STATE OF VERMONT
AGENCY OF TRANSPORTATION

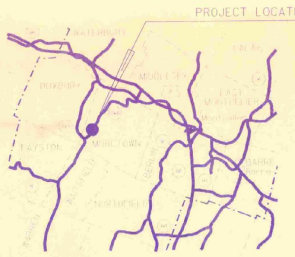
PROPOSED IMPROVEMENT
TOWN OF MORETOWN
COUNTY OF WASHINGTON
VT. ROUTE 100B (FAS) (MAJOR COLLECTOR)

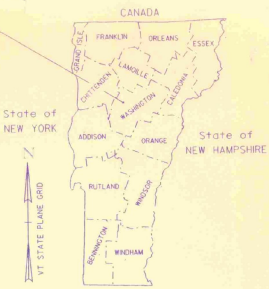
BEGINNING AT A POINT 2.0 MILES NORTH OF THE WAITSFIELD - MORETOWN TOWN LINE AND EXTENDING NORTHERLY ALONG VT. 100-B 0.246 MILES TO MM 2.25.

WORK TO BE PERFORMED ON THIS PROJECT INCLUDES REPLACEMENT OF BRIDGE NUMBER 4 OVER THE MAD RIVER AND NECESSARY APPROACHES CONSISTING OF NEW PAVEMENT , SUBBASE AND DRAINAGE GENERALLY ALONG THE EXISTING ALIGNMENT

LENGTH OF ROADWAY	1105.88 FT.	0.209 MILES
LENGTH OF BRIDGE	194.12 FT.	0.037 MILES
LENGTH OF PROJECT	1300.00 FT.	0.246 MILES ,

PROJECT LOCATION





TRAFFIC DATA	1993	2013
ADT	2760	1280
DHV	385	180
D %	54%	78%
T %	6%	13%

1993-2013 20YR ESALS 2,925,000
DESIGN SPEED 35 MPH

INDEX OF SHEETS

1. TITLE SHEET
2. TYPICAL SHEET
3-5. QUANTITY SHEETS
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7. EARTHWORK SHEET
8-14. PLAN SHEETS
15-16. BLANKS
17-20. ROADWAY LAYOUTS
21-22. ROADWAY PROFILES
23-24. BLANKS
25-30. TRAFFIC SHEETS
(CONSTRUCTION APPROACH SIGNING SHEET #28)
31-32. BLANKS
33-60. BRIDGE BR100 SERIES SHEETS
61-66. CHANNEL CROSS SECTIONS
67-69. BLANKS
70-82. ROADWAY CROSS SECTIONS

STANDARDS

A-62	SLOPES IN SOLID ROCK EXCAVATION	04-02-86
B-5	SLOPE GRADING, EMBANKMENTS, MUCK	12-06-71
B-11	UNDERDRAIN - ROCK SUBGRADE, SLOPE STABILIZ.	12-12-74 R
B-71	RESIDENTIAL DRIVES	03-07-90 R
B-74	TREATED TIMBER CURB	10-25-85 R
C-1	UNDERDRAIN & CARRIER PIPE CONSTRUCTION DETAILS	10-30-85 R
D-1	TREATED GUTTERS	04-02-86
D-4	FLUSHING BASINS, END SECTION, ELBOWS	10-30-85 R
D-6	REINF. CONCRETE DROP INLET W/GRATE (DITCHES)	04-04-73
D-11	GRATES & COVERS (TYPE A)	08-24-81 R
D-16	PRECAST CURB DI, GRATE, RCP END SECTION, ETC.	10-30-85 R
E-100	CONSTRUCTION APPROACH SIGNS	05-26-89 R
E-101	CONSTRUCTION SIGN DETAILS	10-30-87
E-102	CONSTRUCTION SIGN DETAILS	01-23-89 R
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	01-23-89 R
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	04-29-88 R
E-107A	BREAKAWAY BARRICADE DETAILS	09-10-87
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	01-23-89
E-141	REGULATORY SIGN DETAILS	10-30-87
E-143	REGULATORY SIGN DETAILS	10-30-87
E-160	FLANGED CHANNEL STEEL SIGN POST DETAIL	03-01-88 R
G-1D	STEEL BEAM GUARDRAIL (40MPH & LESS)	10-31-85 R
G-4	MARKERS - GUIDE POSTS - WOOD MARKER POSTS	10-31-85 R
G-14	BREAKAWAY CABLE TERMINAL W/WOOD POSTS	11-01-88 R
J-1	PROJECT AND BOUNDARY MARKERS	06-27-80
T-1	TEMPORARY EROSION CONTROL DETAILS	12-07-76 R
T-2	TEMPORARY EROSION CONTROL DETAILS	07-05-72
SB-R4A-82	BRIDGE RAILING, GALVANIZED BOX BEAM	09-18-89 R
SB-R4B-82	GUARD RAIL APPROACH SECTION, TYPE I & II	03-30-88 R

RECORD PLANS

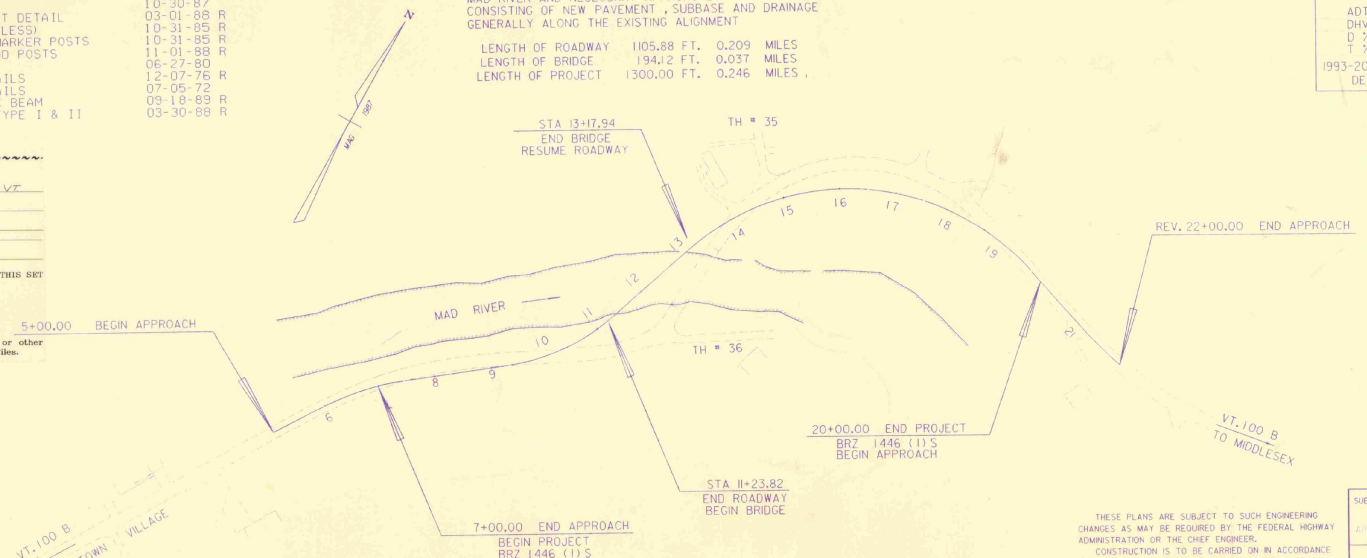
CONTRACTOR: JAMES A. MCDONALD INC. - LYNDON CTR., VT.
RESIDENT ENGINEER: RAYMOND HAYES
CONSTRUCTION BEGAN: 1-29-93
CONSTRUCTION COMPLETED: 7-15-94
RECORD PLANS BY: CONSTRUCTION CADD - JEFF COTA

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

BY _____ RESIDENT ENGINEER

DATE 11/22/96

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



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

DATUM
VERTICAL NGVD 1929
HORIZONTAL N / A

0 100 200
SCALE

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON MARCH 15, 1990 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

PROJECT PROCESSED UNDER SECONDARY ROAD PLAN

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD
APPROVED Gordon B. MacMillan DATE 11/25/96
DIRECTOR OF ENGINEERING

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

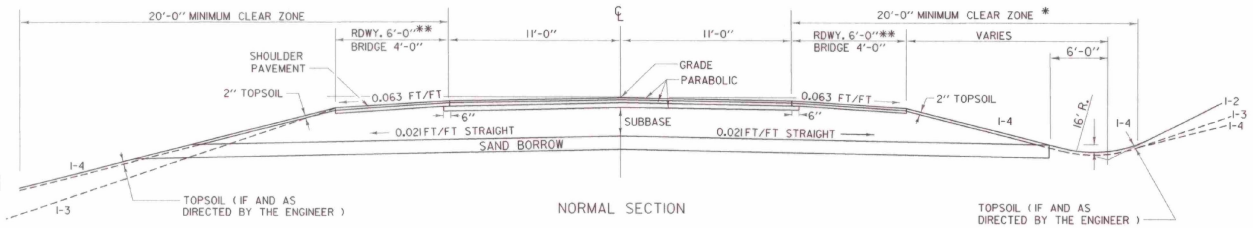
PROJECT BRZ 1446 (1)
SHEET 1 OF 82 SHEETS

TYPICAL SECTIONS

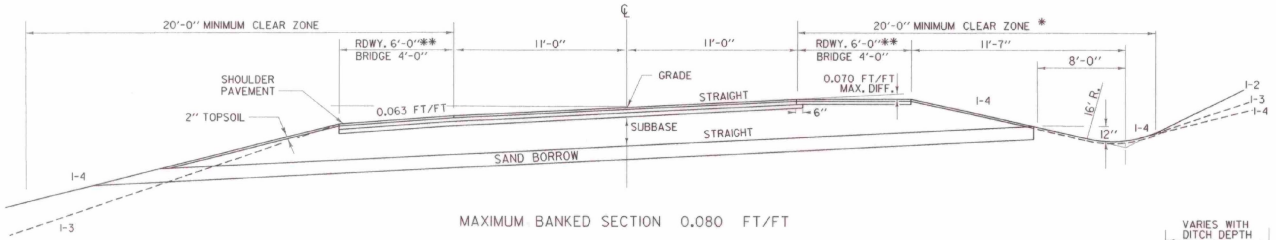
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT	± 1/4"
BASE COURSE	± 1/4"
SUBBASE	± 1/2"
SAND BORROW	± 1/2"

1½" BITUMINOUS CONCRETE PAVEMENT, TYPE III (SINGLE LIFT)
2" BITUMINOUS CONCRETE PAVEMENT, TYPE II (SINGLE LIFT)
3" BITUMINOUS CONCRETE PAVEMENT, TYPE I (SINGLE LIFT)
24" SUBASE OF DENSE GRADED CRUSHED STONE
10" SAND BORROW
SHOULDERS 3½" BITUMINOUS CONCRETE PAVEMENT (SEE NOTE BELOW)

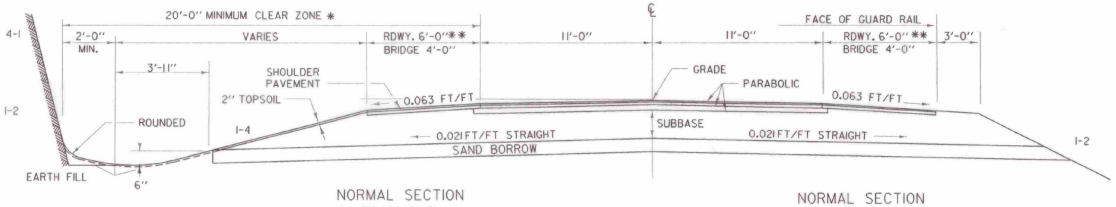
NOTE: FULL DEPTH OF PAVEMENT TO BE CARRIED TO THE OUTSIDE EDGE OF THE SHOULDER ON THE INSIDE OF THE CURVES.
LEFT SHOULDER: 9+00 TO 11+23.82 (BRIDGE)
RIGHT SHOULDER: 13+17.94 (BRIDGE) TO 20+00



NORMAL SECTION

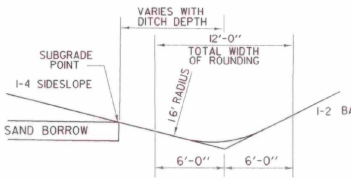


MAXIMUM BANKED SECTION 0.080 FT/FT

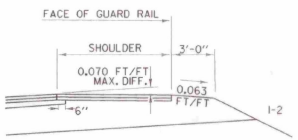


NORMAL SECTION IN ROCK CUT

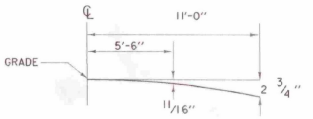
NORMAL SECTION WITH GUARD RAIL



TYPICAL DITCH DETAILS



DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION



PARABOLIC DETAIL

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	95	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

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

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

FERTILIZER- FORMULA 19-19-19 TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE.

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

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

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

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

SLOPE ROUNDING- ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

PAY LIMITS OF SAND BORROW WHEN USED IN CONJUNCTION WITH UNDERDRAIN- SEE STANDARD SHEET D-2.

* THE MINIMUM CLEAR ZONE IS MEASURED FROM THE EDGE OF THE TRAVEL WAY TO A POINT 2 FEET BEYOND THE INTERSECTION POINT OF THE I-4 SLOPE AND THE BACK SLOPE.

** THE ROADWAY WILL HAVE A 6'-11'-11'-6' TYPICAL WHILE THE BRIDGE WILL HAVE A 4'-11'-11'-4' TYPICAL. THE SHOULDERS SHALL HAVE A MINIMUM 50' TRANSITION LENGTH FOR THE 2' SHOULDER DIFFERENCE.

FOR SLOPES IN SOLID ROCK EXCAVATION AND DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, SEE STANDARD SHEET A-62.

DATUM
VERTICAL
HORIZONTAL

SURVEYED BY	REED	DATE	9/87
DRAWN BY	SHANGRAW	DATE	1/88
SQUAD LEADER	D.E.LYONS		
DESIGN FILE NO.	78FI74.DGN	DATE PLOTTED	10-SEP-1992
PROJ. NAME	MORETOWN		
PROJ. NO.	BRZ 1446 (1)		
SHEET	2 OF 82 SHEETS		

78FI74TYP.I

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

NON-GOV'T. PARTICIPATION	LANDSCAPE	TRAINING	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	LS	CLEARING AND GRUBBING (PLUS INDIVIDUAL TREES AND STUMPS)	201.10	EST.
					8700	8700	CY	COMMON EXCAVATION	203.15	1
				970	650	1620	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	17
					650	650	CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28	-
					100	100	CY	EARTH BORROW	203.30	EST.
					1900	1900	CY	SAND BORROW	203.31	17
					740	740	CY	GRANULAR BORROW	203.32	-
					6750	6750	SY	FINE GRADING-SUBGRADE	203.40	-
			29		2921	2950	CY	TRENCH EXCAVATION OF EARTH	204.20	18
				770		770	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	-
				1		1	LS	COFFERDAM (STA. 11+26)	204.40	-
				1		1	LS	COFFERDAM (STA. 12+21)	204.40	-
				1		1	LS	COFFERDAM (STA. 13+16)	204.40	-
			145		5305	5450	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	45
					105	105	CY	AGGREGATE SURFACE COURSE	401.10	3
					1925	1925	TON	BITUMINOUS CONCRETE PAVEMENT	406.25	19
				191		191	CY	CONCRETE, CLASS A	501.22	-
				1086	14	1100	CY	CONCRETE, CLASS B	501.25	-
				27		27	CY	SILICA FUME CONCRETE	501.60	-
				1		1	LS	FURNISHING EQUIPMENT FOR PILE DRIVING	504.10	-
				6000		6000	LF	STEEL PILING (14 X 73)	505.17	-
				221000		221000	LB	STRUCTURAL STEEL (PLATE GIRDER)	506.55	-
1						1	LS	STRUCTURAL STEEL (MODIFIED)	506.75	-
				114310	1000	115310	LB	REINFORCING STEEL	507.15	2
				68780		68780	LB	EPOXY COATED REINFORCING STEEL	507.17	-
				1		1	LS	SHEAR CONNECTORS (2080 7/8" X 7" STUDS)	508.15	-
				1		1	LS	STRUCTURAL PAINTING (SHOP APPLIED)	513.25	-
				1		1	LS	SURFACE PREPARATION	513.40	-
				58		58	GAL	WATER REPELLANT	514.10	-
				61		61	LF	BRIDGE EXPANSION JOINT	516.10	-
				796		796	SY	SHEET MEMBRANE WATERPROOFING	519.20	-
				412		412	LF	BRIDGE RAILING-2 RAIL GALV. BOX BEAM	525.31	-
				1		1	LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJ.	527.10	-
				1		1	EA	PARTIAL REMOVAL OF STRUCTURE	529.20	-
				15		15	EA	BEARING DEVICE ASSEMBLY	531.10	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
6345	CY	MAINLINE
1900	CY	SAND BORROW
356	CY	TH# 36
85	CY	DRIVES
14	CY	ROUNDING
8700	CY	TOTAL
		SUBBASE OF CRUSHED STONE (DENSE GRADED)
4770	CY	MAINLINE
102	CY	TH 35
244	CY	TH 36
144	CY	DRIVES
145	CY	EROSION CONTROL
45	CY	ROUNDING
5450	CY	TOTAL
		BITUMINOUS CONCRETE PAVEMENT
1816	TON	MAINLINE
90	TON	BRIDGE
19	TON	ROUNDING
1925	TON	TOTAL
		BITUMINOUS BREAKDOWN BY TYPE
733	TON	TYPE I - BASE COURSE
619	TON	TYPE II - BINDER COURSE
518	TON	TYPE III - TOP COURSE
36	TON	TYPE IV - FIRST LIFT ON BRIDGE
19	TON	ROUNDING
1925	TON	TOTAL
		TRENCH EXCAVATION OF EARTH
662	CY	DESIGNED DRAINAGE
1894	CY	EST. UNDERDRAIN
29	CY	TEMPORARY EROSION CONTROL
15	CY	ROUNDING
2600	CY	TOTAL
		STONE FILL, TYPE II
54	CY	DRAINAGE SHEET
600	CY	STREAM BANK STABILIZATION
6	CY	ROUNDING
660	CY	TOTAL

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
7+00	9+50	6.0	22.0	6.0			250.00	0.0473	
9+50	10+00		22.0				50.00	0.0095	LT. SHOULDER TAPER
10+00	11+23.82	4.0	22.0				123.82	0.0235	
11+00	11+23.82		22.0				23.82	0.0045	RT. SHOULDER TAPER
11+23.82	13+50		22.0	4.0			226.18	0.0428	
11+23.82	11+50						26.18	0.0050	LT. SHOULDER TAPER
13+50	14+00						50.00	0.0095	RT. SHOULDER TAPER
14+00	20+00	6.0	22.0	4.0			600.00	0.1136	
TOTALS									

23-SEP-1992 T8F1740S1.1

REV 12/5/92

PROJECT NAME MORETOWN
PROJECT NUMBER BRZ 1446(1)

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

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					740	740	CY	GRANULAR BORROW	203.32	-
					6750	6750	SY	FINE GRADING-SUBGRADE	203.40	-
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				770		770	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	-
				1		1	LS	COFFERDAM (STA. 11+26)	204.40	-
				1		1	LS	COFFERDAM (STA. 12+21)	204.40	-
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					105	105	CY	AGGREGATE SURFACE COURSE	401.10	3
					1925	1925	TON	BITUMINOUS CONCRETE PAVEMENT	406.25	19
				191		191	CY	CONCRETE, CLASS A	501.22	-
				1086	14	1100	CY	CONCRETE, CLASS B	501.25	-
				27		27	CY	SILICA FUME CONCRETE	501.60	-
				1		1	LS	FURNISHING EQUIPMENT FOR PILE DRIVING	504.10	-
				6000		6000	LF	STEEL PILING (14 X 73)	505.17	-
				221000		221000	LB	STRUCTURAL STEEL (PLATE GIRDER)	506.55	-
1						1	LS	STRUCTURAL STEEL (MODIFIED)	506.75	-
				114310	1000	115310	LB	REINFORCING STEEL	507.15	2
				68780		68780	LB	EPOXY COATED REINFORCING STEEL	507.17	-
				1		1	LS	SHEAR CONNECTORS (2080 7/8'' X 7'' STUDS)	508.15	-
				1		1	LS	STRUCTURAL PAINTING (SHOP APPLIED)	513.25	-
				1		1	LS	SURFACE PREPARATION	513.40	-
				58		58	GAL	WATER REPELLANT	514.10	-
				61		61	LF	BRIDGE EXPANSION JOINT	516.10	-
				796		796	SY	SHEET MEMBRANE WATERPROOFING	519.20	-
				412		412	LF	BRIDGE RAILING-2 RAIL GALV. BOX BEAM	525.31	-
				1		1	LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJ.	527.10	-
				1		1	EA	PARTIAL REMOVAL OF STRUCTURE	529.20	-
				15		15	EA	BEARING DEVICE ASSEMBLY	531.10	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

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15	CY	ROUNDING
2600	CY	TOTAL
		STONE FILL, TYPE II
54	CY	DRAINAGE SHEET
600	CY	STREAM BANK STABILIZATION
6	CY	ROUNDING
660	CY	TOTAL

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
7+00	9+50	6.0	22.0	6.0			250.00	0.0473	
9+50	10+00		22.0				50.00	0.0095	LT. SHOULDER TAPER
10+00	11+23.82	4.0	22.0				123.82	0.0235	
11+00	11+23.82		22.0				23.82	0.0045	RT. SHOULDER TAPER
11+23.82	13+50		22.0	4.0			226.18	0.0428	
11+23.82	11+50						26.18	0.0050	LT. SHOULDER TAPER
13+50	14+00						50.00	0.0095	RT. SHOULDER TAPER
14+00	20+00	6.0	22.0	4.0			600.00	0.1136	
TOTALS									

23-SEP-1992 78F17405LJ

REV 12/15/93

PROJECT NAME MORETOWN
PROJECT NUMBER BRZ 1446(1)

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

		LANDSCAPE	TRAINING	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
									••••••••• BEGIN OPTION PIPES •••••••••		
						46	46	LF	12" PCCSP .064	601.0405	
						46	46	LF	12" CAAP .060	601.0205	
						454	454	LF	18'' CAAP .060	601.0215	
						454	454	LF	18'' PCCSP .064	601.0415	
						454	454	LF	18'' RCP CLASS III	601.0815	
						454	454	LF	18'' CPEP(SL)	601.2615	
						92	92	LF	24'' CAAP .060	601.0225	
						92	92	LF	24'' PCCSP .064	601.0425	
						92	92	LF	24'' RCP CLASS III	601.0825	
						92	92	LF	24'' CPEP(SL)	601.2620	
						2	2	EA	12'' CAAP ELBOW 0.060	601.5205	
						2	2	EA	12'' PCCSP ELBOW 0.064	601.5405	
						1	1	EA	18'' CSP END SECTION	601.6015	
						1	1	EA	18'' RCP END SECTION	601.6815	
						1	1	EA	24'' CSP END SECTION	601.6025	
						1	1	EA	24'' RCP END SECTION	601.6825	
									•••••••••• END OPTION PIPES •••••••••		
						2	2	EA	PRC CURB DROP INLET W/ CAST IRON GRATE	604.30	
						4	4	EA	CAST IRON GRATE WITH FRAME, TYPE A	604.45	-
						1850	1850	LF	6'' UNDERDRAIN	605.10	8
						300	300	LF	6'' UNDERDRAIN CARRIER PIPE	605.20	-
						7	7	EA	UNDERDRAIN FLUSHING BASIN	605.95	EST.
						23	23	HR	ROADWAY PATROL MAINTENANCE	607.10	EST.
						7	7	HR	BULLDOZER RENTAL, TYPE I	608.10	EST.
						7	7	HR	POWER GRADER RENTAL	608.15	EST.
						7	7	HR	ALL PURP. EXCAVATOR RENTAL, TYPE I	608.25	EST.
						7	7	HR	TRUCK RENTAL	608.37	EST.
						72	72	M/G	DUST CONTROL W/WATER	609.10	EST.
						1	1	TON	DUST AND ICE CONTROL W/CALC. CHLORIDE	609.15	EST.
				14			14	CY	STONE FILL, TYPE I	613.10	-
						660	660	CY	STONE FILL, TYPE II	613.11	6
					1350	25	1375	CY	STONE FILL, TYPE IV	613.13	-
						650	650	LF	TREATED TIMBER CURB	616.35	-
						5	5	EA	RELOCATE MAILBOXES, SINGLE SUPPORT	617.10	EST.
						23	23	EA	BOUNDARY MARKERS	619.10	EST.
						14	14	EA	WOOD MARKER POST	619.15	3

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

14-SEP-1992 78F174QS2

PROJECT NAME MORETOWN
PROJECT NUMBER BRZ 1446(1)

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

		LANDSCAPE	TRAINING	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
						2	2	EA	REMOVING AND RESETTING PROP. MARKER	619.20	EST.
						430	430	LF	REMOVAL OF EXISTING FENCE	620.55	-
						940	940	LF	STEEL BEAM GUARD RAIL	621.20	0.5
						3	3	EA	BREAKAWAY CABLE TERMINAL	621.50	-
						1	1	EA	ANCHOR FOR STEEL BEAM GUARD RAIL	621.60	-
						4	4	EA	GUARD RAIL APPROACH SECTION, TYPE I	621.70	-
						405	405	LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	-
						140	140	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.
						760	760	HR	FLAGGERS	630.15	EST.
						1	1	LS	FIELD OFFICE-ENGINEERS	631.10	-
					0.9	0.1	1	LS	TESTING EQUIPMENT - CONCRETE	631.16	-
						1	1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-
					1		1	LS	TESTING EQUIPMENT-PROTECTIVE COATINGS	631.18	-
			520				520	HR	EMPLOYEE TRAINEESHIP	634.10	EST.
						1	1	LS	MOBILIZATION	635.10	EST.
						3250	3250	LF	DURABLE 4'' WHITE LINE	646.40	10
						3250	3250	LF	DURABLE 4'' YELLOW LINE	646.41	10
						9750	9750	LF	TEMPORARY 4'' WHITE LINE	646.60	-
						9750	9750	LF	TEMPORARY 4'' YELLOW LINE	646.61	-
					1000	1100	2100	SY	GEOTEXTILE UNDER STONE FILL	649.31	57
				600			600	SY	GEOTEXTILE FOR SILT FENCE	649.51	EST.
				60			60	LB	SEED	651.15	-
				17			17	LB	SEED-WINTER RYE	651.17	-
				500			500	LB	FERTILIZER	651.18	-
				2			2	TON	AGRICULTURAL LIMESTONE	651.20	-
				3			3	TON	HAY MULCH	651.25	-
				350			350	EA	HAY BALES FOR EROSION CONTROL	651.26	EST
						370	370	CY	TOPSOIL	651.35	-
					750	850	1600	CY	GRUBBING MATERIAL	651.40	25
				470			470	SY	EROSION MATTING	654.10	-
		32					32	EA	DECIDUOUS SHRUBS ''RED OSIER DOGWOOD'' (CORNUS STOLONIFERA) (2' TO 3' HT.) MINIMUM 3 CANES, BALLED AND BURLAPPED	656.35	-
						53.5	53.5	SF	TRAFFIC SIGNS, TYPE A	675.20	-
						382.5	382.5	LB	FLANGED CHANNEL SIGN POST	675.30	-
						23	23	EA	REMOVING SIGNS	675.50	EST

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

14-SEP-1992 78F174QS3

PROJECT NAME MORETOWN
PROJECT NUMBER BRZ 1446(1)

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 SL	PCCSP SL TH	PIPE ELBOW NO-DEG	ES EA	CB	PCCSD	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC. CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT
7+00		CL								18	64	.064	.060	III	-	X			1								64								5	II		
9+05		LT								12	24	.064	.060					1		1							10								10	II		
10+18		CL								18	82	.064	.060	III	-	X											85											
10+18		CL	112 RT																								91											
14+00		RT								12	22	.064	.060					1		1							17								13	II		
14+39		CL								18	54	.064	.060	III	-	X						5.0	2.62	199	A			25								6	II		
14+40																											55											
15+13		CL								18	80	.064	.060	III	-	X						6.0	3.06	230	A			48								5	II		
14+72	14+93	LT																									16											
16+43	16+46	LT																									20											
17+15	17+40																																					
17+65		CL								18	98	.064	.060	III	-	X						9.5	4.50	331	A			82								6	II		
18+18	18+58	LT																									18											
17+65	18+43	LT								18	76	.064	.060	III	-	X						6.5	3.28	238	A			75											
18+50		LT																																				
20+75	21+00	CL								24	92	.064	.060	III	-	X			1								56								9	II		
22+55																																						
TOTALS										12	46	(2 WAY OPTION PIPE)						2-10		2			13.5	998	4-A		662								54	II		
										18	454	(4 WAY OPTION PIPE)							1-18 ES																			
										24	92	(4 WAY OPTION PIPE)							1-24 ES																			
TOTALS																																						

GUARD RAIL

REMARKS	STA.	STA.	LT.	RT.	END TREATMENT	
NEW 18'' OPTION PIPE	5+42	5+67	-	-	BCT	
NEW PRCCDI W/ 12''X 24' OPT.PIPE(2 WAY) W/10 DEGREE ELBOW	5+67	10+42	475	-	STEEL	BEAM
NEW 18'' OPTION PIPE	10+94 RT= TH 36	TH 36				
EXISTING 24''X 64' RCP - REMOVE	40+24	41+40	137.5	-	STEEL	BEAM
			2	-	G-1D	
NEW PRCCDI W/ 12''X 22' OPT.PIPE(2 WAY) W/10 DEGREE ELBOW	13+52	13+64.5	12.5	-	STEEL	BEAM
NEW 18''X 54' OPTION PIPE W/ NEW RCDI	13+64.5	13+89.5	-	-	BCT	
EXISTING 24''X 51' RCP - REMOVE	13+93	17+05.5	-	312.5	STEEL	BEAM
	17+05.5	17+30.5	-	-	BCT	
NEW 18''X 80' OPTION PIPE W/ NEW RCDI	TOTALS		627.0	312.5		3-BCTS
EXISTING 18'' CGMP- REMOVE			939.5			1-G-1D
EXISTING 18'' RCP AND D.I.- REMOVE						
EXISTING 15'' CGMP - DO NOT DISTURB						
NEW 18''X 98' OPTION PIPE W/ NEW RCDI						
EXISTING 15''X 50' CGMP - REMOVE						
NEW 18''X 76' OPTION PIPE W/ NEW RCDI						
EXISTING 7'' PLASTIC PIPE - DO NOT DISTURB						
NEW 24''X 92' OPTION PIPE						
EXISTING 18'' RCP - DO NOT DISTURB						
TOTALS						

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	MKR PST
7+00		C	RT	6	64	19				1
7+00	10+50	U	RT	6	350	90			1	1
7+50	9+00	U	LT	6	150	189			1	2
9+00		C	LT	6	14	0				
9+08		C	LT	6	26	0				
9+08	10+00	U	LT	6	92	94			1	1
14+50		C	RT	6	14	0				
14+50		C	CL	6	56	27				1
14+50	18+50	U	RT	6	400	545			1	1
18+50	20+75	U	RT	6	225	341			1	1
14+50	19+00	U	LT	6	450	376			1	1
19+00	20+75	U	LT	6	175	167			1	1
20+75		C	RT	6	44	0				1
21+00		C	CL	6	82	46				
TOTALS		U		6	1842	1802				
		C		6	300	92				
				6	2142	1894			7	11

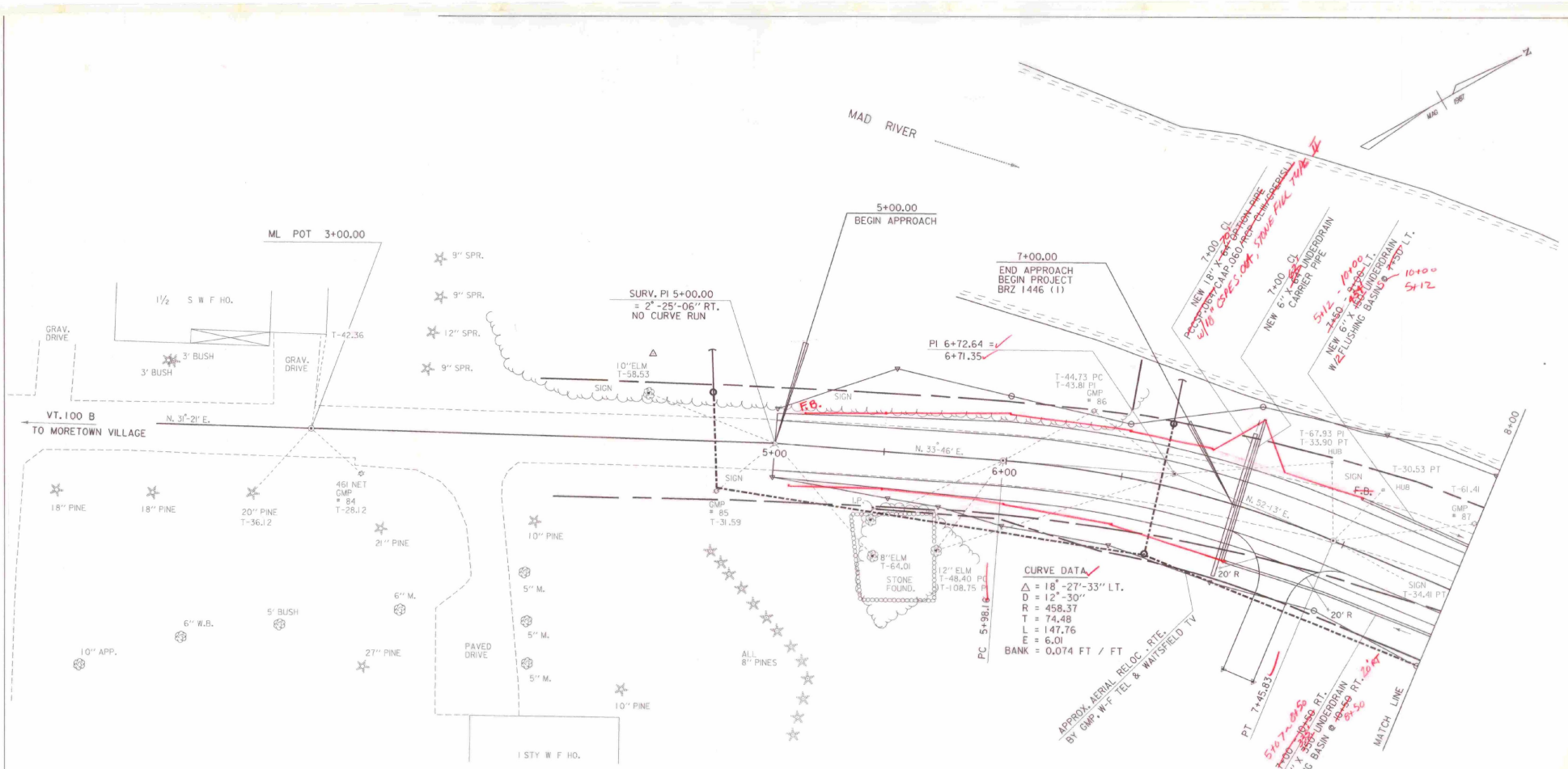
PROJECT NAME MORETOWN
PROJECT NUMBER BRZ 1446(1)

78F174DR.TXT 23-SEP-1992

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES: ELEVATION ON TANGENT	GRADES: ELEVATION ON CURVES	GRADES: CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK: AREA	TOTAL EXCAVATION EARTH AND ROCK: CU. YDS.	ROCK EXCAVATION: AREA	ROCK EXCAVATION: CU. YDS.	EMBANKMENT: AREA	EMBANKMENT: CU. YDS.		
		5+00	581.70	581.70	0.00		10				0			
						50		46				16		
		5+50	580.03	580.27	0.24		40				17			
						50		90				18		
		6+00	578.37	579.32	0.95		57				5			
								127				5		
		6+20	577.70	579.07	1.37									
		6+50	578.07	578.84	0.77		80				2			
						50		123				2		
		7+00	578.68	578.83	0.15		53				0		C.	591
						50		50				15	R.	0
													R. FAC.	0.495
		7+40	579.17	579.17	0.00								F.	1215
													F. FAC.	1.15
		7+50	579.30				1				16		EX. F.	806
						50		7				87		
		8+00	579.91				7				78			
						50		13				218		
		8+50	580.53				7				157			
						50		20				285		
		9+00	581.14				15				151			
						50		52				280		
		9+50	581.75				41				161			
						50		63				289		
		10+00	582.37				27				166			
						50		34				235		
		10+18	582.59											
		10+50	582.98				1				88			
						50		1				248		
		11+00	583.60				0				180			
						24						80		
		11+23.82	583.89				STOP ROADWAY BEGIN BRIDGE							
		11+50	584.21										C.	135
		12+00	584.82										R.	0
													R. FAC.	0.495
		12+50	585.44										F.	1333
													F. FAC.	1.15
		13+00	586.05										EX. F.	1398
		13+17.94	586.27				END BRIDGE RESUME ROADWAY							
		13+39.00	586.53											
		13+50	586.67				6				407		C.	100
						50		35				397	R.	0
		14+00	587.28				32				22		R. FAC.	0.495
						50		47				150	F.	770
		14+12	587.43										F. FAC.	1.15
													EX. F.	786
		14+20	587.53	587.53	0.00									
		14+50	587.90	587.93	0.03		19				140			
						50		18				223		
		14+69	588.13	588.20	0.07									
		14+85	588.32	588.44	0.12									
		14+93	588.42	588.57	0.15									
		15+00	588.51	588.69	0.18		0				101			



BREAKAWAY CABLE TERMINAL
5+42 LT. ~ 5+67 LT. ✓

STEEL BEAM GUARD RAIL
5+67 LT. ~ 8+00 LT. ✓

GEOTEXTILE FABRIC FOR SILT FENCE
~~5+00~~ 5+05 LT. ~ 8+00 LT. ✓

CONSTRUCT DRIVE
7+30 RT. (14'-GRAVEL) ✓

EXCAVATION OF SURFACES AND PAVEMENTS
5+00 ~ 8+00 ✓

HAY BALES FOR EROSION CONTROL
5+00 LT. ~ 8+00 LT.

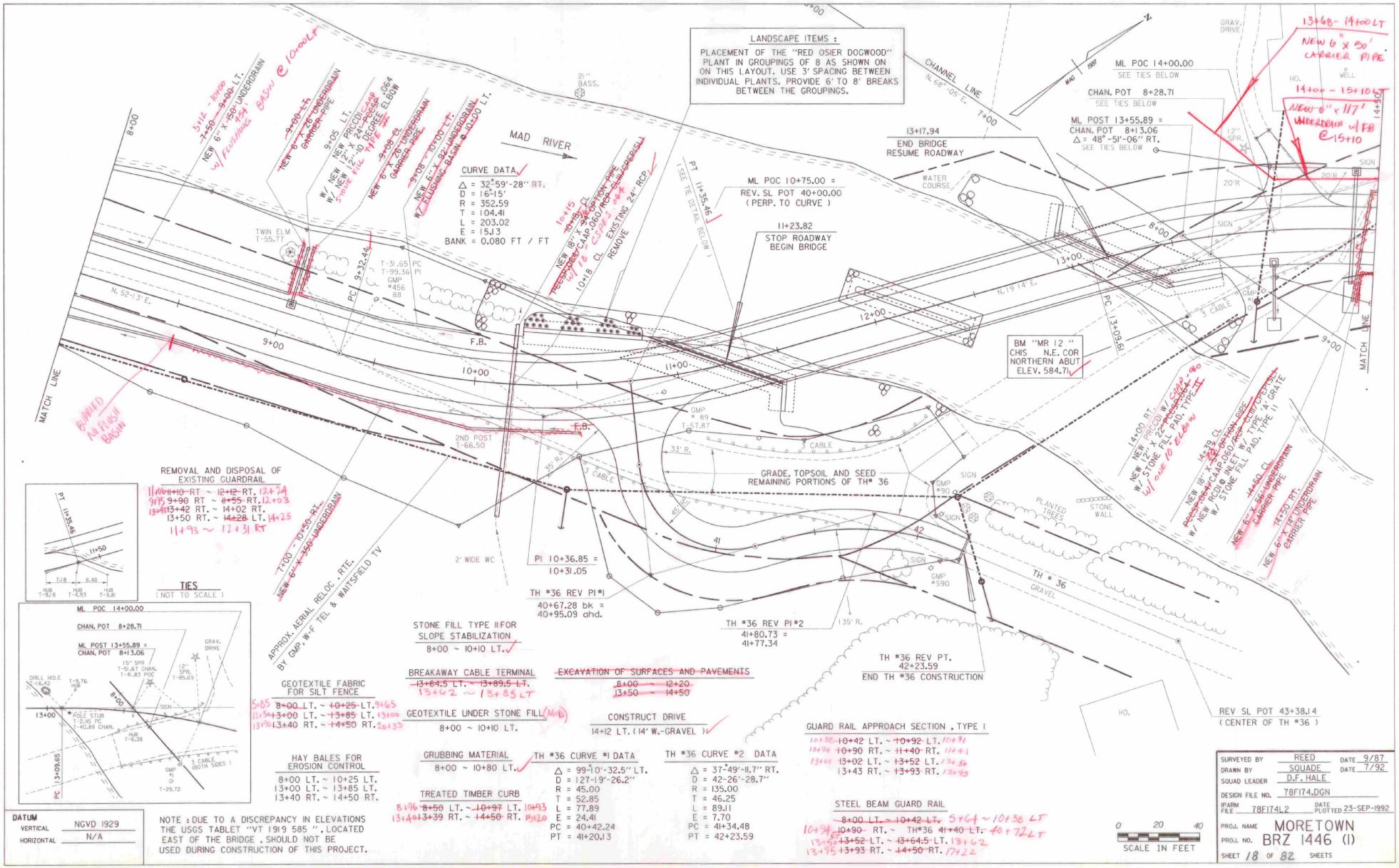
STONE FILL TYPE II FOR SLOPE STABILIZATION
6+97 LT. ~ 8+00 LT. ✓

GRUBBING MATERIAL
6+97 LT. ~ 8+00 LT. ✓

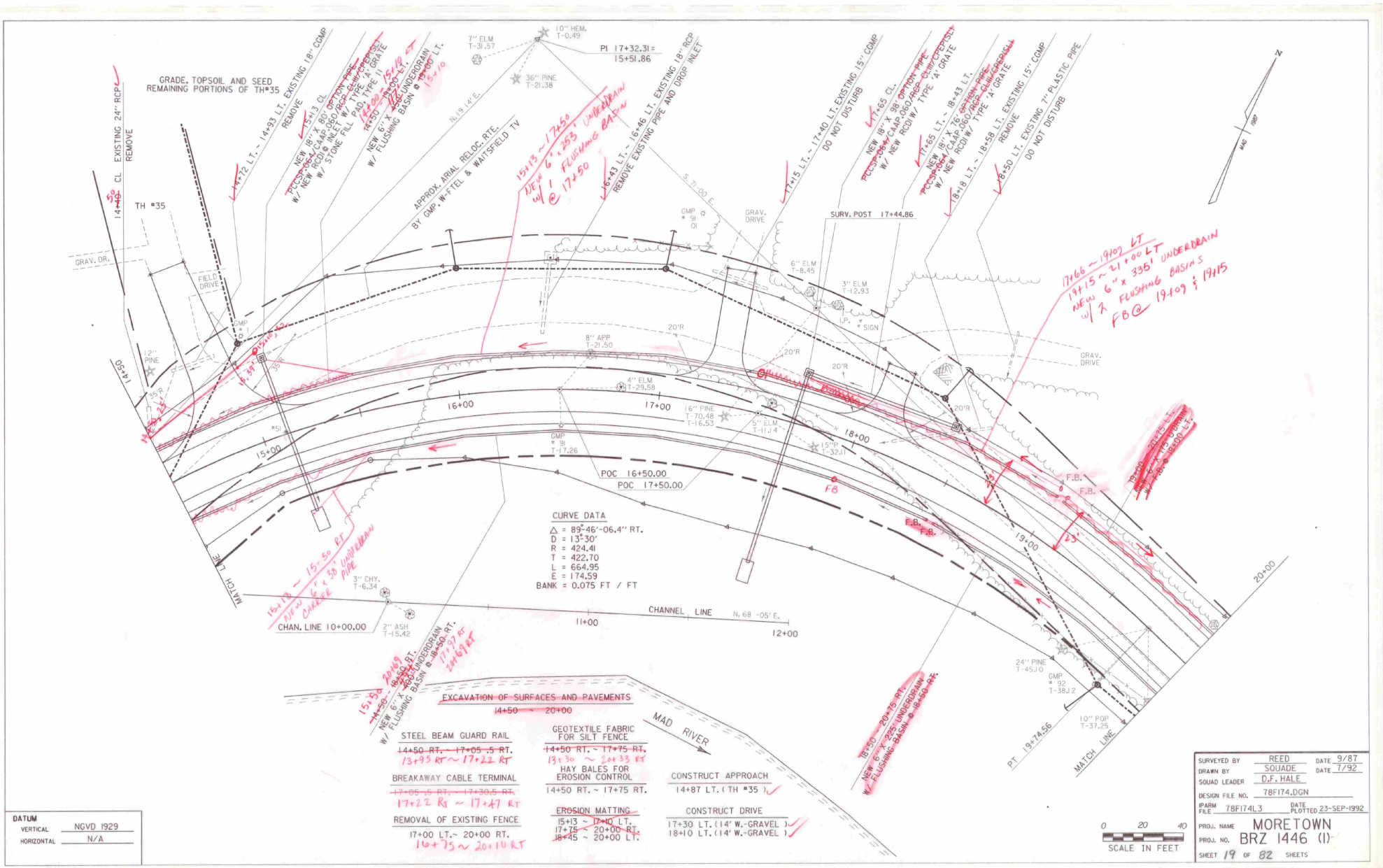
GEOTEXTILE UNDER STONE FILL
~~6+97~~ 6+90 LT. ~ 8+00 LT. ✓

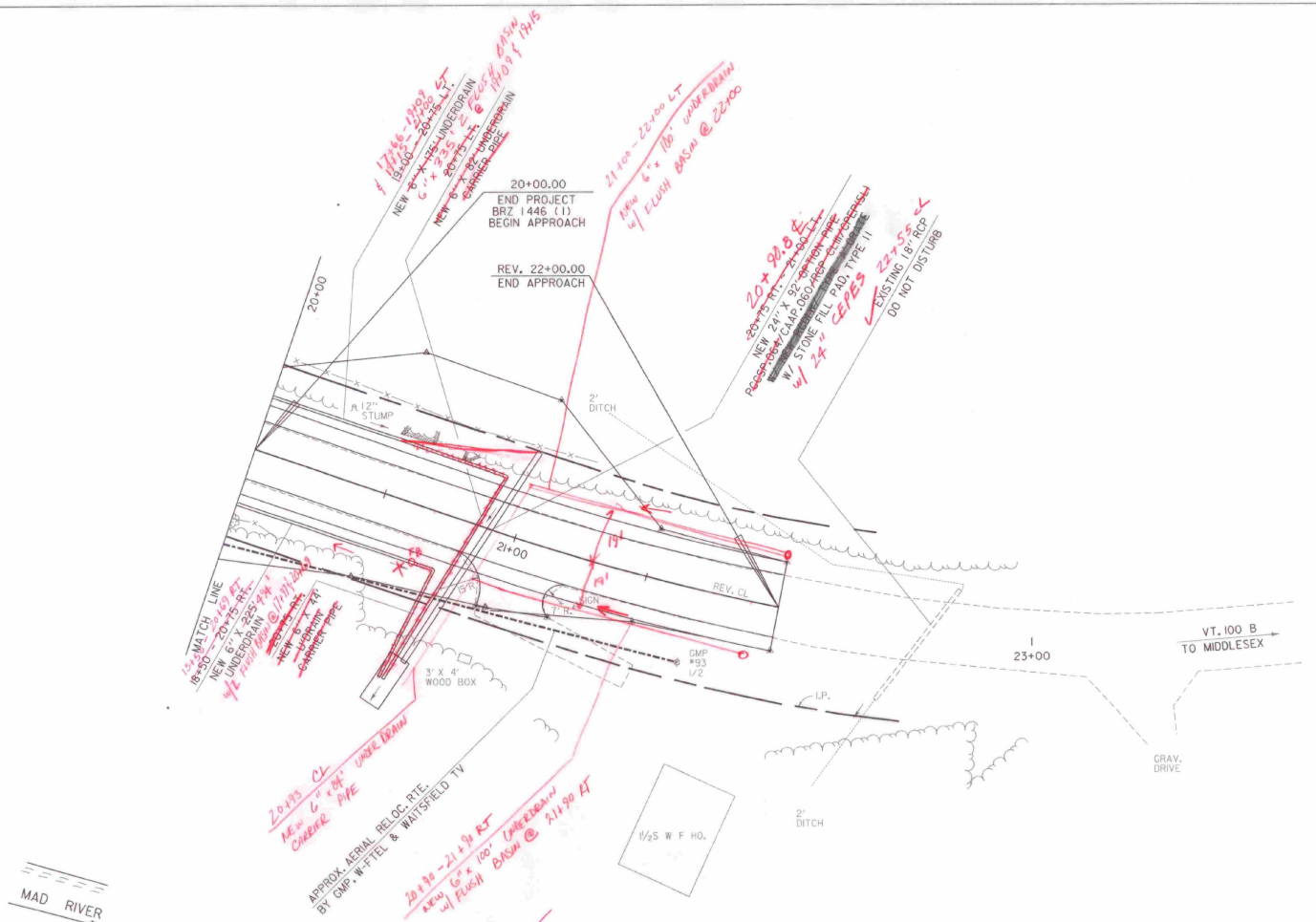
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SURVEYED BY REED DATE 9/87
DRAWN BY SQUADE DATE 7/92
SQUAD LEADER D.F. HALE
DESIGN FILE NO. 78F174.DGN
IPARM FILE 78F174LI DATE PLOTTED 23-SEP-1992
PROJ. NAME MORETOWN
PROJ. NO. BRZ 1446 (1)
SHEET 17 OF 82 SHEETS



LANDSCAPE ITEMS :
PLACEMENT OF THE "RED OSIER DOGWOOD" PLANT IN GROUPINGS OF 8 AS SHOWN ON ON THIS LAYOUT. USE 3' SPACING BETWEEN INDIVIDUAL PLANTS. PROVIDE 6' TO 8' BREAKS BETWEEN THE GROUPINGS.
MAD RIVER
CURVE DATA
Δ = 32°59'-28" RT.
D = 16°-15'
R = 352.59
T = 104.41
L = 203.02
E = 15.13
BANK = 0.080 FT / FT
ML POC 10+75.00 =
REV. SL POT 40+00.00
(PERP. TO CURVE)
11+23.82
STOP ROADWAY
BEGIN BRIDGE
13+17.94
END BRIDGE
RESUME ROADWAY
ML POC 14+00.00
SEE TIES BELOW
CHAN. POT 8+28.71
SEE TIES BELOW
ML POST 13+55.89 =
CHAN. POT 8+13.06
Δ = 48°-51'-06" RT.
SEE TIES BELOW
13+68 - 14+00 LT
NEW 6" x 50' CARRIER PIPE
14+00 - 15+10 LT
NEW 6" x 117' UNDERDRAIN w/ FB @ 15+10
BM "MR 12"
CHIS N.E. COR
NORTHERN ABUT
ELEV. 584.71
GRADE, TOPSOIL AND SEED
REMAINING PORTIONS OF TH# 36
PI 10+36.85 =
10+31.05
TH #36 REV PI #1
40+67.28 bk =
40+95.09 ahd.
TH #36 REV PI #2
41+80.73 =
41+77.34
TH #36 REV PT.
42+23.59
END TH #36 CONSTRUCTION
REV SL POT 43+38.14
(CENTER OF TH #36)
MATCH LINE
CHANNEL LINE
N. 68°-05' E.
N. 52-13' E.
N. 19 14' E.
TWIN ELM
T-55.77
PC 9+32.44
PC 13+09.61
PT 11+35.46
(SEE TIE DETAIL BELOW)
2ND POST
T-66.50
F.B.
2' WIDE WC
PLANTED TREES
STONE WALL
GRAVEL
TH # 36
APPROX. AERIAL RELOC. RTE.
BY GMP, W-F TEL & WAITSFIELD TV
REMOVAL AND DISPOSAL OF
EXISTING GUARDRAIL
11+06 11+10 RT ~ 12+12 RT. 12+24
9+95 9+90 RT ~ 11+55 RT. 12+03
13+43 13+42 RT. ~ 14+02 RT.
13+50 RT. ~ 14+28 LT. 14+25
11+93 ~ 12+31 RT
TIES
(NOT TO SCALE)
ML POC 14+00.00
CHAN. POT 8+28.71
ML POST 13+55.89 =
CHAN. POT 8+13.06
GEOTEXTILE FABRIC
FOR SILT FENCE
5+85 8+00 LT. ~ 10+25 LT. 9+65
12+50 13+00 LT. ~ 13+85 LT. 13+00
13+90 13+40 RT. ~ 14+50 RT. 20+35
HAY BALES FOR
EROSION CONTROL
8+00 LT. ~ 10+25 LT.
13+00 LT. ~ 13+85 LT.
13+40 RT. ~ 14+50 RT.
STONE FILL TYPE II FOR
SLOPE STABILIZATION
8+00 ~ 10+10 LT.
BREAKAWAY CABLE TERMINAL
13+64.5 LT. ~ 13+89.5 LT.
13+62 ~ 13+85 LT
GEOTEXTILE UNDER STONE FILL (MOD)
8+00 ~ 10+10 LT.
GRUBBING MATERIAL
8+00 ~ 10+80 LT.
TREATED TIMBER CURB
8+96 8+50 LT. ~ 10+97 LT. 10+93
13+40 13+39 RT. ~ 14+50 RT. 15+20
EXCAVATION OF SURFACES AND PAVEMENTS
8+00 ~ 12+20
13+50 ~ 14+50
CONSTRUCT DRIVE
14+12 LT. (14' W.-GRAVEL)
TH #36 CURVE #1 DATA
Δ = 99°10'-32.5" LT.
D = 127°19'-26.2"
R = 45.00
T = 52.85
L = 77.89
E = 24.41
PC = 40+42.24
PT = 41+20.13
TH #36 CURVE #2 DATA
Δ = 37°49'-11.7" RT.
D = 42°26'-28.7"
R = 135.00
T = 46.25
L = 89.11
E = 7.70
PC = 41+34.48
PT = 42+23.59
GUARD RAIL APPROACH SECTION , TYPE I
10+38 10+42 LT. ~ 10+92 LT. 10+91
10+94 10+90 RT. ~ 11+40 RT. 11+41
13+01 13+02 LT. ~ 13+52 LT. 13+50
13+43 RT. ~ 13+93 RT. 13+95
STEEL BEAM GUARD RAIL
8+00 LT. ~ 10+42 LT. 5+64 ~ 10+38 LT
10+94 10+90 RT. ~ TH#36 41+40 LT. 40+72 LT
13+50 13+52 LT. ~ 13+64.5 LT. 13+62
13+95 13+93 RT. ~ 14+50 RT. 17+22
0 20 40
SCALE IN FEET
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A
NOTE : DUE TO A DISCREPANCY IN ELEVATIONS THE USGS TABLET "VT 1919 585 ", LOCATED EAST OF THE BRIDGE , SHOULD NOT BE USED DURING CONSTRUCTION OF THIS PROJECT.
SURVEYED BY REED DATE 9/87
DRAWN BY SQUADE DATE 7/92
SQUAD LEADER D.F. HALE
DESIGN FILE NO. 78F174.DGN
IPARM FILE 78F174L2 DATE PLOTTED 23-SEP-1992
PROJ. NAME MORETOWN
PROJ. NO. BRZ 1446 (1)
SHEET 18 OF 82 SHEETS


GRADE, TOPSOIL AND SEED REMAINING PORTIONS OF TH#35
14+72 LT. ~ 14+93 LT. EXISTING 18" CGMP REMOVE
15+13 CL. NEW 18" X 80' OPTION PIPE PCCSP-064/CAAP-060/RCP CLW/CFEP(SL) W/ NEW RCDI@ INLET W/ TYPE 'A' GRATE W/ STONE FILL PAD, TYPE 11
14+50 ~ 15+10 LT. NEW 6" X 450' UNDERDRAIN W/ FLUSHING BASIN @ 19+00 LT.
15+10
APPROX. ARIAL RELOC. RTE. BY GMP, W-FTEL & WAITSFIELD TV
15+13 ~ 17+50 NEW 6" x 253' UNDERDRAIN w/ 1 FLUSHING BASIN @ 17+50
16+43 LT. ~ 16+46 LT. EXISTING 18" RCP REMOVE EXISTING PIPE AND DROP INLET
14+50 CL EXISTING 24" RCP REMOVE
TH #35
GRAV. DR.
FIELD DRIVE
12" PINE
14+50
15+00
16+00
17+00
18+00
19+00
20+00
11+00
12+00
MATCH LINE
CHANNEL LINE N. 68 -05' E.
CHAN. LINE 10+00.00
POC 16+50.00
POC 17+50.00
PI 17+32.31 = 15+51.86
SURV. POST 17+44.86
17+15 LT. ~ 17+40 LT. EXISTING 15" CGMP DO NOT DISTURB
17+65 CL. NEW 18" X 98' OPTION PIPE PCCSP-064/CAAP-060/RCP CLW/CFEP(SL) W/ NEW RCDI W/ TYPE 'A' GRATE
17+65 LT. ~ 18+43 LT. NEW 18" X 76' OPTION PIPE PCCSP-064/CAAP-060/RCP CLW/CFEP(SL) W/ NEW RCDI W/ TYPE 'A' GRATE
18+18 LT. ~ 18+58 LT. EXISTING 15" CGMP REMOVE
18+50 LT. EXISTING 7" PLASTIC PIPE DO NOT DISTURB
17+66 ~ 19+09 LT 19+15 ~ 21+00 LT NEW 6" x 335' UNDERDRAIN w/ 2 FLUSHING BASINS FB @ 19+09 & 19+15
19+00 ~ 20+75 LT. NEW 6" X 115' UNDERDRAIN W/ F.B. @ 19+00 LT.
18+50 ~ 20+75 RT. NEW 6" X 225' UNDERDRAIN W/ FLUSHING BASIN @ 18+50 RT.
15+18 ~ 15+50 RT NEW 6" x 38' UNDERDRAIN CARRIER PIPE
14+50 ~ 18+50 RT. NEW 6" X 400' UNDERDRAIN W/ FLUSHING BASIN @ 18+50 RT.
17+97 RT 20+69 RT
15+50 20+69
MAD RIVER
PT 19+74.56
MATCH LINE
CURVE DATA
Δ = 89°-46'-06.4" RT.
D = 13°-30'
R = 424.41
T = 422.70
L = 664.95
E = 174.59
BANK = 0.075 FT / FT
EXCAVATION OF SURFACES AND PAVEMENTS
14+50 ~ 20+00
STEEL BEAM GUARD RAIL
14+50 RT. ~ 17+05 .5 RT.
13+95 RT ~ 17+22 RT
BREAKAWAY CABLE TERMINAL
17+05 .5 RT. ~ 17+30.5 RT.
17+22 RT ~ 17+47 RT
REMOVAL OF EXISTING FENCE
17+00 LT.~ 20+00 RT.
16+75 ~ 20+10 RT
GEOTEXTILE FABRIC FOR SILT FENCE
14+50 RT. ~ 17+75 RT.
13+30 ~ 20+33 RT
HAY BALES FOR EROSION CONTROL
14+50 RT. ~ 17+75 RT.
EROSION MATTING
15+13 ~ 17+10 LT.
17+75 ~ 20+00 RT.
18+45 ~ 20+00 LT.
CONSTRUCT APPROACH
14+87 LT. (TH #35)
CONSTRUCT DRIVE
17+30 LT. (14' W.-GRAVEL)
18+10 LT. (14' W.-GRAVEL)
0 20 40
SCALE IN FEET
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A
SURVEYED BY REED DATE 9/87
DRAWN BY SOUADE DATE 7/92
SQUAD LEADER D.F. HALE
DESIGN FILE NO. 78F174.DGN
IPARM FILE 78F174L3 DATE PLOTTED 23-SEP-1992
PROJ. NAME MORETOWN
PROJ. NO. BRZ 1446 (1)
SHEET 19 OF 82 SHEETS



CONSTRUCT DRIVE
21+05 RT. (22'W.-GRAVEL)

~~EROSION MATTING~~
~~20+00 LT. ~ 20+75 LT.~~

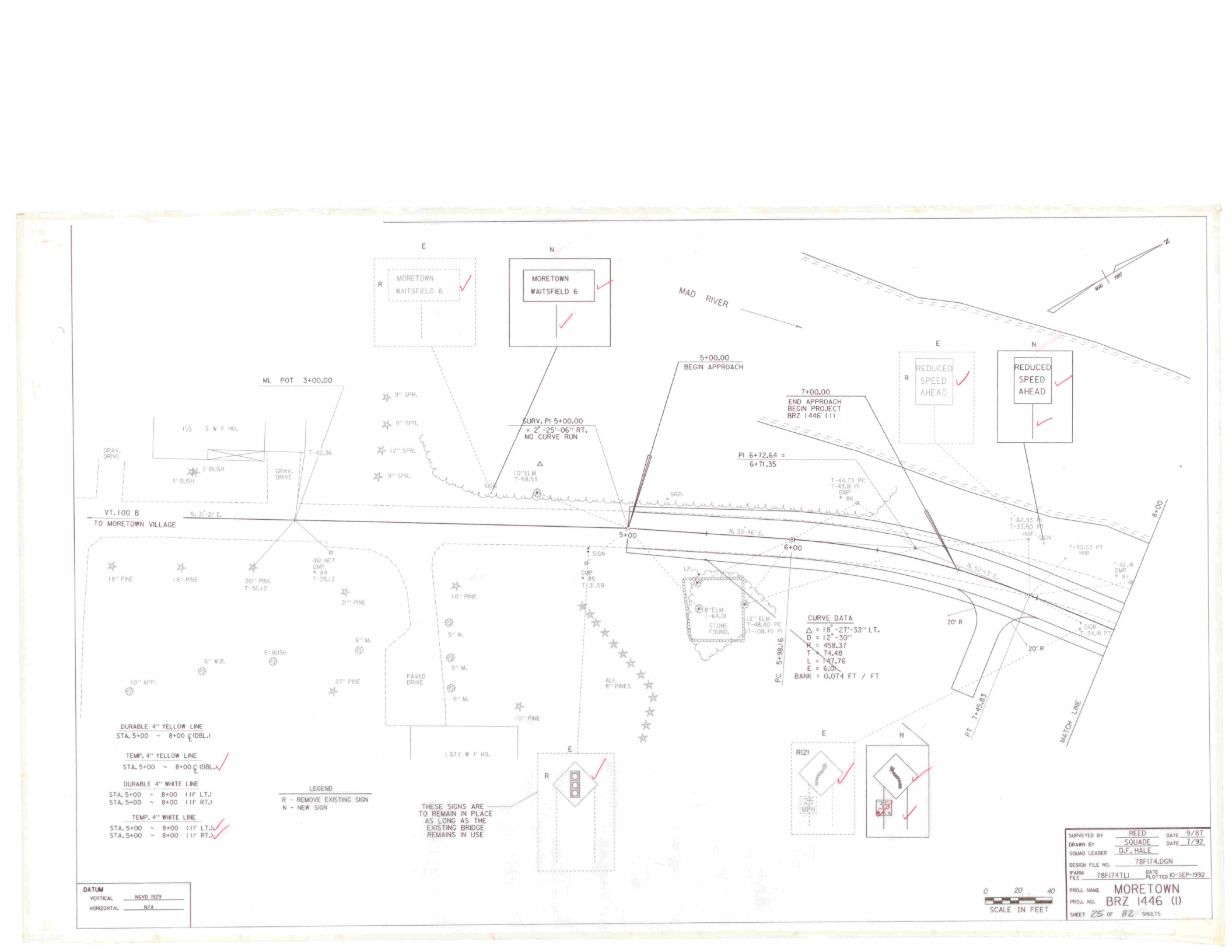
EXCAVATION OF SURFACES AND PAVEMENTS
20+00 ~ 22+00

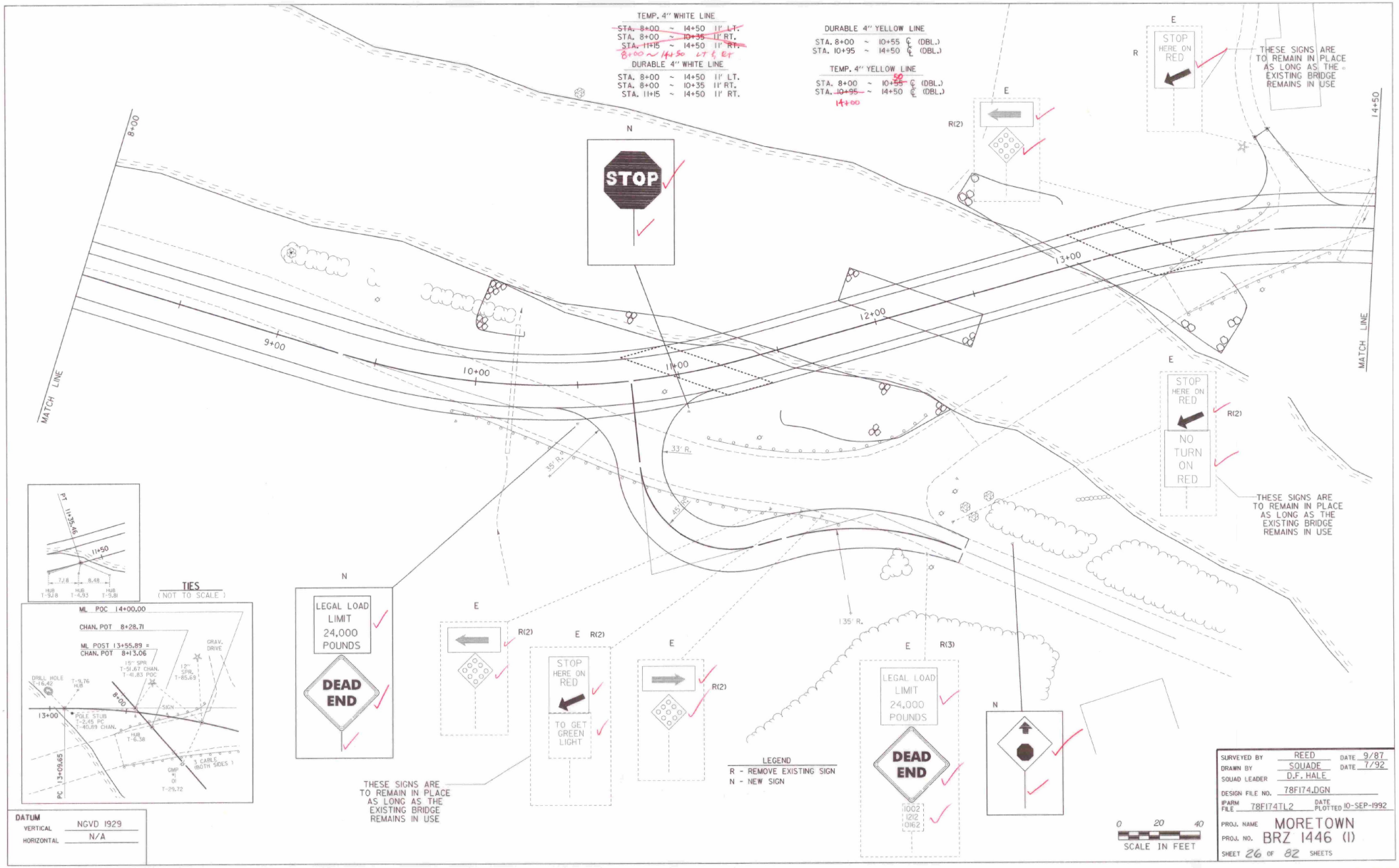
REMOVAL OF EXISTING FENCE
~~20+00 RT. ~ 20+18 RT.~~
20+05 LT. ~ 21+20 LT.
16+75 RT ~ 20+10 RT

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

0 20 40
SCALE IN FEET

SURVEYED BY	REED	DATE	9/87
DRAWN BY	SQUADE	DATE	7/92
SQUAD LEADER	D.F. HALE		
DESIGN FILE NO.	78FI74.DGN		
IPARM FILE	78FI74L4	DATE PLOTTED	23-SEP-1992
PROJ. NAME	MORETOWN		
PROJ. NO.	BRZ 1446 (2)		
SHEET	20 OF 82 SHEETS		

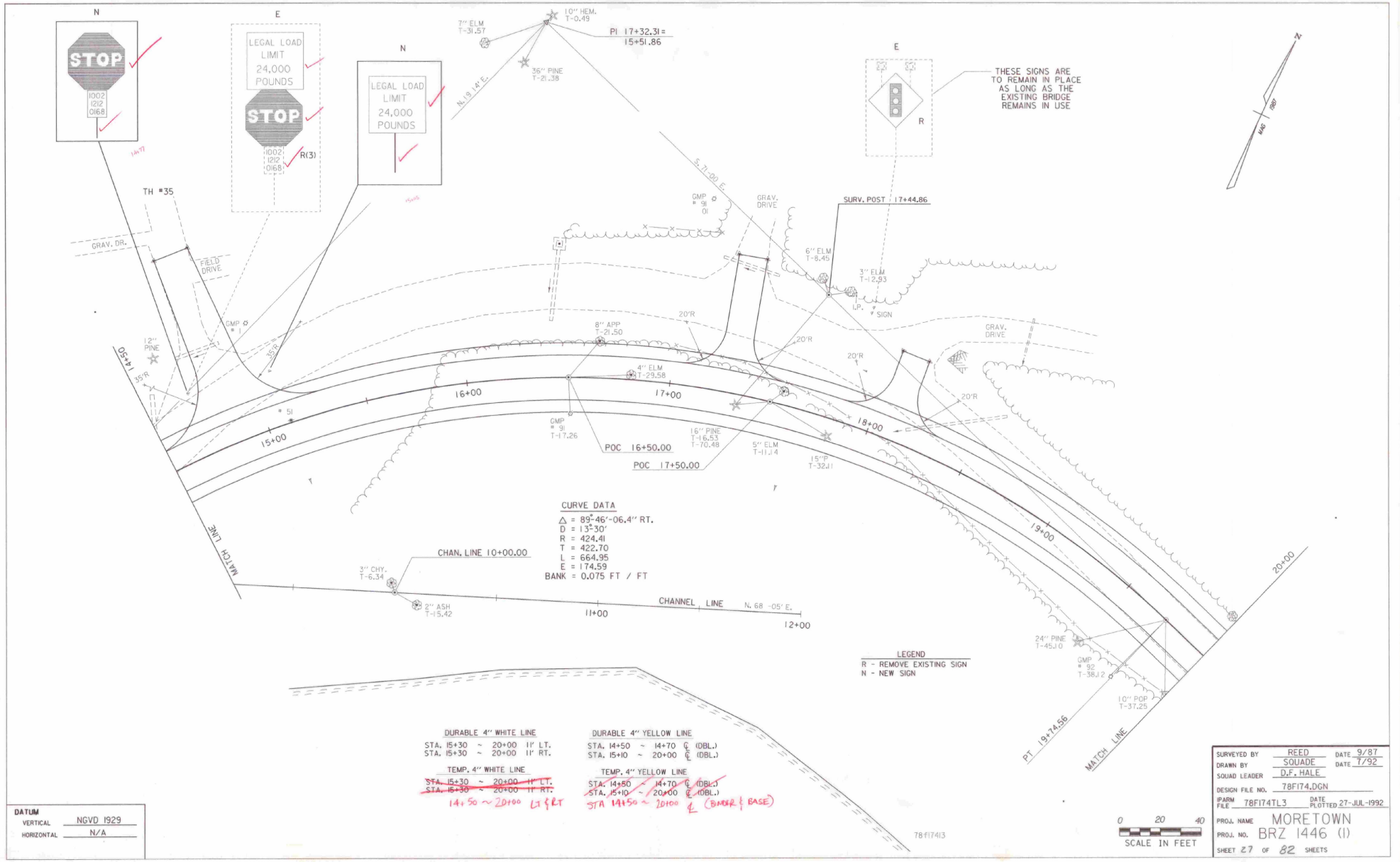

E
R
MORETOWN
WAITSFIELD 6
N
MORETOWN
WAITSFIELD 6
MAD RIVER
5+00.00
BEGIN APPROACH
7+00.00
END APPROACH
BEGIN PROJECT
BRZ 1446 (1)
E
R
REDUCED
SPEED
AHEAD
N
REDUCED
SPEED
AHEAD
ML POT 3+00.00
SURV. PI 5+00.00
= 2°-25'-06" RT.
NO CURVE RUN
PI 6+72.64 =
6+71.35
9" SPR.
9" SPR.
12" SPR.
9" SPR.
1½ S W F HO.
GRAV.
DRIVE
3' BUSH
3' BUSH
GRAV.
DRIVE
T-42.36
10" ELM
T-58.53
SIGN
SIGN
T-44.73 PC
T-43.81 PI
CMP
* 86
VT. 100 B
TO MORETOWN VILLAGE
N. 31°-21' E.
5+00
N. 33°-46' E.
6+00
N. 52°-13' E.
8+00
T-67.93 PI
T-33.90 PT
HUB
SIGN
T-30.53 PT
HUB
T-61.41
CMP
* 87
18" PINE
18" PINE
20" PINE
T-36.12
461 NET
CMP
* 84
T-28.12
21" PINE
10" PINE
5" M.
5" M.
5" M.
6" M.
6" W.B.
5' BUSH
10" APP.
27" PINE
PAVED
DRIVE
10" PINE
1 STY. W F HO.
SIGN
CMP
* 85
T-31.59
I.P.
8" ELM
T-64.01
STONE
FOUND.
12" ELM
T-48.40 PC
T-108.75 PI
ALL
8" PINES
PC 5+98.16
CURVE DATA
Δ = 18°-27'-33" LT.
D = 12°-30"
R = 458.37
T = 74.48
L = 147.76
E = 6.0
BANK = 0.074 FT / FT
20' R
20' R
SIGN
T-34.41 PT
PT 7+45.83
MATCH LINE
E
R(2)
25
MPH
N
35
M.P.H.
E
R
THESE SIGNS ARE
TO REMAIN IN PLACE
AS LONG AS THE
EXISTING BRIDGE
REMAINS IN USE
DURABLE 4" YELLOW LINE
STA. 5+00 ~ 8+00 ℄ (DBL.)
TEMP. 4" YELLOW LINE
STA. 5+00 ~ 8+00 ℄ (DBL.)
DURABLE 4" WHITE LINE
STA. 5+00 ~ 8+00 (11' LT.)
STA. 5+00 ~ 8+00 (11' RT.)
TEMP. 4" WHITE LINE
STA. 5+00 ~ 8+00 (11' LT.)
STA. 5+00 ~ 8+00 (11' RT.)
LEGEND
R - REMOVE EXISTING SIGN
N - NEW SIGN
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A
0 20 40
SCALE IN FEET
SURVEYED BY REED DATE 9/87
DRAWN BY SQUADE DATE 7/92
SQUAD LEADER D.F. HALE
DESIGN FILE NO. 78FI74.DGN
IPARM FILE 78FI74TLI DATE PLOTTED 10-SEP-1992
PROJ. NAME MORETOWN
PROJ. NO. BRZ 1446 (1)
SHEET 25 OF 82 SHEETS



DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

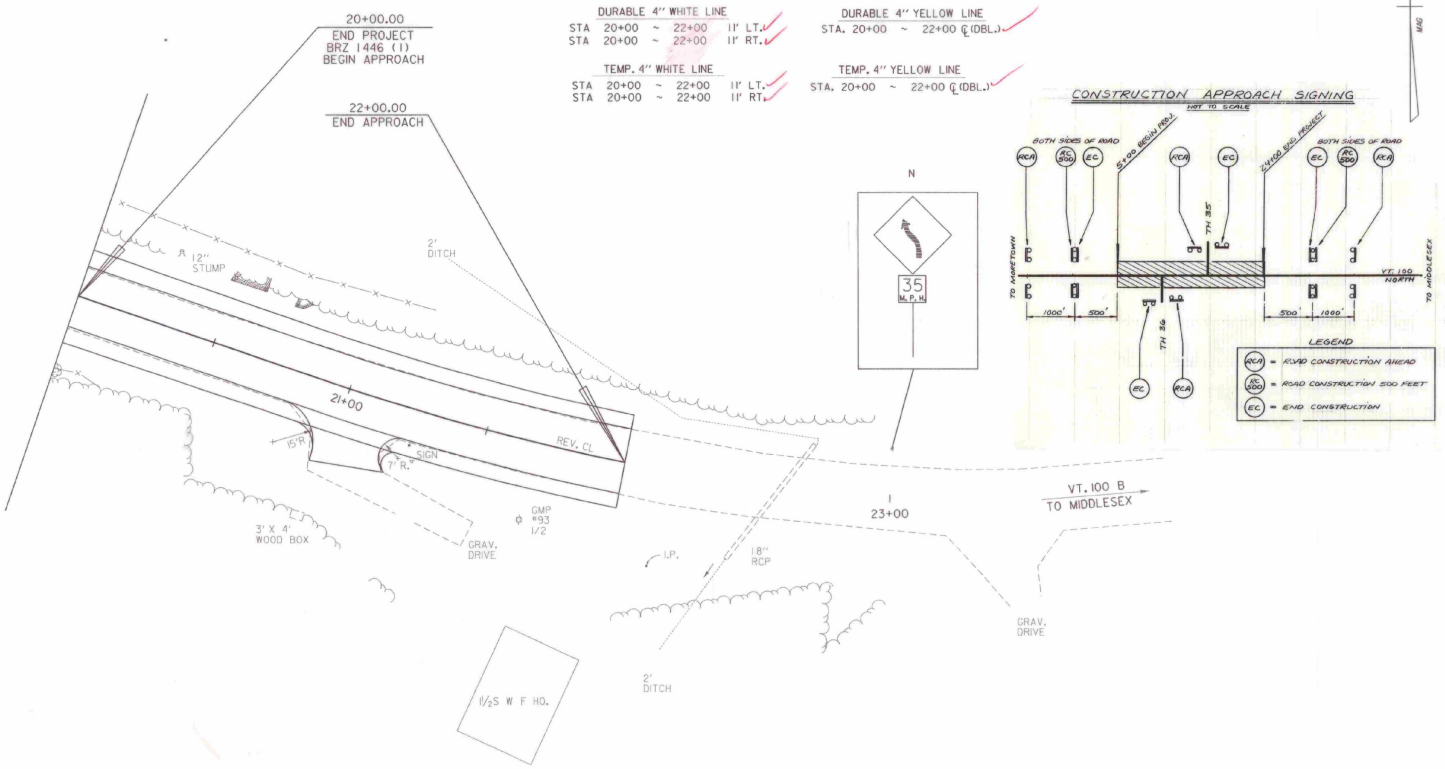
SURVEYED BY	REED	DATE	9/87
DRAWN BY	SQUADE	DATE	7/92
SQUAD LEADER	D.F. HALE		
DESIGN FILE NO.	78F174.DGN		
IPARM FILE	78F174TL2	DATE PLOTTED	10-SEP-1992

PROJ. NAME MORETOWN
PROJ. NO. BRZ 1446 (I)
SHEET 26 OF 82 SHEETS



DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

SURVEYED BY	REED	DATE	9/87
DRAWN BY	SQUADE	DATE	7/92
SQUAD LEADER	D.F. HALE		
DESIGN FILE NO.	78F174.DGN		
IPARM FILE	78F174TL3	DATE PLOTTED	27-JUL-1992
PROJ. NAME	MORETOWN		
PROJ. NO.	BRZ 1446 (1)		
SHEET 27 OF 82 SHEETS			



LEGEND
R - REMOVE EXISTING SIGN
N - NEW SIGN

0 20 40
SCALE IN FEET

78F174I4

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SURVEYED BY REED DATE 9/87
DRAWN BY SQUADE DATE 7/92
SQUAD LEADER D.F. HALE
DESIGN FILE NO. 78F174.DGN
IPARM FILE 78F174TL4 DATE PLOTTED 27-JUL-1992
PROJ. NAME MORETOWN
PROJ. NO. BRZ 1446 (2)
SHEET 28 OF 82 SHEETS

TRAFFIC SIGN SUMMARY SHEET

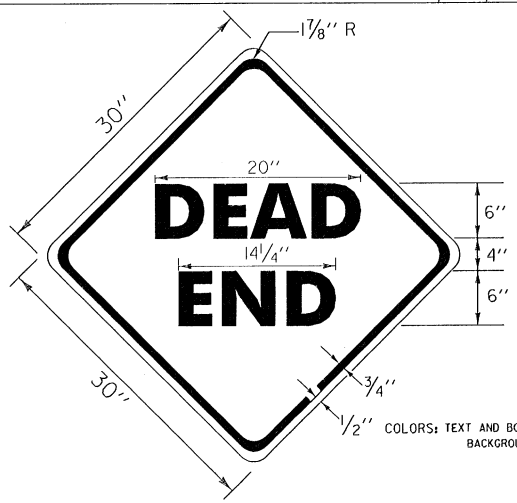
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS	NEW AND SALVAGED SIGNS "A"	"B"	SALV. SIGN	SALV. T.I.S.	EXIST. POSTS RET.	SALV.	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL LB./FT. 1.12	2.0	3.0	TUBULAR ALUMINUM 3.0"ø	4.0" ø	TUBULAR STEEL FOUNDATION	3"ø	3.5"ø	4.0"ø	5.0"ø	W-SHAPE STEEL POST SIZE	WEIGHT	FTG. SIZE 24"	30"	SIGN FRAME	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
4+17 LT	MORETOWN WAITSFIELD 8	30''X 18''	3.75						1			X													SEE SIGN DETAIL SHEET		
7+45 LT	REDUCED SPEED AHEAD	24''X 30''	5.0						1			X															E-142
7+80 RT		30''X 30''	6.25						1			X													SEE SIGN DETAIL SHEET		
	35 M. P. H.	18''X 18''	2.25																							E-152
10+52 RT	LEGAL LOAD LIMIT 24,000 POUNDS	24''X 30''	5.0						1			X															E-141
	DEAD END	30''X 30''	6.25																					SEE SIGN DETAIL SHEET		
11+00 RT	STOP	24''X 24''	4.00						1			X															E-143
12+35 RT ON TH-36		36''X 36''	9.00						1			X															E-150
14+77 RT	STOP	24''X 24''	4.00						1			X															E-143
15+05 LT	LEGAL LOAD LIMIT 24,000 POUNDS	24''X 30''	5.0						1			X															E-141
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S " SIGN POST DESIGN GUIDELINE ". TOTALS			SF. 50.5	SF.	EA.	SF.			LBS.	LBS.	LBS. 340.50		LBS.	LBS.	EA.	LBS.	LBS.	LBS.	LBS.		LBS.	EA.	EA.					

78FI74TSS.1

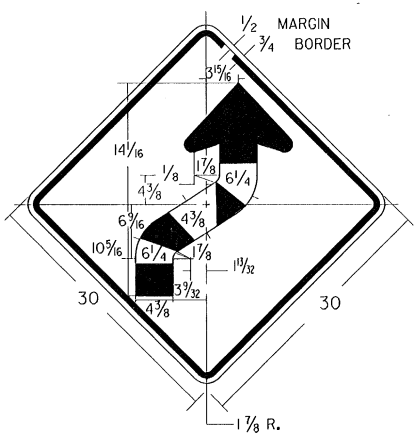
DRAWN BY squade DATE 6-9-92
SQUAD LEADER D.F.H.
DESIGN FILE NO. /usr/2fd2/055050.dlr/78fi
IPARM FILE INSTRUCTIONS saved 24-JUL-1992
PROJ. NAME MORETOWN
PROJ. NO. BRZ 1446 (1)
SHEET 29 OF 32 SHEETS

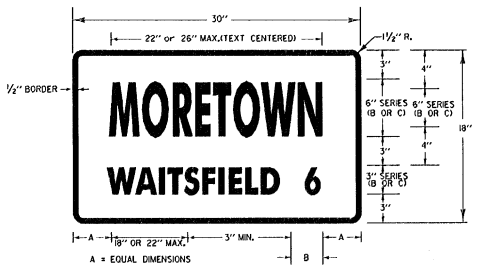
TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS	NEW AND SALVAGED SIGNS				EXIST. POSTS		NEW SIGN POSTS															REMARKS	SIGN DETAIL	
			"A"	"B"	SALV. SIGN	SALV. T.I.S.	RET.	SALV.	NO. OF POSTS	FLANGED CHANNEL LB./FT.			TUBULAR ALUMINUM		FOUND-ATION	TUBULAR STEEL				W-SHAPE STEEL		FTG. SIZE		SIGN FRAME		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
										1.12	2.0	3.0	3.0"ø	4.0" ø		3"ø	3.5"ø	4.0"ø	5.0"ø	POST SIZE	WEIGHT	24"	30"			
17+82 LT		30" X 30"	6.25						1			13.5												SEE SIGN DETAIL SHEET		
	35 M. P. H.	18" X 18"	2.25																							E-152
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S " SIGN POST DESIGN GUIDELINE ". TOTALS			SF. 3	SF.	EA.	SF.			LBS.	LBS.	LBS.	42	LBS.	LBS.	EA.	LBS.	LBS.	LBS.	LBS.		LBS.	EA.	EA.			



COLORS: TEXT AND BORDER - BLACK (NON-REFL)
BACKGROUND - YELLOW (REFL)





COLOR: GREEN REFL. (ENG. GRADE) BACKGROUND
WHITE REFL. TEXT

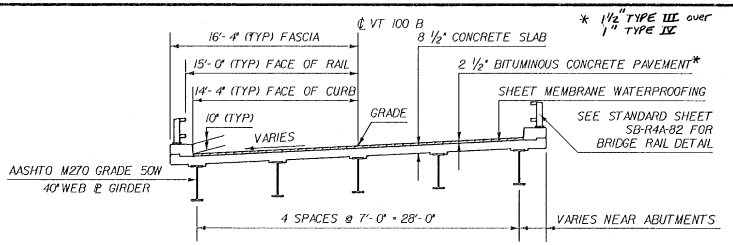
78FI74TSUMH.I

DRAWN BY	squade
SQUAD LEADER	D. F. H.
DESIGN FILE NO.	/usr/zfa2/055050.dlr/78FI
IPARM FILE	INSTRUCTIONS$$$$ DATE 24-JUL-1992
PROJ. NAME	MORETOWN
PROJ. NO.	BRZ 1446 (1)
SHEET 30 OF 82 SHEETS	

DATE 6-9-92

LIST OF SHEETS

BRI00	PRELIMINARY INFORMATION
BRI01	BRIDGE QUANTITIES
BRI02	GENERAL NOTES
BRI03	PLAN & ELEVATION
BRI04-106	BORING INFORMATION
BRI07	TYPICAL SECTION & DECK REINFORCING PLAN
BRI08	FRAMING PLAN & GIRDER ELEVATION
BRI09	DIAPHRAGM & SPLICE DETAILS
BRI10	APPROACH SLAB DETAILS
BRI11	BEARING DETAILS
BRI12	ABUTMENT 2 BEARING DETAILS & BEARING NOTES
BRI13	MISCELLANEOUS DETAILS
BRI14	ABUTMENT 1 DETAILS
BRI15	ABUTMENT 2 DETAILS
BRI16	FOOTING REINFORCING STEEL
BRI17	PILE LAYOUT
BRI18	WINGWALL 1 DETAILS
BRI19	WINGWALL 2,3,4 DETAILS
BRI20	BACKWALL DETAILS
BRI21	PIER DETAILS
BRI22	EXPANSION JOINT DETAILS
BRI23	EXPANSION JOINT PLAN VIEW
BRI24	END BRIDGE RAIL DETAIL
BRI25	SCUPPER DETAILS
BRI26-127	REINFORCING STEEL SCHEDULE
BRI28-133	CHANNEL SECTIONS

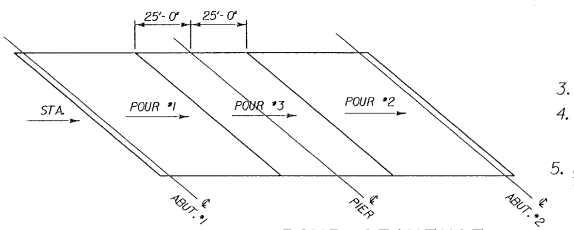


TYPICAL BRIDGE SECTION

SCALE: 1" = 5'-0"

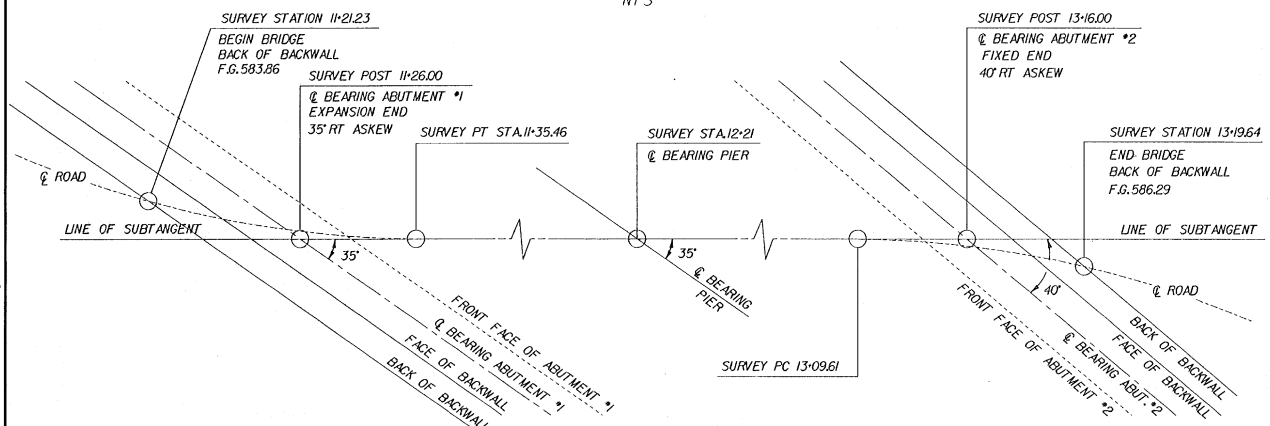
NOTES

1. THE SEQUENCE OF POURS 1 & 2 MAY BE INTERCHANGED. A MINIMUM OF 96 HOURS BETWEEN POURS IS REQUIRED.
2. IF APPROVED BY THE ENGINEER, POURS 1 & 2 OR ALL SECTIONS MAY BE POURED THE SAME DAY PROVIDED THE MAXIMUM TIME OF THE POUR IS 8 HOURS AND THE INDICATED POURING SEQUENCE IS FOLLOWED AND A RETARDING ADMIXTURE IS USED SO THAT THE DECK CONCRETE WILL NOT SET UP UNTIL ALL THE POUR HAS BEEN MADE. THE RETARDING ADMIXTURE WILL BE SUBSIDIARY TO THE ITEM 501.22, "CONCRETE CLASS A".
3. ALL POURS SHALL START FROM THE LOW END (ELEVATION WISE).
4. IF ALL SECTIONS ARE NOT POURED IN THE SAME DAY, USE TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINTS. (SEE SHEET BRI13 FOR DETAILS)
5. BRIDGE DECK CONCRETE SHALL BE DEPOSITED AND SCREEDED PARALLEL TO THE CENTERLINE OF BEARING



POUR SEQUENCE

NTS



LAYOUT OF ABUTMENTS

NOT TO SCALE

EXISTING STRUCTURE

1. STRUCTURE TYPE SINGLE SPAN STEEL — OVERALL LENGTH 125.0' — INVENTORY RATING ----------
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 120.0'
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM 105.0'
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 1650 SQ.FT. — VERTICAL CLEARANCE ABOVE STREAMBED 17.0'
5. WATER SURFACE ELEVATION @ Q 2.33 569.5 — WATER SURFACE ELEVATION @ Q 100 577.0
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD ------- — YEAR 1927 — ESTIMATED DISCHARGE ------
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? YES IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? ------
   ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF ------
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL TIMBER PILES TO LEDGE
9. DISPOSITION OF STRUCTURE REMOVE EXISTING STRUCTURE

NEW STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE 2 SPAN CONTINUOUS PLATE GIRDER — OVERALL LENGTH 198.41'
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 2 SPANS @ 95.0'
3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER 15.5'
4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM 96.5 - 93.5 TOTAL 105.0'
5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 1630 SQ.FT.
6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? ------

HYDRAULIC DATA:

1. Q 2.33 4000 CFS — WATER ELEVATION 569.5 — VELOCITY 7.3 FPS
   Q 10 9400 CFS — WATER ELEVATION 573.0 — VELOCITY 10.2 FPS
   Q 25 12600 CFS — WATER ELEVATION 574.7 — VELOCITY 11.7 FPS
   Q 50 15000 CFS — WATER ELEVATION 575.8 — VELOCITY 12.6 FPS
   Q 100 17200 CFS — WATER ELEVATION 577.0 — VELOCITY 13.4 FPS
2. DRAINAGE AREA 130 SQ. MI. — CHARACTER OF TERRAIN ROLLING HILLS TO MOUNTAINOUS
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM? NO
4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? YES — IS ORDINARY RISE RAPID? YES
5. NATURE OF NATURAL STREAMBED GRAVEL AND COBBLES
6. ESTIMATED SCOUR DEPTH 8.0' @ PIER — COMMENT ON: DRIFT MODERATE — ICE HEAVY
7. WILL ALL WATER PASS THROUGH NEW STRUCTURE? YES IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR? ------
   ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF ------
8. VERTICAL CLEARANCE ABOVE Q 100 = 1.0'
9. ALLOWABLE WATER SURFACE ELEVATION 578.0 — LIMITED BY LOW STEEL ELEVATION
10. IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO IF YES, DESCRIBE ------
11. AVERAGE DAILY LOW FLOW 125 CFS — DEPTH 1.0' — AVERAGE DAILY HIGH FLOW 2500 CFS — DEPTH 4.0'
12. STREAMBANK OR CHANNEL PROTECTION REQUIRED STONE FILL TYPE IV
13. DISTANCE TO EXISTING UPSTREAM STRUCTURE 2500' — SPAN 20' — WATERWAY AREA OF FULL OPENING 289' — Q
14. DISTANCE TO EXISTING DOWNSTREAM STRUCTURE 10000' — SPAN 16' — WATERWAY AREA OF FULL OPENING 1554' — Q

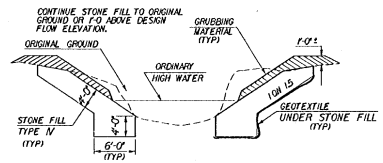
ALLOWABLE STRESSES:

1. DESIGN LIVE LOAD AASHTO HS 25
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL ------ — ON LEDGE ------
3. ALLOWABLE LOAD FOR PILING 9 KSI — TYPE HP 14X73 — ESTIMATED LENGTH SEE BORING LOGS
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M 270 GRADE 50W — TENSION 27 KSI
5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24 KSI — COMPRESSION 20 KSI
6. ALLOWABLE STRESS FOR CONCRETE CLASS A f_c 3.5 KSI — f_b 1.4 KSI
   CLASS B f_c 3.5 KSI — f_b 1.4 KSI

TRAFFIC MAINTENANCE:

1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE YES OR ON TEMPORARY BRIDGE ------
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY ------ TRAFFIC CONTROL SIGNALS REQUIRED ------
   MINIMUM CLEAR SPAN ------ MINIMUM CLEAR HEIGHT ------ MINIMUM WATERWAY AREA ------
   ARE SIDEWALKS REQUIRED? ------ IF SO, ON WHAT SIDE? ------

ADDITIONAL DESIGN CONSIDERATIONS



TYPICAL CHANNEL SECTION

LOAD RATING (TONS)

STRESS LEVELS	TRUCK H	HS	3S2	6 AXLE	3A, STR.	4A, STR.	5A, SEMI
INVENTORY 0.55 F_y = 27	42	49					
POSTED 0.67 F_y = 33.5	61	70	81		64	64	74
OPERATING 0.75 F_y = 37.5		83	96	109	76	77	

REVISIONS

NO.	DESCRIPTION	BY & DATE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT. 100-B	Log Sta. 86+53
	Surv. Sta. 12+21+/-

PRELIMINARY INFORMATION

VT. 100-B OVER THE MAD RIVER

Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS — Date 4/92	Bridge Design Supervisor F.W. Balkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ 1446(1)
I.G.C. Info. ZH2:(34,30)T8F(14P1.DGN	T8F(14P1)P.ARM
Bridge Sheet No. BRI00	Sheet 33 of 82

BRIDGE QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN: SUPER STRUCTURE	ABUTMENT 1	ABUTMENT 2	PIER	APPROACH SLAB 1	APPROACH SLAB 2	CHANNEL	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CY							970	970	
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY		410	360					770	
204.40	COFFERDAM (@ STATION 11+26)	LS		1						1	
204.40	COFFERDAM (@ STATION 12+21)	LS				1				1	
204.40	COFFERDAM (@ STATION 13+16)	LS			1					1	
x 406.25	BITUMINOUS CONCRETE PAVEMENT	TON	90				13	13		116	
501.22	CONCRETE, CLASS A	CY	191							191	
501.25	CONCRETE, CLASS B	CY		448	345	220	36	37		1086	
501.60	SILICA-FUME CONCRETE	CY	27							27	
504.10	FURNISHING EQUIPMENT FOR DRIVING PILING	LS								1	
505.17	STEEL PILING (HP 14 X 73)	LF		3560	1360	1080				6000	
506.55	STRUCTURAL STEEL (PLATE GIRDER)	LBS	219260			1740				221000	
507.15	REINFORCING STEEL	LBS		49470	41520	23320				114310	
507.17	EPOXY COATED REINFORCING STEEL	LBS	59290				4760	4730		68780	
508.15	SHEAR CONNECTORS (2080 7/8" X 7" STUDS)	LS	1							1	
513.25	STRUCTURAL PAINTING (SHOP APPLIED)	LS	1							1	
513.40	SURFACE PREPARATION	LS	1							1	
514.10	WATER REPELLENT	GAL	16	16	13	13				58	
516.10	BRIDGE EXPANSION JOINT	LF	61							61	
519.20	SHEET MEMBRANE WATERPROOFING	SY	630				83	83		796	
525.31	BRIDGE RAILING - 2 RAIL GALV. BOX BEAM	LF	412							412	
527.10	MAINT. OF TRAFFIC FOR BRIDGE PROJECTS	LS	1							1	
529.20	PARTIAL REMOVAL OF STRUCTURE	EA								1	
531.10	BEARING DEVICE ASSEMBLY	EA	15							15	
631.18	TESTING EQUIPMENT - PROTECTIVE COATINGS	LS	1							1	
613.13	STONE FILL, TYPE IV	CY							1350	1350	
649.31	GEOTEXTILE UNDER STONE FILL	SY							1000	1000	
651.40	GRUBBING MATERIAL	SY							750	750	

x INDICATES ROADWAY QUANTITIES

BRIDGE(S) AT STATION(S) 12+21
LOCATION(S) VT RTE 100 B OVER MAD RIVER

PREPARED BY: C.P. WILLIAMS
CHECKED BY: M.M. GARCIA
SUPERVISOR: F.W. BOLKUM

PROJECT: MORETOWN
PROJECT NO: BRZ 1446(1)
BR 101 OF 131
SHEET NO: 34 OF 82

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 1990, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1989, AND ITS LATEST REVISIONS.

2. TRAFFIC WILL BE MAINTAINED ON THE EXISTING STRUCTURE.

3. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP BEADS.

4. TWENTY-FIVE CUBIC YARDS OF STONE FILL, TYPE IV HAS BEEN INCLUDED TO BE USED AS FISH ROCKS. SEE SPECIAL PROVISIONS.

5. EARTHWORK QUANTITIES HAVE BEEN CALCULATED ON THE ASSUMPTION THAT THE COFFERDAM LIMIT WILL BE 3 FEET OUTSIDE THE NEW FOOTING LIMIT.

6. BLANK

7. ITEM 529.20 'PARTIAL REMOVAL OF STRUCTURE', SHALL BE USED TO REMOVE THE ENTIRE SUPERSTRUCTURE, AND ALL PORTIONS OF THE EXISTING NORTH ABUTMENT NOT REMOVED UNDER THE ITEMS 'COFFERDAM' OR 'UNCLASSIFIED CHANNEL EXCAVATION', AND ALL CONCRETE ABOVE THE BRIDGE SEAT ELEVATION (579 +/-) AT THE EXISTING SOUTH ABUTMENT.

8. THE HP 14X73 PILES SHALL BE DRIVEN TO SOUND LEDGE OR REFUSAL AS DETERMINED BY THE RESIDENT ENGINEER. PILE TIP REINFORCEMENT SHALL CONFORM TO SUB-SECTION 505.04(d).

9. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F.

10. THE 'STONE FILL, TYPE IV' UNDER THE BRIDGE SHALL BE PLACED BEFORE THE BEAMS ARE SET.

11. ALL REINFORCING STEEL IN THE CONCRETE DECK, BRIDGE CURBS AND APPROACH SLABS SHALL BE EPOXY COATED AND PAID UNDER ITEM 507.17. WHEN EPOXY COATED REBAR IS CUT THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REBAR WILL NOT BE PERMITTED.

12. MINIMUM COVER FOR REINFORCING STEEL (EXCEPT IN DECKS) SHALL BE 2 INCHES ALONG BACK FACES OF WALLS AGAINST EARTH, FOUR INCHES IN THE PIER STEM, AND 3 INCHES ELSEWHERE.

13. REINFORCING PLACEMENT TOLERANCES SHALL BE:

    SPACING +/- 1"
    CLEARANCE +/- 1/4"

14. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

15. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".

16. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER AREAS OF THE BRIDGE SEAT SHALL BE SLOPED 1/2 INCH PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD MID-SPAN. PIER SEATS SHALL BE SLOPED EACH WAY FROM CENTER. THE ENTIRE BRIDGE SEAT SHALL BE STEEL TROWEL FINISHED.

17. THE CONCRETE BRIDGE CURB SHALL BE 'SILICA-FUME CONCRETE' AND SHALL BE PAID UNDER ITEM 501.60.

18. DECK CONCRETE SHALL BE CONCRETE, CLASS A, AND ALL OTHER CONCRETE SHALL BE CONCRETE, CLASS B UNLESS NOTED OTHERWISE.

19. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENTH OF THE JOINT.

20. ALL FIELD CONNECTIONS SHALL BE MADE USING 7/8 INCH DIAMETER TYPE III BOLTS MEETING AASHTO M 164. CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STATE FOR APPROVAL.

21. ANY HOLES IN THE FASCIA BEAM NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS.

22. AFTER THE BEAMS HAVE BEEN SET ON THE BEARINGS, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH BEAM, UNDER THE DIRECTION OF THE RESIDENT ENGINEER, FOR USE IN DETERMINING THE FINAL FINISH GRADE.

23. INTERMEDIATE DIAPHRAGM BOLTS SHALL ONLY BE SNUG TIGHT UNTIL AFTER THE ENTIRE DECK HAS BEEN PLACED. SEE SHEET BRI09 FOR DETAILS.

24. THE STEEL IN THE VICINITY OF THE FIELD SPLICE SHALL BE SAND BLASTED PRIOR TO BOLTING OF THE SPLICE PLATES.

25. ALL STRUCTURAL STEEL WITHIN 8 FEET OF ABUTMENT 1 SHALL BE COATED WITH A PROTECTIVE PAINT SYSTEM. SEE SPECIAL PROVISIONS.

26. ALL HORIZONTAL REINFORCING STEEL IN ABUTMENT 2 THAT IS IN THE VICINITY OF THE EXISTING NORTH ABUTMENT HAS BEEN DETAILED LONG ENOUGH TO PROVIDE FOR A STANDARD SPLICE IN THE EVENT THAT A VERTICAL CONSTRUCTION JOINT IS USED HERE. IF THE CONTRACTOR ELECTS TO USE MECHANICAL SPLICES, THEIR COST SHALL BE CONSIDERED SUBSIDIARY TO ITEM 507.15. THE EXACT LOCATION OF THIS CONTRUCTION JOINT SHALL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO FORMING.

27. A CONSTRUCTION JOINT IN THE CORNER OF THE DECK AND THE APPROACH SLAB ADJACENT TO THE EXISTING NORTH ABUTMENT WILL BE PERMITTED. THE LOCATION OF THESE JOINTS SHALL BE SUCH THAT TWO-WAY TRAFFIC CAN BE MAINTAINED ON THE NEW STRUCTURE BEFORE THE EXISTING STRUCTURE IS REMOVED. THE CONTRACTOR SHALL SUBMIT DETAILS REGARDING THE CONSTRUCTION JOINT IN THE DECK TO THE STRUCTURES ENGINEER, AND THE METHOD FOR MAINTAINING TRAFFIC TO THE CONSTRUCTION ENGINEER FOR APPROVAL. THE COST OF REQUIRED SHEET PILING AND REQUIRED STAGE CONSTRUCTION SHALL BE INCLUDED UNDER THE UNIT PRICE BID FOR ITEM 527.10 'MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS'.

28. 3 DAY WAITING PERIOD FOR POURS ADJACENT TO VERTICAL CONSTRUCTION JOINTS.

PLOTTED 09-NOV-1992 12:50

sht4

STATE OF VERMONT
AGENCY OF TRANSPORTATION

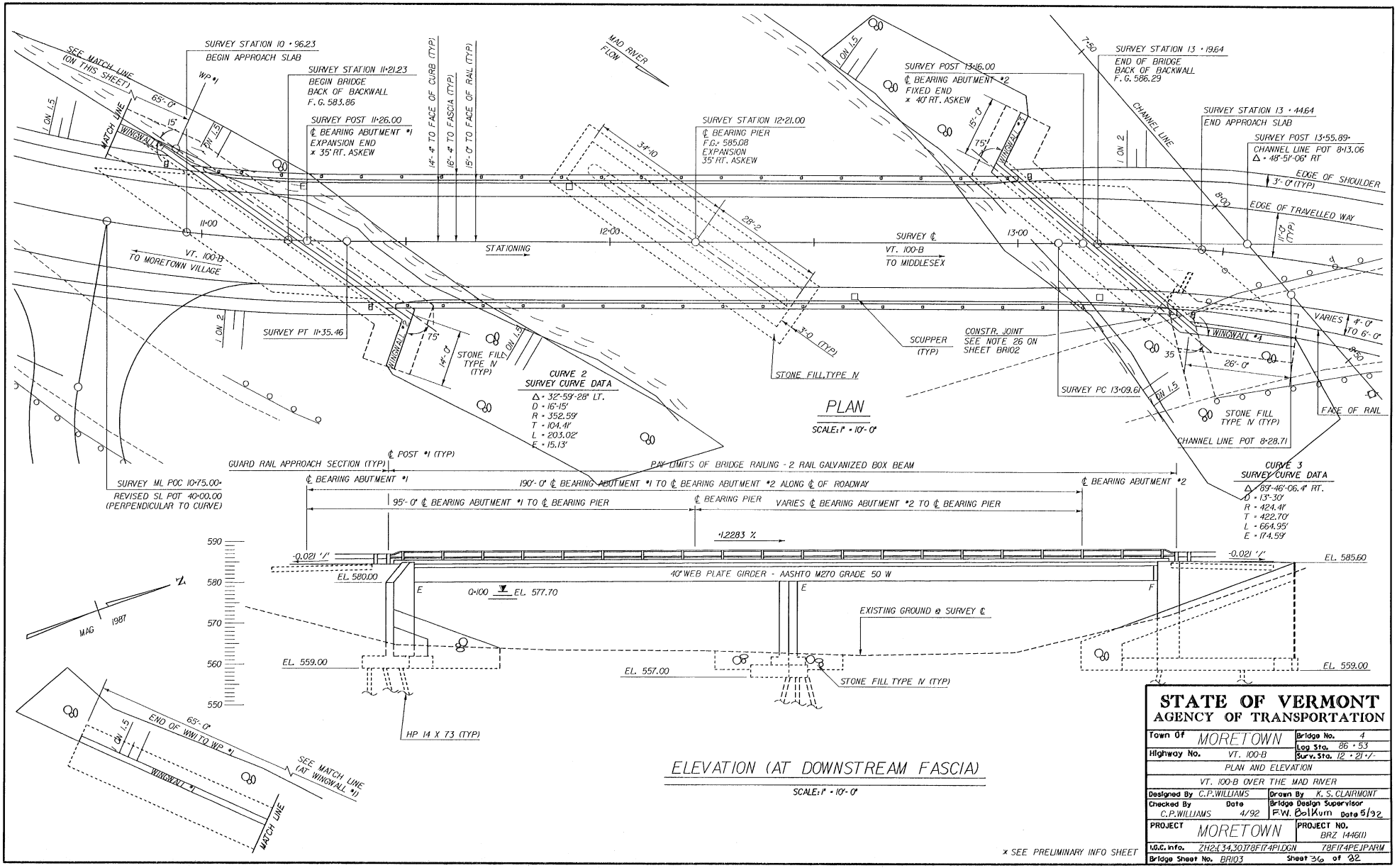
Town Of	MORETOWN	Bridge No.	4
		Log Sta.	86+53
Highway No.	VT RTE 100B	Surv. Sta.	12+21

GENERAL NOTES

VT RTE 100 B OVER MAD RIVER

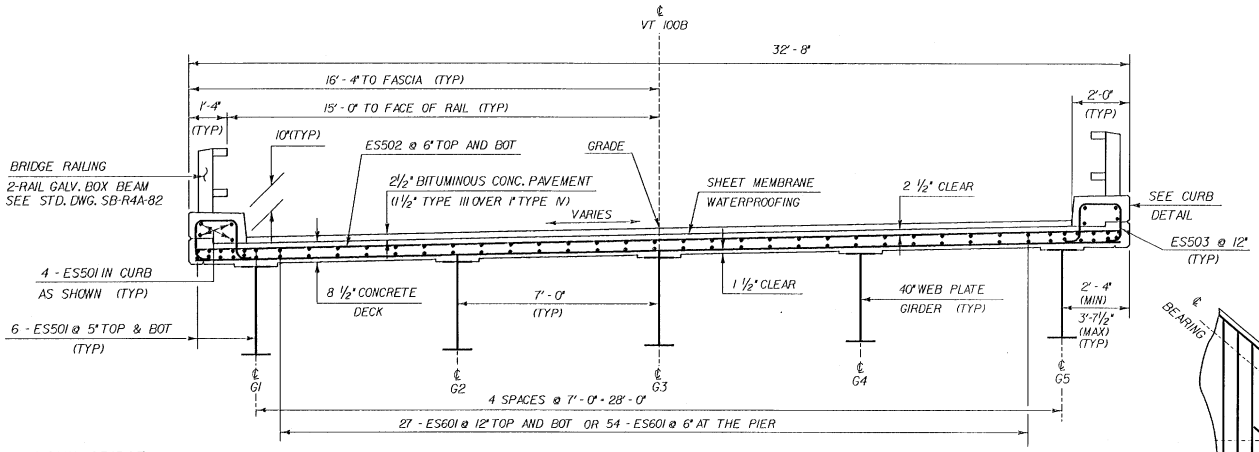
Designed By	C.P.WILLIAMS	Drawn By	C.P.WILLIAMS
Checked By	Date	Bridge Design Supervisor	
M.M.GARCIA	4/92	F.W.BOLIUM	Date 5/92

PROJECT	MORETOWN	PROJECT NO.	BRZ 1446(11)S
I.C.C. Info.	/usr/zh2/0340.50.dir/78f1f		78F1F4NOT.JPARM
Bridge Sheet No.	BRI02	Sheet	35 of 82



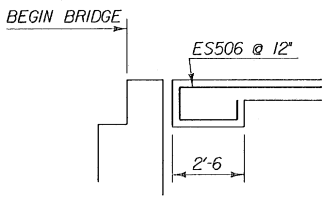
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT. 100-B	Log Sta. 86 • 53
	Surv. Sta. 12 • 21 • 1-
PLAN AND ELEVATION	
VT. 100-B OVER THE MAD RIVER	
Designed By C.P.WILLIAMS	Drawn By K. S. CLAIRMONT
Checked By C.P.WILLIAMS Date 4/92	Bridge Design Supervisor F.W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ 1446(11)
W.O.C. info. ZH2;L34,30;T8F;I74PI;DGN	78F;I74PEJPARM
Bridge Sheet No. BRI03	Sheet 36 of 32



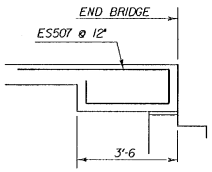
TYPICAL BRIDGE SECTION

SCALE: ½" = 1'-0"



SECTION A-A

NTS



SECTION B-B

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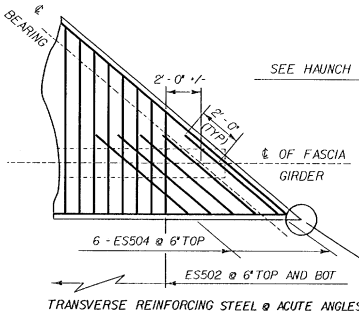
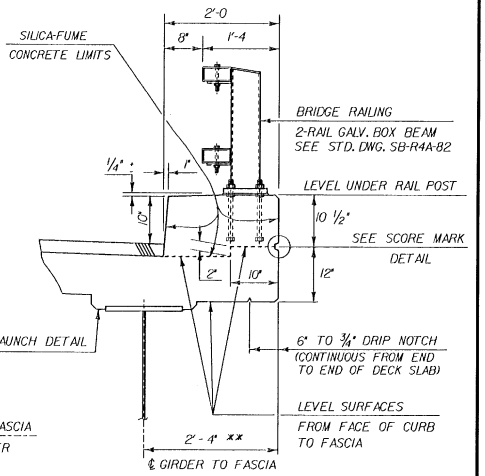


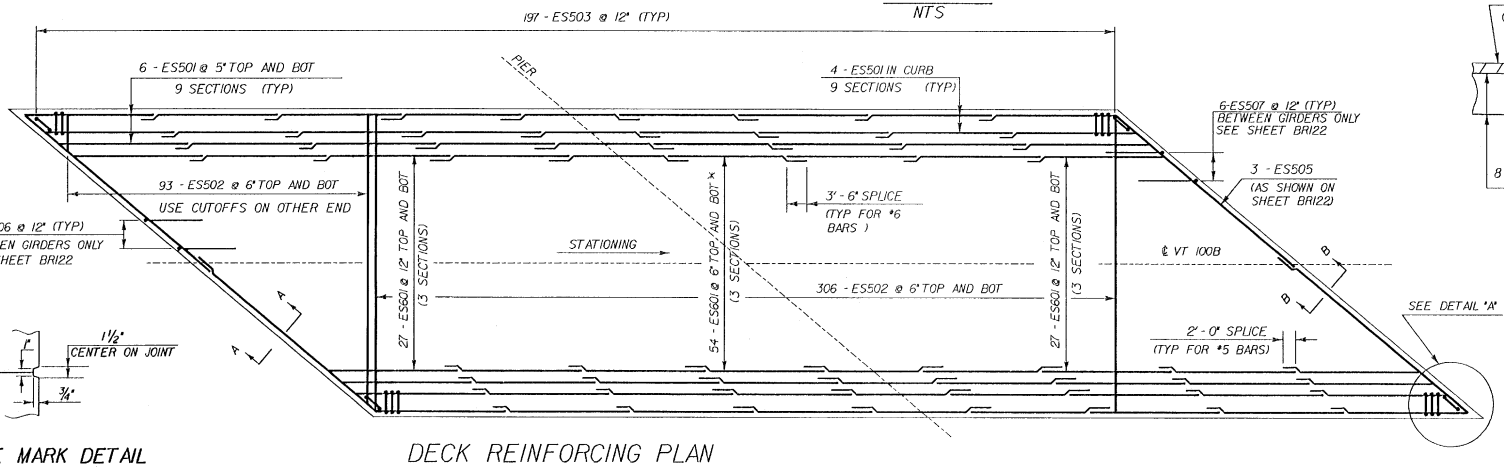
DETAIL "A"

SCALE: ⅜" = 1'-0"



CURB DETAIL

SCALE: 1" = 1'-0"



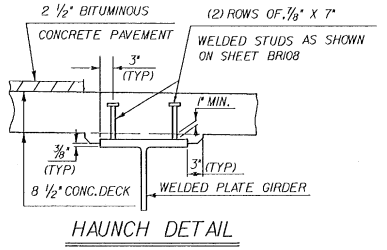
SCORE MARK DETAIL

NTS

DECK REINFORCING PLAN

NTS

* THESE 3 SECTIONS OF ES601 BARS
SHALL BE PLACED SYMMETRICALLY ABOUT THE ℄ PIER

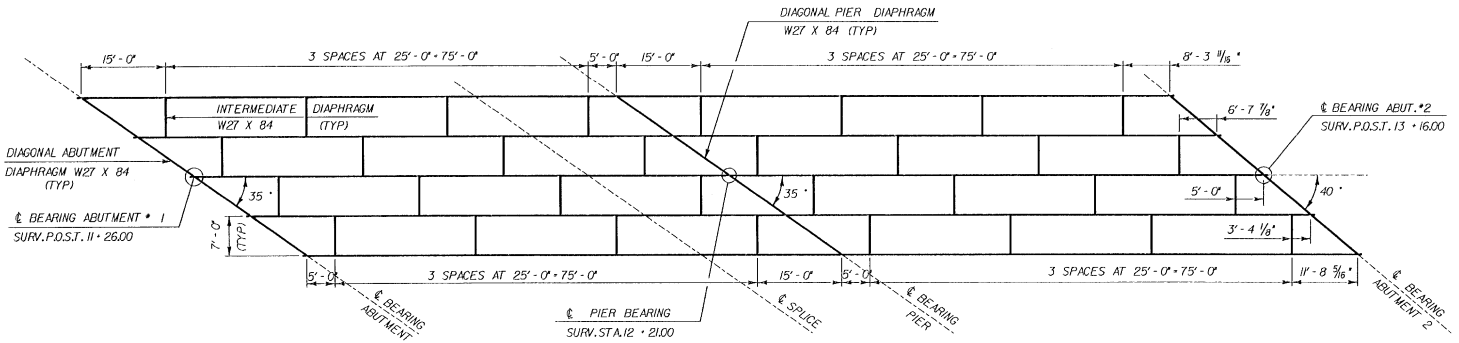


HAUNCH DETAIL

NTS

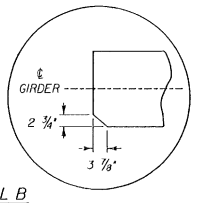
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86 + 53
	Surv. Sta. 12 + 21
VT 100B OVER MAD RIVER	
TYPICAL SECTION AND DECK REINFORCING PLAN	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 3/92	Bridge Design Supervisor F.W. Bolhurn Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ - 1446(1)
I.G.C. Info. ZH:\E30\B6JT8F\T4DEK.DGN	T8FT4DEKJPARM
Bridge Sheet No. BRIOT	Sheet 40 of 82



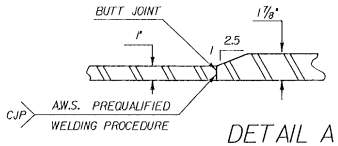
FRAMING PLAN

SCALE: 1" = 10'-0"



DETAIL B

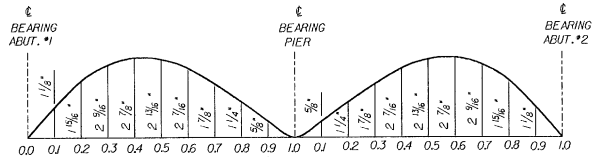
SCALE: 1" = 1'-0"



DETAIL A

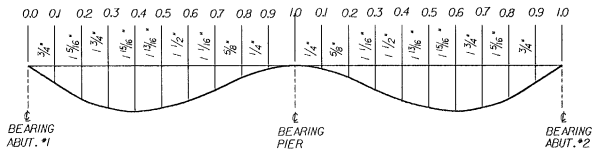
FLANGE SPLICE

SCALE: 3" = 1'-0"



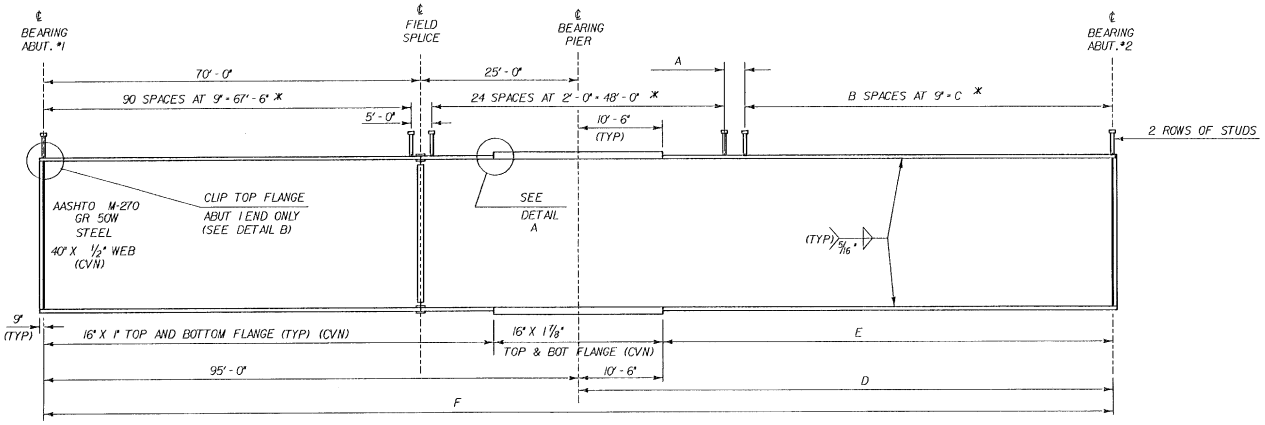
CAMBER DIAGRAM

NTS



DEAD LOAD DEFLECTION DIAGRAM

NTS



GIRDER ELEVATION

NTS

CVN = CHARPY V-NOTCH TESTING REQUIRED.

* SEE HAUNCH DETAIL ON SHEET BR107.

	A	B	C	D	E	F	NUMBER OF CONNECTORS PER GIRDER
G1	1'-6 11/16"	95	71'-3"	98'-3 11/16"	87'-9 11/16"	193'-3 11/16"	424
G2	1'-4 1/8"	93	69'-9"	96'-1 7/8"	86'-1 7/8"	191'-7 7/8"	420
G3	1'-3"	91	68'-3"	95'-0"	84'-6"	190'-0"	416
G4	1'-1 1/8"	89	66'-9"	93'-4 1/8"	82'-10 1/8"	188'-4 1/8"	412
G5	0'-11 5/16"	87	65'-3"	91'-8 5/16"	81'-2 5/16"	186'-8 5/16"	408

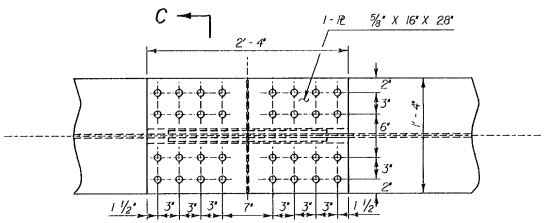
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86+53
	Surv. Sta. 12+21

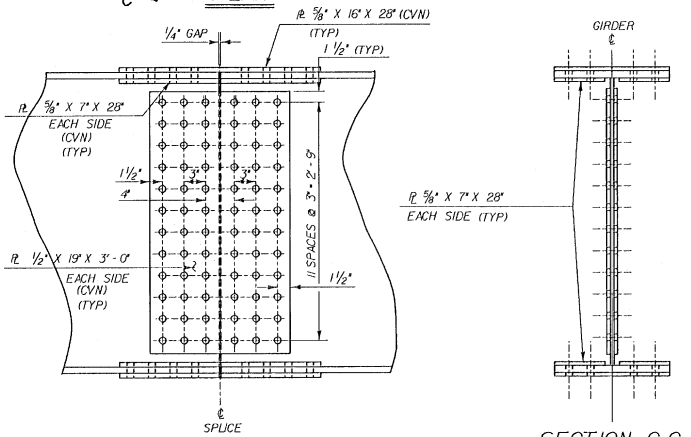
VT 100B OVER THE MAD RIVER

FRAMING PLAN AND GIRDER ELEVATION

Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 3/92	Bridge Design Supervisor Date
PROJECT MORETOWN	PROJECT NO. BRZ-1446(11)S
I.G.C. Info. ZH2:[34,30]T8F17ASTLDGN T8F17AST2)PARM	
Bridge Sheet No. BR108	Sheet 41 of 88



PLAN



ELEVATION

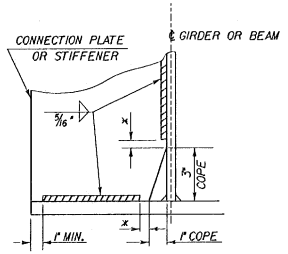
SECTION C-C

SPLICE DETAILS

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

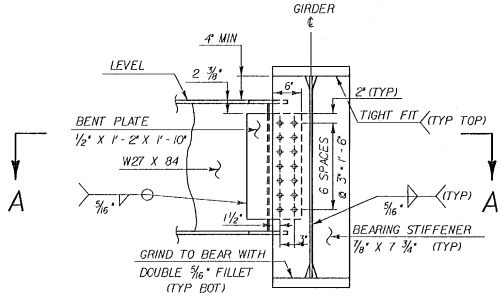
ALL SPLICE CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER, AASHTO M164 BOLTS IN 15/16" DIAMETER HOLES.

CVN = CHARPY V - NOTCH TESTING REQUIRED.



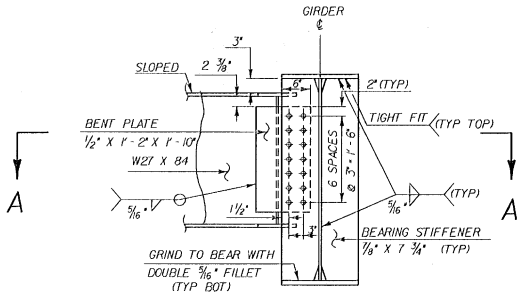
WELD TERMINATION AND COPING DETAILS

* NO WELD FOR 1/4" MIN. 1/2" MAX.
(EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)



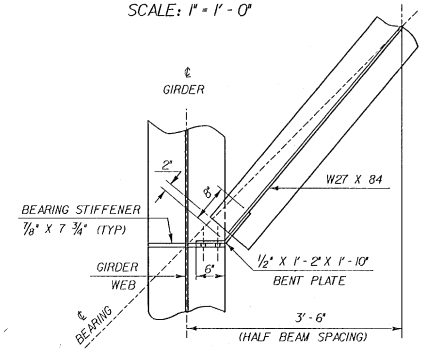
PIER DIAPHRAGM

SCALE: 1" = 1' - 0"



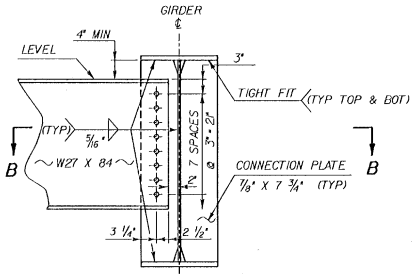
ABUTMENT DIAPHRAGM

SCALE: 1" = 1' - 0"



SECTION A - A

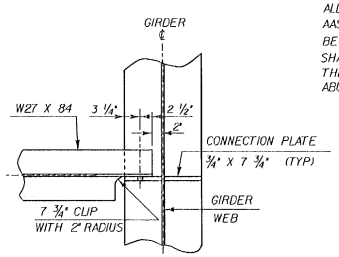
NTS



INTERMEDIATE DIAPHRAGM

SCALE: 1" = 1' - 0"

ALL CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER, AASHTO M164 BOLTS. ALL HOLES IN THE DIAPHRAGMS SHALL BE 15/16" DIAMETER. ALL HOLES IN THE CONNECTOR PLATES SHALL BE 1" DIAMETER EXCEPT THE CONNECTOR PLATES AT THE SET OF INTERMEDIATE DIAPHRAGMS CLOSEST TO THE ABUTMENTS SHALL HAVE 1 1/8" DIAMETER HOLES.

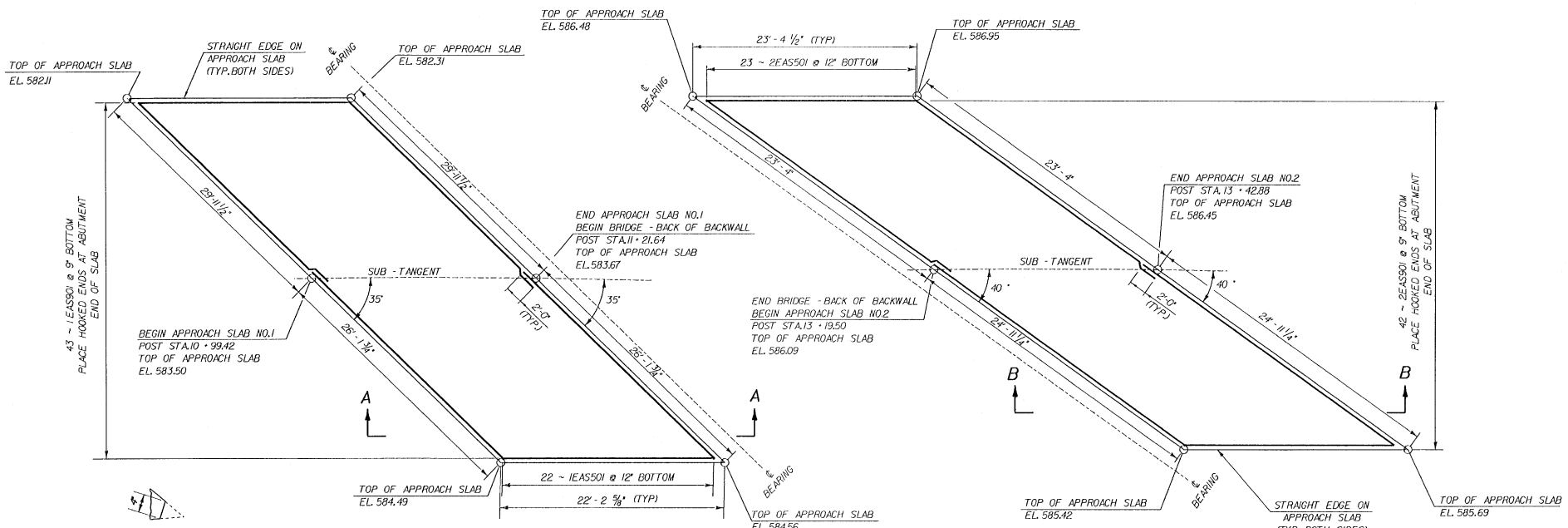


SECTION B - B

SCALE: 1" = 1' - 0"

STATE OF VERMONT
AGENCY OF TRANSPORTATION

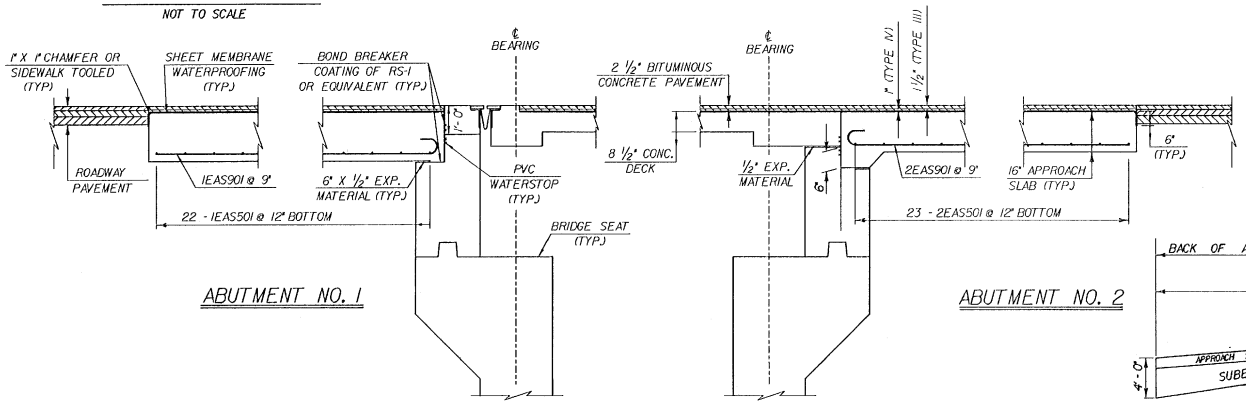
Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86 + 53
	Surv. Sta. 12 + 21
VT 100B OVER THE MAD RIVER	
DIAPHRAGM AND SPLICE DETAILS	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 3/92	Bridge Design Supervisor F.W. Balkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ - 1446(11)
I.C.C. Info. ZH2:L34,30,17&F17 4STL.DGN	78F174ST1.IPARM
Bridge Sheet No. BR109	Sheet 42 of 82



CHAMFER DETAIL
(TYP FOR ACUTE ANGLES)
NOT TO SCALE

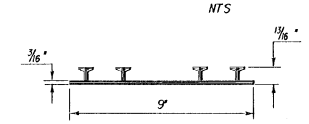
APPROACH SLAB NO. 1 PLAN
NTS

APPROACH SLAB NO. 2 PLAN
NTS



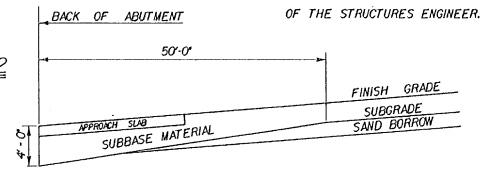
ABUTMENT NO. 1

ABUTMENT NO. 2



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.

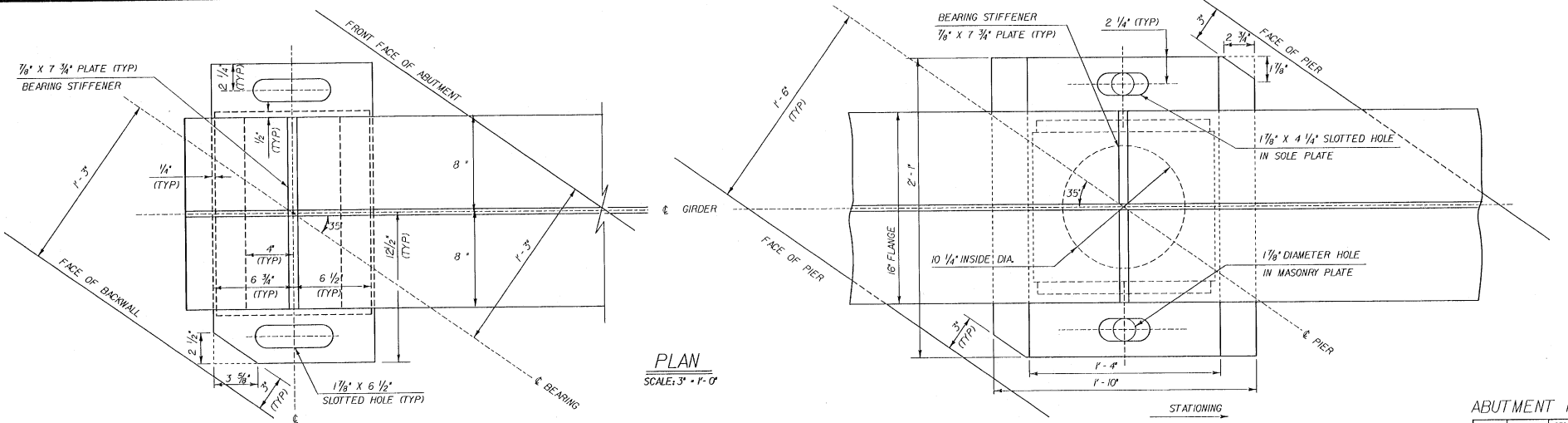


SECTION A - A
NTS

SECTION B - B
NTS

SUBBASE DETAIL AT ABUTMENTS
(ELEVATION IN CUT AND FILL)
NOT TO SCALE

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	MORETOWN	Bridge No.	4
		Log Sta.	86 + 53
Highway No.	VT100B	Surv. Sta.	12 + 21 +/-
VT100B OVER MAD RIVER			
APPROACH SLAB DETAILS			
Designed By	C.P. WILLIAMS	Drawn By	T.A. SUMNER
Checked By	C.P. WILLIAMS	Date	4/92
Bridge Design Supervisor	F.W. Bolkum	Date	5/92
PROJECT	MORETOWN	PROJECT NO.	BRZ - 1446 (1)
I.G.C. Info.	ZH2:(34,30)78F174AS.DGN		78F174AS.JPARM
Bridge Sheet No.	BR110	Sheet	43 of 82



PLAN
SCALE: 3" = 1'-0"

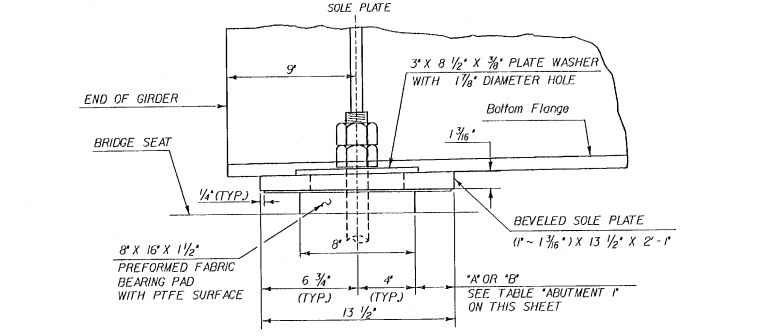
SIDE ELEVATION
SCALE: 3" = 1'-0"

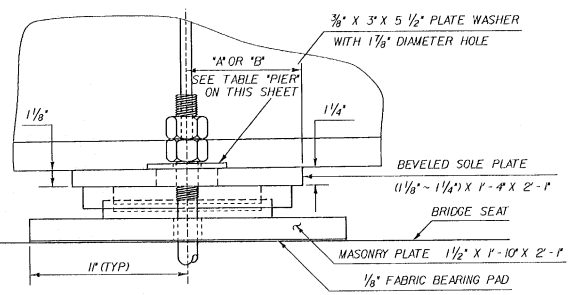
ABUTMENT NO.1

TEMP	"A" DIST	"B" DIST
0°F	3 13/16"	3 7/16"
15°F	3 3/8"	3 3/16"
30°F	3 3/8"	3"
45°F	3 1/8"	2 3/4"
60°F	2 7/8"	2 1/2"
75°F	2 11/16"	2 5/16"
90°F	2 1/16"	2 1/16"

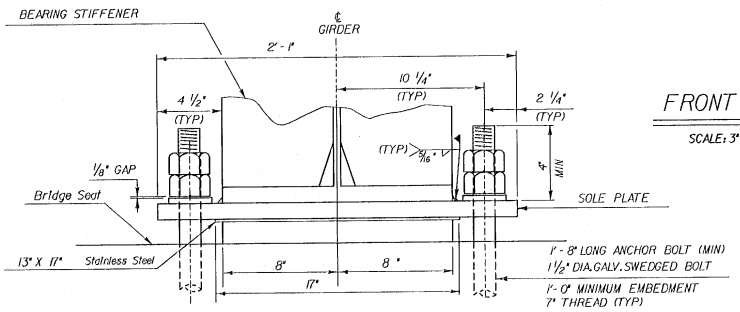
PIER

TEMP	"A" DIST	"B" DIST
0°F	8 7/16"	8 3/16"
15°F	8 3/8"	8 1/4"
30°F	8 1/4"	8 1/8"
45°F	8 1/8"	8"
60°F	8"	7 7/8"
75°F	7 7/8"	7 3/4"
90°F	7 13/16"	7 11/16"



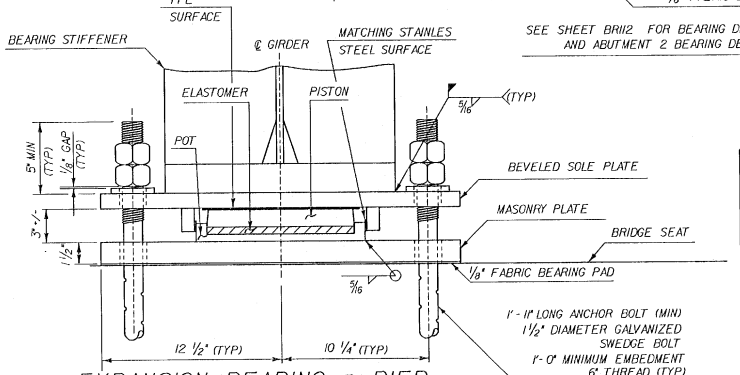


SEE SHEET BRII2 FOR BEARING DEVICE NOTES, AND ABUTMENT 2 BEARING DETAILS



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

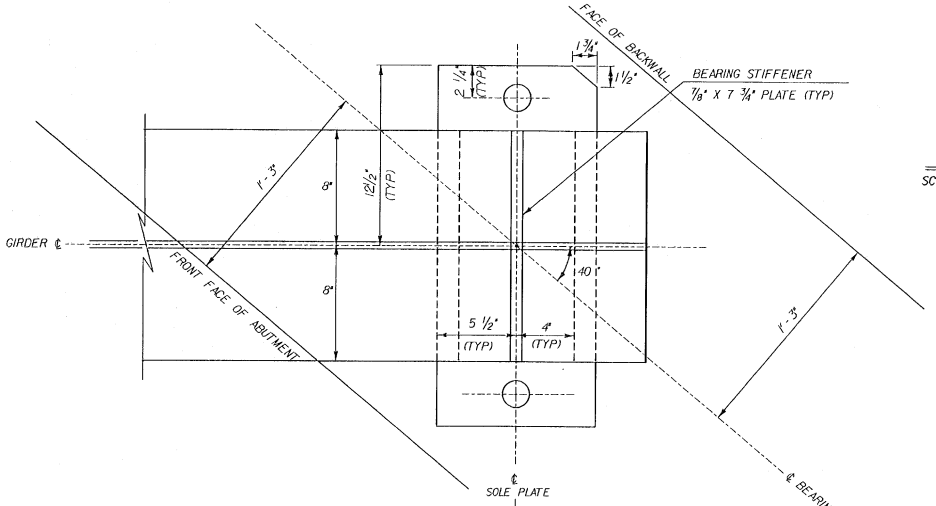
EXPANSION BEARING @ ABUT #1



EXPANSION BEARING @ PIER

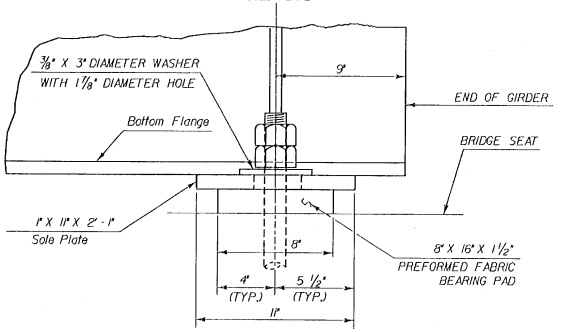
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86+53
	Surv. Sta. 12+21
VT 100B OVER THE MAD RIVER	
BEARING DETAILS	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 3/92	Bridge Design Supervisor F. W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ-1446(1)
I.G.C. Info. ZH2:[34,30]78FI74BGI.DGN	78FI74BGIPARM
Bridge Sheet No. BRIII	Sheet 44 of 82



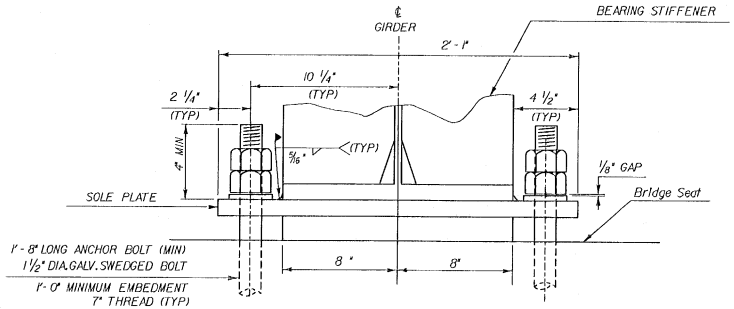
PLAN

SCALE: 3" = 1'-0"



SIDE ELEVATION

SCALE: 3" = 1'-0"



FRONT VIEW

SCALE: 3" = 1'-0"

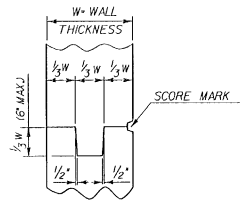
FIXED BEARING @ ABUT #2

BEARING NOTES

1. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY".
2. THE FIELD WELD CONNECTING THE BOTTOM FLANGE WITH THE BEARING DEVICE SHALL BE MADE WITH E7018 RODS. AREAS OF GALVANIZING DAMAGED BY WELDING SHALL BE PAINTED WITH A ZINC RICH PAINT, PER SUBSECTION 708.02(d), VT 1.05 .
3. 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.
4. BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMODATE AN ALTERNATE CONFIGURATION.
5. THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE GIRDERS. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK AND CURBS HAVE BEEN POURED. THE DIFFERENCE OF 3/8" AT ABUTMENT 2 AND 1/8" AT THE PIER IS THE ELONGATION DUE TO DEAD LOAD DEFLECTION OF SLAB, CURB AND PAVEMENT. THE FINAL "B" DISTANCE MUST BE REACHED WITHIN 1/8".
6. DESIGN CRITERIA:
   A. BASE PLATE TO CONCRETE DESIGN PRESSURE = 1000 PSI MAXIMUM.
   B. MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS.
   C. HORIZONTAL CAPACITY SHALL BE A MINIMUM 20 % OF VERTICAL LOAD.
   D. DESIGN LOAD PER BEARING = 280 KIPS @ PIER AND 120 KIPS @ ABUTMENTS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86 + 53
	Surv. Sta. 12 + 21
VT 100B OVER THE MAD RIVER	
ABUTMENT 2 BEARING DETAILS AND BEARING NOTES	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 3/92	Bridge Design Supervisor F.W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ - 1446(1)
I.G.C. Info. ZH2:[34.30]78F174BRG.DGN	78F174BG2)PARM
Bridge Sheet No. BR112	Sheet 45 of 82



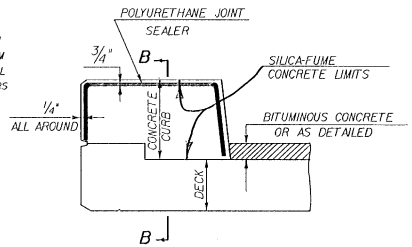
TYPICAL CONCRETE CONSTRUCTION JOINT

NTS

NOTES:

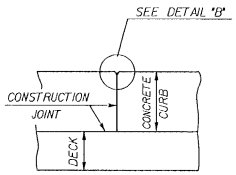
1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 20'-0" CENTER TO CENTER AND SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.

2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.



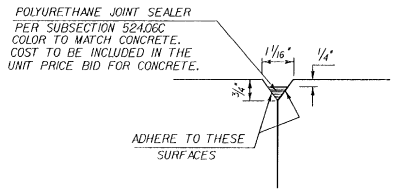
TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT

NTS



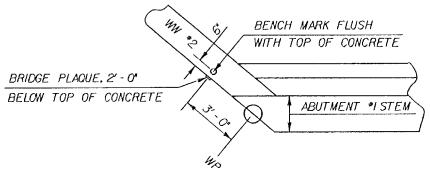
SECTION B - B

NTS



DETAIL "B"

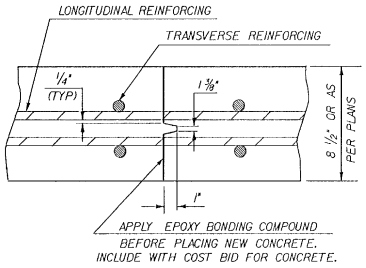
NTS



BENCH MARK AND BRIDGE PLAQUE LOCATION DETAIL

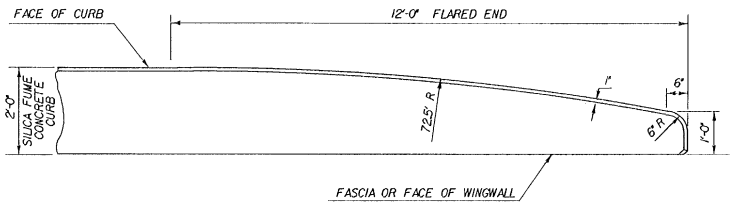
NTS

THE BENCH MARK AND BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR AS SHOWN OR AS DIRECTED BY THE RESIDENT ENGINEER.



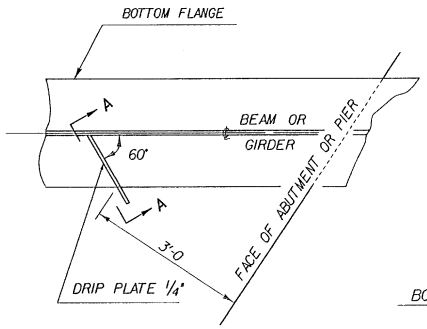
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS

NTS

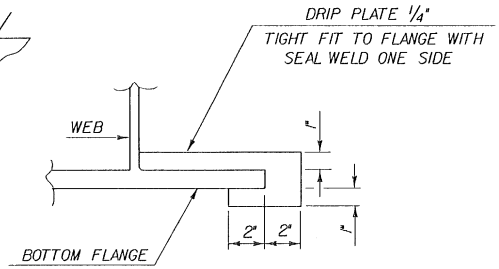


FLARED END DETAIL FOR 2'-0" CURB

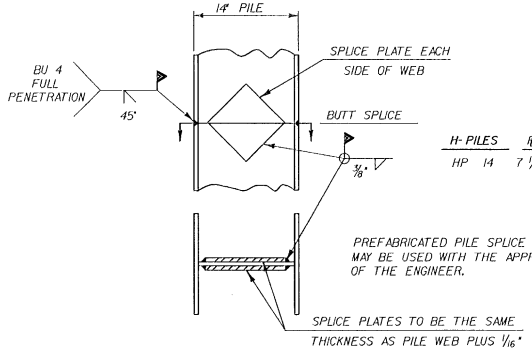
NTS



PLAN DRIP PLATE



SECTION A - A



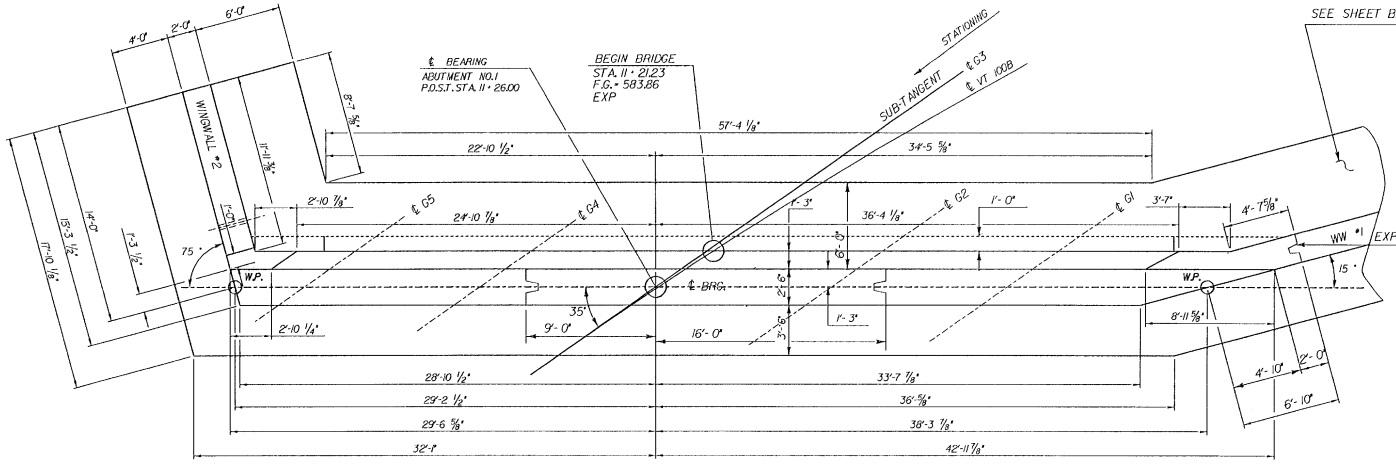
DETAIL OF PILE SPLICE

NTS

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.

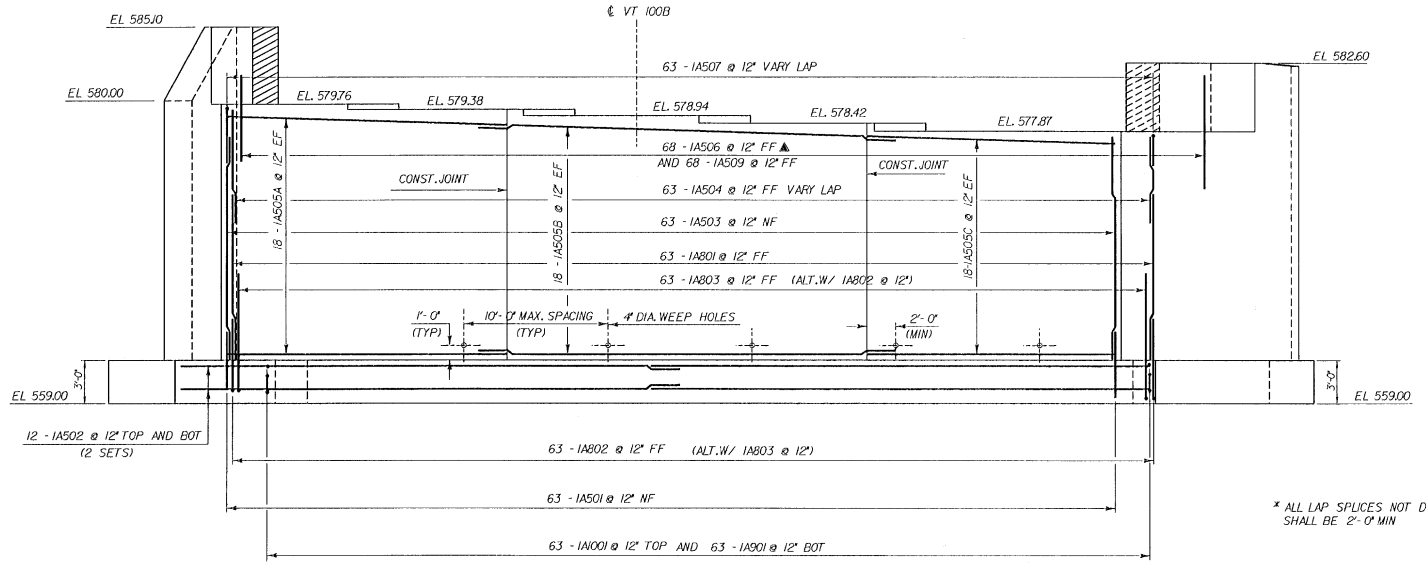
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86 + 53
	Surv. Sta. 12 + 21
VT 100B OVER THE MAD RIVER	
MISCELLANEOUS DETAILS	
Designed By C.P.WILLIAMS	Drawn By T.A.SUMNER
Checked By C.P.WILLIAMS Date 3/92	Bridge Design Supervisor Date
PROJECT MORETOWN	PROJECT NO. BRZ - 1446(1)
I.G.C. Info. ZH2:134,30 T8F174BRG.DGN	78F174MDIJPARM
Bridge Sheet No. BR113	Sheet 46 of 82



ABUTMENT NO.1 PLAN

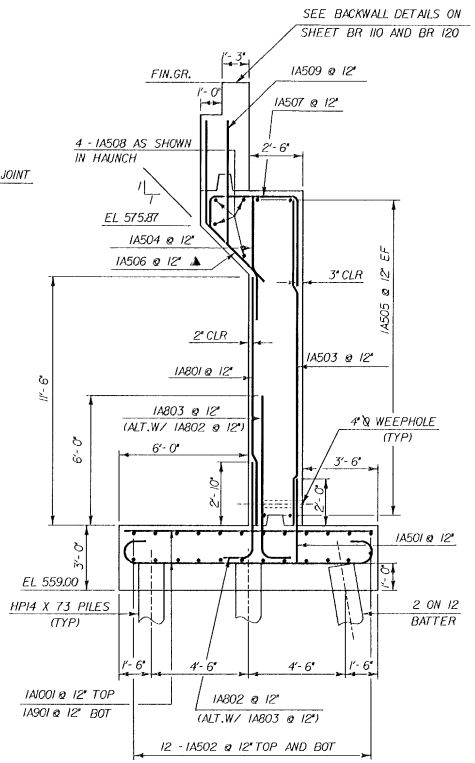
SCALE: 1/4" = 1'-0"



ABUTMENT NO.1 ELEVATION

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

* ALL LAP SPLICES NOT DETAILED SHALL BE 2'-0" MIN

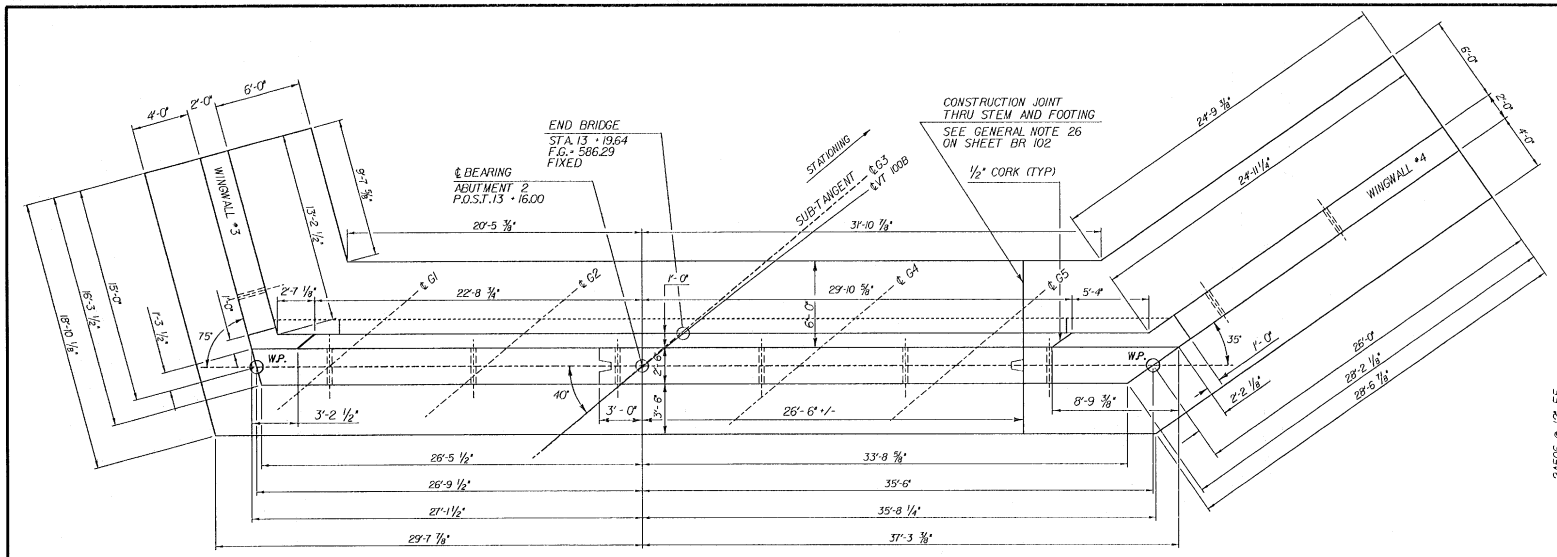


ABUTMENT No. 1 TYPICAL

SCALE 3/8" = 1'-0

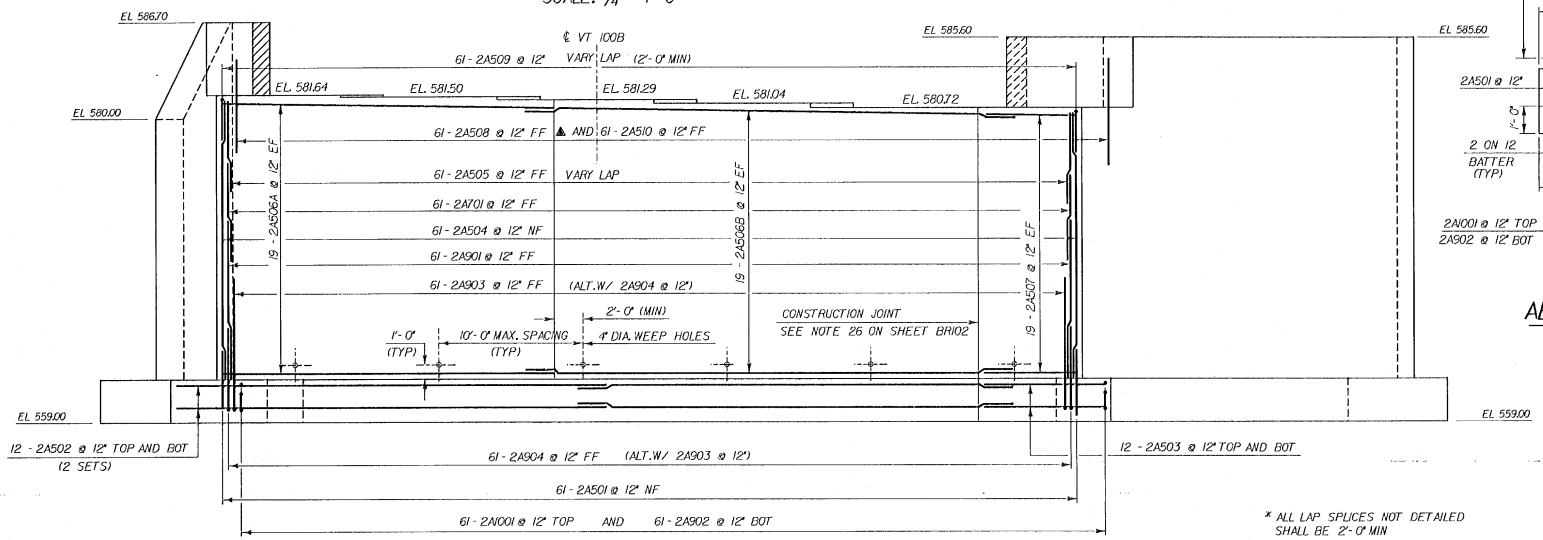
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
	Log Sta. 86 + 53
Highway No. VT 100B	Surv. Sta. 12 + 21 +/-
VT 100B OVER MAD RIVER	
ABUTMENT #1 DETAILS	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 4/92	Bridge Design Supervisor Date
PROJECT MORETOWN	PROJECT NO. BRZ-1446 (1)
I.G.C. Info. ZH2E34.30.T8F174ABT.DGN	78F174ABUPARM
Bridge Sheet No. BR114	Sheet 47 of 82



ABUTMENT NO.2 PLAN

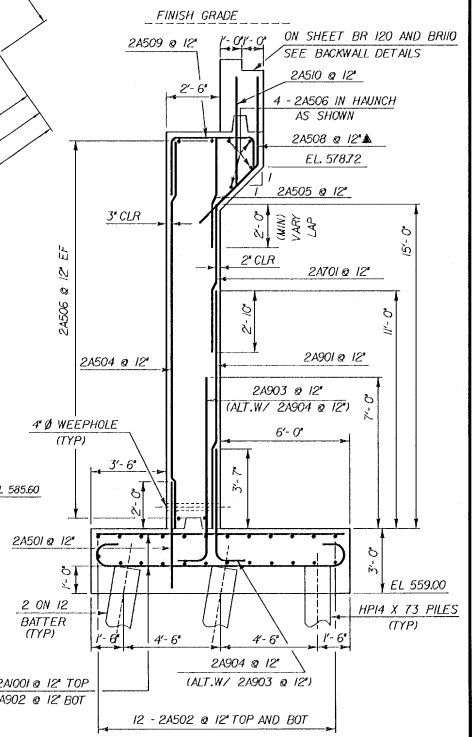
SCALE: 1/4" = 1'-0"



ABUTMENT NO.2 ELEVATION

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

* ALL LAP SPLICES NOT DETAILED SHALL BE 2'-0" MIN

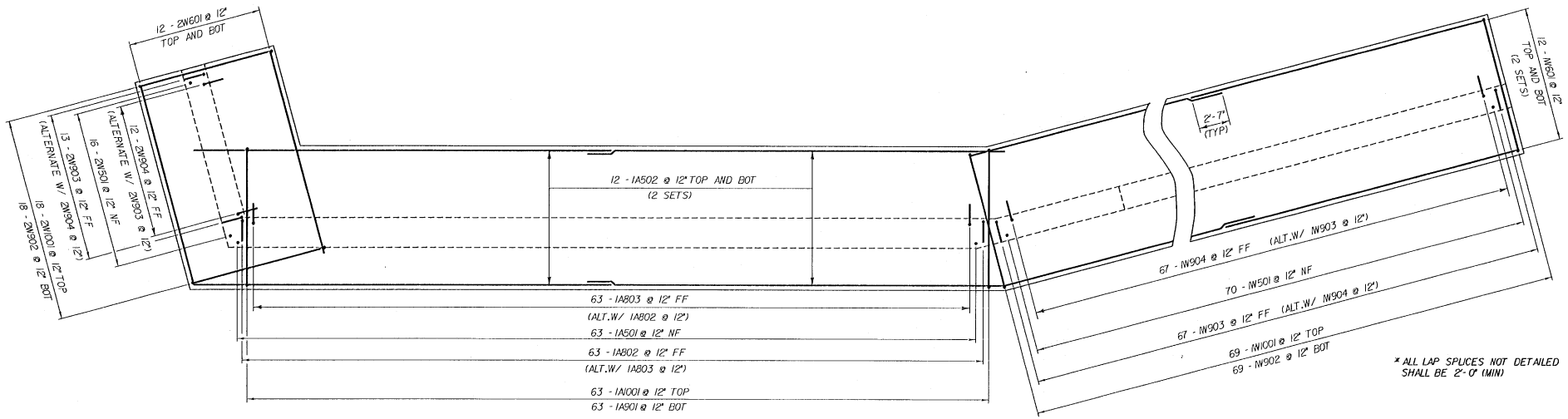


ABUTMENT No. 2 TYPICAL

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

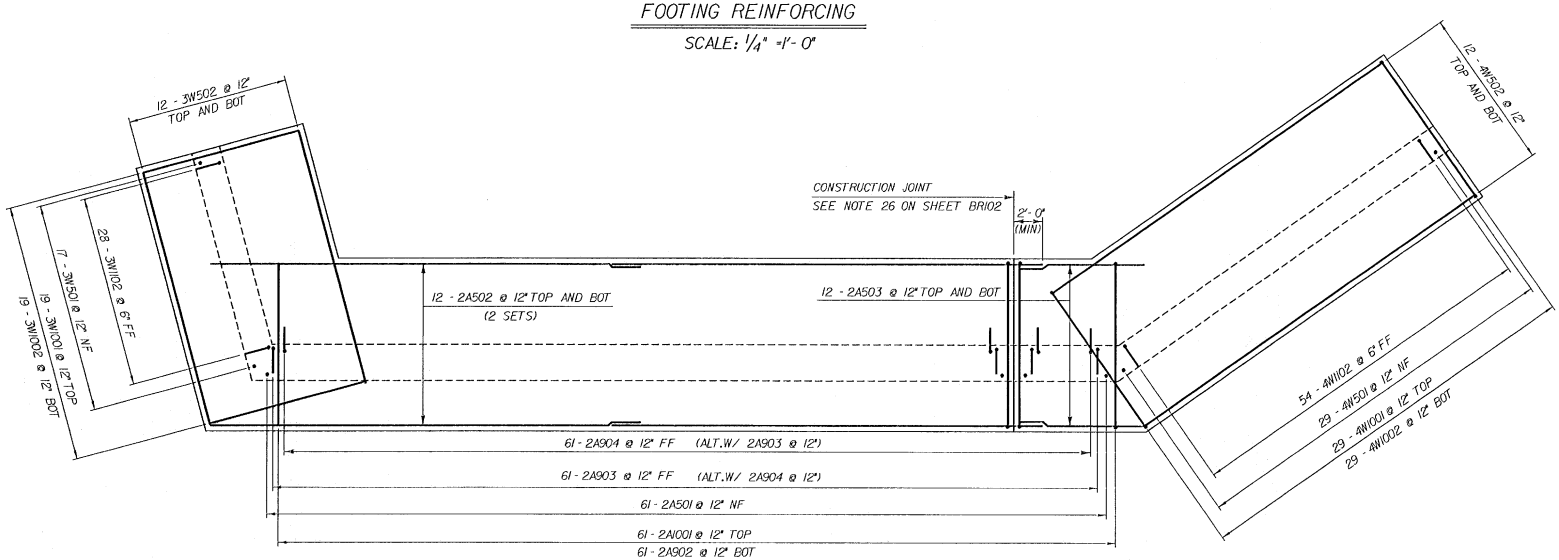
Town Of MORETOWN	Bridge No. 4
	Log Sta. 86 + 53
Highway No. VT 100B	Surv. Sta. 12 + 21 +/-
VT 100B OVER MAD RIVER	
ABUTMENT #2 DETAILS	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 4/92	Bridge Design Supervisor F.W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ-1446 (1)
I.G.C. Info. ZH2(34303)78F174ABT.DGN	78F174AB2JPARM
Bridge Sheet No. BR115	Sheet 48 of 82



* ALL LAP SPLICES NOT DETAILED SHALL BE 2'-0" (MIN)

ABUTMENT NO.1
FOOTING REINFORCING

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

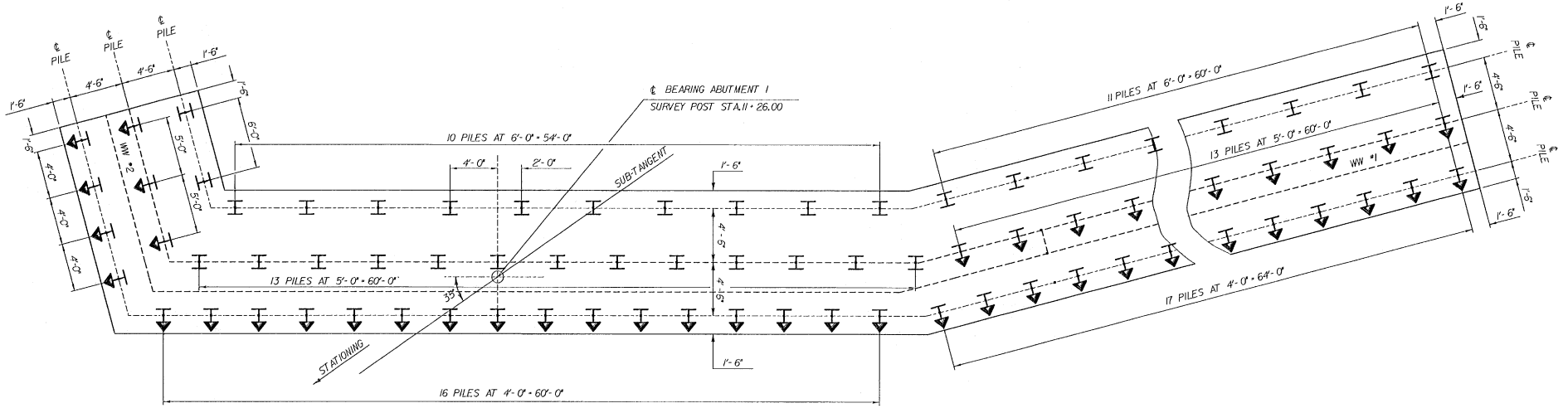


ABUTMENT NO.2
FOOTING REINFORCING

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

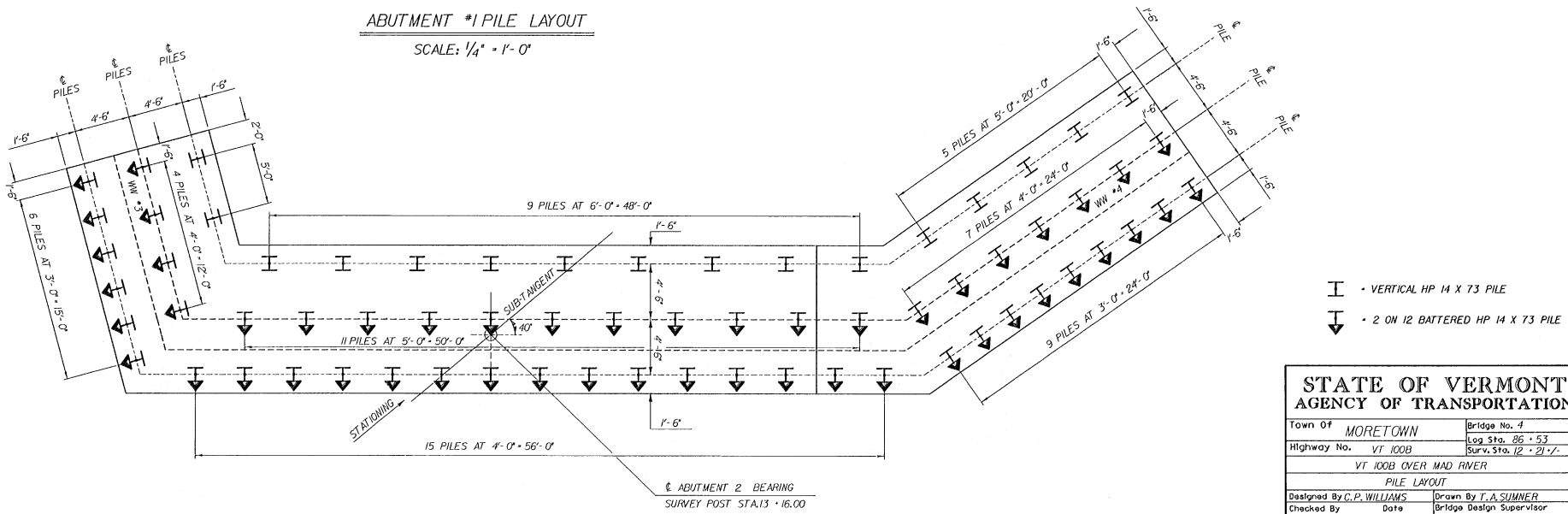
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86 + 53
	Surv. Sta. 12 + 21 +/-
VT 100B OVER MAD RIVER	
FOOTING REINFORCING STEEL	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 4/92	Bridge Design Supervisor F.W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ-1446 (1)
I.G.C. Info. ZH2L34.30JT8F1T4ABT.DGN	T8F1T4FRSJPARM
Bridge Sheet No. BRI16	Sheet 49 of 92



ABUTMENT #1 PILE LAYOUT

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



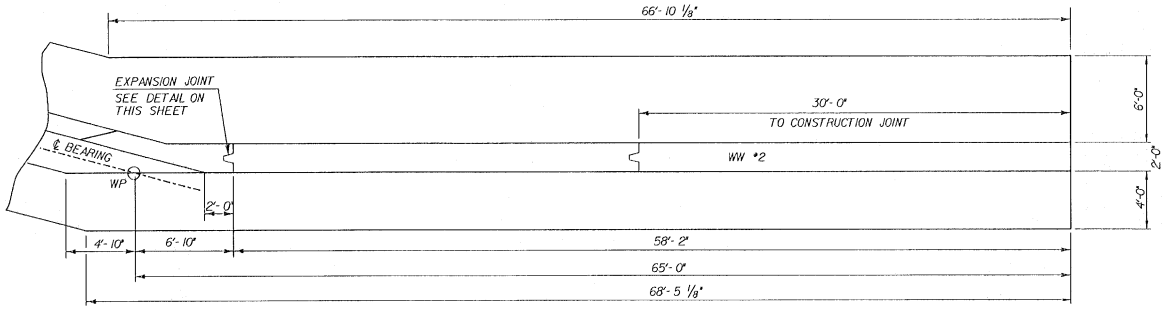
ABUTMENT #2 PILE LAYOUT

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

- VERTICAL HP 14 X 73 PILE
- 2 ON 12 BATTERED HP 14 X 73 PILE

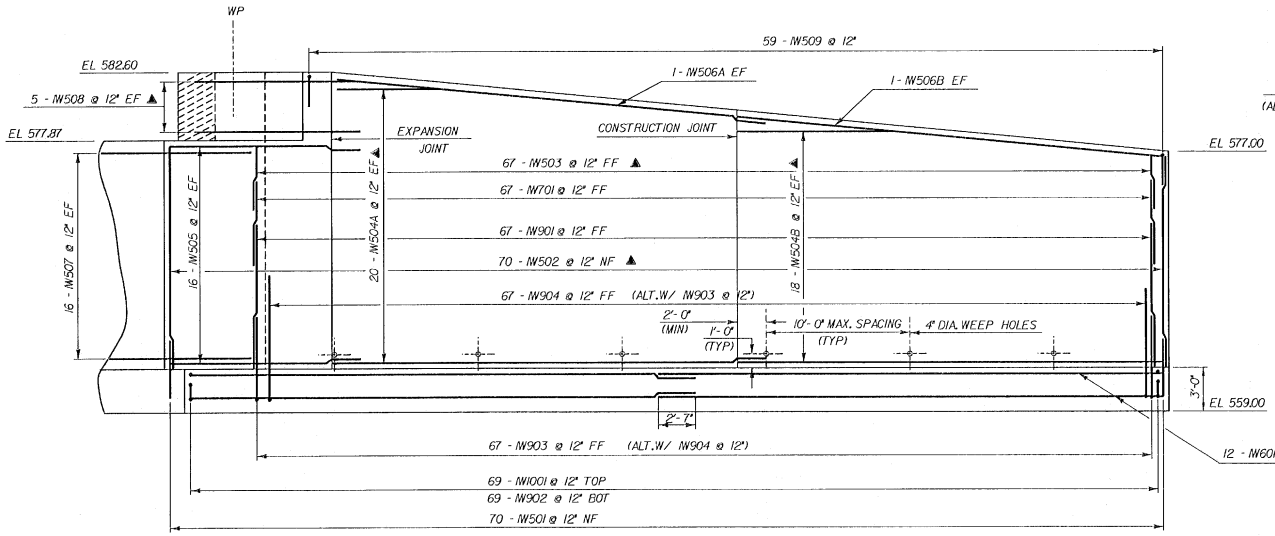
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
	Log Sta. 86 + 53
Highway No. VT 100B	Surv. Sta. 12 + 21 +/-
VT 100B OVER MAD RIVER	
PILE LAYOUT	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 4/92	Bridge Design Supervisor F.W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ-1446 (1)
I.G.C. Info. ZH2&34,30,T8F17-4ABT.DGN	78F17-4HP.JPARM
Bridge Sheet No. BR117	Sheet 50 of 82



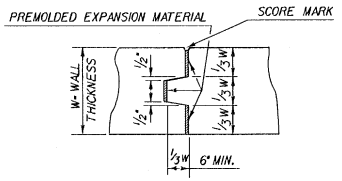
WINGWALL #1 PLAN

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

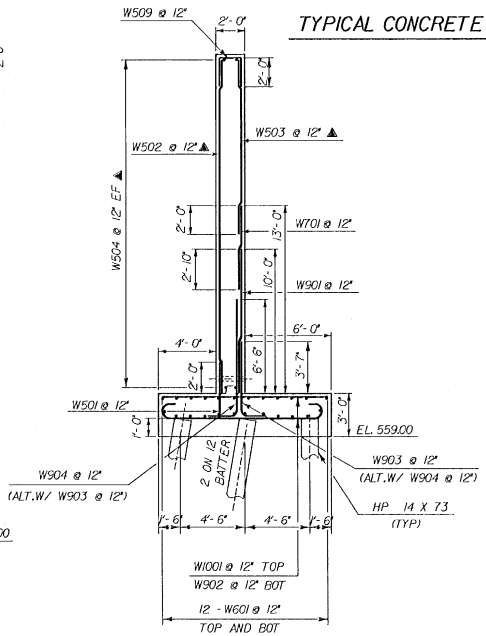


WINGWALL #1 ELEVATION

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



TYPICAL CONCRETE EXPANSION JOINT



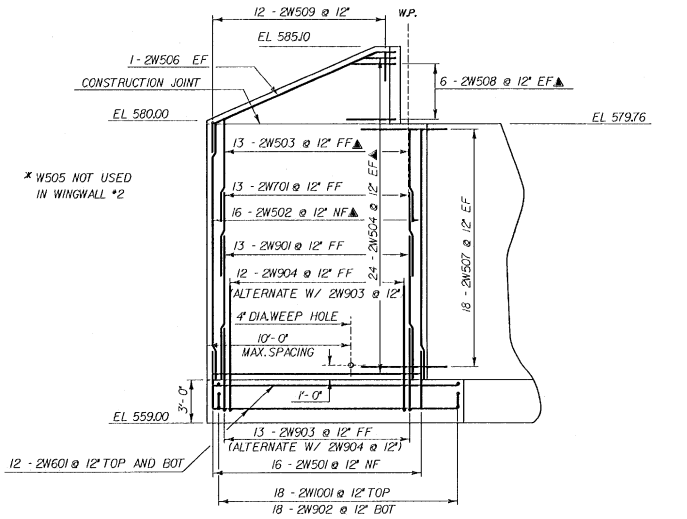
WINGWALL #1 AND #2
TYPICAL

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

* ALL LAP SPLICES NOT DETAILED
SHALL BE 2'- 0" MIN

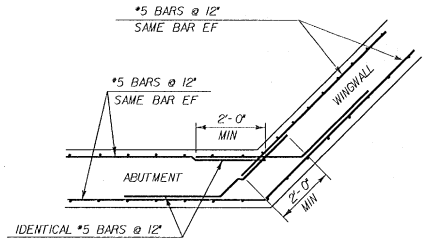
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
	Log Sta. 86 + 53
Highway No. VT 100B	Surv. Sta. 12 + 21 +/-
VT 100B OVER MAD RIVER	
WINGWALL #1 DETAILS	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 4/92	Bridge Design Supervisor F.W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ-1446 (1)
I.G.C. Info. ZH2L34.30J78F174ABT.DGN	78F174NW1JPARM
Bridge Sheet No. BR118	Sheet 51 of 82



WING WALL NO. 2 ELEVATION

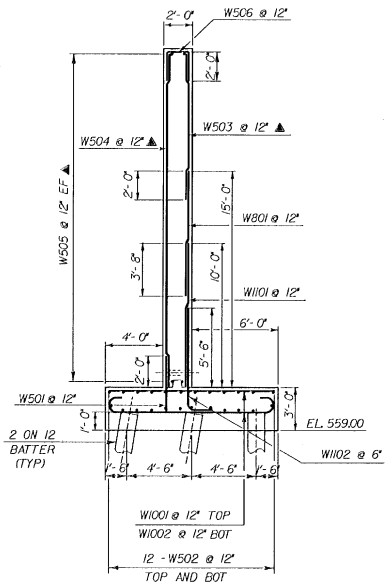
SCALE: 1/4" = 1'-0"



TYPICAL CORNER DETAIL BELOW BRIDGE SEAT

NOT TO SCALE

NOTE:
ALL HORIZONTAL STEEL IN WINGWALL *1 WILL NOT PASS THROUGH THE EXPANSION JOINT.

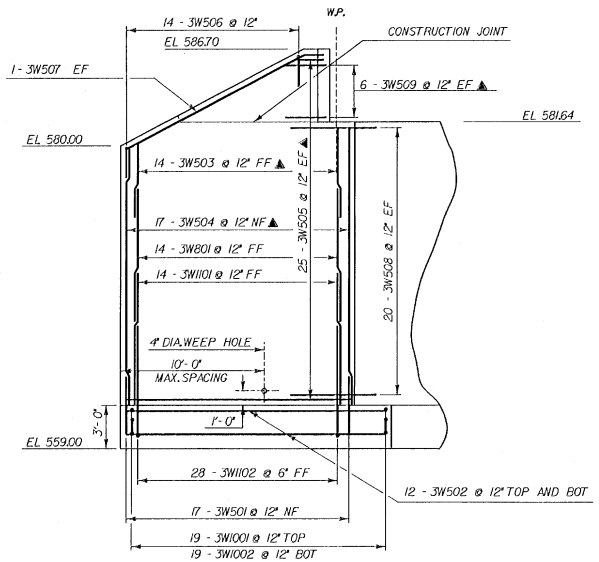


WINGWALL *3 AND *4 TYPICAL

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

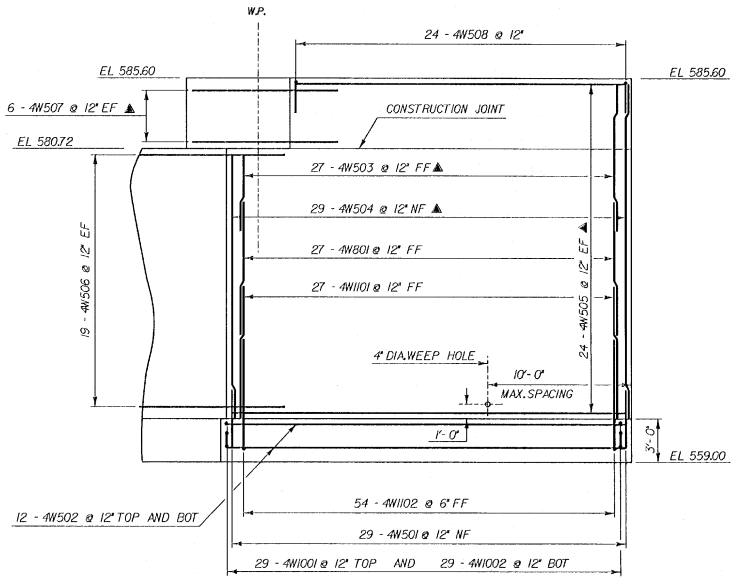
SEE SHEET BRII8 FOR WINGWALL TYPICAL

ALL LAP SPLICES NOT DETAILED SHALL BE 2'-0" MIN.



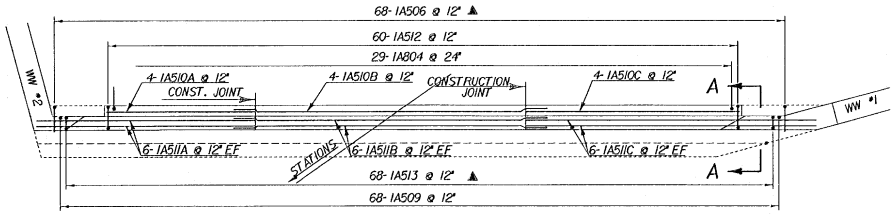
WING WALL NO. 3 ELEVATION

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



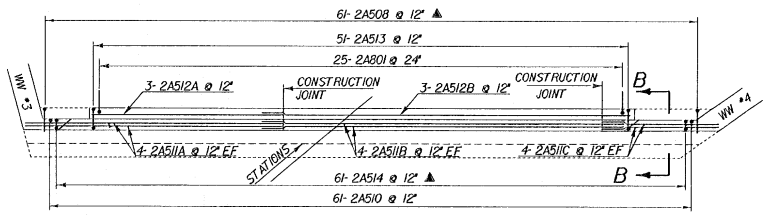
WING WALL NO. 4 ELEVATION

STATE OF VERMONT AGENCY OF TRANSPORTATION	
Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86 + 53 Surv. Sta. 12 + 21 +/-
VT 100B OVER MAD RIVER	
WINGWALL *2,*3 AND *4 DETAILS	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 4/92	Bridge Design Supervisor F.W. Balkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ-1446 (1)
I.G.C. Info. 2H2E3A30T78F17A4BTDGN	78F17-ANWJPARM
Bridge Sheet No. BRII9	Sheet 52 of 82



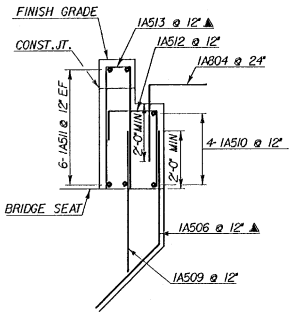
ABUTMENT 1 BACKWALL PLAN

3/16" = 1'-0



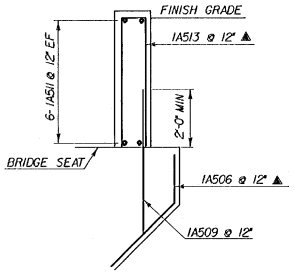
ABUTMENT 2 BACKWALL PLAN

3/16" = 1'-0



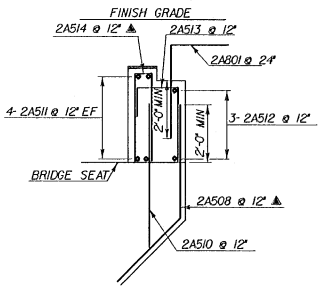
SECTION @ CENTERLINE ABUTMENT 1

1/2" = 1'-0



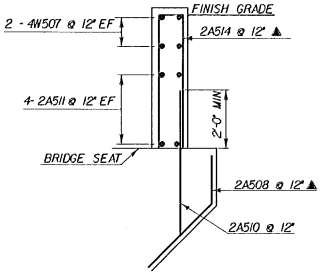
SECTION A-A

1/2" = 1'-0



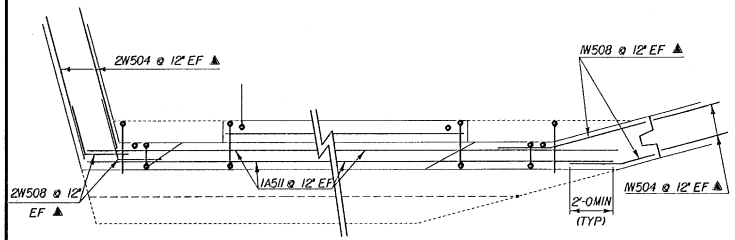
SECTION @ CENTERLINE ABUTMENT 2

1/2" = 1'-0



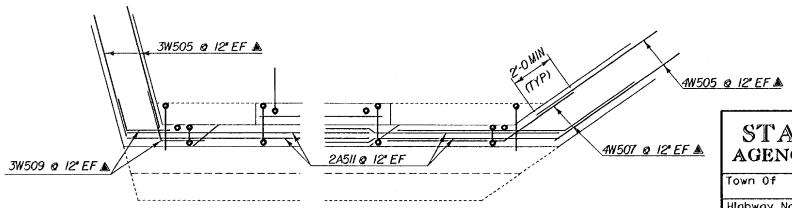
SECTION B-B

1/2" = 1'-0



ABUTMENT 1 CORNER DETAILS

3/8" = 1'-0



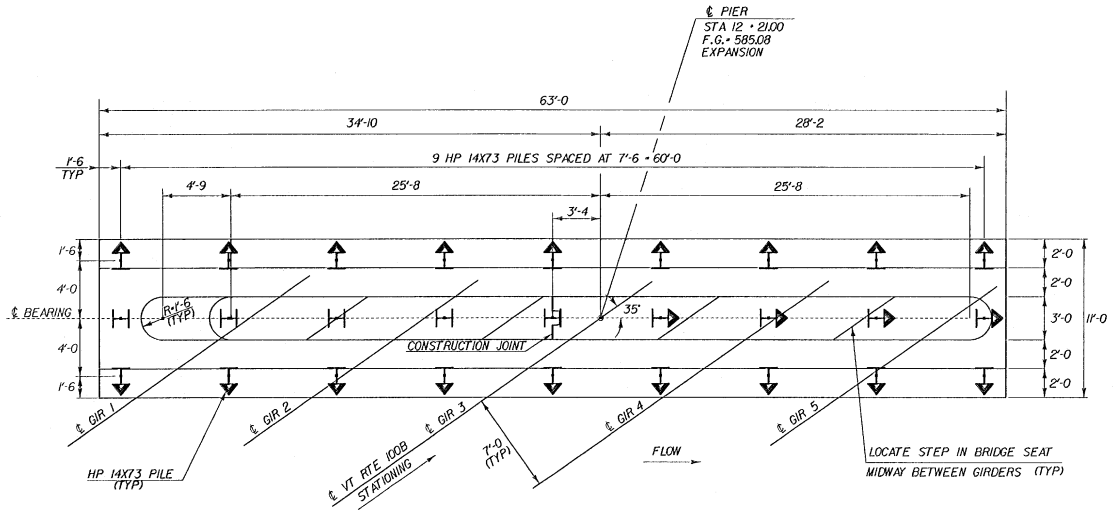
ABUTMENT 2 CORNER DETAILS

3/8" = 1'-0

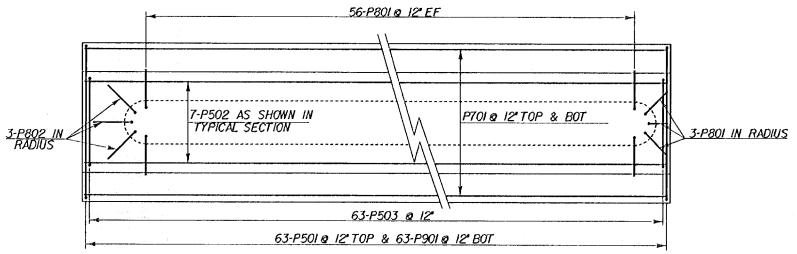
PLOTTED 14-MAY-1992 11:04
TS88840

STATE OF VERMONT
AGENCY OF TRANSPORTATION

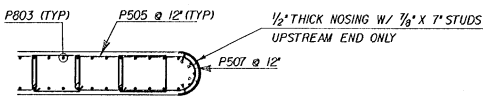
Town Of	MORETOWN	Bridge No.	4
		Log Sta.	86 + 53
Highway No.	VT RTE 100 B	Surv. Sta.	12 + 21
VT RTE 100B OVER MAD RIVER			
BACKWALL DETAILS			
Designed By	C.P.WILLIAMS	Drawn By	C.P.WILLIAMS
Checked By	T.A.SUMNER	Date	5/92
Bridge Design Supervisor	F.W. Bolkum	Date	5/92
PROJECT	MORETOWN	PROJECT NO.	BRZ 1446 (1)
I.G.C. Info.	ZH2.(034,030)T8F1T4BKW.DG		T8F1T4BKW.JPARM
Bridge Sheet No.	BR120	Sheet	53 of 82



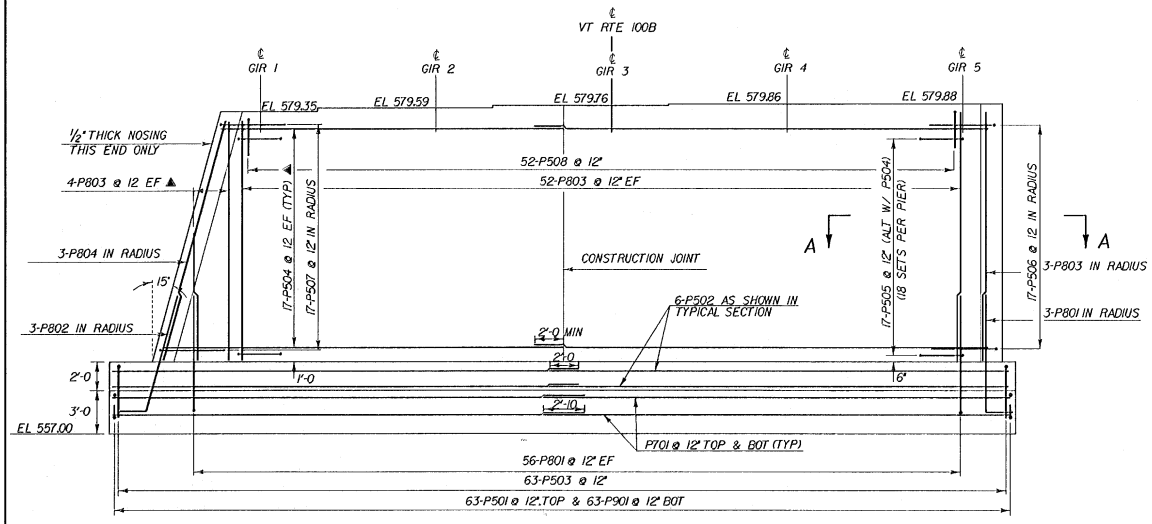
PLAN & PILE LAYOUT
1/4" = 1'-0



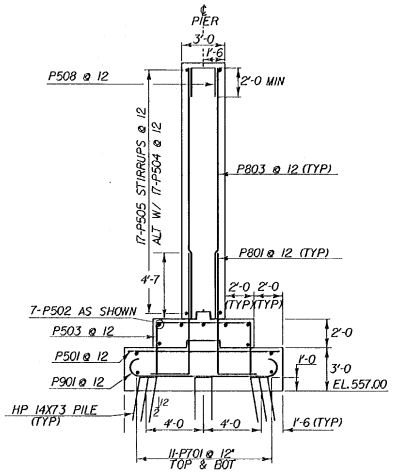
FOOTING REINFORCING PLAN
1/4" = 1'-0



SECTION A-A
1/4" = 1'-0



ELEVATION
1/4" = 1'-0



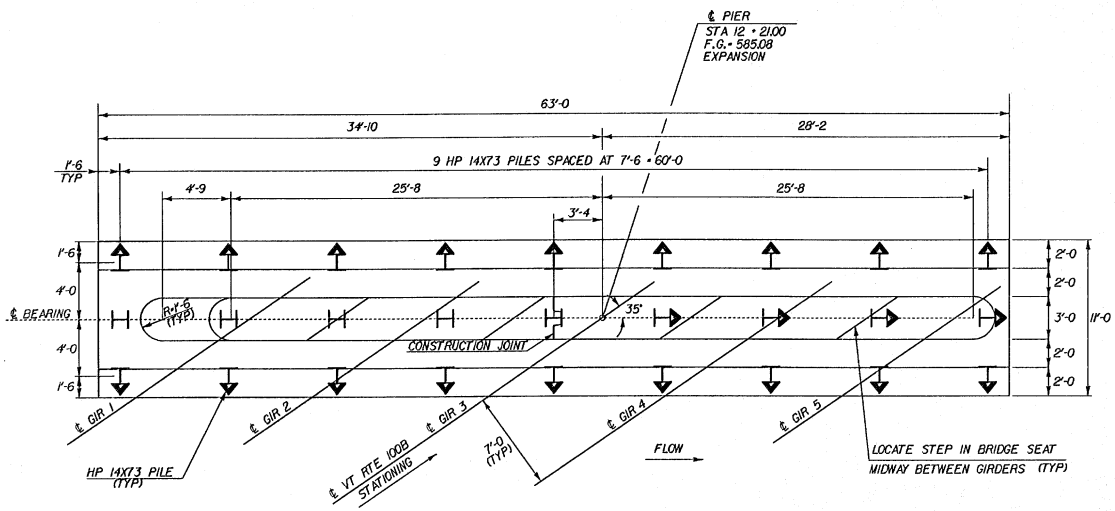
TYPICAL SECTION
1/4" = 1'-0

NOTES

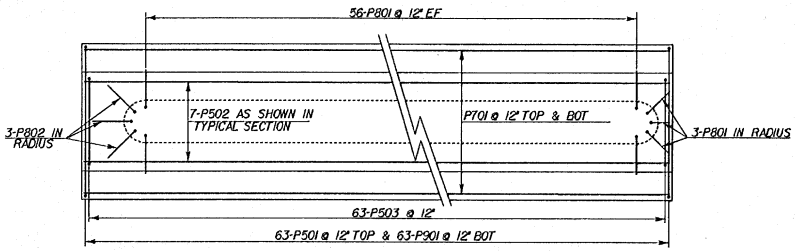
1. 3" CLEAR COVER IN FOOTING
2. 4" CLEAR COVER OVER STIRRUPS IN STEM
3. ⇧ DENOTES BATTERED PILE (2 ON 12)

PLOTTED 14-MAY-1992 11:09
TS88840

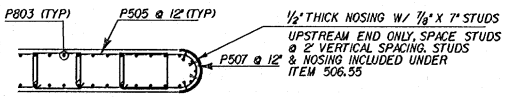
STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	MORETOWN	Bridge No.	4
		Log Sta.	86+53
Highway No.	VT RTE 100B	Surv. Sta.	12 + 21
VT RTE 100B OVER MAD RIVER			
PIER DETAILS			
Designed By	M.M.GARCIA	Drawn By	C.P.WILLIAMS
Checked By	M.M.GARCIA	Date	4-92
Bridge Design Supervisor	F. W. Bolkum	Date	5/92
PROJECT	MORETOWN	PROJECT NO.	BRZ 1446(1)
I.G.C. Info.	ZH2.(034030)78F174PER.DGN		78F174PER.IPARM
Bridge Sheet No.	BR121	Sheet	54 of 82



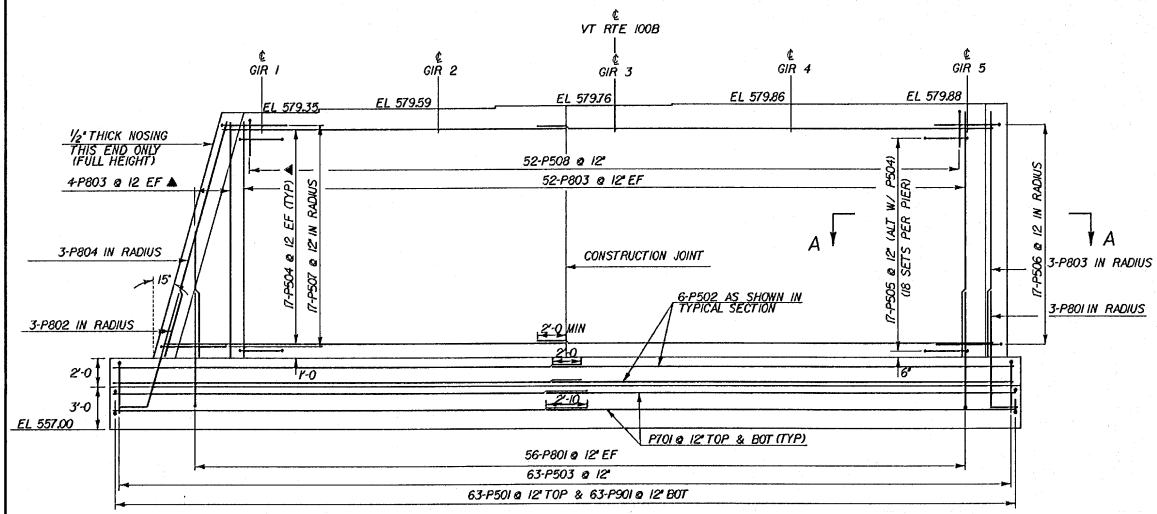
PLAN & PILE LAYOUT
1/4" =1'-0



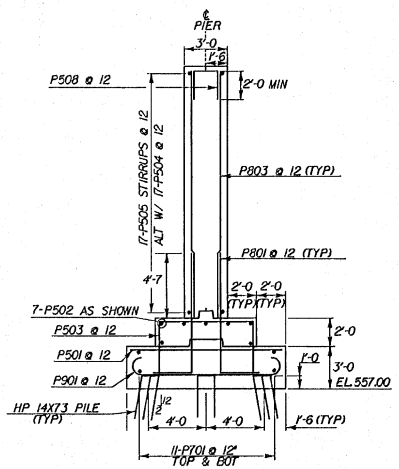
FOOTING REINFORCING PLAN
1/4" =1'-0



SECTION A-A
1/4" =1'-0



ELEVATION
1/4" =1'-0



TYPICAL SECTION
1/4" =1'-0

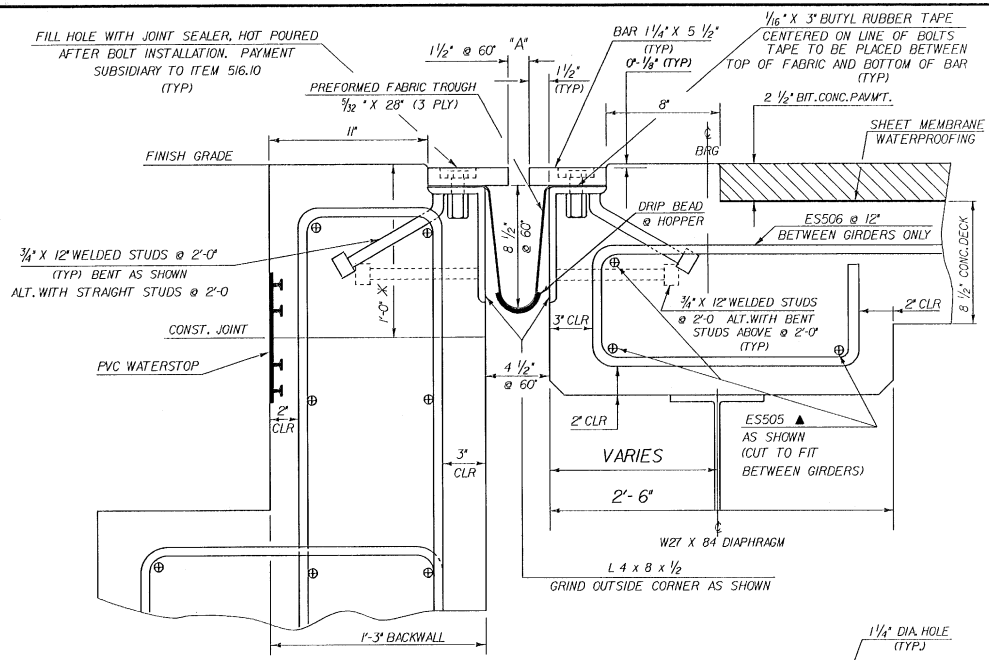
NOTES

1. 3" CLEAR COVER IN FOOTING
2. 4" CLEAR COVER OVER STIRRUPS IN STEM
3. ▲ DENOTES BATTERED PILE (2 ON 12)

REVISED 12/9/92
PLOTTED 09-DEC-1992 14:45
str4

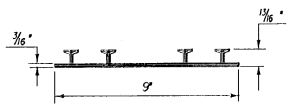
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT RTE 100B	Log Sta. 86+53
	Surv. Sta. 12 + 21
VT RTE 100B OVER MAD RIVER	
PIER DETAILS	
Designed By M.M.GARCIA	Drawn By C.P.WILLIAMS
Checked By M.M.GARCIA Date 4-92	Bridge Design Supervisor Date
PROJECT MORETOWN	PROJECT NO. BRZ 1446(1)S
I.G.C. Info. /usr/z12/034030dir/78f1f	78F1F4PERUPARM
Bridge Sheet No. BR121	Sheet 54 of 82



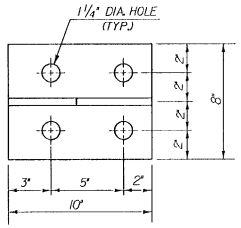
TYPICAL SECTION BETWEEN GIRDERS (NORMAL)

SCALE: 3" = 1'-0



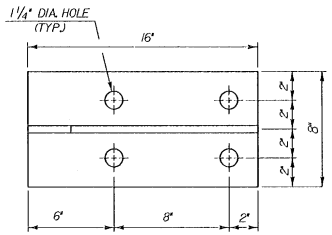
P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS

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.



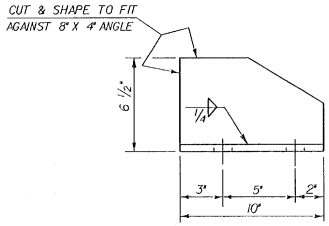
BRACKET PLAN IN BACKWALL

SCALE: 3" = 1'-0



BRACKET PLAN ON GIRDER

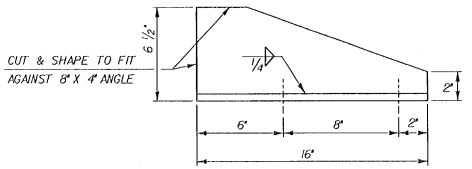
SCALE: 3" = 1'-0



BRACKET ELEVATION IN BACKWALL

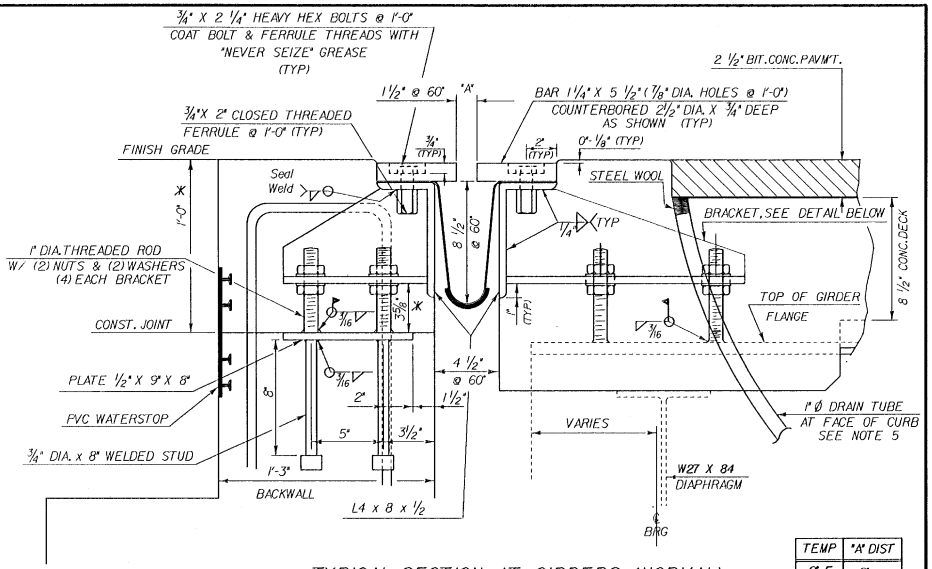
SCALE: 3" = 1'-0

ALL PLATES ½"



BRACKET ELEVATION ON GIRDER

SCALE: 3" = 1'-0



TYPICAL SECTION AT GIRDERS (NORMAL)

SCALE: 3" = 1'-0

* THESE DIMENSIONS ARE THEORETICAL AND MAY CHANGE DEPENDING UPON THE OUTCOME OF THE BEAM PROFILES

TEMP	"A" DIST
0° F	2"
15° F	1 7/8"
30° F	1 ¾"
45° F	1 5/8"
60° F	1 ½"
75° F	1 3/8"
90° F	1 ¼"
105° F	1 ⅛"

NOTES

1. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK CONCRETE.
2. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36 GALVANIZED OR METALIZED AS PER SUBSECTION 506J5 (b) OR (c).
3. THE 1¼" X 5 ½" BARS SHALL BE FURNISHED IN 2 PIECES MINIMUM, EACH SIDE OF JOINT.
4. DETAILS ON THIS SHEET ARE FOR ITEM 516J0 "BRIDGE EXPANSION JOINTS".
5. A 1" DIAMETER PLASTIC DRAIN TUBE 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 6" BELOW THE BOTTOM OF THE ADJACENT GIRDER. THE DRAIN TUBES SHALL BE FASTENED TO THE GIRDERS USING A METHOD APPROVED BY THE ENGINEER.
6. A DRIP BEAD OF PREFORMED FABRIC MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	MORETOWN	Bridge No.	4
Highway No.	VT 100B	Log Sta.	86+53
		Surv. Sta.	12+21 +/-

VT 100B OVER MAD RIVER

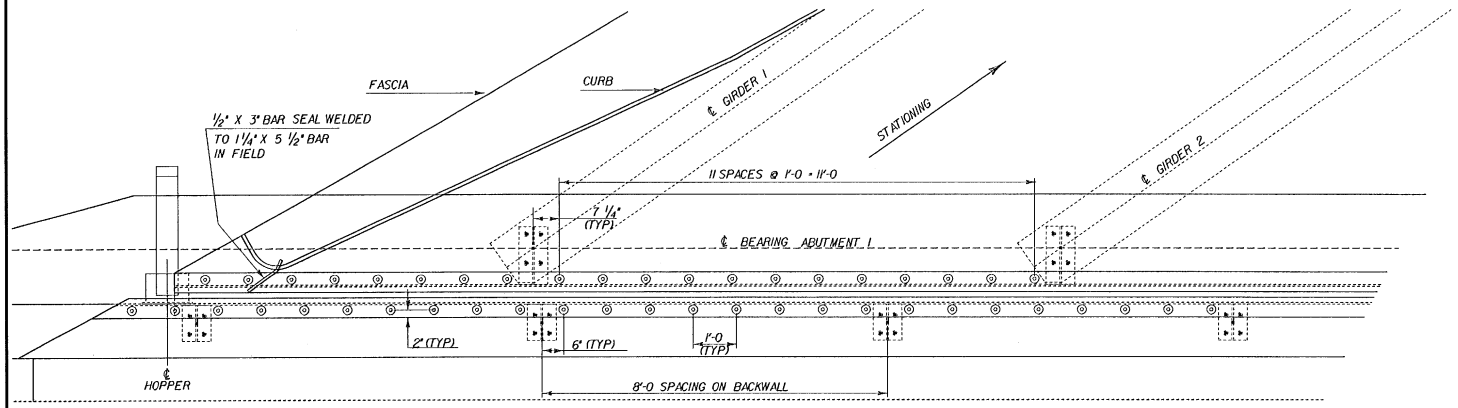
EXPANSION JOINT DETAILS

Designed By	C.P. WILLIAMS	Drawn By	T.A. SUMNER
Checked By	C.P. WILLIAMS	Date	4/92
Bridge Design Supervisor	F.W. Bolkum	Date	5/92

PROJECT MORETOWN — PROJECT NO. BRZ - 1446 (1)

I.C.C. Info. ZH2E34,30J10F17.4EXPJ.DGN 78F17.4EXPJPARM

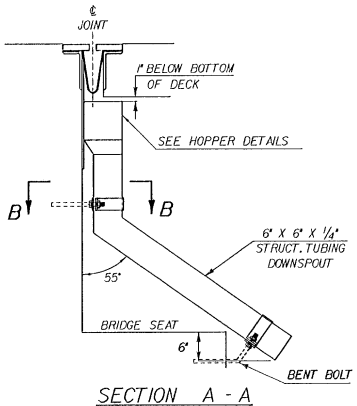
Bridge Sheet No. BR122 — Sheet 33 of 82



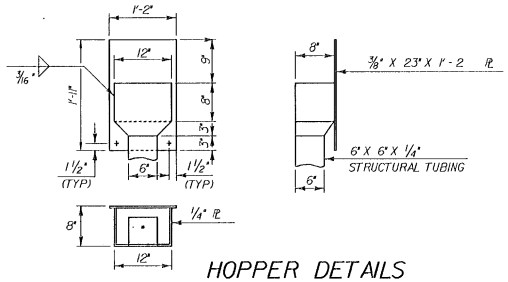
PARTIAL PLAN VIEW
3/4" = 1'-0

NOTES

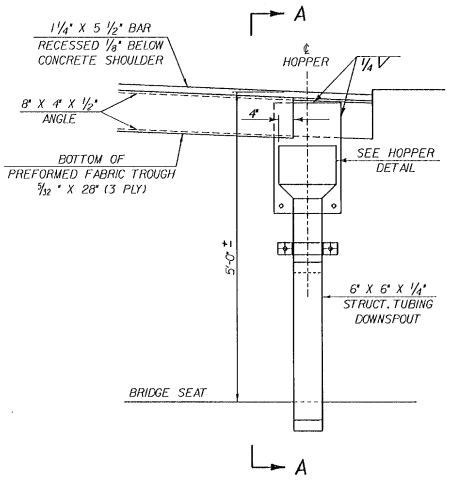
1. THE HIGH END OF THE FABRIC TROUGH SHALL BE CLOSED BY FOLDING.
2. A HOPPER WILL ONLY BE REQUIRED AT THE WINGWALL 1 CORNER.
3. ALL HOPPER AND DOWNSPOUT COMPONENTS AND HARDWARE SHALL BE GALVANIZED PER VT. SPEC. 506.15 (B). STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500 B AND ALL OTHER COMPONENTS SHALL CONFORM TO AASHTO M 270 GRADE 36.
4. THE HOPPER AND DOWNSPOUT ASSEMBLY SHALL NOT BE INSTALLED UNTIL AFTER THE BRIDGE EXPANSION JOINT IS IN PLACE.
5. THE HOPPER AND DOWNSPOUT SHALL BE PAID FOR UNDER ITEM 506.55 "STRUCTURAL STEEL - PLATE GIRDER".



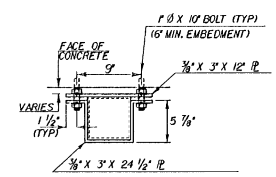
SECTION A - A
SCALE: 1" = 1'-0"



HOPPER DETAILS
1"=1'-0



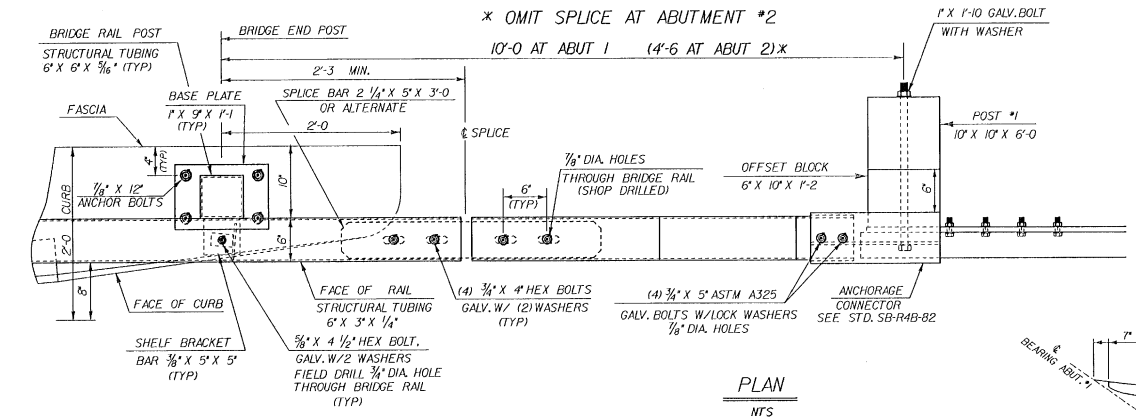
SECTION AT CENTERLINE OF JOINT
SCALE: 1" = 1'-0"



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

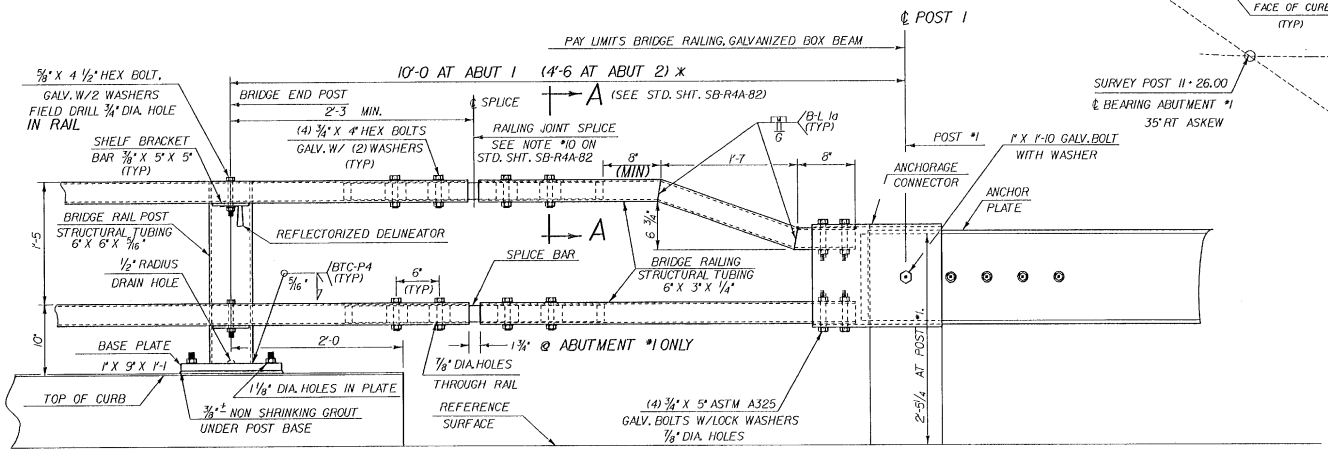
PLOTTED 14-MAY-1992 11:05
TS88840

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	MORETOWN	Bridge No.	4
		Log Sta.	86 + 53
Highway No.	VT. RTE 100B	Surv. Sta.	12 + 21
VT RTE 100B OVER MAD RIVER			
EXPANSION JOINT PLAN			
Designed By	C.P. WILLIAMS	Drawn By	C.P. WILLIAMS
Checked By	M.M. GARCIA	Date	4/92
Bridge Design Supervisor	F.W. Bolkum	Date	5/92
PROJECT	MORETOWN	PROJECT NO.	BRZ 1446(1)
I.G.C. Info.	ZH2:(034030)78F174EXP.DGN		78F174EX2.IPARM
Bridge Sheet No.	BR123	Sheet	56 of 82



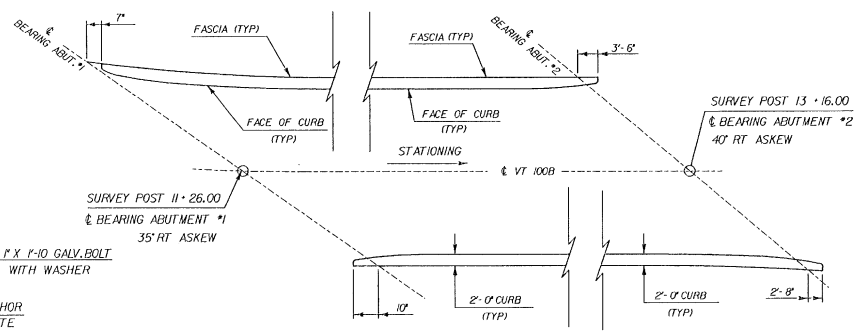
PLAN

NTS



ELEVATION

NTS



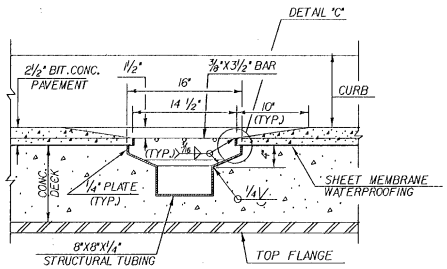
CURB END DETAIL

NTS

NOTE:

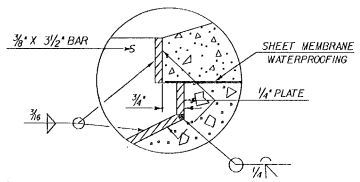
SEE STD. DWGS. SB-R4a-82 AND SB-R4b-82
FOR ADDITIONAL DETAILS NOT SHOWN.

STATE OF VERMONT AGENCY OF TRANSPORTATION	
Town Of MORETOWN	Bridge No. 4 Log Sta. 86 + 53
Highway No. VT 100B	Surv. Sta. 12 + 21 +/-
VT 100B OVER MAD RIVER	
END BRIDGE RAIL DETAIL	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 3/92	Bridge Design Supervisor F.W. Bolkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ - 1446 (1)
I.G.C. Info. ZH2:[34,30]T8F174EXP.DGN T8F174EBRJPARM	
Bridge Sheet No. BR124	Sheet 57 of 82



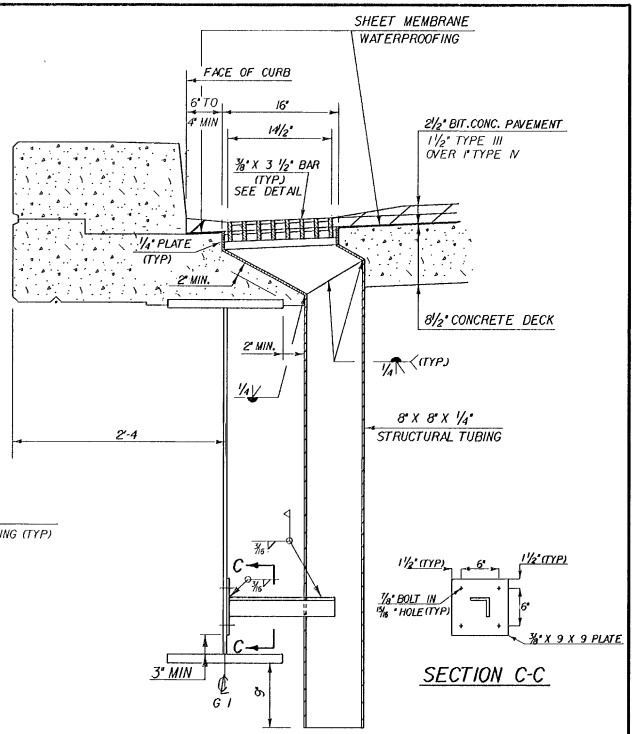
SECTION B-B

SCALE: 1½" = 1'-0



DETAIL "C"

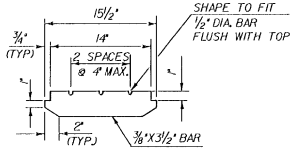
SCALE: 6" = 1'-0



SECTION C-C

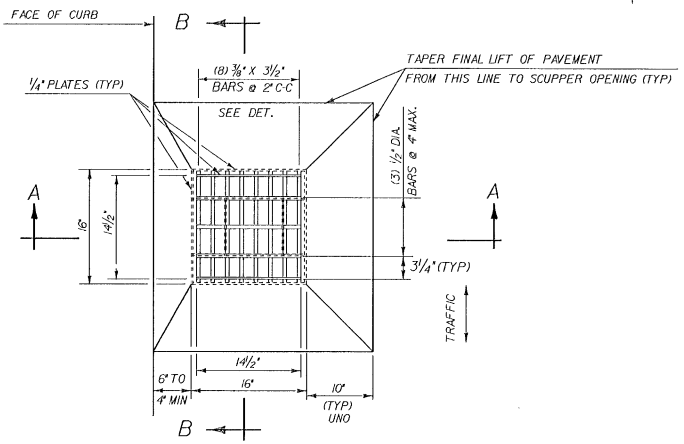
SECTION A - A

1½" = 1'-0"



BAR DETAIL FOR GRATE

SCALE: 1½" = 1'-0



PLAN

SCALE 1½" = 1'-0

NOTES

THE FOLLOWING NOTES APPLY TO ALL SCUPPERS UNLESS OTHERWISE DETAILED ON PROJECT PLANS

1. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO AST.M A-500 GR.B OR A-501.
2. ALL PLATES, BARS AND ANGLES SHALL CONFORM TO AASHTO M 270 GR. 36.
3. ALL SCUPPERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 AFTER FABRICATION.
4. THE TOP SURFACE OF SCUPPER SHALL BE SLOPED TO MATCH ROADWAY SLOPE AND GRADE.
5. THE BAR AND GRATE SECTION MAY BE PREFABRICATED PROVIDING THE GEOMETRY AND SECTION PROPERTIES ARE EQUIVALENT TO THE DETAILS SHOWN.
6. SCUPPERS SHALL BE PAID UNDER ITEM 506.55 "STRUCTURAL STEEL (PLATE GIRDER)".
7. SCUPPERS SHALL BE LOCATED @ APPROXIMATE STATIONS 11+25 LT, 11+90 LT, 12+60 RT AND 13+20 RT.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of MORETOWN	Bridge No. 4
Highway No. VT 100B	Log Sta. 86 + 53
	Surv. Sta. 12 + 21.7-
VT 100B OVER MAD RIVER	
SCUPPER DETAILS	
Designed By C.P. WILLIAMS	Drawn By T.A. SUMNER
Checked By C.P. WILLIAMS Date 3/92	Bridge Design Supervisor F.W. Balkum Date 5/92
PROJECT MORETOWN	PROJECT NO. BRZ - 1446 (1)
I.G.C. Info. ZH2L34,30178F1145CP.DGN	78F1145CP1PARM
Bridge Sheet No. BR125	Sheet 58 of 82

FINAL ~~DRAINAGE~~ UNDERDRAIN SUMMARY

PREPARED BY S. LASKOWSKI PROJECT NO. MORETOWN BRZ 1446(1)
CHECKED BY E. PEABODY

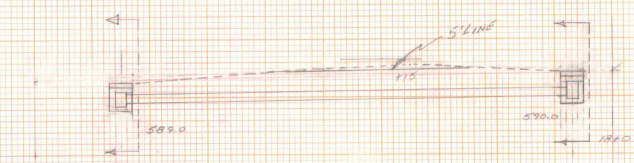
STATION	STATION	POSITION		DRAINAGE SYSTEM	TYPE	DIA.	LENGTH	TRENCH EARTH	TRENCH ROCK	FLUSH BASIN	WOOD MARK POST	REMARKS
7+0		CL		DC010'	C	6	67'	5.4'				
5+07	8+50	RT	RT	DU010'	U	6	335'	134.2'		1'		BEGIN OF UNDERDRAIN IS BURIED AT 8+50 RT - NO FLUSHING BASIN FLUSHING BASIN AT 5+07 - 17' RT
5+12	10+0	LT	LT	DU020'	U	6	454'	304.4'		2'		FLUSHING BASIN AT 5+12 - 17' LT FLUSHING BASIN AT 10+0 - 21' LT
6+85	7+15	LT	LT	DC020'	C	6	68'	15.6'				
9+08		LT		DC030'								CARRIER PIPE RUN ELIMINATED
9+08	10+0	LT	LT	DU030'								UNDERDRAIN RUN ELIMINATED
15+13	15+50	RT	RT	DC040'	C	6	48'	6.7'				
13+68	14+0	LT	LT	DC050'	C	6	70'	18.8'				
14+0	15+10	LT	LT	DU105'	U	6	117'	118.9'		1'		FLUSHING BASIN AT 15+10 - 42' LT
15+50	20+69	RT	RT	DU040'	U	6	494'	263.4'		2'		FLUSHING BASIN AT 17+97 - 20' RT FLUSHING BASIN AT 20+69 - 20' RT
18+50	20+75	RT	RT	DU060'								UNDERDRAIN RUN ELIMINATED
15+13	17+50	LT	LT	DU050'	U	6	253'	142.7'		1'		FLUSHING BASIN AT 17+50 - 20' LT
17+66	21+0	LT	LT	DU070'	U	6	335'	145.8'		2'		FLUSHING BASIN AT 19+09 - 23' LT FLUSHING BASIN AT 19+15 - 23' LT
21+0	22+0	LT	LT	DU100'	U	6	100'	47.3'		1'		FLUSHING BASIN AT 22+0 - 18' LT
20+75		RT		DC060'								CARRIER PIPE RUN ELIMINATED
20+93		CL		DC100'	C	6	94'	4.8'				
20+90	21+90	RT	RT	DU110'	U	6	100'	91.1'		1'		FLUSHING BASIN AT 21+90 - 19' RT
					C U	6 6	347' 2188'	1299.1'		11'		

FINAL DRAINAGE SUMMARY

PREPARED BY SHAUNA LASKOWSKI PROJECT MORETOWN
CHECKED BY E. PEABODY NO. BRZ 1446 (1)

STATION	STATION	POS.	ASKEW	CAAP DIA IN	CAAP L FT	TH	END SECT. EA	PIPE ELBOW NO-DEG	PROCD I EA	DEPTH DI	CONC. CL B CY	REIN STEEL LB	DI GRATE TYPE	TRENCH EARTH CY	TRENCH ROCK CY	GRAN BKFL STRUC. CY	STONE FILL CY	STONE FILL TYPE	WOOD MARK. POSTS EA	REMARKS
7+00		CL		18"	70"	.060	1							29.9			3.7	II		
9+00		LT		12"	24"	.060		1-10	1					6.4						
10+15		CL		18"	96"	.060	1							103.9		11.7				
10+18		CL	112° RT											122.2	8.3					REMOVE EXISTING PIPE
14+00		RT		12"	22"	.060		1-10	1					11.6			5.9	II		
14+39		CL		18"	70"	.060				4.0	2.1	193	A	44.1	2.1		9.5	II		
14+50		CL												37.1	3.4					REMOVE EXISTING PIPE
15+13		CL		18"	80"	.060				3.5	1.9	158	A	40.5	1.8		5.9	II		
14+72	14+93	LT/LT												9.2						REMOVE EXISTING PIPE
16+43	16+46	LT/LT												17.8	2.4					REMOVE EXISTING PIPE
17+15	17+40	LT/LT																		15" CGMP - DO NOT DISTURB
17+40		RT															14.8	II		STONE FILL GROIN AREA
17+65		CL		18"	98"	.060				5.0	2.6	231	A	60.0			13.3	II		
18+18	18+58	LT/LT												15.3						REMOVE EXISTING PIPE
17+65	18+43	LT/LT		18"	76"	.060				4.5	2.3	200	A	53.9						
18+50		LT																		7" PLASTIC PIPE - DO NOT DISTURB
20+90.8		CL		24"	92"	.060	1							101.3			12.1	II		
22+55		CL																		18" RCP - DO NOT DISTURB
	TOTAL			12 18 24	46 490 92	.060 .060 .060		2-18" ES 1-24" ES	2	2		8.9	782	4-A	653.2	18.0	11.7	65.2		

Keuffel & Esser Company PLATE 3 CROSS SECTION 48T056 Made in U.S.A.

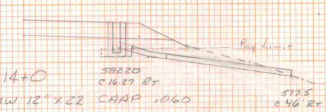


DI 5.8 x 6 x 6 = 208.8
0-5 Pipe 328 x 3.6 = 1180.8
5+ 12" x 3.6 x 1.5 = 64.8
1454.4

1454.4 x 1/27 = 53.9 cy
CLP 10-12-93
SPL 11-29-93

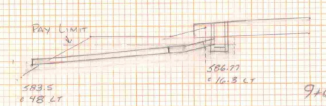
17+66 - 18+42
New 18" x 76' CAAP .060
Bk 2 Pg 54

590



TRENCH EARTH
DI 5 x 4.2 x 1.2 = 25.2
Pipe 41" x 3.1 = 127.1
for stone Fill
10 x 8 x 2 = 160.0
312.3/27
= 11.6 cy
RWA 5-9-94
ELP 5-16-94

14+0
New 12" x 22 CAAP .060
Bk 2 Pg 18

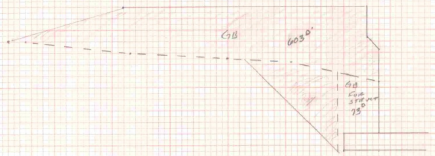


9+0
℄
New 12" x 24' CAAP .060
w/ 1 10° Elbow
Bk 2 Pg 6

580

TRENCH EARTH
DI - (5')(4.21')(1.17') = 24.63
Pipe - (48")(3.1') = 148.80
173.43/27 = 6.4 cy
SPL 10-11-93
ELP 10-12-93

Moratown
BRZ 1446(1)



570

8+0

STA	DIST	GB AREA	GB VOL	GB For Structure AREA	GB Structure VOL
7+59.5		425		278	2596
	15.5		7060		
7+75		486		62	768
	25		13,613		
8+0		603		73	2545
	19.5		8804		
8+19.5		300		188	2961
	13.5				
8+33				221	

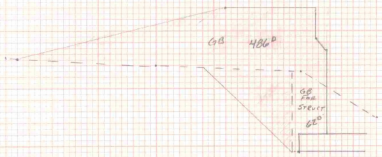
29,477/27 = 1091.7 To BL1 Pg 43

9590/27 = 355.2 cy To BL3 Pg 22

Bent 4-26-94

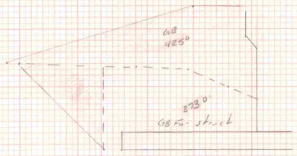


8+33
BUTT



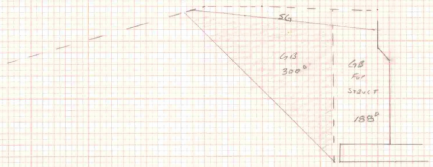
570

7+75



570

Bent 7+59.5



8+19.5
Butt GB

Moretown
BRZ 1446(1)
Abut #2
GB-2

Keuffel & Esser Company PLATE 3 CROSS SECTION 467056 Made in U.S.A.

Butt @ 6+91
Same as 6+87

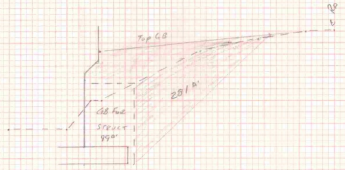
	STA	DIST	GB AREA	GB VOL.	G.B. FOR STRUCT. AREA	G.B. FOR STRUCT. VOL
	5+70	20.	18	360	85.5 ~~80~~	1710 ~~1600~~
Bk	+90		18		85.5 ~~80~~	
Ah	+90	10.	240	2400	91	910
	6	25.	240	6512.5	91	2375
	+25	25.	281	7562.5	99	2237.5
	+50	25.	324	8125	80	2000
	+75	12.	326	4176	80	1356
	+87	4.	370	1480	146	584
	+91		370		146	
				30,616.0 / 27		~~11062.5~~ 11172.5 / 27
				= 1133.9		= ~~409.7~~ 413.8

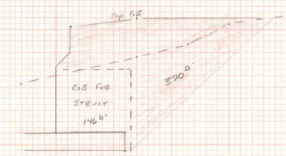
To Bk 1 Pg 43
Rev H
4-27-94
SPL 4-29-94

To Bk 3 Pg 22

570

6+25



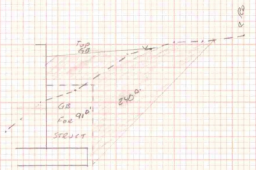


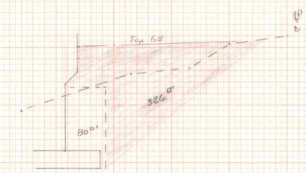
6+87

570

570

6+0

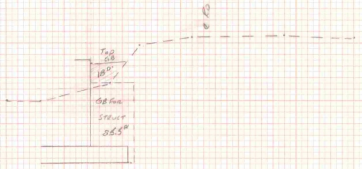


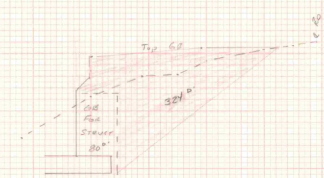


6+75

570

5+90 Ah
Same as 6+0
5+90 Bk:
Same as 5+70





570

570

5+70

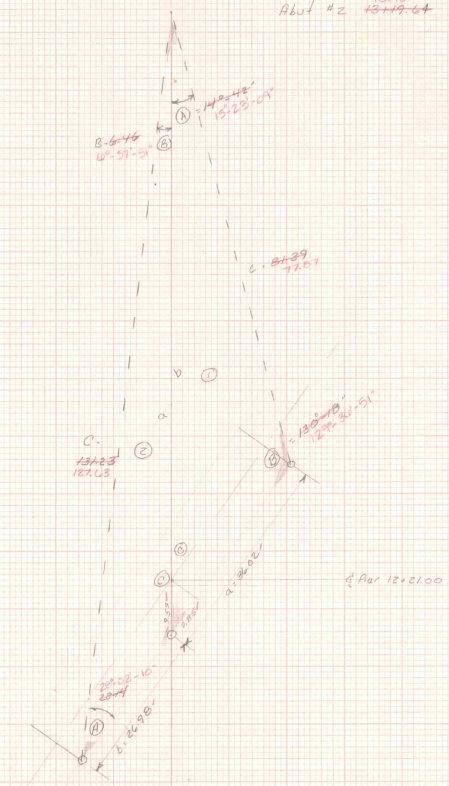
6+50

MORETOWN
BRZ 1446(1)
ABUT #1
GB-1

150' RT
CH

150' RT
CHL

Keuffel & Esser Company PLATE 3, CROSS SECTION 487056 Made in U.S.A.



Triangle ②

Given $C = 145°$

$b = 26.98$

$a = 108.23$

Req c, A

$c = \sqrt{108.23^2 + 26.98^2 - 2(26.98)(108.23)\cos 145}$

$= \sqrt{12,441.65 + (-4,783.92)}$

$= \sqrt{17,225.57}$

$= 131.25$ ✓

$B = 6°-45'$ ✓

Triangle ①

Given: $C = 35°$

$b = 108.23'$

$a = 36.02$

Req. c, A

$c = \sqrt{a^2 + b^2 - 2ab\cos C}$

$= \sqrt{36.02^2 + 108.23^2 - 2(36.02)(108.23)\cos 35}$

$= \sqrt{13,011.17 - 6,386.84}$

$= \sqrt{6624.33}$

$c = 81.39$ ✓

$A = 14°-42'$ ✓

Keuffel & Esser Company PLATE 3, CROSS SECTION 48 7056 Made in U.S.A.

Field Meas. Along Remainder of WW #4 1-7-94 RWH

CH 25 x 7 x 4/27 = 25.9 cy

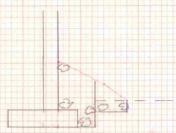
SF 25 x 12 x 4 = 44.4 cy

Abut 2

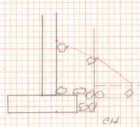
STA	DIST	CH AREA	CH VOL	SF AREA	SF VOL
7+10	43	120	203.9	84	175.2
7+53	7	136	19.3	136	29.6
7+60	59	13	26.2	92	187.9
8+19	6	11	2.4	80	17.8
8+25		11		80	
			251.8		410.5
			+ 25.9		+ 44.4
			277.7		454.9

RWH 1-19-94 2-24-94

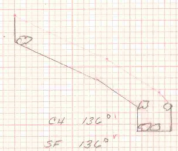
Same @ 8+25 Butt



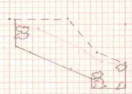
8+19 CH 11 SF 80



7+60 CH 13 SF 92



7+53 CH 136 SF 136



7+10 Butt CH 120 SF 84

Pier Typical A-A



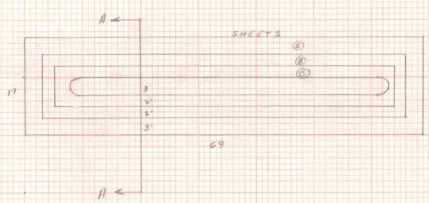
Ⓐ 160 x 3 x 6.5 = 3120

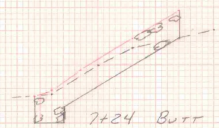
Ⓑ 140 x 2 x 3.5 = 980

Ⓒ 124 x 2 x 1.5 = 372

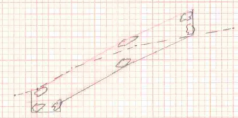
4472/27 = 165.6 cy

2-24-94

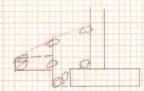




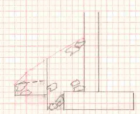
7+24 Butt CH 81 SF 121



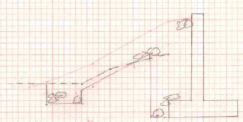
6+96 CH 90 SF 122



6+86 CH 14 SF 84



6+27 CH 12 SF 78



5+64 CH 25 SF 178

5+52 CH-65 SF-59 use Same quantities as 10+0 ML

150' Rt CHL

Abut #1

STA	DIST	CH AREA	CH VOL	SF AREA	SF VOL
5+52	12	65	20.0	59	52.7
5+64	63	25	43.2	178	298.7
6+27	59	12	28.4	78	177.0
6+86	10	14	19.3	84	38.1
6+96	28	90	88.7	122	126.0
7+24		81		121	
			199.6		692.5

RWH 1-19-94 2-24-94

Totals

	Channel Excav	Type IV Stone Fill
Abut 1	199.6	692.5
Pier		165.6
Abut 2	277.7	454.9
	477.3	1313.0
	Jag 477 Bk 3 Pg 2	Bk 3 Pg 114

2-24-94

* ORIGINAL SECTIONS INTERPOLATED

✓ Plot 2-8-94

MORETOWN BRZ 1446(1) BRIDGE CHANNEL EXCAV & Type IV SF

CH #1

CH L

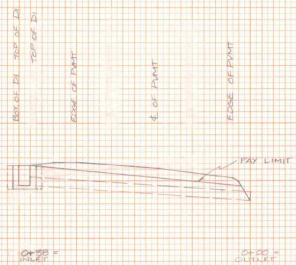
Keuffel & Esser Company PLATE 2 CROSS SECTION 487C56 Made in U.S.A.



T.E. = $\frac{(69^{\square'})(3.6')}{27}$ = 9.2 cy

SPL 4-19-93
ELP 10-12-93

14+72 LT ~ 14+93 LT
REMOVE EXISTING 18" CMP
BOOK 2 - PAGE 34



T.E. PIPE = $\frac{(102^{\square'})(3.9')}{27}$ = 14.7 cy

T.E. DI = $\frac{(6')(6')(4.1')}{27}$ = 5.5 cy

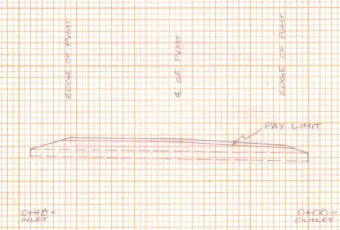
SPL 4-20-93
ELP 10-12-93

TRENCH ROCK = $\frac{(4')(4')(4.1')}{27}$ = 2.4 cy

TOTAL EXCAVATION 20.2 cy
TRENCH ROCK 2.4 cy
TRENCH EARTH 17.8 cy

SPL 10-11-93
ELP 10-12-93

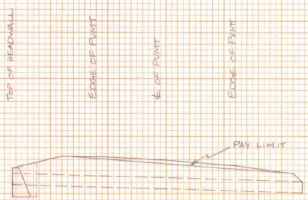
16+43 LT ~ 16+46 LT
REMOVE EXISTING 18" RCP
BOOK 2 - PAGE 40



T.E. = $\frac{(125^{\square'})(3.3')}{27}$ = 15.3 cy

SPL 4-21-93
ELP 10-12-93

18+18 LT ~ 18+58 LT
REMOVE EXISTING 15" CMP
BOOK 2 - PAGE 50



T.E. PIPE = $\frac{(192^{\square'})(4.5')}{27}$ = 32.0 cy

T.E. HEADWALL = $\frac{(23^{\square'})(10')}{27}$ = 8.5 cy

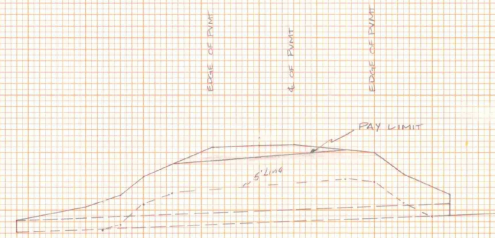
SPL 4-21-93

TRENCH ROCK = $\frac{\left(\frac{1+2.67}{2}\right)(5')(10')}{27}$ = 3.4 cy

14+50 ℄
REMOVE EXISTING 24" RCP
BOOK 2 - PAGE 26

TOTAL EXCAVATION 40.5 cy
TRENCH ROCK 3.4 cy
TRENCH EARTH 37.1 cy

SPL 10-11-93
ELP 10-12-93



10+18 ℄ ASKEW 112° RT
REMOVE EXISTING 24" RCP
BOOK 2 - PAGE 14

T.E.
0-5 348' x 4.5' = 1566.0
over 5 290' x 4.5' x 1.5' = 1957.5
3523.5/27 = 130.5 cy

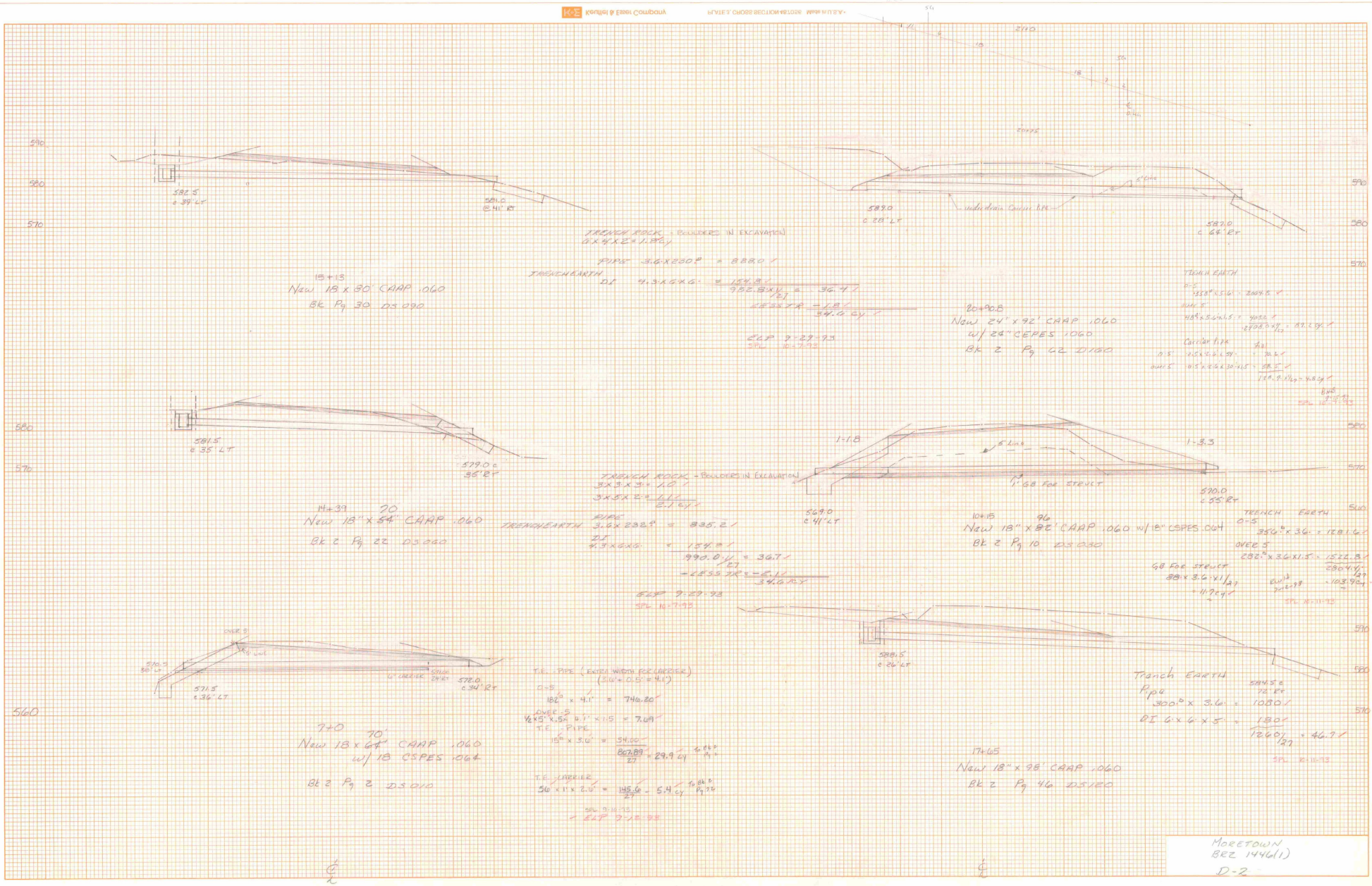
RW H 7-12-93

TOTAL EXCAV. 130.5
TR. ROCK (BK 2 PG 15) 8.3
TR. EARTH 122.2 cy

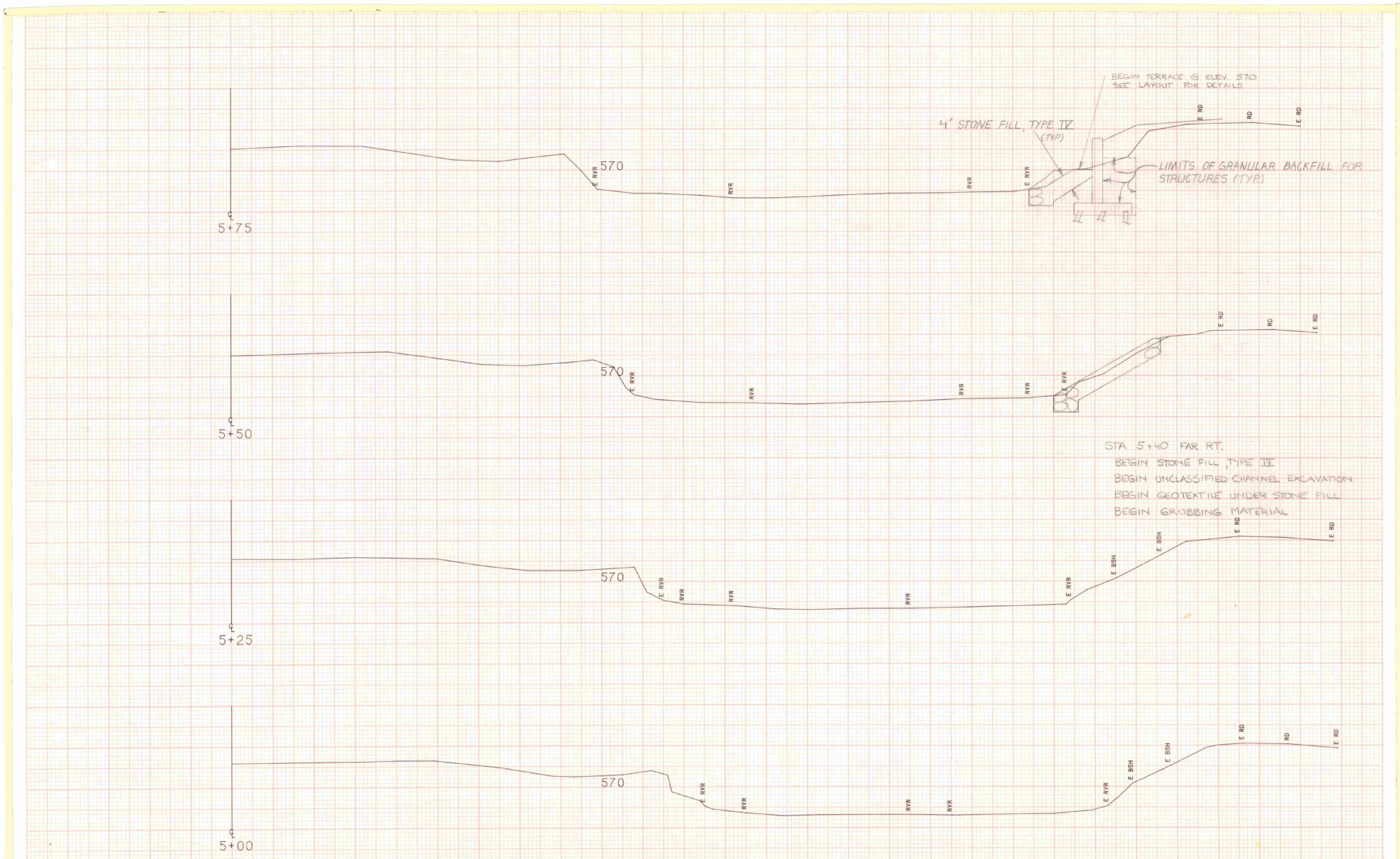
ELP 10-11-93
SPL 10-11-93

MORETOWN BRZ 1446(1)

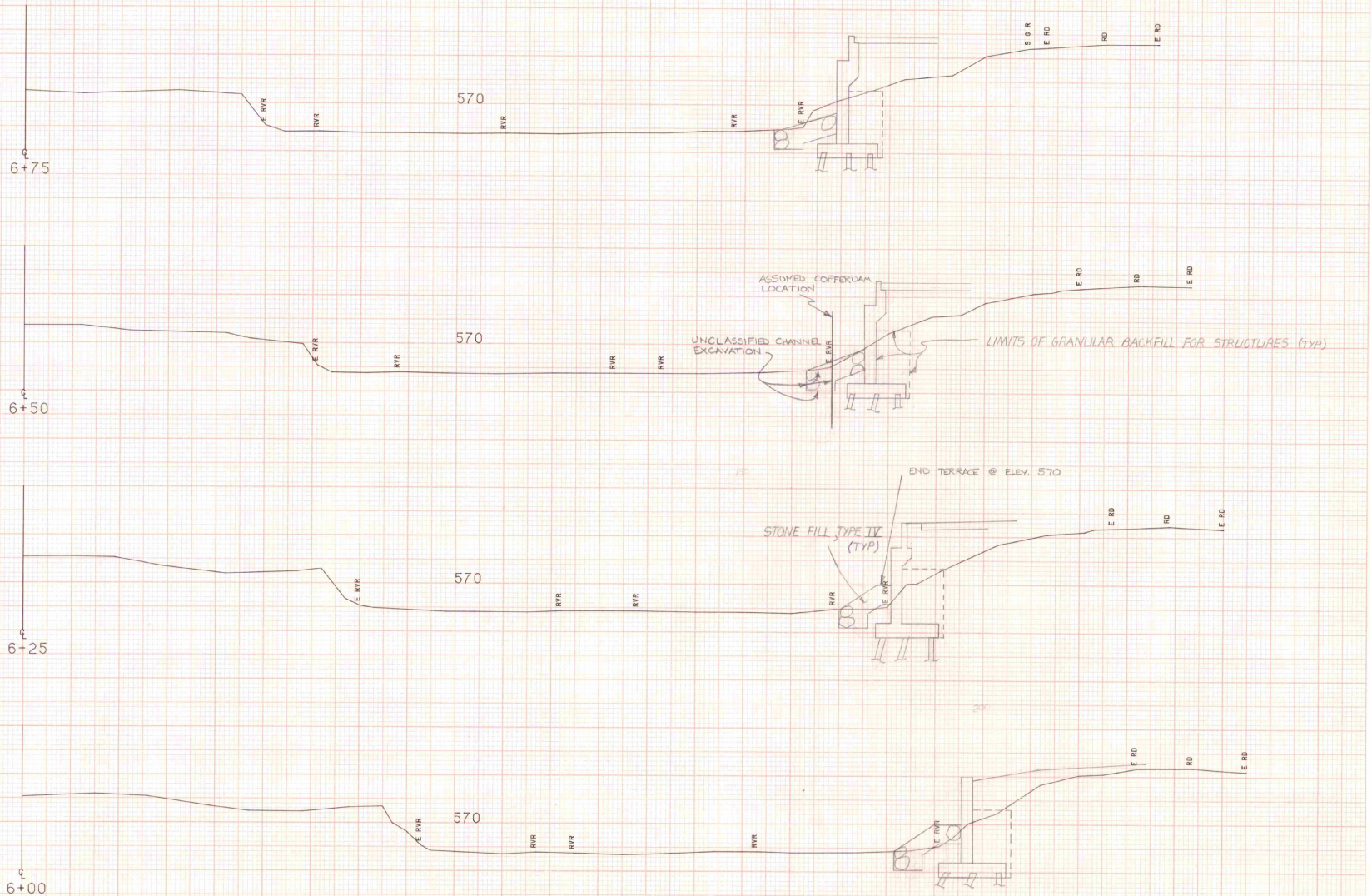
D-1



590
580
570
582.5
c 39' LT
581.0
@ 41' RT
15+13
New 18 x 80' CAAP .060
Bk Pg 30 DS 090
TRENCH ROCK - BOULDERS IN EXCAVATION
6 x 4 x 2 = 1.8 cy
PIPE 3.6 x 230.0 = 828.0
TRENCH EARTH
DI 4.3 x 6 x 6 = 154.8
982.8 x 1/27 = 36.4
LESS TR -1.8
34.6 cy
ELP 9-29-93
SPL 10-7-93
589.0
c 28' LT
587.0
c 64' RT
20+90.8
New 24' x 92' CAAP .060
w/ 24" CSPES .060
Bk 2 Pg 62 D160
TRENCH EARTH
0-5
358.0 x 5.6 = 2004.8
OVER 5
48.0 x 5.6 x 1.5 = 403.2
2408.0 x 1/27 = 89.2 cy
Carrier Pipe
0-5 0.5 x 2.6 x 54 = 70.2
OVER 5 0.5 x 2.6 x 30 x 1.5 = 58.5
128.9 x 1/27 = 4.8 cy
BWB 9-15-93
SPL 10-7-93
581.5
c 35' LT
579.0 c
35' RT
14+39
New 18" x 70 CAAP .060
Bk 2 Pg 22 DS 060
TRENCH ROCK - BOULDERS IN EXCAVATION
3 x 3 x 3 = 1.0
3 x 5 x 2 = 1.1
2.1 cy
TRENCH EARTH
PIPE
3.6 x 232.0 = 835.2
DI
4.3 x 6 x 6 = 154.8
990.0 x 1/27 = 36.7
LESS TR = -2.1
34.6 cy
ELP 9-29-93
SPL 10-7-93
1-1.8
1-3.3
5' Line
1' GB FOR STRUCT
569.0
c 41' LT
570.0
c 55' RT
10+15
New 18" x 96 CAAP .060 w/ 18" CSPES .064
Bk 2 Pg 10 DS 030
TRENCH EARTH
0-5
356.0 x 3.6 = 1281.6
OVER 5
282.0 x 3.6 x 1.5 = 1522.8
2804.4/27
= 103.9 cy
GB FOR STRUCT
88 x 3.6 x 1/27
= 11.7 cy
BWB 9-12-93
SPL 10-11-93
OVER 5
5' LINE
570.5
38' LT
571.5
c 36' LT
6" CARRIER
572.0
c 34' RT
7+0
New 18 x 70' CAAP .060
w/ 18 CSPES .064
Bk 2 Pg 2 DS 010
T.E. - PIPE (EXTRA WIDTH FOR CARRIER)
(3.6' + 0.5' = 4.1')
0-5
182.0 x 4.1' = 746.20
OVER 5
1/2 x 5' x .5 x 4.1' x 1.5 = 7.69
T.E. - PIPE
15.0 x 3.6' = 54.00
807.89/27 = 29.9 cy
To Bk 2 Pg 2
T.E. - CARRIER
56 x 1' x 2.6' = 145.6/27 = 5.4 cy
To Bk 2 Pg 72
SPL 9-10-93
ELP 9-12-93
588.5
c 26' LT
584.5 c
72' RT
Trench EARTH
Pipe
300.0 x 3.6 = 1080
DI 6 x 6 x 5 = 180
1260/27 = 46.7
SPL 10-11-93
17+65
New 18" x 98' CAAP .060
Bk 2 Pg 46 DS 120
MORETOWN
BRZ 1446(1)
D-2

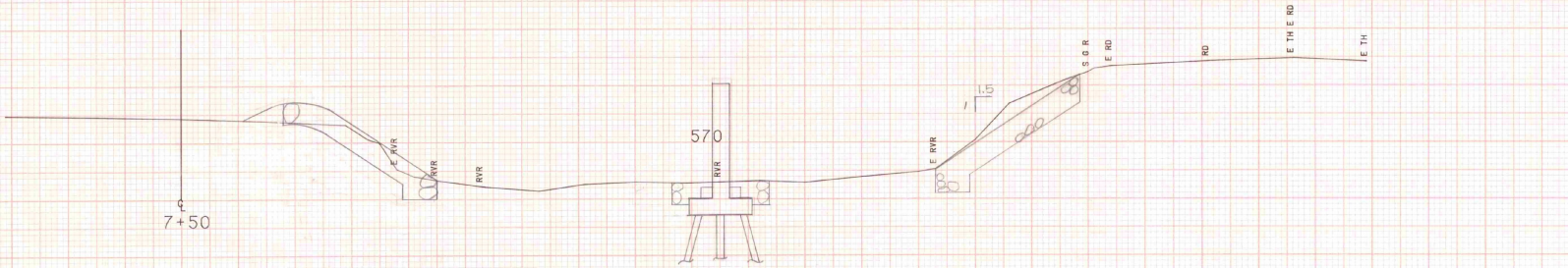


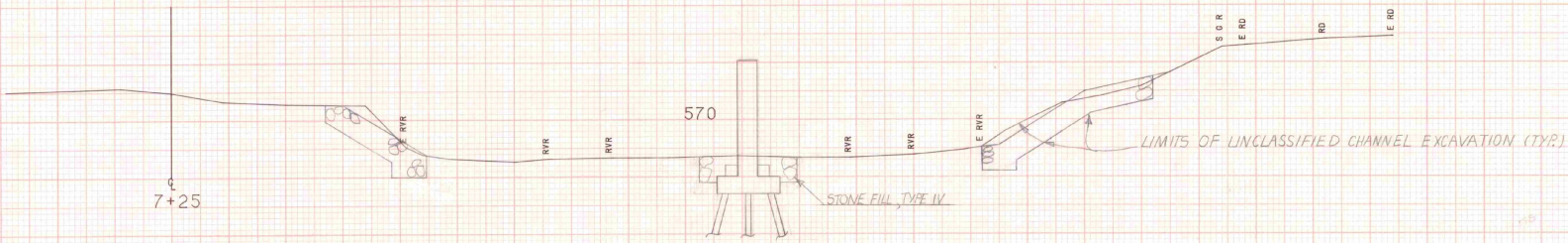
FROM STA. 5+00		TO STA. 5+75	
PROJECT NAME	MORETOWN CHAN		
NO.	BR1446(1)		PLOTTED 03/25/88
SURVEYED BY	C. REED	03/88	0112
SHEET 61 OF 82 SHEETS			



FROM STA. 6+00		TO STA. 6+75	
PROJECT NAME	MORETOWN CHAN		
NO.	BR1446(1)		PLOTTED 03/25/88
SURVEYED BY	S.REED	03/88	0112
SHEET 62 OF 82 SHEETS			

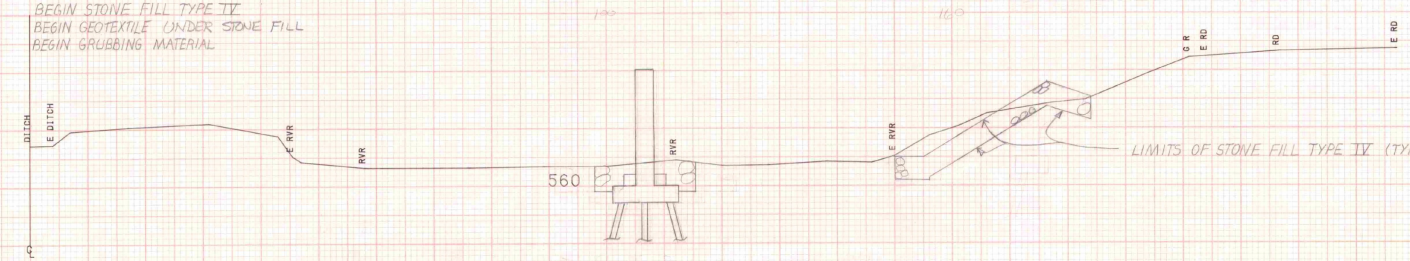
SCALE 10 FEET





STA 7+10 (RT) BEGIN UNCLASSIFIED CHANNEL EXCAVATION

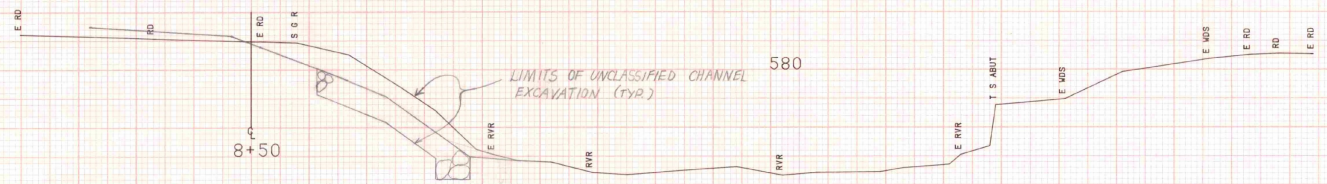
BEGIN STONE FILL TYPE IV
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL

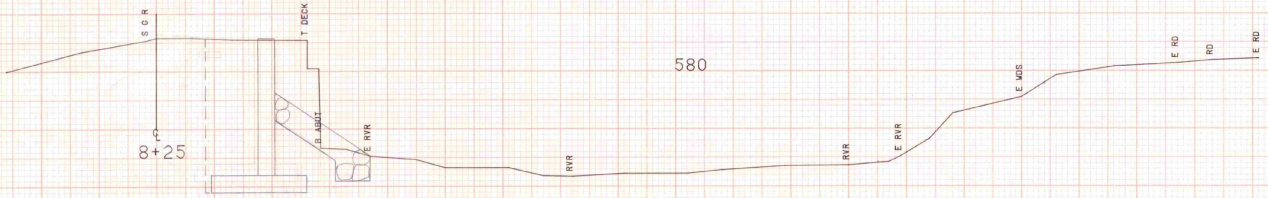


SCALE 10 FEET

FROM STA. 7+00		TO STA. 7+50	
PROJECT NAME	MORETOWN CHAN		
NO.	BR1446(1)		PLOTTED 03/25/88
SURVEYED BY	C.REED		03/88 0112
SHEET 63 OF 82 SHEETS			

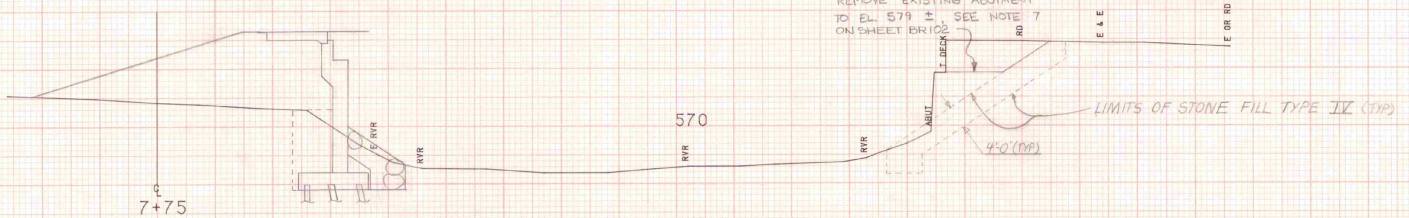
STA 8+60 (RT) END UNCLASSIFIED CHANNEL EXCAVATION
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL
END STONE FILL TYPE IV





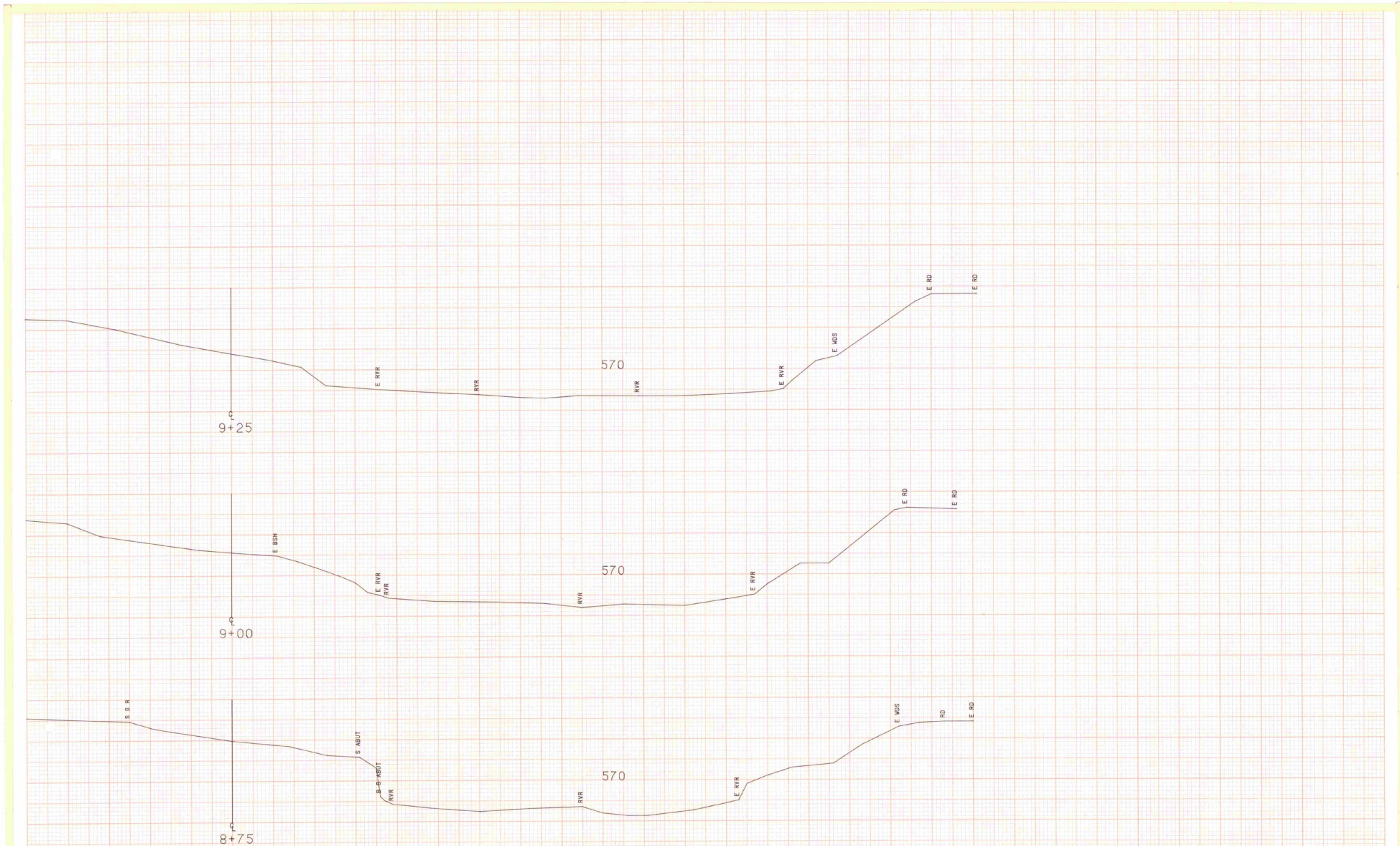


STA 7+68 (FAR RT) END UNCLASSIFIED CHANNEL EXCAVATION
END STONE FILL TYPE IV
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL



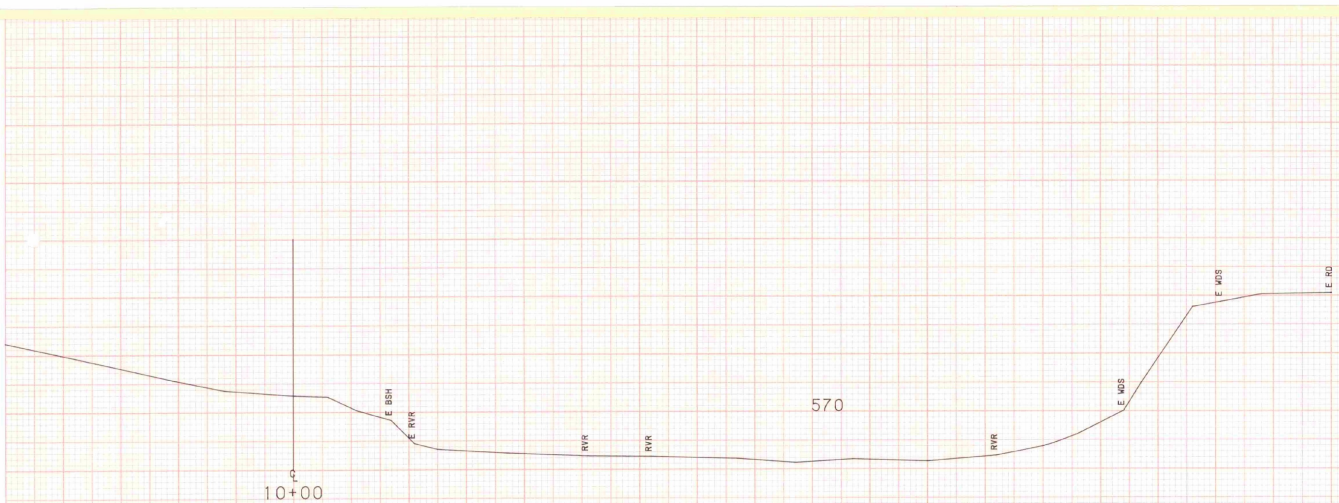
SCALE 10 FEET

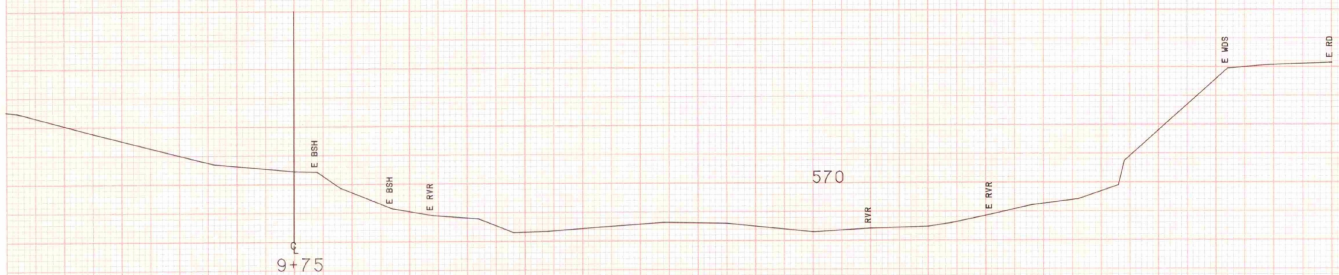
FROM STA. 7+75		TO STA. 8+50	
PROJECT NAME	MORETOWN CHAN		
NO.	BR1446(1)		PLOTTED 03/25/88
SURVEYED BY	C.REED		03/88 0112
SHEET 64 OF 82 SHEETS			

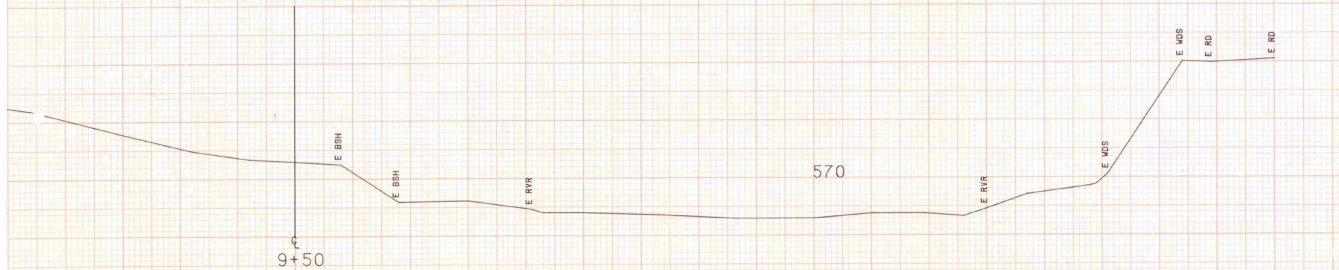


FROM STA. 8+75		TO STA. 9+25	
PROJECT NAME	MORETOWN CHAN		
NO.	BR1446(1)		PLOTTED 03/25/88
SURVEYED BY	C.REED		03/88 0112
SHEET 65 OF 82 SHEETS			

SCALE 10 FEET

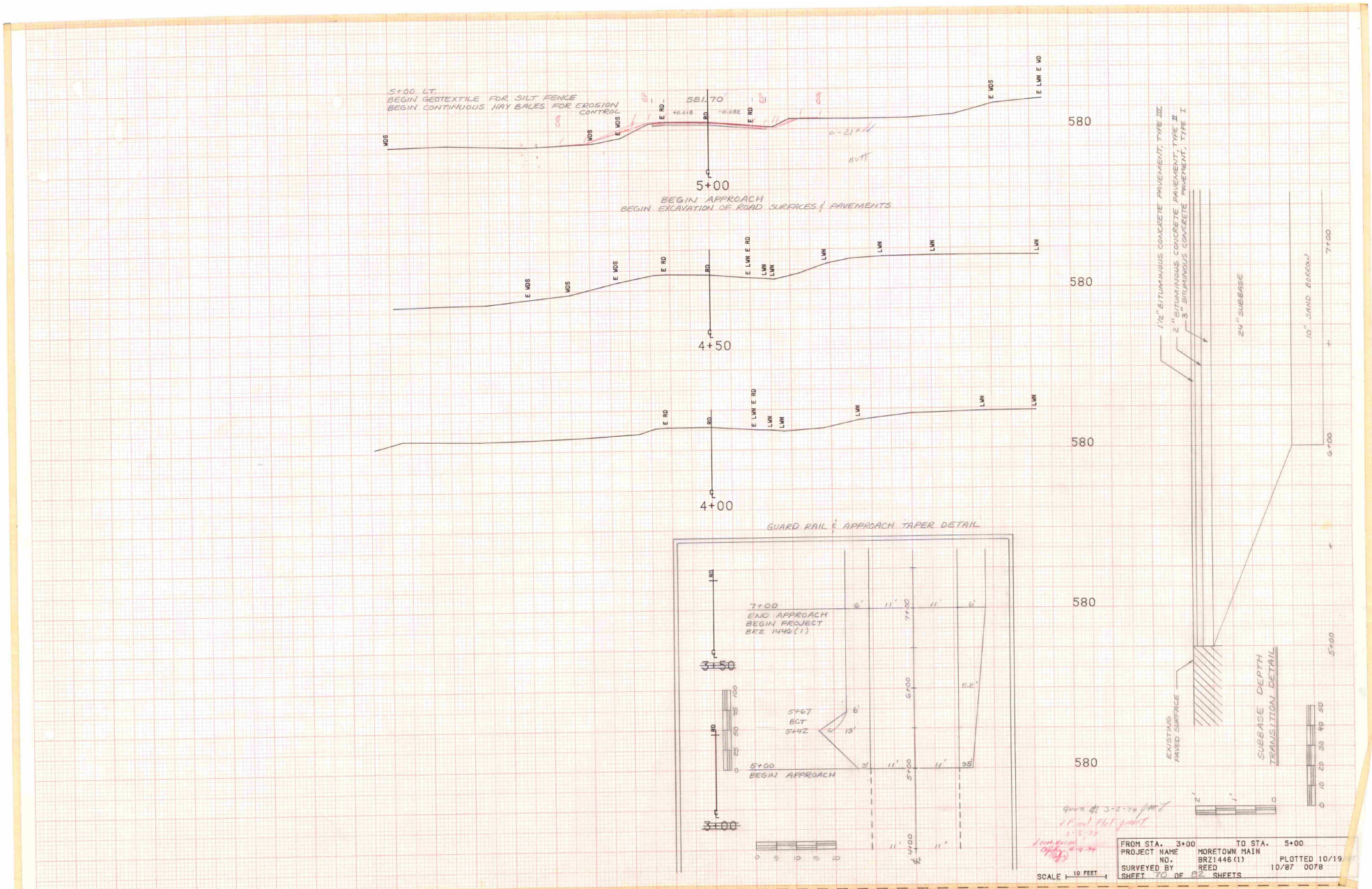


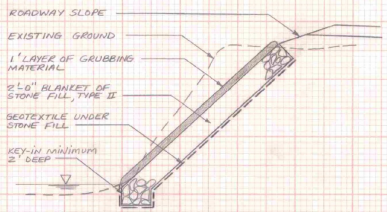




FROM STA. 9+50		TO STA. 10+00	
PROJECT NAME	MORETOWN CHAN		
NO.	BR1446(1)		PLOTTED 03/25/88
SURVEYED BY	C.REED		03/88 0112
SHEET 66 OF 82 SHEETS			

SCALE 10 FEET


5+00 LT.
BEGIN GEOTEXTILE FOR SILT FENCE
BEGIN CONTINUOUS HAY BALES FOR EROSION CONTROL
581.70
+0.018
-0.082
E RD
RD
E WDS
WDS
E LWN E WD
580
5+00
BEGIN APPROACH
BEGIN EXCAVATION OF ROAD SURFACES & PAVEMENTS
E WDS
WDS
E RD
RD
E LWN E RD
LWN
4+50
4+00
GUARD RAIL & APPROACH TAPER DETAIL
7+00
END APPROACH
BEGIN PROJECT
BRZ 1446(1)
6'
11'
5+67
BCT
5+42
13'
5.2'
5+00
BEGIN APPROACH
3+50
3+00
0 5 10 15 20
1 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE III
2" BITUMINOUS CONCRETE PAVEMENT, TYPE II
3" BITUMINOUS CONCRETE PAVEMENT, TYPE I
24" SUBBASE
10" SAND BORROW
EXISTING PAVED SURFACE
SUBBASE DEPTH TRANSITION DETAIL
0 10 20 30 40 50
SCALE 10 FEET
FROM STA. 3+00 TO STA. 5+00
PROJECT NAME MORETOWN MAIN
NO. BRZ1446(1) PLOTTED 10/19/87
SURVEYED BY REED 10/87 0078
SHEET 70 OF 82 SHEETS



STREAM BANK STABILIZATION DETAIL

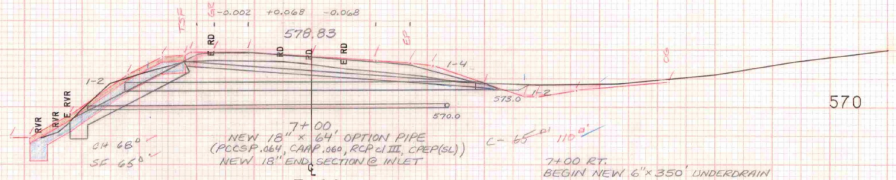
NOT TO SCALE

GRUBBING MATERIAL

STONE FILL

NOTES:

1. EXCAVATION OF EXISTING STREAM BANK MATERIAL SHALL BE PAID FOR AS UNCLASSIFIED CHANNEL EXCAVATION.
2. FINISHED SLOPES SHALL BE SEEDED, FERTILIZED & MULCHED.
3. FINISHED SLOPE MAY VARY WITH EXISTING SLOPE.



7+00

NEW 18" x 64' OPTION PIPE (PCCSP,064, CAMP,060, RCP cl III, CPEP(SL)) NEW 18" END SECTION @ INLET

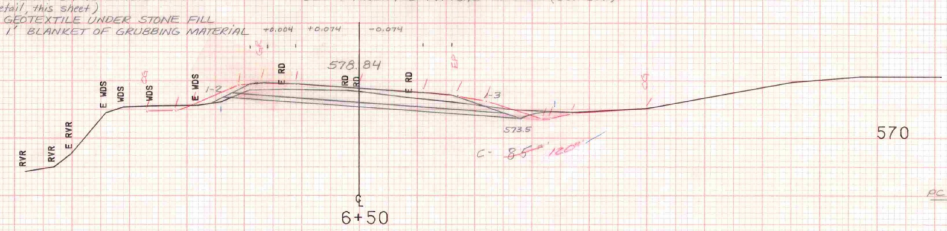
7+00 RT. BEGIN NEW 6" x 350' UNDERDRAIN

7+00 RT.~LT. NEW 6" x 70' UNDERDRAIN CARRIER PIPE

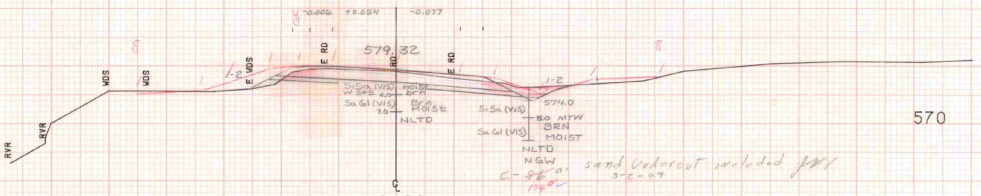
7+00 END APPROACH BEGIN PROJECT BRZ 1446(1)

BEGIN MODIFIED TYPICAL - LT. SIDE (BOX CUT)

6+97 LT. BEGIN STONE FILL, TYPE II FOR STREAM BANK STABILIZATION (See detail, this sheet.) BEGIN GEOTEXTILE UNDER STONE FILL BEGIN 1' BLANKET OF GRUBBING MATERIAL



6+50

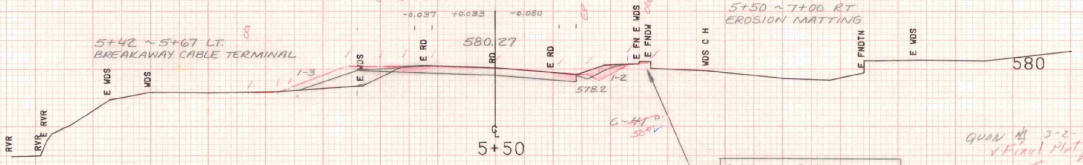


sand undercut included 3-2-94

6+00

5+67 LT. BEGIN STEEL BEAM GUARDRAIL

BEGIN 10" SAND BORROW



5+42 ~ 5+67 LT. BREAKAWAY CABLE TERMINAL

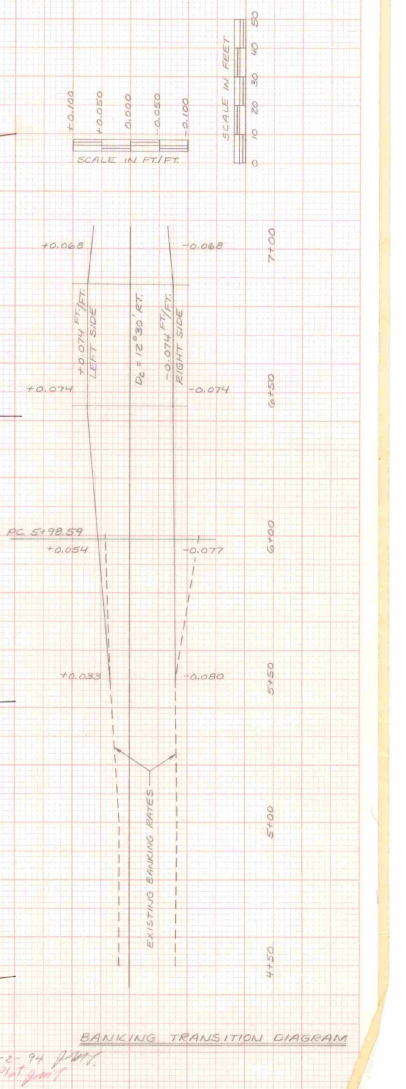
5+50 ~ 7+00 RT. EROSION MATTING

5+50

5+35 RT. ~ 5+70 RT. EXISTING FOUNDATION ~ DO NOT DISTURB

GUAN 3-2-94

BANKING TRANSITION DIAGRAM

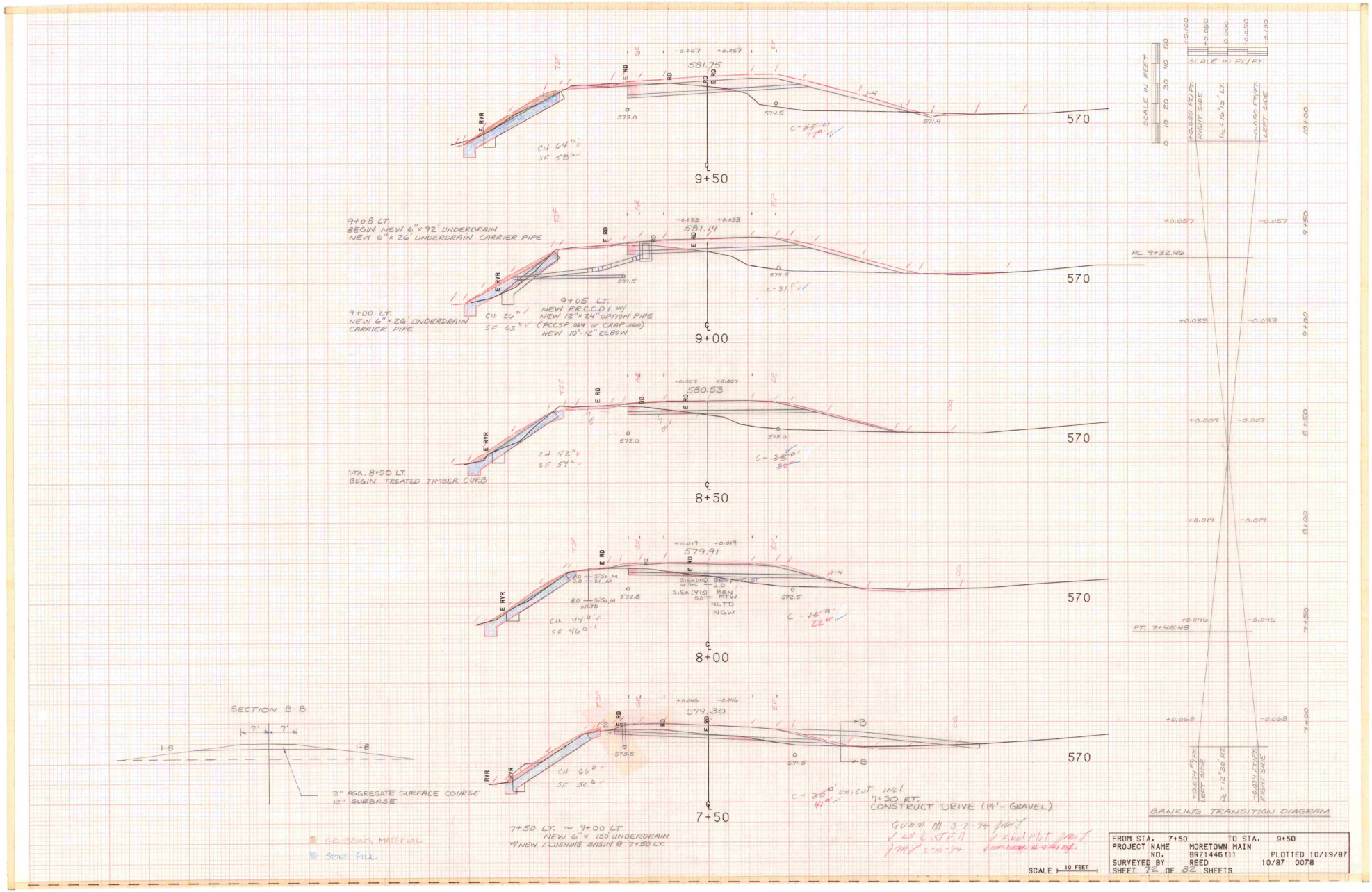


FROM STA. 5+50	TO STA. 7+00
PROJECT NAME	MORETOWN MAIN
NO.	BRZ1446(1)
SURVEYED BY	REED
SHEET 71 OF 82 SHEETS	

PLOTTED 10/19/87

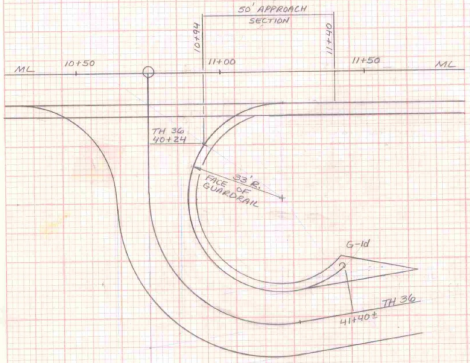
10/87 0078

SCALE 10 FEET



9+50
9+00
8+50
8+00
7+50
570
581.75
581.14
580.53
579.91
579.30
9+08 LT.
BEGIN NEW 6"x 92' UNDERDRAIN
NEW 6"x 26' UNDERDRAIN CARRIER PIPE
9+00 LT.
NEW 6"x 26' UNDERDRAIN
CARRIER PIPE
9+05 LT.
NEW P.R.C.C.D.I. w/
NEW 12"x 24" OPTION PIPE
(PCCSP.064 or CAAP.060)
NEW 10"-12" ELBOW
STA. 8+50 LT.
BEGIN TREATED TIMBER CURB
SECTION B-B
3" AGGREGATE SURFACE COURSE
12" SUBBASE
7+50 LT. ~ 9+00 LT.
NEW 6" x 150' UNDERDRAIN
w/ NEW FLUSHING BASIN @ 7+50 LT.
7+30 RT.
CONSTRUCT DRIVE (14'- GRAVEL)
GRUBBING MATERIAL
STONE FILL
SCALE IN FEET
SCALE IN FT./FT.
PC 9+32.46
PT. 7+45.48
BANKING TRANSITION DIAGRAM
FROM STA. 7+50 TO STA. 9+50
PROJECT NAME MORETOWN MAIN
NO. BRZ1446(1)
PLOTTED 10/19/87
SURVEYED BY REED
10/87 0078
SHEET 72 OF 82 SHEETS
SCALE 10 FEET

GUARDRAIL DETAIL

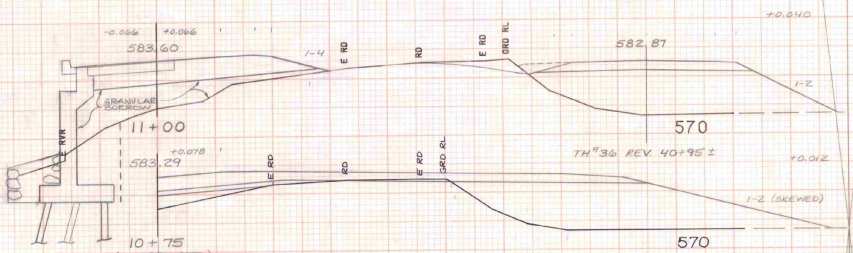


(ML 10+94 RT)
TH 36 40+24 LT ≈ 41+40 ± LT (137.5')
STEEL BEAM GUARD RAIL
W/G-1d ANCHOR @ 41+40 ± LT.

10+94 RT = (TH 36 40+24 LT.)
BEGIN GUARDRAIL APPROACH
SECTION, TYPE I

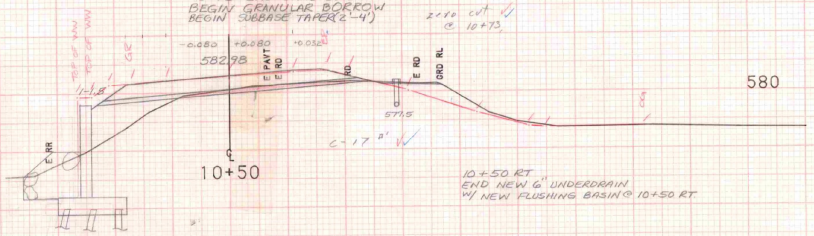
11+00 LT.
END TREATED TIMBER CURB.

10+92 LT.
END GUARDRAIL APPROACH
SECTION, TYPE I
BEGIN BRIDGE RAILING - 2 RAIL
GALVANIZED BOX BEAM.



10+73 END SAND BORROW
BEGIN GRANULAR BORROW
BEGIN SUBBASE TAPER (2-4')

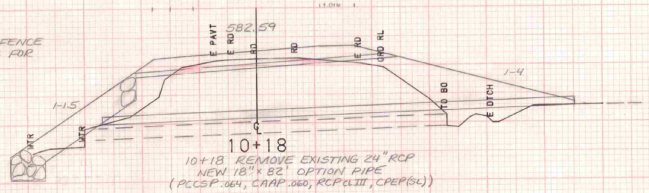
10+80 LT.
END 1' BLANKET OF GRUBBING
MATERIAL.



10+50 RT
END NEW 6" UNDERDRAIN
W/ NEW FLUSHING BASIN @ 10+50 RT.

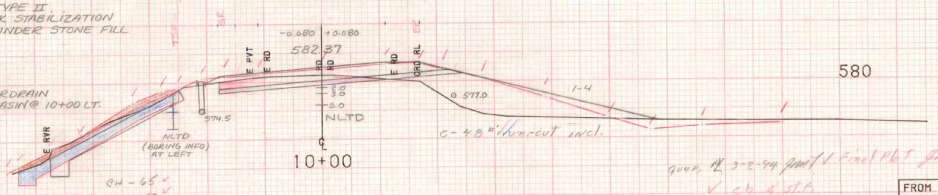
10+42 LT.
END STEEL BEAM GUARDRAIL
BEGIN GUARDRAIL APPROACH
SECTION, TYPE I

10+25 LT.
END GEOTEXTILE FOR SILT FENCE
END CONTINUOUS HAY BALES FOR
EROSION CONTROL



10+18 REMOVE EXISTING 24" RCP
NEW 18" x 82' OPTION PIPE
(PCCSP:.064, CMAP.060, RCP CLIII, CPEP(SL))

10+10 LT.
END STONE FILL, TYPE II
FOR STREAM BANK STABILIZATION
END GEOTEXTILE UNDER STONE FILL

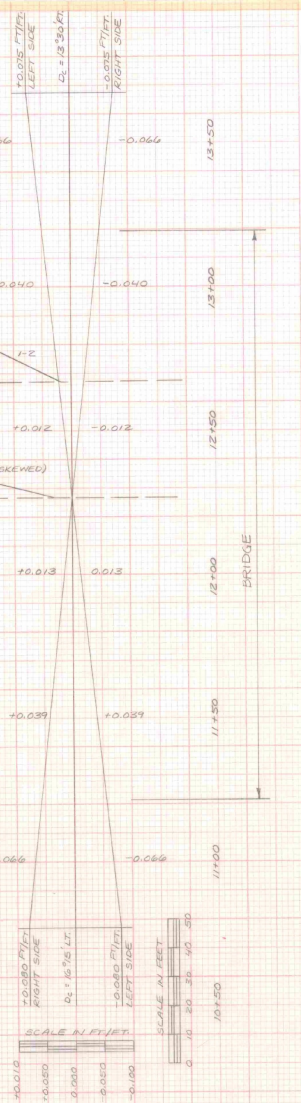


10+00 LT.
END NEW 6" UNDERDRAIN
W/ NEW FLUSHING BASIN @ 10+00 LT.

BORING INFO.

STA 10+00 ℄			
0.0 - 0.8	PAVT		
0.0 - 2.0	Si Sa w/ STS	BRN/MOIST	
2.0 - 3.0	SA GI	BRN/MOIST	
3.0 - 5.0	Sa Si	BRN/MOIST	
STA 10+00	26' LT.		
0.0 - 3.0	Sa Si	BRN/MOIST	
3.0 - 6.0	Si Sa	BRN/MOIST	

GRUBBING MATERIAL
STONE FILL

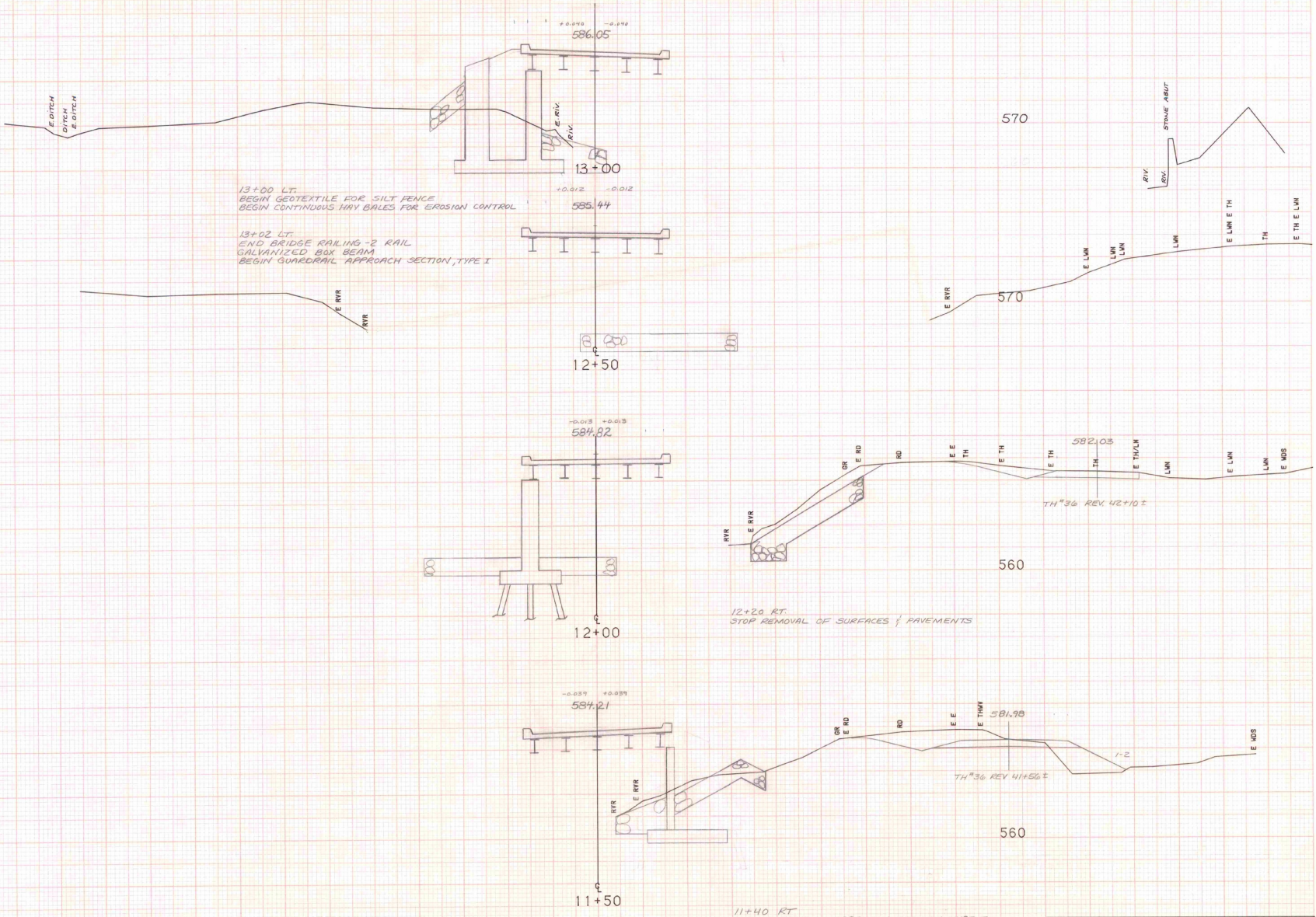


BANKING TRANSITION DIAGRAM

Given ✓ 3-8-94 JMM
✓ ck'd 4-5-94
JMM
Corrected 4-19-94 JMM

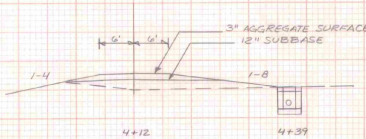
FROM STA.	10+00	TO STA.	11+00
PROJECT NAME	MORETOWN MAIN		
NO.	BRZ1446(1)	PLOTTED	10/19/87
SURVEYED BY	REED	10/87	0078
SHEET 73 OF 82 SHEETS			

SCALE 10 FEET



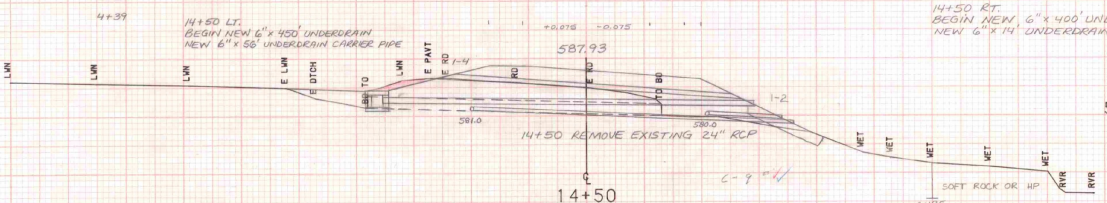
FROM STA. 11+50	TO STA. 12+50
PROJECT NAME	MORETOWN MAIN
NO.	BRZ1446(1)
SURVEYED BY	REED 10/87 0078
SHEET 74 OF 82 SHEETS	PLOTTED 10/19/87

SECTION A-A
DRIVE TYPICAL

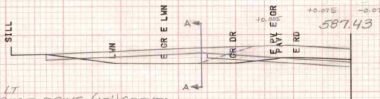


14+50 LT.
BEGIN NEW 6" x 450' UNDERDRAIN
NEW 6" x 58' UNDERDRAIN CARRIER PIPE

14+50 RT.
BEGIN NEW 6" x 400' UNDERDRAIN
NEW 6" X 14' UNDERDRAIN CARRIER PIPE

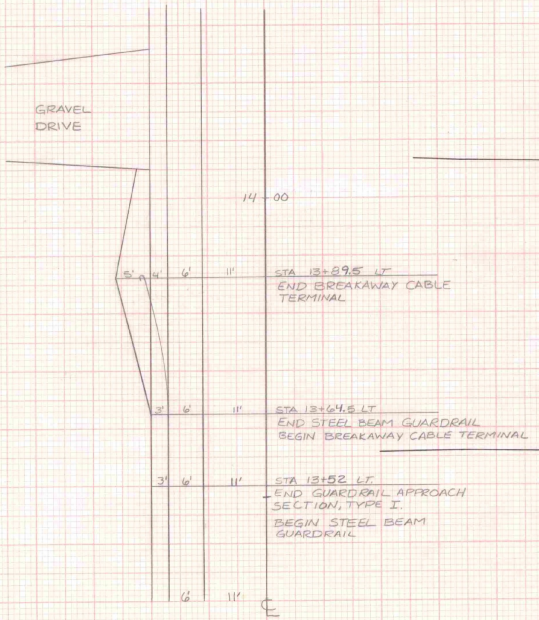


14+39
NEW 18" x 64' OPTION PIPE
(PCCSP.064, CAAP.060, RCP CL III, CPEP(SL))
W/ NEW RCD1 W/ TYPE "A" GRATE



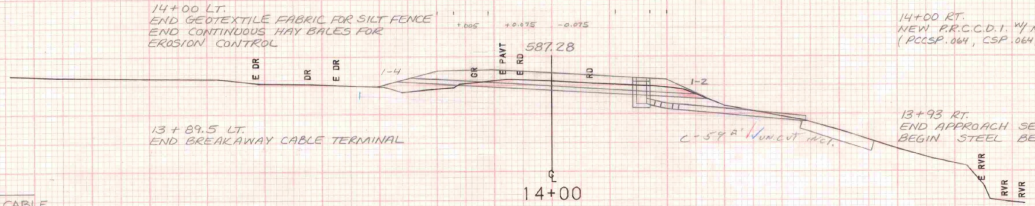
14+12 LT.
CONSTRUCT DRIVE (12') GRAVEL

GUARDRAIL TERMINAL DETAIL



14+00 LT.
END GEOTEXTILE FABRIC FOR SILT FENCE
END CONTINUOUS HAY BALES FOR EROSION CONTROL

14+00 RT.
NEW F.R.C.C.D.1. W/ NEW 12" x 22' OPTION PIPE
(PCCSP.064, CSP.064) W/ NEW 12" ELBOW (10°)



13+89.5 LT.
END BREAKAWAY CABLE TERMINAL

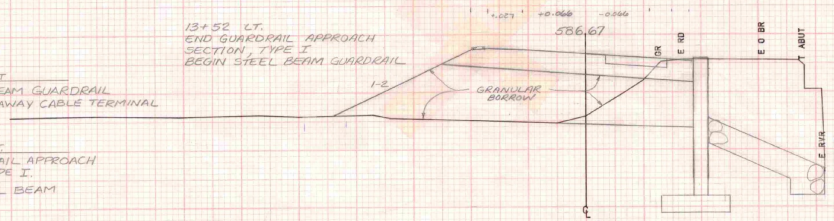
13+93 RT.
END APPROACH SECTION, TYPE I
BEGIN STEEL BEAM GUARDRAIL

13+64.5 LT.
END STEEL BEAM GUARDRAIL
BEGIN BREAKAWAY CABLE TERMINAL

13+72
END GRANULAR BORROW
BEGIN 10" SAND BORROW

13+43 RT. END BRIDGE RAILING - 2 RAIL GALVANIZED BOX BEAM
BEGIN APPROACH SECTION, TYPE I
BEGIN TREATED TIMBER CURB

13+52 LT.
END GUARDRAIL APPROACH SECTION, TYPE I
BEGIN STEEL BEAM GUARDRAIL

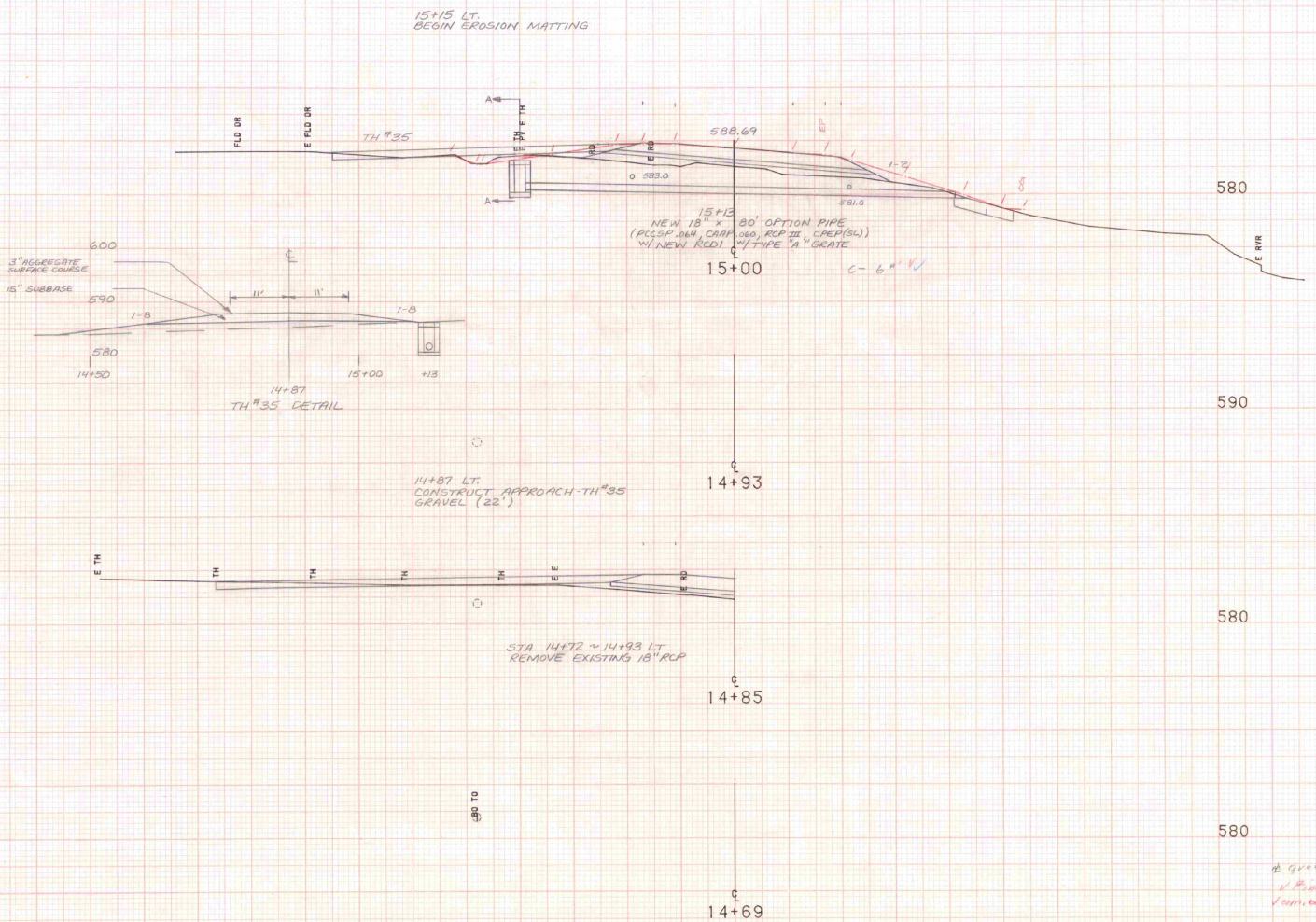


13+40 RT.
BEGIN GEOTEXTILE FOR SILT FENCE
BEGIN CONTINUOUS HAY BALES FOR EROSION CONTROL

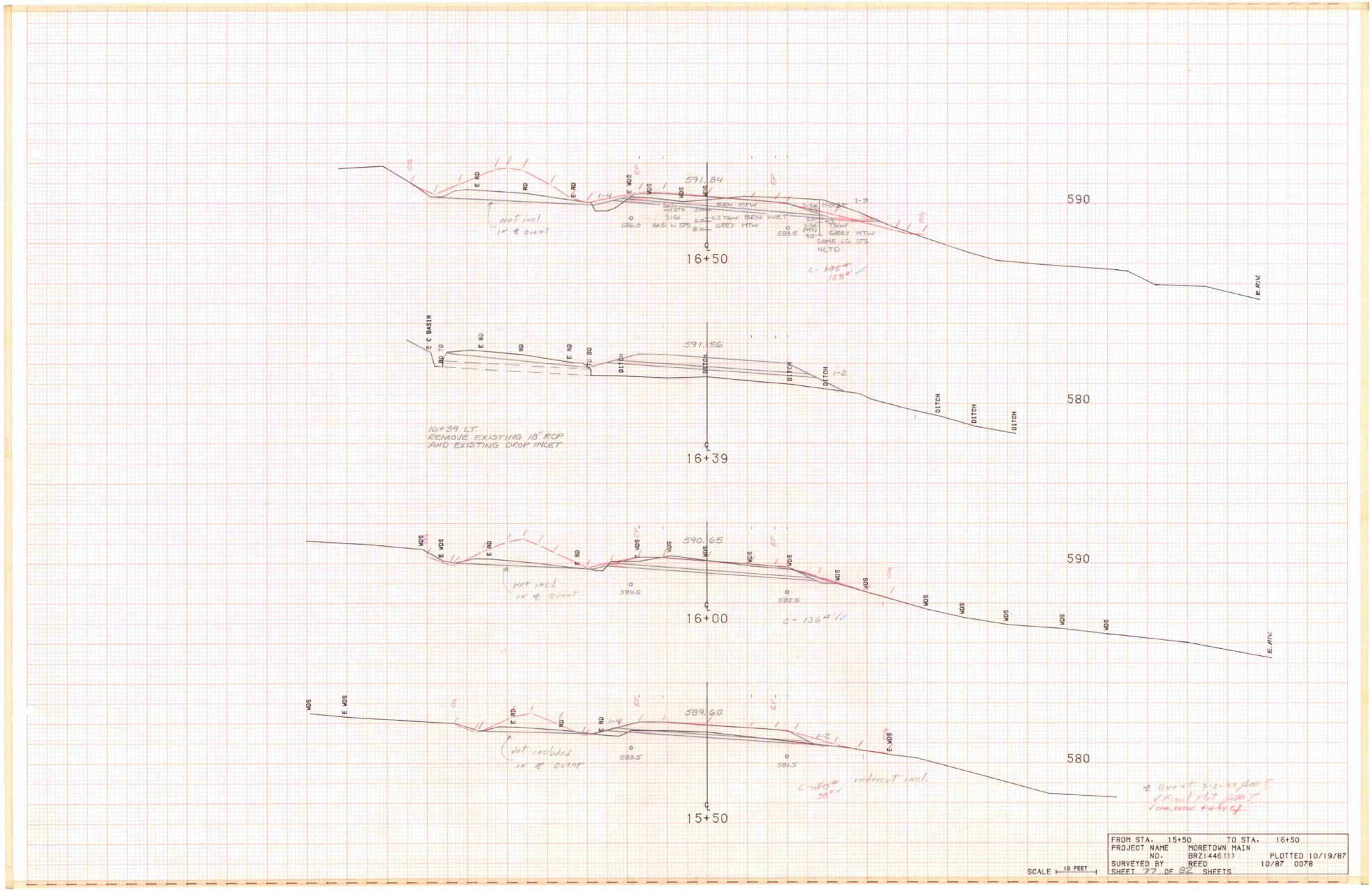
RESUME EXCAVATION OF SURFACES & PAVEMENTS

FROM STA.	13+50	TO STA.	14+50
PROJECT NAME	MORETOWN MAIN		
NO.	BRZ1446(1)		PLOTTED 10/19/87
SURVEYED BY	REED	10/87	0078
SHEET 75 OF 82 SHEETS			

SCALE 10 FEET

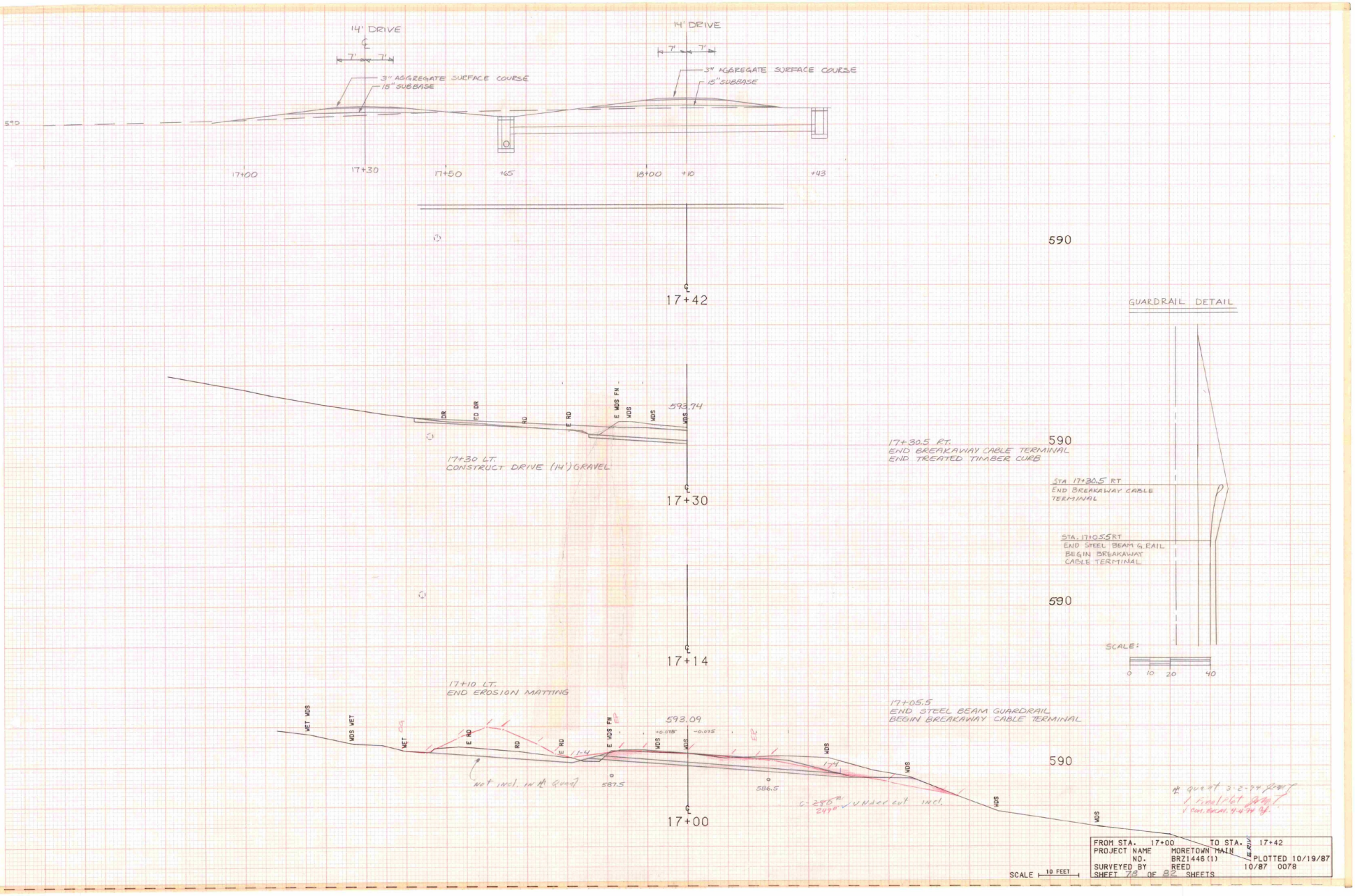


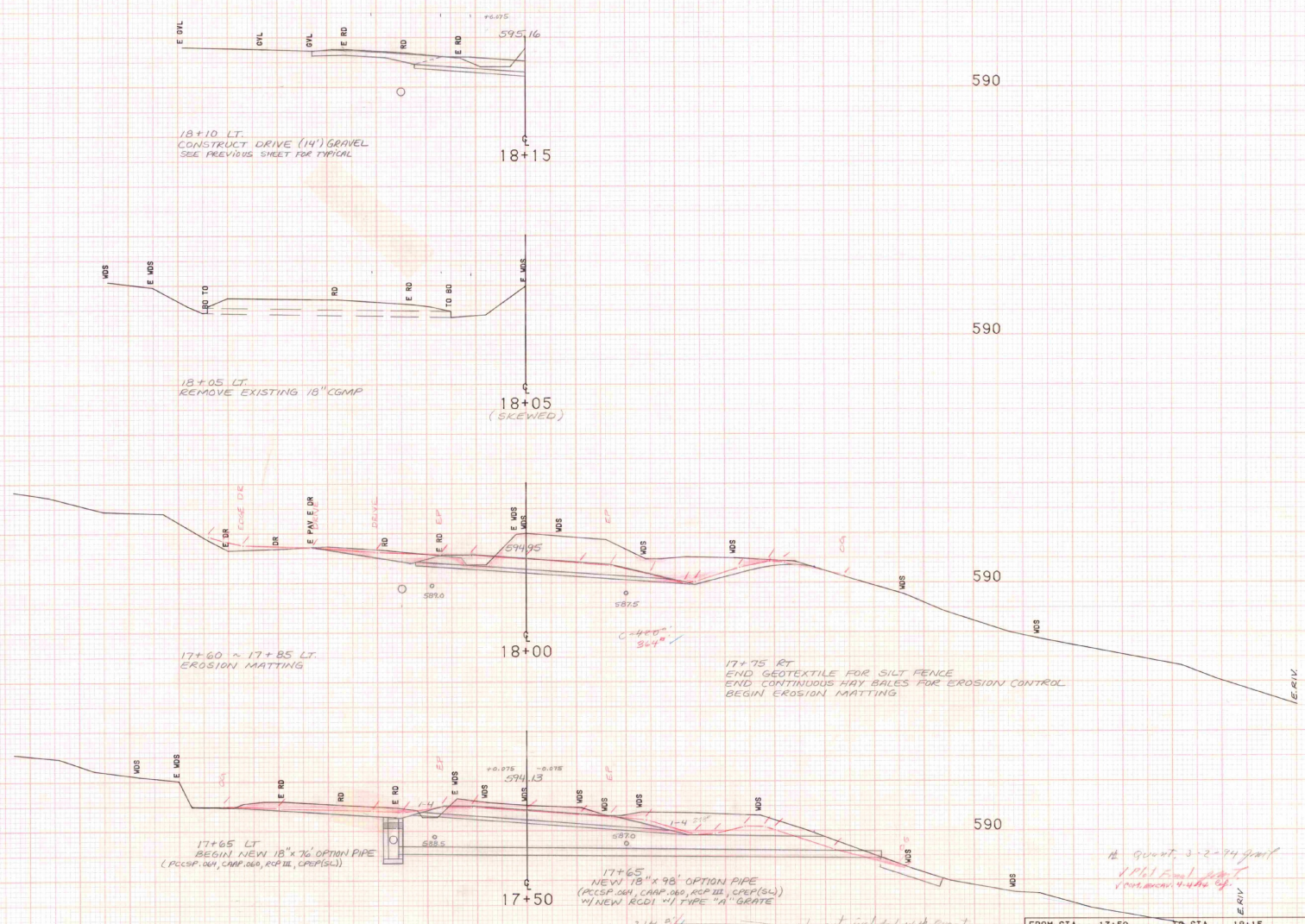
FROM STA. 14+69 TO STA. 15+00
PROJECT NAME MORETOWN MAIN
NO. BRZ1446(1) PLOTTED 10/19/87
SURVEYED BY REED 10/87 0078
SHEET 76 OF 82 SHEETS



FROM STA. 15+50		TO STA. 16+50	
PROJECT NAME	MORETOWN MAIN		
NO.	BRZ1446(1)		PLOTTED 10/19/87
SURVEYED BY	REED	10/87	0078
SHEET 77 OF 82 SHEETS			

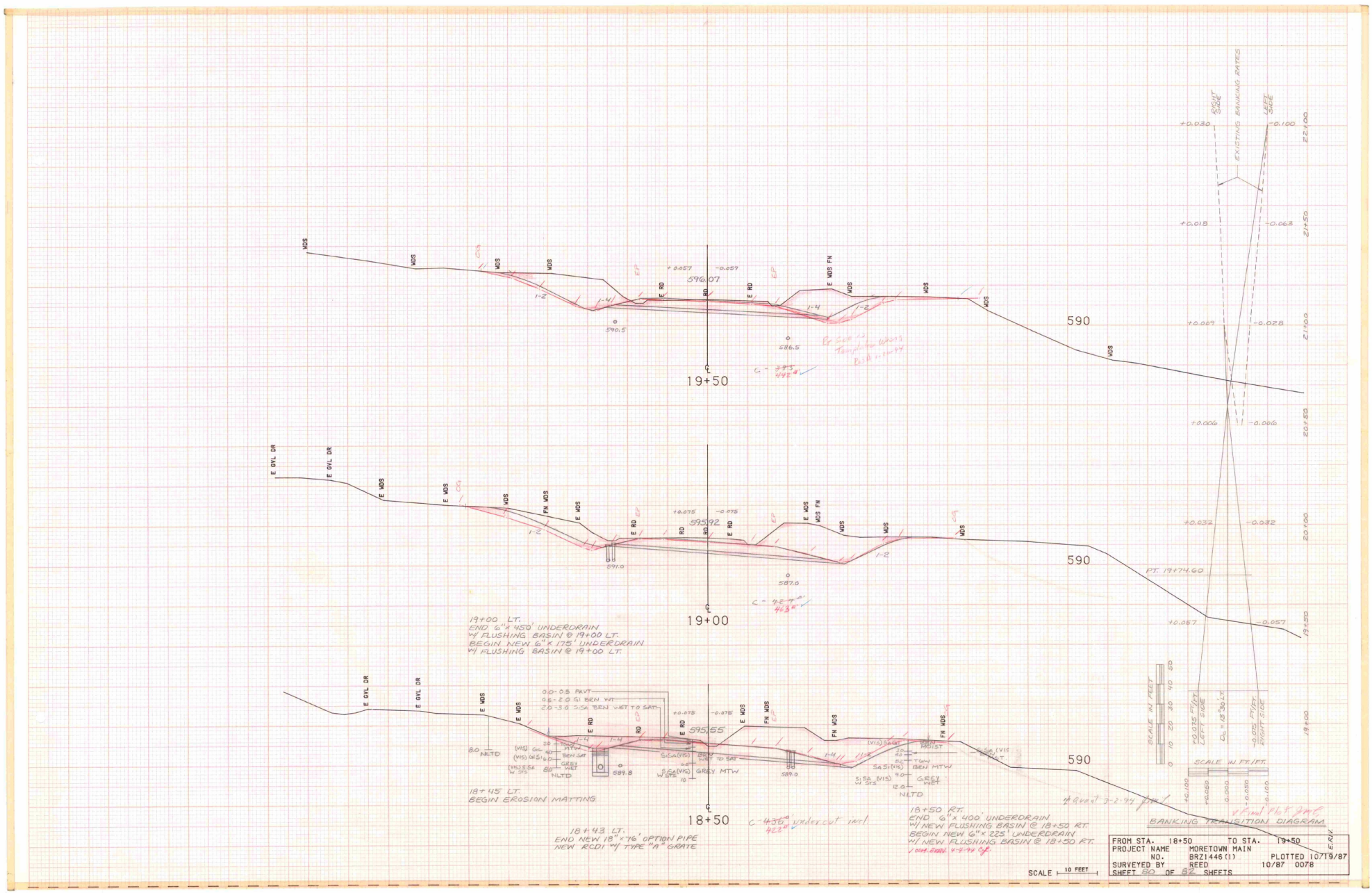
SCALE 10 FEET

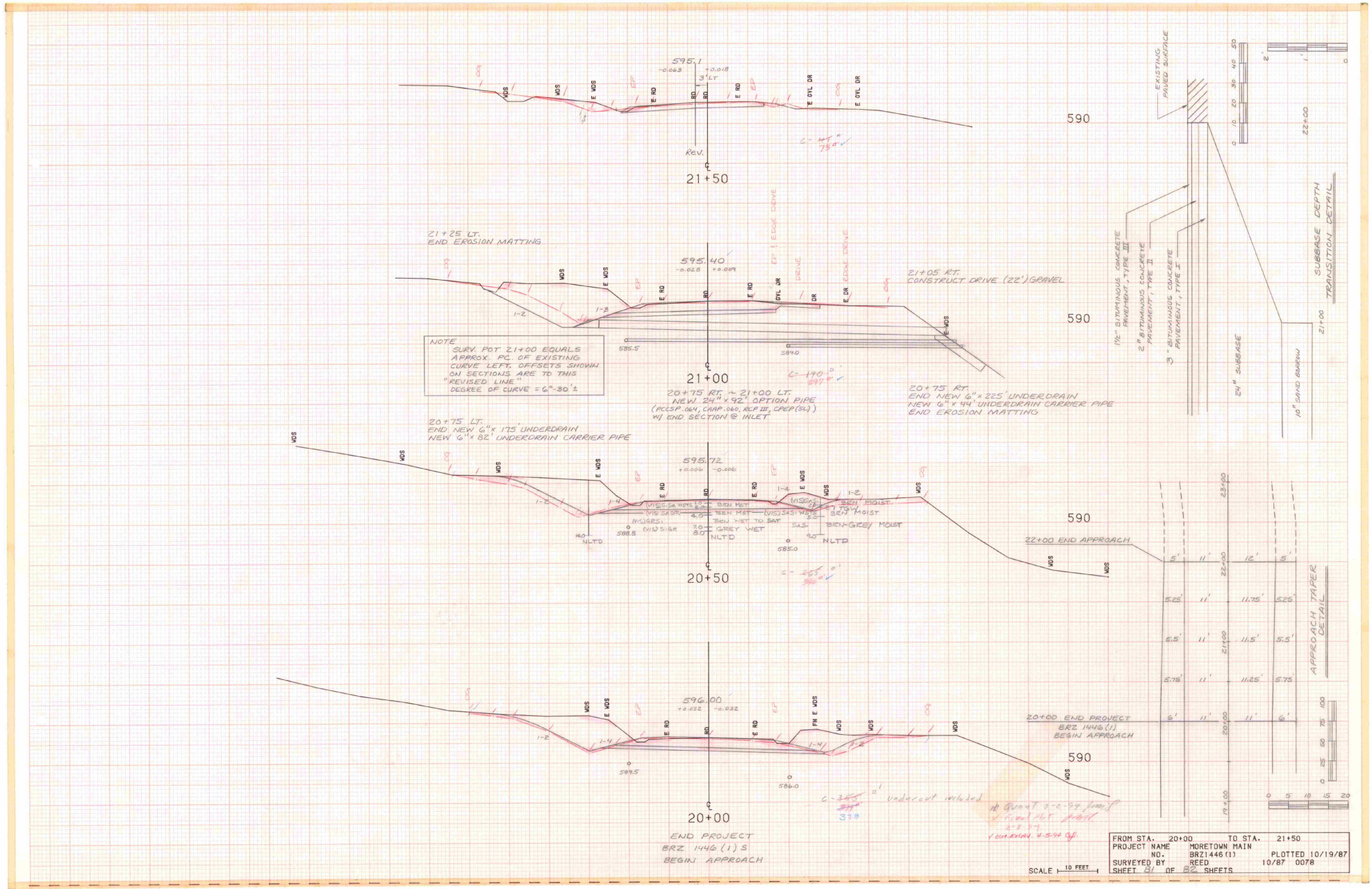

14' DRIVE
7' 7'
3" AGGREGATE SURFACE COURSE
15" SUBBASE
590
17+00
17+30
17+50
+65
18+00
+10
+43
17+42
GUARDRAIL DETAIL
593.74
17+30 LT.
CONSTRUCT DRIVE (14') GRAVEL
17+30.5 RT.
END BREAKAWAY CABLE TERMINAL
END TREATED TIMBER CURB
STA 17+30.5 RT
END BREAKAWAY CABLE TERMINAL
STA. 17+05.5 RT
END STEEL BEAM G. RAIL
BEGIN BREAKAWAY CABLE TERMINAL
17+30
17+14
SCALE:
0 10 20 40
17+10 LT.
END EROSION MATTING
17+05.5
END STEEL BEAM GUARDRAIL
BEGIN BREAKAWAY CABLE TERMINAL
593.09
+0.075
-0.075
WET WDS
WDS WET
WET
E RD
RD
E WDS FN
WDS
1-4
1-4
Not incl. in ℄ Quant
587.5
586.5
C-280 249 ✓ under cut incl.
17+00
SCALE 10 FEET
FROM STA. 17+00 TO STA. 17+42
PROJECT NAME MORETOWN MAIN
NO. BRZ1446(1)
SURVEYED BY REED
SHEET 78 OF 82 SHEETS
PLOTTED 10/19/87
10/87 0078

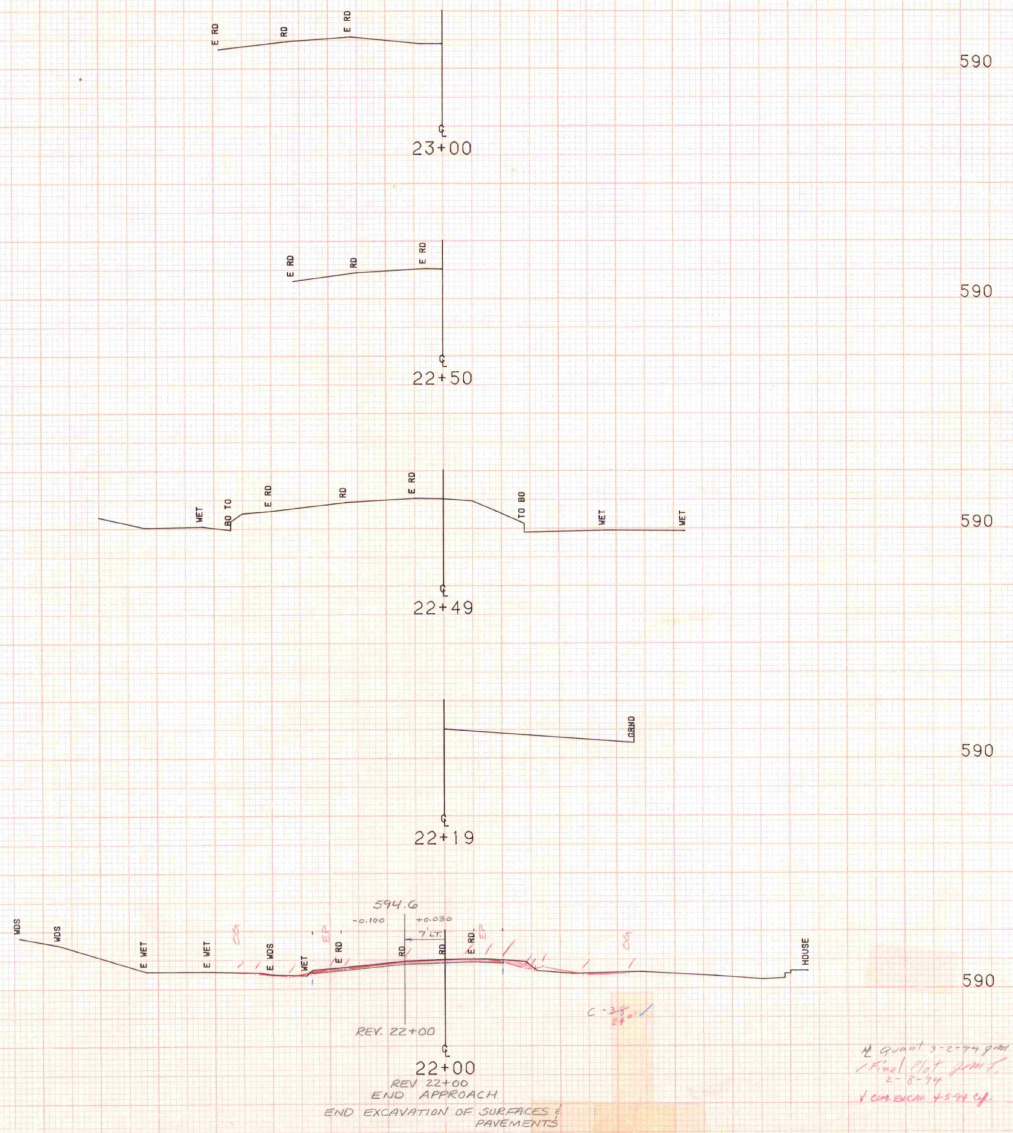


SCALE 10 FEET

FROM STA. 17+50		TO STA. 18+15	
PROJECT NAME	MORETOWN MAIN		
NO.	BRZ1446(1)		PLOTTED 10/19/87
SURVEYED BY	REED		10/87 0078
SHEET 79 OF 82 SHEETS			


19+50
596.07
590.5
586.5
19+00
595.92
591.0
587.0
18+50
595.55
589.8
589.0
18+45 LT.
BEGIN EROSION MATTING
19+00 LT.
END 6"x 450' UNDERDRAIN
W/ FLUSHING BASIN @ 19+00 LT.
BEGIN NEW 6"x 175' UNDERDRAIN
W/ FLUSHING BASIN @ 19+00 LT.
18+43 LT.
END NEW 18"x76' OPTION PIPE
NEW RCDI W/ TYPE "A" GRATE
18+50 RT.
END 6"x 400' UNDERDRAIN
W/ NEW FLUSHING BASIN @ 18+50 RT.
BEGIN NEW 6"x 225' UNDERDRAIN
W/ NEW FLUSHING BASIN @ 18+50 RT.
EXISTING BANKING RATES
RIGHT SIDE
LEFT SIDE
BANKING TRANSITION DIAGRAM
SCALE W. FT./FT.
SCALE 10 FEET
FROM STA. 18+50 TO STA. 19+50
PROJECT NAME MORETOWN MAIN
NO. BRZ1446(1)
SURVEYED BY REED
PLOTTED 10/19/87
10/87 0078
SHEET 80 OF 82 SHEETS


595.1
-0.063
+0.018
3' LT
Rev.
21+50
590
595.40
-0.028
+0.009
21+00
21+25 LT.
END EROSION MATTING
21+05 RT.
CONSTRUCT DRIVE (22') GRAVEL
NOTE
SURV. POT 21+00 EQUALS APPROX. PC. OF EXISTING CURVE LEFT. OFFSETS SHOWN ON SECTIONS ARE TO THIS "REVISED LINE"
DEGREE OF CURVE = 6°-30'±
20+75 RT. ~ 21+00 LT.
NEW 24" x 92' OPTION PIPE
(RCCSP.064, CAAP.060, RCP III, CPEP(SL))
W/ END SECTION @ INLET
20+75 RT.
END NEW 6" x 225' UNDERDRAIN
NEW 6" x 94' UNDERDRAIN CARRIER PIPE
END EROSION MATTING
20+75 LT.
END NEW 6" x 175' UNDERDRAIN
NEW 6" x 82' UNDERDRAIN CARRIER PIPE
595.72
+0.006
-0.006
20+50
22+00 END APPROACH
596.00
+0.032
-0.032
20+00
END PROJECT
BRZ 1446(1) S
BEGIN APPROACH
20+00 END PROJECT
BRZ 1446(1)
BEGIN APPROACH
EXISTING PAVED SURFACE
1½" BITUMINOUS CONCRETE PAVEMENT, TYPE III
2" BITUMINOUS CONCRETE PAVEMENT, TYPE II
3" BITUMINOUS CONCRETE PAVEMENT, TYPE I
24" SUBBASE
10" SAND BORROW
SUBBASE DEPTH TRANSITION DETAIL
APPROACH TAPER DETAIL
FROM STA. 20+00 TO STA. 21+50
PROJECT NAME MORETOWN MAIN
NO. BRZ1446(1) PLOTTED 10/19/87
SURVEYED BY REED 10/87 0078
SHEET 8/ OF 82 SHEETS
SCALE 10 FEET



SCALE 10 FEET

FROM STA. 22+00		TO STA. 23+00	
PROJECT NAME	MORETOWN MAIN		
NO.	BRZ1446(1)		PLOTTED 10/19/87
SURVEYED BY	REED		10/87 0078
SHEET 82 OF 82 SHEETS			

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

1). ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 1990 WITH LATEST REVISIONS AND THE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS

1). AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (A.A.S.H.T.O) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1989 EDITION WITH INTERIMS.

MATERIAL SPECIFICATIONS

1). UNLESS NOTED, ALL STEEL TO BE AASHTO M-270 GR.50W (ASTM A709-50W) UNPAINTED.

2). HIGH STRENGTH BOLTS: AASHTO M164 (ASTM A325) 7/8" DIA., TYPE 3, IN 15/16" DIAMETER HOLES, UNLESS NOTED. BOLTS IN PAINTED AREAS SHALL MEET AASHTO M164 & COATED PER AASHTO M298 CLASS 50 TYPE I.

3). ALL ITEMS DENOTED AS "MAIN TENSION MEMBER" ON THE PLANS SHALL BE CHARPY V NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS. DRAWINGS SHALL CALL OUT "C.V.N." FOR EACH APPLICABLE ITEM IN THE BILLS OF MATERIAL.

4). "BUY AMERICA" PROVISIONS OF VERMONT SPEC. 107.22 & MODIFIED IN SPECIAL PROVISION 45 SHALL BE ADHERED TO.

FABRICATION

1). ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE UNLESS NOTED.

2). ALL HOLES NOTED THUS [DA] SHALL BE DRILLED FROM THE SOLID IN ASSEMBLY.

3). STUDS ARE FURNISHED AND FIELD APPLIED BY OTHERS.

WELDING

1). THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-88 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). SSPC SP-6 TO BE USED ON UNPAINTED STEEL.

2). SSPC SP-10 TO BE USED ON PAINTED STEEL.

PAINTING

1). NONE EXCEPT AS NOTED BELOW.

2). ALL STRUCTURAL STEEL WITHIN EIGHT FEET OF ABUTMENT NO. 1 SHALL BE COATED WITH A PROTECTIVE PAINT SYSTEM IN ACCORDANCE WITH THE CONTRACT DWGS. & THE SUPPLEMENTAL SPEC. SECTION 513 & TABLE 513.02A (FOR SHOP APPLIED COATINGS).

3). SHOP PRIME COAT (WHERE REQD.) SHALL BE A MINIMUM THICKNESS OF 2.0 OR 3.0 MILS & MAXIMUM THICKNESS OF 3.0 TO 6.0 MILS. SUCH THICKNESS (BASED ON BRAND OF PAINT USED) TO CONFORM TO SPECIFICATION AS SHOWN IN NOTE #2 ABOVE.

4). INTERMEDIATE SHOP COAT (WHERE REQD.) SHALL BE A MIN. THICKNESS OF 3.0 OR 4.0 MILS & MAXIMUM THICKNESS OF 5.0 TO 10.0 MILS. SUCH THICKNESS (BASED ON BRAND OF PAINT USED) TO CONFORM TO SPECIFICATION AS SHOWN IN NOTE #2 ABOVE.

5). ALL PAINT TO BE USED WILL BE FROM THE SAME MANUFACTURER.

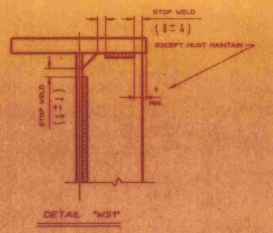
FIELD CONNECTIONS

1). ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH A-325 BOLTS TYPE 3, IN 15/16 DIAMETER HOLES, UNLESS OTHERWISE NOTED.

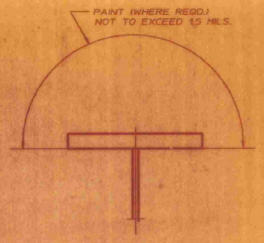
2). BOLTS SHALL HAVE HEAVY HEX NUT, HEX HEAD, & ONE FLAT WASHER EACH (WASHER TO BE PLACED UNDER TURNED ELEMENT).

3). PIECE MARKS WILL BE LOCATED AS SHOWN ON ERECTION DRAWINGS.

4). PIER NOSING, DOWNSPOUTS, SCUPPERS, & HARDWARE TO BE GALVANIZED.



DETAIL "WS1"



DETAIL "TP"

(THIS DETAIL IS ONLY APPLICABLE WITHIN 8 FEET OF ABUTMENT 1)

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MNL

RESERVED FOR STAMPS

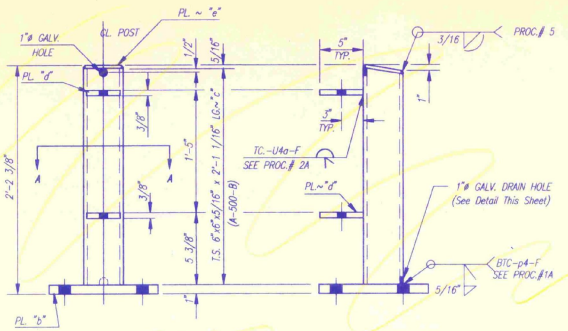
REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

QTY.	DATE	ISSUED TO:	FOR:

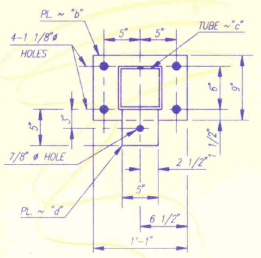
ECSE

EAST COAST STEEL
Bridge Division
Pollock Rd.
South Portland, ME 04106
207-772-1941

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BR2 -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GENERAL NOTES
TENSOR 1401
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: GN1



43 MK "A" POST



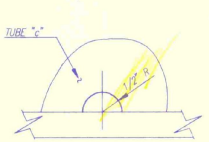
SECTION A-A

Each Post Mk "A" Consisting Of:

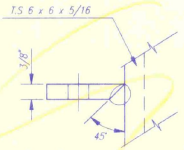
SUB MK	QUAN.	DESCRIPTION
b	1	PL. 9" x 1" x 1'-1" LG. (A36)
c	1	T.S. 6" x 6" x 5/16" x 2'-1 1/16" Lg. (A500B)
d	2	PL. 5" x 3/8" x 5" Lg. (A36)
e	1	PL. 5 5/8" x 5/16" x 5 5/8" Lg. (A36)

BILL OF MATERIAL

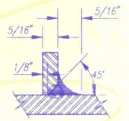
	PRODUCT CODE	MK	QTY	DESCRIPTION	WT	REMARKS
	14392A	A	43	POST (8609)	90#	
	32124A	SP	48	SPLICE (8476)	37#	
*	19710A	AC	4	ANCHOR CONN. (8671)	83#	
	HARDWARE					
	3706G		96	3/4"ø x 4" HEX HD. BOLT		A307 GR.A A153
	3700G		192	3/4" WASHER		F844 A153
	3704G		96	3/4" HEX NUT (HVY)		A563 GR.A A153
*	4584G		4	5/8"ø x 1'-8" LG. SQUARE HD BOLT		A325 A153
	4433G		86	5/8"ø x 4 1/2" LG HEX HD. BOLT		A307 GR.A A153
	4373G		172	5/8" WASHER		F844 A153
	3350G		86	5/8" HEX NUT		A563 GR.A A153
*	4940G		4	1"ø x 1'-10" LG HEX. HD. BOLT		A325 A153
	4902G		4	1" WASHER		F436 A153
	4903G		4	1" HEX NUT		A194 GR.2H A153
	4779G		16	3/4"ø x 4 1/2" LG HEX HD. BOLT		A325 A153
	3685G		16	3/4" LOCKWASHER		F436 A153
	3711G		16	3/4" HEX NUT		A194 GR.2H A153
*	3404G		24	5/8" x 2" LG. HEX HD BOLT		A325 A153
	4372G		28	5/8" WASHER		F436 A153
	3314G		24	5/8" LOCKWASHER		F436 A153
	3351G		28	5/8" HEX NUT		A194 GR.2H A153
	PAY QUANTITIES					
	411'-4" LIN FT.			ITEM NO. 525.31		2-RAIL GALV. BOX BEAM BRIDGE RAILING
*	4 EACH			ITEM NO. 621.70		SPEC. BEAM TO BOX BEAM CONN.



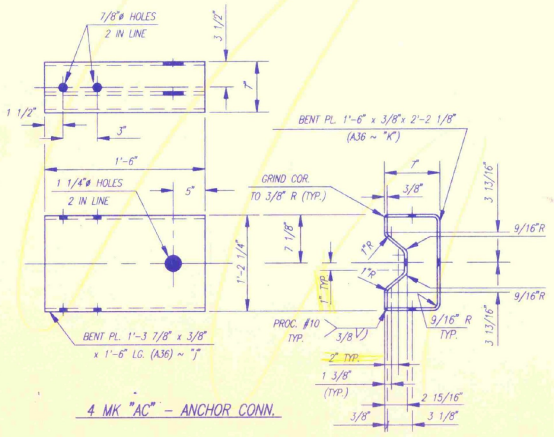
GALV. DRAIN DETAIL



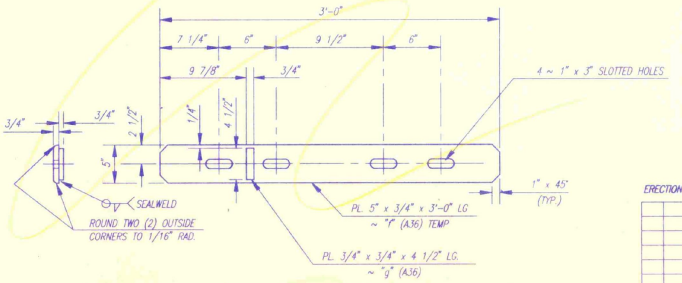
WELD PROC. # 2A
(Tc-U4a-F)



WELD PROC. # 1A
(BTC-p4-F)



4 MK "AC" – ANCHOR CONN.



48 MK "SP" – SPLICE

ERECTION DETAILS ARE ON SHEETS E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

HARDWARE NOTE:

VERMONT DEPT. OF HIGHWAYS HIGH STRENGTH HARDWARE A325 OR A449 REQUIRES MANUFACTURER'S CERTIFICATE SHOWING HEAT NO, PHYSICAL PROPERTIES AND CHEMICAL ANALYSIS.

CARBON A307 HARDWARE REQUIRES THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE.

RECEIVED CK'D BY FLD CK'D BY EN APPROVAL DRAWINGS JUL 19 1993 RESUBMIT APPROVED BY RPG DATE 7/22/93

NOTES:
1. ALL POSTS TO BE CHARPY V NOTCH TESTED
2. INSPECTED BY CONWELL
3. FINISH: GALV A123

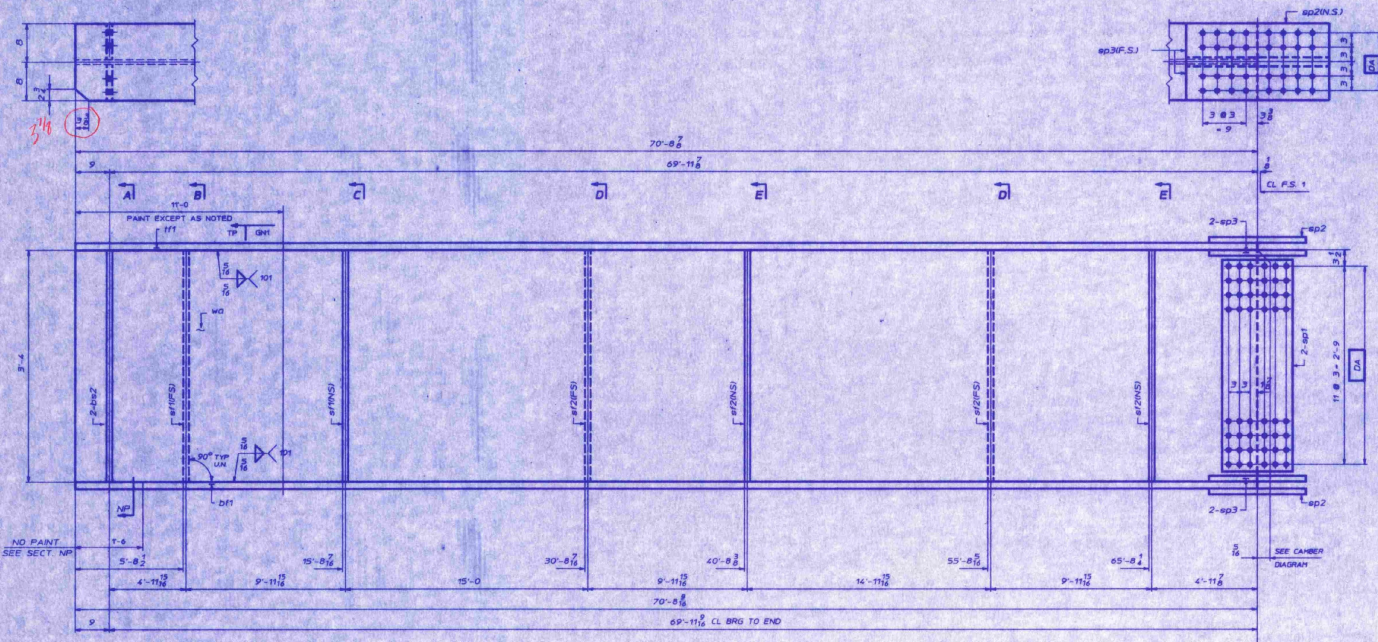
ISSUED JUL 15 1993

CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL – (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT. 100B OVER MAD RIVER
PROJECT NO. BRZ – 1446 (1)

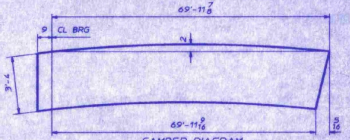
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO	22-3308Z
DRAWN	FLD
CHECKED	E.N.
APPROVED	
DATE	5/26/93
SCALE	NONE
DRAWING NO.	22-3082
	1 OF 2

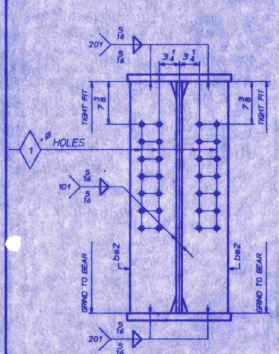




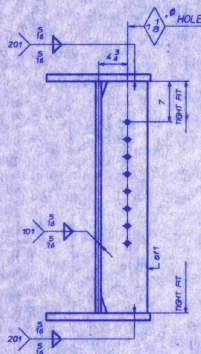
SECTION NP



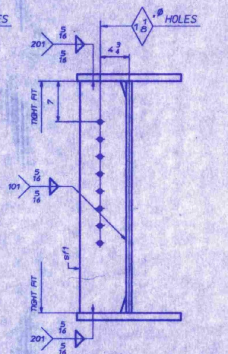
CAMBER DIAGRAM



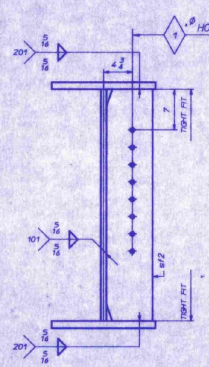
SECTION-A



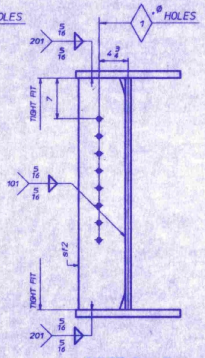
SECTION-B



SECTION-C



SECTION-D



SECTION-E

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG GN1.
HOLES TO BE 15/16 ø U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

ASM INFO		SHP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-6	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G4A	1		GIRDER					
1	T		1	WG	PL 1/2 x 42	70	8 9/16	(CVN)		
1	P		1	tf1	PL 1 x 16	70	8 9/16	(CVN)		
1	P		1	bf1	PL 1 x 16	70	8 9/16	(CVN)		
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)		
3	G		2	sp2	PL 5/8 x 16	2	4 1/2	(CVN)		
3	H		4	sp3	PL 5/8 x 7	2	4 1/2	(CVN)		
3	B		2	bs2	PL 5/8 x 7 3/4	3	4			
3	B		2	sf1	PL 5/8 x 7 3/4	3	4			
3	B		4	sf2	PL 5/8 x 7 3/4	3	4			

RECEIVED
OKD BY SPW OKD BY BLD
MAR 04 1993
RESOLVIT APPROVED AS NOTED
BY DATE 3/10/93

REV	DATE	DESCRIPTION
1	2-22-93	J.A. MacDonald
5	2-23-93	VT AOT

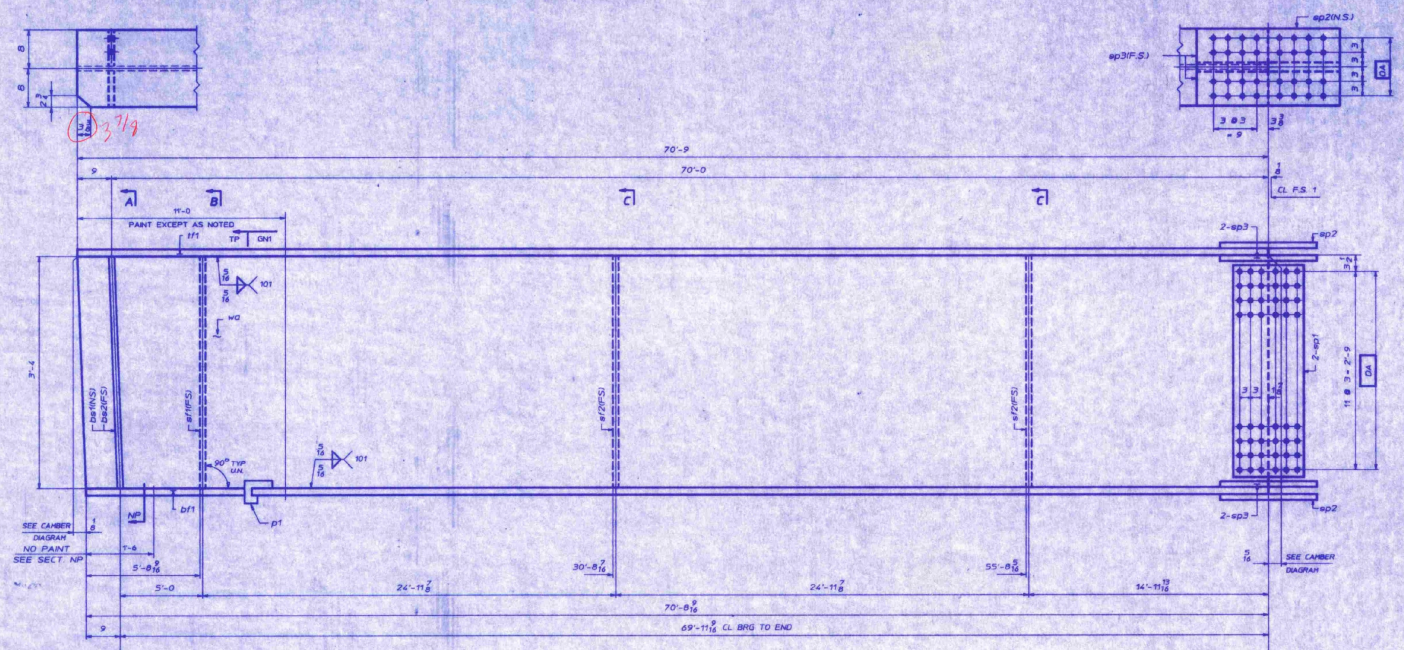
RESERVED FOR STAMPS

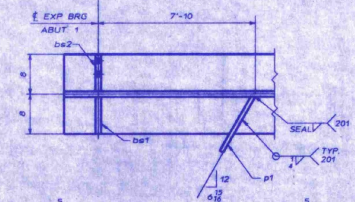
QTY	DATE	ISSUED TO:	FOR:
			FOR APPROVAL
			FOR FABRICATION

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1842

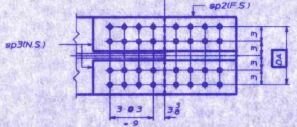
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G4A
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-6

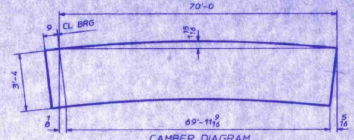




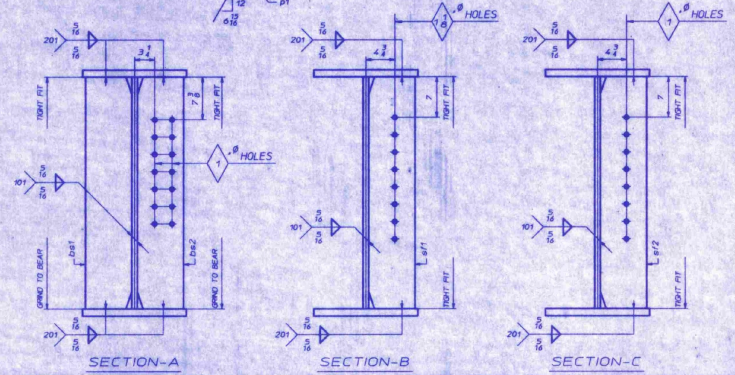


SECTION NP





CAMBER DIAGRAM



SECTION-A SECTION-B SECTION-C

ASM INFO. PAGE	LINE	SHP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G5A	1		GIRDER					
1	T		1	wa	PL 2 x 41 15/16	70	9	(CVN)		
1	P		1	tf1	PL 1 x 16	70	9	(CVN)		
1	P		1	bf1	PL 1 x 16	70	8 9/16	(CVN)		
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)		
3	G		2	sp2	PL 1/2 x 16	2	4 1/2	(CVN)		
3	H		4	sp3	PL 1/2 x 7	2	4 1/2	(CVN)		
3	B		1	bs1	PL 5/8 x 7 3/4	3	4			
3	B		1	bs2	PL 5/8 x 7 3/4	3	4			
3	B		1	sf1	PL 5/8 x 7 3/4	3	4			
3	B		2	sf2	PL 5/8 x 7 3/4	3	4			
3	Q		1	p1	PL 1/4 x 3	0	11			

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 13/16 Ø U.N.
NO PAINT EXCEPT AS NOTED.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

JOB NO. 93-01-0775
DRAWING NO. 52-7
REV.

RECEIVED
CKD BY CFW CKD BY ELD
MAR 04 1993
RESUBMIT ____ APPROVED AS NOTED
BY
DATE 3/11/93

REV	DATE	DESCRIPTION
1	2-22-93	J.A. McDonald
2	3-22-93	VT AOT

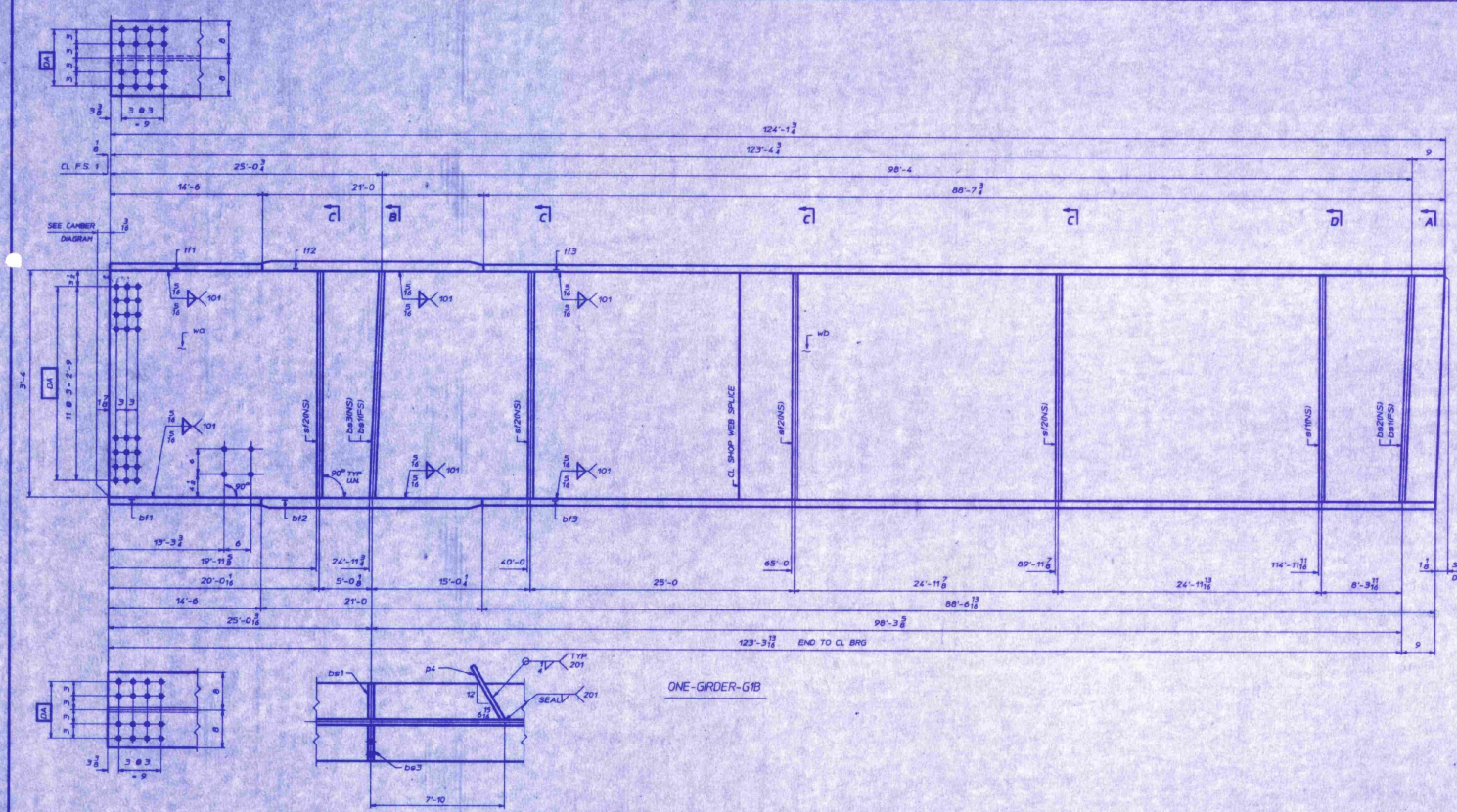
RESERVED FOR STAMPS

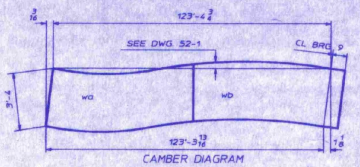
QTY DATE ISSUED TO: FOR:
FOR APPROVAL
FOR APPROVAL

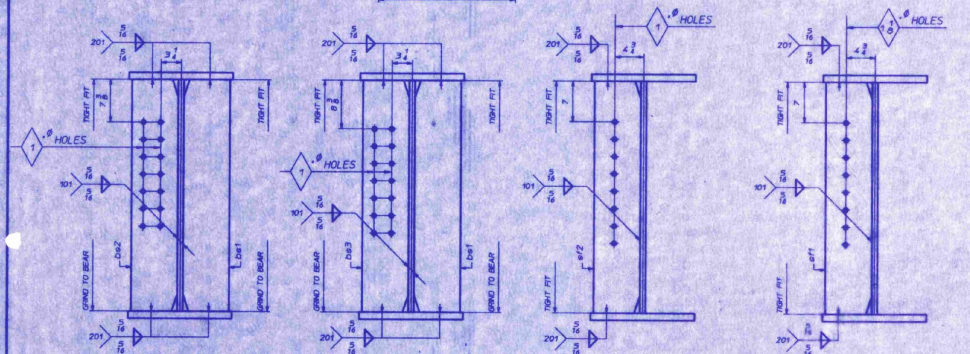
ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G5A TENSOR 1461
DRAWN BY: JAK JOB NUMBER 93-01-0775 SHEET NUMBER 52-7
CHECKED BY: JB 2-93







ASH INFO PAGE	LINE	SHP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G1B	1		GIRDER					
1	V		1	wc	PL $\frac{7}{16}$ x 41 $\frac{7}{8}$	59	9 $\frac{1}{8}$	(CVN)		
2	A		1	wb	PL $\frac{7}{16}$ x 41 $\frac{7}{8}$	64	4 $\frac{15}{16}$	(CVN)		
1	R		1	tf1	PL 1 x 16	14	6	(CVN)		
1	B		1	tf2	PL 1 $\frac{1}{8}$ x 16	21	0	(CVN)		
1	D		1	tf3	PL 1 x 16	88	7 $\frac{3}{4}$	(CVN)		
1	R		1	bf1	PL 1 x 16	14	6	(CVN)		
1	B		1	bf2	PL 1 $\frac{1}{8}$ x 16	21	0	(CVN)		
1	D		1	bf3	PL 1 x 16	88	6 $\frac{13}{16}$	(CVN)		
3	B		4	sf2	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		1	bs3	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		2	bs1	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		1	sf1	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		1	bs2	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	R		1	b4	PL $\frac{1}{2}$ x 3 $\frac{3}{8}$	0	11			

JOB NO. 93-01-0775 | DRAWING NO. 52-8 | REV.

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ϕ U.N.
NO PAINT EXCEPT AS NOTED.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

RECEIVED
CK'D BY STM CK'D BY BLD
MAR 04 1993
RESUBMIT ____ APPROVED ✓
BY James B. McCulloch DATE 3/10/93

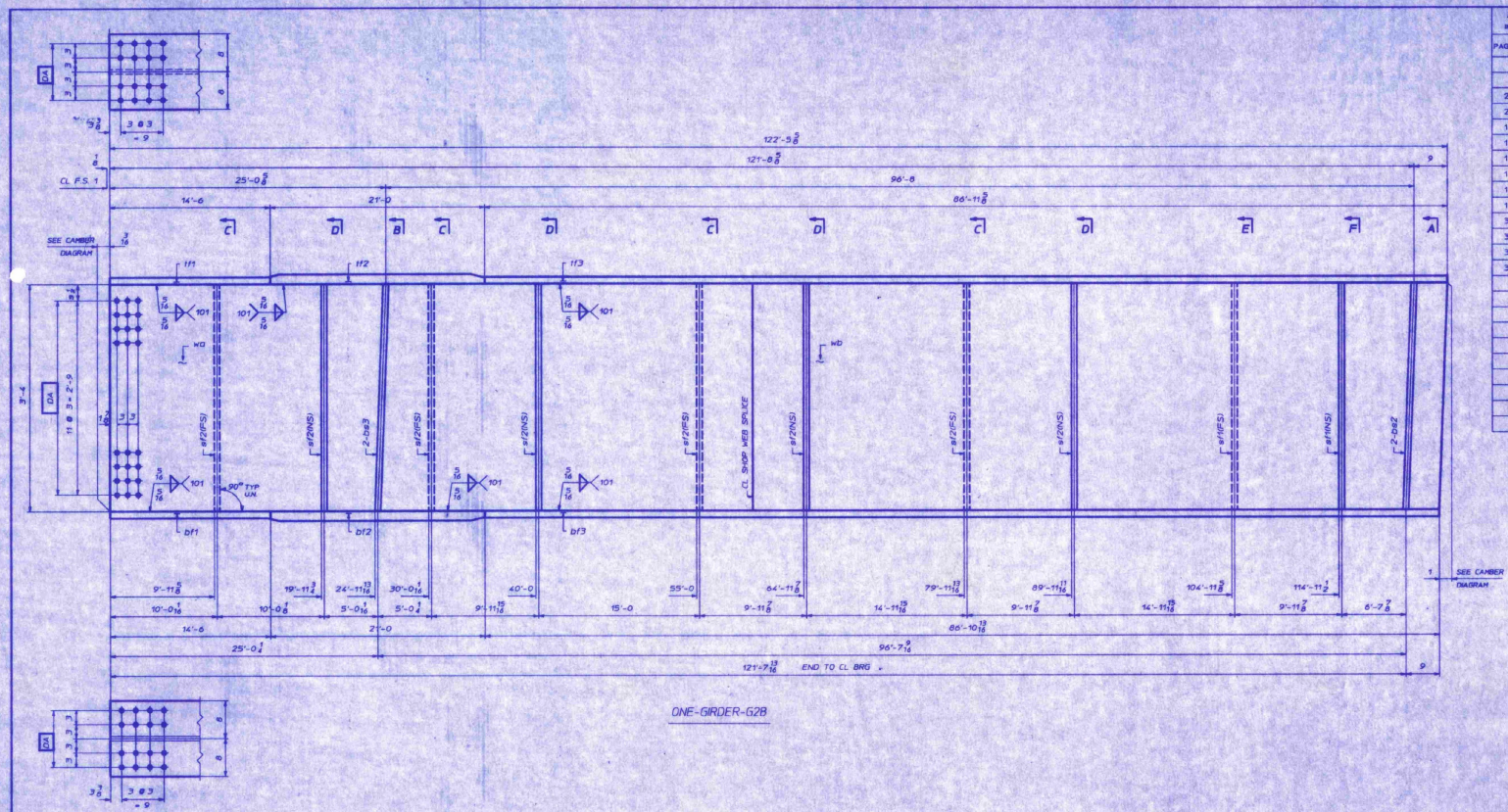
RESERVED FOR STAMPS

REV	DATE	DESCRIPTION
1	2-22-93	J.A. McDonald — FOR APPROVAL
5	2-12-93	VT. DOT — FOR APPROVAL

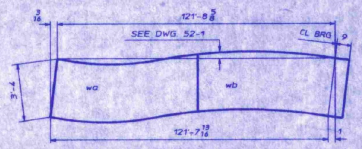
QTY. DATE ISSUED TO: FOR:

ECSE
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

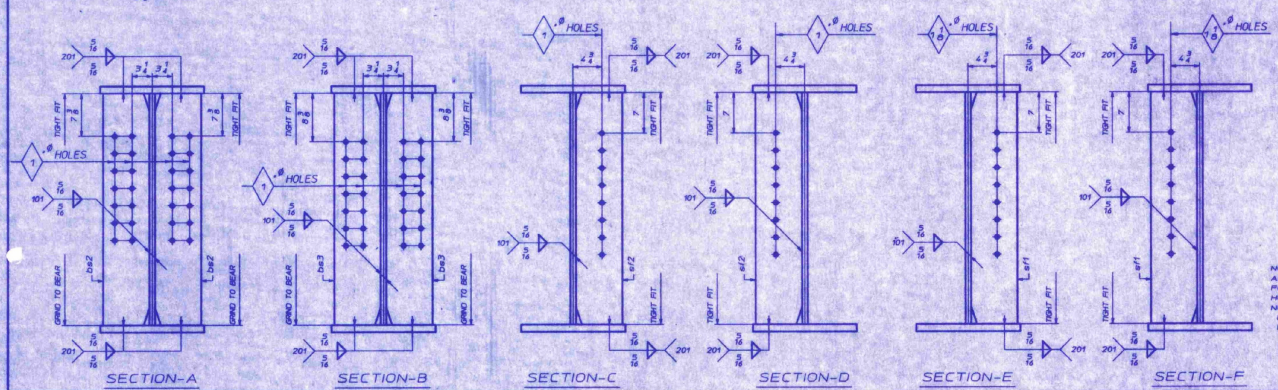
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G1B TENSOR 1461
DRAWN BY: JAK JOB NUMBER: 93-01-0775 SHEET NUMBER: 52-8
CHECKED BY: JB 2-93



ONE-GIRDER-G2B



CAMBER DIAGRAM



SECTION-A SECTION-B SECTION-C SECTION-D SECTION-E SECTION-F

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-9	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G2B	1		GIRDER					
2	E		1	wa	PL 1/2 x 41 3/4	59	9 1/8	(CVN)		
2	C		1	wb	PL 1/2 x 41 5/8	62	8 13/16	(CVN)		
1	R		1	tf1	PL 1 x 16	14	6	(CVN)		
1	B		1	tf2	PL 1 7/8 x 16	21	0	(CVN)		
1	F		1	tf3	PL 1 x 16	86	11 5/8	(CVN)		
1	R		1	bf1	PL 1 x 16	14	6	(CVN)		
1	B		1	bf2	PL 1 7/8 x 16	21	0	(CVN)		
1	F		1	bf3	PL 1 x 16	86	10 13/16	(CVN)		
3	B		8	sf2	PL 7/8 x 7 3/4	3	4			
3	B		2	bs3	PL 7/8 x 7 3/4	3	4			
3	B		2	sf1	PL 7/8 x 7 3/4	3	4			
3	B		2	bs2	PL 7/8 x 7 3/4	3	4			

RECEIVED
DWG BY CFW DWG BY BLD
MAR 04 1993
RESUBMIT APPROVED ✓
BY DATE 3/10/93
James M. Kaely

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ø U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

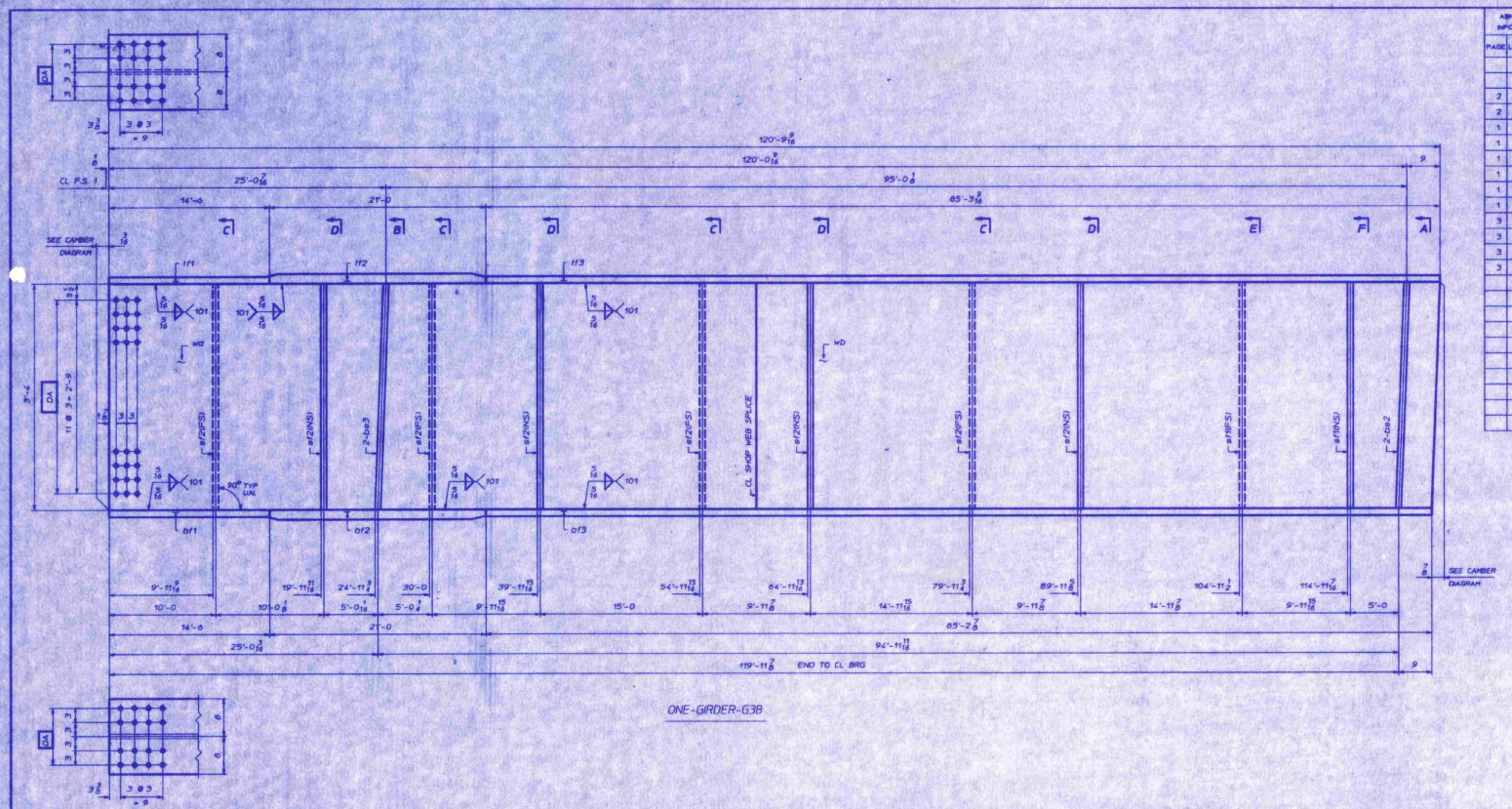
RESERVED FOR STAMPS

REV	DATE	DESCRIPTION	QTY.	DATE	ISSUED TO:	FOR:
5						
4						
3						
2			1	2-22-93	J.A. McDONALD	FOR APPROVAL
1			3	2-22-93	VT AOT	FOR APPROVAL

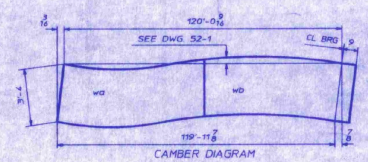
ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

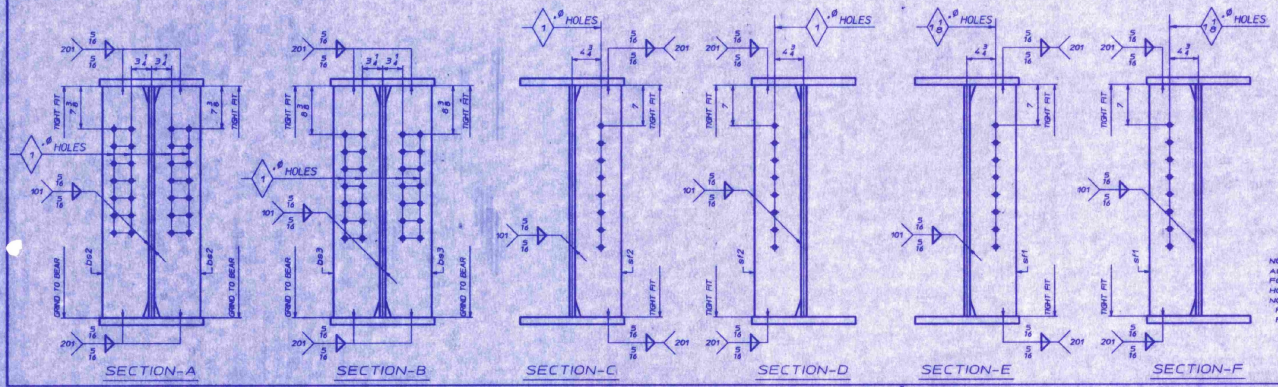
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G2B — TENSOR 1461
DRAWN BY: JAK — JOB NUMBER: 93-01-0775 — SHEET NUMBER: 52-9
CHECKED BY: JB 2-93



ONE-GIRDER-G3B



CAMBER DIAGRAM



SECTION-A SECTION-B SECTION-C SECTION-D SECTION-E SECTION-F

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-10	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G3B	1		GIRDER					
2	E		1	wa	PL 1/2 x 41 3/4	59	9 1/8	(CVN)		
2	G		1	wb	PL 1/2 x 41 1/2	61	0 3/4	(CVN)		
1	R		1	tf1	PL 1 x 16	14	6	(CVN)		
1	B		1	tf2	PL 1 7/8 x 16	21	0	(CVN)		
1	H		1	tf3	PL 1 x 16	85	3 9/16	(CVN)		
1	R		1	bf1	PL 1 x 16	14	6	(CVN)		
1	B		1	bf2	PL 1 7/8 x 16	21	0	(CVN)		
1	H		1	bf3	PL 1 x 16	85	2 7/8	(CVN)		
3	B		8	sf2	PL 7/8 x 7 3/4	3	4			
3	B		2	bs3	PL 7/8 x 7 3/4	3	4			
3	B		2	sf1	PL 7/8 x 7 3/4	3	4			
3	B		2	bs2	PL 7/8 x 7 3/4	3	4			

RECEIVED
CK'D BY CFW CK'D BY BLD
MAR 04 1993
RECEIVING ___ APPROVED ✓
BY James B. McCally DATE 3/10/93

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ø U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

RESERVED FOR STAMPS

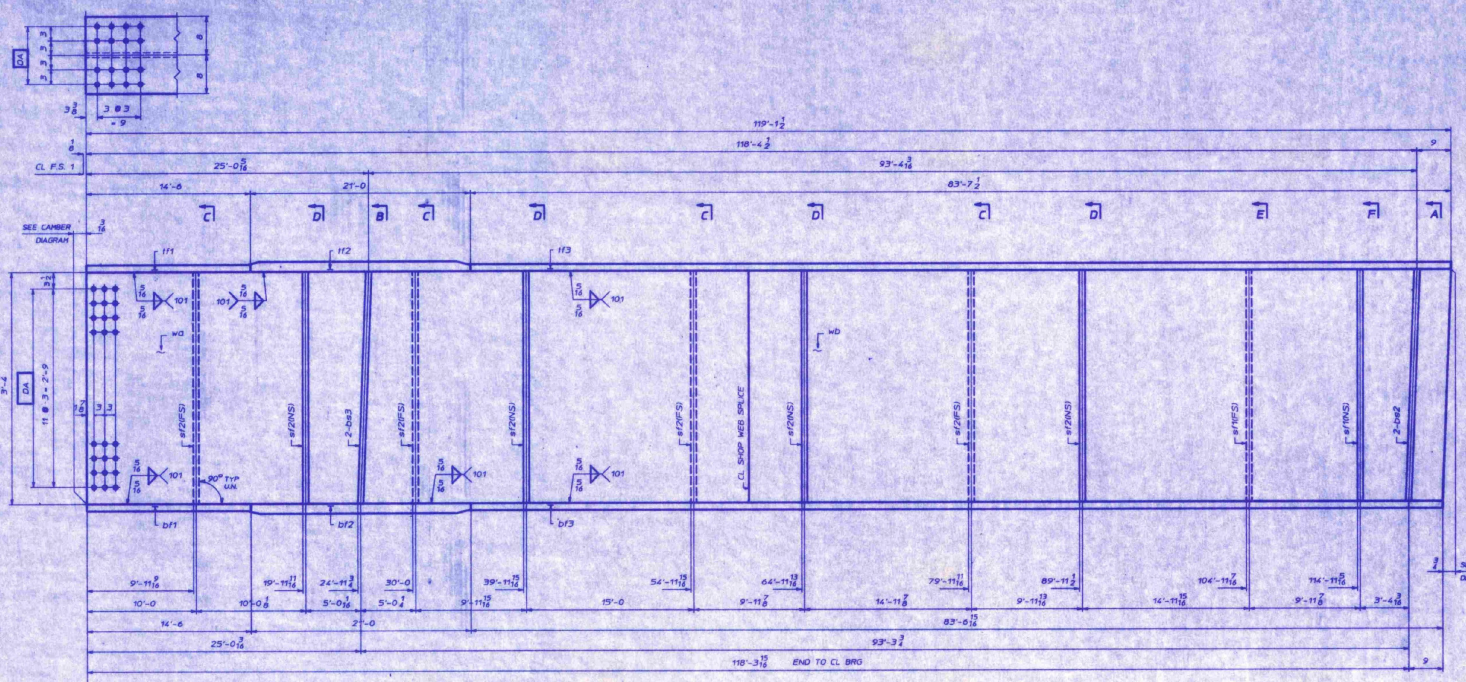
REV	DATE	DESCRIPTION
5		
4		
3		
2		
1		

QTY	DATE	ISSUED TO	FOR
1	2-22-93	J.A. McDONALD	FOR APPROVAL
5	2-22-93	VT AOT	FOR APPROVAL

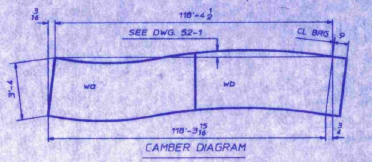
ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G3B
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-10

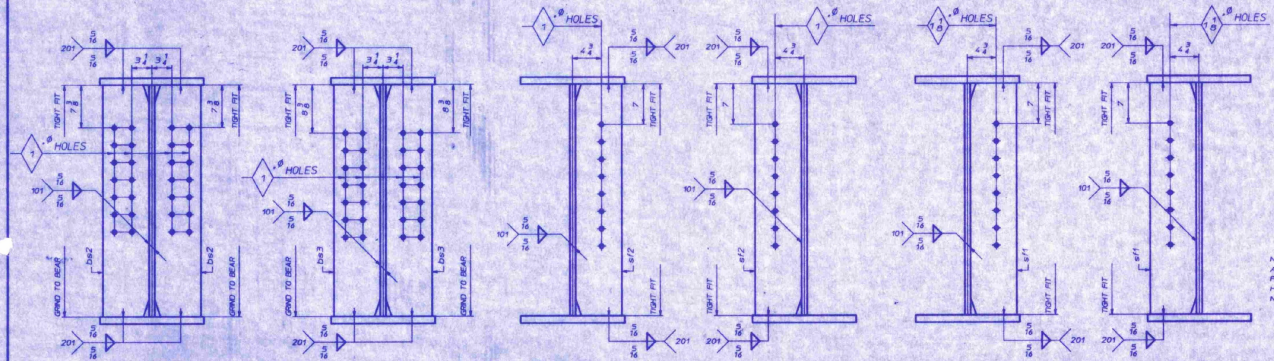


ONE-GIRDER-G4B



CAMBER DIAGRAM

ASH INFO PAGE	ASH INFO LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS
		G4B	1		GIRDER			
2	E		1	wc	PL 1/2 x 41 3/4	59	9 5/8	(CVN)
2	J		1	wb	PL 1/2 x 41 5/8	59	6 11/16	(CVN)
1	R		1	tf1	PL 1 x 16	14	6	(CVN)
1	B		1	tf2	PL 1 1/8 x 16	21	0	(CVN)
1	K		1	tf3	PL 1 x 16	83	7 1/2	(CVN)
1	R		1	bf1	PL 1 x 16	14	6	(CVN)
1	B		1	bf2	PL 1 1/8 x 16	21	0	(CVN)
1	K		1	bf3	PL 1 x 16	83	6 15/16	(CVN)
3	B		8	sf2	PL 7/8 x 7 3/4	3	4	
3	B		2	bs3	PL 7/8 x 7 3/4	3	4	
3	B		2	sf1	PL 7/8 x 7 3/4	3	4	
3	B		2	bs2	PL 7/8 x 7 3/4	3	4	



NOTES
ALL MATERIAL TO BE M270-50W (A709-50W)
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 15/16 ø U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR F.C.G. ASSEMBLY DIAGRAM SEE DWG. 52-2

RECEIVED
DWG BY CFW DWG BY BLD
MAR 04 1993
RECEIVED BY Jennifer M. Smith APPROVED DATE 3/1/93

REV	DATE	DESCRIPTION
1	2-23-93	J.A. McDonald
2	2-23-93	VT AGT

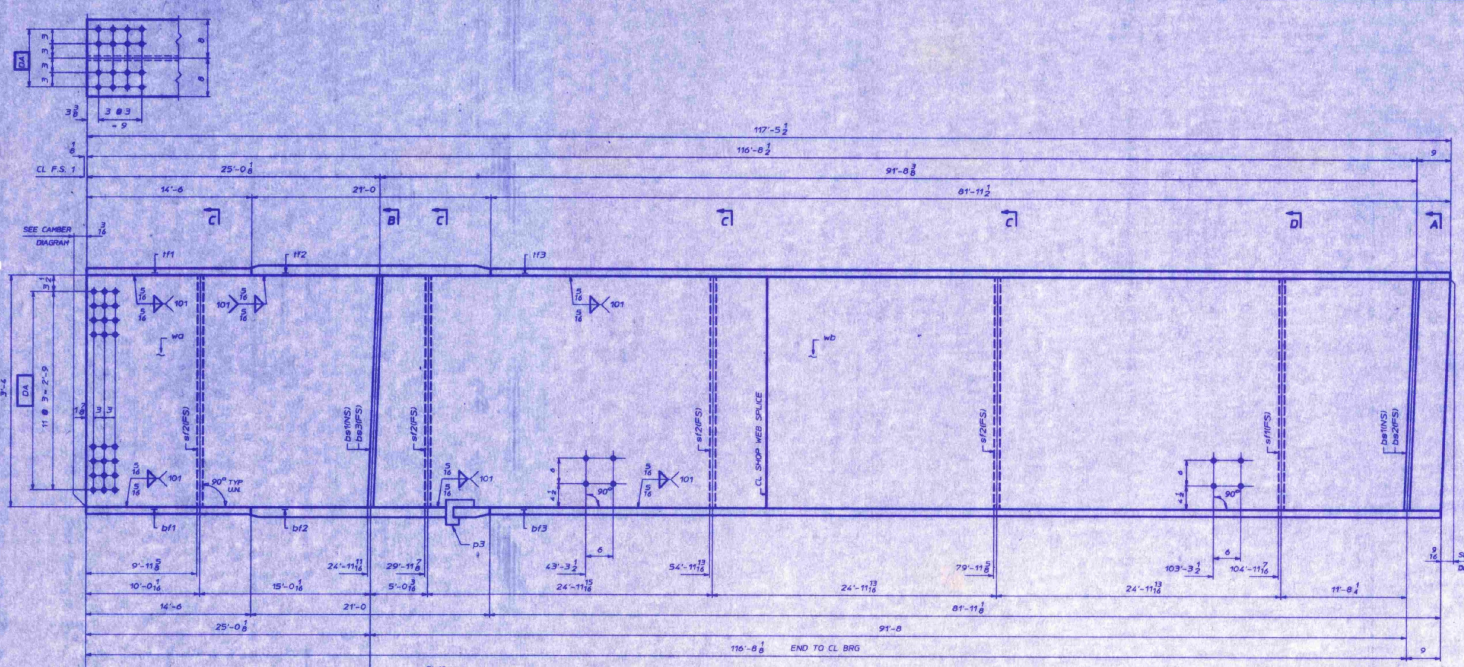
RESERVED FOR STAMPS

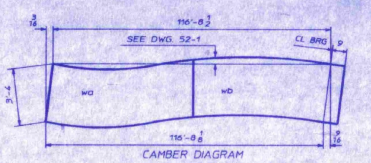
QTY	DATE	ISSUED TO:	FOR:
			FOR APPROVAL
			FOR APPROVAL

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1662

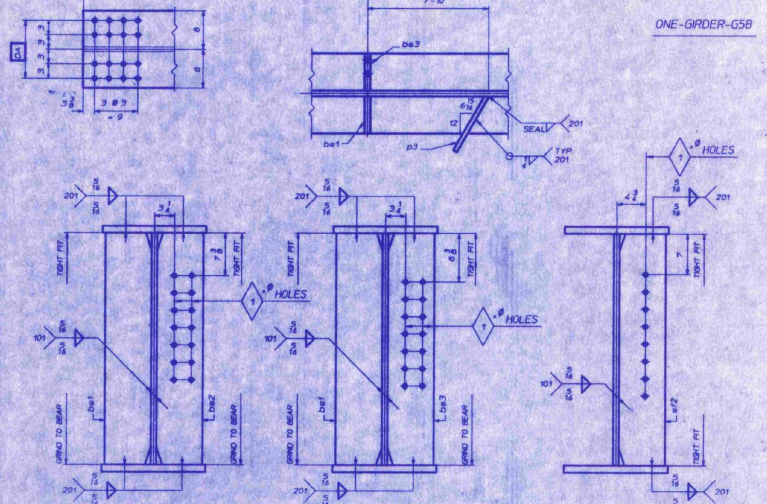
PROJECT: VT RTE 100B OVER THE MAD RIVER
LOCATION: PROJ. NO. BRZ-5466(1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G4B
TENSOR 1481
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-11





ABM INFO PAGE	LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G5B	1		GIRDER					
2	E		1	WG	PL $\frac{1}{2}$ x 41 $\frac{3}{4}$	59	9 $\frac{5}{8}$	ICVN		
2	L		1	WD	PL $\frac{1}{2}$ x 41 $\frac{3}{4}$	57	8 $\frac{11}{16}$	ICVN		
1	R		1	tf1	PL 1 x 16	14	6	ICVN		
1	B		1	tf2	PL 1 $\frac{1}{8}$ x 16	21	0	ICVN		
1	M		1	tf3	PL 1 x 16	81	11 $\frac{1}{2}$	ICVN		
1	R		1	bf1	PL 1 x 16	14	6	ICVN		
1	B		1	bf2	PL 1 $\frac{1}{8}$ x 16	21	0	ICVN		
1	M		1	bf3	PL 1 x 16	81	11 $\frac{1}{2}$	ICVN		
3	B		4	sf2	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		2	be1	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		1	be3	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		1	sf1	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	B		1	be2	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	3	4			
3	R		1	p3	PL $\frac{1}{4}$ x 3 $\frac{5}{8}$	0	11			

JOB NO. 93-01-0775 | DRAWING NO. 52-12 | REV.



NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W)
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 15/16 ϕ U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

RECEIVED
ORIG BY CPW CKD BY BLD
MAR 04 1993
RESUBMIT ____ APPROVED ✓
BY James B. McDaniel DATE 3/10/93

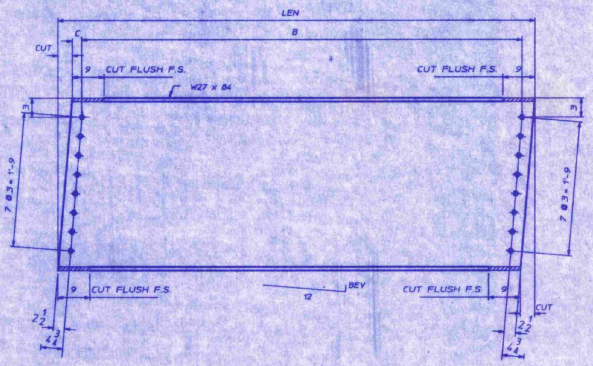
REV	DATE	DESCRIPTION
1	2-22-93	J.A. MacDonald
5	2-22-93	V.T. AOT

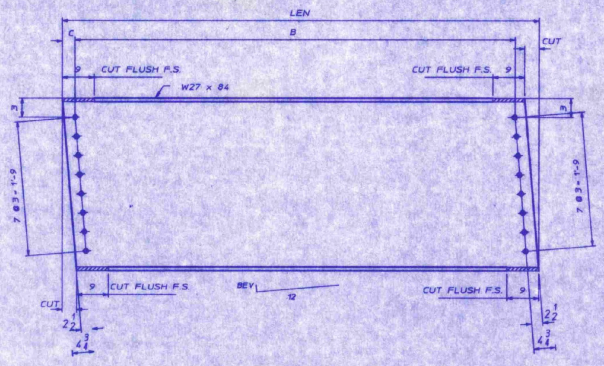
RESERVED FOR STAMPS

FOR APPROVAL
FOR APPROVAL

ECSE
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1662

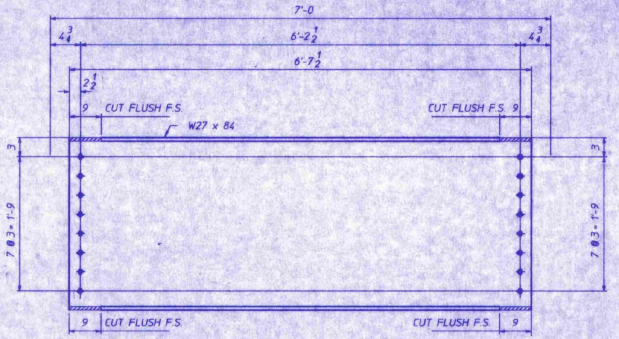
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ-1446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. MCDONALD
DRAWING TITLE: GIRDER G5B TENSOR 1461
DRAWN BY: JAK JOB NUMBER: 93-01-0775 SHEET NUMBER: 52-12
CHECKED BY: JB 2-93





MARK	No. REQD	LEN	C	B	BEV	CUT
D1	1	6'-9 9/16	1 9/16	6'-2 5/8	11/16	1 9/16
D2	1	6'-8 15/16	1 5/8	6'-2 5/8	5/8	1 3/8
D3	2	6'-8 13/16	1 5/8	6'-2 9/16	9/16	1 1/4
D4	1	6'-8 3/8	1 3/8	6'-2 1/16	1/2	1 1/16
D5	2	6'-8 9/16	1 5/8	6'-2 9/16	7/16	1
D6	1	6'-8 7/16	1 5/8	6'-2 9/16	3/8	7/8
D7	1	6'-8 3/8	1 11/16	6'-2 1/16	3/8	13/16
D8	1	6'-8 1/4	1 11/16	6'-2 1/2	5/16	3/4
D9	2	6'-8 1/8	1 11/16	6'-2 1/2	5/16	5/8
D10	2	6'-7 15/16	1 11/16	6'-2 1/2	3/16	7/16
D11	1	6'-7 3/4	1 3/4	6'-2 1/2	1/8	1/4
D12	1	6'-7 5/8	1 3/4	6'-2 1/2	1/16	1/8

MARK	No. REQD	LEN	C	B	BEV	CUT
D14	1	6'-8 15/16	1 3/8	6'-2 5/8	5/8	1 3/8
D15	1	6'-8 13/16	1 3/8	6'-2 9/16	9/16	1 1/4
D16	2	6'-8 5/8	1 3/8	6'-2 9/16	1/2	1 1/16
D17	2	6'-8 1/16	1 3/8	6'-2 9/16	3/8	7/8
D18	2	6'-8 3/8	1 13/16	6'-2 9/16	3/8	13/16
D19	2	6'-8 1/8	1 13/16	6'-2 1/2	5/16	5/8
D20	1	6'-8 1/16	1 13/16	6'-2 1/2	1/4	9/16
D21	1	6'-7 15/16	1 13/16	6'-2 1/2	3/16	7/16
D22	2	6'-7 7/8	1 13/16	6'-2 1/2	3/16	3/8
D23	1	6'-7 7/8	1 1/4	6'-2 1/2	1/16	1/8



1 ~ DIAPHRAGM ~ D13

ASM INFO PAGE	ASM INFO LINE	SHP MARK	QTY.	MARK	MATERIAL	LENGTH FT.	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
					DIAPHRAGMS					
3	K	D1	1		W 27x84	6	9 9/16			
3	K	D2	1		W 27x84	6	8 15/16			
3	K	D3	2		W 27x84	6	8 13/16			
3	K	D4	1		W 27x84	6	8 3/8			
3	K	D5	2		W 27x84	6	8 9/16			
3	K	D6	1		W 27x84	6	8 7/16			
3	K	D7	1		W 27x84	6	8 3/8			
3	K	D8	1		W 27x84	6	8 1/4			
3	K	D9	2		W 27x84	6	8 1/8			
3	K	D10	2		W 27x84	6	7 15/16			
3	K	D11	1		W 27x84	6	7 3/4			
3	K	D12	1		W 27x84	6	7 5/8			
3	K	D13	1		W 27x84	6	7 1/2			
3	K	D14	1		W 27x84	6	8 15/16			
3	K	D15	1		W 27x84	6	8 13/16			
3	K	D16	2		W 27x84	6	8 5/8			
3	K	D17	2		W 27x84	6	8 1/16			
3	K	D18	2		W 27x84	6	8 3/8			
3	K	D19	2		W 27x84	6	8 1/8			
3	K	D20	1		W 27x84	6	8 1/16			
3	K	D21	1		W 27x84	6	7 15/16			
3	K	D22	2		W 27x84	6	7 7/8			
3	K	D23	1		W 27x84	6	7 7/8			

RECEIVED
CHD BY EFD CKD BY JAC
MAR 04 1993
RESUBMIT APPROVED
BY Jamie C. McCall DATE 3/10/93

ALL MATERIAL TO BE M270-50W.
FOR GENERAL NOTES SEE SHT. GN1.
ALL RE-ENTRANT CUTS TO HAVE 2" RAD.
ALL HOLES TO BE 15/16 Ø

RESERVED FOR STAMPS

REV	DATE	DESCRIPTION
1	2-22-93	J.A. McDONALD — FOR APPROVAL
3	3-23-93	VT DOT — FOR APPROVAL

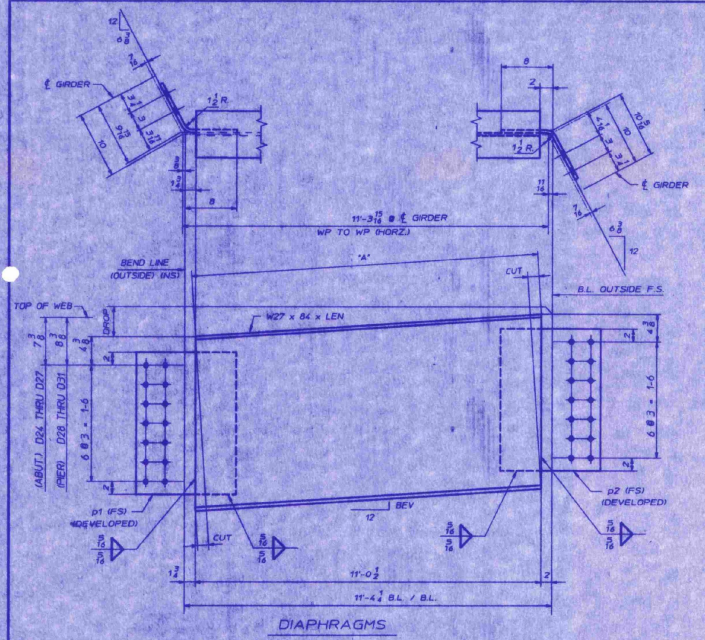
QTY.	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-3662

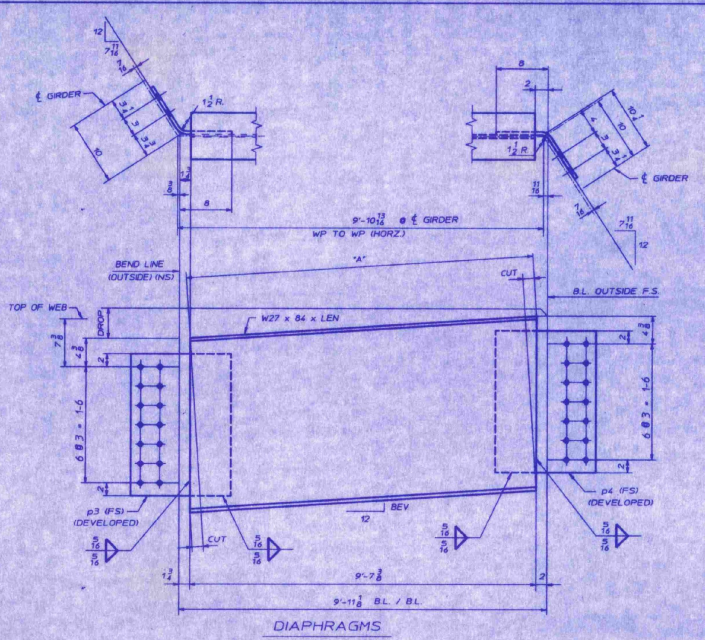
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ. NO. BRZ-1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: DIAPHRAGMS — TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 56-1

JOB NO. 93-01-0775 | DRAWING NO. 56-1 | REV.



DIAPHRAGMS

MARK	No. REQD	LEN	"A"	BEV	CUT	DROP
D24	1	11'-2 3/16	11'-0 11/16	5/8	1 3/8	6 13/16
D25	1	11'-1 13/16	11'-0 11/16	9/16	1 1/4	6 1/16
D26	1	11'-1 7/16	11'-0 3/8	1/16	1 1/16	5 5/16
D27	1	11'-1 3/8	11'-0 3/8	3/8	3/4	4 9/16
D28	1	11'-1 1/16	11'-0 9/16	1/4	1/2	3
D29	1	11'-0 15/16	11'-0 9/16	5/16	3/8	2 5/8
D30	1	11'-0 3/4	11'-0 1/2	1/8	1/4	1 3/16
D31	1	11'-0 9/16	11'-0 1/2	1/16	1/16	5/16



DIAPHRAGMS

MARK	No. REQD	LEN	"A"	BEV	CUT	DROP
D32	1	9'-8 3/16	9'-7 7/16	3/8	3/4	3 5/8
D33	1	9'-8 1/16	9'-7 7/16	5/16	5/8	3
D34	1	9'-7 15/16	9'-7 7/16	1/4	1/2	2 7/8
D35	1	9'-7 3/4	9'-7 3/8	3/16	3/8	2 11/16

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W)
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 15/16 ø
NO PAINT EXCEPT AS NOTED

BILL OF MATERIAL

ABH INFO PAGE	ABH INFO LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
					DIAPHRAGMS					
3	L	D24	1		W 27x84	11	2 1/16			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D25	1		W 27x84	11	1 15/16			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D26	1		W 27x84	11	1 13/16			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D27	1		W 27x84	11	1 3/8			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D28	1		W 27x84	11	1 1/16			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D29	1		W 27x84	11	0 15/16			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D30	1		W 27x84	11	0 3/4			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D31	1		W 27x84	11	0 9/16			
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT		
3	L	D32	1		W 27x84	9	8 1/16			
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT		
3	L	D33	1		W 27x84	9	8 1/16			
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT		
3	L	D34	1		W 27x84	9	7 15/16			
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT		
3	L	D35	1		W 27x84	9	7 3/4			
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT		
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT		

JOB NO. 92-11-0725
DRAWING NO. 56-21
REV.

RECEIVED
DRD BY CPW DRD BY BLD
MAR 04 1993
REVIEWED ___ APPROVED ✓
BY [signature] DATE 3/1/93

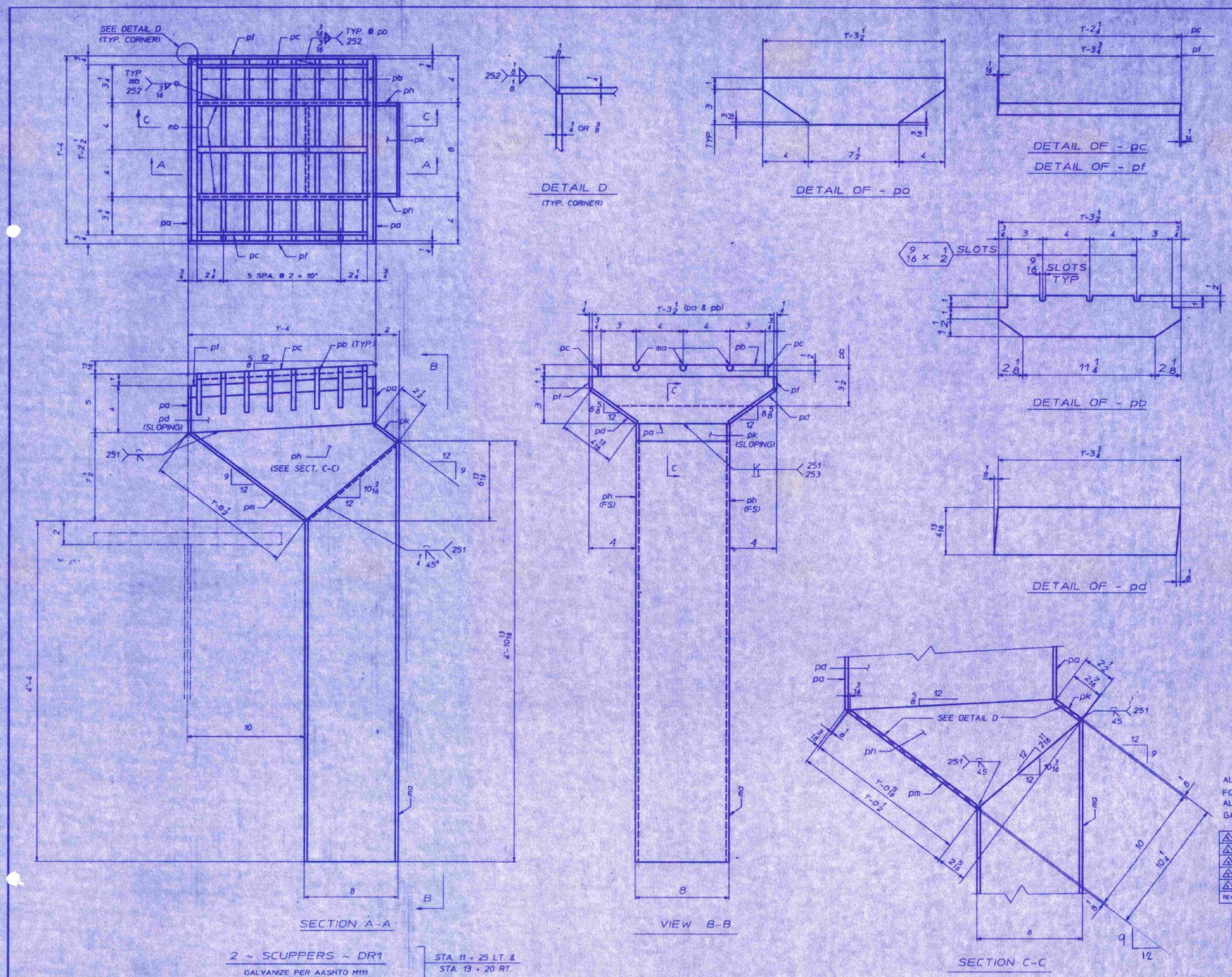
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

RESERVED FOR STAMPS

QTY	DATE	ISSUED TO	FOR
1	2.27.93	J.A. McDONALD	FOR APPROVAL
5	2.28.93	VT AOT	FOR APPROVAL

ECSE
EAST COAST STEEL
Bridge Division
3 Wallace Ave.
South Portland, ME 04106
207-773-1662

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ-1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: BEARING DIAPHRAGMS
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 56-2



2 ~ SCUPPERS ~ DR1
GALVANIZE PER AASHTO M111 AFTER FABRICATION
STA. 11 + 25 LT. & STA. 13 + 20 RT.

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 59-1	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		DR1	2		SCUPPERS			GALVANIZE		
4	B		2	ma	TS 8 x 8 x 1/4	4	10 13/16	A500 GR.B		
4	E		16	pb	PL 3/8 x 3 1/2	1	3 1/2			
4	G		4	pa	PL 1/4 x 4	1	3 1/2			
4	H		4	pc	PL 1/4 x 1	1	2 5/16			
4	H		4	pf	PL 1/4 x 1	1	3 13/16			
4	K		4	pd	PL 1/4 x 4 13/16	1	3 7/8			
4	L		4	ph	PL 1/4 x 10	1	2 5/8			
4	K		2	pk	PL 1/4 x 2 7/16	0	7 1/2			
4	J		2	pm	PL 1/4 x 7 1/2	1	0 5/16			
4	F		6	mb	1/2 DIA ROD	1	2 1/2			

RECEIVED
CHK'D BY CFW CHK'D BY BLD
MAR 04 1993
RESUBMIT APPROVED ✓
BY James M McCarthy DATE 3/10/93

ALL MATERIAL TO BE M270-36 GALV. (U.N.)
FOR GENERAL NOTES SEE SHT. GN1.
ALL WELD TO BE SEAL WELDS AS TO BE WATER TIGHT.
GALVANIZE AFTER FABRICATION.

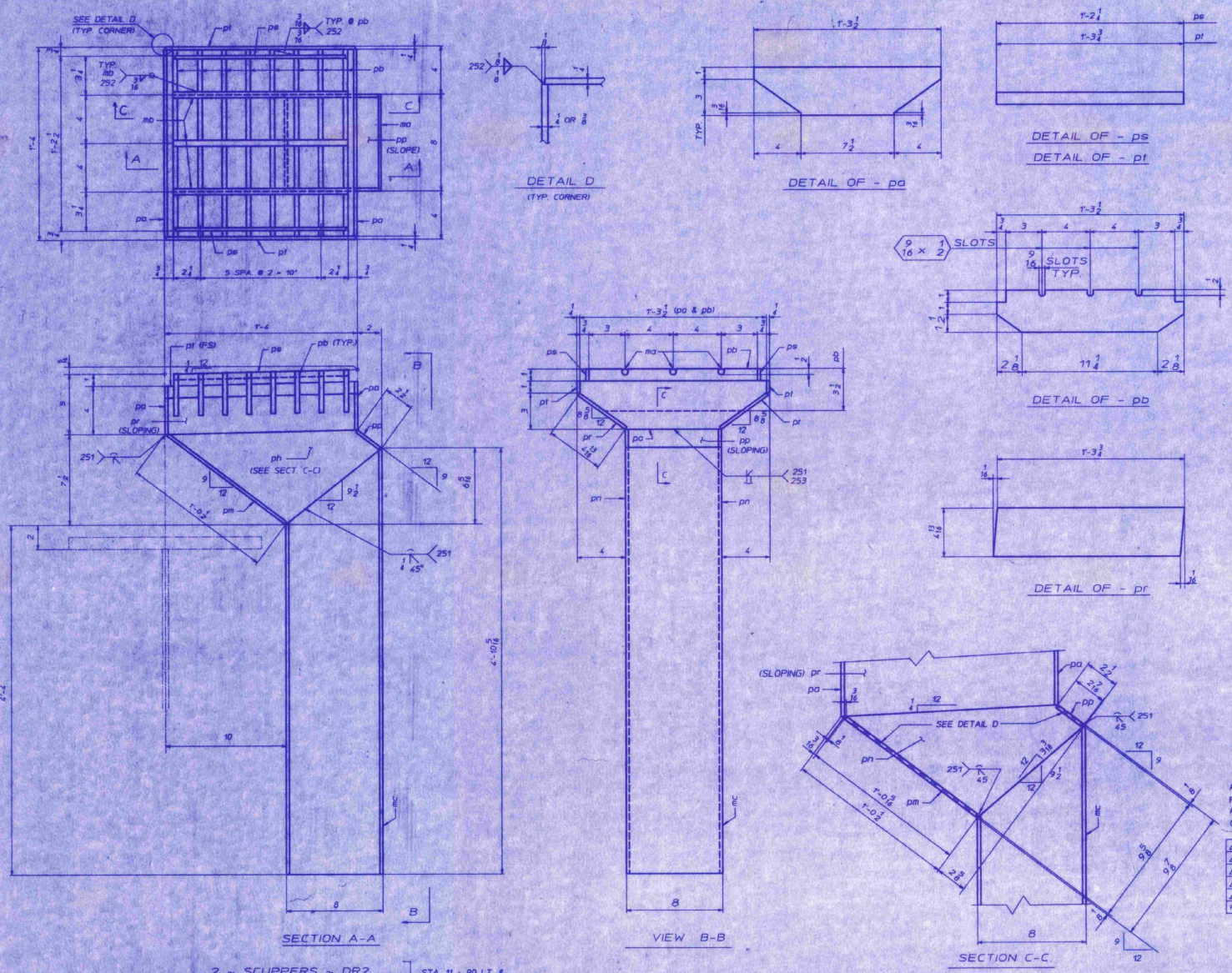
RESERVED FOR STAMPS

REV	DATE	DESCRIPTION	QTY	DATE	ISSUED TO	FOR
5						
4						
3						
2			1	2-22-93	J. A. McDONALD	FOR APPROVAL
1			5	2-22-93	VT. AOT	FOR APPROVAL

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ - 1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: SCUPPERS
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 59-1



2 ~ SCUPPERS ~ DR2

GALVANIZE PER AASHTO M111 AFTER FABRICATION

STA. 11 + 90 LT. & STA. 12 + 60 RT.

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 59-2	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT.	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		DR2	2		SCUPPERS			GALVANIZE		
4	B		2	mc	TS 8 x 8 x 1/4	4	10 5/16	A500 GR.B		
4	E		16	pb	PL 3/8 x 3 1/2	1	3 1/2			
4	G		4	pa	PL 1/4 x 4	1	3 1/2			
4	H		4	ps	PL 1/4 x 1	1	2 1/4			
4	H		4	pt	PL 1/4 x 1	1	3 3/4			
4	K		4	pr	PL 1/4 x 4 13/16	1	3 13/16			
4	L		4	pn	PL 1/4 x 9 5/8	1	2 13/16			
4	K		2	pp	PL 1/4 x 2 7/16	0	7 1/2			
4	J		2	pm	PL 1/4 x 7 1/2	1	0 5/16			
4	F		6	mb	1/2 DIA ROD	1	2 1/2			

RECEIVED
CK'D BY CFW CK'D BY BLD
MAR 04 1993
RESUBMIT ____ APPROVED ✓
BY ____ DATE 3/10/93
James B. McDonald

ALL MATERIAL TO BE M270-36 GALV. (U.N.)
FOR GENERAL NOTES SEE SHT. GN1.
ALL WELD TO BE SEAL WELDS AS TO BE WATER TIGHT.
GALVANIZE AFTER FABRICATION.

RESERVED FOR STAMPS

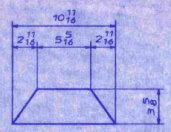
REV	DATE	DESCRIPTION
5		
4		
3		
2		
1		

QTY.	DATE	ISSUED TO:	FOR:
1	2-22-93	J.A. McDONALD	FOR APPROVAL
5	2-22-93	VT AOT	FOR APPROVAL

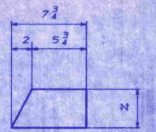
ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

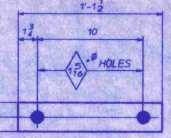
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ. NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: SCUPPERS
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 59-2



DETAIL ~ PLATE paa

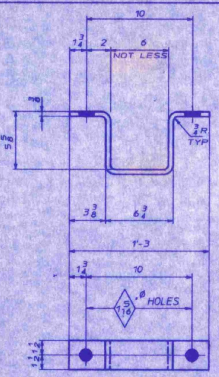


DETAIL ~ PLATE py



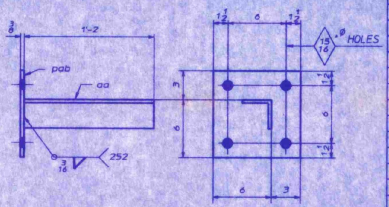
2 - ANCHOR PLATES - AP1

GALVANIZED PER VT. SPEC. 506.15 (B)



2 - BENT STRAPS - BS1

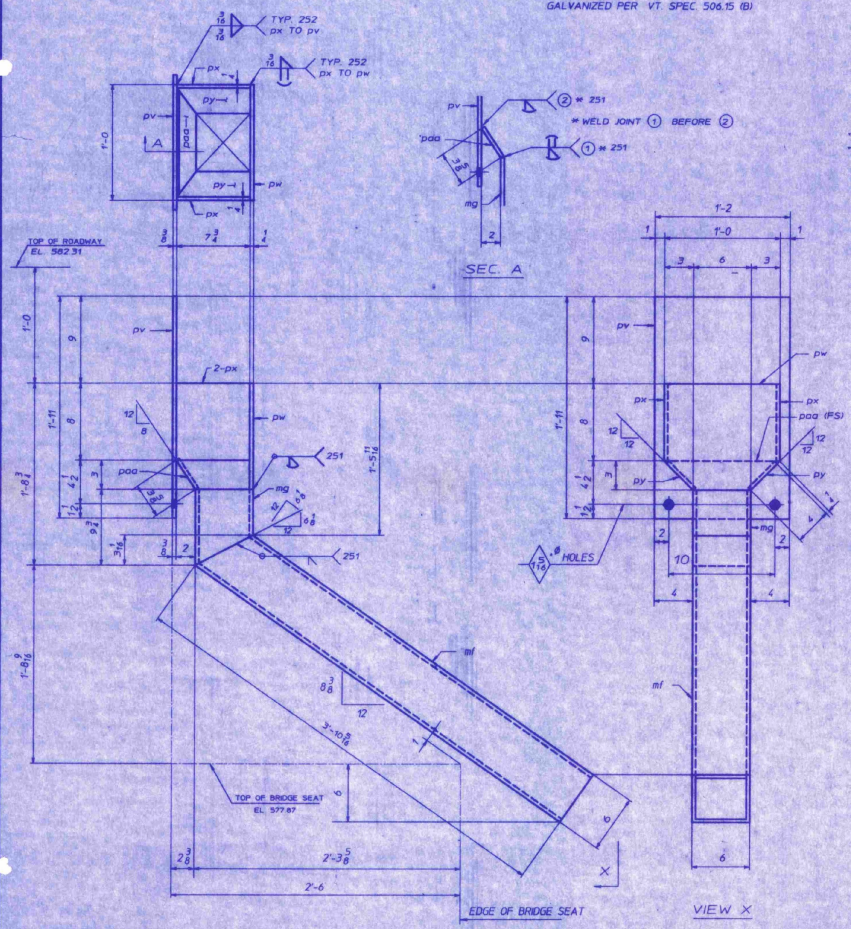
GALVANIZED PER VT. SPEC. 506.15 (B)



4 - DRAIN GUSSETS - DG1

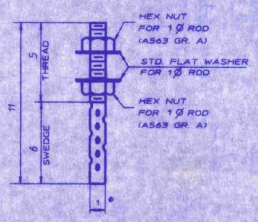
GALVANIZED PER VT. SPEC. 506.15 (B)

ABM INFO		SHP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 59-3	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		DS1	1		DOWNSPOUT			GALVANIZE		
4	P		1	mf	TS 6 x 6 x $\frac{1}{4}$	3	$10\frac{11}{16}$	(A500) GR.B		
4	Q		1	mg	TS 6 x 6 x $\frac{1}{4}$	0	$9\frac{3}{8}$	(A500) GR.B		
4	R		1	pv	PL $\frac{3}{8}$ x 14	1	11			
4	S		1	pw	PL $\frac{1}{4}$ x 11	1	0			
4	T		2	px	PL $\frac{1}{4}$ x $7\frac{3}{4}$	0	8			
4	T		2	py	PL $\frac{1}{4}$ x 4	0	$7\frac{1}{4}$			
4	S		1	paa	PL $\frac{1}{4}$ x $3\frac{5}{8}$	0	$10\frac{11}{16}$			
		DG1	4		GUSSETS			GALVANIZE		
4	C		4	pab	PL $\frac{3}{8}$ x 9	0	9			
4	D		4	aa	L 3 x 3 x $\frac{3}{8}$	1	2			
					ANCHOR PLATES			GALVANIZE		
4	U	AP1	2		PL $\frac{3}{8}$ x 3	1	$1\frac{1}{2}$	(M270-36)		
					BENT STRAPS			GALVANIZE		
4	V	BS1	2		PL $\frac{3}{8}$ x 3	1	$11\frac{1}{2}$	(M270-36) BENT		
					SWEDGE BOLTS			GALVANIZE		
4	W		2	SB1	ROD 1Ø	0	11	(M270-36)		
4	W		2	SB2	ROD 1Ø	1	$3\frac{1}{2}$	(M270-36) BENT		
4	X		8		HEX NUTS FOR 1Ø ROD			A563 GR. A		
4	Y		8		FLAT WASHERS FOR 1Ø ROD			F436		



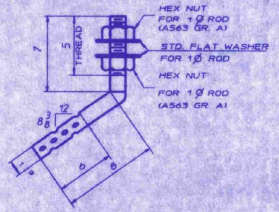
1 - DOWNSPOUT - DS1

GALVANIZED PER VT. SPEC. 506.15 (B)



2 - SWEDGE BOLTS - SB1

GALVANIZED PER VT. SPEC. 506.15 (B)



2 - SWEDGE BOLTS - SB2

GALVANIZED PER VT. SPEC. 506.15 (B)

RECEIVED (A) (B) (C)
OK'D BY CAW ON 3.4.93 (SE)
MAR 04 1993
RESUBMIT ____ APPROVED ✓
BY: Jerrold M. Leach DATE: 3/10/93

NOTES

ALL MATERIAL TO BE M270-36 GALV. (U.N.)
FOR GENERAL NOTES SEE SHT. GN1.
HOLES TO BE AS NOTED.
GALV. TO BE DONE AFTER FABRICATION.
ALL WELDS TO BE SEAL WELDS AS TO BE WATER TIGHT.

RESERVED FOR STAMPS

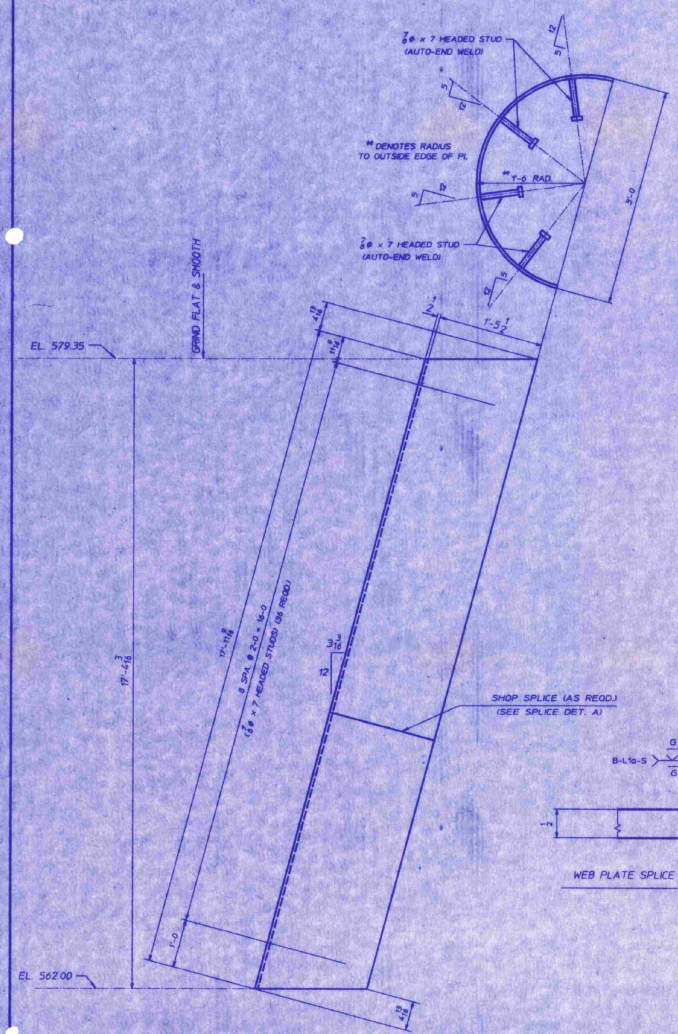
REV	DATE	DESCRIPTION
1	2-22-93	J.A. McDonald
5	3-22-93	VT AOT

QTY.	DATE	ISSUED TO:	FOR
			FOR APPROVAL
			FOR APPROVAL

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-5842

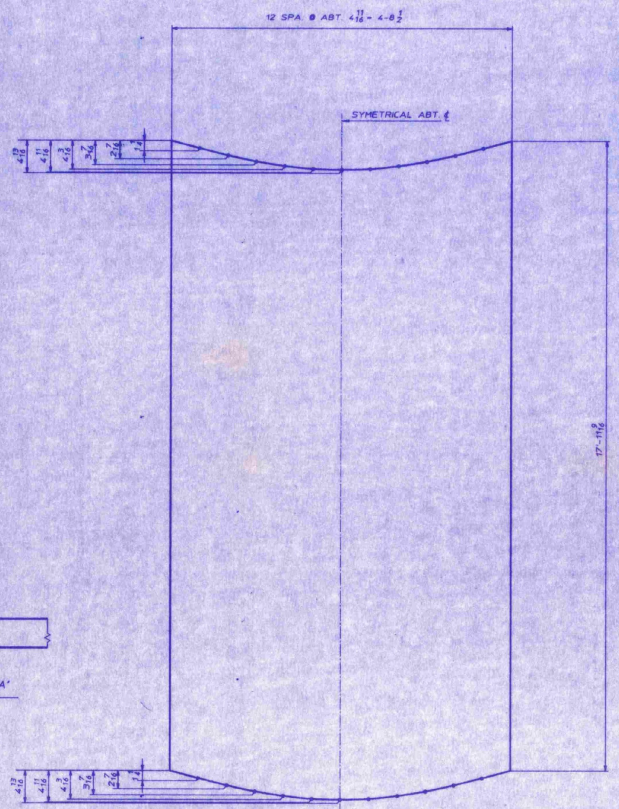
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ-1446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: DOWNSPOUT & ACCESSORIES TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 59-3



ONE ~ PIER NOSING ~ PN1

GALVANIZED

WEB PLATE SPLICE DETAIL "WA"



CUTTING DIAGRAM

(DEVELOPED)

ASH INFO		SHP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 61-1	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		PN1	1		PIER NOSING			GALVANIZE		
3	U		1		PL 3/8 x 56 1/2	10	4 3/8	ROLLED ø ℄ ABT		
3	V		36		7/8ø HEADED STUD	0	7	A108		

ALL MATERIAL TO BE M270-36 GALV. (AFTER WELDING & BENDING)

FOR GENERAL NOTES SEE SHT. GN1 AND STUDDING

RECEIVED
CKD BY CW CKD BY BLD
MAR 04 1993
RESUBMIT APPROVED AS NOTED
BY DATE
Jennifer B. McCarthy 2/10/93

RESERVED FOR STAMPS

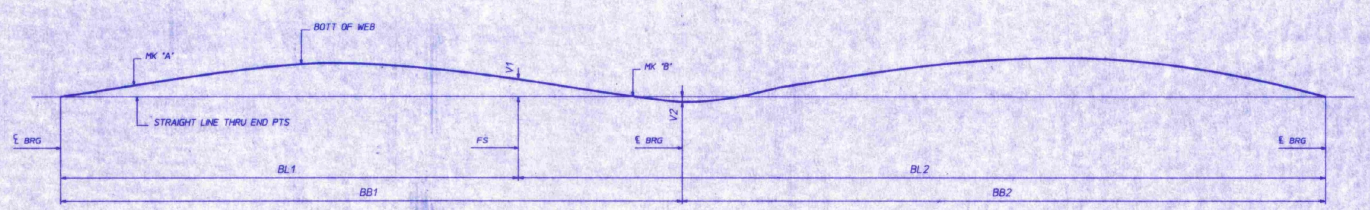
REV	DATE	DESCRIPTION
1	2-22-93	J.A. McDONALD — FOR APPROVAL
5	2-26-93	VT. AOT — FOR APPROVAL

QTY	DATE	ISSUED TO	FOR

ECSF

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1842

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: PIER NOSING — TENSOR 1661
DRAWN BY: JAK — JOB NUMBER: 93-01-0775 — SHEET NUMBER: 61-1
CHECKED BY: JB 2-93



SHOP REAMING DIAGRAM

LINE	BL1	BL2	V1	V2	BB1	BB2
1	69'-11 7/8	123'-3 15/16	1 3/16	3/8	95'-0 3/16	98'-3 5/8
2	69'-11 3/4	121'-7 15/16	1 7/16	1/8	95'-0 1/8	96'-7 9/16
3	69'-11 3/4	120'-0	1 9/16	1/16	95'-0 1/16	94'-11 11/16
4	69'-11 11/16	118'-4 1/16	1 9/16	1/8	95'-0	93'-3 3/4
5	69'-11 11/16	116'-8 1/4	1 7/16	1/4	94'-11 15/16	91'-8

LINE	MK "A"	MK "B"
1	G1A	G1B
2	G2A	G2B
3	G3A	G3B
4	G4A	G4B
5	G5A	G5B

RECEIVED
CHK'D BY CFW CHK'D BY BLD
MAR 04 1993
RESUBMIT ___ APPROVED ✓
BY James B McCulloch DATE 3/11/93

NOTES
FOR GENERAL NOTES SEE DWG GN1
ALL DIMENSIONS GIVEN AT BOTT OF WEB (UN)

RESERVED FOR STAMPS

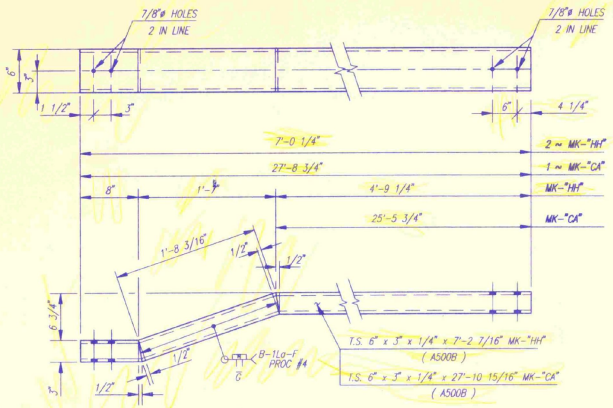
REV	DATE	DESCRIPTION
5		
4		
3		
2		
1		

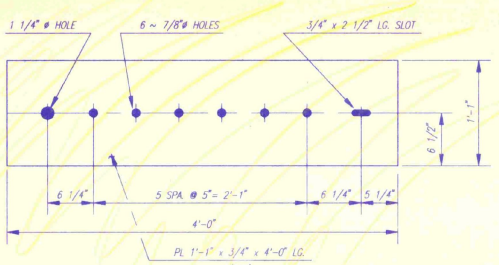
QTY	DATE	ISSUED TO	FOR
1	2-22-93	J.A. McDONALD	FOR APPROVAL
5	2-22-93	VT AUT	FOR APPROVAL

ECSE

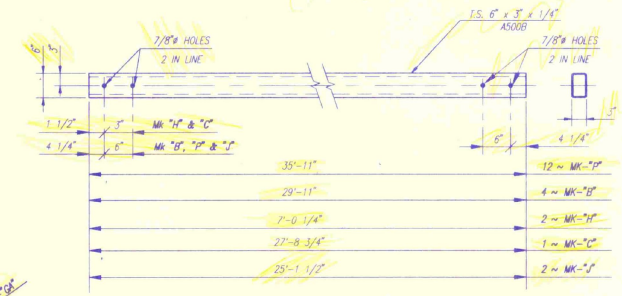
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

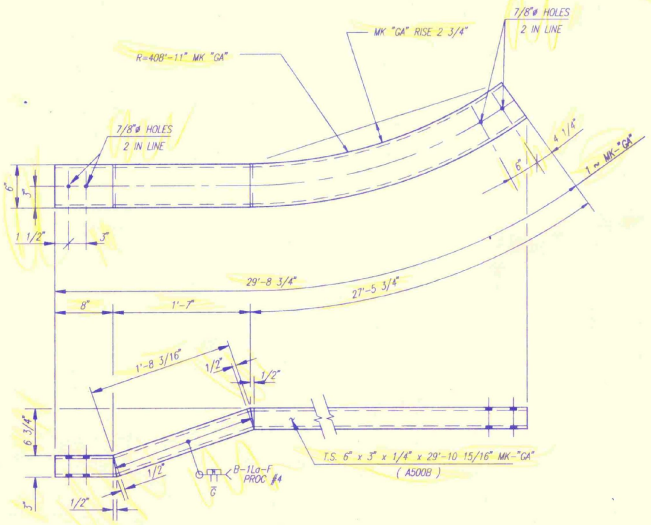
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: BLOCKING DIAGRAM TENSOR 1461
DRAWN BY: JAK
CHECKED BY: ELC 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: BD1

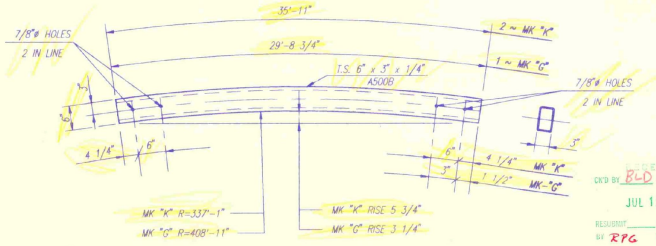




4 ~ MK "AP" – ANCHOR PLATE







BILL OF MATERIAL

	PRODUCK CODE	MK	QTY	DESCRIPTION	WT	REMARKS
*	811G	AP	4	ANCHOR PLATE (8500)	133#	
	71450A	HH	2	22-3082 HH RAIL 7-2 7/16	106#	
	71451A	CA	1	22-3082 CA RAIL 27-10 15/16	412#	
	71453A	GA	1	22-3082 GA RAIL 29-10 15/16	441#	CURVED
	71454G	P	12	22-3082 P RAIL 35-11	530#	
	71455G	B	4	22-3082 B RAIL 29-11	441#	
	71456G	H	2	22-3082 H RAIL 7-0 1/4	104#	
	71457G	C	1	22-3082 C RAIL 27-8 3/4	409#	
	71460G	J	2	22-3082 J RAIL 25-1 1/2	370#	
	71462G	K	2	22-3082 K RAIL 35-11	530#	CURVED
	71463G	G	1	22-3082 G RAIL 29-8 3/4	438#	CURVED

* SEE SHEET 1 OF 2

NOTES:
1. INSPECTED BY: CONWELL
2. FINISH: GALV. A123

RECEIVED JUL 19 1993
CK'D BY BLD CK'D BY PW
RESUBMIT APPROVED
BY RTG DATE 7/22/93

APPROVAL DRAWINGS

ISSUED JULY 5 1993

ERECTION DETAILS ARE ON SHEETS E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

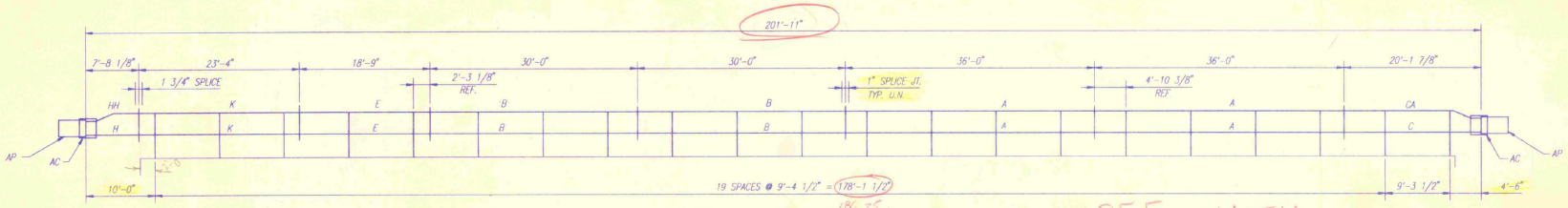
CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL – (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ – 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

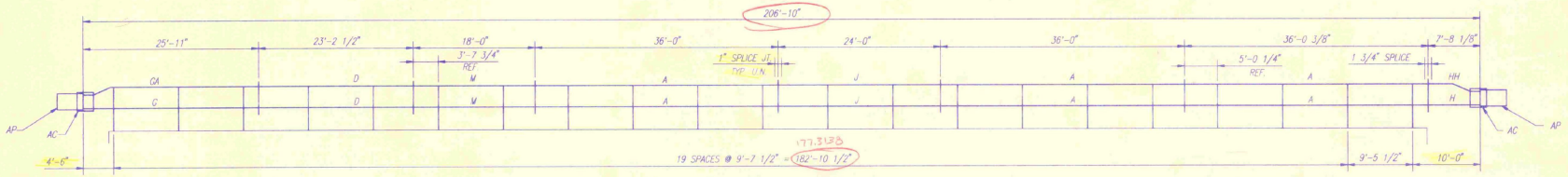
SYRO REF NO. 22-33082
DRAWN F.L.D.
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO. 22-3082
2 OF 2

* NORTH RAIL LONGER THAN SOUTH RAIL



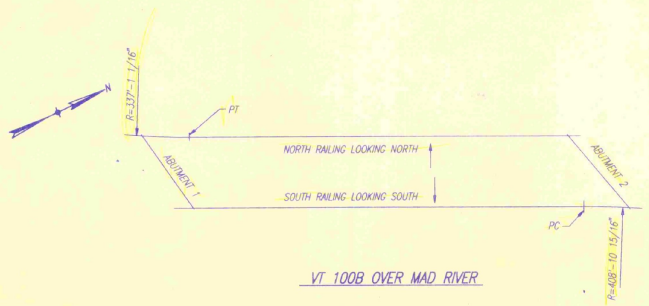
NORTH RAIL LOOKING NORTH

DON'T AGREE WITH OUR CALCULATIONS, NO OTHER DIMENSIONS CHECKED



SOUTH RAIL LOOKING SOUTH

STRUCTURES COPY



VT 100B OVER MAD RIVER

RECEIVED
CK'D BY FLD CK'D BY CPW
JUN 10 1993
RESUBMIT ✓ APPROVED
BY DATE 6/23/93

APPROVAL DRAWINGS

NOTES:
1. INSPECTED BY: CONWELL
2. TOTAL PAY LENGTH: 408'-2" LIN./FT.
3. FINISH: GALV. ATOP
4. ALL JOINT SPLICES ARE 1" (UNLESS NOTED)
5. ALL POSTS ARE WK "A"

ISSUED
JUN 3 - 1993
ISSUED

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

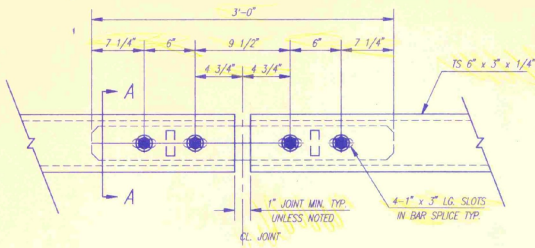
CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

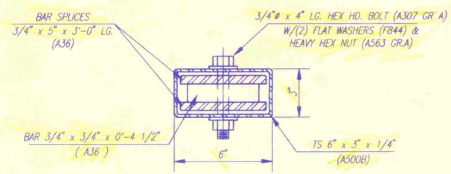
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO
22-33082

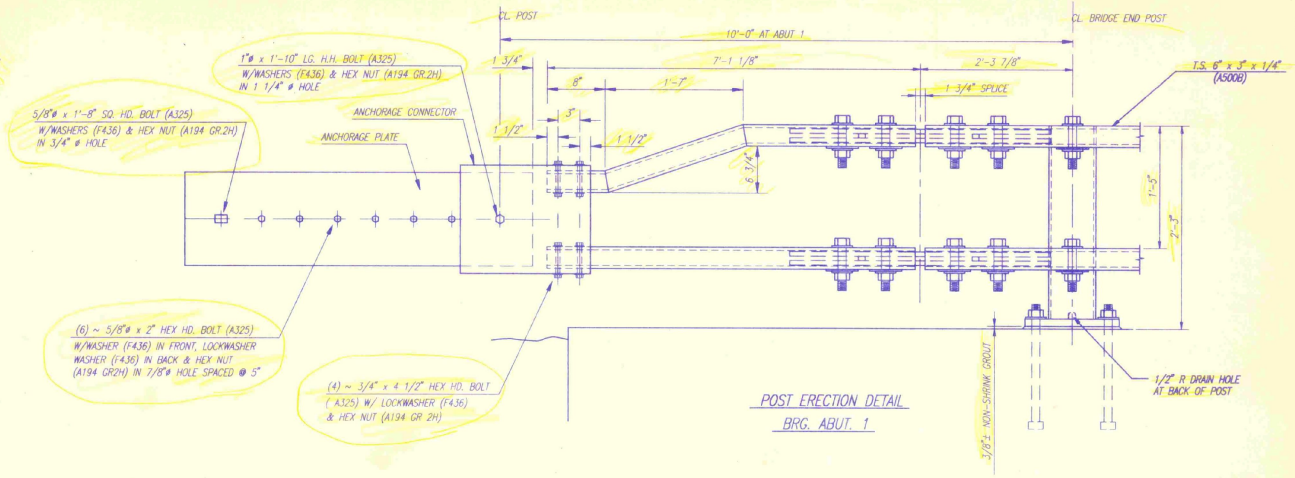
DRAWN FLD
CHECKED C.N.
APPROVED
DATE 6/2/93
SCALE NONE
DRAWING NO. 22-3082
E1 OF 2



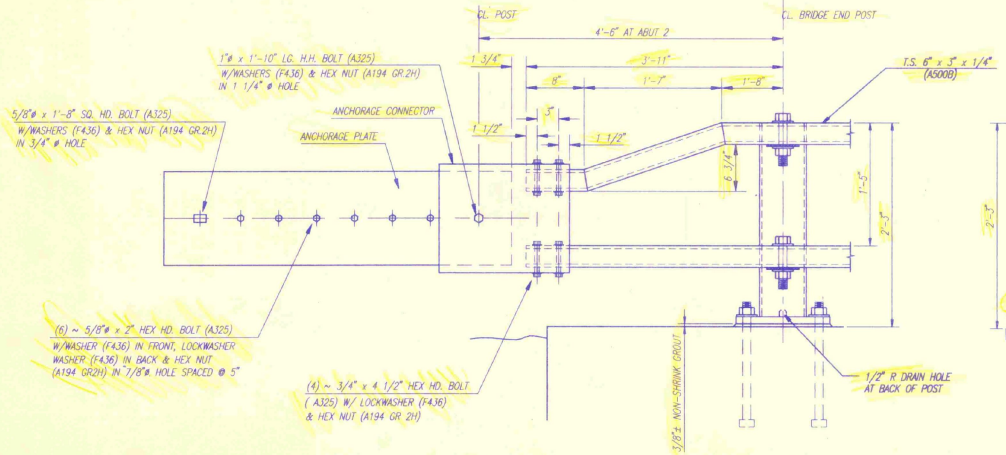
SPLICE DETAIL



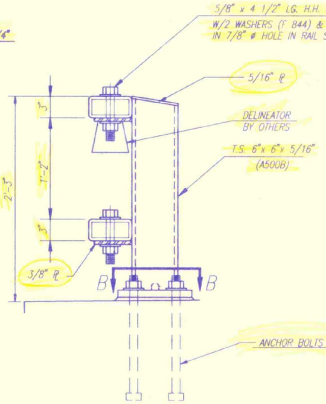
SECTION ~ "A-A"

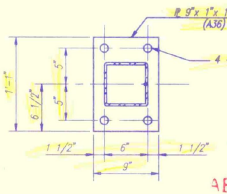


POST ERECTION DETAIL
BRG. ABUT. 1



POST ERECTION DETAIL
BRG. ABUT. 2





SECTION ~ B - B

RECEIVED
CK'D BY ELD CK'D BY CPMA
JUN 10 1993
RESUBMIT APPROVED
BY DATE 6/23/93

APPROVAL DRAWINGS
ISSUED
JUN 9 = 1993
ISSUED

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

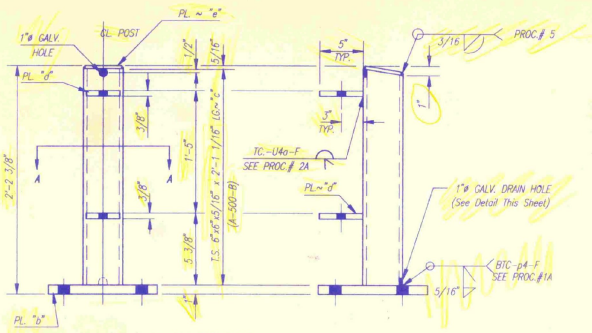
CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

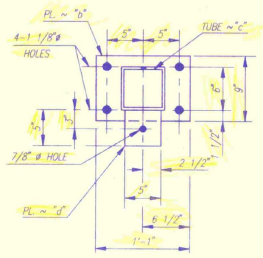
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO	22-33082
DRAWN	F.L.D
CHECKED	E.D.
APPROVED	
DATE	6/2/93
SCALE	NONE
DRAWING NO.	22-3082
	E2 OF 2

DWG NO. 22-3082 POST ANCHOR RAIL SHT 6/6/93



42 MK "A" POST



SECTION A-A

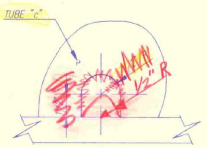
Each Post Mk "A" Consisting Of:

SUB MK	QUAN.	DESCRIPTION
b	1	PL. 9" x 1" x 1'-1" LG. (A36)
c	1	T.S. 6" x 6" x 5/16" x 2'-1 1/16" Lg. (A500B)
d	2	PL. 5" x 3/8" x 5" Lg. (A36)
e	1	PL. 5 5/8" x 5/16" x 5 5/8" Lg. (A36)

BILL OF MATERIAL

PRODUCT CODE	MK	QTY	DESCRIPTION	WT	REMARKS
14392A	A	42	POST (8609)	90#	
32124A	SP	56	SPLICE (8476)	37#	
71464A	AC	4	ANCHOR CONN. (8671)	83#	
			HARDWARE		
3706G		112	3/4"ø x 4" HEX HD. BOLT		A307 GR.A A153
3700G		224	3/4" WASHER		F844 A153
3704G		112	3/4" HEX NUT (HVY)		A563 GR.A A153
4584G		4	5/8"ø x 1'-8" LG. SQUARE HD BOLT		A325 A153
4433G		84	5/8"ø x 4 1/2" LG HEX HD. BOLT		A307 GR.A A153
4373G		168	5/8" WASHER		F844 A153
3354G		84	5/8" HEX NUT		A563 GR.A A153
4940G		4	1"ø x 1'-10" LG HEX. HD. BOLT		A325 A153
4902G		4	1" WASHER		F436 A153
4903G		4	1" HEX NUT		A194 GR.2H A153
4779G		16	3/4"ø x 4 1/2" LG HEX HD. BOLT		A325 A153
3685G		16	3/4" LOCKWASHER		F436 A153
3711G		16	3/4" HEX NUT		A194 GR.2H A153
3404G		24	5/8" x 2" LG. HEX HD BOLT		A325 A153
3313G		28	5/8" WASHER		F436 A153
3314G		24	5/8" LOCKWASHER		F436 A153
3351G		28	5/8" HEX NUT		A194 GR.2H A153
			PAY QUANTITIES		
408'-2" LIN FT.			ITEM NO. 525.31		2-RAIL GALV. BOX BEAM BRIDGE RAILING

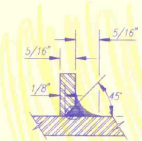
NOT CHECKED



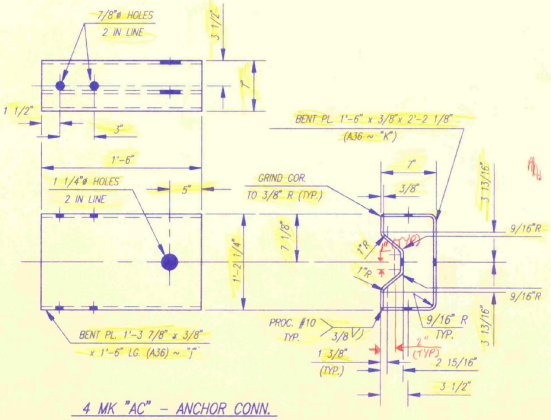
GALV. DRAIN DETAIL



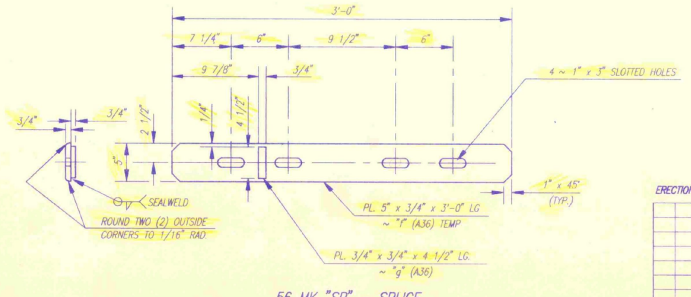
WELD PROC. # 2A
(Tc-U4a-F)



WELD PROC. # 1A
(BTC-p4-F)



4 MK "AC" - ANCHOR CONN.



56 MK "SP" - SPLICE

RECEIVED
CK'D BY BLD CK'D BY CHM
JUN 10 1993
RESUBMIT APPROVED
BY DATE 6/23/93

APPROVAL DRAWINGS

HARDWARE NOTE:

VERMONT DEPT. OF HIGHWAYS HIGH STRENGTH HARDWARE A325 OR A449 REQUIRES MANUFACTURER'S CERTIFICATE SHOWING HEAT NO, PHYSICAL PROPERTIES AND CHEMICAL ANALYSIS.

CARBON A307 HARDWARE REQUIRES THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE.

ISSUED
JUN 23 1993

NOTES:
1. ALL POSTS TO BE CHARPY V NOTCH TESTED
2. INSPECTED BY CONWELL
3. FINISH: GALV A123

ISSUED

ERECTION DETAILS ARE ON SHEETS E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

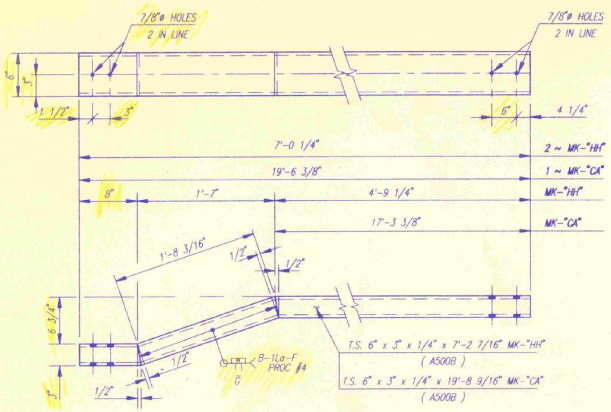
CUSTOMER
F.R. LAFAYETTE INC.

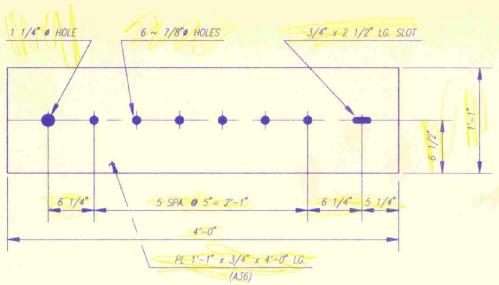
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT. 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

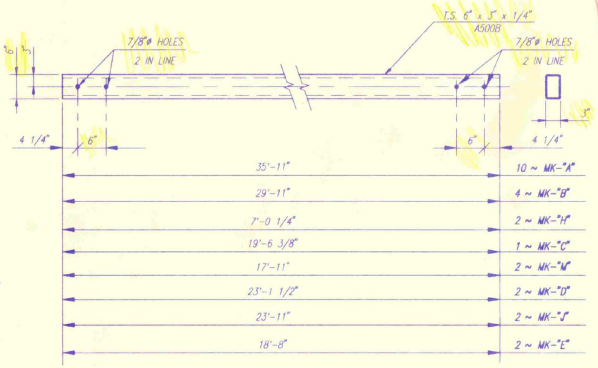
SYRO REF. NO
22-33082

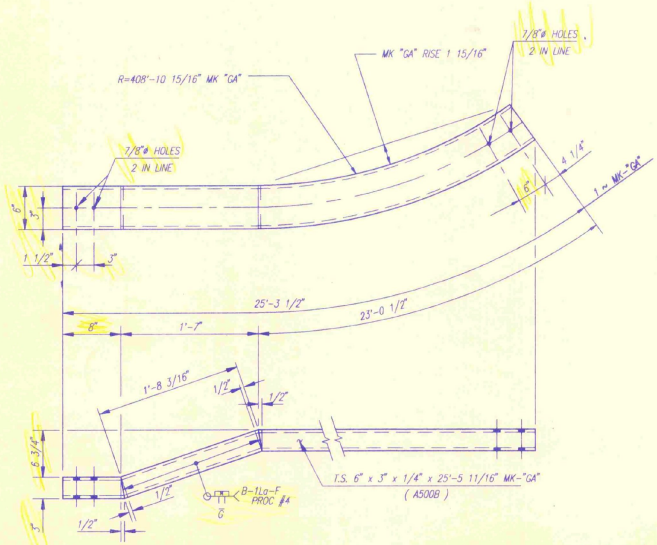
DRAWN FLD
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO. 22-3082
1 OF 2

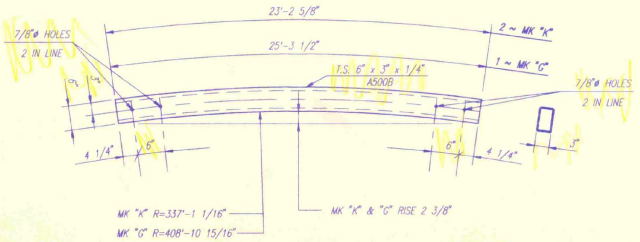




4 ~ MK "AP" - ANCHOR PLATE







BILL OF MATERIAL

PRODUCK CODE	MK	QTY	DESCRIPTION	WT	REMARKS
811G	AP	4	ANCHOR PLATE (8500)	133#	
71450A	HH	2	22-3082 HH RAIL 7-2 7/16	106#	
71451A	CA	1	22-3082 CA RAIL 19-8 9/16	285#	
71452G	E	2	22-3082 E RAIL 18-8	275#	
71453A	GA	1	22-3082 GA RAIL 25-5 11/16	377#	CURVED
71454G	A	10	22-3082 A RAIL 35-11	530#	
71455G	B	4	22-3082 B RAIL 29-11	441#	
71456G	H	2	22-3082 H RAIL 7-0 1/4	104#	
71457G	C	1	22-3082 C RAIL 19-6 3/8	283#	
71458G	M	2	22-3082 M RAIL 17-11	264#	
71459G	D	2	22-3082 D RAIL 23-1 1/2	336#	
71460G	J	2	22-3082 J RAIL 23-11	353#	
71462G	K	2	22-3082 K RAIL 23-2 5/8	341#	CURVED
71463G	G	1	22-3082 G RAIL 25-3 1/2	374#	CURVED

NOT CHECKED

DIMENSIONS
NOT CHECKED

RECEIVED
CK'D BY BLD CK'D BY CPW
JUN 10 1993
RESUBMIT BY
APPROVED
DATE 6/23/93

APPROVAL DRAWINGS

NOTES:
1. INSPECTED BY: CONWELL
2. FINISH: GALV. A123

ISSUED
JUN 23 1993
ISSUED

FOR ERECTION DETAIL SEE SHEETS NO E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

CUSTOMER
F.R. LAFAYETTE INC.

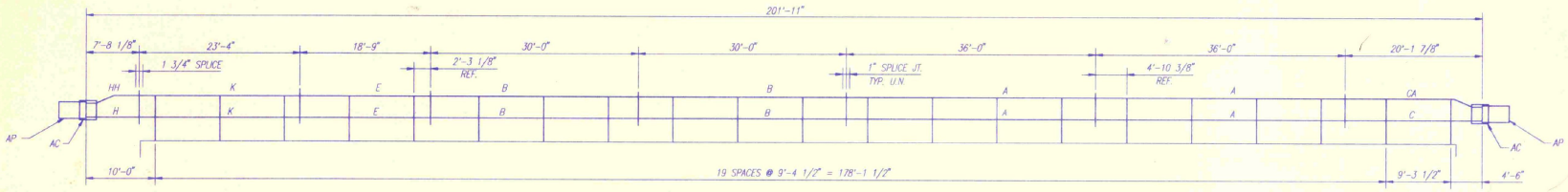
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

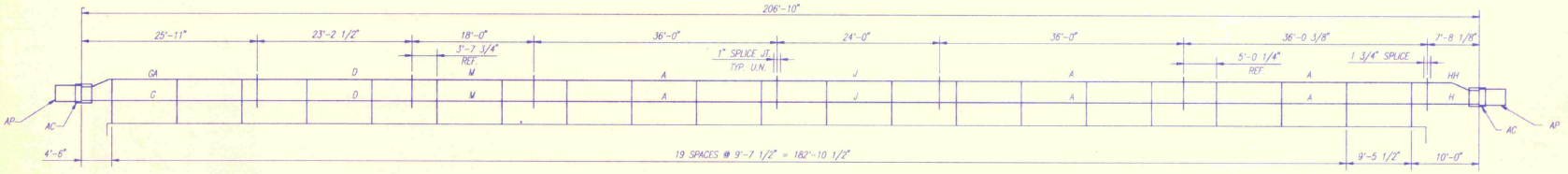
SYRO REF NO
22-33082

DRAWN	FLD
CHECKED	E.N.
APPROVED	
DATE	5/26/93
SCALE	NONE
DRAWING NO.	22-3082
	2 OF 2

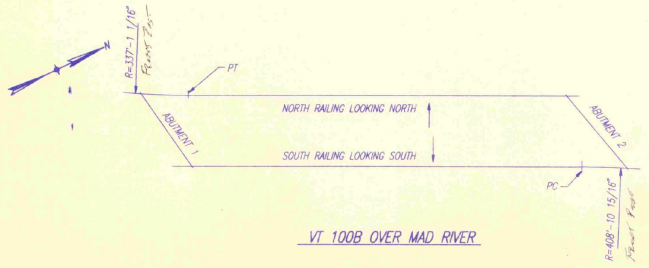
DWG NO. 22308202 PLOT FACTOR FULL SHT 4/5/93



NORTH RAIL LOOKING NORTH



SOUTH RAIL LOOKING SOUTH



VT 100B OVER MAD RIVER

RECEIVED
CK'D BY ____ CK'D BY ____
JUN 10 1993
RESUBMIT ____ APPROVED ____
BY DATE

APPROVAL DRAWINGS

ISSUED
JUN 3 - 1993
ISSUED

NOTES:

1. INSPECTED BY: CONWELL
2. TOTAL PAY LENGTH: 408'-2" LIN./FT.
3. FINISH: GALV. A123
4. ALL JOINT SPLICES ARE 1" (UNLESS NOTED)
5. ALL POSTS ARE MK "A"

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY
	REVISIONS		

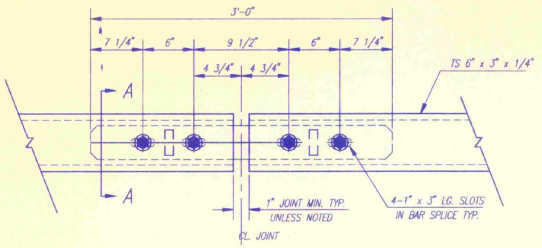
CUSTOMER
F.R. LAFAYETTE INC.

SYRO REF NO
22-33082

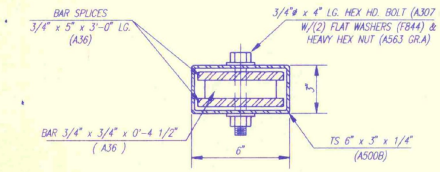
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL – (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ – 1446 (1)

DRAWN FLD
CHECKED E.N.
APPROVED
DATE 6/2/93
SCALE NONE
DRAWING NO. 22-3082
SHT 1 OF 2

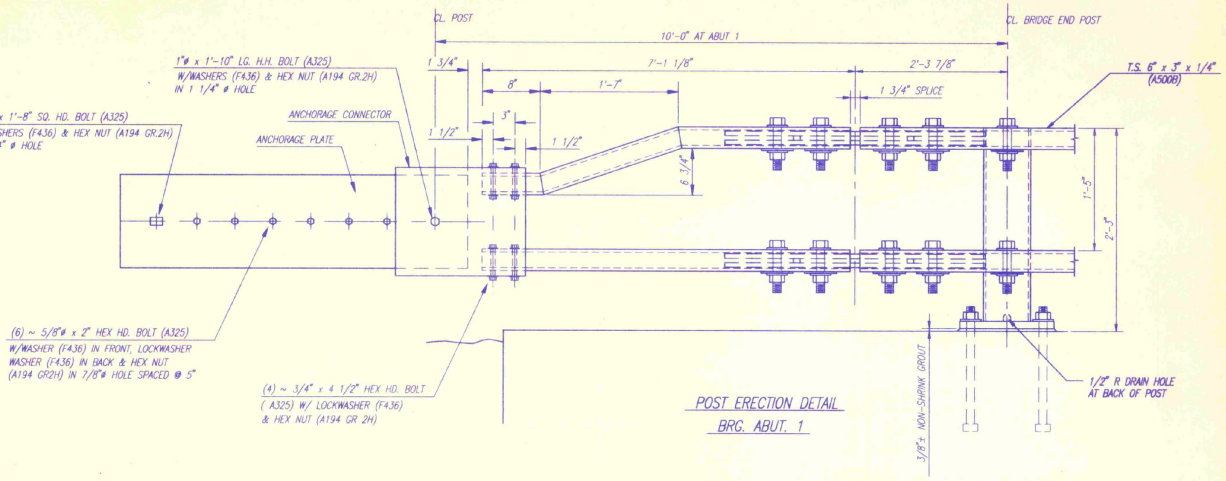
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH



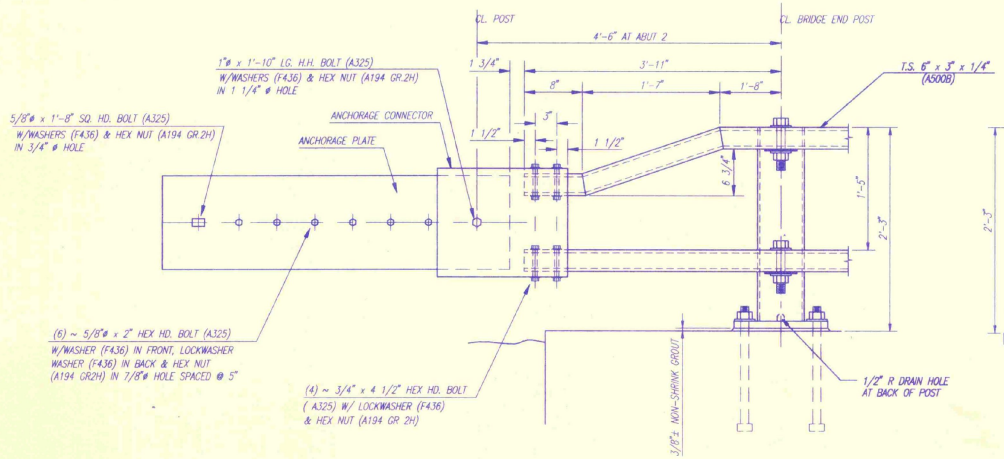
SPLICE DETAIL



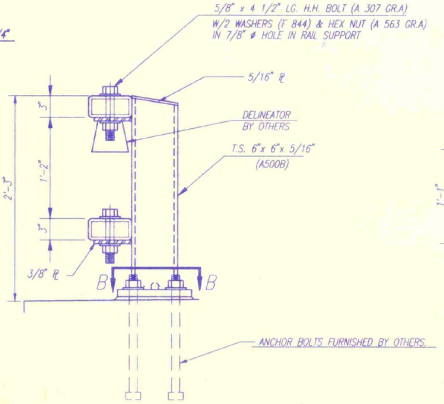
SECTION ~ "A-A"

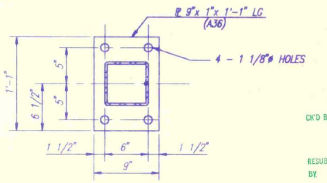


POST ERECTION DETAIL
BRG. ABUT. 1



POST ERECTION DETAIL
BRG. ABUT. 2





SECTION ~ B - B

RECEIVED
CK'D BY____ CK'D BY____
JUN 10 1993
RESUBMIT____ APPROVED____
BY____ DATE____

APPROVAL DRAWINGS
JUN 9 - 1993
ISSUED

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY
	REVISIONS		

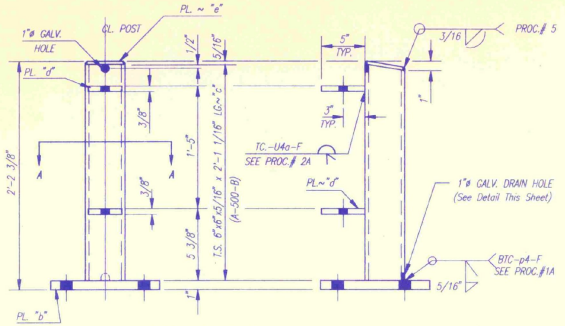
CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

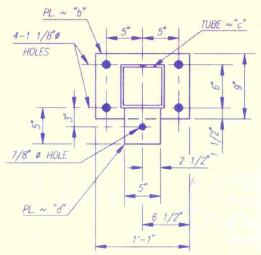
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO	22-33082
DRAWN	F.L.D
CHECKED	E.D.
APPROVED	
DATE	6/2/93
SCALE	NONE
DRAWING NO.	22-3082
	E2 OF 2

DWG NO. 22-3082 POST FACTOR RAIL DATE 6.5.93



42 MK "A" POST



SECTION A-A

Each Post Mk "A" Consisting Of:

SUB MK	QUAN.	DESCRIPTION
b	1	PL. 9" x 1" x 1'-1" LG. (A36)
c	1	T.S. 6" x 6" x 5/16" x 2'-1 1/16" Lg. (A500B)
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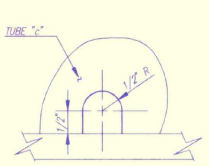
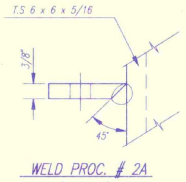
e	1	PL. 5 5/8" x 5/16" x 5 5/8" Lg. (A36)

BILL OF MATERIAL

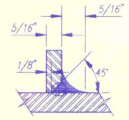
PRODUCT CODE	MK.	QTY	DESCRIPTION	WT	REMARKS
14392A	A	42	POST (8609)	90#	
32124A	SP	56	SPLICE (8476)	37#	
71464A	AC	4	ANCHOR CONN. (8671)	83#	
			HARDWARE		
3706G		112	3/4"ø x 4" HEX HD. BOLT		A307 GR.A A153
3700G		224	3/4" WASHER		F844 A153
3704G		112	3/4" HEX NUT (HVY)		A563 GR.A A153
4584G		4	5/8"ø x 1'-8" LG. SQUARE HD BOLT		A325 A153
4433G		84	5/8"ø x 4 1/2" LG HEX HD. BOLT		A307 GR.A A153
4373G		168	5/8" WASHER		F844 A153
3354G		84	5/8" HEX NUT		A563 GR.A A153
4940G		4	1"ø x 1'-10" LG HEX. HD. BOLT		A325 A153
4902G		4	1" WASHER		F436 A153
4903G		4	1" HEX NUT		A194 GR.2H A153
4779G		16	3/4"ø x 4 1/2" LG HEX HD. BOLT		A325 A153
3685G		16	3/4" LOCKWASHER		F436 A153
3711G		16	3/4" HEX NUT		A194 GR.2H A153
3404G		24	5/8" x 2" LG. HEX HD BOLT		A325 A153
3313G		28	5/8" WASHER		F436 A153
3314G		24	5/8" LOCKWASHER		F436 A153
3351G		28	5/8" HEX NUT		A194 GR.2H A153
			PAY QUANTITIES		
408'-2" LIN FT.			ITEM NO. 525.31		2-RAIL GALV. BOX BEAM BRIDGE RAILING



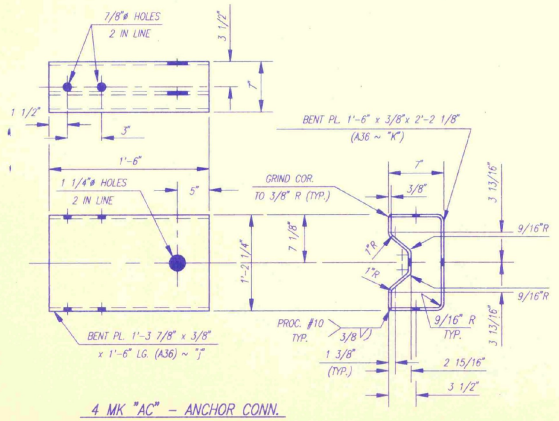
GALV. DRAIN DETAIL



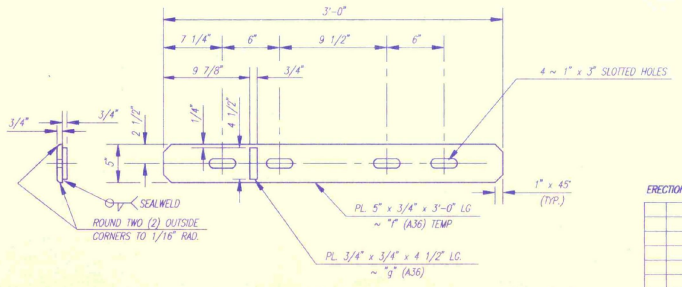
WELD PROC. # 2A
(TC-U4a-F)



WELD PROC. # 1A
(BTC-p4-F)



4 MK "AC" - ANCHOR CONN.



56 MK "SP" - SPLICE

ERECTION DETAILS ARE ON SHEETS E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

RECEIVED
CK'D BY_____ CK'D BY_____
JUN 10 1993
RESUBMIT BY_____ APPROVED DATE_____

APPROVAL DRAWINGS

HARDWARE NOTE:

VERMONT DEPT. OF HIGHWAYS HIGH STRENGTH HARDWARE A325 OR A449 REQUIRES MANUFACTURER'S CERTIFICATE SHOWING HEAT NO, PHYSICAL PROPERTIES AND CHEMICAL ANALYSIS.

CARBON A307 HARDWARE REQUIRES THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE.

ISSUED
JUN 3 1993

NOTES:
1. ALL POSTS TO BE CHARPY V NOTCH TESTED
2. INSPECTED BY CONWELL
3. FINISH: GALV A123

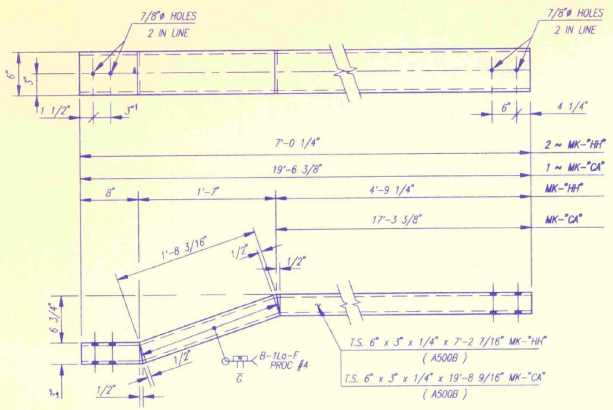
CUSTOMER
F.R. LAFAYETTE INC.

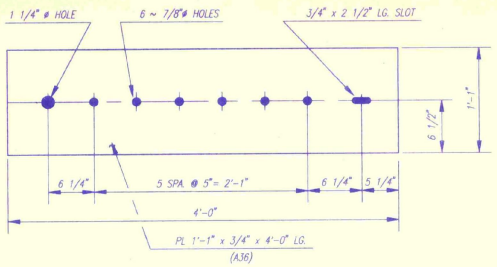
SYRO REF NO
22-33082

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT. 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

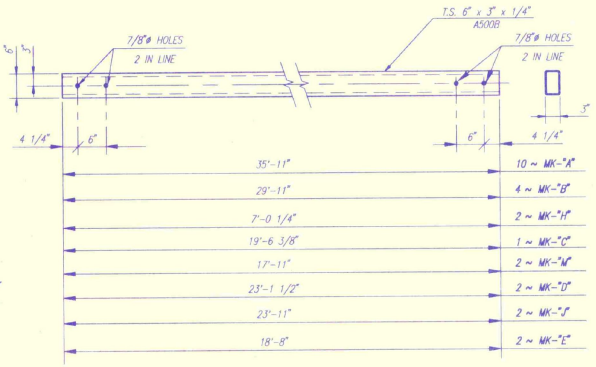
DRAWN FLD
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO. 22-3082
1 OF 2

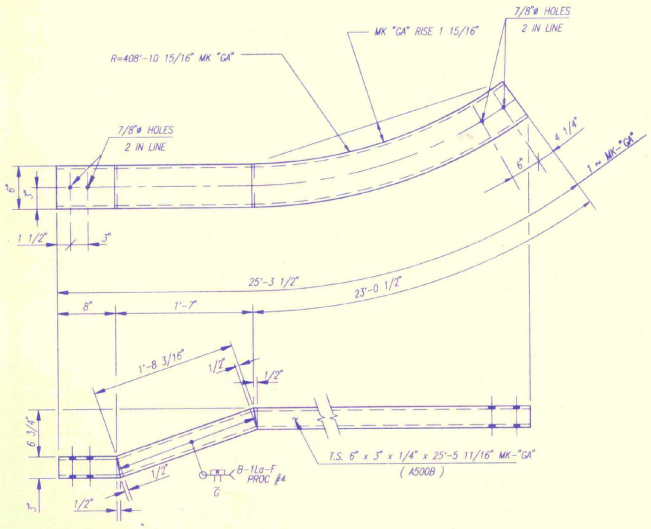
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

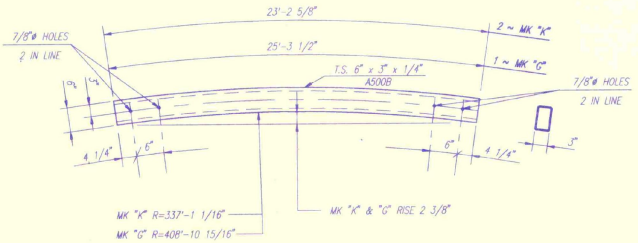




4 ~ MK "AP" - ANCHOR PLATE







BILL OF MATERIAL

PRODUCK CODE	MK	QTY	DESCRIPTION	WT	REMARKS
811G	AP	4	ANCHOR PLATE (8500)	133#	
71450A	HH	2	22-3082 HH RAIL 7-2 7/16	106#	
71451A	CA	1	22-3082 CA RAIL 19-8 9/16	285#	
71452G	E	2	22-3082 E RAIL 18-8	275#	
71453A	GA	1	22-3082 GA RAIL 25-5 11/16	377#	CURVED
71454G	A	10	22-3082 A RAIL 35-11	530#	
71455G	B	4	22-3082 B RAIL 29-11	441#	
71456G	H	2	22-3082 H RAIL 7-0 1/4	104#	
71457G	C	1	22-3082 C RAIL 19-6 3/8	283#	
71458G	M	2	22-3082 M RAIL 17-11	264#	
71459G	D	2	22-3082 D RAIL 23-1 1/2	336#	
71460G	J	2	22-3082 J RAIL 23-11	353#	
71462G	K	2	22-3082 K RAIL 23-2 5/8	341#	CURVED
71463G	G	1	22-3082 G RAIL 25-3 1/2	374#	CURVED

RECEIVED
CK'D BY____ CK'D BY____
JUN 10 1993
RESUBMIT BY____ APPROVED DATE____

APPROVAL DRAWINGS

ISSUED
JUN 9 - 1993
ISSUED

NOTES:
1. INSPECTED BY: CONWELL
2. FINISH: GALV. A123

FOR ERECTION DETAIL SEE SHEETS NO E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

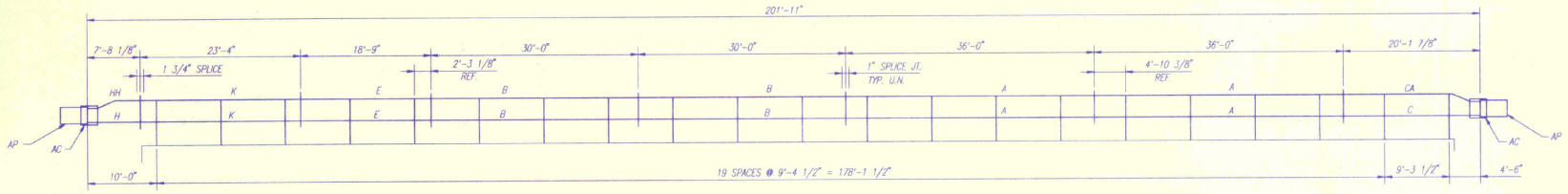
CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

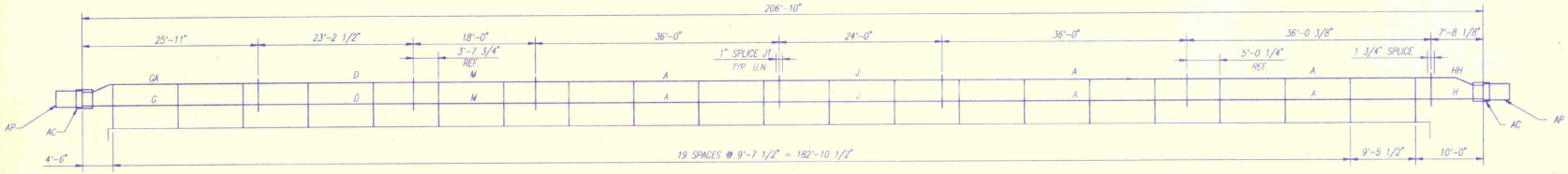
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO
22-33082

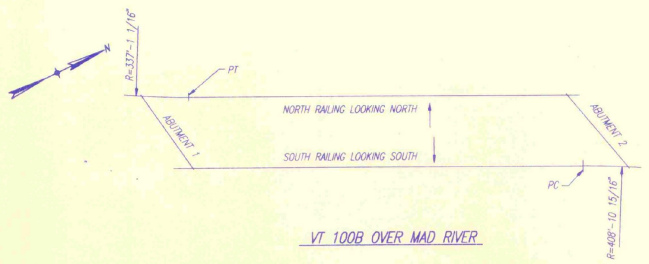
DRAWN FLD
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO.
22-3082
2 OF 2



NORTH RAIL LOOKING NORTH



SOUTH RAIL LOOKING SOUTH



VT 100B OVER MAD RIVER

RECEIVED
CK'D BY_____ OK'D BY_____
JUN 10 1993
RESUBMIT_____ APPROVED_____
BY DATE

APPROVAL DRAWINGS

ISSUED
JUN 3 - 1993
ISSUED

NOTES:

1. INSPECTED BY: CONWELL
2. TOTAL PAY LENGTH: 408'-2" LIN./FT.
3. FINISH: GALV. A123
4. ALL JOINT SPLICES ARE 1" (UNLESS NOTED)
5. ALL POSTS ARE MK "A"

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

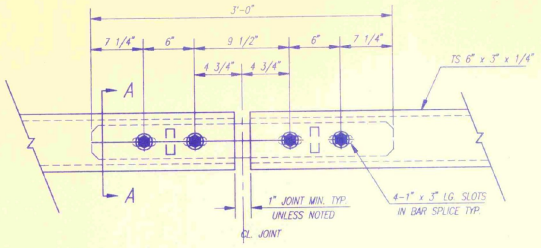
REVISIONS

CUSTOMER
F.R. LAFAYETTE INC.

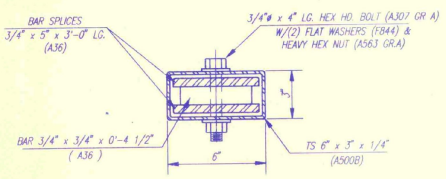
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

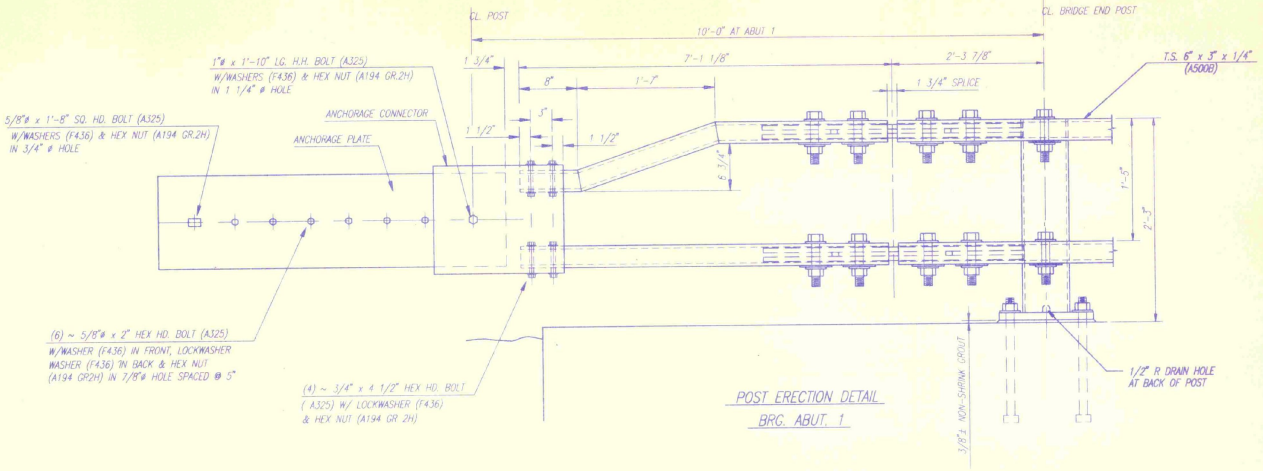
SYRO REF NO.
22-33082
DRAWN FLD
CHECKED E.N.
APPROVED
DATE 6/2/93
SCALE NONE
DRAWING NO.
22-3082
E1 OF 2



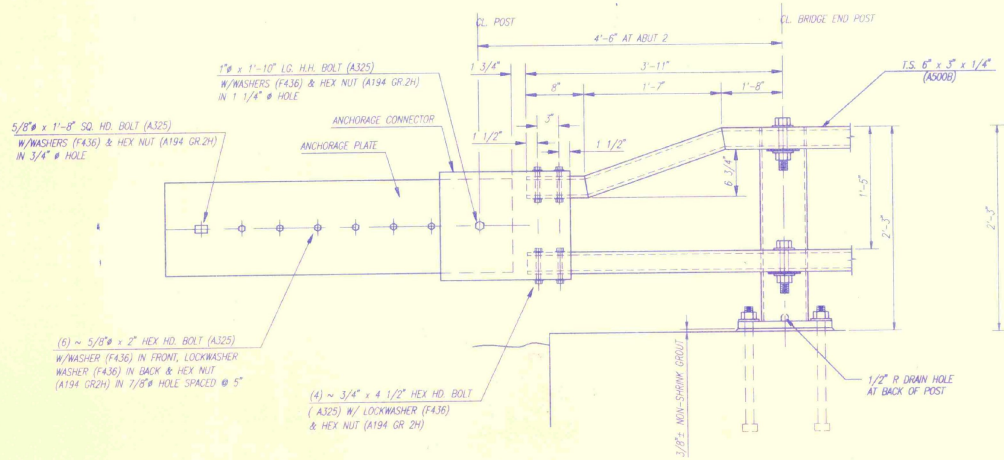
SPLICE DETAIL



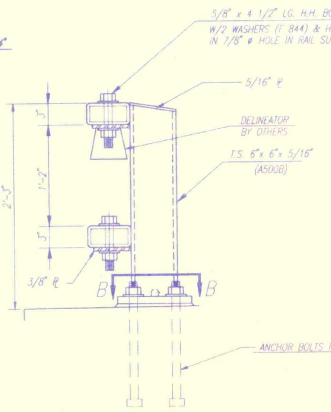
SECTION ~ "A-A"



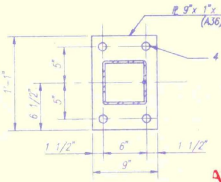
POST ERECTION DETAIL
BRG. ABUT. 1



POST ERECTION DETAIL
BRG. ABUT. 2



SECTION ~ B - B



RECEIVED
CK'D BY ____ CK'D BY ____
JUN 10 1993
RESUBMIT ____ APPROVED ____
BY DATE

APPROVAL DRAWINGS

ISSUED
JUN 9 1993
ISSUED

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

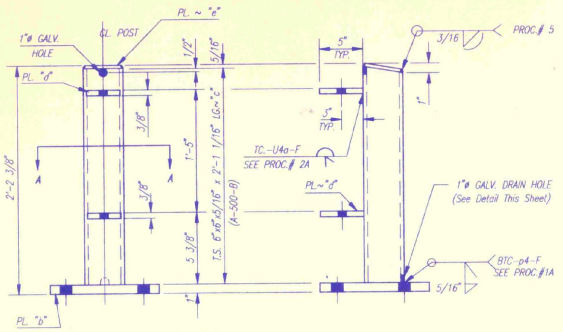
NO.	REMARKS	DATE	BY
	REVISIONS		

CUSTOMER
F.R. LAFAYETTE INC.

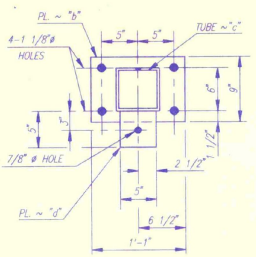
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF. NO	22-3082
DRAWN	FLD
CHECKED	E.D.
APPROVED	
DATE	6/2/93
SCALE	NONE
DRAWING NO.	22-3082
	E2 OF 2



42 MK "A" POST



SECTION A-A

Each Post Mk "A" Consisting Of:

SUB MK	QUAN.	DESCRIPTION
b	1	PL. 9" x 1" x 1'-1" LG. (A36)
c	1	T.S. 6" x 6" x 5/16" x 2'-1 1/16" Lg. (A500B)
d	2	PL. 5" x 3/8" x 5" Lg. (A36)
e	1	PL. 5 5/8" x 5/16" x 5 5/8" Lg. (A36)

BILL OF MATERIAL

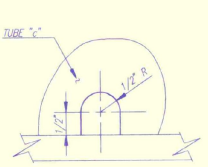
PRODUCT CODE	MK	QTY	DESCRIPTION	WT	REMARKS
14392A	A	42	POST (8609)	90#	
32124A	SP	56	SPLICE (8476)	37#	
71464A	AC	4	ANCHOR CONN. (8671)	83#	

HARDWARE

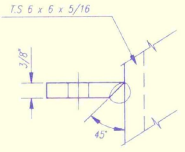
3706G		112	3/4"ø x 4" HEX HD. BOLT		A307 GR.A A153
3700G		224	3/4" WASHER		F844 A153
3704G		112	3/4" HEX NUT (HVY)		A563 GR.A A153
4584G		4	5/8"ø x 1'-8" LG. SQUARE HD. BOLT		A325 A153
4433G		84	5/8"ø x 4 1/2" LG HEX HD. BOLT		A307 GR.A A153
4373G		168	5/8" WASHER		F844 A153
3354G		84	5/8" HEX NUT		A563 GR.A A153
4940G		4	1"ø x 1'-10" LG HEX. HD. BOLT		A325 A153
4902G		4	1" WASHER		F436 A153
4903G		4	1" HEX NUT		A194 GR.2H A153
4779G		16	3/4"ø x 4 1/2" LG HEX HD. BOLT		A325 A153
3685G		16	3/4" LOCKWASHER		F436 A153
3711G		16	3/4" HEX NUT		A194 GR.2H A153
3404G		24	5/8" x 2" LG. HEX HD BOLT		A325 A153
3313G		28	5/8" WASHER		F436 A153
3314G		24	5/8" LOCKWASHER		F436 A153
3351G		28	5/8" HEX NUT		A194 GR.2H A153

PAY QUANTITIES

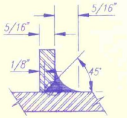
408'-2" LIN FT.	ITEM NO. 525.31	2-RAIL GALV. BOX BEAM BRIDGE RAILING



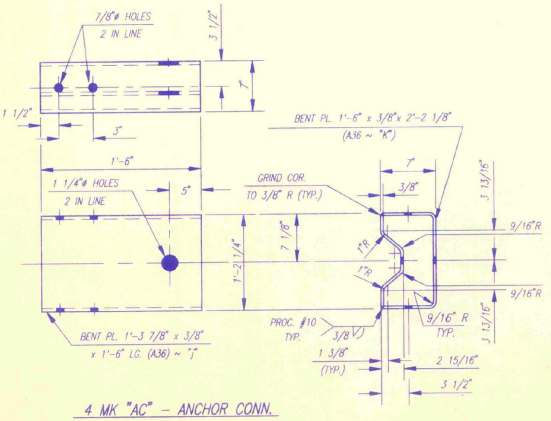
GALV. DRAIN DETAIL



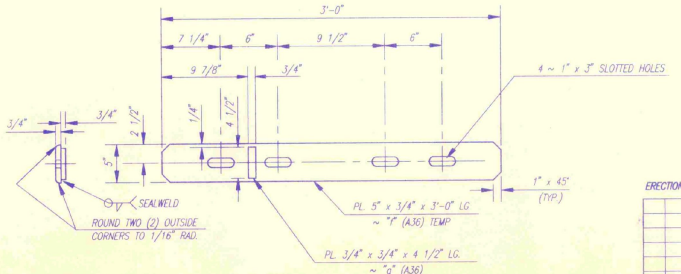
WELD PROC. # 2A
(Tc-U4a-f)



WELD PROC. # 1A
(BTC-p4-F)



4 MK "AC" – ANCHOR CONN.



56 MK "SP" – SPLICE

ERECTION DETAILS ARE ON SHEETS E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

HARDWARE NOTE:

VERMONT DEPT. OF HIGHWAYS HIGH STRENGTH HARDWARE A325 OR A449 REQUIRES MANUFACTURER'S CERTIFICATE SHOWING HEAT NO, PHYSICAL PROPERTIES AND CHEMICAL ANALYSIS.

CARBON A307 HARDWARE REQUIRES THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE.

NOTES:

1. ALL POSTS TO BE CHARPY V NOTCH TESTED
2. INSPECTED BY CONWELL
3. FINISH: GALV A123

RECEIVED
CK'D BY CK'D BY
JUN 10 1993
RESUBMIT APPROVED
BY DATE

APPROVAL DRAWINGS

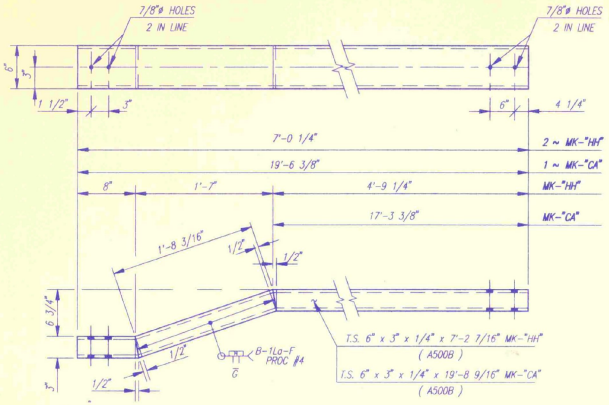
ISSUED
JUNE - 1993
ISSUED

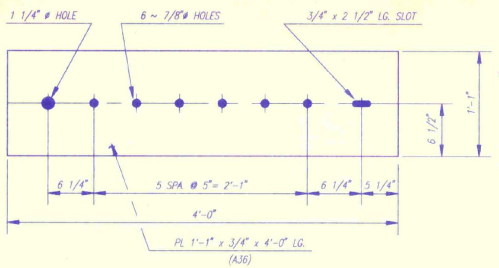
CUSTOMER	SYRO REF NO
F.R. LAFAYETTE INC.	22-33082

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL – (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT. 100B OVER MAD RIVER
PROJECT NO. BRZ – 1446 (1)

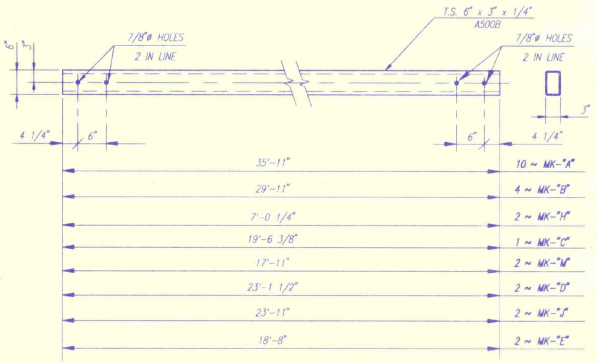
DRAWN F.L.D.
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO. 22-3082
1 OF 2

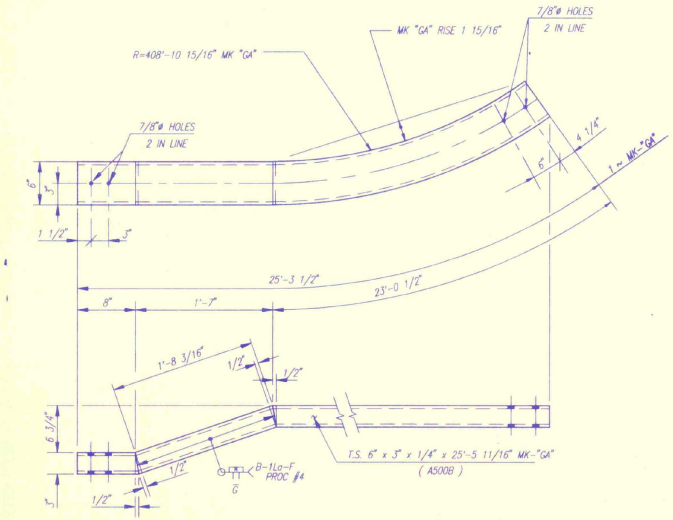
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

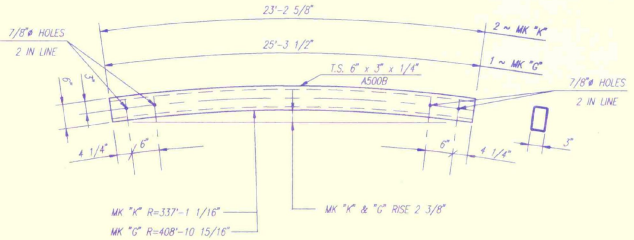




4 ~ MK "AP" - ANCHOR PLATE







BILL OF MATERIAL

PRODUCK CODE	MK	QTY	DESCRIPTION	WT	REMARKS
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71450A	HH	2	22-3082 HH RAIL 7-2 7/16	106#	
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71453A	GA	1	22-3082 GA RAIL 25-5 11/16	377#	CURVED
71454G	A	10	22-3082 A RAIL 35-11	530#	
71455G	B	4	22-3082 B RAIL 29-11	441#	
71456G	H	2	22-3082 H RAIL 7-0 1/4	104#	
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71460G	J	2	22-3082 J RAIL 23-11	353#	
71462G	K	2	22-3082 K RAIL 23-2 5/8	341#	CURVED
71463G	G	1	22-3082 G RAIL 25-3 1/2	374#	CURVED

RECEIVED
CK'D BY_____ CK'D BY_____
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RESUBMIT_____ APPROVED_____
BY DATE

APPROVAL DRAWINGS

NOTES:
1. INSPECTED BY: CONWELL
2. FINISH: GALV. A123

ISSUED
JUN 9 - 1993
ISSUED

FOR ERECTION DETAIL SEE SHEETS NO E1 & E2 OF 2 (22-3082)

NO	REMARKS	DATE	BY

REVISIONS

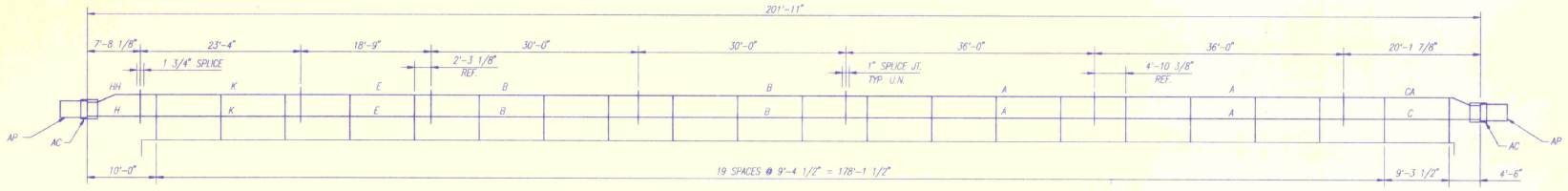
CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

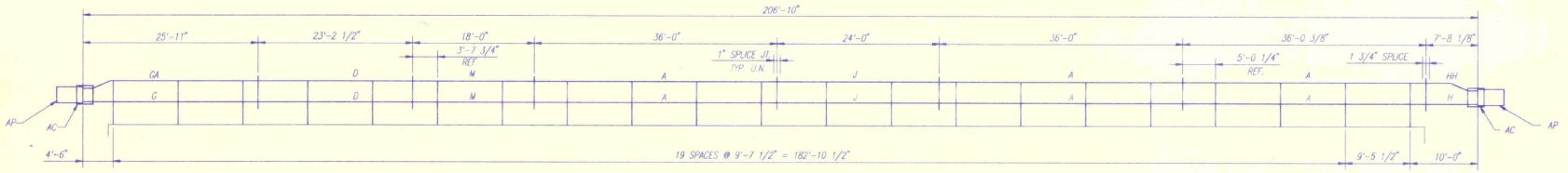
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO
22-33082

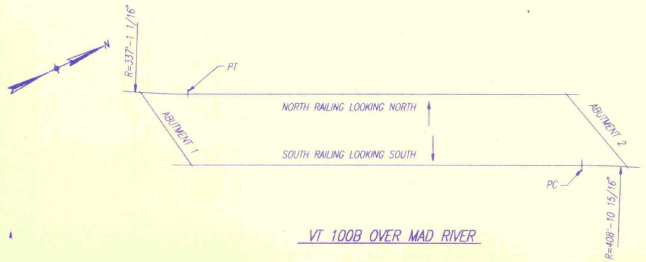
DRAWN FLD
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO. 22-3082
2 OF 2



NORTH RAIL LOOKING NORTH



SOUTH RAIL LOOKING SOUTH



VT 100B OVER MAD RIVER

RECEIVED
OK'D BY _____ OK'D BY _____
JUN 10 1993
RESUBMIT _____ APPROVED _____
BY DATE

APPROVAL DRAWING

NOTES:

1. INSPECTED BY: CONWELL
2. TOTAL PAY LENGTH: 408'-2" LIN./FT.
3. FINISH: GALV. A123
4. ALL JOINT SPLICES ARE 1" (UNLESS NOTED)
5. ALL POSTS ARE MK "A"

ISSUED
JUN 3 - 1993
ISSUED

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY
	REVISIONS		

CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
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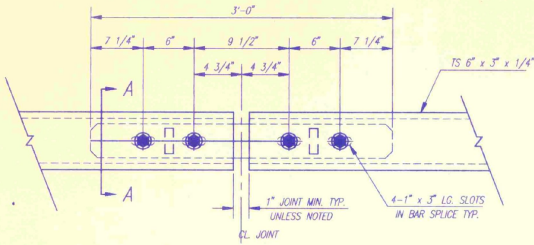
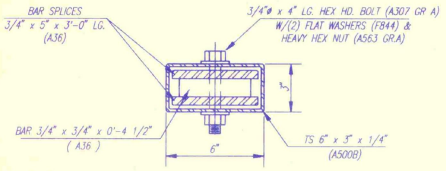
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

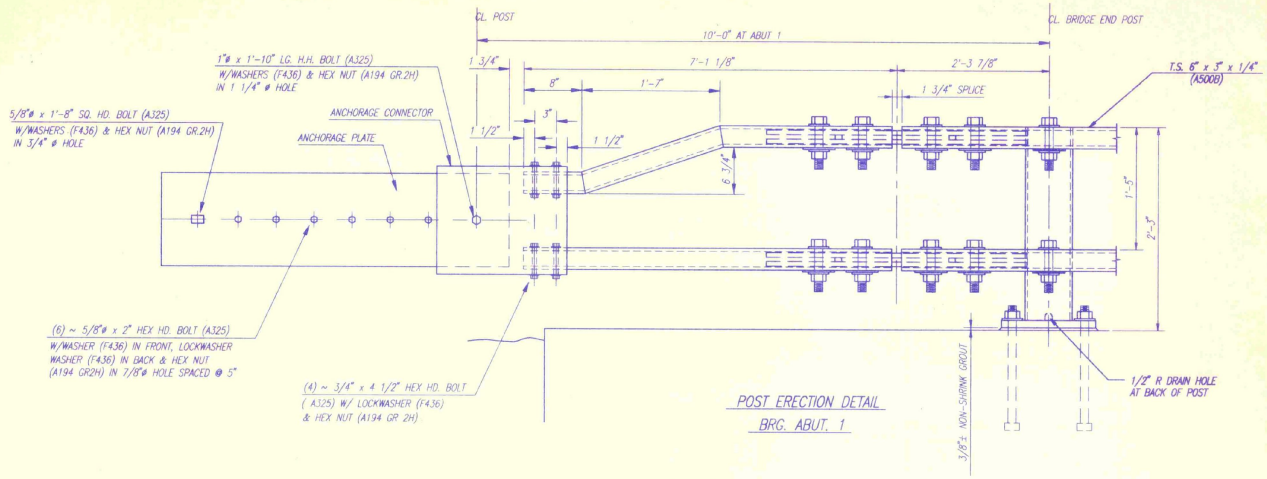
SYRO REF NO
22-33082
DRAWN FLD
CHECKED E.N.
APPROVED
DATE 6/2/93
SCALE NONE
DRAWING NO.
22-3082
E1 OF 2



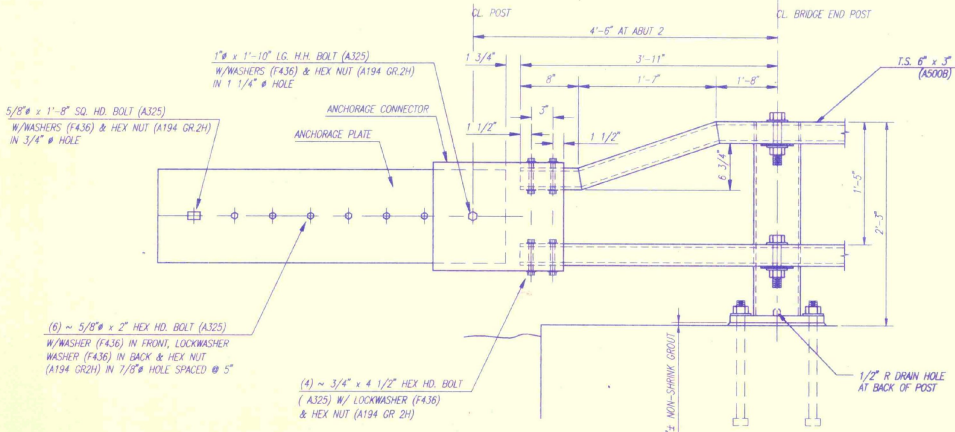
SPLICE DETAIL



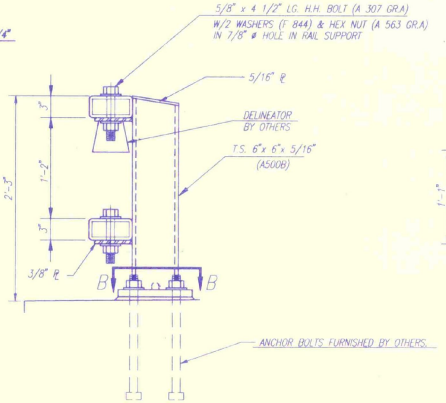
SECTION ~ "A-A"

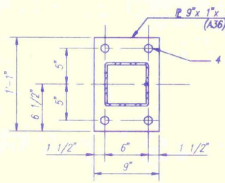


POST ERECTION DETAIL
BRG. ABUT. 1



POST ERECTION DETAIL
BRG. ABUT. 2





SECTION ~ B - B

RECEIVED
CK'D BY ____ CK'D BY ____
JUN 10 1993
RESUBMIT ____ APPROVED ____
BY ____ DATE ____

APPROVAL DRAWINGS

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

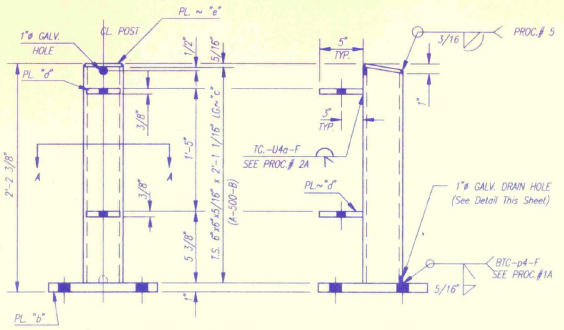
NO.	REMARKS	DATE	BY
	REVISIONS		

CUSTOMER
F.R. LAFAYETTE INC.

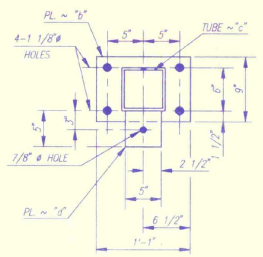
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER WAD RIVER
PROJECT NO. BRZ - 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF. NO.	22-3082
DRAWN	F.L.D.
CHECKED	E.D.
APPROVED	
DATE	6/2/93
SCALE	NONE
DRAWING NO.	22-3082
	E2 OF 2



42 MK "A" POST



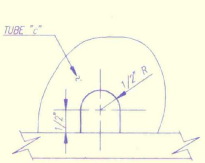
SECTION A-A

Each Post Mk "A" Consisting Of:

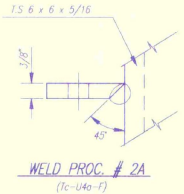
SUB MK	QUAN.	DESCRIPTION
b	1	PL. 9" x 1" x 1'-1" LG. (A36)
c	1	T.S. 6" x 6" x 5/16" x 2'-1 1/16" Lg. (A500B)
d	2	PL. 5" x 3/8" x 5" Lg. (A36)
e	1	PL. 5 5/8" x 5/16" x 5 5/8" Lg. (A36)

BILL OF MATERIAL

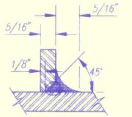
PRODUCT CODE	MK	QTY	DESCRIPTION	WT	REMARKS
14392A	A	42	POST (8609)	90#	
32124A	SP	56	SPLICE (8476)	37#	
71464A	AC	4	ANCHOR CONN. (8671)	83#	
			HARDWARE		
3706G		112	3/4"ø x 4" HEX HD. BOLT		A307 GR.A A153
3700G		224	3/4" WASHER		F844 A153
3704G		112	3/4" HEX NUT (HVY)		A563 GR.A A153
4584G		4	5/8"ø x 1'-8" LG. SQUARE HD. BOLT		A325 A153
4433G		84	5/8"ø x 4 1/2" LG HEX HD. BOLT		A307 GR.A A153
4373G		168	5/8" WASHER		F844 A153
3354G		84	5/8" HEX NUT		A563 GR.A A153
4940G		4	1"ø x 1'-10" LG HEX. HD. BOLT		A325 A153
4902G		4	1" WASHER		F436 A153
4903G		4	1" HEX NUT		A194 GR.2H A153
4779G		16	3/4"ø x 4 1/2" LG HEX HD. BOLT		A325 A153
3685G		16	3/4" LOCKWASHER		F436 A153
3711G		16	3/4" HEX NUT		A194 GR.2H A153
3404G		24	5/8" x 2" LG. HEX HD BOLT		A325 A153
3313G		28	5/8" WASHER		F436 A153
3314G		24	5/8" LOCKWASHER		F436 A153
3351G		28	5/8" HEX NUT		A194 GR.2H A153
			PAY QUANTITIES		
408'-2" LIN FT.			ITEM NO. 525.31		2-RAIL GALV. BOX BEAM BRIDGE RAILING



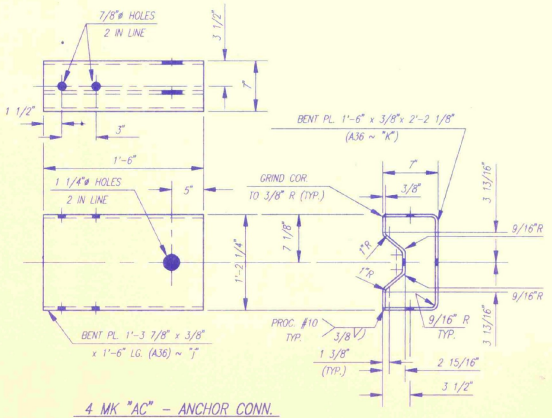
GALV. DRAIN DETAIL



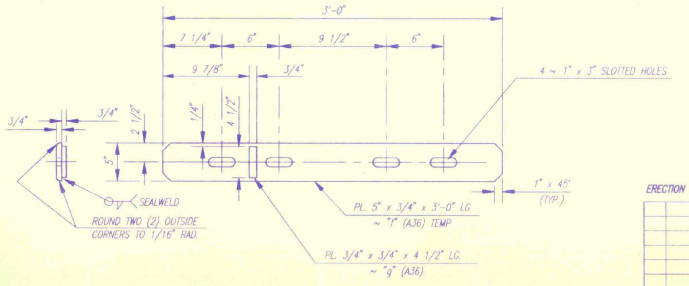
WELD PROC. # 2A
(Tc-U4a-F)



WELD PROC. # 1A
(BTC-p4-F)



4 MK "AC" - ANCHOR CONN.



56 MK "SP" - SPLICE

ERECTION DETAILS ARE ON SHEETS E1 & E2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

REVISIONS

RECEIVED
OK'D BY_____ OK'D BY_____
JUN 10 1993
RESUBMIT_____ APPROVED_____
BY DATE

APPROVAL DRAWINGS

HARDWARE NOTE:

VERMONT DEPT. OF HIGHWAYS HIGH STRENGTH HARDWARE A325 OR A449 REQUIRES MANUFACTURER'S CERTIFICATE SHOWING HEAT NO, PHYSICAL PROPERTIES AND CHEMICAL ANALYSIS.

CARBON A307 HARDWARE REQUIRES THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE.

NOTES:
1. ALL POSTS TO BE CHARPY V NOTCH TESTED
2. INSPECTED BY CONWELL
3. FINISH: GALV A123

ISSUED
JUN 3 1993
ISSUED

CUSTOMER
F.R. LAFAYETTE INC.

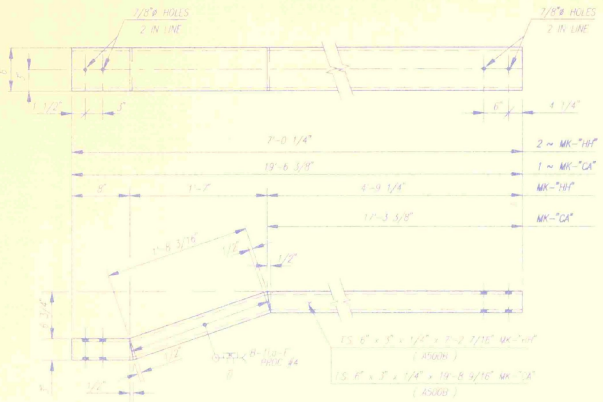
SYRO REF NO.
22-33082

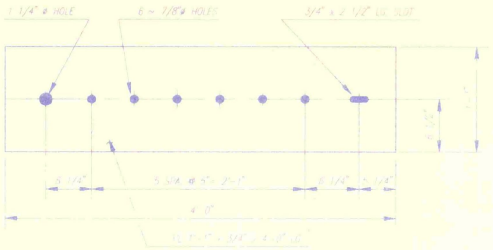
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT. 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

DRAWN FLD
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO. 22-3082

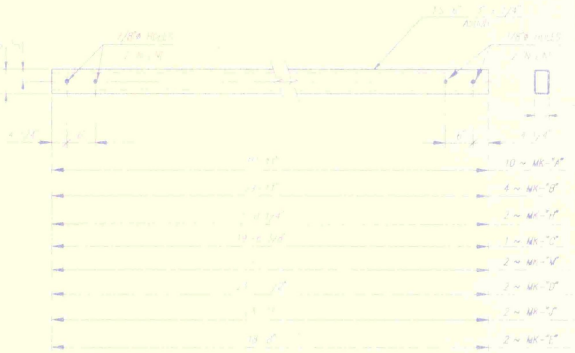
SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

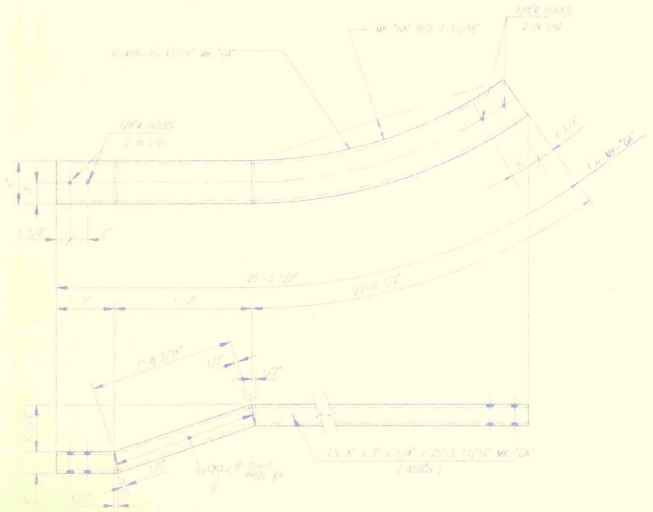
1 OF 2

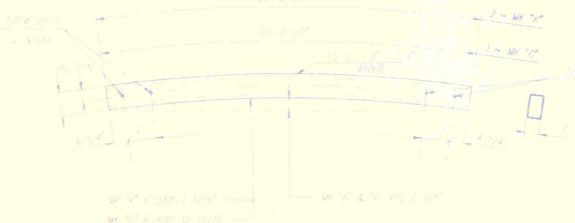




4 ~ MK "AP" - ANCHOR PLATE







BILL OF MATERIAL

PRODUCK CODE	MK	QTY	DESCRIPTION	WT	REMARKS
8116	AP	4	ANCHOR PLATE (8300)	133#	
71450A	HH	2	22-3082 HH RAIL 7-2 7/16	106#	
71451A	CA	1	22-3082 CA RAIL 19-8 3/16	285#	
71452G	E	2	22-3082 E RAIL 18-8	275#	
71453A	GA	1	22-3082 GA RAIL 25-5 11/16	377#	CURVED
71454G	A	10	22-3082 A RAIL 35-11	530#	
71455G	B	4	22-3082 B RAIL 29-11	441#	
71456G	H	2	22-3082 H RAIL 7-0 1/4	104#	
71457G	C	1	22-3082 C RAIL 19-6 3/8	285#	
71458G	M	2	22-3082 M RAIL 17-11	264#	
71459G	D	2	22-3082 D RAIL 23-1 1/2	336#	
71460G	J	2	22-3082 J RAIL 23-11	353#	
71462G	K	2	22-3082 K RAIL 23-2 5/8	341#	CURVED
71463G	G	1	22-3082 G RAIL 25-3 1/2	374#	CURVED

APPRO

NOTES:

1. INSPECTED BY: CONWELL
2. FINISH: GALV. A123

ISS
JUN 3 - 1993
ISSUED

FOR ERECTION DETAIL SEE SHEETS NO E1 & E2 OF 2 (22-3082)

NO	REVISIONS	DATE

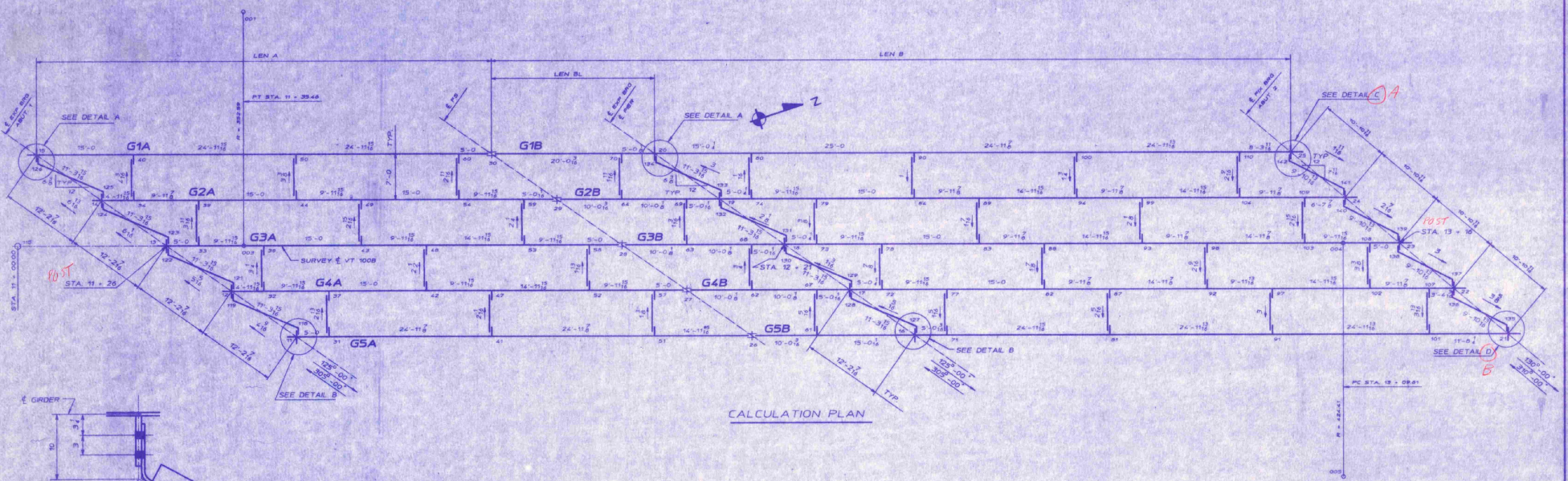
CUSTOMER
F.R. LAFAYETTE, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

SYRO, INC.
A Subsidiary of Emcy Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO
22-3308Z

DRAWN FLD
CHECKED E.N.
APPROVED
DATE 5/26/93
SCALE NONE
DRAWING NO 22-3082
2 OF 2



CALCULATION PLAN

DETAIL A

DETAIL B

RECEIVED
CK'D BY CPW OK'D BY RLD
MAR 04 1993
RESUBMIT ____ APPROVED AS NOTED
BY ____ DATE 3/10/93
James B. McLaughlin

Line	Len A	Len BL	Len B	ABUT. 1	PIER	ABUT. 2
1	69'-11 7/8	25'-0 5/16	123'-3 15/16	.0147	.0197	.0197
2	69'-11 3/4	25'-0 3/8	121'-7 15/16	.0132	.0160	.0160
3	69'-11 3/4	25'-0 5/16	120'-0	.0112	.0123	.0128
4	69'-11 11/16	25'-0 5/16	118'-4 1/16	.0086	.0086	.0104
5	69'-11 11/16	25'-0 1/4	116'-8 1/4	.0049	.0049	.0082

NOTES:
ALL LONGID. DIMEN. ARE TAKEN ALONG BOTT OF WEB WITH ALL ADJUSTMENTS MADE FOR CAMBER & GRADE
ALL TRANSV. DIMEN. ARE TAKEN IN A HORIZ PLANE
ALL ENDS, BRG. STIFFENERS ARE VERTICAL
INTERMEDIATE STIFF. ARE NORMAL.
BOTTOM POINTS ARE EQUAL TO TOP POINTS + 200
ARROW POINTS TOWARD LOW END OF MEMBER

RESERVED FOR STAMPS

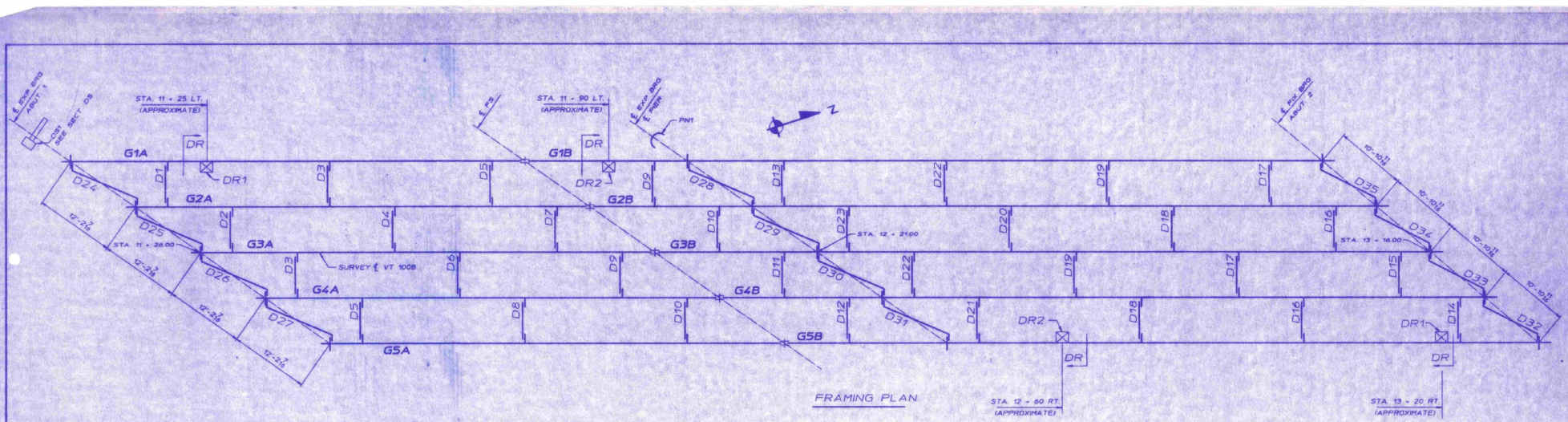
REV	DATE	DESCRIPTION
5		
4		
3		
2		
1		

QTY.	DATE	ISSUED TO:	FOR
1	2/22/93	J.A. McDONALD	FOR APPROVAL
5	2/12/93	VT. AOT	FOR APPROVAL

ECSE

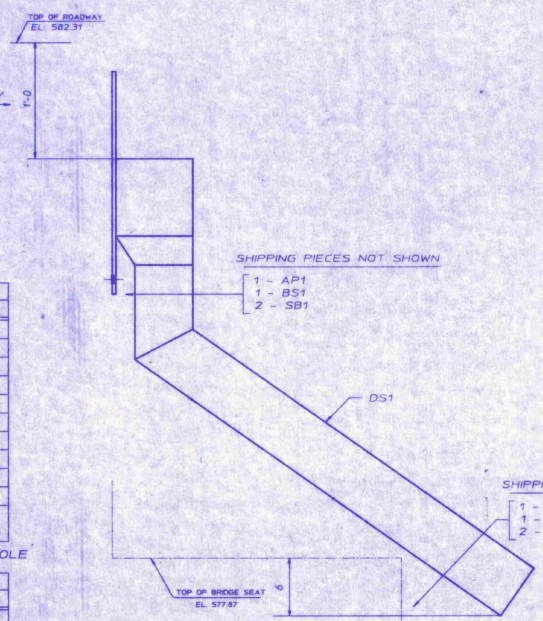
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: CALCULATION PLAN TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: WS1

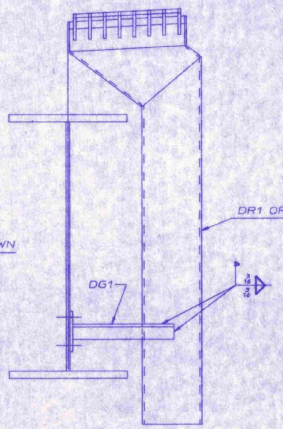


FRAMING PLAN

ENGR. VERIFY



SECTION DS



SECTION DR

	A325 Type 3 BOLTS												FIELD BOLTS	
LINE	NO REQ'D.	BOLT DIAM.	BOLT LEN.	BOLTS / CONN.	BOLTS / CONN.	GRIP	THICKNESS OF PCS. CONNECTED						WASHER CODE	PIECES CONNECTED AND REMARKS
1														
2	320	7/8	3 3/4	32	10	2 1/4	5/8	1	5/8				1	FLANGE SPLICES
3	360	7/8	3	72	5	1 1/2	1/2	1/2	1/2				1	WEB SPLICES
4														
5	336	7/8	3 3/4	14	24	3 1/8	7/8	1/2					1	DIAPH. @ BEARINGS
6	512	7/8	2 3/4	8	64	1 5/16	7/8	7/16					1	DIAPH. (BALANCE)
7														
8	16	7/8	3 3/4	4	4	7/8	1/2	3/8					1	SCUPPER TO WEB
9														
10														

WASHER CODES:
1: 1 Hard Flat Washer

ERECTOR NOTE : INSTALL WASHER AGAINST OVERSIZED HOLE

	2% ADDED, MIN. 2 EXTRA					FIELD BOLTS
LINE	NO. OF BOLTS	BOLT DIAM.	TYPE	BOLT LEN.	ACTUAL COUNT	REMARKS
1	18	7/8	A325 Type 3	2 3/4	18	
2	865	7/8	"	2 3/4	848	
3	367	7/8	"	3	360	
4	326	7/8	A325 Type 3	3 3/4	320	
5						
6	1576 Hard Flat Washers for		7/8	DIA. BOLT.		
7						
8						
9						

RECEIVED
CK'D BY CPW CK'D BY BLD
MAR 04 1993
RESUBMIT APPROVED
BY DATE 3/10/93
James B. McCauley

REV	DATE	DESCRIPTION
1	2/23/93	J.A. McDONALD
2	2/26/93	V.T. AOT

RESERVED FOR STAMPS

FOR APPROVAL
FOR APPROVAL

QTY. DATE ISSUED TO: FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ. NO. BRZ-1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: FRAMING PLAN
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: E1

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

1). ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 1990 WITH LATEST REVISIONS AND THE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS

1). AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (A.A.S.H.T.O) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1989 EDITION WITH INTERIMS.

MATERIAL SPECIFICATIONS

1). UNLESS NOTED, ALL STEEL TO BE AASHTO M-270[4] GR.50W (ASTM A709-50W) UNPAINTED.

2). HIGH STRENGTH BOLTS: AASHTO M164 (ASTM A325) 7/8" DIA., TYPE 3, IN 15/16" DIAMETER HOLES, UNLESS NOTED.

3). ALL ITEMS DENOTED AS "MAIN TENSION MEMBER" ON THE PLANS SHALL BE CHARPY V NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS. DRAWINGS SHALL CALL OUT "C.V.N." FOR EACH APPLICABLE ITEM IN THE BILLS OF MATERIAL.

BUY AMERICA

FABRICATION

1). ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE UNLESS NOTED.

2). ALL HOLES NOTED THUS [DA] SHALL BE DRILLED FROM THE SOLID IN ASSEMBLY.

3). STUDS ARE FURNISHED AND FIELD APPLIED BY OTHERS.

BUY AMERICA PROVISIONS OF VT. SPEC. 107.22 & MODIFIED IN SPECIAL PROVISIONS HS SHALL BE ADHERED TO

WELDING

1). THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-88 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). SSPC SP-6 TO BE USED ON UNPAINTED STEEL.

2). SSPC SP-10 TO BE USED ON PAINTED STEEL.

PAINTING

1). NONE EXCEPT AS NOTED BELOW.

2). ALL STRUCTURAL STEEL WITHIN EIGHT FEET OF ABUTMENT NO. 1 SHALL BE COATED WITH A PROTECTIVE PAINT SYSTEM IN ACCORDANCE WITH THE CONTRACT DWGS. & THE SUPPLEMENTAL SPEC. SECTION 513 & TABLE 513.02A (FOR SHOP APPLIED COATINGS)

3). SHOP PRIME COAT (WHERE REQD.) SHALL BE A MINIMUM THICKNESS OF 2.0 OR 3.0 MILS & MAXIMUM THICKNESS OF 3.0 TO 6.0 MILS, SUCH THICKNESS (BASED ON BRAND OF PAINT USED) TO CONFORM TO SPECIFICATION AS SHOWN IN NOTE #2 ABOVE.

4). INTERMEDIATE SHOP COAT (WHERE REQD.) SHALL BE A MIN. THICKNESS OF 3.0 OR 4.0 MILS & MAXIMUM THICKNESS OF 5.0 TO 10.0 MILS, SUCH THICKNESS (BASED ON BRAND OF PAINT USED) TO CONFORM TO SPECIFICATION AS SHOWN IN NOTE #2 ABOVE.

5). ALL PAINT TO BE USED WILL BE FROM THE SAME MANUFACTURER.

FIELD CONNECTIONS

1). ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH A-325 BOLTS TYPE 3, IN 15/16 DIAMETER HOLES, UNLESS OTHERWISE NOTED.

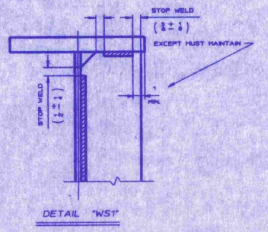
2). BOLTS SHALL HAVE HEAVY HEX NUT, HEX HEAD, & ONE FLAT WASHER EACH (WASHER TO BE PLACED UNDER TURNED ELEMENT).

3). PIECE MARKS WILL BE LOCATED AS SHOWN ON ERECTION DRAWINGS.

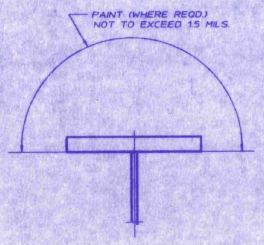
4). PIER NOSING & SCUPPERS TO BE GALVANIZED.

& DOWNSPOUTS & HARDWARE

BOLTS IN PAINTED AREAS SHALL MEET AASHTO M164 AND CMTRD. PER AASHTO M253, CLASS 50, TYPE 3



DETAIL "WS1"



DETAIL "P1"

(THIS DETAIL IS ONLY APPLICABLE WITHIN 8 FEET OF ABUTMENT 1)

RECEIVED
CK'D BY CPW CK'D BY BLD
MAR 04 1993
RESUBMIT ____ APPROVED AS NOTED
BY Jamie D'Arcelly DATE 3/10/93

RESERVED FOR STAMPS

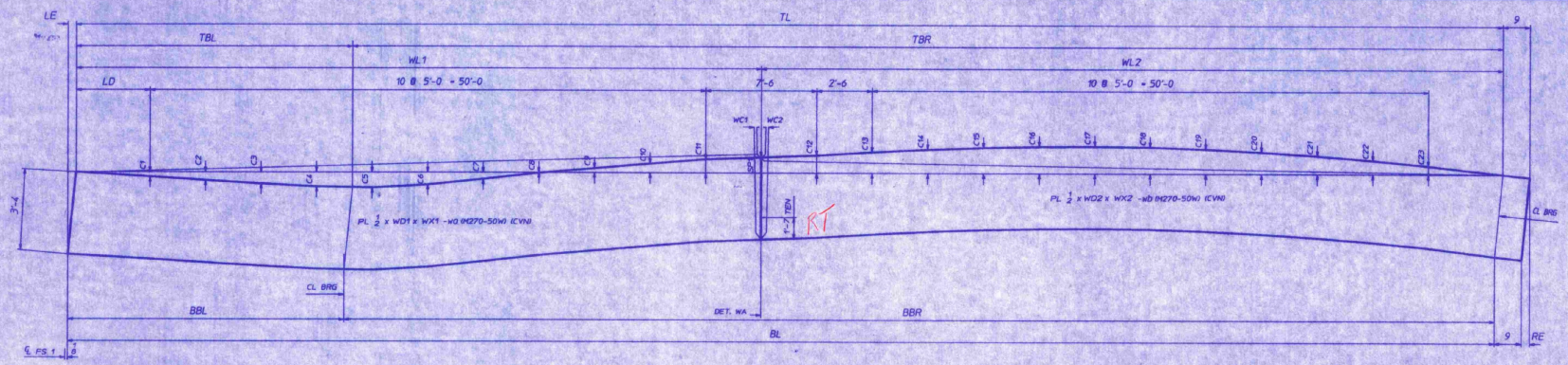
REV	DATE	DESCRIPTION
1	2/19/93	J. A. McDONALD
0	2/22/93	VT. AOT

QTY.	DATE	ISSUED TO:	FOR:
1	2/19/93	J. A. McDONALD	FOR APPROVAL
0	2/22/93	VT. AOT	FOR APPROVAL

ECSE

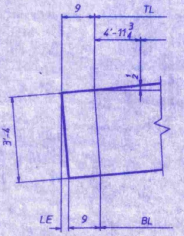
EAST COAST STEEL
Bridge Division
1 Wallace Ave
South Portland,ME 04106
207-773-1642

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GENERAL NOTES
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: GN1

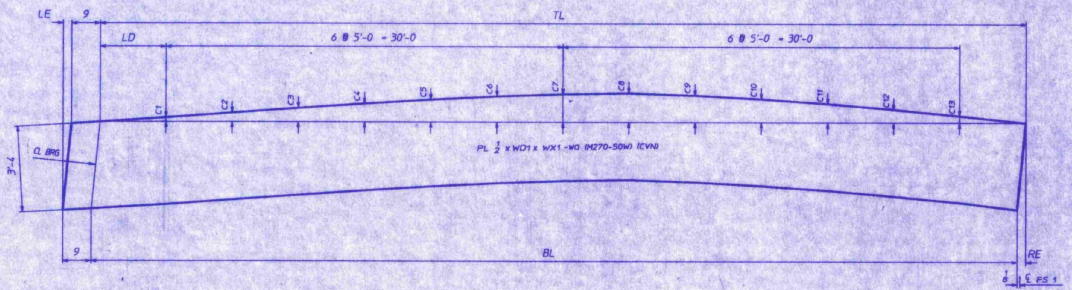


MARK	TL	BL	LE	RE	WL1	WL2	WD1	WX1	WD2	WX2	SP1	WC1	WC2	TBL	TBR	BBL	BBR	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	PG/LINE	PG/LINE
G1B	123'-4 3/4	123'-3 13/16	3/16	1/8	59'-8 7/8	63'-7 7/8	41 7/8	59'-9 1/8	41 5/8	64'-4 15/16	1 3/8	1/16	1/16	25'-0 3/4	98'-4	25'-0 9/16	98'-3 5/8	6'-7 7/8	3/8	11/16	15/16	1 3/16	1 5/16	1 1/16	9/16	0	3/8	3/4	1 1/8	1 1/2	1 3/4	2	2 3/16	2 1/4	2 5/16	2 1/4	2 1/16	1 7/8	1 9/16	1 3/16	11/16	1 / V	2 / A
G2B	121'-8 5/8	121'-7 13/16	3/16	1	59'-8 7/8	61'-11 3/4	41 3/4	59'-9 1/8	41 5/8	62'-8 13/16	1 3/8	1/16	1/16	25'-0 5/8	96'-8	25'-0 1/4	96'-7 9/16	5'-9 7/8	5/16	9/16	7/8	1 3/16	1 5/16	15/16	1/2	0	5/16	3/4	1 1/8	1 7/16	1 13/16	2 1/16	2 1/4	2 5/16	2 5/16	2 1/4	2 1/16	1 3/4	1 7/16	1 1/16	5/8	2 / E	2 / C
G3B	120'-0 9/16	119'-11 7/8	3/16	7/8	59'-8 7/8	60'-3 11/16	41 3/4	59'-9 1/8	41 1/2	61'-0 3/4	1 7/16	1/16	1/16	25'-0 7/16	95'-0 1/8	25'-0 3/16	94'-11 11/16	5'-0	1/4	1/2	7/8	1 1/8	1 5/16	1	9/16	-1/8	5/16	11/16	1 1/16	1 7/16	1 3/4	2	2 1/4	2 5/16	2 5/16	2 3/16	2	1 3/4	1 3/8	1	9/16	2 / E	2 / G
G4B	118'-4 1/2	118'-3 15/16	3/16	3/4	59'-8 7/8	58'-7 5/8	41 3/4	59'-9 1/8	41 3/8	59'-4 11/16	1 3/8	1/16	1/16	25'-0 5/16	93'-4 3/8	25'-0 3/16	93'-3 3/4	4'-2	3/16	1/2	13/16	1 1/8	1 5/16	1 1/16	11/16	-3/4	3/16	9/16	1	1 5/16	1 11/16	1 15/16	2 1/8	2 3/16	2 3/16	2 1/16	1 7/8	1 9/16	1 3/16	13/16	7/16	2 / E	2 / J
G5B	116'-8 1/2	116'-8 1/8	3/16	9/16	59'-8 7/8	56'-11 5/8	41 3/4	59'-9 1/8	41 1/4	57'-8 11/16	1 1/4	1/16	1/16	25'-0 1/8	91'-8 3/8	25'-0 1/8	91'-8	3'-4 1/8	3/16	7/16	7/8	1 1/4	1 7/16	1 3/16	13/16	-7/16	0	3/8	13/16	1 3/16	1 7/16	1 11/16	1 7/8	2	1 15/16	1 19/16	1 5/8	1 5/16	1	5/8	1/4	2 / E	2 / L

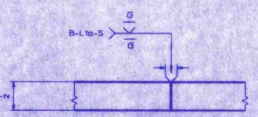
NEGATIVE SIGN (-) DENOTES ORDINATE VALUE BELOW CHORD LINE



* END FOR G5A ONLY



MARK	TL	BL	LE	RE	WD1	WX1	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	PG/LINE
G1A	69'-11 9/16	69'-11 3/4	7/16	1/4	41 5/8	70'-9	4'-11 7/8	1/4	1/2	13/16	1 1/16	1 1/4	1 7/16	1 9/16	1 5/8	1 1/2	1 5/16	1 1/16	3/4	3/8	1 / X
G2A	69'-11 11/16	69'-11 5/8	1/4	5/16	41 13/16	70'-8 15/16	4'-11 7/8	3/8	3/4	1 1/16	1 5/16	1 9/16	1 3/4	1 13/16	1 13/16	1 11/16	1 7/16	1 3/16	13/16	7/16	1 / T
G3A	69'-11 13/16	69'-11 5/8	1/8	5/16	41 13/16	70'-8 15/16	4'-11 7/8	7/16	7/8	1 3/16	1 1/2	1 3/4	1 7/8	1 15/16	1 15/16	1 3/4	1 9/16	1 1/4	7/8	7/16	1 / T
G4A	69'-11 7/8	69'-11 9/16	0	5/16	42	70'-8 7/8	4'-11 3/4	1/2	15/16	1 1/4	1 9/16	1 13/16	1 15/16	2	1 15/16	1 13/16	1 9/16	1 1/4	7/8	7/16	1 / T
G5A	70'-0	69'-11 9/16	1/8	5/16	41 15/16	70'-9	4'-11 3/4	1/2	15/16	1 5/16	1 5/8	1 13/16	1 15/16	1 15/16	1 7/8	1 3/4	1 1/2	1 1/4	7/8	7/16	1 / T



WEB PLATE SPLICE DETAIL "WA"

RECEIVED
CK'D BY JAM CK'D BY BLD
MAR 04 1993
RESUBMIT APPROVED AS NOTED
BY DATE
DATE 3/10/93

NOTES:
ALL WEB MATERIAL TO BE M270-50W.
CVN DENOTES CHARPY-V-NOTCH TESTING REQD.
FOR GENERAL NOTES SEE SHT. GN1.

RESERVED FOR STAMPS

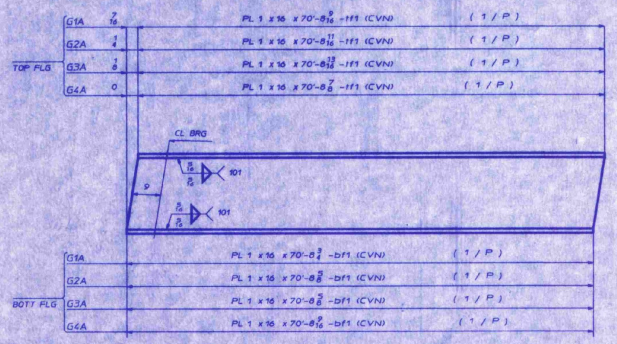
REV	DATE	DESCRIPTION
1	2/23/93	JA McDonald
2	2/25/93	VT AOT

QTY	DATE	ISSUED TO:	FOR:
			For Approval
			For Approval

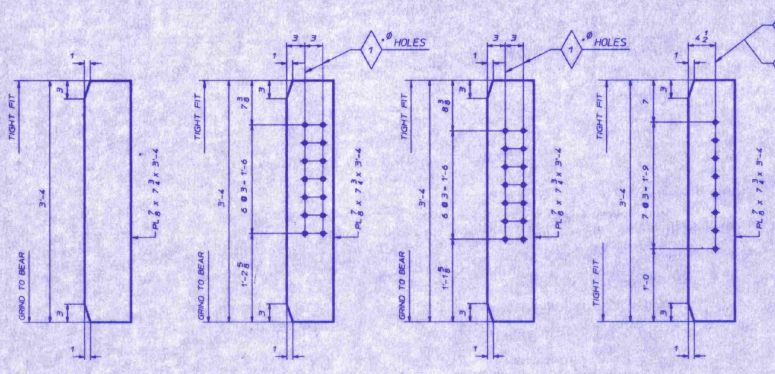
ECSE

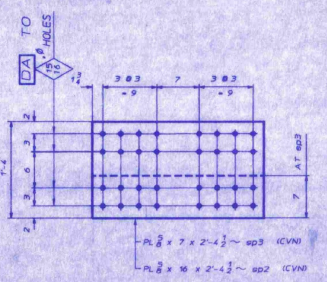
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-5642

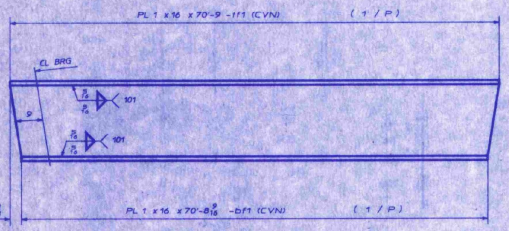
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: CAMBER DIAGRAM
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-1



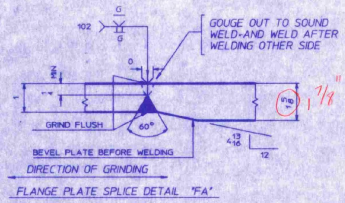
FLANGE DIAGRAM FOR G1A THRU G4A



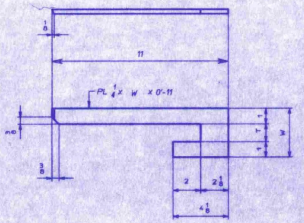




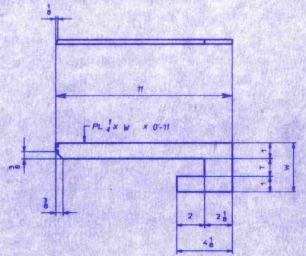
FLANGE DIAGRAM FOR G5A



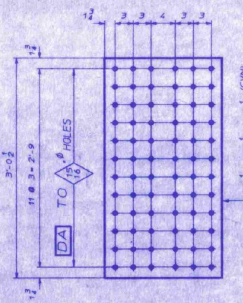
FLANGE PLATE SPLICE DETAIL "FA"

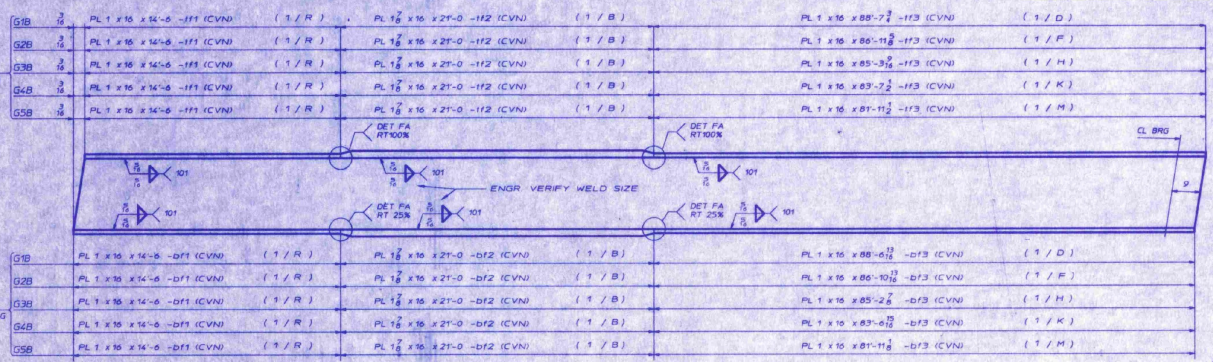


REQD.	MARK	"T"	"W"
1	p1	1	3
1	p3	1 7/8	3 7/8



REQD.	MARK	"T"	"W"
1	p2	1	3
1	p4	1 7/8	3 7/8





FLANGE DIAGRAM FOR G1B THRU G5B

RECEIVED
CK'D BY CPW CK'D BY BLD
MAR 04 1993
RESUBMIT APPROVED AS NOTED
BY DATE BLD
James B. McCarthy

NOTES:
ALL MATERIAL TO BE M270-50W.
CVN DENOTES CHARPY-V-NOTCH TESTING REQD.
FOR GENERAL NOTES SEE SHT GN1.
HOLE SIZES AS NOTED.

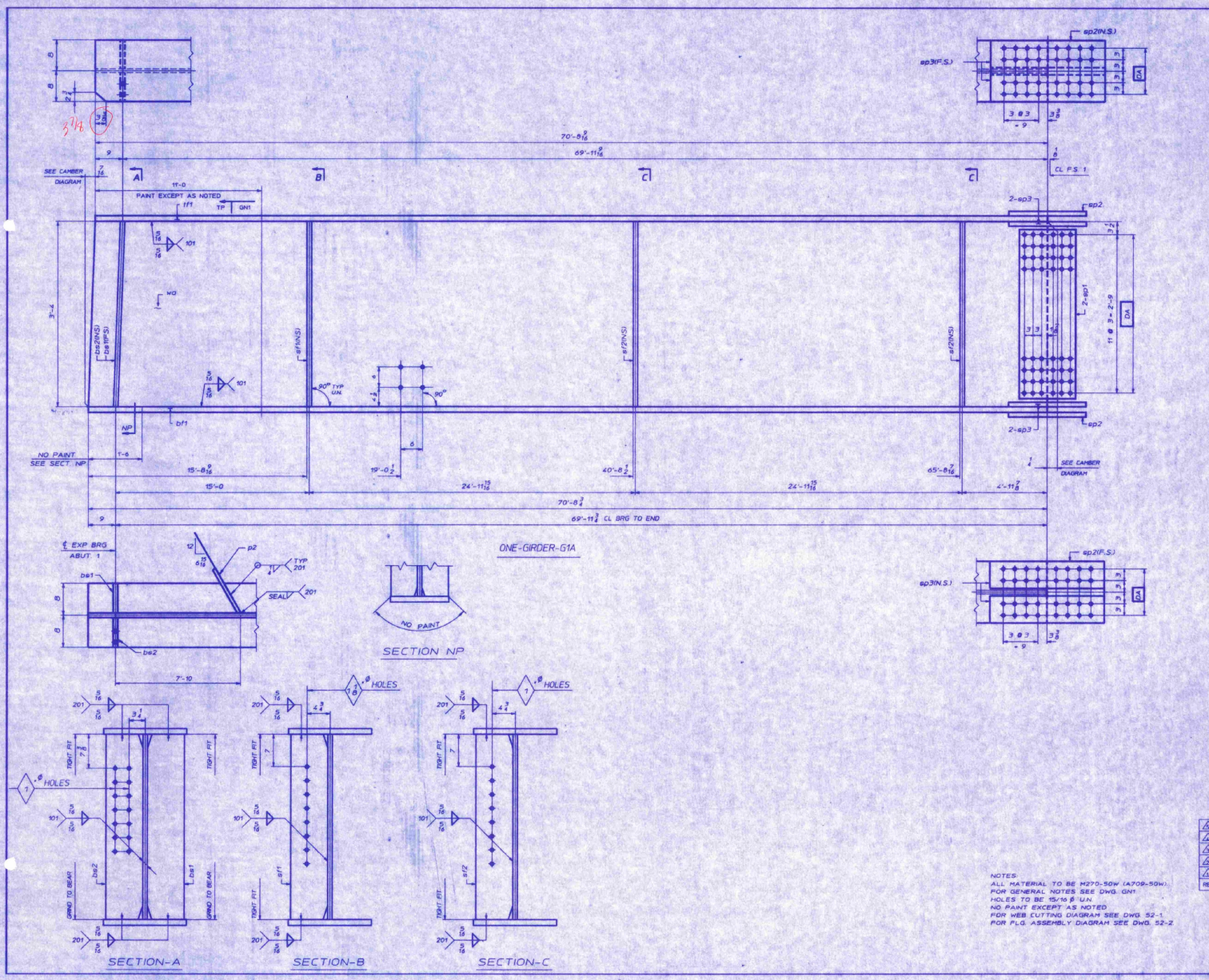
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

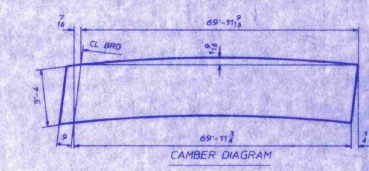
RESERVED FOR STAMPS

QTY.	DATE	ISSUED TO:	FOR:
1	2/22/93	J.A. McDonald	For Approval
5	2/26/93	VT AOT	For Approval

ECSE
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT:	VT RTE. 100B OVER THE MAD RIVER
LOCATION:	PROJ NO BR2 -1446 (1)
ARCHITECT:	STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER:	J.A. McDONALD
DRAWING TITLE:	FLG. DIAG. & GIRDER STDS. TENSOR 1461
DRAWN BY:	JAK
JOB NUMBER:	93-01-0775
CHECKED BY:	JB 2-93
SHEET NUMBER:	52-2





CAMBER DIAGRAM

ASH INFO		SHIP	BILL OF MATERIAL						JOB NO. 93-01-0775	DRAWING NO. 52-3	REV
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT.	PROCUREMENT NOTES	
		G1A	1		GIRDER						
1	X		1	wa	PL 1/2 x 41 5/8	70	9	(CVN)			
1	P		1	tf1	PL 1 x 16	70	8 9/16	(CVN)			
1	P		1	bf1	PL 1 x 16	70	8 3/4	(CVN)			
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)			
3	G		2	sp2	PL 5/8 x 16	2	4 1/2	(CVN)			
3	H		2	sp3	PL 5/8 x 7	2	4 1/2	(CVN)			
3	B		1	bs2	PL 7/8 x 7 3/4	3	4				
3	B		1	bs1	PL 7/8 x 7 3/4	3	4				
3	B		1	sf1	PL 7/8 x 7 3/4	3	4				
3	B		2	sf2	PL 7/8 x 7 3/4	3	4				
3	G		1	p2	PL 1/4 x 3	0	11				

RECEIVED
CK'D BY CPW DK'D BY BLP
MAR 04 1993
RESUBMIT ____ APPROVED AS NOTED
BY James B. McCarthy DATE 3/10/93

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 15/16 ø U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

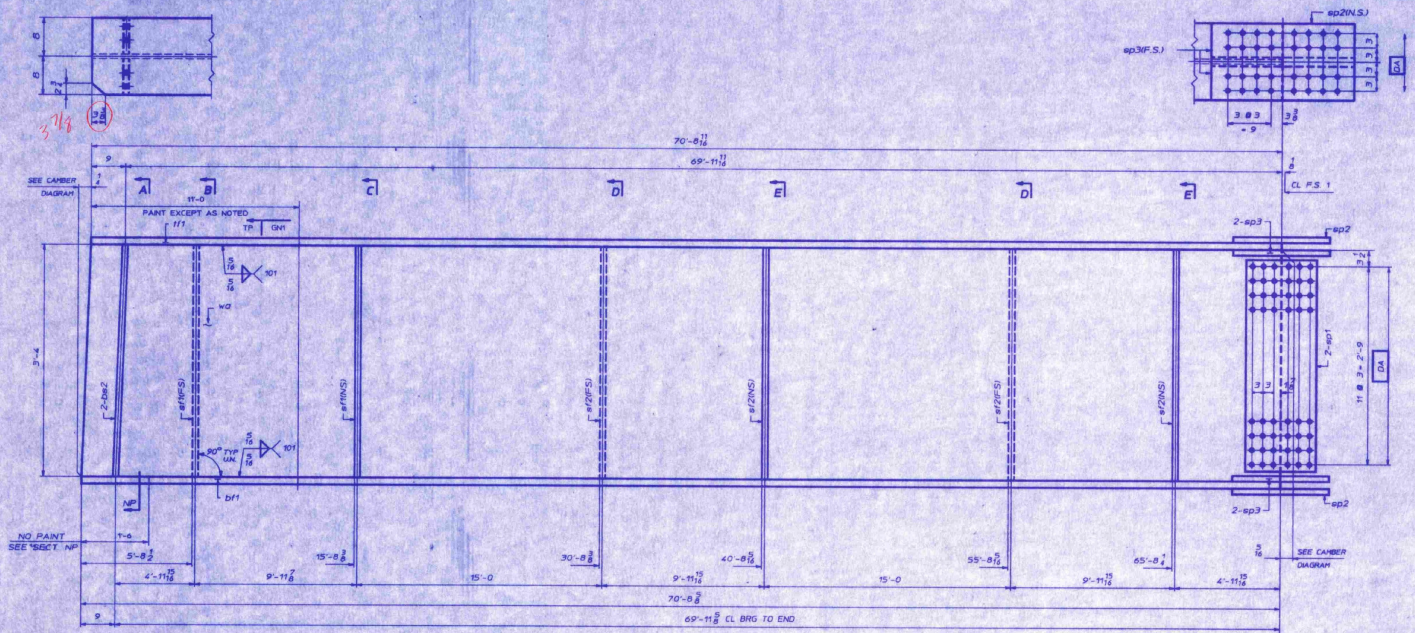
RESERVED FOR STAMPS

REV	DATE	DESCRIPTION	QTY	DATE	ISSUED TO	FOR
5						
4						
3						
2			1	2/22/93	J.A. McDONALD	FOR APPROVAL
1			5	2/22/93	VT ADT	FOR APPROVAL

ECSE

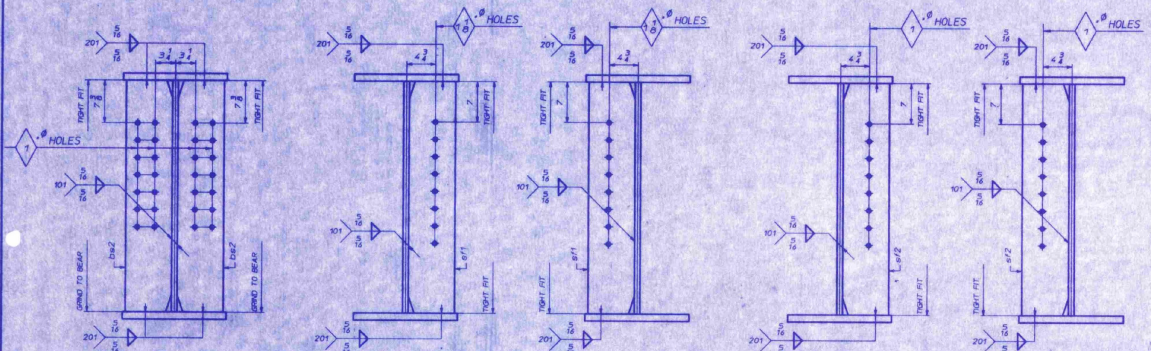
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G1A — TENSOR 1461
DRAWN BY: JAK — JOB NUMBER: 93-01-0775 — SHEET NUMBER: 52-3
CHECKED BY: JB 2-93

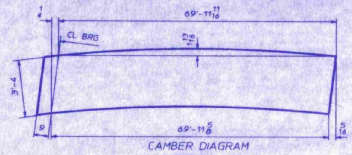




SECTION NP



SECTION-A SECTION-B SECTION-C SECTION-D SECTION-E



CAMBER DIAGRAM

ASM INFO		SHP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-4	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT.	PROCUREMENT NOTES
		G2A	1		GIRDER					
1	T		1	WQ	PL 1/2 x 41 13/16	70	8 15/16	(CVN)		
1	P		1	tf1	PL 1 x 16	70	8 15/16	(CVN)		
1	P		1	bf1	PL 1 x 16	70	8 5/8	(CVN)		
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)		
3	G		2	sp2	PL 3/8 x 16	2	4 1/2	(CVN)		
3	H		4	sp3	PL 3/8 x 7	2	4 1/2	(CVN)		
3	B		2	bs2	PL 3/8 x 7 3/4	3	4			
3	B		2	sf1	PL 3/8 x 7 3/4	3	4			
3	B		4	sf2	PL 3/8 x 7 3/4	3	4			

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W)
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 15/16 Ø U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

RECEIVED
CK'D BY CPW CK'D BY BLD
MAR 04 1993
RESUBMIT ____ APPROVED AS NOTED
BY James B. McCarthy DATE 3/4/93

RESERVED FOR STAMPS

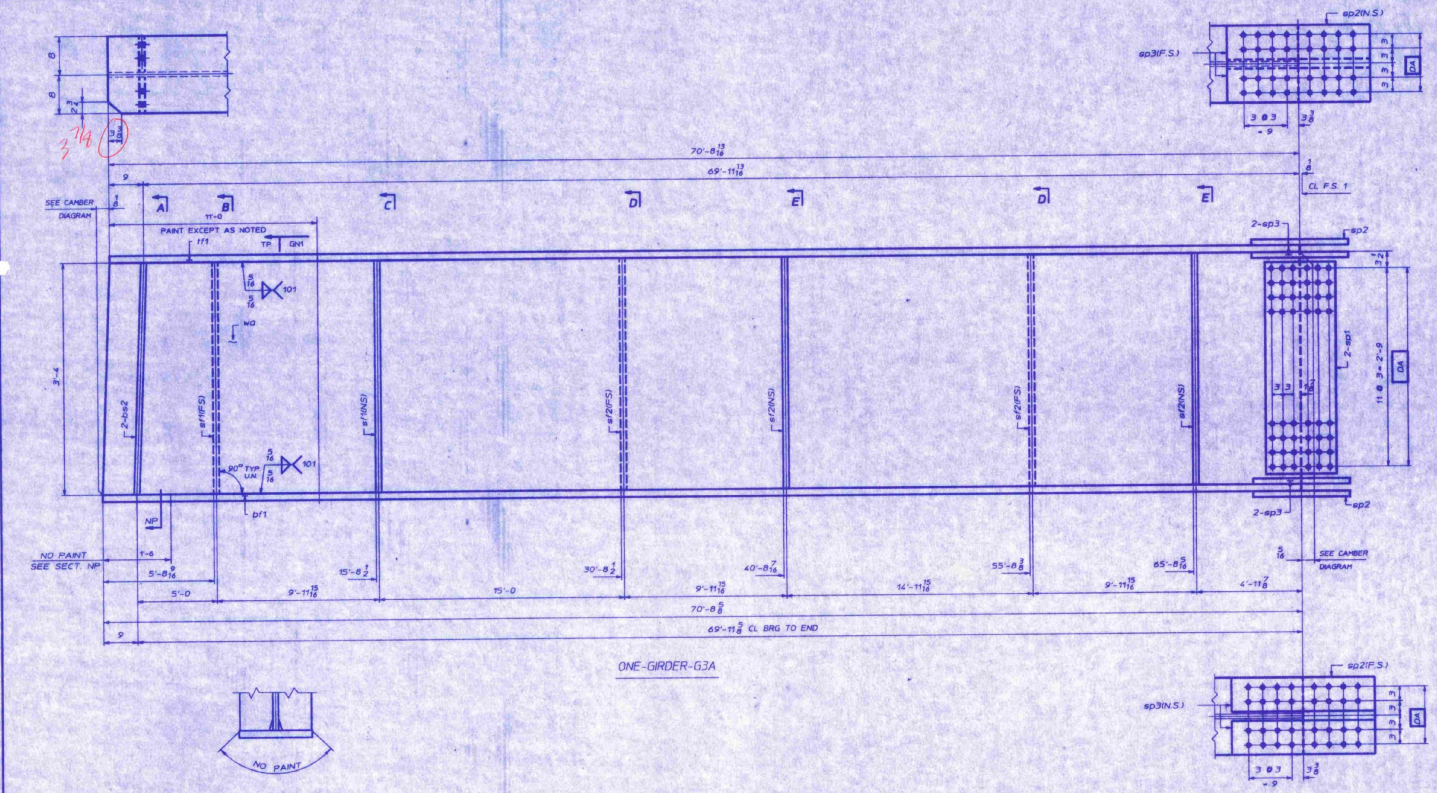
REV	DATE	DESCRIPTION
1	2-22-93	J.A. McDonald
2	2-22-93	VT AOT

QTY	DATE	ISSUED TO	FOR
			FOR APPROVAL
			FOR APPROVAL

ECSE

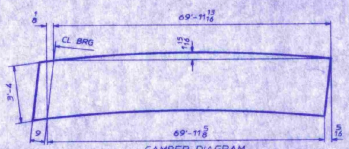
EAST COAST STEEL
Bridge Division
1 Wallace Ave
South Portland ME 04106
207-773-1642

PROJECT: VT RTE 100B OVER THE MAD RIVER
LOCATION: PROJ NO BRZ-1446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G2A TENSOR 1661
DRAWN BY: JAK JOB NUMBER: 93-01-0775 SHEET NUMBER: 52-4
CHECKED BY: KB 2-93

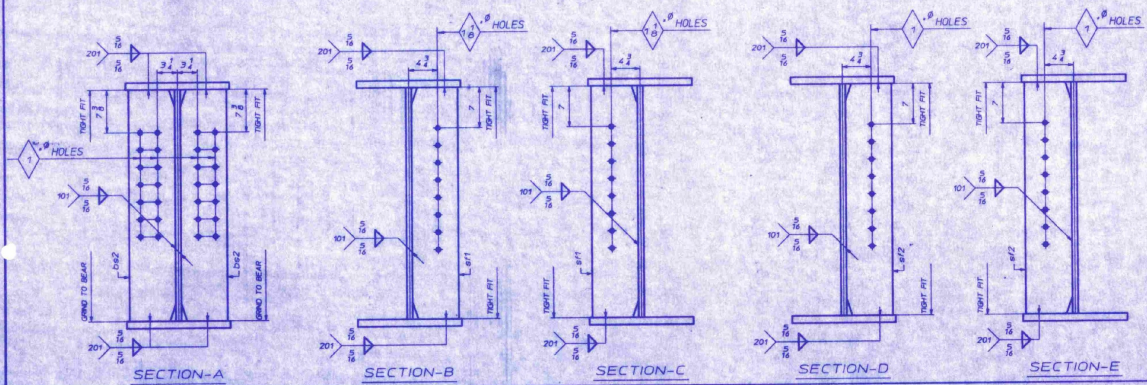


ONE-GIRDER-G3A

SECTION NP



CAMBER DIAGRAM



SECTION-A SECTION-B SECTION-C SECTION-D SECTION-E

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-5	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G3A	1		GIRDER					
1	T		1	wa	PL 1/2 x 41 15/16	70	8 15/16	(CVN)		
1	P		1	tf1	PL 1 x 16	70	8 13/16	(CVN)		
1	P		1	bf1	PL 1 x 16	70	8 5/8	(CVN)		
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)		
3	G		2	sp2	PL 5/8 x 16	2	4 1/2	(CVN)		
3	H		4	sp3	PL 5/8 x 7	2	4 1/2	(CVN)		
3	B		2	bs2	PL 7/8 x 7 3/4	3	4			
3	B		2	sf1	PL 7/8 x 7 3/4	3	4			
3	B		4	sf2	PL 7/8 x 7 3/4	3	4			

RECEIVED
CK'D BY CFW CK'D BY BLD
MAR 04 1993
RESUBMIT ____ APPROVED AS NOTED
BY ____ DATE 3/10/93
James D. McCarthy

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ϕ U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

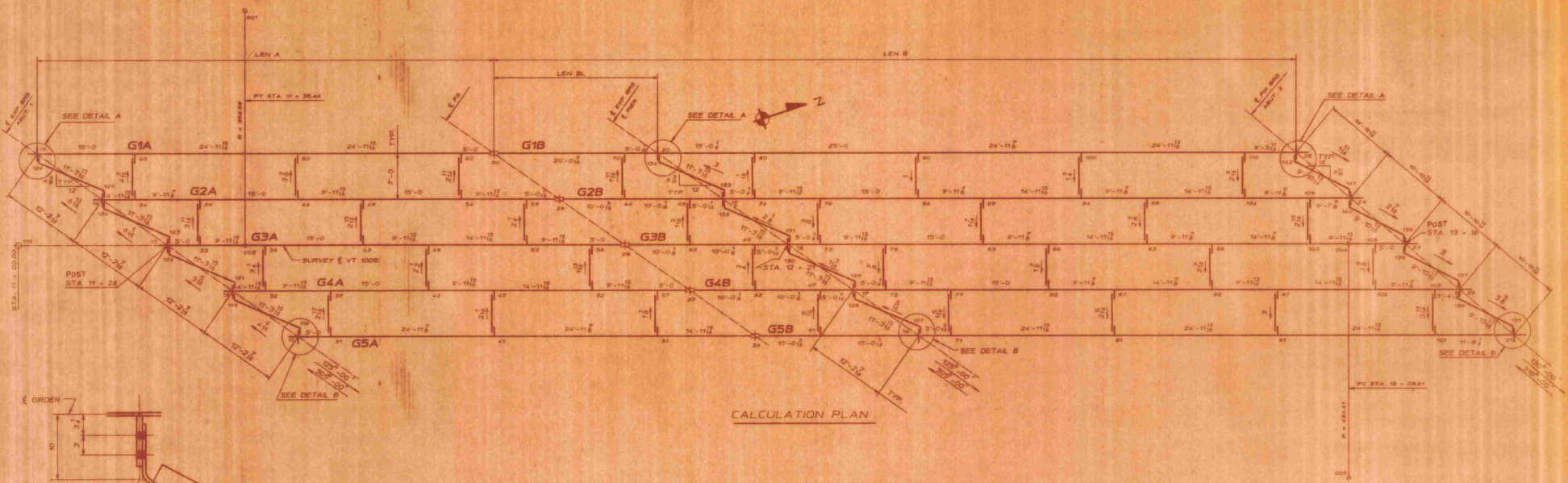
RESERVED FOR STAMPS

REV	DATE	DESCRIPTION	QTY	DATE	ISSUED TO	FOR
5						
4						
3						
2			1	2-22-93	J.A. McDONALD	FOR APPROVAL
1			5	2-22-93	VT AOT	FOR APPROVAL

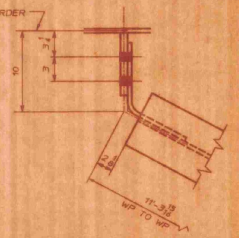
ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

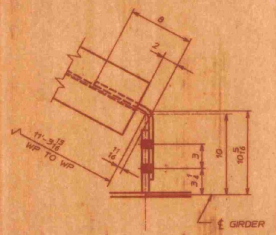
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G3A — TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-5



CALCULATION PLAN



DETAIL A



DETAIL B

Line	Len A	Len BL	Len B	ABUT. 1	PIER	ABUT. 2
1	69'-11 7/8	25'-0 5/16	123'-3 15/16	.0147	.0197	.0197
2	69'-11 3/4	25'-0 3/8	121'-7 15/16	.0132	.0160	.0160
3	69'-11 3/4	25'-0 5/16	120'-0	.0112	.0123	.0126
4	69'-11 11/16	25'-0 5/16	118'-4 1/16	.0086	.0086	.0104
5	69'-11 11/16	25'-0 1/4	116'-8 1/4	.0049	.0049	.0082

NOTES
ALL LONGID. DIMEN. ARE TAKEN ALONG BOTT OF WEB WITH ALL ADJUSTMENTS MADE FOR CAMBER & GRADE
ALL TRANSV. DIMEN. ARE TAKEN IN A HORIZ PLANE
ALL ENDS, BRG. STIFFENERS ARE VERTICAL
INTERMEDIATE STIFF. ARE NORMAL.
BOTTOM POINTS ARE EQUAL TO TOP POINTS + 200
ARROW POINTS TOWARD LOW END OF MEMBER.

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 28 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MNL

RESERVED FOR STAMPS

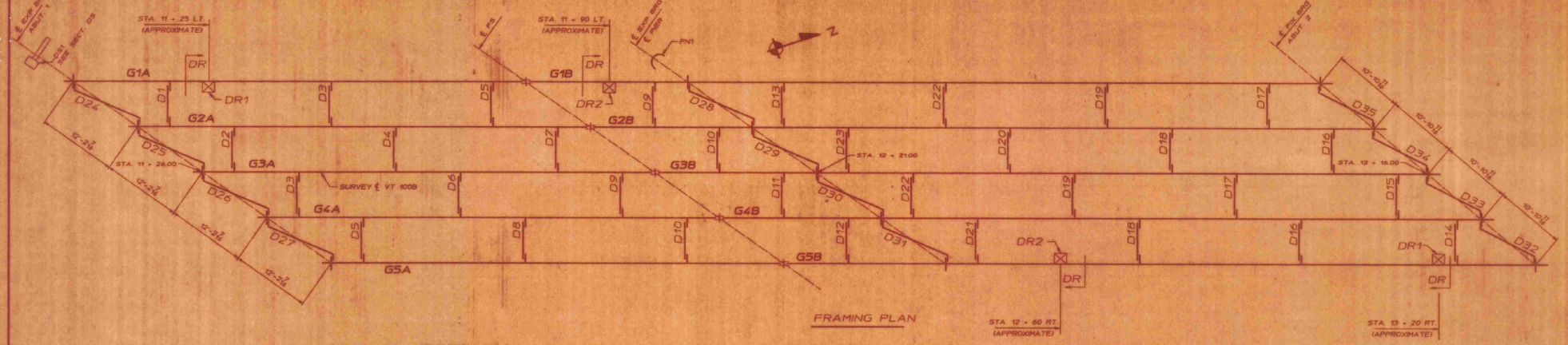
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

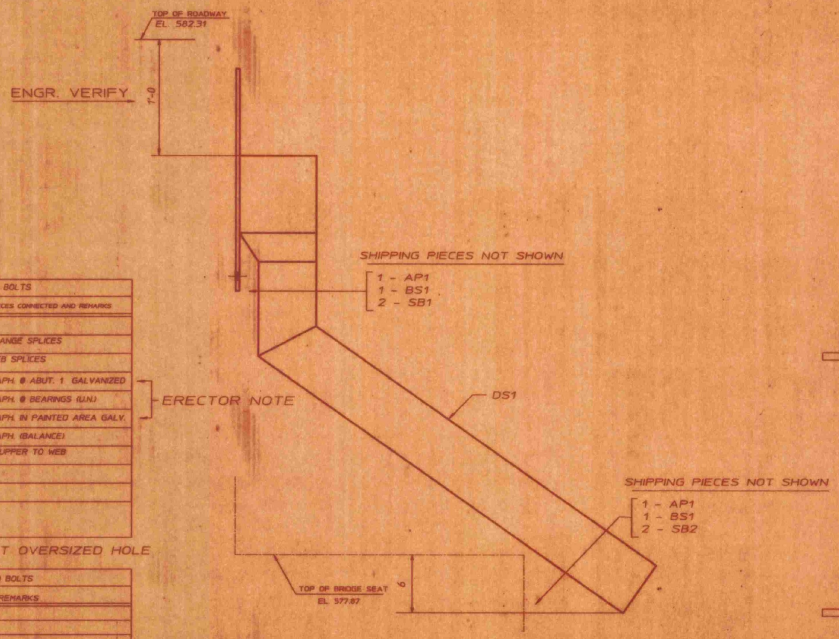
QTY.	DATE	ISSUED TO:	FOR:

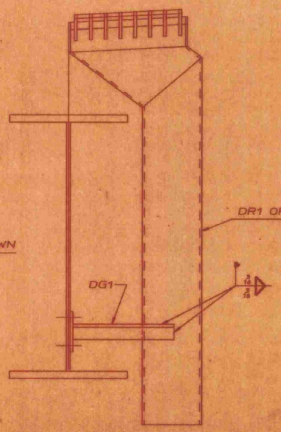
ECSE

EAST COAST STEEL
Bridge Division
Box 1000 Route 1 Axis
South Portland, ME 04106
207-775-1882

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: CALCULATION PLAN
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 5-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: WS1







								A325 Type 3 BOLTS							FIELD 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															
2	320	7/8	3 3/4	32	10	2 1/4	7/8	1	7/8					1	FLANGE SPLICES
3	360	7/8	3	72	5	1 1/2	1/2	1/2	1/2					1	WEB SPLICES
4	112	7/8	2 1/2	14	24	3/16	7/8	1/2						1	DIAPH. @ ABUT. 1 GALVANIZED
5	224	7/8	2 1/2	14	24	1/8	7/8	1/2						1	DIAPH. @ BEARINGS (U.N.)
6	32	7/8	2 1/2	8	4	1 5/16	7/8	7/16						1	DIAPH. IN PAINTED AREA GALV.
7	480	7/8	2 1/2	8	60	1 5/16	7/8	7/16						1	DIAPH. (BALANCE)
8	16	7/8	2 1/2	4	4	7/8	1/2	3/8						1	SCUPPER TO WEB
9															
10															

WASHER CODES

1: 1 Hard Flat Washer

ERECTOR NOTE

ERECTOR NOTE : INSTALL WASHER AGAINST OVERSIZED HOLE

				2% ADDED, MIN. 2 EXTRA	FIELD BOLTS	
LINE	NO. OF BOLTS	BOLT DIAM.	TYPE	BOLT LEN.	ACTUAL COUNT	REMARKS
1	18	7/8	A325 Type 3	2 1/4	18	
2	718	7/8	1	2 1/4	704	
3	367	7/8	1	3	360	
4	326	7/8	A325 Type 3	3 1/4	320	
5	147	7/8	A325 Type 3	2 1/4	144	GALVANIZED
6						
7	1429 Hard Flat Washers for			7/8	DIA. BOLT	WEATHERING
8	147 Hard Flat Washers for			7/8	DIA. BOLT	GALVANIZED
9						

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MHL

RESERVED FOR STAMPS

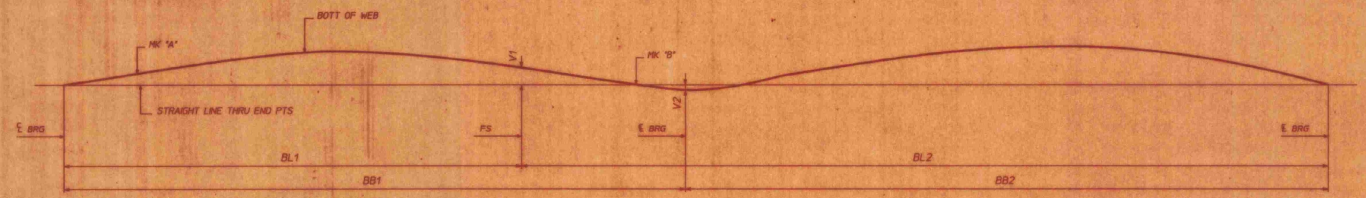
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

QTY.	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Wiggins Ave.
South Portland, ME 04106
207-775-5842

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: FRAMING PLAN TENSON 1461
DRAWN BY: JAK
CHECKED BY: JS 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: E1



SHOP REAMING DIAGRAM

LINE	BL1	BL2	V1	V2	BB1	BB2
1	69'-11 7/16	123'-3 15/16	1 3/16	3/8	95'-0 3/16	98'-3 3/8
2	69'-11 3/4	121'-7 15/16	1 7/16	1/8	95'-0 1/8	96'-7 9/16
3	69'-11 3/4	120'-0	1 9/16	1/16	95'-0 1/16	94'-11 11/16
4	69'-11 11/16	118'-4 1/16	1 9/16	1/8	95'-0	93'-3 3/4
5	69'-11 11/16	116'-8 1/4	1 7/16	1/4	94'-11 15/16	91'-8

LINE	MK 'A'	MK 'B'
1	G1A	G1B
2	G2A	G2B
3	G3A	G3B
4	G4A	G4B
5	G5A	G5B

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 28 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MAL

NOTES
FOR GENERAL NOTES SEE DWG GN1
ALL DIMENSIONS GIVEN AT BOTT OF WEB (UN)

RESERVED FOR STAMPS

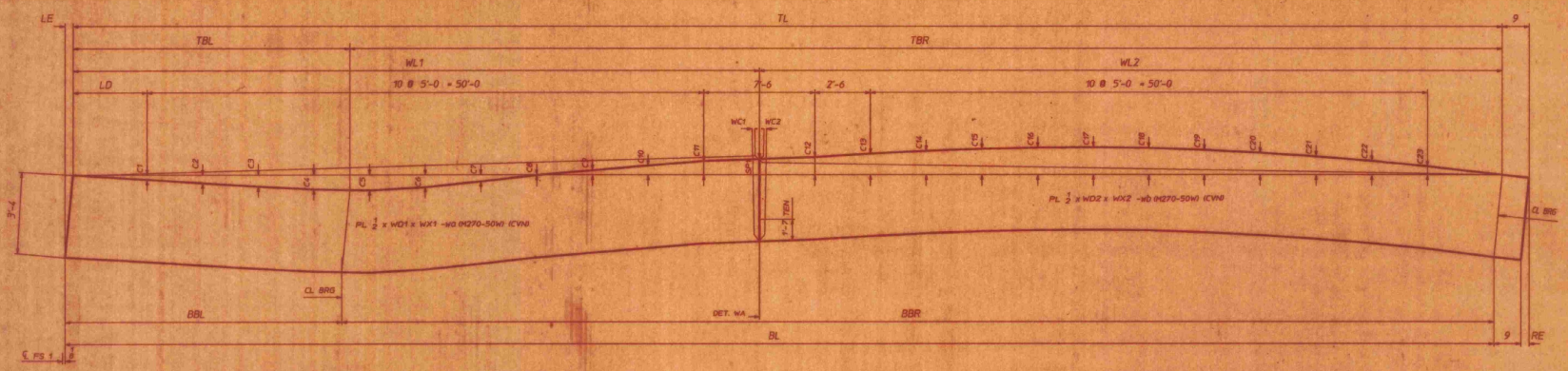
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

QTY.	DATE	ISSUED TO	FOR

ECSE

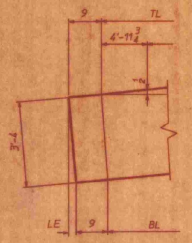
EAST COAST STEEL
Bridge Division
1 Wallace Ave
South Portland, ME 04106
207-773-5642

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (5)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. MCDONALD
DRAWING TITLE: BLOCKING DIAGRAM TENSOR 1461
DRAWN BY: JAK
CHECKED BY: ELC 3-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: BD1

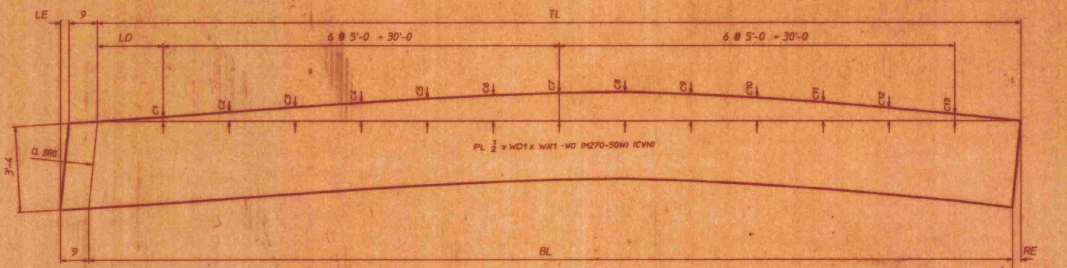


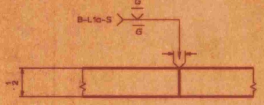
MARK	TL	BL	LE	RE	WL1	WL2	WD1	WX1	WD2	WX2	SP1	WC1	WC2	TBL	TBR	BBL	BBR	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	PG/LINE	PG/LINE
G1B	123'-4 3/4	123'-3 13/16	3/16	1 1/8	59'-8 7/8	63'-7 7/8	41 7/8	59'-9 1/8	41 5/8	64'-4 15/16	1 3/8	1/16	1/16	25'-0 3/4	98'-4	25'-0 3/16	98'-3 5/8	6'-7 7/8	3/8	11/16	15/16	1 3/16	1 5/16	1 1/16	9/16	0	3/8	3/4	1 1/8	1 1/2	1 3/4	2	2 3/16	2 1/4	2 5/16	2 1/4	2 1/16	1 7/8	1 9/16	1 3/16	11/16	1 / V	2 / A
G2B	121'-8 5/8	121'-7 13/16	3/16	1	59'-8 7/8	61'-11 3/4	41 3/4	59'-9 1/8	41 5/8	62'-8 13/16	1 3/8	1/16	1/16	25'-0 5/8	96'-8	25'-0 1/4	96'-7 9/16	5'-9 7/8	5/16	9/16	7/8	1 3/16	1 5/16	15/16	1/2	0	5/16	3/4	1 1/8	1 7/16	1 13/16	2 1/16	2 1/4	2 5/16	2 5/16	2 1/4	2 1/16	1 3/4	1 7/16	1 1/16	5/8	2 / E	2 / C
G3B	120'-0 9/16	119'-11 7/8	3/16	7/8	59'-8 7/8	60'-3 11/16	41 3/4	59'-9 1/8	41 1/2	61'-0 3/4	1 7/16	1/16	1/16	25'-0 7/16	95'-0 1/8	25'-0 3/16	94'-11 11/16	5'-0	1/4	1/2	7/8	1 1/8	1 5/16	1	9/16	-1/8	5/16	11/16	1 1/16	1 7/16	1 3/4	2	2 1/8	2 5/16	2 5/16	2 3/16	2	1 3/4	1 3/8	1	9/16	2 / E	2 / G
G4B	118'-4 1/2	118'-3 15/16	3/16	3/4	59'-8 7/8	58'-7 5/8	41 3/4	59'-9 1/8	41 3/8	59'-4 11/16	1 3/8	1/16	1/16	25'-0 5/16	93'-4 3/16	25'-0 3/16	93'-3 3/4	4'-2	3/16	1/2	13/16	1 1/8	1 5/16	1 1/16	11/16	-1/4	3/16	9/16	1	1 5/16	1 11/16	1 15/16	2 1/8	2 3/16	2 3/16	2 1/16	1 7/8	1 9/16	1 3/16	13/16	7/16	2 / E	2 / J
G5B	116'-8 1/2	116'-8 1/8	3/16	9/16	59'-8 7/8	56'-11 5/8	41 3/4	59'-9 1/8	41 1/4	57'-8 11/16	1 1/4	1/16	1/16	25'-0 1/8	91'-8 3/8	25'-0 1/8	91'-8	3'-4 1/8	3/16	7/16	7/8	1 1/4	1 7/16	1 3/16	13/16	-7/16	0	3/8	13/16	1 3/16	1 7/16	1 11/16	1 7/8	2	1 15/16	1 13/16	1 5/8	1 5/16	1	5/8	1/4	2 / E	2 / L

NEGATIVE SIGN (-) DENOTES ORDINATE VALUE BELOW CHORD LINE.



* END FOR G5A ONLY





WEB PLATE SPLICE DETAIL 'WA'

MARK	TL	BL	LE	RE	WD1	WX1	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	PG/LINE
G1A	69'-11 9/16	69'-11 3/4	7/16	1/4	41 5/8	70'-9	4'-11 7/8	1/4	1/2	13/16	1 1/16	1 1/4	1 7/16	1 9/16	1 5/8	1 1/2	1 5/16	1 1/16	3/4	3/8	1 / X
G2A	69'-11 11/16	69'-11 5/8	1/4	5/16	41 13/16	70'-8 15/16	4'-11 7/8	3/8	3/4	1 1/16	1 5/16	1 9/16	1 3/4	1 13/16	1 13/16	1 11/16	1 7/16	1 9/16	13/16	7/16	1 / T
G3A	69'-11 13/16	69'-11 5/8	1/8	5/16	41 15/16	70'-8 15/16	4'-11 7/8	7/16	7/8	1 3/16	1 1/2	1 3/4	1 7/8	1 15/16	1 15/16	1 3/4	1 9/16	1 1/4	7/8	7/16	1 / T
G4A	69'-11 7/8	69'-11 9/16	0	5/16	42	70'-8 7/8	4'-11 3/4	1/2	15/16	1 1/4	1 9/16	1 13/16	1 15/16	2	1 15/16	1 13/16	1 9/16	1 1/4	7/8	7/16	1 / T
G5A	70'-0	69'-11 9/16	1/8 *	5/16	41 15/16	70'-9	4'-11 3/4	1/2	15/16	1 5/16	1 5/8	1 13/16	1 15/16	1 15/16	1 7/8	1 3/4	1 1/2	1 1/4	7/8	7/16	1 / T

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MNL

NOTES:
ALL WEB MATERIAL TO BE M270-50W.
CVN DENOTES CHARPY-V-NOTCH TESTING REQD.
FOR GENERAL NOTES SEE SHT. GN1.

RESERVED FOR STAMPS

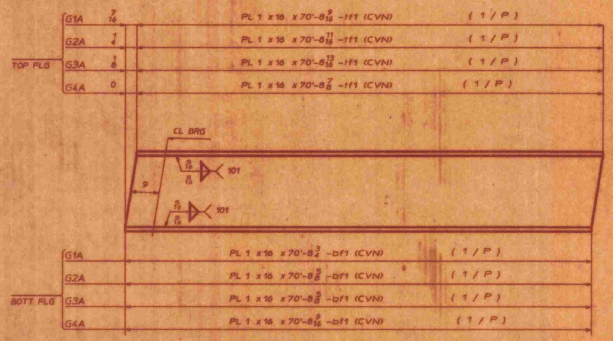
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

QTY	DATE	ISSUED TO:	FOR:

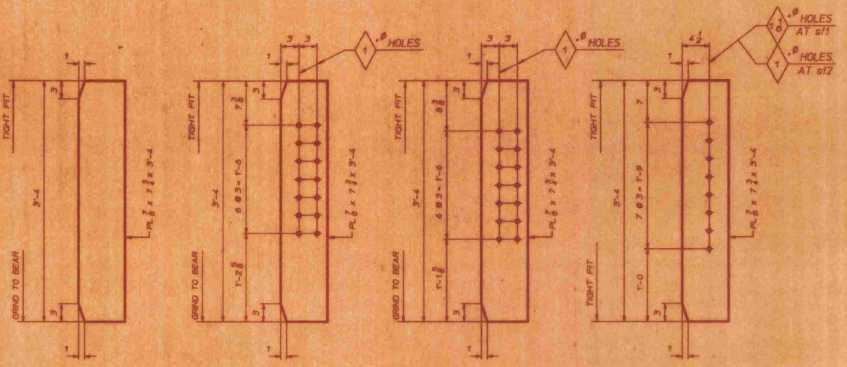
ECSE

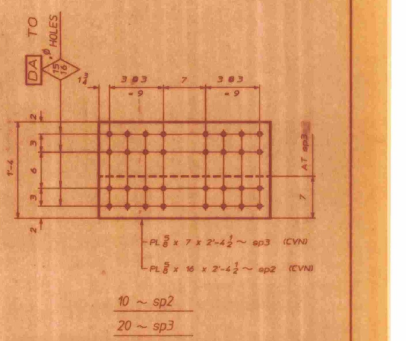
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1868

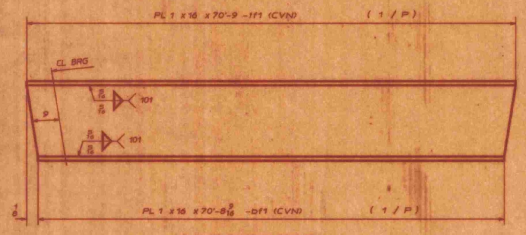
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (5)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: CAMBER DIAGRAM
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-1



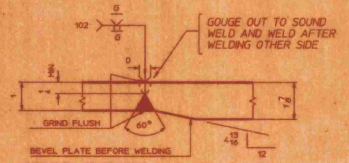
FLANGE DIAGRAM FOR G1A THRU G4A



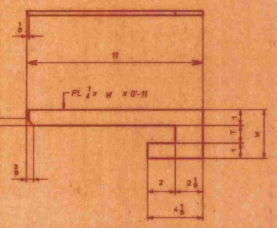




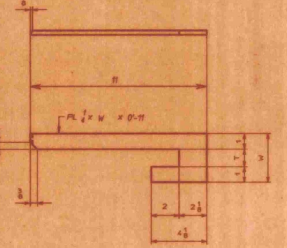
FLANGE DIAGRAM FOR G5A



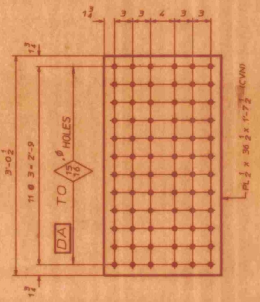
FLANGE PLATE SPLICE DETAIL "FA"

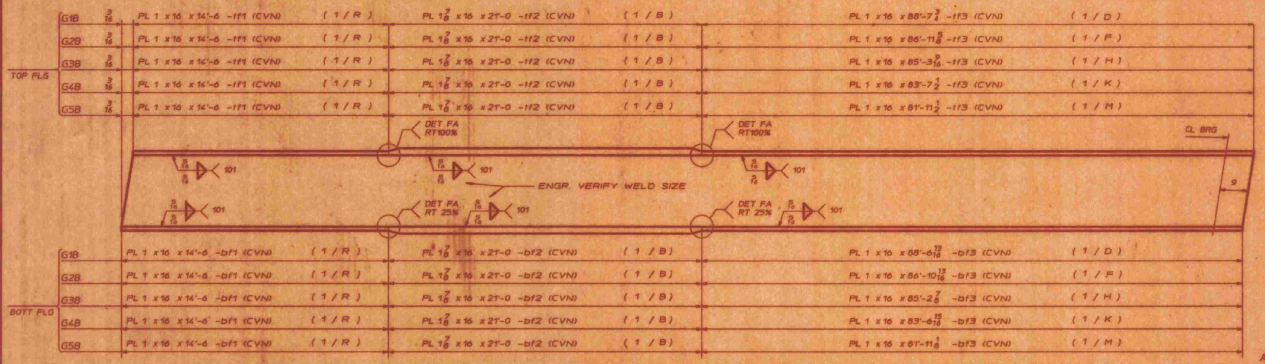


REQD.	MARK	"T"	"W"
1	p1	1	3
1	p3	1 7/8	3 7/8



REQD.	MARK	"T"	"W"
1	p2	1	3
1	p4	1 7/8	3 7/8





FLANGE DIAGRAM FOR G1B THRU G5B

NOTES:
ALL MATERIAL TO BE M270-50W.
CVN DENOTES CHARPY-V-NOTCH TESTING REQD.
FOR GENERAL NOTES SEE SHT. GN1.
HOLE SIZES AS NOTED.

EAST COAST STEEL
BRIDGE DIVISION
FOR APPROVAL / RESUBMITTAL
APR 23 1993
APPROVED / APPROVED AS NOTED
RELEASED FOR FAB. BY: HNL

RESERVED FOR STAMPS

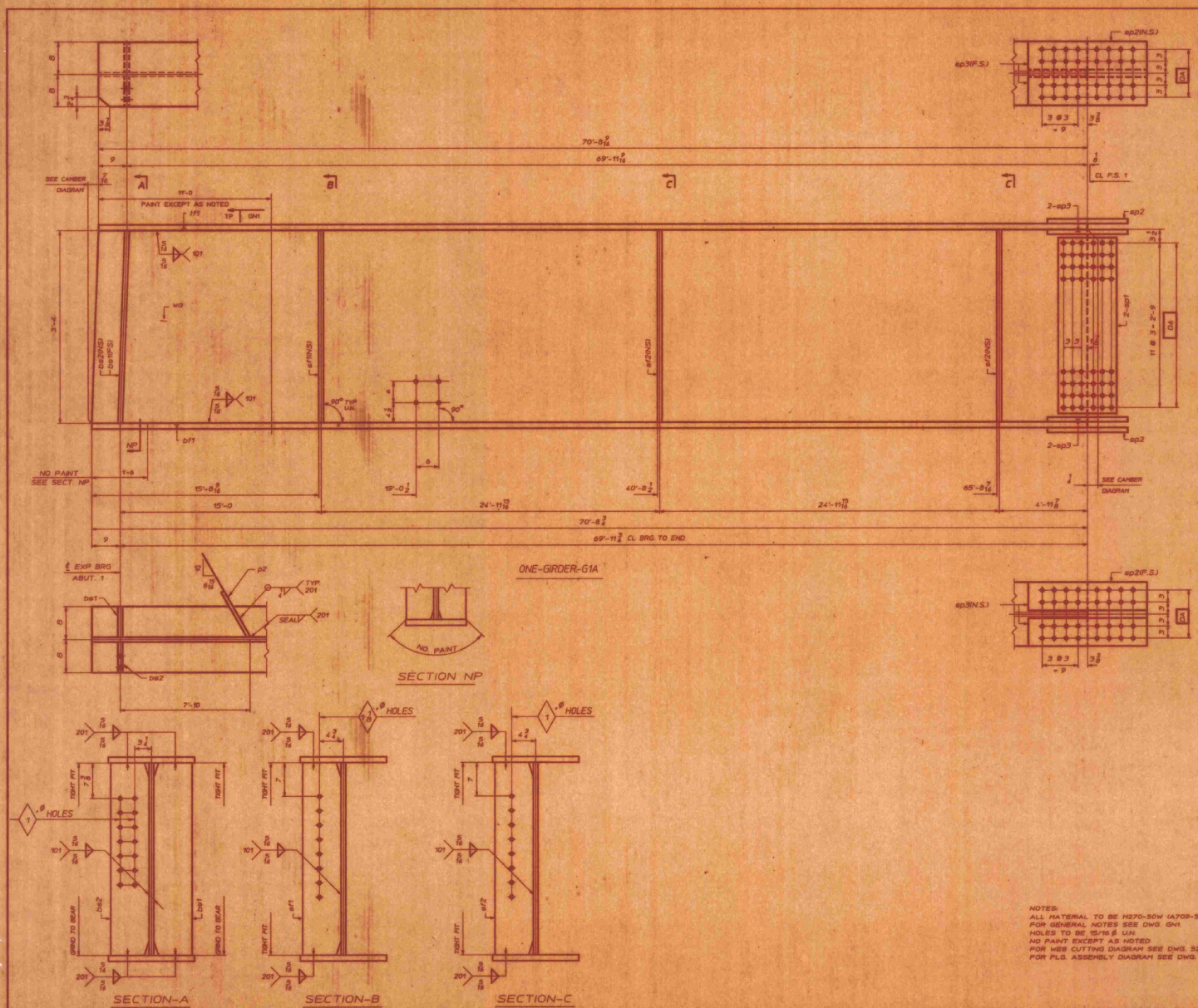
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

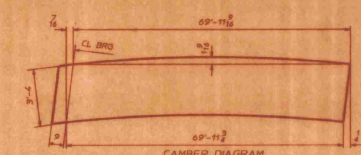
QTY.	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Millstone Ave.
South Portland, ME. 04106
207-773-1600

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: PLG. DIAG. & GIRDER STDS. TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: S2-2





CAMBER DIAGRAM

ABH INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-3	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G1A	1		GIRDER					
1	X		1	wa	PL 1/2 x 41 5/8	70	9	(CVN)	4816	
1	P		1	tf1	PL 1 x 16	70	8 9/16	(CVN)	3850	
1	P		1	bf1	PL 1 x 16	70	8 3/4	(CVN)	3851	
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)	202	
3	G		2	sp2	PL 5/8 x 16	2	4 1/2	(CVN)	162	
3	H		2	sp3	PL 5/8 x 7	2	4 1/2	(CVN)	71	
3	B		1	bs2	PL 7/8 x 7 3/4	3	4		77	
3	B		1	bs1	PL 7/8 x 7 3/4	3	4		77	
3	B		1	sf1	PL 7/8 x 7 3/4	3	4		77	
3	B		2	sf2	PL 7/8 x 7 3/4	3	4		154	
3	Q		1	p2	PL 1/4 x 3	0	11		2	
								TOTAL WEIGHT	13339	

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MAIL

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ϕ U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

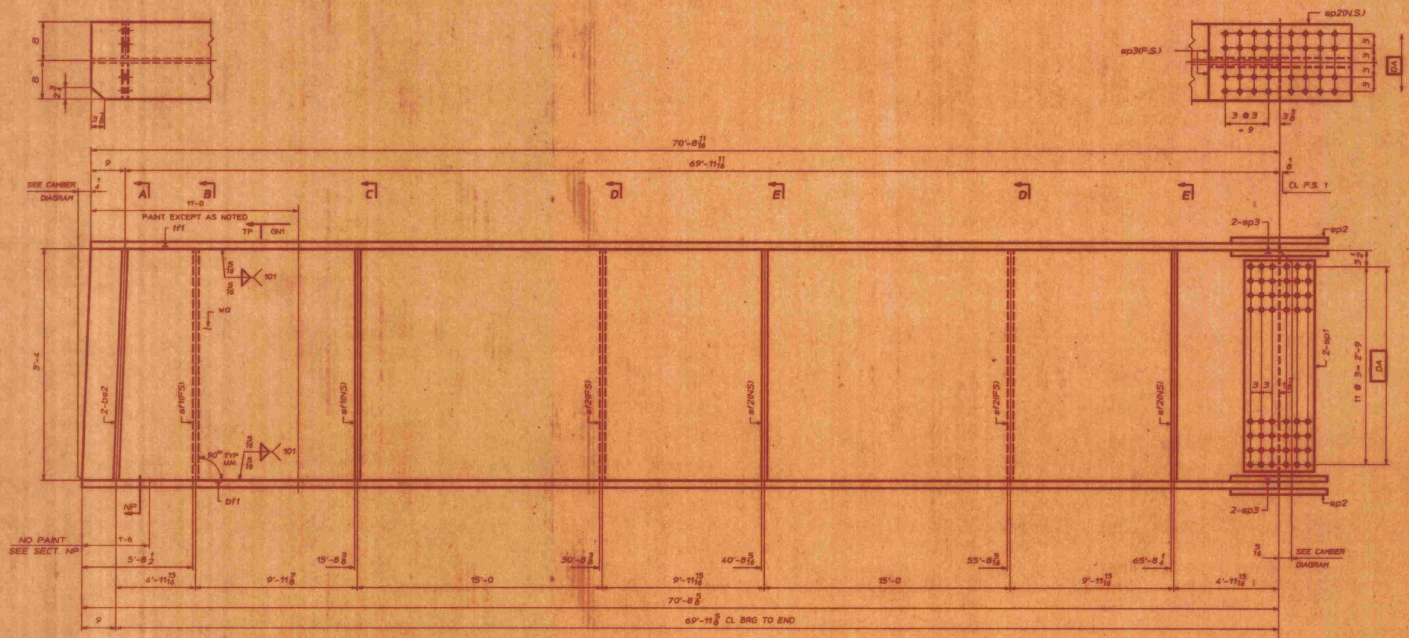
RESERVED FOR STAMPS

REV	DATE	DESCRIPTION	QTY.	DATE	ISSUED TO:	FOR:
5						
4						
3						
2						
1						

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

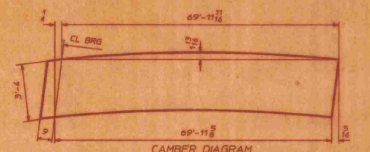
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G1A — TENSOR 1461
DRAWN BY: JAK — JOB NUMBER: 93-01-0775 — SHEET NUMBER: 52-3
CHECKED BY: JB 2-93



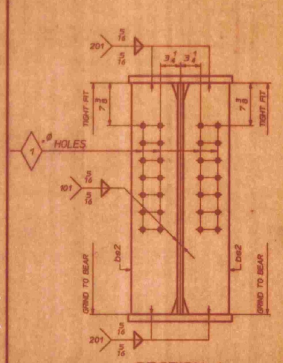
ONE-GIRDER-G2A



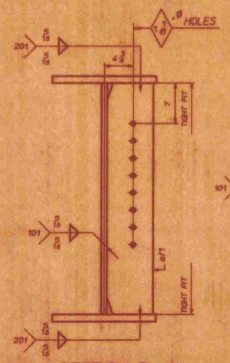
SECTION NP



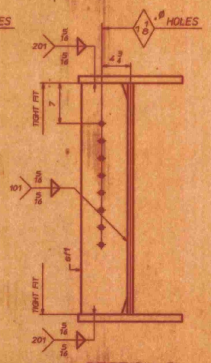
CAMBER DIAGRAM



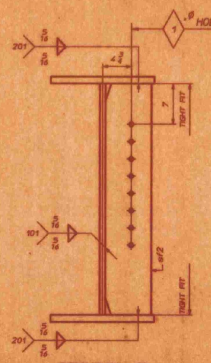
SECTION-A



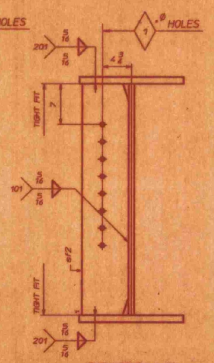
SECTION-B



SECTION-C



SECTION-D



SECTION-E

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ø U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR FLG. ASSEMBLY DIAGRAM, SEE DWG. 52-2.

BILL OF MATERIAL

ASH INFO PAGE	ASH INFO LINE	SHP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G2A	1		GIRDER					
1	T		1	wa	PL 3/8 x 41 15/16	70	8 15/16	(CVN)	4815	
1	P		1	tf1	PL 1 x 16	70	8 15/16	(CVN)	3851	
1	P		1	bf1	PL 1 x 16	70	8 3/8	(CVN)	3851	
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)	207	
3	G		2	sp2	PL 5/8 x 16	2	4 1/2	(CVN)	162	
3	H		4	sp3	PL 5/8 x 7	2	4 1/2	(CVN)	141	
3	B		2	bs2	PL 5/8 x 7 7/8	3	4		154	
3	B		2	sf1	PL 5/8 x 7 7/8	3	4		154	
3	B		4	sf2	PL 5/8 x 7 7/8	3	4		308	
								TOTAL WEIGHT	13430	

JOB NO. 93-01-0775 | DRAWING NO. 52-4 | REV.

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: HAH

RESERVED FOR STAMPS

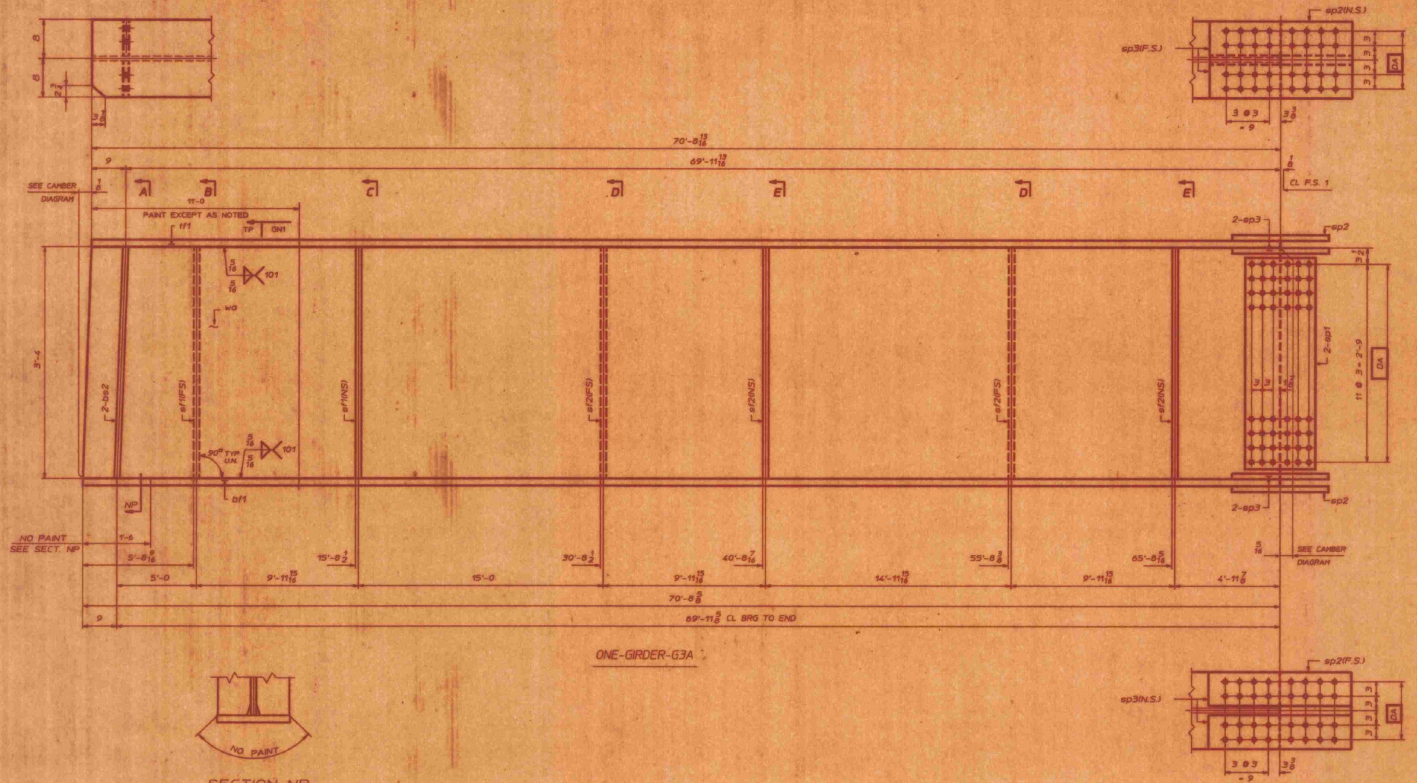
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

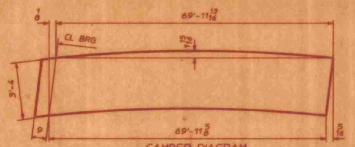
QTY	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-775-1642

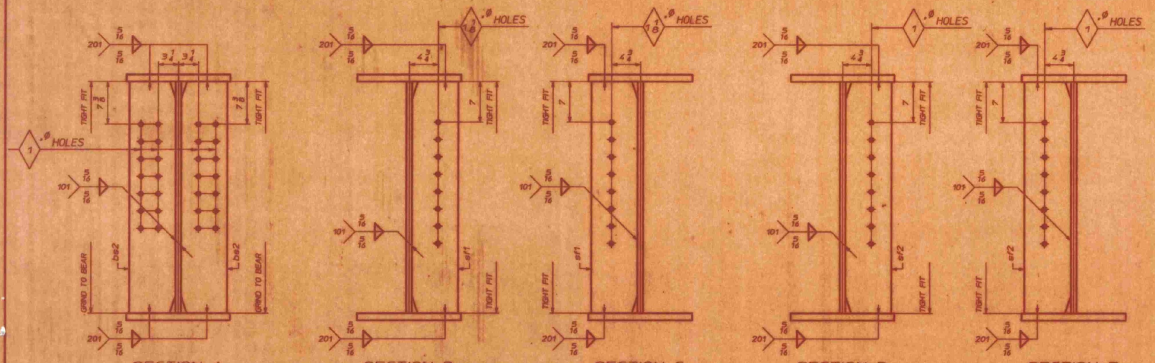
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G2A — TENSOR 1161
DRAWN BY: JAK | JOB NUMBER: 93-01-0775 | SHEET NUMBER: 52-4
CHECKED BY: JS 2-93





CAMBER DIAGRAM

SECTION NP



ABH INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-5	REV
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G3A	1		GIRDER					
1	T		1	wa	PL $\frac{1}{2}$ x 41 $\frac{15}{16}$	70	8 $\frac{15}{16}$			
1	P		1	tf1	PL 1 x 16	70	8 $\frac{15}{16}$	(CVN)	4815	
1	P		1	bf1	PL 1 x 16	70	8 $\frac{15}{16}$	(CVN)	3852	
3	F		2	sp1	PL $\frac{1}{2}$ x 36 $\frac{1}{2}$	1	7 $\frac{1}{2}$	(CVN)	3851	
3	G		2	sp2	PL $\frac{5}{8}$ x 16	2	4 $\frac{1}{2}$	(CVN)	202	
3	H		4	sp3	PL $\frac{5}{8}$ x 7	2	4 $\frac{1}{2}$	(CVN)	162	
3	B		2	bs2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		141	
3	B		2	sf1	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		154	
3	B		4	sf2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		154	
									308	
								TOTAL WEIGHT	13639	

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ϕ U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 29 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MAL

REV	DATE	DESCRIPTION
1		
2		
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4		
5		

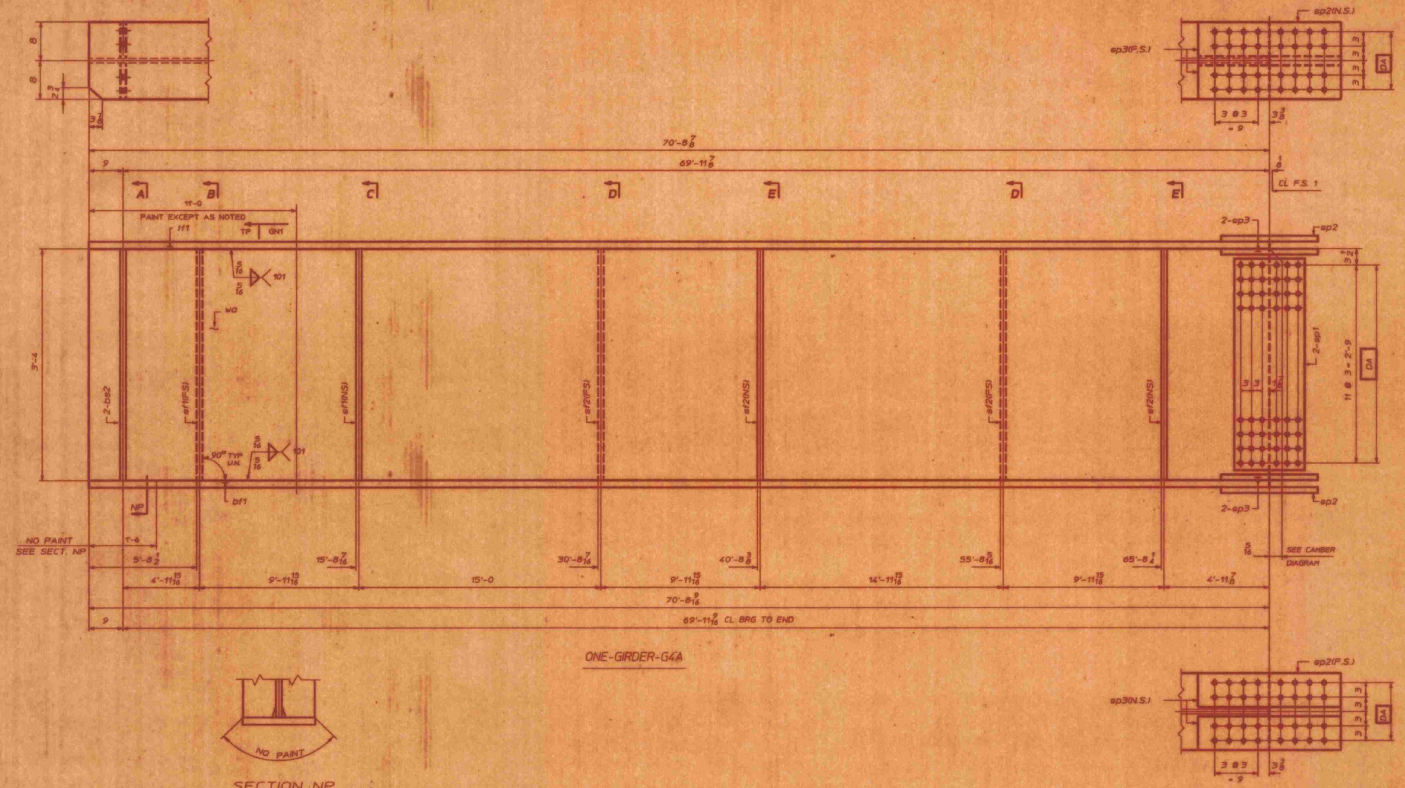
RESERVED FOR STAMPS

QTY	DATE	ISSUED TO:	FOR:

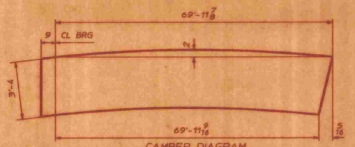
ECSE

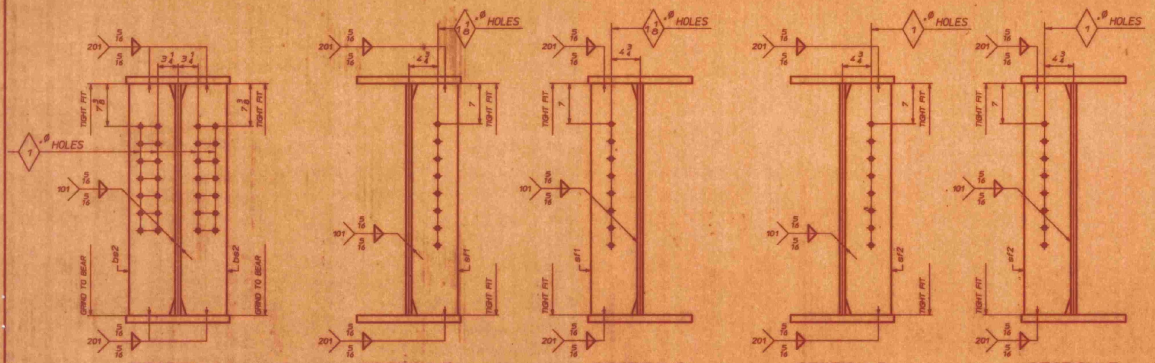
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-3861

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G3A
TENSOR 1661
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-5



SECTION NP





ASH INFO PAGE	ASH INFO LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G4A	1		GIRDER					
1	T		1	wa	PL $\frac{1}{2}$ x 42	70	8 $\frac{9}{16}$	ICVN0	4813	
1	P		1	tf1	PL 1 x 16	70	8 $\frac{9}{16}$	ICVN0	3862	
1	P		1	bf1'	PL 1 x 16	70	8 $\frac{9}{16}$	ICVN0	3850	
3	F		2	ep1	PL $\frac{1}{2}$ x 36 $\frac{1}{2}$	1	7 $\frac{3}{4}$	ICVN0	202	
3	G		2	ep2	PL $\frac{5}{8}$ x 16	2	4 $\frac{1}{2}$	ICVN0	152	
3	H		4	ep3	PL $\frac{5}{8}$ x 7	2	4 $\frac{1}{2}$	ICVN0	141	
3	B		2	bs2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		154	
3	B		2	sf1	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		154	
3	B		4	sf2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		308	
								TOTAL WEIGHT	13638	

JOB NO. 93-01-0775

DRAWING NO. 52-6

REV.

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ϕ U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MNL

RESERVED FOR STAMPS

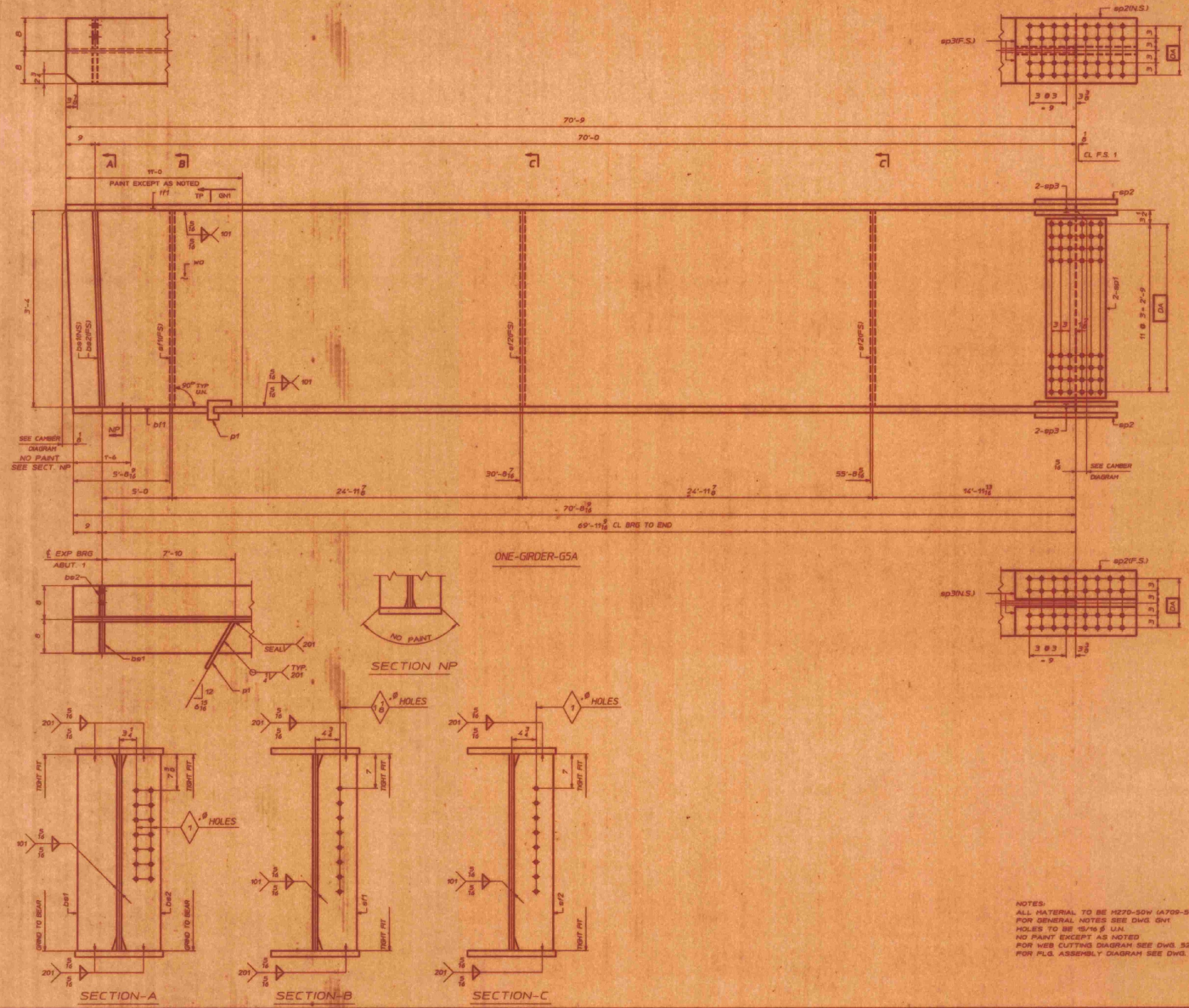
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

QTY	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-3861

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G4A
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-6



ASM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-7	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G5A	1		GIRDER					
1	T		1	wq	PL 1/2 x 41 15/16	70	9	(CVN)	1916	
1	P		1	tf1	PL 1 x 16	70	9	(CVN)	2852	
1	P		1	bf1	PL 1 x 16	70	8 15/16	(CVN)	3950	
3	F		2	sp1	PL 1/2 x 36 1/2	1	7 1/2	(CVN)	202	
3	G		2	sp2	PL 5/8 x 16	2	4 1/2	(CVN)	162	
3	H		4	sp3	PL 5/8 x 7	2	4 1/2	(CVN)	141	
3	B		1	bs1	PL 5/8 x 7 3/4	3	4		77	
3	B		1	bs2	PL 5/8 x 7 3/4	3	4		77	
3	B		1	sf1	PL 5/8 x 7 3/4	3	4		77	
3	B		2	sf2	PL 5/8 x 7 3/4	3	4		154	
3	Q		1	p1	PL 1/4 x 3	0	11		2	
								TOTAL WEIGHT	15410	

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: JAK

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ø U.N.
NO PAINT EXCEPT AS NOTED
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

RESERVED FOR STAMPS

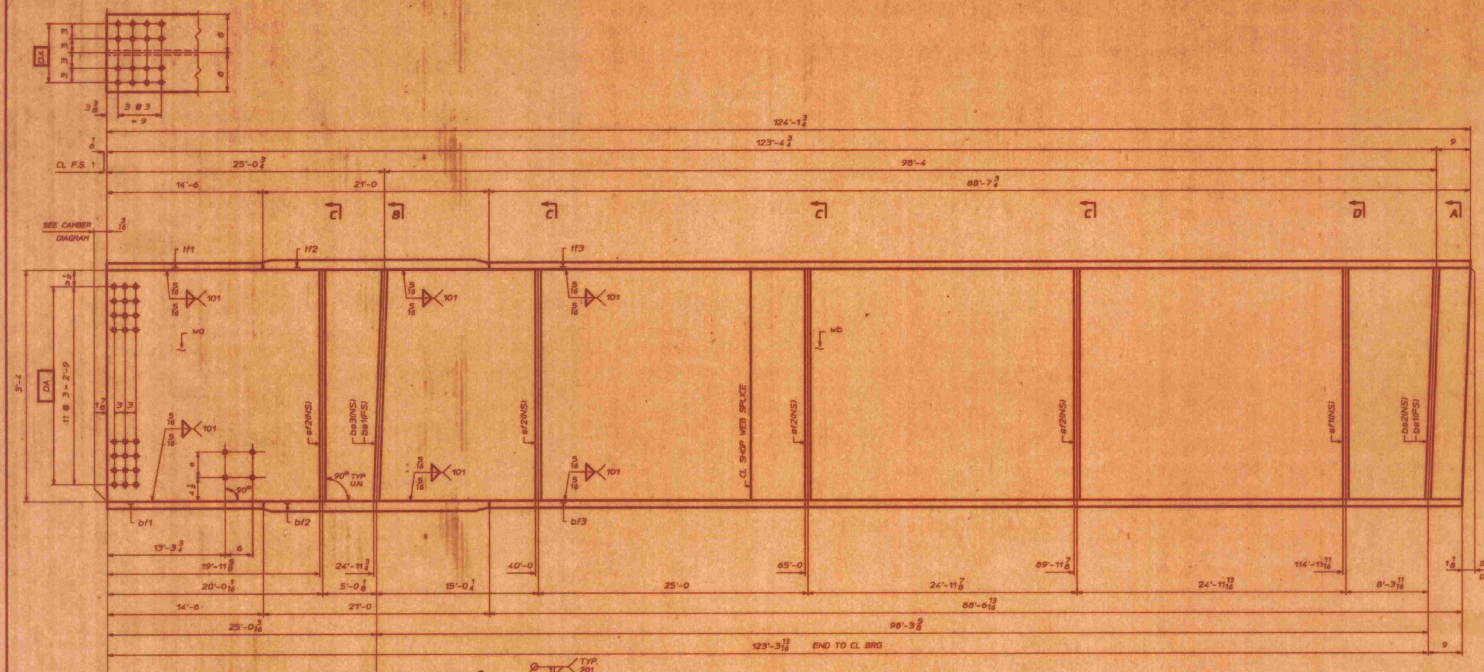
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

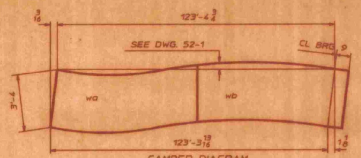
QTY.	DATE	ISSUED TO:	FOR:

ECSE

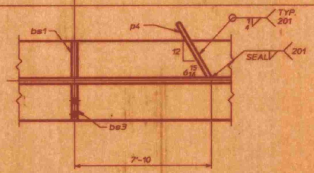
EAST COAST STEEL
Bridge Division
1 Monroe Ave.
South Portland, ME 04106
207-773-1565

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BR2 -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G5A
TENSOR 1681
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-7

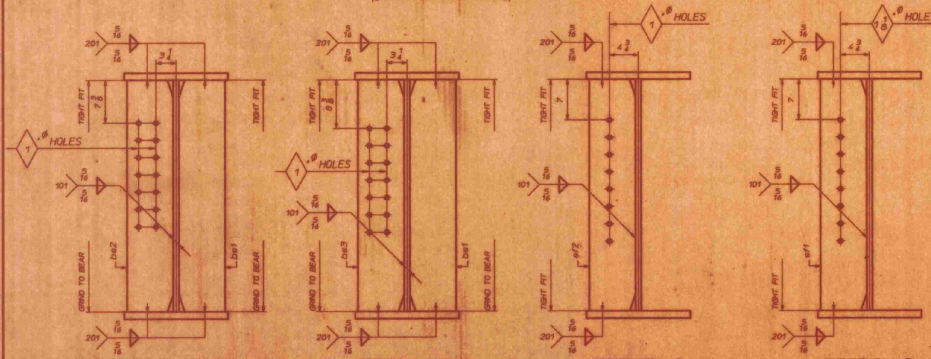




CAMBER DIAGRAM



ONE-GIRDER-G1B



ASH INFO		SHP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	93-01-0775	52-8	
								REMARKS	WT	PROCUREMENT NOTES
		G1B	1		GIRDER					
1	V		1	wa	PL $\frac{7}{16}$ x 41 $\frac{7}{8}$	59	9 $\frac{5}{8}$	ECVNI	4068	
2	A		1	wb	PL $\frac{7}{16}$ x 41 $\frac{7}{8}$	64	4 $\frac{1}{2}$	ECVNI	4384	
1	R		1	tf1	PL 1 x 16	14	6	ECVNI	730	
1	B		1	tf2	PL 1 $\frac{1}{8}$ x 16	21	0	ECVNI	2144	
1	D		1	tf3	PL 1 x 16	88	7 $\frac{1}{2}$	ECVNI	4827	
1	R		1	bf1	PL 1 x 16	14	6	ECVNI	730	
1	B		1	bf2	PL 1 $\frac{1}{8}$ x 16	21	0	ECVNI	2144	
1	D		1	bf3	PL 1 x 16	88	6 $\frac{15}{16}$	ECVNI	4825	
3	B		4	af2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4			308	
3	B		1	ba3	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4			77	
3	B		2	ba1	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4			154	
3	B		1	af1	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4			77	
3	B		1	ba2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4			77	
3	R		1	p4	PL $\frac{1}{4}$ x 3 $\frac{7}{8}$	0	11			3	
								TOTAL WEIGHT		24666

NOTES:
- ALL MATERIAL TO BE M270-50W (A709-50W).
- FOR GENERAL NOTES SEE DWG. GN1
- HOLES TO BE 15/16 ϕ U.N.
- NO PAINT EXCEPT AS NOTED
- FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
- FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

EAST COAST STEEL BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MAL

RESERVED FOR STAMPS

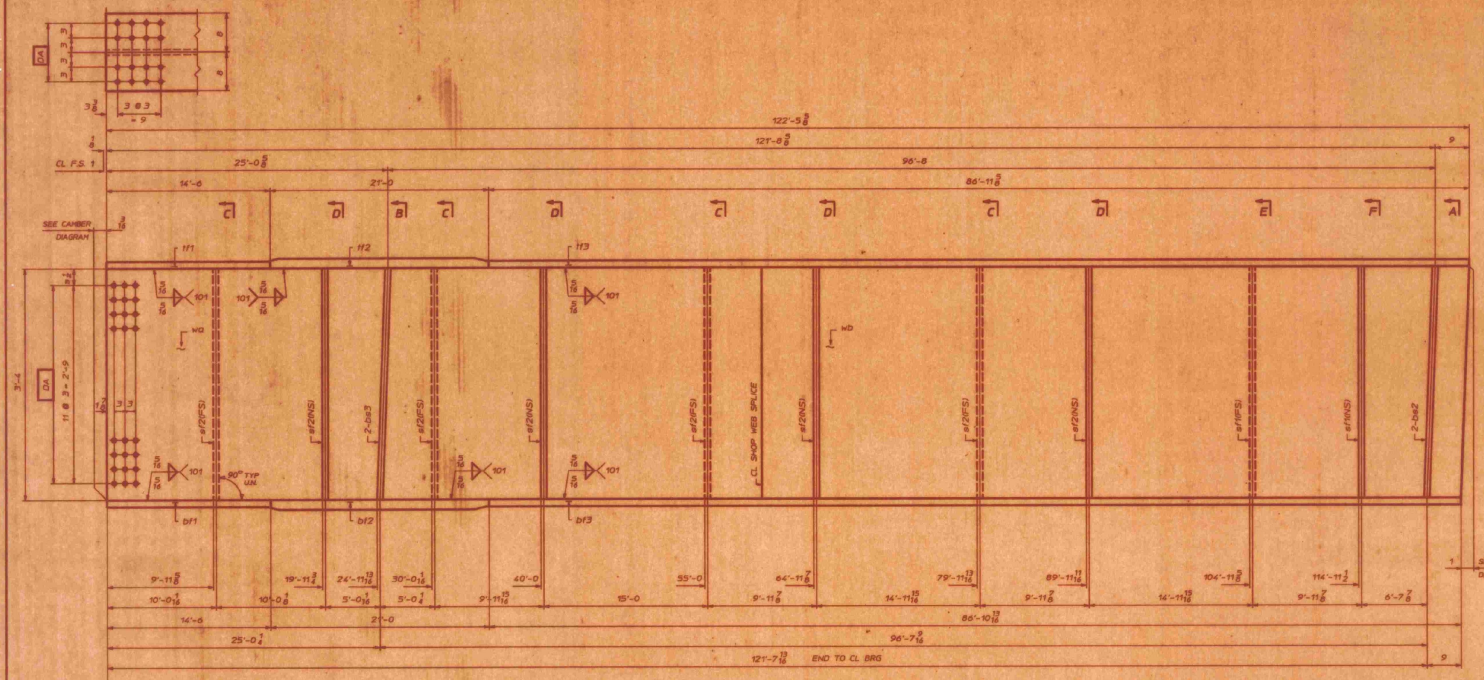
REV.	DATE	DESCRIPTION

QTY.	DATE	ISSUED TO:	FOR:

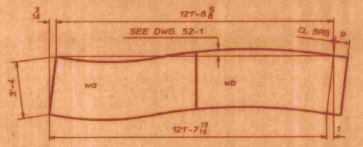
ECSE

EAST COAST STEEL
Bridge Division
1 Alliance Ave
South Portland, ME 04106
207-773-5661

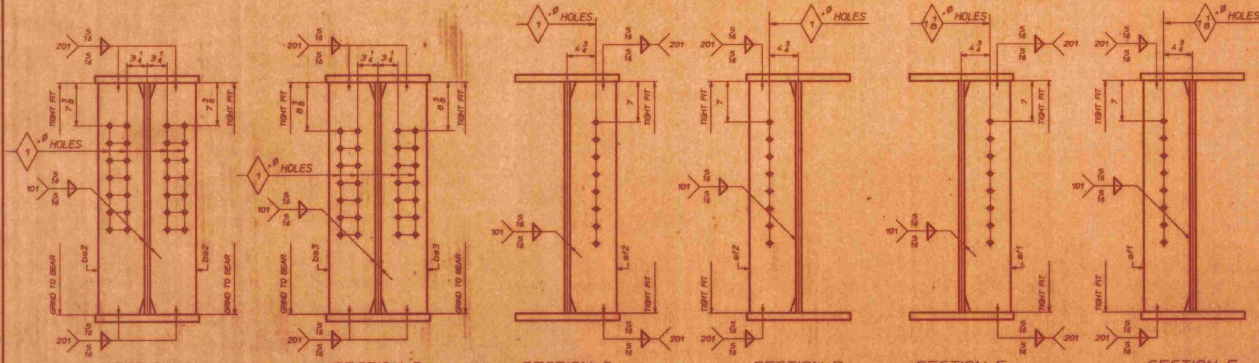
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G1B
TENSOR 1441
DRAWN BY: JAK
CHECKED BY: 4-2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-8



ONE-GIRDER-G2B



CAMBER DIAGRAM



SECTION-A SECTION-B SECTION-C SECTION-D SECTION-E SECTION-F

ASH INFO PAGE	ASH INFO LINE	SHOP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G2B	1		GIRDER					
2	E		1	wa	PL $\frac{1}{2}$ x 41 $\frac{3}{4}$	59	9 $\frac{5}{8}$	(CVN)	4065	
2	C		1	wb	PL $\frac{1}{2}$ x 43 $\frac{5}{8}$	62	8 $\frac{15}{16}$	(CVN)	4270	
1	R		1	tf1	PL 1 x 16	14	6	(CVN)	790	
1	B		1	tf2	PL 1 $\frac{1}{8}$ x 16	21	0	(CVN)	2144	
1	F		1	tf3	PL 1 x 16	86	11 $\frac{5}{8}$	(CVN)	4726	
1	R		1	bf1	PL 1 x 16	14	6	(CVN)	790	
1	B		1	bf2	PL 1 $\frac{1}{8}$ x 16	21	0	(CVN)	2144	
1	F		1	bf3	PL 1 x 16	86	10 $\frac{13}{16}$	(CVN)	4732	
3	B		8	sf2	PL $\frac{3}{8}$ x 7 $\frac{3}{4}$	3	4		615	
3	B		2	bs3	PL $\frac{3}{8}$ x 7 $\frac{3}{4}$	3	4		77	
3	B		2	sf1	PL $\frac{3}{8}$ x 7 $\frac{3}{4}$	3	4		154	
3	B		2	bs2	PL $\frac{3}{8}$ x 7 $\frac{3}{4}$	3	4		154	
								TOTAL WEIGHT	24679	

BILL OF MATERIAL

JOB NO. 93-01-0775 | DRAWING NO. 52-9 | REV.

EAST COAST STEEL BRIDGE DIVISION
FOR APPROVAL / RESUBMITTAL
APR 23 1993
APPROVED / APPROVED AS NOTED
RELEASED FOR FAB. BY: MNL

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16-ϕ U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR FLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

RESERVED FOR STAMPS

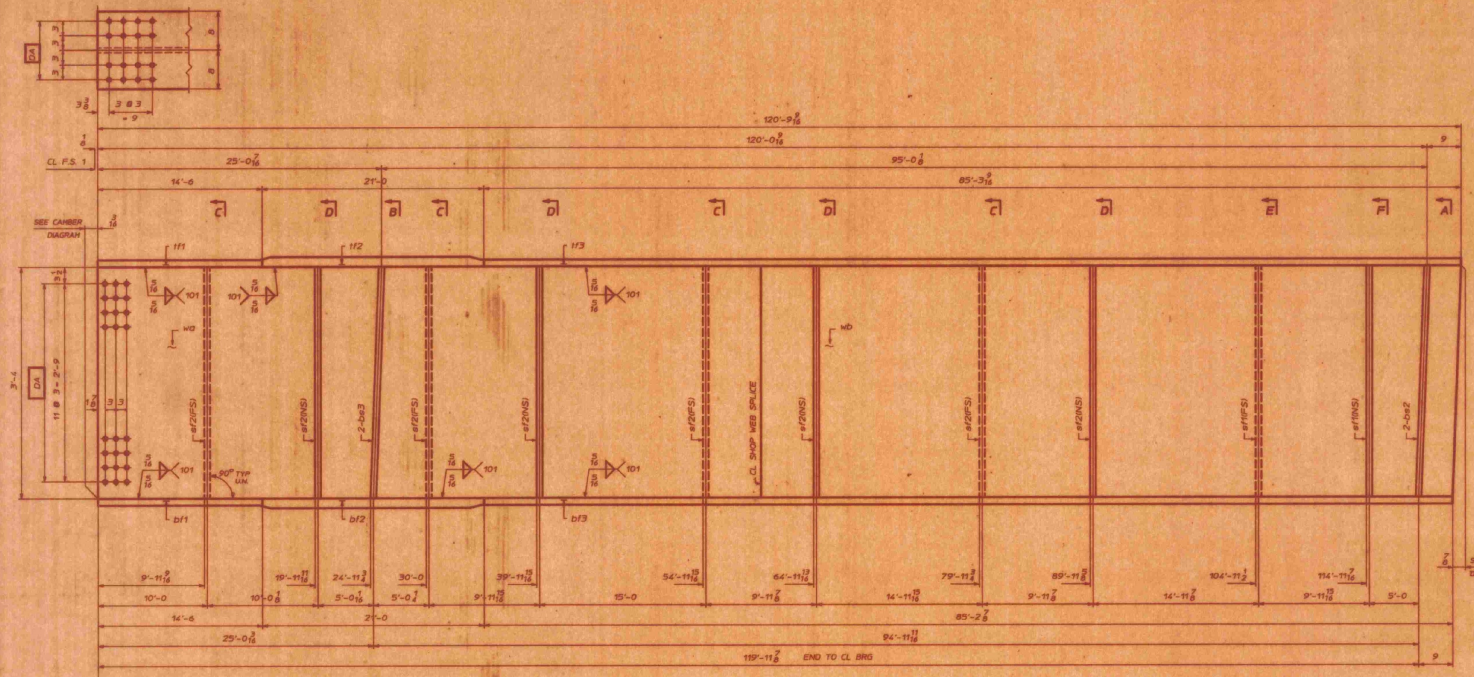
REV	DATE	DESCRIPTION

QTY	DATE	ISSUED TO:	FOR:

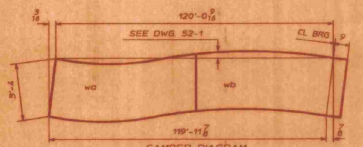
ECSE

EAST COAST STEEL
Bridge Division
Route 66 & 111
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G2B
TENSOR 1401
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-9

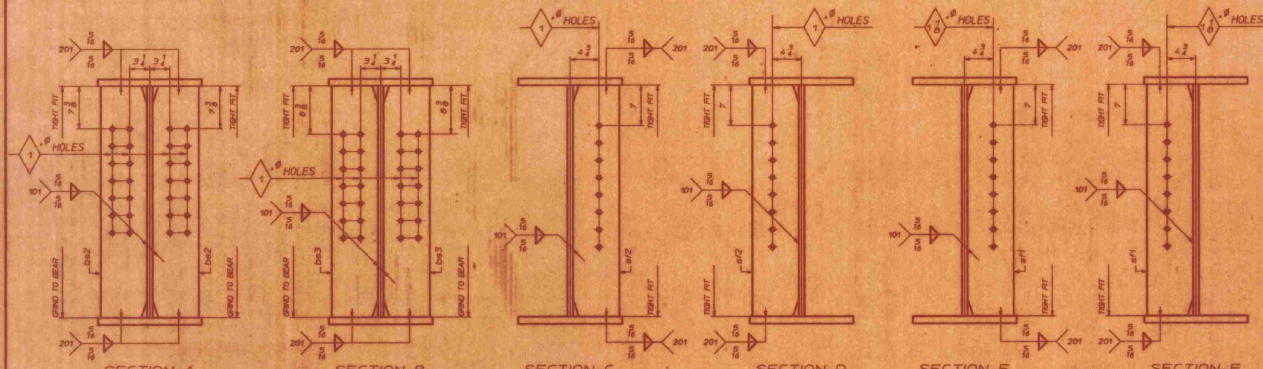


ONE-GIRDER-G3B



CAMBER DIAGRAM

ABH INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 52-10	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G3B	1		GIRDER					
2	E		1	wa	PL 1/2 x 41 3/4	59	9 5/8	(CVN)	4062	
2	G		1	wb	PL 1/2 x 41 1/2	61	0 1/2	(CVN)	4136	
1	R		1	tf1	PL 1 x 16	14	6	(CVN)	790	
1	B		1	tf2	PL 1 1/8 x 16	21	0	(CVN)	2144	
1	H		1	tf3	PL 1 x 16	85	3 1/16	(CVN)	4645	
1	R		1	bf1	PL 1 x 16	14	6	(CVN)	790	
1	B		1	bf2	PL 1 1/8 x 16	21	0	(CVN)	2144	
1	H		1	bf3	PL 1 x 16	85	2 5/8	(CVN)	4641	
3	B		8	sf2	PL 5/8 x 7 3/4	3	4		615	
3	B		2	bs3	PL 5/8 x 7 3/4	3	4		154	
3	B		2	sf1	PL 5/8 x 7 3/4	3	4		154	
3	B		2	bs2	PL 5/8 x 7 3/4	3	4		154	
								TOTAL WEIGHT	24455	



EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MAIL

RESERVED FOR STAMPS

REV	DATE	DESCRIPTION

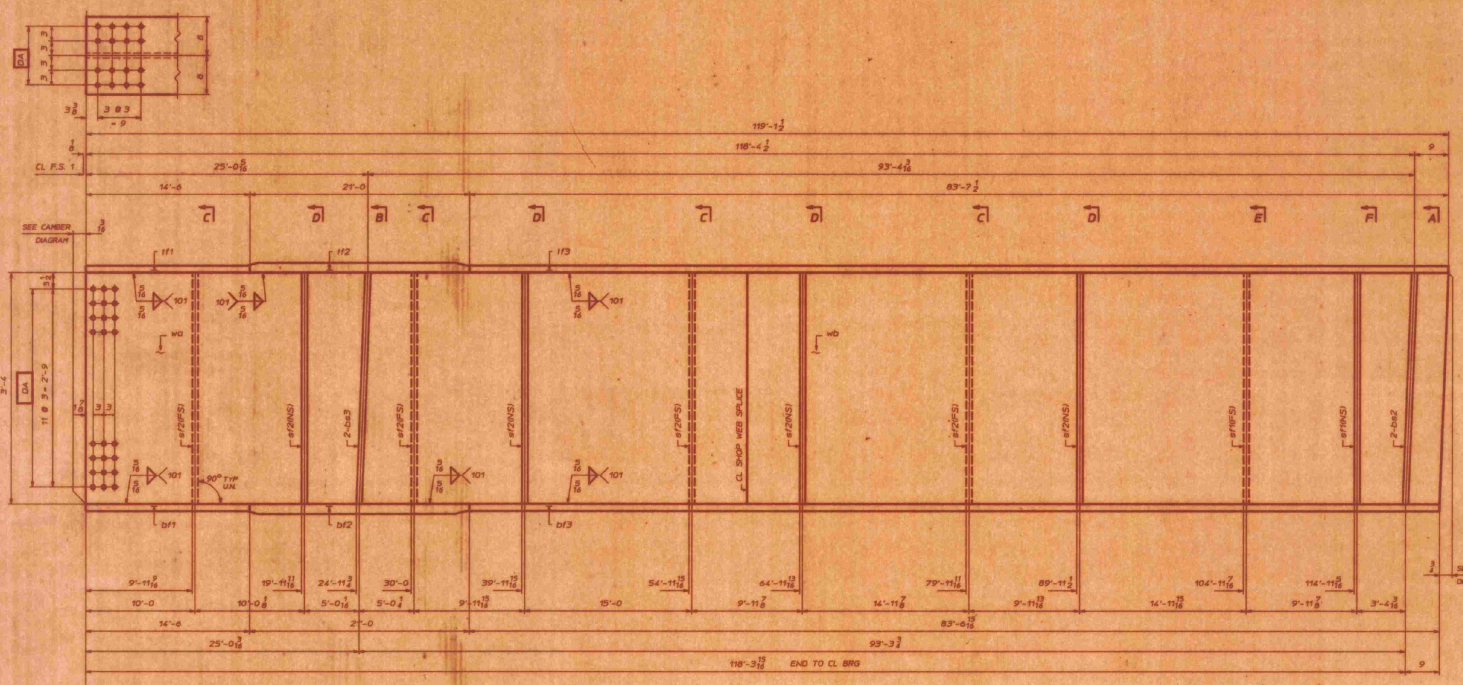
QTY	DATE	ISSUED TO:	FOR:

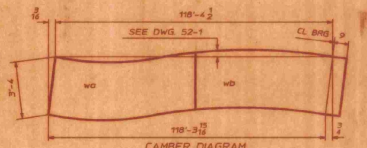
NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 Ø U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

ECSE

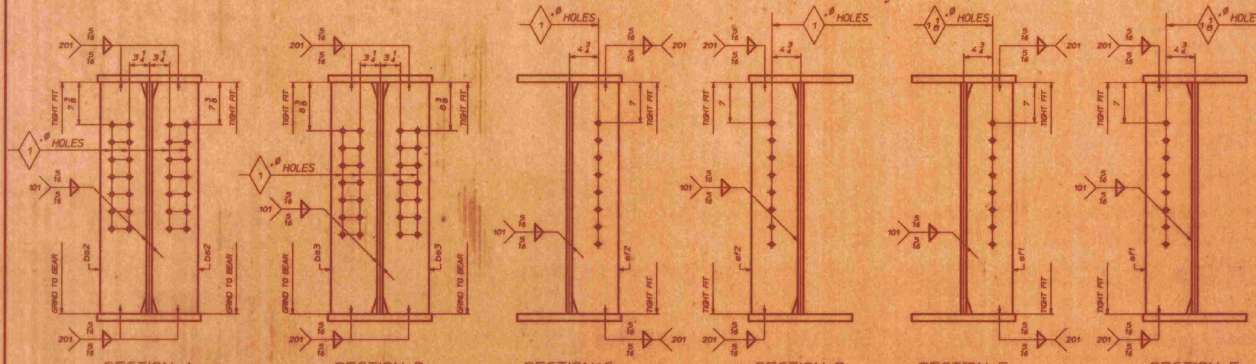
EAST COAST STEEL
Bridge Division
1 Widgeon Ave.
South Portland, ME 04106
207-773-1662

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G3B
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-10





ASM INFO PAGE	ASM INFO LINE	SHP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		G4B	1		GIRDER					
2	E		1	w1	PL $\frac{1}{2}$ x 41 $\frac{3}{8}$	59	9 $\frac{1}{8}$	ICVNO	4068	
2	J		1	w3	PL $\frac{1}{2}$ x 41 $\frac{3}{8}$	59	4 $\frac{11}{16}$	ICVNO	4042	
1	R		1	tf1	PL 1 x 16	14	6	ICVNO	790	
1	B		1	tf2	PL 1 $\frac{1}{16}$ x 16	21	0	ICVNO	2144	
1	K		1	tf3	PL 1 x 16	83	7 $\frac{1}{2}$	ICVNO	4653	
1	R		1	bf1	PL 1 x 16	14	6	ICVNO	790	
1	B		1	bf2	PL 1 $\frac{1}{16}$ x 16	21	0	ICVNO	2144	
1	K		1	bf3	PL 1 x 16	83	6 $\frac{15}{16}$	ICVNO	4651	
3	B		8	sf2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		615	
3	B		2	bs3	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		154	
3	B		2	sf1	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		154	
3	B		2	bs2	PL $\frac{5}{8}$ x 7 $\frac{3}{4}$	3	4		154	
								TOTAL WEIGHT	19159	



NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 15/16 Ø U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1.
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2.

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: Mail

REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

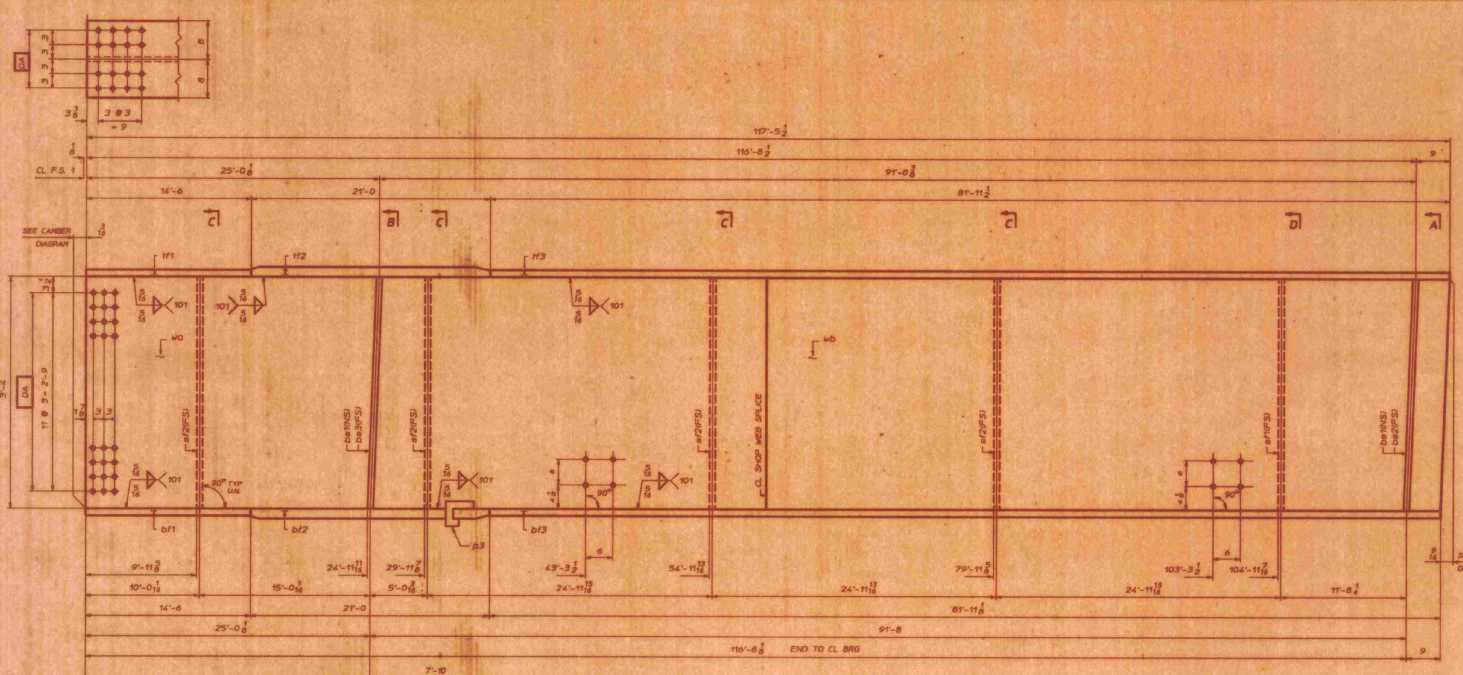
RESERVED FOR STAMPS

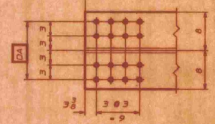
QTY	DATE	ISSUED TO:	FOR:

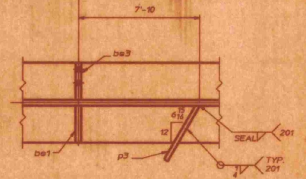
ECSE

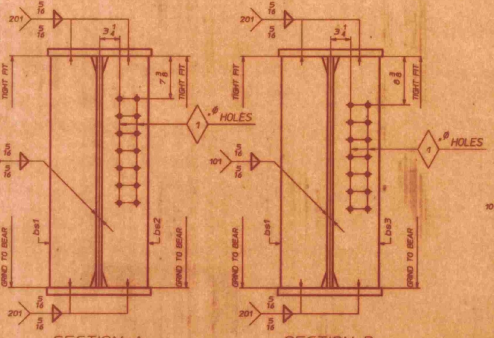
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1642

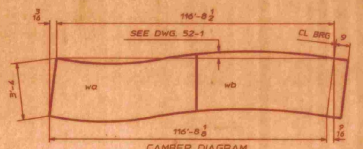
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER G4B
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 52-11











ABM INFO		SHP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
						LENGTH		93-01-0775	52-12	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	FT	INCHES	REMARKS	WT	PROCUREMENT NOTES
		G5B	1		GIRDER					
2	E		1	wb	PL 1/2 x 41 3/4	59	9 5/8	ICVN8	4668	
2	L		1	wb	PL 1/2 x 41 1/4	57	8 13/16	ICVN8	3929	
1	R		1	tf1	PL 1 x 16	14	6	ICVN8	790	
1	B		1	tf2	PL 1 1/8 x 16	21	0	ICVN8	2149	
1	M		1	tf3	PL 1 x 16	81	11 1/2	ICVN8	4463	
1	R		1	bf1	PL 1 x 16	14	6	ICVN8	790	
1	B		1	bf2	PL 1 1/8 x 16	21	0	ICVN8	2144	
1	M		1	bf3	PL 1 x 16	81	11 1/8	ICVN8	4461	
3	B		4	ef2	PL 5/8 x 7 3/4	3	4		308	
3	B		2	be1	PL 5/8 x 7 3/4	3	4		154	
3	B		1	be3	PL 5/8 x 7 3/4	3	4		77	
3	B		1	ef1	PL 5/8 x 7 3/4	3	4		77	
3	B		1	be2	PL 5/8 x 7 3/4	3	4		77	
3	R		1	p3	PL 1/4 x 3 5/8	0	11		3	
								TOTAL WEIGHT	23485	

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1
HOLES TO BE 15/16 ϕ U.N.
NO PAINT.
FOR WEB CUTTING DIAGRAM SEE DWG. 52-1
FOR PLG. ASSEMBLY DIAGRAM SEE DWG. 52-2

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MAIL

RESERVED FOR STAMPS

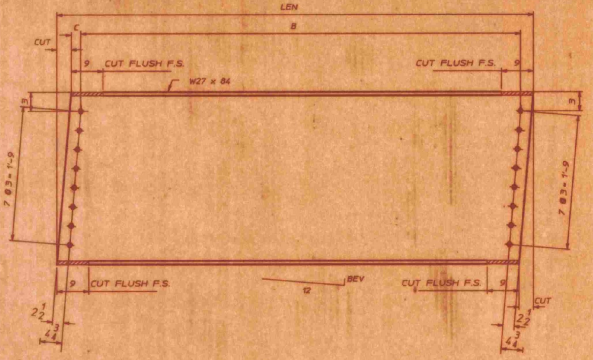
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

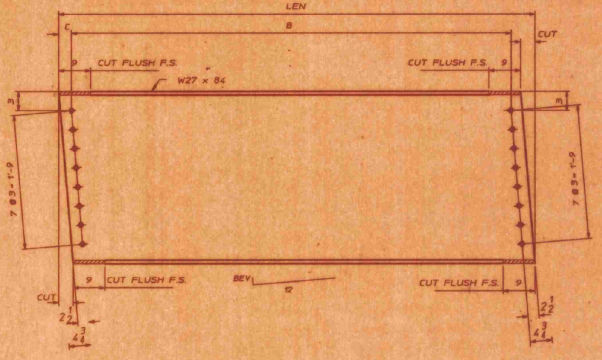
QTY	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-3642

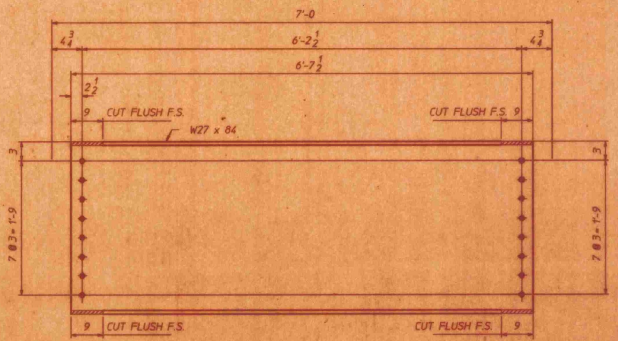
PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: GIRDER. G5B TENSOR 1461
DRAWN BY: JAK JOB NUMBER: 93-01-0775 SHEET NUMBER: 52-12
CHECKED BY: JB 2-93





MARK	No. REQD	LEN	C	B	BEV	CUT
D1	1	6'-9 3/16	1 9/16	6'-2 5/8	11/16	1 9/16
D2	1	6'-8 15/16	1 5/8	6'-2 5/8	5/8	1 3/8
D3	2	6'-8 13/16	1 5/8	6'-2 9/16	9/16	1 1/4
D4	1	6'-8 5/8	1 5/8	6'-2 1/16	1/2	1 1/16
D5	2	6'-8 9/16	1 5/8	6'-2 9/16	7/16	1
D6	1	6'-8 7/16	1 5/8	6'-2 9/16	3/8	7/8
D7	1	6'-8 5/8	1 11/16	6'-2 1/16	3/8	13/16
D8	1	6'-8 1/4	1 11/16	6'-2 1/2	5/16	3/4
D9	2	6'-8 1/8	1 11/16	6'-2 1/2	5/16	5/8
D10	2	6'-7 15/16	1 11/16	6'-2 1/2	3/16	7/16
D11	1	6'-7 3/4	1 3/4	6'-2 1/2	1/8	1/4
D12	1	6'-7 5/8	1 3/4	6'-2 1/2	1/16	1/8

MARK	No. REQD	LEN	C	B	BEV	CUT
D14	1	6'-8 15/16	1 7/8	6'-2 5/8	5/8	1 3/8
D15	1	6'-8 13/16	1 7/8	6'-2 9/16	9/16	1 1/4
D16	2	6'-8 5/8	1 7/8	6'-2 9/16	1/2	1 1/16
D17	2	6'-8 7/16	1 7/8	6'-2 9/16	3/8	7/8
D18	2	6'-8 3/8	1 13/16	6'-2 9/16	3/8	13/16
D19	2	6'-8 1/8	1 13/16	6'-2 1/2	5/16	5/8
D20	1	6'-8 1/16	1 13/16	6'-2 1/2	1/4	9/16
D21	1	6'-7 15/16	1 13/16	6'-2 1/2	3/16	7/16
D22	2	6'-7 7/8	1 13/16	6'-2 1/2	3/16	3/8
D23	1	6'-7 5/8	1 1/4	6'-2 1/2	1/16	1/8



1 ~ DIAPHRAGM ~ D13

ABM INFO PAGE	ABM INFO LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
					DIAPHRAGMS					
3	K	D1	1		W 27x84	6	9 3/16		548	
3	K	D2	1		W 27x84	6	8 15/16		547	
3	K	D3	2		W 27x84	6	8 13/16		1151	
3	K	D4	1		W 27x84	6	8 5/8		564	
3	K	D5	2		W 27x84	6	8 9/16		1128	
3	K	D6	1		W 27x84	6	8 7/16		563	
3	K	D7	1		W 27x84	6	8 5/8		563	
3	K	D8	1		W 27x84	6	8 1/4		562	
3	K	D9	2		W 27x84	6	8 1/8		1122	
3	K	D10	2		W 27x84	6	7 15/16		1119	
3	K	D11	1		W 27x84	6	7 3/4		558	
3	K	D12	1		W 27x84	6	7 5/8		557	
3	K	D13	1		W 27x84	6	7 5/8		557	
3	K	D14	1		W 27x84	6	8 15/16		567	
3	K	D15	1		W 27x84	6	8 13/16		566	
3	K	D16	2		W 27x84	6	8 5/8		1129	
3	K	D17	2		W 27x84	6	8 7/16		1126	
3	K	D18	2		W 27x84	6	8 3/8		1125	
3	K	D19	2		W 27x84	6	8 1/8		1121	
3	K	D20	1		W 27x84	6	8 1/16		560	
3	K	D21	1		W 27x84	6	7 15/16		560	
3	K	D22	2		W 27x84	6	7 7/8		1118	
3	K	D23	1		W 27x84	6	7 5/8		557	
								TOTAL WEIGHT	17989	

BILL OF MATERIAL

JOB NO. 93-01-0775

DRAWING NO. 56-1

REV.

ALL MATERIAL TO BE M270-50W.
FOR GENERAL NOTES SEE SHT. GN1.
ALL RE-ENTRANT CUTS TO HAVE 2" RAD.
ALL HOLES TO BE 15/16 Ø.

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 23 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MNL

RESERVED FOR STAMPS

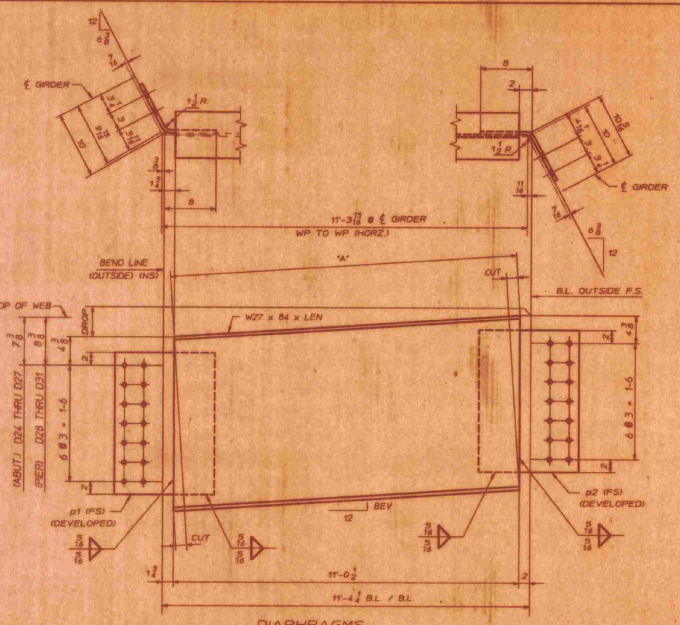
REV	DATE	DESCRIPTION
1		
2		
3		
4		
5		

QTY	DATE	ISSUED TO:	FOR:

ECSE

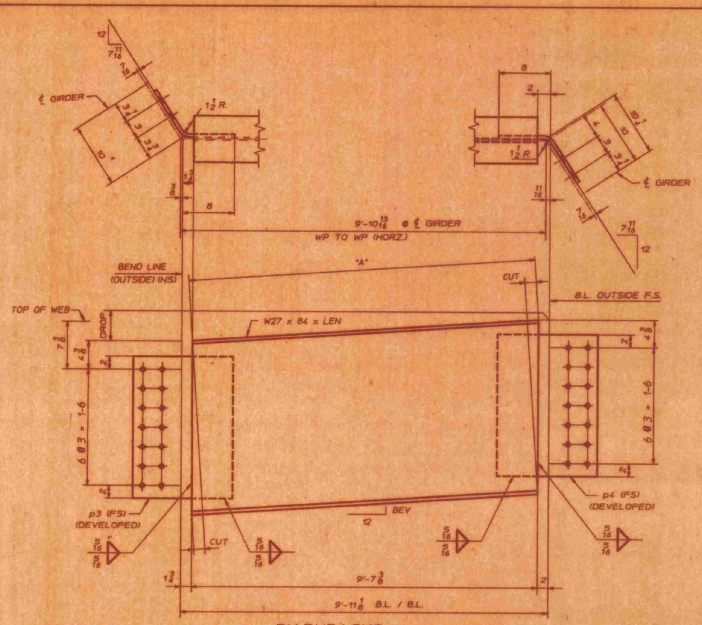
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-3641

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1448 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: DIAPHRAGMS
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 56-1



DIAPHRAGMS

MARK	No. REQD	LEN	"A"	BEV	CUT	DROP
D24	1	11'-2 1/16	11'-0 11/16	3/8	1 3/8	6 13/16
D25	1	11'-1 13/16	11'-0 11/16	9/16	1 1/4	6 1/16
D26	1	11'-1 9/16	11'-0 5/8	7/16	1 3/16	5 15/16
D27	1	11'-1 3/8	11'-0 5/8	3/8	3/4	4 7/16
D28	1	11'-1 1/16	11'-0 9/16	1/4	1/2	3
D29	1	11'-0 13/16	11'-0 9/16	5/16	3/8	2 1/8
D30	1	11'-0 3/8	11'-0 1/2	1/8	1/4	1 1/8
D31	1	11'-0 1/16	11'-0 1/2	1/16	1/16	5/16



DIAPHRAGMS

MARK	No. REQD	LEN	"A"	BEV	CUT	DROP
D32	1	9'-8 3/16	9'-7 7/16	3/8	3/4	3 3/8
D33	1	9'-8 1/16	9'-7 7/16	5/16	5/8	3
D34	1	9'-7 15/16	9'-7 7/16	1/4	1/2	2 7/16
D35	1	9'-7 3/4	9'-7 3/8	3/16	3/8	1 11/16

BILL OF MATERIAL

JOB NO. 92-11-0725 | DRAWING NO. 56-21 | REV.

ABM INFO PAGE	ABM INFO LINE	SHIP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
					DIAPHRAGMS					
3	L	D24	1		W 27x84	11	2 1/16		938	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D25	1		W 27x84	11	1 15/16		938	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D26	1		W 27x84	11	1 9/16		935	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D27	1		W 27x84	11	1 3/8		934	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D28	1		W 27x84	11	1 1/16		931	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D29	1		W 27x84	11	0 13/16		931	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D30	1		W 27x84	11	0 5/8		929	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D31	1		W 27x84	11	0 9/16		929	
3	N		1	p1	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p2	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D32	1		W 27x84	9	8 1/16		813	
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D33	1		W 27x84	9	8 1/16		812	
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D34	1		W 27x84	9	7 15/16		812	
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT	51	
3	L	D35	1		W 27x84	9	7 3/4		810	
3	N		1	p3	PL ½ x 22	1	4 1/4	BENT	51	
3	N		1	p4	PL ½ x 22	1	4 1/2	BENT	51	

TOTAL WEIGHT 11986

EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APR 28 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MAIL

NOTES:
ALL MATERIAL TO BE M270-50W (A709-50W).
FOR GENERAL NOTES SEE DWG. GN1.
HOLES TO BE 15/16 ø
NO PAINT EXCEPT AS NOTED

RESERVED FOR STAMPS

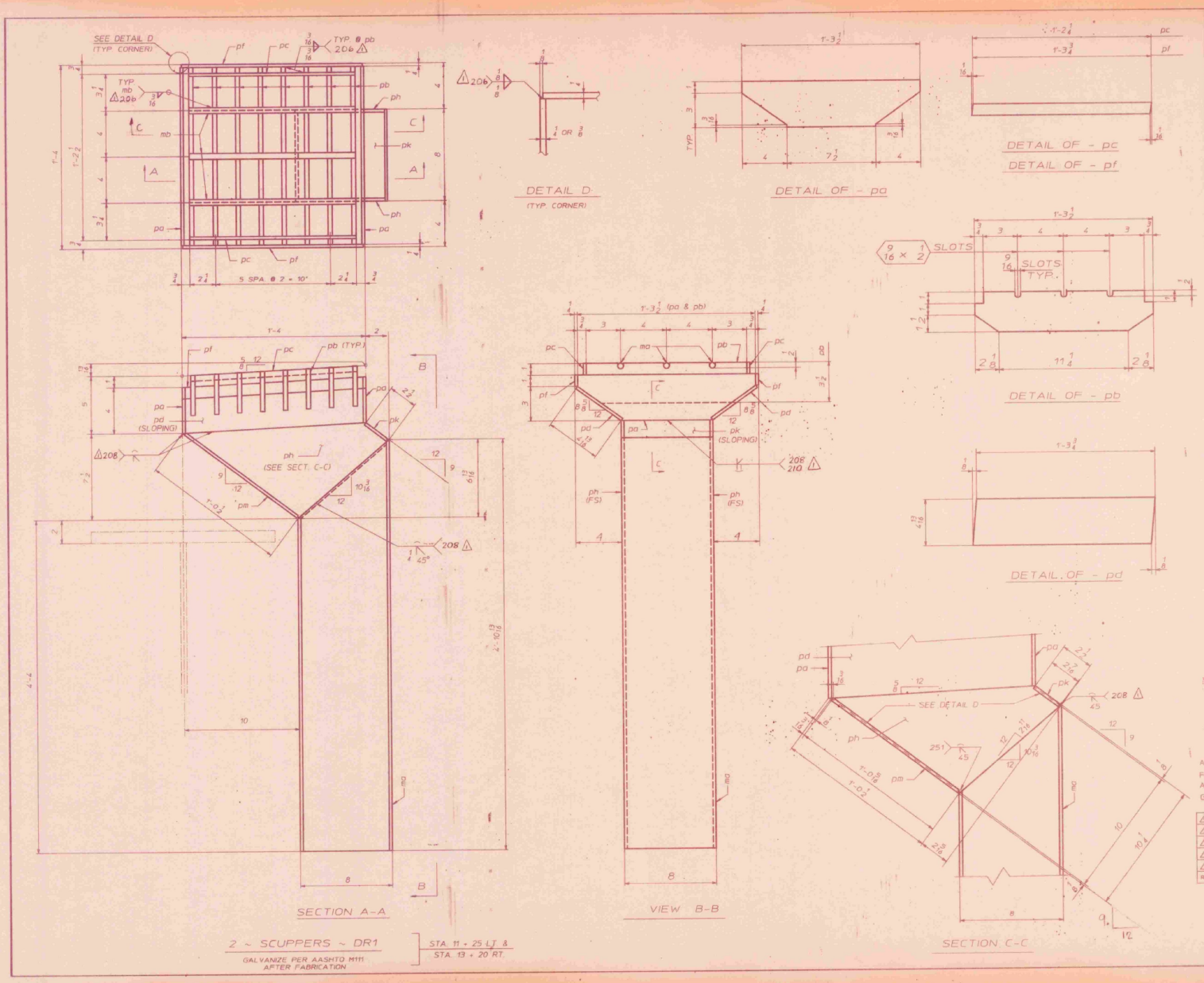
REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

QTY.	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1842

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ. NO. BRZ -1446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: BEARING DIAPHRAGMS TENSOR 1461
DRAWN BY: JAK JOB NUMBER: 93-01-0775
CHECKED BY: JB 2-93 SHEET NUMBER: 56-2



2 ~ SCUPPERS ~ DR1

GALVANIZE PER AASHTO M111 AFTER FABRICATION

STA. 11 + 25 LT. & STA. 13 + 20 RT.

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 59-1	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		DR1	2		SCUPPERS			GALVANIZE		
4	B		2	ma	TS 8 x 8 x 1/4	4	10 13/16	A500 GR.B	253	
4	E		16	pb	PL 3/8 x 3 1/2	1	3 1/2		92	
4	G		4	pa	PL 1/4 x 4	1	3 1/2		18	
4	H		4	pc	PL 1/4 x 1	1	2 5/16		4	
4	H		4	pf	PL 1/4 x 1	1	3 13/16		4	
4	K		4	pd	PL 1/4 x 4 13/16	1	3 9/8		22	
4	L		4	ph	PL 1/4 x 10	1	2 5/8		41	
4	K		2	pk	PL 1/4 x 2 7/16	0	7 1/2		3	
4	J		2	pm	PL 1/4 x 7 1/2	1	0 5/16		13	
4	F		6	mb	1/2 DIA ROD	1	2 1/2		5	
								TOTAL WEIGHT	455	

REVISED

ALL MATERIAL TO BE M270-36 GALV. (U.N.)
FOR GENERAL NOTES SEE SHT. GN1.
ALL WELD TO BE SEAL WELDS AS TO BE WATER TIGHT.
GALVANIZE AFTER FABRICATION

EAST COAST STEEL BRIDGE DIVISION
FOR APPROVAL / RESUBMITTAL
APPROVAL / APPROVED AS NOTED
RELEASED FOR FAB BY MAIL

RESERVED FOR STAMPS

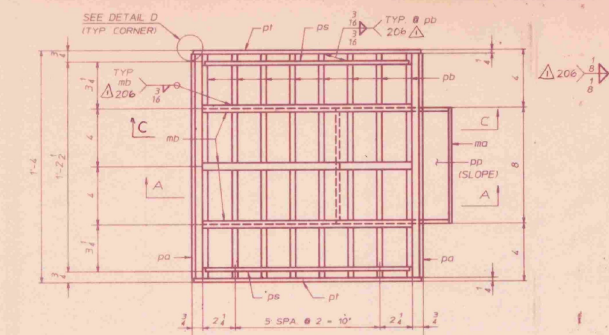
REV	DATE	DESCRIPTION
5		
4		
3		
2		
1	9-7-93	WELDING PROCEDURES

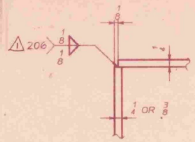
QTY.	DATE	ISSUED TO:	FOR

ECSE

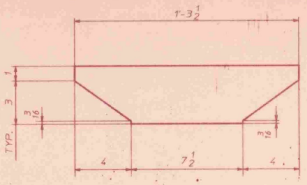
EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: SCUPPERS
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 59-1

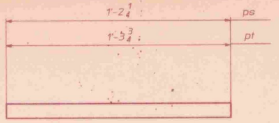




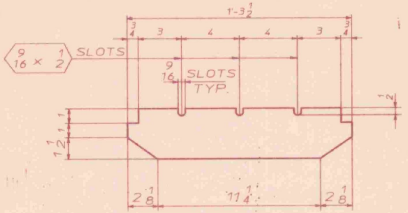
DETAIL D
(TYP CORNER)



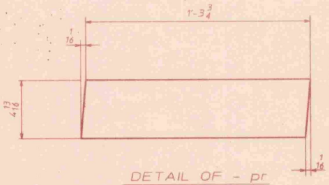
DETAIL OF - pa



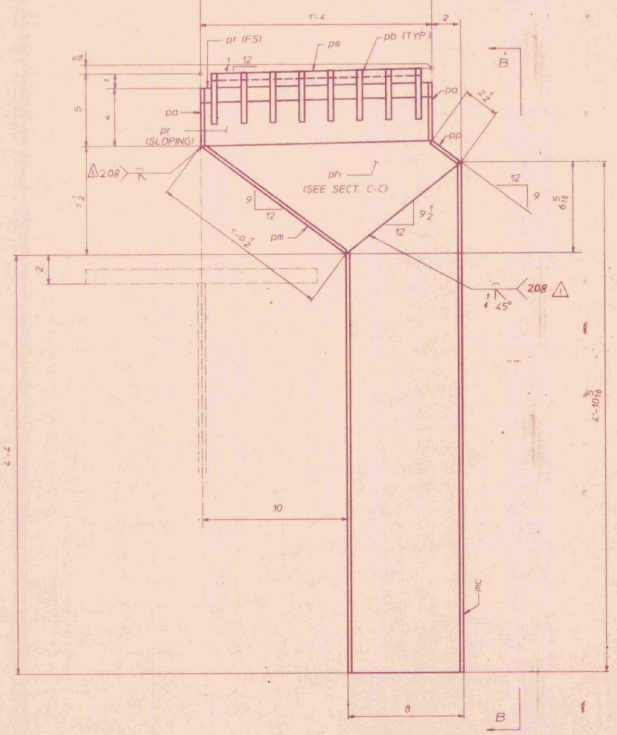
DETAIL OF - ps
DETAIL OF - pt



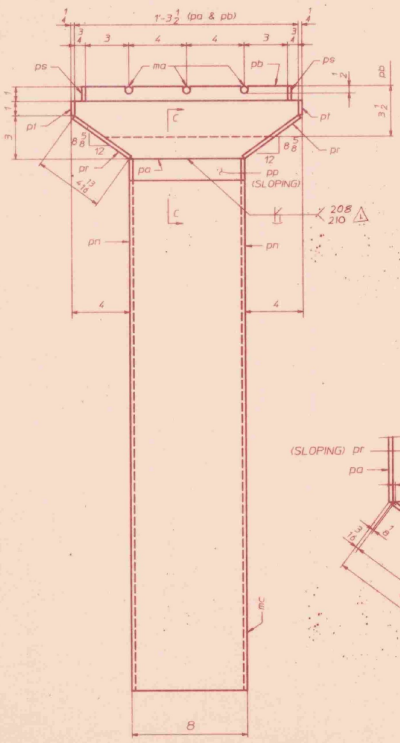
DETAIL OF - pb



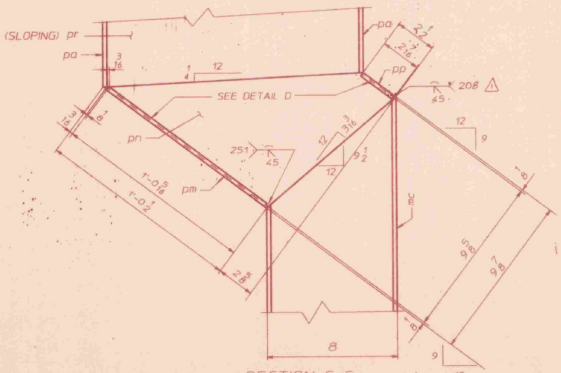
DETAIL OF - pr



SECTION A-A



VIEW B-B



SECTION C-C

2 ~ SCUPPERS ~ DR2

GALVANIZE PER AASHTO M111
AFTER FABRICATION

STA. 11 + 90 LT. &
STA. 12 + 60 RT.

ABK INFO PAGE	ABK INFO LINE	SHP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		DR2	2		SCUPPERS			GALVANIZE		
4	B		2	mc	TS 8 x 8 x 1/4	4	10 5/16	A500 GR.B	251	
4	E		16	pb	PL 1/8 x 3 1/2	1	3 1/2		92	
4	G		4	pa	PL 1/4 x 4	1	3 1/2		18	
4	H		4	ps	PL 1/4 x 1	1	2 1/4		4	
4	H		4	pt	PL 1/4 x 1	1	3 1/2		4	
4	K		4	pr	PL 1/4 x 4 13/16	1	3 15/16		22	
4	L		4	pn	PL 1/4 x 9 5/8	1	2 13/16		41	
4	K		2	pp	PL 1/4 x 2 1/16	0	7 1/2		3	
4	J		2	pm	PL 1/4 x 7 1/2	1	0 1/16		13	
4	F		6	mb	1/2 DIA ROD	1	2 1/2		5	
								TOTAL WEIGHT	463	

JOB NO. 93-01-0775
DRAWING NO. 59-2
REV.

BILL OF MATERIAL

REVISED

ALL MATERIAL TO BE M270-36 GALV. (U.N.)
FOR GENERAL NOTES SEE SHT. GN1
ALL WELD TO BE SEAL WELDS AS TO BE WATER TIGHT
GALVANIZE AFTER FABRICATION

EAST COAST STEEL BRIDGE DIVISION
FOR APPROVAL
FOR INFORMATION
APPROVED
APPROVED AS NOTED
RELEASED FOR FAB BY: MNL

RESERVED FOR STAMPS

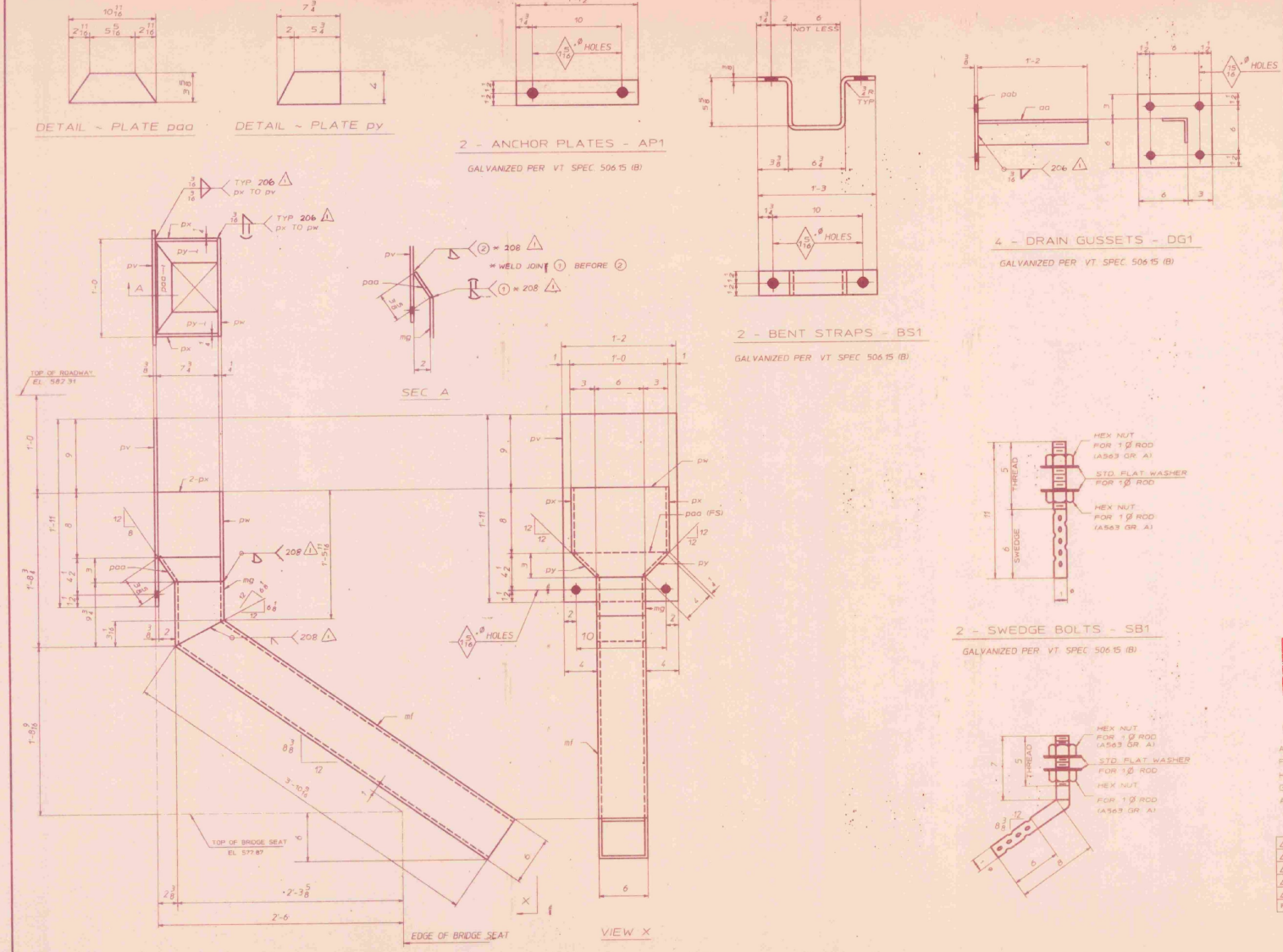
REV.	DATE	DESCRIPTION
1	9-7-93	WELDING PROCEDURES

QTY.	DATE	ISSUED TO:	FOR:

ECSE

EAST COAST STEEL
Bridge Division
Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE. 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ - 5446 (9)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: SCUPPERS
TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 59-2



ABM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 59-3	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		DS1	1		DOWNSPOUT			GALVANIZE		
4	P		1	mf	TS 6 x 6 x 1/4	3	10 5/16	(A500) GR.B	93	
4	Q		1	mg	TS 6 x 6 x 1/4	0	9 3/4	(A500) GR.B	15	
4	R		1	pv	PL 3/8 x 14	1	11		34	
4	S		1	pw	PL 1/4 x 11	1	0		9	
4	T		2	px	PL 1/4 x 7 3/4	0	8		9	
4	T		2	py	PL 1/4 x 4	0	7 3/4		4	
4	S		1	paa	PL 1/4 x 3 5/8	0	10 11/16		3	
								TOTAL WEIGHT	167	
		DG1	4		GUSSETS			GALVANIZE		
4	C		4	pab	PL 3/8 x 9	0	9		34	
4	D		4	aa	L 3 x 3 x 3/8	1	2		29	
								TOTAL WEIGHT	63	
					ANCHOR PLATES			GALVANIZE		
4	U	AP1	2		PL 3/8 x 3	1	1 1/2	(M270-36)	9	
					BENT STRAPS			GALVANIZE		
4	V	BS1	2		PL 3/8 x 3	1	11 1/2	(M270-36) BENT	15	
					SWEDGE BOLTS			GALVANIZE		
4	W		2	SB1	ROD 1 Ø	0	11	(M270-36)	5	
4	W		2	SB2	ROD 1 Ø	1	3 1/2	(M270-36) BENT	7	
4	X		8		HEX NUTS FOR 1 Ø ROD			A563 GR A	8	
4	Y		8		FLAT WASHERS FOR 1 Ø ROD			F436	8	

REVISED

EAST COAST STEEL BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
APPROVED AS NOTED
☑ RELEASED FOR FAB. BY MNL

NOTES

ALL MATERIAL TO BE M270-36 GALV (U.N.)
FOR GENERAL NOTES SEE SHT GN1
HOLES TO BE AS NOTED
GALV TO BE DONE AFTER FABRICATION
ALL WELDS TO BE SEAL WELDS AS TO BE WATER TIGHT

RESERVED FOR STAMPS

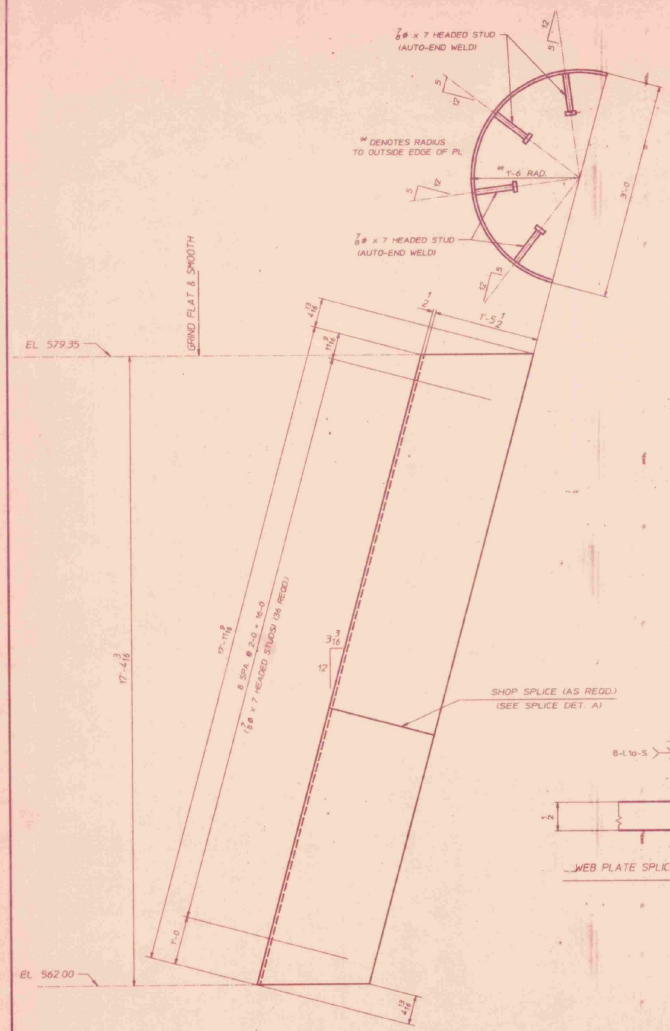
REV	DATE	DESCRIPTION
5		
4		
3		
2		
1	9-7-93	WELDING PROCEDURES

QTY.	DATE	ISSUED TO	FOR

ECSE

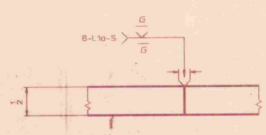
EAST COAST STEEL
Bridge Division
1 Wallace Ave
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE 100B OVER THE MAD RIVER
LOCATION: PROJ NO. BRZ -1446 (1)
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: J.A. McDONALD
DRAWING TITLE: DOWNSPOUT & ACCESSORIES TENSOR 1461
DRAWN BY: JAK
CHECKED BY: JB 2-93
JOB NUMBER: 93-01-0775
SHEET NUMBER: 59-3

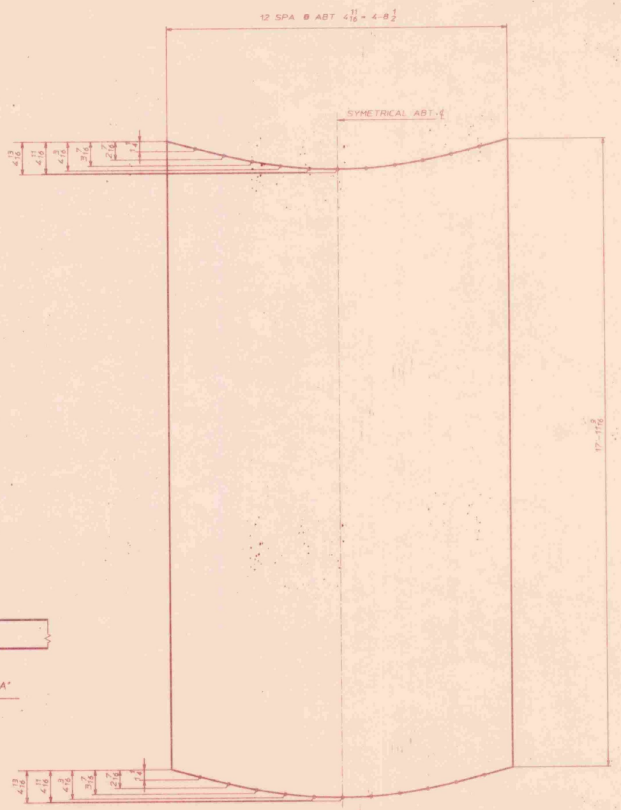


ONE ~ PIER NOSING ~ PN1

GALVANIZED



WEB PLATE SPLICE DETAIL "WA"



CUTTING DIAGRAM

(DEVELOPED)

ABM INFO		SHIP	BILL OF MATERIAL					JOB NO. 93-01-0775	DRAWING NO. 61-1	REV
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		PN1	1		PIER NOSING			GALVANIZE		
3	U		1		PL 1/2 x 56 1/2	18	4 3/8	ROLLED @ ℄ ABT	1767	
3	V		36		7/8 ø HEADED STUD	0	7	A108	8	

EAST COAST STEEL BRIDGE DIVISION

FOR APPROVAL — RESUBMITTAL

APPROVED — APPROVED AS NOTED

RELEASED FOR CAS BY [illegible]

ALL MATERIAL TO BE M270-36 GALV. (AFTER WELDING, BENDING, & STUDDING)

FOR GENERAL NOTES SEE SHT GN1.

RESERVED FOR STAMPS

REV	DATE	DESCRIPTION
5		
4		
3		
2		
1		

QTY	DATE	ISSUED TO	FOR

ECSE

EAST COAST STEEL
Bridge Division
1 Wallace Ave.
South Portland, ME 04106
207-773-1862

PROJECT: VT RTE 100B OVER THE MAD RIVER

LOCATION: PROJ NO. BRZ -1446 (1)

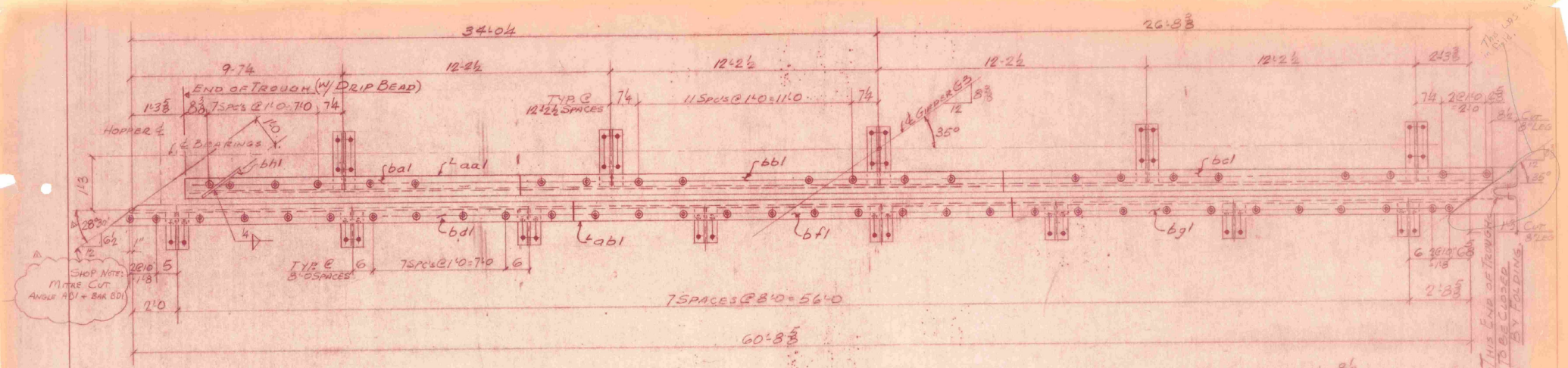
ARCHITECT: STATE OF VERMONT AGENCY OF TRANSPORTATION

CUSTOMER: J.A. McDONALD

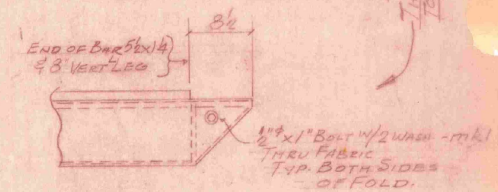
DRAWING TITLE: PIER NOSING — TENSOR 1461

DRAWN BY: JAK — JOB NUMBER: 93-01-0775 — SHEET NUMBER: 61-1

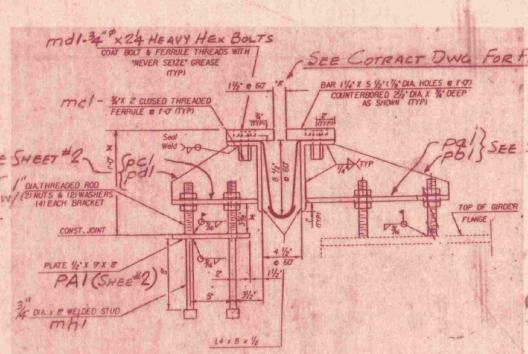
CHECKED BY: JB 2-93



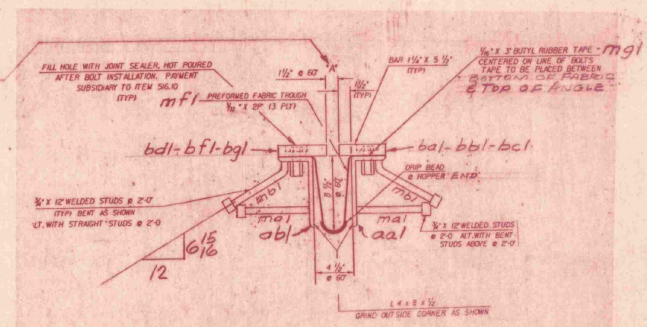
EJ1 - ASSEMBLY - ONE REQ'D.



TROUGH FOLDING DETAIL



"A-A" TYPICAL SECTION AT GIRDERS



"B-B" TYPICAL SECTION BETWEEN GIRDERS

* MAY VARY IN FIELD.

FOR ADDITIONAL DETAILS AND BILL OF MATERIAL SEE SHEET No. 2

REVISED

PROJECT No BRZ 1446(1)
BRIDGE No. 4
PAY ITEM No. 516.10

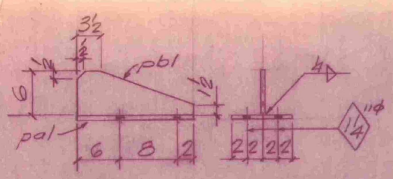
EAST COAST STEEL BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
JUL 13 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY MNL

DATE & #	DESCRIPTION	QTY.	DATE	ISSUED TO	FOR
5					
4					
3					
2					
9-7-93	APP'L COMMENTS	1	5-3-93	JA McDONALD	FOR APPROVAL
1		5	5-3-93	VT ACT	FOR APPROVAL
7-15-93	SHOP NOTE MITRE CUT	1	4-5-93	JA McDONALD	FOR APPROVAL
		5	4-5-93	VT ACT	FOR APPROVAL

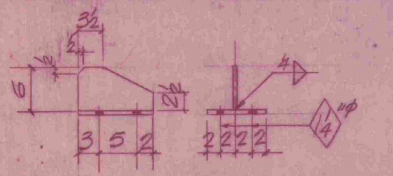
ECSE INC.

EAST COAST STEEL
Forest Rd. P.O. Box E
Greenfield, N.H. 03047
603-547-3316

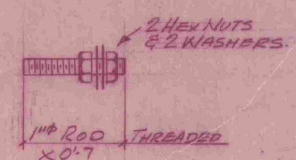
PROJECT: VT. RTE. 100B OVER MAD RIVER
LOCATION: MORETOWN, VT.
ARCHITECT: STATE OF VT. AGENCY OF TRANSP.
CUSTOMER: J.A. McDONALD
DRAWING TITLE: EXPANSION JOINT DETAILS
DRAWN BY: JPF | JOB NUMBER: 93-01 | SHEET NUMBER: 1 OF 2
CHECKED BY: E.J. | NUMBER: 0785



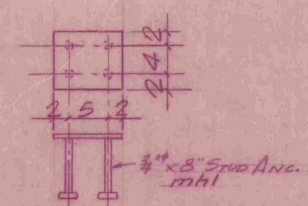
BRKT. ASS'Y. @ GIRDERS - 5 REQ'D.



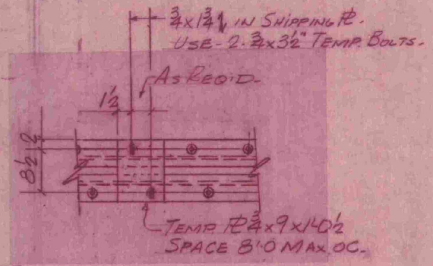
BRKT. ASS'Y. @ BACKWALL - 8 REQ'D.



TS1 - 52 - REQ'D.



PA1 - 8 REQ'D



TEMP. SHIPPING & ADJ. DEVICE

No.	Item	Qty	Description	Length		Remarks	Rev	Date	
	EU1	1	ASS'Y	61	0		—	—	—
	aa1	1	8×4×½	60	8				1078
	ab1	1	DO	62	7				1049
	ba1	1	BAR 5½×1¼	19	4⅝				454
	bb1	1		19	8				460
	bc1	1		20	10⅞				489
	bd1	1		20	3¾				475
	bf1	1		20	0				468
	bg1	1	BAR 5½×1¼	21	2⅜				496
	bh1	1	BAR 3×½	1	3				6
	pa1	5	PL½×8	1	4				91
	pb1	5	PL½×6	1	4				68
	pc1	8	PL½×8		10				91
	pd1	8	PL½×6		10				68
	ma1	62	¾"φ STUD ANC.	1	0				
	mb1	62	DO	1	0	BENT			
	mc1	122	¾"φ THREADED FERRULE		2	CLOSED			
	md1	122	¾"φ BOLT		2¼	HEAVY HEX			
	mf1	1	5/32" × 28"	63	0	L/F PREFORMED (3 PLY) FABRIC TROUGH			
	mg1	1	1/16" × 3"	124	0	L/F BUTYL RUBBER TAPE			
		1	DRIP BEAD & CEMENT REQUIRED FOR TROUGH						
	mk1	2	½"φ BOLT		1"	W/NUT & 2 WASH.			
	TS1	52	1"φ THREADED ROD	0	7				81
		104	1"φ HEX NUTS						
		104	1"φ STD WASH						
	PA1	8	PL½×8		9				82
	mh1	32	¾"φ STUD ANC		8				
	SHIPPING DEVICE								
	SHOP	8	PL¾×9	1	0½				191
	SHOP	16	¾"φ BOLTS		3½				
						TOTAL WEIGHT			5576

PROJECT No. BRZ 1446(1)
BRIDGE No. 4
PAY ITEM No. 516.10

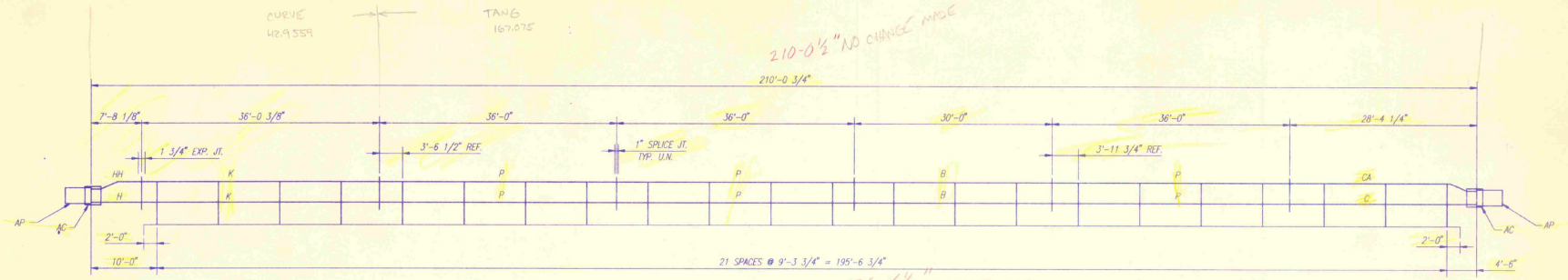
EAST COAST STEEL
BRIDGE DIVISION
☐ FOR APPROVAL ☐ RESUBMITTAL
JUL 13 1993
☑ APPROVED ☐ APPROVED AS NOTED
☑ RELEASED FOR FAB. BY: MNL

DATE & #	DESCRIPTION	QTY.	DATE	ISSUED TO	FOR
5		1	5-3-93	J.A. McDONALD	FOR APPROVAL
4		5	5-3-93	VT AOT	FOR APPROVAL
3		1	4-5-93	J.A. McDONALD	FOR APPROVAL
2		3	4-5-93	VT AOT	FOR APPROVAL
1					

AASHTO M270 GR. 36
ASTM A36 UNLESS NOTED
HOLES 13/16"φ UNLESS NOTED
SHOP WELD E70XX
SHOP PAINT GALVANIZED
PER SUBSECT 506.15(b)
OFF — MILS SSPC-SP
REF "E" DWG —

ECSE
EAST COAST STEEL
Forest Rd. P.O. Box E
Greenfield, N.H. 03047
603-547-3318

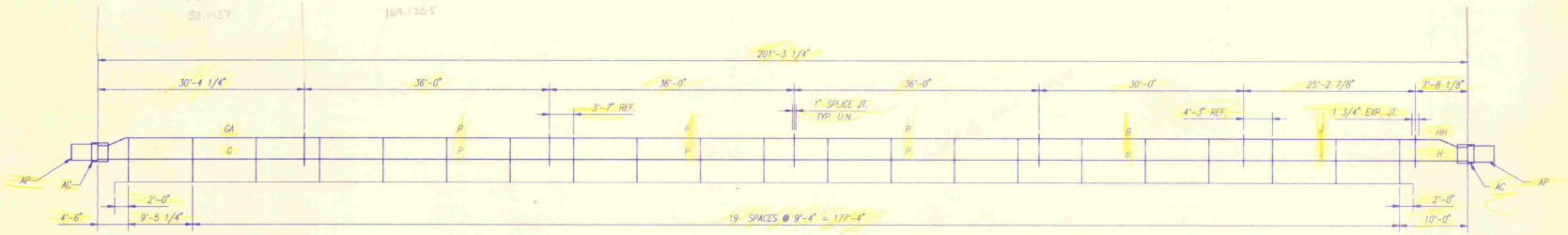
PROJECT: VT. RTE. 100B OVER MAD RIVER
LOCATION: MORETOWN, VT.
ARCHITECT: STATE OF VT. AGENCY OF TRANSP.
CUSTOMER: J.A. McDONALD
DRAWING TITLE: EXPANSION JOINT DETAILS
DRAWN BY: JPF JOB 93-01 SHEET
CHECKED BY: EJ NUMBER: 0785 NUMBER: 2 OF 2



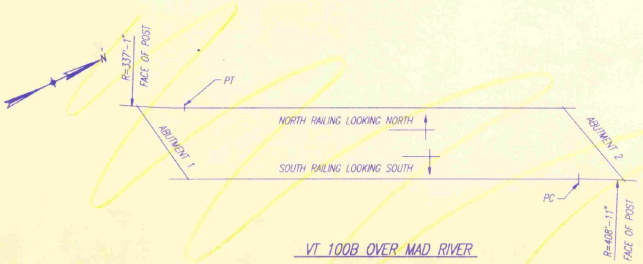
210-0½" NO CHANGE MADE

NORTH RAIL LOOKING NORTH

195-6½" NO CHANGE MADE



SOUTH RAIL LOOKING SOUTH



VT 100B OVER MAD RIVER

STRUCTURES COPY

RECEIVED
CK'D BY BLD CK'D BY PWL
JUL 19 1993
RESUBMIT ____ APPROVED ✓
BY RPG DATE 7/22/93

NOTES:

1. INSPECTED BY: CONWELL
2. TOTAL PAY LENGTH: 411'-4" LIN./FT.
3. FINISH: GALV. A123
4. ALL JOINT SPLICES ARE 1" (UNLESS NOTED)
5. ALL POSTS ARE MK "A"
6. ALL SPLICES ARE MK "SP"

APPROVAL DRAWINGS

ISSUED JUL 15 1993

ISSUED

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY

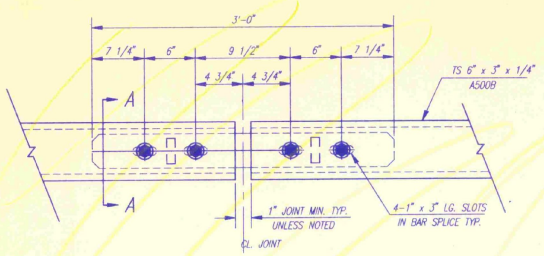
REVISIONS

CUSTOMER
F.R. LAFAYETTE INC.

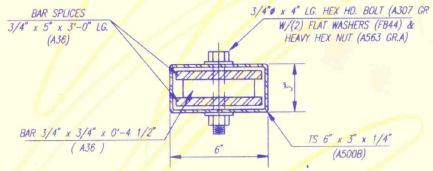
STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL – (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ – 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

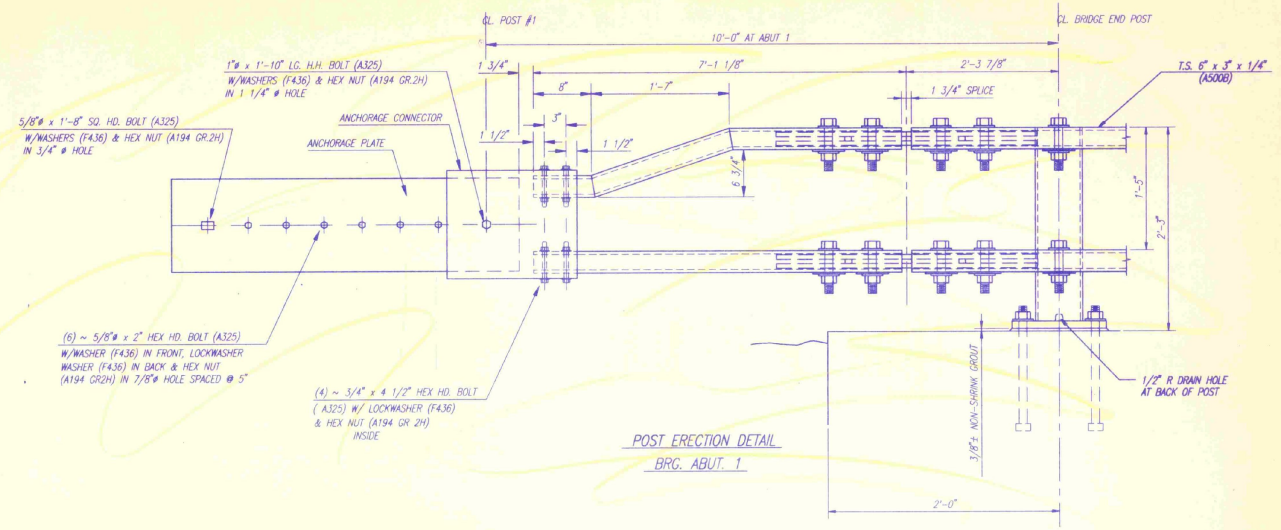
SYRO REF. NO.	22-3082
DRAWN	FLD
CHECKED	E.N.
APPROVED	
DATE	6/2/93
SCALE	NONE
DRAWING NO.	22-3082
	E1 OF 2



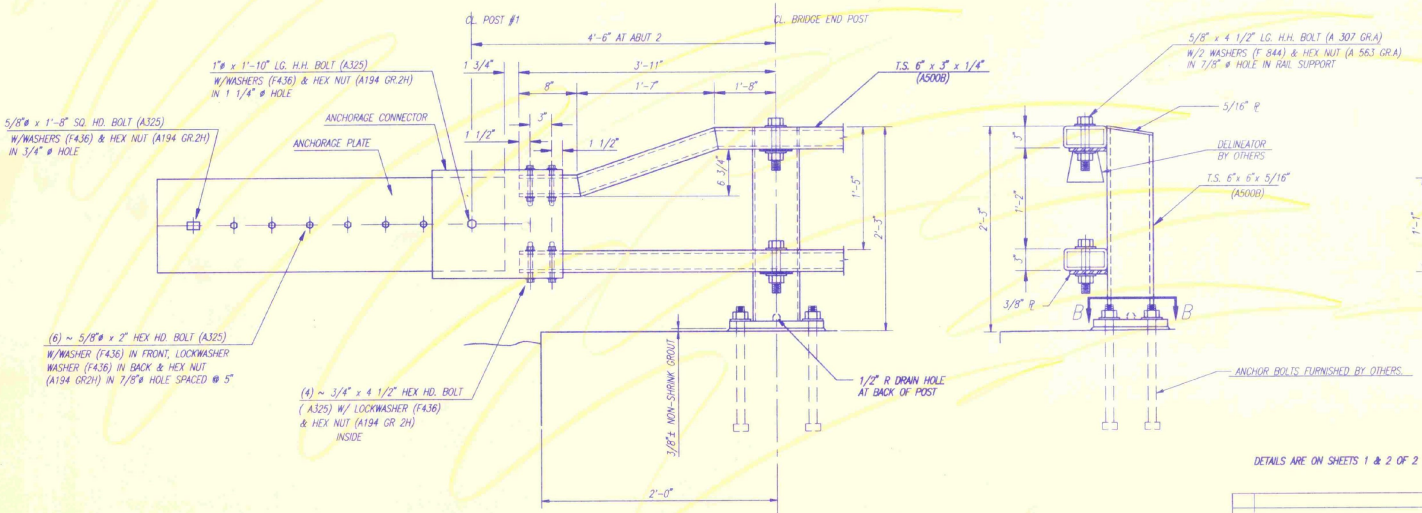
SPLICE DETAIL



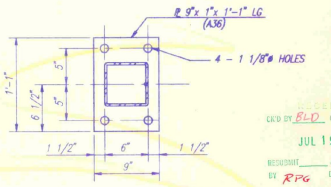
SECTION ~ "A-A"



POST ERECTION DETAIL
BRG. ABUT. 1



POST ERECTION DETAIL
BRG. ABUT. 2



SECTION ~ B - B

RECEIVED
CK'D BY BLD DK'D BY CPW
JUL 19 1993
RESIDENT APPROVED
BY RPG DATE 7/22/93

ISSUED
JUL 21 1993

APPROVAL DRAWING ISSUED

DETAILS ARE ON SHEETS 1 & 2 OF 2 (22-3082)

NO.	REMARKS	DATE	BY
	REVISIONS		

CUSTOMER
F.R. LAFAYETTE INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
BOX BEAM BRIDGE RAIL - (2-RAIL)
TOWN OF MORETOWN
HIGHWAY NO. VT 100B OVER MAD RIVER
PROJECT NO. BRZ - 1446 (1)

SYRO, INC.
A Subsidiary of Trinity Industries, Inc.
GIRARD, OHIO CENTERVILLE, UTAH

SYRO REF NO
22-3082
DRAWN FLD
CHECKED E.D.
APPROVED
DATE 6/2/93
SCALE NONE
DRAWING NO. 22-3082
E2 OF 2

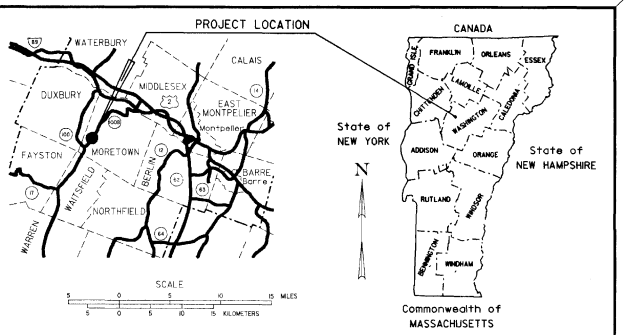
CAE NO. 223082 POST ANCHOR RAIL SCALE 3"=1'-0"

STATE OF VERMONT
AGENCY OF TRANSPORTATION



R.O.W. PLANS

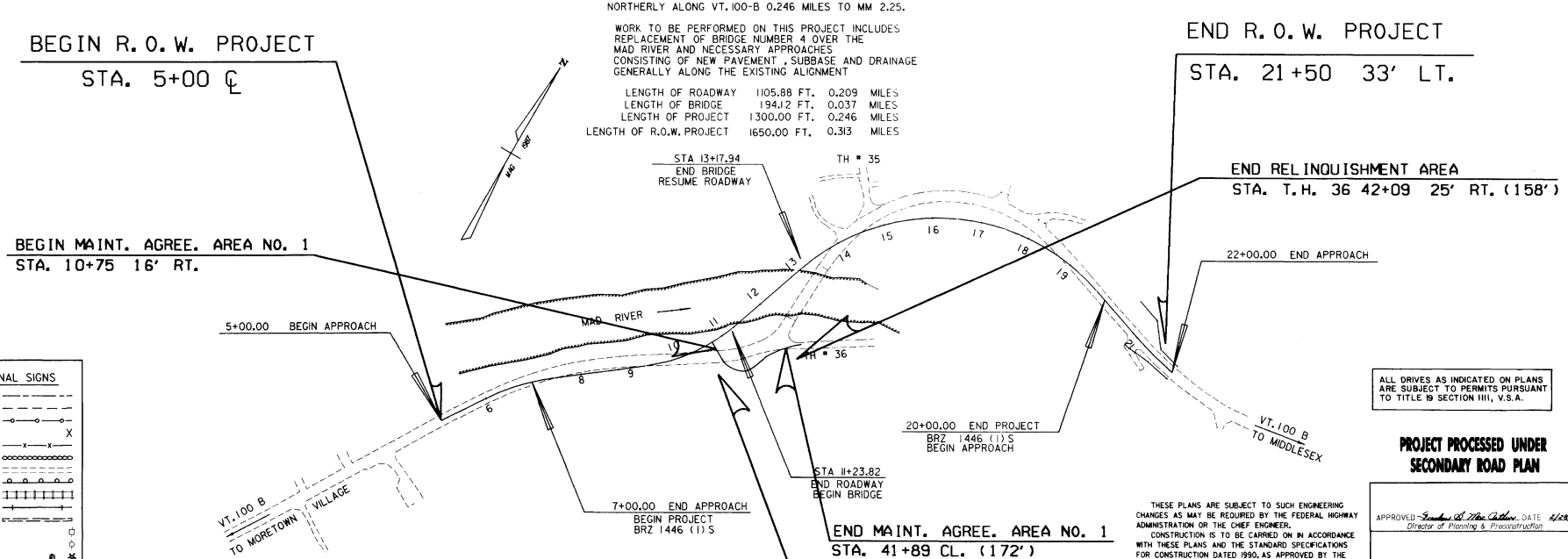
PROPOSED IMPROVEMENT
TOWN OF MORETOWN
COUNTY OF WASHINGTON
VT. ROUTE 100B (FAS)



BEGINNING AT A POINT 2.0 MILES NORTH OF THE WAITSFIELD - MORETOWN TOWN LINE AND EXTENDING NORTHERLY ALONG VT. 100-B 0.246 MILES TO MM 2.25.

WORK TO BE PERFORMED ON THIS PROJECT INCLUDES REPLACEMENT OF BRIDGE NUMBER 4 OVER THE MAD RIVER AND NECESSARY APPROACHES CONSISTING OF NEW PAVEMENT , SUBBASE AND DRAINAGE GENERALLY ALONG THE EXISTING ALIGNMENT

LENGTH OF ROADWAY	1105.88 FT.	0.209	MILES
LENGTH OF BRIDGE	194.12 FT.	0.037	MILES
LENGTH OF PROJECT	1300.00 FT.	0.246	MILES
LENGTH OF R.O.W. PROJECT	1650.00 FT.	0.313	MILES



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

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N / A

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON MARCH 15, 1990 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

ALL DRIVES AS INDICATED ON PLANS ARE SUBJECT TO PERMITS PURSUANT TO TITLE 19 SECTION 1111, V.S.A.

PROJECT PROCESSED UNDER SECONDARY ROAD PLAN

APPROVED _____ DATE 4/29/91
Director of Planning & Preconstruction

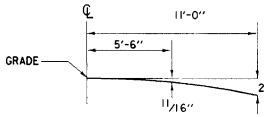
APPROVED _____ DATE 4/29/91
Chief, Property Administration

MORETOWN
BRZ 1446(1)S
R.O.W. SHEET 1 OF 9 SHEETS

TYPICAL SECTIONS

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT	± 1/4"
BASE COURSE	± 1/4"
SUBBASE	± 1/2"

1½" BITUMINOUS CONCRETE PAVEMENT, TYPE III (SINGLE LIFT)
2" BITUMINOUS CONCRETE PAVEMENT, TYPE II (SINGLE LIFT)
2½" BITUMINOUS CONCRETE PAVEMENT, TYPE I (SINGLE LIFT)
SHOULDERS 1½" BITUMINOUS CONCRETE PAVEMENT
24" SUBASE OF DENSE GRADED CRUSHED STONE
0" TO 24" SAND BORROW } AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER



PARABOLIC DETAIL

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
3.33	2	CROWN VETCH	97	75
50.00	30	CREEPING RED FESCUE	98	85
8.33	5	TIMOTHY	99	85
16.67	10	PERENNIAL RYE GRASS (VAR.PENNFINE)	95	85
8.34	5	ALFAFA (VAR. SARANAC)	99	85
8.33	5	BIRDSFOOT TREFOIL(VAR.EMPIRE)	98	85
5.00	3	HIGHLAND BENT GRASS	92	85
100.00	60			

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

SEED- TO BE APPLIED PER SEEDING FORMULAS DIRECTED BY THE ENGINEER.

FERTILIZER- FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE.

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

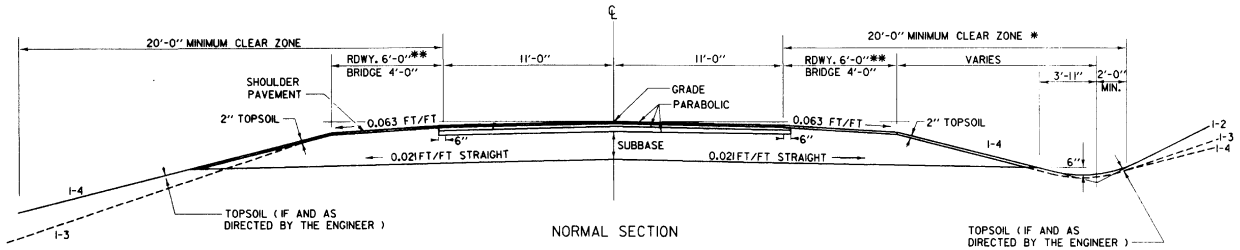
HAY MULCH- TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

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

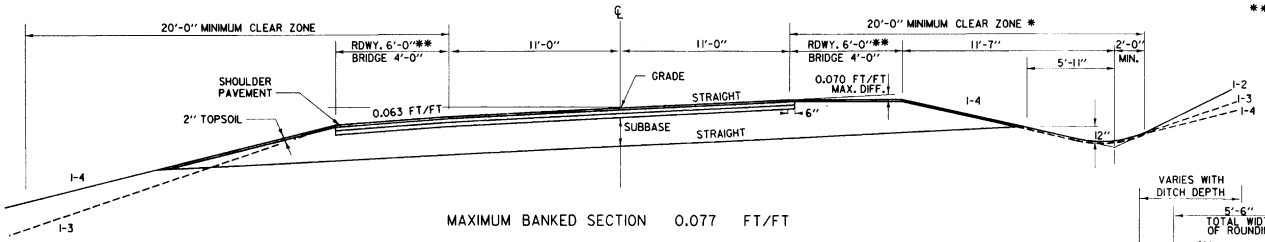
SLOPE ROUNDING- ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

PAY LIMITS OF SAND BORROW WHEN USED IN CONJUNCTION WITH UNDERDRAIN- SEE STANDARD SHEET D-2.



NORMAL SECTION

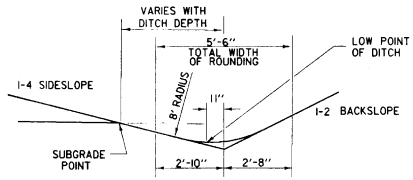
* THE MINIMUM CLEAR ZONE IS MEASURED FROM THE EDGE OF THE TRAVEL WAY TO A POINT 2 FEET BEYOND THE INTERSECTION POINT OF THE I-4 SLOPE AND THE BACK SLOPE.



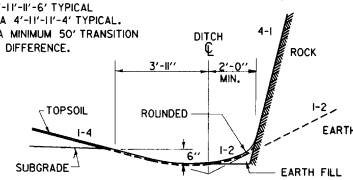
MAXIMUM BANKED SECTION 0.077 FT/FT

** THE ROADWAY WILL HAVE A 6'-11'-11'-6' TYPICAL WHILE THE BRIDGE WILL HAVE A 4'-11'-11'-4' TYPICAL. THE SHOULDERS SHALL HAVE A MINIMUM 50' TRANSITION LENGTH FOR THE 2' SHOULDER DIFFERENCE.

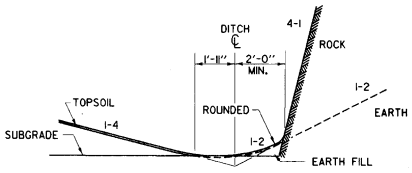
NOTE: FULL DEPTH OF PAVEMENT TO BE CARRIED TO THE OUTSIDE EDGE OF THE SHOULDER ON THE INSIDE OF THE CURVES.
LEFT SHOULDER: 9+00 TO 11+23.82 (BRIDGE)
RIGHT SHOULDER: 13+17.94 (BRIDGE) TO 20+00



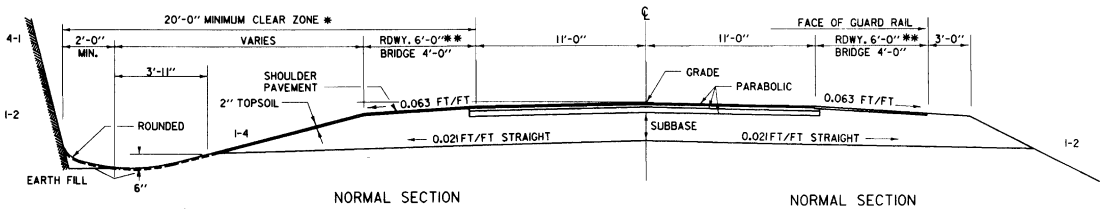
TYPICAL DITCH DETAILS



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

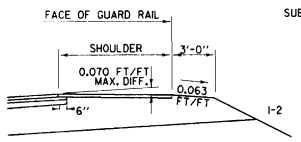


DETAILS OF DITCH AND BACKSLOPE FOR LOW SIDE OF BANK ≥ 0.042 FT/FT



NORMAL SECTION IN ROCK CUT

NORMAL SECTION WITH GUARD RAIL



DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION

FOR SLOPES IN SOLID ROCK EXCAVATION AND DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, SEE STANDARD SHEET A-62.

DATUM
VERTICAL
HORIZONTAL

SURVEYED BY	REED	DATE 9/87
DRAWN BY	SHANGRAW	DATE 1/88
SQUAD LEADER	D.E.LYONS	
DESIGN FILE NO.	78FI74.DGN	DATE PLOTTED 1/88

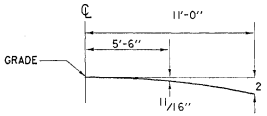
MORETOWN
BRZ 1446 (1) S
R.O.W. SHEET 2 OF 9 SHEETS

78FI74TYP

TYPICAL SECTIONS

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT	± 1/4"
BASE COURSE	± 1/4"
SUBBASE	± 1/2"

SHOULDERS
- 1½" BITUMINOUS CONCRETE PAVEMENT, TYPE III (SINGLE LIFT)
- 2" BITUMINOUS CONCRETE PAVEMENT, TYPE II (SINGLE LIFT)
- 2½" BITUMINOUS CONCRETE PAVEMENT, TYPE I (SINGLE LIFT)
- 1½" BITUMINOUS CONCRETE PAVEMENT
- 24" SUBASE OF DENSE GRADED CRUSHED STONE
- 0" TO 24" SAND BORROW } AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER



PARABOLIC DETAIL

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
3.33	2	CROWN VETCH	97	75
50.00	30	CREEPING RED FESCUE	98	85
8.33	5	TIMOTHY	99	85
16.67	10	PERENNIAL RYE GRASS (VAR.PENNFINE)	95	85
8.34	5	ALFAFA (VAR. SARANAC)	99	85
8.33	5	BIRDSFOOT TREFOIL(VAR.EMPIRE)	98	85
5.00	3	HIGHLAND BENT GRASS	92	85
100.00	60			

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

SEED- TO BE APPLIED PER SEEDING FORMULAS DIRECTED BY THE ENGINEER.

FERTILIZER- FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE.

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

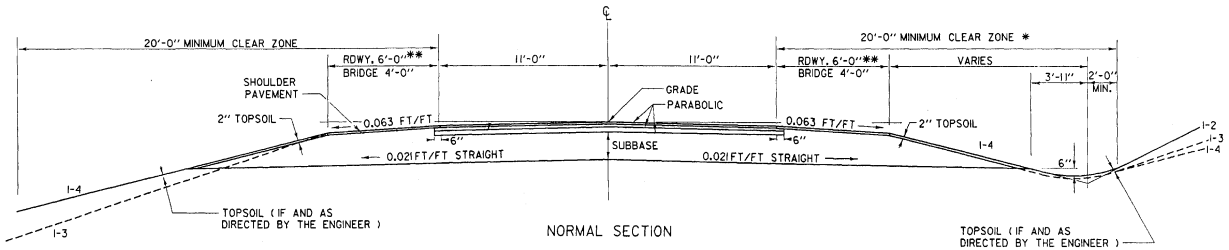
HAY MULCH- TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

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

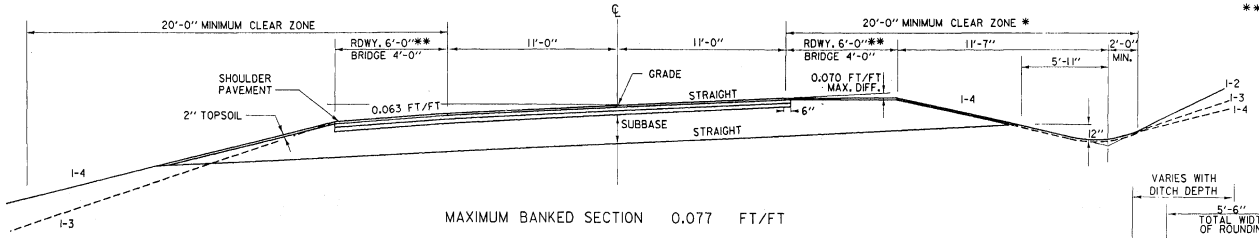
SLOPE ROUNDING- ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

PAY LIMITS OF SAND BORROW WHEN USED IN CONJUNCTION WITH UNDERDRAIN- SEE STANDARD SHEET D-2.



NORMAL SECTION

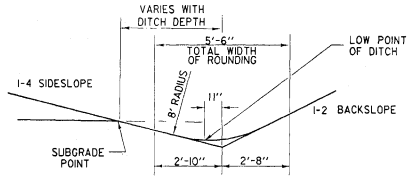
* THE MINIMUM CLEAR ZONE IS MEASURED FROM THE EDGE OF THE TRAVEL WAY TO A POINT 2 FEET BEYOND THE INTERSECTION POINT OF THE 1-4 SLOPE AND THE BACK SLOPE.



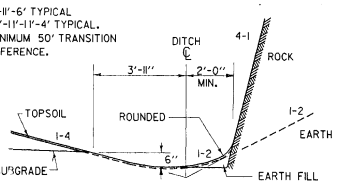
MAXIMUM BANKED SECTION 0.077 FT/FT

** THE ROADWAY WILL HAVE A 6'-11'-11'-6' TYPICAL WHILE THE BRIDGE WILL HAVE A 4'-11'-11'-4' TYPICAL. THE SHOULDERS SHALL HAVE A MINIMUM 50' TRANSITION LENGTH FOR THE 2' SHOULDER DIFFERENCE.

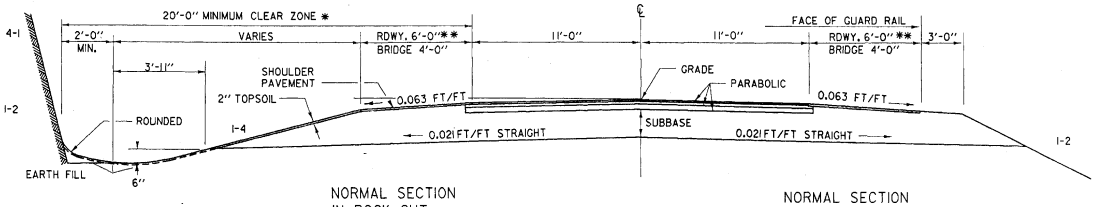
NOTE: FULL DEPTH OF PAVEMENT TO BE CARRIED TO THE OUTSIDE EDGE OF THE SHOULDER ON THE INSIDE OF THE CURVES.
LEFT SHOULDER: 9+00 TO 11+23.82 (BRIDGE)
RIGHT SHOULDER: 13+17.94 (BRIDGE) TO 20+00



TYPICAL DITCH DETAILS

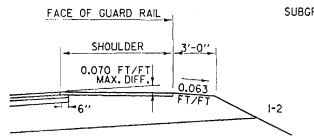


DETAILS OF DITCH AND BACKSLOPE FOR LOW SIDE OF BANK < 0.042 FT/FT

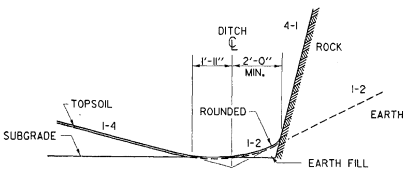


NORMAL SECTION IN ROCK CUT

NORMAL SECTION WITH GUARD RAIL



DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION



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

FOR SLOPES IN SOLID ROCK EXCAVATION AND DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, SEE STANDARD SHEET A-62.

DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY	REED	DATE 9/87
DRAWN BY	SHANGRAW	DATE 1/88
SQUAD LEADER	D.E.LYONS	
DESIGN FILE NO.	78F174.DGN	DATE PLOTTED 1/88

MORETOWN
BRZ 1446 (1) S

78F174TYP

R.O.W. SHEET 2 OF 9 SHEETS

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	WATSON, JOHN	6, 7	6+50 LT.	12+14 RT.	0.32A±					COND.	04-02-92	MORETOWN	49	332-337	
1B		6, 7	5+00 CL. 5+00 LT. 5+28 LT.	12+32 RT. 6+50 LT. 6+02 LT.	0.41A±		ALL R.T. & I. EASE. SLOPE	 (T) (P)	 0.03A± 0.01A±						HWY. EASE. RTE. 100B 1297 S.F.± 280 S.F.±
2A	BABCOCK, A. JUDSON & MURPHY, JOHN F. & BABCOCK, LUCINDA W.	6, 7	5+44 RT. 5+70 RT. 5+75 RT. 6+62 RT. 7+00 RT. 7+30 RT. 10+00 RT.	9+92 RT. 10+45 RT. 6+37 RT. 7+00 RT. 10+33 RT.	0.16A±		 EASE. DITCH DITCH SLOPE DRIVE CUL. & DITCH	 (T) (P) (P) (T) (T) (P)	 0.12A± 0.10A±	COND.	04-02-92	MORETOWN	49	332-337	 150 S.F.± 72 S.F.± 14' GRAVEL M.P. 0211
2B		7	TH 36 40+55 RT. 10+44 RT. 10+54 RT.	TH 36 40+84 RT. TH 36 40+94 RT. TH 36 40+90 RT.	0.01A±		 EASE. SLOPE	 (T) (P)	 0.02A± 0.01A±						453 S.F.± 790 S.F.± 439 S.F.±
2C		6, 7	5+43 CL.	8+51 RT.	0.18A±		ALL R.T. & I.								HWY. EASE. RTE. 100B
3A	WOODMAN ROOSEVELT- LIMITED PARTNERSHIP	7	TH 36 40+74 RT. TH 36 40+84 RT. TH 36 40+90 RT.	TH 36 42+09 RT. TH 36 41+62 RT. TH 36 42+10 RT.	0.04A±		 SLOPE EASE.	 (P) (T)	 0.01A± 0.03A±	COND.	04-02-92	MORETOWN	49	332-337	1756 S.F.± 450 S.F.± 1270 S.F.±
3B		7	TH 36 41+59 RT.	12+59 RT.	0.07A±		ALL R.T. & I.		0.07A±						HWY. EASE. RTE. 100B 3264 S.F.±

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	3	PARCEL NO. 2 BABCOCK & MURPHY. CHANGE STA. OF CUL. & DITCH (P) FROM 10+18 RT. TO 10+00 RT. DELETE 5+44 RT. ~ TH 36 40+84 RT. PER C.O. 8038.	03-26-91	M. J. R.	F. J. M.
2	4, 5, 7	PARCEL NO. 4 BEDRIN. ADD 'E' TO GERALDINE. CHANGE RUNNING DISTANCES FROM 143' TO 130'; 57' TO 44'. REMOVE THE 158' RELATING TO THE LENGTH OF RELINQUISHMENT AREA NO. 1. PER C.O. 8039.	03-26-91	M. J. R.	F. J. M.
3	4, 9	PARCEL NO. 5 PIAZZA. REMOVE DRIVE (T) AT STA. 19+50 RT. REMOVE WORD 'APPROX.' FROM PROPERTY LINE AT STA. 20+95 RT. PER C.O. 8052.	04-22-91	M. J. R.	F. J. M.
4	3, 7	PARCEL NO. 2 BABCOCK & MURPHY. CHANGE ENDING STA. OF EASE. (T) FROM 10+38 RT. TO 10-45 RT., (0.12A±); CHANGE ENDING STA. OF SLOPE (T) FROM 10+25 RT. TO 10+33 RT. (0.10A±). PER C.O. 8053.	04-22-91	M. J. R.	F. J. M.
5	3, 6	PARCEL NO. 2 BABCOCK & MURPHY. ADD DRIVE AT STA. 7+30 RT., 14' GRAVEL. PER C.O. 8006.	04-22-91	M. J. R.	F. J. M.
6	3, 6 7	PARCEL NO. 2 BABCOCK. ADD LUCINDA W. BABCOCK TO TITLE. PER C.O. 8196.	02-06-92	M. J. R.	L. W. B.
7	3, 7	PARCEL NO. 3 BABCOCK. CHANGE TITLE TO WOODMAN ROOSEVELT - LIMITED PARTNERSHIP. PER C.O. 8197. MYLARS TO DESIGN 07-02-94	02-06-92	M. J. R.	L. W. B.
8	4, 7 8, 9	PARCEL NO. 5 PIAZZA. DELETE PARCEL 5B. NOT PURCHASED PER C.O. 8597.	08-26-94	M. J. R.	L. W. B.

03-8217 1805 78F174

ACCT.prop
/prop/78f174/r-f174d.dgn
DATE PLOTTED 2-SEP-1994

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
CLEAR ZONE
CONSTRUCTION EASEMENT
SLOPE RIGHTS
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

APPROVED: F. JOHN MALNATI DATE: 03-11-91
AGENT D, PLANS & TITLES

R. O. W. PLANS

MORETOWN
BRZ 1446(1)S

SHEET 3 OF 9

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
4	BEDRIN, GERALDINE M.	7	12+26 LT.	14+30 LT.	0.13A±					COND.	04-02-92	MORETOWN	49	332-337	
			13+03 LT.	14+00 LT.			EASE	(T)	0.02A±						1000 S.F.±
			13+14 LT.	13+85 LT.			SLOPE	(P)	0.02A±						700 S.F.±
			14+12 LT.				DRIVE	(T)							14' GRAVEL M.P. 0213
5A	PIAZZA, FRANK A.	7,8,9	13+50 RT.	19+75 RT.	0.36A±					COND.	07-07-92	MORETOWN	49	718-720	
			14+00 RT.				DRAINAGE	(P)							
			14+39 RT.				DRAINAGE	(P)							
			14+40 RT.	20+83 RT.			EASE	(T)	0.12A±						
			15+13 RT.				CUL., DIT. & DR.	(P)							
			16+00 RT.	18+00 RT.			SLOPE	(T)	0.08A±						3362 S.F.±
			17+65 RT.				CUL., DIT. & DR.	(P)							
			18+00 RT.	20+50 RT.			SLOPE	(P)	0.07A±						2966 S.F.±
			20+64 RT.	20+75 RT.			DITCH & DRAINAGE	(P)							
			20+75 RT.	20+80 RT.			CULVERT	(P)							
6	BICICA, PAUL J. SHARP, STACEY	8	17+30 LT.							AGREE.					14' GRAVEL DRIVE M.P. 0220
7	PARROTT, THOMAS S. & RAE E.	8,9	18+10 LT.							COND.	04-02-92	MORETOWN	49	332-337	14' GRAVEL DRIVE M.P. 0221
			19+07 LT.	21+50 LT.			EASE	(T)	0.04A±						1875 S.F.±
			20+05 LT.	21+30 LT.			SLOPE	(P)	0.04A±						1740 S.F.±
			20+05 LT.	21+20 LT.											FENCE
8	LEE, DAVID L. & DOROTHY L.	9	21+05 RT.							AGREE.					22' GRAVEL DRIVE M.P. 0227
9A	TOWN OF MORETOWN	7	TH 36 41+59 RT.	T.H. 36 42+12 LT.	0.04A±		ALL R.T. & I.			COND.	04-02-92	MORETOWN	49	332-337	HWY. EASE. RTE. 100B
			10+75 RT.	T.H. 36 41+89 CL			APPROACH	(T)							1815 S.F.±
															T.H. 36
9B		8	14+87 LT.				APPROACH	(T)							T.H. 35

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

03-8217 1805 78F174

ACCT.prop
/prop/78f174/rf174d.dgn
DATE PLOTTED 2-SEP-1994

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

APPROVED: F. JOHN MALNATI DATE: 03-11-91
AGENT D. PLANS & TITLES

R. O. W. PLANS

MORETOWN
BRZ 1446(1)S

SHEET 4 OF 9

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
10	WAITSFIELD - FAYSTON TELEPHONE							COND.	04-02-92	MORETOWN	49	332-337	UTILITY
11	WAITSFIELD - FAYSTON T.V.							COND.	04-02-92	MORETOWN	49	332-337	UTILITY
12	GREEN MOUNTAIN POWER CORP.							COND.	04-02-92	MORETOWN	49	332-337	UTILITY
	RELINQUISHMENT NO. I	7	TH 36 40+55 RT.	TH 36 42+09 RT.									TH 36
	MAINTENANCE AGREEMENT AREA NO. 1	7	10+75 RT.	TH 36 41+89 CL.									TH 36 172' LENGTH
	MAINTENANCE AGREEMENT AREA NO. 2	8	14+87 LT.	14+87 LT.									TH 35 39' LENGTH

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

03-8217 1805 78F174

ACCT.prop
/prop/78f174/rf174d.dgn
DATE PLOTTED 2-SEP-1994

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

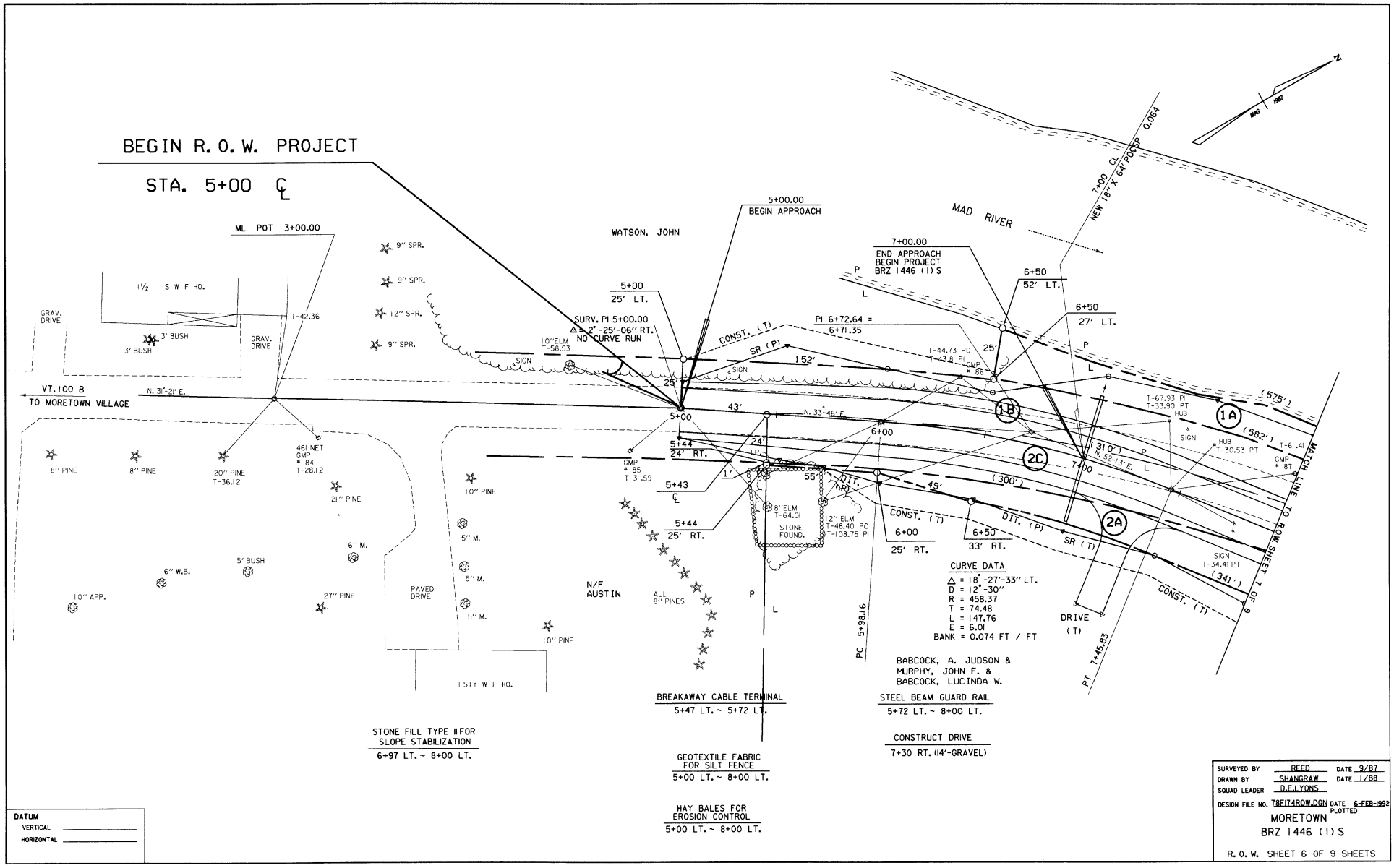
LEGEND
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

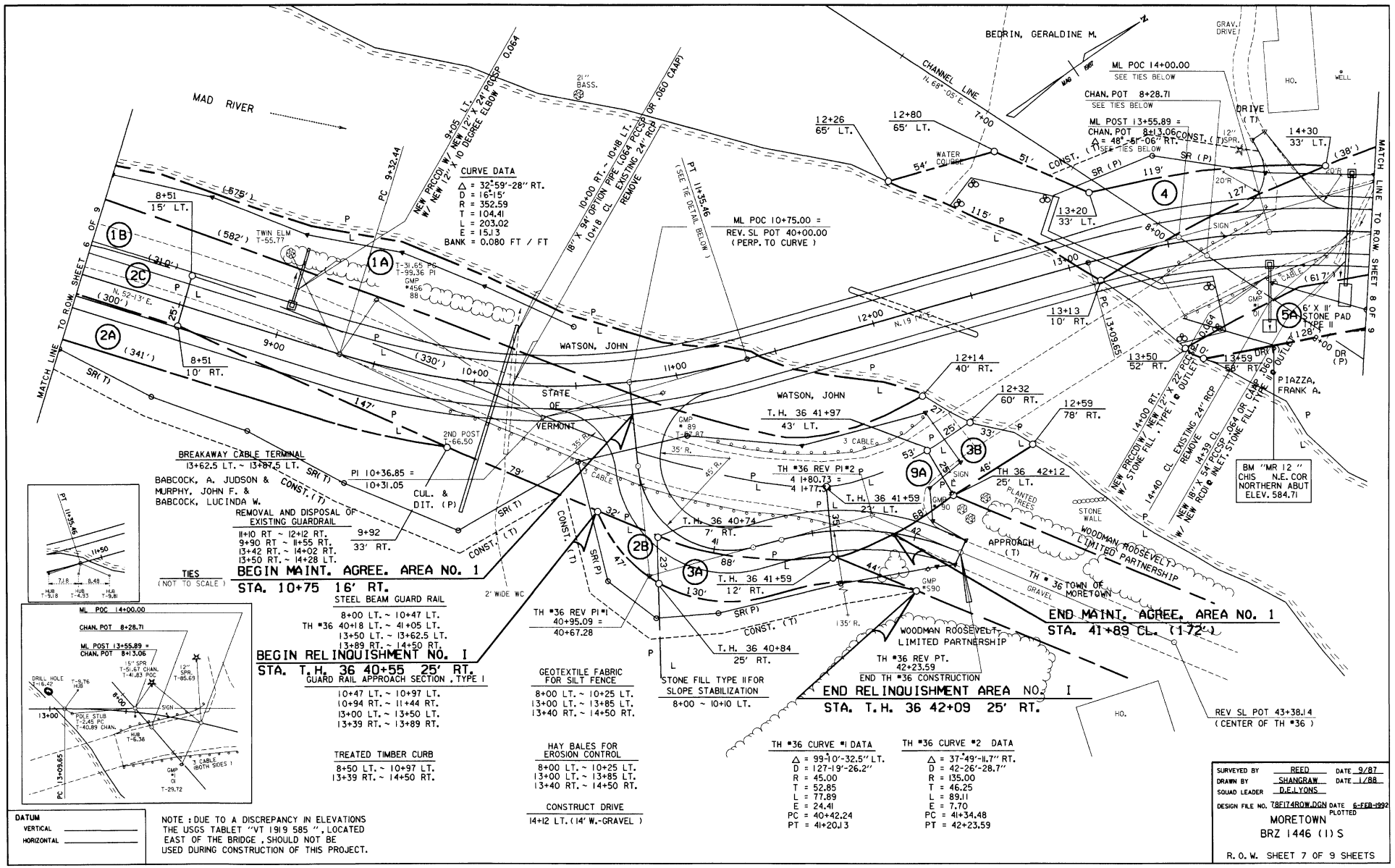
APPROVED: E. JOHN MALNATI DATE: 03-11-91
AGENT D. PLANS & TITLES

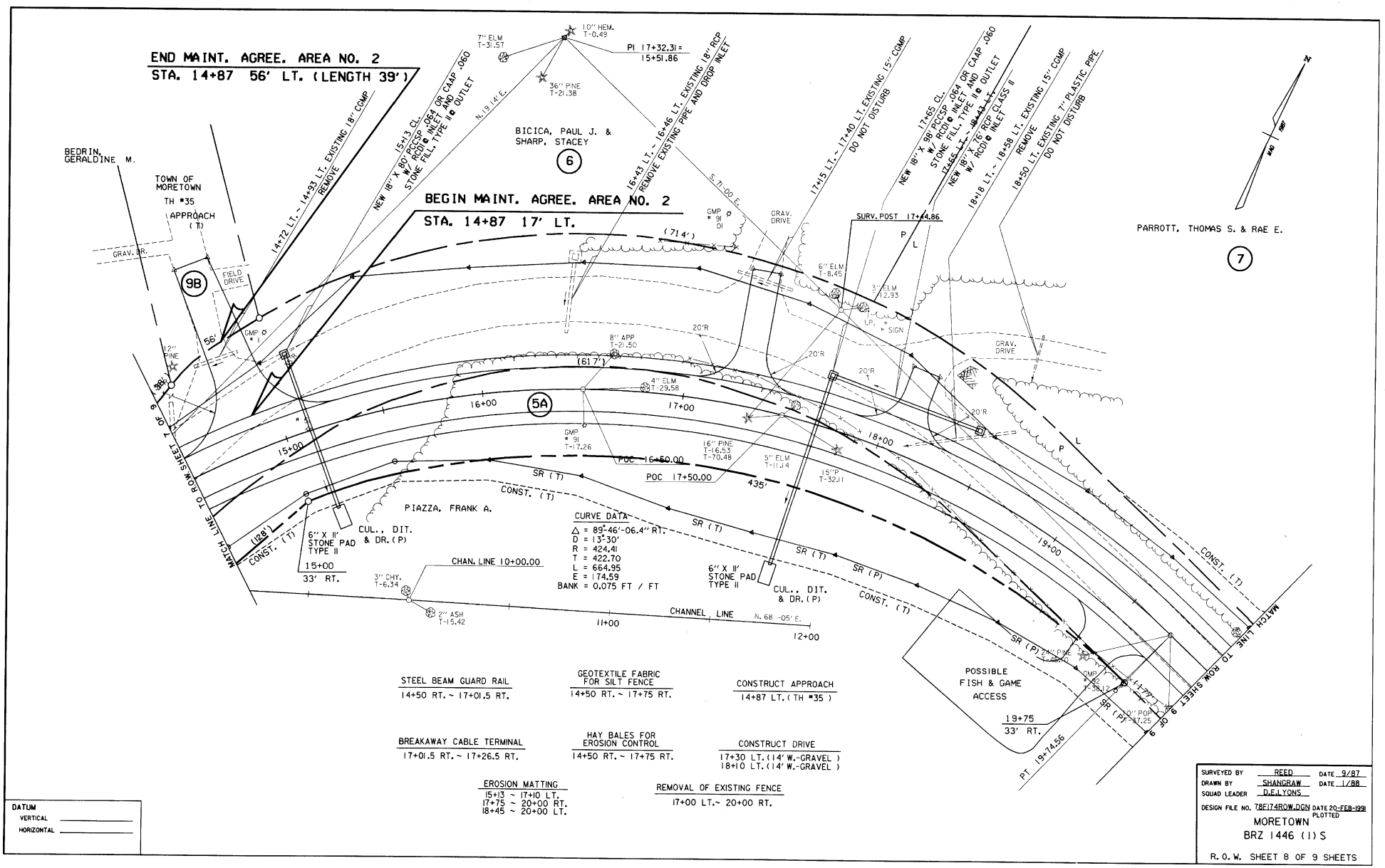
R. O. W. PLANS

MORETOWN
BRZ 1446(1)S

SHEET 5 OF 9


BEGIN R.O.W. PROJECT
STA. 5+00 ℄
ML POT 3+00.00
WATSON, JOHN
5+00.00
BEGIN APPROACH
MAD RIVER
7+00.00
END APPROACH
BEGIN PROJECT
BRZ 1446 (1) S
7+00 CL
NEW 18" X 64' POCSP 0.064
5+00
25' LT.
6+50
52' LT.
6+50
27' LT.
SURV. PI 5+00.00
Δ = 2°-25'-06" RT.
NO CURVE RUN
PI 6+72.64 =
6+71.35
CONST. (T)
SR (P)
152'
25'
43'
N. 33°-46' E.
5+00
5+44
24' RT.
5+43
℄
5+44
25' RT.
6+00
6+00
25' RT.
6+50
33' RT.
(575')
(582')
(310')
(300')
(341')
1A
1B
2A
2C
MATCH LINE TO ROW SHEET 7 OF 9
VT. 100 B
TO MORETOWN VILLAGE
N. 31°-21' E.
N. 52°-13' E.
GRAV. DRIVE
1½ S W F HO.
3' BUSH
3' BUSH
T-42.36
9" SPR.
9" SPR.
12" SPR.
9" SPR.
10" ELM
T-58.53
SIGN
461 NET
GMP
84
T-28.12
18" PINE
18" PINE
20" PINE
T-36.12
21" PINE
10" PINE
5" M.
5" M.
5" M.
6" M.
5' BUSH
6" W.B.
10" APP.
27" PINE
PAVED DRIVE
10" PINE
1 STY W F HO.
N/F
AUSTIN
ALL
8" PINES
GMP
85
T-31.59
8" ELM
T-64.01
STONE FOUND.
12" ELM
T-48.40 PC
T-108.75 PI
DIT. (P)
CONST. (T)
SR (T)
DRIVE (T)
PC 5+98.16
PT 7+45.83
T-44.73 PC
T-43.81 PI
GMP
86
T-67.93 PI
T-33.90 PT
HUB
HUB
T-30.53 PT
T-61.41
GMP
87
SIGN
T-34.41 PT
CURVE DATA
Δ = 18°-27'-33" LT.
D = 12°-30"
R = 458.37
T = 74.48
L = 147.76
E = 6.01
BANK = 0.074 FT / FT
BABCOCK, A. JUDSON &
MURPHY, JOHN F. &
BABCOCK, LUCINDA W.
STEEL BEAM GUARD RAIL
5+72 LT. ~ 8+00 LT.
CONSTRUCT DRIVE
7+30 RT. (14'-GRAVEL)
BREAKAWAY CABLE TERMINAL
5+47 LT. ~ 5+72 LT.
GEOTEXTILE FABRIC
FOR SILT FENCE
5+00 LT. ~ 8+00 LT.
HAY BALES FOR
EROSION CONTROL
5+00 LT. ~ 8+00 LT.
STONE FILL TYPE II FOR
SLOPE STABILIZATION
6+97 LT. ~ 8+00 LT.
DATUM
VERTICAL
HORIZONTAL
SURVEYED BY REED DATE 9/87
DRAWN BY SHANGRAW DATE 1/88
SQUAD LEADER D.E.LYONS
DESIGN FILE NO. 78F174ROW.DGN DATE 6-FEB-1992
PLOTTED
MORETOWN
BRZ 1446 (1) S
R.O.W. SHEET 6 OF 9 SHEETS


MAD RIVER
MATCH LINE TO ROW SHEET 6 OF 9
MATCH LINE TO ROW SHEET 8 OF 9
BEDRIN, GERALDINE M.
CHANNEL LINE
N. 68°-05'E.
ML POC 14+00.00
SEE TIES BELOW
CHAN. POT 8+28.71
SEE TIES BELOW
ML POST 13+55.89 =
CHAN. POT 8+13.06
Δ = 48°-51'-06" RT.
SEE TIES BELOW
CURVE DATA
Δ = 32°-59'-28" RT.
D = 16°-15'
R = 352.59
T = 104.41
L = 203.02
E = 15.13
BANK = 0.080 FT / FT
PC 9+32.44
PT 11+35.46
(SEE TIE DETAIL BELOW)
ML POC 10+75.00 =
REV. SL POT 40+00.00
(PERP. TO CURVE)
NEW PRCCD W/ NEW 12" X 24" PCCSP 0.064
W/ NEW 12" X 10 DEGREE ELBOW
9+05 LT.
10+00 RT. ~ 10+18 LT.
18" X 54" OPTION PIPE, 0.064 PCCSP OR .060 CAAP
10+18 CL EXISTING 24" RCP
REMOVE
TWIN ELM T-55.77
T-31.65 PS
T-99.36 PI
GMP #456 88
N. 52-13' E.
(300')
(582')
(575')
(310')
(341')
(330')
(617')
(38')
8+51
15' LT.
8+51
10' RT.
9+00
10+00
11+00
12+00
13+00
8+00
12+26
65' LT.
12+80
65' LT.
13+20
33' LT.
14+30
33' LT.
13+13
10' RT.
12+14
40' RT.
12+32
60' RT.
12+59
78' RT.
13+50
52' RT.
13+59
58' RT.
WATER COURSE
51' CONST. (T)
54'
115' P
119'
SR (P)
SR (T)
147'
79'
35' R.
45' R.
135' R.
2ND POST T-66.50
CUL. & DIT. (P)
9+92
33' RT.
PI 10+36.85 =
10+31.05
BREAKAWAY CABLE TERMINAL
13+62.5 LT. ~ 13+87.5 LT.
BABCOCK, A. JUDSON &
MURPHY, JOHN F. &
BABCOCK, LUCINDA W.
REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL
11+10 RT ~ 12+12 RT.
9+90 RT ~ 11+55 RT.
13+42 RT. ~ 14+02 RT.
13+50 RT. ~ 14+28 LT.
BEGIN MAINT. AGREE. AREA NO. 1
STA. 10+75 16' RT.
STEEL BEAM GUARD RAIL
8+00 LT. ~ 10+47 LT.
TH #36 40+18 LT. ~ 41+05 LT.
13+50 LT. ~ 13+62.5 LT.
13+89 RT. ~ 14+50 RT.
BEGIN RELINQUISHMENT NO. 1
STA. T.H. 36 40+55 25' RT.
GUARD RAIL APPROACH SECTION, TYPE 1
10+47 LT. ~ 10+97 LT.
10+94 RT. ~ 11+44 RT.
13+00 LT. ~ 13+50 LT.
13+39 RT. ~ 13+89 RT.
TREATED TIMBER CURB
8+50 LT. ~ 10+97 LT.
13+39 RT. ~ 14+50 RT.
TH #36 REV PI #1
40+95.09 =
40+67.28
GEOTEXTILE FABRIC FOR SILT FENCE
8+00 LT. ~ 10+25 LT.
13+00 LT. ~ 13+85 LT.
13+40 RT. ~ 14+50 RT.
HAY BALES FOR EROSION CONTROL
8+00 LT. ~ 10+25 LT.
13+00 LT. ~ 13+85 LT.
13+40 RT. ~ 14+50 RT.
CONSTRUCT DRIVE
14+12 LT. (14' W.-GRAVEL)
STONE FILL TYPE II FOR SLOPE STABILIZATION
8+00 ~ 10+10 LT.
TH #36 REV PI #2
41+80.73 =
41+77.73
T.H. 36 40+74
7' RT.
T.H. 36 41+59
12' RT.
T.H. 36 40+84
25' RT.
T.H. 36 41+59
23' LT.
T.H. 36 41+97
43' LT.
TH #36 42+12
25' LT.
PLANTED TREES
STONE WALL
WOODMAN ROOSEVELT LIMITED PARTNERSHIP
APPROACH (T)
TH #36 TOWN OF MORETOWN
GRAVEL
END MAINT. AGREE. AREA NO. 1
STA. 41+89 CL. (172')
WOODMAN ROOSEVELT LIMITED PARTNERSHIP
TH #36 REV PT. 42+23.59
END TH #36 CONSTRUCTION
END RELINQUISHMENT AREA NO. 1
STA. T.H. 36 42+09 25' RT.
REV SL POT 43+38.14
(CENTER OF TH #36)
TH #36 CURVE #1 DATA
Δ = 99°-10'-32.5" LT.
D = 127-19'-26.2"
R = 45.00
T = 52.85
L = 77.89
E = 24.41
PC = 40+42.24
PT = 41+20.13
TH #36 CURVE #2 DATA
Δ = 37°-49'-11.7" RT.
D = 42-26'-28.7"
R = 135.00
T = 46.25
L = 89.11
E = 7.70
PC = 41+34.48
PT = 42+23.59
NEW PRCCD W/ STONE FILL, TYPE I
14+00 RT.
14+40 CL EXISTING 24" RCP REMOVE
NEW 12" X 22" PCCSP OUTLET
14+39 CL
NEW 18" X 54" PCCSP, 0.064 OR CAAP W/ MLET, STONE FILL, TYPE II OUTLET
NEW RCD OUTLET
6' X 11' STONE PAD TYPE II
BM "MR 12" CHIS N.E. COR NORTHERN ABUT ELEV. 584.71
PIAZZA, FRANK A.
DRIVE (T)
GRAV. DRIVE
HO.
WELL
SIGN
3 CABLE
20'R
12" SPR.
1A
1B
2A
2B
2C
3A
3B
4
5A
9A
TIES
(NOT TO SCALE)
ML POC 14+00.00
CHAN. POT 8+28.71
ML POST 13+55.89 =
CHAN. POT 8+13.06
15" SPR T-5.67 CHAN. T-41.83 POC
12" SPR T-85.69
DRILL HOLE T-16.42
T-9.76 HUB
POLE STUB T-2.45 PC T-40.89 CHAN.
HUB T-6.38
3 CABLE (BOTH SIDES)
GMP #1 01 T-29.72
PC 13+09.65
HUB T-9.18
HUB T-4.33
HUB T-9.81
7.18
8.48
PT 11+35.46
11+50
DATUM
VERTICAL
HORIZONTAL
NOTE : DUE TO A DISCREPANCY IN ELEVATIONS THE USGS TABLET "VT 1919 585 ", LOCATED EAST OF THE BRIDGE , SHOULD NOT BE USED DURING CONSTRUCTION OF THIS PROJECT.
SURVEYED BY REED DATE 9/87
DRAWN BY SHANGRAW DATE 1/88
SQUAD LEADER D.E.LYONS
DESIGN FILE NO. 78F174ROW.DGN DATE PLOTTED 6-FEB-1992
MORETOWN
BRZ 1446 (1) S
R. O. W. SHEET 7 OF 9 SHEETS



STEEL BEAM GUARD RAIL
14+50 RT. ~ 17+01.5 RT.

GEOTEXTILE FABRIC FOR SILT FENCE
14+50 RT. ~ 17+75 RT.

CONSTRUCT APPROACH
14+87 LT. (TH #35)

BREAKAWAY CABLE TERMINAL
17+01.5 RT. ~ 17+26.5 RT.

HAY BALES FOR EROSION CONTROL
14+50 RT. ~ 17+75 RT.

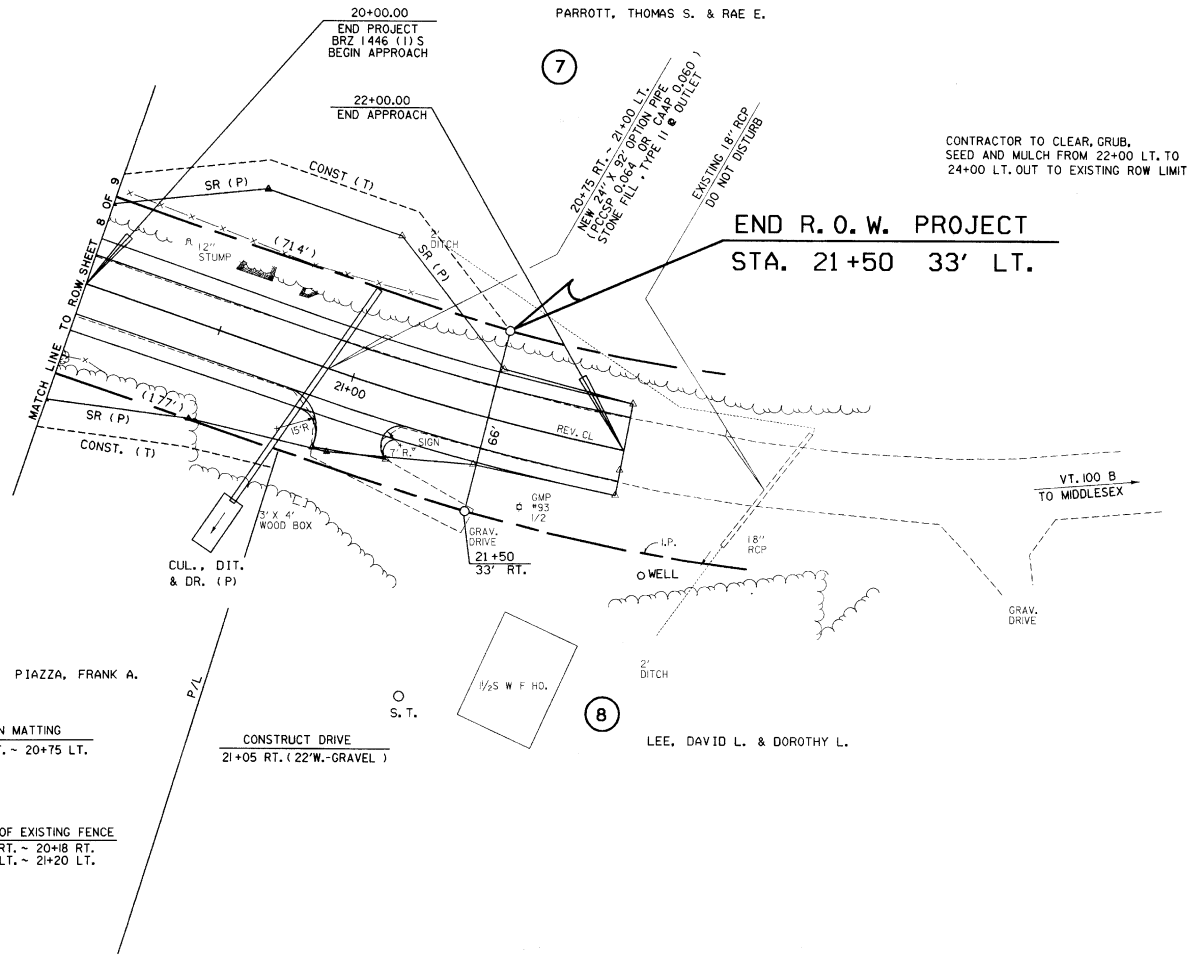
CONSTRUCT DRIVE
17+30 LT. (14' W.-GRAVEL)
18+10 LT. (14' W.-GRAVEL)

EROSION MATTING
15+13 ~ 17+10 LT.
17+75 ~ 20+00 RT.
18+45 ~ 20+00 LT.

REMOVAL OF EXISTING FENCE
17+00 LT. ~ 20+00 RT.

DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY REED DATE 9/87
DRAWN BY SHANGRAW DATE 1/88
SQUAD LEADER D.E.LYONS
DESIGN FILE NO. 78F174ROW.DGN DATE PLOTTED 20-FEB-1991
MORETOWN
BRZ 1446 (1) S
R. O. W. SHEET 8 OF 9 SHEETS



DATUM
VERTICAL _____
HORIZONTAL _____

SURVEYED BY	REED	DATE 9/87
DRAWN BY	SHANGRAW	DATE 1/88
SQUAD LEADER	D.E.LYONS	
DESIGN FILE NO.	78F174ROW.DGN	DATE PLOTTED 20-FEB-1991

MORETOWN
BRZ 1446 (1) S

R. O. W. SHEET 9 OF 9 SHEETS

4-5-94 Tuesday

ITEM 203.15

MORETOWN BRZ-1446 (1)

C.E. LOHR for R. HAYES

COMMON EXCAVATION + UNDERCUTS (X-SECTIONS)

STATION	DIST.	AREA	AVG. AREA	÷27 = VOL
BUTT 5+00		21		
	50	×	35.5 =	65.7
+50		50		
	50	×	77 =	142.6
6+00		104		
	50	×	112 =	207.4
+50		120		
	50	×	115 =	213.0
7+00		110		
	50	×	75.5 =	139.8
+50		41		
	50	×	31.5 =	58.3
8+00		22		
	50	×	25 ~~27~~ =	46.3 ~~50.0~~
+50		~~32~~ 28		
	50	×	29.5 ~~31.5~~ =	54.6 ~~58.3~~
9+00		31		
	50	×	54 =	100.0
+50		77		
	50	×	62.5 =	115.7
10+00		48		
	50	×	32.5 =	60.2
+50		17		
	23	×	8.5 =	7.2
+73		0		
BRIDGE				
13+72		0		
	28	×	29.5 ~~14~~ =	30.6 ~~14.5~~
14+00		59		
	50	×	34 =	63.0
+50		9		
	50	×	7.5 =	13.9
15+00		6		
	50	×	22 =	40.7
+50		38		
	50	×	87 =	161.1
16+00		136		
	50	×	159.5 =	295.4
+50		183		
	50	×	216 =	400.0
17+00		249		

STATION	DIST.	AREA	AVG. AREA	÷27 = VOL
17+00		249		
	50	×	281.5 =	521.3
+50		314		
	50	×	339 =	627.8
18+00		364		
	50	×	393 =	727.8
+50		422		
	50	×	442.5 =	819.4
19+00		463		
	50	×	452.5 =	838.0
+50		442		
	50	×	410 ~~418~~ =	759.3 ~~774.1~~
20+00		~~394~~ 378		
	50	×	384 ~~392~~ =	711.1 ~~725.9~~
+50		390		
	50	×	343.5 =	636.1
21+00		297		
	50	×	185 =	342.6
+50		73		
	50	×	48.5 =	89.8
22+00		24		
BUTT				

DFM

TOTAL = ~~8309.2~~ 8288.7 cy

cef.

BLOCKS

5-10 = ~~1150.4~~ 1143.4 cy.

10-15 = ~~158.8~~ 174.9 cy.

15-20 = ~~5205.6~~ 5190.8 cy.

20-25 = ~~1794.4~~ 1779.6 cy

~~8309.2 cy~~ 8288.7

~~8309 cy.~~ TOTAL

8289

cef

ECP

5-26-94

DFM

7-22-94

INITIALS Vermont Agency of DONE
Transportation
PHASE 2-INTERSTATE
#122302-01

INITIALS Hanger 2835 DONE

BRIDGE 4
1994

MORETOWN

VT. 100B

BRZ 1446 (1)

R.O.W.

1991 ON CADD ALSO

MORETOWN BRZ 1446(1)S

BRIDGE 4 VT. 100B