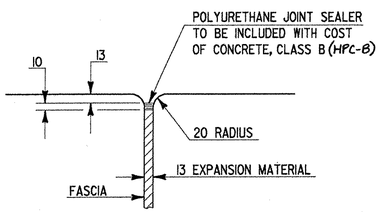
TYPICAL CONCRETE CONSTRUCTION JOINT

NOT TO SCALE



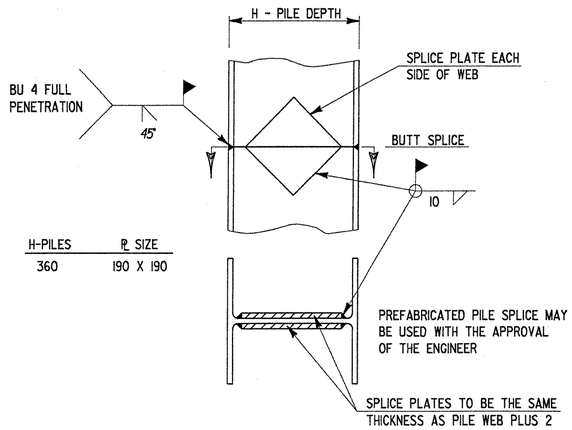
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS

NOT TO SCALE



JOINT BETWEEN FASCIA AND WINGWALL

NOT TO SCALE



DETAIL OF PILE SPLICE

NOT TO SCALE

PILE SPLICE NOTES:

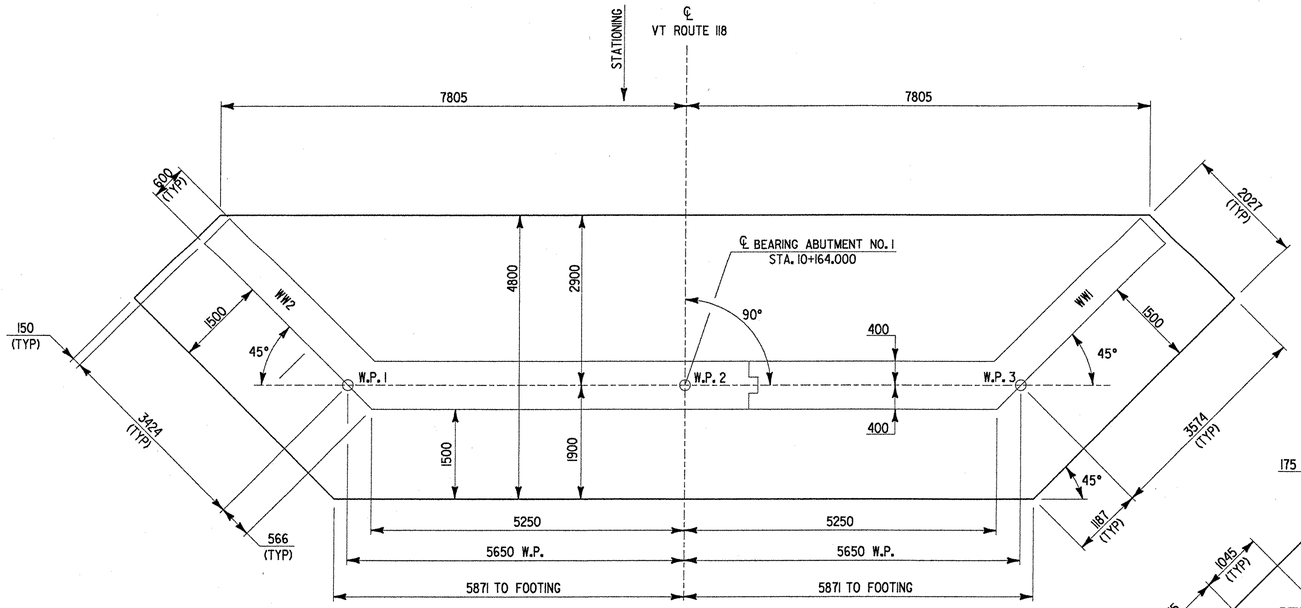
1. STEEL PILING SHALL BE ROLLED STEEL SECTIONS PER STANDARD SPECIFICATION 730.
2. PILES, SPLICE PLATES AND POINT REINFORCEMENT SHALL BE NEW MATERIAL (PER STANDARD SPECIFICATION 730) CONFORMING TO THE REQUIREMENTS OF AASHTO M 270M, GRADE 250.
3. FOR ADDITIONAL INFORMATION SEE NOTE 24, BRIDGE SHEET 1.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
MISCELLANEOUS DETAILS	
Designed By S.JOHNSON	Drawn By S.DELIA
Checked By S.JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J914562\zf184mdt.dgn	IPARM:zf184mdt1
Bridge Sheet No. BRI9	Sheet 58 of 140

78f184/zf184MSC

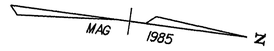
VAOT Metric

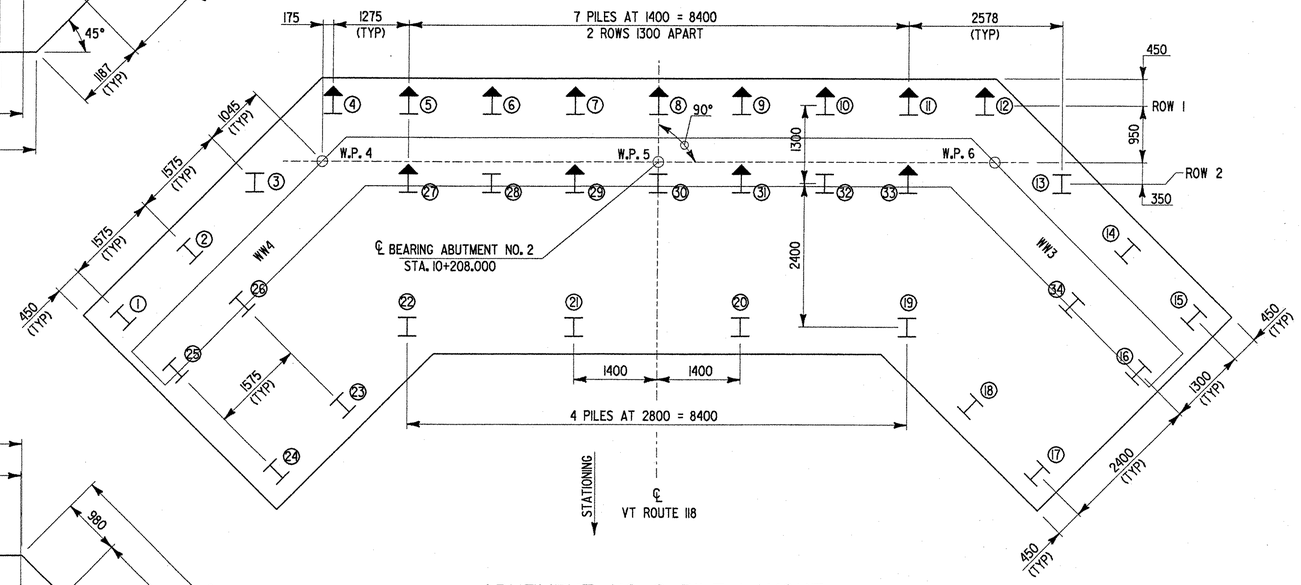


ABUTMENT NO. 1 FOOTING PLAN

0 1 2 3 4 5

SCALE 1:50

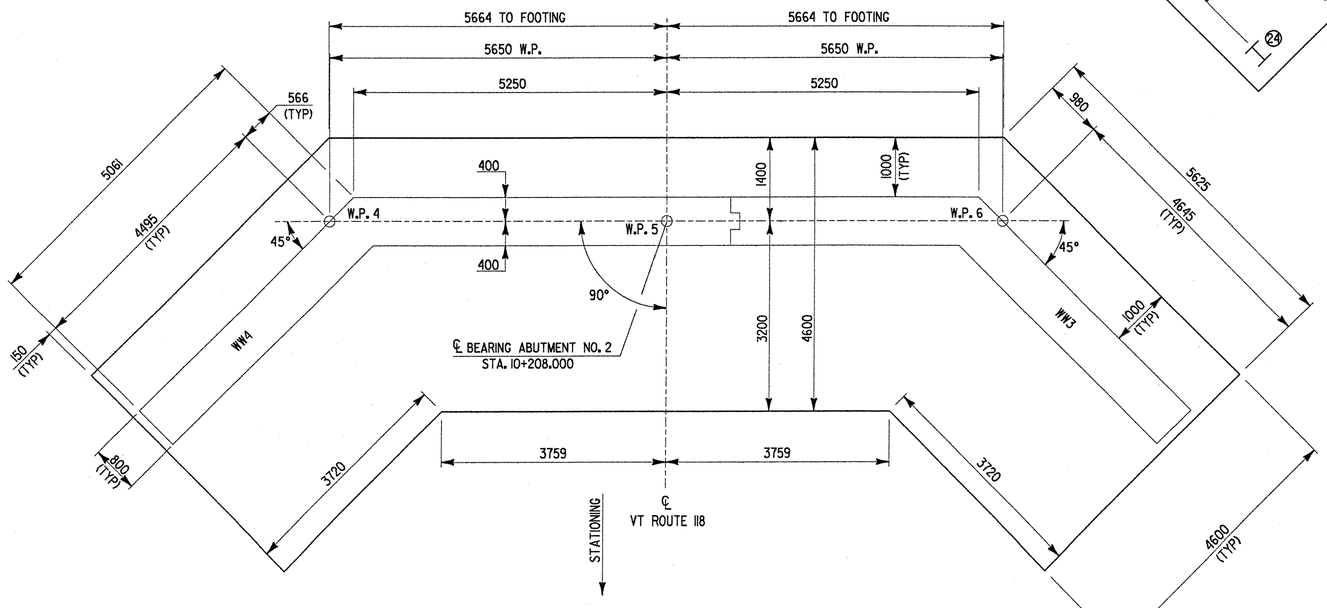




ABUTMENT NO. 2 PILE LAYOUT

0 1 2 3 4 5

SCALE 1:50



ABUTMENT NO. 2 FOOTING PLAN

0 1 2 3 4 5

SCALE 1:50

I - VERTICAL HP 360 X 108 PILE

I - 10N 5 BATTERED HP 360 X 108 PILE

⑩ - PILE NUMBER

STATE OF VERMONT
AGENCY OF TRANSPORTATION

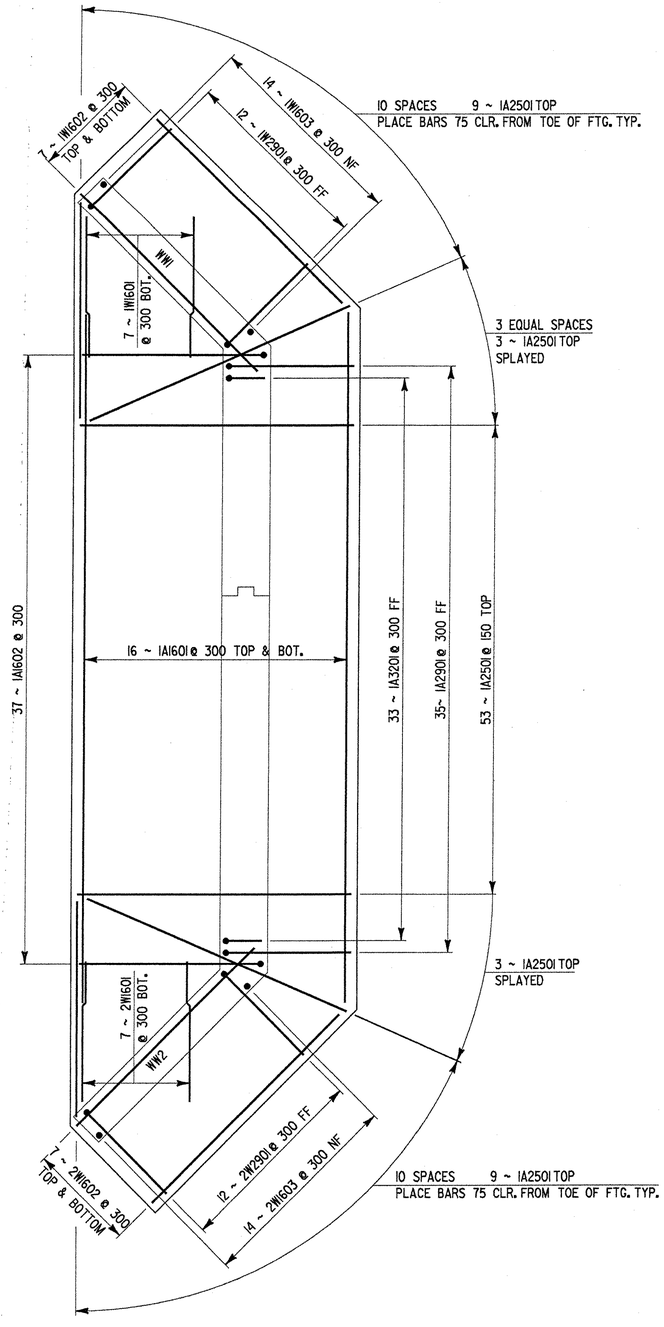
Town Of BERKSHIRE	Bridge No. 26
	Log Sta.
Highway No. VT. ROUTE 118	Surv. Sta.

VT. ROUTE 118 OVER TROUT RIVER

ABUTMENT NO. 1 & NO. 2 FOOTING LAYOUT

Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
L.G.C. info. y:\J9I4562\zf184fml.dgn	IPARM:zf184fml1
Bridge Sheet No. BR20	Sheet 59 of 140

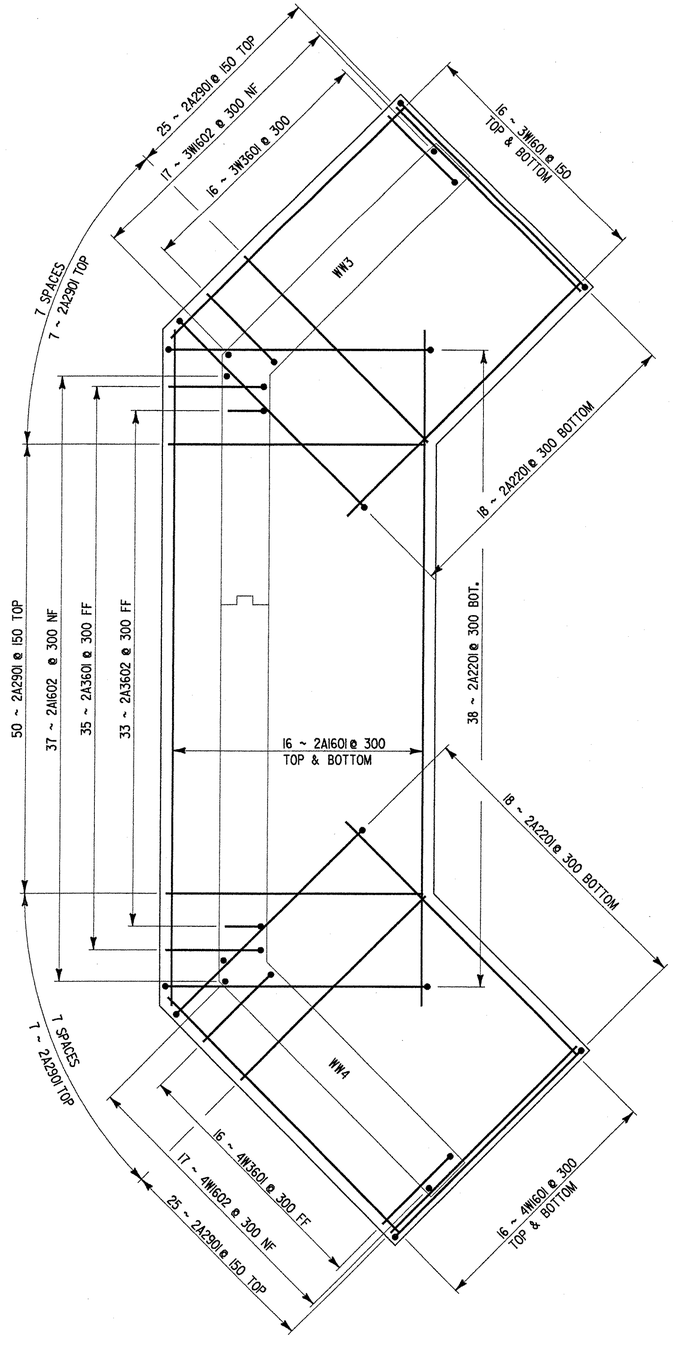
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ABUTMENT NO. 1
FOOTING PLAN

0 1 2 3 4 5

SCALE 1:50



ABUTMENT NO. 2
FOOTING PLAN

0 1 2 3 4 5

SCALE 1:50

N

MAG 1985

VAOT Metric

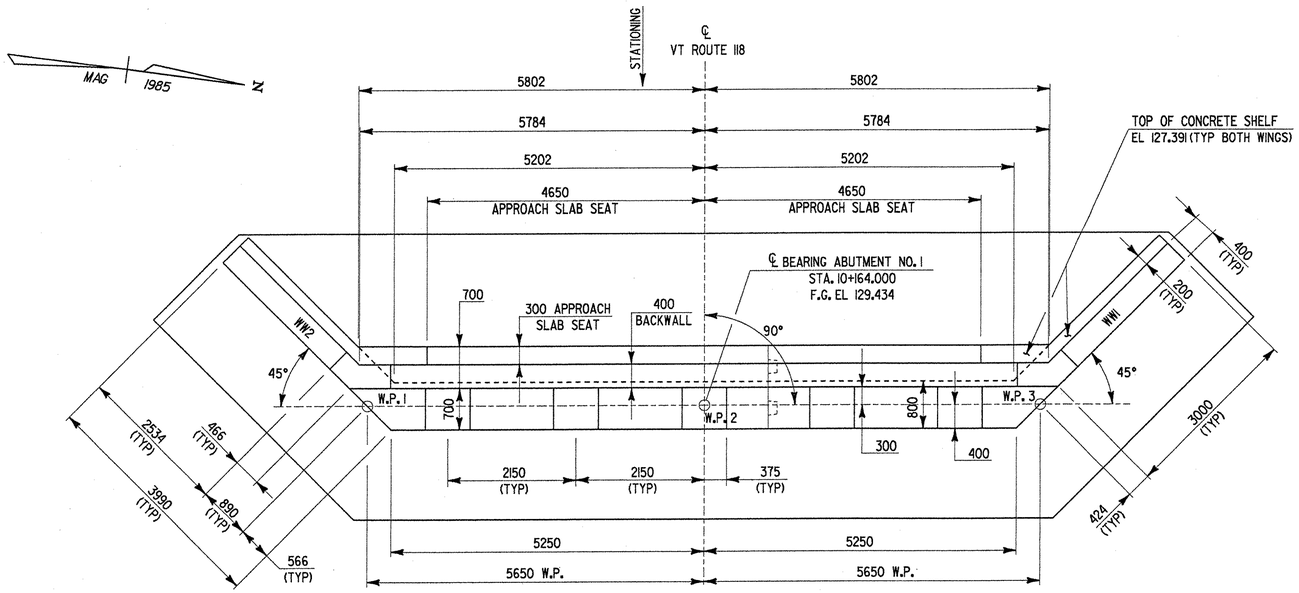
NOTE:

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
	Log Sta.
Highway No. VT. ROUTE 118	Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
ABUTMENT NO. 1 & NO. 2 FOOTING REINFORCING	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. info. y:\J9\4562\zf184fr1.dgn	IPARM:zf184fr1J
Bridge Sheet No. BR21	Sheet 60 of 140

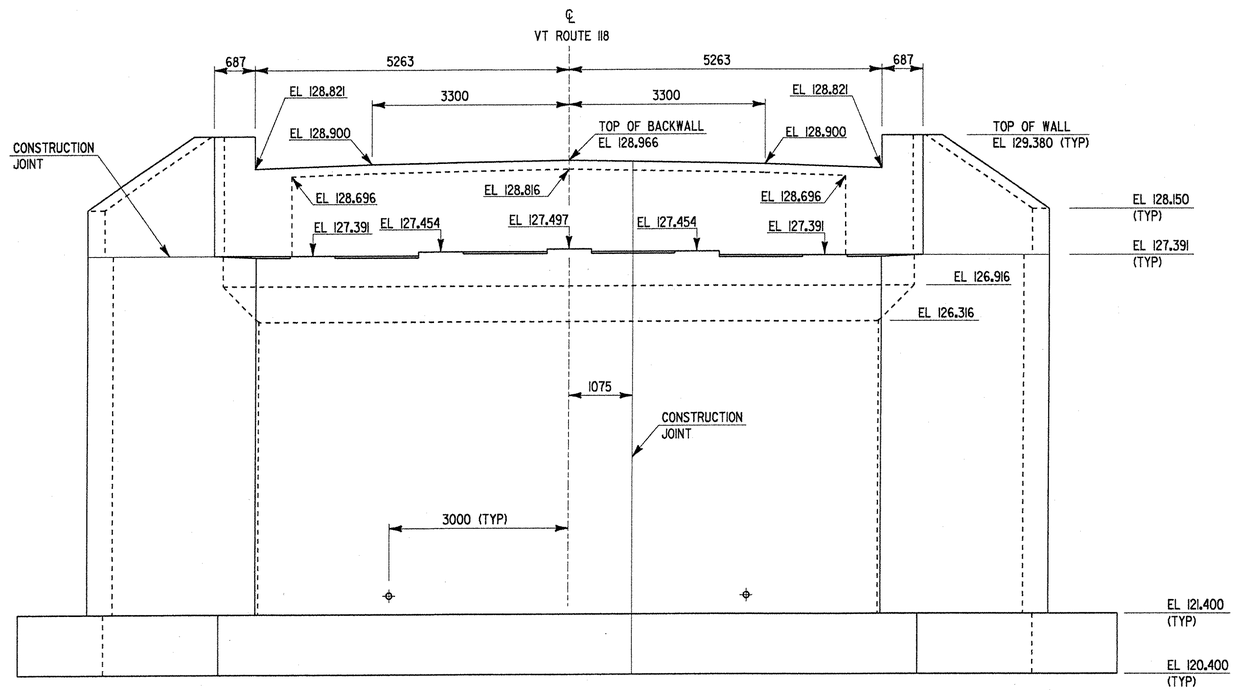
78f184/zf184RF1



ABUTMENT NO. 1 PLAN

0 1 2 3 4 5

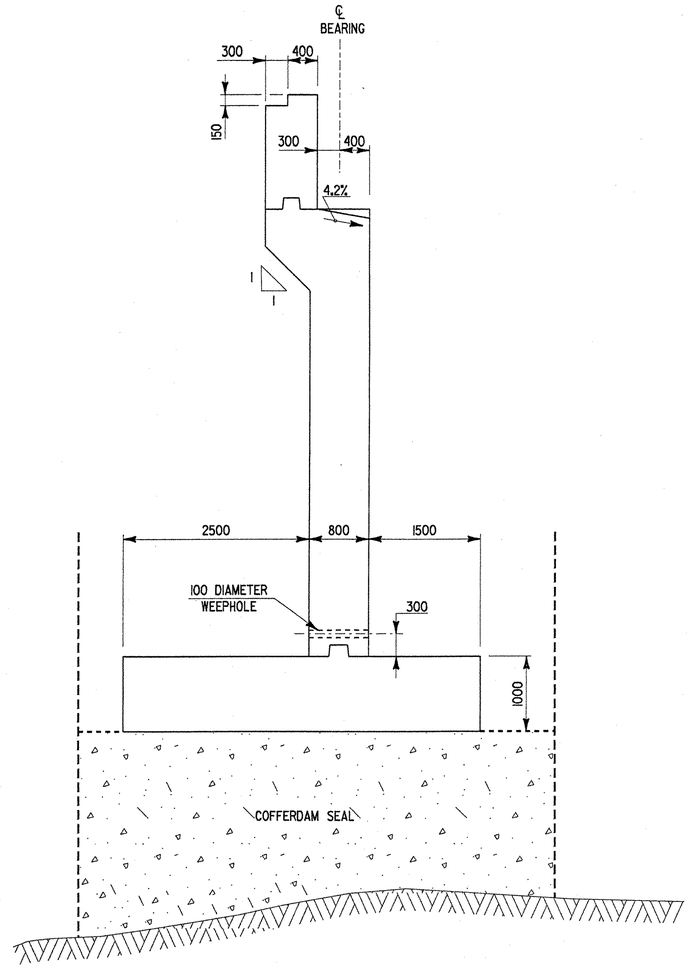
SCALE 1:50



ABUTMENT NO. 1 ELEVATION

0 1 2 3 4 5

SCALE 1:50



ABUTMENT NO. 1 TYPICAL SECTION

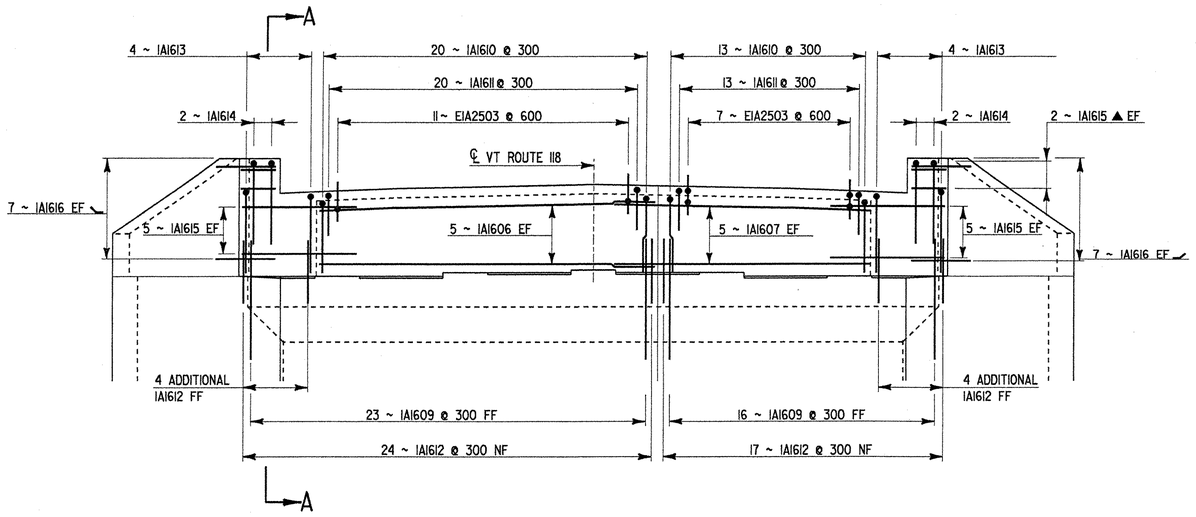
0 1 2 3 4

SCALE 1:40

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
ABUTMENT NO. 1 PLAN AND ELEVATION	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9\4562\zf184aml.dgn	IPARM:zf184aml1
Bridge Sheet No. BR22	Sheet 61 of 140

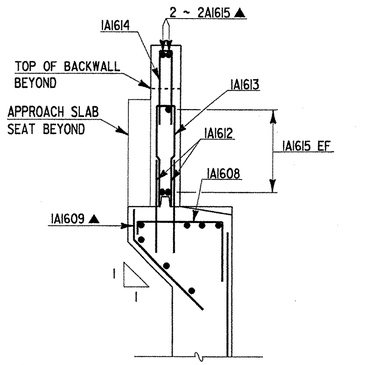
78f184/zf184AB1



ABUTMENT NO. 1 BACKWALL ELEVATION

0 1 2 3 4 5

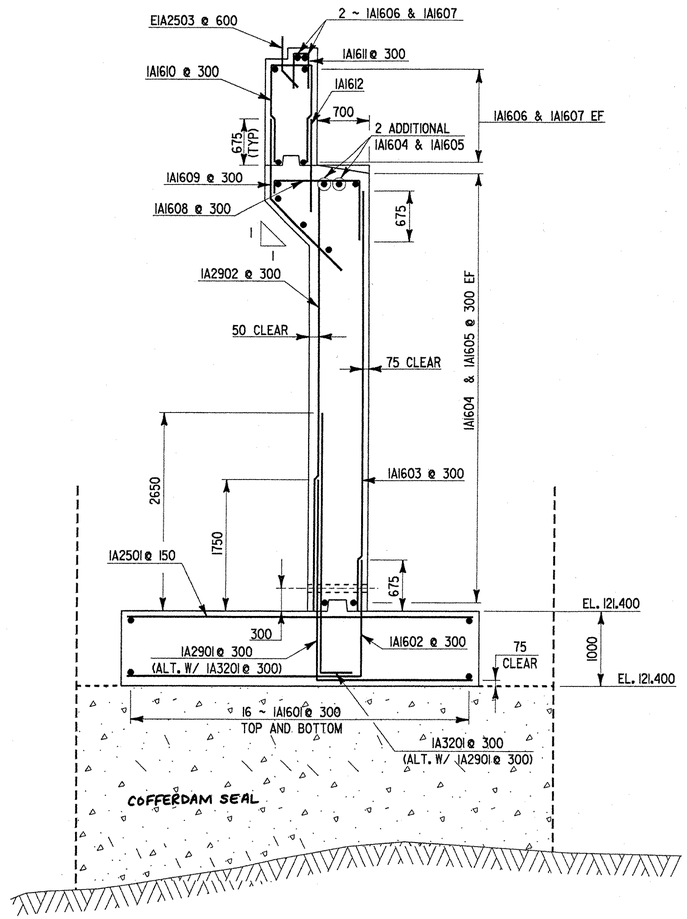
SCALE 1:50



SECTION A-A

0 1 2 3 4

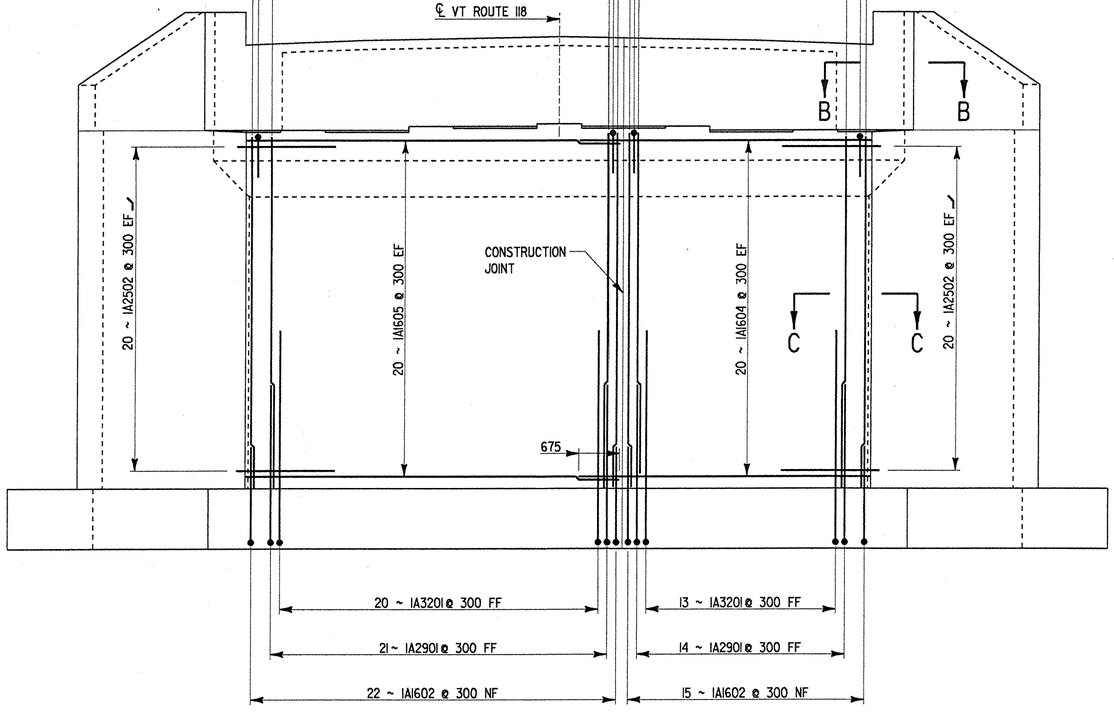
SCALE 1:40



ABUTMENT NO. 1 TYPICAL SECTION

0 1 2 3 4

SCALE 1:40



ABUTMENT NO. 1 ELEVATION

0 1 2 3 4 5

SCALE 1:50

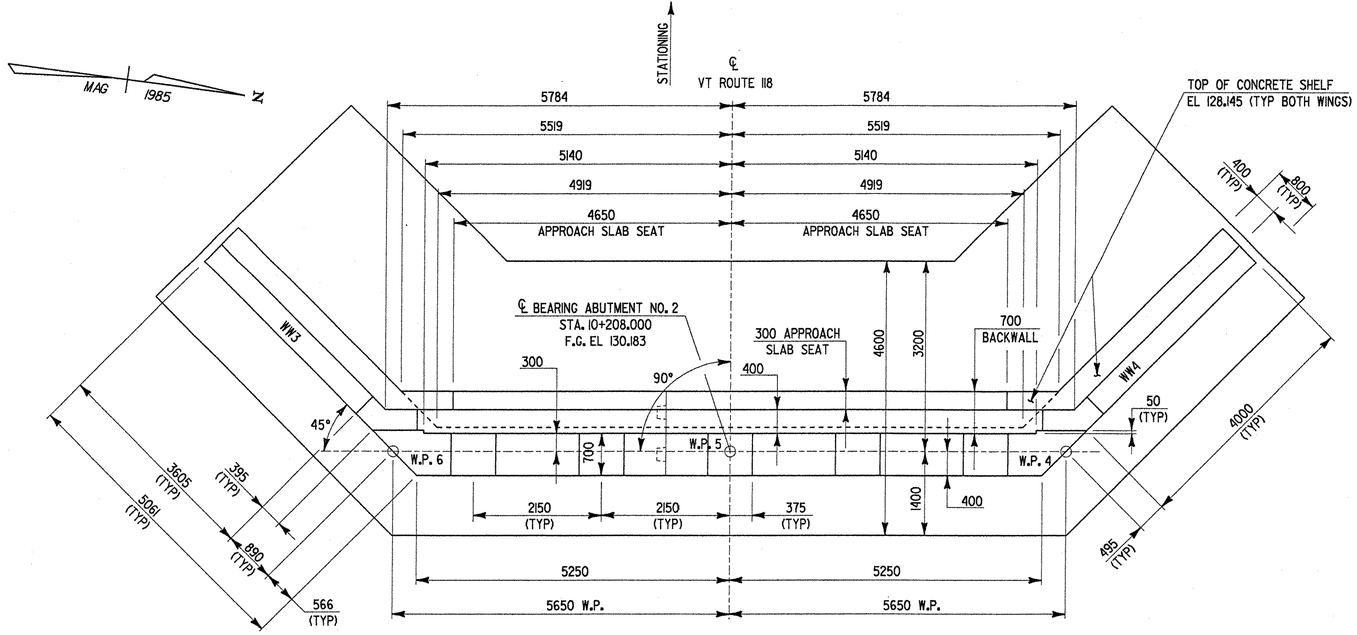
NOTES:

1. FF = FAR FACE
2. NF = NEAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 75 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS
6. FOR SECTIONS B-B & C-C SEE BRIDGE SHEET BR26

STATE OF VERMONT
AGENCY OF TRANSPORTATION

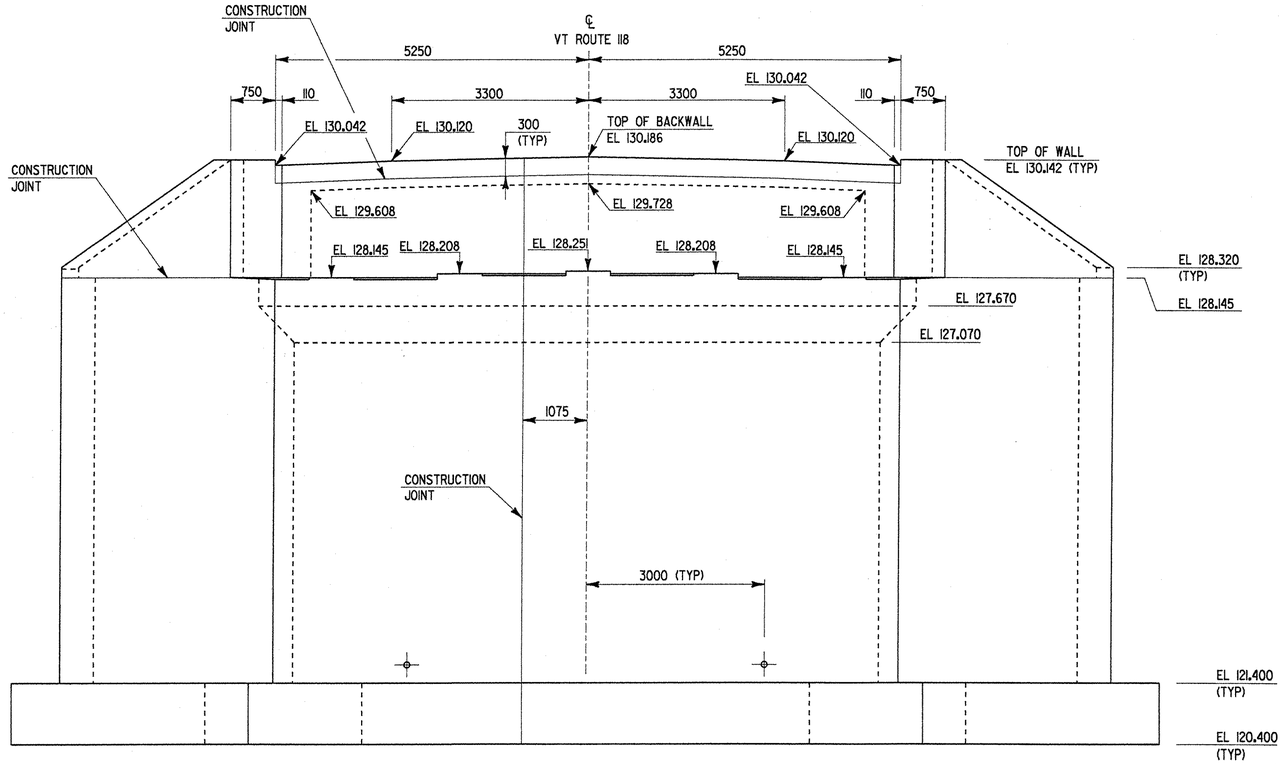
Town Of BERKSHIRE	Bridge No. 26
	Log Sta.
Highway No. VT. ROUTE 118	Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
ABUTMENT NO. 1 REINFORCING	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON — Date 02/00	Bridge Design Supervisor — Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J914562\zf184ar1.dgn	IPARM\zf184ar1.1
Bridge Sheet No. BR23	Sheet 62 of 140

78f184/zf184AR1



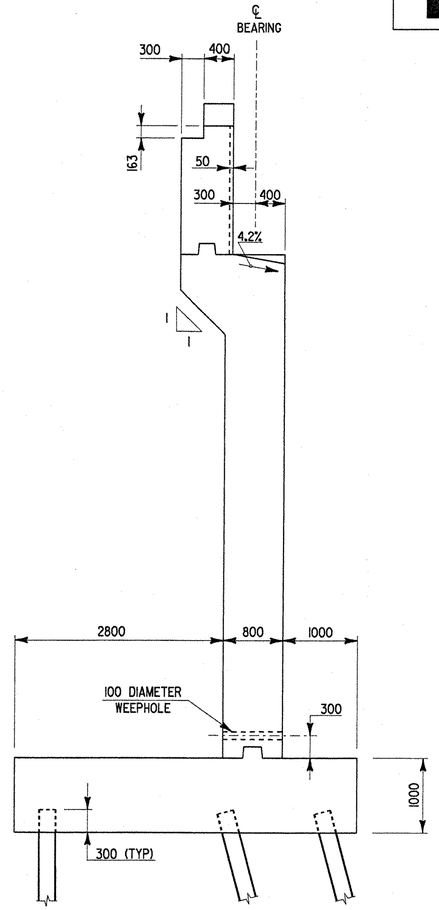
ABUTMENT NO. 2 PLAN

0 1 2 3 4 5
SCALE 1:50



ABUTMENT NO. 2 ELEVATION

0 1 2 3 4 5
SCALE 1:50



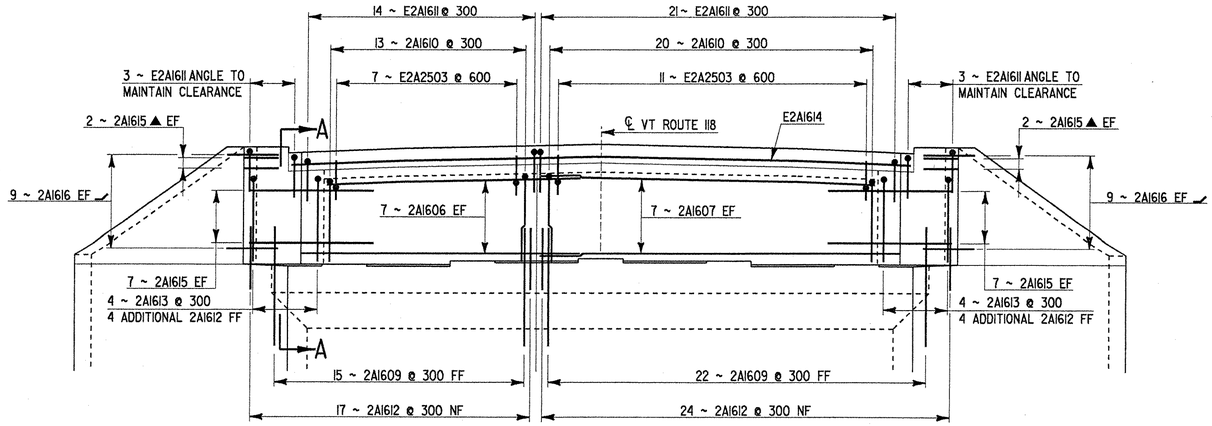
ABUTMENT NO. 2 TYPICAL SECTION

0 1 2 3 4
SCALE 1:40

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
ABUTMENT NO. 2 PLAN AND ELEVATION	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. info. y:\J914562\zf184am2.dgn	IPARM:zf184am2J
Bridge Sheet No. BR24	Sheet 63 of 140

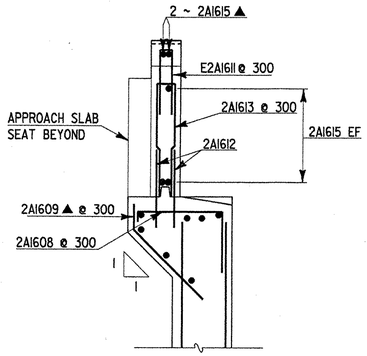
78f184/zf184AB2



ABUTMENT NO. 2 BACKWALL ELEVATION

0 1 2 3 4 5

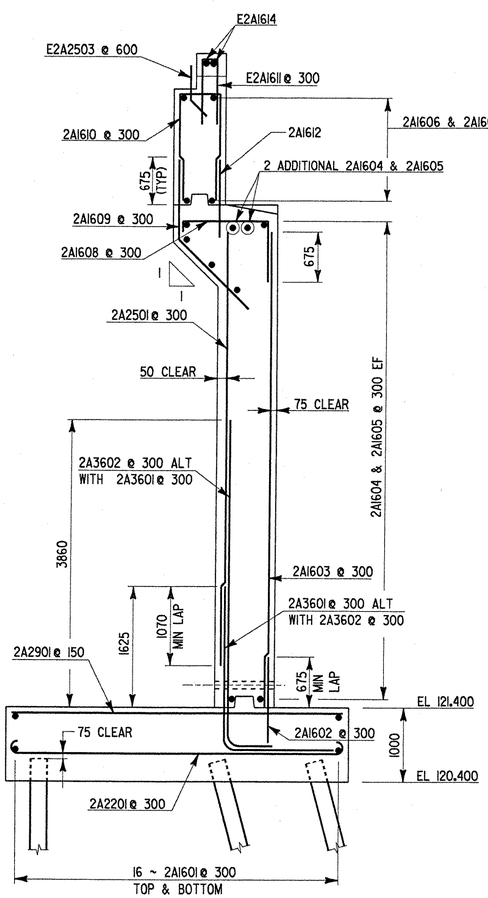
SCALE 1:50



SECTION A-A

0 1 2 3 4

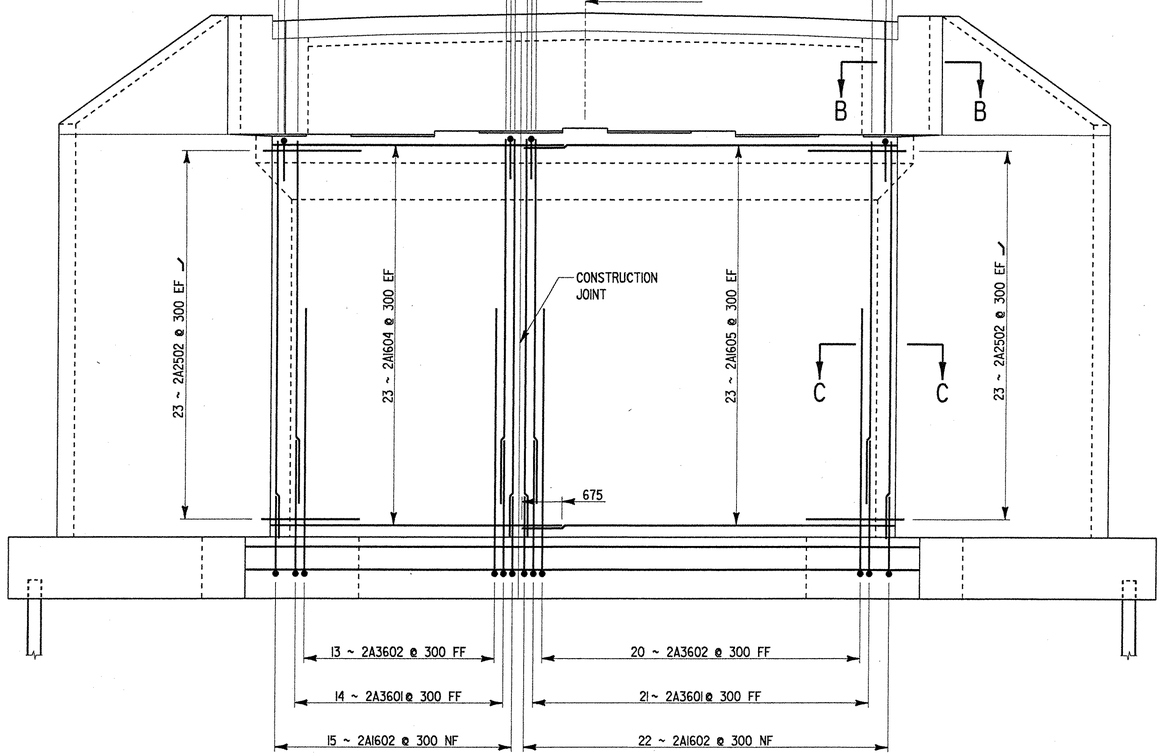
SCALE 1:40



ABUTMENT NO. 2 TYPICAL SECTION

0 1 2 3 4

SCALE 1:40



ABUTMENT NO. 2 ELEVATION

0 1 2 3 4 5

SCALE 1:50

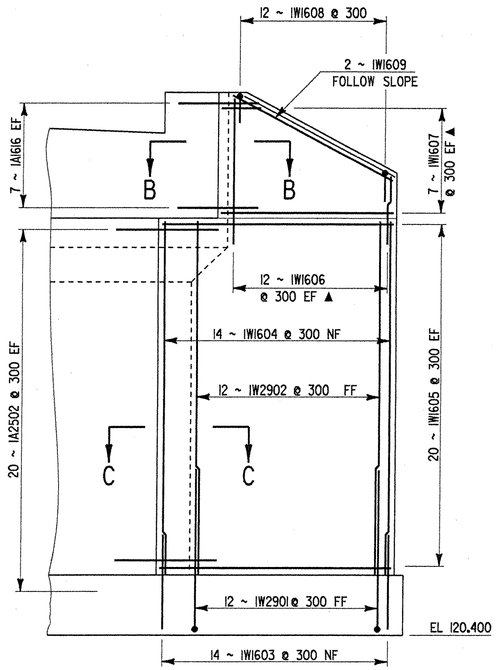
NOTES:

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3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 75 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS
6. FOR SECTIONS B-B & C-C SEE BRIDGE SHEET BR26

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
ABUTMENT NO. 2 REINFORCING	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON Date 02/00	Bridge Design Supervisor Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9141562\zf184ar2.dgn	IPARM:zf184ar2J
Bridge Sheet No. BR25	Sheet 64 of 140

78f184/zf184AR2

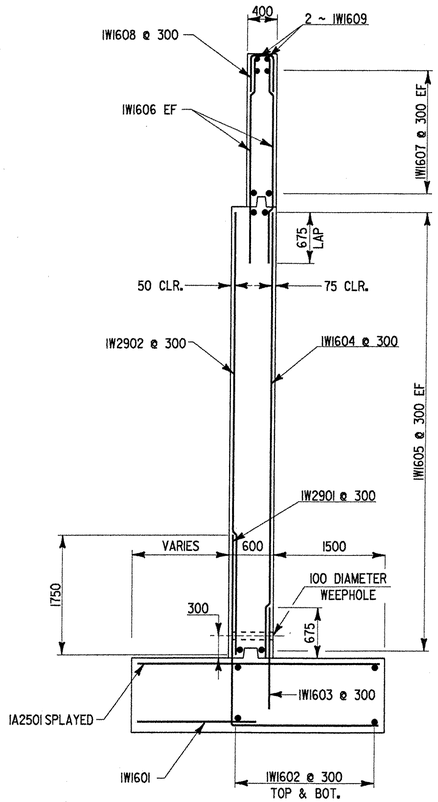


ABUTMENT NO. 1 WINGWALL ELEVATION

WINGWALL 1 SHOWN, WINGWALL 2 OPPOSITE

0 1 2 3 4 5

SCALE 1:50

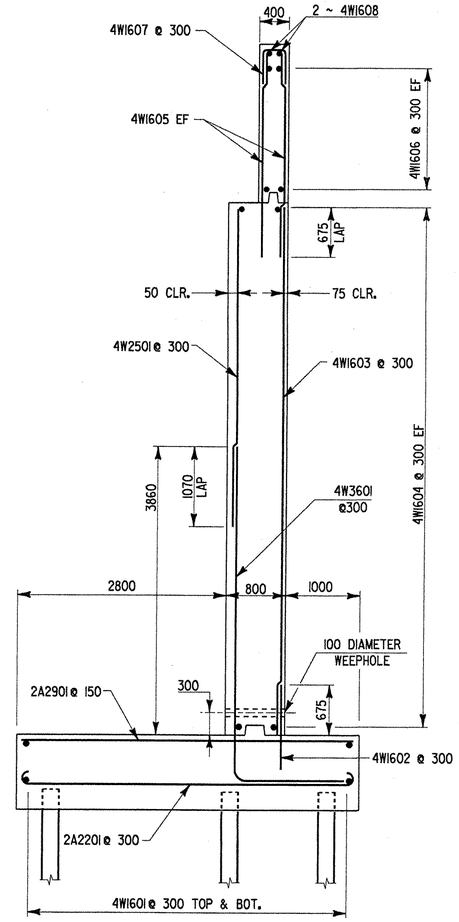


WINGWALL NO. 1 & NO. 2 TYPICAL SECTION

WINGWALL 1 SHOWN, WINGWALL 2 SIMILAR

0 1 2 3 4

SCALE 1:40

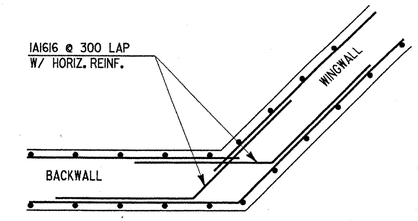


WINGWALL NO. 3 & NO. 4 TYPICAL SECTION

WINGWALL 4 SHOWN, WINGWALL 3 SIMILAR

0 1 2 3 4

SCALE 1:40

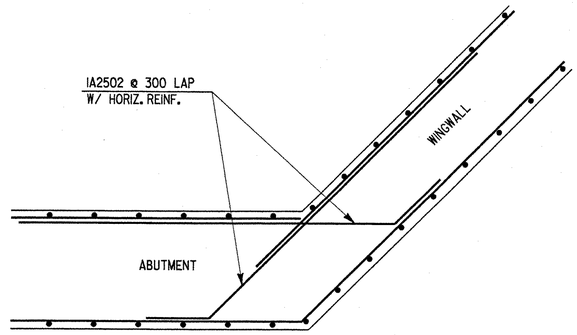


SECTION C-C BACKWALL CORNER DETAIL

ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR

0 1 2

SCALE 1:20

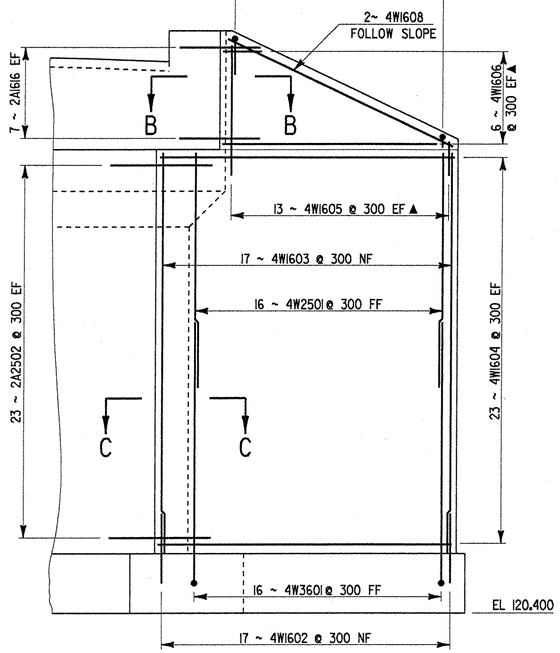


SECTION B-B ABUTMENT CORNER DETAIL

ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR

0 1 2

SCALE 1:20



ABUTMENT NO. 2 WINGWALL ELEVATION

WINGWALL 4 SHOWN, WINGWALL 3 OPPOSITE

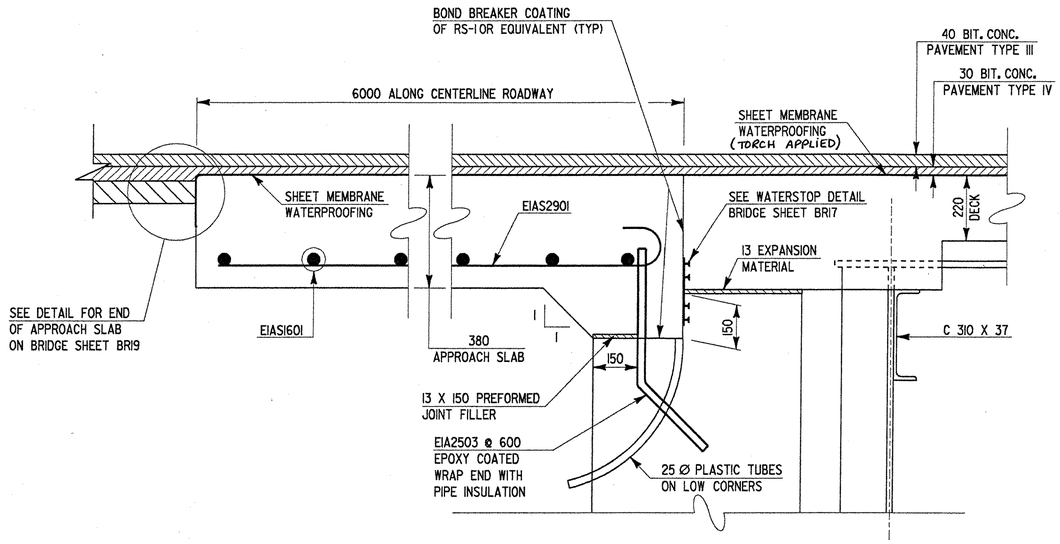
0 1 2 3 4 5

SCALE 1:50

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
WINGWALL REINFORCING	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON — Date 02/00	Bridge Design Supervisor — Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9\4562\zf184wdt.dgn	IPARM:zf184wdt.I
Bridge Sheet No. BR26	Sheet 65 of 140

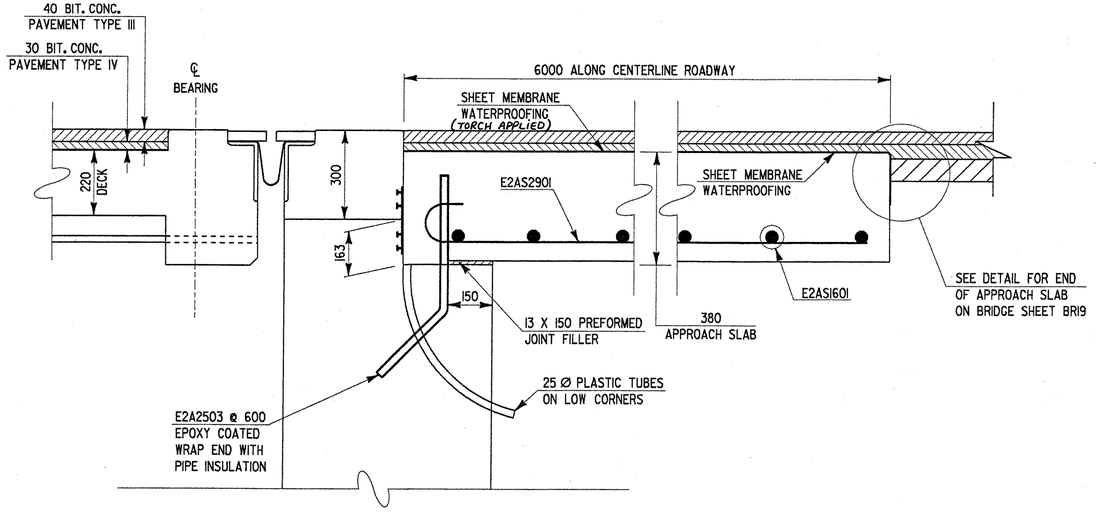
78f184/zf184WWR



SECTION A - A

0 0.5 1

SCALE 1:10

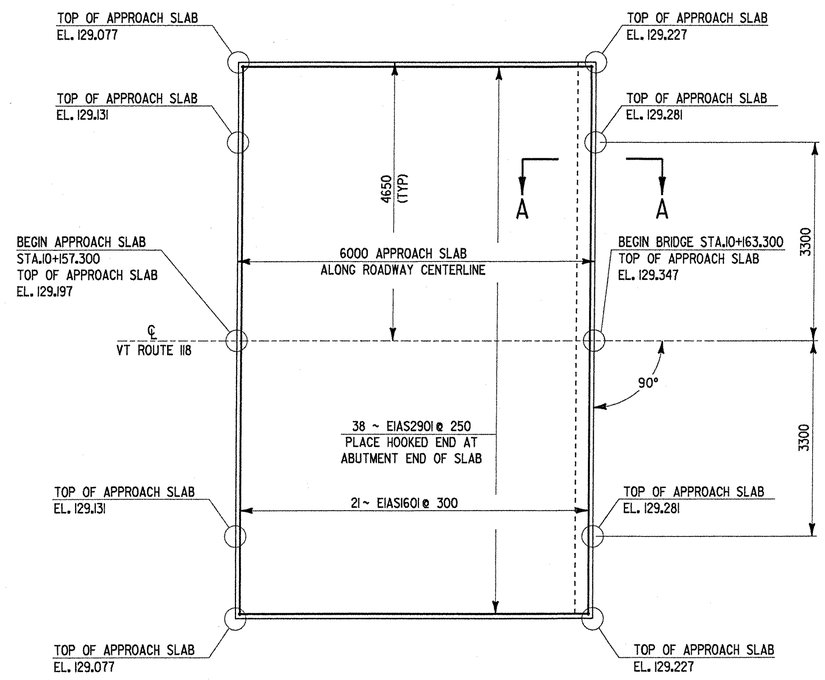


SECTION B - B

0 0.5 1

SCALE 1:10

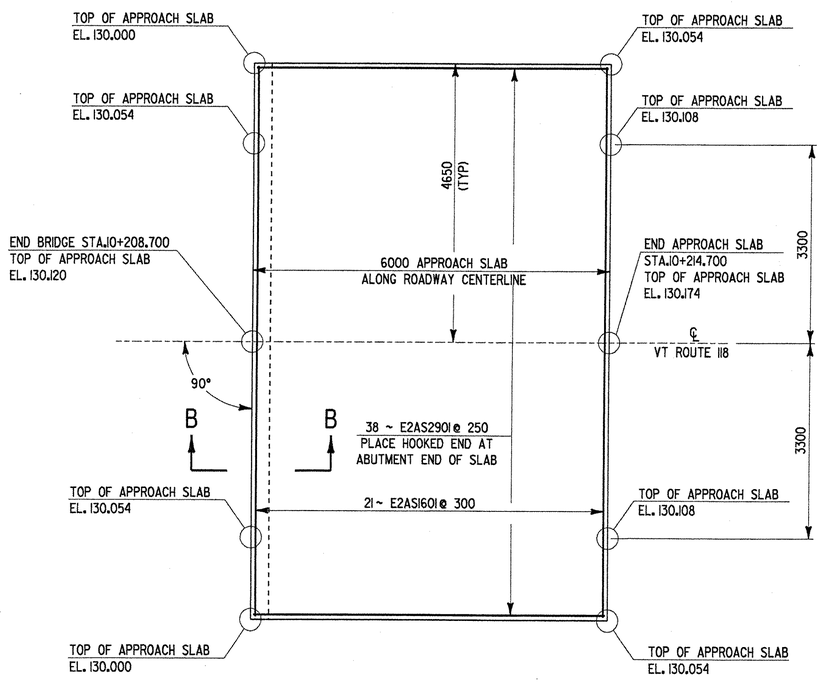
SEE BRIDGE SHEET BRI7 & BRI8 FOR ADDITIONAL
DETAILS AT EXPANSION JOINT



APPROACH SLAB NO. 1 PLAN

0 1 2 3 4 5

SCALE 1:50



APPROACH SLAB NO. 2 PLAN

0 1 2 3 4 5

SCALE 1:50

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BERKSHIRE	Bridge No. 26
Highway No. VT. ROUTE 118	Log Sta. / Surv. Sta.
VT. ROUTE 118 OVER TROUT RIVER	
APPROACH SLAB DETAILS	
Designed By S. JOHNSON	Drawn By S. DELIA
Checked By S. JOHNSON — Date 02/00	Bridge Design Supervisor — Date
PROJECT BERKSHIRE	PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. y:\J9I4562\zf184aps.dgn	IPARM:zf184apsJ
Bridge Sheet No. BR27	Sheet 66 of 140

78f184/zf184SLB

DECK

ITEM	PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
*	229	16	12 000	ES1601	STR												
*	77	16	10 970	ES1602	STR												
8	474	16	1740	ES1603	S5	250	400	440	400			250					
9	24	16	2350	ES1604	S5	1125	250	775	200								
10	24	16	1310	ES1605	S5	600	250	260	200								
11△	368	19	10 350	ES1901	STR	▲											

APPROACH SLAB 1

18	21	16	9150	E1AS1601	STR												
19	38	29	6225	E1AS2901	1	375	5850							300			

APPROACH SLAB 2

26△	23	16	9150	E2AS1601	STR												
27△	40	29	6225	E2AS2901	1	375	5850							300			

ABUTMENT NO 1

34	32	16	11 675	1A1601	STR												
35	37	16	4750	1A1602	17		3150	1600									
36	37	16	5875	1A1603	STR												
37	42	16	4900	1A1604	STR												
38*	43	16	6275	1A1605	STR												
39	12	16	5650	1A1606	STR												
40*	13	16	4200	1A1607	STR												
41	37	16	2325	1A1608	17		250	1275	800								
42	39	16	2650	1A1609	12	▲		1300	1350				955		955		
43	33	16	3025	1A1610	17		1225	575	1225								
44	33	16	1175	1A1611	17		450	275	450								
45	49	16	1300	1A1612	STR												
46	8	16	2925	1A1613	17		1325	275	1325								
47	4	16	2225	1A1614	17		975	275	975								
48	28	16	1975	1A1615	STR	▲											
49	28	16	1850	1A1616	12			925	925				654		654		
50△	79	25	4650	1A2501	STR												
51	80	25	2950	1A2502	12			425	2525				1786		1786		
52	18	25	900	1A2503	12			450	450				318		318		
53	35	29	4825	1A2901	17		2675	2150									
54	35	29	5900	1A2902	STR												
55△	35	32	4215	1A3201	17		3575	550									

ABUTMENT NO 2

62	32	16	11 325	2A1601	STR												
63	37	16	1300	2A1602	STR												
64	37	16	6625	2A1603	STR												
65	48	16	4900	2A1604	STR												
66*	49	16	6275	2A1605	STR												
67	14	16	4200	2A1606	STR												
68*	15	16	5650	2A1607	STR												
69	37	16	2325	2A1608	17		250	1275	800								
70	37	16	2675	2A1609	12	▲		1325	1350				955		955		
71	33	16	3325	2A1610	17		1375	575	1375								
72	41	16	1675	E2A1611	17		700	275	700								
73	49	16	1325	2A1612	STR												
74	8	16	4075	2A1613	17		1900	275	1900								
75	2	16	10 400	E2A1614	STR												
76	36	16	1975	2A1615	STR	▲											
77	36	16	1850	2A1616	12			925	925				654		654		
78△	76	22	4950	2A2201	1	250	4450					250					
79*	36	25	6625	2A2501	STR												
80*	93	25	2950	2A2502	12			425	2525				1786		1786		
81	18	25	900	2A2503	12			450	450				318		318		
82△	116	29	4450	2A2901	STR												
83*	36	36	3900	2A3601	17		2250	1650									
84*	34	36	5100	2A3602	17		4500	600									

WINGWALL NO 1

ITEM	PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
105	7	16	2625	1W1601	STR												
106	14	16	4600	1W1602	STR												
107	14	16	1275	1W1603	STR												
108	14	16	5900	1W1604	STR												
109	* 41	16	3875	1W1605	STR												
110	24	16	2600	1W1606	STR	▲											
111	* 15	16	2875	1W1607	STR	▲											
112	12	16	850	1W1608	17		300	250	300								
113	2	16	2825	1W1609	STR												
114	* 13	29	4625	1W2901	17		2675	1950									
115	* 13	29	5900	1W2902	STR												

WINGWALL NO 2

122	7	16	2625	2W1601	STR												
123	14	16	4600	2W1602	STR												
124	14	16	1275	2W1603	STR												
125	14	16	5900	2W1604	STR												
126	* 41	16	3875	2W1605	STR												
127	24	16	2600	2W1606	STR	▲											
128	* 15	16	2875	2W1607	STR	▲											
129	12	16	850	2W1608	17		300	250	300								
130	2	16	2825	2W1609	STR												
131	* 13	29	4625	2W2901	17		2675	1950									
132	* 13	29	5900	2W2902	STR												

WINGWALL NO 3

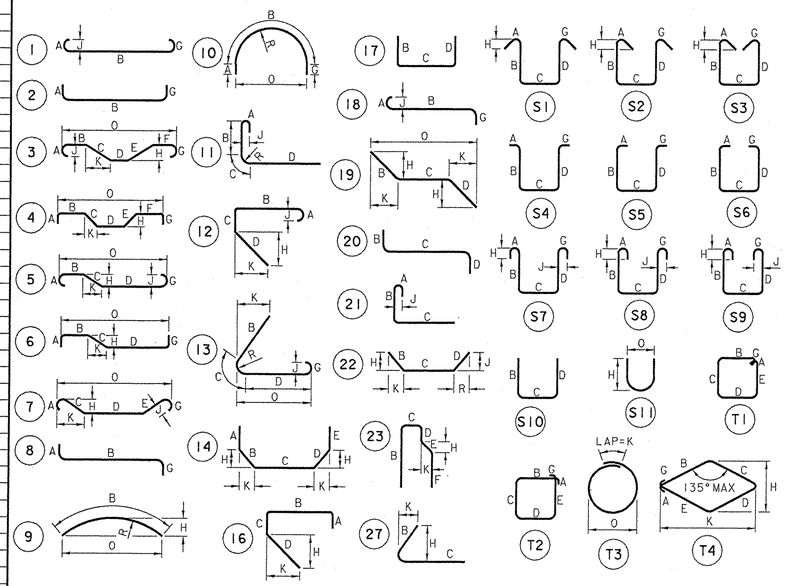
139	32	16	5525	3W1601	STR												
140	17	16	1300	3W1602	STR												
141	17	16	6700	3W1603	STR												
142	* 47	16	4925	3W1604	STR												
143	26	16	2600	3W1605	STR	▲											
144	* 13	16	3875	3W1606	STR	▲											
145	12	16	850	3W1607	17		300	250	300								
146	2	16	4175	3W1608	STR												
147	△ 18	25	3900	3W2501	STR												
148	△ 18	36	6100	3W3601	17		4500	1600									

WINGWALL NO 4

156	32	16	5525	4W1601	STR												
157	17	16	1300	4W1602	STR												
158	17	16	6700	4W1603	STR												
159	* 47	16	4925	4W1604	STR												
160	26	16	2600	4W1605	STR	▲											
161	* 13	16	3875	4W1606	STR	▲											
162	12	16	850	4W1607	17		300	250	300								
163	2	16	4175	4W1608	STR												
164	△ 18	25	3900	4W2501	STR												
165	△ 18	36	6100	4W3601	17		4500	1600									

NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFROM TO THE REQUIREMENT OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, 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 ARE TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS ARE TO BE SHOWN ONLY WHEN NECCESSARY 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. * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	NOMINAL MASS kg/m	NOMINAL DIMENSIONS ROUND SECTION: DIAMETER mm	CROSS SECTIONAL AREA mm²	PERIMETER mm
10	0.560	9.5	71	29.84
13	0.994	12.7	129	39.90
16	1.552	15.9	199	49.95
19	2.235	19.1	284	60.00
22	3.042	22.2	387	69.74
25	3.973	25.4	510	79.80
29	5.060	28.7	645	90.16
32	6.404	32.3	819	101.47
36	7.907	35.8	1006	112.47
43	11.380	43.0	1452	135.09
57	20.240	57.3	2581	180.01

STATE OF VERMONT
AGENCY OF TRANSPORTATION

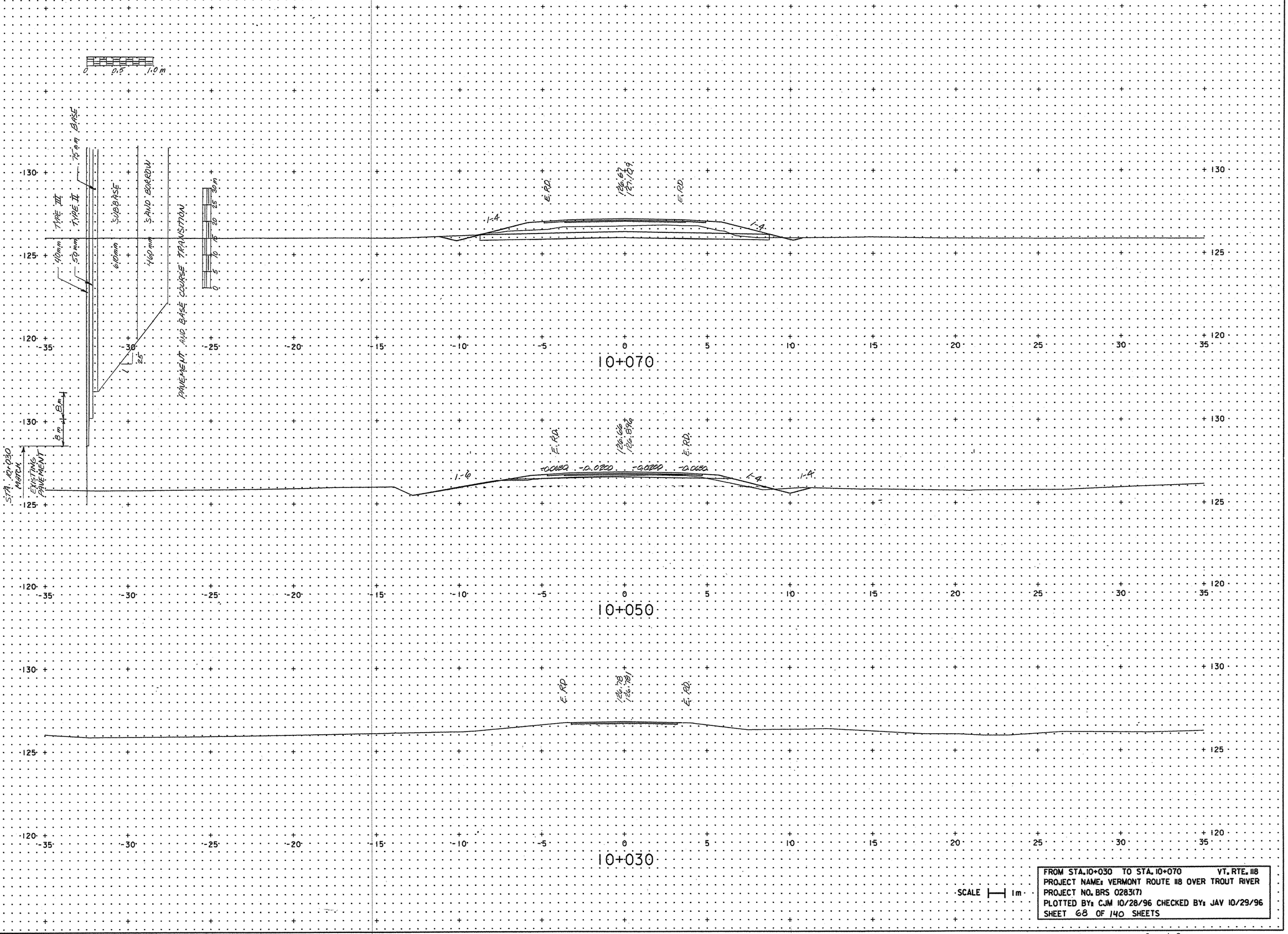
Town Of BERKSHIRE — Bridge No. 26
Highway No. VT. ROUTE 118 — Log Sta. — Surv. Sta.

VT. ROUTE 118 OVER TROUT RIVER

REINFORCING STEEL SCHEDULE

Designed By S. JOHNSON — Drawn By S. DELIA
Checked By S. JOHNSON — Date 11/96 — Bridge Design Supervisor — Date
PROJECT BERKSHIRE — PROJECT NO. BRF-RS 0283(7)
I.G.C. Info. yAJ914562\zf184rsh.dgn — IPARM:zf184rsh1
Bridge Sheet No. BR28 — Sheet 67 of 140

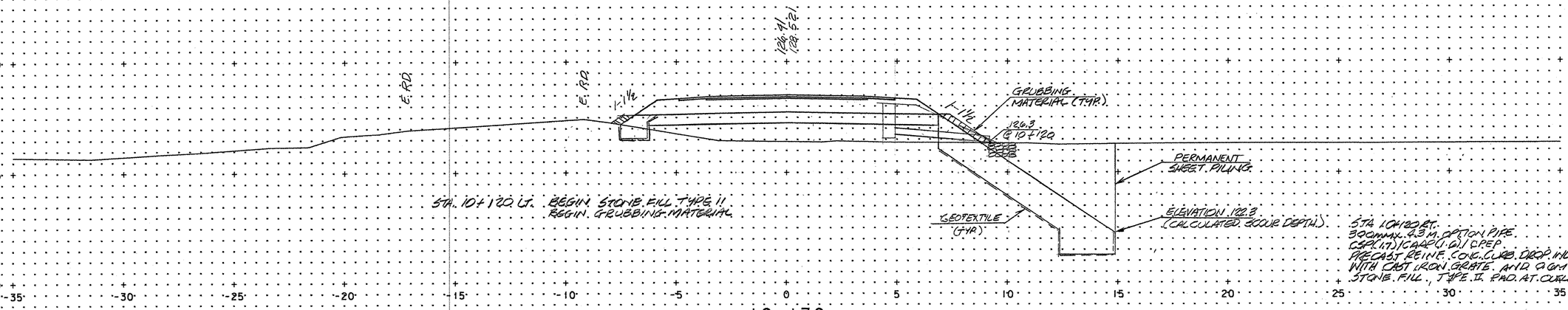
78f184/zf184RSS



FROM STA. 10+030 TO STA. 10+070 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 68 OF 140 SHEETS

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78f184/zf184x01

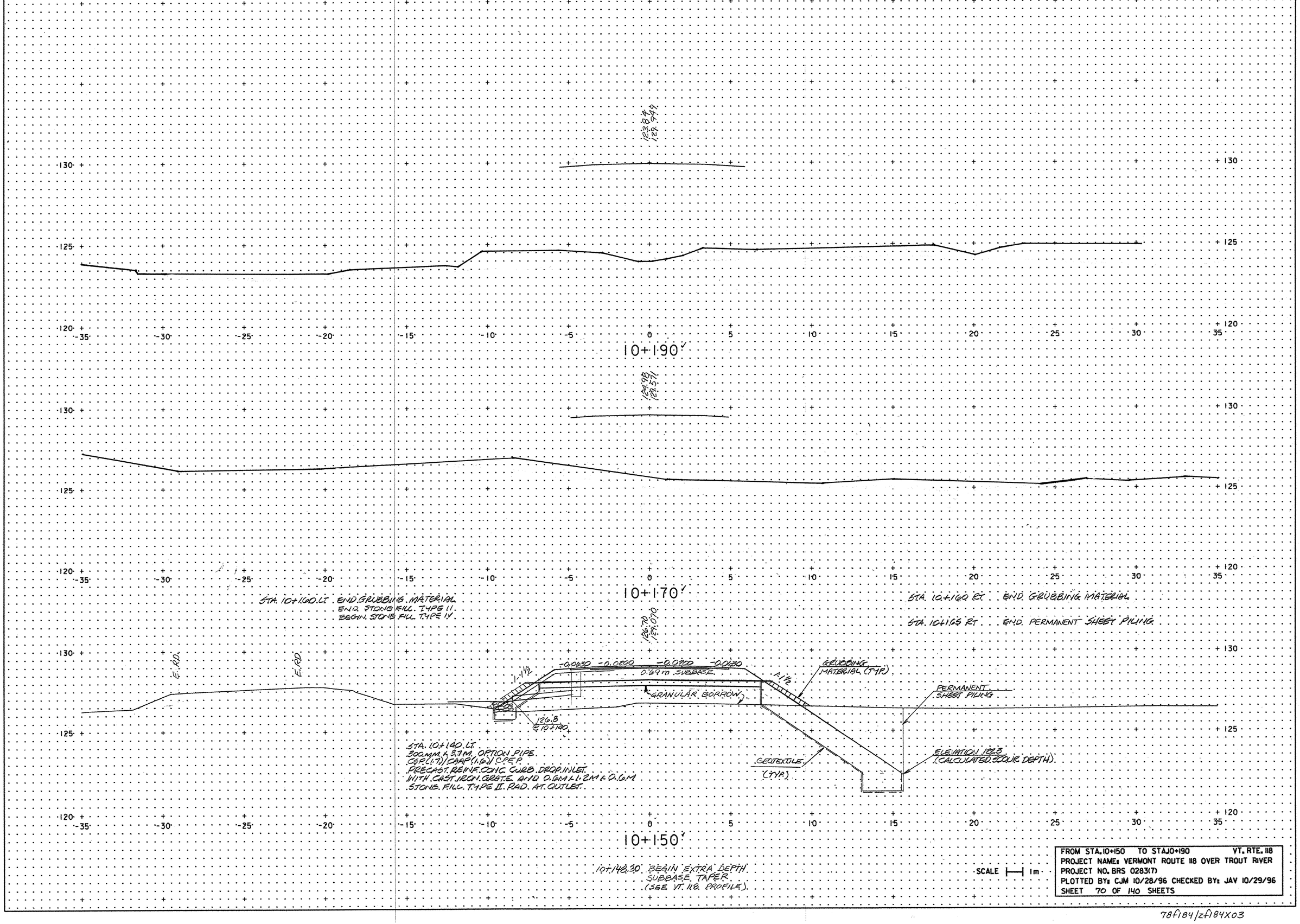


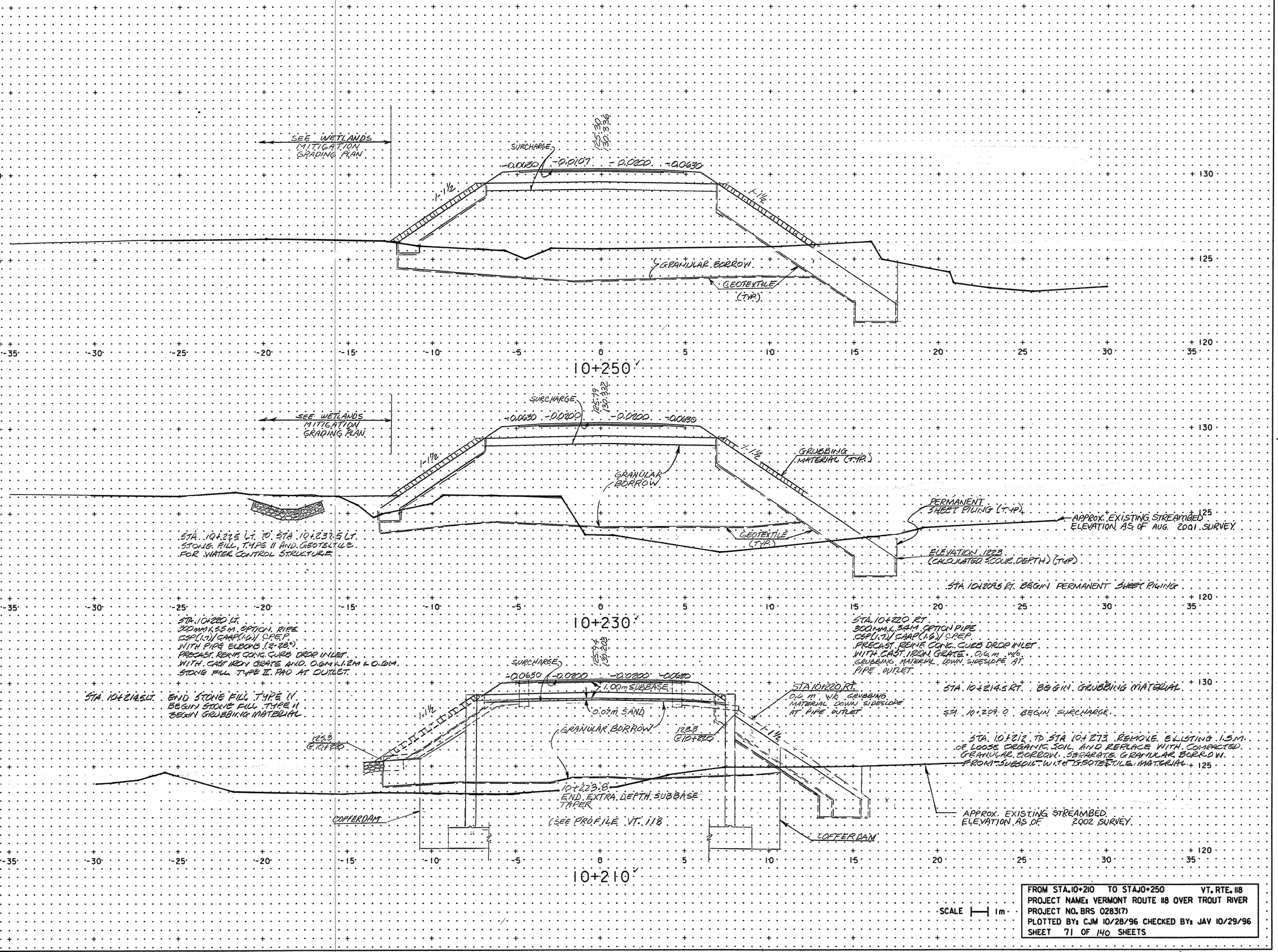
FROM STA. 10+090 TO STA. 10+130 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 69 OF 140 SHEETS

SCALE 1m

/user5/jb45620/02837rs6.dgn

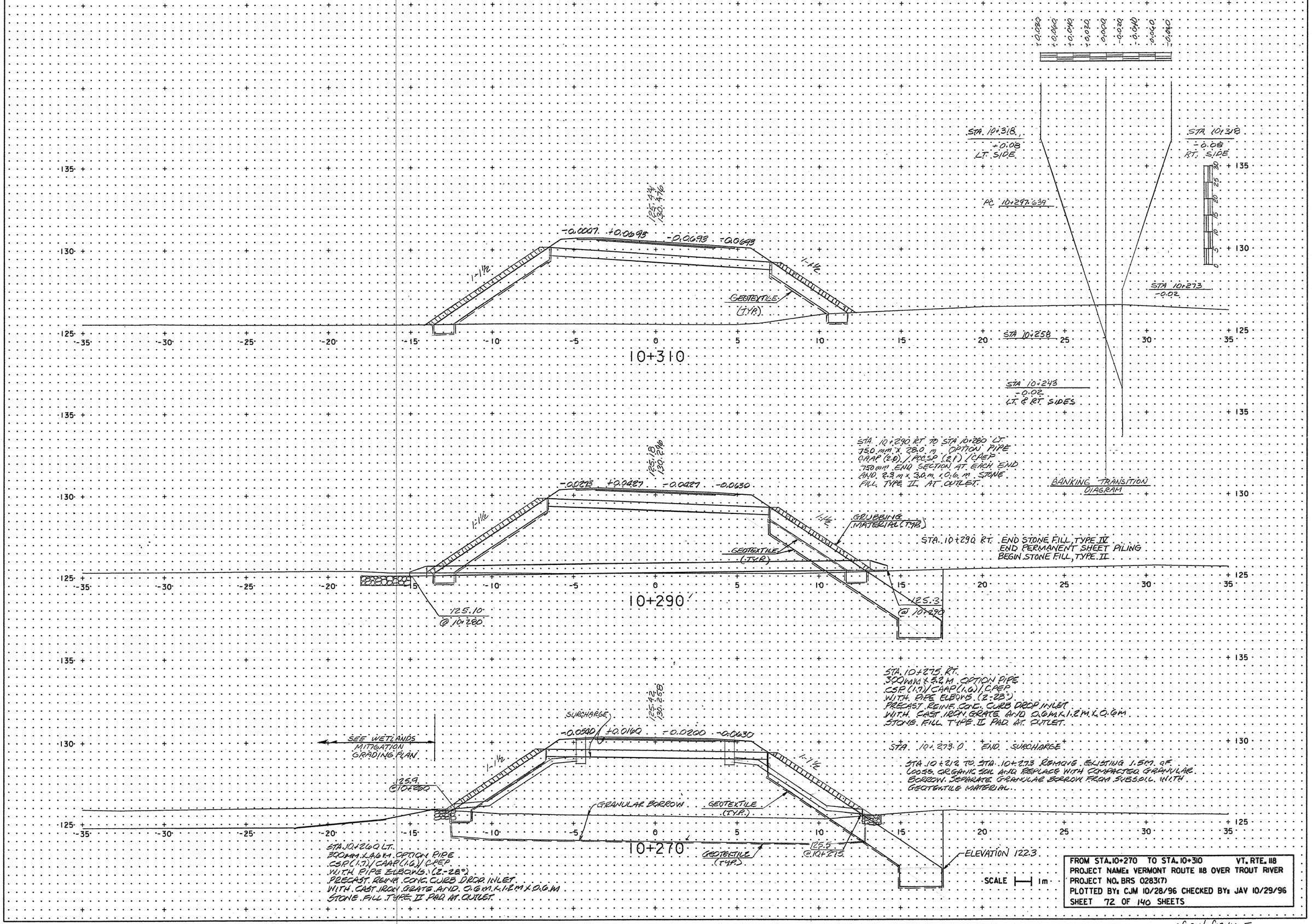
78f184/zf184x02


10+190
10+170
10+150
E.RD.
E.RD.
-0.0030
-0.0200
-0.0200
-0.0230
0.69 m SUBBASE.
GRANULAR BORROW
GRUBBING MATERIAL (TYP.)
PERMANENT SHEET PILING
GEOTEXTILE (TYP.)
ELEVATION 122.3 (CALCULATED SCOUR DEPTH).
126.8 @ 10+190
STA. 10+140 LT.
300 MM x 3.7 M. ORTION PIPE CSP(1.7)/CAAP(1.6)/CPEP PRECAST REINF. CONC. CURB DROP INLET WITH CAST IRON GRATE AND 0.6M x 1.2M x 0.6M STONE FILL TYPE II RAD. AT OUTLET.
STA. 10+160 LT END GRUBBING MATERIAL
END STONE FILL TYPE II
BEGIN STONE FILL TYPE IV
STA. 10+160 RT. END GRUBBING MATERIAL
STA. 10+165 RT. END PERMANENT SHEET PILING
10+148.30 BEGIN EXTRA DEPTH SUBBASE TAPER (SEE VT. 118 PROFILE).
SCALE 1m
FROM STA. 10+150 TO STA 10+190 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 70 OF 140 SHEETS
/usr5/jm45620/0283(7)x4.dgn
78f184/zf184x03



/usr5/j945620/02837xs.dgn

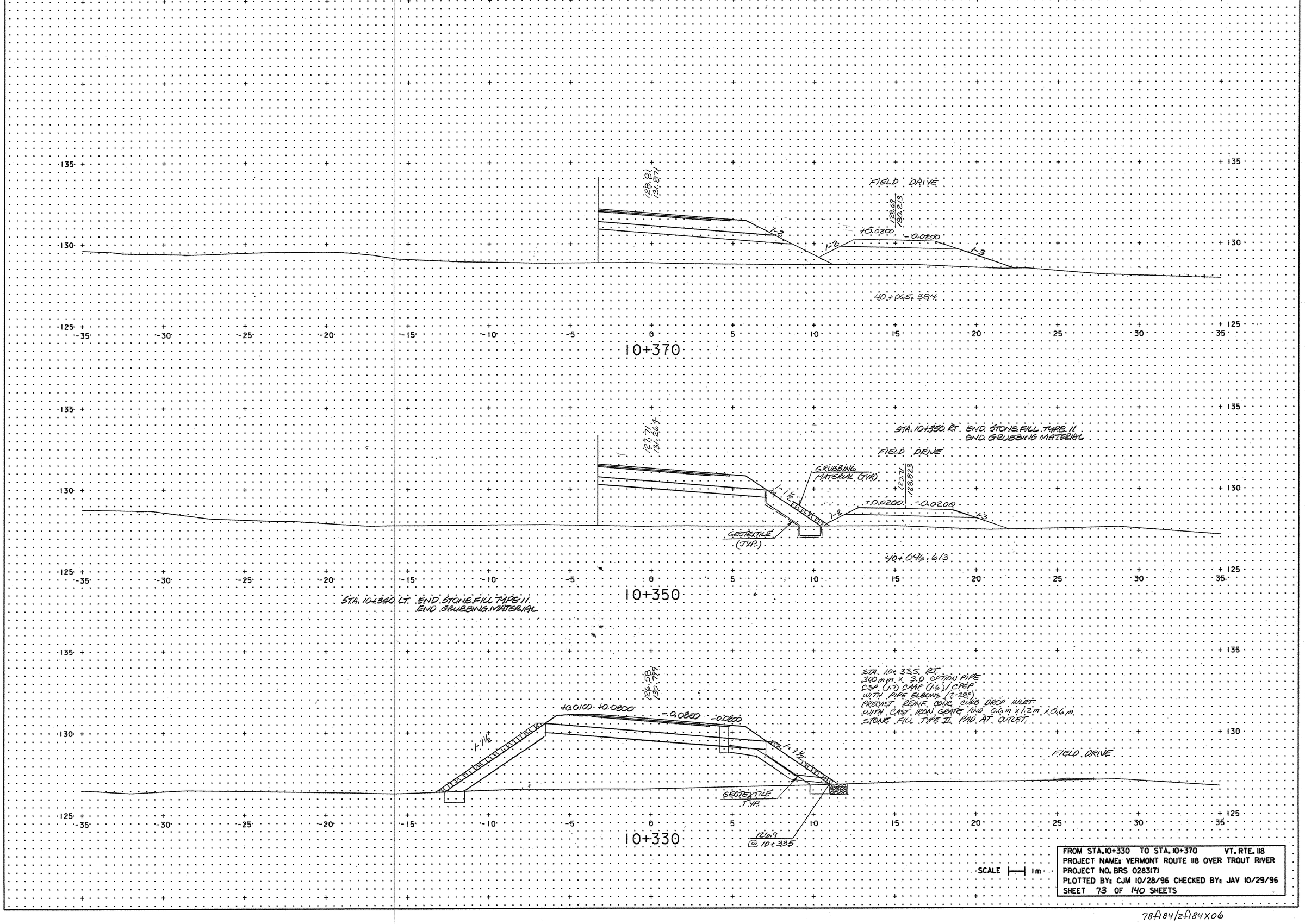
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FROM STA. 10+270 TO STA. 10+310 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 72 OF 140 SHEETS

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78f184/zf184x05

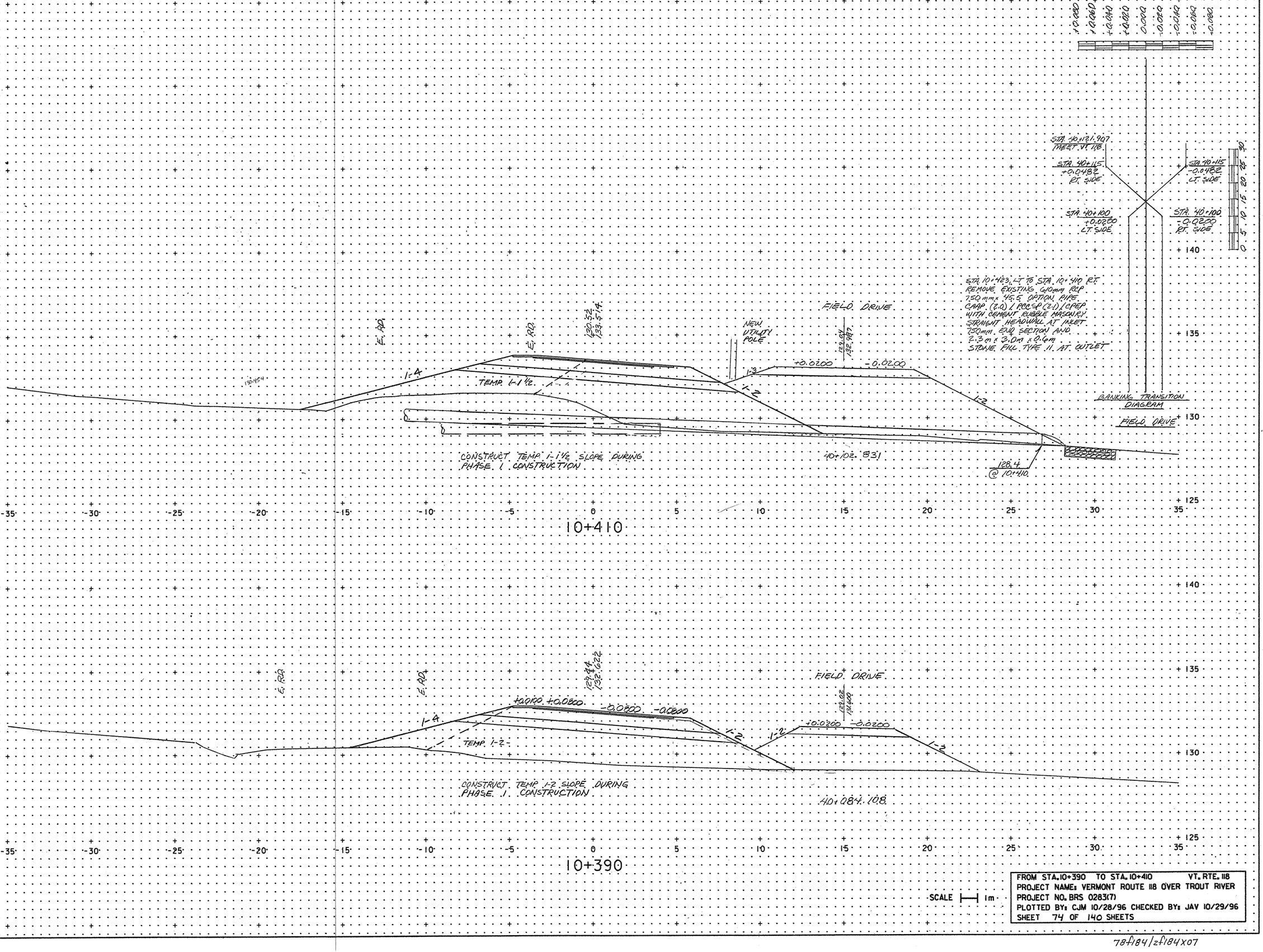


FROM STA. 10+330 TO STA. 10+370 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 73 OF 140 SHEETS

SCALE 1m

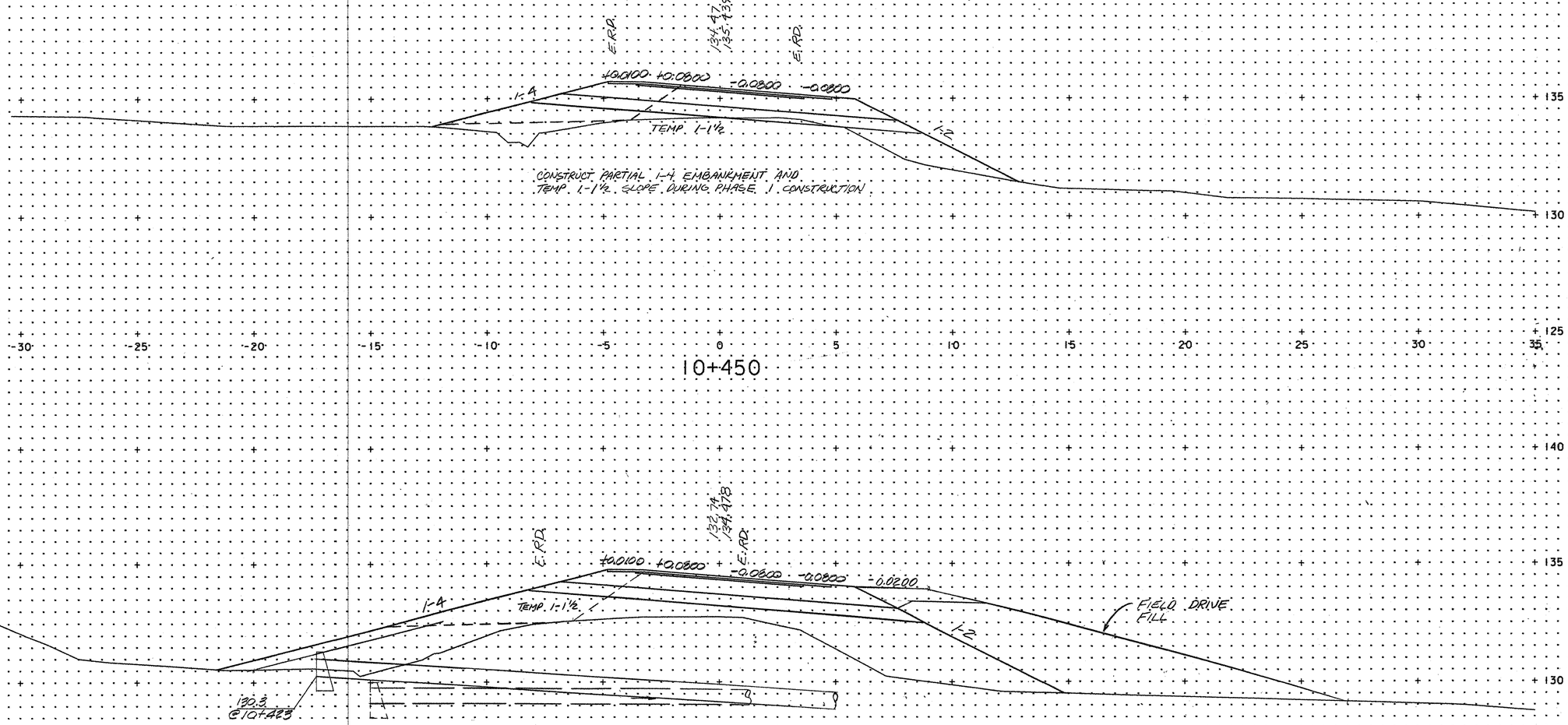
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78f184/zf184x06



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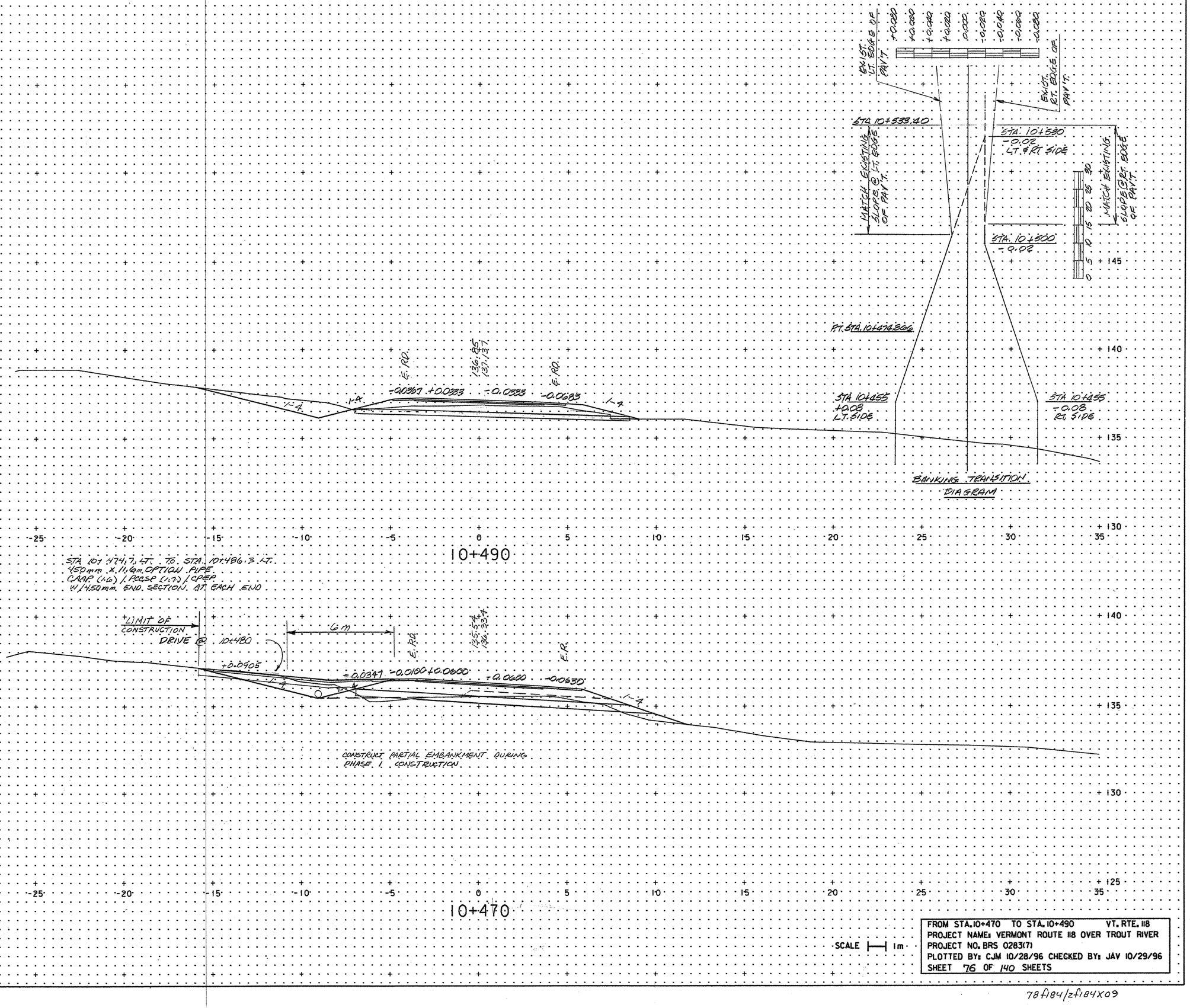
78f184/zf184x07



FROM STA. 10+430 TO STA. 10+450 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 75 OF 140 SHEETS

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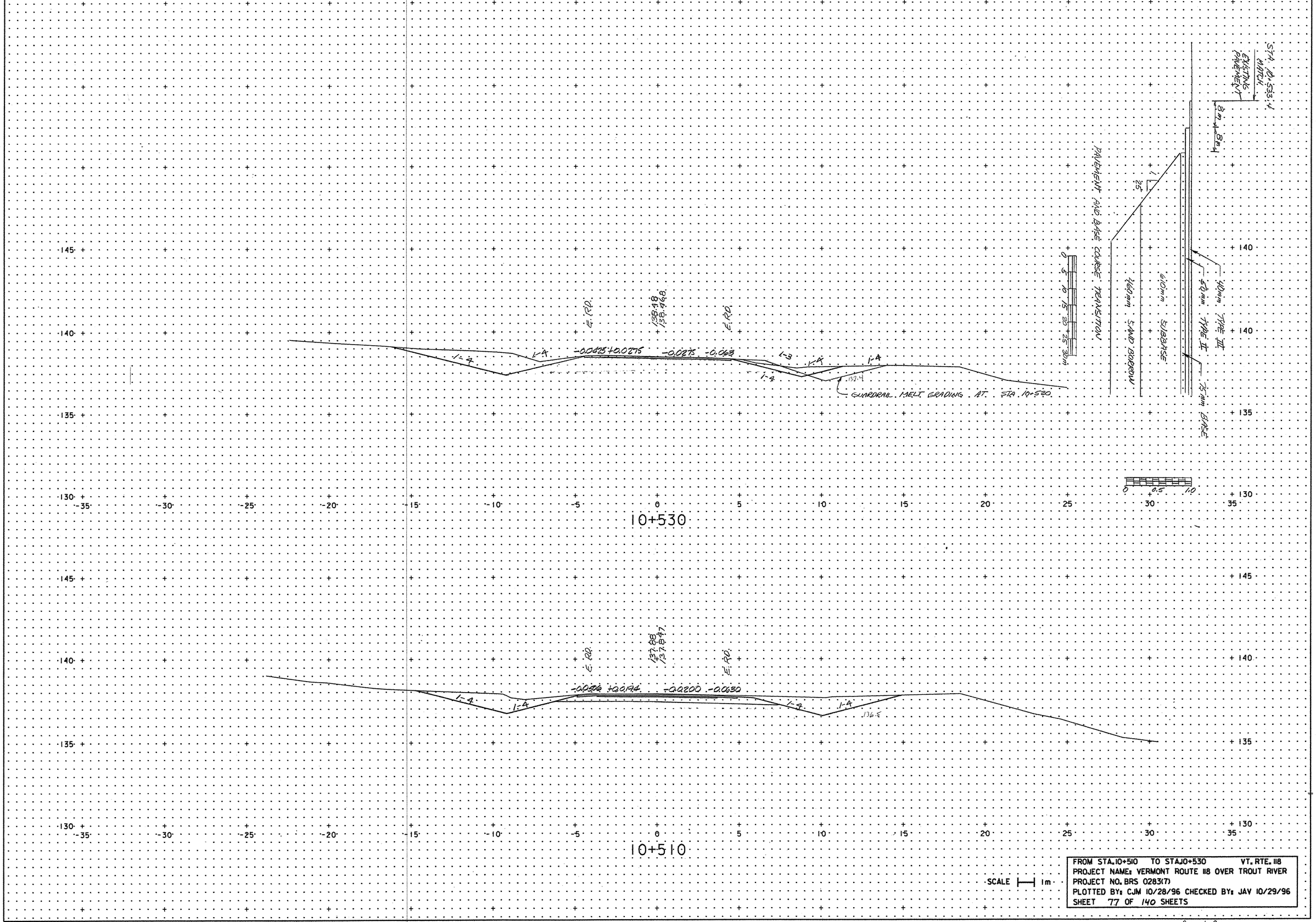
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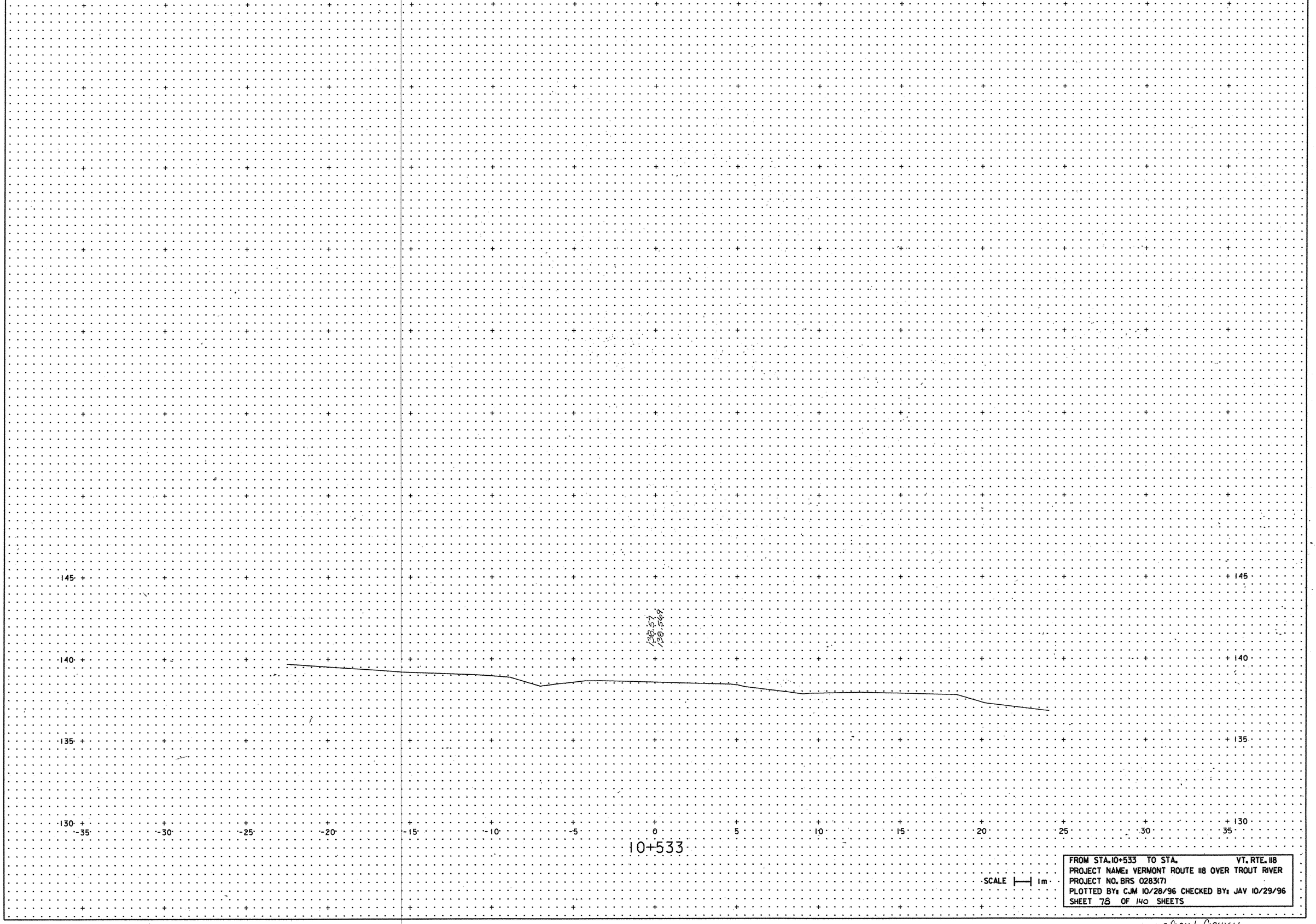


FROM STA. 10+470 TO STA. 10+490 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 76 OF 140 SHEETS

/usr5/jm45620/02837xs4.dgn

78f184/zf184x09


STA. 10+533.4 MATCH EXISTING PAVEMENT
8 in. 8 in.
1
2.5
PAVEMENT AND BASE COURSE TRANSITION
610mm SUBBASE
Various SAND ISOBORUM
40mm TYPE III
50 mm TYPE II
75 mm BASE
0 5 10 15 20 25 30m
145
140
135
E. RD.
138.48
138.48
-0.0425 +0.0275
-0.0275
-0.063
1-4
1-3
132.4
GUARDRAIL MELT GRADING AT STA. 10+520.
10+530
137.88
137.847
-0.0326 +0.0144
-0.0200
-0.0650
136.5
10+510
0 0.5 1.0
SCALE 1m
FROM STA. 10+510 TO STA 10+530 VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 77 OF 140 SHEETS
/user5/jm45620/02837xs4.dgn
78f184 /zf184x10

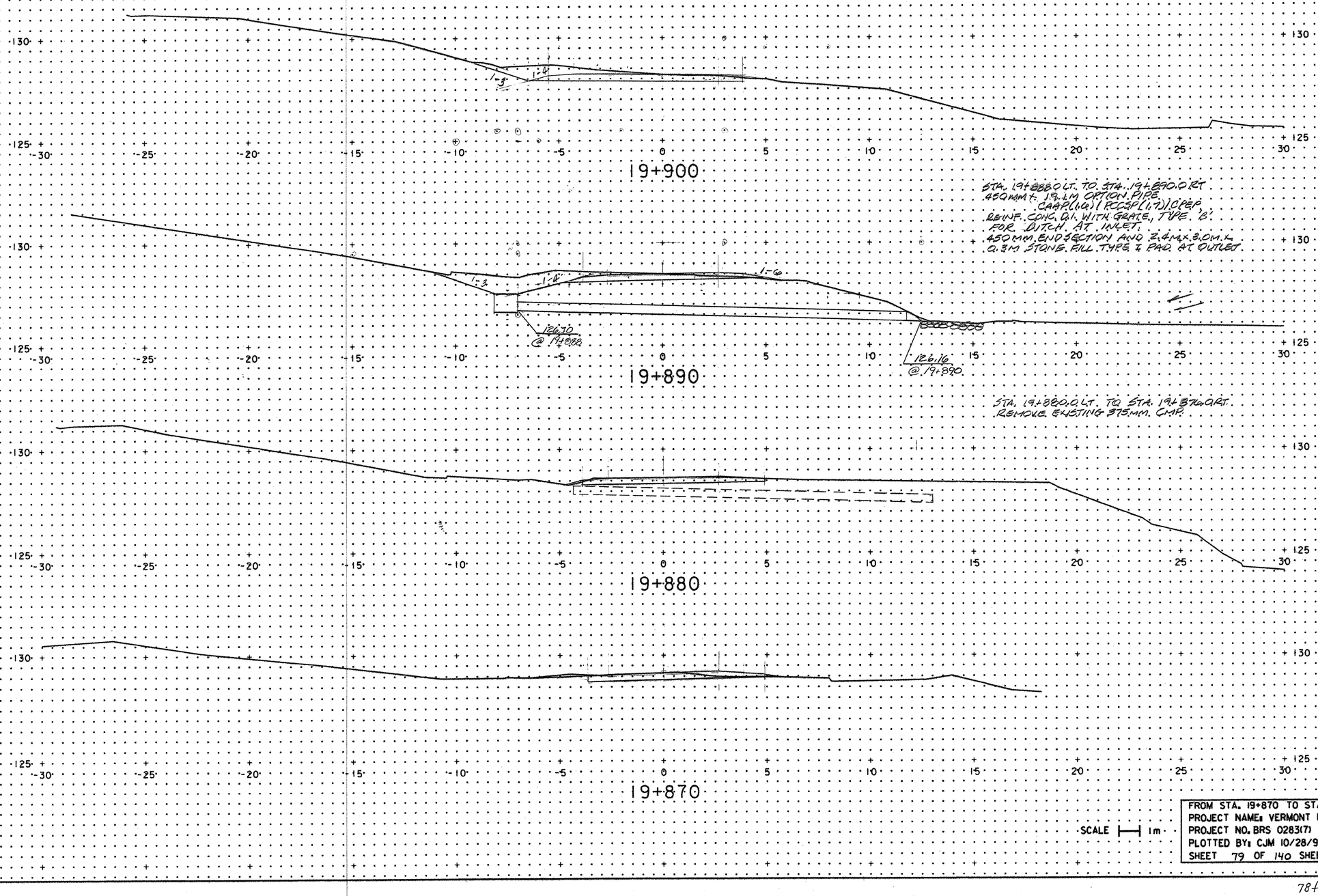


FROM STA. 10+533 TO STA. VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 78 OF 140 SHEETS

SCALE 1m

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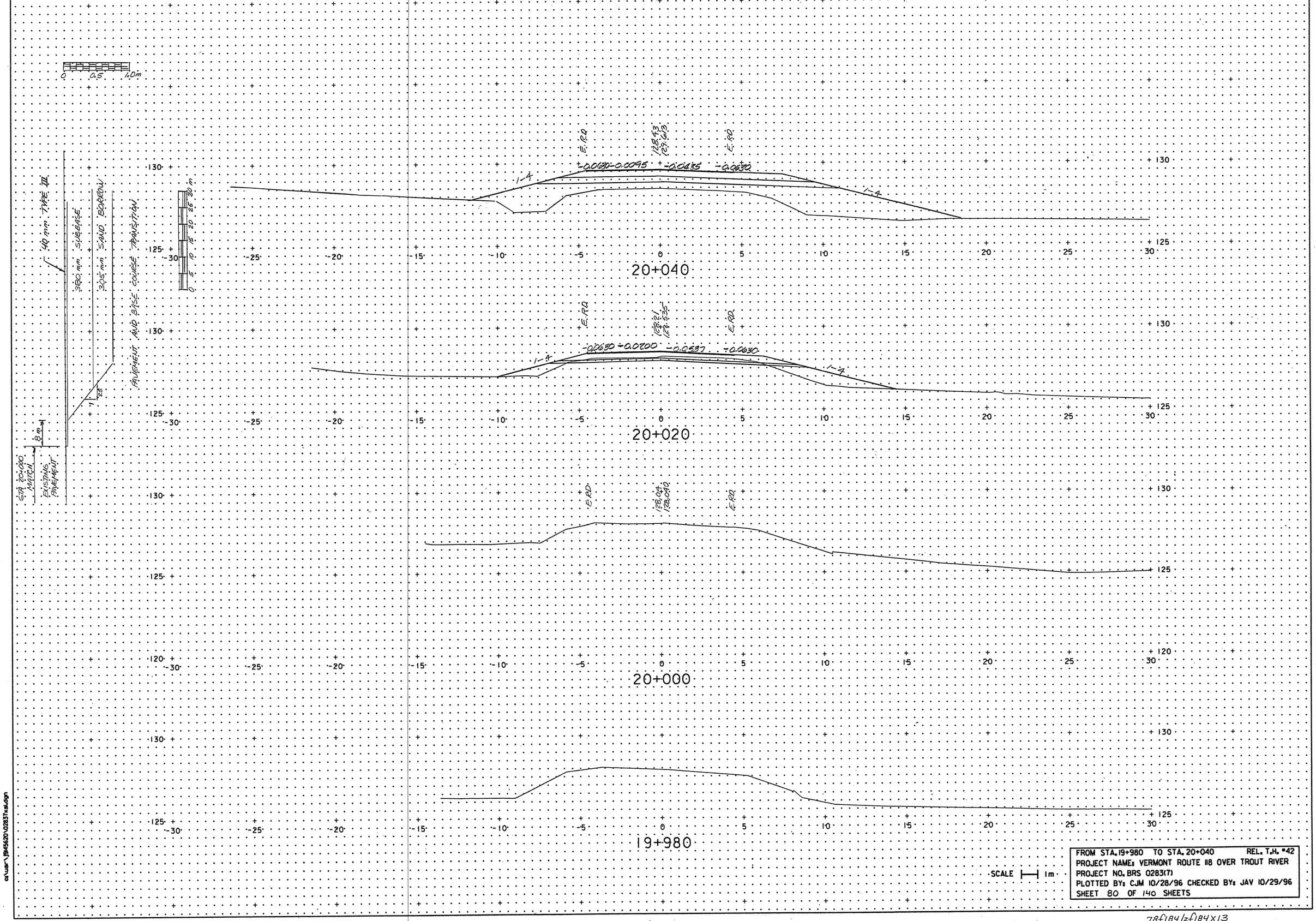
78f184/zf184X11



FROM STA. 19+870 TO STA. 19+900 REL. T.H. #42
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 79 OF 140 SHEETS

da\19456201\02837-sd.dgn

78f184/zf184x12



FROM STA. 19+980 TO STA. 20+040 REL. T.H. #42
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 80 OF 140 SHEETS

SCALE 1m

c:\usr\jb45620\0283(7)sht.dgn

78f184/zf184x13

20+096

20+080

20+060

E. RD.

128.86
31,864

-0.0378 +0.0822 -0.0822

1-4

1:3

STA. 20+062
+0.0322
LT. SIDE

STA. 20+062
-0.0322
RT. SIDE

STA. 20+045

STA. 20+031.44
-0.020
LT. SIDE

STA. 20+018.00
-0.020
LT. SIDE

STA. 20+000
+0.0071
LT. SIDE

STA. 20+000
-0.0639
RT. SIDE

EXISTING LT. SIDE

EXISTING RT. SIDE

0 5 10 15 20 25 30

BANKING TRANSITION DIAGRAM

LIMIT OF CONSTRUCTION

10m ROUNDING

6.0m

+14.28%

-15.0000%

-3.9700%

-0.0397

1-4

DRIVE @ STA. 20+070

LIMIT OF DRIVE CONSTRUCTION

STA. 20+062.5 RT. TO STA. 20+075.5 RT.
450mm x 17.5m OPTION PIPE. CAAP(1.6)/. ACCSP(1.7)/CPEP.
W/450mm. END SECTION AT EACH END

E. RD.

128.90
30.978

E. RD.

-0.0416 +0.0284 -0.0392 -0.0690

1-4

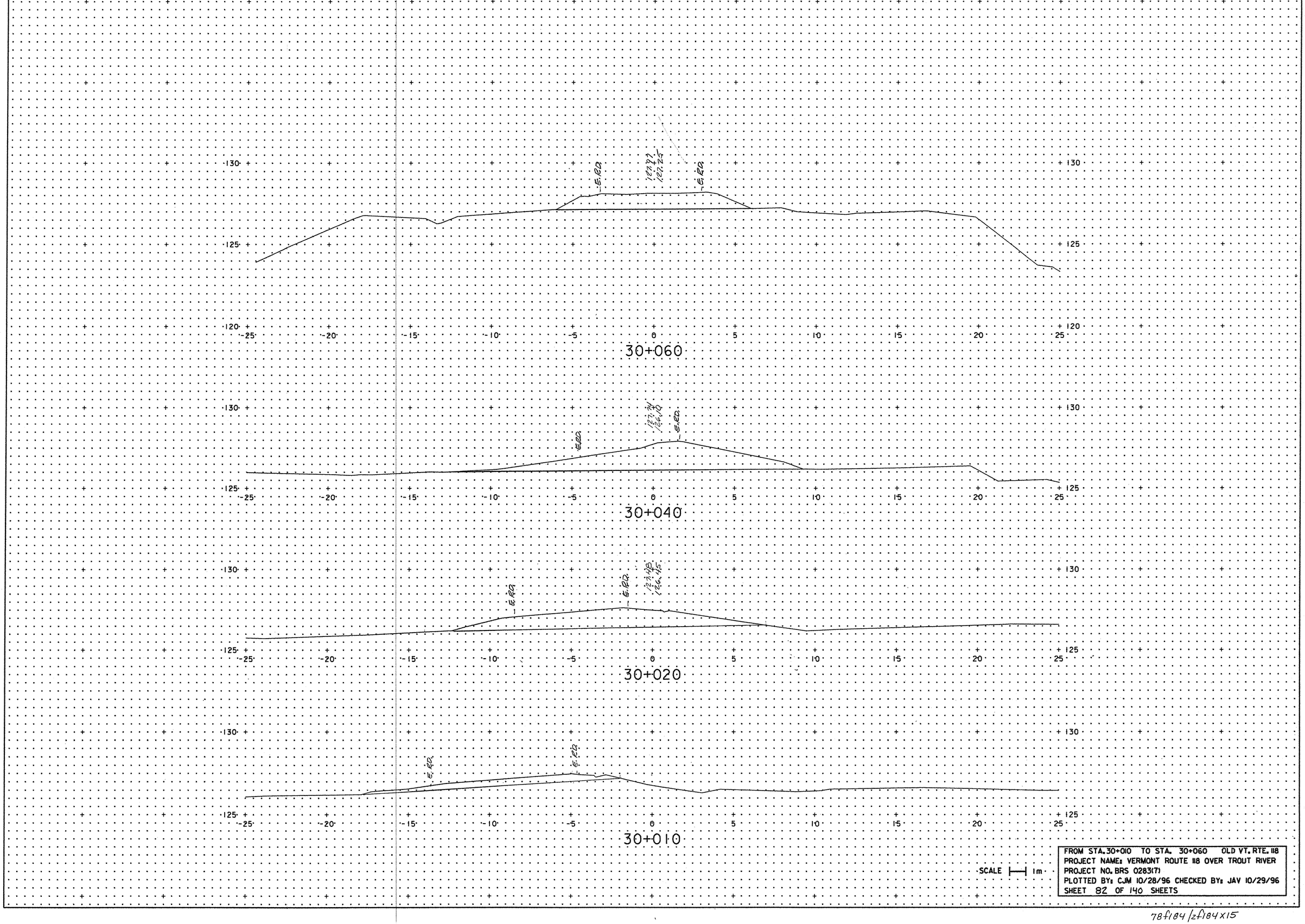
1-4

FROM STA. 20+060 TO STA. 20+096 REL. T.H. #42
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 81 OF 140 SHEETS

SCALE 1m

c:\user\3945620\02837xs6.dgn

78f184/zf184X14

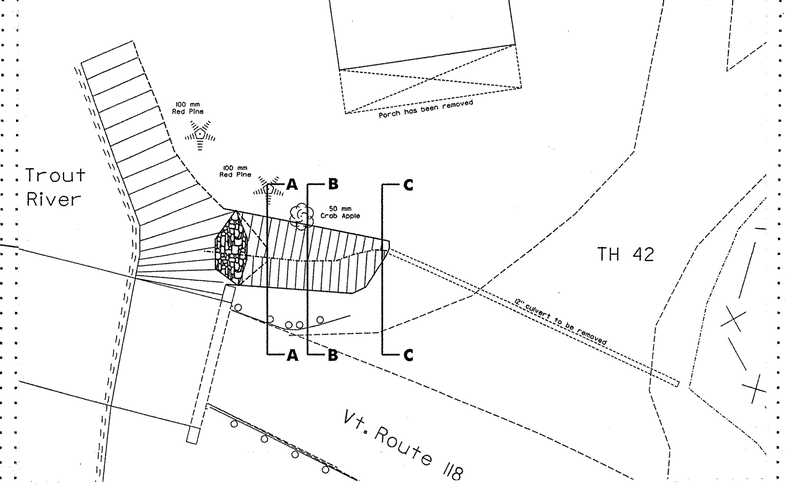


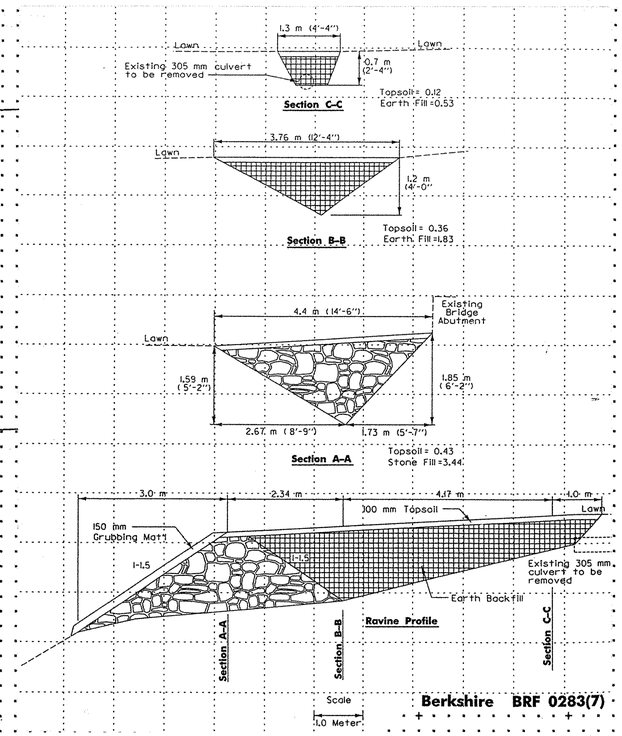
FROM STA. 30+010 TO STA. 30+060 OLD VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 82 OF 140 SHEETS

SCALE 1m

c:\user\jb45620\02837xsl.dgn

78f184 /zf184x15





Berkshire BRF 0283(7)

FROM STA. 30+070 TO STA. 30+115 OLD VT. RTE. 118
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 83 OF 140 SHEETS

SCALE 1m

c:\usr\19456201\02837rsk.dgn

78f184/zf184x16

135 130 125

-30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30

40+045

128.74
131.94

REFER TO MAINLINE CROSS SECTIONS @ STA 10+350 RT.
FOR CONTINUATION OF DRIVE SECTIONS.

40+040

128.27
129.06

1-A 1-4

40+020

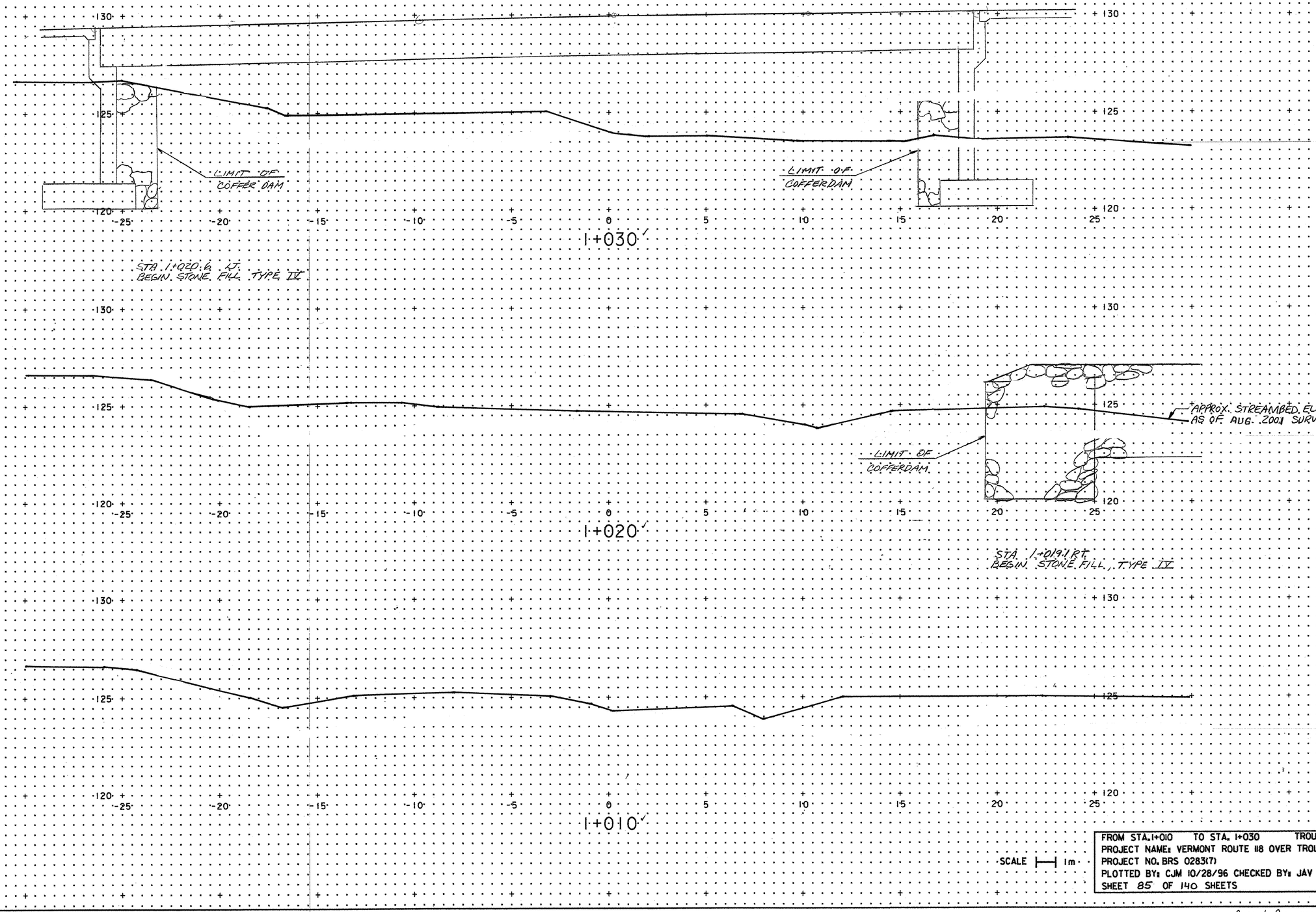
40+003

SCALE 1m

FROM STA. 40+000 TO STA. 40+045 FIELD DRIVE
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 84 OF 140 SHEETS

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78f184/zf184X17

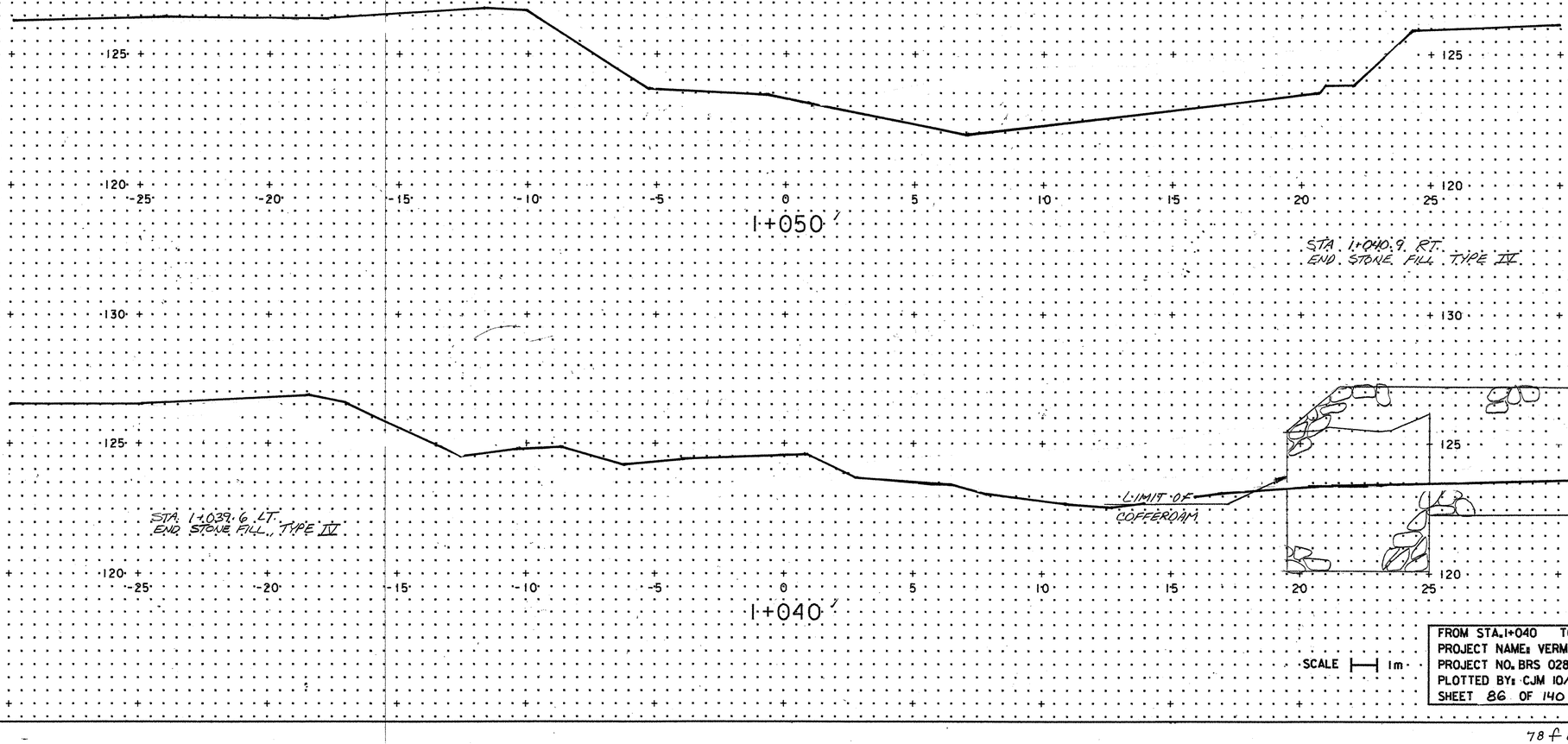


FROM STA. 1+010 TO STA. 1+030 TROUT RIVER
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 85 OF 140 SHEETS

SCALE 1m

c:\user\BM5620\02837x8.dgn

78f184/zf184cx1

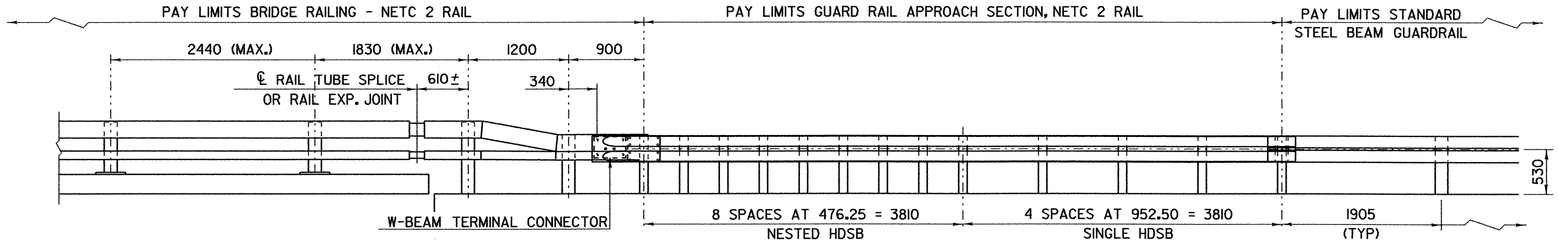


FROM STA. 1+040 TO STA. 1+050 TROUT RIVER
PROJECT NAME: VERMONT ROUTE 118 OVER TROUT RIVER
PROJECT NO. BRS 0283(7)
PLOTTED BY: CJM 10/28/96 CHECKED BY: JAV 10/29/96
SHEET 86 OF 140 SHEETS

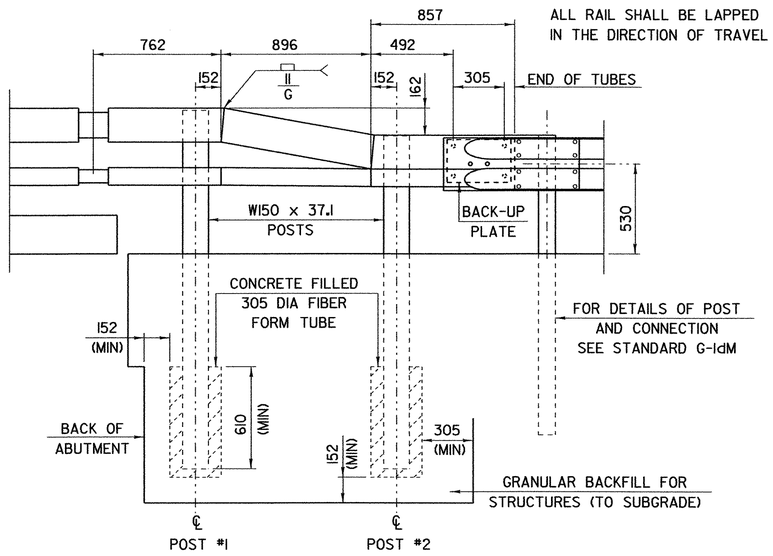
SCALE 1m

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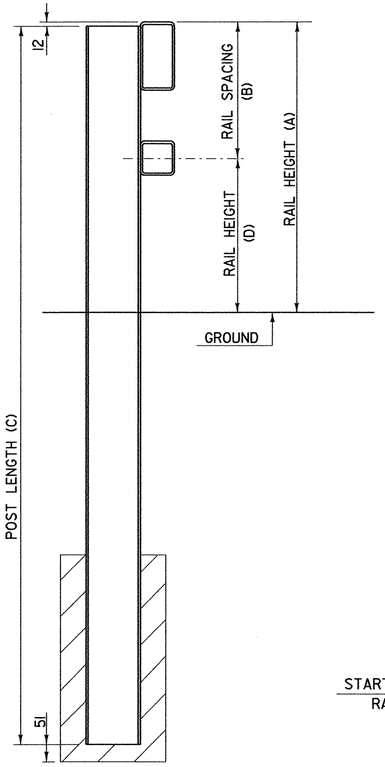
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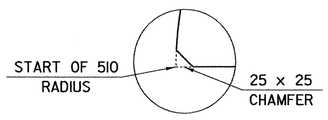
RAILING TRANSITION ELEVATION



ELEVATION

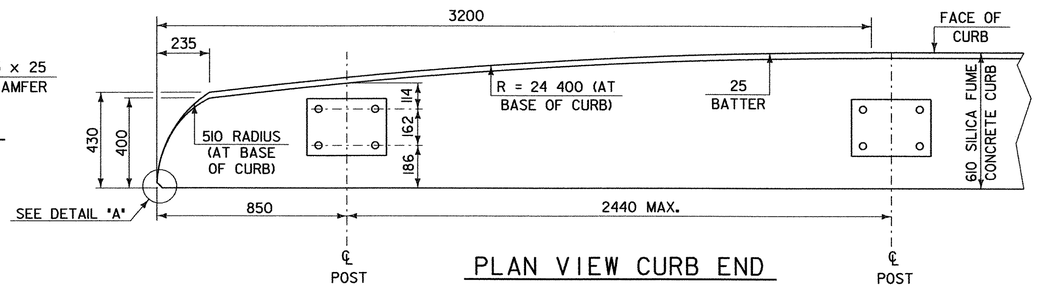


TYPICAL SECTION

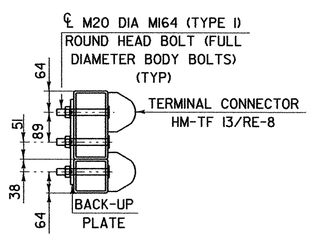


DETAIL "A"

POST NUMBER	RAIL HEIGHT (A)	RAIL SPACING (B)	POST LENGTH (C)	RAIL HEIGHT (D)
1	860	405	2134	455
2	702	254	1956	448



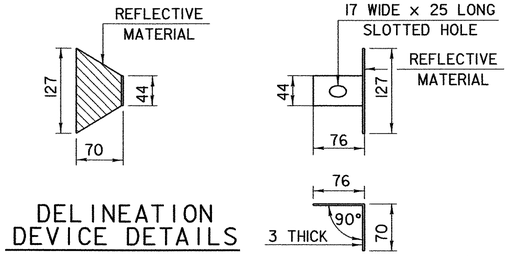
PLAN VIEW CURB END



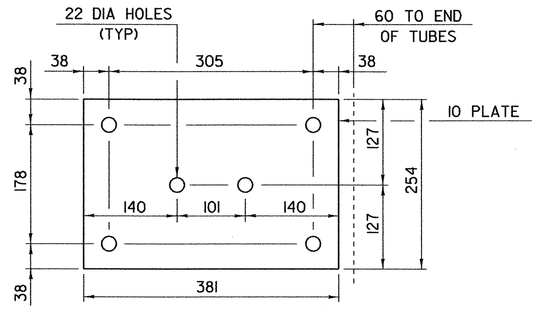
SECTION THROUGH GUARD RAIL CONNECTION AT TERMINAL CONNECTOR

NOTES:

1. REFER TO STANDARD DETAIL BRI-97M FOR ADDITIONAL DETAILS, NOTES AND MATERIAL SPECIFICATIONS.
2. TO FACILITATE FIELD FIT - UP OF THE TRANSITION RAILING, POSTS SHALL BE SET LOOSELY INTO FIBER FORM TUBES WHILE TRANSITION PARTS ARE BEING ASSEMBLED. POST HOLES SHALL BE BACKFILLED WITH A CONCRETE MIX APPROVED BY THE ENGINEER. PAYMENT FOR COMPONENTS, INCLUDING BACKUP PLATE AND END TERMINAL CONNECTOR FOR GUARD RAIL, AUGERING, FIBER FORM TUBES AND CONCRETE, AND INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO BRIDGE RAILING, N.E.TC. 2 RAIL.
3. THE REFLECTORIZED ALUMINUM DELINEATION IS TO BE ERECTED EVERY 9m (OR CLOSEST POST) WITH A M16 BOLT. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.
4. REFLECTIVE MATERIAL SHALL MEET REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVER'S LEFT AND SILVER ON THEIR RIGHT.
5. ON BRIDGES WITH A SIDEWALK, DELINEATORS ARE NOT TO BE INSTALLED ON THE SIDEWALK SIDE OF THE BRIDGE (I.E. DELINEATORS INSTALLED ONLY ON THE CURB SIDE AND ON THE APPROACH ON THE CURB SIDE). PAYMENT SHALL BE SUBSIDIARY TO ALL OTHER ITEMS.
6. ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
7. SEE STANDARD G-1M AND G-1dM FOR ADDITIONAL INFORMATION.



DELINEATION DEVICE DETAILS

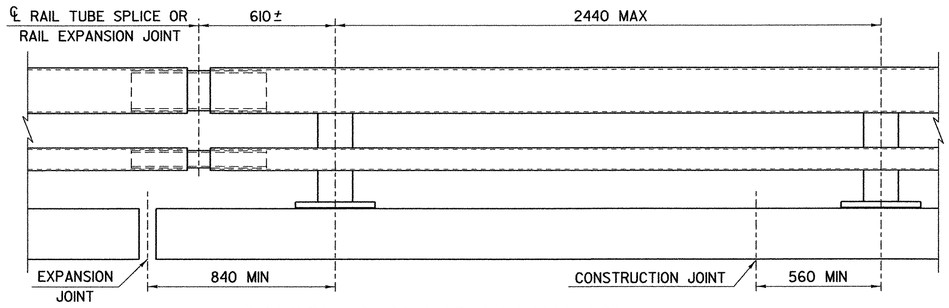


BACK-UP PLATE

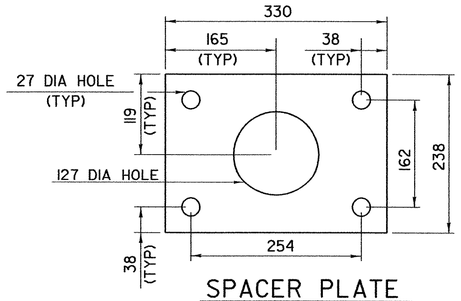
NETC Rail Details

PROJECT NAME: BERKSHIRE
PROJECT NUMBER: BRF-RS 0283(7)

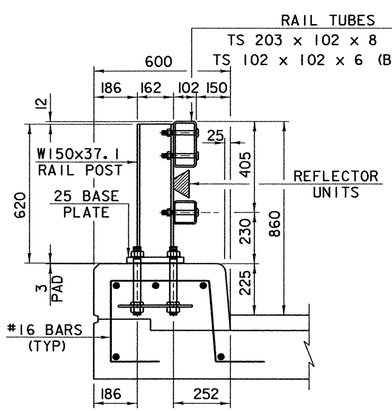
FILE NAME: str5/78f184/netcrail.dgn PLOT DATE: 13-AUG-2003
PROJECT LEADER: C. Keller DRAWN BY: G. Shangraw
DESIGNED BY: CHECKED BY:
brl-97m.i SHEET 87 OF 140



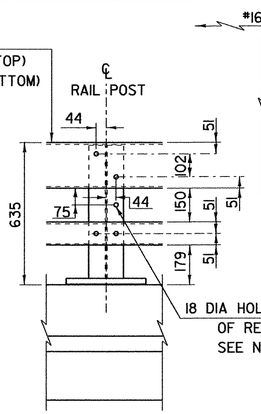
BRIDGE RAILING ELEVATION



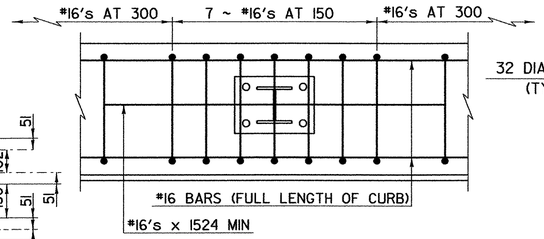
SPACER PLATE



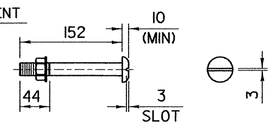
TYPICAL SECTION



ELEVATION

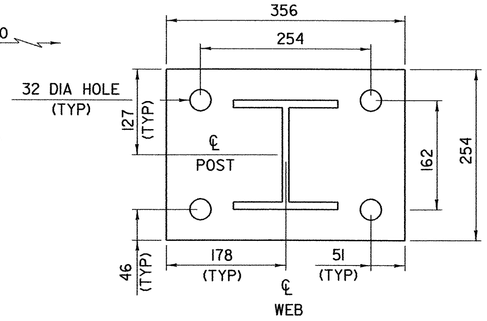


CURB REINFORCING PLAN

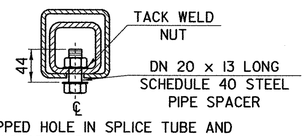


M20 DIA M164M (TYPE 1) ROUND HEAD BOLT

(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
(SEE NOTE *9)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



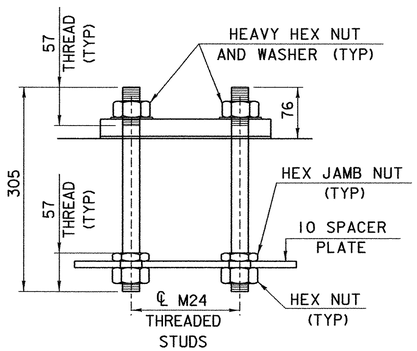
POST AND BASE PLATE



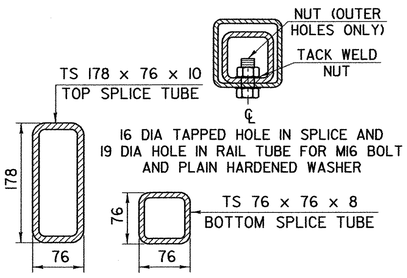
16 DIA TAPPED HOLE IN SPLICE TUBE AND
29 x 'C' SLOT IN RAIL TUBE FOR M16
BOLT AND PLAIN HARDENED WASHER

EXPANSION JOINT SECTION

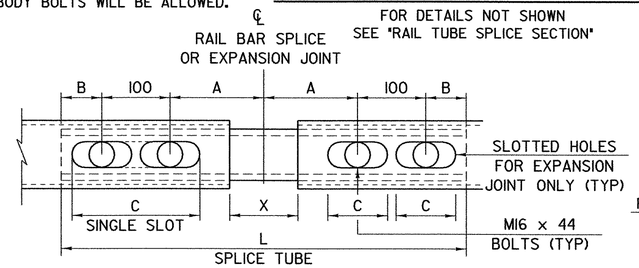
FOR DETAILS NOT SHOWN
SEE "RAIL TUBE SPLICE SECTION"



RAIL POST ANCHORAGE

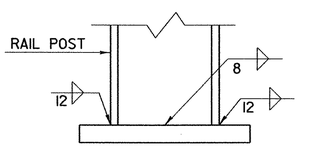


RAIL TUBE SPLICE SECTION



RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL

(BOTTOM VIEW)



BASE WELD DETAIL

NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF SECTION 525, "RAILINGS OF THE STANDARD SPECIFICATION FOR CONSTRUCTION."
2. TUBING AND POSTS SHALL MEET THE REQUIREMENTS OF SECTION 732, "RAILING MATERIALS OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION," EXCEPT THAT THE DROP-WEIGHT TEAR TEST IN SECTION 732 SHALL NOT APPLY TO THE STRUCTURAL TUBING IN THIS STANDARD.
3. ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 2mm RADIUS AND BE FREE OF BURRS.
4. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
5. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
6. RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 7°C AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
7. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT THAT HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M232M.
8. RAIL POSTS ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
9. RAIL TUBES SHALL BE ATTACHED USING M20 FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE. HOLES HOLES IN POSTS SHALL BE 2mm LARGER THAN THE BOLT SIZE.
10. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
11. IF THERE IS A CONFLICT BETWEEN THESE STANDARD DETAILS AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
12. ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
13. THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS INCLUDING WELDING PROCEDURES TO THE STRUCTURES SECTION FOR APPROVAL IN ACCORDANCE WITH THE PROVISION OF 506.04, SHOP DRAWINGS. ALL WELDING SHALL CONFORM WITH SECTION 506.10.
14. RAIL POST AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A370 CHARPY IMPACT TESTING USING TYPE A SPECIMENS.

MATERIALS

RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501
RAIL POSTS AND BASE PLATE.....ASTM A709/A709M, GRADE 345
ALL OTHER SHAPES AND PLATES.....ASTM A709/A709M, GRADE 250
ANCHOR STUDS.....ASTM FS68M CLASS 8.8
ALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164M, TYPE 1

NUTS FOR AASHTO M164M (ASTM A325M) BOLTS AND ANCHOR STUDS SHALL COMPLY WITH AASHTO M291M (ASTM A563M).

WASHERS SHALL COMPLY WITH AASHTO M293M (ASTM F436M) SPECIFICATIONS.

3mm PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02.

SPLICE TABLE					
T	A	B	C	L	X
NA	100	50	--	510	20
EXPANSION JOINT TABLE					
<100	100	50	65	510	65
>100 <165	140	60	90	605	105
>165 <230	165	85	230*	705	130
>230 <330	215	110	280*	860	180

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

NETC Rail Details

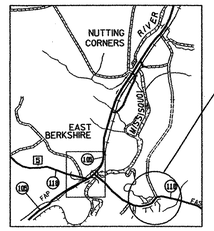
PROJECT NAME: BERKSHIRE
PROJECT NUMBER: BRF-RS 0283(7)

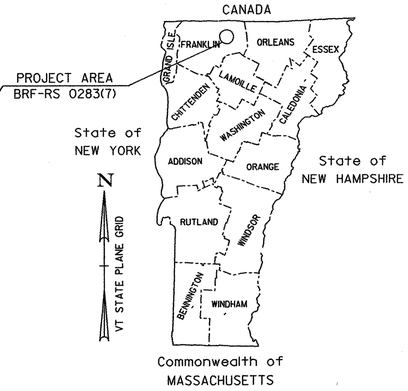
FILE NAME: str5/78f184/netcrail.dgn PLOT DATE: 13-AUG-2003
PROJECT LEADER: C. Keller DRAWN BY: G. Shangraw
DESIGNED BY: CHECKED BY:
br2-97m.i SHEET 88 OF 140

INDEX OF SHEETS

100	TITLE SHEET
101	TYPICAL SECTIONS
102	TIE SHEET
103	CONSTRUCTION BASELINE LAYOUT
104	R.O.W DETAIL SHEET
105-108	R.O.W. LAYOUT SHEETS
109	CONSTRUCTION SEQUENCE
110	CONSTRUCTION SITE PLAN
111-113	CONSTRUCTION PLAN SHEETS
114	PROFILE SHEET
115	PLANTING PLAN SHEET
116	PLANTING DETAIL SHEET
117-121	MISCELLANEOUS DETAIL SHEETS
122-132	CROSS SECTIONS

STATE OF VERMONT
AGENCY OF TRANSPORTATION





DESIGN CRITERIA

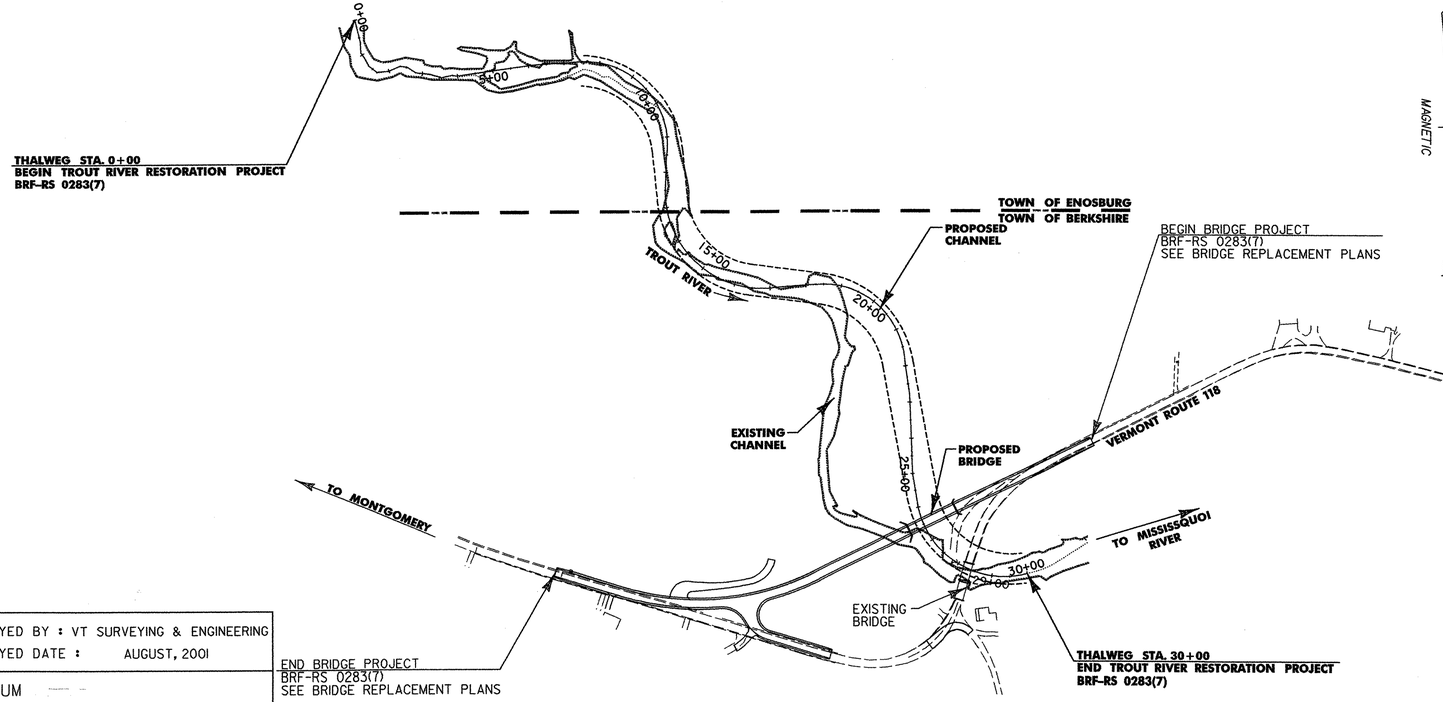
DRAINAGE AREA =	82 sq. mi.
BANKFULL WIDTH, W_{bkf} =	85 ft.
MEAN DEPTH, d_{bkf} =	3.7 ft.
WETTED PERIMETER, W_p =	92 ft.
HYDRAULIC RADIUS, R =	3.42 ft.
CROSS SECTIONAL AREA, A_{bkf} =	315 sf
WIDTH FLOOD PRONE AREA, W_{fpa} =	190 ft. (min.)
BANKFULL FLOW, Q_{bkf} =	2000 cfs.
MEAN SLOPE, S =	0.2%
D_{50} BED PARTICLE SIZE =	0.94 in.
D_{84} BED PARTICLE SIZE =	1.85 in.
D_{90} BED PARTICLE SIZE =	2.20 in.

PROPOSED IMPROVEMENT
TOWNS OF BERKSHIRE AND ENOSBURG
COUNTY OF FRANKLIN
TROUT RIVER RESTORATION

BEGINNING AT A POINT APPROXIMATELY 2825 FEET UPSTREAM OF EXISTING BRIDGE #26 AND EXTENDING DOWNSTREAM 3000 FEET.

WORK TO BE PERFORMED UNDER THE RIVER RESTORATION PORTION OF THIS PROJECT INCLUDES STABILIZATION OF THE TROUT RIVER AND ESTABLISHMENT OF A RIPARIAN BUFFER ZONE. WORK TO BE PERFORMED UNDER THE BRIDGE REPLACEMENT PORTION OF THIS PROJECT IS OUTLINED IN THE BRIDGE REPLACEMENT PLANS.

LENGTH OF RIVER RESTORATION PROJECT: 3000 FEET.



CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
HVCTRL
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS (SR SR SR)
TOP OF CUT
TOE OF SLOPE
WETLANDS
EDGE OF VEGETATION

SURVEYED BY : VT SURVEYING & ENGINEERING
SURVEYED DATE : AUGUST, 2001

DATUM
VERTICAL NAVD 88
HORIZONTAL N/A

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROJECT 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.

STATE OF VERMONT — SCOTT A. ROGERS No. 7408 — 4/9/03 — PROFESSIONAL ENGINEER

Dufresne-Henry

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATOR
APPROVED _____ DATE _____

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE _____

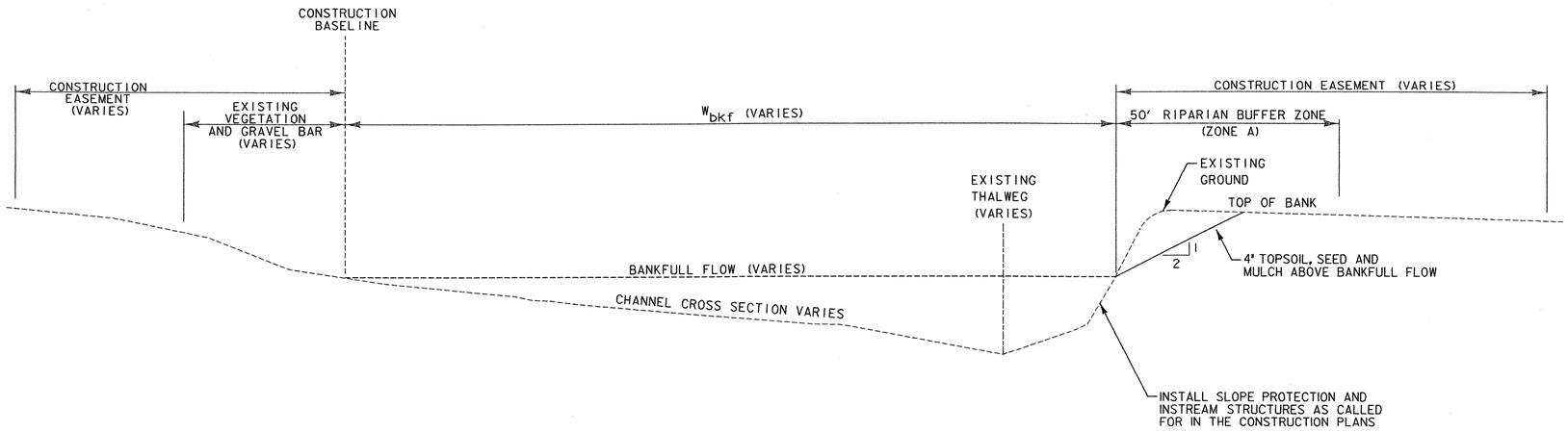
PROJECT MANAGER : JOHN LEPORE

PROJECT NAME : TROUT RIVER RESTORATION
PROJECT NUMBER : BRF-RS 0283 (7)

SHEET 100 OF 140 SHEETS

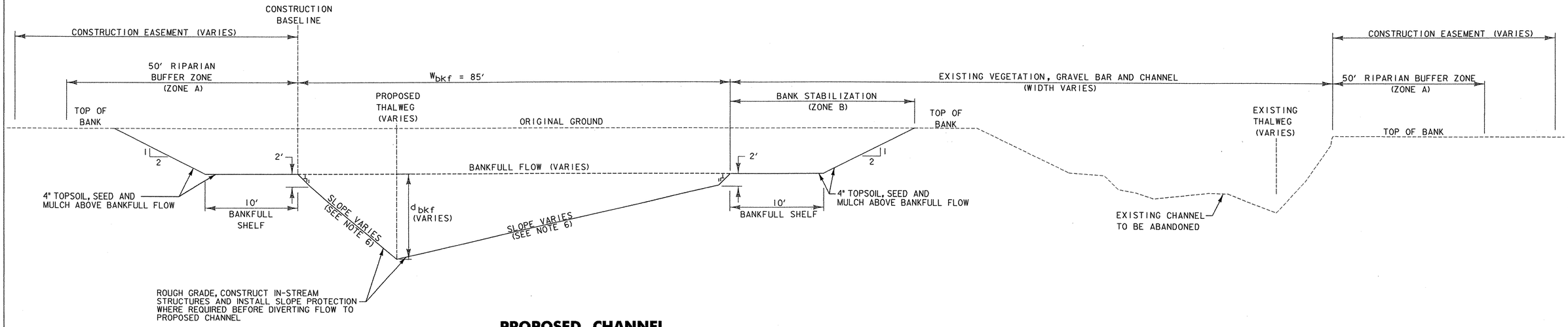
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TYPICAL SECTIONS



EXISTING CHANNEL

N.T.S.



PROPOSED CHANNEL

N.T.S.

SEEDING FORMULA

MIXTURE	LBS./ACRE	LBS./1000 SF
TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDSFOOT TREFOIL	8	0.20
	48	1.10

SEEDING NOTES

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 FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 30 LBS./1000 SQUARE FEET. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA). (SEE NOTE 5).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 75 TO 100 POUNDS PER PER 1000 SQUARE FEET, OR AS DIRECTED BY THE ENGINEER. (SEE NOTE 5) LIMESTONE SHALL CONTAIN NOT LESS THAN 95% CALCIUM AND MAGNESIUM CARBONATES.

STRAW MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER. STRAW MULCH SHALL BE DRY AND SHALL COME FROM WHEAT OR OATS, FREE FROM WEEDS, TWIGS AND DEBRIS. SHALL BE FREE FROM ROT AND MOLD.

MULCH NETTING: SHALL BE MADE OF PAPER, TWINE, PLASTIC OR PLASTIC AND WOOD FIBER.

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

NOTES:

1. FOR LOCATION OF PROPOSED THALWEG, SEE CONSTRUCTION PLANS AND CROSS SECTIONS.
2. FOR LOCATION OF PROPOSED IN-STREAM STRUCTURES, SEE CONSTRUCTION PLANS.
3. FOR BANKFULL FLOW ELEVATIONS, SEE PROFILE. FOR BANKFULL WIDTHS, SEE CROSS SECTIONS.
4. FOR WIDTH AND LOCATION OF CONSTRUCTION EASEMENT, SEE ROW PLANS, CONSTRUCTION SITE PLAN AND CONSTRUCTION PLAN SHEETS.
5. FERTILIZER AND LIMESTONE ARE NOT TO BE UTILIZED WITHIN THE RIPARIAN BUFFER ZONE OR WITHIN 100 FEET OF THE CHANNEL.
6. SEE CONSTRUCTION PLANS AND CROSS SECTIONS FOR GRADING AND ELEVATIONS OF PROPOSED CHANNEL.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

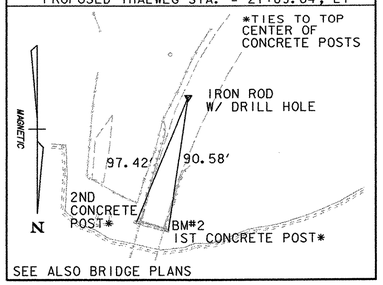
FILE NAME: zo2837frm.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
TYPICAL SECTION SHEET

PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 101 OF 140

\\Proj Files\1001\plot\sl.plt 08/26/2003 08:55:51 AM

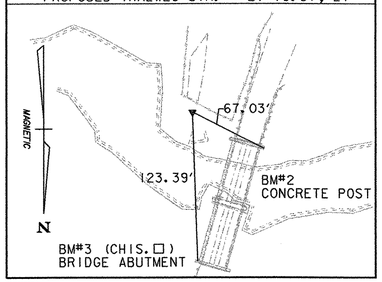
TRAVERSE TIES

TRAVERSE #10
N = 85839.30′
E = 90078.32′
ELEV. = 418.61′
CONSTRUCTION BASELINE STA. = 122+98.11, LT
PROPOSED THALWEG STA. = 27+89.64, LT

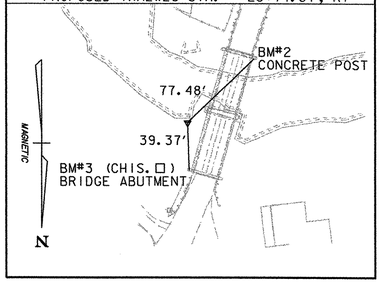


SEE ALSO BRIDGE PLANS

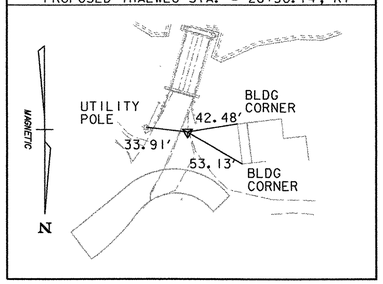
HVCTRL #101
N = 85920.26′
E = 90154.61′
ELEV. = 416.62′
CONSTRUCTION BASELINE STA. = 122+84.35, RT
PROPOSED THALWEG STA. = 27+70.61, LT



HVCTRL #102
N = 86004.65′
E = 90152.47′
ELEV. = 405.04′
CONSTRUCTION BASELINE STA. = 123+17.94, RT
PROPOSED THALWEG STA. = 28+14.81, RT



HVCTRL #103
N = 86080.97′
E = 90132.99′
ELEV. = 421.14′
CONSTRUCTION BASELINE STA. = 123+46.34, RT
PROPOSED THALWEG STA. = 28+50.74, RT



NO TIES ARE AVAILABLE FOR THE FOLLOWING HV CONTROL POINTS:

HVCTRL #104
N = 85788.65′
E = 90525.54′
ELEV. = 411.17′
CONSTRUCTION BASELINE STA. = 121+12.61, RT
PROPOSED THALWEG STA. = 25+57.35, RT

HVCTRL #105
N = 85232.68′
E = 90461.34′
ELEV. = 411.07′
CONSTRUCTION BASELINE STA. = 121+91.51, RT
PROPOSED THALWEG STA. = 26+55.00, RT

HVCTRL #106
N = 85587.30′
E = 90571.98′
ELEV. = 412.52′
CONSTRUCTION BASELINE STA. = 106+05.82, LT
PROPOSED THALWEG STA. = 24+18.24, LT

HVCTRL #107
N = 85569.78′
E = 90706.71′
CONSTRUCTION BASELINE STA. = 112+52.00, RT
PROPOSED THALWEG STA. = 16+68.83, RT

HVCTRL #108
N = 85220.52′
E = 90524.30′
ELEV. = 415.74′
CONSTRUCTION BASELINE STA. = 115+10.02, RT
PROPOSED THALWEG STA. = 19+55.71, RT

HVCTRL #109
N = 85142.93′
E = 90887.09′
ELEV. = 414.40′
CONSTRUCTION BASELINE STA. = 110+66.23, LT
PROPOSED THALWEG STA. = 14+83.97, RT

HVCTRL #110
N = 85073.75′
E = 90813.39′
ELEV. = 408.19′
CONSTRUCTION BASELINE STA. = 110+51.28, RT
PROPOSED THALWEG STA. = 14+64.06, LT

HVCTRL #111
N = 84796.75′
E = 90983.34′
ELEV. = 409.39′
CONSTRUCTION BASELINE STA. = 107+64.37, LT
PROPOSED THALWEG STA. = 11+40.79, RT

HVCTRL #112
N = 84691.26′
E = 90586.21′
CONSTRUCTION BASELINE STA. = 107+38.51, LT
PROPOSED THALWEG STA. = 10+86.29, LT

HVCTRL #113
N = 84608.92′
E = 91170.32′
ELEV. = 409.43′
CONSTRUCTION BASELINE STA. = 103+78.62, LT
PROPOSED THALWEG STA. = 7+71.29, RT

HVCTRL #114
N = 84589.65′
E = 91335.69′
ELEV. = 410.21′
CONSTRUCTION BASELINE STA. = 101+98.16, RT
PROPOSED THALWEG STA. = 5+98.19, RT

HVCTRL #115
N = 84575.24′
E = 91363.16′
ELEV. = 410.55′
CONSTRUCTION BASELINE STA. = 101+72.32, RT
PROPOSED THALWEG STA. = 5+72.96, RT

NOTES:

1. COORDINATE SYSTEM IS ASSUMED. SEE BRIDGE REPLACEMENT PLANS.
2. MAIN TRAVERSE COMPLETED BY VERMONT SURVEY AND ENGINEERING, AUGUST 2001.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: baselinetles.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
TIE SHEET

PLOT DATE: 04/09/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 102 OF 140

...\plot files\00baselinetles.plt 04/09/2003 12:02:56 PM

CONSTRUCTION BASELINE POB Sta 96+00.00

CONSTRUCTION BASELINE Sta 100+00.00 =THALWEG STA 4+00

PC Sta 103+11.26

PI STA 106+05.09
PI AHEAD STA 104+78.21

S84°05'41.45"W

96+00 98+00 100+00 102+00 104+00 CURVE #1 106+00

HVCTRL #112
N84691.26
E90586.21

HVCTRL #114
N84589.65
E91335.69
ELEV. 410.21

CONST. BASELINE POB
N 84605.87
E 91935.37

HVCTRL #113
N84608.92
E91170.32
ELEV. 409.43

PT
Sta 107+72.04

HVCTRL #111
N84796.75
E90983.34
ELEV. 409.39

N06°38'43.17"W

108+00

PC
Sta 109+07.95

TOWN OF ENOSBURG

TOWN OF BERKSHIRE

HVCTRL #110
N85073.75
E90813.39
ELEV. 408.19

HVCTRL #108
N85232.54
E90430.69
ELEV. 415.48

PI BACK STA 116+01.25
PI AHEAD STA 115+43.19

110+00 CURVE #2 N82°35'37.63"W 112+00 114+00 CURVE #3 116+00

PI BACK STA 110+72.85
PI AHEAD STA 110+21.72

HVCTRL #109
N85142.93
E90887.09
ELEV. 414.40

PT Sta 111+86.62

PC Sta 113+87.86

PT
Sta 117+56.57

118+00

PROPOSED THALWEG

MAGNETIC

N

HVCTRL #107
N85569.78
E90706.71

N10°22'22.33"W

120+00

"TRAVERSE #10"
N85839.30
E90078.32
ELEV. 418.61

HVCTRL #104
N85788.65
E90525.54
ELEV. 411.17

PC
Sta 121+33.81

122+00 CURVE #4

PT = POE
Sta 124+52.71

124+53

CONST. BASELINE POE
N 85917.79
E 89961.56

VERMONT ROUTE 118

HVCTRL #101
N85920.26
E90154.61
ELEV. 416.62

BM #2
CONCRETE POST.
SEE NOTE 3

HVCTRL #105
N85232.68
E90461.34
ELEV. 411.07

PI BACK STA 123+34.38
PI AHEAD STA 122+52.14

HVCTRL #103
N86080.97
E90132.99
ELEV. 421.14

BM #3 (CHIS. □)
BRIDGE ABUT.
SEE NOTE 3

0 100 200
SCALE

DATUM:

VERTICAL NADV88
HORIZONTAL N/A

CURVE #1

R = 292.50
Δ = 90°15'32.42" RT.
D = 19°35'17.91"
L = 460.78
T = 293.83
M = 86.14
E = 122.10

CURVE #2

R = 207.50
Δ = 76°56'51.25" LT.
D = 27°36'44.76"
L = 278.67
T = 164.90
M = 45.05
E = 57.54

CURVE #3

R = 292.50
Δ = 72°13'19.53" RT.
D = 19°35'17.91"
L = 368.70
T = 213.38
M = 56.19
E = 69.56

CURVE #4

R = 207.50
Δ = 88°03'21.78" LT.
D = 27°36'44.76"
L = 318.90
T = 200.57
M = 58.31
E = 81.09

NOTES:

1. COORDINATE SYSTEM IS ASSUMED. SEE BRIDGE REPLACEMENT PLANS.
2. MAIN TRAVERSE COMPLETED BY VERMONT SURVEY AND ENGINEERING, AUGUST 2001. SEE HVCTRL POINTS, THIS SHEET, AND HVCTRL TIES ON TIE SHEET.
3. FOR BENCHMARK DATA, SEE BRIDGE REPLACEMENT PLANS. NOTE THAT BRIDGE REPLACEMENT PLANS ARE METRIC AND USE NGVD 1929 VERTICAL DATUM.
4. CONSTRUCTION BASELINE SHALL BE USED TO ESTABLISH CONSTRUCTION EASEMENT LOCATIONS AND WORKING AREAS. PROPOSED STRUCTURES AND PROFILE REFERENCE THE THALWEG STATIONS AND NOT THE CONSTRUCTION BASELINE.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: ...\103baseline.ptf
PROJECT LEADER: GAE
DESIGNED BY: SAR
PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH

CONSTRUCTION BASELINE LAYOUT

SHEET 103 OF 140

...\Plot Files\103baseline.plt 08/26/2003 08:51:20 AM

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

TABLE OF PROJECT PROPERTY ACQUISITION

NOTE: ALL STATIONS REFER TO TROUT RIVER RESTORATION CONSTRUCTION BASELINE

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1E	KINNEY, RAYMOND G. & VIRGINIA G.	9,10,11	103+64.00 LT.	113+92.02 LT.	3.84 A±					ENOSBURG			167,210 S.F.±
			103+64.00 LT.	114+27± LT.			CONST. (T) 1.42 A±						61,650 S.F.±
1F		9,11,12	109+09.26 RT.	121+73.03 RT.	9.56 A±					BERKSHIRE			416,650 S.F.±
			109+26± RT.	121+74± RT.			CONST. (T) 2.44 A±						106,290 S.F.±
			113+92.02 LT.	121+20.20 LT.			CONST. (T) 1.16 A±						50,360 S.F.± INCL. STABILIZED CONSTRUCTION ENTRANCE
			121+50± RT.	121+76± RT.			ACCESS (T) 0.27 A±						11,630 S.F.± INCL. STABILIZED CONSTRUCTION ENTRANCE (SEE SHEET 9)
1G		9,12	123+40.80 LT.	124+52.71 RT.	0.28 A±					BERKSHIRE			12,040 S.F.±
			123+40.80 LT.	124+52.71 LT.			CONST. (T) 3,520 S.F.±						
			124+52.71 LT.	124+67± RT.			SLOPE (T) 240 S.F.±						
2A	KOTORMAN, DANIEL F. & HOLLY H.	9,12	123+49± RT.	124+52.71 RT.			BUFFER (P) 0.22 A±			BERKSHIRE			9,660 S.F.
11	L.F. HURTUBISE AND SONS, INC.	9,10,11	96+04.00 LT.	108+31.56 RT.	2.12 A±					ENOSBURG			39,270 S.F.±
	JOINED BY VERMONT LAND TRUST, INC., VERMONT DEPARTMENT OF AGRICULTURE, FOOD AND MARKETS, AND VERMONT HOUSING AND CONSERVATION BOARD		99+90± RT.	104+90.73 RT.			CONST. (T) 0.90 A±						92,220 S.F.±
	NOTE: ALL TEMPORARY RIGHTS WILL EXPIRE 3 YEARS AFTER PROJECT COMPLETION AND ACCEPTANCE.												

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

TROUT RIVER RESTORATION
R. O. W. PLANS

BERKSHIRE
BRF RS 0283(7)

SHEET 104 OF 140

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 SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 12-12-02
CHIEF, PLANS & TITLES

ACCT.**USERNAME**
DGN*SPECIFICATION*****************
DATE PLOTTED 03/31/2003
/prop/78f184/rf184dl.i

MM 03/31/2003 08:51:56 \\Highway\Users\prj\MM\detail.dgn

N

VT STATE PLANE GRID

KINNEY,
RAYMOND G. & VIRGINIA G.

KINNEY,
RAYMOND G. & VIRGINIA G.

L.F. HURTUBISE
AND SONS, INC.,
ET AL.

11

1E

TOWN OF ENOSBURG

TOWN OF BERKSHIRE

KINNEY,
RAYMOND G. & VIRGINIA G.

1F

L.F. HURTUBISE
AND SONS, INC.,
ET AL.

KINNEY,
RAYMOND G. & VIRGINIA G.

TO EAST BERKSHIRE

VT. RTE. 108

TO MONTGOMERY

KINNEY,
RAYMOND G. & VIRGINIA G.

1G

1F

ACCESS(T)

2A

STATE OF
VERMONT

KOTORMAN,
DANIEL F.
& HOLLY H.

0 100 200
SCALE

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.

VTrans Getting To Get You There VERMONT AGENCY OF TRANSPORTATION

TROUT RIVER RESTORATION

Dufresne-Henry

PROJECT NAME: BERKSHIRE
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: 78f184\rightofway\ROW.I
PROJECT LEADER:
DESIGNED BY:
RIGHT-OF-WAY PLANS

PLOT DATE: 03/31/2003
DRAWN BY: EGP
CHECKED BY:
SHEET 105 OF 140

\rightofway\dsk\rightofway.dgn 03/31/2003 07:41:15 AM

N

VT STATE PLANE GRID

KINNEY,
RAYMOND G. & VIRGINIA G.

KINNEY,
RAYMOND G. & VIRGINIA G.

HVCTRL #114
N84589.65
E91335.69
ELEV. 410.21

Sta 103+11.26
LRP

Sta 100+00.90
=THALWEG STA. 4+00

103+64.00
50.00'LT.

80'

CONST(T)

293.91'

BUFFER

105+75.00
130' LT.

80'

CONST(T)

106+15.00
50.00'LT.

[558.49']

104+00

103+64.00
36' LT.+/-

CURVE #1

1E

106+00

106+43+/-
27' RT.+/-

MATCHLINE - STA. 10+50 - SEE RIGHT-OF-WAY PLAN - SHEET #107 OF 140

97+23+/-
98'+/-LT.

96+04.00
46.00' LT.

129.80'

POB
STA 96+00.00

69.96'

96+00

97+00

98+00

99+00

100+00

102+00

S84°08'41.45"W

716'+/-

P
L

FLOW

716'+/-

273'+/-

11

96+32.00
18.00' RT.

103.31'

97+24.00
65.00' RT.

96.00'

BUFFER

98+20.00
65.00' RT.

161.94'

99+80.00
90.00' RT.

91.92'

100+65.00
125.00' RT.

220.23'

BUFFER

102+85.00
135.00' RT.

11

CONST(T)

120'

HVCTRL #113
N84608.92
E91170.32
ELEV. 409.43

132.82'

104+90.73
250.00' RT.

[355'+/-]

L.F. HURTUBISE
AND SONS, INC.,
ET AL.

CONST(T)

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.

0 40 80
SCALE

TROUT RIVER RESTORATION

VTrans Working to Get You There
VERMONT AGENCY OF TRANSPORTATION

Dufresne-Henry

PROJECT NAME: BERKSHIRE
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: 78f184\rightofway\ROW01.1
PROJECT LEADER:
DESIGNED BY:
RIGHT-OF-WAY PLANS

PLOT DATE: 16-DEC-2002
DRAWN BY: EGP
CHECKED BY:
SHEET 106 OF 140

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VT STATE PLANE GRID

N

MATCHLINE - STA. 10+50 - SEE RIGHT-OF-WAY PLANS SHEET #106 OF 140

MATCHLINE - STA. 22+50 - SEE RIGHTH-OF-WAY PLANS SHEET #108 OF 140

CONST(T)

113+92.02
176.19'LT.

114+50.00
170'LT.

114+25.00
150.00'LT.

116+00.00
123'LT.

117+56.67
100'LT.

57.61'

[558.49']

100.08'

114+28.00
50.00'LT.

[948.36']

BUFFER

KINNEY,
RAYMOND G. & VIRGINIA G.

1E

1F

TOWN OF ENOSBURG
TOWN OF BERKSHIRE

775.00'
775.00'

HVCTRL #108
N85232.54
E90430.69
ELEV. 415.48

HVCTRL #110
N85073.75
E90813.39
ELEV. 408.19

HVCTRL #111
N84796.75
E90983.34
ELEV. 409.39

FLOW

FLOW

11

P L

103.71'

[355'+/-]

L.F. HURTUBISE
AND SONS, INC.,
ET AL.

108+31.56
311.19'RT.

P L

101'+/-

108+96.90
366.12'RT.

14.88'

109+09.26
368.53'RT.

P L

253.15'

109+55.00
135.00'RT.

382.31'

BUFFER

115'

CONST(T)

HVCTRL #109
N85142.93
E90887.09
ELEV. 414.40

KINNEY,
RAYMOND G. & VIRGINIA G.

111+86.62
135.00'RT.

50.00'

111+86.62
185.00'RT.

[110.00']

236.96'

44'

117+90.00
320.00'RT.

CONST(T)

L.F. HURTUBISE
AND SONS, INC.,
ET AL.

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.

0 40 80
SCALE

VTrans Working To Get You There
VERMONT AGENCY OF TRANSPORTATION

Dufresne-Henry

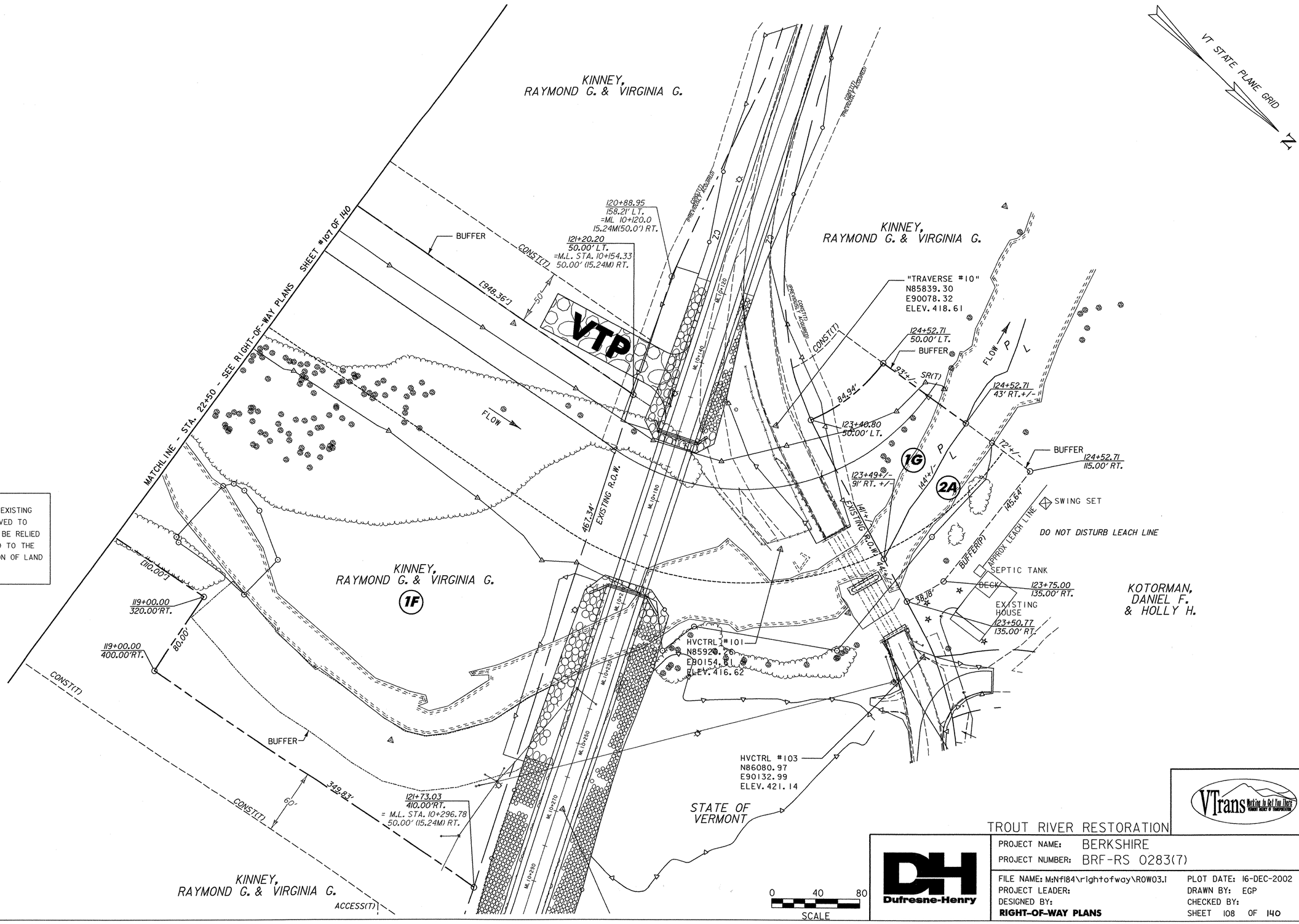
TROUT RIVER RESTORATION

PROJECT NAME: BERKSHIRE
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: M:78f184\rightofway\ROW02.1
PROJECT LEADER:
DESIGNED BY:
RIGHT-OF-WAY PLANS

PLOT DATE: 16-DEC-2002
DRAWN BY: EGP
CHECKED BY:
SHEET 107 OF 140

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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.

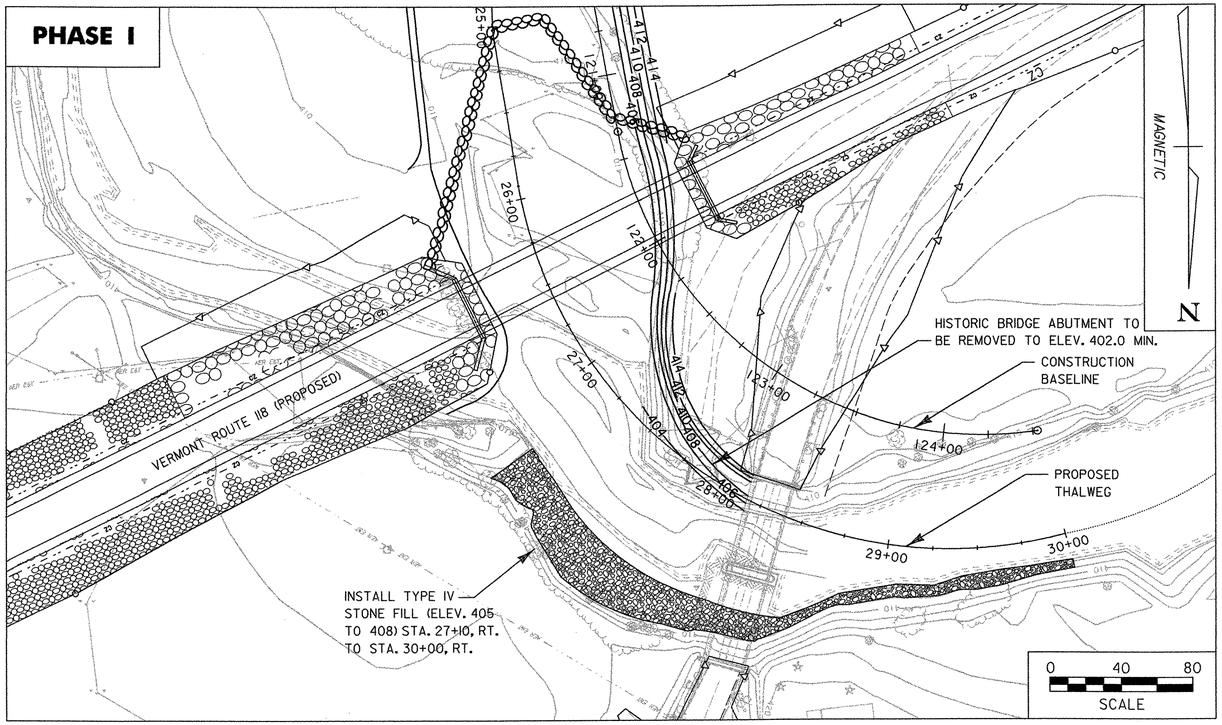
VTrans Putting As Get You There

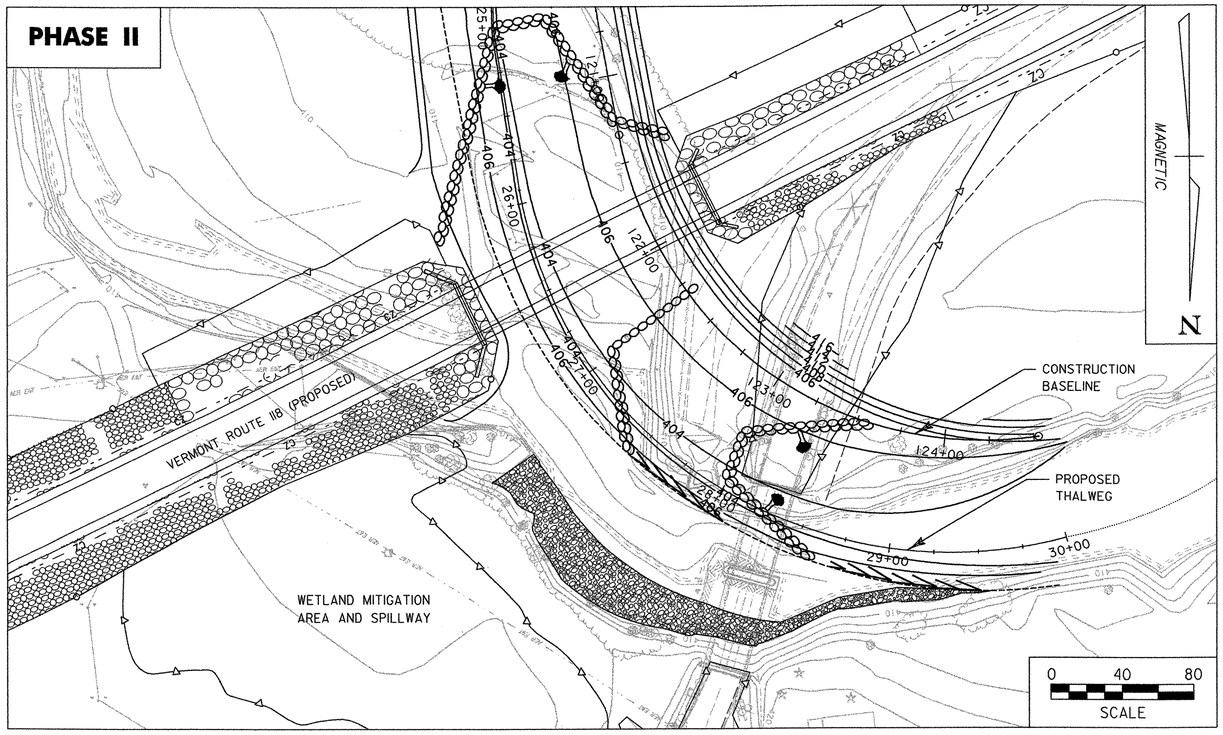
TROUT RIVER RESTORATION

Dufresne-Henry

PROJECT NAME: BERKSHIRE	
PROJECT NUMBER: BRF-RS 0283(7)	
FILE NAME: M:Nf184\rightofway\ROW03.i	PLOT DATE: 16-DEC-2002
PROJECT LEADER:	DRAWN BY: EGP
DESIGNED BY:	CHECKED BY:
RIGHT-OF-WAY PLANS	SHEET 108 OF 140

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GENERAL NOTES:

1. PRIOR TO COMMENCING SITE WORK, THE CONTRACTOR SHALL VERIFY EXISTING FIELD CONDITIONS. THE ENGINEER SHALL BE NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION WHERE DISCREPANCIES EXIST BETWEEN THE CONSTRUCTION DRAWINGS AND ACTUAL FIELD CONDITIONS. WORK WILL NOT BE ALLOWED IN THE RIVER FROM SEPT 20 TO JULY 1 WITHOUT WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES RIVER MANAGEMENT SECTION, THE ARMY CORPS OF ENGINEERS AND THE ENGINEER.
2. THE CONTRACTOR SHALL CONTACT DIG SAFE (1-888-344-7233) SEVENTY-TWO (72) HOURS PRIOR TO START OF CONSTRUCTION TO ACCURATELY ESTABLISH THE LOCATION OF ALL UNDERGROUND UTILITIES LOCATED ON THE PROJECT SITE.
3. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING ON-SITE WITH THE RESIDENT ENGINEER, LANDOWNERS, AGENCY OF TRANSPORTATION, ARMY CORPS OF ENGINEERS, AGENCY OF NATURAL RESOURCES, AND DISTRICT #6 ACT 250 COORDINATOR TO REVIEW THE EROSION AND SEDIMENT CONTROL REQUIREMENTS, LIMITS OF WORK, EQUIPMENT REFUELLING AND MAINTENANCE AREAS, MATERIAL STORAGE AREAS AND SEQUENCE OF CONSTRUCTION.
4. THE CONTRACTOR SHALL PROVIDE FORTY-EIGHT (48) HOURS NOTICE PRIOR TO INITIATION OF CONSTRUCTION TO THE LANDOWNER, THE RESIDENT ENGINEER AND THE AGENCY OF TRANSPORTATION.
5. THE CONTRACTOR SHALL DELINEATE THE REQUIRED WORKING AREA WITH ORANGE SNOW FENCE ON SITE PRIOR TO THE START OF CONSTRUCTION. SEE CONSTRUCTION SITE PLANS. ALL OPERATIONS SHALL BE CONFINED TO THE DELINEATED AREA. OPERATION OF EQUIPMENT IN THE STREAM SHALL BE MINIMIZED.
6. ON-SITE EQUIPMENT REFUELLING AND MAINTENANCE SHALL BE CONFINED TO DESIGNED AREAS, AS APPROVED BY THE ENGINEER.
7. ALL FILL TO BE PLACED IN AND AROUND EXISTING AND PROPOSED CHANNEL (INCLUDING ALL MATERIAL USED IN CONSTRUCTION OF STRUCTURES) SHALL BE CLEAN AS APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
8. WORKING AREAS, ACCESS POINTS, AND TEMPORARY MATERIAL STORAGE AREAS MUST BE PRE-APPROVED BY AGENCY OF TRANSPORTATION ENVIRONMENTAL SECTION PRIOR TO START OF CONSTRUCTION, AND ARE TO BE MAINTAINED IN GOOD CONDITION BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION THESE AREAS SHALL BE ROTOTILLED (IF REQUIRED) TO REVERSE COMPACTION AND RETURNED TO ORIGNAL OR BETTER CONDITION.
9. DEBRIS AND EXCESS MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONRACTOR IN A LOCATION APPROVED OF BY THE ENGINEER. IF REQUIRED THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING A SOLID WASTE PERMIT FROM THE AGENCY OF NATURAL RESOURCES SOLID WASTE MANAGEMENT DIVISION PRIOR TO DISPOSAL OF STUMPS, CONCRETE, ETC.
10. ALL FINISHED GRADES SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH THE PLANTING PLAN AND SPECIFICATIONS. OTHERWISE, WHEN CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL STABILIZE ANY REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE ENGINEER, SEDIMENT CONTROL DEVICES SHALL BE REMOVED. ANY AREAS DISTURBED BY SEDIMENT CONTROL REMOVAL SHALL BE STABILIZED. ANY ROAD, PARKING AREA AND TRAIL USED FOR CONSTRUCTION ACCESS, MATERIAL STOCKPILING/WORKING AREAS OR OTHER CONSTRUCTION RELATED ACTIVITIES SHALL BE ROTOTILLED (IF REQUIRED) TO REVERSE COMPACTION FROM HEAVY VEHICLE USAGE AND REPAIRED TO ORIGINAL OR BETTER CONDITION.
11. TEMPORARILY STABILIZE ALL DISTURBED AREAS AT THE END OF EACH WORKING DAY.

RIVER RESTORATION CONSTRUCTION SEQUENCE:

PHASE I:

1. INSTALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS DETAILED IN THE EROSION CONTROL PLANS. SEE EROSION PREVENTION AND SEDIMENT CONTROL PHASE I - STEP 1 THROUGH STEP 4.
2. REMOVE HISTORIC ABUTMENT AT STA. 28+00, LT. GRADE AS SHOWN AND STABILIZE BANK.
3. INSTALL RIP-RAP BANK PROTECTION: TYPE IV STONE FILL (ELEV. 405 TO ELEV. 408), STA. 27+10, RT - STA. 30+00, RT.
4. CONSTRUCT NEW CHANNEL, IN-CHANNEL STRUCTURES, AND BANK STABILIZATION AS REQUIRED, STA. 19+00 - STA. 26+75.
5. CONSTRUCT CHANNEL BLOCK AT STA. 18+50, DIVERTING FLOW TO PROPOSED CHANNEL.
6. CONSTRUCT CHANNEL BLOCK AT STA. 23+25.
7. INSTALL PHASE I TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS DETAILED IN THE EROSION CONTROL PLANS. SEE EROSION PREVENTION AND SEDIMENT CONTROL PHASE I - STEP 6 AND STEP 7.
8. COMMENCE PHASE I CONSTRUCTION OF PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS. SEE EROSION PREVENTION AND SEDIMENT CONTROL PHASE I - STEP 8.
9. CONSTRUCT BANK STABILIZATION STRUCTURES, GRADING AND OTHER PLANNED CHANNEL IMPORVEMENTS FROM STA. 0+00 TO STA. 19+00.
10. INSTALL BUFFER ZONE PLANTINGS AS PER PLANTING PLANS AND DETAILS.
11. COMPLETE PHASE I CONSTRUCTION OF PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS. SEE EROSION PREVENTION AND SEDIMENT CONTROL PHASE I - STEP 10 AND STEP 11.

PHASE II:

1. COMPLETE PHASE II CONSTRUCTION OF PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS. SEE EROSION PREVENTION AND SEDIMENT CONTROL PHASE II - STEP 2 THROUGH STEP 7.
2. COMMENCE PHASE III CONSTRUCTION OF PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS. SEE EROSION PREVENTION AND SEDIMENT CONTROL PHASE III - STEP 2 THROUGH STEP 5.
3. REMOVE EXISTING BRIDGE DECK, SOUTH ABUTMENT AND PIER.
4. CONSTRUCT BANK STABILIZATION STRUCTURES, GRADING AND OTHER PLANNED CHANNEL IMPROVEMENTS FROM STA 26+75 TO STA. 30+00.
5. INSTALL BUFFER ZONE PLANTINGS AS PER PLANTING PLANS AND DETAILS.
6. CONSTRUCT WETLAND MITIGATION AREA AND SPILLWAY. SEE BRIDGE REPLACEMENT PLANS.
7. COMPLETE EROSION PREVENTION AND SEDIMENT CONTROL PHASE III - STEP 7 THROUGH STEP 9.

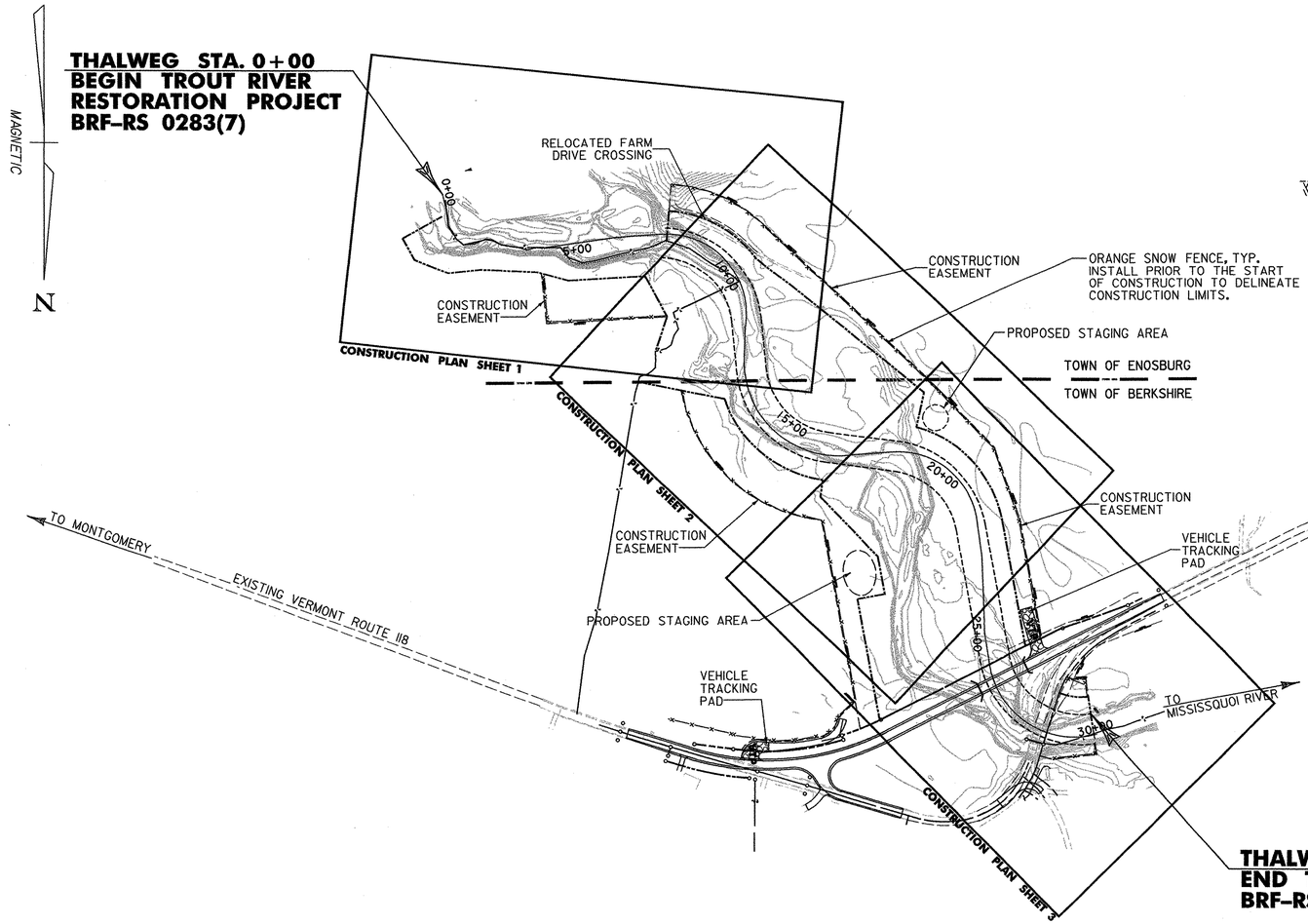
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: sequencing.ptf
PROJECT LEADER: GAE
DESIGNED BY: SAR
CONSTRUCTION SEQUENCE

PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 109 OF 140

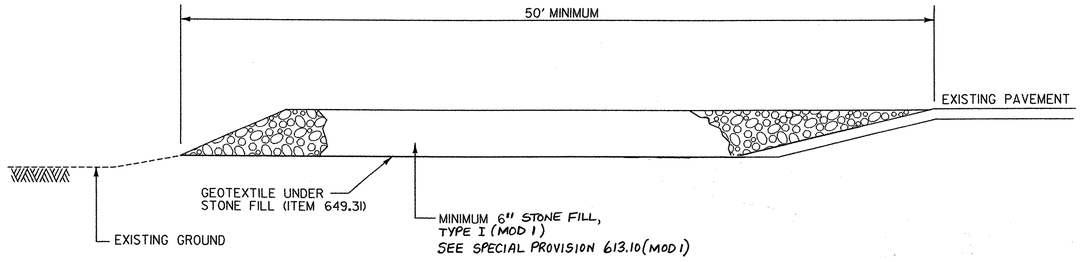
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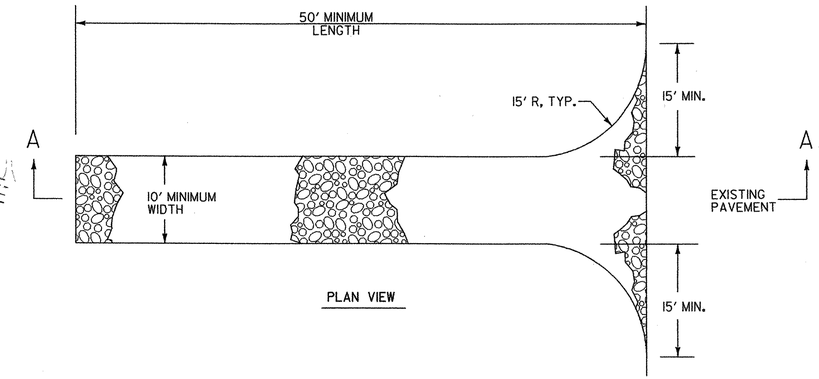
CONSTRUCTION SITE PLAN

0 100 200 300 400

SCALE IN FEET



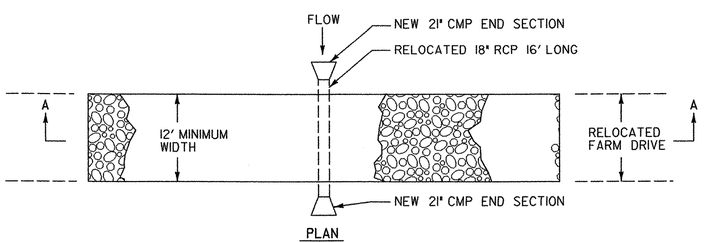
SECTION A-A



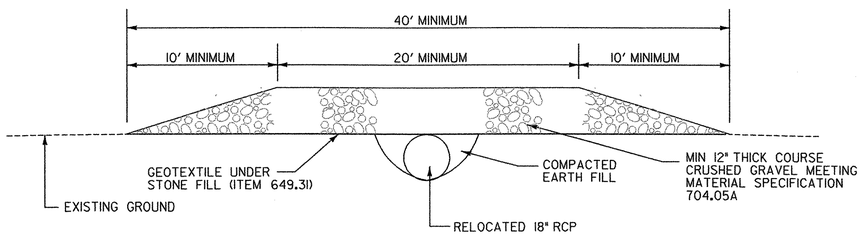
PLAN VIEW

VEHICLE TRACKING PAD

N.T.S.



PLAN



SECTION A-A

RELOCATED FARM DRIVE CROSSING

N.T.S.

NOTES:

2. A VEHICLE TRACKING PAD SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE *ENTIRE* LENGTH OF THE VEHICLE TRACKING PAD
3. TO MINIMIZE EROSION, THE CONTRACTOR SHALL PERFORM VISUAL INSPECTIONS OF EROSION CONTROL DEVICES, BANKS, IN-CHANNEL STRUCTURES, ETC., EVERY SEVEN (7) CALENDAR DAYS AS WELL AS AFTER ANY STORM EVENTS GENERATING STORMWATER RUNOFF FROM THE SITE. DEFICIENCIES SHALL BE REPAIRED AND REQUIRED MAINTENANCE SHALL BE PERFORMED WITHIN 24 HOURS.
4. FOR CONSTRUCTION EASEMENT DESCRIPTIONS, SEE R.O.W. PLANS.
5. CONSTRUCTION EASMENT BOUNDARIES, LIMITS OF STAGING AREAS, AND RIPARIAN BUFFER LIMITS SHALL BE DELINEATED WITH ORANGE SNOW FENCE PRIOR TO THE START OF CONSTRUCTION, AS SHOWN.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: 094CONSTRUCTIONSITE.PTF
PROJECT LEADER: GAE
DESIGNED BY: SAR
CONSTRUCTION SITE PLAN

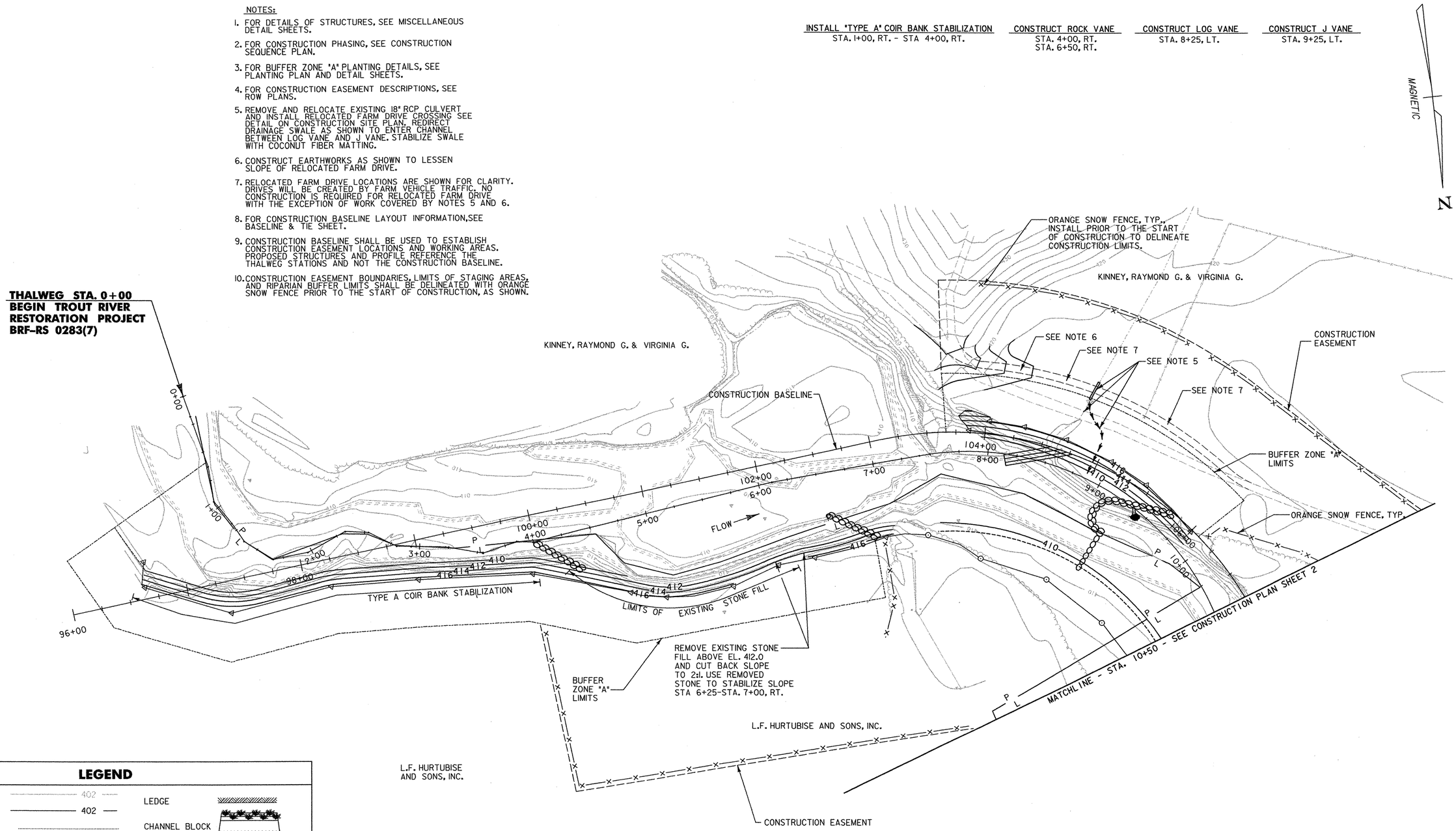
PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 110 OF 140

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NOTES:

1. FOR DETAILS OF STRUCTURES, SEE MISCELLANEOUS DETAIL SHEETS.
2. FOR CONSTRUCTION PHASING, SEE CONSTRUCTION SEQUENCE PLAN.
3. FOR BUFFER ZONE "A" PLANTING DETAILS, SEE PLANTING PLAN AND DETAIL SHEETS.
4. FOR CONSTRUCTION EASEMENT DESCRIPTIONS, SEE ROW PLANS.
5. REMOVE AND RELOCATE EXISTING 18" RCP CULVERT AND INSTALL RELOCATED FARM DRIVE CROSSING SEE DETAIL ON CONSTRUCTION SITE PLAN. REDIRECT DRAINAGE SWALE AS SHOWN TO ENTER CHANNEL BETWEEN LOG VANE AND J VANE. STABILIZE SWALE WITH COCONUT FIBER MATTING.
6. CONSTRUCT EARTHWORKS AS SHOWN TO LESSEN SLOPE OF RELOCATED FARM DRIVE.
7. RELOCATED FARM DRIVE LOCATIONS ARE SHOWN FOR CLARITY. DRIVES WILL BE CREATED BY FARM VEHICLE TRAFFIC. NO CONSTRUCTION IS REQUIRED FOR RELOCATED FARM DRIVE WITH THE EXCEPTION OF WORK COVERED BY NOTES 5 AND 6.
8. FOR CONSTRUCTION BASELINE LAYOUT INFORMATION,SEE BASELINE & TIE SHEET.
9. CONSTRUCTION BASELINE SHALL BE USED TO ESTABLISH CONSTRUCTION EASEMENT LOCATIONS AND WORKING AREAS. PROPOSED STRUCTURES AND PROFILE REFERENCE THE THALWEG STATIONS AND NOT THE CONSTRUCTION BASELINE.
10. CONSTRUCTION EASEMENT BOUNDARIES, LIMITS OF STAGING AREAS, AND RIPARIAN BUFFER LIMITS SHALL BE DELINEATED WITH ORANGE SNOW FENCE PRIOR TO THE START OF CONSTRUCTION, AS SHOWN.

INSTALL "TYPE A" COIR BANK STABILIZATION	CONSTRUCT ROCK VANE	CONSTRUCT LOG VANE	CONSTRUCT J VANE
STA. 1+00, RT. - STA 4+00, RT.	STA. 4+00, RT. STA. 6+50, RT.	STA. 8+25, LT.	STA. 9+25, LT.



LEGEND

EXISTING CONTOUR	402	LEDGE	
PROPOSED CONTOUR	402	CHANNEL BLOCK	
EXISTING THALWEG		ROOT WAD	
DESIGN THALWEG	12+00	LOG VANE	
DESIGN BANKFULL WIDTH		J-VANE	
EXISTING CHANNEL		ROCK WEIR	
CONSTRUCTED RIFFLE			
ROCK VANE			
TREE REVETMENT			
ORANGE SNOW FENCE			

0 40 80
SCALE

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: plan03.ptf
PROJECT LEADER: GAE
DESIGNED BY: SAR
CONSTRUCTION PLAN SHEET 1

PLOT DATE: 08/27/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET III OF 140

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CONSTRUCT TREE REVETMENT
STA. 13+60, RT. - STA. 14+20, RT.
STA. 14+60, RT. - STA. 15+20, RT.
STA. 19+60, LT. - STA. 20+20, LT.
STA. 20+60, LT. - STA. 21+20, LT.

CONSTRUCT ROOT WADS WITH PINNING
STA. 18+60, LT. - STA. 19+00, LT.

CONSTRUCT ROOT WADS WITH CROSS BRACING
STA. 12+60, RT. - STA. 13+00, RT.

CONSTRUCT CHANNEL BLOCK
STA. 18+50, RT.
TOP ELEV. 409.0

CONSTRUCT RIFFLE
STA. 10+90 - STA. 12+10
RIFFLE HEAD ELEV. 407.0
RIFFLE SLOPE 0.5%

STA. 16+90 - STA. 18+10
RIFFLE HEAD ELEV. 405.8
RIFFLE SLOPE 0.5%

CONSTRUCT J VANE
STA. 15+25, RT.
STA. 21+25, LT.

CONSTRUCT LOG VANE
STA. 19+25, LT.
STA. 20+25, LT.

CONSTRUCT ROCK VANE
STA. 13+25, RT.
STA. 14+25, RT.

MAGNETIC
N

TOWN OF ENOSBURG
TOWN OF BERKSHIRE
TOWN LINE

CONSTRUCTION EASEMENT

ORANGE SNOW FENCE, TYP., INSTALL PRIOR TO THE START OF CONSTRUCTION TO DELINEATE CONSTRUCTION LIMITS.

KINNEY, RAYMOND G. & VIRGINIA G.

SEE NOTE 6

BUFFER ZONE "A" LIMITS

CONSTRUCTION BASELINE

MATCHLINE - STA. 10+50 - SEE CONSTRUCTION PLAN SHEET 1

MATCHLINE - STA. 22+50 - SEE CONSTRUCTION PLAN SHEET 3

STATE OF VERMONT
(TO BUFFER ZONE LIMITS)

FLOW

KINNEY, RAYMOND G., VIRGINIA G.

L.F. HURTUBISE AND SONS, INC.

BUFFER ZONE "A" LIMITS

ORANGE SNOW FENCE, TYP.

CONSTRUCTION EASEMENT

0 40 80
SCALE

LEGEND

EXISTING CONTOUR	LEDGE
PROPOSED CONTOUR	CHANNEL BLOCK
EXISTING THALWEG	
DESIGN THALWEG	ROOT WAD
DESIGN BANKFULL WIDTH	
EXISTING CHANNEL	LOG VANE
CONSTRUCTED RIFFLE	J-VANE
ROCK VANE	
TREE REVETMENT	ROCK WEIR
ORANGE SNOW FENCE	

NOTES:

1. FOR DETAILS OF STRUCTURES, SEE MISCELLANEOUS DETAIL SHEETS.
2. FOR CONSTRUCTION PHASING, SEE CONSTRUCTION SEQUENCE PLAN.
3. FOR CONSTRUCTION BASELINE LAYOUT INFORMATION, SEE BASELINE & TIE SHEET.
4. FOR BUFFER ZONE "A" PLANTING DETAILS, SEE PLANTING PLAN AND DETAIL SHEETS.
5. FOR CONSTRUCTION EASEMENT DESCRIPTIONS, SEE ROW PLANS.
6. STRIP TOPSOIL FROM AREA OF PROPOSED CHANNEL, USE TOPSOIL TO FILL LOW SPOTS IN PASTURE OUTSIDE OF PROPOSED BUFFER ZONE "A" AREA.
7. CONSTRUCTION BASELINE SHALL BE USED TO ESTABLISH CONSTRUCTION EASEMENT LOCATIONS AND WORKING AREAS. PROPOSED STRUCTURES AND PROFILE REFERENCE THE THALWEG STATIONS AND NOT THE CONSTRUCTION BASELINE.
8. CONSTRUCTION EASEMENT BOUNDARIES, LIMITS OF STAGING AREAS, AND RIPARIAN BUFFER LIMITS SHALL BE DELINEATED WITH ORANGE SNOW FENCE PRIOR TO THE START OF CONSTRUCTION, AS SHOWN.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: plan02.ptf
PROJECT LEADER: GAE
DESIGNED BY: SAR
CONSTRUCTION PLAN SHEET 2

PLOT DATE: 08/27/2003
DRAWN BY: MBL
CHECKED BY: WCH
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CONSTRUCT ROCK VANE
STA. 27+25, RT.

CONSTRUCT RIFFLE
STA. 22+90 - STA. 24+10
RIFFLE HEAD ELEV. 404.6
RIFFLE SLOPE 0.5%

CONSTRUCT ROCK WEIR
STA. 25+00
STA. 28+00

CONSTRUCT CHANNEL BLOCK
STA. 23+25, RT.
TOP ELEV. 408.0

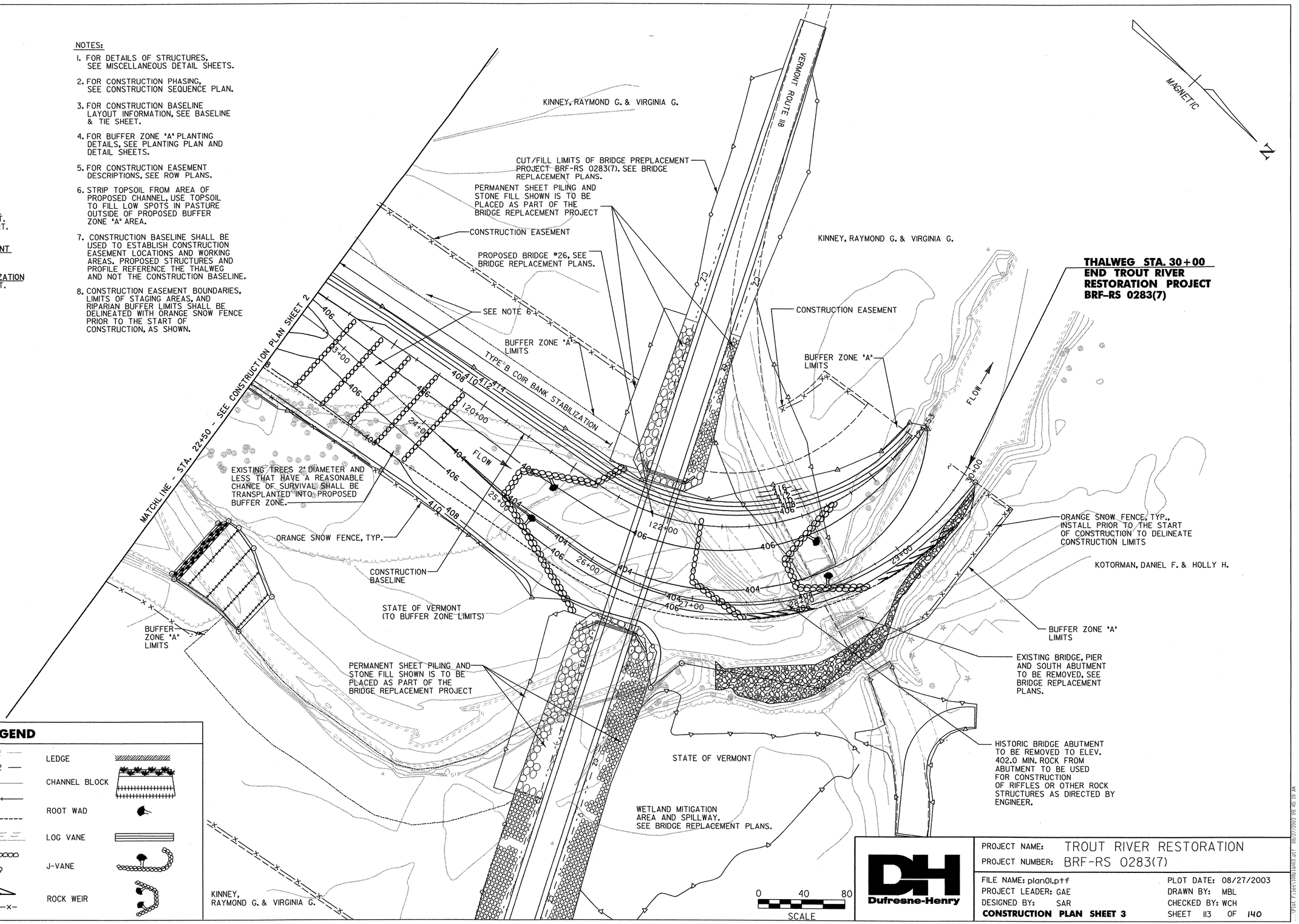
CONSTRUCT TREE REVETMENT
STA. 27+50, RT. - STA. 28+10, RT.
STA. 28+70, RT. - STA. 29+50, RT.

REMOVE HISTORIC BRIDGE ABUTMENT
STA. 28+00

INSTALL "TYPE B" COIR BANK STABILIZATION
STA. 22+50, LT. - STA. 25+50, LT.

NOTES:

1. FOR DETAILS OF STRUCTURES, SEE MISCELLANEOUS DETAIL SHEETS.
2. FOR CONSTRUCTION PHASING, SEE CONSTRUCTION SEQUENCE PLAN.
3. FOR CONSTRUCTION BASELINE LAYOUT INFORMATION, SEE BASELINE & TIE SHEET.
4. FOR BUFFER ZONE 'A' PLANTING DETAILS, SEE PLANTING PLAN AND DETAIL SHEETS.
5. FOR CONSTRUCTION EASEMENT DESCRIPTIONS, SEE ROW PLANS.
6. STRIP TOPSOIL FROM AREA OF PROPOSED CHANNEL, USE TOPSOIL TO FILL LOW SPOTS IN PASTURE OUTSIDE OF PROPOSED BUFFER ZONE 'A' AREA.
7. CONSTRUCTION BASELINE SHALL BE USED TO ESTABLISH CONSTRUCTION EASEMENT LOCATIONS AND WORKING AREAS. PROPOSED STRUCTURES AND PROFILE REFERENCE THE THALWEG AND NOT THE CONSTRUCTION BASELINE.
8. CONSTRUCTION EASEMENT BOUNDARIES, LIMITS OF STAGING AREAS, AND RIPARIAN BUFFER LIMITS SHALL BE DELINEATED WITH ORANGE SNOW FENCE PRIOR TO THE START OF CONSTRUCTION, AS SHOWN.



LEGEND

EXISTING CONTOUR	402	LEDGE	
PROPOSED CONTOUR	402	CHANNEL BLOCK	
EXISTING THALWEG		ROOT WAD	
DESIGN THALWEG	12+00	LOG VANE	
DESIGN BANKFULL WIDTH		J-VANE	
EXISTING CHANNEL		ROCK WEIR	
CONSTRUCTED RIFFLE			
ROCK VANE			
TREE REVETMENT			
ORANGE SNOW FENCE	x—x—x—x		

Dufresne-Henry

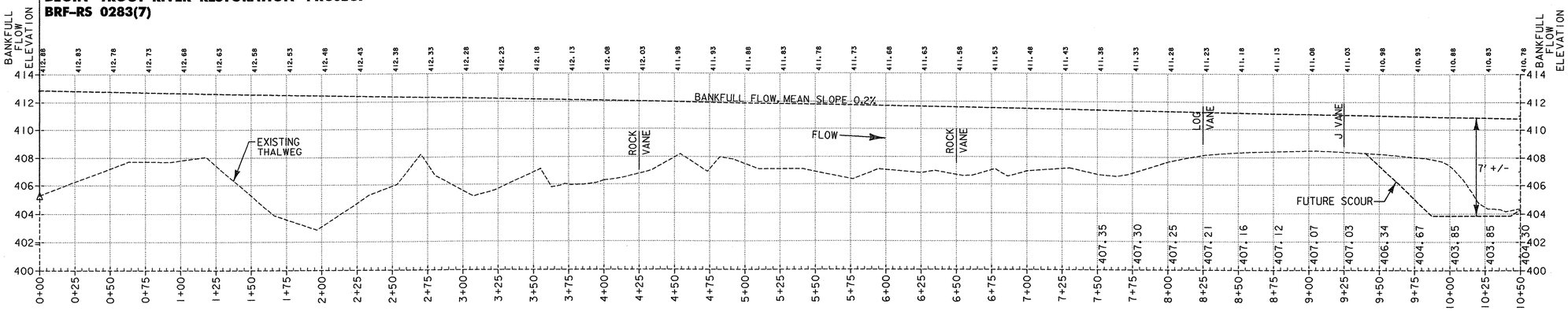
PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

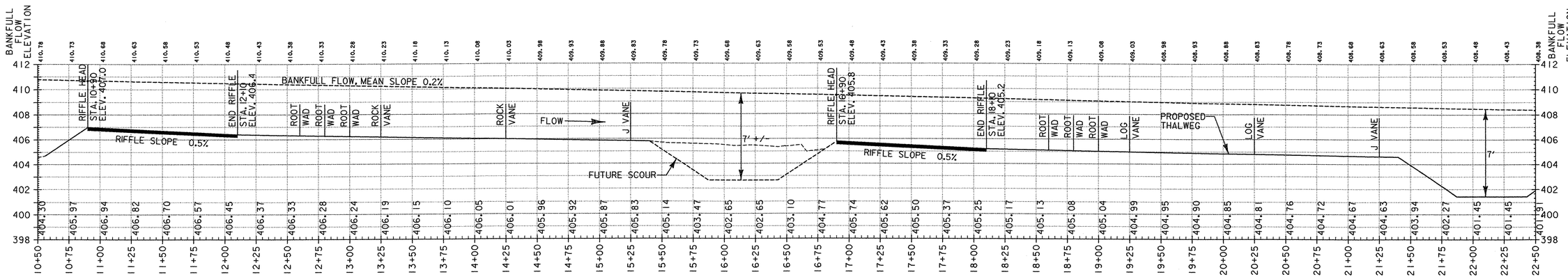
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PROJECT LEADER: GAE
DESIGNED BY: SAR
CONSTRUCTION PLAN SHEET 3

PLOT DATE: 08/27/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 113 OF 140

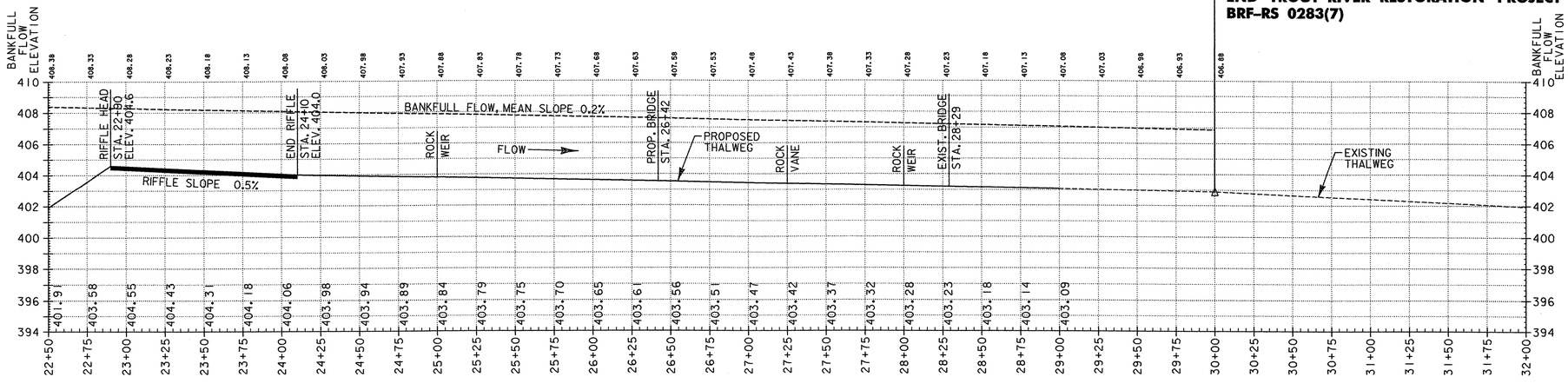
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THALWEG STA. 0+00
BEGIN TROUT RIVER RESTORATION PROJECT
BRF-RS 0283(7)





THALWEG STA. 30+00
END TROUT RIVER RESTORATION PROJECT
BRF-RS 0283(7)



NOTES:
1. EXISTING CHANNEL GRADES FROM STA. 28+50 TO STA. 32+00 WERE NOT OBTAINED DUE TO ICE COVER AT THE TIME OF SURVEY. GRADES AT STA. 32+00 (REFERENCE CROSS SECTION 1), ARE KNOWN AND GRADES FROM STA. 28+50 TO STA. 32+00 ARE ESTIMATED.

VERTICAL 0 1 2 4 6
HORIZONTAL 0 20 40 60
SCALE IN FEET

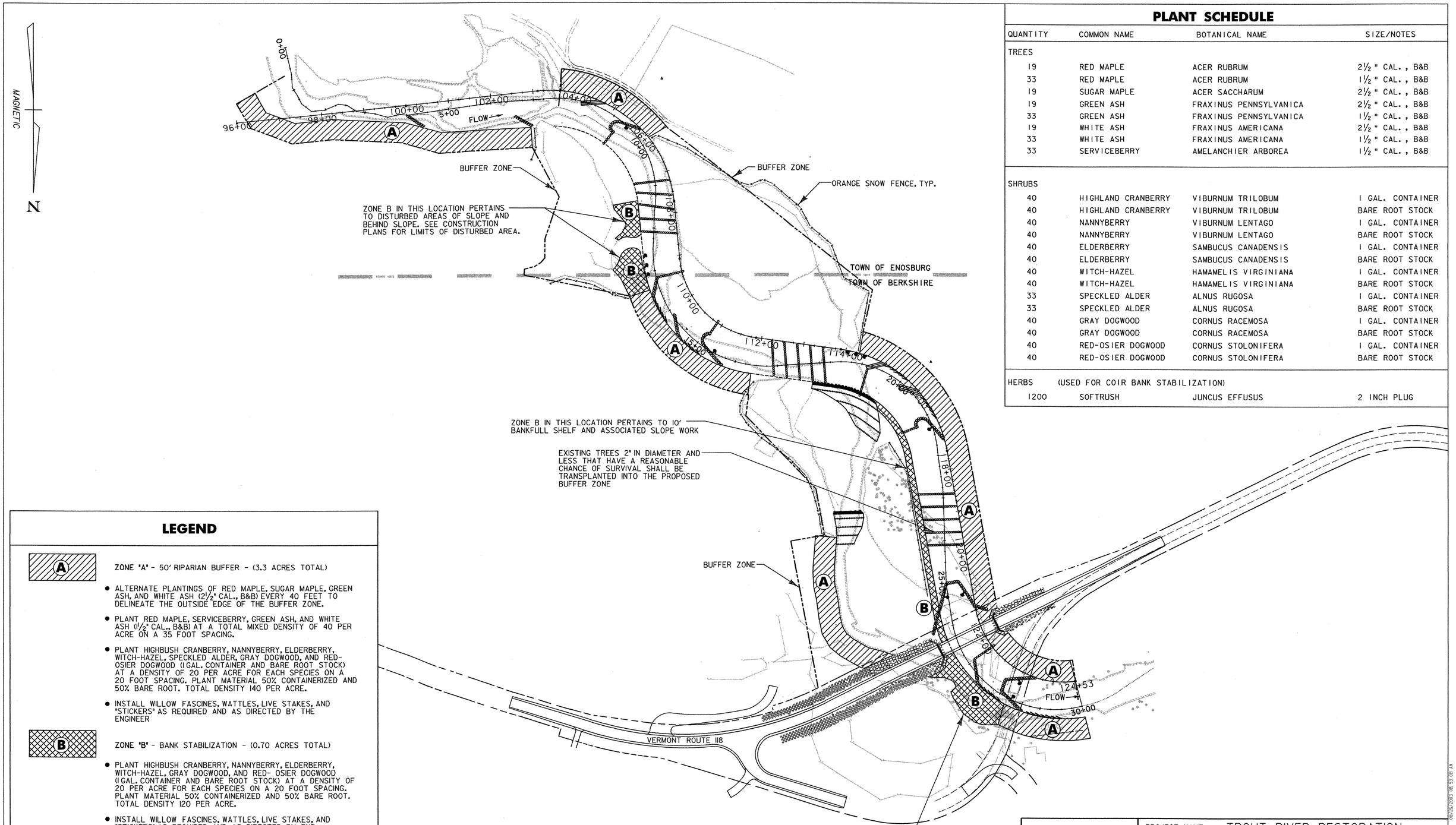
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: profile01.ptf
PROJECT LEADER: GAE
DESIGNED BY: SAR
PROFILE SHEET

PLOT DATE: 04/09/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 114 OF 140

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PLANT SCHEDULE

QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE/NOTES
TREES			
19	RED MAPLE	ACER RUBRUM	2½" CAL., B&B
33	RED MAPLE	ACER RUBRUM	1½" CAL., B&B
19	SUGAR MAPLE	ACER SACCHARUM	2½" CAL., B&B
19	GREEN ASH	FRAXINUS PENNSYLVANICA	2½" CAL., B&B
33	GREEN ASH	FRAXINUS PENNSYLVANICA	1½" CAL., B&B
19	WHITE ASH	FRAXINUS AMERICANA	2½" CAL., B&B
33	WHITE ASH	FRAXINUS AMERICANA	1½" CAL., B&B
33	SERVICEBERRY	AMELANCHIER ARBOREA	1½" CAL., B&B
SHRUBS			
40	HIGHLAND CRANBERRY	VIBURNUM TRILOBUM	1 GAL. CONTAINER
40	HIGHLAND CRANBERRY	VIBURNUM TRILOBUM	BARE ROOT STOCK
40	NANNYBERRY	VIBURNUM LENTAGO	1 GAL. CONTAINER
40	NANNYBERRY	VIBURNUM LENTAGO	BARE ROOT STOCK
40	ELDERBERRY	SAMBUCUS CANADENSIS	1 GAL. CONTAINER
40	ELDERBERRY	SAMBUCUS CANADENSIS	BARE ROOT STOCK
40	WITCH-HAZEL	HAMAMELIS VIRGINIANA	1 GAL. CONTAINER
40	WITCH-HAZEL	HAMAMELIS VIRGINIANA	BARE ROOT STOCK
33	SPECKLED ALDER	ALNUS RUGOSA	1 GAL. CONTAINER
33	SPECKLED ALDER	ALNUS RUGOSA	BARE ROOT STOCK
40	GRAY DOGWOOD	CORNUS RACEMOSA	1 GAL. CONTAINER
40	GRAY DOGWOOD	CORNUS RACEMOSA	BARE ROOT STOCK
40	RED-OSIER DOGWOOD	CORNUS STOLONIFERA	1 GAL. CONTAINER
40	RED-OSIER DOGWOOD	CORNUS STOLONIFERA	BARE ROOT STOCK
HERBS	(USED FOR COIR BANK STABILIZATION)		
1200	SOFTRUSH	JUNCUS EFFUSUS	2 INCH PLUG

LEGEND

ZONE 'A' - 50' RIPARIAN BUFFER - (3.3 ACRES TOTAL)

- ALTERNATE PLANTINGS OF RED MAPLE, SUGAR MAPLE, GREEN ASH, AND WHITE ASH (2½" CAL., B&B) EVERY 40 FEET TO DELINEATE THE OUTSIDE EDGE OF THE BUFFER ZONE.
- PLANT RED MAPLE, SERVICEBERRY, GREEN ASH, AND WHITE ASH (1½" CAL., B&B) AT A TOTAL MIXED DENSITY OF 40 PER ACRE ON A 35 FOOT SPACING.
- PLANT HIGHBUSH CRANBERRY, NANNYBERRY, ELDERBERRY, WITCH-HAZEL, SPECKLED ALDER, GRAY DOGWOOD, AND RED-OSIER DOGWOOD (1 GAL. CONTAINER AND BARE ROOT STOCK) AT A DENSITY OF 20 PER ACRE FOR EACH SPECIES ON A 20 FOOT SPACING. PLANT MATERIAL 50% CONTAINERIZED AND 50% BARE ROOT. TOTAL DENSITY 140 PER ACRE.
- INSTALL WILLOW FASCINES, WATTLES, LIVE STAKES, AND "STICKERS" AS REQUIRED AND AS DIRECTED BY THE ENGINEER

ZONE 'B' - BANK STABILIZATION - (0.70 ACRES TOTAL)

- PLANT HIGHBUSH CRANBERRY, NANNYBERRY, ELDERBERRY, WITCH-HAZEL, GRAY DOGWOOD, AND RED- OSIER DOGWOOD (1 GAL. CONTAINER AND BARE ROOT STOCK) AT A DENSITY OF 20 PER ACRE FOR EACH SPECIES ON A 20 FOOT SPACING. PLANT MATERIAL 50% CONTAINERIZED AND 50% BARE ROOT. TOTAL DENSITY 120 PER ACRE.
- INSTALL WILLOW FASCINES, WATTLES, LIVE STAKES, AND "STICKERS" AS REQUIRED AND AS DIRECTED BY THE ENGINEER.

ORANGE SNOW FENCE

NOTES:

1. AREAS OF THE BUFFER ZONE THAT ARE NOT SHOWN AS BEING PLANTED ARE ALREADY VEGETATED.
2. EXISTING RIPARIAN VEGETATED BUFFER ZONES ARE TO BE DELINEATED WITH ORANGE SNOW FENCE AS SHOWN, PRIOR TO THE START OF CONSTRUCTION.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: planting01.ptf
PROJECT LEADER: GAE
DESIGNED BY: SAR
PLANTING PLAN SHEET

PLOT DATE: 08/26/2003
DRAWN BY: MBL
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SHEET 115 OF 140

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GENERAL PLANTING NOTES:

1. APPLICABLE STANDARDS: AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS, ANSI A300. AMERICAN STANDARD FOR NURSERY STOCK, ANDSO Z60.1. HORTUS THIRD, THE STAFF OF THE L.H. BAILEY HORTORIUM. ALL STANDARDS SHALL INCLUDE THE LATEST ADDITIONS AND AMENDMENTS AS OF THE DATE OF ADVERTISEMENT FOR BIDS.

2. WARRANTY TREES AND SHRUBS AND ALL OTHER PLANT MATERIAL FOR A PERIOD OF TWO YEARS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANTS IN A LIVE, HEALTHY AND PRESENTABLE GROWING CONDITION UNTIL ACCEPTANCE OF THE COMPLETED CONTRACT. REMOVE AND REPLACE TREES, SHRUBS, OR OTHER PLANTS FOUND TO BE DEAD OR IN UNHEALTHY CONDITION DURING WARRANTY PERIOD.

3. PLANTING SOIL MIXTURE:
   1/3 TOPSOIL
   1/3 PEAT MOSS
   1/3 COARSE SAND
   PLANTING SOIL pH 5.5-6.5
   FERTILIZER AS SPECIFIED
   NO FERTILIZER OR LIMESTONE SHALL BE UTILIZED WITHIN THE BUFFER ZONES OR WITHIN 100 FEET OF THE CHANNEL.

4. FERTILIZER: SLOW RELEASE TYPE, OR SUBSTITUTE APPROVED BY THE ENGINEER, APPLIED AS FOLLOWS:
   TREES AND SHRUBS
   MARCH-MAY 10-10-10
   MAY-OCTOBER 6-10-10
   OCTOBER-MARCH 4-12-12
   RATE OF APPLICATION: 1lb./INCH IN CALIPER
   NO FERTILIZER OR LIMESTONE SHALL BE UTILIZED WITHIN THE BUFFER ZONES OR WITHIN 100 FEET OF THE CHANNEL.

5. EXCAVATE SOIL TO 4' WIDER THAN ROOT BALL DIAMETER FOR TREES AND 2' WIDER FOR SHRUBS. SET BALLED AND BURLAPPED (B&B) STOCK ON LAYER OF COMPACTED SOIL MIXTURE, STAND PLUMB AND IN CENTER OF PIT OR TRENCH WITH TOP OF BALL AT THE SAME ELEVATION AS ADJACENT FINISHED LANDSCAPE GRADES. REMOVE WIRE BASKET AND ALL TWINE, REMOVE BURLAP FROM UPPER HALF OF BALLS; RETAIN ON BOTTOMS. SET CONTAINER GROWN SOCK AS SPECIFIED FOR B&B MATERIAL, EXCEPT CUT CANS ON TWO SIDES WITH AN APPROVED CAN CUTTER.

6. DISH TOP OF BACKFILL TO ALLOW FOR MULCHING. MULCH PITS WITH NOT LESS THAN 3" OF ORGANIC MULCH.

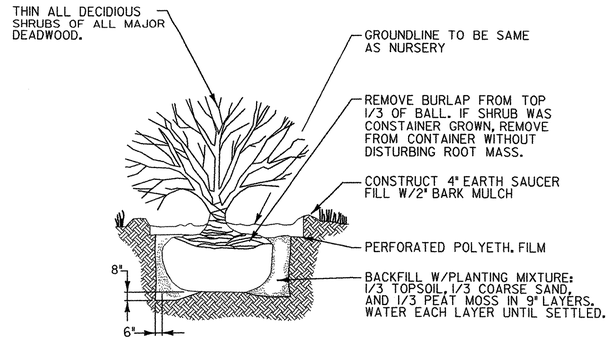
7. WRAP TREE TRUNKS PROMPTLY AFTER PLANTING.

8. GUY AND STAKE TREES IMMEDIATELY AFTER PLANTING, AND REMOVE AFTER ONE GROWING SEASON OR RESTAKE, IF NECESSARY, AS DETERMINED BY THE ENGINEER.

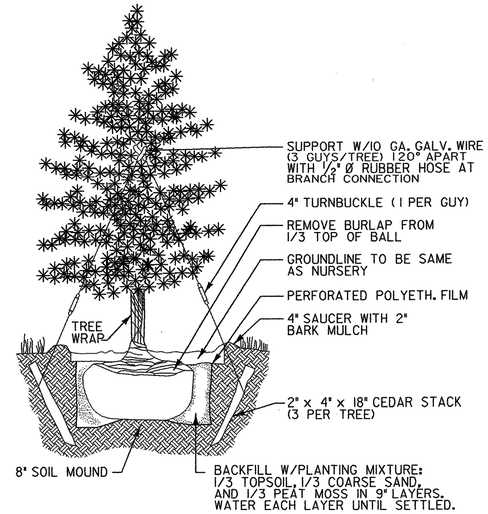
9. ALL PLANTS SHALL BE CAREFULLY AND THOROUGHLY WATERED DURING PLANTING AND AS OFTEN AS NECESSARY THEREAFTER TO PROVIDE THE BEST GROWING CONDITIONS UNTIL ACCEPTANCE OF THE WORK.

10. BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING. MAINTAIN TREES, SHRUBS, AND OTHER PLANTS BY PRUNING, CULTIVATING, AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND REST TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITIONS AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE, AT THE EXPENSE OF THE CONTRACTOR.

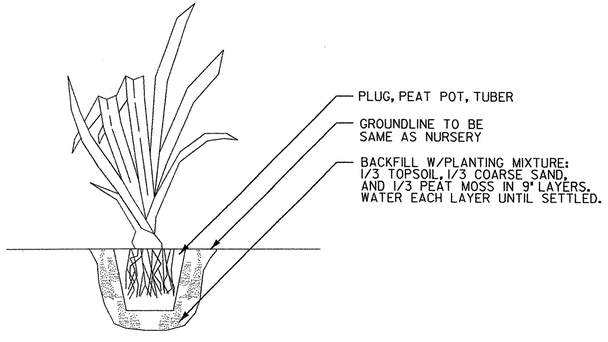
11. MAINTAIN LAWNS BY WATERING, FERTILIZING, WEEDING, MOWING (2" HEIGHT), TRIMMING, AND OTHER OPERATIONS SUCH AS ROLLING, REGRADING, AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS AT THE EXPENSE OFTHE CONTRACTOR. NO FERTILIZER OR LIMESTONE SHALL BE UTILIZED WITHIN THE BUFFER ZONES OR WITHIN 100 FEET OF THE CHANNEL.



SHRUB PLANTING
N.T.S.



CONIFEROUS TREE PLANTING
N.T.S.



HERBACEOUS PLANTING - PLUGS
N.T.S.

DECIDUOUS TREE PLANTING
N.T.S.

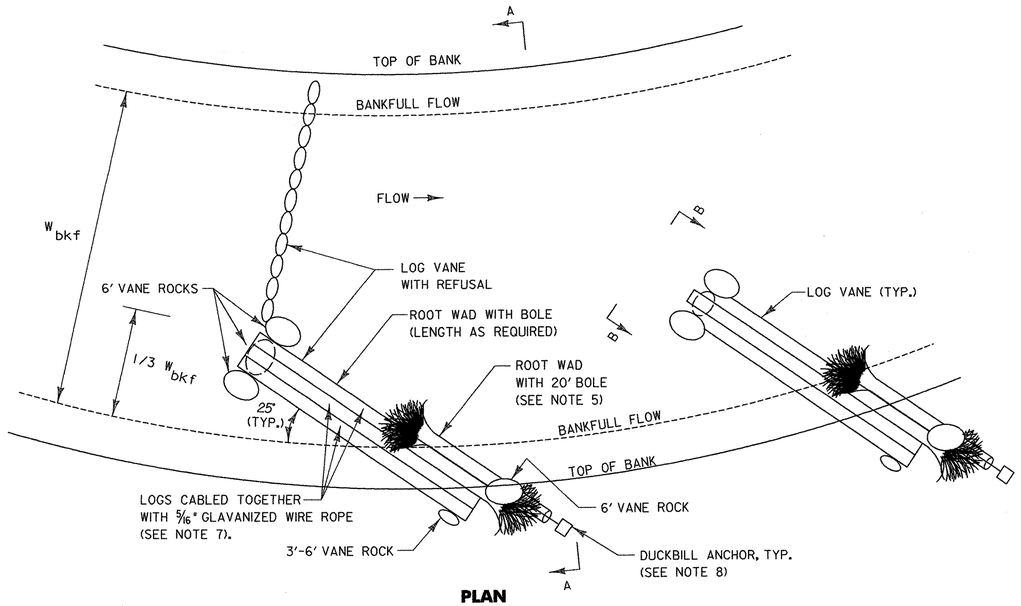
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

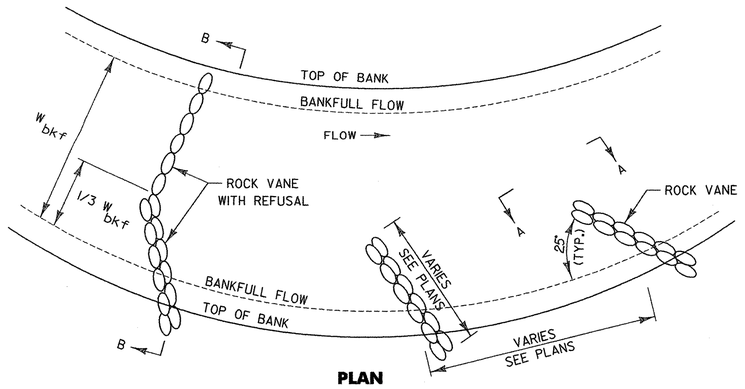
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PROJECT LEADER: GAE
DESIGNED BY: SAR
PLANTING DETAIL SHEET

PLOT DATE: 04/09/2003
DRAWN BY: MBL
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SHEET 116 OF 140

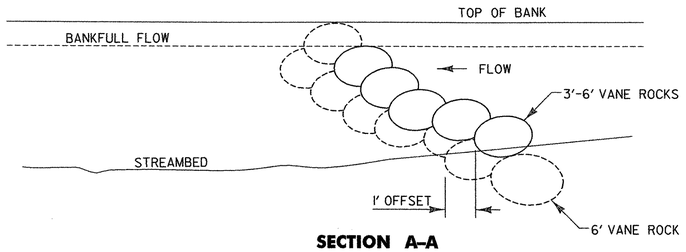
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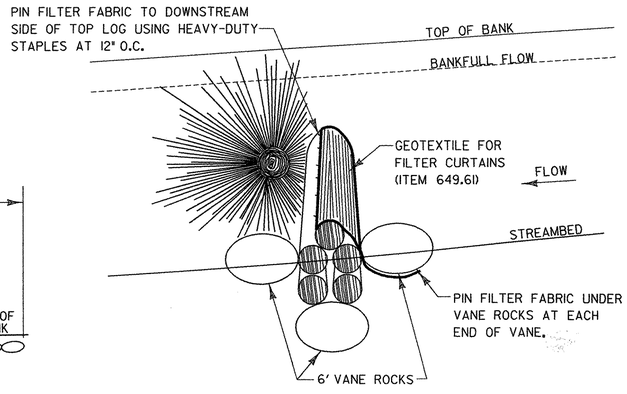
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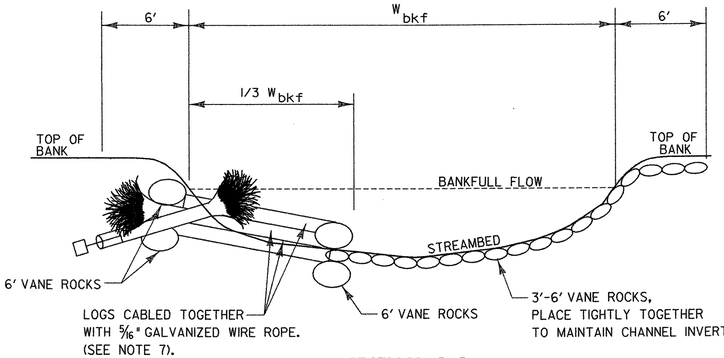
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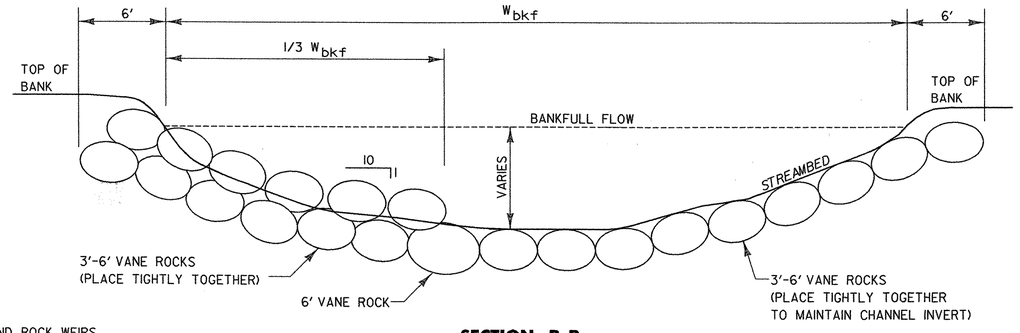
SECTION A–A



SECTION B–B



SECTION A–A



SECTION B–B

APPROXIMATE QUANTITIES	
LOG VANE	
STONE FILL, TYPE IV (MOD.)	27 CY
12" DIAMETER LOGS	400 LF
ROOT WAD WITH BOLE	2 EA
GEOTEXTILE FOR FILTER CURTAIN	45 SY
5/16" GALVANIZED WIRE ROPE	40 LF
UNCLASSIFIED CHANNEL EXCAVATION	34 CY
DUCKBILL ANCHOR	1 EA
LOG VANE REFUSAL	
STONE FILL, TYPE IV (MOD.)	58 CY
UNCLASSIFIED CHANNEL EXCAVATION	58 CY

LOG VANE
N.T.S.

NOTES:

1. FOR BANKFULL WIDTH AND OTHER DESIGN CRITERIA, SEE TITLE SHEET.
2. FOR DESIGN BANKFULL ELEVATIONS, SEE PROFILE SHEETS.
3. FOR LOCATIONS OF STRUCTURES, SEE PLAN SHEETS.
4. VANE ROCKS AND WEIR ROCKS SHALL BE CLASSIFIED AS STONE FILL, TYPE IV (MOD.), AND SHALL MEET THE FOLLOWING SIZE REQUIREMENTS:
   - NO DIMENSION CAN BE < 3 FEET
   - AT LEAST 2 DIMENSIONS MUST BE > 4 FEET
   - AT LEAST 1 DIMENSION MUST BE > 5 FEET
5. ROOT WADS SHALL HAVE A MINIMUM FAN DIAMETER OF 6'.
6. CHINK BEHIND ROCK VANES AND ROCK WEIRS WITH TYPE I STONE TO INHIBIT PIPING OF SEDIMENT THROUGH THE STRUCTURES. USE 6-8 CY TYPE I STONE PER STRUCTURE. (TYP.)
7. LOGS ARE TO BE MIN. 12" DIAMETER HEMLOCK, OR OTHER MATERIAL AS APPROVED BY THE ENGINEER. BOLES SHALL BE AS STRAIGHT AS POSSIBLE AND ALL SIDE BRANCHES SHALL BE CUT TO A LENGTH OF 1" OR LESS. LOGS SHALL BE CABLED TOGETHER IN AT LEAST TWO LOCATIONS WITH 5/16" 7 X 19 GALVANIZED WIRE ROPE, HAVING A MIN. BREAKING STRENGTH OF 9800 LBS.
8. DUCKBILL ANCHORS SHALL BE DUCKBILL EARTH ANCHOR SYSTEMS MODEL 138 OR APPROVED EQUAL. ANCHORS SHALL HAVE A MINIMUM OF 5000 LBS OF ANCHOR HOLDING POWER IN NORMAL SOIL. ANCHORS SHALL BE ATTACHED TO TREES WITH 5/16" 7 X 19 GALVANIZED WIRE ROPE HAVING A MIN. BREAKING STRENGTH OF 9800 LBS.

APPROXIMATE QUANTITIES	
ROCK VANE	
STONE FILL, TYPE IV (MOD.)	148 CY
UNCLASSIFIED CHANNEL EXCAVATION	74 CY
STONE FILL, TYPE I	7 CY
ROCK VANE REFUSAL	
STONE FILL, TYPE IV (MOD.)	58 CY
UNCLASSIFIED CHANNEL EXCAVATION	58 CY

ROCK VANE
N.T.S.

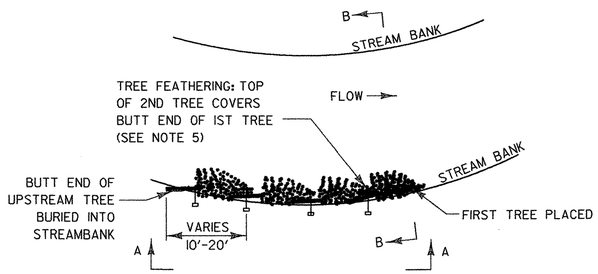
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

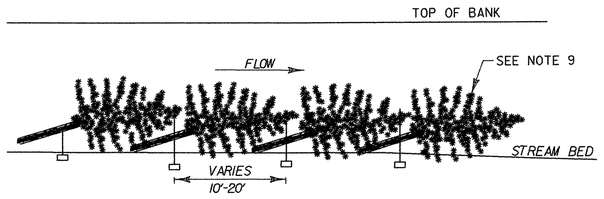
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DESIGNED BY: SAR
MISC. DETAIL SHEET 1

PLOT DATE: 06/06/2003
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SHEET 117 OF 140

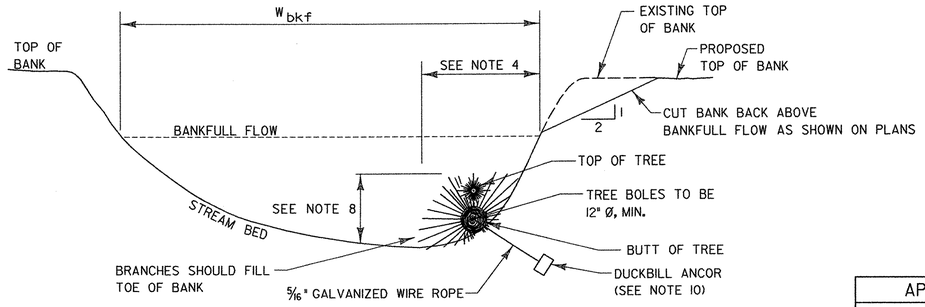
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PLAN



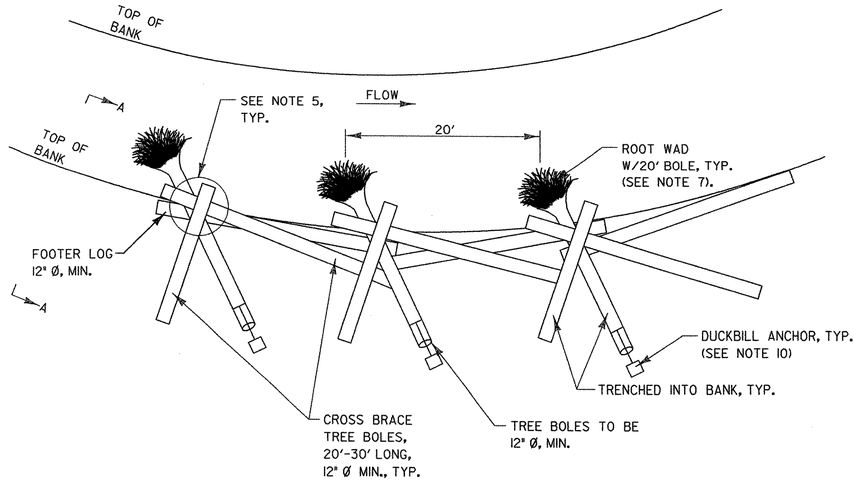
SECTION A-A



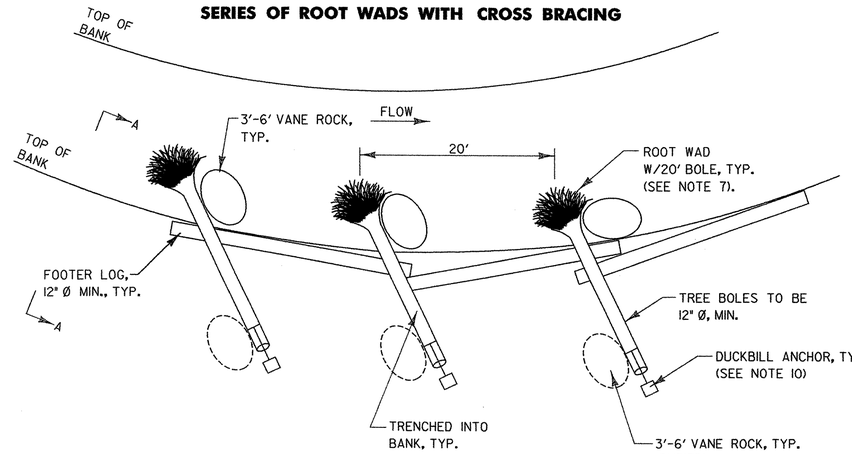
SECTION B-B

TREE REVETMENT
N.T.S.

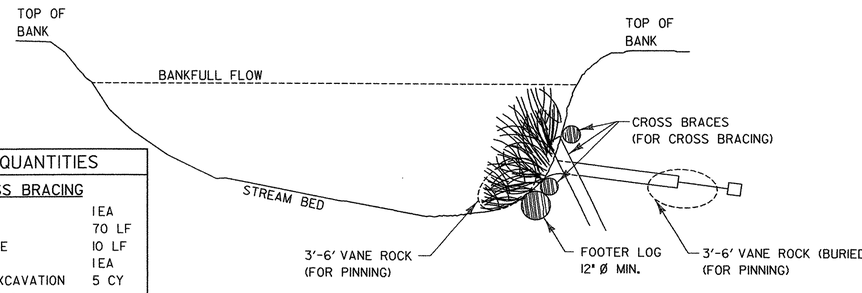
APPROXIMATE QUANTITIES	
TREE REVETMENT	
12" DIAMETER TREE (10'-20' LONG)	4 EA
5/16" GALVANIZED WIRE ROPE	40 LF
DUCKBILL ANCHOR	4 EA
UNCLASSIFIED CHANNEL EXCAVATION	10 CY



SERIES OF ROOT WADS WITH CROSS BRACING



SERIES OF ROOT WADS WITH PINNING



SECTION A-A

ROOT WAD
N.T.S.

APPROXIMATE QUANTITIES	
ROOT WAD WITH CROSS BRACING	
ROOT WAD WITH BOLE	1 EA
12" DIAMETER LOGS	70 LF
5/16" GALVANIZED WIRE ROPE	10 LF
DUCKBILL ANCHOR	1 EA
UNCLASSIFIED CHANNEL EXCAVATION	5 CY
ROOT WAD WITH PINNING	
ROOT WAD WITH BOLE	1 EA
12" DIAMETER LOGS	20 LF
STONE FILL, TYPE IV (MOD.)	7 CY
5/16" GALVANIZED WIRE ROPE	10 LF
DUCKBILL ANCHOR	1 EA
UNCLASSIFIED CHANNEL EXCAVATION	5 CY

NOTES:

1. FOR BANKFULL WIDTH AND OTHER DESIGN CRITERIA, SEE TITLE SHEET.
2. FOR DESIGN BANKFULL ELEVATIONS, SEE PROFILE SHEETS.
3. FOR LOCATIONS OF STRUCTURES, SEE PLAN SHEETS.
4. TREE REVETMENT SHOULD NOT EXCEED 15% OF TOTAL BANKFULL WIDTH.
5. THE ENDS OF ALL TREE BOLES ARE CABLED TOGETHER USING 5/16" 7X19 GALVANIZED WIRE ROPE HAVING A MIN. BREAKING STRENGTH OF 9800 LBS.
6. VANE ROCKS AND WEIR ROCKS SHALL BE CLASSIFIED AS STONE FILL, TYPE IV (MOD.), AND SHALL MEET THE FOLLOWING SIZE REQUIREMENTS:
   - NO DIMENSION CAN BE < 3 FEET
   - AT LEAST 2 DIMENSIONS MUST BE > 4 FEET
   - AT LEAST 1 DIMENSION MUST BE > 5 FEET
7. ROOT WADS SHALL HAVE A MINIMUM FAN DIAMETER OF 6'.
8. TREE REVETMENTS USED FOR TOE OF SLOPE PROTECTION SHALL EXTEND UP TO 1/2 TO 2/3 BANKFULL DEPTH.
9. TREES FOR TREE REVETMENTS SHALL BE HEMLOCK OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
10. DUCKBILL ANCHORS SHALL BE DUCKBILL EARTH ANCHOR SYSTEMS MODEL 138 OR APPROVED EQUAL. ANCHORS SHALL HAVE A MINIMUM OF 5000 LBS OF ANCHOR HOLDING POWER IN NORMAL SOIL. ANCHORS SHALL BE ATTACHED TO TREES WITH 5/16" 7 X 19 GALVANIZED WIRE ROPE HAVING A MIN. BREAKING STRENGTH OF 9800 LBS.

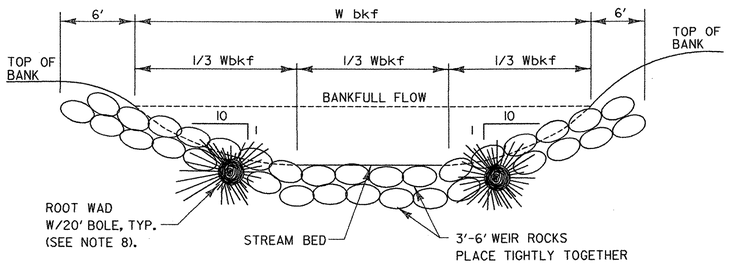
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

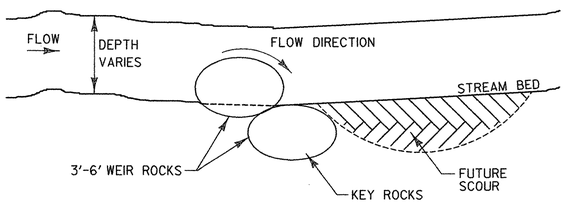
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PROJECT LEADER: GAE
DESIGNED BY: SAR
MISC. DETAIL SHEET 2

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DRAWN BY: MBL
CHECKED BY: WCH
SHEET 118 OF 140

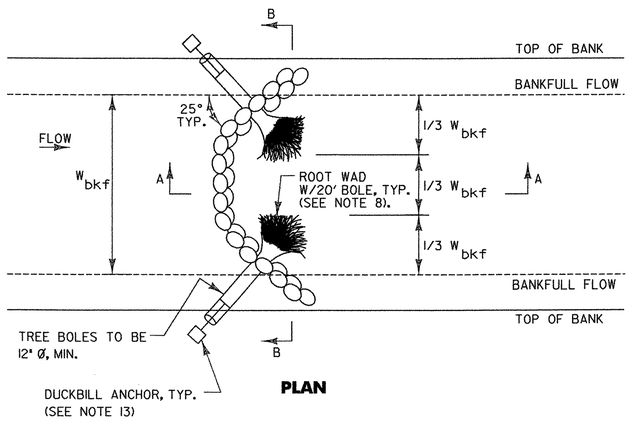
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SECTION B–B



SECTION A–A



PLAN

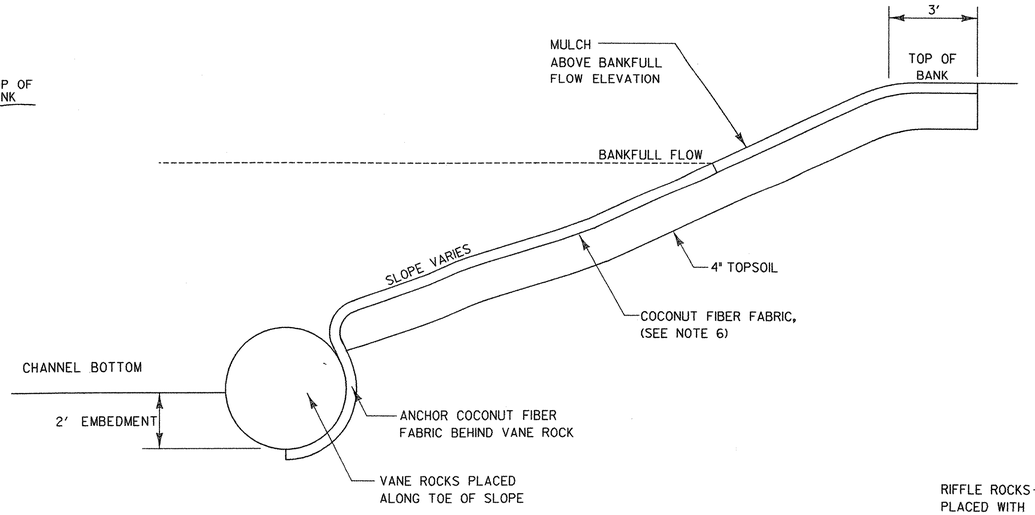
ROCK WEIR

N.T.S.

APPROXIMATE QUANTITIES	
ROCK WEIR	
ROOT WAD WITH BOLE	2 EA
5/16" GALVANIZED WIRE ROPE	20 LF
DUCKBILL ANCHOR	2 EA
STONE FILL, TYPE IV (MOD.)	350 CY
UNCLASSIFIED CHANNEL EXCAVATION	175 CY
STONE FILL, TYPE I	7 CY

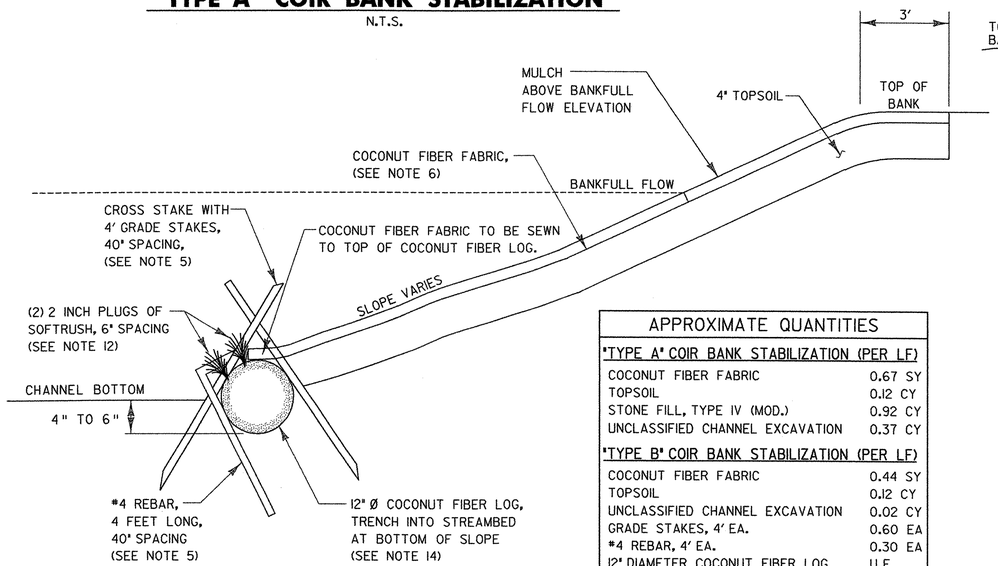
NOTES:

1. FOR BANKFULL WIDTH AND OTHER DESIGN CRITERIA, SEE TITLE SHEET.
2. FOR DESIGN BANKFULL ELEVATIONS SEE PROFILE SHEETS.
3. FOR LOCATIONS OF STRUCTURES SEE PLAN SHEETS.
4. CONSTRUCT RIFFLE PERPENDICULAR TO DESIGN THALWEG. SEE CONSTRUCTION PLANS AND PROFILES FOR THALWEG LOCATIONS AND ELEVATIONS.
5. STAKES AND REBAR ARE TO BE TILTED DOWNSTREAM TO AVOID SNAGGING OF DEBRIS. REBAR IS TO BE FIELD BENT TO WRAP AROUND COCONUT FIBER LOG.
6. FIBER MAT SHALL BE ROLANKA BIO D-MAT 90, OR APPROVED EQUAL. FIBER MAT SHALL BE LAID WITH 2' OVERLAP IN THE DIRECTION OF FLOW AND ATTACHED TO BANK WITH 8" SOD STAPLES WITH A 2' SQUARE SPACING.
7. VANE ROCKS AND WEIR ROCKS SHALL BE CLASSIFIED AS STONE FILL, TYPE IV (MOD.), AND SHALL MEET THE FOLLOWING SIZE REQUIREMENTS:
   - NO DIMENSION CAN BE < 3 FEET
   - AT LEAST 2 DIMENSIONS MUST BE > 4 FEET
   - AT LEAST 1 DIMENSION MUST BE > 5 FEET



"TYPE A" COIR BANK STABILIZATION

N.T.S.

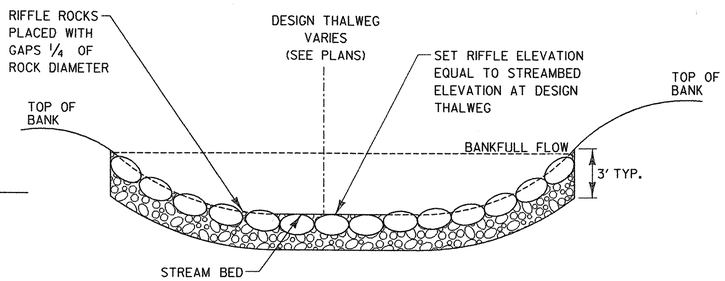


"TYPE B" COIR BANK STABILIZATION

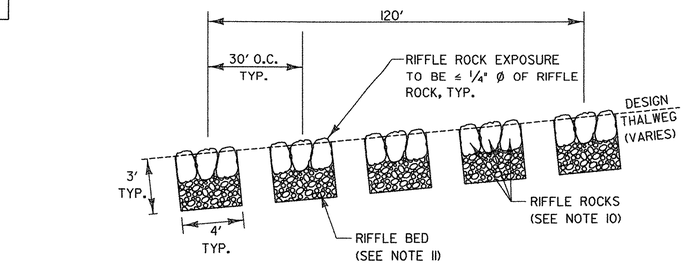
N.T.S.

APPROXIMATE QUANTITIES	
"TYPE A" COIR BANK STABILIZATION (PER LF)	
COCONUT FIBER FABRIC	0.67 SY
TOPSOIL	0.12 CY
STONE FILL, TYPE IV (MOD.)	0.92 CY
UNCLASSIFIED CHANNEL EXCAVATION	0.37 CY
"TYPE B" COIR BANK STABILIZATION (PER LF)	
COCONUT FIBER FABRIC	0.44 SY
TOPSOIL	0.12 CY
UNCLASSIFIED CHANNEL EXCAVATION	0.02 CY
GRADE STAKES, 4' EA.	0.60 EA
#4 REBAR, 4' EA.	0.30 EA
12" DIAMETER COCONUT FIBER LOG	1 LF

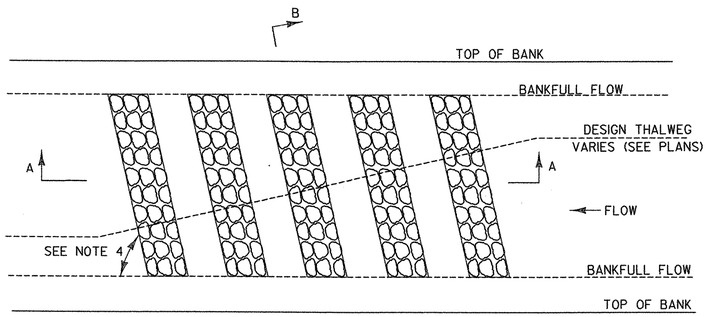
8. ROOT WADS SHALL HAVE A MINIMUM FAN DIAMETER OF 6'.
9. CHINK BEHIND ROCK VANES AND ROCK WEIRS WITH TYPE I STONE TO INHIBIT PIPING OF SEDIMENT THROUGH THE STRUCTURES. USE 6-8 CY TYPE I STONE PER STRUCTURE. (TYP.)
10. RIFFLE ROCK SHALL BE CLASSIFIED AS STONE FILL, TYPE II (MOD.), AND SHALL MEET THE FOLLOWING SIZE REQUIREMENTS:
    - AT LEAST 2 DIMENSIONS MUST BE > 12 INCHES
    - AT LEAST 1 DIMENSION MUST BE > 15 INCHES
11. RIFFLE BED MATERIAL SHALL BE CLASSIFIED AS GRANULAR BORROW (MOD) AND SHALL CONSIST OF GRAVEL AND COBBLES TAKEN FROM BARS ABOVE BANKFULL FLOW OR OTHER GRAVEL AND COBBLES LOCATED ON SITE, AS DIRECTED BY THE ENGINEER.
12. RUSH PLUGS ARE TO BE PLANTED ONLY WHEN FIBER LOG IS COMPLETELY SATURATED.
13. DUCKBILL ANCHORS SHALL BE DUCKBILL EARTH ANCHOR SYSTEMS MODEL 138 OR APPROVED EQUAL. ANCHORS SHALL HAVE A MINIMUM OF 5000 LBS OF ANCHOR HOLDING POWER IN NORMAL SOIL. ANCHORS SHALL BE ATTACHED TO TREES WITH 5/16" 7 X 19 GALVANIZED WIRE ROPE HAVING A MIN. BREAKING STRENGTH OF 9800 LBS.
14. COCONUT FIBER LOG SHALL BE ROLANKA BIO D-ROLL 30, OR APPROVED EQUAL.



SECTION B–B



SECTION A–A



PLAN

CONSTRUCTED RIFFLE

N.T.S.

APPROXIMATE QUANTITIES	
CONSTRUCTED RIFFLE	
STONE FILL, TYPE II (MOD.)	95 CY
GRANULAR BORROW (MOD.)	95 CY
UNCLASSIFIED CHANNEL EXCAVATION	190 CY

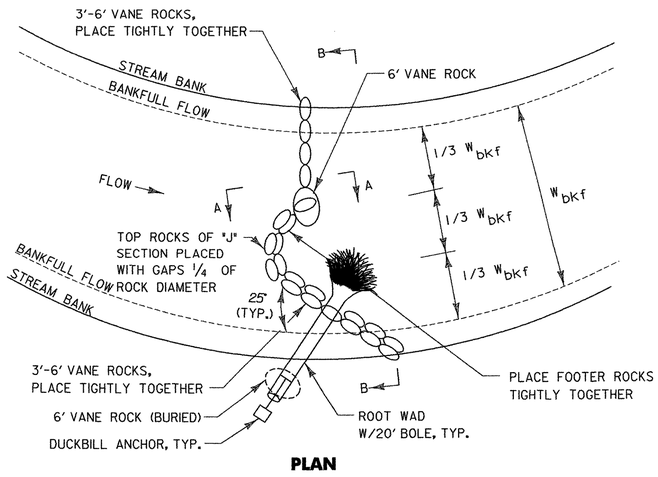
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

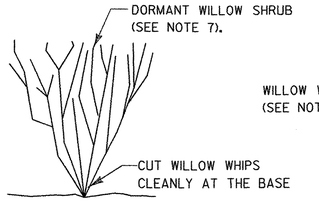
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PLOT DATE: 06/06/2003
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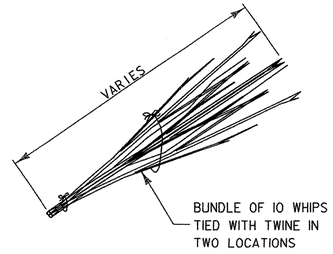
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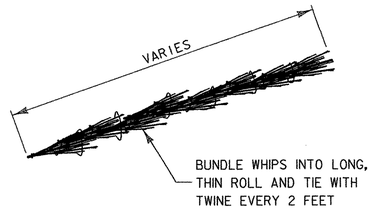
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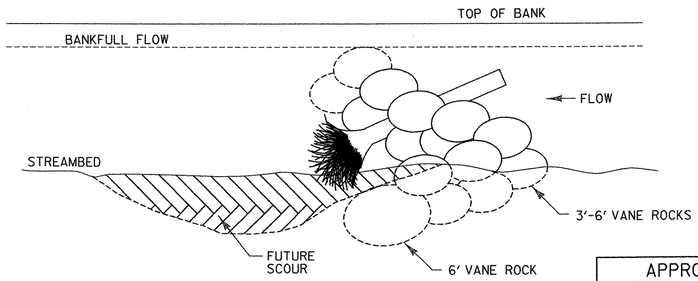
WHIP
N.T.S.



WILLOW WATTLE
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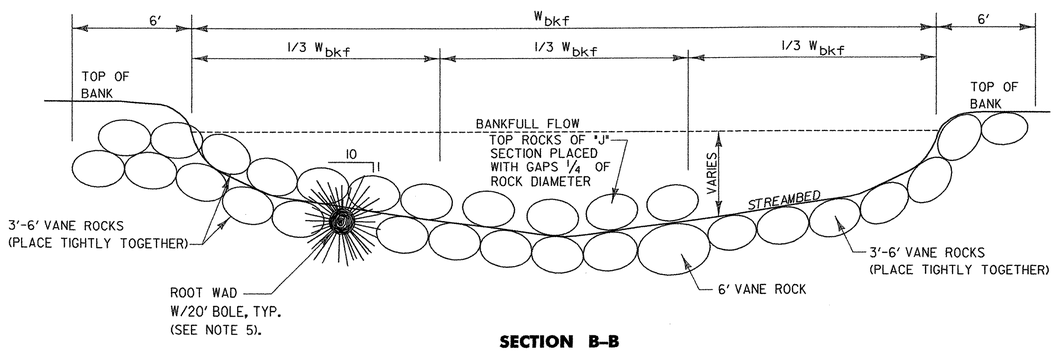


WILLOW FASCINE
N.T.S.



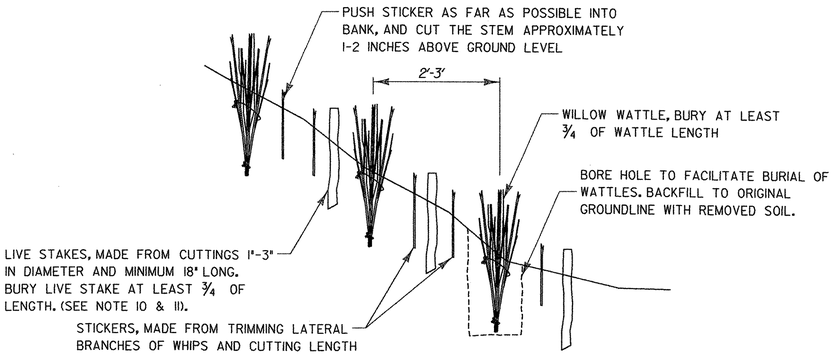
SECTION A-A

APPROXIMATE QUANTITIES	
J VANE	
ROOT WAD WITH BOLE	1 EA
5/8" GALVANIZED WIRE ROPE	10 LF
DUCKBILL ANCHOR	1 EA
STONE FILL, TYPE IV (MOD.)	258 CY
UNCLASSIFIED CHANNEL EXCAVATION	157 CY
STONE FILL, TYPE I	7 CY



SECTION B-B

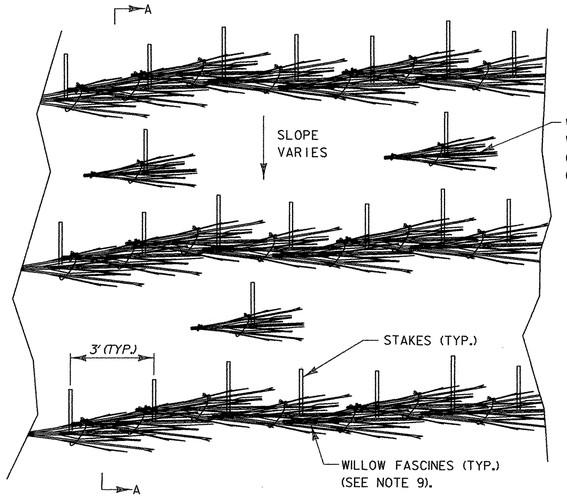
J VANE
N.T.S.



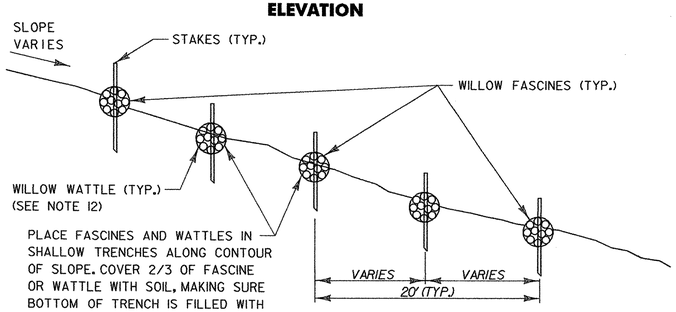
LIVE STAKES, STICKERS AND WATTLES
N.T.S.

NOTES:

1. FOR BANKFULL WIDTH AND OTHER DESIGN CRITERIA, SEE TITLE SHEET.
2. FOR DESIGN BANKFULL ELEVATIONS SEE, PROFILE SHEETS.
3. FOR LOCATIONS OF STRUCTURES, SEE PLAN SHEETS.
4. VANE ROCKS AND WEIR ROCKS SHALL BE CLASSIFIED AS STONE FILL, TYPE IV (MOD.) AND SHALL MEET THE FOLLOWING SIZE REQUIREMENTS:
   - NO DIMENSION CAN BE < 3 FEET
   - AT LEAST 2 DIMENSIONS MUST BE > 4 FEET
   - AT LEAST 1 DIMENSION MUST BE > 5 FEET
5. ROOT WADS SHALL HAVE A MINIMUM FAN DIAMETER OF 6'.
6. CHINK BEHIND ROCK VANES AND ROCK WEIRS WITH TYPE I STONE TO INHIBIT PIPING OF SEDIMENT THROUGH THE STRUCTURES. USE 6-8 CY TYPE I STONE PER STRUCTURE. (TYP.)
7. BOTH ROOTED NURSERY STOCK AND DORMANT CUTTINGS SHALL BE STORED IN A COOL AND MOIST ENVIRONMENT.
8. WILLOW WHIPS USED IN CONSTRUCTION OF WATTLES, AND FASCINES SHALL BE CUT THE DAY OF INSTALLATION TO ENSURE FRESHNESS.
9. FASCINES AND WATTLES PLACED ADJACENT TO FLOW SHALL HAVE BUTT ENDS POINTED UPSTREAM.
10. WHEN PLACING LIVE STAKES, MAKE A PILOT HOLE TO AVOID HAVING TO FORCE STAKES INTO GROUND AND RISK DAMAGING OR SPLITTING THE ENDS. CARE SHOULD BE TAKEN TO MAKE SURE BUDS ARE FACING UP.
11. LIVE STAKES AND STICKERS SHALL BE SOAKED IN WATER FOR A MINIMUM OF 2 HOURS PRIOR TO INSTALLATION. CUT STEMS MAY BE USED FOR LIVE STAKES AND STICKERS ON THE ENSUING DAY AFTER OVERNIGHT SOAKING.
12. WATTLES USED IN CONJUCTION WITH FASCINES WILL BE SPACED LATERALLY, AND ALONG THE SLOPE, AS DIRECTED BY THE ENGINEER.



ELEVATION



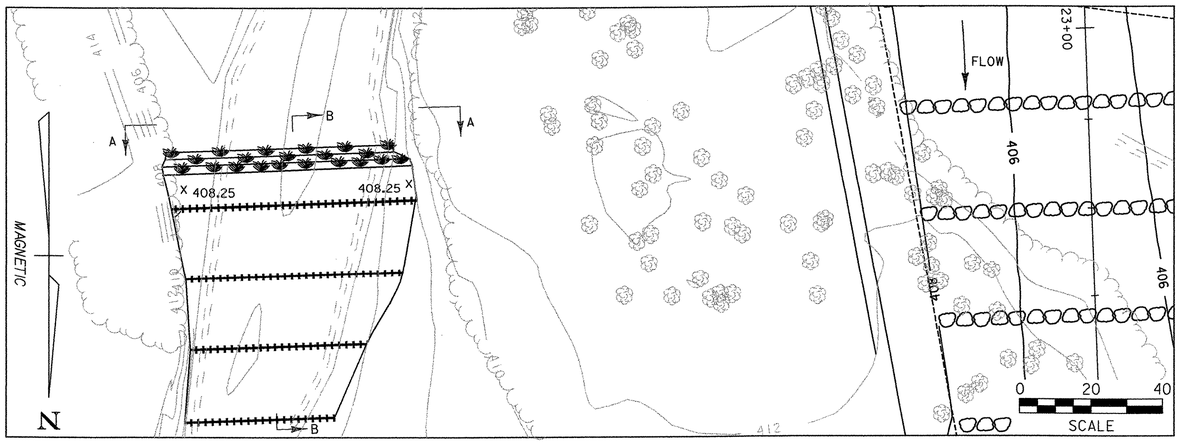
SECTION A-A

WILLOW FASCINE AND WATTLE INSTALLATION
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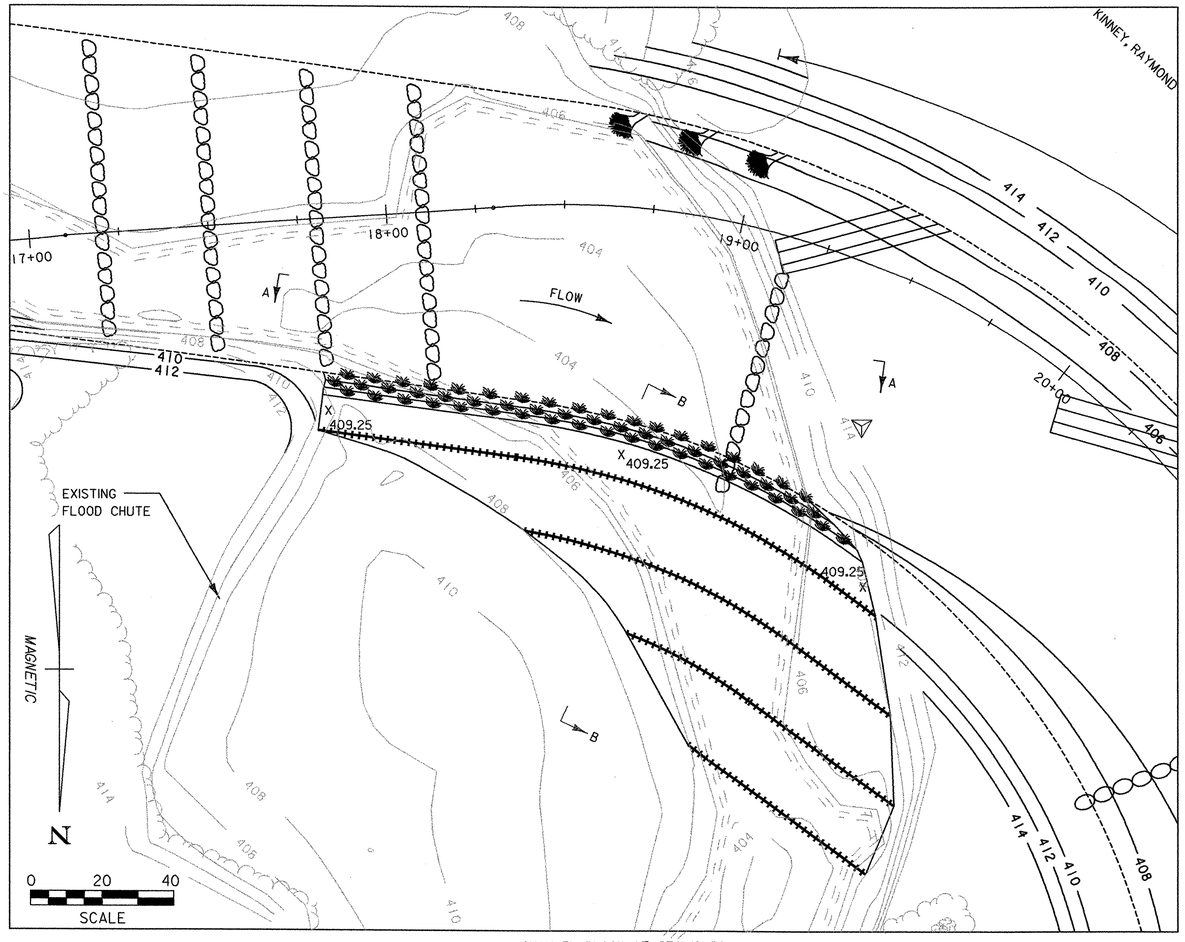
Dufresne-Henry

PROJECT NAME:	TROUT RIVER RESTORATION
PROJECT NUMBER:	BRF-RS 0283(7)
FILE NAME: zo2837frm.dgn	PLOT DATE: 08/26/2003
PROJECT LEADER: GAE	DRAWN BY: MBL
DESIGNED BY: SAR	CHECKED BY: WCH
MISC. DETAIL SHEET 4	SHEET 120 OF 140

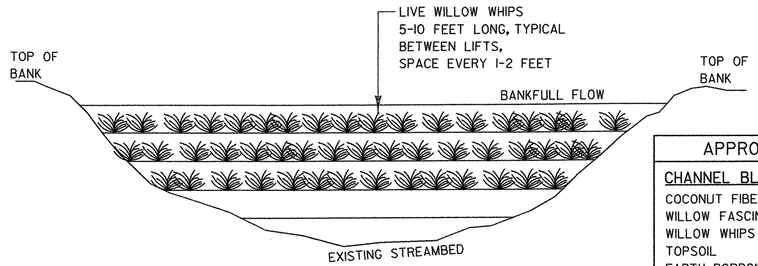
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CHANNEL BLOCK AT STA. 23+25

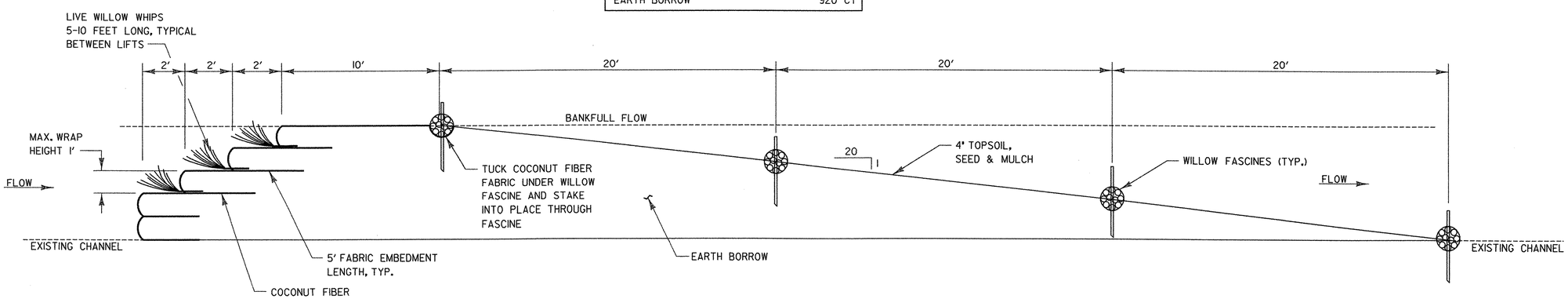


CHANNEL BLOCK AT STA. 18+50



SECTION A–A

APPROXIMATE QUANTITIES	
CHANNEL BLOCK AT STA. 23+25	
COCONUT FIBER FABRIC	520 SY
WILLOW FASCINES	220 LF
WILLOW WHIPS	210 EA
TOPSOIL	40 CY
EARTH BORROW	450 CY
CHANNEL BLOCK AT STA. 18+50	
COCONUT FIBER FABRIC	1190 SY
WILLOW FASCINES	430 LF
WILLOW WHIPS	480 EA
TOPSOIL	82 CY
EARTH BORROW	920 CY



SECTION B–B

CHANNEL BLOCK
N.T.S.

NOTES:

1. FOR BANKFULL WIDTH AND OTHER DESIGN CRITERIA, SEE TITLE SHEET.
2. FOR DESIGN BANKFULL ELEVATIONS SEE, PROFILE SHEETS.
3. FOR LOCATIONS OF STRUCTURES, SEE PLAN SHEETS.
4. COCONUT FIBER FABRIC SHALL BE ROLANKA BIO D-MAT 90, OR APPROVED EQUAL

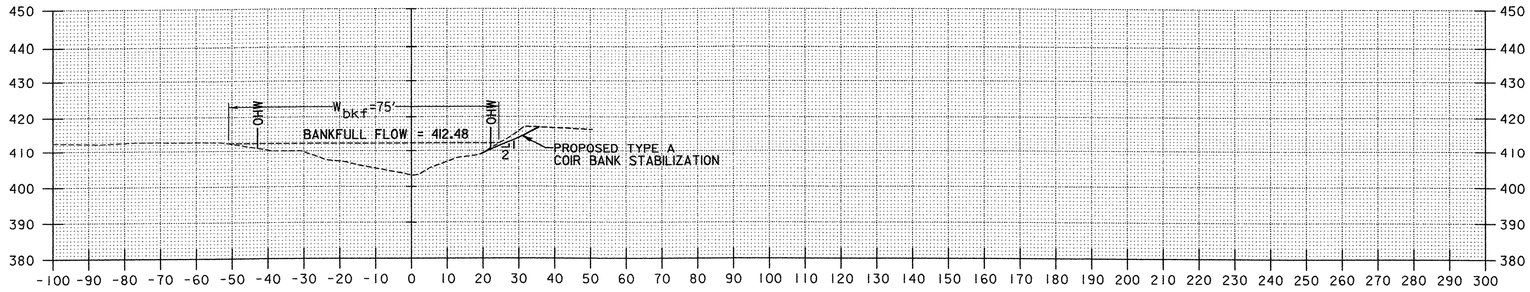
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

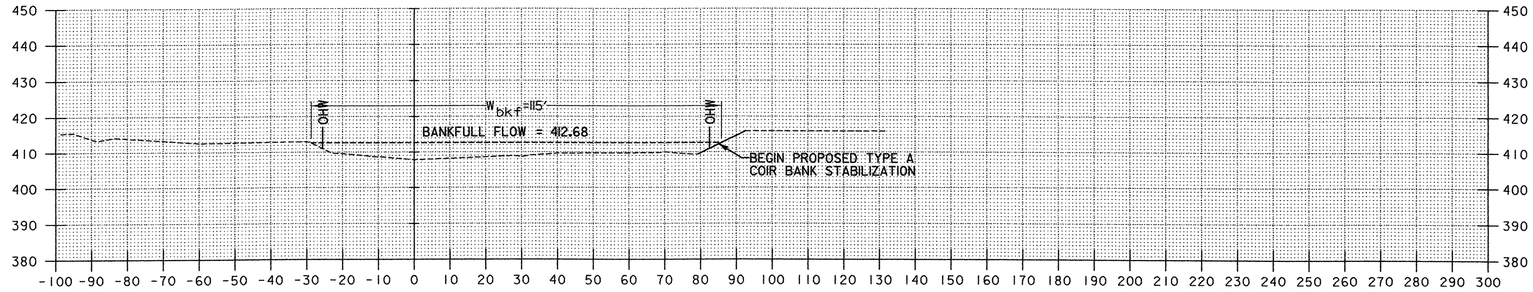
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PROJECT LEADER: GAE
DESIGNED BY: SAR
MISC. DETAIL SHEET 5

PLOT DATE: 06/06/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 121 OF 140

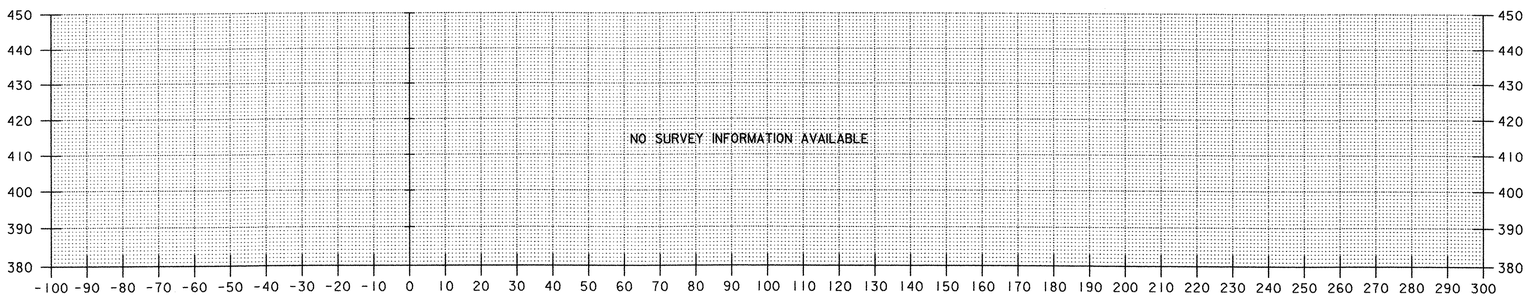
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2+00



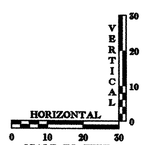
1+00



0+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.



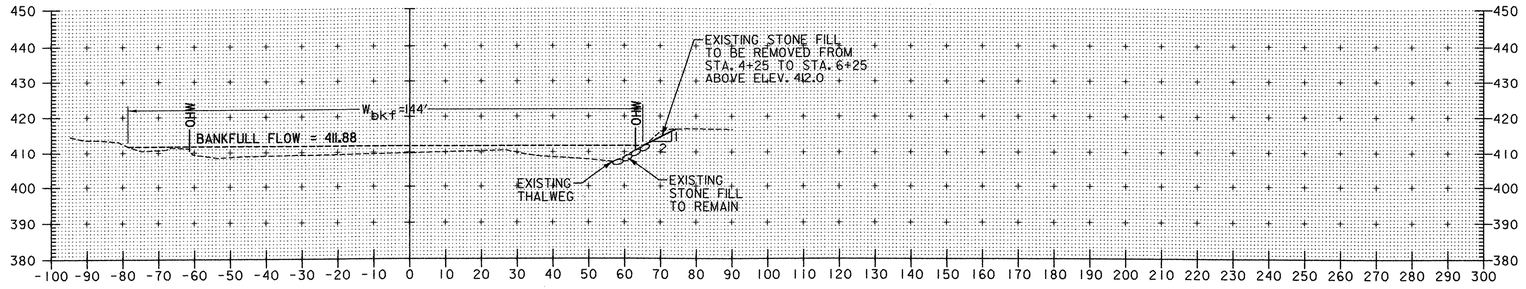
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

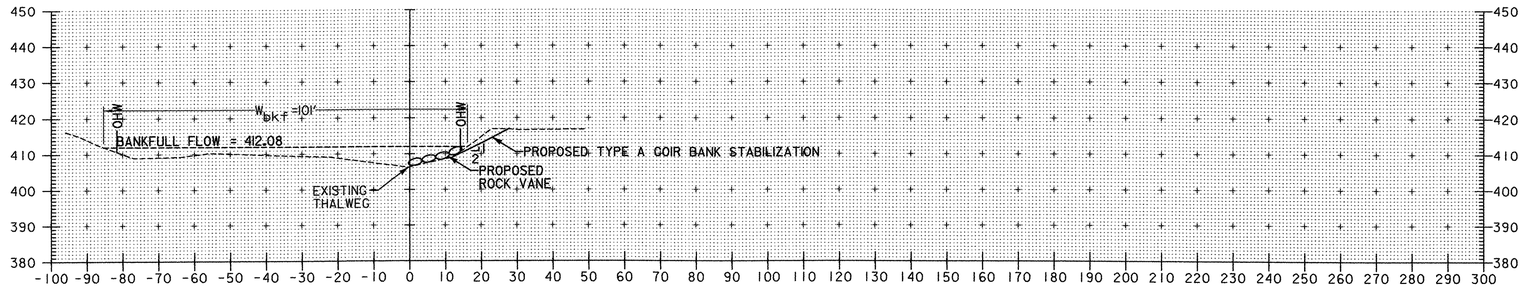
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PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 04/09/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 122 OF 140

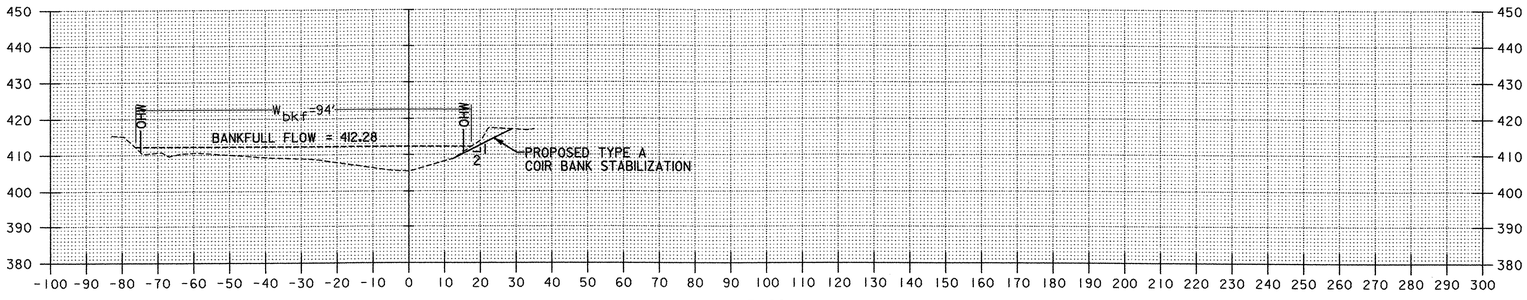
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5+00



4+00



3+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 0 10 20 30
HORIZONTAL 0 10 20 30
SCALE IN FEET

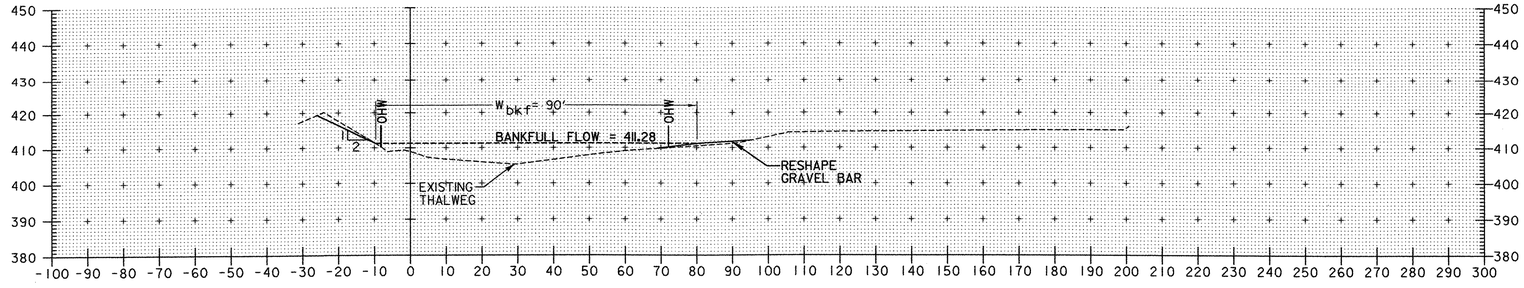
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

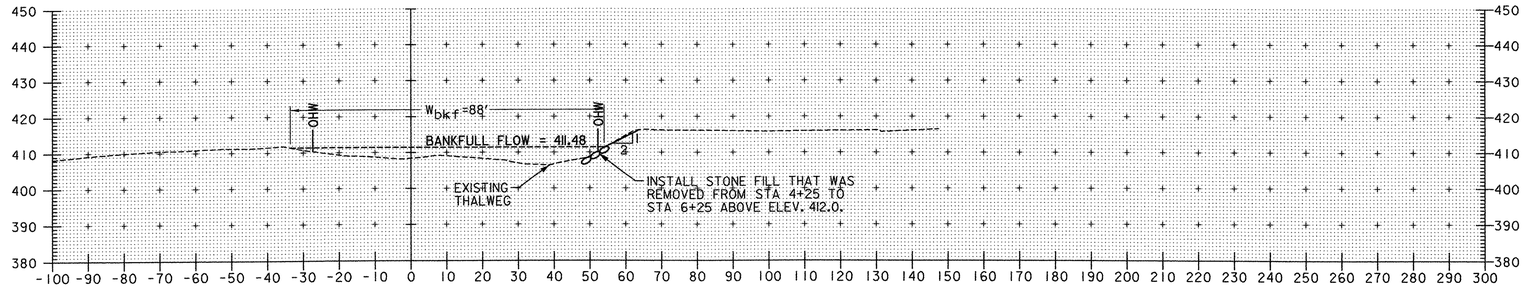
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PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 04/09/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 123 OF 140

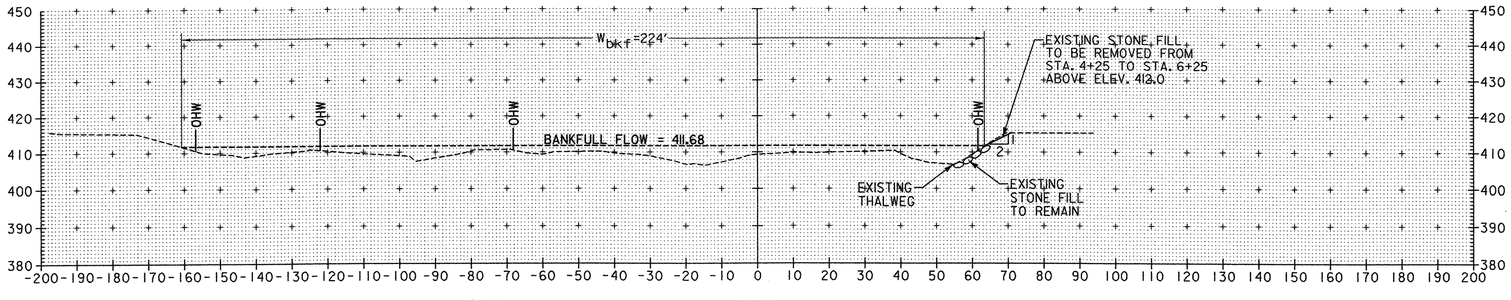
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8+00



7+00



6+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
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VERTICAL 0 10 20

HORIZONTAL 0 10 20 30

SCALE IN FEET

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION

PROJECT NUMBER: BRF-RS 0283(7)

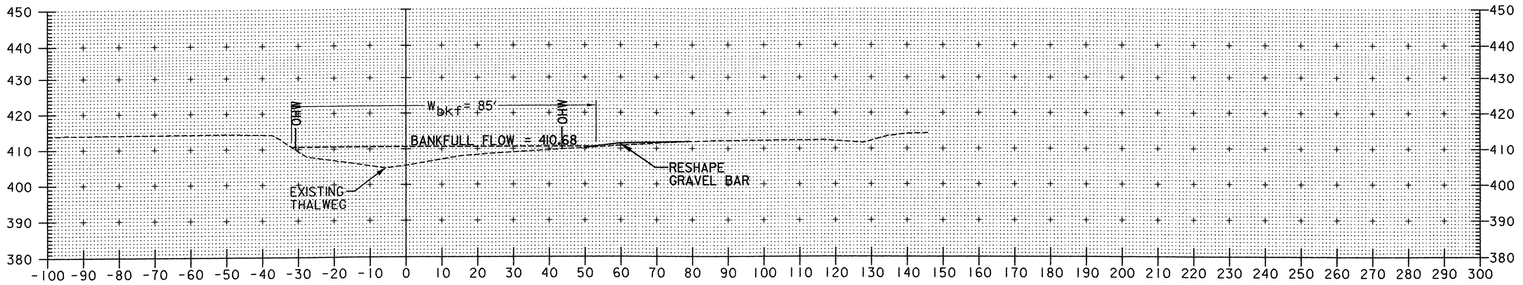
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PROJECT LEADER: GAE
DESIGNED BY: SAR

PLOT DATE: 04/09/2003
DRAWN BY: MBL
CHECKED BY: WCH

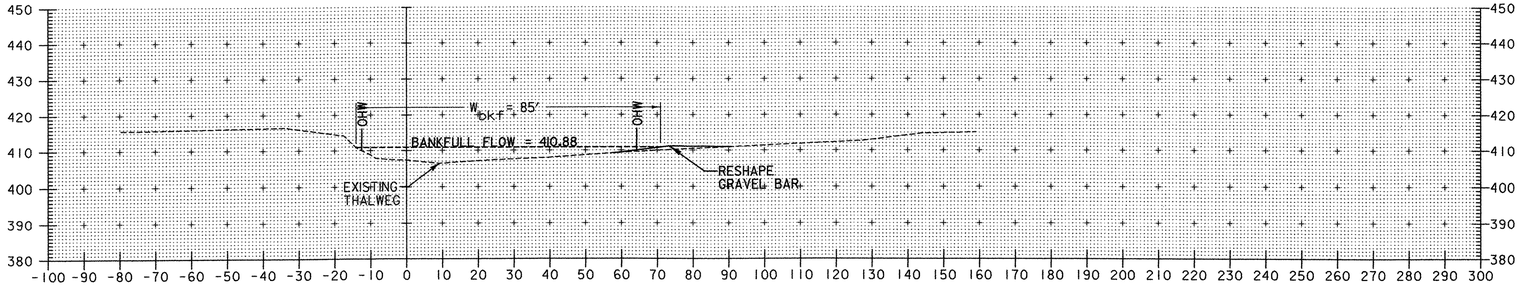
CROSS SECTIONS

SHEET 124 OF 140

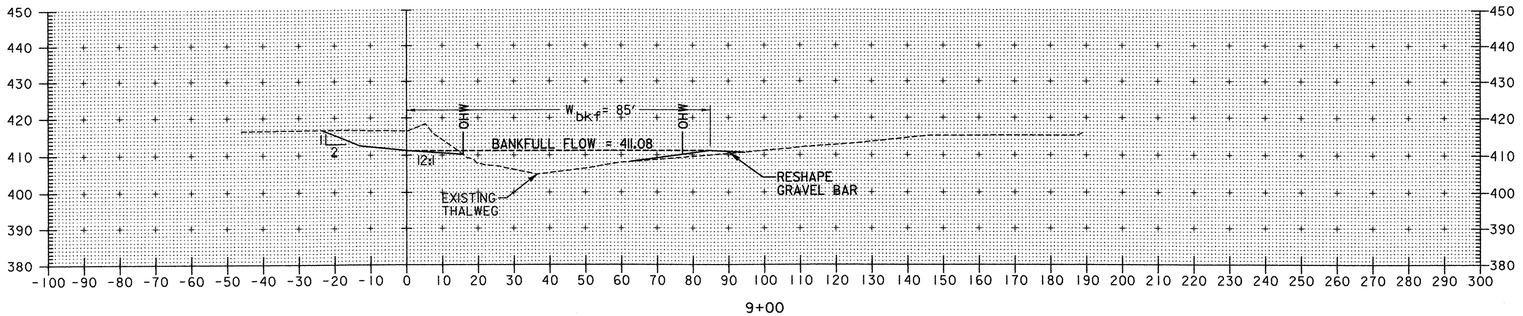
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11+00



10+00



9+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 0 10 20 50
HORIZONTAL 0 10 20 30
SCALE IN FEET

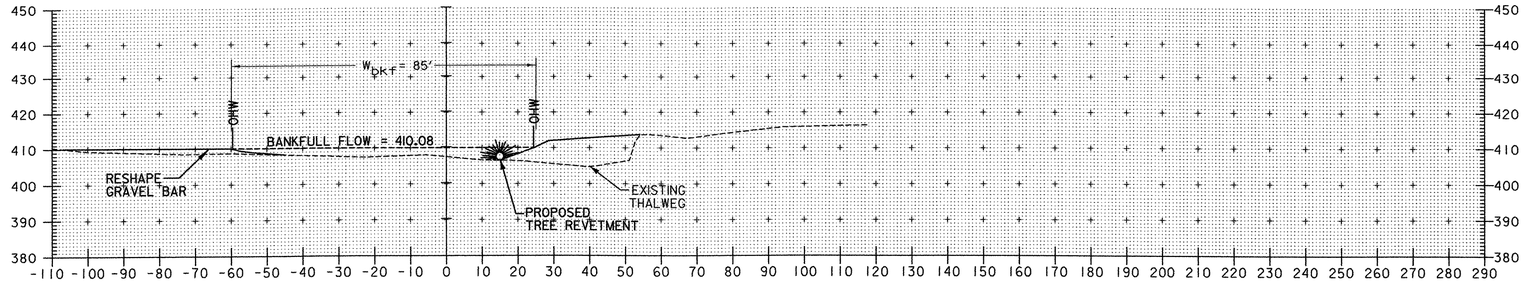
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

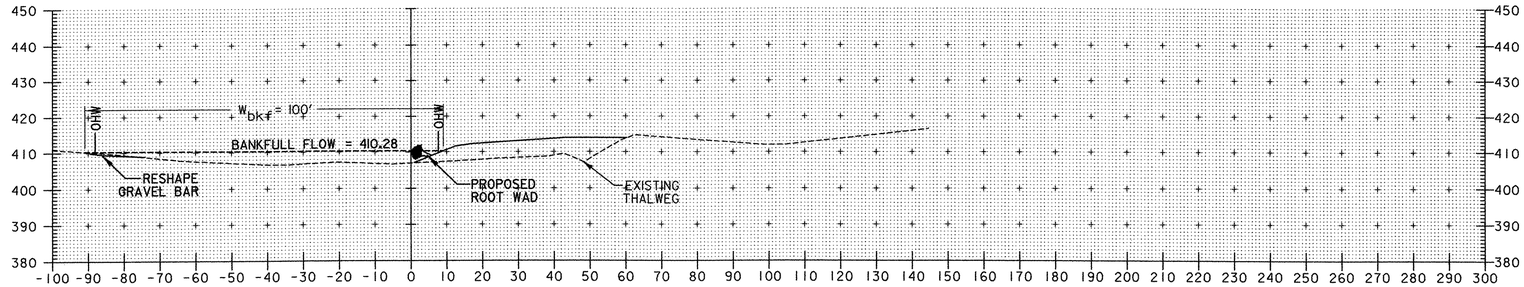
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DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 04/09/2003
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CHECKED BY: WCH
SHEET 125 OF 140

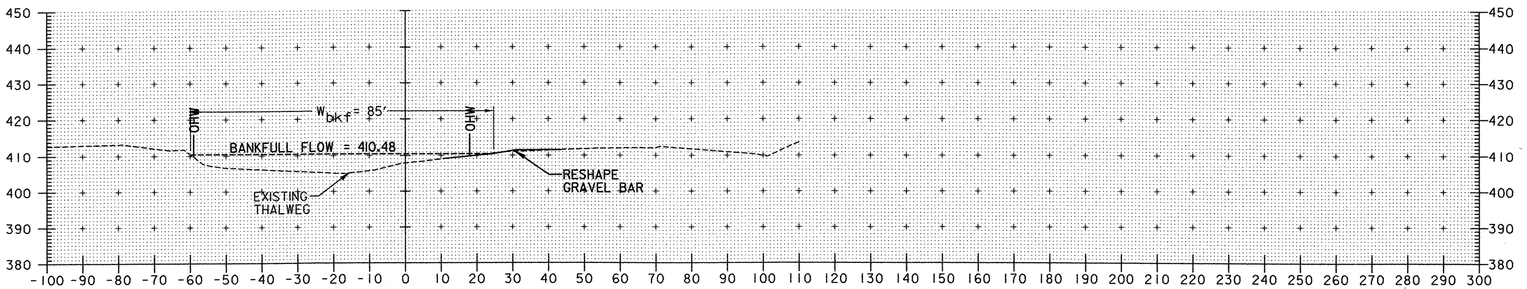
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14+00



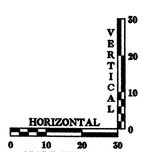
13+00



12+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
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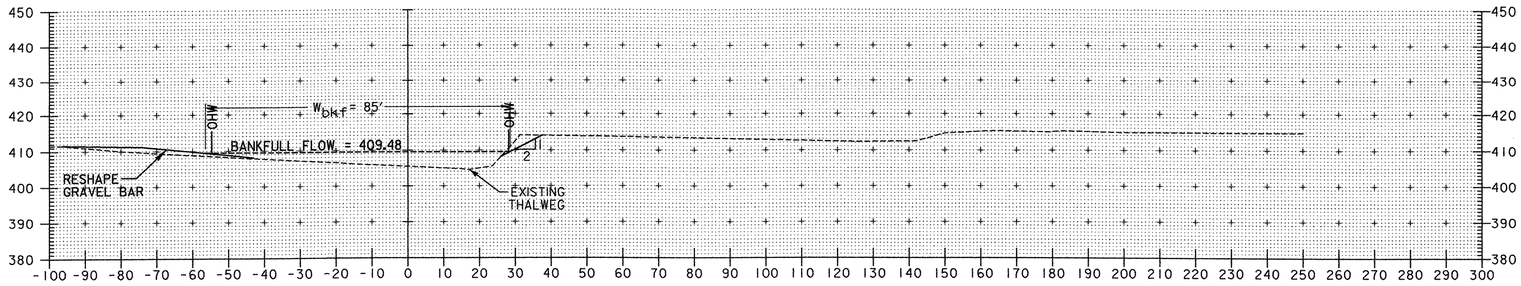
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PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

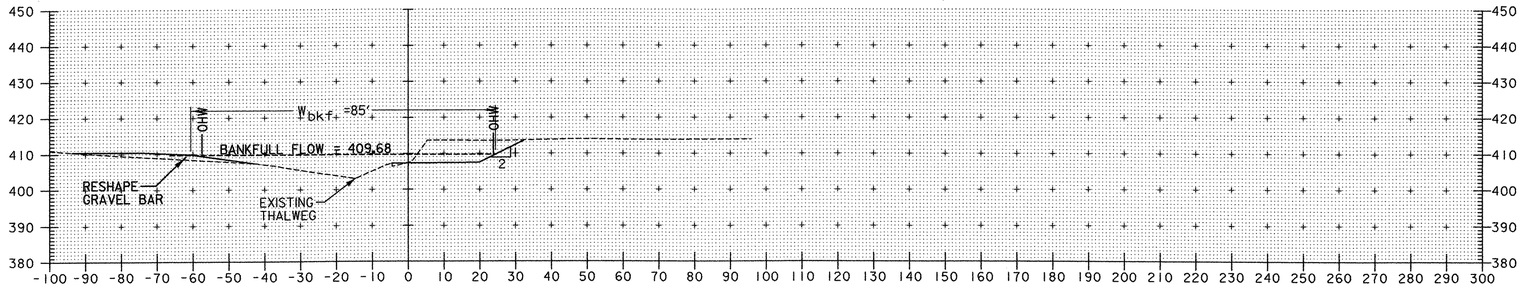
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PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 04/09/2003
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CHECKED BY: WCH
SHEET 126 OF 140

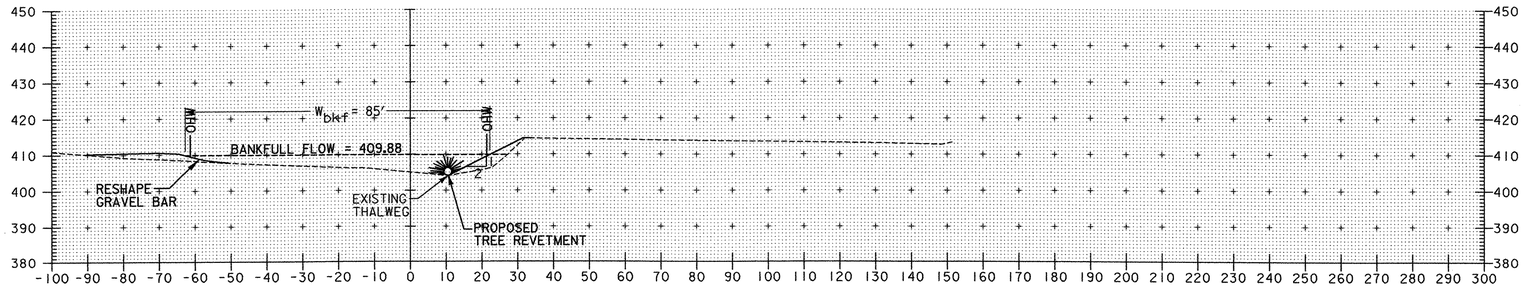
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17+00



16+00



15+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
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4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 0 10 20 30
HORIZONTAL 0 10 20 30
SCALE IN FEET

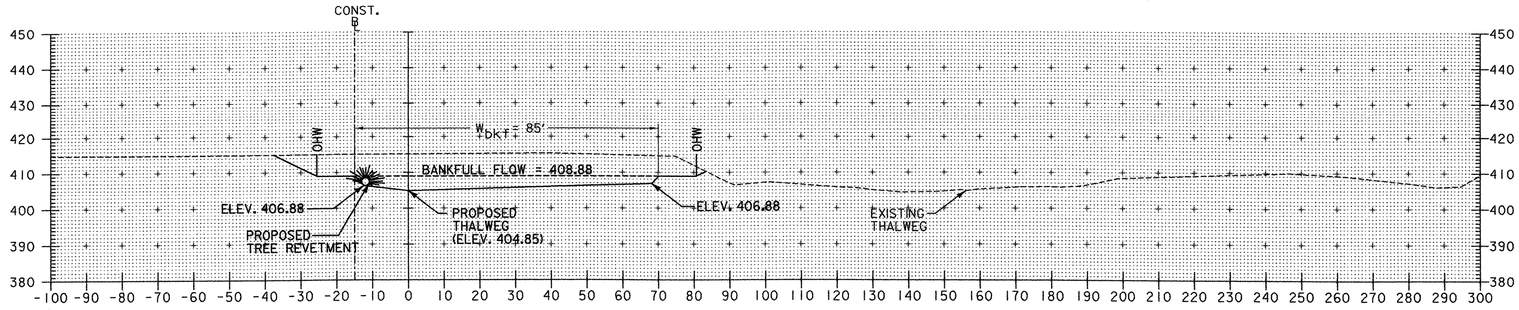
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

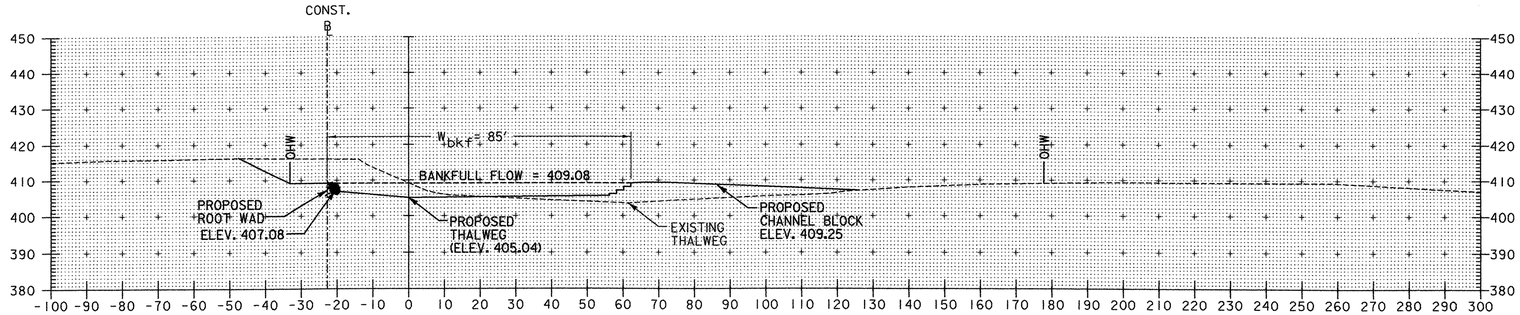
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PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 04/09/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 127 OF 140

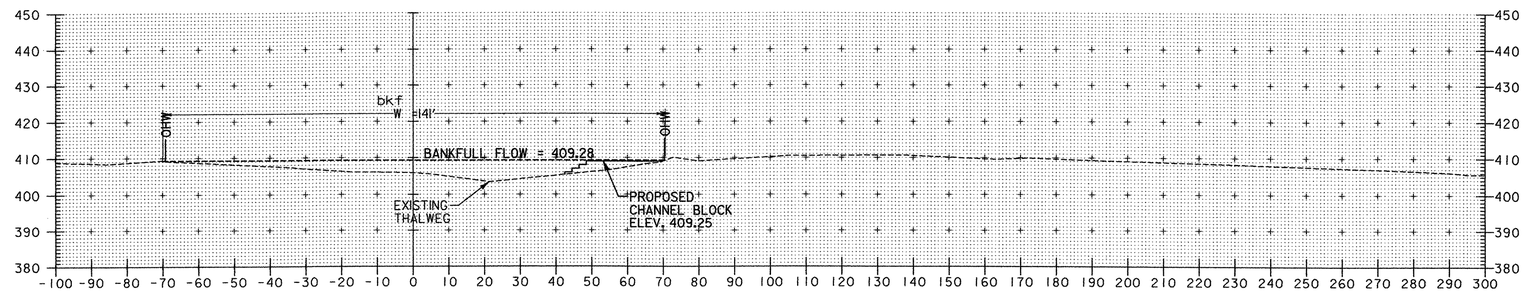
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20+00



19+00



18+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 50 20 10 0
HORIZONTAL 0 10 20 30
SCALE IN FEET

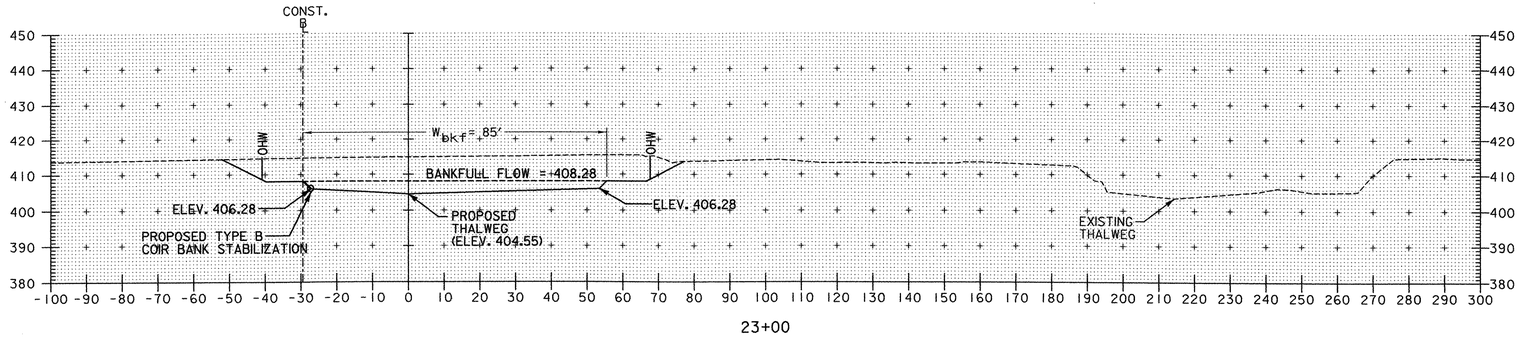
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

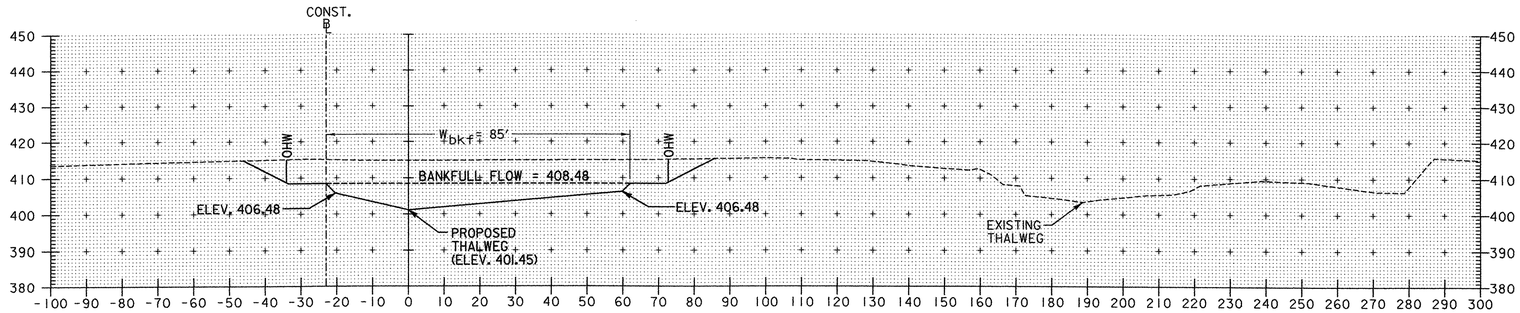
FILE NAME: z02837xsl.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 128 OF 140

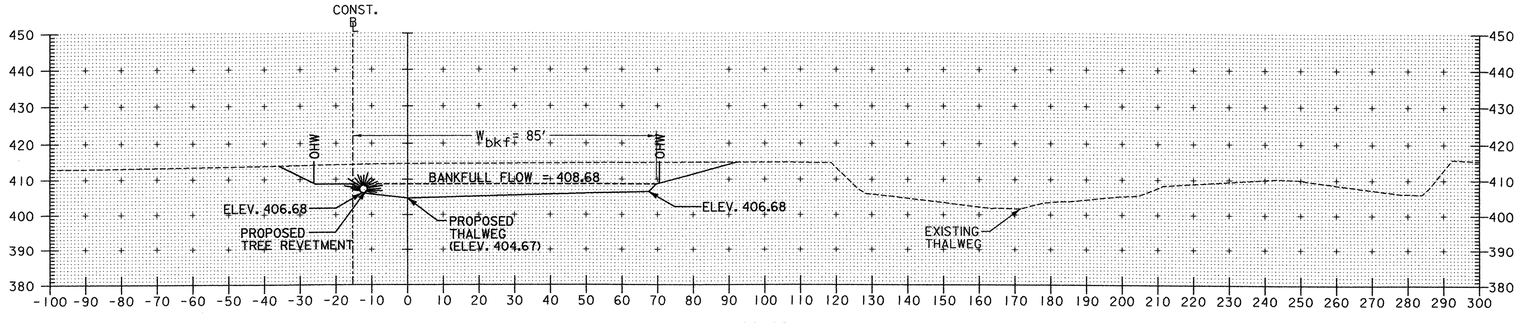
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23+00



22+00



21+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 0 10 20 30
HORIZONTAL 0 10 20 30
SCALE IN FEET

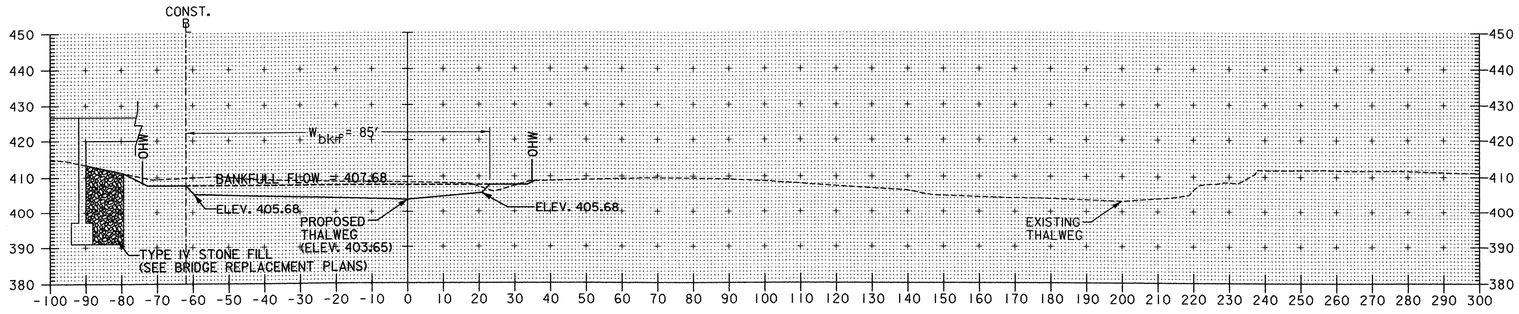
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

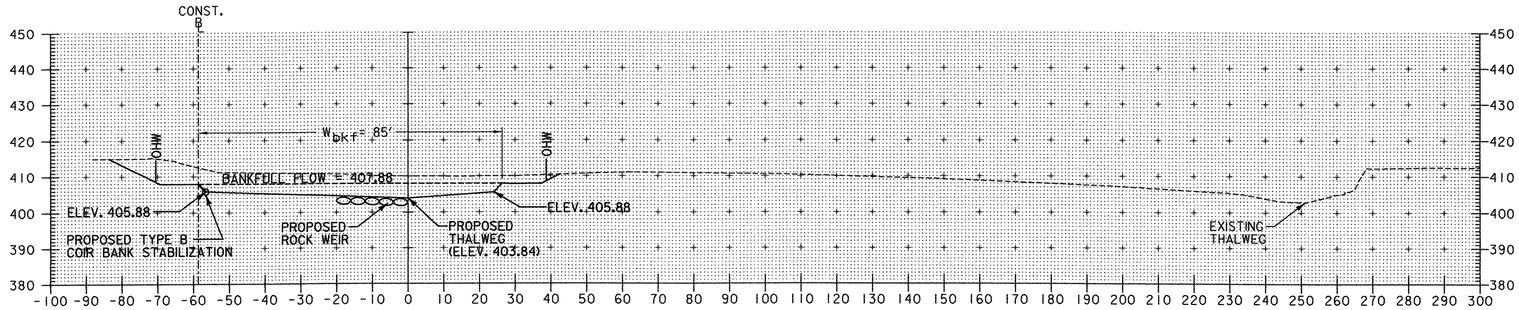
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PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 129 OF 140

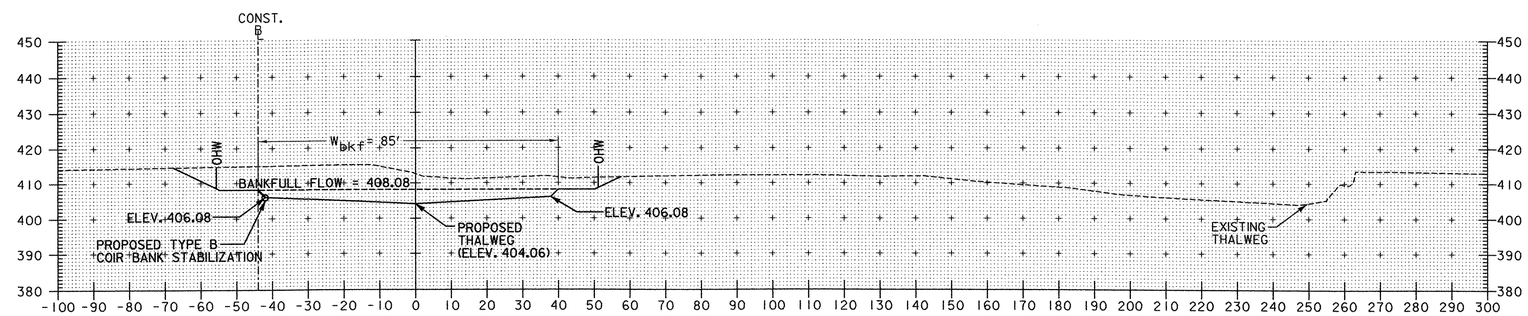
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26+00



25+00



24+00

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 0 10 20 30
HORIZONTAL 0 10 20 30
SCALE IN FEET

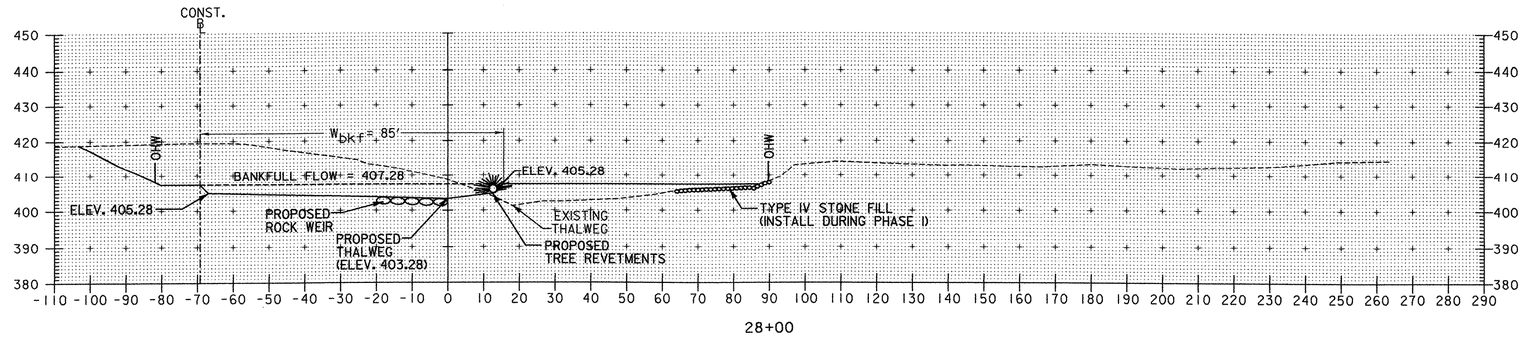
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

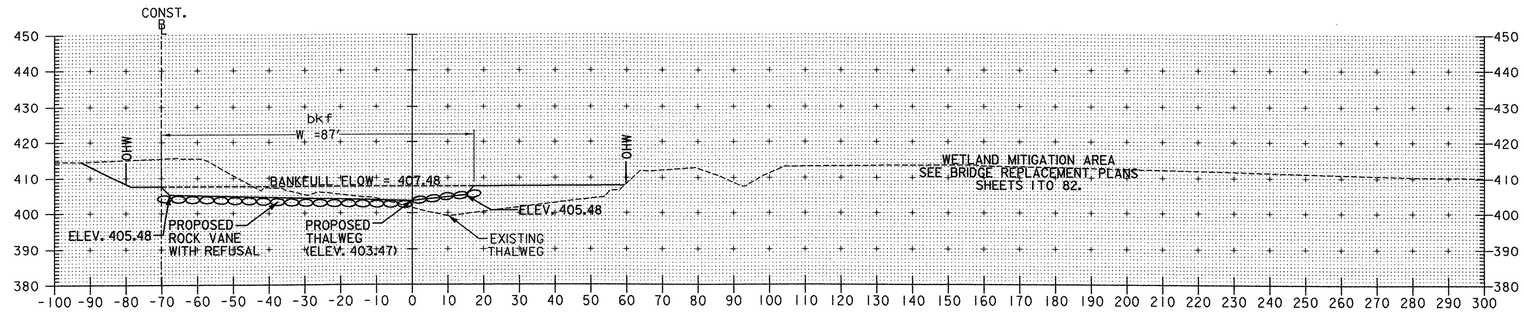
FILE NAME: z02837xsl.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 130 OF 140

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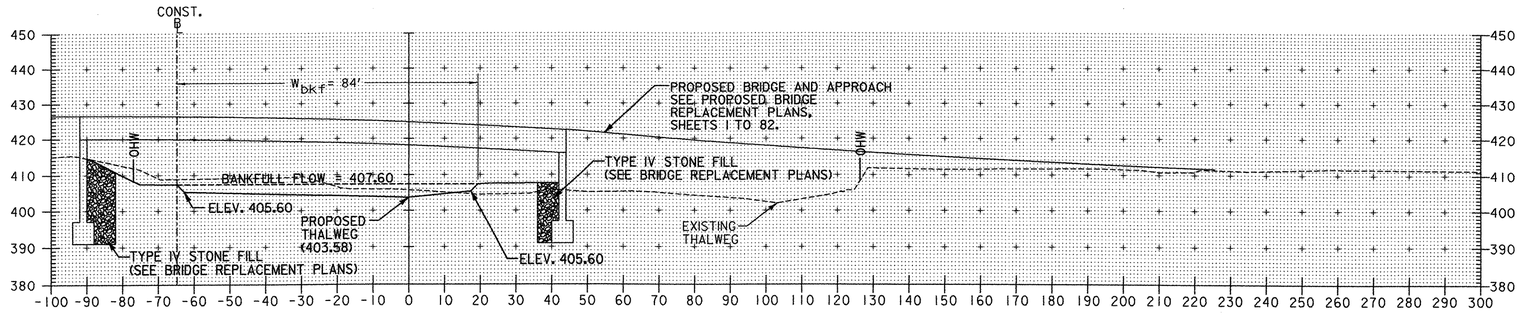


28+00



27+00

PROPOSED BRIDGE



26+42

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. OHW DENOTES EXISTING ORDINARY HIGH WATER.
4. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 50 20 10 0
HORIZONTAL 0 10 20 50
SCALE IN FEET

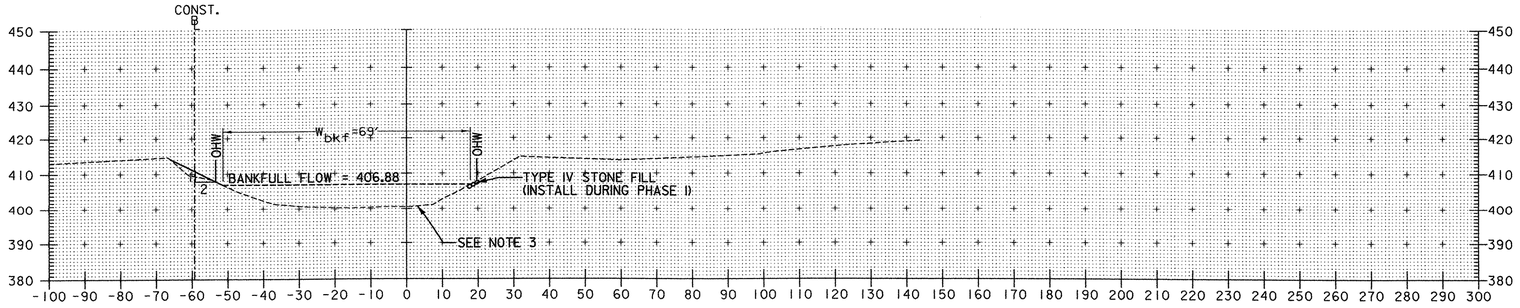
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

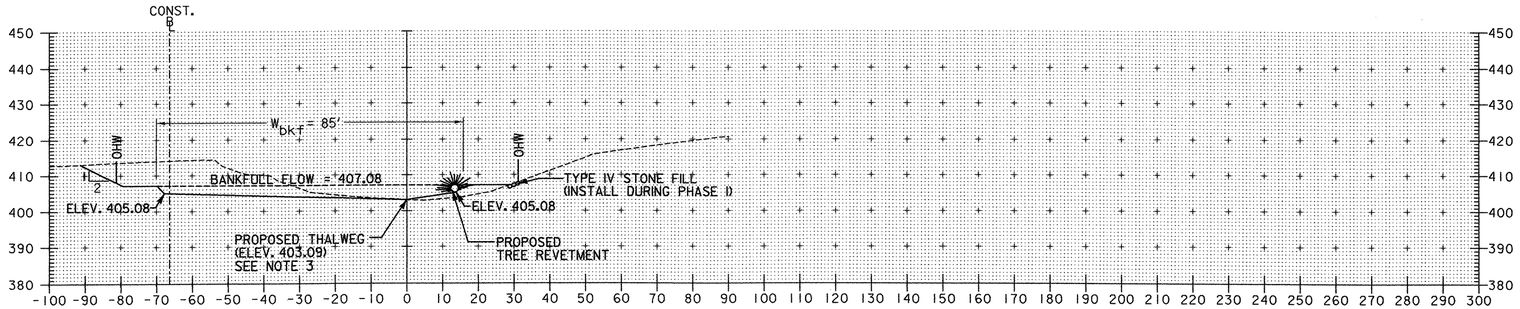
FILE NAME: z02837xsl.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 131 OF 140

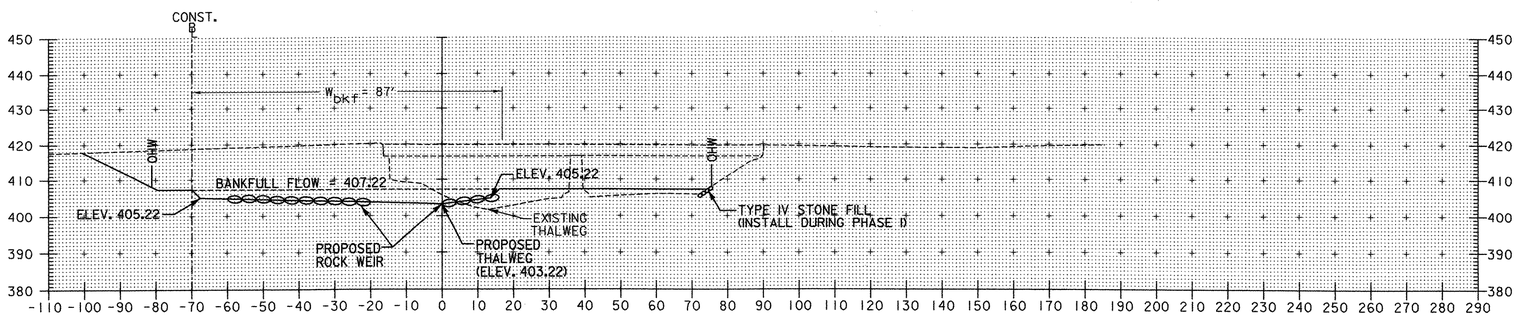
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30+00



29+00



28+29

NOTES:

1. FOR LOCATION OF STRUCTURES SEE CONSTRUCTION PLAN SHEETS.
2. FOR DETAILS OF STRUCTURES SEE MISCELLANEOUS DETAIL SHEETS.
3. EXISTING CHANNEL BOTTOM GEOMETRY FOR STA. 29+00 AND 30+00 IS NOT KNOWN DUE TO ICE COVER AT THE TIME OF SURVEY. EXISTING CHANNEL BOTTOM GEOMETRY AT STA. 29+00 AND 30+00 IS ASSUMED.
4. OHW DENOTES EXISTING ORDINARY HIGH WATER.
5. CROSS SECTIONS ARE BASED ON THALWEG STATIONING.

VERTICAL 50 20 10 0
HORIZONTAL 0 10 20 50
SCALE IN FEET

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: z02837xsl.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
CROSS SECTIONS

PLOT DATE: 08/26/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 132 OF 140

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY ESTIMATE

DESCRIPTION: TYPE A COIR BANK STABILIZATION STA 1+00 - 4+40, RT	ROCK VANE STA 4+00, RT	ROCK VANE STA 6+50, RT	LOG VANE STA 8+25, LT	J VANE STA 9+25, LT	CONSTRUCTED RIFFLE STA 10+60	ROOT WADS WITH CROSS BRACING STA 12+60 - 13+00, RT	ROCK VANE WITH REFUSAL STA 13+25, RT	TREE REVETMENT STA 13+60 - 14+20, RT	ROCK VANE STA 14+20, RT	TREE REVETMENT STA 14+80 - 15+20, RT	J VANE STA 15+25, RT	CONSTRUCTED RIFFLE STA 16+90	CHANNEL BLOCK STA 18+50, RT	ROOT WADS WITH PINNING STA 18+80 - 19+00, LT	LOG VANE WITH REFUSAL STA 19+25, LT	TREE REVETMENT STA 19+60 - 20+50, LT	LOG VANE STA 20+25, LT	TREE REVETMENT STA 20+80 - 21+50, LT	J VANE STA 21+25, LT	TYPE B COIR BANK STABILIZATION STA 22+50 - 23+50, LT	CONSTRUCTED RIFFLE STA 22+90	CHANNEL BLOCK STA 23+25, RT	ROCK WEIR STA 25+00	ROCK VANE WITH REFUSAL STA 27+25, RT	TREE REVETMENT STA 27+50 - 28+10, RT	ROCK WEIR STA 28+60	TREE REVETMENT STA 29+70 - 29+90, RT		EARTHWORKS		MISCELLANEOUS		REMOVE HISTORIC BRIDGE ABUTMENT		FARM DRIVE CROSSING		ZONE 'A' PLANTINGS	ZONE 'B' PLANTINGS	TOTALS: ROUND	GRAND TOTAL	FINAL		SUMMARY OF QUANTITIES: QUANTITIES	UNIT	ITEMS
																												1												1	1		1	LS	CLEARING AND GRUBBING
																												29050												29050	29050		29050	CY	COMMON EXCAVATION
																																25								25	25		25	CY	REMOVAL OF CONCRETE OR MASONRY
111	74	74	34	157	190	15	132	10	74	10	157	190		15	92	10	34	10	157	6	190		175	132	10	175	10												6	2244	2250		2250	CY	UNCLASSIFIED CHANNEL EXCAVATION
					95							95									95																		5	285	290		290	CY	GRANULAR BORROW (MOD.)
													920									450						6770												8140	8140		8140	CY	EARTH BORROW
																																						15				15	15		15	CY	CRUSHED GRAVEL (704.05 A)
	7	7		7			7		7		7								7				7	7		7																70	70		70	CY	STONE FILL, TYPE I
					95							95									95																		5	285	290		290	CY	STONE FILL, TYPE II (MOD.)
																																										650	650		650	CY	STONE FILL, TYPE IV
276	148	148	27	258			206		148		258			21	85		27		258				350	206		350																34	2766	2800		2800	CY	STONE FILL, TYPE IV (MOD.)
			2	1		3					1			3	2		2		1				2			2																19	19		19	EA	ROOT WAD WITH BOLE
			400			210								60	400		400																									1470	1470		1470	LF	12" DIA. LOG
								4		4						4		4								4		4															24	24		24	EA	12" DIA. TREE, 10' - 20' LONG
			45												45		45																									135	135		135	SY	GEOTEXTILE FOR FILTER CURTAIN
																																						55				55	55		55	SY	GEOTEXTILE UNDER STONE FILL
201													1190							132		520																			7	2043	2050		2050	SY	COCONUT FIBER FABRIC
																				300																						300	300		300	LF	12" DIA. COCONUT FIBER LOG
			40	10		30		40		40	10			30	40	40	40	40	10				20		40	20	40															10	490	500		500	LF	1/4" AIRCRAFT CABLE
			1	1		3		4		4	1			3	1	4	1	4	1				2		4	2	4																40	40		40	EA	DUCKBILL ANCHOR
																				180																						180	180		180	EA	GRADE STAKES, 4' LONG
																				90																						90	90		90	EA	#4 REBAR, 4' LONG
																																					2					2	2		2	EA	21" CMP END SECTION
36													82							36		40						970													6	1164	1170		1170	CY	TOPSOIL
																												600														600	600		600	LB	SEEDING
																												20														20	20		20	TON	HAY MULCH
																																							19				19	19		19	EA	2 1/2" CAL. RED MAPLE
																																							33				33	33		33	EA	1 1/2" CAL. RED MAPLE
																																							19				19	19		19	EA	2 1/2" CAL. SUGAR MAPLE
																																							19				19	19		19	EA	2 1/2" CAL. GREEN ASH
																																							33				33	33		33	EA	1 1/2" CAL. GREEN ASH
																																							19				19	19		19	EA	2 1/2" CAL. WHITE ASH
																																							33				33	33		33	EA	1 1/2" CAL. WHITE ASH
																																							33				33	33		33	EA	1 1/2" CAL. SERVICEBERRY
																																							33	7			40	40		40	EA	HIGHLAND CRANBERRY (1 GAL.)
																																							33	7			40	40		40	EA	HIGHLAND CRANBERRY (BARE ROOT)
																																							33	7			40	40		40	EA	NANNYBERRY (1 GAL.)
																																							33	7			40	40		40	EA	NANNYBERRY (BARE ROOT)
																																							33	7			40	40		40	EA	ELDERBERRY (1 GAL.)
																																							33	7			40	40		40	EA	ELDERBERRY (BARE ROOT)
																																							33	7			40	40		40	EA	WITCH-HAZEL (1 GAL.)
																																							33	7			40	40		40	EA	WITCH-HAZEL (BARE ROOT)
																																							33				33	33		33	EA	SPECKLED ALDER (1 GAL.)
																																							33				33	33		33	EA	SPECKLED ALDER (BARE ROOT)
																																							33	7			40	40		40	EA	GRAY DOGWOOD (1 GAL.)
																																							33	7			40	40		40	EA	GRAY DOGWOOD (BARE ROOT)
																																							33	7			40	40		40	EA	RED-OSIER DOGWOOD (1 GAL.)
																																							33	7			40	40		40	EA	RED-OSIER DOGWOOD (BARE ROOT)
																				1200																						1200	1200		1200	EA	SOFTRUSH (2 INCH PLUG)
													480									210								100											10	790	800		800	EA	WILLOW WHIPS
													430									220								100												750	750		750	LF	WILLOW FASCINES
																															50												50	50		50	EA	WILLOW WATTLES
																															100												100	100		100	EA	WILLOW "LIVE STAKES"
																															200												200	200		200	EA	WILLOW "STICKERS"
																															25												25	25		25	EA	TRANSPLANTING TREES

THE VERMONT AGENCY OF TRANSPORTATION (VAOT) IS PROVIDING THIS SHEET FOR INFORMATION ONLY.

THE ITEMS SHOWN ON THIS SHEET ARE NOT BID ITEMS. THE QUANTITIES SHOWN ARE ESTIMATED AMOUNTS.

TROUT RIVER RESTORATION
ESTIMATED ITEM BREAKDOWN
SHEET 133 OF 140

STREAM RESTORATION GLOSSARY

OVERVIEW: Following is a glossary of terms commonly used in stream restoration. Not all of the terms appear in the plans, and the list is intended as a general reference.

Aggradation -- A progressive buildup or raising of the channel bed and floodplain due to sediment deposition. geologic process by which stream beds are raised in elevation and floodplains are formed.
Aggradation is an indicator that a change in the stream's discharge and/or bedload characteristics is taking place. Opposite of degradation.

Alluvial -- Deposited by running water.

Alluvium -- Sediment or loose material such as clay, silt, sand, gravel, and larger rocks deposited by moving water.

Anabranch -- A diverging branch of a river which re-enters the main stream.

Aquatic ecosystem -- Any body of water, such as a stream, lake or estuary, and all organisms and nonliving components within it, functioning as a natural system.

Aquatic habitat -- Habitat that occurs in free water.

Armoring -- A natural process where an erosion-resistant layer of relatively large particles is established on the surface of the streambed through removal of finer particles by stream flow.
A properly armored streambed generally resists movement of bed material at discharges up to approximately ¾ bankfull depth.

Avulsion -- A change in channel course that occurs when a stream suddenly breaks through its banks - typically bisecting an over extended meander arc.

Backwater -- (1) A small, generally shallow body of water attached to the main channel, with little or no current of its own.
(2) A condition in subcritical flow where the water surface elevation is raised by downstream flow impediments.

Backwater pool -- A pool that formed as a result of an obstruction like a large tree, weir, or boulder.

Bank stability -- The ability of a stream bank to counteract erosion or gravity forces.

Bankfull channel depth -- The maximum depth of a channel within a riffle segment when flowing at a bankfull discharge.

Bankfull channel width -- The top surface width of a stream channel when flowing at a bankfull discharge.

Bankfull discharge -- The stream discharge corresponding to the water stage which first overtops the natural banks. This flow occurs, on average, about once every 1 to 2 years.

Bankfull width -- The width of a river or stream channel between the highest banks on either side of a stream.

Bar -- An accumulation of alluvium(usually gravel or sand) caused by a decrease in sediment transport capacity on the inside of meander bends or in the center of an overwide channel.

Barrier -- A physical block or impediment to the movement or migration of fish, such as a waterfall (natural barrier) or a dam (man-made barrier).

Base flow -- The sustained portion of stream discharge that is drawn from natural storage sources, and not affected by human activity or regulation.

Bed load -- Sediment moving on or near the stream bed and transported by jumping, rolling, or sliding on the bed layer of a stream. See also suspended load.

Bed material -- The sediment mixture of which a streambed is composed.

Bed material load -- That portion of the total sediment load with sediments of a size found in the stream bed.

Bed roughness -- A measure of the irregularity of the stream bed as it contributes to flow resistance. Commonly expressed as a Manning 'n' value.

Bed slope -- The inclination of the channel bottom, measured as the elevation drop per unit length of channel.

Bioengineering - Use the native and natural materials to stabilize streambanks.

Bole - Term referring to the stem or trunk of a tree.

Braided channel -- A stream characterized by flow within several channels which successively meet and divide. Braiding often occurs when sediment loading is too large to be carried by a single channel.

Braiding (of River Channels) -- Successive division and rejoining of river flow with accompanying islands.

Buffer strip -- A barrier of permanent vegetation, either forest or other vegetation, between waterways and land uses such as agriculture or urban development, designed to intercept and filter out pollution before it reaches the surface water resource.

Canopy -- A layer of foliage in a forest stand. This most often refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multistoried stand.
Leaves, branches and vegetation that are above ground and/or water that provide shade and cover for fish and wildlife.

Cascade -- A short, steep drop in stream bed elevation often marked by boulders and agitated white water.

Catchment -- (1) The catching or collecting of water, especially rainfall. (2) A reservoir or other basin for catching water. (3) The water thus caught. (4) A watershed.

Channel -- An area that contains continuously or periodically flowing water that is confined by banks and a stream bed.

Channelization -- The process of changing (usually straightening) the natural path of a waterway.

Cobble -- Substrate particles that are smaller than boulders and larger than gravels, and are generally 64-256 mm in diameter. Can be further classified as small and large cobble.

Coconut fiber fabric - Fabric composed of coconut husk and other vegetative fibers which help stabilize slopes and encourage plant growth within the fiber.

Coconut fiber log - Cylindrical structures composed of coconut husk and other vegetative fibers bound together and installed at the toe of streambanks to trap sediment and encourage plant growth within the fiber rolls.

COIR -Natural coconut fiber.

Confluence -- (1) The act of flowing together; the meeting or junction of two or more streams; also, the place where these streams meet.
(2) The stream or body of water formed by the junction of two or more streams; a combined flood.

Critical shear stress -- The minimum amount of shear stress exerted by stream currents required to initiate soil particle motion.
Because gravity also contributes to stream bank particle movement but not on stream beds, critical shear stress along streambanks is less than for stream beds.

Debris flow -- A rapid moving mass of rock fragments, soil, and mud, with more that half of the particles being larger than sand size.

Debris torrent -- Rapid movement of a large quantity of materials (wood and sediment) down a stream channel during storms or floods.
This generally occurs in smaller streams and results in scouring of streambed.

Degradation -- (1) A progressive lowering of the channel bed due to scour.
Degradation is an indicator that a change in the stream's discharge and/or sediment load is occurring. The opposite of aggradation.
(2) A decrease in value for a designated use.

Dike -- (1) (Engineering) An embankment to confine or control water, especially one built along the banks of a river to prevent overflow of lowlands; a levee.
(2) A low wall that can act as a barrier to prevent a spill from spreading. (3) (Geology) A tabular body of igneous (formed by volcanic action) rock that cuts across the structure of adjacent rocks or cuts massive rocks.

Diversion -- The transfer of water from a stream, lake, aquifer, or other source of water by a canal, pipe, well, or other conduit to another watercourse or to the land, as in the case of an irrigation system.

Diversion channel -- (1) An artificial channel constructed around a town or other point of high potential flood damages to divert floodwater from the main channel to minimize flood damages. (2) A channel carrying water from a diversion dam.

Drainage area - The total surface area upstream of a point on a stream that drains toward that point. Not to be confused with watershed. The drainage area may include one or more watersheds.

Drainage basin -- The total area of land from which water drains into a specific river.

Dredging -- Removing material (usually sediments) from wetlands or waterways, usually to make them deeper or wider.

Dry wash -- A streambed that carries water only during and immediately following rainstorms.

Ecosystem -- Recognizable, relatively homogeneous units, including the organisms they contain, their environment, and all the interactions among them.

Eddy -- A circular current of water, usually resulting from an obstruction.

Embankment -- An artificial deposit of material that is raised above the natural surface of the land and used to contain, divert, or store water, support roads or railways, or for other similar purposes.

Energy dissipation -- The loss of kinetic energy of moving water due to internal turbulence, bottom friction, large rocks, debris, or other obstacles that impede flow.

Ephemeral streams -- Streams which flow only in direct response to precipitation and whose channel is at all times above the water table.

Erosion -- Wearing away of rock or soil by the gradual detachment of soil or rock fragments by water, wind, ice, and other mechanical, chemical, or biological forces.

Estuary -- A coastal body of water that is semi-enclosed, openly connected with the ocean, and mixes with freshwater drainage from land.

Fascine - Dormant branch cuttings bound together in cylindrical bundles and placed in shallow trenches on slopes of streambanks.

Flash flood -- A sudden flood of great volume, usually caused by a heavy rain. Also, a flood that crests in a short length of time and is often characterized by high velocity flows.

Floodplain -- Land built of sediment that gets covered with water as a result of the flooding of a nearby stream.

Floodplain (100-year) -- The area adjacent to a stream that is on average inundated once a century.

Flow -- The amount of water passing a particular point in a stream or river, usually expressed in cubic-feet per second (cfs).

Fluvial -- Migrating between main rivers and tributaries. Of or pertaining to streams or Rivers.

Fluvial -- Pertaining to streams or produced by stream action.

Ford -- A shallow place in a body of water, such as a river, where one can cross by walking or riding on an animal or in a vehicle.

Forest canopy -- The cover of branches and foliage formed collectively by the crowns of adjacent trees and other woody growth.

Gabion -- A wire basket or cage that is filled with gravel or cobble and generally used to stabilize stream banks.

Geomorphology -- A branch of both physiography and geology that deals with the form of the earth, the general configuration of its surface, and the changes that take place due to erosion of the primary elements and in the buildup of erosional debris.

Glide -- A section of stream that has little or no turbulence.

Headwater -- Referring to the source of a stream or river.

Hydraulic gradient -- The slope of the water surface. See also stream bed gradient.

Hydraulic radius -- The cross-sectional area of a stream divided by the wetted perimeter.

Hydrograph -- A curve showing stream discharge over time.

Hydrology -- The scientific study of the water of the earth, its occurrence, circulation and distribution, its chemical and physical properties, and its interaction with its environment, including its relationship to living things.

Incised river -- A river that erodes its channel by the process of degradation to a lower base level than existed previously or is consistent with the current hydrology.

Inflow -- Water that flows into a stream, lake, reservoir or forebay during a specified period.

In stream cover -- The layers of vegetation, like trees, shrubs, and overhanging vegetation, that are in the stream or immediately adjacent to the wetted channel.

In stream flows -- (1) Portion of a flood flow that is contained by the channel. (2) A minimum flow requirement to maintain ecological health in a stream.

In stream use -- Use of water that does not require diversion from its natural watercourse. For example, the use of water for navigation, recreation, fish and wildlife, aesthetics, and scenic enjoyment.

Intermittent stream -- Any nonpermanent flowing drainage feature having a definable channel and evidence of scour or deposition. This includes what are sometimes referred to as ephemeral streams if they meet these two criteria.

Invasives - Plants which encroach on other species, taking over a streambank.

Invertebrate drift -- Stream and terrestrial invertebrates that float with the current.

J vane -- In stream structure composed of rocks, constructed for the purpose of reducing shear stress on streambanks and directing flow towards the center of the channel, where the loop of the "J" forms a scour pool over time.

Large woody debris (LWD) -- Pieces of wood larger than 10 feet long and 6 inches in diameter, in a stream channel.

Levee -- An embankment constructed to prevent a river from overflowing (flooding).

Live stakes - Live, rootable, dormant branch cuttings inserted and tamped into the ground on slopes of streambanks.

Log vane - In stream structure composed of logs, rocks and root wads constructed for the purpose of reducing shear stress on streambanks and directing flow towards the center of the channel.

Mainstem -- The principle channel of a drainage system into which other smaller streams or rivers flow.

Mean annual discharge -- Daily mean discharge averaged over a period of years. Mean annual discharge generally fills a channel to about 1/3 of its bankfull depth.

Mean velocity -- The average cross-sectional velocity of water in a stream channel. Surface values typically are much higher that bottom velocities. May be approximated in the field by multiplying the surface velocity, as determined with a float, times 0.8.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: zo2837frm.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
STORMWATER GLOSSARY

PLOT DATE: 06/06/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 134a OF 140

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STREAM RESTORATION GLOSSARY

Meander -- The winding of a stream channel, usually in an erodible alluvial valley. A series of sine-generated curves characterized by curved flow and alternating banks and shoals.
Meander amplitude -- The distance between points of maximum curvature of successive meanders of opposite phase in a direction normal to the general course of the meander belt, measured between centerlines of channels.
Meander belt width -- the distance between lines drawn tangential to the extreme limits of fully developed meanders. Not to be confused with meander amplitude.
Meander length -- The lineal distance down valley between two corresponding points of successive meanders of the same phase.
Morphology -- The form, shape or structure of a stream or organism.
Natural flow -- The flow past a specified point on a natural stream that is unaffected by stream diversion, storage, import, export, return flow, or change in use caused by modifications in land use.
Off-channel area -- Any relatively calm portion of a stream outside of the main flow.
Outfall -- The mouth or outlet of a river, stream, lake, drain or sewer.
Oxbow -- An abandoned meander in a river or stream, caused by cutoff. Used to describe the U-shaped bend in the river or the land within such a bend of a river.
Perennial streams -- Streams which flow continuously.
Point bar -- The convex side of a meander bend that is built up due to sediment deposition.
Pool -- A reach of stream that is characterized by deep low velocity water and a smooth surface.
Pool/riffle ratio -- The ratio of surface area or length of pools to the surface area or length of riffles in a given stream reach; frequently expressed as the relative percentage of each category. Used to describe fish habitat rearing quality.
Probability of exceedence -- The probability that a random flood will exceed a specified magnitude in a given period of time.
Rapids -- A reach of stream that is characterized by small falls and turbulent high velocity water.
Reach -- A section of stream between two defined points.
Refusal - A series of rocks placed across the channel, with the top of the rocks at the existing grade of the channel to maintain the channel invert. Used in conjunction with vanes to prevent scour around the end of the vane structures.
Regime theory -- A theory of channel formation that applies to streams that make a part of their boundaries from their transported sediment load and a portion of their transported sediment load from their boundaries.
Channels are considered in regime or equilibrium when bank erosion and bank formation are equal.
Restoration -- The return of an ecosystem to a close approximation of its condition prior to disturbance.
Riffle -- A reach of stream that is characterized by shallow, fast moving water broken by the presence of rocks and boulders.
Rift -- A shallow or rocky place in a stream, forming either a ford or a rapid.
Riparian area -- An area of land and vegetation adjacent to a stream that has a direct effect on the stream. This includes woodlands, vegetation, and floodplains.
Riparian buffer -- The riparian area and vegetation adjacent to streams, lakes, estuaries, or other waterways, which shall be created, established or preserved, and remain protected.
Riparian habitat -- The aquatic and terrestrial habitat adjacent to streams, lakes, estuaries, or other waterways.
Riparian -- Located on the banks of a stream or other body of water.
Riparian vegetation -- The plants that grow adjacent to a wetland area such as a river, stream, reservoir, pond, spring, marsh, bog, meadow, etc., and that rely upon the hydrology of the associated water body.
Ripple -- (1) A specific bedform found in sand bed streams. (2) Undulations or waves on the surface of flowing water.
Riprap -- Rock or other material with a specific mixture of sizes referred to as a 'gradation', used to stabilize stream or river banks from erosion or to create habitat features in a stream.
River channels -- Natural or artificial open conduits which continuously or periodically contain moving water, or which form a connection between two bodies of water.
River miles -- Miles from the mouth of a river to a specific destination or, for upstream tributaries, from the confluence with the main river to a specific destination.
River reach -- Any defined length of a river.
River stage -- The elevation of the water surface at a specified station above some arbitrary zero datum (level).
Riverine -- Relating to, formed by, or resembling a river including tributaries, streams, brooks, etc.
Riverine habitat -- The aquatic habitat within streams and rivers.
Rock vane - In stream structure composed of rocks, constructed for the purpose of reducing shear stress on streambanks and directing flow towards the center of the channel.
Rock weir -- A structure designed to serve as grade control and to create a diversity of flow velocities while still maintaining adequate sediment transport capacity.
Root wad -- The mass of roots associated with a tree adjacent or in a stream that provides refuge for fish and other aquatic life.
Run (in stream or river) -- A reach of stream characterized by fast flowing low turbulence water.
Runoff -- Water that flows over the ground and reaches a stream as a result of rainfall or snowmelt.
Scour -- The erosive action of running water in streams, which excavates and carries away material from the bed and banks. Scour may occur in both earth and solid rock material and can be classed as general, contraction, or local scour.
Sediment -- Soil or mineral material transported by water or wind and deposited in streams or other bodies of water.
Sedimentation -- (1) The combined processes of soil erosion, entrainment, transport, deposition, and consolidation. (2) Deposition of sediment.
Siltation -- The deposition or accumulation of fine soil particles.
Sinuosity -- The ratio of channel length to direct down valley distance. Also may be expressed as the ratio of down valley slope to channel slope.
Slope -- The ratio of the change in elevation over distance.
Slough -- A shallow backwater inlet that is commonly exposed at low flow or tide.
Stable channel -- A stream channel with the right balance of slope, planform and cross-section to transport both the water and sediment load without net long-term bed or bank sediment deposition or erosion throughout the stream segment.
Stream -- A general term for a body of flowing water; natural water course containing water at least part of the year. In Hydrology, the term is generally applied to the water flowing in a natural channel as distinct from a canal.
Stream channel -- A long narrow depression shaped by the concentrated flow of a stream and covered continuously or periodically by water.
Stream gradient -- A general slope or rate of change in vertical elevation per unit of horizontal distance of the bed, water surface, or energy grade of a stream.
Stream morphology -- The form and structure of streams.
Stream order -- A hydrologic system of stream classification. Each small unbranched tributary is a first order stream. Two first order streams join to make a second order stream. A third order stream has only first and second order tributaries, and so forth.
Stream reach -- An individual segment of stream that has beginning and ending points defined by identifiable features such as where a tributary confluence changes the channel character or order.
Streambank erosion -- The removal of soil from streambanks by flowing water.
Streambank stabilization -- The lining of streambanks with riprap, matting, etc., or other measures intended to control erosion.
Streambed -- (1) The unvegetated portion of a channel boundary below the base flow level. (2) The channel through which a natural stream of water runs or used to run, as a dry streambed.
Stream flow -- The rate at which water passes a given point in a stream or river, usually expressed in cubic feet per second (cfs).
Substrate -- (1) The composition of a streambed, including either mineral or organic materials. (2) Material that forms an attachment media for organisms.
Surface erosion -- The detachment and transport of soil particles by wind, water, or gravity. Or a groups of processes whereby soil materials are removed by running water, waves and currents, moving ice, or wind.
Surface water -- All waters whose surface is naturally exposed to the atmosphere, for example, rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc., and all springs, wells,
or other collectors directly influenced by surface water.
Suspended sediment -- Sediment suspended in a fluid by the upward components of turbulent currents, moving ice, or wind.
Suspended sediment load -- That portion of a stream's total sediment load which is transported within the body of water and has very little contact the stream bed.
Tailwater -- (1) The area immediately downstream of a reservoir. (2) Applied irrigation water that runs off the end of a field.
Thalweg -- (1) The lowest thread along the axial part of a valley or stream channel. (2) A subsurface, ground-water stream percolating beneath and in the general direction of a surface stream course or valley. (3) The middle, chief, or deepest part of a navigable channel or waterway.
Torrent -- (1) A turbulent, swift-flowing stream. (2) A heavy downpour; a deluge.
Tractive force - -The drag on a stream bed or bank caused by passing water which tends to pull soil particles along with the stream flow.
Tree revetment - Installation of trees attached to each other along the streambank to trap sediment, provide habitat diversity and protect the bank.
Tributary -- A stream that flows into another stream, river, or lake.
Turbidity -- A measure of the content of suspended matter that interferes with the passage of light through the water or in which visual depth is restricted. Suspended sediments are only one component of turbidity.
Waterfall -- A sudden, nearly vertical drop in a stream, as it flows over rock.
Watershed -- An area of land that's total surface drainage flows to a single point in a stream.
Watershed management -- The analysis, protection, development, operation or maintenance of the land, vegetation and water resources of a drainage basin for the conservation of all its resources for the benefit of its residents.
Watershed restoration -- Improving current conditions of watersheds to restore degraded fish habitat and provide long-term protection to aquatic and riparian resources.
Wattles - Bunches of dormant branch cuttings bound together in cylindrical bundles and embedded in streambanks.
Wetted perimeter -- The length of the wetted contact between a stream of flowing water and the stream bottom in a vertical plane at right angles to the direction of flow.
Whips - Any dormant woody branch cutting (usually flexible) with a diameter of less than 3 inches.
Woody debris -- Referring to wood in streams.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: zo2837frm.dgn
PROJECT LEADER: GAE
DESIGNED BY: SAR
STORMWATER GLOSSARY

PLOT DATE: 06/06/2003
DRAWN BY: MBL
CHECKED BY: WCH
SHEET 134b OF 140

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

INDEX OF SHEETS

[redacted]

135. **EROSION CONTROL TITLE SHEET**
136. **EROSION CONTROL PLAN - PHASE I**
137. **EROSION CONTROL PLAN - PHASE II**
138. **EROSION CONTROL PLAN - PHASE III**
139.–140. **EROSION CONTROL DETAILS**

BEGINNING AT A POINT APPROXIMATELY 1142.90 METERS WEST OF THE ENOSBURG-BERKSHIRE TOWN LINE AND EXTENDING EASTERLY 397.47 METERS

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REPLACEMENT OF BRIDGE # 26 OVER THE TROUT RIVER AND NECESSARY ROADWAY APPROACHES INCLUDING A NEW INTERSECTION FOR ACCESS TO T.H. #42

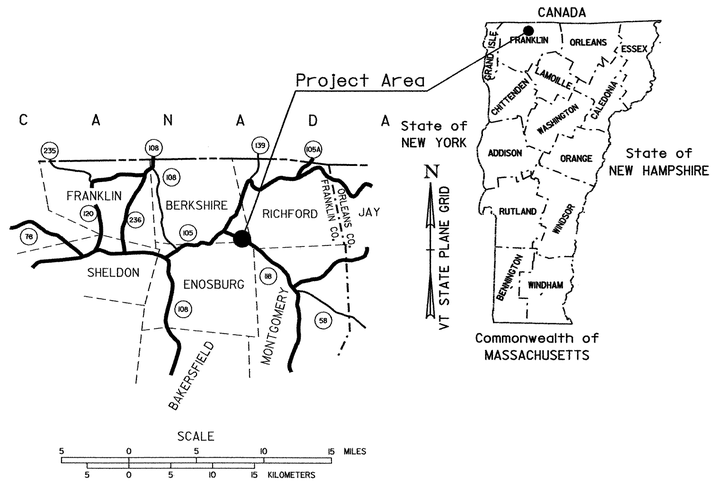
LENGTH OF STRUCTURE 45.40 METERS
LENGTH OF ROADWAY 352.07 METERS
LENGTH OF PROJECT 397.47 METERS

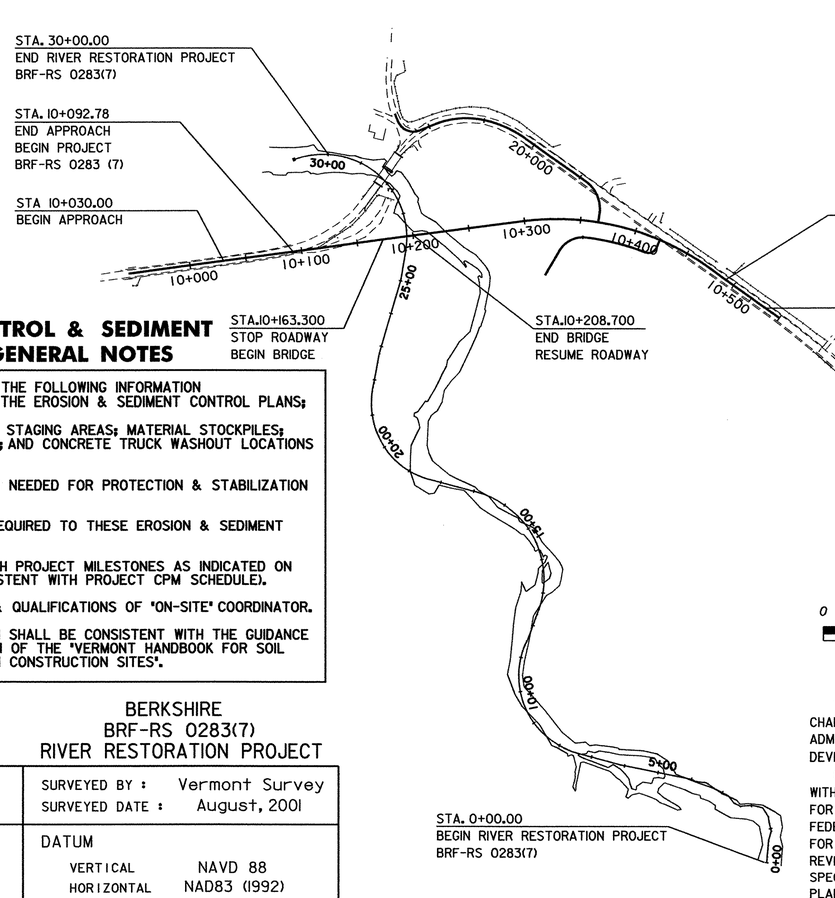
BEGINNING AT A POINT APPROXIMATELY 350 FEET DOWNSTREAM OF EXISTING BRIDGE #26 AND EXTENDING UPSTREAM 3190 FEET.

WORK TO BE PERFORMED UNDER THE RIVER RESTORATION PORTION OF THIS PROJECT INCLUDES STABILIZATION OF THE TROUT RIVER AND ESTABLISHMENT OF A RIPARIAN BUFFER ZONE.

LENGTH OF RIVER RESTORATION PROJECT 3190 FEET

PROPOSED IMPROVEMENT
TOWN OF BERKSHIRE
COUNTY OF FRANKLIN
VERMONT ROUTE 118 (F.A.S.)





TRAFFIC DATA	
1997 ADT = 1760	2017 ADT = 2390
DHV = 245	DHV = 335
ADTT = 130	ADTT = 150
% T = 5	% T = 5
% D = 56	
V = 80 km/h	
1997-2017(20YR) 18 K ESAL = 1,759,000	
FUNCTIONAL CLASSIFICATION : MAJOR COLLECTOR	

EROSION CONTROL & SEDIMENT CONTROL GENERAL NOTES

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION FOR APPROVAL AND INCLUSION IN THE EROSION & SEDIMENT CONTROL PLANS;

LOCATION OF WASTE, BORROW, AND STAGING AREAS; MATERIAL STOCKPILES; REFUELING & MAINTENANCE AREAS; AND CONCRETE TRUCK WASHOUT LOCATIONS (ATTACH A MAP IF NECESSARY).

DISCUSSION & ADDITIONAL DETAILS NEEDED FOR PROTECTION & STABILIZATION OF THE SITES LISTED ABOVE.

PROPOSED MODIFICATIONS IF/AS REQUIRED TO THESE EROSION & SEDIMENT CONTROL PLANS.

PROPOSED DATED ASSOCIATED WITH PROJECT MILESTONES AS INDICATED ON THE SEQUENCE OF EVENTS (CONSISTENT WITH PROJECT CPM SCHEDULE).

NAMES, PHONE NUMBER, ADDRESS, & QUALIFICATIONS OF "ON-SITE" COORDINATOR.

THE ABOVE REQUIRED INFORMATION SHALL BE CONSISTENT WITH THE GUIDANCE PROVIDED IN THE LATEST REVISION OF THE "VERMONT HANDBOOK FOR SOIL EROSION & SEDIMENT CONTROL ON CONSTRUCTION SITES".

CONVENTIONAL SYMBOLS

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

BERKSHIRE BRF-RS 0283(7) BRIDGE PROJECT	
SURVEYED BY :	R. Hayes
SURVEYED DATE :	1985
DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

BERKSHIRE BRF-RS 0283(7) RIVER RESTORATION PROJECT	
SURVEYED BY :	Vermont Survey
SURVEYED DATE :	August, 2001
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD83 (1992)

0 100 200 300
SCALE IN METERS
(1:2500)

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROJECT 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 & SEDIMENT CONTROL PLANS

VAOT Metric

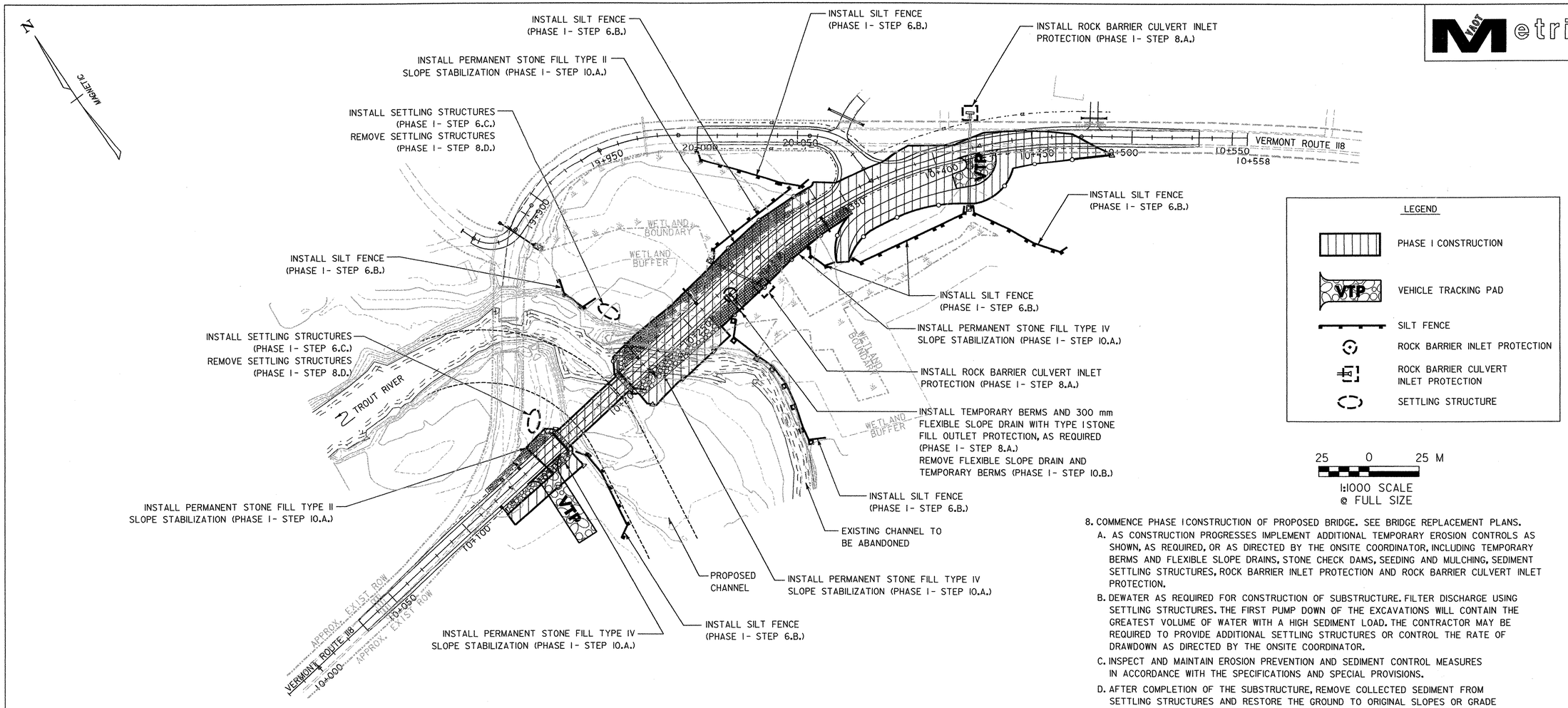
UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

DIRECTOR OF PROJECT DEVELOPMENT
APPROVED _____ DATE _____

PROJECT MANAGER :

PROJECT NAME : BERKSHIRE
PROJECT NUMBER : BRF-RS 0283(7)

SHEET 135 OF 140 SHEETS



1. CONSTRUCT TWO (2) VEHICLE TRACKING PADS AS SHOWN. SEE CONSTRUCTION SITE PLAN FOR DETAILS. *SEE DETAIL ON SHEET 110.*

2. DELINEATE BOUNDARIES OF EXISTING VEGETATED RIPARIAN BUFFER ZONES AND WETLANDS TO REMAIN UNDISTURBED (FOR THE ENTIRE PROJECT SITE) USING ORANGE SNOW FENCE, AS DIRECTED BY THE ONSITE COORDINATOR, AND AS SHOWN ON THE CONSTRUCTION PLANS AND THE PLANTING PLAN.

3. ESTABLISH AND DELINEATE LOCATIONS OF TOPSOIL STOCKPILES, STAGING AREAS, EQUIPMENT AND MATERIAL STORAGE AREAS, AND REFUELING AND MAINTENANCE AREAS USING ORANGE SNOW FENCE, AS APPROVED BY THE ENGINEER, THE ONSITE COORDINATOR AND THE DISTRICT #6 ACT 250 COMMISSIONER. VEHICLE AND EQUIPMENT STORAGE AREAS OR AREAS ADJACENT TO CONSTRUCTION TRAILER OR OTHER HIGH TRAFFIC AREAS WILL BE COVERED WITH GEOTEXTILE FABRIC AND 300 mm OF GRAVEL. FOLLOWING COMPLETION OF CONSTRUCTION, ALL NON-NATIVE MATERIALS WILL BE REMOVED FROM THE STAGING AREA. ERODIBLE MATERIALS STOCKPILED WITHIN THE MATERIAL STORAGE AREAS WILL BE ISOLATED WITH FILTER FABRIC. SOIL STOCKPILED ON THE SITE WILL BE SEEDED AND MULCHED.

4. CLEAR THE SITE AS REQUIRED FOR THE RIVER RESTORATION PORTION OF THE PROJECT AND PHASE I OF THE BRIDGE REPLACEMENT PORTION OF THE PROJECT. STAGING AREAS SHALL BE CLEARED BUT NOT GRUBBED. TREES AND BRUSH SHALL BE CUT AS CLOSE TO GRADE AS POSSIBLE, BUT NOT STUMPED.

EROSION PREVENTION AND SEDIMENT CONTROL - PHASE I

5. COMMENCE RIVER RESTORATION CONSTRUCTION AND COMPLETE RIVER RESTORATION CONSTRUCTION SEQUENCE PHASE I- STEPS 2 THROUGH 6. SEE RIVER RESTORATION CONSTRUCTION SEQUENCE PLAN.

6. INSTALL PHASE I TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES, AS SHOWN, AS REQUIRED, OR AS DIRECTED BY THE ONSITE COORDINATOR, IN THE FOLLOWING ORDER:

   A. DIVERSION STRUCTURES (DIVERSION DIKES OR CHANNELS).

   B. FILTER BARRIERS (SILT FENCE OR GEOSYNTHETIC BARRIERS - SEE EROSION CONTROL DETAIL SHEETS FOR CONSTRUCTION NOTES AND DETAILS).

   C. SETTLING STRUCTURES (SINGLE CHAMBER TEMPORARY SEDIMENT TRAPS OR SEDIMENT CONTAINMENT FILTER BAGS - SEE EROSION CONTROL DETAIL SHEETS FOR CONSTRUCTION NOTES AND DETAILS).

7. GRUB THE PHASE I SITE. STUMPS, EXCESS SOILS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF IN A LOCATION APPROVED BY THE ONSITE COORDINATOR, THE AGENCY OF NATURAL RESOURCES, THE VTRANS BIOLOGIST AND THE VTRANS ARCHEOLOGIST.

8. COMMENCE PHASE I CONSTRUCTION OF PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS.
   A. AS CONSTRUCTION PROGRESSES IMPLEMENT ADDITIONAL TEMPORARY EROSION CONTROLS AS SHOWN, AS REQUIRED, OR AS DIRECTED BY THE ONSITE COORDINATOR, INCLUDING TEMPORARY BERMS AND FLEXIBLE SLOPE DRAINS, STONE CHECK DAMS, SEEDING AND MULCHING, SEDIMENT SETTLING STRUCTURES, ROCK BARRIER INLET PROTECTION AND ROCK BARRIER CULVERT INLET PROTECTION.
   B. DEWATER AS REQUIRED FOR CONSTRUCTION OF SUBSTRUCTURE. FILTER DISCHARGE USING SETTLING STRUCTURES. THE FIRST PUMP DOWN OF THE EXCAVATIONS WILL CONTAIN THE GREATEST VOLUME OF WATER WITH A HIGH SEDIMENT LOAD. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE ADDITIONAL SETTLING STRUCTURES OR CONTROL THE RATE OF DRAWDOWN AS DIRECTED BY THE ONSITE COORDINATOR.
   C. INSPECT AND MAINTAIN EROSION PREVENTION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE SPECIFICATIONS AND SPECIAL PROVISIONS.
   D. AFTER COMPLETION OF THE SUBSTRUCTURE, REMOVE COLLECTED SEDIMENT FROM SETTLING STRUCTURES AND RESTORE THE GROUND TO ORIGINAL SLOPES OR GRADE AS SHOWN ON THE CONSTRUCTION DRAWINGS.
   E. DISPOSE OF COLLECTED SEDIMENT AND OTHER POLLUTANTS IN A MANNER APPROVED BY THE ONSITE COORDINATOR THAT WILL NOT RESULT IN SEDIMENTS AND POLLUTANTS ENTERING WATERS OF THE STATE.

9. COMPLETE RIVER RESTORATION CONSTRUCTION SEQUENCE PHASE I- STEP 9 AND STEP 10.

10. COMPLETE PHASE I CONSTRUCTION OF THE PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS.

   A. PERMANENTLY AND IMMEDIATELY STABILIZE ALL FINISHED GRADES AS EARTHWORK IS COMPLETED INCLUDING CHANNEL LININGS, SEEDING AND MULCHING (PERMANENT TURF ESTABLISHMENT) AND PERMANENT STONE FILL FOR SLOPE STABILIZATION.

   B. REMOVE TEMPORARY BERMS AND FLEXIBLE SLOPE DRAIN FOLLOWING COMPLETION OF PERMANENT STONE FILL FOR SLOPE STABILIZATION, AS SHOWN.

11. AN ALTERNATE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR (PRIOR TO THE START OF CONSTRUCTION) FOR APPROVAL BY THE ENGINEER. THE VTRANS DIRECTOR OF PROGRAM DEVELOPMENT AND THE AGENCY OF NATURAL RESOURCES. IF AN ALTERNATE PLAN IS SUBMITTED, CONSTRUCTION WILL NOT BE ALLOWED UNTIL WRITTEN APPROVAL IS OBTAINED FROM ALL AFOREMENTIONED ENTITIES.

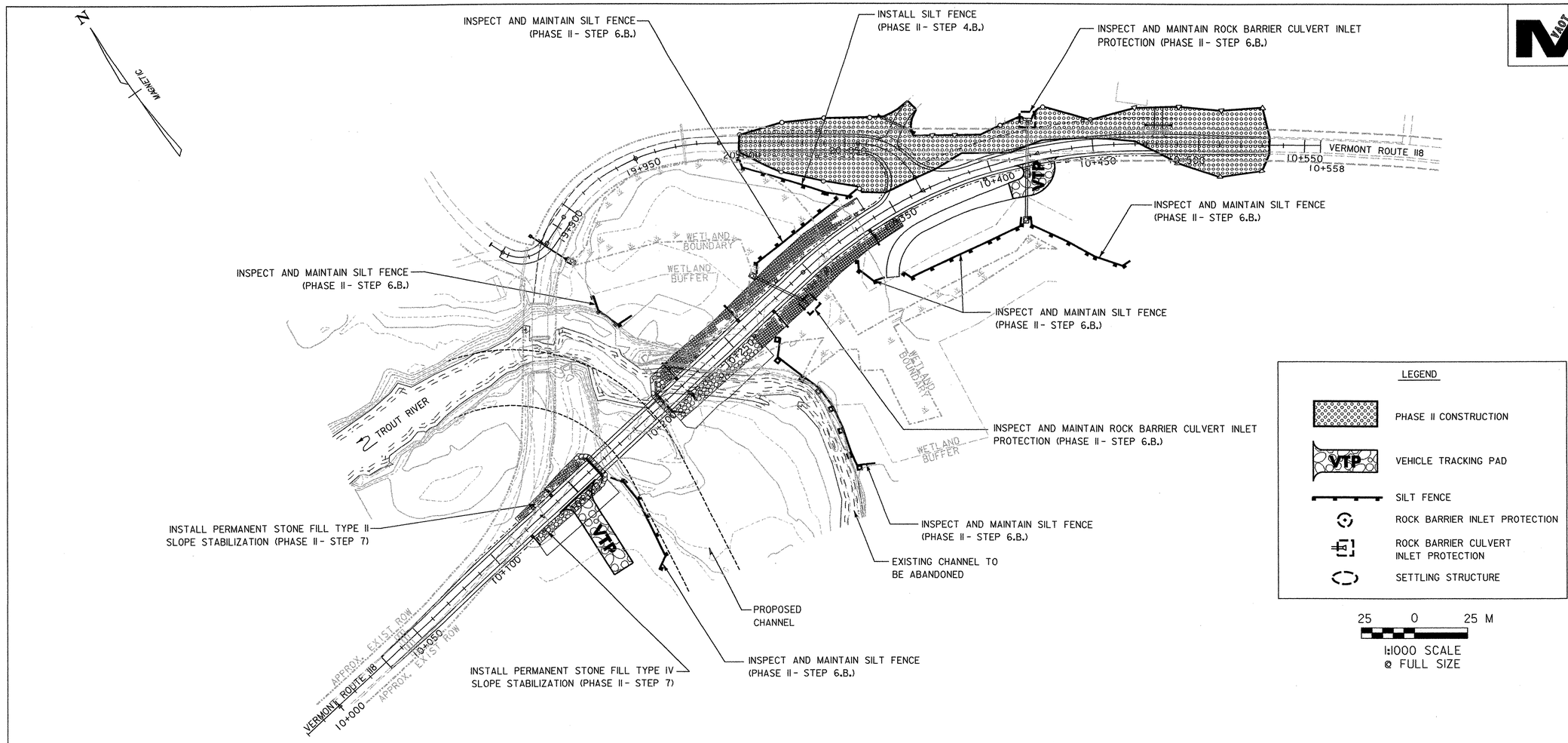
12. FOR ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL NOTES SEE EROSION CONTROL PLAN 4.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283 (7)

FILE NAME: ...\02837ESC1.ptf
PROJECT LEADER: GAE
DESIGNED BY: SAR
PLOT DATE: 08/26/2003
DRAWN BY: PZA
CHECKED BY: WCH
EROSION CONTROL PLAN 1
SHEET 136 OF 140

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EROSION PREVENTION AND SEDIMENT CONTROL – PHASE II

1. AN ALTERNATE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR (PRIOR TO THE START OF CONSTRUCTION) FOR APPROVAL BY THE ENGINEER, THE VTRANS DIRECTOR OF PROGRAM DEVELOPMENT AND THE AGENCY OF NATURAL RESOURCES. IF AN ALTERNATE PLAN IS SUBMITTED, CONSTRUCTION WILL NOT BE ALLOWED UNTIL WRITTEN APPROVAL IS OBTAINED FROM ALL AFOREMENTIONED ENTITIES.

2. TRANSFER TRAFFIC TO PROPOSED BRIDGE AND COMMENCE PHASE II CONSTRUCTION. SEE THE TRAFFIC CONTROL PLANS FOR LIMITS AND DETAILS OF PHASE II WORK.

3. CLEAR THE SITE AS REQUIRED FOR PHASE II AND PHASE III OF THE BRIDGE REPLACEMENT PORTION OF THE PROJECT.

4. INSTALL PHASE II TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES, AS SHOWN, AS REQUIRED, OR AS DIRECTED BY THE ONSITE COORDINATOR, IN THE FOLLOWING ORDER:

   A. DIVERSION STRUCTURES (DIVERSION DIKES OR CHANNELS).

   B. FILTER BARRIERS (SILT FENCE OR GEOSYNTHETIC BARRIERS - SEE EROSION CONTROL DETAIL SHEETS FOR CONSTRUCTION NOTES AND DETAILS).

5. GRUB THE PHASE II SITE. STUMPS, EXCESS SOILS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF IN A LOCATION APPROVED BY THE ONSITE COORDINATOR, THE AGENCY OF NATURAL RESOURCES, THE VTRANS BIOLOGIST AND THE VTRANS ARCHEOLOGIST.

6. COMPLETE PHASE II CONSTRUCTION OF PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS.

   A. AS CONSTRUCTION PROGRESSES IMPLEMENT ADDITIONAL TEMPORARY EROSION CONTROLS AS SHOWN, AS REQUIRED, OR AS DIRECTED BY THE ONSITE COORDINATOR, INCLUDING TEMPORARY BERMS AND FLEXIBLE SLOPE DRAINS, STONE CHECK DAMS, SEEDING AND MULCHING, SEDIMENT SETTLING STRUCTURES, ROCK BARRIER INLET PROTECTION AND ROCK BARRIER CULVERT INLET PROTECTION.

   B. INSPECT AND MAINTAIN EROSION PREVENTION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE SPECIFICATIONS AND SPECIAL PROVISIONS.

   C. DISPOSE OF COLLECTED SEDIMENT AND OTHER POLLUTANTS IN A MANNER APPROVED BY THE ENGINEER THAT WILL NOT RESULT IN SEDIMENTS AND POLLUTANTS ENTERING WATERS OF THE STATE.

7. PERMANENTLY AND IMMEDIATELY STABILIZE ALL FINISHED GRADES AS EARTHWORK IS COMPLETED INCLUDING CHANNEL LININGS, SEEDING AND MULCHING (PERMANENT TURF ESTABLISHMENT) AND PERMANENT STONE FILL FOR SLOPE STABILIZATION.

8. FOR ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL NOTES SEE EROSION CONTROL PLAN 4.

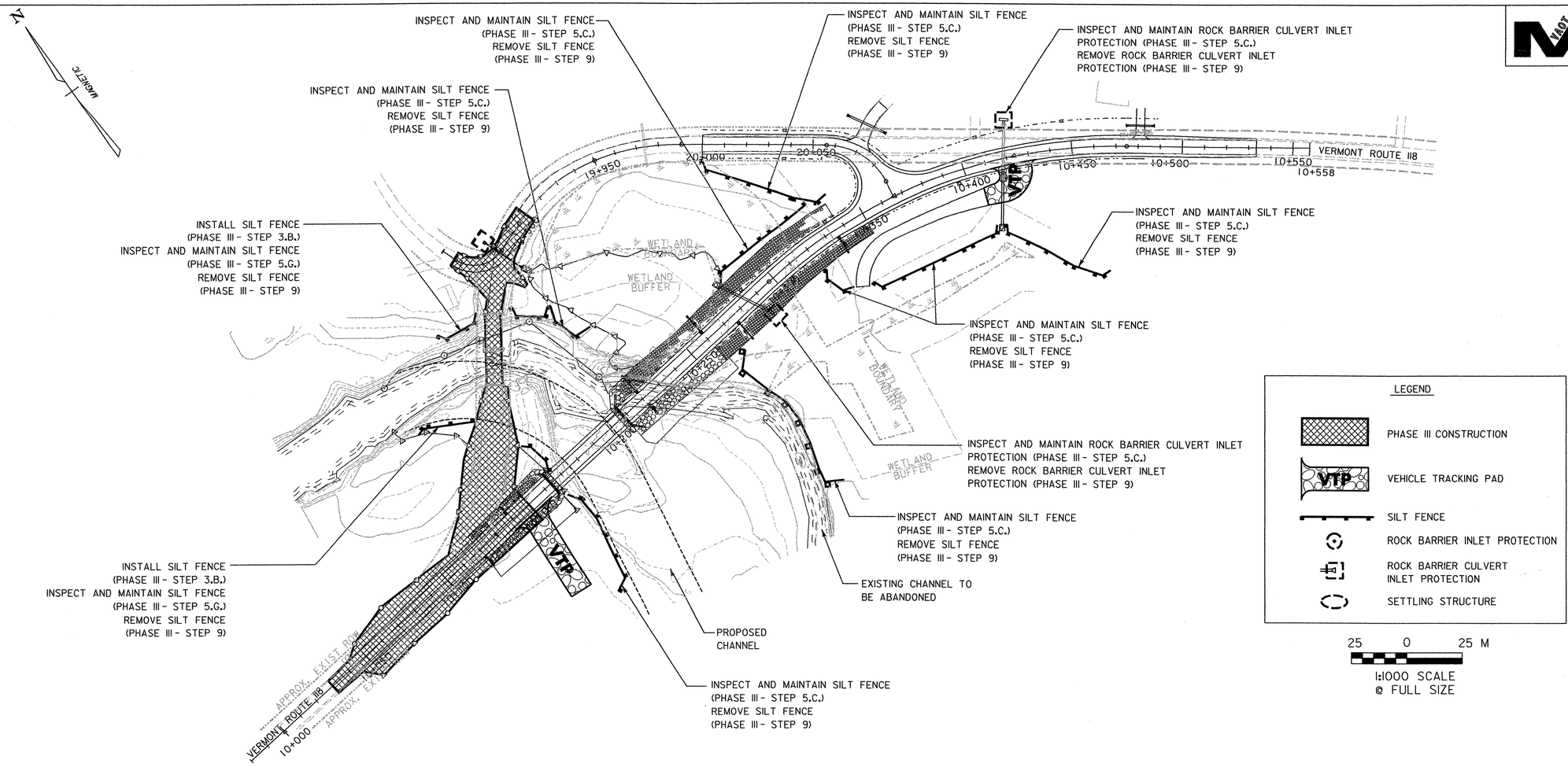
Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283 (7)

FILE NAME: ...\02837ESC2.p+f
PROJECT LEADER: GAE
DESIGNED BY: SAR
EROSION CONTROL PLAN 2

PLOT DATE: 08/26/2003
DRAWN BY: PZA
CHECKED BY: WCH
SHEET 137 OF 140

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EROSION PREVENTION AND SEDIMENT CONTROL - PHASE III

1. AN ALTERNATE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR (PRIOR TO THE START OF CONSTRUCTION) FOR APPROVAL BY THE ENGINEER, THE VTRANS DIRECTOR OF PROGRAM DEVELOPMENT AND THE AGENCY OF NATURAL RESOURCES. IF AN ALTERNATE PLAN IS SUBMITTED, CONSTRUCTION WILL NOT BE ALLOWED UNTIL WRITTEN APPROVAL IS OBTAINED FROM ALL AFOREMENTIONED ENTITIES.

2. TRANSFER TRAFFIC AND COMMENCE PHASE III CONSTRUCTION. SEE THE TRAFFIC CONTROL PLANS FOR LIMITS AND DETAILS OF PHASE III WORK.

3. INSTALL PHASE III TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES, AS SHOWN, AS REQUIRED, OR AS DIRECTED BY THE ONSITE COORDINATOR, IN THE FOLLOWING ORDER:

   A. DIVERSION STRUCTURES (DIVERSION DIKES OR CHANNELS).

   B. FILTER BARRIERS (SILT FENCE OR GEOSYNTHETIC BARRIERS - SEE EROSION CONTROL DETAIL SHEETS FOR CONSTRUCTION NOTES AND DETAILS).

   C. SETTLING STRUCTURES (SINGLE CHAMBER TEMPORARY SEDIMENT TRAPS OR SEDIMENT CONTAINMENT FILTER BAGS - SEE EROSION CONTROL DETAIL SHEETS FOR CONSTRUCTION NOTES AND DETAILS).

4. GRUB THE PHASE III SITE. STUMPS, EXCESS SOILS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF IN A LOCATION APPROVED BY THE ONSITE COORDINATOR, THE AGENCY OF NATURAL RESOURCES, THE VTRANS BIOLOGIST AND THE VTRANS ARCHEOLOGIST.

5. COMPLETE PHASE III CONSTRUCTION OF PROPOSED BRIDGE. SEE BRIDGE REPLACEMENT PLANS.

   A. AS CONSTRUCTION PROGRESSES IMPLEMENT ADDITIONAL TEMPORARY EROSION CONTROLS AS SHOWN, AS REQUIRED, OR AS DIRECTED BY THE ONSITE COORDINATOR, INCLUDING TEMPORARY BERMS AND FLEXIBLE SLOPE DRAINS, STONE CHECK DAMS, SEEDING AND MULCHING, SEDIMENT SETTLING STRUCTURES, ROCK BARRIER INLET PROTECTION AND ROCK BARRIER CULVERT INLET PROTECTION.

   B. DEWATER AS REQUIRED. FILTER DISCHARGE USING SETTLING STRUCTURES.

   C. INSPECT AND MAINTAIN EROSION PREVENTION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE SPECIFICATIONS AND SPECIAL PROVISIONS.

   D. DISPOSE OF COLLECTED SEDIMENT AND OTHER POLLUTANTS IN A MANNER APPROVED BY THE ENGINEER THAT WILL NOT RESULT IN SEDIMENTS AND POLLUTANTS ENTERING WATERS OF THE STATE.

6. COMPLETE RIVER RESTORATION CONSTRUCTION SEQUENCE PHASE II - STEP 3 THROUGH STEP 6. SEE RIVER RESTORATION CONSTRUCTION SEQUENCE PLAN.

7. PERMANENTLY AND IMMEDIATELY STABILIZE ALL FINISHED GRADES AS EARTHWORK IS COMPLETED INCLUDING CHANNEL LININGS, SEEDING AND MULCHING (PERMANENT TURF ESTABLISHMENT) AND PERMANENT STONE FILL FOR SLOPE STABILIZATION.

8. UPON COMPLETION OF ALL EARTHWORK (FINAL GRADING):

   A. ANY ACCESS ROAD, PARKING AREA OR TRAIL USED FOR CONSTRUCTION ACCESS, MATERIAL STOCKPILING, WORKING AREAS OR OTHER CONSTRUCTION RELATED ACTIVITIES SHALL BE ROTOTILLED (IF REQUIRED) TO REVERSE COMPACTION AND RETURNED TO ORIGINAL OR BETTER CONDITION.

   B. COMPLETE FINAL STABILIZATION OF THE SITE, INCLUDING CHANNEL LININGS, SEEDING AND MULCHING (PERMANENT TURF ESTABLISHMENT), CHECK DAMS AND OUTLET PROTECTION.

9. REMOVE ALL TEMPORARY MEASURES UPON PROJECT COMPLETION OR FINAL SITE STABILIZATION AS APPROVED BY THE ENGINEER, WHICHEVER OCCURS LAST, AND STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF THE TEMPORARY MEASURES.

10. FOR ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL NOTES SEE EROSION CONTROL PLAN 4.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283 (7)

FILE NAME: ...\02837ESC3.p+f
PROJECT LEADER: GAE
DESIGNED BY: SAR
EROSION CONTROL PLAN 3

PLOT DATE: 08/26/2003
DRAWN BY: PZA
CHECKED BY: WCH
SHEET 138 OF 140

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EROSION PREVENTION AND SEDIMENT CONTROL PLAN GENERAL NOTES

1. CONTRACTOR'S RESPONSIBILITIES FOR EROSION PREVENTION AND SEDIMENT CONTROL

a. Prevent or minimize soil erosion of disturbed land and prevent the discharge of sediment and other construction related pollutants to waters of the State.
b. Furnish, install, inspect and maintain erosion and sediment control materials in conjunction with the general clearing, grading and excavation of the site.
c. Establish limits of soil disturbance; location(s) of topsoil stockpiles; construction staging areas; storage areas; refueling and maintenance areas.
d. Establish and mark boundaries for any undisturbed riparian buffer zones and maintain all existing streams and riparian buffer zones in their natural condition.
e. Locate areas for disposal of stumps, excess soils and collected sediment and other pollutants, and dispose of these materials in a manner that will not result in sediments and pollutants entering waters of the State.
f. Sequence construction activities to minimize the extent of disturbed soils left open to erosion at any given time as detailed in the construction phasing and erosion and sediment control plans.
g. Avoid all land disturbances within 50 feet of all water bodies, measured from the top of bank, and wetlands, except where necessary for the reconstruction of existing roads and the construction of bridges, stream crossings, and components of stormwater management systems which by necessity must be located in this zone.
h. Maintain and preserve to the extent possible the site's natural drainage ways that convey stormwater to streams, rivers, lakes, ponds and wetlands.
i. Prevent off-site stormwater from entering areas of disturbed soil on-site.
j. Prevent the off-site discharge of sediment mobilized on the construction site, including off-site tracking of sediment onto paved public or private roadways by construction vehicles.
k. Dispose of sediments and other pollutants which have been collected and removed in the course of stormwater treatment in a manner that will not result in the sediments and pollutants entering waters of the State. Disposal sites require relatively level terrain with an isolation distance of at least 100 feet from any surface waters, including wetlands.

2. LIMITATIONS AND PROHIBITIONS

a. The contractor shall schedule earthwork completion, site stabilization, establishment of perennial cover and installation of non-vegetative protection measures no later than October 15. To assure establishment of vegetated cover, seeding and mulching activities shall be completed by September 15.

   For projects extending beyond October 15, limit exposure of soils and minimize additional earthworks. Any proposed soil disturbance and earthworks between October 15 and May 1 will require development of a special winter erosion and sediment control plan addressing the specific concerns of winter construction. This plan must be filed with, and approved by, the permitting authority by September 15. If it is determined by the engineer or the permitting authority that winter construction would present a significant risk to water quality, the contractor will need to request a winter shutdown in accordance with the provisions of the contract documents.
b. Discharges of any material other than stormwater, such as vehicle and equipment maintenance spills, fuels, wash water, construction debris, oil, wet concrete (including washout water from concrete batch trucks or equipment used to mix concrete), and other substances, are prohibited.
c. No silt fence shall be utilized in areas of concentrated flows, such as channels or ditches.
d. Disposal of sediment in a wetland or any corrective action undertaken to remove sediment from a wetland is prohibited.
e. The failure to promptly abate the discharge of sediment or any other waste which causes a visible discoloration of surface waters (including wetlands), or is found to be exceeding water quality standards based on monitoring, is prohibited.

3. GENERAL CONSTRUCTION NOTES

a. See Erosion Control Plan 1 through Erosion Control Plan 3 for construction notes and phasing.
b. Vehicle and equipment storage areas or areas adjacent to construction trailer or other high traffic areas shall be covered with geotextile fabric and 12 inches of gravel. Following completion of construction, all non-native materials shall be removed from the staging area. Compacted, rutted, or otherwise disturbed soils shall be tilled, raked, seeded and mulched.
c. Erodible materials stockpiled within the material storage areas shall be isolated with filter fabric. Soil stockpiled on the site shall be seeded and mulched.
d. All disturbed areas shall be seeded and mulched within 24 hours of being stripped or backfilled and graded.
e. Stockpiles shall be mulched if they will be undisturbed for more than 24 hours.

4. INSPECTION

a. The onsite coordinator shall inspect all erosion and sediment control structures and measures, at least once every seven (7) calendar days and no later than 24 hours after any storm event which generates a discharge of stormwater runoff from the construction site, to ensure they are operating correctly.
b. The onsite coordinator shall inspect any sites that have been temporarily or finally stabilized a minimum of once a month.
c. The contractor shall inspect channel linings, embankments and channel beds daily for any sign of erosion.
d. The contractor shall inspect discharge points daily to visually assess whether erosion control measures are effective in preventing impacts to receiving waters.
e. In the case of soil disturbance or earthwork occurring over the winter period (Oct. 15 to May 1), daily monitoring of all erosion prevention, sediment control and construction activities shall be required in areas where such soil disturbance, earthwork or activities are ongoing. In areas that have been shut down for the winter, the onsite coordinator shall inspect erosion prevention and sediment control devices in the field monthly, no later than 24 hours after any storm event which generates a discharge of stormwater runoff from the construction site, or during a thaw.
   The contractor shall be directed to make repairs or install additional measures as necessary.
f. The onsite coordinator and the contractor shall inspect for the evidence of, or the potential for, sediment leaving from all disturbed areas or material storage areas.
g. An Erosion and Sediment Control Monitoring Report form completed by the onsite coordinator stating the date of review and describing the erosion and sediment control and stormwater management measures reviewed, the effectiveness of their operation, any deficiencies, and corrective action to be undertaken shall be prepared after each review. A copy shall be provided to the engineer and maintained on file at the project site.

5. MAINTENANCE

a. The contractor shall keep all seeded areas watered and in good condition, re-seeding if and when necessary until a good, healthy, uniform growth is established over the entire area seeded.
b. The contractor shall repair all erosion and sediment control structures and measures that are determined to be failing, or not functioning as designed, within 24 hours of inspection.
c. The contractor shall remove accumulated sediment from containment systems and other sediment control structures as required, such that performance of these systems is not compromised or in any way impaired.
d. The contractor shall remove all debris and repair all damages caused by soil erosion or construction equipment at or before the end of each working day.

6. CORRECTIVE ACTION

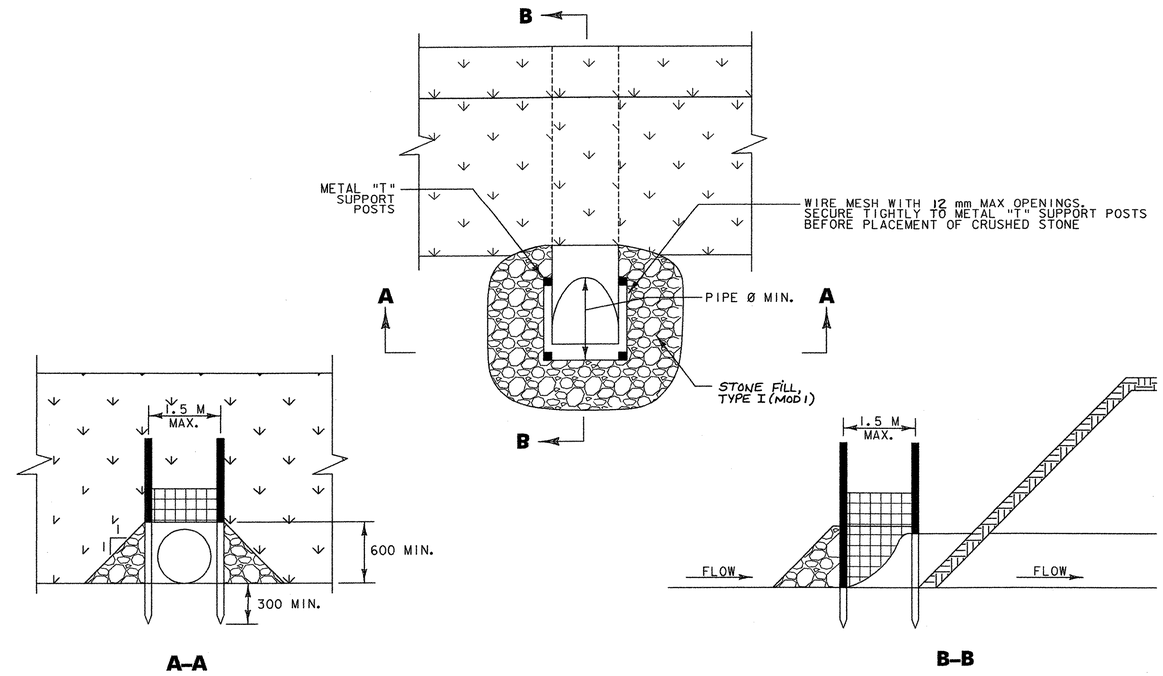
a. The contractor shall notify the resident engineer as soon as possible, but within 24 hours, of any evidence of measurable amounts of sediment or sediment-laden water leaving the construction site or any visible discoloration of surface waters (including wetlands).
b. The contractor shall take immediate action to correct the discharge, including halting or reducing construction activities as necessary until the discharge and/or the condition is fully corrected.

Dufresne-Henry

PROJECT NAME: TROUT RIVER RESTORATION
PROJECT NUMBER: BRF-RS 0283(7)

FILE NAME: Erosion ControlDetails.dgn PLOT DATE: 08/27/2003
DESIGN SUPERVISOR: GAE DRAWN BY: MBL
DESIGNED BY: SAR CHECKED BY: WCH
EROSION CONTROL PLAN 4 SHEET 139a OF 140

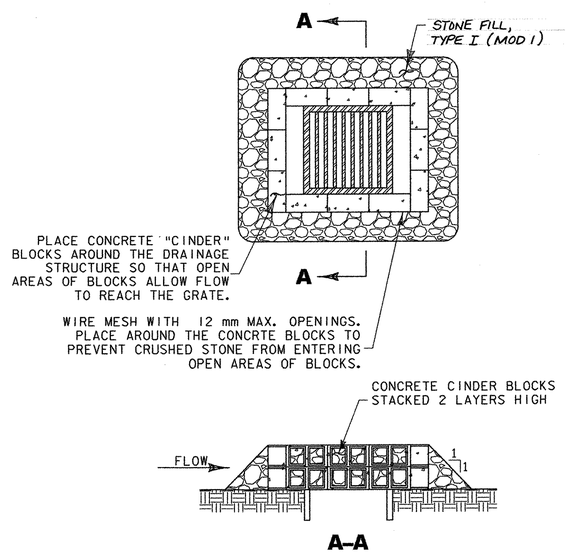
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ROCK BARRIER CULVERT INLET PROTECTION

NOT TO SCALE

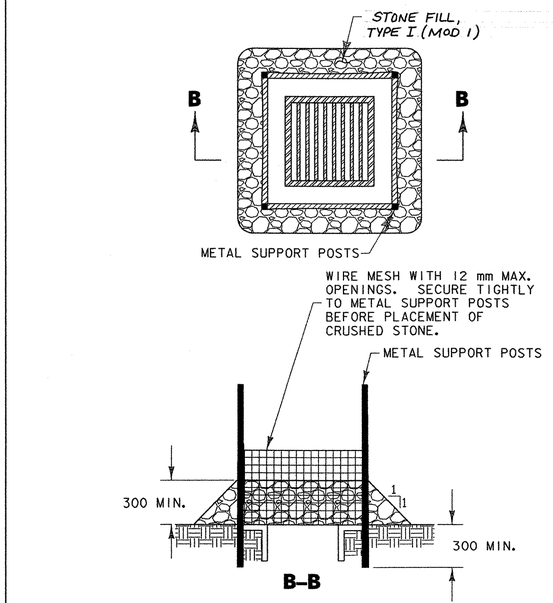
SEE SPECIAL PROVISION 613.10 (MOD 1)



ROCK BARRIER INLET PROTECTION – PAVED AREAS

NOT TO SCALE

SEE SPECIAL PROVISION 613.10 (MOD 1)



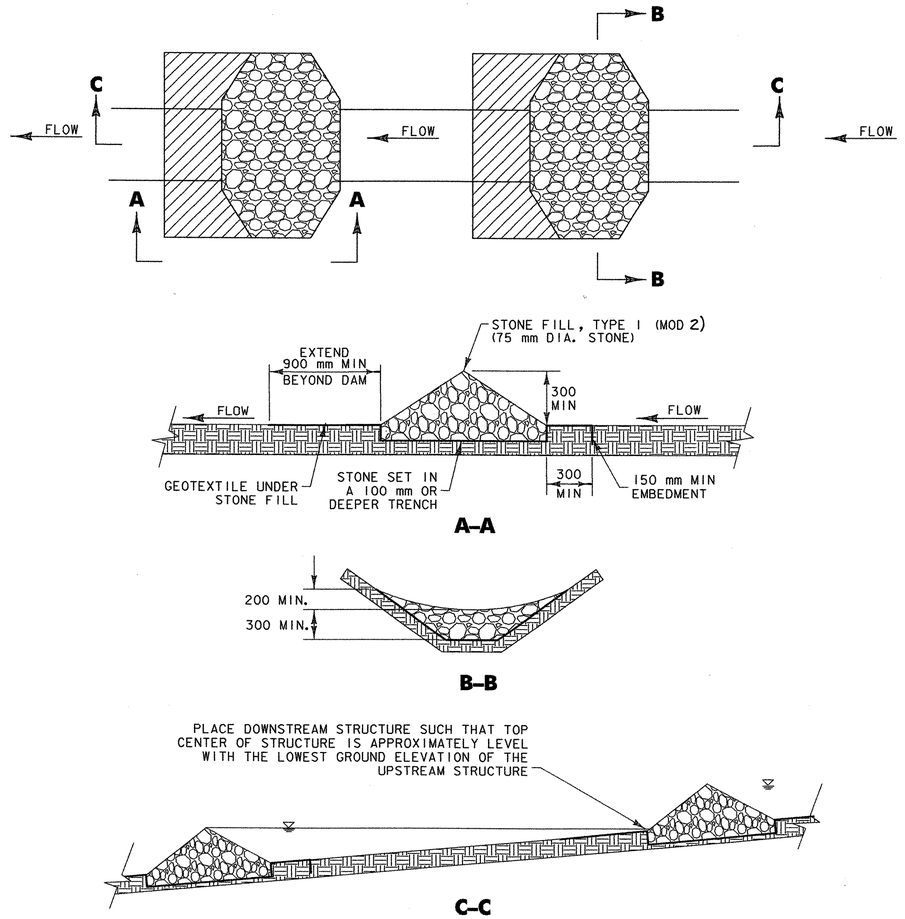
ROCK BARRIER INLET PROTECTION – UNPAVED AREAS

NOT TO SCALE

SEE SPECIAL PROVISION 613.10 (MOD 1)

NOTES:

1. SEE EROSION PREVENTION AND SEDIMENT CONTROL SPECIFICATION IN THE SPECIAL PROVISIONS SECTION OF THE CONTRACT DOCUMENTS FOR INSTALLATION, INSPECTION, AND OPERATION & MAINTENANCE OF ALL EROSION CONTROL MEASURES.
2. SEE EROSION CONTROL PLANS FOR LOCATIONS OF EROSION CONTROL MEASURES.
3. FOR VEHICLE TRACKING PAD CONSTRUCTION DETAILS, SEE CONSTRUCTION SITE PLAN.



STONE CHECK DAMS

NOT TO SCALE

SEE SPECIAL PROVISION 613.10 (MOD 2)

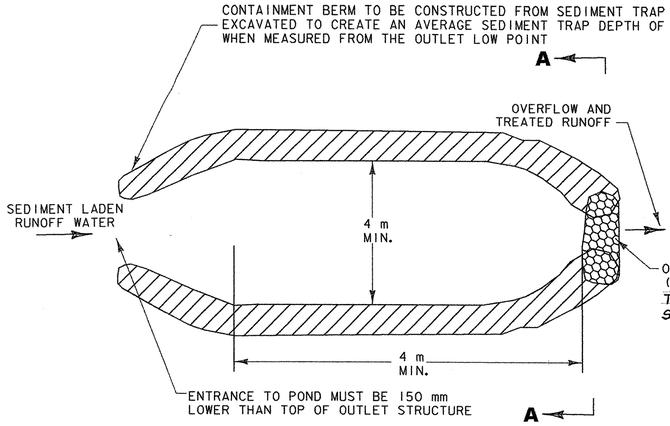
PROJECT NAME:	TROUT RIVER RESTORATION
PROJECT NUMBER:	BRF-RS 0283(7)
FILE NAME: Erosion Control Details.dgn	PLOT DATE: 06/06/2003
DESIGN SUPERVISOR: GAE	DRAWN BY: PZA
DESIGNED BY: SAR	CHECKED BY: WCH
EROSION CONTROL DETAILS 1	SHEET 139b OF 140

Dufresne-Henry

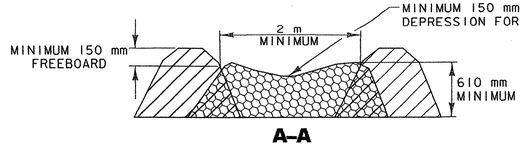
K:\630004 (Trout River\Highway\Design\Erosion Control Details.dgn

Erosion Control Details.dgn 06/06/2003 08:52:28 AM

Metric



PLAN VIEW

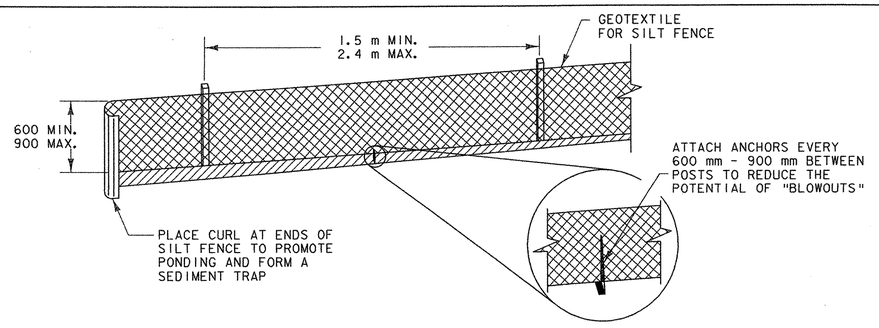


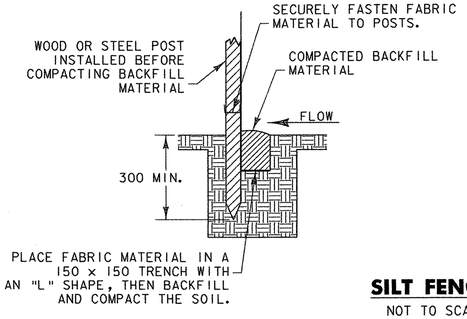
A–A

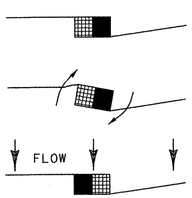
NOTES:
1. ONCE THE POND IS FULL, INFLOW RATES WILL EQUAL OUTFLOW RATES.
2. DISCHARGE MUST BE TO UNDISTURBED GROUND AND FLOW AWAY FROM THE CONSTRUCTION SITE.
3. SEDIMENT CAPTURED BY THE TEMPORARY SEDIMENT TRAP MUST BE REMOVED AND STABILIZED AS PER THE SPECIFICATIONS AND SPECIAL PROVISIONS.

SINGLE CHAMBER TEMPORARY SEDIMENT TRAP

NOT TO SCALE







1. PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
2. ROTATE BOTH POSTS AS LEAST 180° IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL
3. DRIVE BOTH POSTS 300 mm INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

ATTACHING TWO SILT FENCES WHEN TRENCHING IS USED

NOTE: SILT FENCE SHALL NOT BE INSTALLED IN AREAS WHERE CONCENTRATED FLOWS ARE EXPECTED, SUCH AS DRAINAGE DITCHES, AROUND INLETS, OR ABOVE OR BELOW CULVERT DISCHARGES.

SILT FENCE

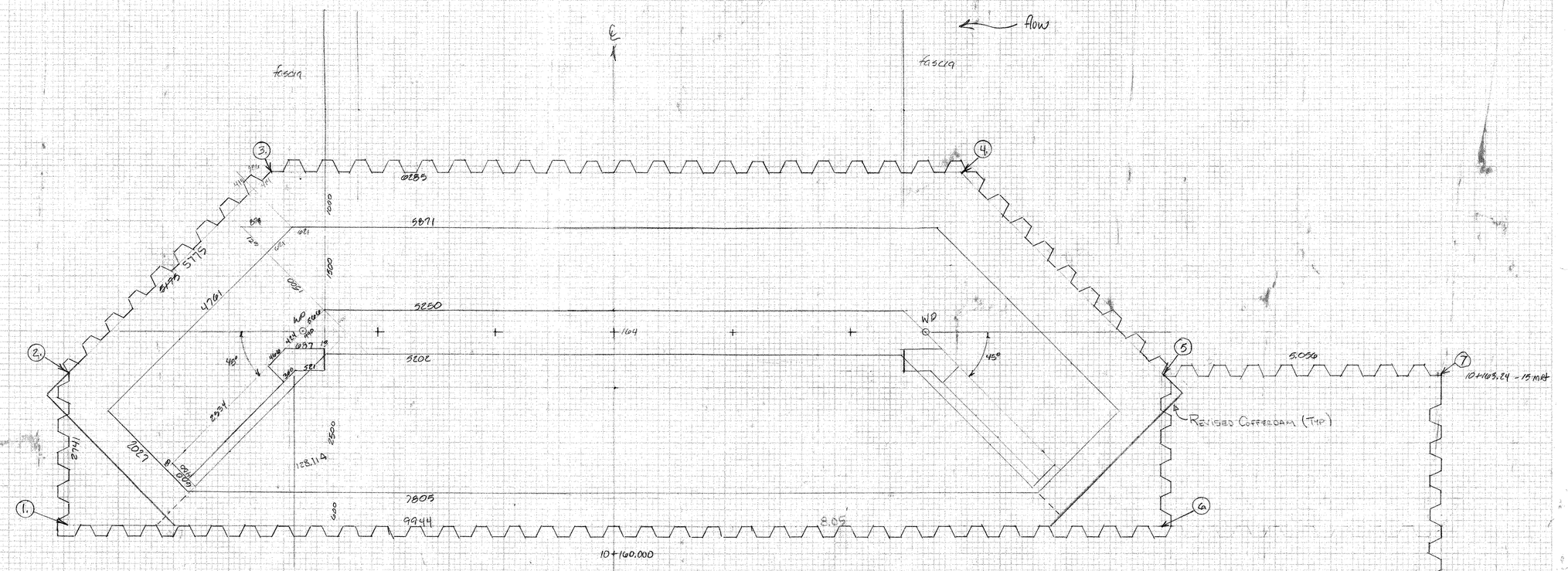
NOT TO SCALE

Dufresne-Henry

PROJECT NAME:	TROUT RIVER RESTORATION
PROJECT NUMBER:	BRF-RS 0283(7)
FILE NAME: Erosion ControlDetails.dgn	PLOT DATE: 08/27/2003
DESIGN SUPERVISOR: GAE	DRAWN BY: PZA
DESIGNED BY: SAR	CHECKED BY: WCH
EROSION CONTROL DETAILS 2	SHEET 140 OF 140

K:\63\0004 (Trout River\Highway\Design\Erosion ControlDetails.dgn

...\Erosion ControlDetails.dgn 08/27/2003 08:05:05 AM



Coffer Dam points	Northern	Eastern
1	1724.1146	1018.3896
2	1724.4784	1021.1064
3	1721.3371	1025.2189
4	1708.8783	1026.8871
5	1704.7058	1023.7458
6	1704.4020	1021.0290
7	1699.7948	1024.4168
8	1696.6701	1001.3813
9	1694.0158	981.5582

0 1m 2m 3m

Scale 1:1

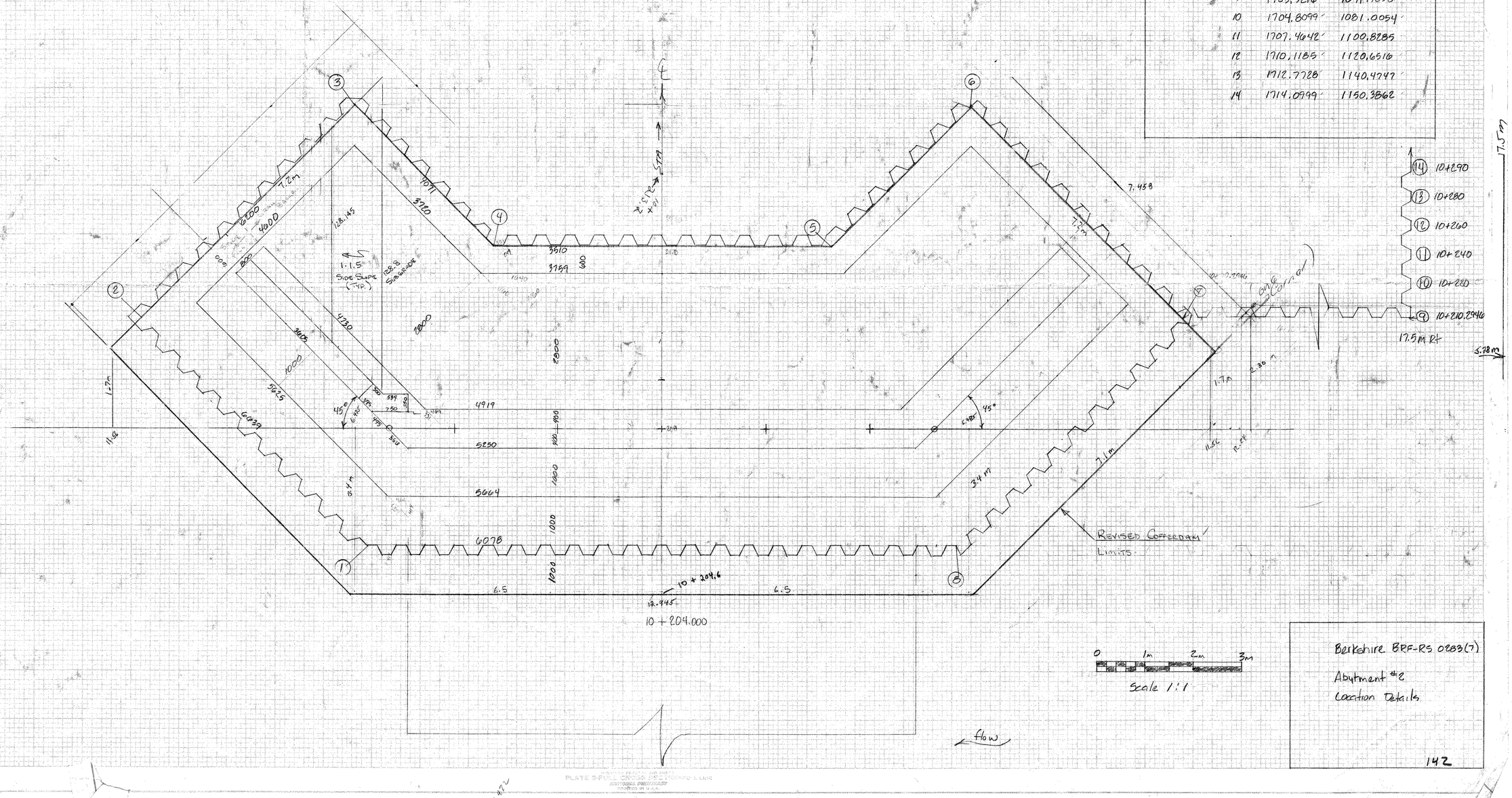
Berkshire BRF-RS 0283(7)

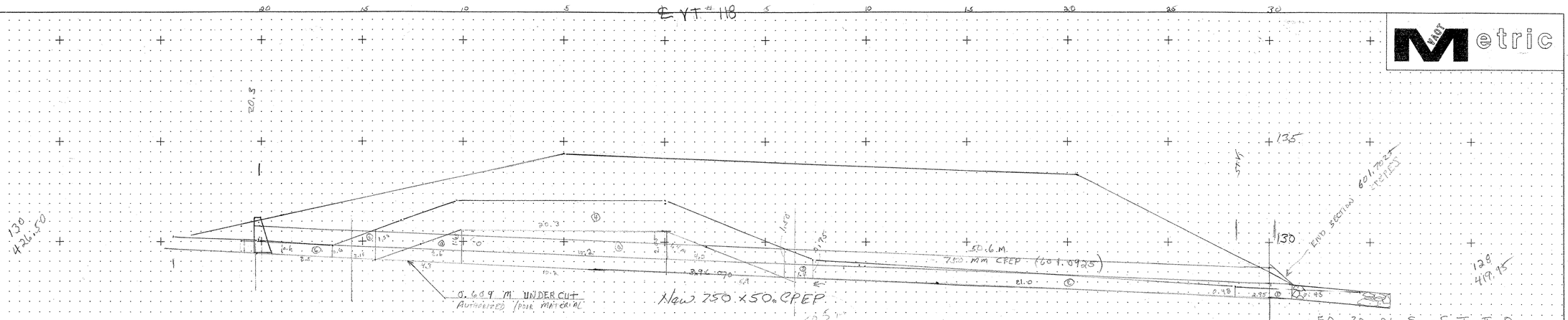
Abutment #1

Location Details

141

Coffer Dam Points	Northern	Eastern
1	1726.2682	1063.6037
2	1731.5442	1067.6336
3	1727.7807	1072.5607
4	1724.5455	1070.0896
5	1717.5876	1071.0213
6	1715.1165	1074.2565
7	1710.1894	1070.4930
8	1714.2493	1065.2170
9	1703.5216	1071.9858
10	1704.8099	1081.0054
11	1707.4642	1100.8285
12	1710.1185	1120.6516
13	1712.7728	1140.4747
14	1714.0999	1150.3862


CUT
1.5:1 Slope
1.5:1 Slope (typ.)
1.5:1 Slope
1.7m
7.2m
7.45m
6000
4600
4730
3800
1000
9425
6039
3759
3510
1340
2110
1000
1000
1000



REMOVE EXISTING 610 mm R.C.P. @ 10+420

WIDTH OF REMOVAL TRENCH = 1.610 m

LENGTH 22.m (MEASURED IN FIELD BY D.E.R.) 6-8-04

VOL = .22 x 1.610 x 1.50 = 53.13

$= \left[\left(\frac{1.8 \times 2.6}{2}\right) + \left(\frac{1.4 \times 4.0}{2}\right) + \left(10.2\left(\frac{1.0 + 1.4}{2}\right)\right)\right] 1.610 \times 1.5 = \frac{39.46}{92.59}$ cm ITEM 204.20

16.34 m² 12.24

See Drainage Summary sheet

Total TE 138.1
92.6
230.7 Right

To Final Drainage Summary sht

COMPUTE TRENCH EXCAVATION FOR NEW PIPE

① 2.95 x $\frac{0.95+0.48}{2}$ (1.85) = 2.54

② 21.0 x $\frac{0.48+0.75}{2}$ (1.85) = 27.78

③ 1.4 x $\frac{0.75+1.59}{2}$ (1.85) = 3.17

④ 60.3 x 1.50 (1.85) = 56.33

⑥ 2.15 x $\frac{0.6+1.6}{2}$ (1.85) = 4.18

⑥ 2.50 $\frac{0.6+0.6}{2}$ (1.85) = 2.78

⑦ $\frac{5.9 \times 2.15}{2}$ (1.85)(1.5) = 16.78

⑧ 10.2 x $\frac{3.95+1.66}{2}$ (1.85)(1.5) = 52.36

⑦ 4.3 x $\frac{1.65}{2}$ (1.85)(1.5) = 9.84

175.76 cm ITEM 204.20 TRENCH EXCAVATION

Headwall 90m(6) x 1.0 x (6) x 0.60m x 4.44 kg/m = 1598.4 kg = 1600 kg WBT 02-01-05

Steel for T.F.H. Cradle 2450 x 5m x 2 = 7.45m = 18.62m = 18.6 tons WBT 02-01-05
EWH 12-23-05

GRANULAR BACKFILL FOR STRUCTURES

COMPUTE FROM 2' BELOW PIPE TO 6" OVER PIPE

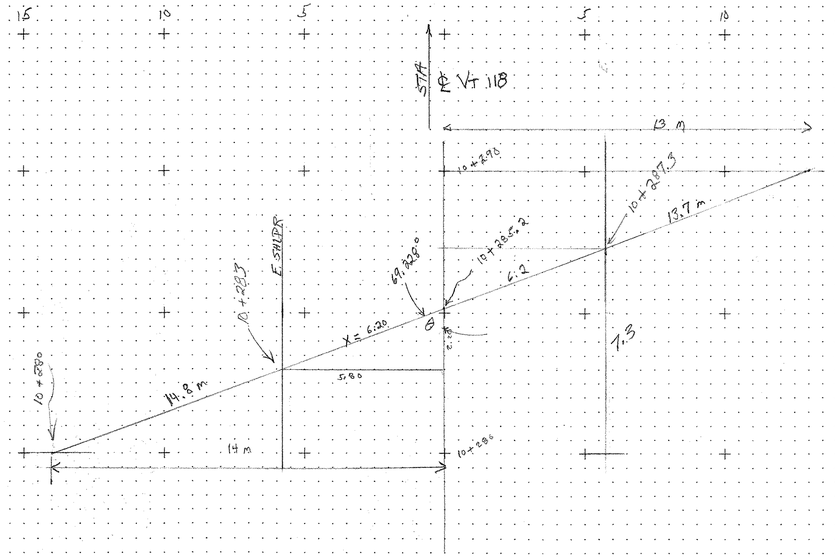
LENGTH OF + 50.M

HEIGHT OF = 610 + 750 + 150 = 1.510 M.
WIDTH 1.85 m

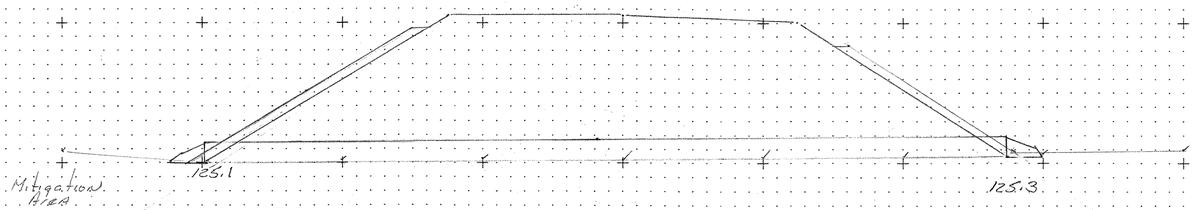
VOLUME = 1.51 x 50 x 1.85 = 139.675 cm ITEM 204.30

Say 139.7

PROJECT: BERKSHIRE	PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: IPARM FILE NAME:	PLOT DATE: 01-MAY-1996
VT 118 ℄ Pipe @ 10+411 ±	
143	SHEET: 1 OF 3



PLAN



10+285.2 (SKEW RT 69.228°)
New 750 X 28.65 CPEP
0m³ Trench Excavation
See Drainage Summary Sheet

Fill slope at 10+290 13m RT

125.2 m (from sections)

COMPUTE FILL SLOPE 14 m LEFT AT 10+280

℄ GRADE = 130.259

Slope ELEV = 130.257 + .628 (3.5) − .042 (2.3) − 8.2 (.666)

= 124.79

TAN θ = 5.80 / 2.80 = 2.0636636

θ = 69.228°

.93499991

SIN 69.228° = 5.80 / X

X = 5.80 / .93499991 = 6.20'

130.259 − 5.47 = 124.79

COMPUTE 10+283 LT SHLDR

STA	ELEV ℄ ℄	
10+280	130.259	
10+283	130.270	.037 X .3 = .011
10+290	130.296	+.112
		−.0874

LT SHLDR = 130.270 + .032 (3.5) − .0380 (2.3)

= 130.295

COMPUTE 10+285.2 ℄ ℄

STA	ELEV ℄ ℄	
10+280	130.259	.037 X .58 = .019
10+285.2	130.278	
10+290	130.296	

COMPUTE 10+287.3 RT SHLDR

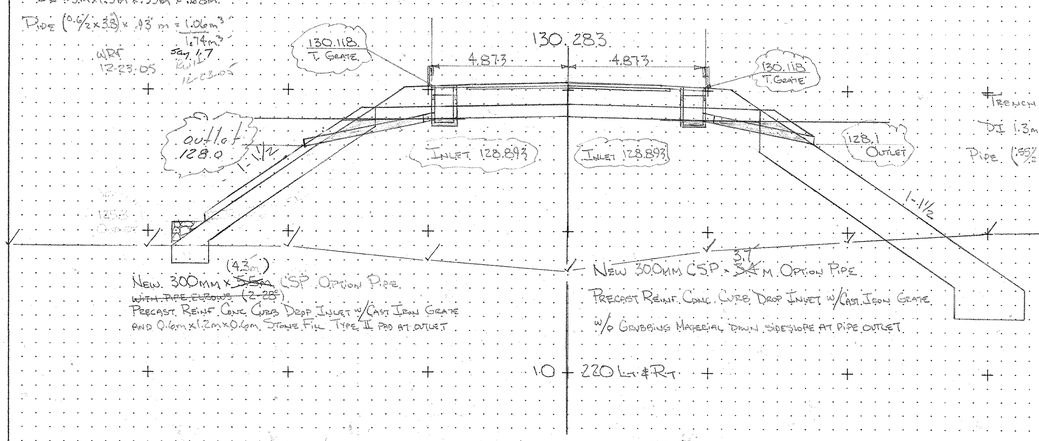
STA	ELEV ℄ ℄	
10+280	130.259	.73 X .037
10+287.3	130.286	= .027
10+290	130.296	
	−.133	−.445

RT SHLDR = 130.286 − .038 (3.5) − 2.3 (.663)

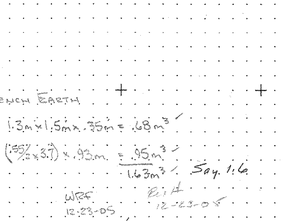
130.608

PROJECT: BEAKSHIRE	PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME:	
IPARM FILE NAME:	PLOT DATE: 01-MAY-1996
750 mm PIPE @ 10+295	
144	SHEET: 2 OF 3

MTO Metric



Trench Earth
DI 1.3m x 1.5m x .35m = .68m³
Pipe (0.4⅞ x 3.8) x .13 m = 1.06m³
1.74m³
Say 1.7
WRF 12-23-05
Built 12-23-05

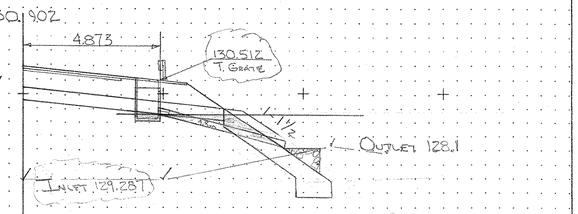


Trench Earth
DI 1.3m x 1.5m x .35m = .68m³
Pipe (.59⅜ x 3.7) x .93m = .95m³
1.63m³
Say 1.6
WRF 12-23-05
Built 12-23-05

10 + 220 Lt & Rt

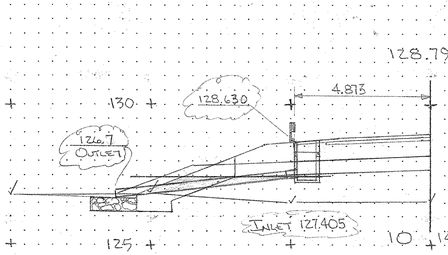
New 300mm CSP x 3.7m Option Pipe
Precast Reinf. Conc. Curb Drop Inlet w/Cast Iron Grate
w/o Grubbing Material Down Sideslope at Pipe Outlet

Trench Earth
DI 1.3m x 1.5m x .35m = .68m³
Pipe (.67½ x 4.3) x .93m = 1.40m³
2.08m³
Say 2.1
WRF 12-22-05
Built 12-23-05



10 + 335 Rt

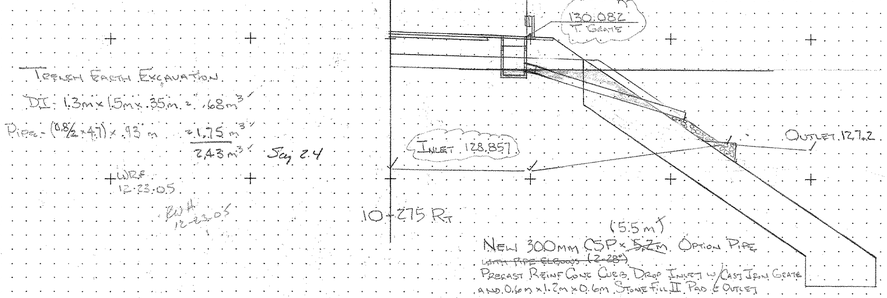
New 300mm CSP x 4.3m Option Pipe
With Pipe Elbows (2-28°)
Precast Reinf Cone Curb Drop Inlet w/Cast Iron Grate
and 0.6m x 1.2m x 0.6m Stone Fill Type II Pad at Outlet



Trench Earth
DI: 1.3m x 1.5m x .35m. = .68m³
Pipe (.45⅜ x 5.4) x .93m = 1.13m³
1.8 1m³
Say 1.8
WRF 12-23-05
Built 12-23-05

10 + 140 Lt

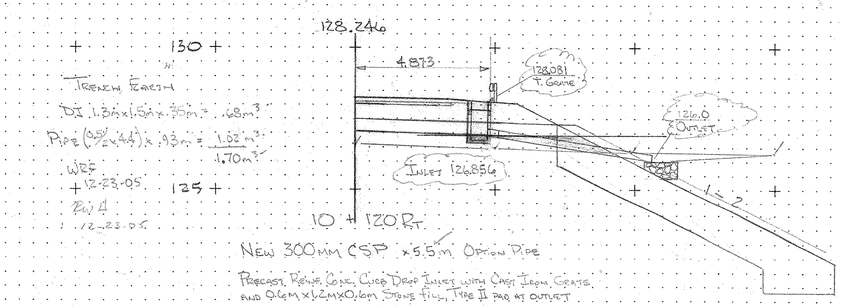
New 300mm CSP x 6.1m Option Pipe
Precast Reinf Conc Curb Drop Inlet with Cast Iron Grate
and 0.6m x 1.2m x 0.6m Stone Fill Type II pad at outlet



Trench Earth Excavation
DI: 1.3m x 1.5m x .35m. = .68m³
Pipe - (0.8½ x 4.1) x .93m = 1.75 m³
2.43m³
Say 2.4
WRF 12-23-05
Built 12-23-05

10 + 275 Rt

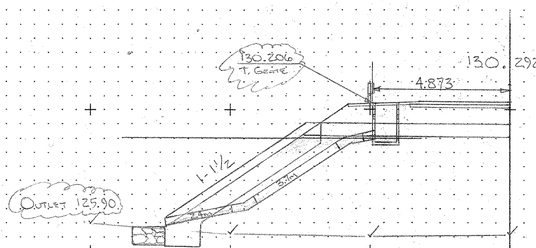
New 300mm CSP x 5.2m Option Pipe
With Pipe Elbows (2-28°)
Precast Reinf Cone Curb Drop Inlet w/Cast Iron Grate
and 0.6m x 1.2m x 0.6m Stone Fill II Pad & Outlet



Trench Earth
DI 1.3m x 1.5m x .35m = .68m³
Pipe (0.5⅝ x 4.4) x .93m = 1.02 m³
1.70m³
WRF 12-23-05
Built 12-23-05

10 + 120 Rt

New 300mm CSP x 5.5m Option Pipe
Precast Reinf Cone Curb Drop Inlet with Cast Iron Grate
and 0.6m x 1.2m x 0.6m Stone Fill Type II pad at outlet



(3.7m + 2.4m)

New 300mm CSP x 6.1m Option Pipe
With Pipe Elbows (2-28°)
Precast Reinf Cone Curb Drop Inlet w/Cast Iron Grate and
0.6m x 1.2m x 0.6m Stone Fill Type II Pad at Outlet

10 + 260 Lt

VOID - Eliminated 02-08-05 Craig Keller

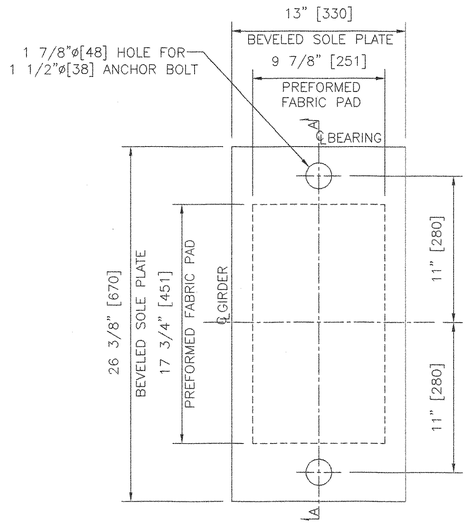
PROJECT: Berkshire	PROJECT NO.: BRF-RS 0283(7)
DESIGN FILE NAME: IPARM FILE NAME: - Slope Pipes -	PLOT DATE: 01-MAY-1996
	145 SHEET: 3 OF 3

ITEM DETAIL AND DRAINAGE SHEET

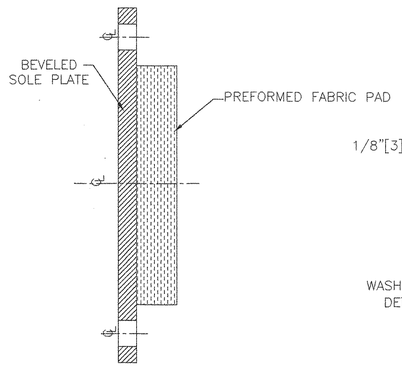
STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

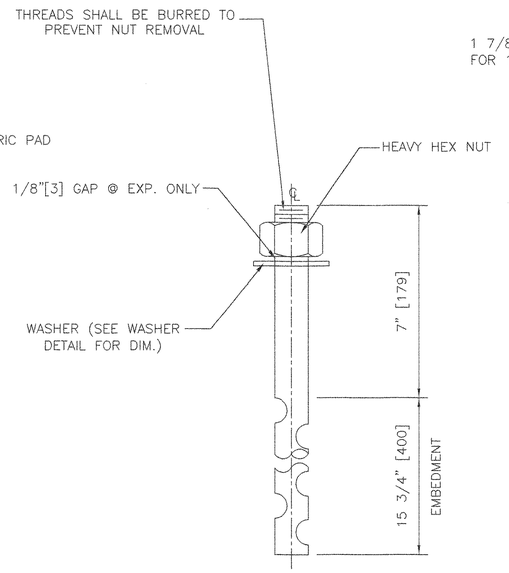
STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	PCCSP PI TH	PIPE ELBOW NO-DEG	ES EA	CB	PRCCS	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM m³ CY	TR EXCAV EARTH 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	Geotextile for S.F.	REMARKS
	VT	Route	118																																					
See D-3	10+120		Rt							300	5.5'				X						1'						1.7'													
D-3	10+140		Lt							300	6.1'				X						1'						1.8'													
D-3	10+220		Rt							300	3.7'				X						1'						1.6'													
D-3	10+220		Lt							300	4.3'				X						1'						1.7'													
D-3	10+260		Lt							—																	—												PRCCDI ; slope pipe eliminated
D-3	10+275		Rt							300	5.5'				X						1'						2.4'													
D-2	10+290	10+350	Rt-Lt							750	28.65'					X			2								0'												
D-3	10+335		Rt							300	4.3'				X						1'						2.1'													
D-1	10+423	10+410	Lt-Rt							750	50.0'					X			1'								2.6	280.7'					139.7'							Includes existing pipe removal
Bkl Pg 53	10+475	10+486	Lt							450	12.2'					X			2'								0'													Drive Culvert
	TH	#42																																						
Bkl Pg 54	19+880	19+876	Lt-Rt																								22.1'													
Bkl Pg 53	19+888	19+890	Lt-Rt							450	18.3'					X			0			0.9	1.22	67	B		75.5'											6.2	II	Includes inlet ditch 8-17 Stone Fill c Outlet
Bkl Pg 53	20+062	20+076	Lt-Lt							450	18.3'					X			2'								17.3'													Drive Culvert plus removal @ 20+070
	Wetland																																							
Bkl Pg 54	10+225	10+237	Lt-Lt																								52.5'											34.2	II	Spillway



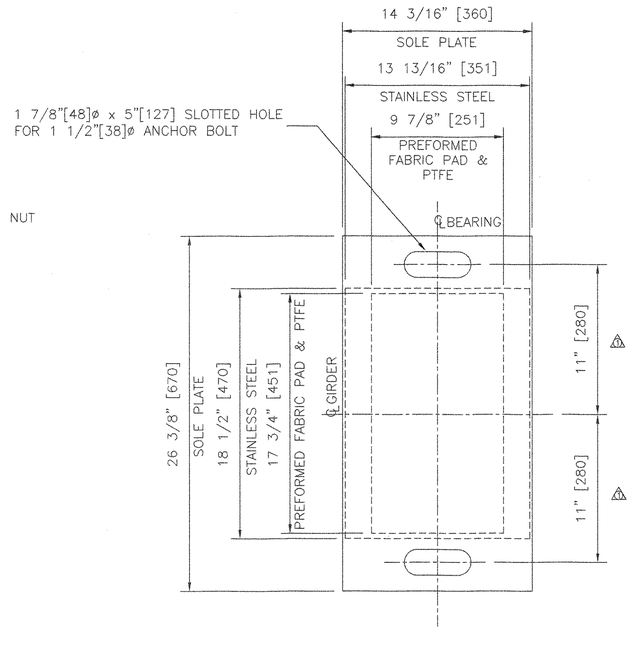
PLAN VIEW
LOCATION: ABUTMENT 1
QUANTITY: 5



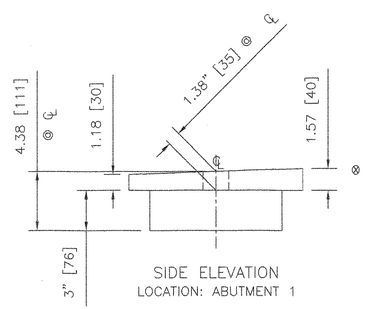
SECTION A–A
LOCATION: ABUTMENT 1



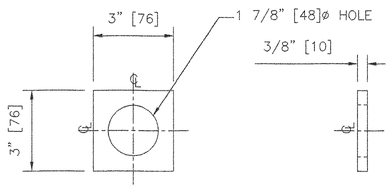
ANCHOR BOLT DETAIL
N.T.S.
QUANTITY: 20
1 1/2"[38]ø x 22 3/4"[578] LONG ASTM F1554 GR 55 SWEDGED ONE END ANCHOR BOLT WITH 4"[102] THREAD WITH ONE A36 PLATE WASHER AND ONE ASTM A563 HEAVY HEX NUT. ALL GALV.



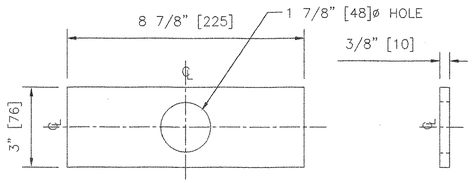
PLAN VIEW
LOCATION: ABUTMENT 2
QUANTITY: 5



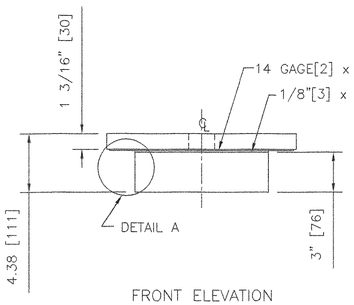
SIDE ELEVATION
LOCATION: ABUTMENT 1



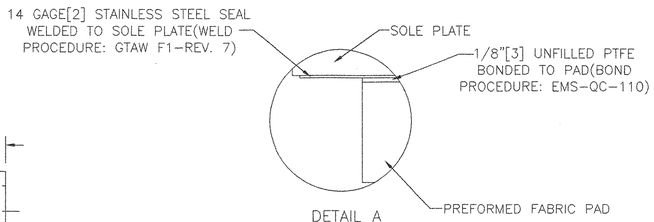
WASHER DETAIL FOR FIXED BEARING ONLY
N.T.S.
QUANTITY: 10



WASHER DETAIL FOR EXPANSION BEARING ONLY
N.T.S.
QUANTITY: 10



FRONT ELEVATION
LOCATION: ABUTMENT 2



DETAIL A
N.T.S.

MATERIAL:
STEEL– ASTM A709 GRADE 50 ZINC METALLIZED
STAINLESS STEEL– ASTM A240 TYPE 304, 10 RMS FINISH OR LESS
PTFE– ASTM D4894 VIRGIN UNFILLED
PREFORMED FABRIC PAD– AASHTO 18.4.9.1 DIV. II
ANCHOR BOLTS– F1554 GRADE 55 GALVANIZED

NOTES:
1. DESIGN CRITERIA:
   A. BASE PLATE TO CONCRETE DESIGN PRESSURE = 1,000 PSI(6.895MPa)
   B. MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS
   C. HORIZONTAL DESIGN CAPACITY SHALL BE A MINIMUM 10% OF VERTICAL LOAD
   D. DESIGN LOAD PER BEARING = 174.5 KIPS[776KN]
2. ALL BEARING DEVICES SHALL BE METALIZED AS PER SUBSECTION 531.04 (B) AND 506.15(b) OF THE GENERAL SPECIAL PROVISIONS. AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN ACCORDANCE WITH SUPPLEMANTAL SPECIFICATIONS 513 WHICH REFERENCES ASTM A760
3. ALL EDGED CORNERS SHALL BE ROUNDED TO 1/16"[1.6] RADIUS
4. ⊗ MARKS THE THICK END OF BEVEL
5. UNITS THAT ARE IN [ ] ARE IN mm
6. COSMEC REPRESENTATIVE: MR. MATT McANDREWS (508)668–6600
7. LOCATION OF FABRICATION: 70 SOUTH STREET WALPOLE MA, 02081

RECEIVED
CK'D BY_____ OK'D BY_____
JUN 1 6 2004
RESUBMIT_____ APPROVED_____
BY DATE

STATE OF VERMONT
AGENCY OF TRANSPORTATION
HIGHWAY NO. VT. ROUTE 118
OVER TROUT RIVER
BRIDGE NO. 26
TOWN OF BERKSHIRE

COSMEC, INC. 70 SOUTH STREET WALPOLE, MA. 02081

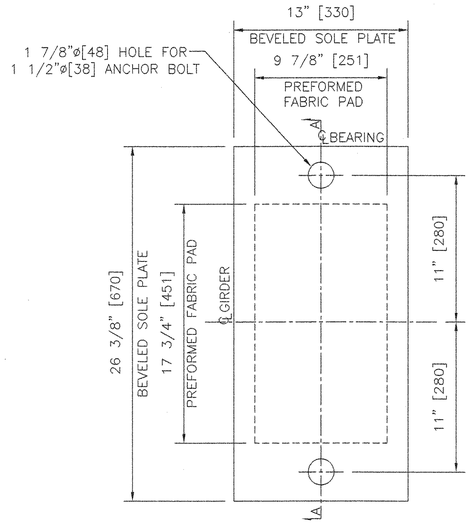
SCALE: 3/16"=1"	DRAWN BY: MK	CHECK BY: NH
	DATE: 1/15/04	DATE: 1/27/04

PREFORMED FABRIC PAD BEARINGS

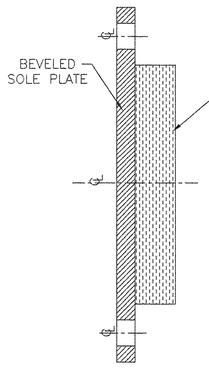
CUSTOMER	S.O. NUMBER	DRAWING NUMBER	REV.
A.L. ST. ONGE	59980	4048	1

REV.		BY	DATE	CHECKED	DATE
1	ADDED SLOT OFFSET DIMENSIONS	MK	6/8/04		

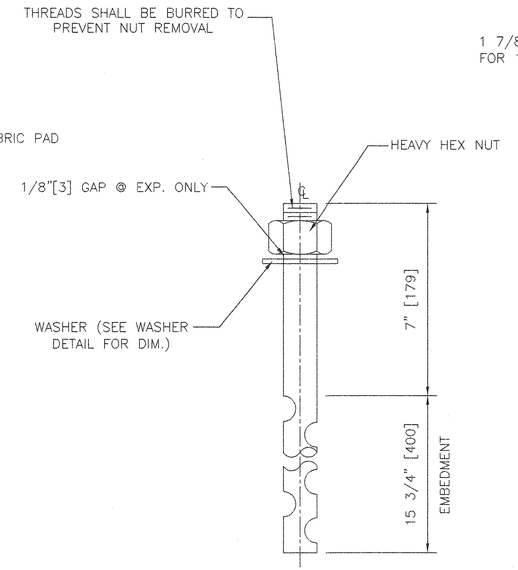
147 BB



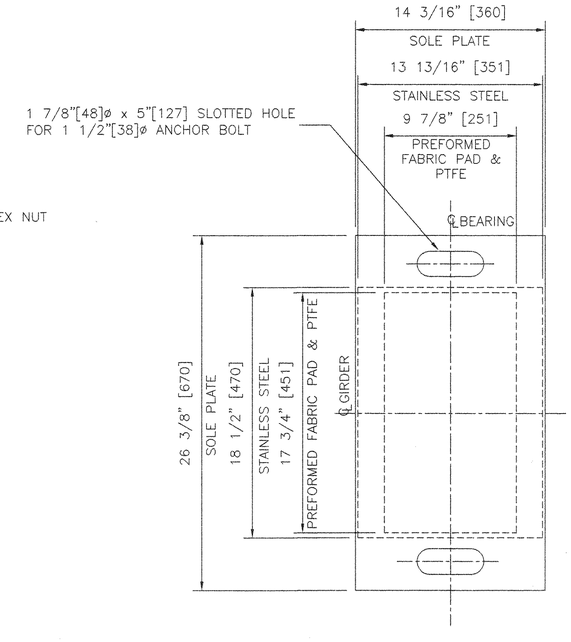
PLAN VIEW
LOCATION: ABUTMENT 1
QUANTITY: 5



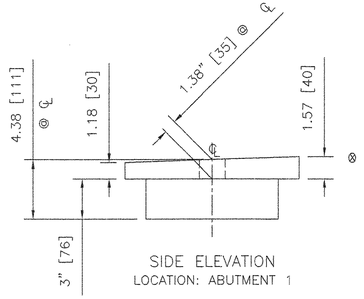
SECTION A–A
LOCATION: ABUTMENT 1



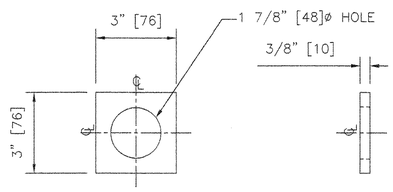
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1 1/2"[38]ø x 22 3/4"[578] LONG ASTM F1554 GR 55
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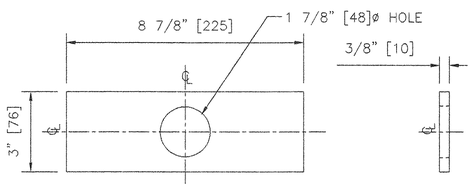
PLAN VIEW
LOCATION: ABUTMENT 2
QUANTITY: 5



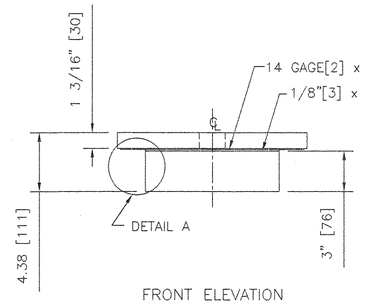
SIDE ELEVATION
LOCATION: ABUTMENT 1



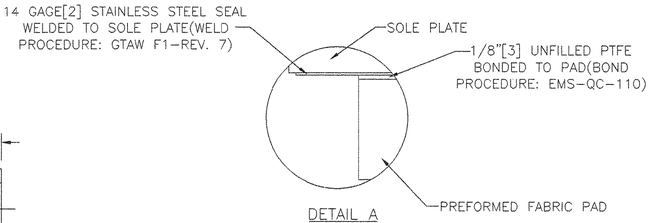
WASHER DETAIL FOR FIXED BEARING ONLY
N.T.S.
QUANTITY: 10



WASHER DETAIL FOR EXPANSION BEARING ONLY
N.T.S.
QUANTITY: 10



FRONT ELEVATION
LOCATION: ABUTMENT 2



DETAIL A
N.T.S.

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6. COSMEC REPRESENTATIVE: MR. MATT McANDREWS (508)668–6600
7. LOCATION OF FABRICATION: 70 SOUTH STREET WALPOLE MA, 02081

RECEIVED
CK'D BY_____ CK'D BY_____
MAY 24 2004
RESUBMIT_____ APPROVED
BY DATE 5/24/04

Reviewed
Rejected
Furnish as Corrected
Revise and Resubmit
Submit Specified Item

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for dimensions to be confirmed and correlated at the jobsite, information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all work in a safe and satisfactory manner.

McFarland-Johnson, Inc.
Date 5/24/04
By EGW

STATE OF VERMONT
AGENCY OF TRANSPORTATION
HIGHWAY NO. VT. ROUTE 118
OVER TROUT RIVER
BRIDGE NO. 26
TOWN OF BERKSHIRE

COSMEC, INC.
70 SOUTH STREET
WALPOLE, MA. 02081

SCALE: 3/16"=1"	DRAWN BY: MK	DATE: 1/15/04	CHECK BY: NH	DATE: 1/27/04

PREFORMED FABRIC PAD BEARINGS

REV.		BY	DATE	CHECKED	DATE

CUSTOMER	S.O. NUMBER	DRAWING NUMBER	REV.
A.L. ST. ONGE	59980	4048	

C:\DWG\CURRENT\MATTS WORK\VT 59980\VT 59980.dwg, 02/05/2004 10:16:29 AM, DesignJet 700 C4705B.pc3

148 BB

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, 1996 EDITION WITH LATEST REVISIONS.

MATERIAL SPECIFICATIONS

1). UNLESS NOTED, ALL STEEL TO BE AASHTO M270M GRADE 345W (ASTM A709-345W).

2). HIGH STRENGTH BOLTS: AASHTO M164 (ASTM A325) 22mm (7/8") DIA. TYPE 1 (GALV.) BOLTS SHALL BE USED FOR PAINTED CONNECTIONS AND TYPE 3 BOLTS SHALL BE USED FOR UNPAINTED CONNECTIONS.

3). MATERIAL NOTED "H2-3" OR "CVN" SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M270M, SUPPLEMENT S83 FOR TEMPERATURE ZONE 2. (20J @ 4° C - "H" FREQUENCY)

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 22mm (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.

4). AT OVERSIZED HOLE LOCATIONS A HARDENED WASHER SHALL BE PLACED UNDER BOTH THE HEAD AND THE NUT.

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)

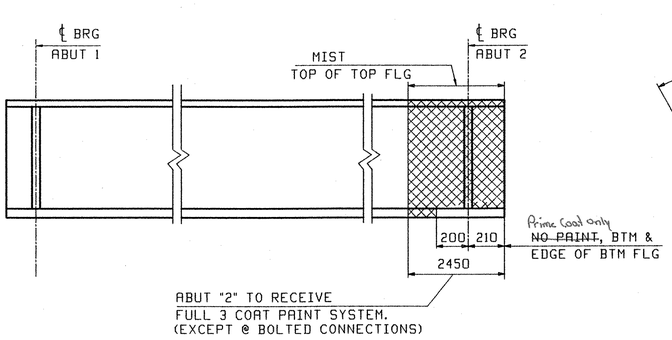
2). STEEL THAT SHALL BE PAINTED SHALL BE CLEANED IN ACCORDANCE WITH SECTION 513.04(A) OF THE SUPPLEMENTAL SPECIFICATIONS.

PAINTING

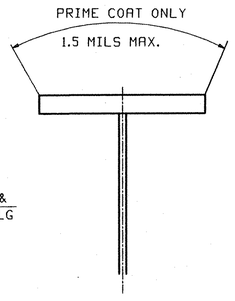
1). STEEL TO BE PAINTED, AS SHOWN BELOW, SHALL BE SHOP APPLIED AS NOTED IN SPECIAL PROVISION SECTION 513.02 (a) & (b) THE COLOR OF THE FINAL COAT OF PAINT SHALL BE BROWN AND SHALL CONFORM WITH FEDERAL STANDARD #595, COLOR CHIP NUMBER 20059 (BROWN).

2). PROTECTIVE GREASE SHALL BE APPLIED IN THE FIELD BY OTHERS.

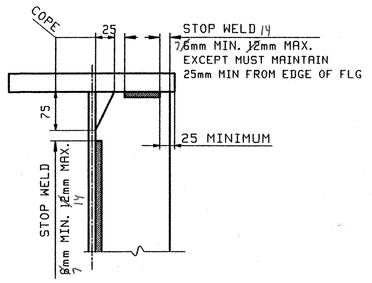
		DFT IN MILS	
		MIN.	MAX
WASSER	(MOISTURE CURE SYSTEM)		
HIGH TECH	P MC-ZINC-ZINC RICH URETHANE (ORGANIC)	3.0	6.0
COATINGS	I MC-FERROX B-URETHANE	3.0	6.0
	T MC-FERROX A-ALIPHATIC URETHANE	3.0	10.0



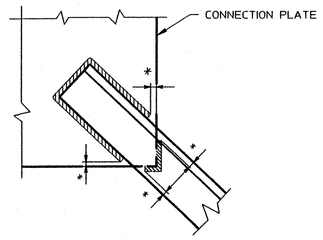
TYPICAL PAINT SKETCH



TOP FLG DETAIL

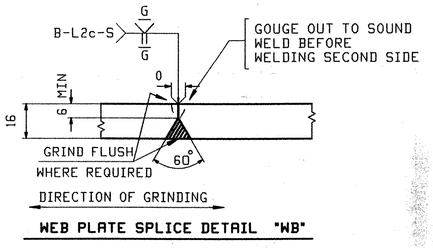


DETAIL "WS1"

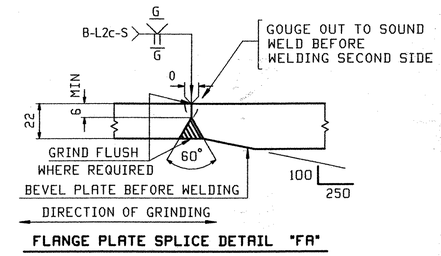


* NO WELD 7 MIN, 14 MAX.

TYP. WELD TERMINATION



WEB PLATE SPLICE DETAIL "WB"



FLANGE PLATE SPLICE DETAIL "FA"

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

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	9a-04									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		AS NOTED	AS NOTED

SURFACE PREP. & PAINT:

RECEIVED
OCT 20 2004
BY

☐ Reviewed ☐ Rejected
☑ Furnish as Corrected ☐ Revise and Resubmit ☐ Submit Specified Item

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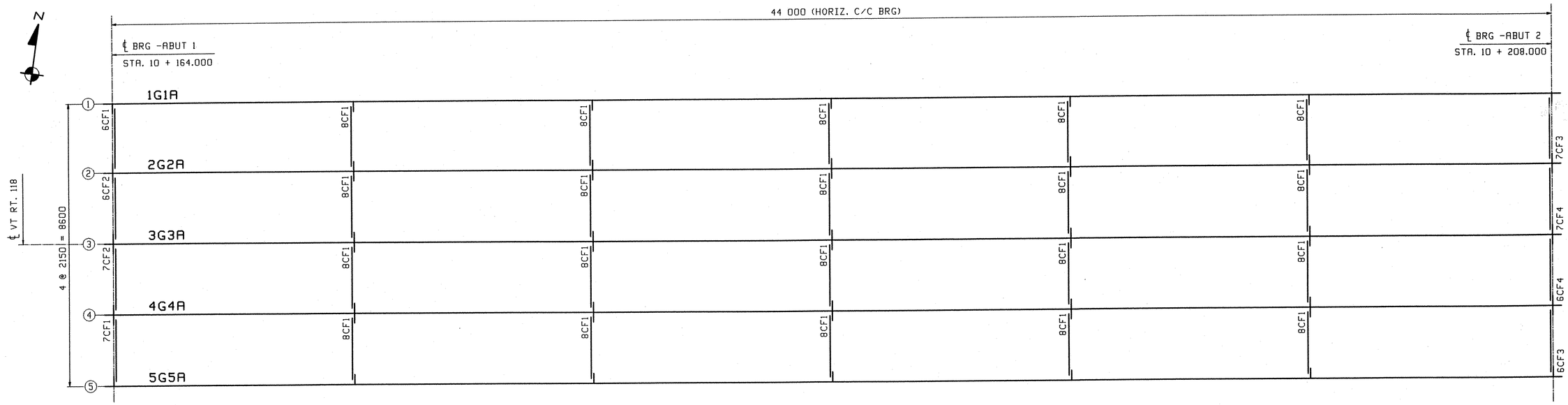
McFarland-Johnson, Inc.
Date 10/18/04
By Steven F. Delia

DESCRIPTION: GENERAL NOTES	DRAWN BY	DATE
JOB: VT. ROUTE 118 OVER TROUT RIVER	WL	07/09
TOWN OF BERKSHIRE, VT	CHKD BY	
FRANKLIN COUNTY	PCP	07/22
TENSOR 2475	APPROV BY	
PROJ NO. BRF-RS 0283(7)	SUPERVISOR	W. J. GATTI
CUSTOMER: A.L. ST. ONGE	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.
222	GN1
149 SS	REV. △

PCP Tue Aug 3 10:35:14 EDT 2004 /users/jobs/2475/GN1.dgn Rev0



FRAMING PLAN

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
8														ABUTMENT CROSSFRAMES ABUT2
9	32	7/8	2 1/2	4	8	30	10	20					1	TOP CHANNEL TO STIFF
10	48	7/8	2 3/4	6	8	33	13	20					1	BTM GUSSET TO STIFF
11														
WASHER CODES														
1: 1 Hard Flat Washer														

FIELD BOLT LIST						A325 Type 3 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														ABUTMENT CROSSFRAMES ABUT1
2	32	7/8	2 1/2	4	8	30	10	20					1	TOP CHANNEL TO STIFF
3	48	7/8	2 3/4	6	8	33	13	20					1	BTM GUSSET TO STIFF
4														
5														INTERMEDIATE CROSSFRAMES
6	160	7/8	2 1/2	4	40	27	13	14					1	TOP GUSSET TO STIFF
7	240	7/8	2 1/2	6	40	27	13	14					1	BTM GUSSET TO STIFF
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	34	7/8	A325 Type 1	2 1/2	32	GALV
2	50	7/8	A325 Type 1	2 3/4	48	GALV
3						
4	84	Hard Flat Washers	for 7/8 ø	BOLT		F436 GALV
5						
6						
7	441	7/8	A325 Type 3	2 1/2	432	
8	50	7/8	A325 Type 3	2 3/4	48	
9						
10	491	Hard Flat Washers	for 7/8 ø	BOLT		
11						
12						
13						

FOR GENERAL NOTES SEE DRAWING GN1.

RECEIVED
CK'D BY Jwc OK'D BY
OCT 2 0 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☑ Reviewed
☐ Rejected
☐ Furnish as Corrected
☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/18/04
By Steven F. Dalio

1. ALL BOLT DIAMETERS AND LENGTHS ARE SHOWN IN INCHES (ENGLISH UNIT OF MEASUREMENT).
2. ALL GRIP VALUES ARE SHOWN IN METRIC UNITS.

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	9-2-04									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		AS NOTED	AS NOTED

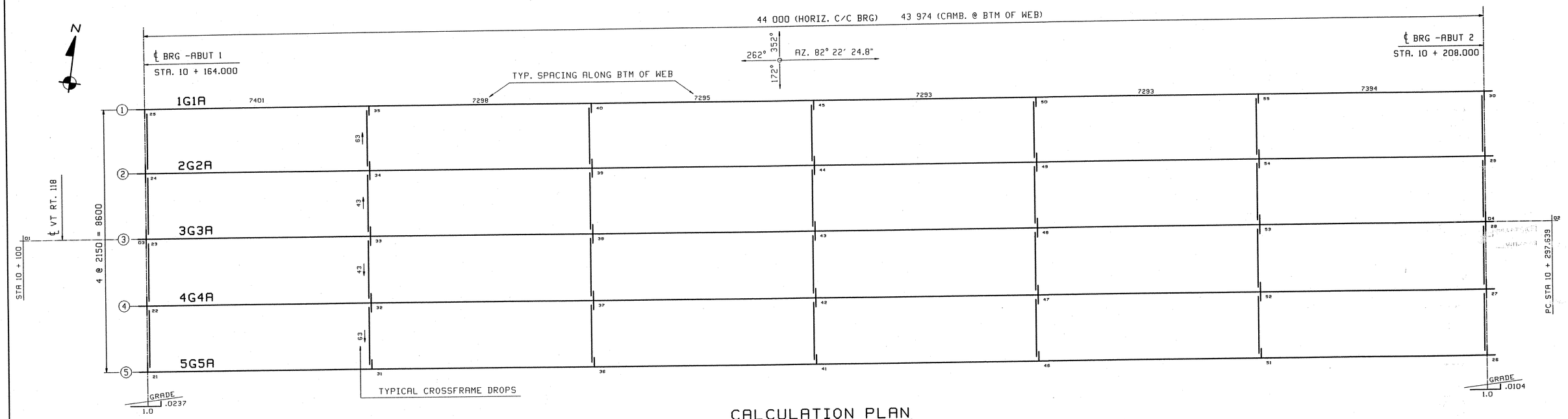
SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

DESCRIPTION: FRAMING PLAN	DRAWN BY	DATE
JOB: VT. ROUTE 118 OVER TROUT RIVER	AB	07/30/04
TOWN OF BERKSHIRE, VT	CHKD BY	
FRANKLIN COUNTY	PCP	07/30/04
TENSOR 2475	APPROV BY	
	SUPERVISOR	W. J. GATTI
PROJ NO. BRF-RS 0283(7)	Q.A.	
CUSTOMER: A.L. ST. ONGE		

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

JOB NO.	DRG. NO.
222	E1
15055	REV. △

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CALCULATION PLAN

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CK'D BY JWC CK'D BY
OCT 2 0 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☑ Reviewed
☐ Rejected
☐ Furnish as Corrected
☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/19/04
By Steven F. Dakin

**** 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. CF CONN. STIFFENERS ARE NORMAL TO GRADE.
6. BOTT PT NUMBERS =TOP PT NUMBERS + 100.
7. FOR LAYOUTS SEE DWG TD1.
8. CROSSFRAME DROPS ARE CALCULATED IN THEIR FINAL POSITION.

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	12-04									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		AS NOTED	AS NOTED

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GNI.
ALL OTHER STEEL SHALL BE UNPAINTED.

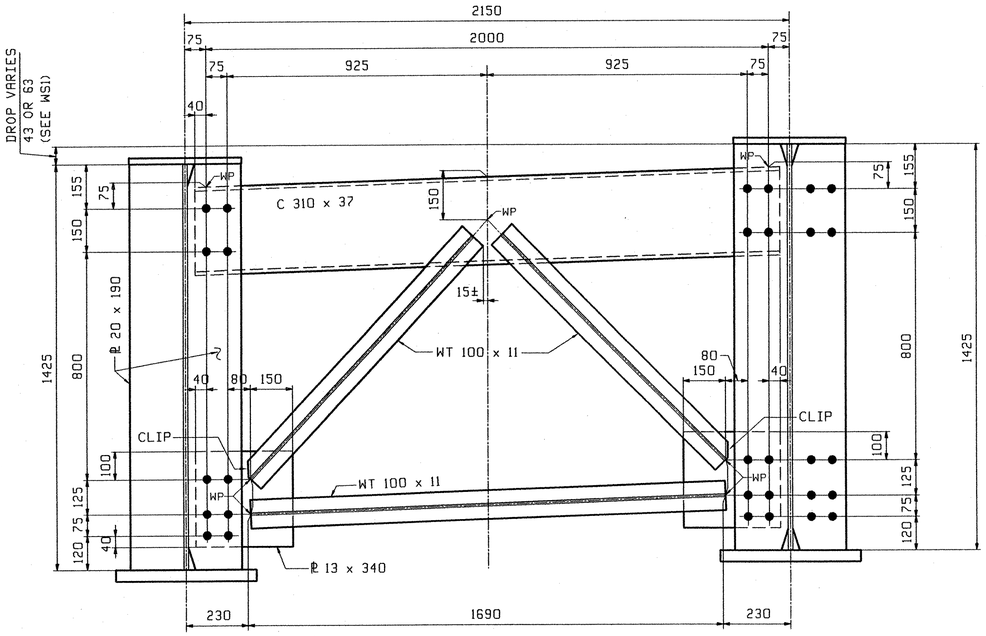
DESCRIPTION:	CALCULATION PLAN	DRAWN BY	DATE
JOB:	VT. ROUTE 118 OVER TROUT RIVER	WL	07/09
	TOWN OF BERKSHIRE, VT	CHKD BY	
	FRANKLIN COUNTY	PCP	07/22
		APPROV BY	
		SUPERVISOR	W. J. GATTI
PROJ NO.	BRF-RS 0283(7)	Q.A.	
CUSTOMER:	A.L. ST. ONGE		

TENSOR 2475

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

JOB NO.	DRG. NO.
222	WS1
157 55	REV. △

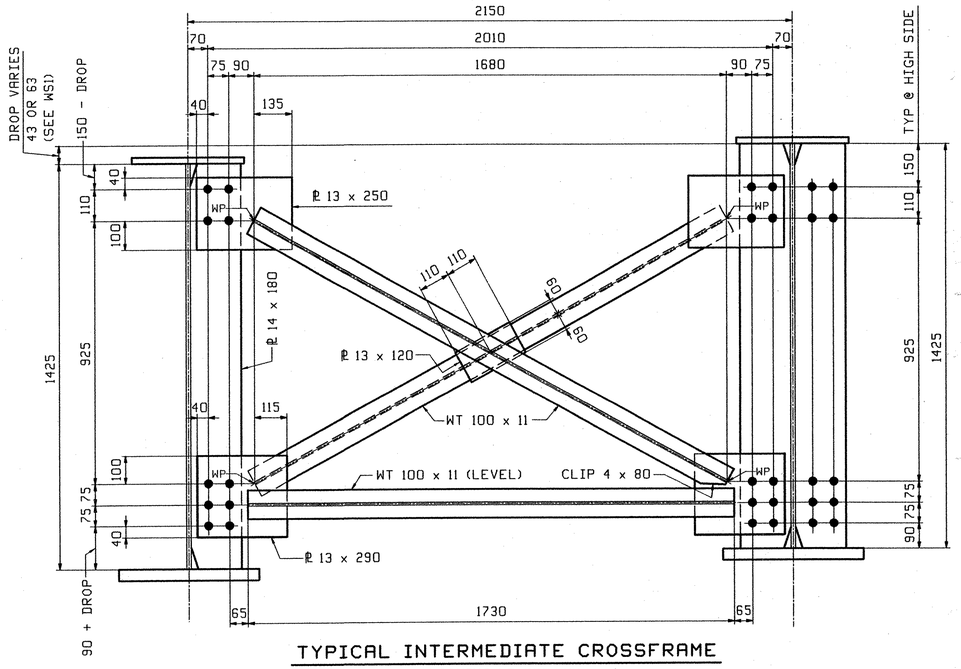
PCP Tue Aug 3 08:58:38 EDT 2004 /users/jobs/2475/WS1.dwg



TYPICAL END CROSSFRAME

(@ ABUTMENTS, AWAY FROM BACKWALL)

(END CROSSFRAMES AT ABUTMENT 2 SHALL BE PAINTED- BOLTS SHALL BE A325-1 GALV)



TYPICAL INTERMEDIATE CROSSFRAME

(LOOKING UP STATION)

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

RECEIVED
CK'D BY JWC OK'D BY
OCT 2 0 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☑ Reviewed ☐ Furnish as Corrected
☐ Rejected ☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/18/04
By Steven F. Dale

SCALE 1:10

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	9/04									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		15/16"ø (24mm)	78ø A325-3 (UN)

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

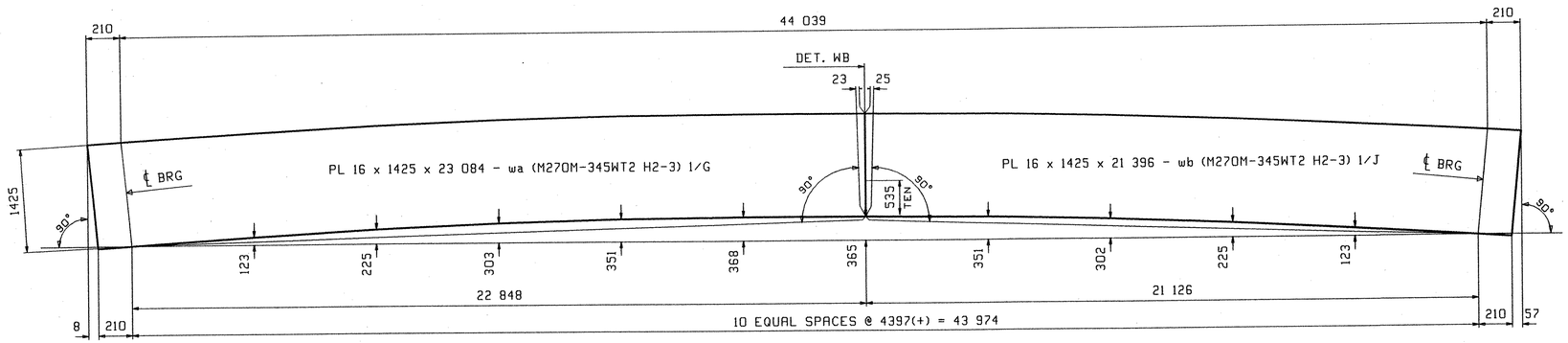
DESCRIPTION:	CROSSFRAME LAYOUTS	DRAWN BY	DATE
JOB:	VT. ROUTE 118 OVER TROUT RIVER TOWN OF BERKSHIRE, VT FRANKLIN COUNTY	WL	07/09
		CHKD BY	
		PCP	07/22
		APPROV BY	
		SUPERVISOR	W. J. GATTI
PROJ NO.	BRF-RS 0283(7)	Q.A.	
CUSTOMER:	A.L. ST. ONGE		

TENSOR 2475

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

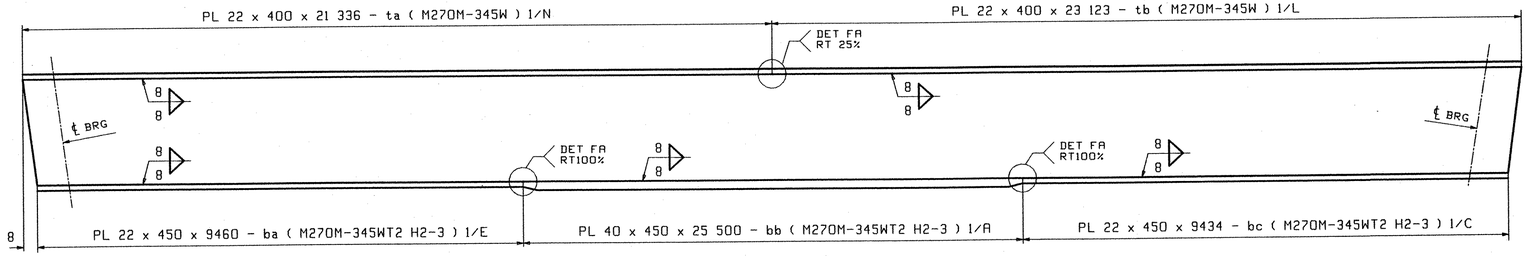
JOB NO.	DRG. NO.
222	TD1
15255	REV. △

PCP Tue Aug 3 10:05:23 EDT 2004 /users/pcp/2475/TD1.dgn



CAMBER DIAGRAM FOR 1G1A THRU 5G5A

(5 ALIKE)



FLANGE DIAGRAM FOR 1G1A THRU 5G5A

(5 ALIKE)

RECEIVED
CK'D BY JWK OK'D BY
OCT 2 0 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☑ Reviewed
☐ Rejected
☐ Furnish as Corrected
☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/19/04
By Steven J. Dellis

NOTES:
1) FOR GENERAL NOTES AND WELD DETAILS SEE GN1.
2) MATERIAL SHALL BE M270M GR345W.
3) "H2-3" DENOTES MATERIAL SUBJECT TO ZONE 2, "H" FREQUENCY, CHARPY V-NOTCH TESTING OF 20J @ 4°C.

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	9-2-04									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		AS NOTED	AS NOTED

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

DESCRIPTION: CAMBER AND FLANGE DIAGRAMS
JOB: VT. ROUTE 118 OVER TROUT RIVER
TOWN OF BERKSHIRE, VT
FRANKLIN COUNTY
PROJ NO. BRF-RS 0283(7)
CUSTOMER: A.L. ST. ONGE

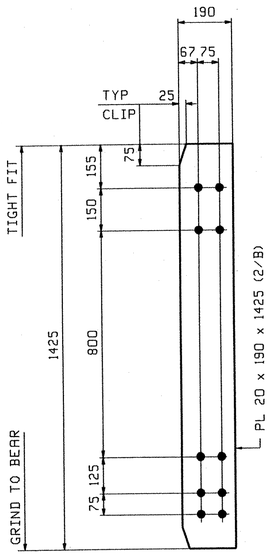
	DRAWN BY	DATE
	WL	07/12
	CHKD BY	
	PCP	07/22
	APPROV BY	
	SUPERVISOR	W. J. GATTI
	Q.A.	

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

JOB NO.	DRG. NO.
222	C1
15355	REV. △

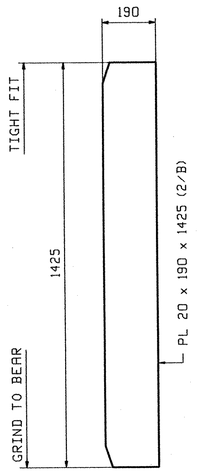
TENSOR 2475

PCP Tue Aug 3 10:46:46 EDT 2004 c:\users\pcp\2475\C1 : Rev0



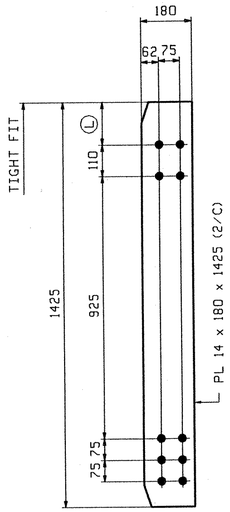
16 ~ x1a

BRG STIFF.



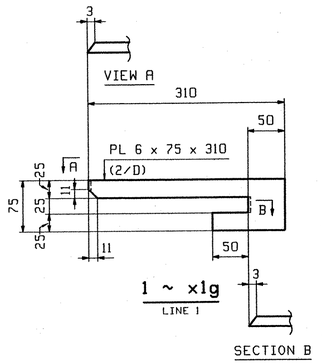
4 ~ x1b

BRG STIFF.



CROSSFR. CONN. STIFF

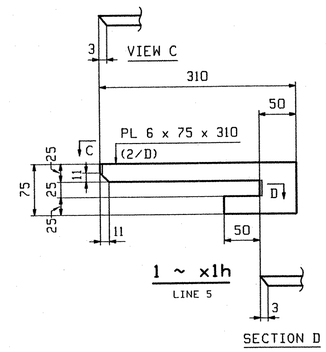
MARK	Q.TY	Ⓛ
x1c	20	150
x1d	10	107
x1f	10	87



1 ~ x1g

LINE 1

SECTION B



1 ~ x1h

LINE 5

SECTION D

NOTES:
1. ALL MATERIAL TO BE AASHTO M270M-345W.
2. FOR GENERAL NOTES SEE DRAWING GN1.
3. ALL BOLT HOLES SHALL BE $\frac{15}{16}$"ø FOR $\frac{7}{8}$"ø HSB.

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	7-2-04									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		$\frac{15}{16}$ø" (24mm)	

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

DESCRIPTION:	GIRDER STANDARD	DRAWN BY	DATE
JOB:	VT. ROUTE 118 OVER TROUT RIVER	AB	07/26/04
	TOWN OF BERKSHIRE, VT	CHKD BY	
	FRANKLIN COUNTY	PCP	07/30/04
		APPROV BY	
		SUPERVISOR	W. J. GATTI
PROJ NO.	BRF-RS 0283(7)	Q.A.	
CUSTOMER:	A.L. ST. ONGE		

TENSOR 2475

CASCO BAY STEEL STRUCTURES, INC.

75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO.	DRG. NO.
222	X1
15455	REV. △

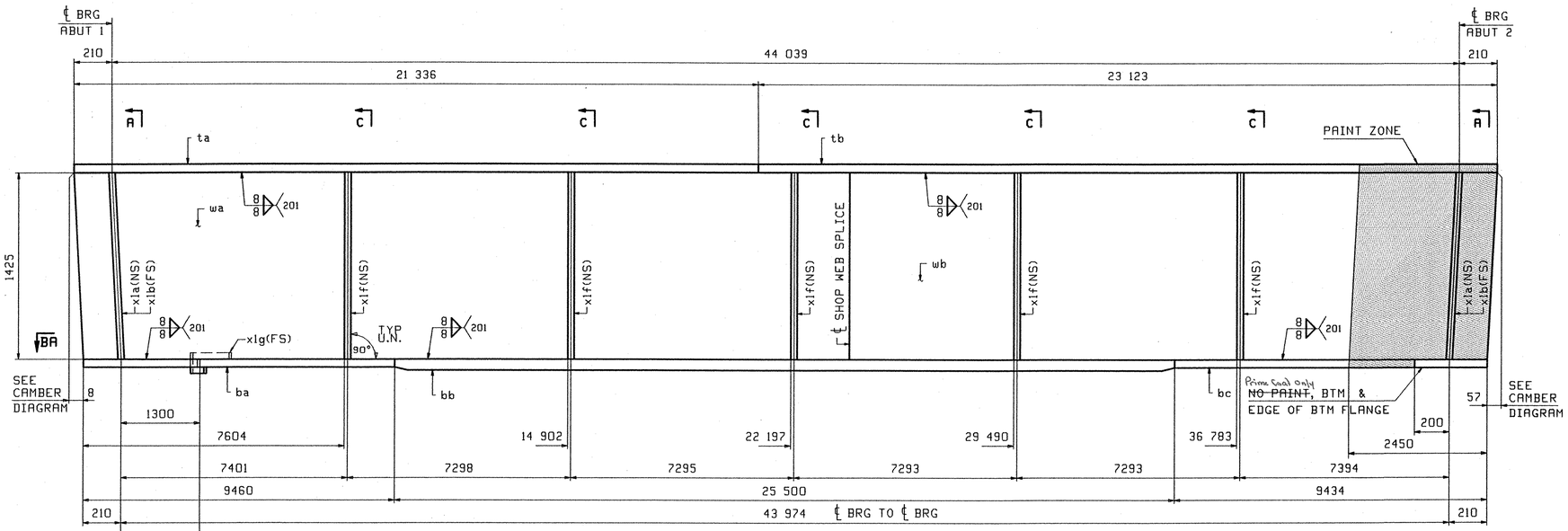
RECEIVED
CK'D BY JWC CK'D BY
OCT 20 2004
RESUBMIT APPROVED
BY DATE 11-01-04

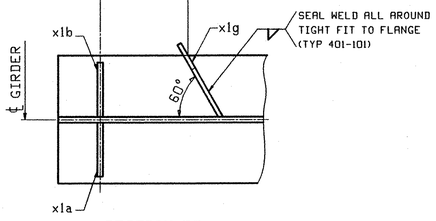
☑ Reviewed
☐ Rejected
☐ Furnish as Corrected
☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/18/04
By Steven F. Dalton

PCP Tue Aug 3 10:05:53 EDT 2004 /users/jobs/2475/d1.dgn

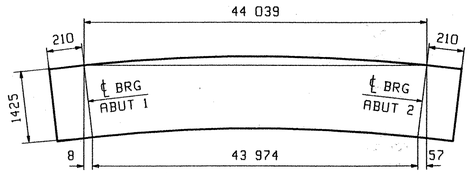




SECTION BA

ONE - GIRDER - 1G1A

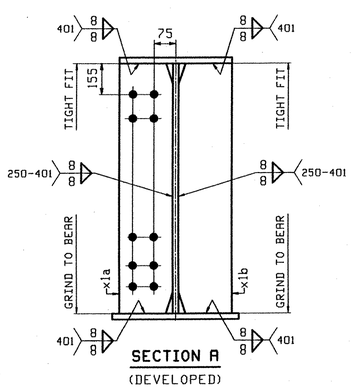
FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.

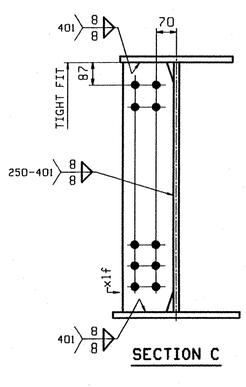


ORIENTATION DIAGRAM
FOR CAMBER SEE DWG. C1

ABM INFO PAGE	ABM INFO LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH m	LENGTH mm	REMARKS	WT	PROCUREMENT NOTES
		1G1A	1		GIRDER				16416 kg 36191 lbs	
1	G		1	wa	PL 16x1425	23	084	(M270M-345WT2)	(H2-3)	
1	J		1	wb	PL 16x1425	21	396	(M270M-345WT2)	(H2-3)	
1	N		1	ta	PL 22x400	21	336			
1	L		1	tb	PL 22x400	23	123			
1	E		1	ba	PL 22x450	9	460	(M270M-345WT2)	(H2-3)	
1	A		1	bb	PL 40x450	25	500	(M270M-345WT2)	(H2-3)	
1	C		1	bc	PL 22x450	9	434	(M270M-345WT2)	(H2-3)	
2	B		2	x1a	PL 20x190	1	425			
2	B		2	x1b	PL 20x190	1	425			
2	C		5	x1f	PL 14x180	1	425			
2	D		1	x1g	PL 6x75	0	310			

JOB NO.
DRAWING NO. 1
REV.





RECEIVED
OK'D BY: JWC OK'D BY
OCT 20 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☐ Reviewed ☐ Furnish as Corrected
☐ Rejected ☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/26/04
By Steven F. Dolin

OUT FOR APPROVAL	9.2.04									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		15 16Ø" (24mm) (UN)	

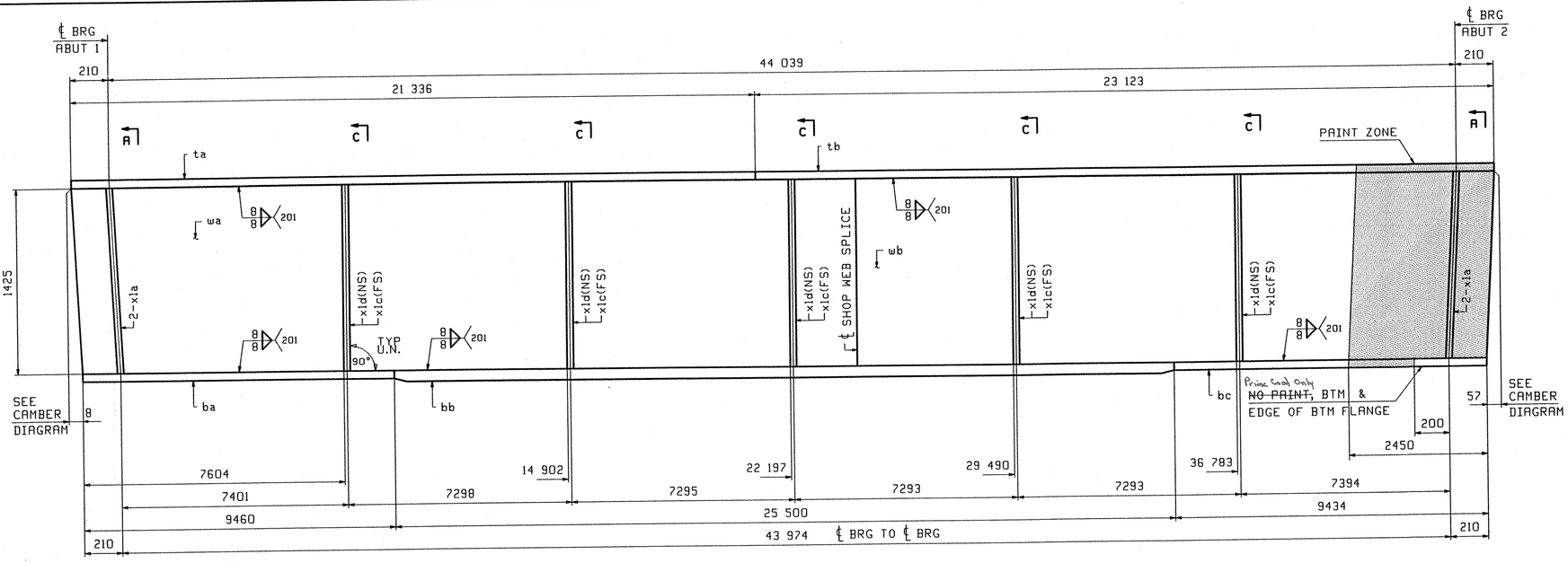
SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

DESCRIPTION:	GIRDER - 1G1A	DRAWN BY	DATE
JOB:	VT. ROUTE 118 OVER TROUT RIVER	AB	07/27/04
	TOWN OF BERKSHIRE, VT	CHKD BY	
	FRANKLIN COUNTY	PCP	07/30/04
TENSOR 2475		APPROV BY	
		SUPERVISOR	W. J. GATTI
PROJ NO.	BRF-RS 0283(7)	Q.A.	
CUSTOMER:	A.L. ST. ONGE		

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

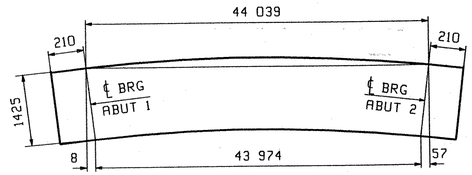
JOB NO.	DRG. NO.
222	1
/55 SS	REV. △

PCP Tue Aug 3 10:58:02 EDT 2004 /users/jobs/2475/1 : Rev0



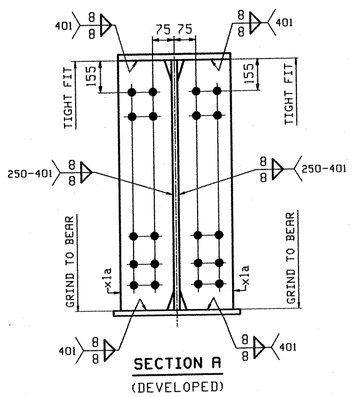
ONE - GIRDER - 2G2A

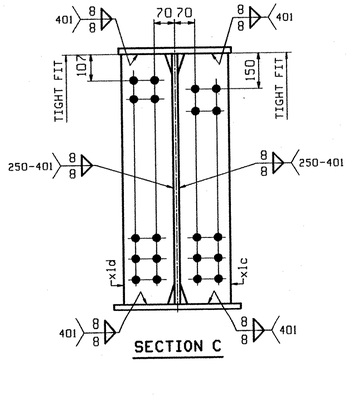
FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



ORIENTATION DIAGRAM
FOR CAMBER SEE DWG. C1

ABM INFO		SHIP	BILL OF MATERIAL			LENGTH		JOB NO.	DRAWING NO.		REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	m	mm	REMARKS	2		
									WT	PROCUREMENT NOTES	
		2G2A	1		GIRDER			16556 kg 36499 lbs			
1	G		1	wa	PL 16x1425	23	084	(M270M-345WT2)	(H2-3)		
1	J		1	wb	PL 16x1425	21	396	(M270M-345WT2)	(H2-3)		
1	N		1	ta	PL 22x400	21	336				
1	L		1	tb	PL 22x400	23	123				
1	E		1	ba	PL 22x450	9	460	(M270M-345WT2)	(H2-3)		
1	A		1	bb	PL 40x450	25	500	(M270M-345WT2)	(H2-3)		
1	C		1	bc	PL 22x450	9	434	(M270M-345WT2)	(H2-3)		
2	B		4	x1a	PL 20x190	1	425				
2	C		5	x1c	PL 14x180	1	425				
2	C		5	x1d	PL 14x180	1	425				





RECEIVED
OK'D BY Jwc OK'D BY
OCT 2 0 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☐ Reviewed ☑ Furnish as Corrected
☐ Rejected ☐ Revise and Resubmit
☐ Submit Specified Item

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all work in a safe and satisfactory manner.

McFarland-Johnson, Inc. Date 10/19/04
By Steven F. Dellea

OUT FOR APPROVAL	9-2-04									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

MATERIAL: M270M-345W
ELECTRODES:
HOLES: 15/16ø" (24mm) (UN)
SHOP BOLTS:

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

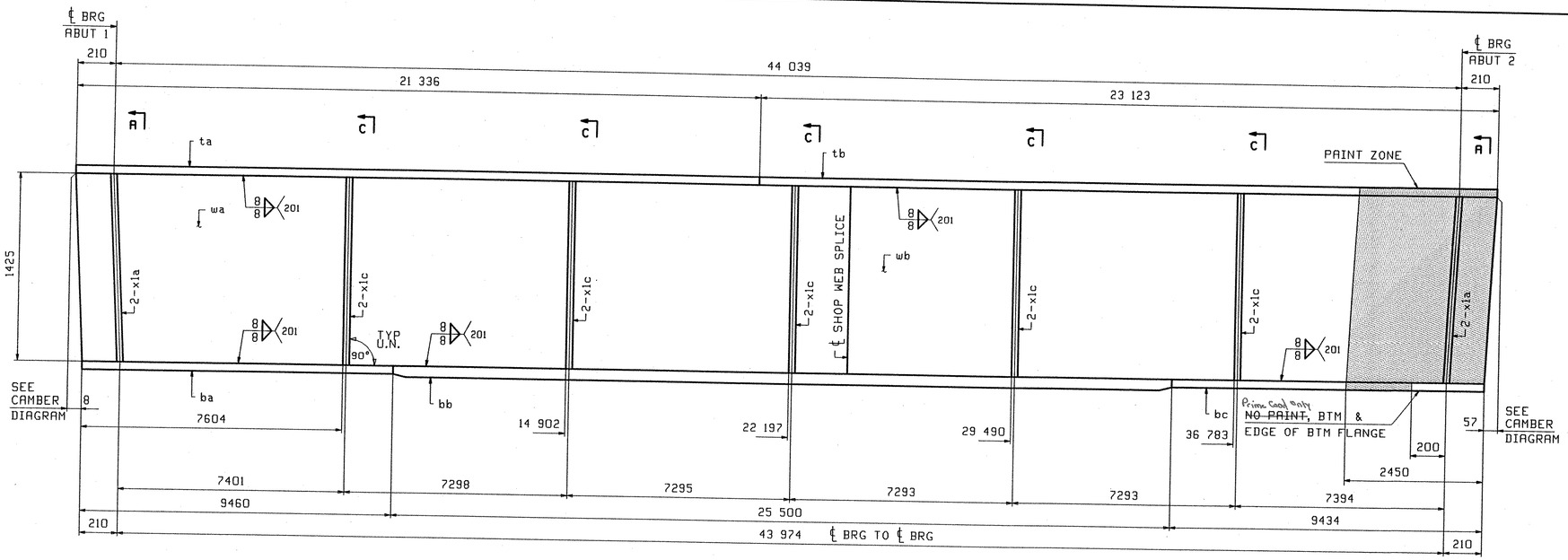
DESCRIPTION: GIRDER - 2G2A
JOB: VT. ROUTE 118 OVER TROUT RIVER
TOWN OF BERKSHIRE, VT
FRANKLIN COUNTY
TENSOR 2475
PROJ NO. BRF-RS 0283(7)
CUSTOMER: A.L. ST. ONGE

DRAWN BY	DATE
AB	07/27/04
CHKD BY	
PCP	07/30/04
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

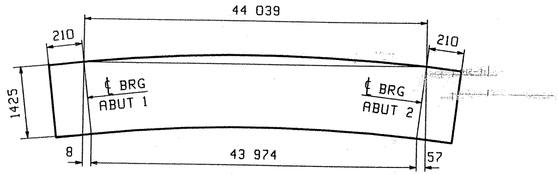
JOB NO.	DRG. NO.
222	2
156 SS	REV. △

PCP Tue Aug 3 Outlet EST 2004 /users/pw2475-2 : Rev0

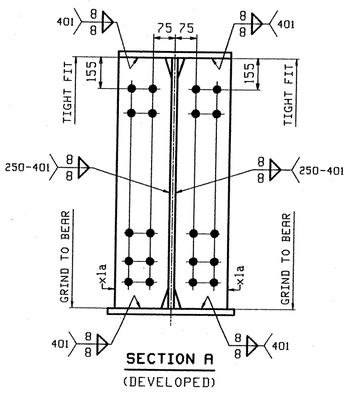


ONE - GIRDER - 3G3A

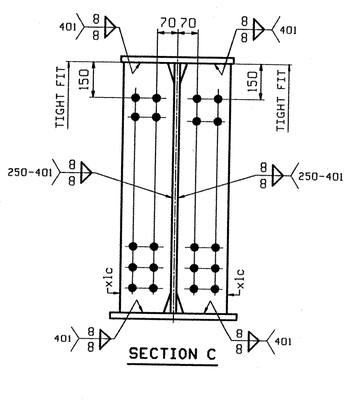
FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



ORIENTATION DIAGRAM
FOR CAMBER SEE DWG. C1



SECTION A
(DEVELOPED)



SECTION C

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
									3	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH m	LENGTH mm	REMARKS	WT	PROCUREMENT NOTES
		3G3A	1		GIRDER				16356 kg 36499 lbs	
1	G		1	wa	PL 16x1425	23	084	(M270M-345WT2)	(H2-3)	
1	J		1	wb	PL 16x1425	21	396	(M270M-345WT2)	(H2-3)	
1	N		1	ta	PL 22x400	21	336			
1	L		1	tb	PL 22x400	23	123			
1	E		1	ba	PL 22x450	9	460	(M270M-345WT2)	(H2-3)	
1	A		1	bb	PL 40x450	25	500	(M270M-345WT2)	(H2-3)	
1	C		1	bc	PL 22x450	9	434	(M270M-345WT2)	(H2-3)	
2	B		4	x1a	PL 20x190	1	425			
2	C		10	x1c	PL 14x180	1	425			

OUT FOR APPROVAL	9-2-04									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		15/16" ø (24mm) (UN)	

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

RECEIVED
CK'D BY JWC CK'D BY
OCT 20 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☐ Reviewed ☐ Furnish as Corrected
☐ Rejected ☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/18/04
By Steven J. Dolan

DESCRIPTION:	GIRDER - 3G3A
JOB:	VT. ROUTE 118 OVER TROUT RIVER TOWN OF BERKSHIRE, VT FRANKLIN COUNTY
PROJ NO.	BRF-RS 0283(7)
CUSTOMER:	A.L. ST. ONGE

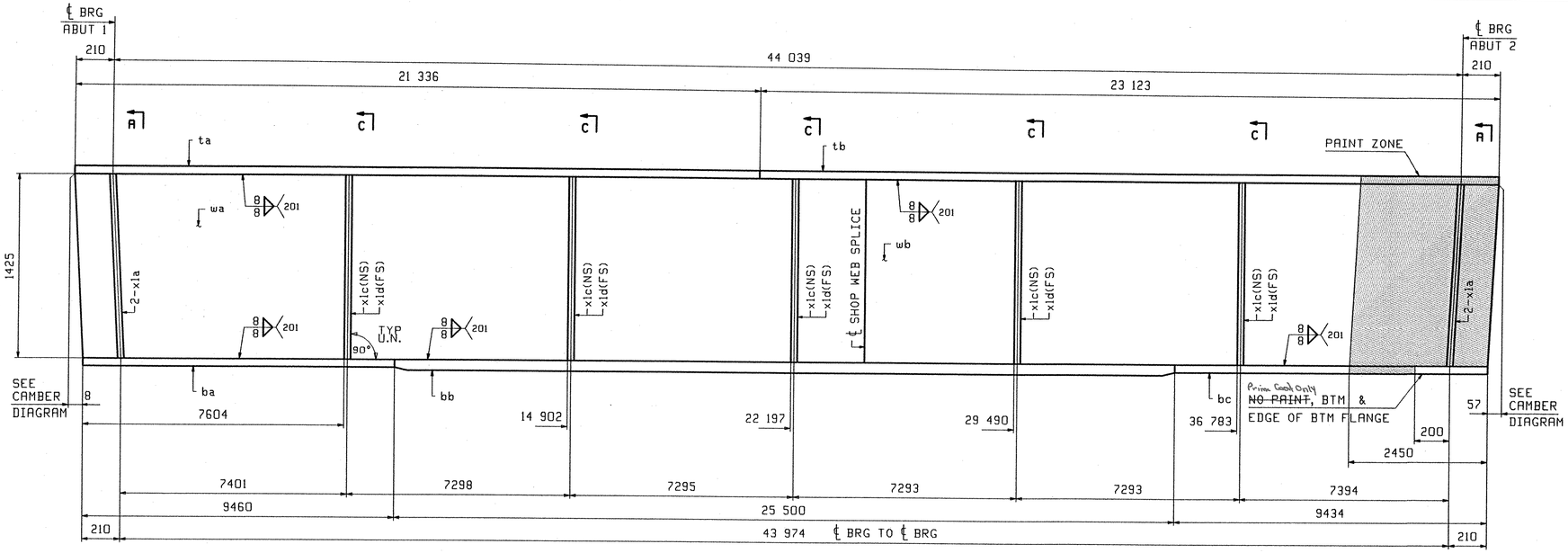
TENSOR 2475

DRAWN BY	DATE
AB	07/27/04
CHKD BY	
PCP	07/30/04
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

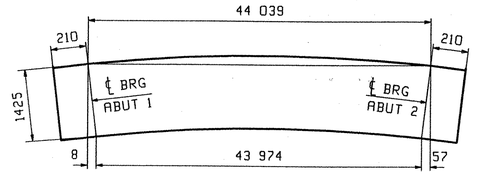
JOB NO.	DRG. NO.
222	3
157 55	REV. △

PCP Tue Aug 3 10:58:58 EDT 2004 /users/jobs/2475/3 : Rev0

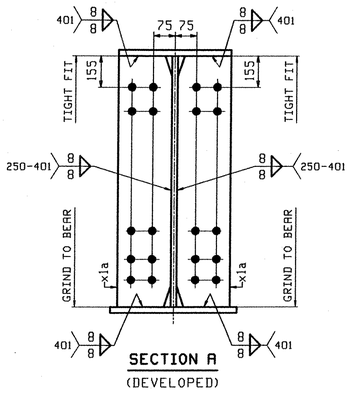


ONE - GIRDER - 4G4A

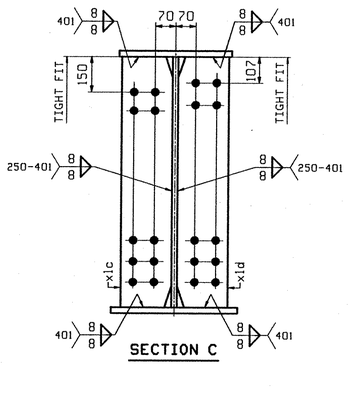
FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



ORIENTATION DIAGRAM
FOR CAMBER SEE DWG. C1



SECTION A
(DEVELOPED)



SECTION C

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.		REV.
									4		
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH m	LENGTH mm	REMARKS	WT	PROCUREMENT NOTES	
		4G4A	1		GIRDER				16556 kg 36499 lbs		
1	G		1	wa	PL 16x1425	23	084	(M270M-345WT2)	(H2-3)		
1	J		1	wb	PL 16x1425	21	396	(M270M-345WT2)	(H2-3)		
1	N		1	ta	PL 22x400	21	336				
1	L		1	tb	PL 22x400	23	123				
1	E		1	ba	PL 22x450	9	460	(M270M-345WT2)	(H2-3)		
1	A		1	bb	PL 40x450	25	500	(M270M-345WT2)	(H2-3)		
1	C		1	bc	PL 22x450	9	434	(M270M-345WT2)	(H2-3)		
2	B		4	x1a	PL 20x190	1	425				
2	C		5	x1c	PL 14x180	1	425				
2	C		5	x1d	PL 14x180	1	425				

OUT FOR APPROVAL	9-2-04									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		15/16ø" (24mm) (UN)	

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

DESCRIPTION:	GIRDER - 4G4A	DRAWN BY	DATE
JOB:	VT. ROUTE 118 OVER TROUT RIVER	AB	07/27
	TOWN OF BERKSHIRE, VT	CHKD BY	
	FRANKLIN COUNTY	PCP	07/30/04
TENSOR 2475		APPROV BY	
PROJ NO.	BRF-RS 0283(7)	SUPERVISOR	W. J. GATTI
CUSTOMER:	A.L. ST. ONGE	Q.A.	

CASCO BAY STEEL STRUCTURES, INC. JOB NO. 222 DRG. NO. 4
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179
158 SS REV. △

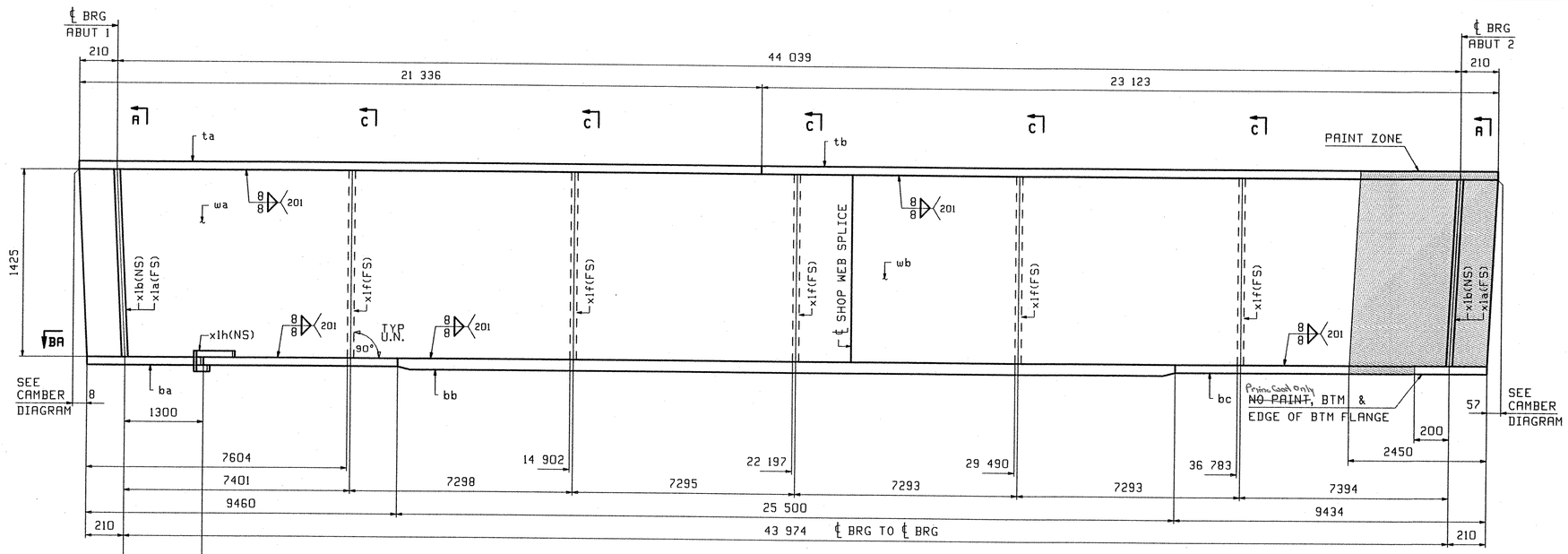
RECEIVED
CK'D BY JWC CK'D BY
OCT 20 2004
RESUBMIT APPROVED
BY DATE 11-01-04

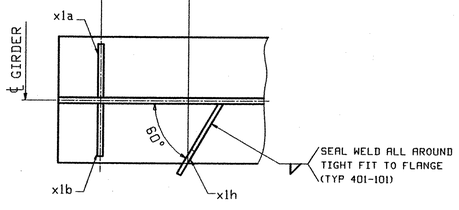
☐ Reviewed ☑ Furnish as Corrected
☐ Rejected ☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/19/04
By Steven F. Dellis

PCP Tue Aug 3 10:58:28 CDT 2004 /users/pcp/2475-1.0w=0

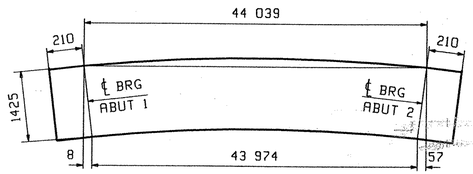




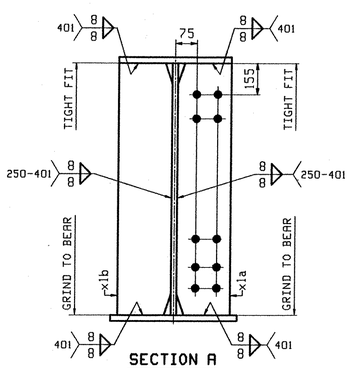
SECTION-BA

ONE - GIRDER - 5G5A

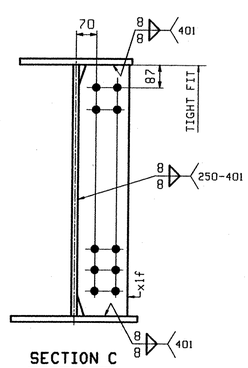
FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
FOR CAMBER DIAGRAM SEE DRAWING C1.
FOR GENERAL NOTES SEE DRAWING GN1.
H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



ORIENTATION DIAGRAM
FOR CAMBER SEE DWG. C1



SECTION A
(DEVELOPED)



SECTION C

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.		REV.
									5		
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH m	LENGTH mm	REMARKS	WT	PROCUREMENT NOTES	
		5G5A	1		GIRDER				16416 kg 36191 lbs		
1	G		1	wa	PL 16x1425	23	084	(M270M-345W H2)	(H2-3)		
1	J		1	wb	PL 16x1425	21	396	(M270M-345W H2)	(H2-3)		
1	N		1	ta	PL 22x400	21	336				
1	L		1	tb	PL 22x400	23	123				
1	E		1	ba	PL 22x450	9	460	(M270M-345W H2)	(H2-3)		
1	A		1	bb	PL 40x450	25	500	(M270M-345W H2)	(H2-3)		
1	C		1	bc	PL 22x450	9	434	(M270M-345W H2)	(H2-3)		
2	B		2	x1a	PL 20x190	1	425				
2	B		2	x1b	PL 20x190	1	425				
2	C		5	x1f	PL 14x180	1	425				
2	D		1	x1h	PL 6x75	0	310				

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.
	OUT FOR APPROVAL	9-2-04				
	OUT FOR APPROVAL					
	ISSUED TO SHOP					
	FIELD & OFFICE					

NO.	DIA.	LGT	TYPE	WASHER

MATERIAL: M270M-345W
ELECTRODES:
HOLES: 15 16Ø" (24mm) (UN)
SHOP BOLTS:

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

RECEIVED
CK'D BY JCW CK'D BY
OCT 20 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☐ Reviewed ☐ Rejected
☑ Furnish as Corrected ☐ Revise and Resubmit ☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/18/04
By Steven T. DeBie

DESCRIPTION: GIRDER - 5G5A
JOB: VT. ROUTE 118 OVER TROUT RIVER
TOWN OF BERKSHIRE, VT
FRANKLIN COUNTY
PROJ NO. BRF-RS 0283(7)
CUSTOMER: A.L. ST. ONGE

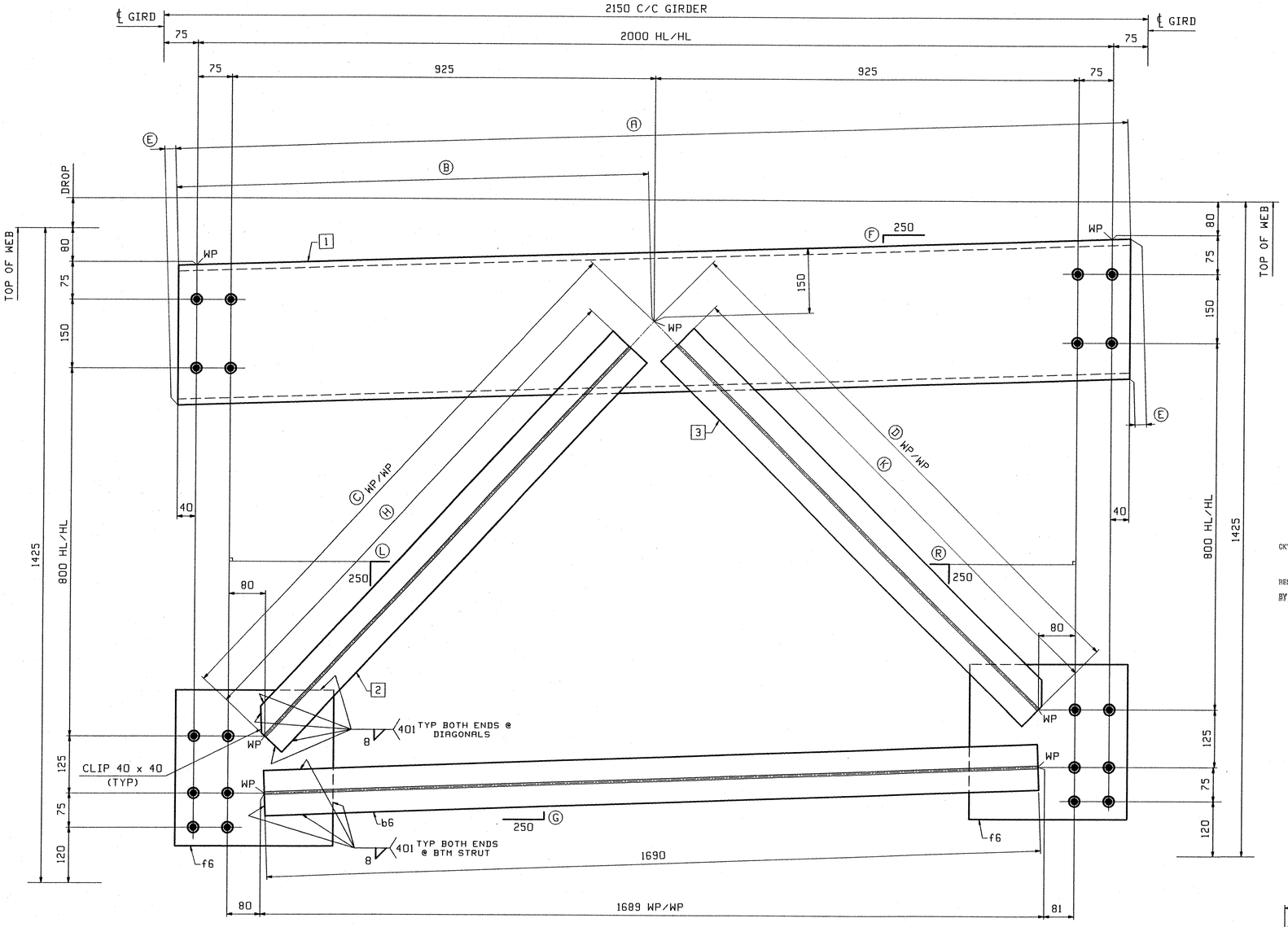
DRAWN BY	DATE
AB	07/27/04
CHK'D BY	
PCP	07/30/04
APPROV BY	
SUPERVISOR	W. J. GATTI
Q.A.	

TENSOR 2475

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

JOB NO.	DRG. NO.
222	5
159 SS	REV. △

PCP Tue Aug 3 10:16:27 EDT 2004 /users/jobs/2475/5 : RevO

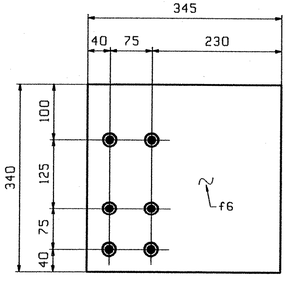


END CROSSFRAMES

(@ ABUTMENTS LOOKING AWAY FROM BACKWALL)

	MARK	REQ'D	DROP	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ	Ⓚ	Ⓛ	Ⓡ	1	2	3
G1-G2 (ABUT1)	6CF1	1	63	2081	1036	1239	1194	10	8	9	1160	1120	233	250	a6	c6	d6
G3-G2 (ABUT1)	6CF2	1	43	2080	1037	1232	1201	7	5	6	1155	1130	236	248	g6	h6	k6
G5-G4 (ABUT2)	6CF3	1	63	2081	1036	1239	1194	10	8	9	1160	1120	233	250	a6	c6	d6
G4-G3 (ABUT2)	6CF4	1	43	2080	1037	1232	1201	7	5	6	1155	1130	236	248	g6	h6	k6

PAINTED



DETAIL OF f6

ABM INFO PAGE	ABM INFO LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH m	LENGTH mm	REMARKS	WT	PROCUREMENT NOTES
		6CF1	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	a6	C 310x37	2	091	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	c6	WT 100x11	1	160	(M270M-345W)		
2	J		1	d6	WT 100x11	1	120	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		
		6CF2	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	g6	C 310x37	2	087	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	h6	WT 100x11	1	155	(M270M-345W)		
2	J		1	k6	WT 100x11	1	130	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		
		6CF3	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	a6	C 310x37	2	091	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	c6	WT 100x11	1	160	(M270M-345W)		
2	J		1	d6	WT 100x11	1	120	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		
		6CF4	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	g6	C 310x37	2	087	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	h6	WT 100x11	1	155	(M270M-345W)		
2	J		1	k6	WT 100x11	1	130	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		

BILL OF MATERIAL — JOB NO. — DRAWING NO. 6 — REV.

RECEIVED
OK'D BY JWC OK'D BY
OCT 20 2004
RESUBMIT APPROVED CSW
BY DATE 11-01-04

Furnish as Corrected
Revise and Resubmit
Submit Specified Item
Reviewed
Rejected

This shop drawing is only for general conformance with the design concept and the information given in the contract documents. Contractor is responsible for dimensions which he shall confirm and correlate at the jobsite; for fabrication processes and techniques of construction; for coordination of the Work with that of all other trades; and for performing all work in a safe and satisfactory manner.

McFarland-Johnson, Inc.
Date 10/18/04
By Steven J. Dale

NOTES:
FOR GENERAL NOTES & WELD PROCEDURES SEE DRAWING GN1.

OUT FOR APPROVAL	9204									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										

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

MATERIAL:	ELECTRODES:	HOLES:	SHOP BOLTS:
M270M-345W		15/16"Ø U.N.	NONE

SURFACE PREP. & PAINT:
STEEL WITHIN 245D OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

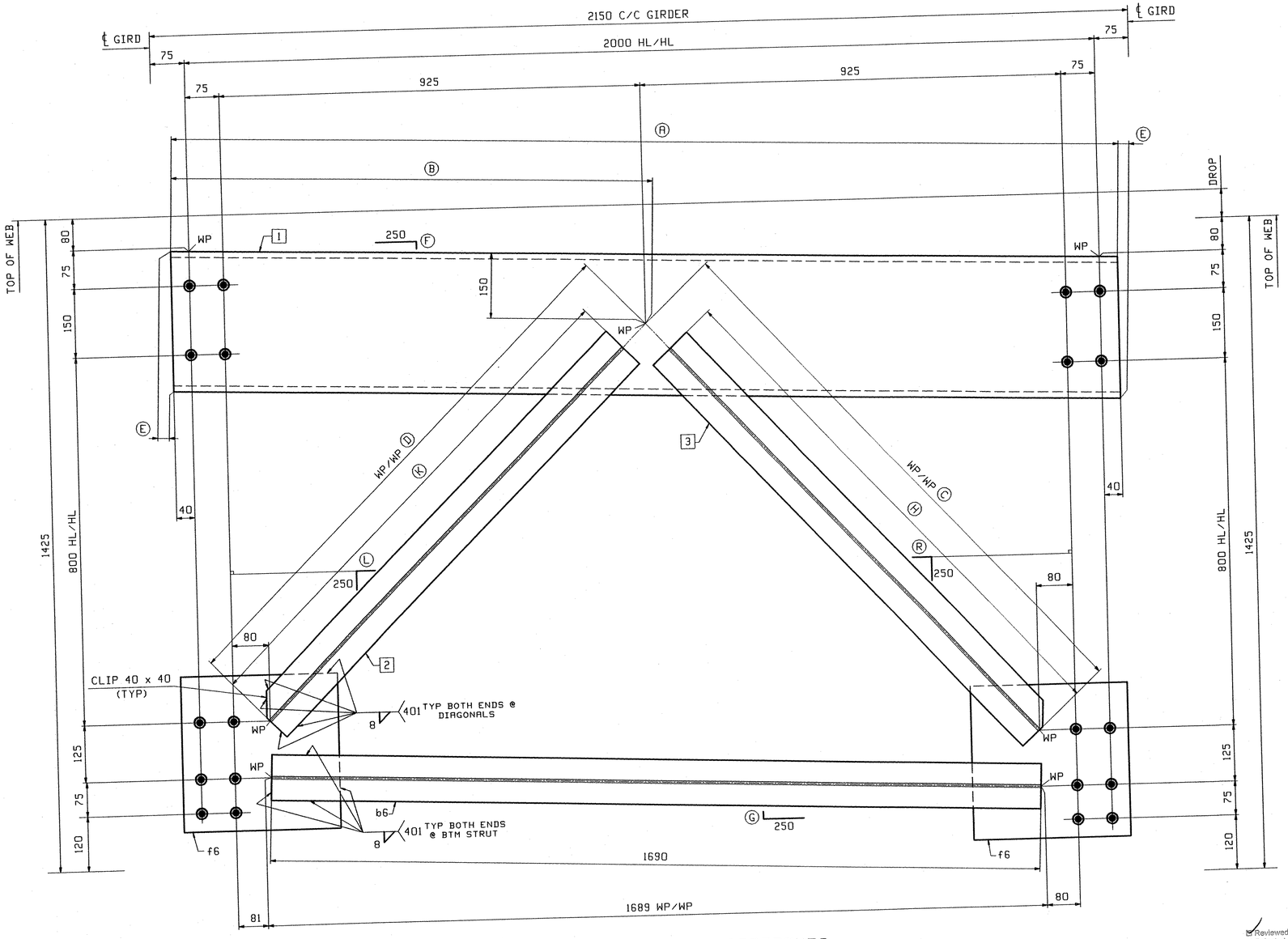
DESCRIPTION: END CROSSFRAMES	DRAWN BY	DATE
JOB: VT. ROUTE 118 OVER TROUT RIVER	AB	07/27/04
TOWN OF BERKSHIRE, VT	CHKD BY	
FRANKLIN COUNTY	PCP	08/02/04
	APPROV BY	
PROJ NO. BRF-RS 0283(7)	SUPERVISOR	W. J. GATTI
CUSTOMER: A.L. ST. ONGE	Q.A.	

TENSOR 2475

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

JOB NO.	DRG. NO.
222	6
160 SS	REV. △

PCP Tue May 3 08:46:46 EST 2005 /users/jobs/2475/6 | RevD



END CROSSFRAMES

(@ ABUTMENTS LOOKING AWAY FROM BACKWALL)

	MARK	REQ'D	DROP	A	B	C	D	E	F	G	H	K	L	R	1	2	3
G5-G4 (ABUT1)	7CF1	1	63	2081	1045	1239	1194	10	8	9	1160	1120	250	233	a7	c7	d7
G4-G3 (ABUT1)	7CF2	1	43	2080	1043	1232	1201	7	5	6	1155	1130	248	236	g7	h7	k7
G2-G1 (ABUT2)	7CF3	1	63	2081	1045	1239	1194	10	8	9	1160	1120	250	233	a7	c7	d7
G3-G2 (ABUT2)	7CF4	1	43	2080	1043	1232	1201	7	5	6	1155	1130	248	236	g7	h7	k7

PAINTED

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH m	LENGTH mm	REMARKS	WT	PROCUREMENT NOTES
		7CF1	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	a7	C 310x37	2	091	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	c7	WT 100x11	1	120	(M270M-345W)		
2	J		1	d7	WT 100x11	1	160	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		
		7CF2	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	g7	C 310x37	2	087	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	h7	WT 100x11	1	130	(M270M-345W)		
2	J		1	k7	WT 100x11	1	155	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		
		7CF3	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	a7	C 310x37	2	091	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	c7	WT 100x11	1	120	(M270M-345W)		
2	J		1	d7	WT 100x11	1	160	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		
		7CF4	1		END CROSSFRAME				145 kg 319 lbs	
2	G		1	g7	C 310x37	2	087	(M270M-345W)		
2	H		1	b6	WT 100x11	1	690	(M270M-345W)		
2	J		1	h7	WT 100x11	1	130	(M270M-345W)		
2	J		1	k7	WT 100x11	1	155	(M270M-345W)		
2	K		2	f6	PL 13x340	0	345	(M270M-345W)		

RECEIVED
CK'D BY JWK DA'D BY
OCT 2 0 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☑ Reviewed
☐ Rejected
☐ Furnish as Corrected
☐ Revise and Resubmit
☐ Submit Specified Items

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on this shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for dimensions to be confirmed and correlated at the jobsite, information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction, coordination of the Work with that of all other trades and performing all work in a safe and satisfactory manner

McFarland-Johnson, Inc.
Date 10/28/04
By Steven F. Dellis

NOTES:
FOR GENERAL NOTES & WELD PROCEDURES SEE DRAWING GN1.
FOR DETAIL OF f6 SEE DRG.6

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.
	OUT FOR APPROVAL	9.2.04				
	OUT FOR APPROVAL					
	ISSUED TO SHOP					
	FIELD & OFFICE					

NO.	DIA.	LGT	TYPE	WASHER

MATERIAL: M270M-345W
ELECTRODES:
HOLES: 15/16 Ø U.N.
SHOP BOLTS: NONE

SURFACE PREP. & PAINT:
STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.
ALL OTHER STEEL SHALL BE UNPAINTED.

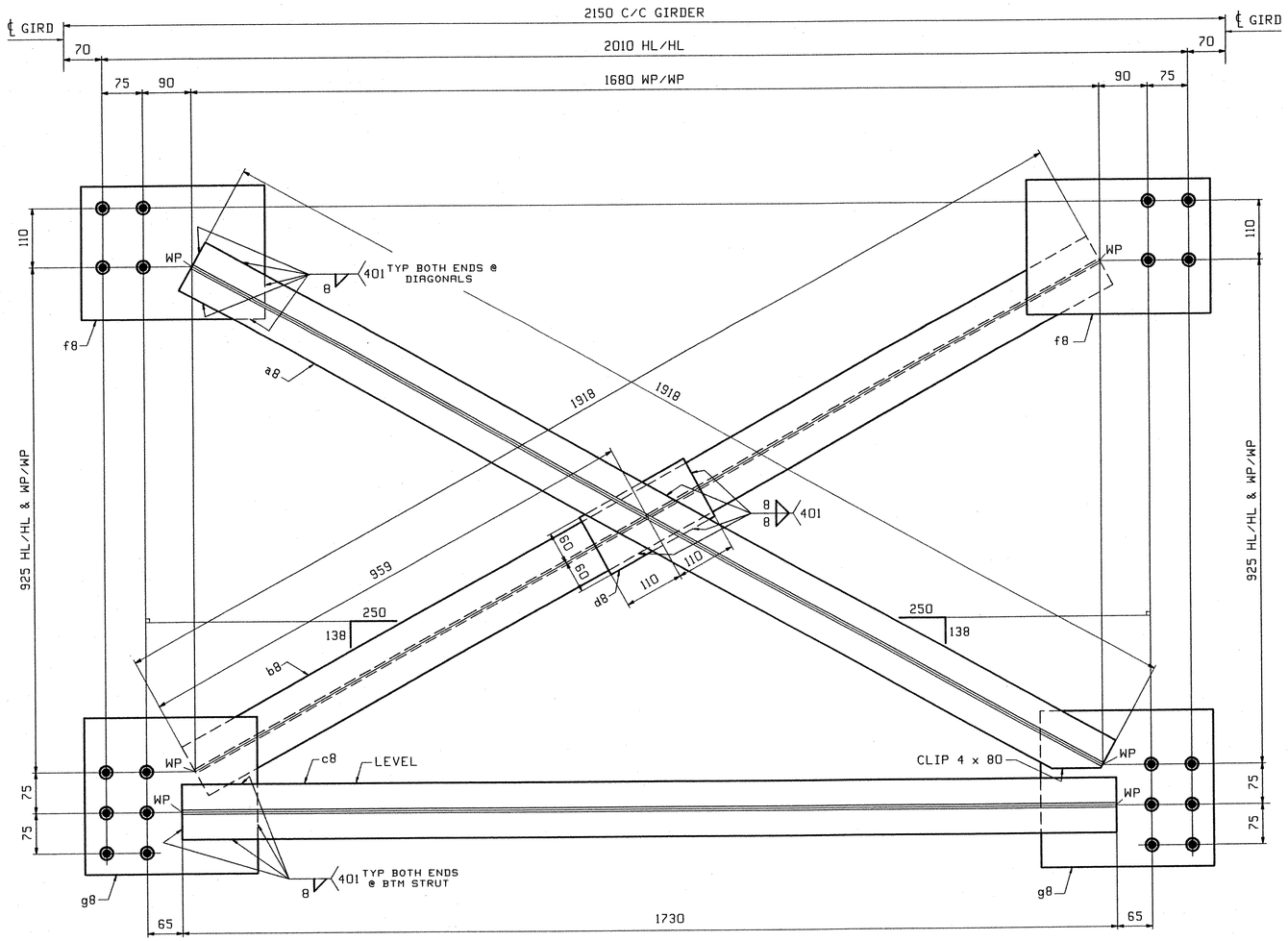
DESCRIPTION: END CROSSFRAME
JOB: VT. ROUTE 118 OVER TROUT RIVER
TOWN OF BERKSHIRE, VT
FRANKLIN COUNTY
TENSOR 2475
PROJ NO. BRF-RS 0283(7)
CUSTOMER: A.L. ST. ONGE

	DRAWN BY	DATE
	AB	07/29/04
	CHK'D BY	
	PCP	08/02/04
	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

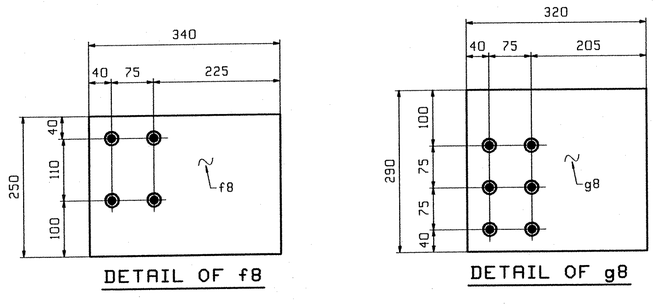
JOB NO.	DRG. NO.
222	7
761 55	REV. △

PCP Tue Aug 3 10:16:56 CST 2004 /users/jobs/2475/7 : RevD



20 ~ INTERMEDIATE CROSSFRAMES ~ 8CF1

(LOOKING UP STATION)



ABM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.		REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH m	LENGTH mm	REMARKS	8 WT	PROCUREMENT NOTES	
		8CF1	20		INT.CROSSFRAMES				100 kg 220 lbs		
2	P		20	a8	WT 100x11	1	918	(M270M-345W)			
2	P		20	b8	WT 100x11	1	918	(M270M-345W)			
2	N		20	c8	WT 100x11	1	730	(M270M-345W)			
2	S		20	d8	PL 13x120	0	220	(M270M-345W)			
2	Q		40	f8	PL 13x250	0	340	(M270M-345W)			
2	R		40	g8	PL 13x290	0	320	(M270M-345W)			

NOTES:

FOR GENERAL NOTES & WELD PROCEDURES SEE DRAWING GN1.

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.
	OUT FOR APPROVAL	9-2-04				
	OUT FOR APPROVAL					
	ISSUED TO SHOP					
	FIELD & OFFICE					

NO.	DIA.	LGT	TYPE	WASHER

MATERIAL: M270M-345W

ELECTRODES:

HOLES: 15/16" Ø U.N.

SHOP BOLTS: NONE

SURFACE PREP. & PRINT:

STEEL WITHIN 2450 OF ABUTMENT 2 SHALL BE PAINTED PER NOTES ON GN1.

ALL OTHER STEEL SHALL BE UNPAINTED.

RECEIVED
CK'D BY JWC OK'D BY
OCT 20 2004
RESUBMIT APPROVED
BY DATE 11-01-04

☑ Reviewed ☐ Furnish as Corrected
☐ Rejected ☐ Revise and Resubmit
☐ Submit Specified Item

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McFarland-Johnson, Inc.
Date 10/18/04
By Steven J. Dellea

DESCRIPTION: INT. CROSSFRAMES

JOB: VT. ROUTE 118 OVER TROUT RIVER
TOWN OF BERKSHIRE, VT
FRANKLIN COUNTY

TENSOR 225

PROJ NO. BRF-RS 0283(7)

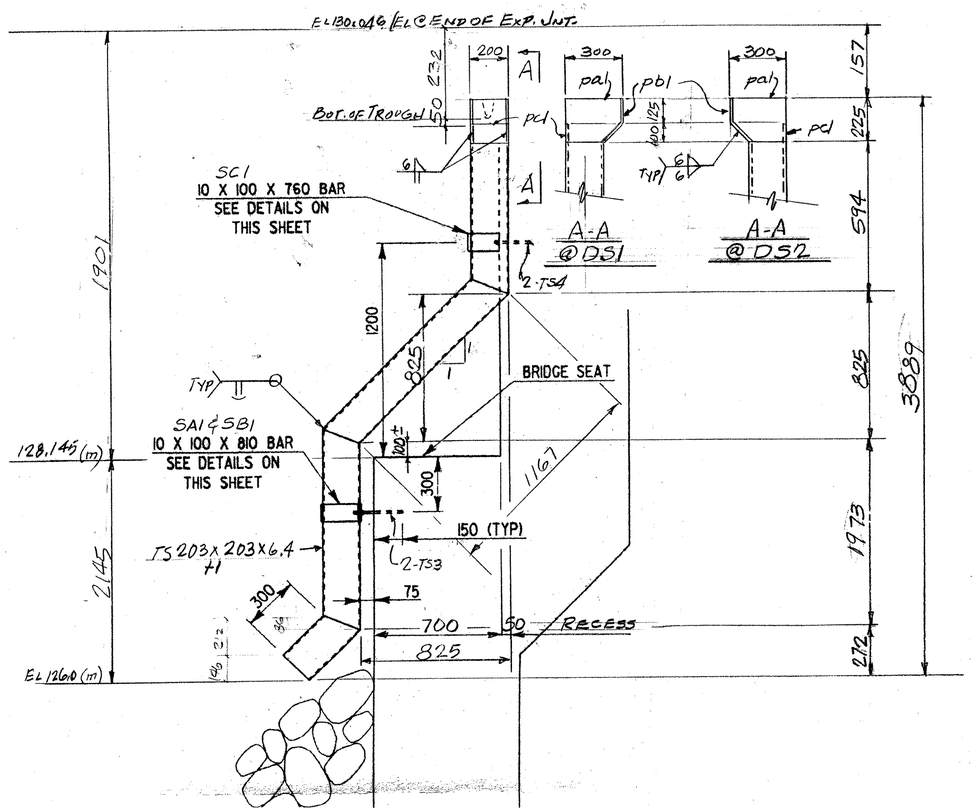
CUSTOMER: A.L. ST. ONGE

DRAWN BY	DATE
AB	07/29
CHKD BY	
PCP	08/02/04
APPROV BY	
SUPERVISOR	W. J. GATTI
Q.A.	

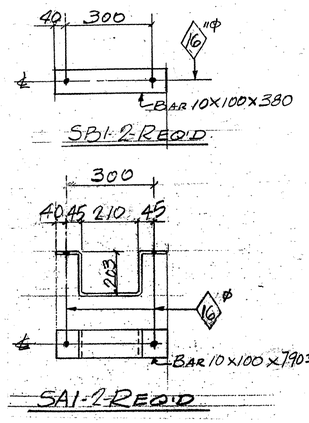
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

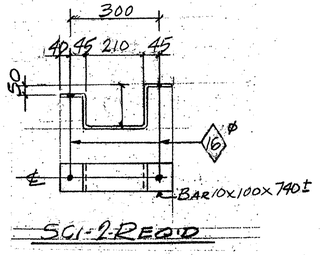
JOB NO.	DRG. NO.
222	8
16255	REV.

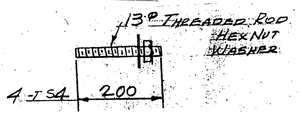
PCP Tue Aug 3 10:17:06 EDT 2004 /users/jobs/2475/8 : Rev=0

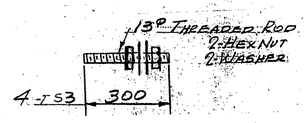


DS1 - ONE REQ'D (@ NORTH END OF ABUT. NO. 2)
DS2 - ONE REQ'D (@ SOUTH DO DO)









VTrans
RECEIVED
OK'D BY _____ OK'D BY _____
MAY 10 2005
RESUBMIT _____ APPROVED
BY DATE 5/12/2005

ABM INFO		SHOP BILL				JOB NO. 222	DRG. NO. M1
PAGE	LINE	NO.	DESCRIPTION	PT. MK.	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		1	DOWNSPOUT	4050		DS1		—
		1	DO	4050		DS2		—
		2	TS 203 x 203 x 6.4	4260±	H1		A500-A501	
		4	ϕ 6.4 x 225	294	pa1			
		2	ϕ 6.4 x 188	200	pb1		BEND	
		2	ϕ 6.4 x 100	188	pc1			
		2	BAR 10 x 100	760±		SA1	BEND	
		2	DO	380		SB1		
		2	DO	540		SB1	BEND	
		4	13ϕ THREADED ROD	300		TS3		
		4	DO	200		TS4		
		12	13ϕ HEX NUTS					
		12	13ϕ WASHERS					

PAY ITEM 510.10

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	3-8-05									
	OUT FOR APPROVAL final	5-9-05									
	ISSUED TO SHOP										
	FIELD & OFFICE										

PROJECT NO. BRF-RS-0283(3) STATE PROJECT NO. 26
MATERIAL AASHTO M270 Gr 250 ELECTRODES: PER PROC. HOLES: AS NOTED SHOP BOLTS: 13ϕ
SURFACE PREP. & PAINT:
GALV. AFTER FAB. (ASTM-A123)

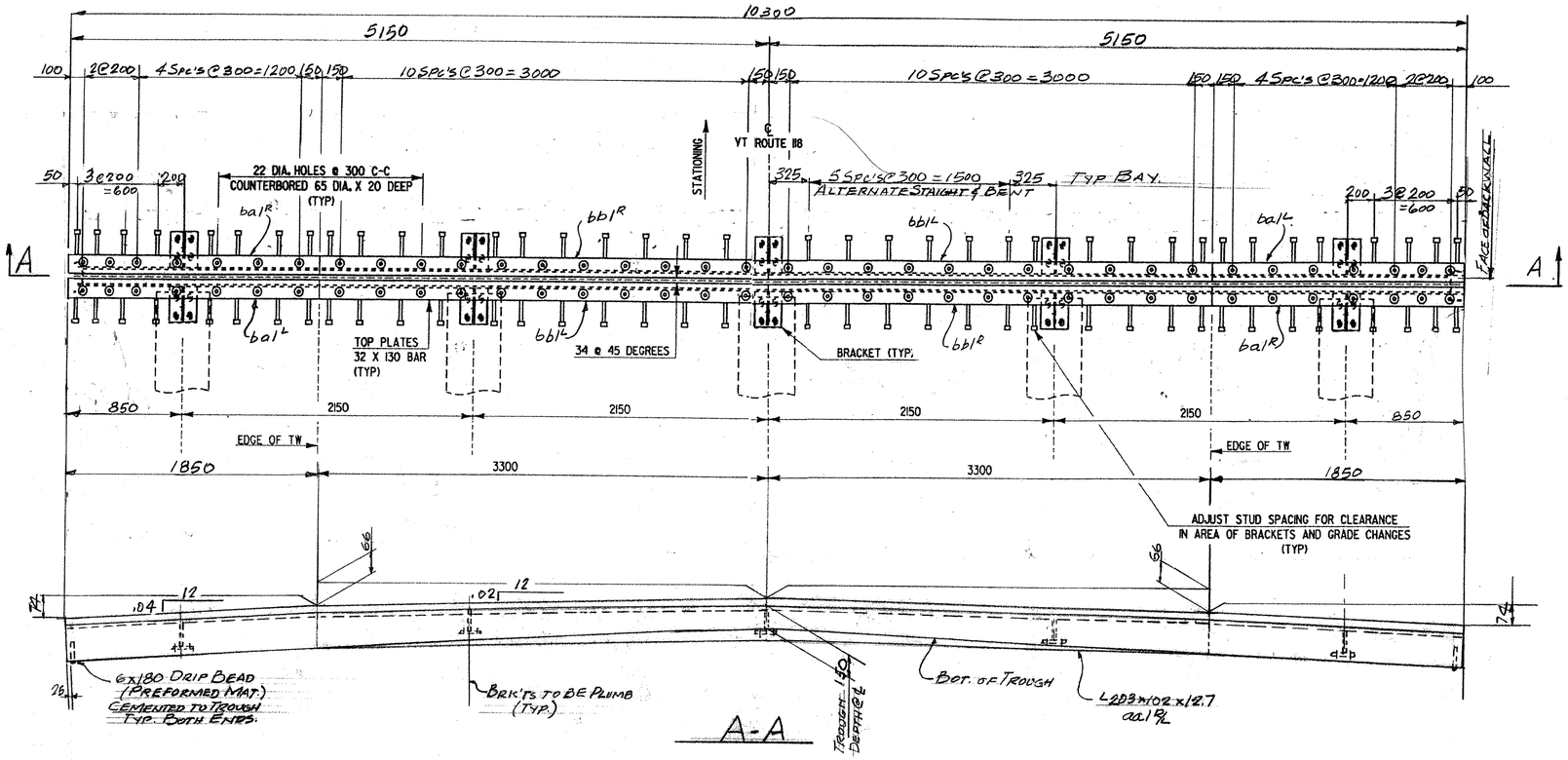
DESCRIPTION: DOWNSPOUTS - ABUT. NO. 2
JOB: VT. ROUTE 118 OVER TROUT RIVER BERKSHIRE, VT.
CUSTOMER: A. L. STONGE

	DRAWN BY	DATE
	J.P.F	3-05
	CHKD. BY	
	E J	
	APPROV BY	
	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.
222	M1
163	REV. 1

1" = 1'-0"

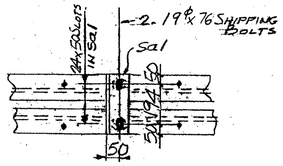


A-A

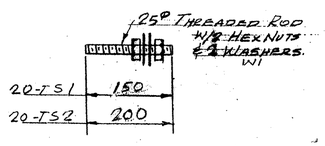
EJI-ONE REQ'D (@ABUT. NO. 2)

ABM INFO PAGE	LINE	NO.	DESCRIPTION	mm	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
				10300		EJ1		—
		2	L 203x102x12.7	10300±	aa1			
		4	BAR 32x130	1850	bal^R			
		4	Do	3300	bal^L			
		10	PL 12x200	250	be1			
		10	PL 12x153	250	bf1			
		72	20# H.S. BOLTS	50	ma1			
		72	20# CLOSED THREADED ANC. FERRULES		mb1			
		64	19# ANC. STUDS	200	mc1			
		1	PREFORMED FABRIC 4 mm X 610	10300±	mf1		3 PLY PER SUBSET 207.07 AASHTO M.192-TYPE B	
		2	BUTYL RUBBER TAPE 2mm x 75	10300±	mg1			
	5		PL 12x200	230		API		
	20		19# ANC. STUDS	200				
	20		25# THREADED ROD	150		TS1		
	20		Do	200		TS2		
		80	25# HEX NUTS		SHOP			
		80	PL 10x75	75	W1			
		7	L 102x102x10	294	sa1			
		14	19# BOLTS	76	SHOP			

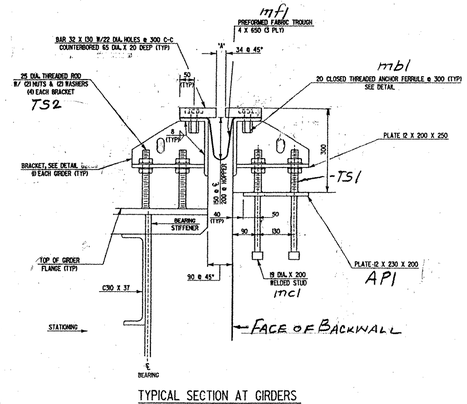
PAY ITEM 516-10



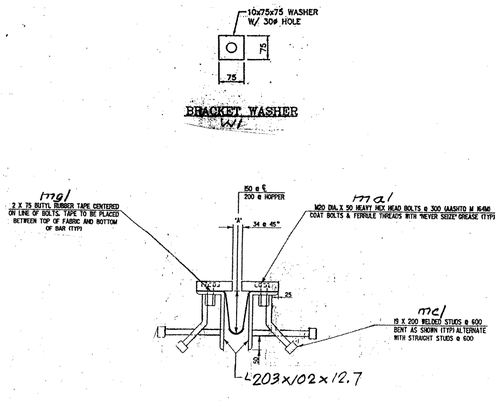
SHIPPING DEVICE
SPACED 1500 O.C. MAX.



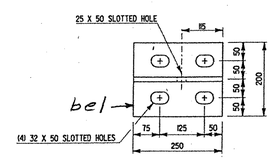
VTrans
RECEIVED
CK'D BY _____ OK'D BY _____
MAY 10 2005
RESUBMIT _____ APPROVED
BY DATE 5/12/2005



TYPICAL SECTION AT GIRDERS



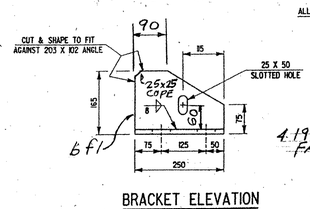
TYPICAL SECTION BETWEEN GIRDERS.



BRACKET PLAN



ANCHOR FERRULE DETAIL



BRACKET ELEVATION

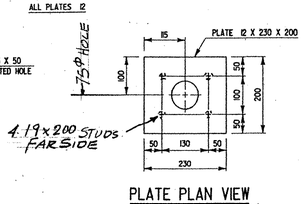


PLATE PLAN VIEW
API-5-REQ'D

PLANS DRAWN USING
METRIC
DIMENSIONS

OUT FOR APPROVAL	3-8-05
OUT FOR APPROVAL final	5-9-05
ISSUED TO SHOP	
FIELD & OFFICE	

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

PROJECT NO. BRF-RS 0283(7) STATE PROJECT NO. 26

MATERIAL AASHTO M270 GR 250 | ELECTRODES: PER PROC | HOLES: AS NOTED | SHOP BOLTS: 20#

SURFACE PREP. & PAINT: M164-GALV.

GALV. AFTER FAB. (ASTM-A123)

DESCRIPTION: EXP. JOINT - ABUT. NO. 2

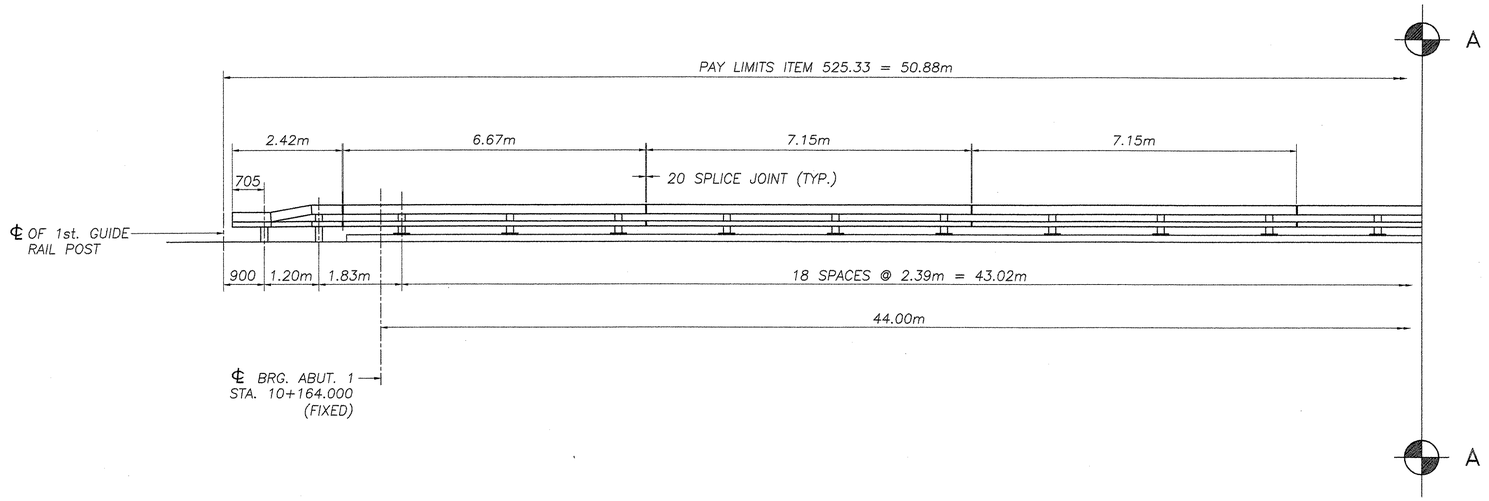
JOB: VT. ROUTE 118 OVER TROUT RIVER BERKSHIRE, VT.

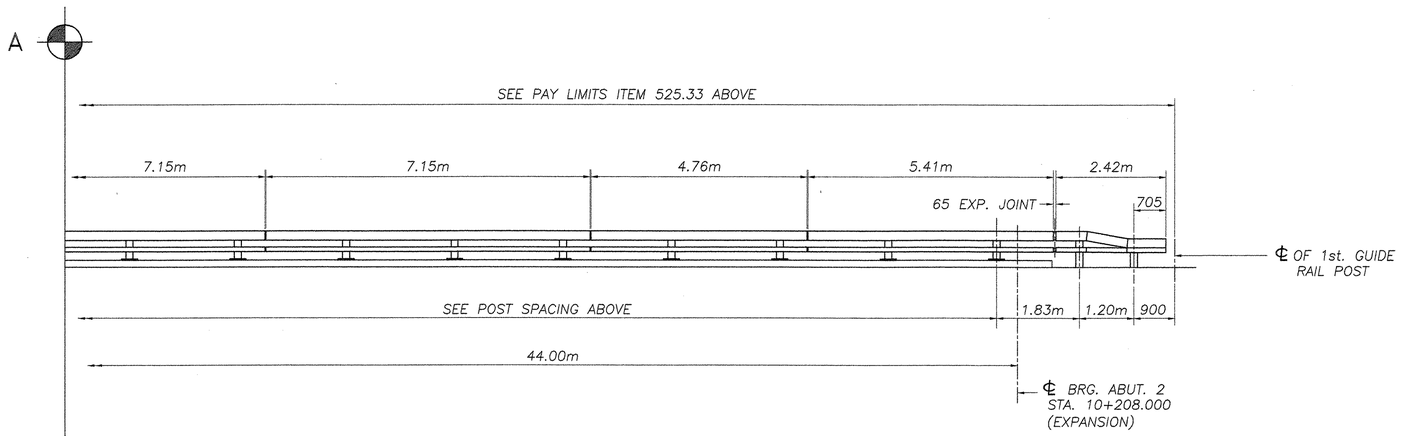
CUSTOMER: A. L. STONGE

DRAWN BY	DATE
JDF	3-05
CHKD BY	
E.J.	
APPROV BY	
Q.A.	
JOB NO.	DRG. NO.
222	J1
164	REV.

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

1" = 1'-0





ELEVATION – NORTH BRIDGE RAIL
FACING (N) FROM ℄ OF ROADWAY
SOUTH ELEVATION SIMILAR

BILL OF MATERIAL		
Mk.	Qty.	Description
	38	W150x37.1 POST W/BASEPLATE (625mm) OAL
	4	W150x37.1 POST (2.134m) OAL
	4	W150x37.1 POST (1.956m) OAL
	2	TS 203 x 102 x 8 (4.76m) OAL
	2	TS 203 x 102 x 8 (5.41m) OAL
	2	TS 203 x 102 x 8 (6.67m) OAL
	8	TS 203 x 102 x 8 (7.15m) OAL
	2	TS 102 x 102 x 6 (4.76m) OAL
	2	TS 102 x 102 x 6 (5.41m) OAL
	2	TS 102 x 102 x 6 (6.67m) OAL
	8	TS 102 x 102 x 6 (7.15m) OAL
	4	TS 203 x 102 x 8 (2.42m) OAL CUT AND WELD
	4	TS 102 x 102 x 6 (2.42m) OAL CUT AND WELD
	16	TS 178 x 76 x 10 SPLICE TUBE 510 LG.
	16	TS 76 x 76 x 8 SPLICE TUBE 510 LG.
*	38	SPACER PLATE 330 x 238 x 10
	38	3mm BEARING PAD
	4	BACK UP PLATE 381x254x10
	4	TERMINAL CONNECTOR
	208	M20 ROUND HEAD BOLT, 152 LONG W/NUT AND WASHER
	128	M16 SPLICE BOLT, 44 LONG W/PLAIN HARDENED WASHER
*	152	M24 ANCHOR STUD, 305 LG. W/(2) HEX NUTS/(1) JAMB NUT/(1) WASHER
	16	M20 x 13 SCH. 40 PIPE SPACER

* – ITEMS MARKED "*" ARE NOT PROVIDED BY HIGHWAY SAFETY CORPORATION –SHOWN FOR REFERENCE ONLY

TOTAL ITEM 525.33 (BOTH SIDES OF BRIDGE) = 102m

REVISIONS		
No.	Remarks	Date
0	Initial submittal	4/21/04

RECEIVED
CK'D BY_____ OK'D BY_____
MAY 04 2004
RESUBMIT_____ APPROVED EW
BY DATE 5/21/04

☒ Reviewed
☐ Rejected
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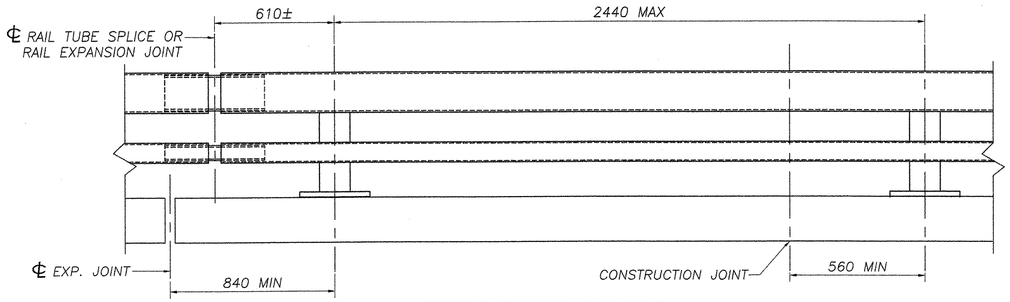
McFarland-Johnson, Inc.
Date 5-21-04
By Steven J. DeRue

HIGHWAY SAFETY CORP.
GLASTONBURY, CT

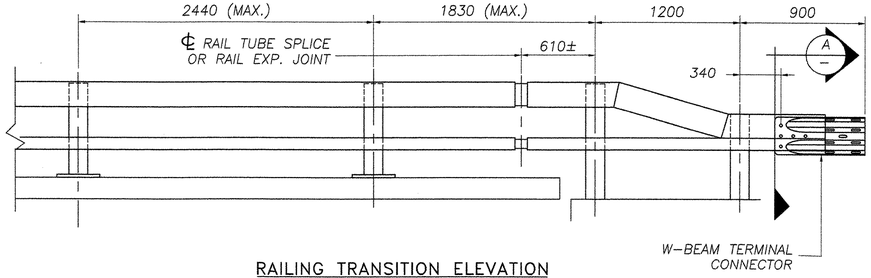
ITEM 525.33 – BRIDGE RAILING–NETC 2 RAIL
PROJECT No. BRF RS 0283(7)
TOWN OF BERKSHIRE Br. No. 26
VT.ROUTE 118 OVER TROUT RIVER

GENERAL CONTRACTOR
SUB CONTRACTOR F.R. LAFAYETTE 165

DRAWN MHM
CHECKED
DATE 2-23-04
SCALE NONE
HSC REFERENCE NO. 1422
SIZE D REVISION 0
SHEET NO. 1 of 2



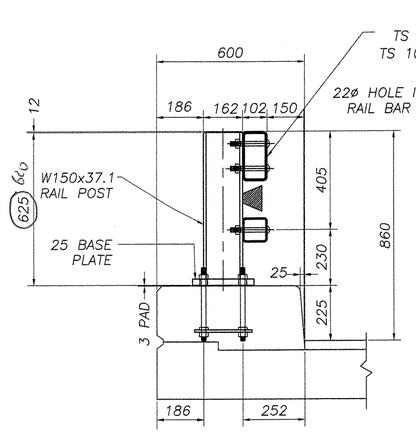
BRIDGE RAILING ELEVATION



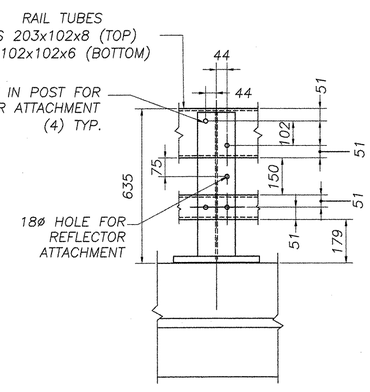
RAILING TRANSITION ELEVATION

NOTES

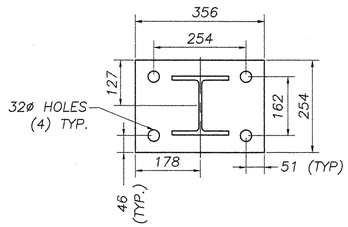
1. ALL RAILINGS AND MATERIALS SHALL CONFORM TO THE PROVISION OF SECTION 525, "RAILINGS OF THE STANDARD SPECIFICATION FOR CONSTRUCTION".
2. TUBING AND POSTS SHALL MEET THE REQUIREMENTS OF SECTION 732, "RAILING MATERIALS OR THE STANDARD SPECIFICATION OF CONSTRUCTION," EXCEPT THAT THE DROP-WEIGHT TEAR TEST IN SECTION 732 SHALL NOT APPLY TO THE STRUCTURAL TUBING SHOWN ON THIS SHEET.
3. ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 2mm RADIUS AND BE FREE OF BURRS.
4. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
5. SECTIONS OF RAIL TUBE SHALL BTE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
6. RAIL TUBE EXPANSION JOINT SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT WIDTH SHALL BE "X" AT 7°C AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
7. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M232.
8. RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
9. RAIL TUBES SHALL BE ATTACHED USING M20 FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLT INSERTED THOUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 2mm LARGER THAN THE BOLT SIZE.
10. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
11. IF THERE IS A CONFLICT BETWEEN THE DETAILS SHOWN ON THIS SHEET AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
12. ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
13. THE FABICATOR SHALL SUBMIT SHOP DRAWINGS, INCLUDING WELDING PROCEDURES TO THE STRUCTURES SECTION FOR APPROVAL IN ACCORDANCE WITH THE PROVISION OF 506.04, SHOP DRAWINGS. ALL WELDING SHALL CONFORM WITH SECTION 506.10.
14. RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A370 CHARPY IMPACT TESTING USING TYPE A SPECIMENS.
15. TO FACILITATE FIELD FIT – UP OF THE TRANSITION RAILING, POSTS SHALL BE SET LOOSELY INTO FIBER FORM TUBES WHILE TRANSITION PARTS ARE BEING ASSEMBLED. POST HOLES SHALL BE BACKED FILLED WITH A CONCRETE MIX APPROVED BY THE ENGINEER. PAYMENT FOR COMPONENTS, INCLUDING BACKUP PLATE AND END TERMINAL CONNECTOR FOR GUARD RAIL, AUGERING, FIBER FORM TUBES AND CONCRETE , AND INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO ITEM 525.33, "BRIDGE RAILING – NETC 2 RAILING".
16. ALL APPROACH RAIL SPLICES SHALL BE LAPPED ON THE DIRECTION OF TRAFFIC FLOW.



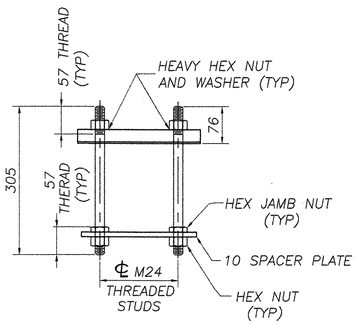
TYPICAL SECTION



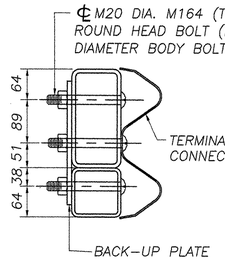
ELEVATION



POST AND BASE PLATE



RAIL POST ANCHORAGE
(BY OTHERS)



A — SECTION

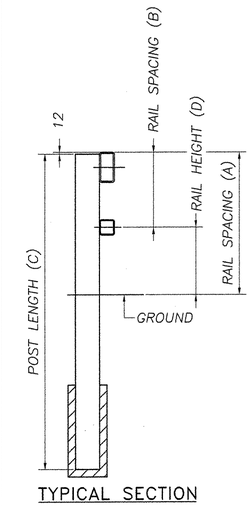
MATERIALS

RAIL TUBES	ASTM A500, GRADE B OR ASTM A501
RAIL POSTS AND BASE PLATES	ASTM A709/A709M, GRADE 345
AALL OTHER SHAPRE AND PLATES	ASTM A709/A709M, GARDE 250
ANCHOR STUDS	ASTM F568M CLASS 8.8
ALL OTHER BOLTS (UNLESS NOTED)	AASHTO M164M, TYPE1

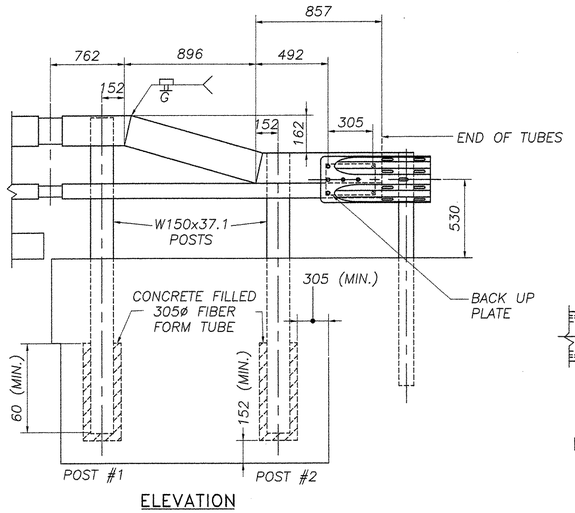
NUTS FOR AASHTO M164M (ASTM A325M) BOLTS AND ANCHOR STUDS SHALL COMPLY WITH AASTHO M291M (ASTM A563M).

WASHERS SHALL COMPLY WITH AASHTO M293M (ASTM F436M) SPECIFCATIONS.

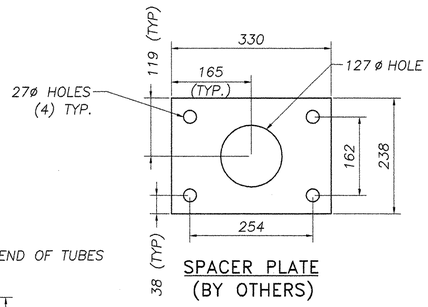
3mm PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02.



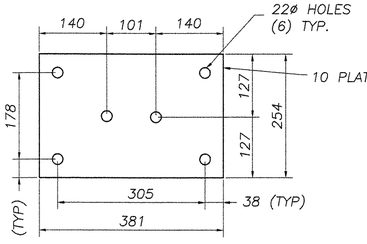
TYPICAL SECTION



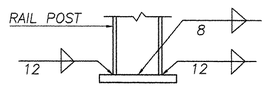
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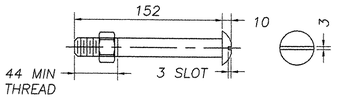
SPACER PLATE
(BY OTHERS)



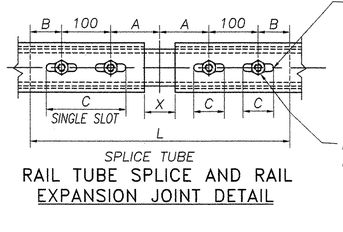
BACK-UP PLATE



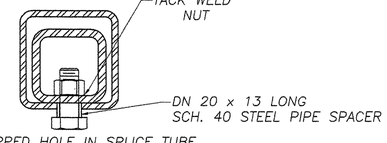
BASE WELD DETAIL



M20 DIA. M164M (TYPE 1)
ROUND HEAD BOLT
(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
(SEE NOTE #9)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



RAIL TUBE SPLICE AND RAIL
EXPANSION JOINT DETAIL



16ø TAPPED HOLE IN SPLICE TUBE
AND 29 x 'C' SLOT IN RAIL TUBE FOR
M16 BOLT AND PLAIN HARDENED WASHER

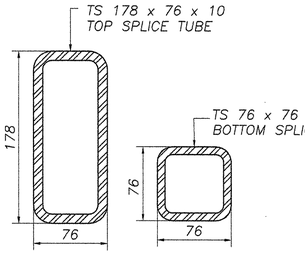
EXPANSION JOINT SECTION

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

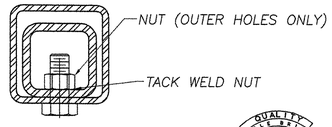
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McFarland-Johnson, Inc.
Date 5-21-04
By Steven J. Dahlin



RAIL TUBE SPLICE SECTION



16ø TAPPED HOLE IN SPLICE TUBE &
19ø HOLE IN RAIL TUBE FOR M16
BOLT & PLAIN HARDENED WASHER

	RAIL HEIGHT	RAIL SPACING	POST LENGTH	RAIL HEIGHT
POST NUMBER	(A)	(B)	(C)	(D)
1	860	405	2134	455
2	702	254	1956	448

SPLICE TABLE					
T	A	B	C	L	X
N/A	100	50	--	510	20
EXPANSION JOINT TABLE					
<100	100	50	65	510	65

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

* = SINGLE SLOT

REVISIONS		
No.	Remarks	Date
0	Initial submittal	

RECEIVED
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RESUBMIT_____ APPROVED
BY DATE 5/21/04

HIGHWAY SAFETY CORP.
GLASTONBURY, CT

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GENERAL CONTRACTOR
SUB CONTRACTOR F.R. LAFAYETTE, INC. 166

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CHECKED
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SCALE NONE
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SHEET NO. 2 of 2