STATE OF VERMONT
AGENCY OF TRANSPORTATION

INDEX OF SHEETS

SEE SHEET 2 FOR INDEX

RECORD PLANS

CONTRACTOR: McDONALD JAMES A. INC. LYNDON CTR. VT
RESIDENT ENGINEER: LANGILL, STEVE
CONSTRUCTION BEGAN: MARCH 18, 1996
CONSTRUCTION COMPLETED: MAY 20, 1998
RECORD PLANS BY: Peter Nye

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

BY Steve Langill by PC Peet RESIDENT ENGINEER

DATE 1-27-2000

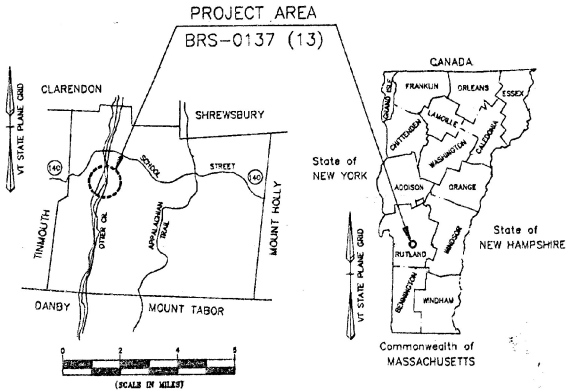
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found on microfilm in Central Files.

PROPOSED IMPROVEMENT
TOWN OF WALLINGFORD
COUNTY OF RUTLAND
U.S. ROUTE 7 (F.A.P.) PRINCIPAL ARTERIAL

THE PROJECT BEGINS AT A POINT ON U.S. ROUTE 7 APPROXIMATELY 4.535 MILES NORTHERLY OF THE DANBY–WALLINGFORD TOWN LINE AND EXTENDS ABOUT 0.350 MILES NORTHERLY.

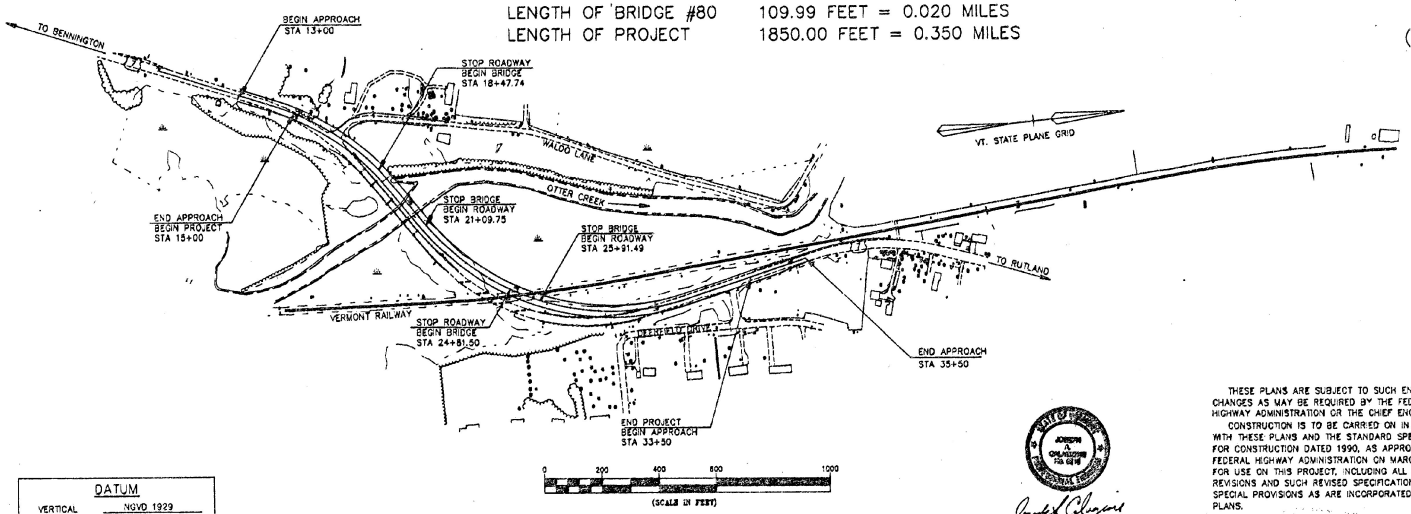
WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE RECONSTRUCTION OF TWO BRIDGES. BRIDGE # 79, U.S. ROUTE 7 OVER OTTER CREEK AND BRIDGE #80, U.S. ROUTE 7 OVER VERMONT RAILWAY AND CONSTRUCTION OF ROADWAY APPROACHES.

LENGTH OF ROADWAY	1478.00 FEET = 0.280 MILES
LENGTH OF BRIDGE #79	262.01 FEET = 0.050 MILES
LENGTH OF BRIDGE #80	109.99 FEET = 0.020 MILES
LENGTH OF PROJECT	1850.00 FEET = 0.350 MILES



TRAFFIC DATA

1994 ADT = 4830
2014 ADT = 6680
1994 DHV = 655
2014 DHV = 855
D = 51%
T = 8%
V = 50
18 KIP ESAL'S
(1994 TO 2014) = 5,868,000



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 SR
TOP OF CUT
TOE OF SLOPE

DATUM

VERTICAL NGVD 1929
HORIZONTAL VT. ST. PLANE GRID

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.

4/14/95

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD
APPROVED _____ DATE 4/14/95
DIRECTOR OF ENGINEERING

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED for DIVISION ADMINISTRATOR DATE 5-5-95

PROJECT BRS 0137 (13)
SHEET 1 OF 113 SHEETS

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INDEX OF SHEETS

1	TITLE SHEET
2	INDEX OF SHEET
3	TYPICAL SECTION SHEET
4	EDGE TIE PLAN
5–7A	QUANTITY SHEETS
8	ITEM DETAIL AND DRAINAGE SHEET
9	EARTHWORK SHEET
10–14	ROW DETAIL SHEETS
15–17	PLAN AND PROFILE SHEETS
18–19	SURVEY BASELINE TIES
20–23	TRAFFIC SIGNS AND PAVEMENT MARKING SHEETS
24	TRAFFIC MANAGEMENT PLAN
25	WETLAND RESTORATION
25A	*DETAIL OF BARBED WIRE FENCE*
26–58	BRIDGE #79 OVER OTTER CREEK
59	BLANK
60–97	BRIDGE #80 OVER VERMONT RAILROAD
98–109	MAIN LINE CROSS SECTION SHEETS
110–111	BLANKS
112–113	SIDE ROAD CROSS SECTION SHEETS

STANDARDS

B–5	SLOPE GRADING, EMBANKMENTS, MUCK	12–06–71
B–11	UNDERDRAIN – ROCK SUBGRADE, SLOPE STABILIZ.	12–12–74 R
C–1	TREATED TIMBER CURB	11–16–92 R
D–2	UNDERDRAIN & CARRIER PIPE CONSTRUCTION DETAILS	10–30–85 R
D–3	TREATED GUTTERS	04–02–86
D–4	UNDERDRAIN FLUSHING BASIN	10–30–85 R
D–16	PRECAST REINFORCED CONCRETE CURB DROP INLET W/ CAST IRON GRATE	10–30–85 R
D–20	HIGHWAY CROSSING FOR UNDERGROUND UTILITIES	10–30–85 R
E–100	CONSTRUCTION APPROACH SIGNS	10–21–92 R
E–101	CONSTRUCTION SIGN DETAILS	10–21–92 R
E–102	CONSTRUCTION SIGN DETAILS	10–21–92 R
E–106	TRAFFIC CONTROL, MISC. DETAILS	09–20–93 R
E–107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	09–20–93 R
E–107A	BREAKAWAY BARRICADE DETAILS	09–20–93 R
E–108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	09–20–93
E–110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	09–20–93 R
E–121	STANDARD SIGN PLACEMENT – CONVENTIONAL ROAD	01–23–89
E–123	GUIDE SIGN PLACEMENT, MISCELLANEOUS DETAILS	01–23–89 R
E–125	TRAVEL INFORMATION SIGNS	08–22–88
E–134	BRIDGE NUMBER PLAQUE	12–18–89
E–141	REGULATORY SIGN DETAILS	10–30–87
E–142	REGULATORY SIGN DETAILS	10–30–87
E–143	REGULATORY SIGN DETAILS	10–30–87
E–150	WARNING SIGN DETAILS	10–30–87
E–151	WARNING SIGN DETAILS	10–30–87
E–152	WARNING SIGN DETAILS	10–21–92 R
E–160	FLANGED CHANNEL STEEL SIGN POST DETAIL	10–21–92 R
E–162	*TUBULAR ALUMINUM SIGN POST*	*10–21–92 R*
G–1	STEEL BEAM GUARDRAIL	10–31–85 R
G–1D	STEEL BEAM GUARDRAIL	10–31–85 R
G–4	GUIDE POSTS	10–31–85 R
	WOOD MARKER POSTS	10–31–85 R
G–15	BREAKAWAY CABLE TERMINAL WITH STEEL POSTS	11–13–89 R
J–1	PROJECT AND BOUNDARY MARKERS	08–27–80
L–1	SETTLEMENT PLATFORM TYPE I AND II	02–09–77 R
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 BEAMS	09–19–89 R
SB–R4B–82	GUARD RAIL APPROACH SECTION, TYPE I & II	03–30–88 R

DATUM
VERTICAL _____
HORIZONTAL _____

DRAWN BY JAC DATE 01/93
SQUAD LEADER _____
DESIGN FILE NO. _____ DATE PLOTTED _____
PROJ. NAME WALLINGFORD
PROJ. NO. BRS – 0137 (13)
SHEET 2 OF 113 SHEETS

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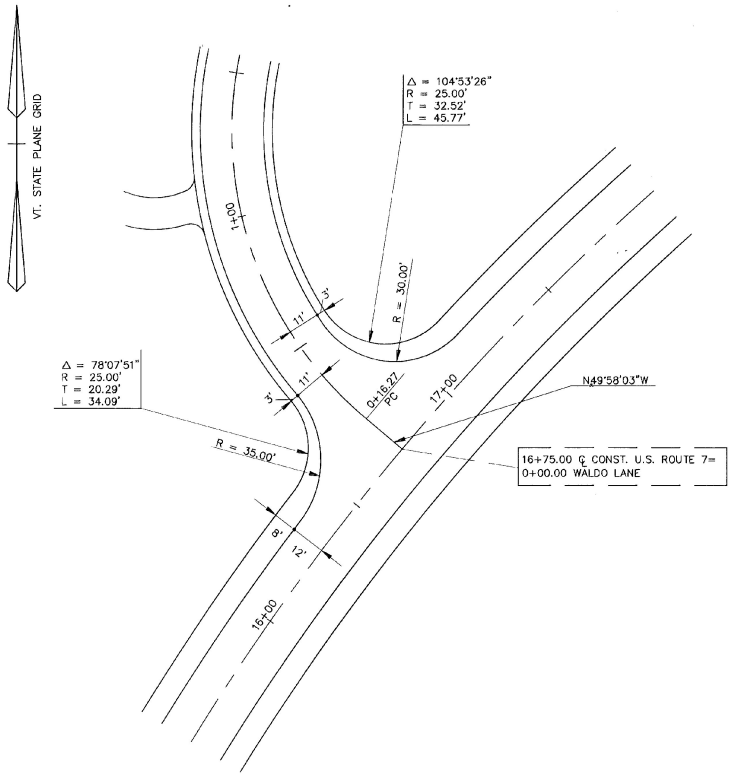
EDGE TIES

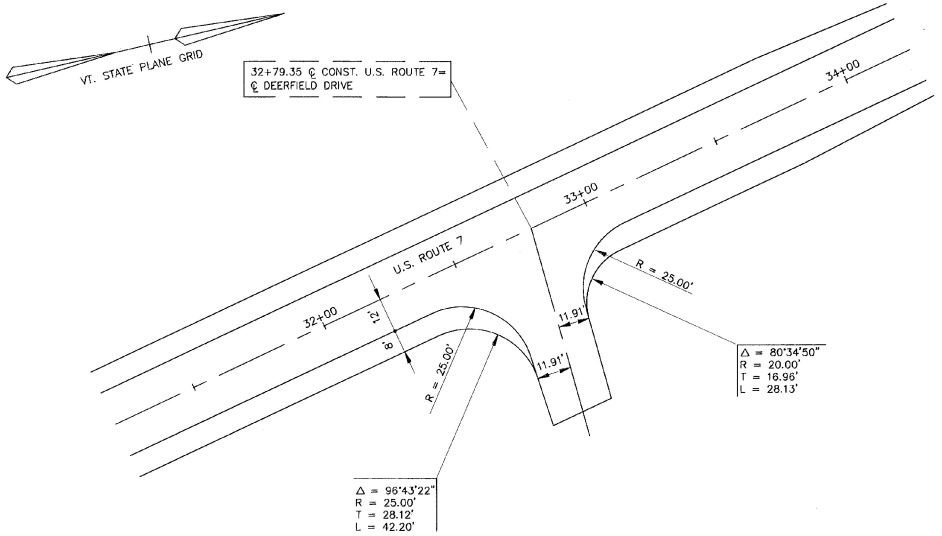
SEEDING FORMULA, ITEM 651.15 (URBAN AREAS)

% WT.	LBS./A.	NAME	PUR %	GERM %
42.5	34.0	CREEPING RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	80.0			

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



WALDO LANE



DEERFIELD DRIVE

0 20 200 400

SURVEYED BY	V.S.C.	DATE	07/90
DRAWN BY	F.J.C.	DATE	11/94
TRACED BY	J.A.C.	DATE	11/94

WALLINGFORD

PROJ. BRS NO. 0137(13)

SHEET 4 OF 113

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QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

NON GOV'T PARTIC.	TRAINING	WETLAND MITIGATION	EROSION CONTROL	#79 BRIDGE	#80 BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
						1	1	LS	CLEARING AND GRUBBING (INCLUDING INDIVIDUAL TREES AND STUMPS)	201.10	
		2,100			1,460	29,650	33,210	CY	COMMON EXCAVATION	203.15	47
						750	750	CY	SOLID ROCK EXCAVATION	203.16	EST.
						7,900	7,900	CY	MUCK EXCAVATION	203.20	10
				425			425	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	17
						42,625	42,625	CY	EARTH BORROW	203.30	63
						5,250	5,250	CY	SAND BORROW	203.31	54
				4,313	5,635	9,102	19,050	CY	GRANULAR BORROW	203.32	17
						13,450	13,450	SY	FINE GRADING – SUBGRADE	203.40	57
			10			870	880	CY	TRENCH EXCAVATION OF EARTH	204.20	5
						50	50	CY	TRENCH EXCAVATION OF ROCK	204.21	47.3
				330	230		560	CY	STRUCTURE EXCAVATION	204.25	
				145	6		151	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
				1			1	LS	COFFERDAM (STA 19+70)	204.40	
						100	100	SY	DRILLING & BLASTING OF SOLID ROCK SUBGRADE	205.20	EST.
						100	100	CY	SUBBASE OF CRUSHED GRAVEL – FINE GRADED	301.26	
						8,200	8,200	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	40
						30	30	CY	AGGREGATE SURFACE COURSE	401.10	5
						30	30	CWT	EMULSIFIED ASPHALT	404.65	EST.
				158	94	3,498	3,750	TON	BITUMINOUS CONCRETE PAVEMENT	406.25	14
						1	1	LS	ASPHALT PRICE ADJUST. (NOT A BID ITEM)	406.50	
				316	154		470	CY	CONCRETE, CLASS A	501.22	
				644	403		1,047	CY	CONCRETE, CLASS B	501.25	
				38	18		56	CY	SILICA – FUME CONCRETE	501.60	
				1			1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	
				890			890	LF	STEEL PILING (HP 14 X 73)	505.17	
				1,200	12,650		13,850	SF	TEMPORARY STEEL SHEET PILING	505.36	
				460,000	173,100		633,100	LB	STRUCTURAL STEEL (PLATE GIRDER)	506.55	
				54,800	20,660		75,460	LB	REINFORCING STEEL	507.15	
				114,000	61,360		175,360	LB	EPOXY COATED REINFORCING STEEL	507.17	
				1			1	LS	SHEAR CONNECTORS (2520–7/8"x7") (BR #79)	508.15	
					1		1	LS	SHEAR CONNECTORS (1530–7/8"x7") (BR #80)	508.15	
				1			1	LS	STRUCTURAL PAINTING – SHOP APPLIED 20 TONS (BR #79)	513.25	
					1		1	LS	STRUCTURAL PAINTING – SHOP APPLIED 10 TONS (BR #80)	513.25	
				1			1	LS	SURFACE PREPARATION (BR #79)	513.40	
					1		1	LS	SURFACE PREPARATION (BR #80)	513.40	
				49	35		84	GAL	WATER REPELLENT	514.10	
				82	94		176	LF	BRIDGE EXPANSION JOINT	516.10	
				1,452	680		2,132	SY	SHEET MEMBRANE WATERPROOFING	51920	
				569	210		779	LF	BRIDGE RAIL–2 RAIL GALV. BOX BEAM	525.31	
					13,150		13,150	SF	REINFORCED SLOPE (MECHANICALLY STABILIZED EARTH WALL ASHLAR STONE PANEL FACING)	526.40	
				1			1	LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (BRIDGE #79)	527.10	
					1		1	LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (BRIDGE #80)	527.10	
		* ITEM OUT OF ORDER		1			1	LS	DISPOSAL OF CONTAM. STEEL (BR 79)	595.25	*
					1		1	EA	REMOVAL OF STRUCTURE (BR #80)	529.15	
				1			1	EA	REMOVAL OF STRUCTURE (BR #79)	529.15	
				18	12		30	EA	BEARING DEVICE ASSEMBLY	531.10	
					1		1	LS	DISPOSAL OF CONTAM. STEEL (BR 80)	595.25	
									** BEGIN OPTION PIPES **		
						280	280	LF	12 INCH CAAP .060	601.0205	4
						280	280	LF	12 INCH PCCSP .064	601.0405	4
						280	280	LF	12 INCH CPEP (SL)	601.2605	4

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
28,787	CY	MAINLINE
2,100	CY	WETLAND REPLACEMENT
761	CY	SIDE ROADS
55	CY	DRIVES
1,460	CY	BRIDGE #80 (MSE WALLS)
47	CY	ROUNDING
33,210	CY	TOTAL
		SUBBASE OF DENSE GRADED CRUSHED STONE
6,695	CY	MAINLINE
1,425	CY	SIDE ROADS
40	CY	DRIVES
40	CY	ROUNDING
8,200	CY	TOTAL
		SUBBASE OF CRUSHED GRAVEL (FINE GRADED)
100	CY	SIDE ROADS
–	CY	DRIVES
–	CY	ROUNDING
100	CY	TOTAL
		AGGREGATE SURFACE COURSE
–	CY	SIDE ROADS
25	CY	DRIVES
5	CY	ROUNDING
30	CY	TOTAL
		GRANULAR BORROW
7,900	CY	MUCK BACKFILL
1,185	CY	FACTOR (0.15)
3,750	CY	BRIDGE APPROACHES (#79)
563	CY	FACTOR (0.15)
4,900	CY	BRIDGE APPROACHES (#80)
735	CY	FACTOR (0.15)
17	CY	ROUNDING
19,050	CY	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		BITUMINOUS CONCRETE PAVEMENT
252	TON	BRIDGES (#79–158T) & (#80–94T)
3,349	TON	MAINLINE
129	TON	SIDE ROADS
6	TON	DRIVE APRONS
14	TON	ROUNDING
3,750	TON	TOTAL
		FINE GRADING – SUBGRADE
11,668	SY	MAINLINE
1,425	SY	SIDE ROADS
300	SY	DRIVES
57	SY	ROUNDING
13,450	SY	TOTAL
		TRENCH EXCAVATION OF EARTH
581	CY	DRAINAGE
284	CY	UNDERDRAIN
10	CY	EROSION CONTROL
5	CY	ROUNDING
880	CY	TOTAL
		TOPSOIL
1,041	CY	MAINLINE
62	CY	SIDE ROAD (WALDO LANE)
22	CY	ROUNDING
1,125	CY	TOTAL
		TEMPORARY EROSION CONTROL (INCLUDED WITH EROSION CONTROL)
10	CY	TRENCH EXCAVATION OF EARTH
4.9	CY	STONE FILL TYPE I
1,500	SY	GEOTEXTILE FOR SILT FENCE
275	LB	SEED
7	LB	SEED – WINTER RYE
2,250	LB	FERTILIZER
9	TON	AGRICULTURAL LIMESTONE
9	TON	HAY MULCH
710	EA	HAY BALES FOR EROSION CONTROL
1,000	SY	EROSION MATTING

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS 40'	PAVEMENT WIDTHS 38.67'	EQUATIONS +	EQUATIONS –	FEET	MILES	REMARKS
15+00	18+47.74	347.74				347.74	0.066	ROADWAY
18+47.74	21+09.75		262.01			262.01	0.050	BRIDGE
21+09.75	24+81.50	371.75				371.75	0.070	ROADWAY
24+81.50	25+91.49		109.99			109.99	0.021	BRIDGE
25+91.49	33+50	758.51				758.51	0.143	ROADWAY
TOTALS		1,478.00	372.00			1850.00	0.350	

PROJECT NAME WALLINGFORD
PROJECT NUMBER BRS – 0137 (13)

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QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

NON GOV'T PARTIC.	TRAINING	WETLAND MITIGATION	EROSION CONTROL	#79 BRIDGE	#80 BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
						60	60	LF	18 INCH CAAP .060	601.0215	6
						60	60	LF	18 INCH PCCSP .064	601.0415	6
						60	60	LF	18 INCH RCP CLASS III	601.0815	6
						60	60	LF	18 INCH CPEP (SL)	601.2615	6
						190	190	LF	24 INCH CAAP .060	601.0225	6
						190	190	LF	24 INCH PCCSP .064	601.0425	6
						190	190	LF	24 INCH RCP CLASS III	601.0825	6
						190	190	LF	24 INCH CPEP (SL)	601.2620	6
						130	130	LF	24 INCH CAAP .060	601.0225	2
						130	130	LF	24 INCH PCCSP .064	601.0425	2
						130	130	LF	24 INCH RCP CLASS IV	601.0826	2
						130	130	LF	24 INCH CPEP (SL)	601.2620	2
						70	70	LF	24 INCH CAAP .060	601.0225	2
						70	70	LF	24 INCH PCCSP .064	601.0425	2
						70	70	LF	24 INCH CPEP (SL)	601.2620	2
						12	12	EA	12 INCH CSP ELBOW .064 (2 2/3 X 1/2)	601.5005	
						12	12	EA	12 INCH CAAP ELBOW .060 (2 2/3 X 1/2)	601.5205	
						12	12	EA	12 INCH CPEP ELBOW (SL)	601.5804	
						1	1	EA	18 INCH CSPES .064 (2 2/3 X 1/2)	601.6015	
						1	1	EA	18 INCH CAAPES .060 (2 2/3 X 1/2)	601.6215	
						1	1	EA	18 INCH RCPES CLASS III	601.6815	
						1	1	EA	18 INCH CPEPES	601.7015	
						2	2	EA	24 INCH CSPES .064 (2 2/3 X 1/2)	601.6025	
						2	2	EA	24 INCH CAAPES .060 (2 2/3 X 1/2)	601.6225	
						2	2	EA	24 INCH RCPES CLASS III	601.6825	
						2	2	EA	24 INCH CPEPES	601.7020	
						1	1	EA	24 INCH CSPES .064 (2 2/3 X 1/2)	601.6025	
						1	1	EA	24 INCH CAAPES .060 (2 2/3 X 1/2)	601.6225	
						1	1	EA	24 INCH CPEPES	601.7020	
									** END OPTION PIPES **		
						15	15	CY	CEMENT RUBBLE MASONRY	602.15	1.8
						6	6	EA	PRECAST REINFORCED CONCRETE CURB DROP INLET W/CAST IRON GRATE	604.30	
						710	710	LF	6" UNDERDRAIN	605.10	2
						4	4	EA	UNDERDRAIN FLUSHING BASINS	605.95	
						50	50	HR	ROADWAY PATROL MAINTENANCE	607.10	EST.
						1	1	HR	BULLDOZER RENTAL TYPE I (NOT A BID ITEM)	608.10	
						1	1	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I (NABI)	608.25	
						1	1	HR	TRUCK RENTAL (NOT A BID ITEM)	608.37	
						1	1	HR	LOADER RENTAL TYPE I (NOT A BID ITEM)	608.40	
						250	250	MGAL	DUST CONTROL WITH WATER	609.10	5
						2	2	TON	DUST & ICE CONTROL WITH CALCIUM CHLORIDE	609.15	.25
			4.9			12.1	17	CY	STONE FILL TYPE I	613.10	
				200	1000	275	1,475	CY	STONE FILL TYPE II	613.11	22.3
						1,780	1,780	CY	STONE FILL TYPE III	613.12	7.6
				1,325		750	2,075	CY	STONE FILL TYPE IV	613.13	18
						1,450	1,450	LF	TREATED TIMBER CURB	616.35	25
						2	2	EA	RELOCATE MAIL BOX SINGLE SUPPORT	617.10	
						4	4	EA	BOUNDARY MARKERS	619.10	
						20	20	EA	YIELDING MARKER POSTS	619.17	
						6	6	EA	REMOVING AND RESETTING PROPERTY MARKERS	619.20	
						300	300	LF	REMOVING AND RESETTING FENCE (MOD)	620.50	40
						110	110	LF	BARBED WIRE FENCE (4 STRAND)	620.60	
						2,200	2,200	LF	SNOW FENCE (MODIFIED)	620.70	30

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									

PROJECT NAME WALLINGFORD
PROJECT NUMBER BRS – 0137 (13)

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QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

NON GOV'T PARTIC.	TRAINING	WETLAND MITIGATION	EROSION CONTROL	#79 BRIDGE	#80 BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
						2,500	2,500	LF	STEEL BEAM GUARD RAIL (W/STEEL POSTS)	621.20	12.5
						3	3	EA	BREAKAWAY CABLE TERMINAL (W/STEEL POSTS)	621.50	
						2	2	EA	ANCHOR FOR STEEL BEAM RAIL	621.60	
						8	8	EA	GUARD RAIL APPROACH SECTION TYPE I	621.70	
						100	100	LF	REMOVING & RESET GUARD RAIL	621.75	EST.
						1,650	1,650	LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	23
				3	6		9	EA	SETTLEMENT PLATFORM TYPE I	623.21	
				1	4		5	EA	SETTLEMENT PLATFORM, VIBRATING WIRE	623.23	
				40	230		270	LF	INCLINOMETERS	623.30	
					70		70	LF	GROUND WATER OBSERVATION WELL	623.50	
					10		10	EA	EARTH PRESSURE CELLS	623.60	
						325	325	HR	UNIFORM TRAFFIC OFFICERS	630.10	17
						550	550	HR	FLAGGERS	630.15	13
						1	1	LS	FIELD OFFICE – ENGINEERS (MODIFIED)	631.10	
				.65	.35		1	LS	TESTING EQUIPMENT – CONCRETE	631.16	
						1	1	LS	TESTING EQUIPMENT – BITUMINOUS	631.17	
				.65	.35		1	LS	TESTING EQUIPMENT – PROTECTIVE COATING	631.18	
						1	1	LS	FIELD OFFICE TELEPHONE (NOT A BID ITEM)	631.25	
	2,080						2,080	HR	EMPLOYEE TRAINEESHIP	634.10	
						1	1	LS	MOBILIZATION	635.10	
						325	325	HR	TRAFFIC OFFICERS W/FLASHING LIGHT	641.35	17
						5,200	5,200	LF	DURABLE 4" WHITE LINE	646.40	20
						4,750	4,750	LF	DURABLE 4" YELLOW LINE	646.41	50
						22	22	LF	DURABLE 24" STOP BAR	646.46	
						5,200	5,200	LF	TEMPORARY 4" WHITE LINE	646.60	20
						4,750	4,750	LF	TEMPORARY 4" YELLOW LINE	646.61	50
						22	22	LF	TEMPORARY 24" STOP BAR	646.66	
						1,125	1,125	SY	GEOTEXTILE FOR ROADBED SUBGRADE SEPERATOR	649.11	13
				1,100	1,620	3,450	6,170	SY	GEOTEXTILE UNDER STONE FILL	649.31	18
			1,500				1,500	SY	GEOTEXTILE FOR SILT FENCE	649.51	70
			275				275	LB	SEED	651.15	8.5
									SEED (MOD)		
		12					12	LB	PHALARIS ARUNDINACEA, REED CANARY GR. (MOD #1)	651.15	
		2					2	LB	GLYCERIA CANADENSIS, MANNA GRASS (MOD #2)	651.15	
		2					2	LB	POLYGONUM PENSYLVANICUM, SMART WEED (MOD #3)	651.15	
			7				7	LB	SEED, WINTER RYE	651.17	
		400	2,250				2,650	LB	FERTILIZER	651.18	
			9				9	TON	AGRICULTURAL LIMESTONE	651.20	
			9				9	TON	HAY MULCH	651.25	
			710				710	EA	HAY BALES FOR EROSION CONTROL	651.26	16
						600	600	SY	SODDING	651.30	20
						1,125	1,125	CY	TOPSOIL	651.35	22
		1,800				960	2,760	SY	GRUBBING MATERIAL (MODIFIED)	651.40	57
			1000				1,000	SY	EROSION MATTING	654.10	45
									DECIDUOUS SHRUBS		
		120					120	EA	(CORNUS STOLONIFERA) RED – OSIER DOGWOOD (18-24" HT, CONTAINER)	656.35	EST.
		50					50	EA	(POTENTILLA FRUTICOSA) SHRUBBY CINQUEFOIL (12-19" HT, CONTAINER)	656.35	EST.
		70					70	EA	(VIBURNUM TRILOBUM) HIGHBUSH CRANBERRY (18-24" HT, CONTAINER)	656.35	EST.
		45					45	EA	(SAMBUCUS CANADENSIS) ELDERBERRY (24" HT, CONTAINER)	656.35	EST.
									GROUND COVERS AND VINES		
		200					200	EA	(SCIRPUS CYPERINUS) WOOL GRASS (BARE ROOT)	656.40	EST.
		200					200	EA	(CAREX LACUSTRIS) LAKE SEDGE (BARE ROOT)	656.40	EST.
		100					100	EA	(IRIS VERSICOLOR) BLUE FLAG IRIS (1 GAL. CONTAINER)	656.40	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									

PROJECT NAME WALLINGFORD
PROJECT NUMBER BRS – 0137 (13)

D:\CIVIL\WALLY\91120-07.DWG (1=1)

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

NON GOV'T PARTIC.	TRAINING	WETLAND MITIGATION	EROSION CONTROL	#79 BRIDGE	#80 BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
						100	100	SF	TRAFFIC SIGNS, TYPE A	675.20	6.93
						770	770	LB	FLANGED CHANNEL SIGN POST	675.30	17
						31	31	EA	REMOVING SIGNS	675.50	
						1	1	EA	TRAFFIC CONTROL SIGNAL SYSTEM-INTER.(MOD)	678.15	
12							12	SF	TRAVEL INFORMATION SIGN (MOD) (NON GOVERNMENT PARTICIPATING)	680.20	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
SQUAD LEADER _____
DESIGN FILE NO. _____
IPARM FILE _____ DATE PLOTTED 16-JUN-1995
PROJ. NAME WALLINGFORD
PROJ. NO. BRS 0137(13)
SHEET 7A OF 113 SHEETS

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	FCCSP H TH	PIPE ELBOW NO-DIA	ES EA	CB	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	MRKR POSTS TYPE	MRKR POSTS LT	MRKR POSTS RT	REHAB DI EA	REMARKS
13+00	13+00	LT–RT																								30	2.7												REMOVE EXISTING 24" CGMP & HEADER
13+00	13+00	LT–RT								24	68	.064	.060			(SL)			1						2.7	22							1.2	I	1	1		OUTFALL TO RIVER W/ STONE FILL PAD, TYPE I
13+75		RT								12	36	.064	.060			(SL)		2–12	1							10							.3	I	1			OUTFALL TO RIVER W/ STONE FILL PAD TYPE I (ELBOWS 22.5°)
2+55	WALDO LN.	LT–RT																								10													REMOVE EXISTING 15" CGMP
2+62	2+52	LT–RT								18	54	.064	.060	III		(SL)			1						1.8	14							0.7	I	1	1		OUTFALL TO RIVER W/ STONE FILL PAD, TYPE I
27+85	28+00	LT								12	60	.064	.060			(SL)		2–12	1							24							0.3	I	1			OUTFALL TO RIVER W/ STONE FILL PAD, TYPE I (ELBOWS – 22.5°)
28+50	28+30	RT–LT																								86													REMOVE EXISTING 24" CGMP
28+50	28+50	RT–LT								24	128	.064	.060	IV		(SL)									2.7	80							2.4	I	1	1		OUTFALL TO RIVER W/ STONE FILL PAD, TYPE I AT INLET & OUTLET
30+97	30+97	RT–LT																								77													REMOVE EXISTING 24" CGMP
32+00	32+00	RT–LT								24	84	.064	.060	III		(SL)			1						2.7	42							2.4	I	1	1		OUTFALL TO RIVER W/ STONE FILL PAD, TYPE I AT INLET & OUTLET
35+00	34+50	RT–LT								24	100	.064	.060	III		(SL)			1						2.7	55							1.2	I	1	1		OUTFALL TO RIVER W/ STONE FILL PAD, TYPE I AT OUTLET
35+15	35+15	RT–LT																								35													REMOVE EXISTING 24" CGMP
15+50	15+70	LT																															2.4	I					CONST. STONE FILL PAD TYPE I, 2'X2' BOX CULVERT TO REMAIN
16+00		RT								12	34	.064	.060			(SL)		2–12	1							10										1			OUTFALL TO RIVER THROUGH STONE FILL (ELBOWS – 22.5°)
31+90		LT								12	20	.064	.060			(SL)		2–12	1							8							1.2	I	1			OUTFALL TO RIVER W/ STONE FILL PAD TYPE I (ELBOWS – 22.5°)
21+35		LT								12	58	.064	.060			(SL)		2–12	1							24										1			OUTFALL TO RIVER (ELBOWS – 22.5°)
24+80		LT								12	68	.064	.060			(SL)		2–12	1							28										1			OUTFALL TO RIVER (ELBOWS – 22.5°)
13+00	14+00	RT																								26													CONSTRUCT GRASSED DITCH

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES: ELEVATION ON TANGENT	GRADES: ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK: AREA	TOTAL EXCAVATION EARTH AND ROCK: CU. YDS.	ROCK EXCAVATION: AREA	ROCK EXCAVATION: CU. YDS.	EMBANKMENT: AREA	EMBANKMENT: CU. YDS.	MUCK EXCAVATION: AREA	MUCK EXCAVATION: CU. YDS.
		13+00					117				137			
						50		219				444		
		+50					119				342			
						50		254				335		
		14+00					154				20			
						50		591				19		
		+50					483				1			
						50		1,050				1		
		15+00					650				0			
						50		1,478				0		
		+50					945				0			
						50		1,948				0		
		16+00					1,159				0			
						50		2,042				0		
		+50					1,046				0			
						50		1,795				0		
		17+00					893				0			
						50		1,586				0		
		+50					820				0			
						50		1,364				83		
		18+00					653				90			
						47.75		691				403		
		+47.75	STOP ROADWAY BEGIN BRIDGE				129				366			
		21+09.75	STOP BRIDGE RESUME ROADWAY				912				921		268	
						40.25		1,202				1,969		186
		+50					701				1,720		256	
						50		1,357				3,404		485
		22+00					765				1,956		278	
						50		1,519				3,769		494
		+50					875				2,114		288	
						50		1,719				4,066		524
		23+00					982				2,277		296	
						50		1,120				4,417		541
		+50					228				2,493		352	
						50		243				3,884		600
		24+00					34				1680		580	
						50		50				2,187		863
		+50					20				660		320	
						31.50		228				545		833
		+81.50	STOP ROADWAY BEGIN BRIDGE				370				275			
						18.50		339				188		
		25+00					620				275		336	
						50		1935				255		607
		+50					1470				0		128	
						41.49		1625				19		430
		+91.49	STOP BRIDGE RESUME ROADWAY				645				25			
						8.51		203				8		
		26+00					645				25		0	
						50		912				343		119
		+50					340				345		68	
						50		546				1,097		63
		27+00					250				840		116	
						50		361				2,144		170
		+50					140				1,475		184	
						50		167				2,682		278
		28+00					40				1,400		226	
						50		37				2,483		380
		+50					0				1,260		212	
						50		0				2,167		406
		29+00					0				1,080		180	
						50		0				1,622		383
		+50					0				672		80	
						50		0				1,111		241
		CARRIED FORWARD						26,581				39,565		7,583
		COLUMN FOOTINGS												

V. C.	% GRADE	STATION	GRADES: ELEVATION ON TANGENT	GRADES: ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK: AREA	TOTAL EXCAVATION EARTH AND ROCK: CU. YDS.	ROCK EXCAVATION: AREA	ROCK EXCAVATION: CU. YDS.	EMBANKMENT: AREA	EMBANKMENT: CU. YDS.	MUCK EXCAVATION: AREA	MUCK EXCAVATION: CU. YDS.
		30+00					0				528		68	
						50		0				806		137
		+50					0				343		40	
						50		0				558		100
		31+00					0				260		36	
						50		9				399		70
		+50					10				171			
						50		71				205		
		32+00					67				50			
						50		221				46		
		+50					172				0			
						50		338				25		
		33+00					193				27			
						50		368				37		
		+50					204				13			
						50		378				20		
		34+00					204				9			
						50		315				48		
		+50					136				43			
						50		238				57		
		35+00					119				19			
						50		270				19		
		+50					173				1			
		WALDO LANE												
		+50					253				0			
						50		379				0		
		1+00					158				0			
						50		171				7		
		+50					29				8			
						50		31				43		
		2+00					5				38			
						50		14				69		
		+50					10				38			
						50		32				36		
		3+00					25				3			
						50		60				3		
		+50					40				0			
						50		74				0		
		4+00					40				0			
						TOTAL	761					158		
		CHANNEL LINE												
		1+25					30				0			
						25		27.7				55.6		
		+50					30				120			
						25		30.6				92.6		
		+75					36				80			
						25		90.7				60.2		
		2+00					160				50			
						25		120.4				69.4		
		+25					100				100			
						25		88.0				117.9		
		+50					90				175			
						25		55.6				92.6		
		+75					30				25			
						TOTAL	413.0					488.3		
		CARRIED FORWARD						3380				2866		307
		COLUMN FOOTINGS												

SUMMARY AND BALANCES

STATION TO STATION		TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
13+00	15+00	3592		799	2793			
15+00	20+00	9426		486	8940		11,733	
20+00	25+00	9712		24,389		14,677		2,944
25+00	30+00	3851		13,891		10,040		12,984
30+00	35+00	2206		2,220		14		12,998
MAINLINE	TOTAL	28,787		41,785				
WALDO	LANE	761		158				
CHANNEL	LINE	413		488				
COMMON EXCAVATION FOR WETLAND MITIGATION		2100						
COMMON EXCAVATION FOR DRIVEWAYS		55		15				
COMMON EXCAVATION BR #80 (MSE WALLS)		1460						
TOTALS		33,163		42,448				

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION TOTAL CY	EXCAVATION ROCK CY	EMBANKMENT CY	MUCK EXCAV. CY
9	1	26581		39,565	
9	2	3380		2866	
9	1				7,583
9	2				307
LESS CHANNEL		(413)			
COMMON EXCAV. FOR WETLAND		2100			
DRIVES		55		15	
BR #80 (MSE WALLS)		1460			
TOTALS		33,163		42,448	7,890

REMARKS

EARTH EXCAVATION	33,163
SOLID ROCK EXCAVATION	750 EST.
COMMON EXCAVATION	33,163
MUCK EXCAVATION	7,890
PLANIMETERED FILL	42,446
LESS FACTORED SOLID ROCK	
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	
NET PLANIMETERED FILL	42,446
FACTOR	6,367
PLANIMETERED FILL INCLUDING FACTOR	48,813
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	5,521
CHANNEL EXCAVATION 80% X 413 =	248
UNDERDRAIN EXCAVATION 80% X 284 =	170
STRUCTURE EXCAVATION 80% X 520 =	312
TOTAL MATERIAL AVAILABLE FOR FILL	6,251
TOTAL FILL INCLUDING FACTOR	48,813
TOTAL MATERIAL FOR FILL	6,251
BORROW	42,562
EXCESS EXCAVATION	* 26,182

* WASTE DUE TO CONSTRUCTION SEQUENCING FOR PROJECT REQUIREMENTS

PROJECT NAME WALLINGFORD

PROJECT NUMBER BRS - 0137(13)

GFX:\CIVIL\WALY\61129-99.DWG (1=1)

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	DAVENPORT, ALAN D. & CHRISTINE H.	6	11+00 LT.	14+42 LT.	0.08A±			COND.	07-08-94	WALLINGFORD	60	424-427	3430 S.F.±
			11+45 LT.	13+75 LT.			CONST. (T) 0.04A±						1902 S.F.±
			12+00 LT.	13+50 LT.			SLOPE (P) 0.03A±						1460 S.F.±
1B		6,7	T.H. 13 0+98 RT.	18+82 LT.	0.24A±								
			T.H. 13 1+50 RT.	T.H. 13 3+10 RT.			SLOPE (T) 0.03A±						1500 S.F.±
			T.H. 13 1+50 RT.	T.H. 13 3+24 RT.			CONST. (T) 0.03A±						1186 S.F.±
			T.H. 13 1+75 RT.				DRIVE (T)						15' GRAVEL
			T.H. 13 1+75 RT.				CULVERT (T)						
			T.H. 13 2+50 RT.				CUL., DIT. & DR. (P)						
			T.H. 13 2+77 RT.				CUL., DIT. & DR. (P)						
1C		6	11+00 LT.	14+42 LT.	0.27A±		ALL R.T & I.						HIGHWAY EASEMENT US 7
1D		7	T.H. 13 1+78 LT.	T.H. 13 2+77 LT.			SLOPE (T) 0.01A±						508 S.F.±
			T.H. 13 2+77 LT.				DRIVE (T)						12' GRAVEL
2A	BRUCE, FRANK C. & JANE G.	6	11+00 RT.	15+45 RT.	0.19A±		ALL R. T. & I.	WD	08-23-94	WALLINGFORD	61	22	HIGHWAY EASEMENT US 7
			11+10 RT.	11+92 RT.			CONST. (T) 0.02A±						750 S.F.±
			11+25 RT.	11+83 RT.			SLOPE (T) 0.02A±						875 S.F.±
2B		6	15+76 RT.	19+39 RT.	0.42A±		ALL R. T. & I.						HIGHWAY EASEMENT US 7
			16+00 RT.				DRAINAGE (P)						
2C		6	12+14 RT.	18+20 RT.	0.37A±								
3A	ZIEDMAN, MURRAY W. & KARIN S.	6,7	17+05 LT.	18+00 RT.	0.06A±			COND.	07-08-94	WALLINGFORD	60	424-427	2775 S.F.±
			17+25 LT.				REMOVE & RESET (T)						FLAGPOLE
3B		6,7	14+39 RT.	T.H. 13 0+98 RT.	0.50A±		ALL R. T. & I.						HIGWAY EASEMENT US 7
			T.H. 13 1+10 LT.				DRIVE (T)						14' GRAVEL
			T.H. 13 1+50 LT.	T.H. 13 1+78 LT.			SLOPE (T) 0.01A±						42 S.F.±
4A	PERRY, FARWELL W. & JUDITH A.	6,8	20+87 LT.	27+27 LT.	1.00A±			WD	08-04-94	WALLINGFORD	60	487	
4B		8	29+82 RT.	32+47 RT.	0.06A±								2415 S.F.±
			28+38 RT.	32+45 RT.			CONST. (T) 0.10A±						
			29+50 RT.	31+00 RT.			SLOPE (P) 0.02A±						725 S.F.±
			31+00 RT.	32+15 RT.			SLOPE (T) 0.03A±						1450 S.F.±
			32+00 RT.				DITCH (P)						
	PARCEL 4C CONTINUED ON NEXT SHEET												

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	5,6	PARCEL NO. 4 BOYLAN. CREATE PARCEL 4D, CONSISTING OF SLOPE (T) AT STA. 21+03 RT. ~ 22+50 RT., 640 S.F.±, 0.01A±. PER C.O. 8339.	03-19-93	M.J.R.	L.W.B.
2	4,6 7	PARCEL NO. 1 DAVENPORT. ADD CHRISTINE H. DAVENPORT TO TITLE. PER C.O. 8349.	04-02-93	M.J.R.	L.W.B.
3	4,7	PARCEL NO. 1 DAVENPORT. ADD PARCEL NO. 1C TO ACQUIRE IN FEE. PER C.O. 8362	04-21-93	L.W.B.	C.C.P.
4	4,6	PARCEL NO. 2 BRUCE. CHANGE PARCEL NO. 2 TO 2A & 2B TO ACQUIRE IN FEE. PER C.O. 8363.	04-21-93	L.W.B.	C.C.P.
5	4,6 7	PARCEL NO. 3 ZIEDMAN. ADD R. T. & I. TO U.S. 7 TO PARCEL 3B. PER C.O. 8364.	04-21-93	L.W.B.	C.C.P.
6	5,6 8	PARCEL NO 4 BOYLAN. ADD R. T. & I. TO U.S. 7 TO PARCEL 4D AND ADD NEW PARCEL 4E. PER C.O. 8365.	04-21-93	L.W.B.	C.C.P.
7	5,7	CHANGE END OF PROJECT AND BEGIN MAINTENANCE AREA. DELETE RELINQUISHMENT. PER C.O. 8366.	04-21-93	L.W.B	C.C.P.
8	5,8	PARCEL NO. 5 ST. OF VT. CHANGE PARCEL 5 TO 5A & 5B. ADD R. T. & I. TO U.S. 7 AND CUL., DIT. & DR. PER C.O. 8367.	04-21-93	L.W.B.	C.C.P.
9	5,8	PARCEL NO. 5 STATE OF VERMONT. ADD DRIVE (T) AT STA. 32+44 LT., 12' GRAVEL. M.P. 0048. PER C.O. 8406.	07-09-93	M.J.R.	L.W.B
10	4,6	PARCEL NO. 3B ZIEDMAN. DELETE SLOPE (T) AT STA. 14+80 LT. ~ 15+27 LT. PER C.O. 8405.	07-09-93	M.J.R.	L.W.B.
11	4,7	PARCEL NO. 1B DAVENPORT. CHANGE DRIVE FROM STA. TH 13 1+35 RT. TO TH 13 1+75 RT. ADD CULVERT (T) AT TH 13 1+75 RT. CHANGE AREA OF CONST. (T) TO 1186 S.F.±. PARCEL 1D: CHANGE DRIVE STA. FROM TH 13 2+85 LT. TO 2+77 LT. CHANGE ENDING STA. FOR CONST. (T) TO 13+75 LT., 0.04A±, 1902 S.F.±. PER C.O. 8404.	07-09-93	M.J.R.	L.W.B.
12	4,6	PARCEL NO. 2 BRUCE. DELETE DRAINAGE (P) AT STA. 16+00 RT. ON PARCEL 2A. ALSO ON PARCEL 2A, CHANGE ENDING STATION OF SLOPE (T) FROM 18+32 RT. TO 18+22 RT. ON PARCEL 2B, DELETE SLOPE (T) AT STA. 14+25 RT. TO 18+32 RT. PER C.O. 8418.	08-02-93	C.C.P.	L.W.B.

0137013 200 1805 84E036

ACCT.prop
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DATE PLOTTED 8-MAR-1995
re036d1.i

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

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(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

REVISED 06-17-94

APPROVED: LAWRENCE BLISS, L.S. DATE: 02-25-93
AGENT D, PLANS & TITLES

R. O. W. PLANS

WALLINGFORD
BRS 0137(13)
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
	SEE PREVIOUS SHEET FOR PARCEL 4B												
4C		8	32+95 RT.	35+60 RT.	0.10 A±								
			32+94 RT.	35+40 RT.			CONST. (T) 0.05A±						2000 S.F.±
			32+95 RT.	36+16 RT.			REMOVE & RESET (T)						STOCKADE FENCE
			33+80 RT.	35+20 RT.			SLOPE (T) 0.02A±						1010 S.F.±
			34+80 RT.	34+98 RT.			DITCH & DRAINAGE (P)						
			34+98 RT.				CULVERT (P)						
4D		6, 8	19+20 RT.	24+91 LT.	2.275A±		ALL R. T. & I.						HIGHWAY EASEMENT US7
4E		8	24+25 RT.	36+16 RT.	2.015A±		ALL R. T. & I.						HIGHWAY EASEMENT US 7
			28+50 RT.				DITCH (P)						
4F		6	20+94 RT.	22+50 RT.	0.05A±								2048 S.F.± BY OPTION ONLY
4G		8	24+25 RT.	26+47 RT.	0.06A±								2788 S.F.± BY OPTION ONLY
5A	STATE OF VERMONT - LESSOR	6, 8	23+17 RT.	29+00 LT.			CROSSING EASEMENT (P)						
	VERMONT RAILWAY, INC. - LESSEE		25+30 RT.	35+00 LT.			SLOPE (P) 0.31A±						
			27+89 LT.	28+05 LT.			CUL., DIT. & DR. (P)						
			28+50 LT.				CUL., DIT. & DR. (P)						
			31+92 LT.				CUL., DIT. & DR. (P)						
			32+00 LT.				CUL., DIT. & DR. (P)						
			32+44 LT.				DRIVE (T)						12' GRAVEL M.P. 0488
5B		8	32+45 LT.	36+16 RT.	0.19A±		ALL R. T. & I.						HIGHWAY EASEMENT US 7
			34+50 LT.	34+57 LT.			CUL., DIT. & DR. (P)						
6A	TOWN OF WALLINGFORD	7	T.H. 13 0+95 CL.	T.H. 13 4+00 CL.			APPROACH (T)						WALDO LANE
6B		8	32+77 RT.				APPROACH (T)						T.H. 68
7	CENTRAL VERMONT PUBLIC SERVICE CORP.												UTILITY
8	G. T. E. OF VERMONT												UTILITY
9	NEW ENGLAND TELEPHONE COMPANY												UTILITY
10	ADELPHIA CABLE OF RUTLAND												UTILITY
	MAINTENANCE AGREEMENT NO. 1	6, 7	T.H. 13 0+12 CL.	T.H. 13 0+95 CL.									83'

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
13	8	PARCEL NO. 5 STATE OF VERMONT. CHANGE OFFSET DISTANCES ON PARCEL 5B AS FOLLOWS: 36+16 28' LT. AND 36+16 24' LT. PER C.O. 8467.	12-22-93	M.J.R.	L.W.B.
	5	PARCEL NO. 4 BOYLAN. ADD RIGHT TO REMOVE & RESET (T), 'STOCKADE FENCE' FROM STA. 32+95 RT. ~ 36+16 RT. PER C.O. 8459.			
14	4, 6, 8	PARCEL NO. 4 BOYLAN. CHANGE TITLE TO PERRY, FARWELL W. & JUDITH A. PER C.O. 8512.	03-09-94	M.J.R.	L.W.B.
15	4, 6	PARCEL NO. 2 BRUCE. ADD PARCEL 2C, STA. 12+14 RT. ~ 18+20 RT., 0.37A±. DELETE 'SLOPE (T)' AT STA. 14+25 RT. ~ 18+22 RT. FROM PARCEL 2A. PER C.O. 8573.	06-17-94	C.C.P.	L.W.B.
16	5, 6 8	PARCEL NO. 4 PERRY. ADD PARCEL 4F, STA. 20+94 RT. ~ 22+50 RT. 0.05A±, 2048 S.F.±, BY OPTION ONLY. ADD PARCEL 4G, STA. 24+25 RT. ~ 26+47 RT., 0.06A±, 2788 S.F.±, BY OPTION ONLY. ON PARCEL 4D, DELETE SLOPE (T) AT STA. 21+03 RT. ~ 22+50 RT. ON PARCEL 4E, DELETE SLOPE (T) AT STA. 25+25 RT. ~ 25+78 RT. AND DELETE CONST. (T) AT STA. 24+92 RT. ~ 26+30 RT. PER C.O. 8574.	06-17-94	C.C.P.	L.W.B.
		MYLARS TO CONSULTANT MANAGEMENT UNIT	07-18-94		
17	5	CHANGE ENDING STATION OF MAINTENANCE AGREEMENT TO READ T.H. 13 0+95 CL. AND REMARKS TO READ 83' PER C.O. 9210	11-06-01	G.J.F.	R.P.D.

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\\vaot_cadd\fillngcabinet$\84e036\RightOfWay\re036cd.dgn
DATE PLOTTED 06-NOV-2001
re036cd2.i

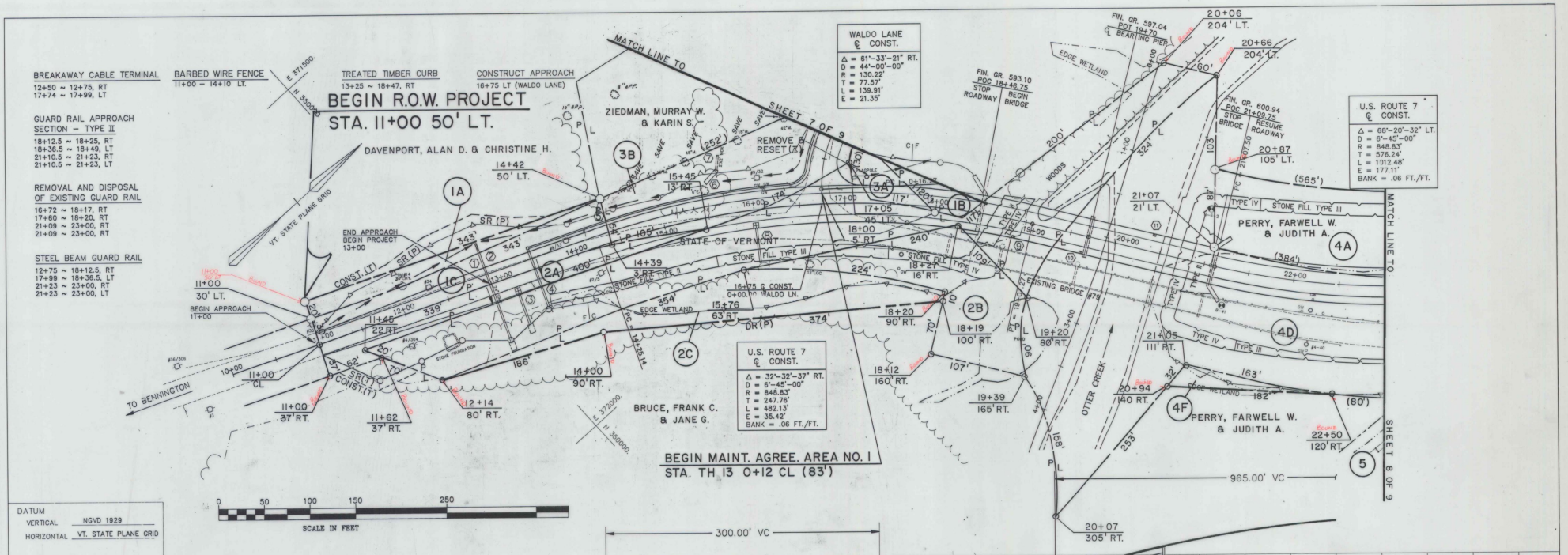
DR.(P)- DRAINAGE RIGHT
DIT.(P)- DITCHING RIGHT
CH.(P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL.(P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

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

APPROVED: LAWRENCE BLISS; L.S. DATE: 02-25-93
CHIEF, PLANS & TITLES

R.O.W. PLANS
WALLINGFORD
BRS 0137(13)
SHEET 5 OF 9



DRAINAGE TABLE

	LOCATION	REMARKS
1	13+00 LT & RT	NEW 24"X106' PCCSP .064, CAAP .060 OR CPEP(SL) W/ END SECTION @ INLET & STONE FILL PAD TYPE I @ OUTLET
2	13+00 LT & RT	REMOVE 24" CGMP & HEADER
3	13+25 RT	NEW 12"x30' PCCSP .064, CAAP .060 W/ ELBOWS & PRCCDI & STONE FILL PAD TYPE I
4	13+50 LT & RT	NEW 6"X70' UNDERDRAIN W/OUTLET RT.
5	13+50~0+75' LT	NEW 6"X368' UNDERDRAIN W/F.B. @ 13+50
6	15+50~15+70 LT	CONST. STONE FILL PAD TYPE I
7	15+50~15+70 LT	RETAIN EXISTING 2'X2' BOX CULVERT
8	16+00 RT	NEW 12"x34' PCCSP .064, CAAP .060 W/ ELBOWS & PRCCDI
9	18+90 RT	BRIDGE SCUPPER
10	19+65 RT	BRIDGE SCUPPER
11	20+40 RT	BRIDGE SCUPPER

06-17-94	REVISIONS 15, 16
03-10-94	REVISION 14
08-02-93	REVISION 12
07-09-93	REVISION 10
04-21-93	REVISIONS 4, 5, & 6
04-02-93	REVISION 2
03-19-93	REVISION 1

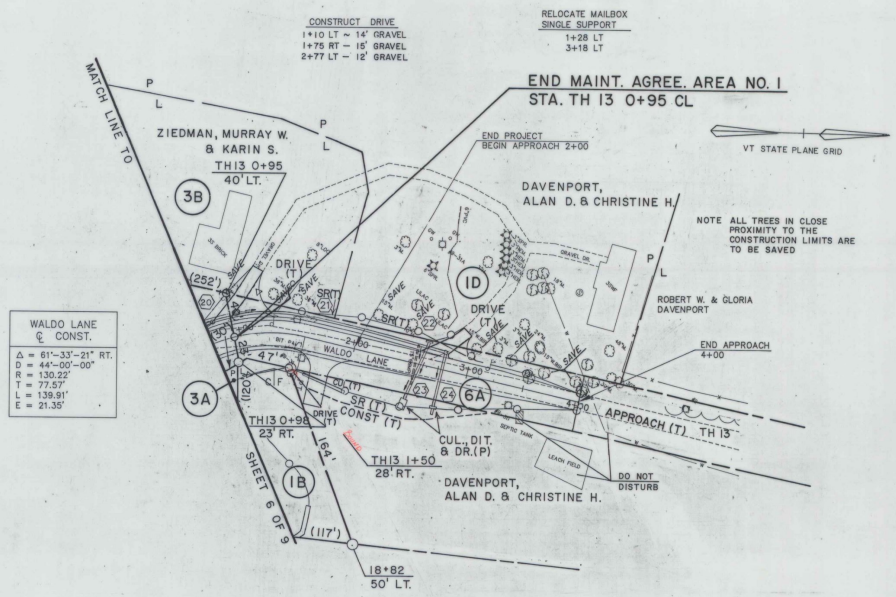
THIS SHEET FOR ROW USE ONLY

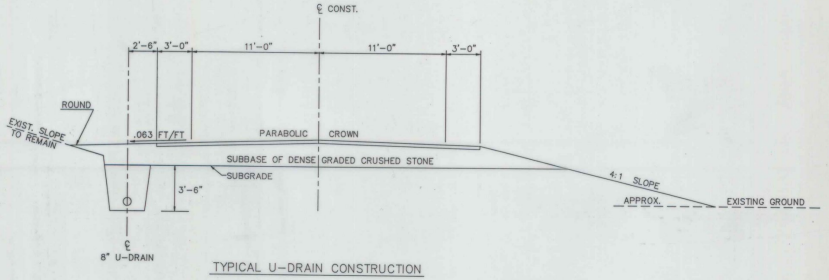
SURVEYED BY V.S.C. DATE 07/90
DRAWN BY F.J.C DATE 04/92
TRACED BY J.A.C./S.A.S. DATE 01/93

WALLINGFORD
BRS 0137 (13)
R.O.W. SHEET 6 OF 9 SHEETS

D:\CIVIL\WALLY\91120-11.DWG (1=50)

12 OF 113





TYPICAL U-DRAIN CONSTRUCTION

WALDO LANE

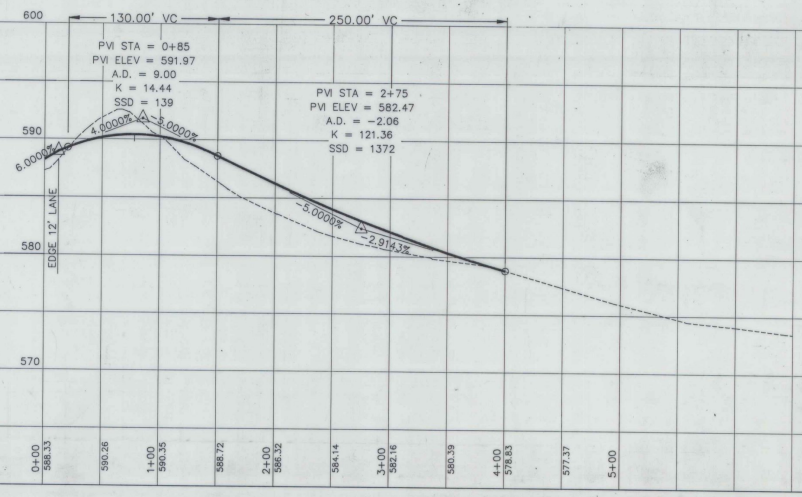
0+78 ~ 2+77 LT

NOT TO SCALE

0 50 100 150 250

(SCALE IN FEET)

DATUM
VERTICAL NGVD 1929
HORIZONTAL VT. STATE PLANE GRID



DRAINAGE TABLE

	LOCATION	REMARKS
22	0+75~0+78 LT	NEW 6"X4' UNDERDRAIN W/F.B. @ 0+78 LT
23	0+78~2+77 LT	NEW 6"X198' UNDERDRAIN W/F.B. @ 2+77 LT
24	2+55	REMOVE EXISTING 15" CGMP
25	2+62 LT~2+52 RT	NEW 18"X54' PCCSP .064 CAAP .060,RCP CLASS III OR CPEP(SL) W/CRM @ INLET & STONE FILL PAD @ OUTLET
26	2+77 LT~RT	NEW 6"X50' UNDERDRAIN W/OUTLET @ 2+77 RT

07-09-93	REVISION 11
04-21-93	REVISIONS 3, 5, & 7
04-02-93	REVISION 2

THIS SHEET FOR ROW USE ONLY

SURVEYED BY V.S.C. DATE 07/90
DRAWN BY FJC DATE 04/92
TRACED BY JAC/SAS DATE 01/93

WALLINGFORD
BRS 0137(13)
R.O.W. SHEET 7 OF 9 SHEETS

13 of 113

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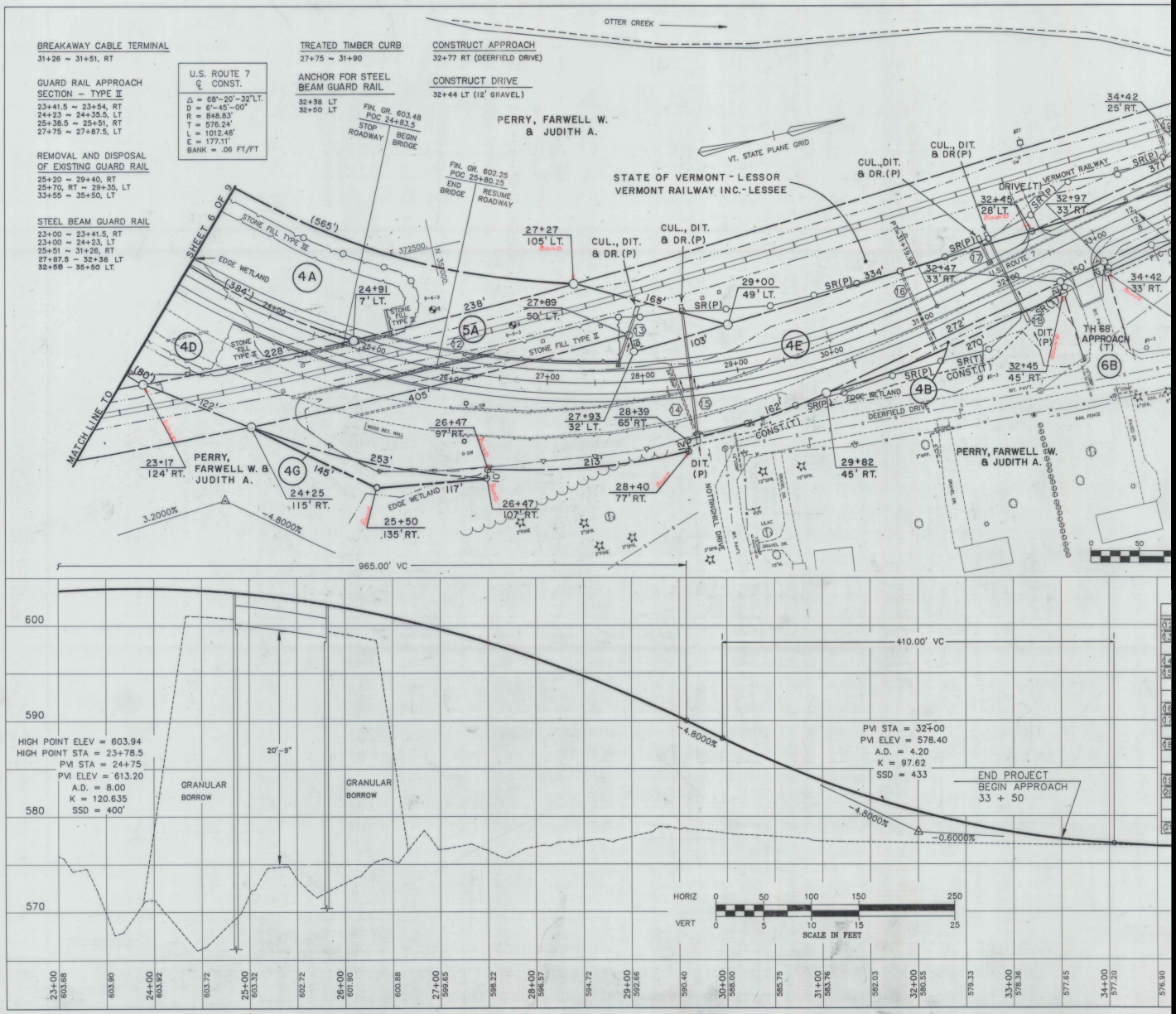
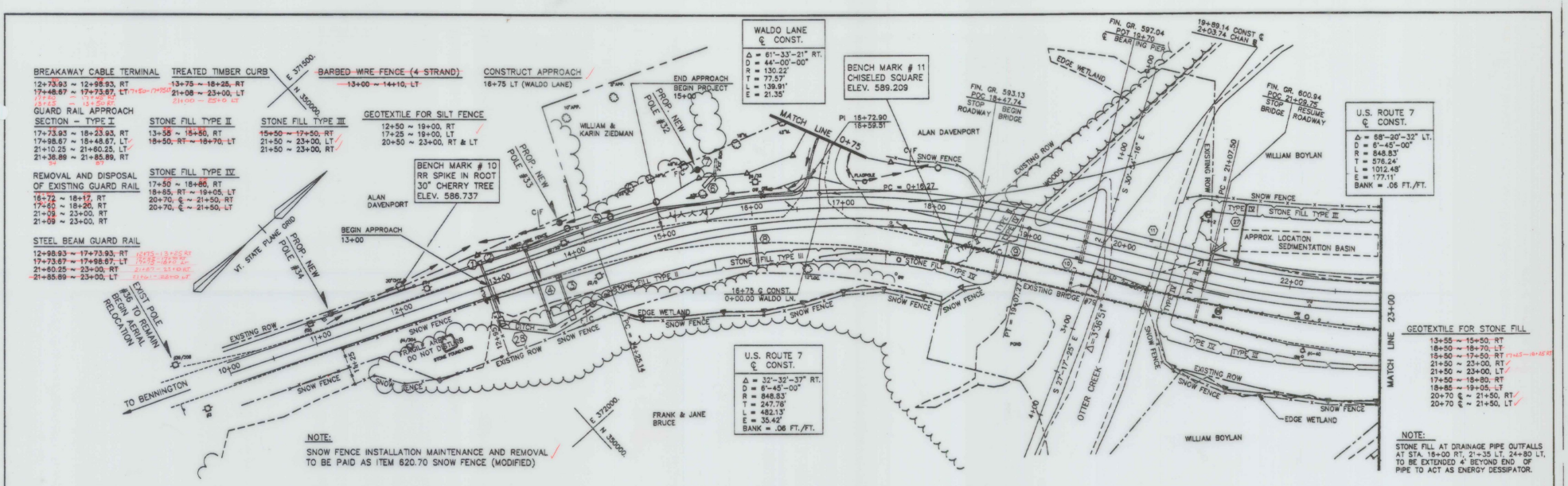

BREAKAWAY CABLE TERMINAL
31+26 ~ 31+51, RT
GUARD RAIL APPROACH SECTION – TYPE II
23+41.5 ~ 23+54, RT
24+23 ~ 24+35.5, LT
25+38.5 ~ 25+51, RT
27+75 ~ 27+87.5, LT
REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL
25+20 ~ 29+40, RT
25+70, RT ~ 29+35, LT
33+55 ~ 35+50, LT
STEEL BEAM GUARD RAIL
23+00 ~ 23+41.5, RT
23+00 ~ 24+23, LT
25+51 ~ 31+26, RT
27+87.5 ~ 32+38 LT
32+50 ~ 35+50 LT
U.S. ROUTE 7 ℄ CONST.
Δ = 68°-20'-32"LT.
D = 6°-45'-00"
R = 848.83'
T = 576.24'
L = 1012.48'
E = 177.11'
BANK = .06 FT/FT
TREATED TIMBER CURB
27+75 ~ 31+90
ANCHOR FOR STEEL BEAM GUARD RAIL
32+38 LT
32+50 LT
CONSTRUCT APPROACH
32+77 RT (DEERFIELD DRIVE)
CONSTRUCT DRIVE
32+44 LT (12' GRAVEL)
OTTER CREEK
PERRY, FARWELL W. & JUDITH A.
VT. STATE PLANE GRID
STATE OF VERMONT - LESSOR
VERMONT RAILWAY INC. - LESSEE
FIN. GR. 603.48
POC 24+83.5
STOP ROADWAY
BEGIN BRIDGE
FIN. GR. 602.25
POC 25+80.25
END BRIDGE
RESUME ROADWAY
SHEET 6 OF 9
MATCH LINE TO
STONE FILL TYPE III
EDGE WETLAND
STONE FILL TYPE II
WOOD RET. WALL
DEERFIELD DRIVE
NOTTINGHILL DRIVE
VERMONT RAILWAY
ROUTE 7
TH 68 APPROACH (T)
CUL., DIT. & DR.(P)
DIT. (P)
SR(P)
SR(T)
CONST.(T)
4A
4B
4D
4E
4G
5A
6B
965.00' VC
410.00' VC
HIGH POINT ELEV = 603.94
HIGH POINT STA = 23+78.5
PVI STA = 24+75
PVI ELEV = 613.20
A.D. = 8.00
K = 120.635
SSD = 400'
PVI STA = 32+00
PVI ELEV = 578.40
A.D. = 4.20
K = 97.62
SSD = 433
END PROJECT
BEGIN APPROACH
33 + 50
GRANULAR BORROW
20'-9"
3.2000%
-4.8000%
-0.6000%
HORIZ 0 50 100 150 250
VERT 0 5 10 15 25
SCALE IN FEET



DRAINAGE TABLE

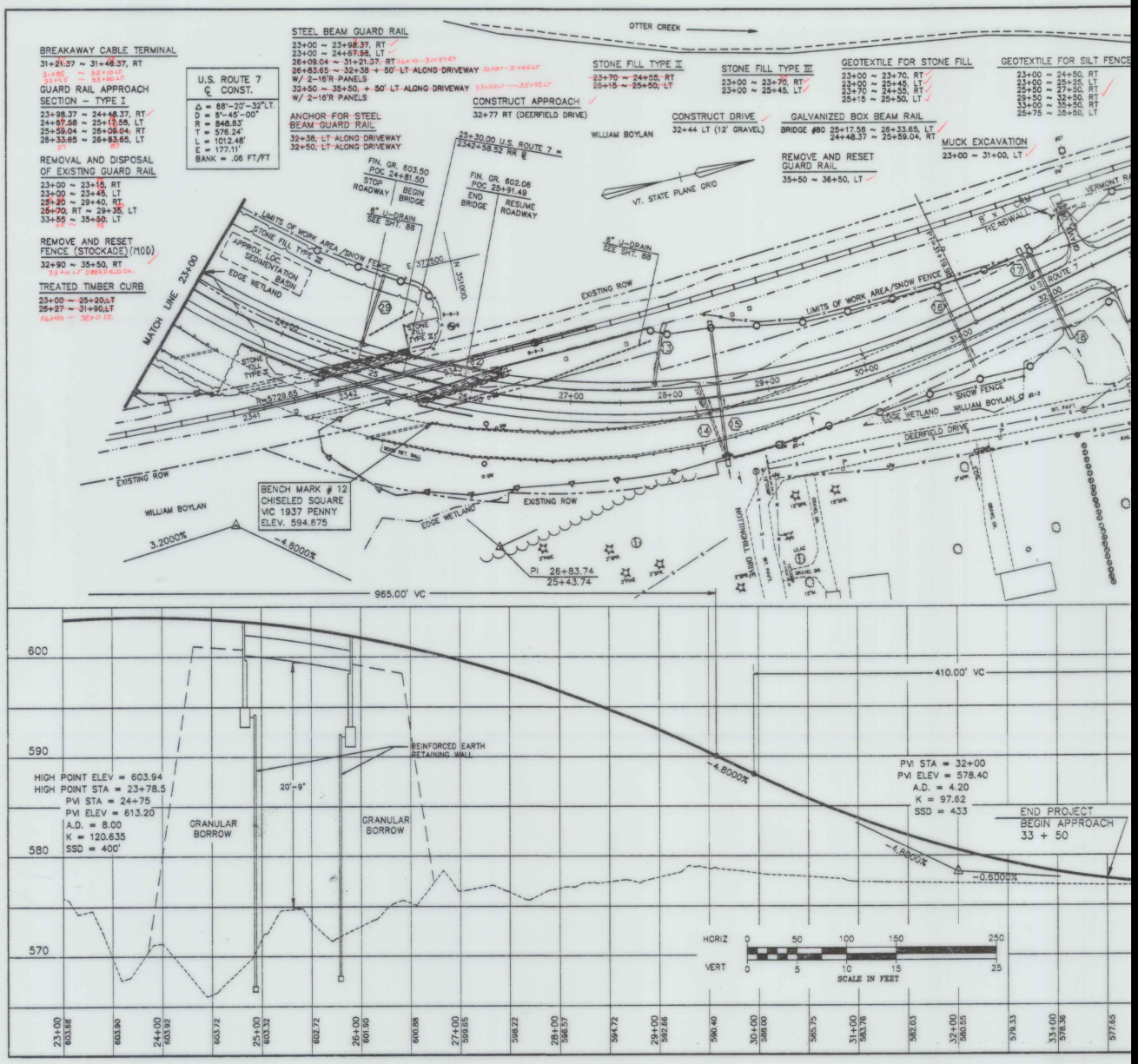
	LOCATION	REMARKS
①	13+00 LT & RT	NEW 24"X68' ~~PCCSP .064, CAAP .060~~ OR CPEP(SL) W/ ~~END SECTION @ INLET &~~ STONE FILL PAD TYPE I ~~@ OUTLET~~
②	13+00 LT & RT	REMOVE 24" CGMP & HEADER
③	13+75 RT	NEW 12"x36' PCCSP .064, CAAP .060, CPEP (SL) W/ ELBOWS & PRCCDI & STONE FILL PAD TYPE I
④	13+50 LT & RT	NEW 6"X68' UNDERDRAIN W/ CRM HEADWALL RT. W/F.B. @ 13+50 LT
⑤	13+50~0+75 LT	NEW 6"X368' UNDERDRAIN
⑥	15+50~15+70 LT	CONST. STONE FILL PAD TYPE I
⑦	15+50~15+70 LT	RETAIN EXISTING 2'X2' BOX CULVERT
⑧	16+00 RT	NEW 12"x34' PCCSP .064, CAAP, .060 CPEP (SL) W/ ELBOWS & PRCCDI
⑨	18+90 RT	BRIDGE SCUPPER
⑩	19+65 RT	BRIDGE SCUPPER
⑪	20+40 RT	BRIDGE SCUPPER
⑫	21+35 LT	NEW 12"x58' PCCSP .064, CAAP .060, CPEP (SL) W/ELBOW & PRCCDI
⑬	13+00~14+00 RT	CONSTRUCT DRAINAGE DITCH

SURVEYED BY V.S.C. DATE 07/90
DRAWN BY F.J.C DATE 11/94
TRACED BY J.A.C./S.A.S. DATE 11/94

WALLINGFORD

PROJ. BRS NO. 0137(13)
SHEET 15 OF 113 SHEETS

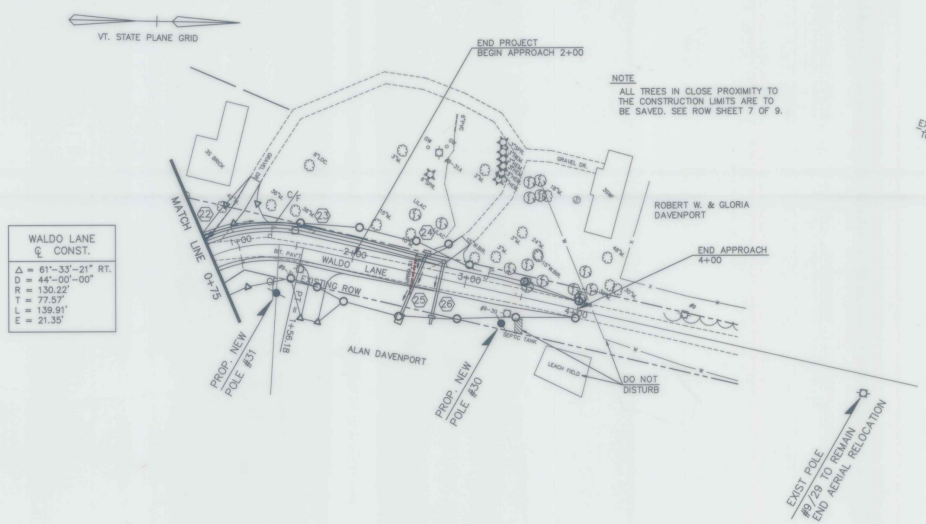
D:\CIVIL\WALLY\91120-15.DWG (1=50)



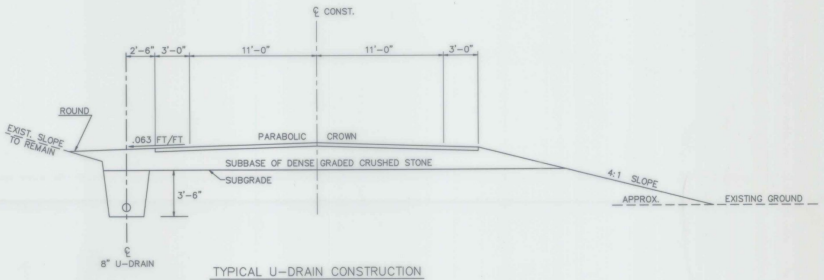
BREAKAWAY CABLE TERMINAL
31+21.37 ~ 31+46.37, RT
GUARD RAIL APPROACH SECTION – TYPE I
23+98.37 ~ 24+48.37, RT
24+67.58 ~ 25+17.58, LT
25+59.04 ~ 26+09.04, RT
26+33.65 ~ 26+83.65, LT
REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL
23+00 ~ 23+15, RT
23+00 ~ 23+45, LT
25+20 ~ 29+40, RT
25+70, RT ~ 29+35, LT
33+55 ~ 35+50, LT
REMOVE AND RESET FENCE (STOCKADE) (MOD)
32+90 ~ 35+50, RT
TREATED TIMBER CURB
23+00 ~ 25+20, LT
26+27 ~ 31+90, LT
U.S. ROUTE 7 ℄ CONST.
Δ = 88°-20'-32"LT.
D = 8°-45'-00"
R = 848.83'
T = 576.24'
L = 1012.48'
E = 177.11'
BANK = .06 FT/FT
STEEL BEAM GUARD RAIL
23+00 ~ 23+98.37, RT
23+00 ~ 24+67.58, LT
26+09.04 ~ 31+21.37, RT
26+83.65 ~ 32+38 + 50' LT ALONG DRIVEWAY
W/ 2-16'R PANELS
32+50 ~ 35+50, + 50' LT ALONG DRIVEWAY
W/ 2-16'R PANELS
ANCHOR FOR STEEL BEAM GUARD RAIL
32+38, LT ALONG DRIVEWAY
32+50, LT ALONG DRIVEWAY
CONSTRUCT APPROACH
32+77 RT (DEERFIELD DRIVE)
STONE FILL TYPE II
23+70 ~ 24+55, RT
25+15 ~ 25+50, LT
STONE FILL TYPE III
23+00 ~ 23+70, RT
23+00 ~ 25+45, LT
GEOTEXTILE FOR STONE FILL
23+00 ~ 23+70, RT
23+00 ~ 25+45, LT
23+70 ~ 24+55, RT
25+15 ~ 25+50, LT
GEOTEXTILE FOR SILT FENCE
23+00 ~ 24+50, RT
23+00 ~ 25+25, LT
25+50 ~ 27+50, RT
29+50 ~ 32+50, RT
33+00 ~ 35+50, RT
25+75 ~ 35+50, LT
CONSTRUCT DRIVE
32+44 LT (12' GRAVEL)
GALVANIZED BOX BEAM RAIL
BRIDGE #80 25+17.58 ~ 26+33.65, LT
24+48.37 ~ 25+59.04, RT
MUCK EXCAVATION
23+00 ~ 31+00, LT
REMOVE AND RESET GUARD RAIL
35+50 ~ 36+50, LT
OTTER CREEK
WILLIAM BOYLAN
25+30.00 U.S. ROUTE 7 = 2342+58.52 RR ℄
FIN. GR. 603.50 POC 24+81.50
STOP ROADWAY
BEGIN BRIDGE
FIN. GR. 602.06 POC 25+91.49
END BRIDGE
RESUME ROADWAY
VT. STATE PLANE GRID
6" U-DRAIN SEE SHT. 88
LIMITS OF WORK AREA/SNOW FENCE
STONE FILL TYPE III
APPROX. LOC. SEDIMENTATION BASIN
EDGE WETLAND
MATCH LINE 23+00
EXISTING ROW
STONE FILL TYPE II
R=5729.65
2341
2342
25
26+00
27+00
28+00
29+00
30+00
31+00
32+00
U.S. ROUTE 7
VERMONT RA
HEADWALL
SNOW FENCE
WILLIAM BOYLAN
DEERFIELD DRIVE
NOTTINGHILL DRIVE
BENCH MARK # 12
CHISELED SQUARE
VIC 1937 PENNY
ELEV. 594.675
3.2000%
-4.8000%
PI 26+83.74
25+43.74
965.00' VC
410.00' VC
600
590
580
570
HIGH POINT ELEV = 603.94
HIGH POINT STA = 23+78.5
PVI STA = 24+75
PVI ELEV = 613.20
A.D. = 8.00
K = 120.635
SSD = 400'
GRANULAR BORROW
20'-9"
REINFORCED EARTH RETAINING WALL
-4.8000%
PVI STA = 32+00
PVI ELEV = 578.40
A.D. = 4.20
K = 97.62
SSD = 433
END PROJECT
BEGIN APPROACH
33 + 50
-0.6000%
HORIZ 0 50 100 150 250
VERT 0 5 10 15 25
SCALE IN FEET
23+00 603.68
603.90
24+00 603.92
603.72
25+00 603.32
602.72
26+00 601.90
600.88
27+00 599.65
598.22
28+00 596.57
594.72
29+00 592.66
590.40
30+00 588.00
585.75
31+00 583.76
582.03
32+00 580.55
579.33
33+00 578.36
577.65

CONSTRUCT DRIVE
1+10 LT ~ 14' GRAVEL
~~1+75 RT ~ 15' GRAVEL~~
2+77 LT ~ 12' GRAVEL

~~RELOCATE MAILBOX SINGLE SUPPORT~~
~~1+28 LT~~
~~3+18 LT~~



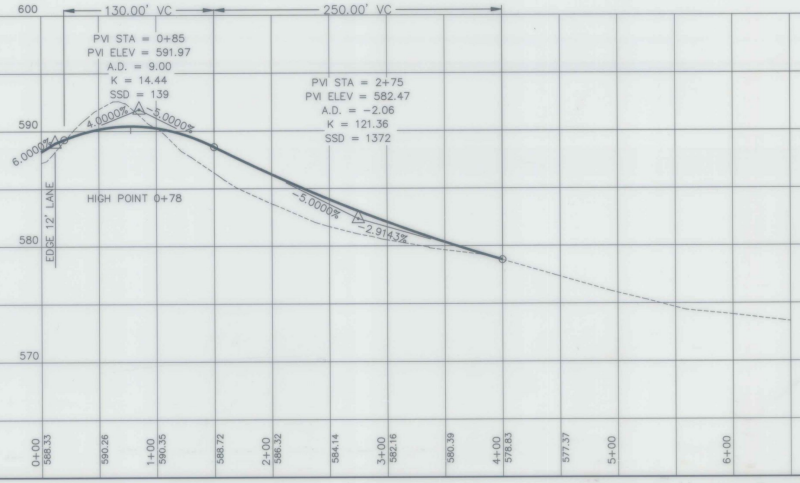
WALDO LANE
℄ CONST.
Δ = 61°-33'-21" RT.
D = 44°-00'-00"
R = 130.22'
T = 77.57'
L = 139.91'
E = 21.35'



TYPICAL U-DRAIN CONSTRUCTION
WALDO LANE
0+78 ~ 2+77 LT
NOT TO SCALE

0 50 100 150 250
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL VT. STATE PLANE GRID



DRAINAGE TABLE

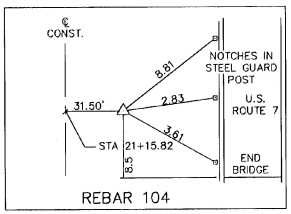
	LOCATION	REMARKS
~~22~~	~~0+75~0+78 LT~~	~~NEW 6"X4' UNDERDRAIN W/F.B. @ 0+78 LT~~
~~23~~	~~0+78~2+77 LT~~	~~NEW 6"X198' UNDERDRAIN W/F.B. @ 0+78 LT &~~
		~~2+77 LT~~
24	2+55	REMOVE EXISTING 15" CGMP
25	2+62 LT~2+52 RT	NEW 18"X54' ~~PCCSP .064~~, ~~CAAP .060~~,RCP CLASS III
		OR CPEP(SL) W/CRM @ INLET & ~~END SECTION~~ &
		~~STONE FILL PAD @ OUTLET~~
~~26~~	~~2+77 LT~RT~~	~~NEW 6"X50' UNDERDRAIN W/OUTLET @ 2+77 RT~~

HORIZ 0 50 100 150 250
VERT 0 5 10 15 25
SCALE IN FEET

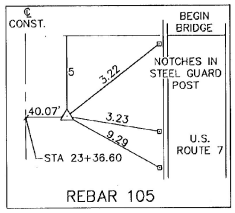
SURVEYED BY V.S.C. DATE 07/90
DRAWN BY FJC DATE 11/94
TRACED BY JAC/SAS DATE 11/94
WALLINGFORD
PROJ. BRS NO. 0137(13)
SHEET 17 OF 113 SHEETS

D:\CIVIL\WALLY\91120-17.DWG (1=50)

SURVEY BASELINE TIES



REBAR 104



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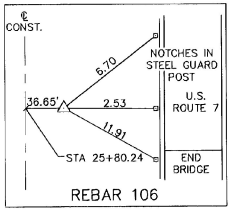

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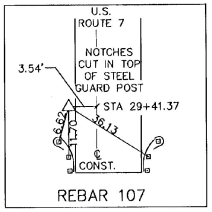

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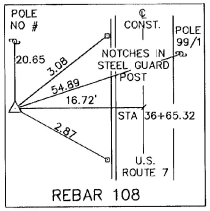

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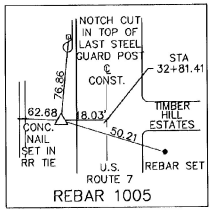

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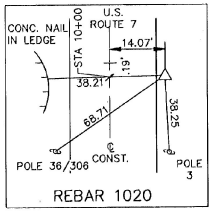

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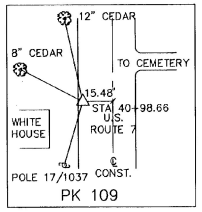
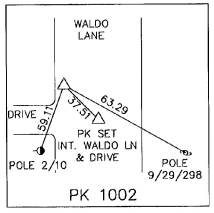
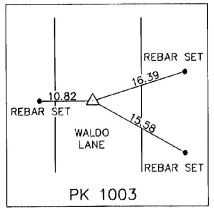


PK 109



PK 1002



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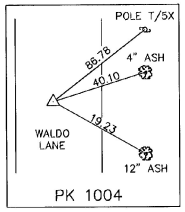

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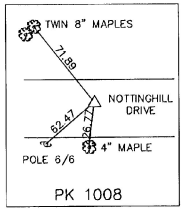
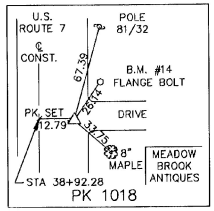
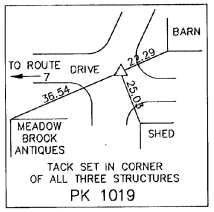


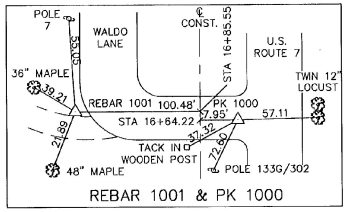
PK 1008



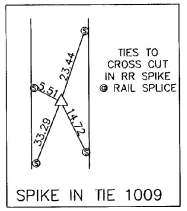
PK 1018



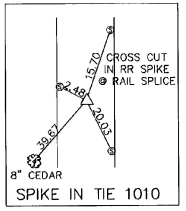
PK 1019



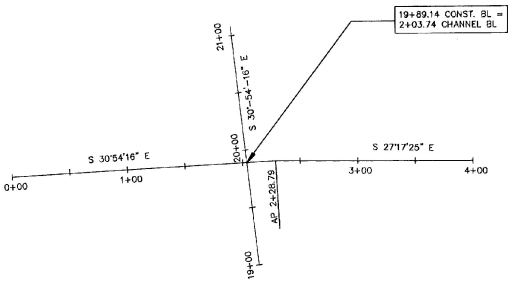
REBAR 1001 & PK 1000



SPIKE IN TIE 1009



SPIKE IN TIE 1010



CHANNEL TIES

SURVEY BASELINE TIES

SURVEYED BY	VSC	DATE 07/90
DRAWN BY	JAC	DATE 11/94
TRACED BY	JAC	DATE 11/94

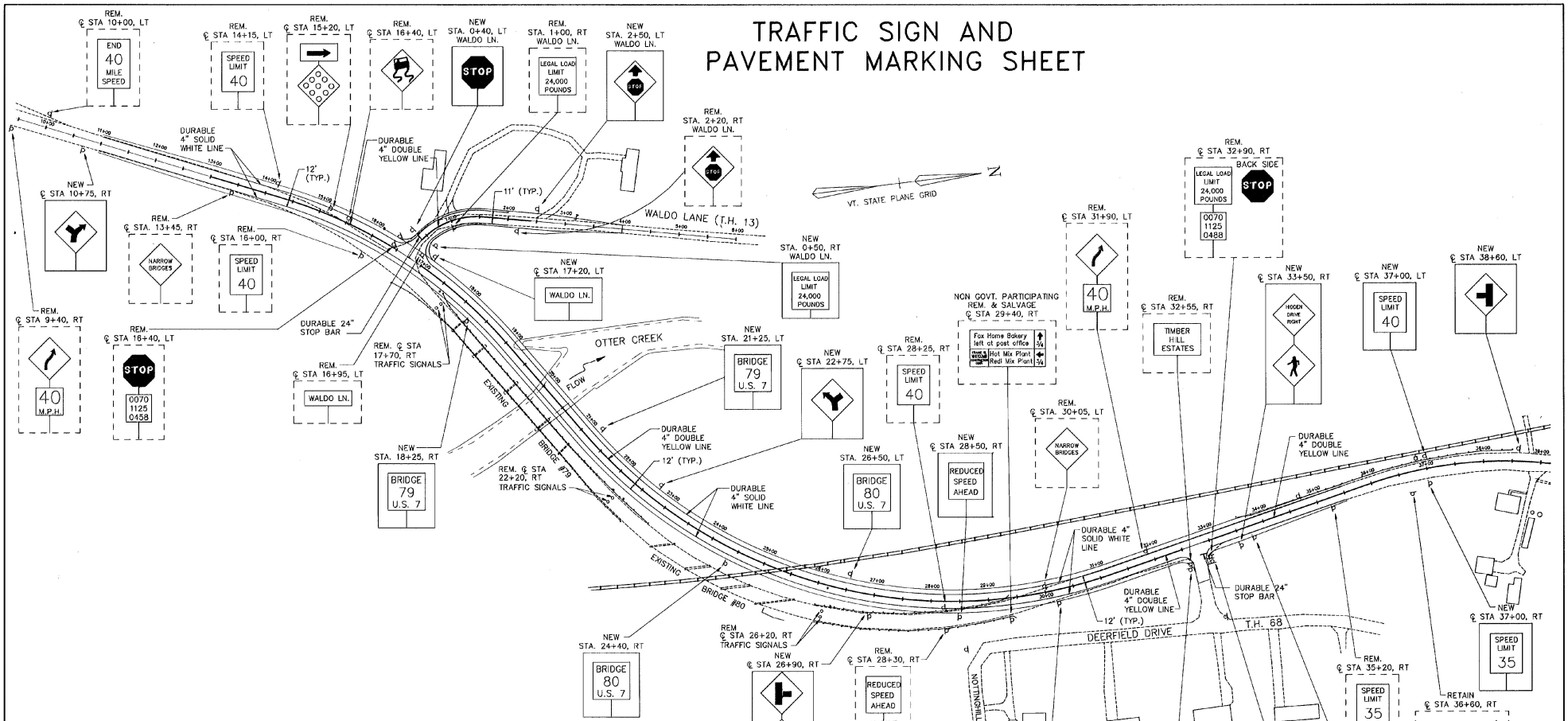
WALLINGFORD

PROJ. BRS NO. 0137(13)

SHEET 19 OF 113 SHEETS

CIVIL\WALLY\91120-19.DWG (1=1)

TRAFFIC SIGN AND PAVEMENT MARKING SHEET



DURABLE 4" WHITE LINE

13+00, LT ~ 3+25, LT, WALDO LANE ✓
13+00, RT ~ 0+40, RT, DEERFIELD DR.✓
3+25, RT, WALDO LANE ~ 35+50, LT ✓
0+40, LT, DEERFIELD DR. ~ 35+50, RT✓

DURABLE 4" DOUBLE YELLOW LINE

13+00 ~ 16+50✓
17+00 ~ 32+50✓
32+90 ~ 35+50✓
0+40 ~ 2+40 WALDO LANE✓

DURABLE 24" STOP BAR

0+40 LT WALDO LANE ✓
0+35 LT DEERFIELD DRIVE✓

TEMPORARY 4" WHITE LINE

13+00, LT ~ 3+25, LT, WALDO LANE ✓
13+00, RT ~ 0+40, RT, DEERFIELD DR.✓
3+25, RT, WALDO LANE ~ 35+50, LT ✓
0+40, LT, DEERFIELD DR. ~ 35+50, RT✓

TEMPORARY 4" DOUBLE YELLOW LINE

13+00 ~ 16+50 ✓
17+00 ~ 32+50 ✓
32+90 ~ 35+50 ✓
0+40 ~ 2+40 WALDO LANE✓

TEMPORARY 24" STOP BAR

0+40, LT WALDO LANE ✓
0+35, LT DEERFIELD DRIVE ✓

SURVEYED BY	VSC	DATE	10/91
DRAWN BY	FJC	DATE	11/94
TRACED BY	SAS	DATE	11/94

WALLINGFORD

PROJ. BRS NO. 0137(13)
SHEET 20 OF 113 SHEETS

D:\CIVIL\WALLY\91120-20.DWG (1=80)

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS	NEW AND SALVAGED SIGNS				EXISTING POSTS					NEW SIGN POSTS																	REMARKS	SIGN DETAIL	
			"A"	"B"	SALV. SIGN	SALV. T.I.S.	RET.	DRILL	REM.	SALV.	NUMBER OF POSTS	FLANGED CHANNEL LB./FT. 1.12	2.0	2.5	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 SHAPED STEEL POST SIZE	WEIGHT	FTG. SIZE 24"	30"	SIGN FRAME		PLAN SHEET NUMBER	STD. SHEET NUMBER
STA. 10+75 ℄ CONST. RT	Y	30 x 30	6.25								1				14' X														23	
STA. 17+20 ℄ CONST. LT	WALDO LN.	9 x 24	1.50								1				12' X													TOP MOUNT POST BRACKET		E-123
STA. 0+50 WALDO LN. RT	LEGAL LOAD LIMIT 24,000 POUNDS	24 x 30	5.00								1				14' X															E-141
STA. 0+40 WALDO LN. LT	STOP	30 x 30	6.25								1				14' X															E-143
STA. 2+50 WALDO LN. LT	TOT	36 x 36	9.00								1				16' X															E-150
STA. 18+25 ℄ CONST. RT	BRIDGE 79 U.S. 7	6 x 8	0.33								1		~~X~~		8' X															E-134
STA. 21+25 ℄ CONST. LT	BRIDGE 79 U.S. 7	6 x 8	0.33								1		~~X~~		8' X															E-134
STA. 22+75 ℄ CONST. LT	Y	30 x 30	6.25								1				16' X														23	
STA. 24+40 ℄ CONST. RT	BRIDGE 80 U.S. 7	6 x 8	0.33								1		~~X~~		8' X															E-134
STA. 26+50 ℄ CONST. LT	BRIDGE 80 U.S. 7	6 x 8	0.33								1		~~X~~		8' X															E-134
STA. 26+90 ℄ CONST. RT		30 x 30	6.25								~~1~~ 2				18' X 18'														23	
26+90 ℄ CONST. RT	SCHOOL BUS STOP AHEAD	30 x 30	6.25																									MOUNT WITH	23	
STA 28+50 ℄ CONST. RT	REDUCED SPEED AHEAD	24 x 30	5.00								1				16' X															E-142
STA. 0+35 DEERFIELD DR. LT	STOP	30 x 30	6.25								1				14' X															E-143
STA. 0+40 DEERFIELD DR. RT	LEGAL LOAD LIMIT 24,000 POUNDS	24 x 30	5.00								1				14' X															E-141
STA. 33+50 ℄ CONST. RT	HIDDEN DRIVE RIGHT	30 x 30	6.25								~~1~~ 2				18' X 18'														23	
STA. 33+50 ℄ CONST. RT		30 x 30	6.25																									MOUNT WITH HIDDEN DRIVE RIGHT		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 DESIGN DIVISION'S " SIGN POST DESIGN MANUAL ". TOTALS			SF. 76.82	SF.	EA.	SF.							~~112~~ 702 ~~618~~		~~202~~ ~~506~~			EA.					LBS.	EA.	EA.					

PREPARED BY SAS DATE 01/93
CHECKED BY MK DATE 11/93
DESIGN SUPERVISOR FJC DATE 08/92
PROJ. WALLINGFORD
BRS 0137 (13)
TRAFFIC SHEET NO. 2 OF 3
SHEET 21 OF 113 SHEETS

D:\CIVIL\WALLY\91120-21.DWG (1=80)

TRAFFIC SIGN SUMMARY SHEET

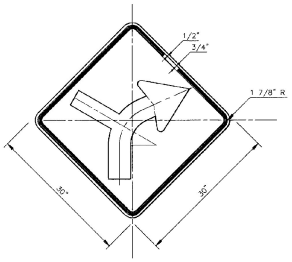
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS	NEW AND SALVAGED SIGNS				EXISTING POSTS				NEW SIGN POSTS																	REMARKS	SIGN DETAIL	
			"A"	"B"	SALV. SIGN	SALV. T.I.S.	RET.	DRILL	REM.	SALV.	NUMBER OF POSTS	FLANGED CHANNEL LB./FT. 1.12	2.0	2.5	3.0	TUBULAR ALUMINUM 3.0"ø	4.0"ø	TUBULAR STEEL FOUND-ATION	3"ø	3.5"ø	4.0"ø	5.0"ø	W SHAPED STEEL POST SIZE	WEIGHT	FTG. SIZE 24"	30"	SIGN FRAME		PLAN SHEET NUMBER	STD. SHEET NUMBER
STA. 35+50 ℄ CONST. RT	SPEED LIMIT 35	24 x 30	5.00								1				X 14'															E-142
STA. 37+00 ℄ CONST. LT	SPEED LIMIT 40	24 x 30	5.00								1				X 14'															E-142
STA. 38+60 ℄ CONST. RT		30 x 30	6.25								1				X 16'														23	
~~STA. 29+40 ℄ CONST. RT~~	~~Fox Home Bakery left at post office 3/4 Hot Mix Plant Redi Mix Plant 3/4~~	~~48 x 36~~				~~12~~																						NON GOVERNMENT PARTICIPATING		E-125
~~24+90 RT~~		~~16' x 72'~~				8																								
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE DESIGN DIVISION'S " SIGN POST DESIGN MANUAL ". TOTALS			SF. 16.25 76.82 93.07	SF.	EA.	SF. ~~8~~ 12						~~112~~ 834 ~~753~~			~~142~~ ~~135~~ 506			EA.						LBS.	EA.	EA.				

NOTES AND DETAILS:

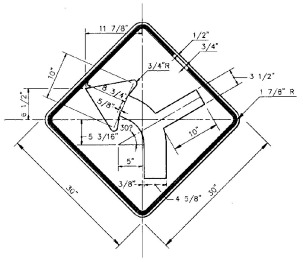
TRAFFIC SIGN SUMMARY SHEET	PREPARED BY SAS DATE 01/93 CHECKED BY MK DATE 11/93 DESIGN SUPERVISOR FJC DATE 08/92 PROJ. WALLINGFORD BRS 0137 (13) TRAFFIC SHEET NO. 3 OF 3 SHEET 22 OF 113 SHEETS

D:\CIVIL\WALLY\91120-22.DWG (1=80)

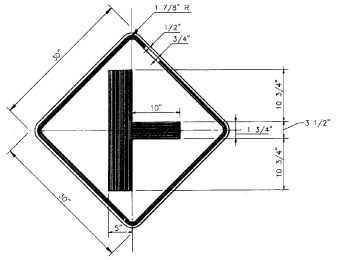
TRAFFIC SIGN DETAIL SHEET



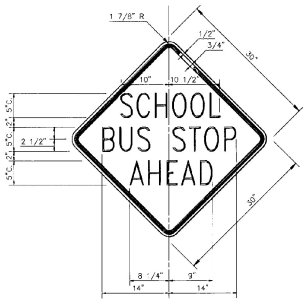
STA 10+75, RT
BACKGROUND – YELLOW (REFL.)
BORDER AND ARROW – BLACK
REFER TO STD. E–151 FOR MATERIALS



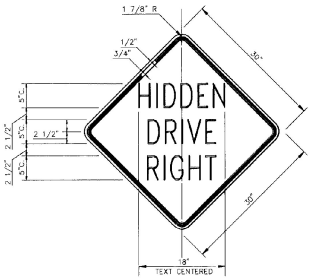
STA 22+75, LT
BACKGROUND – YELLOW (REFL.)
BORDER AND ARROW – BLACK
REFER TO STD. E–151 FOR MATERIALS



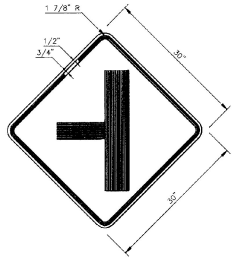
STA 26+90, RT
BACKGROUND – YELLOW (REFL.)
BORDER AND T SYMBOL – BLACK
REFER TO STD. E–151 FOR MATERIALS



STA 26+90, RT
BACKGROUND – YELLOW (REFL.)
TEXT AND BORDER – BLACK
REFER TO STD. E–151 FOR MATERIALS



STA 33+50, RT
BACKGROUND – YELLOW (REFL.)
TEXT AND BORDER – BLACK
REFER TO STD. E–151 FOR MATERIALS



STA 38+60, LT
BACKGROUND – YELLOW (REFL.)
BORDER AND T SYMBOL – BLACK
REFER TO STD. E–151 FOR MATERIALS

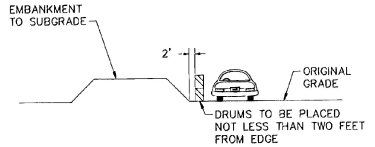
NOT TO SCALE

PREPARED BY	SAS	DATE 01/93
CHECKED BY	MK	DATE 11/93
DESIGN SUPERVISOR	FJC	DATE 08/92
PROJ.	WALLINGFORD BRS 0137 (13)	
TRAFFIC SHEET NO.	____	OF ____
SHEET	23	OF 110 SHEETS

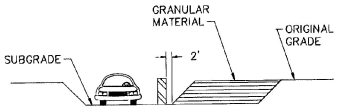
D:\CIVIL\WALLY\91120-23.DWG (1=80)

SUGGESTED TRAFFIC MANAGEMENT SEQUENCE

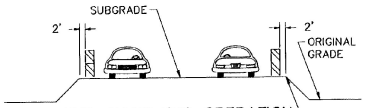
1. ALL TRAFFIC WILL UTILIZE THE EXISTING U.S. ROUTE 7 ROADWAY AND EXISTING BRIDGES #79 AND #80.
2. THE PROPOSED NEW BRIDGES #79 AND #80 WILL BE CONSTRUCTED ON A NEW ALIGNMENT AND THERE APPROACHES MAY BE CONSTRUCTED SO AS TO PROVIDE ACCESS TO THE CONTRACTOR WHILE CONSTRUCTING THE BRIDGES.
3. UPON COMPLETION OF THE BRIDGE CONSTRUCTION FOR BRIDGES #79 AND #80, THE FINAL APPROACH WORK CAN COMMENCE. THE EMBANKMENTS CAN BE CONSTRUCTED IN ACCORDANCE WITH THE GRAPHIC SHOWN FOR EMBANKMENT NAMELY FROM STA. 15+00 TO ABOUT STA. 18+00 AND THE SAME TREATMENT WILL BE AVAILABLE FROM STA. 27+00 TO STA. 31+00. THE EXCAVATION TO SUBGRADE AND SUBSEQUENT GRANULAR BORROW REPLACEMENT OF EXISTING SOILS WILL BE ACCOMPLISHED BY USE OF THE TYPICAL EXCAVATION DETAIL. THIS EXCAVATION WILL BE FROM ABOUT STA. 13+00 TO STA. 15+00 AND ALSO FROM STA. 31+00 TO ABOUT STA. 35+00. WALDO LANE WILL BE PLACED BY THIS EXCAVATION METHOD
4. UPON COMPLETION OF THE EMBANKMENTS AND BRIDGES #79 AND #80 WILL BE REMOVED AND THE EXISTING EMBANKMENT WILL BE REMOVED AND GRADED AS SHOWN ON THE PLANS AND CROSS SECTIONS.



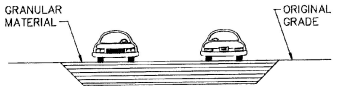
TYP. EMBANKMENT DURING WORKING HOURS



TYP. EXCAVATION DURING WORKING HOURS



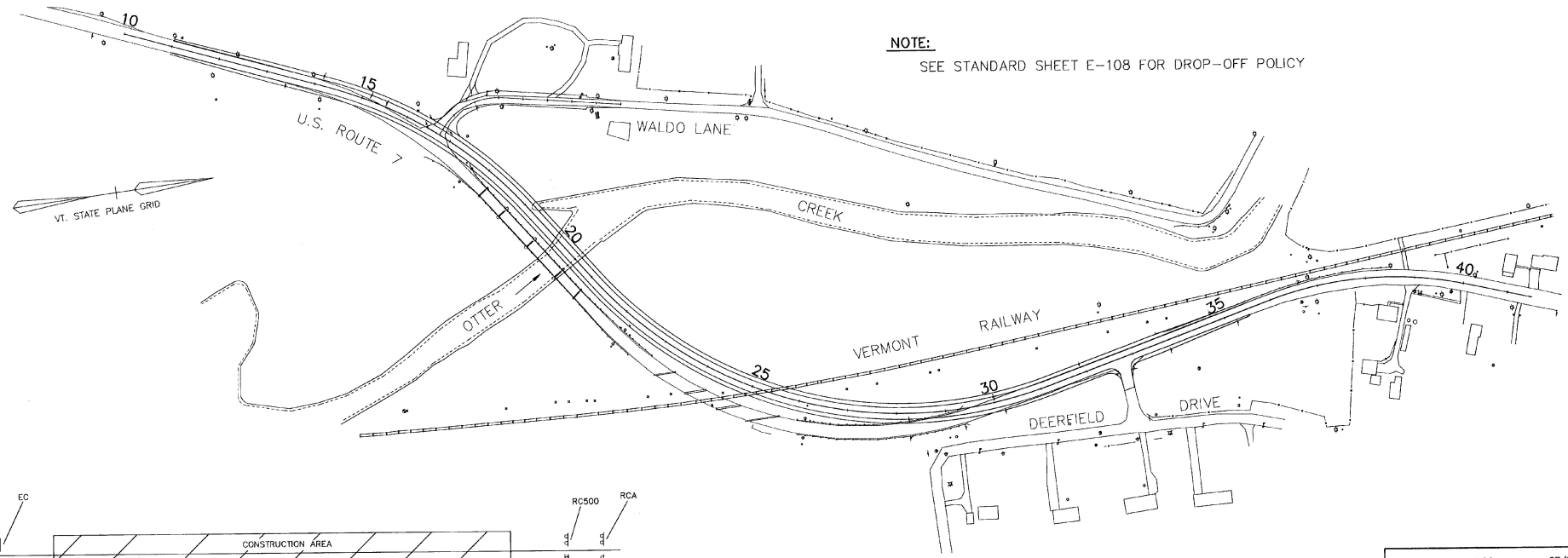
TYP. DAYS END OPERATION

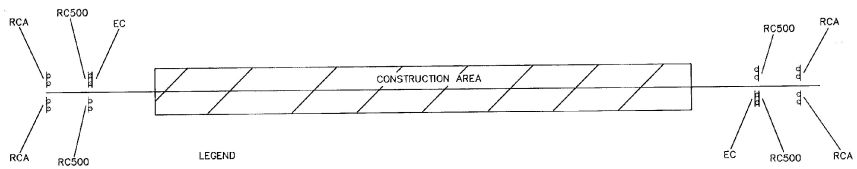


TYP. DAYS END OPERATION

NOTE:

SEE STANDARD SHEET E-108 FOR DROP-OFF POLICY





CONSTRUCTION APPROACH SIGNING

SEE STD. E-100 FOR SIGN PLACEMENT.

SCALE IN FEET

0 100 250 500

SURVEYED BY	VSC	DATE 07/90
DRAWN BY	JAC	DATE 11/94
TRACED BY	JAC	DATE 11/94

WALLINGFORD

PROJ. BRS NO. 0137(13)

SHEET 24 OF 113 SHEETS

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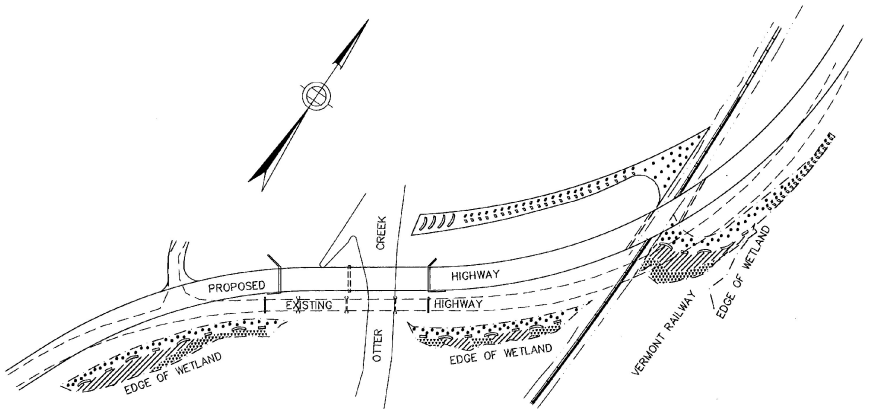


RESTORATION PLANTING PLAN

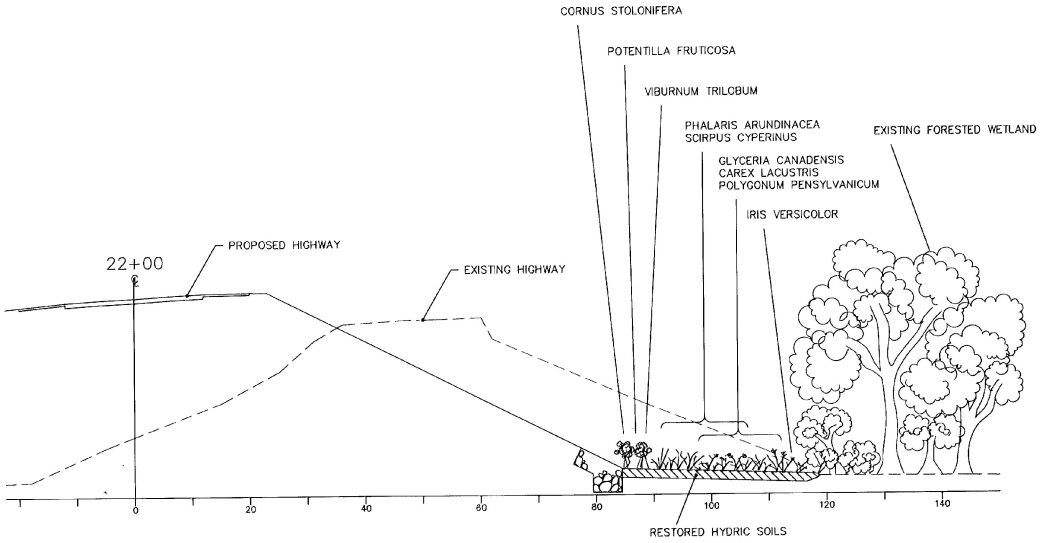
0 100 200 300 500

(SCALE IN FEET)

	SPECIES	COMMON NAMES	QUANTITY/DENSITY/ SPECIFICATION	ITEM NUMBERS
	GRAMINOIDS/HERBS			
▨	PHALARIS ARUNDINACEA SCIRPUS CYPERINUS	REED CANARY GRASS WOOL GRASS	12 LBS (30 LBS/ACRE) 200, BR, 2' ON CENTER	651.15 (MOD #1) 656.40
▨	GLYCERIA CANADENSIS CAREX LACUSTRIS POLYGONUM PENYSLVANICUM	MANNA GRASS LAKE SEDGE SMART WEED	2 LBS (10 LBS/ACRE) 200, BR, 2' ON CENTER 2 LBS (20 LBS/ACRE)	651.15 (MOD #2) 656.40 651.15 (MOD #3)
▫	IRIS VERSICOLOR	BLUE FLAG IRIS	100; 10 GROUPS OF 10, 3' ON CENTER	656.40
	SHRUBS			
●	CORNUS STOLONIFERA	RED – OSIER DOGWOOD	120; 18"–2'; STAGGERED ROW AT BASE OF SLOPE, 5' ON CENTER	656.35
▭	POTENTILLA FRUTICOSA	SHRUBBY CINQUEFOIL	50; 12"–18"; 10 CLUMPS OF 5, 3' ON CENTER	656.35
⌓	VIBURNUM TRILOBUM	HIGHBUSH CRANBERRY	70; 18"–2'; 10 CLUMPS OF 3, 6' ON CENTER	656.35
⌓	SAMBUCUS CANADENSIS	ELDERBERRY	45; 2'; 15' ON CENTER	656.35

RESTORATION AREAS

ENHANCEMENT AREAS



WETLAND RESTORATION AREA: TYPICAL CROSS–SECTION

SCALE: 1" = 10'

EROSION CONTROL MEASURES

SILT BARRIERS, STAKED HAY–BALE DIKES, JUTE MATTING, AND HAY MULCH WILL BE EMPLOYED ACCORDING TO THE SITE PLANS AND RESIDENT ENGINEER TO INHIBIT EROSION AND TO STABILIZE NEWLY ESTABLISHED SLOPES.

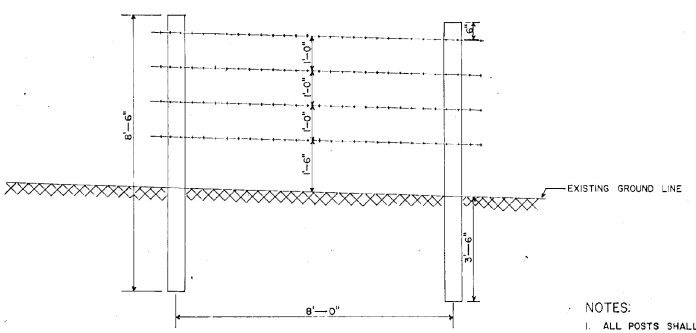
WETLAND MITIGATION

SURVEYED BY _____ DATE _____
DRAWN BY V.A.O.T. DATE 08/94
TRACED BY K.G.G. DATE 11/94

WALLINGFORD

PROJ. BRS NO. 0137(13)
SHEET 25 OF 113

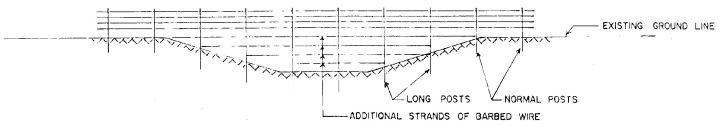
DETAIL OF BARBED WIRE FENCE



TYPICAL OF BARBED WIRE FENCE AT NORMAL SECTION

NOTES:

1. ALL POSTS SHALL BE SEASONED CEDAR, STRAIGHT, SOUND AND NO LESS THAN 4 1/2 INCHES IN DIAMETER AT THE SMALL END.
2. BARBED WIRE SHALL CONFORM TO REQUIREMENTS FOR ZINC-COATED (GALVANIZED) STEEL BARBED WIRE, ASTM A 121, 2 STRAND STANDARD SIZE NO 12 1/2, COATING CLASS NO. 3.
3. STAPLES SHALL BE AT LEAST 1 1/4 INCHES LONG OF NO. 9 GALVANIZED WIRE.
4. IN AREAS OF STREAM CROSSINGS LONGER POSTS AND ADDITIONAL STRANDS OF WIRE SHALL BE USED. THIS SHALL BE DETERMINED FROM FIELD CONDITIONS BY THE RESIDENT ENGINEER AT THE TIME OF ERECTION.



TYPICAL OF BARBED WIRE FENCE AT STREAM CROSSING

PROJECT: WALLINGFORD
BRS - 0137 (13)
SHEET 250 OF 113 SHEETS

BRUNING 44-131 40592

LIST OF BRIDGE SHEETS :

BR100	PRELIMINARY INFORMATION, PLAN AND ELEVATION
BR101	GENERAL NOTES
BR102	BRIDGE QUANTITY SHEET
BR103	BORING INFORMATION SHEET
BR104–105	BORING LOGS
BR106	MONITORING INSTRUMENT LAYOUT
BR107	SUPERSTRUCTURE DETAILS
BR108	BRIDGE DECK REINFORCING PLAN
BR109	CURB, RAILING AND SCUPPER LAYOUT
BR110	BRIDGE RAILING TRANSITION DETAILS @ ABUTMENTS
BR111	CONNECTION/TRANSITION DETAILS
BR112	CURB DETAILS
BR113	FRAMING PLAN
BR114	GIRDER ELEVATION
BR115	CROSS FRAME DETAILS
BR116	BEARING DEVICE DETAILS
BR117	DECK JOINT DETAILS
BR118	DECK JOINT DETAILS
BR119	DECK JOINT DETAILS
BR120	DOWNSPOUT DETAILS
BR121	APPROACH SLAB DETAILS
BR122	PIER PILE PLAN AND ELEVATION
BR123	PIER DETAILS
BR124	ABUTMENT NO. 1 – PLAN AND ELEVATION
BR125	ABUTMENT NO. 2 – PLAN AND ELEVATION
BR126	FOOTING REINFORCEMENT PLAN AND DETAILS
BR127	ABUTMENT NO. 1 WINGWALLS – PLAN AND ELEVATION
BR128	ABUTMENT NO. 2 WINGWALLS – PLAN AND ELEVATION
BR129	REINFORCING STEEL SCHEDULES
BR130	CHANNEL LINE CROSS SECTION
BR131	CHANNEL LINE CROSS SECTION
BR132	CHANNEL LINE CROSS SECTION

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 1992, AND ITS LATEST REVISIONS.
2. DESIGN IS FOR HS–25–44 LOADING.
3. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
4. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER BOLTS MEETING ASTM DESIGNATION A–325. HOLES SHALL BE 15/16" DIAMETER. CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STATE FOR APPROVAL.
5. ALL WELDING SHALL CONFORM WITH THE PROVISIONS OF STANDARD SPECIFICATIONS SUBSECTION 506.10.
6. ALL STRUCTURAL BOLTS CONNECTED TO STEEL MEMBERS SHOULD BE COATED IN ACCORDANCE WITH AASHTO M298, CLASS 50, TYPE I, EXCEPT AS NOTED.
7. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF BEAMS SHALL BE TAKEN AS DIRECTED BY THE ENGINEER FOR USE IN DETERMINING THE FINAL GRADE.
8. ANY HOLES IN FASCIA BEAMS OR FASCIA GIRDER WEBS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS.
9. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".
10. MINIMUM COVER FOR REINFORCING STEEL IN SUBSTRUCTURE SHALL BE THREE (3) INCHES UNLESS OTHERWISE NOTED ON THE PLANS.
11. REINFORCING PLACEMENT TOLERANCES SHALL BE
    SPACING – 1"
    CLEARANCE – 1/4"
12. DECK CONCRETE SHALL BE "CONCRETE, CLASS A". CURB CONCRETE SHALL BE "SILICIA FUME CONCRETE". ALL OTHER CONCRETE SHALL BE "CONCRETE CLASS B" UNLESS OTHERWISE DESIGNATED ON THE PLANS.
13. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".
14. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/2" PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD ABUTMENT FACE. PIER SEATS SHALL BE SLOPED EACH WAY FROM CENTER. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTH WITH EITHER A WOOD OR MAGNESIUM FLOAT FINISH.
15. FOR BRIDGE DECK POURS THE MAXIMUM TIME LIMIT FOR ANY COMBINATION OF POURS DONE IN ONE DAY SHALL BE EIGHT HOURS. THERE SHALL BE A MINIMUM DELAY OF NINETY–SIX HOURS BETWEEN THE COMPLETION OF ONE DAYS POUR AND THE BEGINNING OF ANY OTHER POUR.
16. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP NOTCHES.
17. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.
18. NOTES ON BOLTED CONNECTIONS:
    A. MECHANICALLY GALVANIZED AND PAINTED TYPE I BOLTS ARE TO BE USED FOR PAINTED M270 GRADE 50 AND PAINTED M270 GRADE 36 STRUCTURAL STEEL CONNECTIONS. FIELD PAINTING OF BOLTS TO INCLUDE INTERMEDIATE AND FINAL COATING SYSTEMS AFTER CONNECTION APPROVAL.
    B. TYPE III BOLTS ARE TO BE USED FOR UNPAINTED M270 GRADE 50W STRUCTURAL STEEL CONNECTORS.
19. THE EXISTING STRUCTURE SHALL BE REMOVED UNDER ITEM 529.15. "BRG 79". THE EXISTING PIERS SHALL BE REMOVED DOWN TO 2' BELOW THE RIVER BED. THE EXISTING ABUTMENTS SHALL BE COMPLETELY REMOVED.
20. REMOVAL SHALL BE DONE IN A SAFE, WORKMANLIKE MANNER. EXISTING STRUCTURAL STEEL STRINGERS, STEEL BEAM GUARD RAILS, SHEET PILING AND TRAFFIC CONTROL SIGNALS SHALL REMAIN PROPERTY OF THE STATE AND WILL BE TRANSPORTED BY STATE FORCES. TRAFFIC CONTROL SIGNALS WILL BE SALVAGED ONLY AFTER THE CONTRACTOR HAS HAD THE OPPORTUNITY TO USE THEM FOR TRAFFIC CONTROL. ALL OTHER MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
21. ABUTMENT AND WINGWALL CONCRETE ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE FINAL FINISHED GRADE OF DECK IS ESTABLISHED BY THE ENGINEER.
22. INTERMEDIATE DIAPHRAGM BOLTS SHALL ONLY BE SNUG TIGHT UNTIL AFTER THE ENTIRE DECK HAS BEEN PLACED.
23. THE DESIGN LOADING FOR THE PIER PILES (HP 14x73) IS 149 KIPS. ALL PILES SHALL BE DRIVEN TO REFUSAL AND HAVE AN ULTIMATE CAPACITY OF 2.75 TIMES THE DESIGN LOAD OR 410 KIPS. ALL PILES SHALL HAVE SHOES WHEN DRIVEN.
24. ALL PILES SHALL BE FURNISHED WITH A REINFORCED PILE TIP OF PREFABRICATED CAST STEEL MEETING THE REQUIREMENTS OF ASTM A27. SEE SUBSECTION 505D4 (d).
25. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W, UNLESS OTHERWISE NOTED.
26. FOR INFORMATION ABOUT COFFERDAM AT THE PIER, SEE SPECIAL PROVISIONS. PRICE FOR COFFERDAM SHALL INCLUDE PRICE OF PLACING COFFERDAM SEAL, EXCAVATION AND SHEET PILING (BOTH TEMPORARY AND PERMANENT) AS DETAILED.
27. SEE SHEET BR112 FOR BENCH MARK AND BRIDGE PLAQUE DETAILS.
28. THE "STONE FILL", TYPE II SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE GIRDERS ARE ERECTED.
29. ALL STRUCTURAL STEEL WITHIN A DISTANCE OF 10' FROM THE ENDS OF THE GIRDERS WILL BE COATED WITH A PROTECTIVE PAINT SYSTEM WITH THE FINAL COAT TO BE A DARK BROWN TO BLEND WITH THE AASHTO M270 GRADE 50W STEEL. THIS WORK WILL BE PAID FOR UNDER ITEM 513.25 "STRUCTURAL PAINTING, SHOP APPLIED" AND 513.40 "SURFACE PREPARATION" SEE SUPPLEMENTAL SPECIFICATION 513 FOR PAINTING OF STRUCTURAL STEEL.
30. FOR LIST OF STANDARD SHEETS SEE SHEET 2 OF 113.

REFERENCE SHEETS :

FOR PLAN AND PROFILE SEE SHEET 15 OF 113.

FOR CROSS SECTIONS SEE SHEETS 100 THROUGH 103 OF 113.

FOR CHANNEL SECTIONS SEE SHEETS BR130 THRU BR132.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK	
GENERAL NOTES	
Designed By TJC	Drawn By JNC
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR101	Sheet 27 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

BRIDGE QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

GRADES						EARTHWORK							
% GDE	VERT CUR	STATION	ELEVATION ON TAN.	ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN: SUPER STRUCTURE	PIER	ABUTMENT NO. 1	ABUTMENT NO. 2	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	CHANNEL	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CY							112.6 ~~425~~	112.6 ~~425~~	112.6
203.32	GRANULAR BORROW	CY			0 ~~575~~	4599.9 ~~3738~~				4599.9 ~~4,313~~	4599.9
204.25	STRUCTURE EXCAVATION	CY			293 ~~220~~	0 ~~110~~				293 ~~330~~	239.3
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY			206.9 ~~105~~	147.4 ~~40~~				354.5 ~~145~~	354.5
204.40	COFFERDAM (STA. 19+70)	LS		1 ✓						1 ✓	1
406.25	BITUMINOUS CONCRETE PAVEMENT	TON	180.2 ~~158~~							180.2 ~~158~~	180.2
501.22	CONCRETE, CLASS A	CY	317.38 ~~316~~							317.38 ~~316~~	317.38
501.25	CONCRETE CLASS B	CY		203.54 ~~204~~	187.63 ~~186~~	178.27 ~~182~~	35.71 ~~36~~	35.61 ~~36~~		641.96 ~~644~~	641.96
501.60	SILICA-FUME CONCRETE	CY	39.73 ~~38~~							39.73 ~~38~~	39.73
504.10	FURNISHING EQUIPMENT FOR DRIVING PILING	LS		1 ✓						1 ✓	1
505.17	STEEL PILING (HP 14 x 73)	LF		1150.4 ~~890~~						1150.4 ~~890~~	1150.4
505.36	TEMPORARY STEEL SHEET PILING	SF			312 ~~600~~	804 ~~600~~				1246 ~~1200~~	1246
506.55	STRUCTURAL STEEL (PLATE GIRDER)	LB	444034 ~~460,000~~							444034 ~~460,000~~	444034
507.15	REINFORCING STEEL	LB		29521 ~~27,300~~	13095 ~~13,600~~	13603 ~~13,900~~				56818 ~~54,800~~	56818
507.17	EPOXY COATED REINFORCING STEEL	LB	105,726 ~~105,300~~				4239 ~~4,350~~	4238 ~~4,350~~		114,203 ~~114,000~~	114,203
508.15	SHEAR CONNECTORS (BR 79) (2520 - 7/8" DIA. x 7" STUDS)	LS	1 ✓							1 ✓	1
513.25	STRUCTURAL PAINTING - SHOP APPLIED "20 TONS BR 79"	LS	1 ✓							1 ✓	1
513.40	SURFACE PREPARATION (BR 79)	LS	1 ✓							1 ✓	1
514.10	WATER REPELLANT	GAL	22 ✓	46 ~~8~~	9.7 ~~8~~	9.7 ~~8~~				51 ~~49~~	51
516.10	BRIDGE EXPANSION JOINT	LF	81.5 ~~82~~							81.5 ~~82~~	81.5
519.20	SHEET MEMBRANE WATERPROOFING	SY	1114.35 ~~1,280~~				86 ✓	86 ✓		1286.35 ~~1,452~~	1286.35
525.31	BRIDGE RAILING - 2 RAIL GALV. BOX BEAM	LF	575 ~~569~~							575 ~~569~~	575
527.10	MAINTENANCE OF TRAFFIC - BRG. PROJECTS (BR 79)	LS	1 ✓							1 ✓	1
529.15	REMOVAL OF STRUCTURE (BR 79)	EA	1 ✓							1 ✓	1
531.10	BEARING DEVICE ASSEMBLY	EA	18 ✓							18 ✓	18
~~595.25~~	DISPOSAL OF CONTAM. STEEL (BR79)	LS	1 ✓							1 ✓	1
613.11	STONE FILL, TYPE II	CY							227 ~~200~~	227 ~~200~~	227
613.13	STONE FILL, TYPE IV	CY							1377.1 ~~1,325~~	1377.1 ~~1,325~~	1377.1
623.21	SETTLEMENT PLATFORM, TYPE I	EA				3 ✓				3 ✓	3
623.23	SETTLEMENT PLATFORM, VIBRATING WIRE	EA				1 ✓				1 ✓	1
623.30	INCLINOMETER	LF				42 ~~40~~				42 ~~40~~	42
631.16	TESTING EQUIPMENT - CONCRETE	LS	0.20 ✓	0.15 ✓	0.10 ✓	0.10 ✓	0.05 ✓	0.05 ✓		0.65 ✓	0.65
631.18	TESTING EQUIPMENT - PROTECTIVE COATING	LS	0.65 ✓							0.65 ✓	0.65
649.31	GEOTEXTILE UNDER STONE FILL	SY							1091 ~~1,100~~	1091 ~~1,100~~	1091
900.03	EXTRA W.O. #3 REVISION OF GRADING SYSTEM DUE TO CHANGE IN BRIDGE ELEVATION	EA									1

BRIDGE(S) AT STATION(S) STA. 18+50 TO STA. 21+07.50
LOCATION(S) U.S. ROUTE 7 OVER OTTER CREEK

PREPARED BY: T.J.C. CHECKED BY: D.L.J.
SUPERVISOR: E.M.M.

PROJECT: WALLINGFORD PROJECT NO: BRS 0137 (13)
BR102 OF SHEET NO: 28 OF 116

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil – Low Compressibility
A5	Silty Soil – Highly Compressible
A6	Clayey Soil – Low Compressibility
A7	Clayey Soil – Highly Compressible

UNIFIED SOIL SYSTEM

GW/GP	Clean Gravels (Few Fines)
GM/GC	Gravels (Appreciable Fines)
SW/SP	Clean Sands (Few Fines)
SM/SC	Sand (Appreciable Fines)
ML/CL	Low Plastic Silts & Clays
OL	Low Plastic Organic Silt
MH/CH	High Plastic Silts & Clays
OH	High Plastic Organic Silt
Pt	Highly Organic Soils

MOISTURE

DESCRIPTIVE TERM	OBSERVED IN FIELD	% ± BY ANALYSIS
Dry	No Visible Water	<10
Moist	Damp	10–20
Moist to Wet	Moist to Wet	21–50
Wet	Visible Water	51–70
Saturated		>70

ROCK QUALITY DESIGNATION

R.Q.D.	ROCK DESCRIPTION
<.25	Very Poor
.25 to .50	Poor
.51 to .75	Fair
.76 to .90	Good
>.90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250–500	Soft
500–1000	Med. Stiff
1000–2000	Stiff
2000–4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

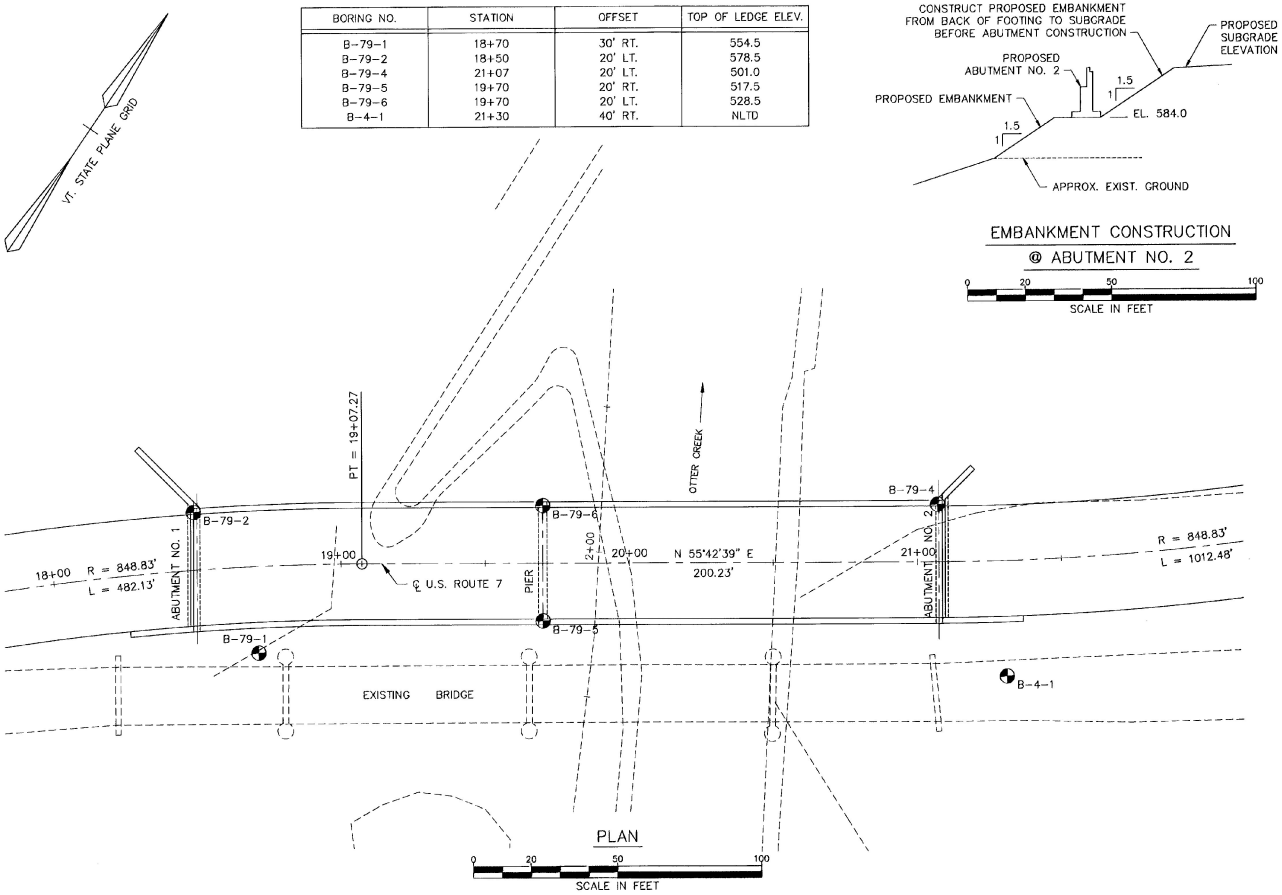
COMMONLY USED SYMBOLS

▼	Water Elevation
⊕	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N>100)

COLOR

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

BORING NO.	STATION	OFFSET	TOP OF LEDGE ELEV.
B-79-1	18+70	30' RT.	554.5
B-79-2	18+50	20' LT.	578.5
B-79-4	21+07	20' LT.	501.0
B-79-5	19+70	20' RT.	517.5
B-79-6	19+70	20' LT.	528.5
B-4-1	21+30	40' RT.	NLTD



PLAN

EMBANKMENT CONSTRUCTION @ ABUTMENT NO. 2

0 20 50 100
SCALE IN FEET

DEFINITIONS (AASHTO)

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

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

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

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

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

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

CLAY – Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED – Alternate layers of silt and clay.

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

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

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

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

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

DIP – Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 9/91 and 12/91 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

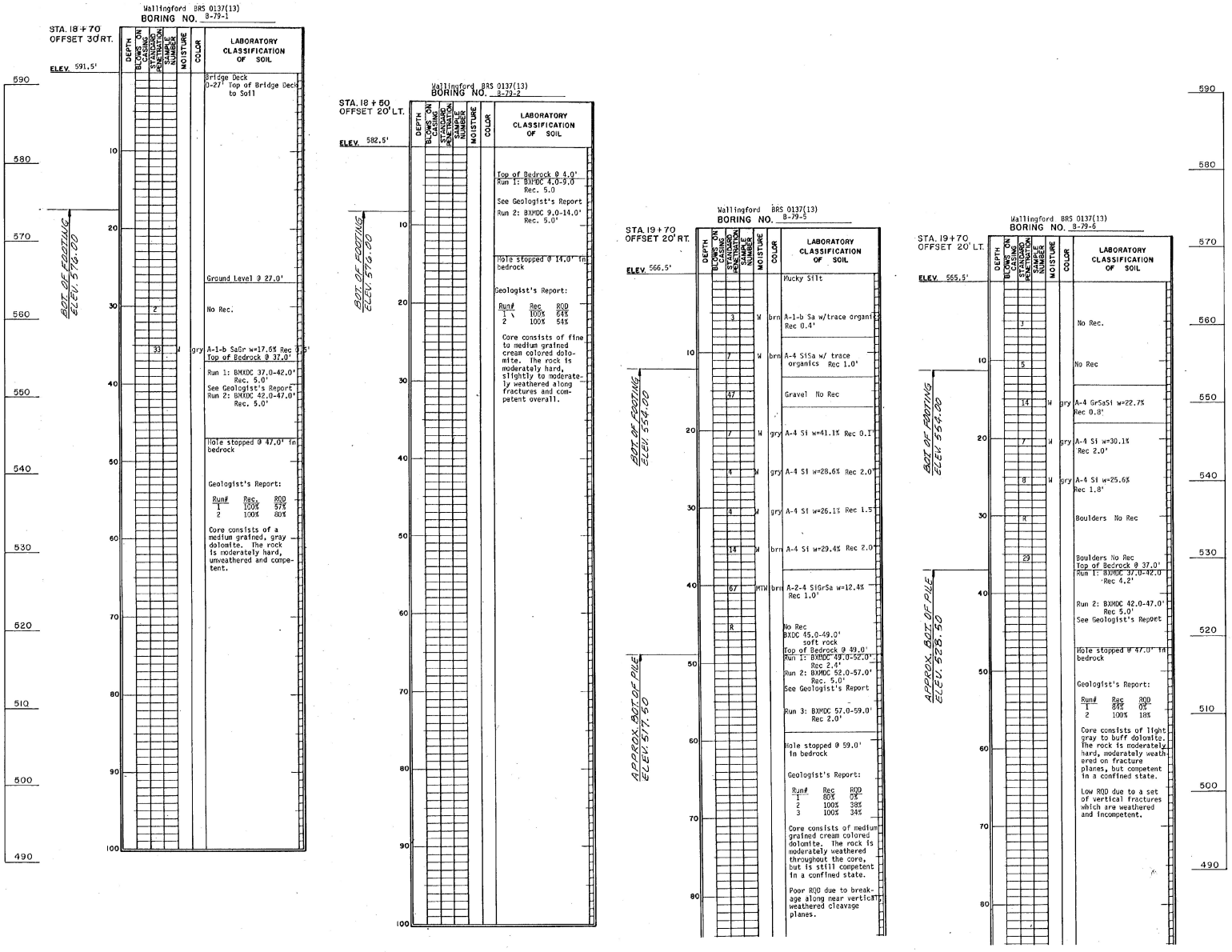
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

BORING INFORMATION

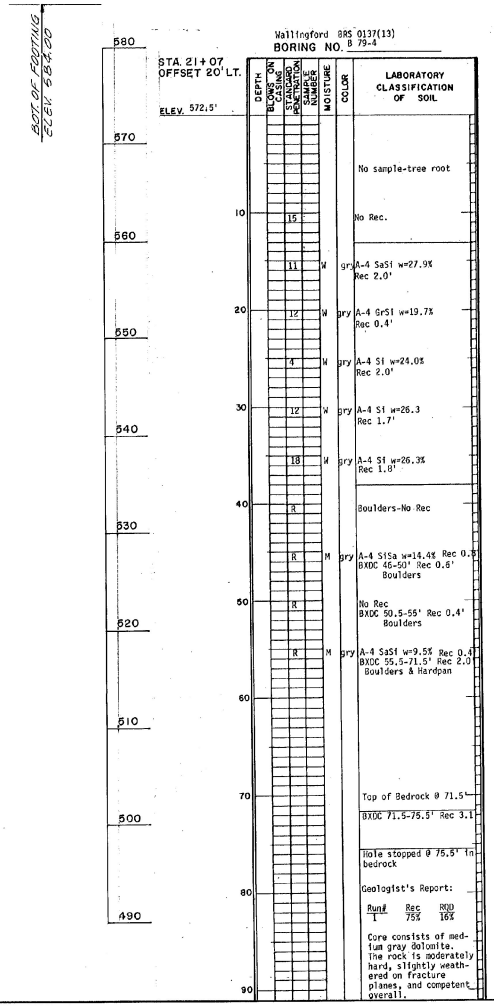
Designed By TJC	Drawn By SAM
Checked By DLJ 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137(13)
I.G.C. Info.	
Bridge Sheet No. BR103	Sheet 29 of 113

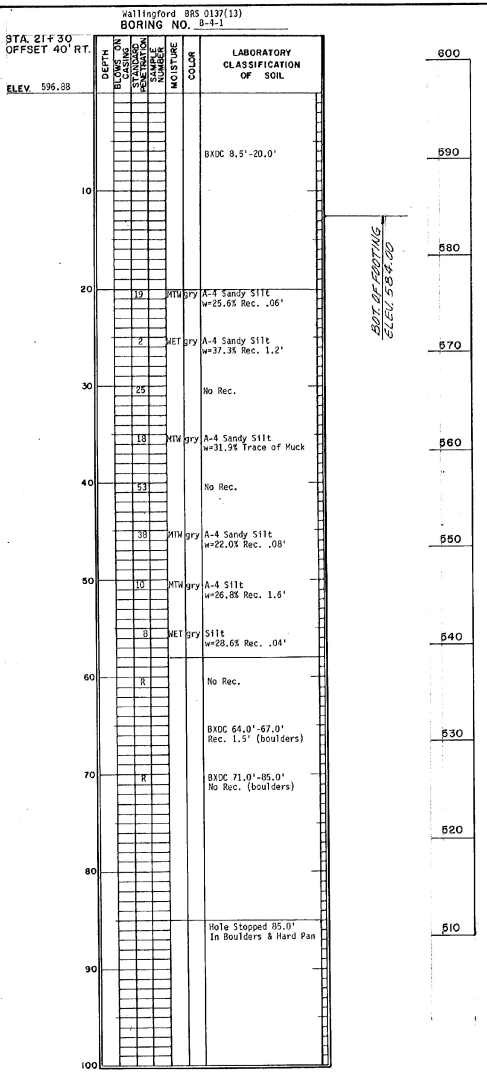


STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. RT. 7	Log Sta. / Surv. Sta.
U.S. RT. 7 OVER OTTER CREEK	
BORING LOGS	
Designed By GRI	Drawn By RJL
Checked By TJC Date 11/94	Bridge Design Supervisor EMM Date 11/94
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR 104	Sheet 30 of 113

D:\CIVIL\WALLY\91120-00.DWG (1=10)





STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. RT. 7	Log Sta. / Surv. Sta.
U.S. RT. 7 OVER OTTER CREEK	
BORING LOGS	
Designed By GRI	Drawn By RJL
Checked By TJC Date 11/94	Bridge Design Supervisor EMM Date 11/94
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR 105	Sheet 31 of 113

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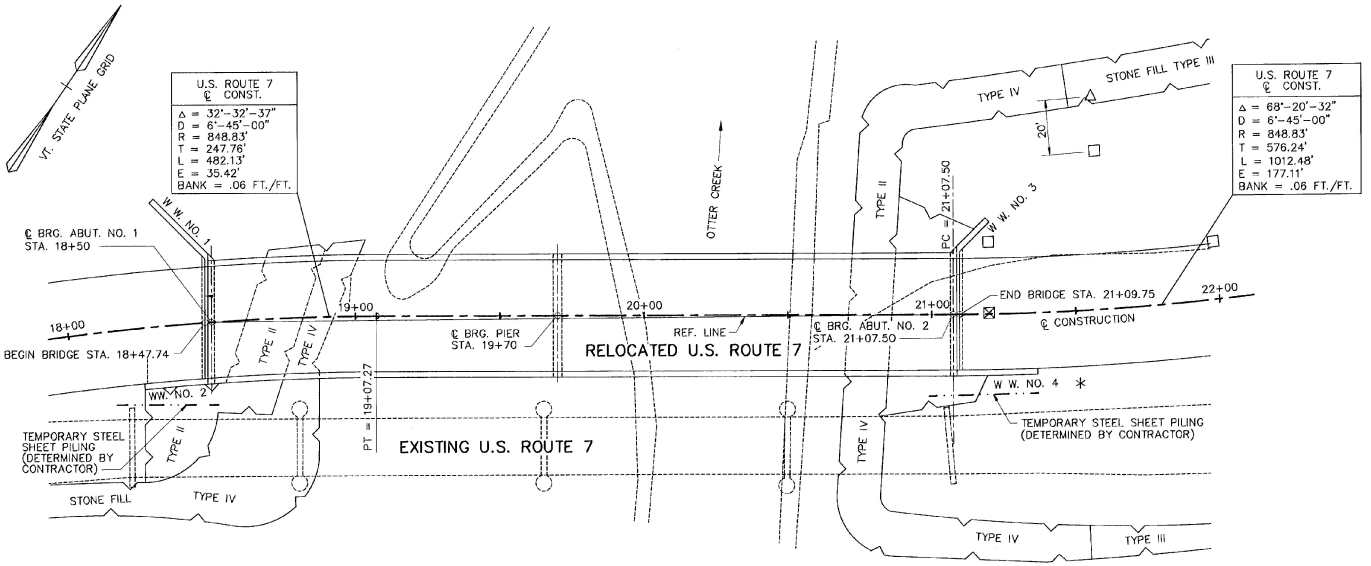


PLAN

0 20 50 100

SCALE IN FEET

TYPE I SETTLEMENT PLATFORM LOCATIONS

STATION	OFFSET
21+20	25' LEFT
21+60	55' LEFT
22+00	20' LEFT

SETTLEMENT PLATFORM VIBRATING WIRE LOCATIONS

STATION	OFFSET
21+20	℄

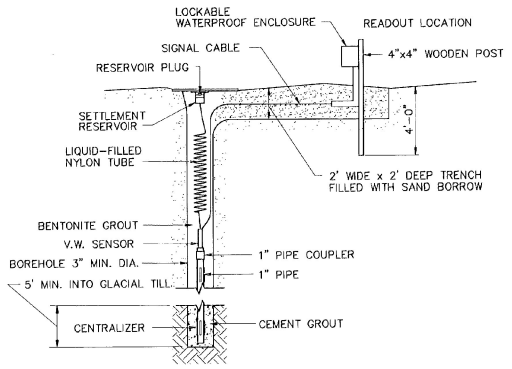
SLOPE INCLINOMETER LOCATIONS

STATION	OFFSET
21+60	75' LEFT

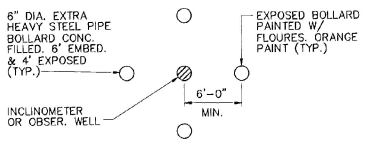
LEGEND

△ – SLOPE INCLINOMETER
□ – SETTLEMENT PLATFORM TYPE I
⊠ – SETTLEMENT PLATFORM VIBRATING WIRE
* – APPROX. LOCATION READOUT BOX

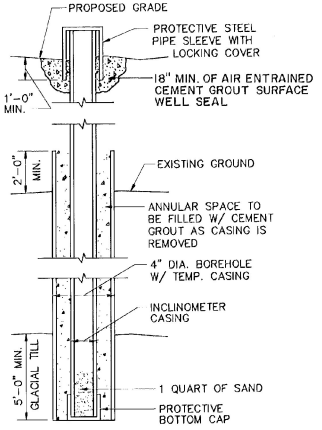
NOTE :
FOR DETAILS OF SETTLEMENT PLATFORMS TYPE I SEE STANDARD SHEET L-1.



SETTLEMENT PLATFORM VIBRATING WIRE
NOT TO SCALE



PROTECTIVE BOLLARD DETAIL
NOT TO SCALE



INCLINOMETER
NOT TO SCALE

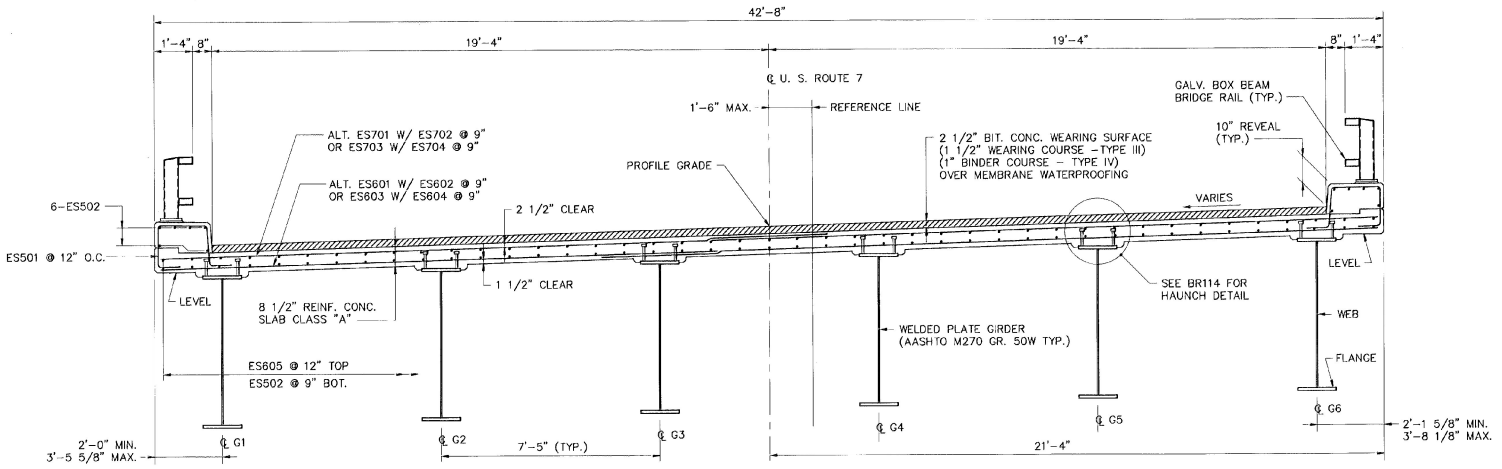
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK
MONITORING INSTRUMENT LAYOUT

Designed By SFS	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR106	Sheet 32 of 113

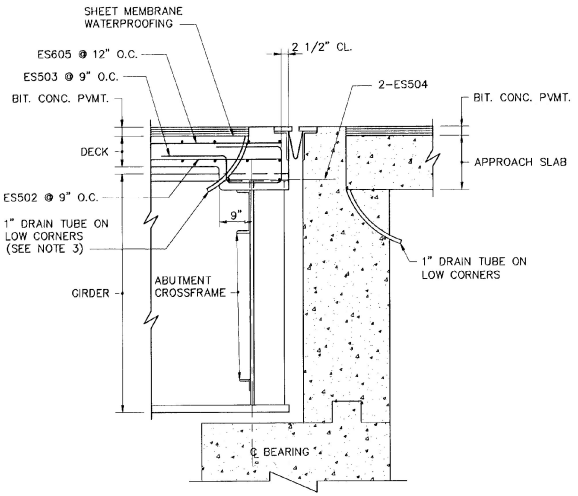
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



TYPICAL BRIDGE SECTION

0 1 2 3 4 5 10

SCALE IN FEET



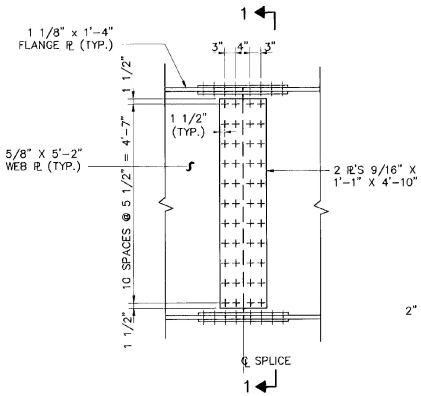
EXPANSION END - ABUTMENT NO. 2

(ABUTMENT NO. 1 OPP. HAND)

TYPICAL SECTION NORMAL TO ABUTMENT

0 1 2 3 4

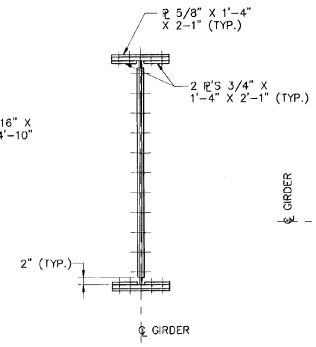
SCALE IN FEET



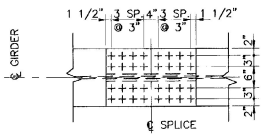
SPLICE DETAIL

0 1 2 3 4

SCALE IN FEET



SECTION 1-1



PLAN

NOTES:

1. THE BRIDGE RAILING SHALL BE GALVANIZED BOX BEAM BRIDGE RAIL. SEE VAOT STANDARD SB-R4A-82.
2. ALL SUPERSTRUCTURE REINFORCING STEEL SHALL BE EPOXY COATED.
3. 1" ø PLASTIC TUBE, THE COST OF WHICH IS SUBSIDIARY TO ITEM "CONCRETE, CLASS A". CARE SHALL BE TAKEN TO KEEP TUBE CLEAR DURING CONSTRUCTION. THE TOP OF THE TUBE SHALL BE RECESSED 1/4" BELOW THE TOP OF THE CONC. DECK, AND THE BOTTOM LOCATED 6" BELOW THE BOTTOM FLANGE OF THE NEAREST GIRDER (LOW SIDE OF BRIDGE).
4. FOR BANKING DIAGRAM SEE SHEET NO. 101 OF 113.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

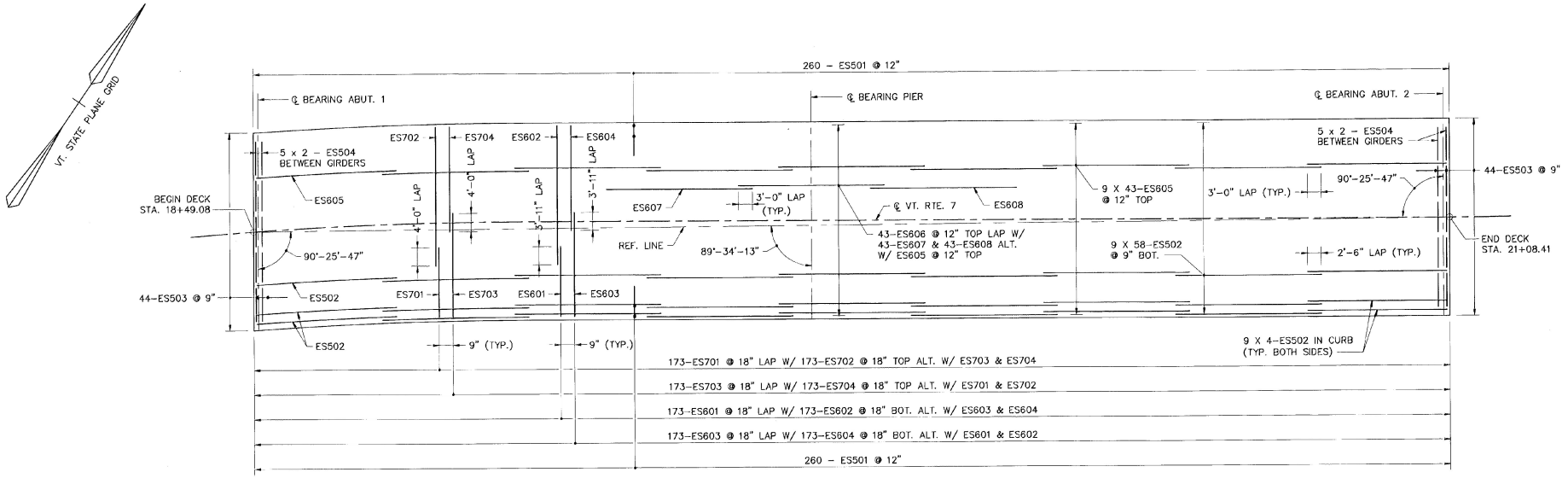
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

SUPERSTRUCTURE DETAILS

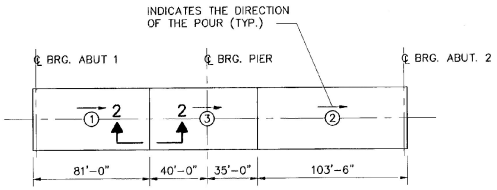
Designed By DLJ	Drawn By SAM
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR107	Sheet 33 of 113



BRIDGE DECK REINFORCING PLAN

0 8 16 24 32

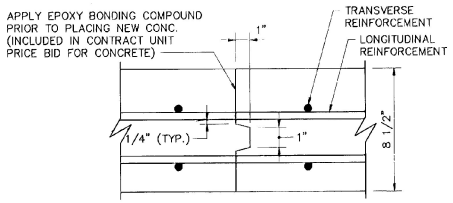
SCALE IN FEET



DECK POUR SEQUENCE

0 40 100 200

SCALE IN FEET



SECTION 2–2

0 2

SCALE IN FEET

NOTES :

1. EACH DECK POUR SHALL BE ACCOMPLISHED IN A MAXIMUM OF 8 HOURS. RETARDER SHALL BE USED AS DIRECTED BY THE ENGINEER.
2. POURS #'s 1 & 2 SHALL BE POURED BEFORE #3.
3. A MINIMUM DELAY OF 96 HOURS BETWEEN POURS SHALL BE OBSERVED WHEN 2 ABUTING DECK SECTIONS ARE NOT POURED IN THE SAME 8 HOUR PERIOD.
4. THE CONTRACTOR SHALL SUBMIT THE PROPOSED DECK POUR DATES AND THE PROPOSED SEQUENCE IF IT DIFFERS FROM THAT INDICATED HERE TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BEGINNING THE POURING.
5. ALL DECK REINFORCING BARS SHALL BE EPOXY COATED.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

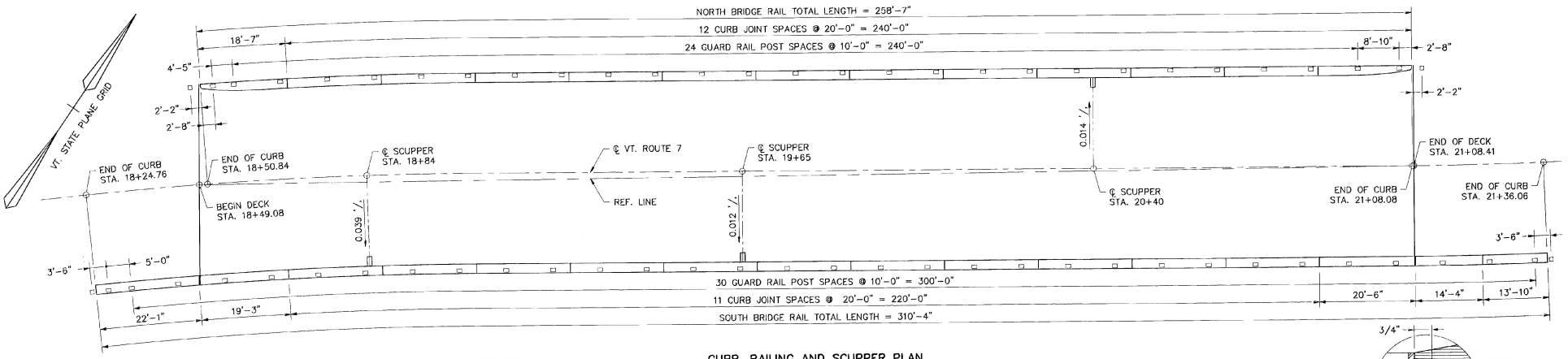
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

DECK REINFORCEMENT

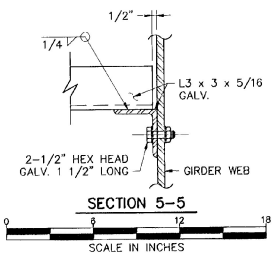
Designed By DLJ	Drawn By JNC
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.Q.C. Info.	
Bridge Sheet No. BR108	Sheet 34 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



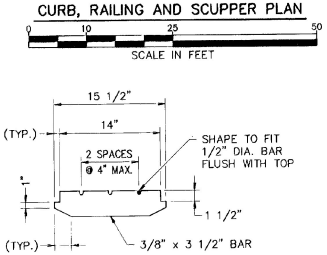
CURB & RAILING NOTES:

1. THE 2'-0" CURB SHALL BE PLACED IN 20'-0' SECTIONS AS PER DWG. BR112, CURB JOINT DETAILS. PLACEMENT DETAILS FOR THE CURB SHALL BE SUBMITTED TO THE BRIDGE RAILING FABRICATOR BY THE CONTRACTOR.
2. BRIDGE RAIL POST SHALL BE 1'-6" MINIMUM FROM CURB CONSTRUCTION JOINTS (UNLESS OTHERWISE NOTED).
3. FOR CURB JOINT DETAILS AND CURB DETAILS SEE BR112.
4. FOR BRIDGE RAILING DETAILS SEE BR110 AND STANDARD SHEET SB-R4A-82.
5. FOR APPROACH RAIL DETAILS SEE STANDARD SHEET SB-R4B-82.



SECTION 5-5

SCALE IN INCHES

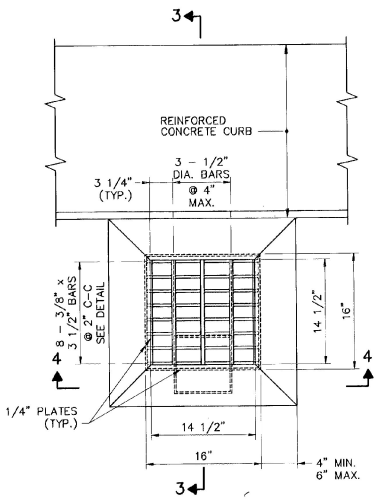


CURB, RAILING AND SCUPPER PLAN

SCALE IN FEET

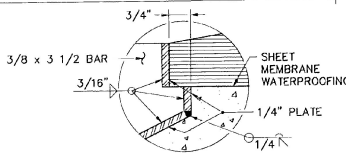
BAR DETAIL FOR GRATE

SCALE IN FEET



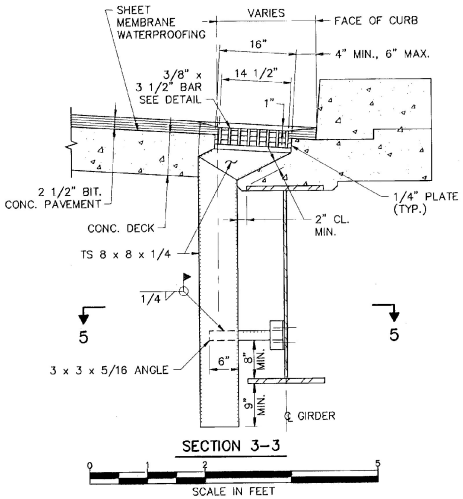
TYPICAL PLAN

SCALE IN FEET



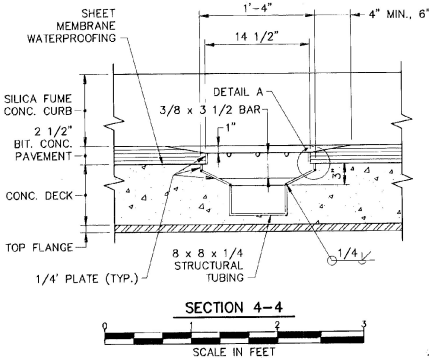
DETAIL A

SCALE IN INCHES



SECTION 3-3

SCALE IN FEET



SECTION 4-4

SCALE IN FEET

SCUPPER NOTES:

1. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 OR A501. ALL OTHER STL. SHALL CONF. TO M270 GRADE 36. THE WHOLE SCUPPER ASSEMBLY SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.
2. ALL SURFACES OF SCUPPER WHICH WILL CONTACT CONCRETE SHALL BE COATED WITH EPOXY BONDING COMPOUND IN ACCORDANCE WITH SECTION 719. THE COST OF THIS WORK SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR CONCRETE, CLASS A.
3. SCUPPERS SHALL BE PAID FOR AS STRUCTURAL STEEL (PLATE GIRDER).
4. SPECIAL CARE SHALL BE TAKEN TO SEAL WATERPROOFING MEMBRANE AROUND SCUPPERS SIMILAR TO METHOD USED AT CURB.
5. THE TOP SURFACE OF SCUPPER SHALL BE SLOPED TO MATCH ROADWAY SLOPE AND GRADE.
6. ANY GALVANIZED AREAS THAT ARE WELDED IN THE FIELD MUST BE COATED WITH AN APPROVED SEALER AFTERWARDS, ACCORDING TO VERMONT SPECIFICATION 708.02(d).

STATE OF VERMONT
AGENCY OF TRANSPORTATION

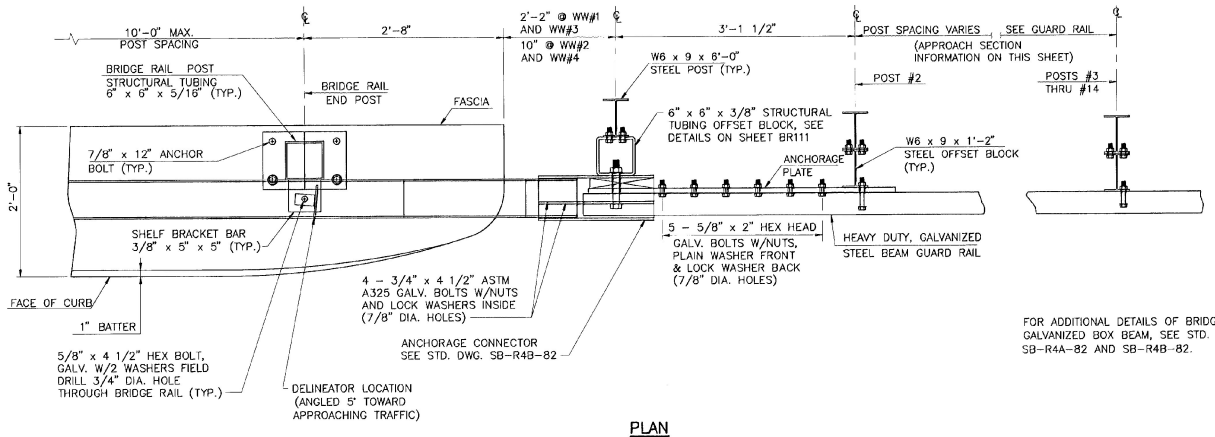
Town Of	WALLINGFORD	Bridge No.	79
		Log Sta.	
Highway No.	U.S. ROUTE 7	Surv. Sta.	

U.S. ROUTE 7 OVER OTTER CREEK

SCUPPER DETAILS

Designed By	TJC	Drawn By	JNC
Checked By	Date	Bridge Design Supervisor	
DLJ	4/95	EMM	Date 4/95
PROJECT	WALLINGFORD	PROJECT NO.	BRS 0137 (13)
I.G.C. Info.			
Bridge Sheet No.	BR109	Sheet	35 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



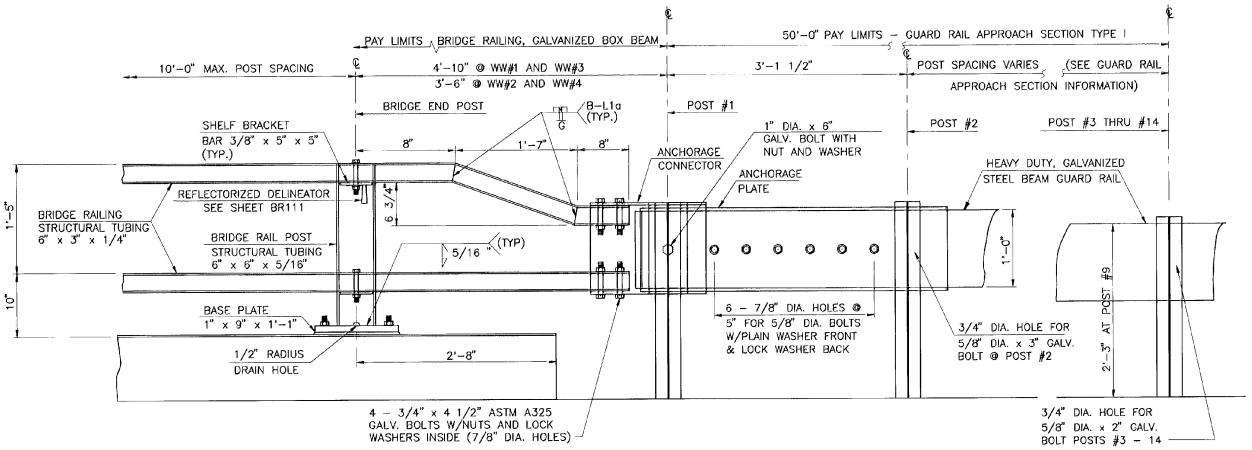
PLAN
N.T.S.

FOR ADDITIONAL DETAILS OF BRIDGE RAILING, GALVANIZED BOX BEAM, SEE STD. DWGS. SB-R4A-82 AND SB-R4B-82.

GUARD RAIL APPROACH SECTION TYPE I

POST NO.	SPACING
1	
2	3'-1 1/2"
3	3'-1 1/2"
4	3'-1 1/2"
5	3'-1 1/2"
6	3'-1 1/2"
7	3'-1 1/2"
8	3'-1 1/2"
9	3'-1 1/2"
10	4'-2"
11	4'-2"
12	4'-2"
13	6'-3"
14	6'-3"

50'-0"PAY LENGTH GUARD RAIL APPROACH SECTION, TYPE I



ELEVATION
N.T.S.

FOR ADDITIONAL INFORMATION ON THE CONNECTION/TRANSITION DETAILS AT POST NO. 1, SEE SHEET BR111.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

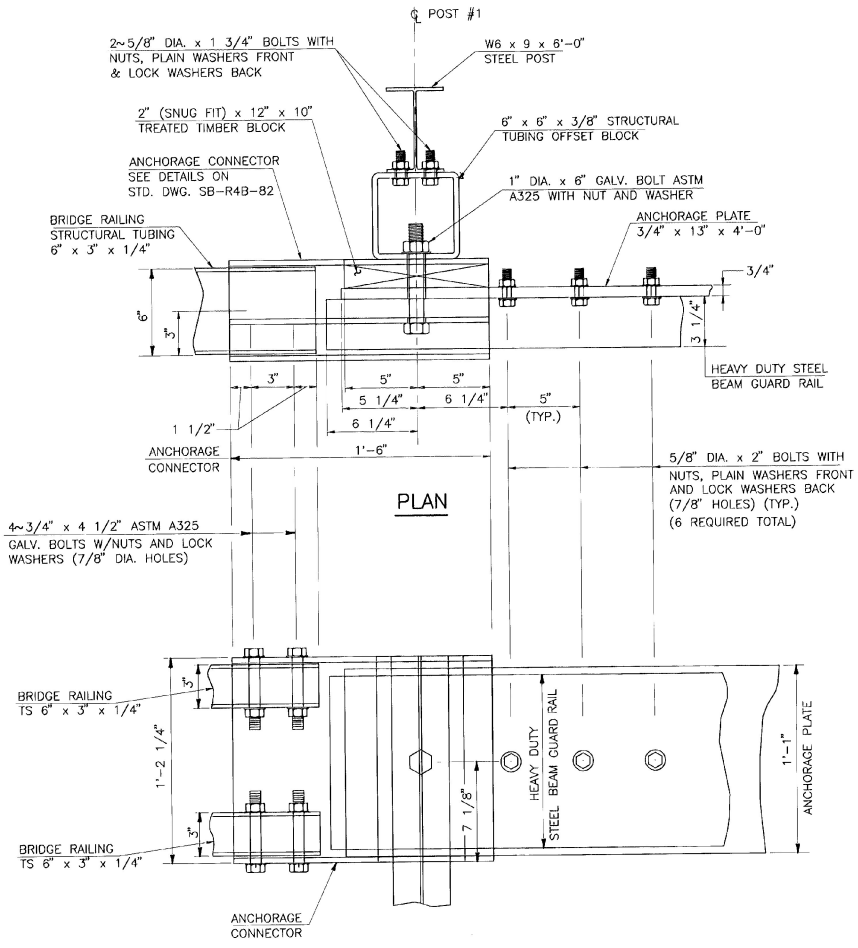
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

BRIDGE RAILING TRANSITION DETAILS @ ABUTMENTS

Designed By VAOT	Drawn By VAOT
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR110	Sheet 36 of 113

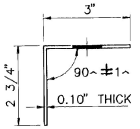
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



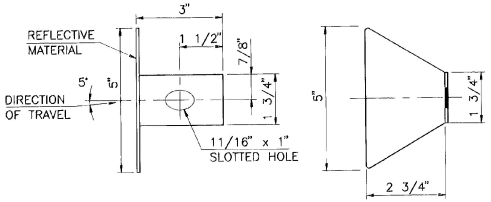
ELEVATION

CONNECTION/TRANSITION DETAILS AT POST NO. 1

0 SCALE IN FEET

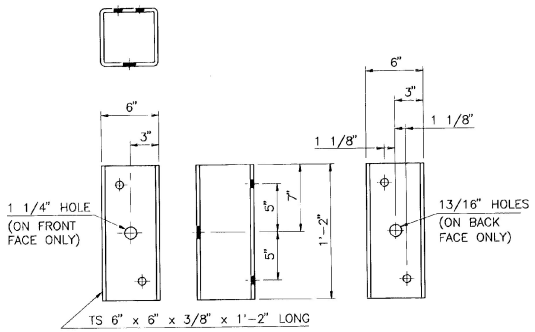


REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE LEFT OR MEDIAN SIDE OF INTERSTATE ROADWAYS.



DELINEATOR DETAILS

THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 30 FEET OR CLOSEST POST. DELINEATOR SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052 – H32.



STRUCTURAL TUBING OFFSET BLOCK DETAILS

(OCCURS AT POST NO. 1 WHEN USING APPROACH RAIL UTILIZING STEEL POSTS)

BOX BEAM BRIDGE RAIL NOTES

1. BRIDGE RAILING AND GUARD RAIL APPROACH SECTIONS ARE DESIGNED IN ACCORDANCE WITH THE LATEST AASHTO SPECIFICATIONS.
2. ALL PLATES, BARS, AND ANGLES SHALL BE ASTM A36 STEEL. UNLESS OTHERWISE SPECIFIED, ALL BOLTS SHALL BE ASTM A307. STRUCTURAL STEEL TUBING SHALL BE ASTM A500 COLD-FORMED GRADE B AS MODIFIED IN SECTION 732.03(a).
3. ALL BOX BEAM BRIDGE RAILING, COMPONENTS, ANCHOR BOLTS, AND ATTACHMENT HARDWARE SHALL BE GALVANIZED TO ASTM A123 AFTER FABRICATION.
4. THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS, INCLUDING WELDING PROCEDURES TO THE STRUCTURES DIVISION, FOR APPROVAL IN ACCORDANCE WITH THE PROVISIONS OF SECTION 506.04 – SHOP DRAWINGS. ALL WELDING SHALL CONFORM WITH SECTION 506.10.
5. THE RAIL SYSTEM SHALL BE CONTINUOUS WITH EACH TUBE SECTION ATTACHED TO A MINIMUM OF TWO POSTS. JOINTS SHALL BE SPLICED AS SHOWN, WITH CONNECTIONS LOCATED ONE DIRECTLY ABOVE THE OTHER.
6. A BRIDGE RAILING JOINT SPLICE SHALL BE PROVIDED AT EACH SUPER-STRUCTURE EXPANSION JOINT. THE RAIL JOINT OPENING SHALL BE ONE INCH UNLESS OTHERWISE NOTED.
7. THE BOX BEAM RAIL SHALL BE SHOP BENT TO MATCH RADII LESS THAN 950 FEET.
8. DELINEATORS SHALL BE MOUNTED AS SHOWN ON SHT. BR110. PAYMENT FOR DELINEATORS SHALL BE SUBSIDIARY TO OTHER ITEMS.
9. PROCEDURE QUALIFICATION FOR ALL WELDS SHALL BE PERFORMED AND APPROVED PRIOR TO FABRICATION. WELDER QUALIFICATION WILL BE REQUIRED FOR EACH PROCEDURE. PROCEDURE AND WELDER QUALIFICATION ACCEPTANCE SHALL BE APPROVED BY RADIOGRAPHIC TESTING.

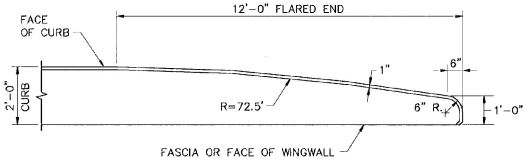
APPROACH RAIL NOTES

1. REFER TO STANDARD G-1 OR G-1d FOR ADDITIONAL APPROACH RAIL DETAILS.
2. ALL POSTS FOR HEAVY DUTY STEEL BEAM GUARD RAIL SHALL BE STEEL, IN ACCORDANCE WITH SECTION 728 "GUARD RAIL, GUIDE POST AND BARRIERS" UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.
3. APPROACH RAIL SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
4. ANCHORAGE CONNECTOR AND ANCHORAGE PLATE SHALL BE ASTM A36 STEEL GALVANIZED TO ASTM A123 AFTER FABRICATION.
5. APPROACH RAILING SHALL BE HEAVY DUTY STEEL BEAM FOR EITHER TYPE OF GUARD RAIL APPROACH SECTION.
6. ALLOWABLE DIMENSIONAL TOLERANCE FOR BENT SECTIONS IS +/- 1/16 OF AN INCH.
7. THE UNIT PRICES BID FOR EITHER TYPE OF GUARD RAIL APPROACH SECTION, SHALL INCLUDE ANCHORAGE CONNECTOR, ANCHORAGE PLATE, HEAVY DUTY STEEL BEAM GUARD RAIL, POSTS, OFFSET BLOCKS, BLOCKING, BOLTS, AND ALL NECESSARY HARDWARE.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

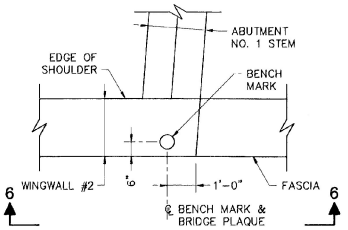
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK	
CONNECTION/TRANSITION DETAILS	
Designed By VAOT	Drawn By VAOT
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR111	Sheet 37 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



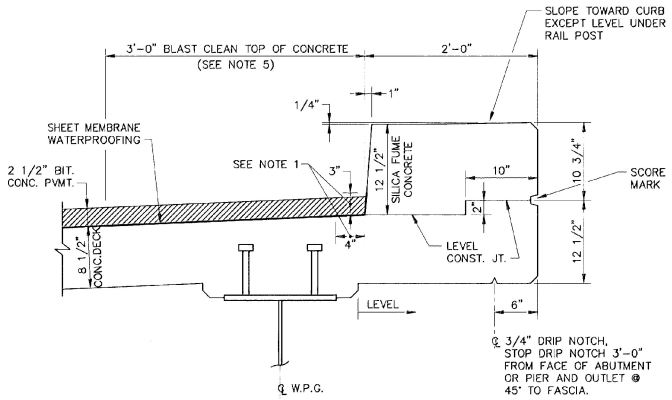
FLARED END DETAIL FOR 2'-0" CURB

NOT TO SCALE

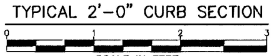


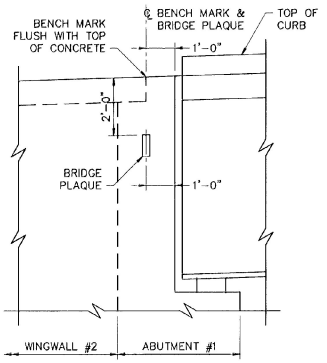
PLAN

NOT TO SCALE



TYPICAL 2'-0" CURB SECTION



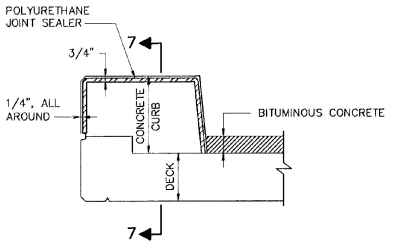


VIEW 6-6
LOCATE BENCH MARK
AND BRIDGE PLAQUE

NOT TO SCALE

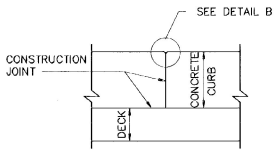
NOTES:

1. TWO COATS OF POLYURETHANE MATERIAL SHALL BE PLACED 4" WIDE ALONG DECK. 3" UP FACE OF CURB AND ALONG CONCRETE SHOULDER AT EXPANSION JOINT. SEE SPEC. 519.05 (B). POLYURETHANE MATERIAL AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT BID FOR SHEET MEMBRANE WATERPROOFING.
2. BLAST CLEAN 3'-0" FROM FACE OF CURB AND 3" UP CURB FACE PRIOR TO PLACING MEMBRANE.
3. SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN.
4. 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.
5. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.
6. CURB REINFORCING STIRRUP BARS SHALL BE TURNED AS REQUIRED TO FIT TAPERED ENDS.
7. SEE SHEET BR114 FOR GIRDER HAUNCH AND SHEAR CONNECTOR DETAIL.
8. THE BENCH MARK AND BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.



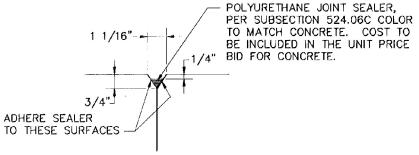
TYPICAL SECTION THROUGH
CONCRETE CURB CONSTRUCTION JOINT

NOT TO SCALE



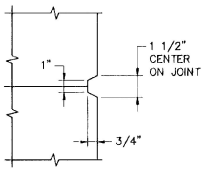
SECTION 7-7

NOT TO SCALE



DETAIL B

NOT TO SCALE



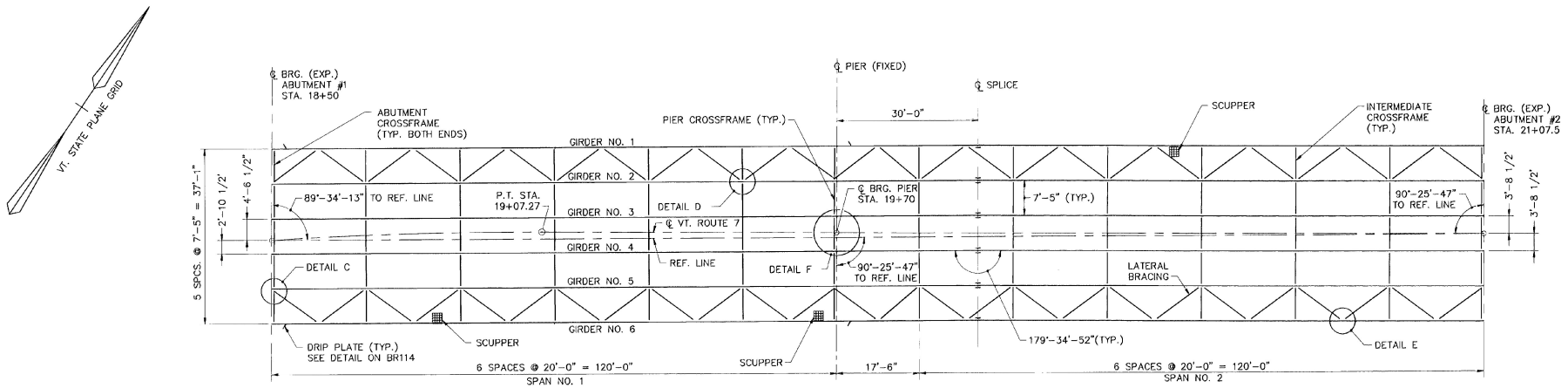
SCORE MARK DETAIL

NOT TO SCALE

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

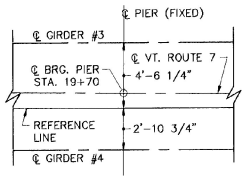
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK	
CURB DETAILS	
Designed By TJC	Drawn By SAM
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR112	Sheet 38 of 113



FRAMING PLAN

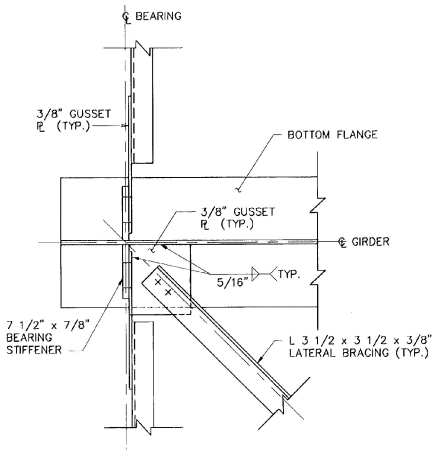
0 8 16 24 32

SCALE IN FEET



DETAIL F

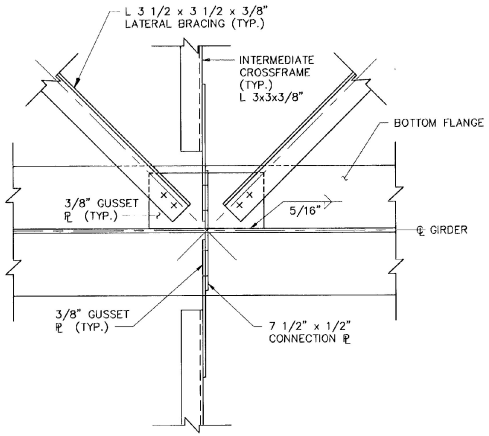
NOT TO SCALE



DETAIL C

0 1 2 3

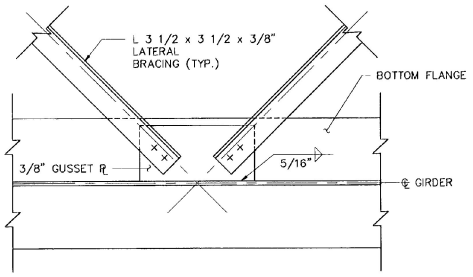
SCALE IN FEET



DETAIL D

0 1 2 3

SCALE IN FEET



DETAIL E

0 1 2 3

SCALE IN FEET

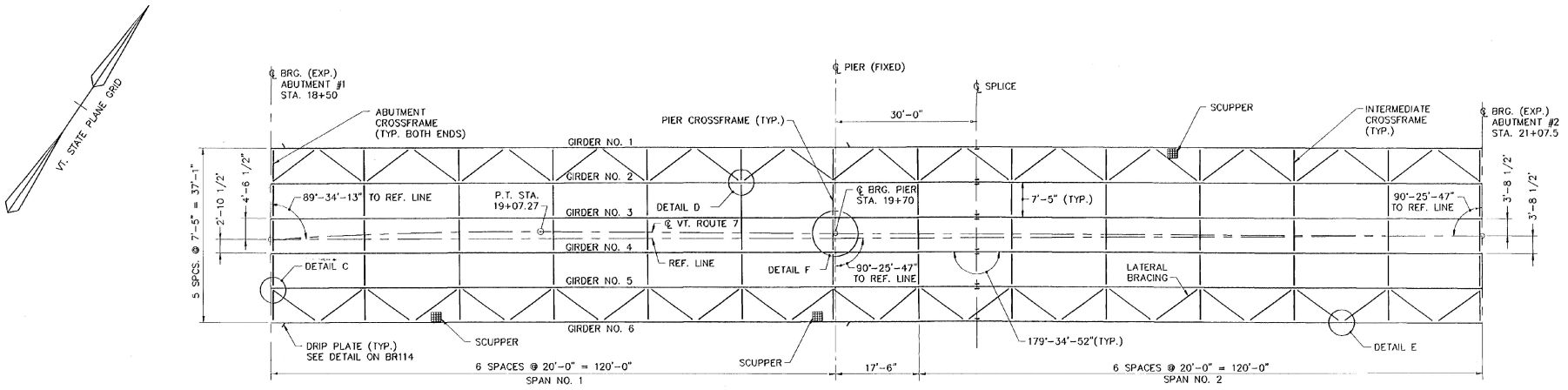
NOTES :

1. FOR STRUCTURAL STEEL NOTES SEE SH. BR114.
2. FOR CROSSFRAME DETAILS SEE SH. BR115.
3. FOR SCUPPER STATION LOCATIONS AND DETAILS SEE SH. BR109.
4. FOR GIRDER ELEVATION AND DETAILS SEE SHTS. BR114 & BR115.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

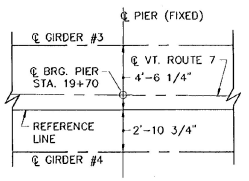
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK	
FRAMING PLAN	
Designed By TJC	Drawn By SAM/JNC
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR113	Sheet 39 of 113

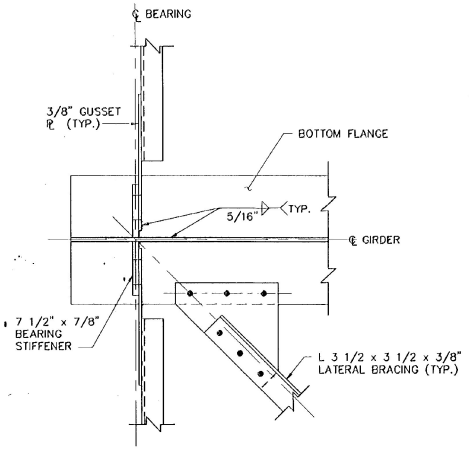
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



FRAMING PLAN

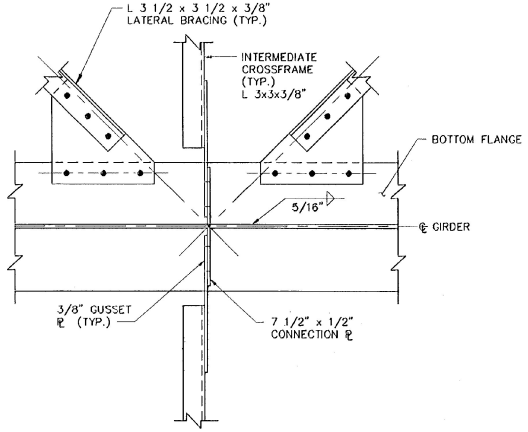
0 8 16 24 32
SCALE IN FEET





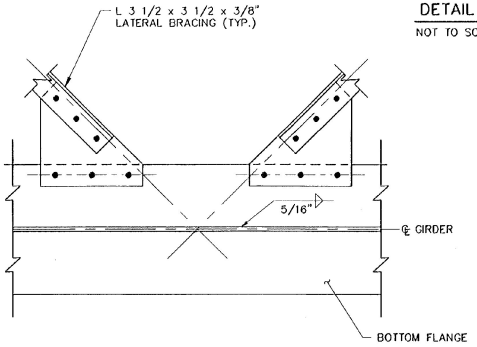
DETAIL C ⚠

0 1 2 3
SCALE IN FEET



DETAIL D ⚠

0 1 2 3
SCALE IN FEET



DETAIL E ⚠

0 1 2 3
SCALE IN FEET

DETAIL F

NOT TO SCALE

NOTES :

1. FOR STRUCTURAL STEEL NOTES SEE SH. BR114.
2. FOR CROSSFRAME DETAILS SEE SH. BR115.
3. FOR SCUPPER STATION LOCATIONS AND DETAILS SEE SH. BR109.
4. FOR GIRDER ELEVATION AND DETAILS SEE SHTS. BR114 & BR115.

REV. NO.	DATE	DESCRIPTION
⚠	11/21/95	REVISED DETAILS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

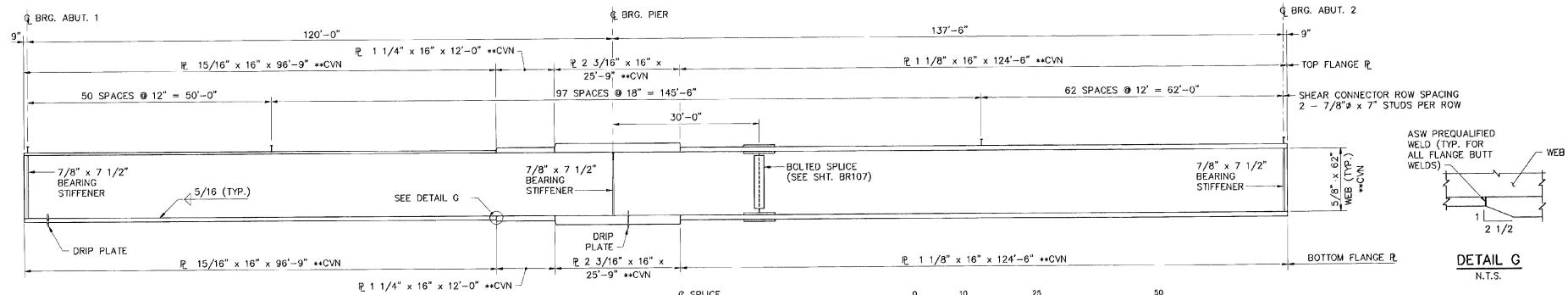
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

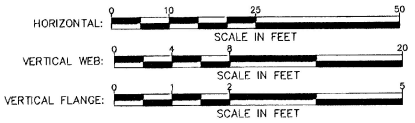
FRAMING PLAN

Designed By TJC	Drawn By SAM/JNC
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR113R	Sheet 39R of 113

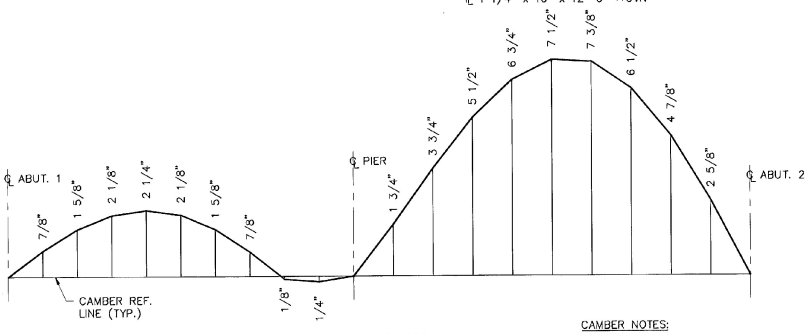
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



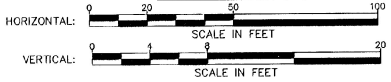
GIRDER ELEVATION



**CVN = CHARPY V-NOTCH TEST

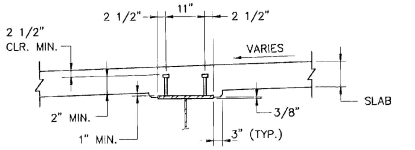


CAMBER DIAGRAM



CAMBER NOTES:

1. CAMBER REF. LINE FOR EACH GIRDER IS A STRAIGHT LINE FROM ABUT. #1 ℄ BRG. TO ℄ PIER FOR SPAN NO. 1 AND A STRAIGHT LINE FROM ℄ PIER TO ABUT. #2 ℄ BRG. FOR SPAN NO. 2.
2. EFFECTS OF VERTICAL CURVE ARE INCLUDED IN SPAN NO. 2 CAMBER. FOR VERTICAL CURVE DATA, SEE SHEETS 15 AND 16 OF 113.

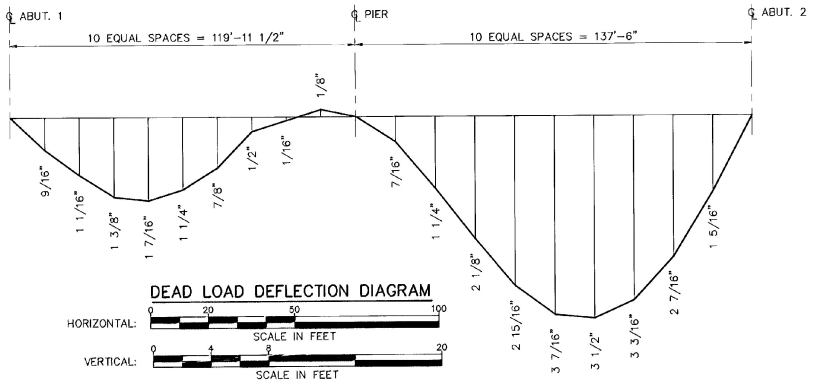


TYPICAL GIRDER HAUNCH AND SHEAR CONNECTOR DETAIL UNLESS NOTED OTHERWISE

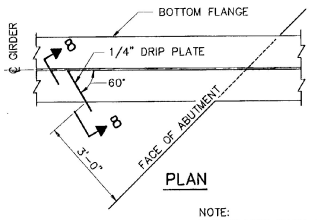
NOT TO SCALE

NOTES:

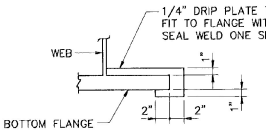
1. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GR 50W UNLESS OTHERWISE NOTED. THE STEEL IN THE WEBS AND FLANGES SHALL MEET THE CHARPY V-NOTCH TEST AS SPECIFIED IN THE STANDARD SPECIFICATIONS SECTION 714.03.
2. ALL BEARING STIFFENERS PLATES SHALL BE VERTICAL IN THEIR FINAL ERECTED POSITIONS.
3. ENDS OF GIRDERS FABRICATED SO THAT THE ENDS WILL BE VERTICAL UNDER FULL DEAD LOAD.
4. CONTACT SURFACES OF BOLTED CONNECTIONS SHALL BE BLAST CLEANED IF RUSTED BEFORE CONNECTION IS MADE.
5. TOP OF STUDS SHALL EXTEND ABOVE BOTTOM LAYER OF DECK REINFORCEMENT.
6. FOR SCUPPER LOCATION AND DETAILS, SEE SHEET BR109.
7. FOR CROSSFRAME DETAILS, SEE SHEET BR113 AND BR115.
8. BUTT WELDED FLANGE PLATES SHALL BE OFFSET 5'-0" FROM BUTT WELDED WEB PLATES.



DEAD LOAD DEFLECTION DIAGRAM



PLAN



SECTION 8-8

NOTE:
DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS AS INDICATED ON PLANS.

DRIP PLATE DETAIL

NOT TO SCALE

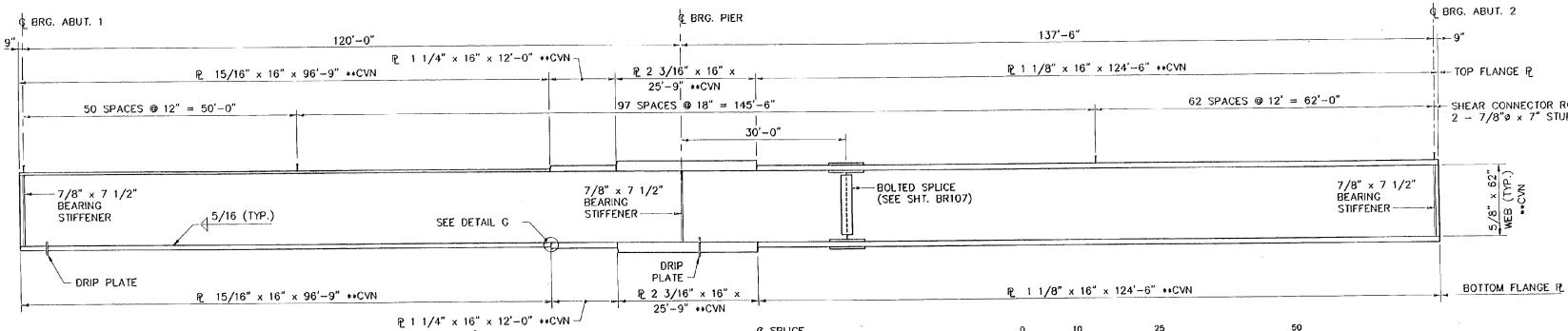
DETAIL G

N.T.S.

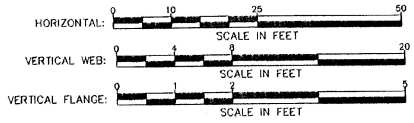
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

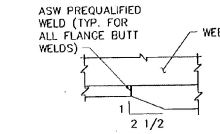
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK	
GIRDER ELEVATION	
Designed By DLJ	Drawn By SAM
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.C.C. Info.	
Bridge Sheet No. BR114	Sheet 40 of 116



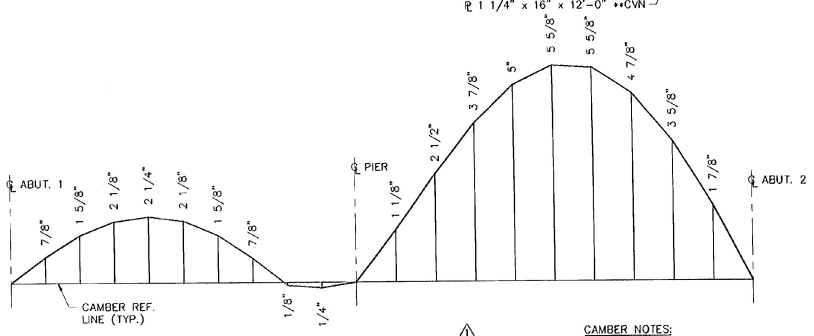
GIRDER ELEVATION



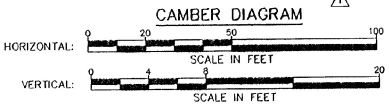
**CVN = CHARPY V-NOTCH TEST



DETAIL G
N.T.S.

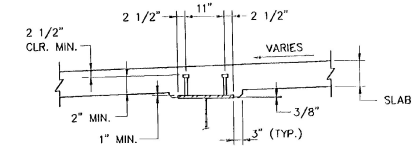


CAMBER DIAGRAM



CAMBER NOTES:

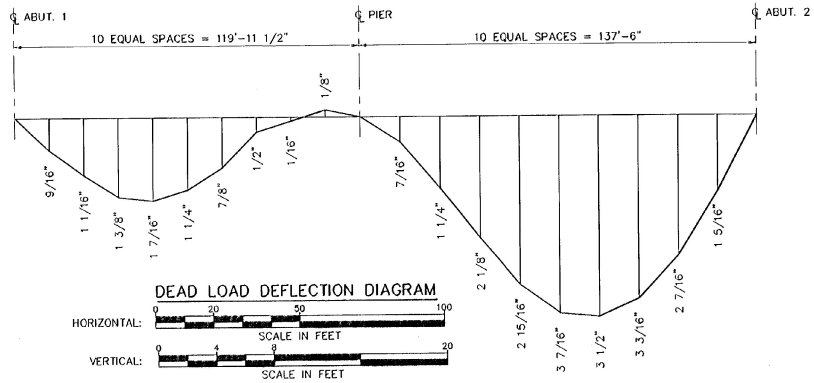
1. CAMBER REF. LINE FOR EACH GIRDER IS A STRAIGHT LINE FROM ABUT. #1 ℄ BRG. TO ℄ PIER FOR SPAN NO. 1 AND A STRAIGHT LINE FROM ℄ PIER TO ABUT. #2 ℄ BRG. FOR SPAN NO. 2.
2. EFFECTS OF VERTICAL CURVE ARE INCLUDED IN SPAN NO. 2 CAMBER. FOR VERTICAL CURVE DATA, SEE SHEETS 15 AND 16 OF 113.



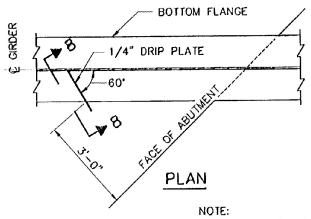
TYPICAL GIRDER HAUNCH AND SHEAR CONNECTOR DETAIL UNLESS NOTED OTHERWISE
NOT TO SCALE

NOTES:

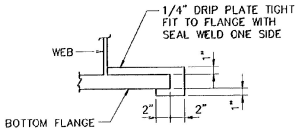
1. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GR 50W UNLESS OTHERWISE NOTED. THE STEEL IN THE WEBS AND FLANGES SHALL MEET THE CHARPY V-NOTCH TEST AS SPECIFIED IN THE STANDARD SPECIFICATIONS SECTION 714.03.
2. ALL BEARING STIFFENERS PLATES SHALL BE VERTICAL IN THEIR FINAL ERECTED POSITIONS.
3. ENDS OF GIRDERS FABRICATED SO THAT THE ENDS WILL BE VERTICAL UNDER FULL DEAD LOAD.
4. CONTACT SURFACES OF BOLTED CONNECTIONS SHALL BE BLAST CLEANED IF RUSTED BEFORE CONNECTION IS MADE.
5. TOP OF STUDS SHALL EXTEND ABOVE BOTTOM LAYER OF DECK REINFORCEMENT.
6. FOR SCUPPER LOCATION AND DETAILS, SEE SHEET BR109.
7. FOR CROSSFRAME DETAILS, SEE SHEET BR113 AND BR115.
8. BUTT WELDED FLANGE PLATES SHALL BE OFFSET 5'-0" FROM BUTT WELDED WEB PLATES.



DEAD LOAD DEFLECTION DIAGRAM



PLAN



SECTION 8-8

NOTE:
DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS AS INDICATED ON PLANS.

DRIP PLATE DETAIL
NOT TO SCALE

REV. NO.	DATE	DESCRIPTION
1	12/6/95	REVISED CAMBER DIAGRAM

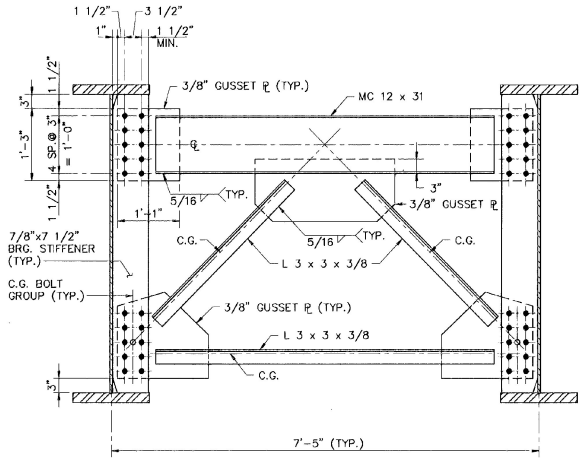
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

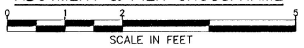
U.S. ROUTE 7 OVER OTTER CREEK
GIRDER ELEVATION

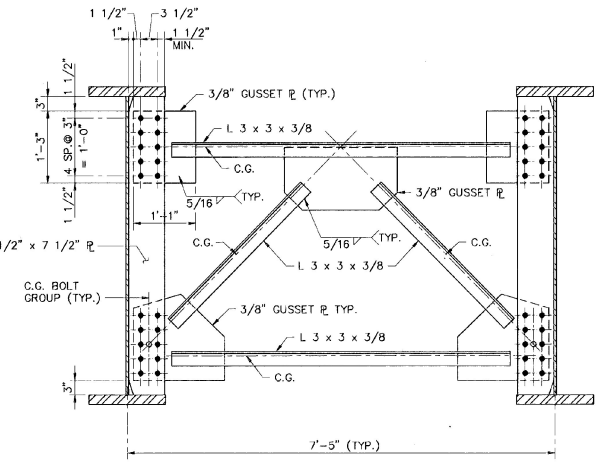
Designed By DLJ	Drawn By SAM
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR114R	Sheet 40R of 116

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



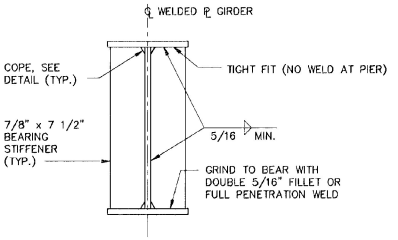
ABUTMENT & PIER CROSSFRAME





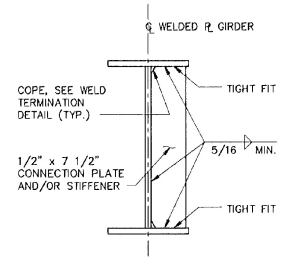
INTERMEDIATE CROSSFRAME





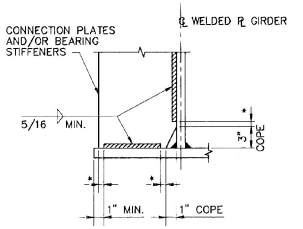
ABUTMENT & PIER BEARING STIFFENERS FOR WELDED PLATE GIRDERS

NOT TO SCALE



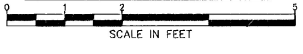
INTERMEDIATE CONNECTION PLATES FOR WELDED PLATE GIRDERS

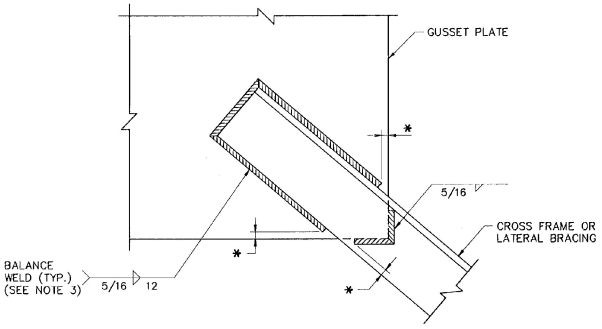
NOT TO SCALE



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

WELD TERMINATION AND COPING DETAILS FOR WELDED PLATE GIRDERS





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

WELD LOCATION DETAIL AT CROSS FRAMES & LATERAL BRACING

NOT TO SCALE

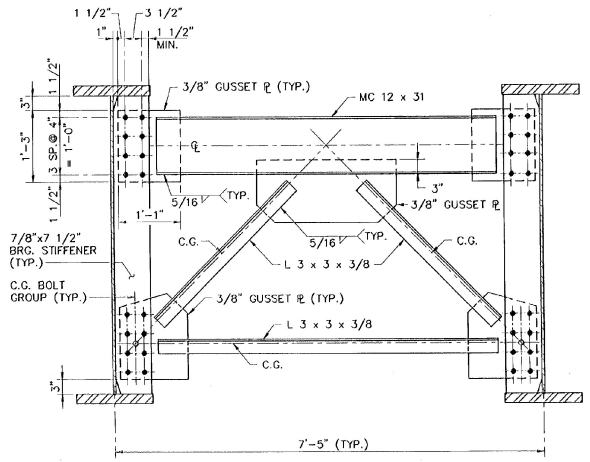
NOTES :

1. ALL CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER AASHTO M164 BOLTS. ALL HOLES IN THE CONNECTOR PLATES SHALL BE 1" DIAMETER.
2. INTERMEDIATE CROSSFRAME BOLTS SHALL ONLY BE SNUG TIGHT UNTIL AFTER THE ENTIRE DECK HAS BEEN PLACED.
3. THE LENGTH OF WELDS ON EACH SIDE OF THE ANGLE SHALL BE PROPORTIONED TO MINIMIZE ECCENTRICITIES IN THE CONNECTION.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

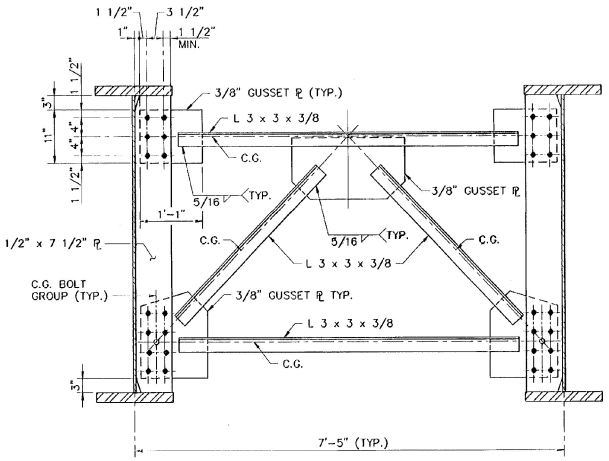
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD		Bridge No. 79	Log Sta.
Highway No. U.S. ROUTE 7			Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK			
CROSSFRAME DETAILS			
Designed By TJC		Drawn By SAM	
Checked By DLJ	Date 4/95	Bridge Design Supervisor EMM	Date 4/95
PROJECT WALLINGFORD		PROJECT NO. BRS 0137 (13)	
I.G.C. Info.			
Bridge Sheet No. BR115		Sheet 41 of 113	



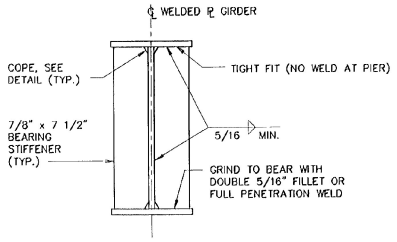
ABUTMENT & PIER CROSSFRAME

SCALE IN FEET



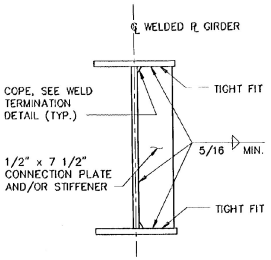
INTERMEDIATE CROSSFRAME

SCALE IN FEET



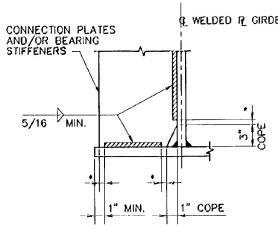
ABUTMENT & PIER BEARING STIFFENERS FOR WELDED PLATE GIRDERS

NOT TO SCALE



INTERMEDIATE CONNECTION PLATES FOR WELDED PLATE GIRDERS

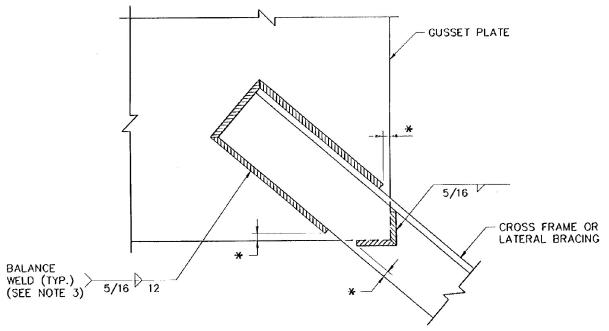
NOT TO SCALE



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

WELD TERMINATION AND COPING DETAILS FOR WELDED PLATE GIRDERS

SCALE IN FEET



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

WELD LOCATION DETAIL AT CROSS FRAMES & LATERAL BRACING

NOT TO SCALE

NOTES :

1. ALL CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER AASHTO M164 BOLTS. ALL HOLES IN THE CONNECTOR PLATES SHALL BE 1" DIAMETER.
2. INTERMEDIATE CROSSFRAME BOLTS SHALL ONLY BE SNUG TIGHT UNTIL AFTER THE ENTIRE DECK HAS BEEN PLACED.
3. THE LENGTH OF WELDS ON EACH SIDE OF THE ANGLE SHALL BE PROPORTIONED TO MINIMIZE ECCENTRICITIES IN THE CONNECTION.

REV. NO.	DATE	DESCRIPTION
1	11/21/95	REVISED CROSSFRAMES

STATE OF VERMONT
AGENCY OF TRANSPORTATION

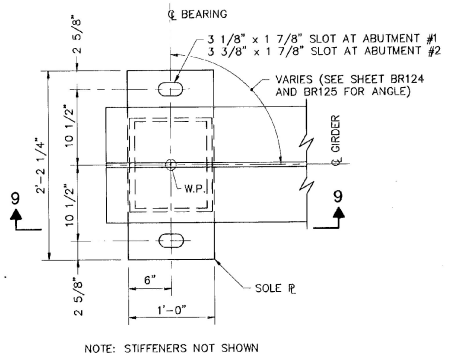
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

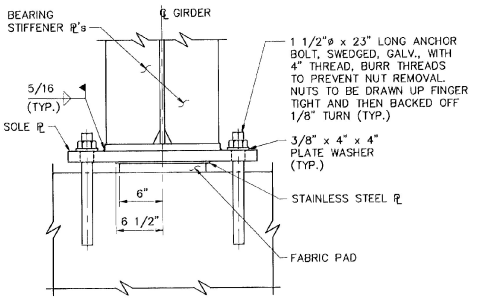
CROSSFRAME DETAILS

Designed By TJC	Drawn By SAM
Checked By DLJ 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR115R	Sheet 41R of 113

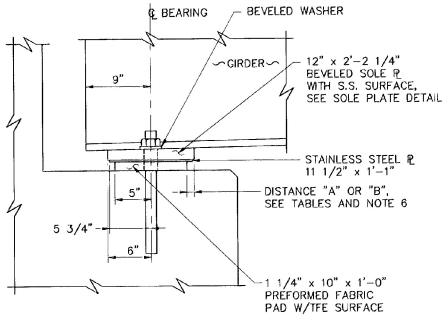
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



PLAN



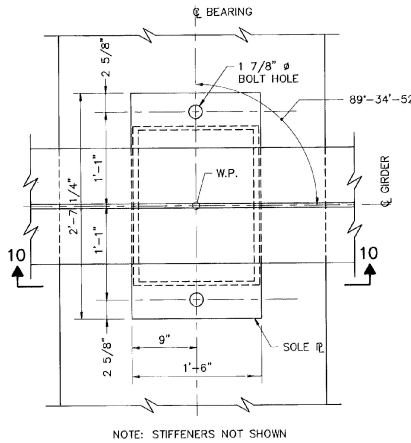
ELEVATION



SECTION 9-9

ABUTMENT BEARINGS

0 1 2 3
SCALE IN FEET



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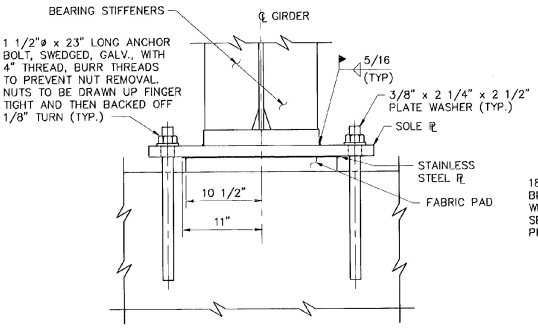

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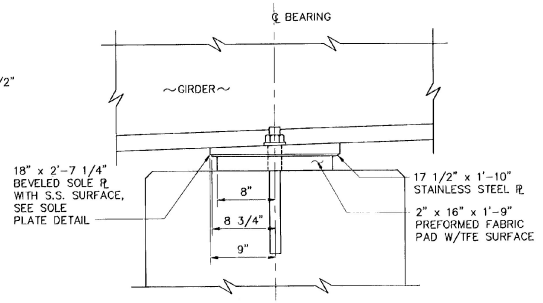


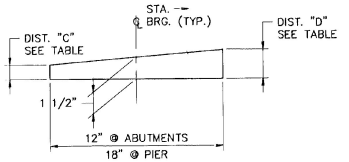
SECTION 10-10

PIER BEARINGS

0 1 2 3
SCALE IN FEET

NOTES:

1. BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 & 731.
2. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY".
3. SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
4. FABRICATION DRAWINGS SHALL IDENTIFY THE NUMBER OF LAYERS OF VULCANIZED SHEETS AND CORRESPONDING SHEET THICKNESSES TO BE USED FOR FABRICATING THE BEARING PAD AND SHALL INCLUDE DETAILED PROCEDURES FOR BONDING THESE SHEETS TOGETHER.
5. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
6. DISTANCE "A" IS THE FINAL SETTING FOR THE BEARING PAD AFTER THE CONCRETE SLAB, CURB, PAVEMENT AND BRIDGE RAIL ARE PLACED. DISTANCE "B" IS LISTED FOR SETTING THE BEARING AFTER THE STRUCTURAL STEEL IS ERECTED AND BEFORE THE CONCRETE DECK IS POURED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO DEAD LOAD DEFLECTION. THE FINAL DISTANCE "A", AS SHOWN IN THE TABLE, MUST BE ATTAINED WITHIN 1/8 INCH.
7. DESIGN CRITERIA:
   A. BASE PLATE TO CONCRETE DESIGN PRESSURE = 1000 P.S.I. MAXIMUM
   B. MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS
   C. DESIGN LOAD PER BEARING = 115 KIPS @ ABUTMENTS.
      = 330 KIPS @ PIERS.
8. ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M-270, GRADE 36.
9. ANCHOR BOLTS SHALL HAVE A MINIMUM OF 15" EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO SUBSECTION 714.08 IN THE "VERMONT SPECIFICATIONS".
10. ALL BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER SUBSECTION 531.04(b) & (C). IF THE BEARINGS ARE METALIZED THEY SHALL BE SEALED WITH AN APPROVED PRIMER AS SPECIFIED IN SUBSECTION 506.15(c). AREAS OF GALVANIZING OR METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALER IN ACCORDANCE WITH SUBSECTION 708.02(d).
11. ALL THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE 3/8" PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "BEARING DEVICE ASSEMBLY".



SOLE PLATE DETAIL
N.T.S.

ABUTMENT NO. 1		
TEMP.	DIST. "A"	DIST. "B"
0° F	1 7/16"	1 5/8"
15° F	1 1/4"	1 7/16"
30° F	1 1/8"	1 5/16"
45° F	1"	1 3/16"
60° F	7/8"	1 1/16"
75° F	3/4"	15/16"
90° F	9/16"	3/4"
105° F	7/16"	5/8"

ABUTMENT NO. 2		
TEMP.	DIST. "A"	DIST. "B"
0° F	1 1/2'	1 15/16"
15° F	1 5/16"	1 3/4"
30° F	1 3/16'	1 5/8"
45° F	1"	1 7/16"
60° F	13/16"	1 1/4"
75° F	11/16"	1 1/8"
90° F	1/2"	15/16"
105° F	3/8"	13/16"

SOLE PLATE BEVEL DISTANCES		
LOCATION	DIST. "C"	DIST. "D"
ABUTMENT NO. 1	1 15/16"	1 11/16"
PIER	1 1/4"	1 3/4"
ABUTMENT NO. 2	1 5/16"	1 11/16"

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

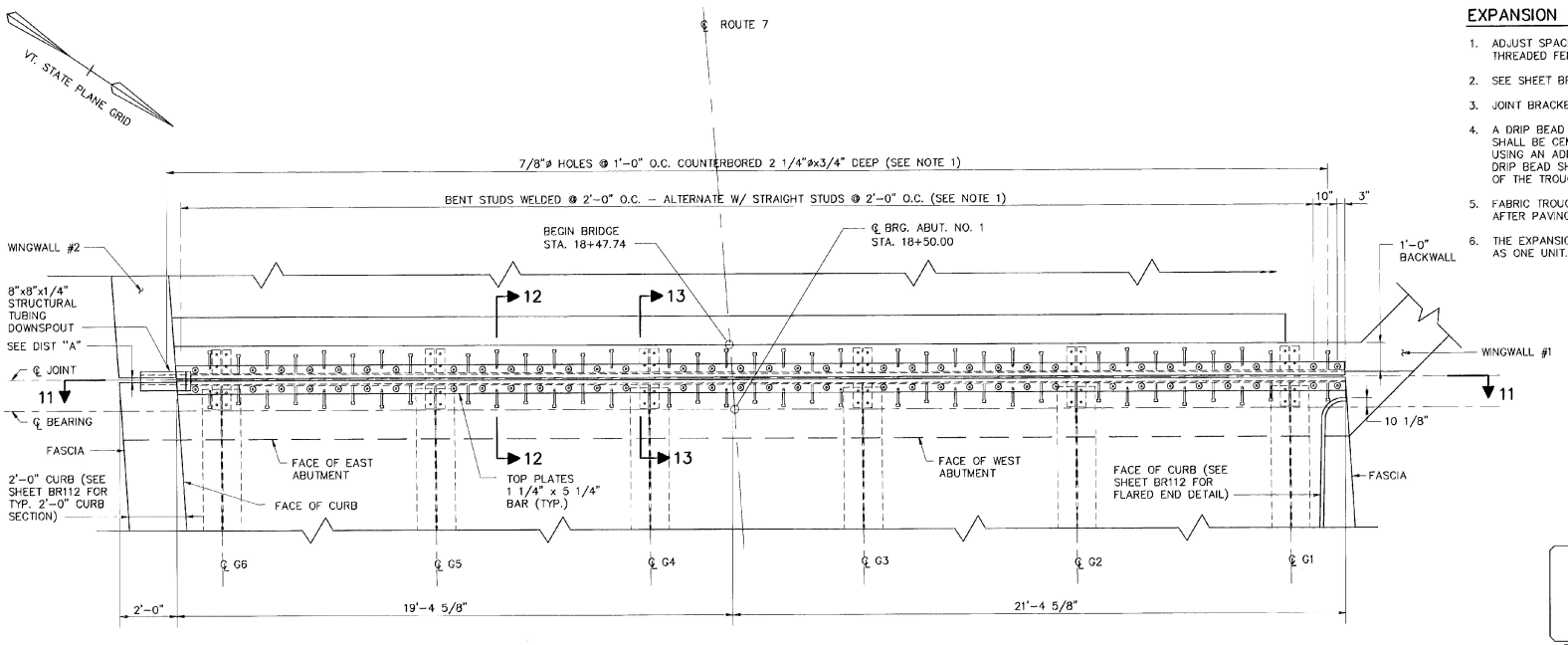
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

BEARING DETAILS

Designed By TJC	Drawn By JNC
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR116	Sheet 42 of 113



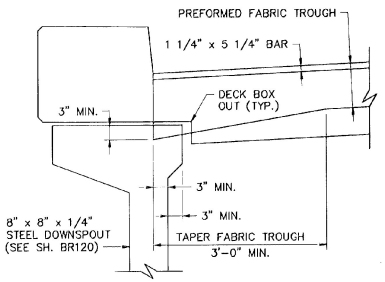
BRIDGE EXPANSION JOINT @ ABUTMENT NO. 1

SCALE IN FEET

EXPANSION JOINT NOTES (AT ABUT. NOS. 1 & 2):

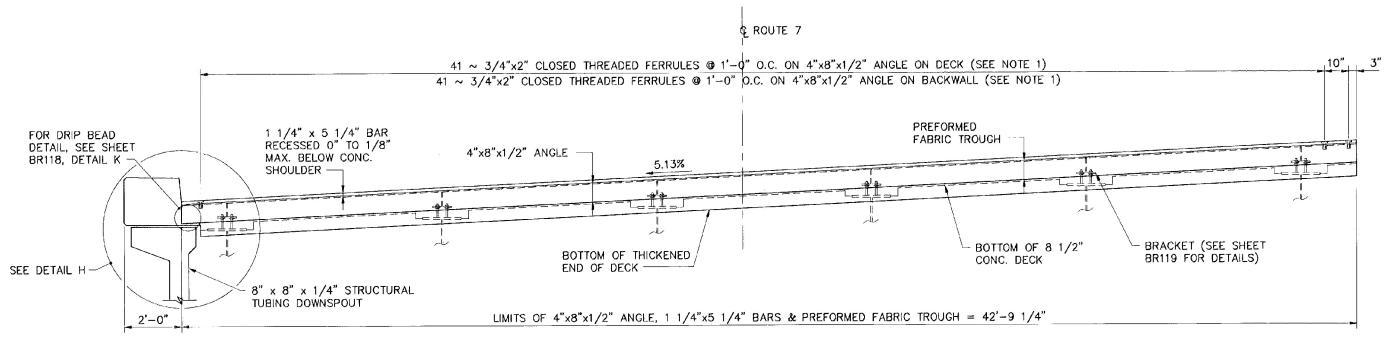
1. ADJUST SPACING 7/8"ø HOLES, WELDED STUDS, AND CLOSED THREADED FERRULES FOR CLEARANCE IN AREAS OF BRACKETS.
2. SEE SHEET BR119 FOR SECTION 12–12 AND 13–13.
3. JOINT BRACKETS SHALL BE CENTERED ON GIRDERS.
4. A DRIP BEAD OF 1/4" x 7" STRIP OF PREFORMED MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPOUT END OF THE TROUGH (SEE BR118 FOR DETAIL).
5. FABRIC TROUGH SHALL BE THOROUGHLY CLEANED AND FLUSHED AFTER PAVING OPERATION.
6. THE EXPANSION JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.

TEMP.	DIST. "A" (AT CURB)
0° F.	1 15/16"
15° F.	1 13/16"
30° F.	1 5/8"
45° F.	1 1/2"
60° F.	1 3/8"
75° F.	1 1/4"
90° F.	1 1/16"
105° F.	15/16"



DETAIL H

SCALE IN FEET



SECTION 11–11

SCALE IN FEET

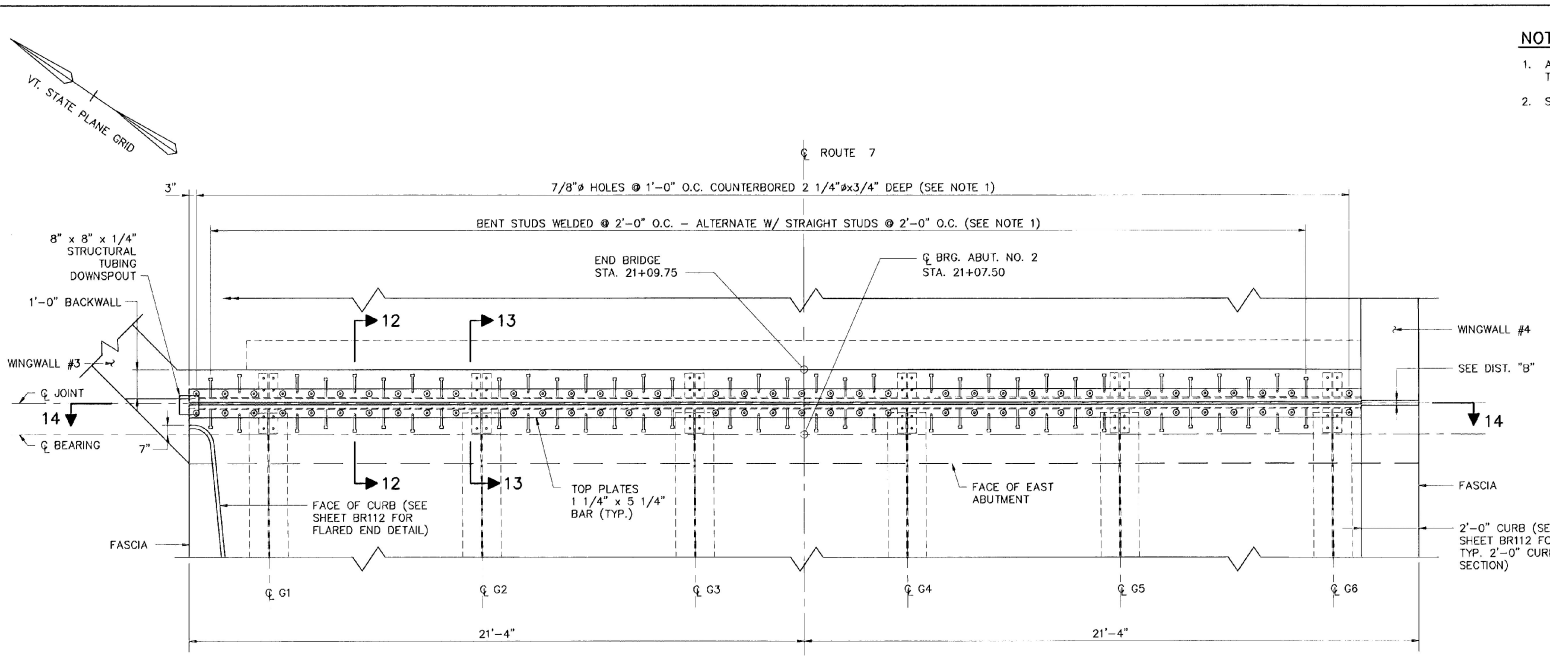
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK
EXPANSION JOINT @ ABUTMENT NO. 1

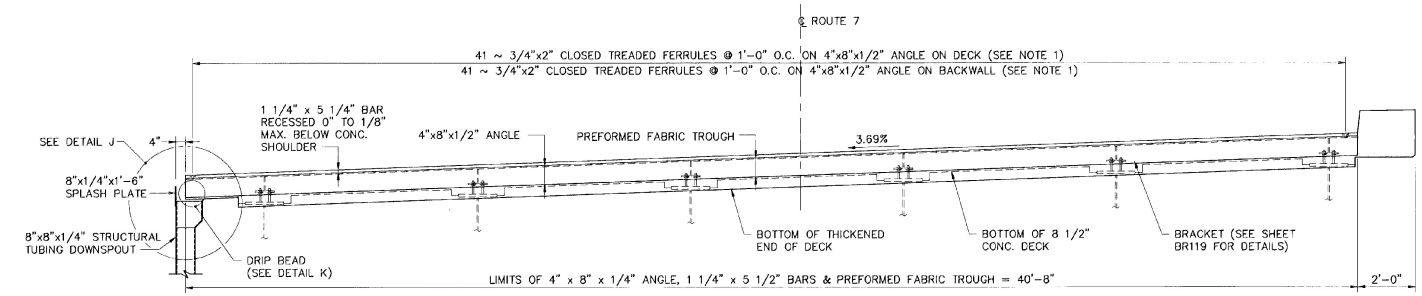
Designed By DLJ	Drawn By DLJ
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR117	Sheet 43 of 118

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



BRIDGE EXPANSION JOINT @ ABUTMENT NO. 2

SCALE IN FEET

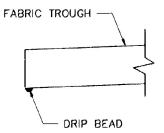


SECTION 14-14

SCALE IN FEET

NOTES:

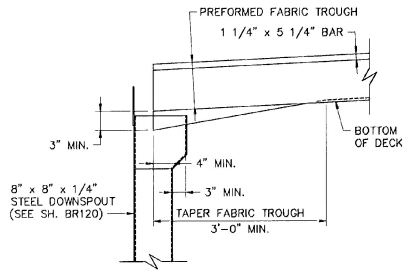
1. ADJUST SPACING 7/8"ø HOLES, WELDED STUDS, AND CLOSED THREADED FERRULES FOR CLEARANCE IN AREAS OF BRACKETS.
2. SEE SHEET BR119 FOR SECTION 12-12 AND 13-13.



A DRIP BEAD OF POLYURETHANE JOINT SEALER IS TO BE APPLIED TO THE UNDERSIDE OF THE FABRIC TROUGH AS SHOWN, WITH THE COST TO BE SUBSIDIARY TO THE ITEM "BRIDGE EXPANSION JOINT".

DETAIL K

TEMP.	DIST. "B" (AT CURB)
0° F.	2"
15° F.	1 13/16"
30° F.	1 5/8"
45° F.	1 1/2"
60° F.	1 5/16"
75° F.	1 3/16"
90° F.	1"
105° F.	7/8"



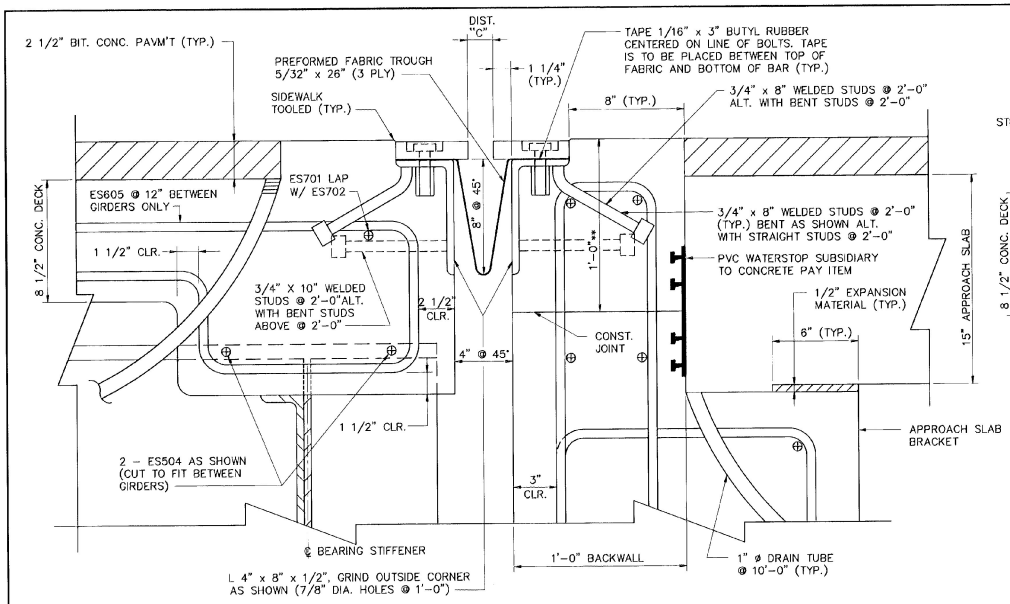
DETAIL J

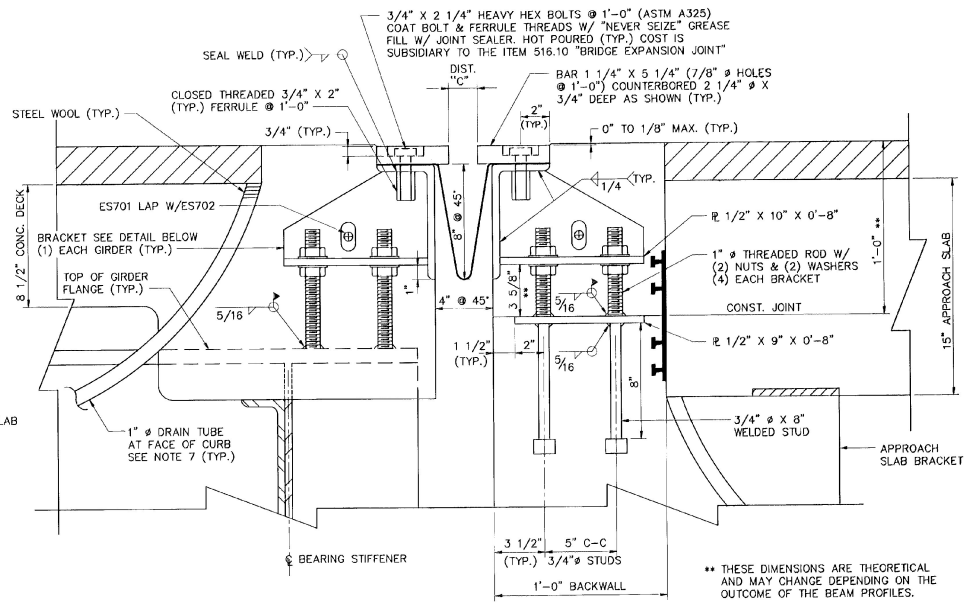
SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK	
EXPANSION JOINT @ ABUTMENT NO. 2	
Designed By DLJ	Drawn By DLJ
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR118	Sheet 44 of 116

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS





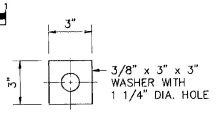
** THESE DIMENSIONS ARE THEORETICAL AND MAY CHANGE DEPENDING ON THE OUTCOME OF THE BEAM PROFILES.

SECTION 12–12
(NORMAL TO ℄ BEARING)

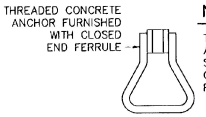
SCALE IN FEET

NOTES :

1. DETAILS ON THIS SHEET ARE FOR ITEM 516.10 "BRIDGE EXPANSION JOINT".
2. PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
3. BUTYL RUBBER TAPE SHALL CONFORM TO SUBSECTION 707.12 OF THE GENERAL SPECIAL PROVISIONS.
4. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK CONCRETE.
5. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36 GALVANIZED OR METALIZED AS PER SUBSECTION 506.15 (b) OR (c) UNLESS OTHERWISE NOTED.
6. THE ITEM "BRIDGE EXPANSION JOINT" SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL STEEL PLATES, ANGLES, WELDED STUDS OR RODS, PREFORMED FABRIC MATERIAL, BUTYL RUBBER TAPE AND OTHER MISCELLANEOUS MATERIAL.
7. CONCRETE CONTACT SURFACES SHALL BE COATED WITH AN EPOXY BONDING COMPOUND CONFORMING TO THE REQUIREMENTS OF SUBSECTION 719.02. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516.10 THE UNIT PRICE BID FOR ITEM 516.10 "BRIDGE EXPANSION JOINTS".
8. 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 BELOW THE BOTTOM OF THE ADJACENT GIRDER. THE DRAIN TUBES SHALL BE FASTENED TO THE GIRDERS USING A METHOD APPROVED BY THE ENGINEER.
9. FOR CLARITY, NOT ALL REINFORCEMENT SHOWN.
10. THE 4" x 8" x 1/2" ANGLE SHALL BE FURNISHED AS ONE CONTINUOUS PIECE. THE 1 1/4" x 5 1/4" BAR SHALL BE FURNISHED IN TWO EQUAL PIECES.



WASHER FOR BRACKET
SCALE IN FEET



NOTE :

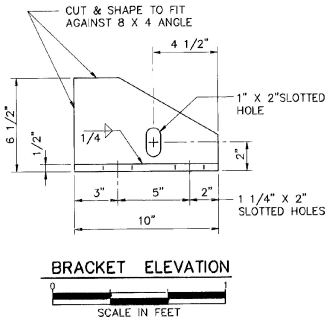
THREADED CONCRETE ANCHORS MAY BE SUBSTITUTED FOR CLOSED THREADED FERRULES

ANCHOR FERRULE DETAIL
SCALE IN FEET

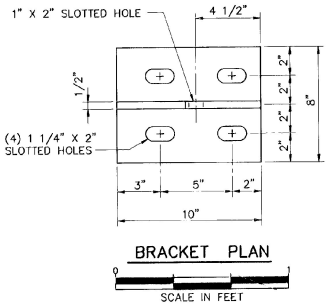
TEMP.	DISTANCE "C" (AT JOINT)	
	ABUT. NO. 1	ABUT. NO. 2
0° F	1 15/16"	2"
15° F	1 13/16"	1 13/16"
30° F	1 5/8"	1 5/8"
45° F	1 1/2"	1 1/2"
60° F	1 3/8"	1 5/16"
75° F	1 1/4"	1 3/16"
90° F	1 1/16"	1"
105° F	15/16"	7/8"

SECTION 13–13
(NORMAL TO ℄ BEARING)

SCALE IN FEET



BRACKET ELEVATION
SCALE IN FEET



BRACKET PLAN
SCALE IN FEET

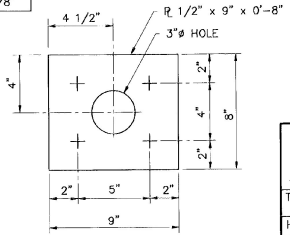
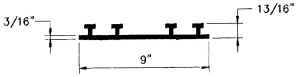


PLATE PLAN VIEW
SCALE IN FEET



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

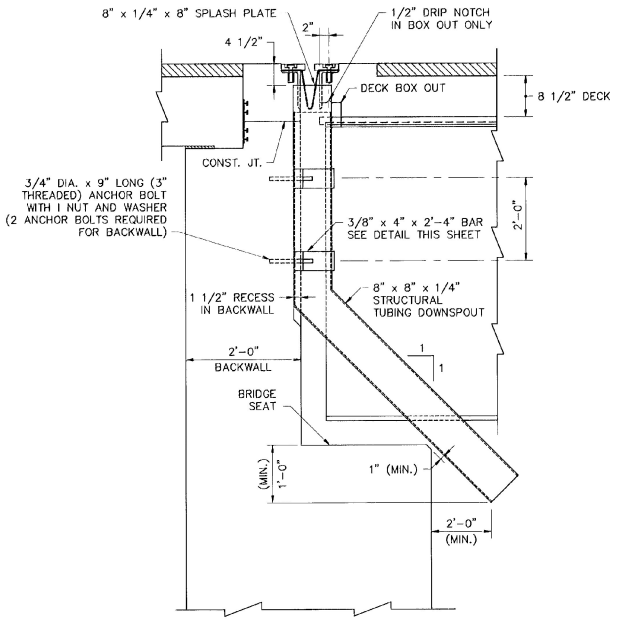
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

EXPANSION JOINT DETAILS

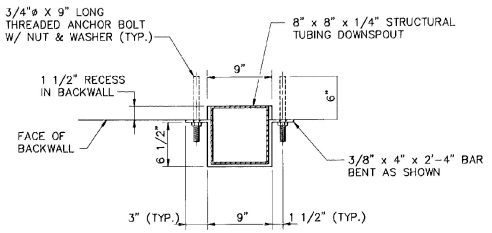
Designed By DLJ	Drawn By RJL
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR119	Sheet 45 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



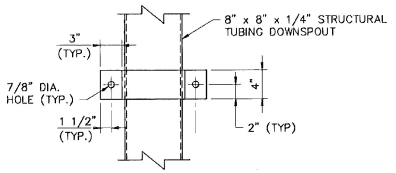
DOWNSPOUT DETAIL
ABUT. NO. 2 SHOWN, ABUT. NO. 1 SIMILAR

0 1 2 5
SCALE IN FEET



PLAN – DOWNSPOUT CONNECTION DETAIL

0 1 2 3
SCALE IN FEET

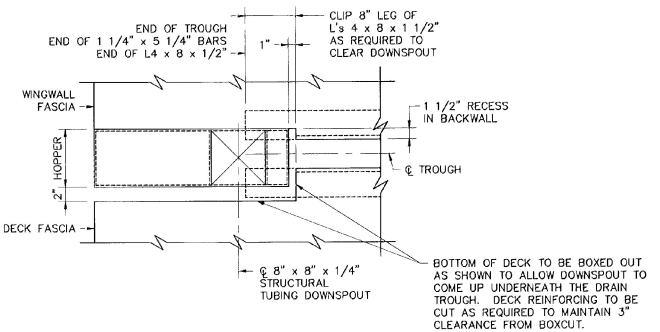


ELEVATION DOWNSPOUT CONNECTION DETAIL

0 1 2 3
SCALE IN FEET

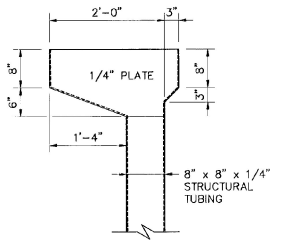
DOWNSPOUT NOTES

1. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO A–500 OR A–501.
2. ALL BARS SHALL CONFORM TO AASHTO M270 GRADE 36 AND SHALL BE GALVANIZED.
3. DOWNSPOUT SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A–123 AFTER FABRICATION.
4. ALL DOWNSPOUT BOLTS AND RELATED HARDWARE SHALL BE ASTM A–307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A–153 (AASHTO M232).
5. WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT OR 4" BAR EITHER BY CUTTING, BURNING, WELDING, PLACING OR ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH TWO COATS OF AN APPROVED SEALER.
6. DOWNSPOUT SHALL BE PAID FOR UNDER THE ITEM 506.55 "STRUCTURAL STEEL (PLATE GIRDER).



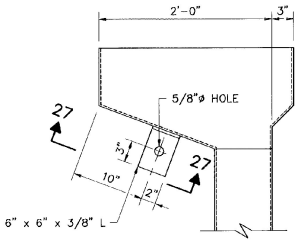
PLAN VIEW OF DECK BOXOUT FOR DOWNSPOUT
ABUT. NO. 1 SHOWN, ABUT. NO. 2 SIMILAR

0 1 2 3
SCALE IN FEET



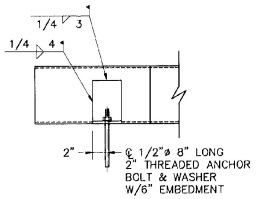
ABUT. NO. 1 HOPPER ELEVATION

0 1 2 5
SCALE IN FEET



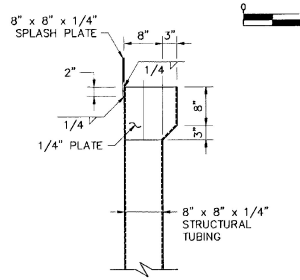
DETAILS FOR ATACHING ABUT. NO. 1 HOPPER ANGLE TO BACKWALL

0 1 2 3
SCALE IN FEET



SECTION 27–27

0 1 2 3
SCALE IN FEET



ABUT. NO. 2 HOPPER ELEVATION

0 1 2 5
SCALE IN FEET

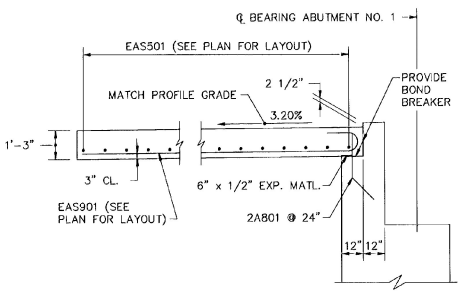
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK
DOWNSPOUT DETAILS AT ABUTMENTS

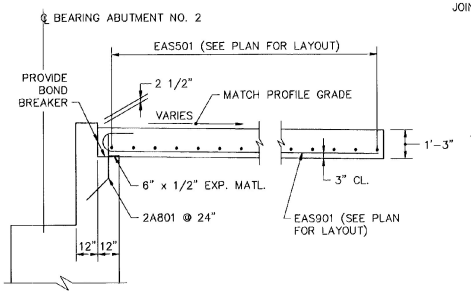
Designed By DLJ	Drawn By RJL/JNC
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR120	Sheet 46 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



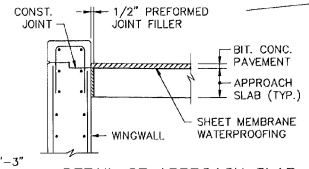
SECTION 14–14

SCALE IN FEET



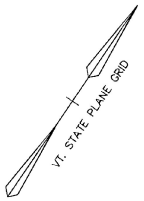
SECTION 15–15

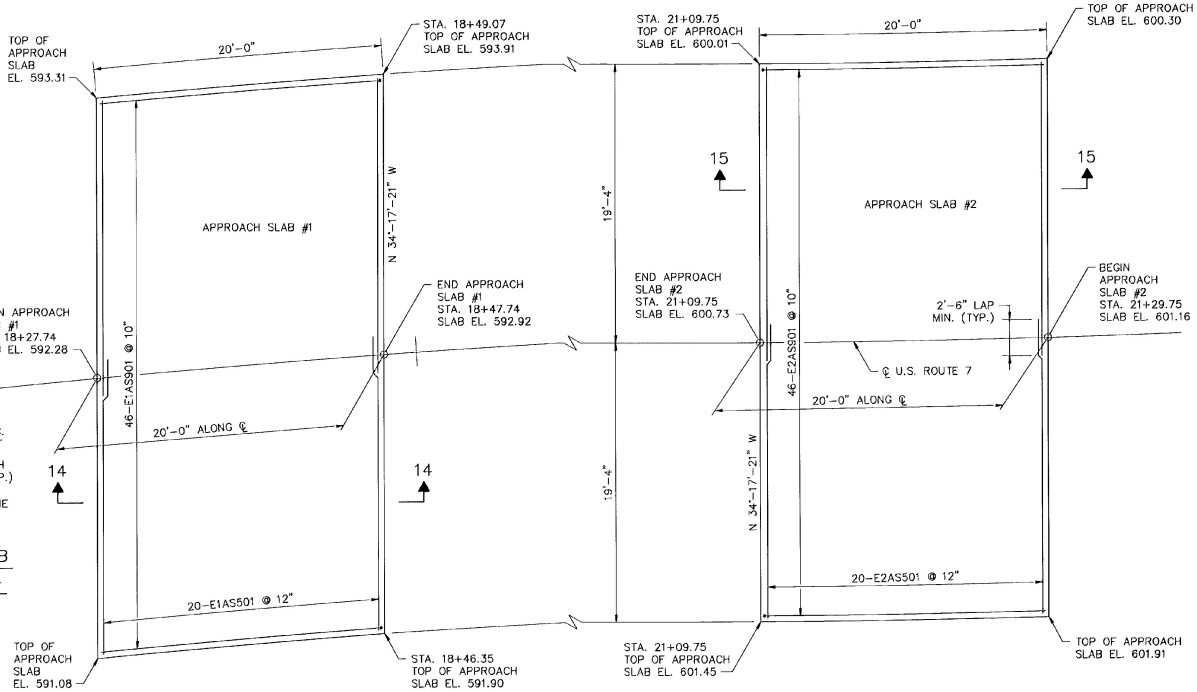
SCALE IN FEET



DETAIL OF APPROACH SLAB AT WINGWALL NOS. 2 & 4

SCALE IN FEET





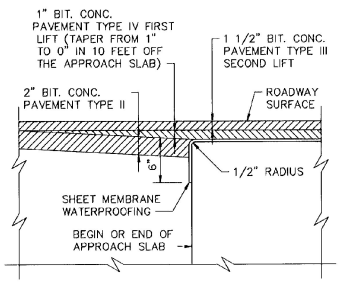
CURVE DATA
L = 482.13'
R = 848.83'
Δ = 32°-32'-37"

PLAN – APPROACH SLAB #1

SCALE IN FEET

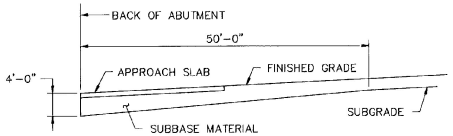
PLAN – APPROACH SLAB #2

SCALE IN FEET



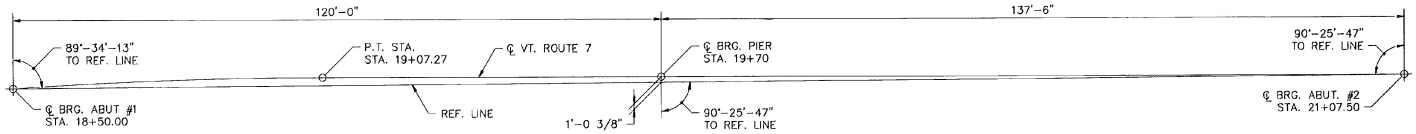
DETAIL FOR SHEET MEMBRANE AT APPROACH SLAB END

NOT TO SCALE



SUBBASE DETAIL AT ABUTMENTS

(ELEVATION IN CUT AND FILL)
NOT TO SCALE



CENTERLINE LAYOUT

SCALE IN FEET

NOTE:

1. ELEVATIONS ARE FINISHED GRADE ELEVATIONS.

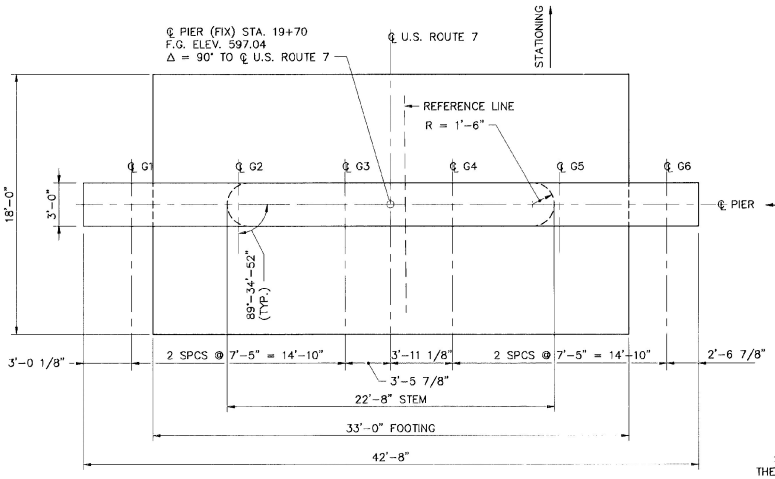
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK
APPROACH SLAB DETAILS

Designed By TJC	Drawn By JNC
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR121	Sheet 47 of 113

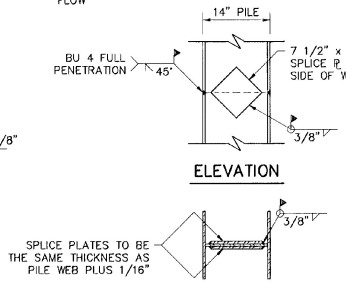


PLAN

SCALE IN FEET

NOTES :

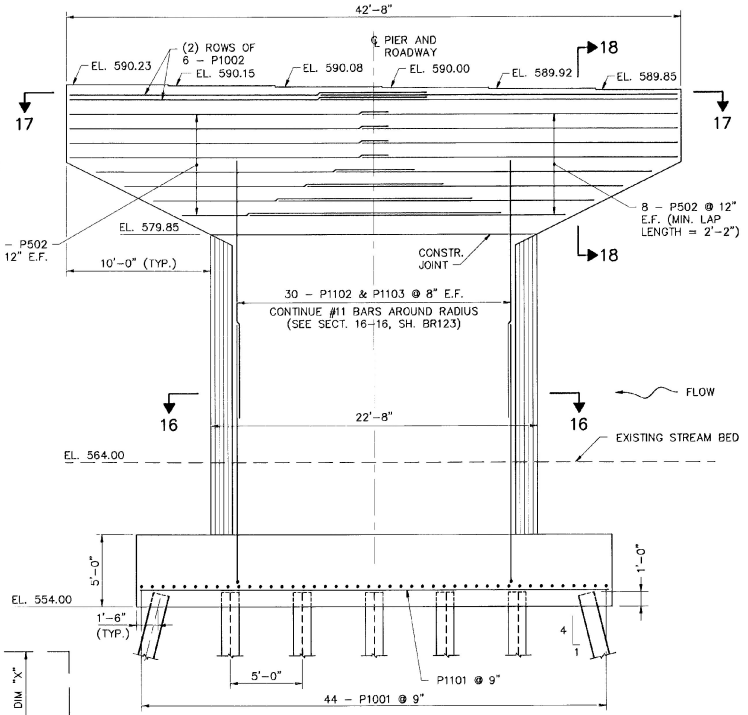
1. ESTIMATED PILE LENGTH = 31 FT. ALL PILES SHALL HAVE AN ULTIMATE CAPACITY OF 2.75 TIMES THE DESIGN LOAD OR 410 KIPS. PILES SHALL BE DRIVEN TO REFUSAL.
2. ALL PILES HP 14x73.
3. FOR SECTIONS 16–16, 17–17 AND 18–18, SEE SHEET BR123.
4. DIM "X", DETERMINED BY THE CONTRACTOR, BEING THE DISTANCE AT WHICH THE SHEETING WILL CLEAR THE BATTERED PILES AT EL. 530±.



PLAN

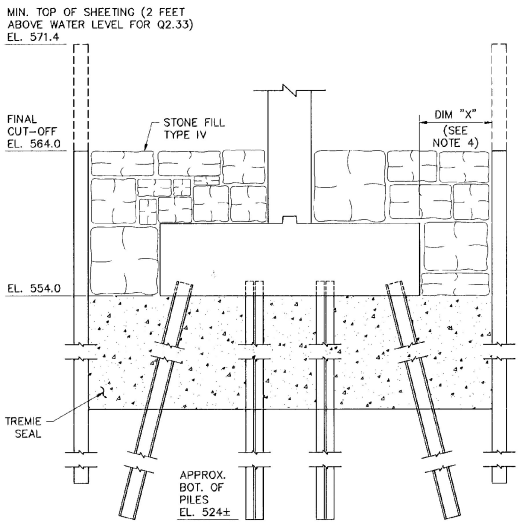
DETAIL OF PILE SPLICE

SCALE IN FEET



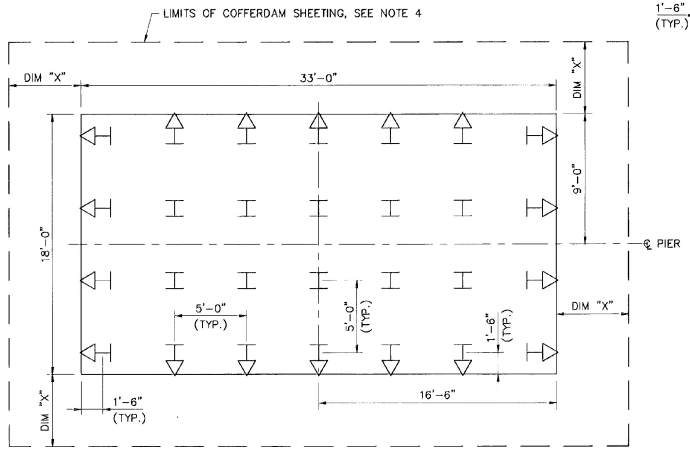
PIER ELEVATION

SCALE IN FEET



PIER COFFERDAM DETAIL

SCALE IN FEET



▽ – INDICATES DIRECTION OF 1 ON 4 BATTER

FOOTING PLAN

SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

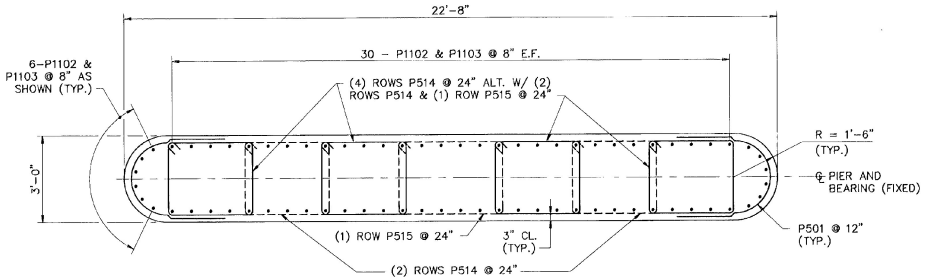
U.S. ROUTE 7 OVER OTTER CREEK

PIER PLAN & ELEVATION

Designed By TJC	Drawn By SAM/JNC
Checked By DLJ 4/95	Bridge Design Supervisor EMM Date 4/95

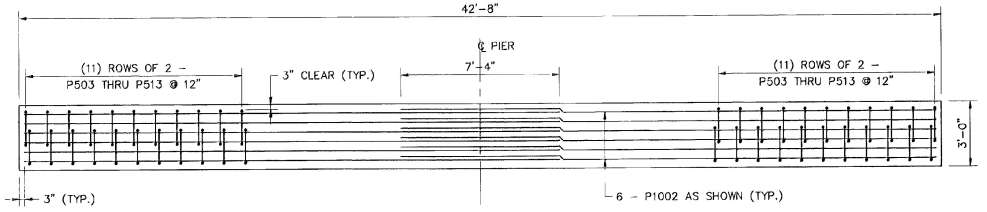
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR122	Sheet 48 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



SECTION 16-16

SCALE IN FEET

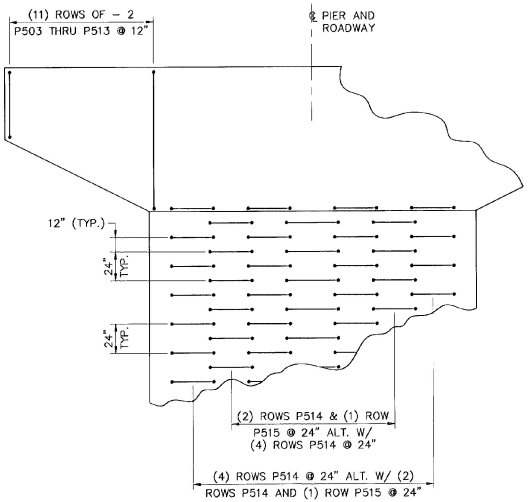


SECTION 17-17

SCALE IN FEET

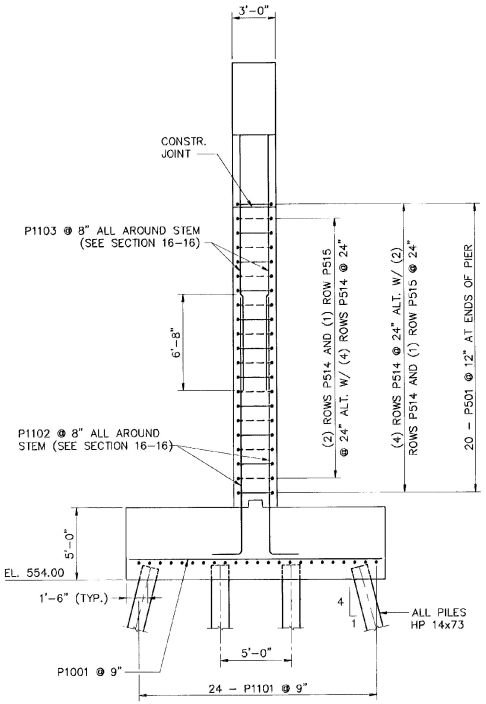
NOTE :

1. ANCHOR BOLTS SHALL CLEAR 6-P1002 AS SHOWN.
2. FOR LOCATION OF SECTIONS 16-16, 17-17 & 18-18 SEE SHEET BR122.



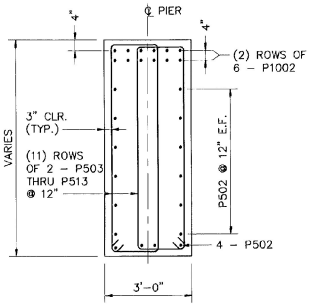
PARTIAL ELEVATION

SCALE IN FEET



END VIEW

SCALE IN FEET



SECTION 18-18

SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

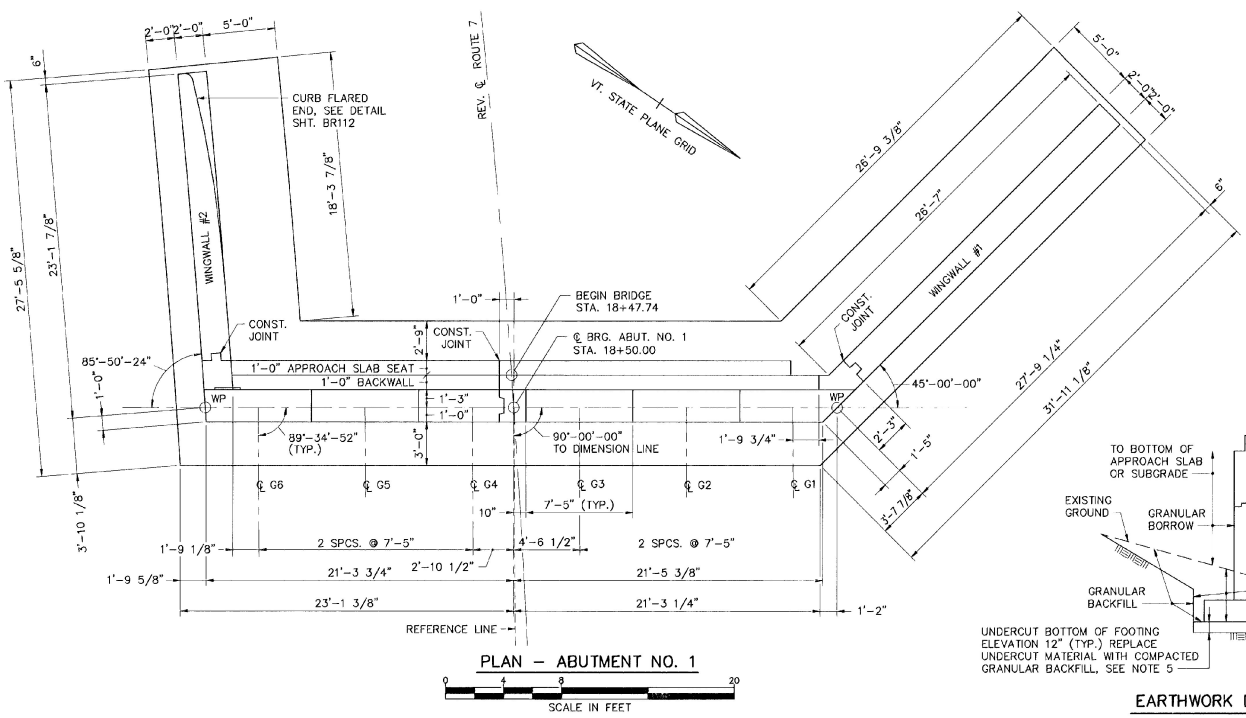
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

PIER DETAILS

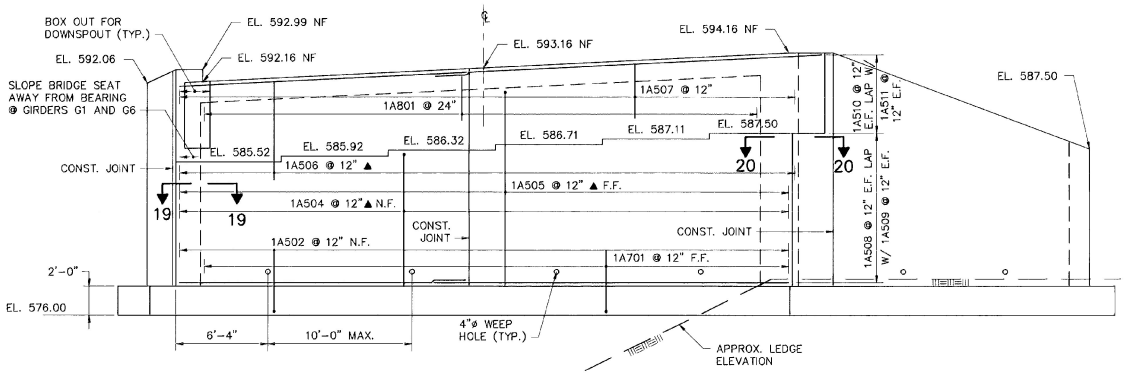
Designed By TJC	Drawn By SAM
Checked By DLJ 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR123	Sheet 49 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



PLAN – ABUTMENT NO. 1

SCALE IN FEET

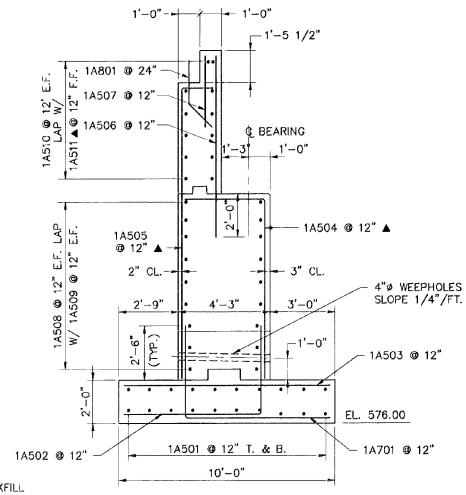


ELEVATION – ABUTMENT NO. 1

SCALE IN FEET

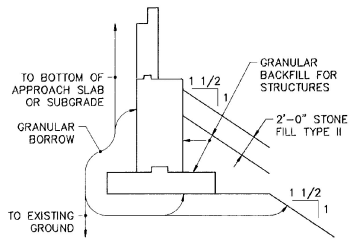
EARTHWORK DETAILS – CUT

NOT TO SCALE



SECTION – ABUTMENT NO. 1

SCALE IN FEET



EARTHWORK DETAILS – FILL

NOT TO SCALE

NOTES :

1. N.F. DENOTES NEAR FACE.
2. F.F. DENOTES FAR FACE.
3. E.F. DENOTES EACH FACE.
4. SEE SHEET BR126 FOR SECTIONS 19–19 AND 20–20.
5. NO LEDGE SHALL PROJECT ABOVE 1'–0" BELOW BOTTOM OF FOOTING ELEVATION. ALL OVERBREAKAGE IN EXCESS OF 12" BELOW INDICATED BOTTOM OF FOOTING SHALL BE REPLACED WITH COMPACTED GRANULAR BACKFILL FOR STRUCTURES. A MAXIMUM OF 12" AVERAGE DEPTH UNDERCUT SHALL BE PAID FOR AS STRUCTURE EXCAVATION AND REPLACED WITH COMPACTED GRANULAR BACKFILL FOR STRUCTURES. ANY ADDITIONAL FILL SHALL BE PLACED AT THE EXPENSE OF THE CONTRACTOR.
6. BRIDGE RAILING AT WINGWALL NO. 2 NOT SHOWN FOR CLARITY.
7. FOR WEEPHOLE DETAILS SEE SHT. BR125.
8. ▲ INDICATES BARS TO BE CUT TO FIT IN FIELD.

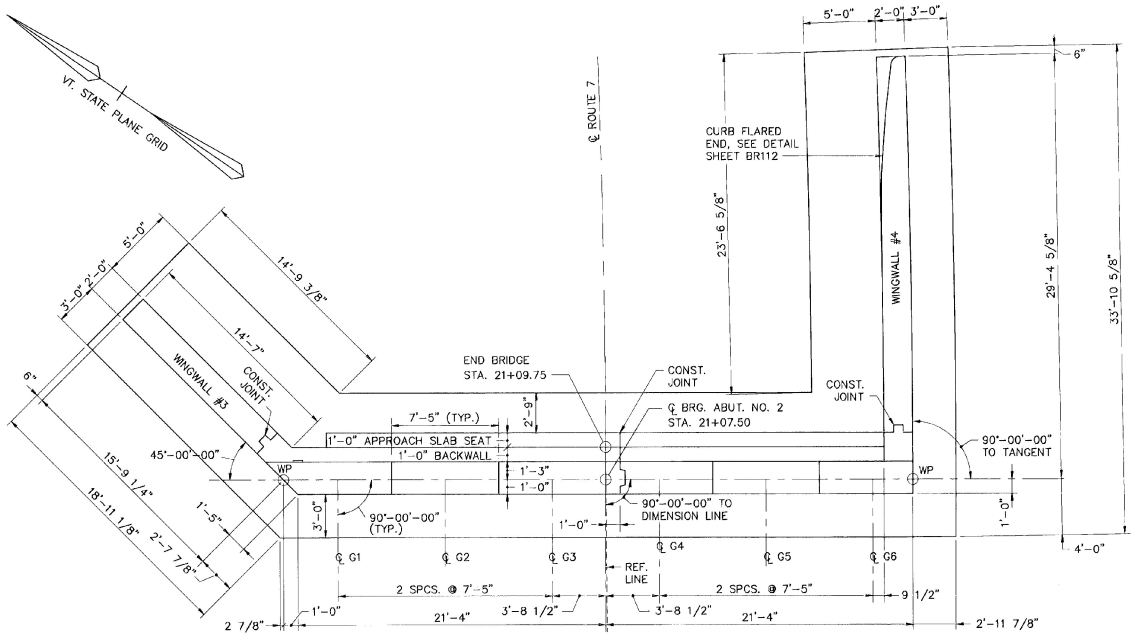
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

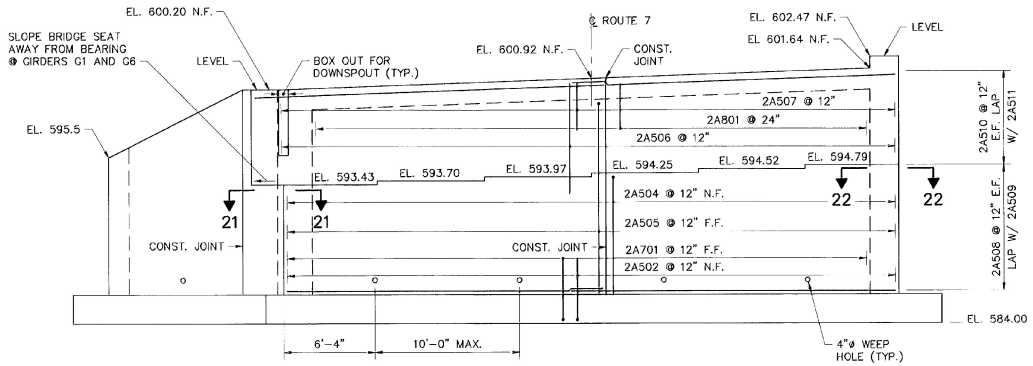
U.S. ROUTE 7 OVER OTTER CREEK
ABUTMENT NO. 1 – PLAN & ELEVATION

Designed By TJC	Drawn By SAM
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR124	Sheet 50 of 113



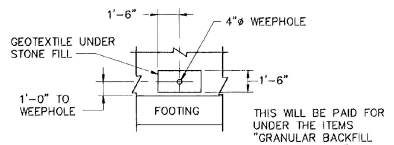
PLAN – ABUTMENT NO. 2

SCALE IN FEET



ELEVATION – ABUTMENT NO. 2

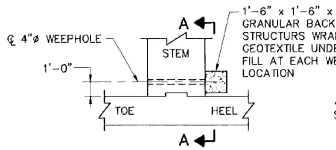
SCALE IN FEET



THIS WILL BE PAID FOR UNDER THE ITEMS "GRANULAR BACKFILL FOR STRUCTURS" AND "GEOTEXTILE UNDER STONE FILL".

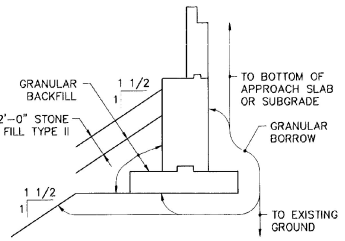
SECTION A–A

N.T.S.



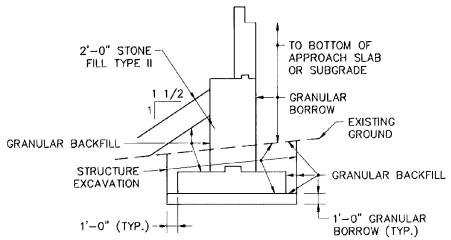
TYPICAL WEEPHOLE DETAIL

N.T.S.



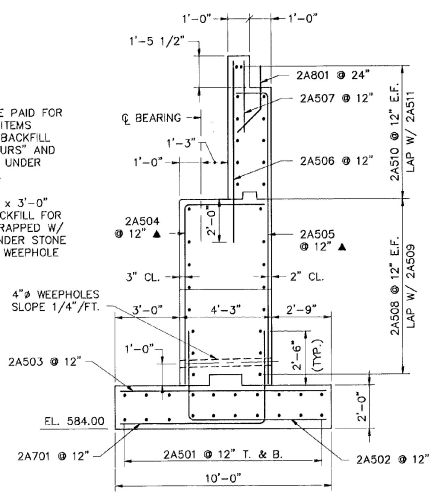
EARTHWORK DETAILS – FILL

NOT TO SCALE



EARTHWORK DETAILS – CUT

NOT TO SCALE



SECTION – ABUTMENT NO. 2

SCALE IN FEET

NOTES :

1. N.F. DENOTES NEAR FACE.
2. F.F. DENOTES FAR FACE.
3. E.F. DENOTES EACH FACE.
4. FOR SECTIONS 3–3 AND 4–4 SEE SH. BR125.
5. BRIDGE RAILING AT WINGWALL NO. 4 NOT SHOWN FOR CLARITY.
6. FOR EMBANKMENT CONSTRUCTION DETAIL AT ABUTMENT NO. 2 SEE SHEET BR103.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	WALLINGFORD	Bridge No.	79
Highway No.	U.S. ROUTE 7	Log Sta.	
		Surv. Sta.	

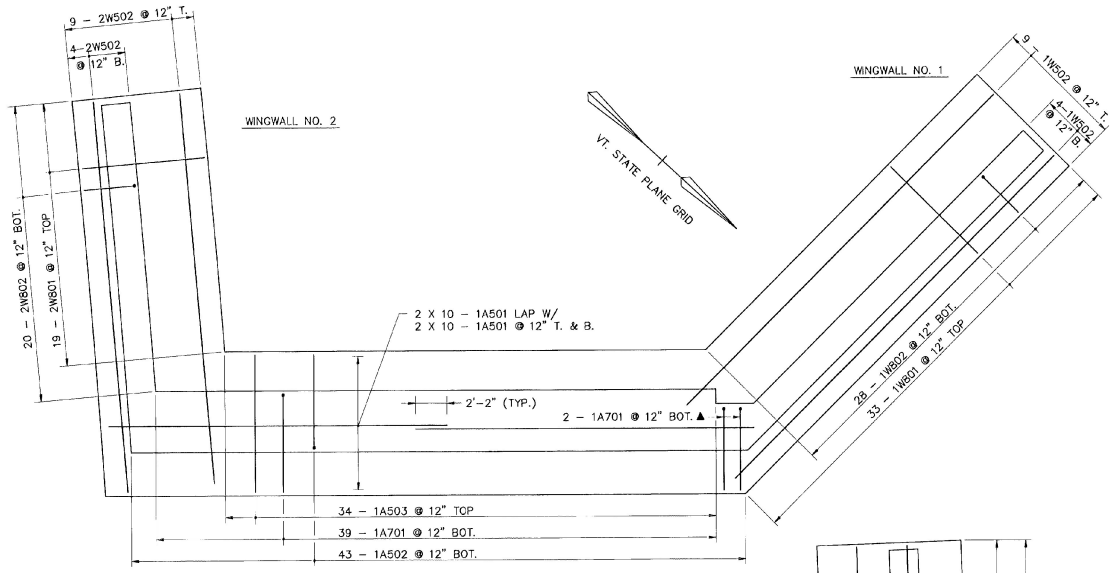
U.S. ROUTE 7 OVER OTTER CREEK

ABUTMENT NO. 2 – PLAN & ELEVATION

Designed By	TJC	Drawn By	SAM
Checked By	DLJ	Date 4/95	Bridge Design Supervisor EMM Date 4/95

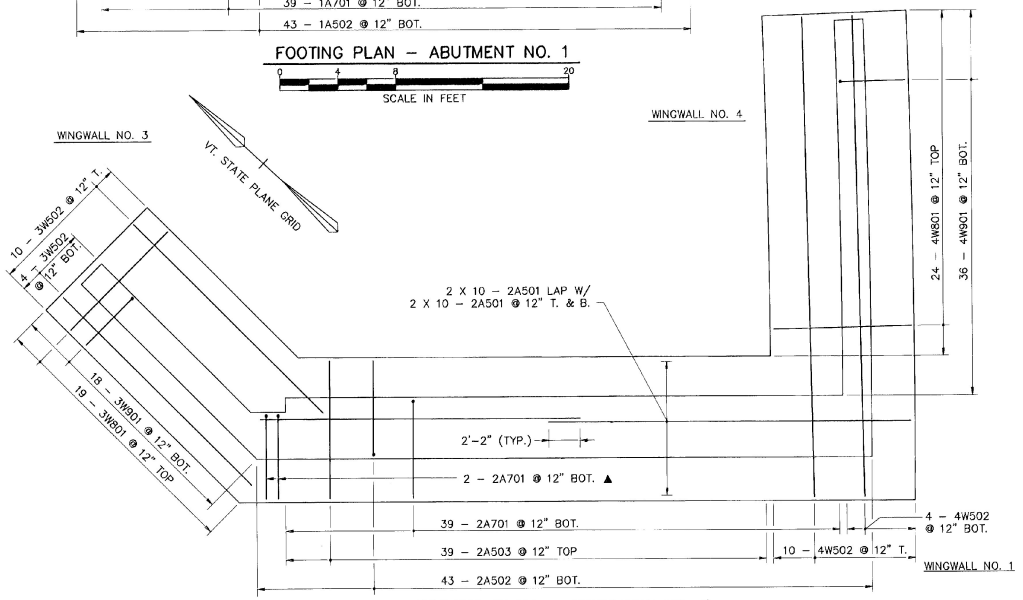
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR125	Sheet 51 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



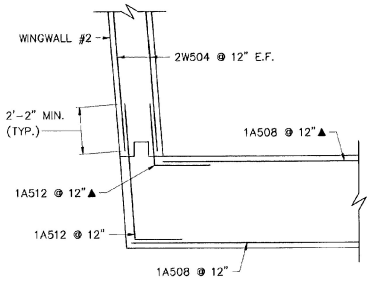
FOOTING PLAN – ABUTMENT NO. 1

SCALE IN FEET



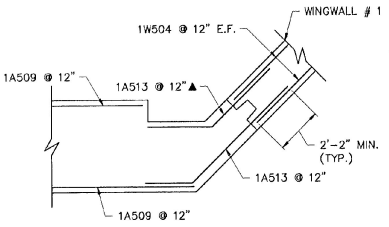
FOOTING PLAN – ABUTMENT NO. 2

SCALE IN FEET



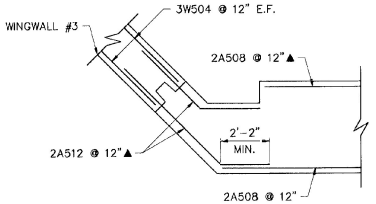
SECTION 19–19

SCALE IN FEET



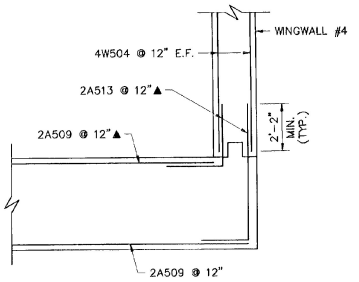
SECTION 20–20

SCALE IN FEET



SECTION 21–21

SCALE IN FEET



SECTION 22–22

SCALE IN FEET

NOTE:

1. ▲ INDICATES BARS CUT TO FIT IN FIELD.
2. N.F. DENOTES NEAR FACE.
3. F.F. DENOTES FAR FACE.
4. E.F. DENOTES EACH FACE.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

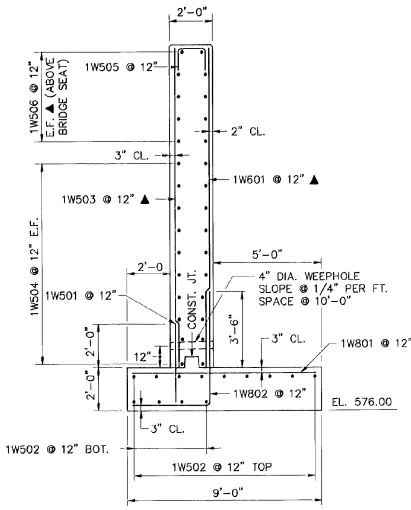
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

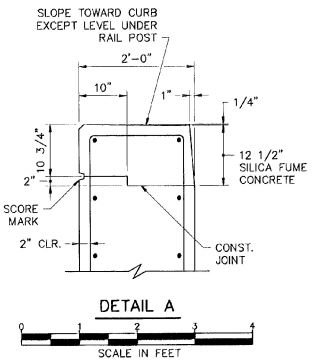
FOOTING REINFORCEMENT PLAN

Designed By TJC	Drawn By JNC
Checked By DLJ 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR126	Sheet 52 of 113



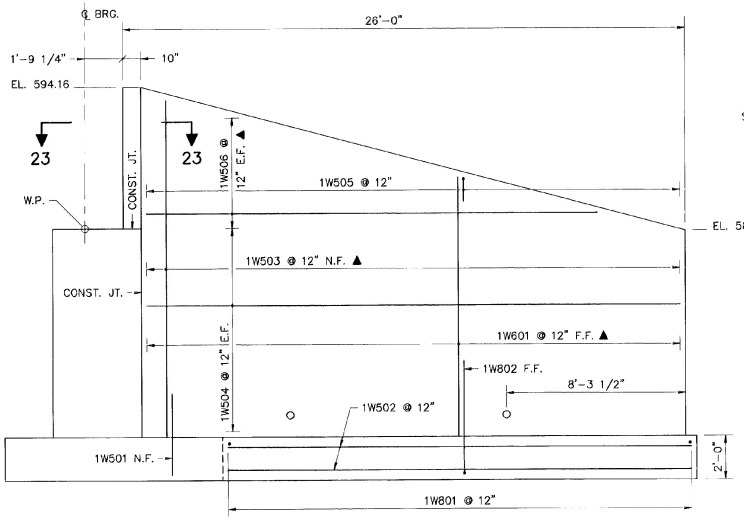
WINGWALL NO. 1 TYPICAL SECTION

SCALE IN FEET



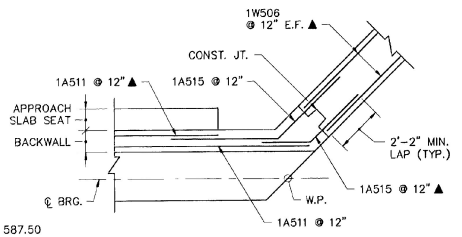
DETAIL A

SCALE IN FEET



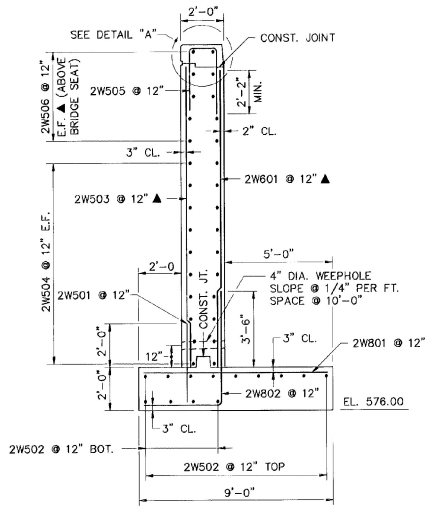
WINGWALL NO. 1 ELEVATION

SCALE IN FEET



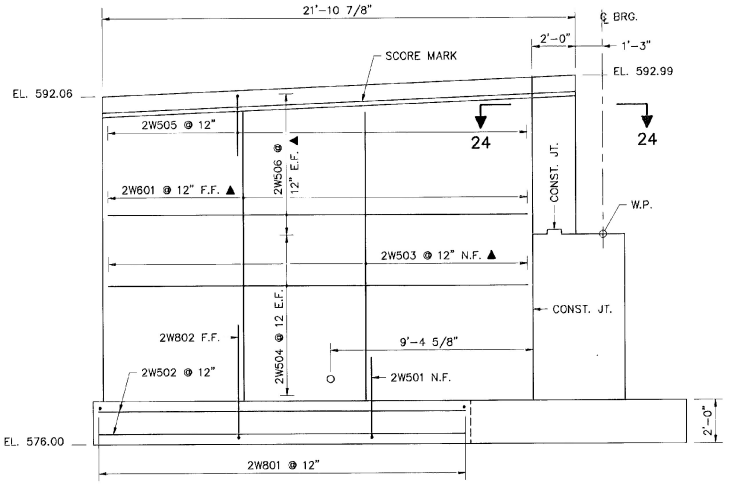
SECTION 23–23

SCALE IN FEET



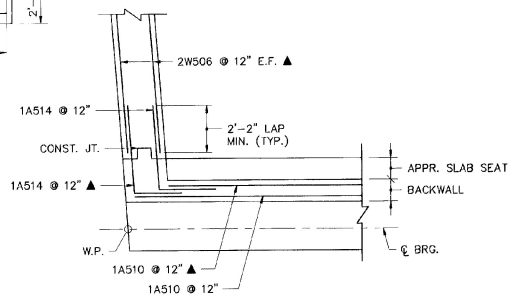
WINGWALL NO. 2 TYPICAL SECTION

SCALE IN FEET



WINGWALL NO. 2 ELEVATION

SCALE IN FEET



SECTION 24–24

SCALE IN FEET

NOTES :

1. FOR SCORE MARK DETAIL SEE SHT. BR112.
2. E.F. DENOTES EACH FACE.
3. N.F. DENOTES NEAR FACE.
4. F.F. DENOTES FAR FACE.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

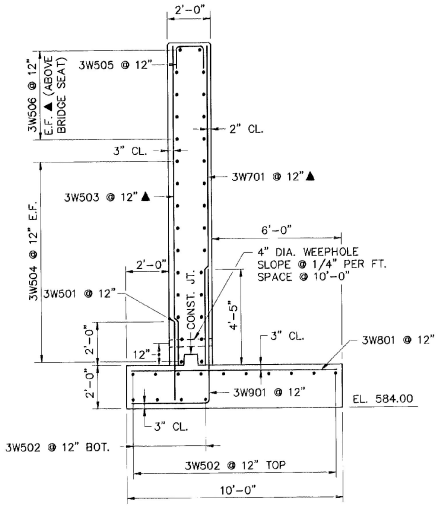
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER OTTER CREEK

ABUT. NO. 1 WINGWALLS – PLAN & ELEV.

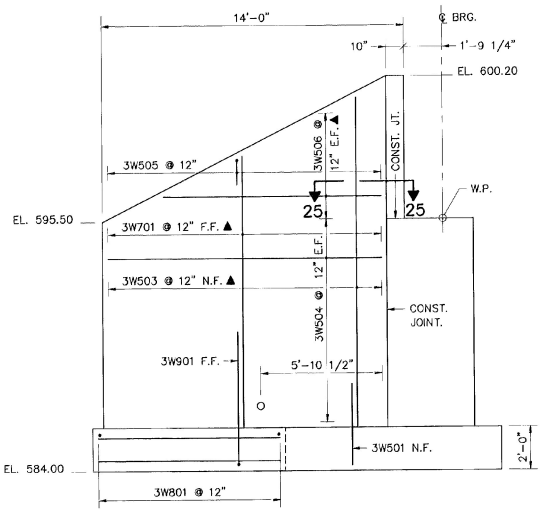
Designed By TJC	Drawn By JNC/RJL
Checked By DLJ 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.C.C. Info.	
Bridge Sheet No. BR127	Sheet 53 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



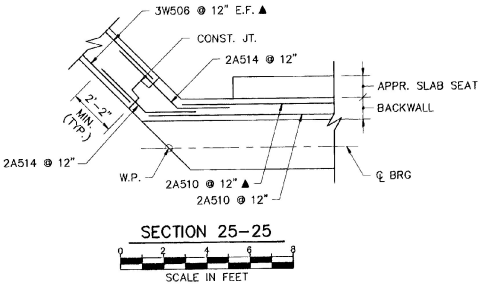
WINGWALL NO. 3 TYPICAL SECTION

SCALE IN FEET



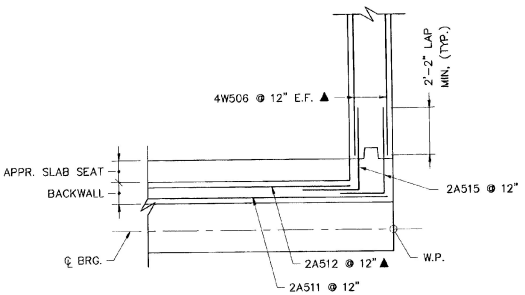
WINGWALL NO. 3 ELEVATION

SCALE IN FEET



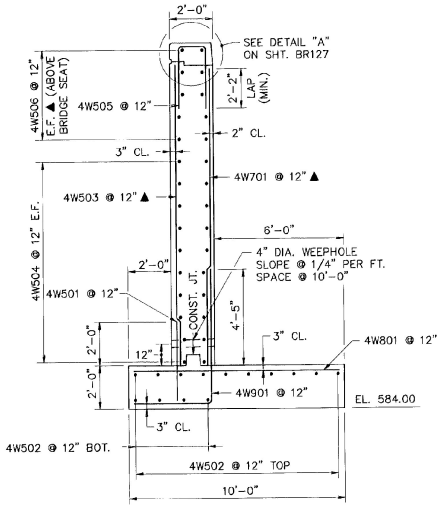
SECTION 25-25

SCALE IN FEET



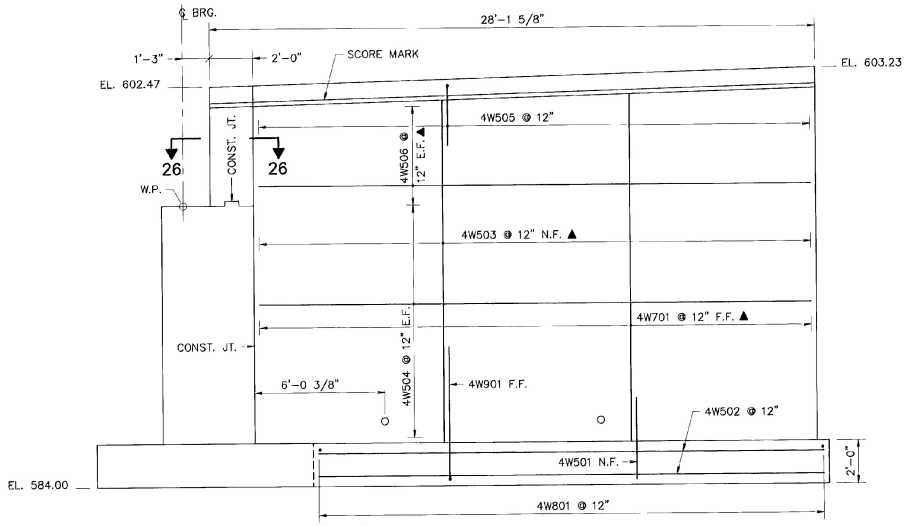
SECTION 26-26

SCALE IN FEET



WINGWALL NO. 4 TYPICAL SECTION

SCALE IN FEET



WINGWALL NO. 4 ELEVATION

SCALE IN FEET

NOTES :

1. FOR SCORE MARK DETAIL SEE SHT. BR112.
2. E.F. DENOTES EACH FACE.
3. N.F. DENOTES NEAR FACE.
4. F.F. DENOTES FAR FACE.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER OTTER CREEK	
ABUT. NO. 2 WINGWALLS – PLAN & ELEV.	
Designed By TJC	Drawn By JNC/RJL
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR128	Sheet 54 of 113

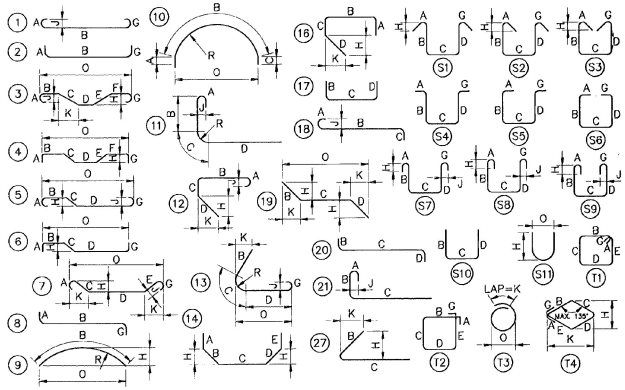
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				SUPERSTRUCTURE													
4	520	5	8'-8"	ES501	S5	1'-2"	1'-5"	1'-6"	1'-5"			1'-2"					
5	▲832	5	31'-0"	ES502	ST												
6	88	5	7'-6"	ES503	S5	2'-6"	0'-9"	1'-3"	0'-6"			2'-6"					
7	20	5	7'-0"	ES504	STR												
9	△175	6	19'-6"	ES601	STR												
10	173	6	28'-9"	ES602	STR												
11	173	6	27'-0"	ES603	STR												
12	173	6	19'-2"	ES604	STR												
13	387	6	31'-6"	ES605	STR												
14	43	6	31'-0"	ES606	STR												
15	43	6	30'-0"	ES607	STR												
16	43	6	26'-0"	ES608	STR												
18	△174	7	15'-6"	ES701	STR												
19	△174	7	30'-9"	ES702	STR												
20	173	7	23'-0"	ES703	STR												
21	173	7	23'-3"	ES704	STR												
				PIER													
25	△66	4	10'-9"	P401	T1	0'-2 1/2"	2'-9"	2'-5"	2'-9"	2'-5"		0'-2 1/2"					
26	10	4	12'-1"	P402	T1	0'-2 1/2"	3'-5"	2'-5"	3'-5"	2'-5"		0'-2 1/2"					
28	△22	5	7'-11"	P501	10	2'-0"	3'-11"	2'-0"									
29	▲36	5	22'-2"	P502	STR												
30	4	5	12'-3"	P503	T1	0'-2 1/2"	1'-6"	4'-5"	1'-6"	4'-5"		0'-2 1/2"					
31	↓	5	TO	THRU	↓		VARIES IN 10 EQUAL INCREMENTS										
32	4	5	22'-3"	P513	T1	0'-2 1/2"	1'-6"	9'-5"	1'-6"	9'-5"		0'-2 1/2"					
34	△46	10	17'-6"	P1001	STR												
35	24	10	24'-9"	P1002	STR												
37	24	11	32'-6"	P1101	STR												
38	△73	11	19'-9"	P1102	2	2'-0"	17'-9"										
39	△73	11	18'-0"	P1103	STR												
				APPROACH SLABS													
42	△82	5	20'-4"	AS501	STR												
43	△94	9	21'-1"	AS901	1	1'-7"	19'-6"							9"			
				ABUTMENT #1													
47	40	5	23'-8"	1A501	STR												
48	△45	5	10'-9"	1A502	17		4'-3"	6'-6"									
49	34	5	9'-8"	1A503	STR												
50	▲43	5	13'-1"	1A504	17		3'-9"	9'-4"									
51	▲43	5	16'-3"	1A505	17		1'-6"	14'-9"									
52	43	5	7'-6"	1A506	STR												
53	43	5	3'-3"	1A507	STR												
54	16	5	19'-10"	1A508	STR												
55	16	5	24'-8"	1A509	STR												
56	▲12	5	19'-10"	1A510	STR												
57	▲12	5	28'-11"	1A511	STR												
58	▲16	5	8'-9"	1A512	17		2'-6"	6'-3"									
59	▲16	5	9'-3"	1A513	19		6'-3"	3'-0"					4'-5"		4'-5"		
60	▲12	5	6'-8"	1A514	17		2'-8"	4'-0"									
61	▲12	5	9'-0"	1A515	19		5'-0"	4'-0"					2'-10"		2'-10"		
63	△43	7	11'-0"	1A701	17		4'-3"	6'-9"									
65	20	8	3'-6"	1A801	19		1'-6"	2'-0"					1'-1"		1'-1"		
				WINGWALL #1													
69	26	5	3'-9"	1W501	STR												
70	13	5	31'-8"	1W502	STR												
71	▲26	5	15'-10"	1W503	STR												
72	20	5	24'-8"	1W504	STR												
73	26	5	3'-7"	1W505	S10		1'-0"	1'-7"	1'-0"								
74	▲14	5	23'-8"	1W506	STR												
76	▲△28	6	15'-10"	1W601	STR												
78	33	8	8'-6"	1W801	STR												
79	30	8	8'-10"	1W802	17		3'-7"	5'-3"									
				WINGWALL #2													
83	20	5	3'-9"	2W501	STR												
84	13	5	27'-0"	2W502	STR												
85	▲20	5	13'-9"	2W503	STR												
86	16	5	19'-5"	2W504	STR												
87	20	5	7'-1"	2W505	S10		2'-9"	1'-7"	2'-9"								
88	▲16	5	19'-5"	2W506	STR												
90	▲20	6	13'-7"	2W601	STR												
92	19	8	8'-8"	2W801	STR												
93	20	8	8'-10"	2W802	17		3'-7"	5'-3"									

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				ABUTMENT #2													
101	40	5	23'-8"	2A501	STR												
102	△45	5	10'-9"	2A502	17		4'-3"	6'-6"									
103	34	5	9'-6"	2A503	STR												
104	▲43	5	12'-5"	2A504	17		3'-9"	8'-8"									
105	▲43	5	15'-10"	2A505	17		1'-6"	14'-4"									
106	43	5	7'-8"	2A506	STR												
107	43	5	3'-3"	2A507	STR												
108	16	5	21'-10"	2A508	STR												
109	16	5	22'-6"	2A509	STR												
110	▲12	5	24'-0"	2A510	STR												
111	▲12	5	22'-6"	2A511	STR												
112	▲16	5	9'-0"	2A512	19		6'-3"	2'-9"					4'-5"		4'-5"		
113	▲16	5	8'-10"	2A513	17		6'-3"	2'-7"									
114	▲12	5	6'-2"	2A514	19		3'-10"	2'-4"					2'-8"		2'-8"		
115	▲12	5	6'-6"	2A515	19		3'-11"	2'-7"									
117	△43	7	11'-0"	2A701	17		4'-3"	6'-9"									
119	△22	8	3'-6"	2A801	19		1'-6"	2'-0"					1'-1"		1'-1"		
				WINGWALL #3													
123	13	5	3'-9"	3W501	STR												
124	14	5	18'-6"	3W502	STR												
125	▲13	5	14'-0"	3W503	STR												
126	16	5	12'-8"	3W504	STR												
127	13	5	3'-7"	3W505	S10		1'-0"	1'-7"	1'-0"								
128	▲14	5	12'-2"	3W506	STR												
130	▲13	7	14'-0"	3W701	STR												
132	19	8	9'-6"	3W801	STR												
134	20	9	9'-9"	3W901	17		3'-7"	6'-2"									
				WINGWALL #4													
138	26	5	3'-9"	4W501	STR												
139	14	5	33'-3"	4W502	STR												
140	▲26	5	16'-2"	4W503	STR												
141	18	5	25'-7"	4W504	STR												
142	26	5	7'-1"	4W505	S10		2'-9"	1'-7"	2'-9"								
145	▲16	5	25'-7"	4W506	STR												
145	▲26	6	16'-0"	4W701	STR												
147	24	8	9'-6"	4W801	STR												
149	36	9	9'-9"	4W901	17		3'-7"	6'-2"									

NOTES :

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



ASTM STANDARD REINFORCING BARS

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

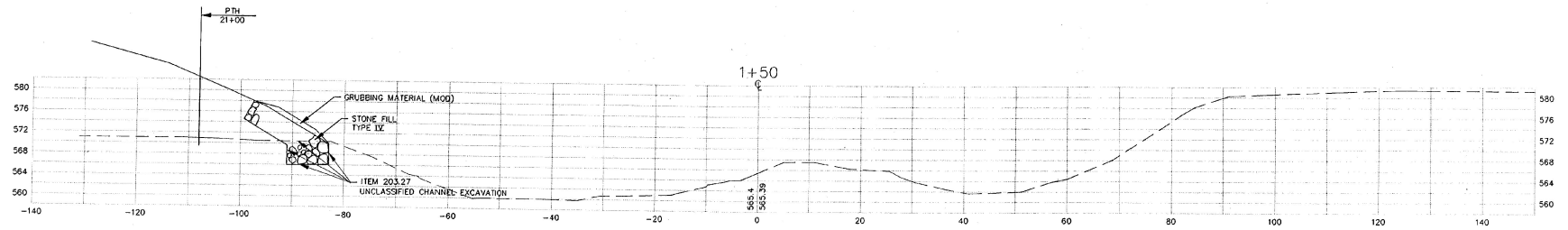
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
80 BOYLSTON STREET, 4TH FL.
BOSTON, MASSACHUSETTS

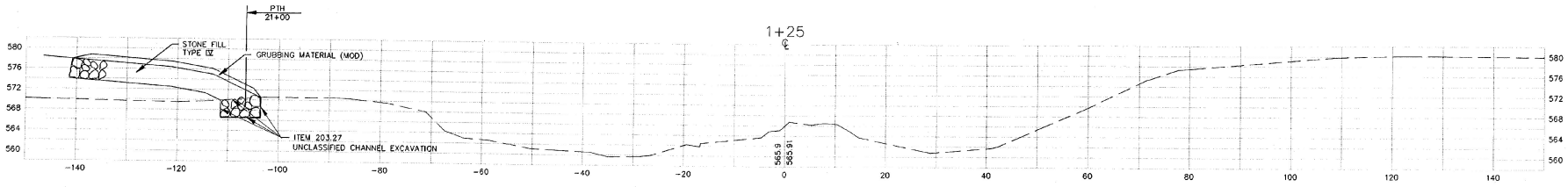
STATE OF VERMONT
AGENCY OF TRANSPORTATION

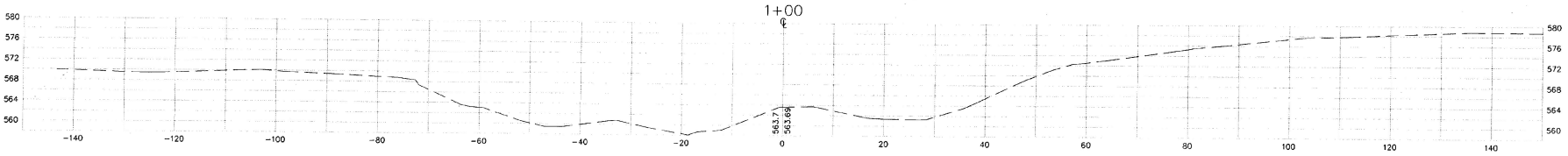
Town Of WALLINGFORD	Bridge No. 79
Highway No. U.S. ROUTE 7	Log Sta.
	Surv. Sta.

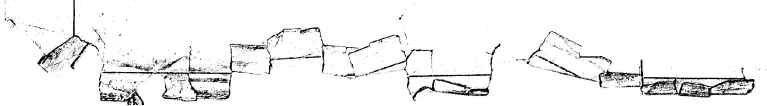
U.S. ROUTE 7 OVER OTTER CREEK
REINFORCING STEEL SCHEDULE

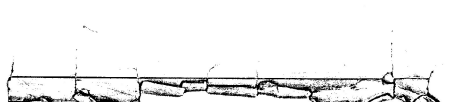
Designed By TJC	Drawn By SAM
Checked By DLJ Date 4/95	Bridge Design Supervisor EMM Date 5/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR129	Sheet 55 of 114

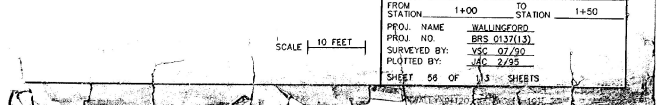










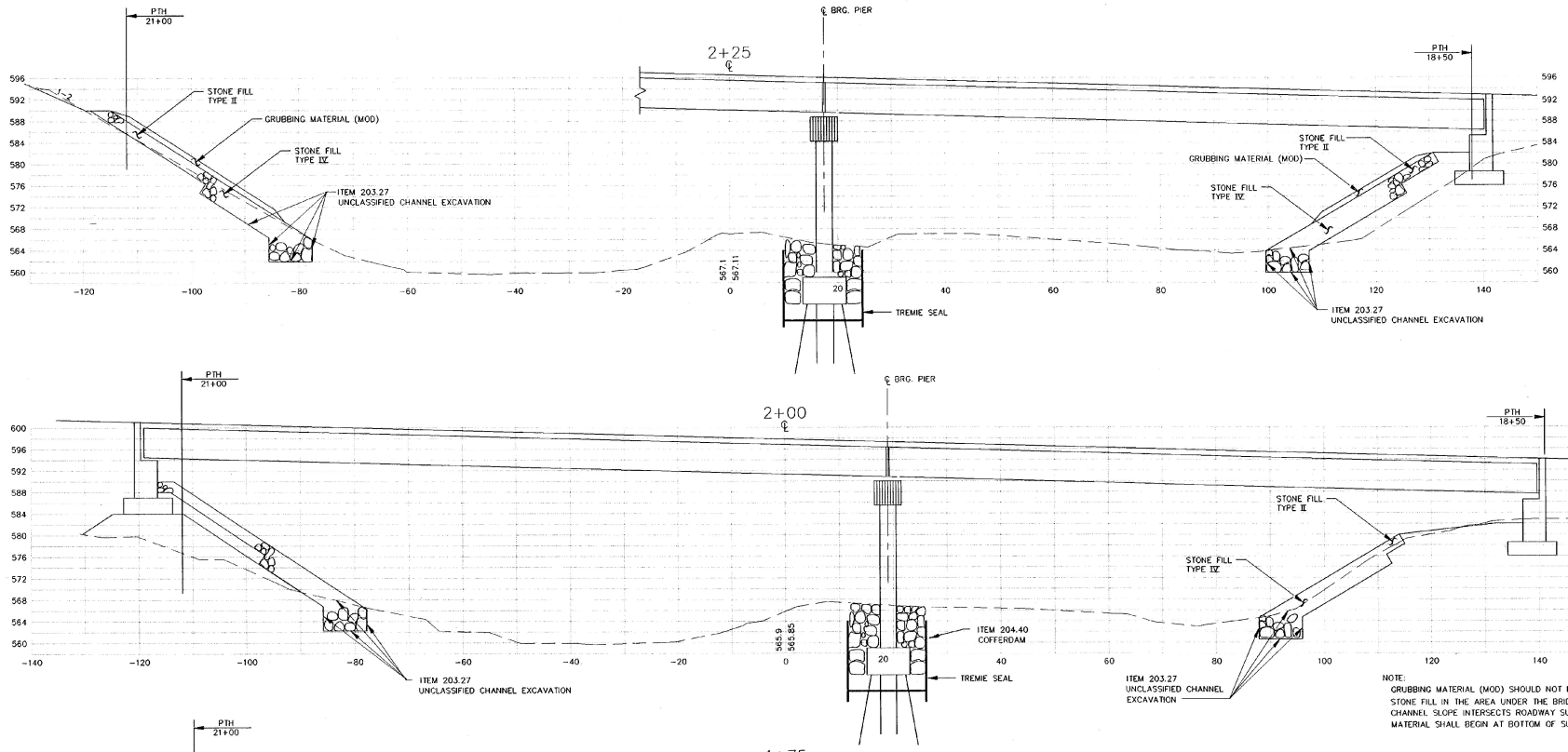


SCALE 10 FEET

CHANNEL LINE

FROM STATION	1+00
TO STATION	1+50
PROJ. NAME	WALLINGFORD
PROJ. NO.	BRS 0137(13)
SURVEYED BY:	VSC 07/90
PLOTTED BY:	VAC 2/95

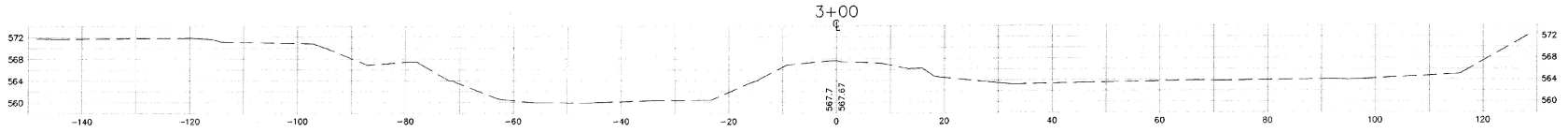
SHEET 56 OF 113 SHEETS

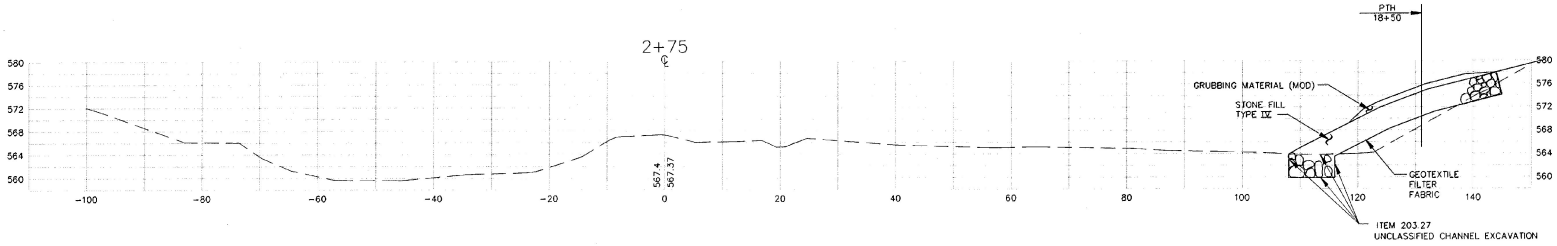


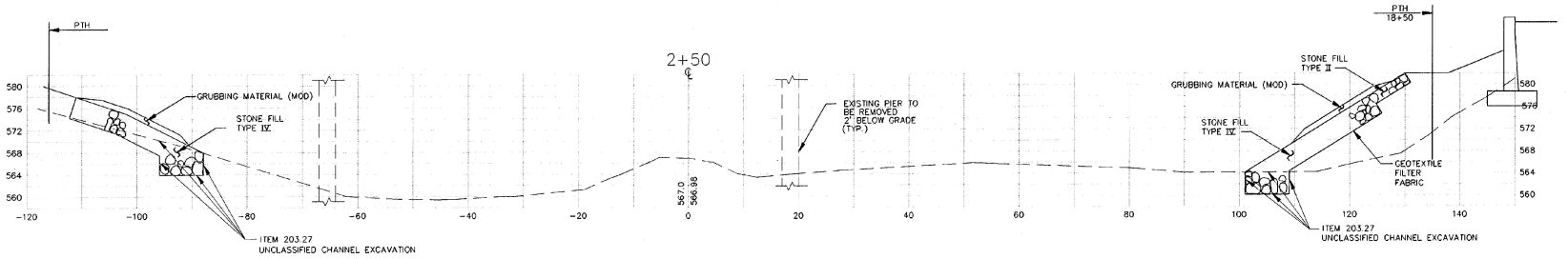
CHANNEL LINE

FROM STATION	1+75
TO STATION	2+25
PROJ. NAME	WALLINGFORD
PROJ. NO.	BRS 0137(13)
SURVEYED BY:	TC 07/90
PLOTTED BY:	TC 2/95
SHEET	SHEET

SCALE 10 FEET





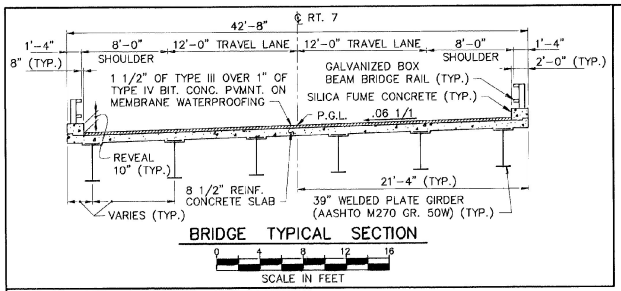


CHANNEL LINE

FROM STATION	2+50	TO STATION	3+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY	VSC 07/90		
PLOTTED BY:	JAC 2/95		

SCALE 1" = FEET

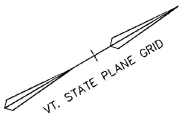
SHEET 58 OF 113 SHEETS



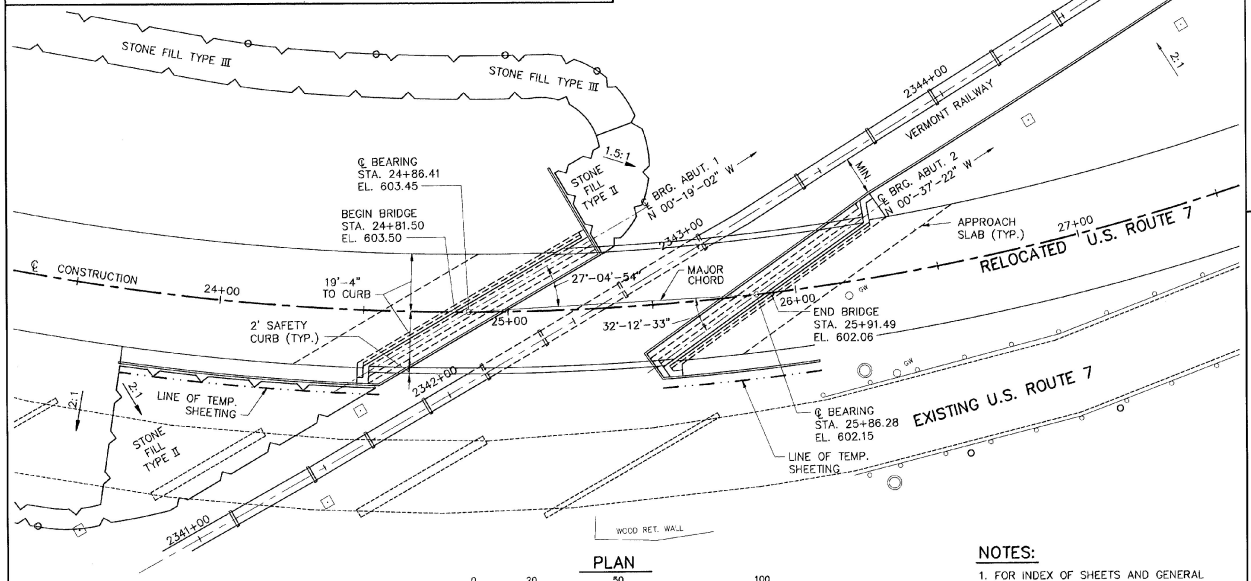
BRIDGE TYPICAL SECTION

0 4 8 12 16

SCALE IN FEET



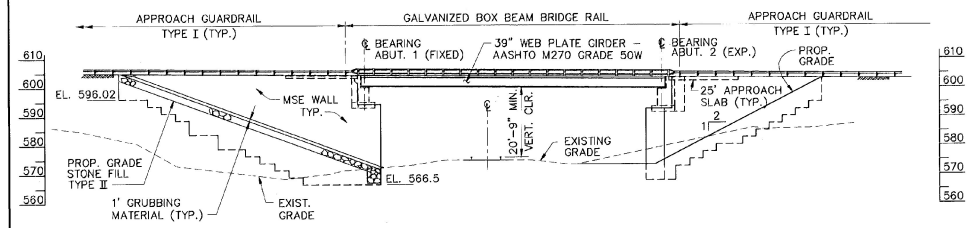
U.S. ROUTE 7 ℄ CONST.	VERTICAL CURVE DATA
Δ = 68°-20'-32"	PVI STA. 24+75
D = 6°-45'-00"	EL. 613.20
R = 848.83'	G1 = +3.2000%
T = 576.24'	G2 = -4.800%
L = 1012.48'	L = 965.00
E = 177.11'	K = 120.625
	E = 9.65 FT.



PLAN

0 20 50 100

SCALE IN FEET



ELEVATION ALONG RIGHT FASCIA

0 20 50 100

SCALE IN FEET

NOTES:

1. FOR INDEX OF SHEETS AND GENERAL NOTES, SEE SHEET BR201.
2. P.G.L. – PROFILE GRADE LINE.

EXISTING STRUCTURE

1. STRUCTURE TYPE 3-SPAN STEEL STRINGER — OVERALL LENGTH 240' — INVENTORY RATING
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 74'-78'-80' (APPROXIMATE)
3. CLEAR SPAN LENGTH(S) NORMAL TO RAILROAD N/A
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) N/A — VERTICAL CLEARANCE ABOVE STREAMBED N/A
5. WATER SURFACE ELEVATION @ Q 2.33 N/A — WATER SURFACE ELEVATION @ Q — N/A
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD N/A — YEAR — ESTIMATED DISCHARGE
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? N/A IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR?
   ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL UNKNOWN
9. DISPOSITION OF STRUCTURE REMOVE EXISTING STRUCXTURE ITEM 529.15

NEW STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE SINGLE SPAN WELDED PLATE GIRDER — OVERALL LENGTH 110' ℄ CONST.
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 100'
3. VERTICAL CLEARANCE ABOVE RAILROAD UNDER 20'-9"
4. CLEAR SPAN LENGTH(S) NORMAL TO RAILROAD N/A
5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) N/A
6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? N/A

ALLOWABLE STRESSES:

1. DESIGN LIVE LOAD AASHTO HS-25
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A — ON LEDGE N/A
3. ALLOWABLE LOAD FOR PILING N/A — TYPE N/A — ESTIMATED LENGTH N/A
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M270 GR 50W — TENSION 27,000 PSI
5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24,000 PSI — COMPRESSION 20,000 PSI
6. ALLOWABLE STRESS FOR CONCRETE CLASS A f'_c 4,000 PSI — f_c 1,800 PSI
   CLASS B f'_c 3,500 PSI — f_c 1,400 PSI
   SILICA FUME CONCRETE f'_c 5,000 PSI — f_c 2,000 PSI

TRAFFIC MAINTENANCE:

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

ADDITIONAL DESIGN CONSIDERATIONS

LOAD RATING (TONS)							
STRESS LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY 0.55 Fy = 27	30	45					
POSTED 0.67 Fy = 33	46	68	77		63	64	72
OPERATING 0.75 Fy = 37		83	95	108	77	79	

REVISIONS

NO.	DESCRIPTION	BY & DATE

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD

PRELIMINARY INFORMATION

Designed By CRI	Drawn By RJL/SAM
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR200	Sheet 60 of 113

LIST OF BRIDGE SHEETS :

BR200	PRELIMINARY INFORMATION, PLAN AND ELEVATION
BR201	GENERAL NOTES
BR202	BRIDGE QUANTITY SHEET
BR203	BORING INFORMATION SHEET
BR204–205	BORING LOGS
BR206	MONITORING INSTRUMENT LAYOUT
BR207	SUPERSTRUCTURE DETAILS
BR208	BRIDGE DECK REINFORCING PLAN
BR209	CURB, RAILING AND SCUPPER LAYOUT
BR210	RAILING DETAILS
BR211	RAILING DETAILS
BR212	RAILING DETAILS
BR213	FRAMING PLAN
BR214	GIRDER ELEVATION
BR215	GIRDER DETAILS
BR216	BEARING DEVICE DETAILS
BR217	EXPANSION JOINT DETAILS
BR218	EXPANSION JOINT DETAILS
BR219	DOWNSPOUT DETAILS
BR220	APPROACH SLAB DETAILS
BR221	ABUTMENT NO. 1 – PLAN, ELEVATION AND SECTION
BR222	ABUTMENT NO. 2 – PLAN, ELEVATION AND SECTION
BR223	FOOTING REINFORCEMENT PLAN
BR224	REINFORCING DETAILS
BR225	MSE WALLS – NOTES
BR226	MSE WALLS – ABUT. NO. 1 ELEVATION
BR227	MSE WALLS – ABUT. NO. 2 ELEVATION
BR228	MSE WALLS – ABUT. NO. 2 PLAN
BR229	MSE WALLS – ABUT. NO. 2 BIN WALL
BR230	MSE WALLS – DETAILS
BR231	MSE STANDARD PANEL DETAILS
BR232	REINFORCING STEEL SCHEDULE
BR233–236	RAILROAD CROSS SECTION SHEETS

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 1992, AND ITS LATEST REVISIONS.
2. DESIGN IS FOR HS–25–44 LOADING.
3. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
4. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER TYPE 3 BOLTS MEETING ASTM DESIGNATION A–325. HOLES SHALL BE 15/16" DIAMETER. CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STATE FOR APPROVAL.
5. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF BEAMS SHALL BE TAKEN AS DIRECTED BY THE ENGINEER FOR USE IN DETERMINING THE FINAL GRADE.
6. ANY HOLES IN FASCIA BEAMS OR FASCIA GIRDER WEBS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS.
7. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".
8. MINIMUM COVER FOR REINFORCING STEEL IN SUBSTRUCTURE SHALL BE THREE (3) INCHES UNLESS OTHERWISE NOTED ON THE PLANS.
9. REINFORCING PLACEMENT TOLERANCES SHALL BE:
   SPACING – 1"
   CLEARANCE – 1/4"
10. DECK CONCRETE SHALL BE "CONCRETE, CLASS A". ALL OTHER CONCRETE SHALL BE "CONCRETE CLASS B" UNLESS OTHERWISE DESIGNATED ON THE PLANS.
11. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".
12. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/2" PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD ABUTMENT FACE. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTH WITH EITHER A WOOD OR MAGNESIUM FLOAT FINISH.
13. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP NOTCHES.
14. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F. (UNLESS NOTED OTHERWISE).
15. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
16. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.
17. THE EXISTING STRUCTURE SHALL BE REMOVED UNDER ITEM 529.15 "BR 80". THE EXISTING ABUTMENTS AND PIERS SHALL BE REMOVED DOWN TO 2' BELOW THE FINISHED GRADE.
18. REMOVAL SHALL BE DONE IN A SAFE, WORKMANLIKE MANNER. EXISTING STRUCTURAL STEEL STRINGERS, STEEL BEAM GUARD RAILS, SHEET PILING AND TRAFFIC CONTROL SIGNALS SHALL REMAIN PROPERTY OF THE STATE AND WILL BE TRANSPORTED BY STATE FORCES. TRAFFIC CONTROL SIGNALS WILL BE SALVAGED ONLY AFTER THE CONTRACTOR HAS HAD THE OPPORTUNITY TO USE THEM FOR TRAFFIC CONTROL. ALL OTHER MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
19. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W UNPAINTED, UNLESS OTHERWISE NOTED.
20. FOR LIST OF STANDARD SHEETS, SEE SHEET NO. 2 OF 113.
21. ALL STRUCTURAL STEEL WITHIN A DISTANCE OF 10' FROM THE ENDS OF THE GIRDERS AT THE EXPANSION JOINT END WILL BE COATED WITH A PROTECTIVE PAINT SYSTEM WITH THE FINAL COAT TO BE A DARK BROWN TO BLEND WITH THE AASHTO M270 GRADE 50W STEEL. THIS WORK WILL BE PAID FOR UNDER ITEM 513.25 "STRUCTURAL PAINTING, SHOP APPLIED" AND 513.40 "SURFACE PREPARATION", SEE SUPPLEMENTAL SPECIFICATION 513 FOR PAINTING OF STRUCTURAL STEEL.
22. THE CONTRACTOR SHALL EXERCISE CARE WHEN PLACING THE STONE FILL AGAINST THE REINFORCED EARTH WALL PANELS.
23. NOTES ON BOLTED CONNECTIONS:
    A. MECHANICALLY GALVANIZED AND PAINTED TYPE I BOLTS ARE TO BE USED FOR PAINTED M270 GRADE 50 AND PAINTED M270 GRADE 36 STRUCTURAL STEEL CONNECTIONS. FIELD PAINTING OF BOLTS TO INCLUDE INTERMEDIATE AND FINAL COATING SYSTEMS AFTER CONNECTION APPROVAL.
    B. TYPE III BOLTS ARE TO BE USED FOR UNPAINTED M270 GRADE 50W STRUCTURAL STEEL CONNECTORS.

REFERENCE SHEETS:

FOR PLAN AND PROFILE, SEE SHEET 16 OF 113.

FOR CROSS SECTIONS, SEE SHEETS 104 THROUGH 107 OF 113.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
GENERAL NOTES	
Designed By GRI	Drawn By JNC
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR201	Sheet 61 of 113

BRIDGE QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

GRADES					EARTHWORK							
% GDE	VERT CUR	STATION	ELEVATION ON TAN.	ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN: SUPER STRUCTURE	PIER	ABUTMENT NO. 1	ABUTMENT NO. 2	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	MSE WALLS	TOTAL	FI
203.15	COMMON EXCAVATION	CY							~~1,480~~ 1257	~~1,480~~ 1257	12
203.32	GRANULAR BORROW	CY					~~3,513~~ 3502	~~2,122~~ 1183		~~5635~~ 5702.7	57
204.25	STRUCTURE EXCAVATION	CY							~~230~~ 780	~~230~~ 780	23
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY			~~3~~ 0	~~3~~ 0				~~6~~ 0	0
406.25	BITUMINOUS CONCRETE PAVEMENT	TON	~~64~~ 65				15 ✓	15 ✓		~~94~~ 95	9
501.22	CONCRETE, CLASS A	CY	~~130~~ 116						~~24~~ 40.7	~~154~~ 161.7	161
501.25	CONCRETE CLASS B	CY			~~147~~ 141	~~185~~ 162.7	~~49~~ 55.5	~~48~~ 46.7		~~403~~ 406.7	40
501.60	SILICA-FUME CONCRETE	CY	~~18~~ 14.2							~~18~~ 14.2	14
505.36	TEMPORARY STEEL SHEET PILING	SF							~~12,650~~ 14405	~~12,650~~ 14405	144
506.55	STRUCTURAL STEEL (PLATE GIRDER)	LB	~~173,100~~ 168,665							~~173,100~~ 168,665	1686
507.15	REINFORCING STEEL	LB			~~9,660~~ 9906	~~11,000~~ 11015				~~20,660~~ 20921	209
507.17	EPOXY COATED REINFORCING STEEL	LB	~~44,610~~ 44599				~~7,010~~ 6963	~~7,320~~ 6983	~~2,420~~ 2505	~~61,360~~ 61038	610
508.15	SHEAR CONNECTORS (BR.80) (1530 – 7/8" DIA. x 7" STUDS)	LS	1 ✓							1 ✓	1
513.25	STRUCTURAL PAINTING – SHOP APPLIED 10 TONS (BR. 80)	LS	1 ✓							1 ✓	1
513.40	SURFACE PREPARATION "BR. 80"	LS	1 ✓							1 ✓	1
514.10	WATER REPELLANT	GAL	~~9~~ 10.07		~~9~~ 10.07	~~12~~ 13.36			~~5~~ 5585	~~35~~ 39	3
516.10	BRIDGE EXPANSION JOINT	LF	~~94~~ 85.78							~~94~~ 85.78	85
519.20	SHEET MEMBRANE WATERPROOFING	SY	~~462~~ 464				108 ✓	108 ✓		680 ✓	67
525.31	BRIDGE RAILING – 2 RAIL GALV. BOX BEAM	LF	~~210~~ 227							~~210~~ 227	2
526.40	REINFORCED SLOPE (MSE WALLS WITH ASHLAR STONE PANEL FACING)	SF			~~6,310~~ 5163.12	~~6,840~~ 6181.7				~~13,150~~ 11344.82	1134
527.10	MAINTENANCE OF TRAFFIC BRIDGE PROJECTS (BR. 80)	LS	1 ✓							1 ✓	1
529.15	REMOVAL OF STRUCTURE (BR. 80)	LS	1 ✓							1 ✓	1
531.10	BEARING DEVICE ASSEMBLY	EA	12 ✓							12 ✓	12
~~595.25~~	DISPOSAL OF CONTAM. STEEL (BR 80)	LS	1 ✓							1 ✓	1
613.11	STONEFILL TYPE II	CY			~~455~~ 368.7	~~545~~ 291.3				~~1,000~~ 605	66
623.21	SETTLEMENT PLATFORM TYPE I	EA			4 ✓	2 ✓				6 ✓	6
623.23	SETTLEMENT PLATFORM VIBRATING WIRE	EA			2 ✓	2 ✓				4 ✓	4
623.30	INCLINOMETERS	LF			~~115~~ 113	115 ~~115~~				~~230~~ 228.5	228
623.50	GROUNDWATER OBSERVATION WELLS	LF			0 35	35 ~~35~~				~~70~~ 785	78
623.60	EARTH PRESSURE CELLS	EA			~~3~~ 2	~~4~~ 5			~~6~~ 2	~~10~~ 9	9
631.16	TESTING EQUIPMENT – CONCRETE	LS			0.20 ✓	0.15 ✓				0.35 ✓	0
631.18	TESTING EQUIPMENT – PROTECTIVE COATING	LS			0.20 ✓	0.15 ✓				0.35 ✓	0
649.40	GEOTEXTILE UNDER STONEFILL	SY			~~750~~ 654	~~870~~ 639				~~1,620~~ 1293	12
620.75	SNOW BARRIER Co#2 SA Dated 10-24-91	LF	150							150	15
900.02	To Seal Corner Joints MSE Wall Coping w/ WP-1	EA							1	1	1

BRIDGE(S) AT STATION(S): STA. 24+81.50 TO STA. 25+91.49
LOCATION(S): U.S. ROUTE 7 OVER RAILROAD

PREPARED BY: G.R.I. | CHECKED BY: D.L.L.
SUPERVISOR: E.M.M.

PROJECT: WALLINGFORD BR202 OF
PROJECT NO: BRS 0137 (13)
SHEET NO: 62 OF 113

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil – Low Compressibility
A5	Silty Soil – Highly Compressible
A6	Clayey Soil – Low Compressibility
A7	Clayey Soil – Highly Compressible

UNIFIED SOIL SYSTEM

GW/GP	Clean Gravels (Few Fines)
GM/GC	Gravels (Appreciable Fines)
SW/SP	Clean Sands (Few Fines)
SM/SC	Sand (Appreciable Fines)
ML/CL	Low Plastic Silts & Clays
OL	Low Plastic Organic Silt
MH/CH	High Plastic Silts & Clays
OH	High Plastic Organic Silt
Pt	Highly Organic Soils

MOISTURE

DESCRIPTIVE TERM	OBSERVED IN FIELD	% ± BY ANALYSIS
Dry	No Visible Water	<10
Moist	Damp	10–20
Moist to Wet	Moist to Wet	21–50
Wet	Visible Water	51–70
Saturated		>70

ROCK QUALITY DESIGNATION

R.Q.D.	ROCK DESCRIPTION
<.25	Very Poor
.25 to .50	Poor
.51 to .75	Fair
.76 to .90	Good
>.90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250–500	Soft
500–1000	Med. Stiff
1000–2000	Stiff
2000–4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

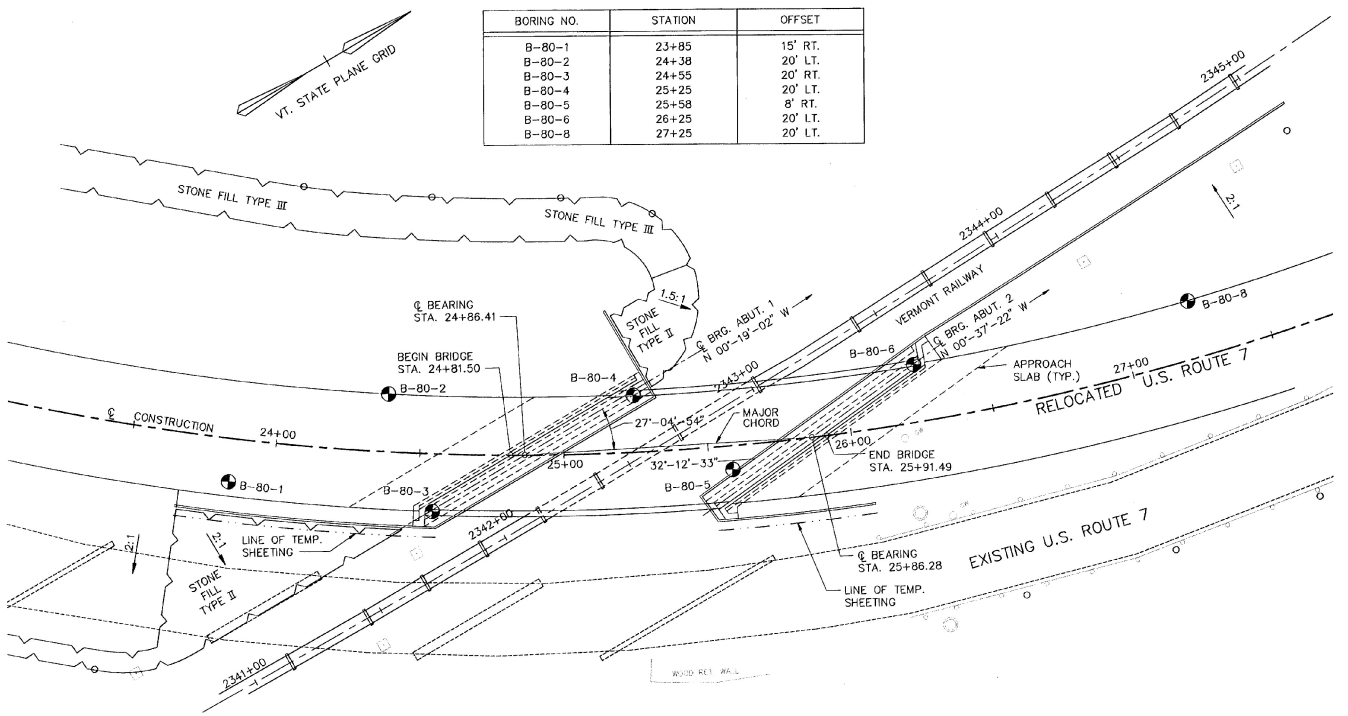
COMMONLY USED SYMBOLS

▼	Water Elevation
	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
W	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N>100)

COLOR

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

BORING NO.	STATION	OFFSET
B-80-1	23+85	15' RT.
B-80-2	24+38	20' LT.
B-80-3	24+55	20' RT.
B-80-4	25+25	20' LT.
B-80-5	25+58	8' RT.
B-80-6	26+25	20' LT.
B-80-8	27+25	20' LT.



BORING LOCATION PLAN

0 20 50 100

SCALE IN FEET

DEFINITIONS (AASHTO)

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

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

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

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

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

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

CLAY – Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED – Alternate layers of silt and clay.

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

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

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

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

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

DIP – Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 9/91 and 12/91 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

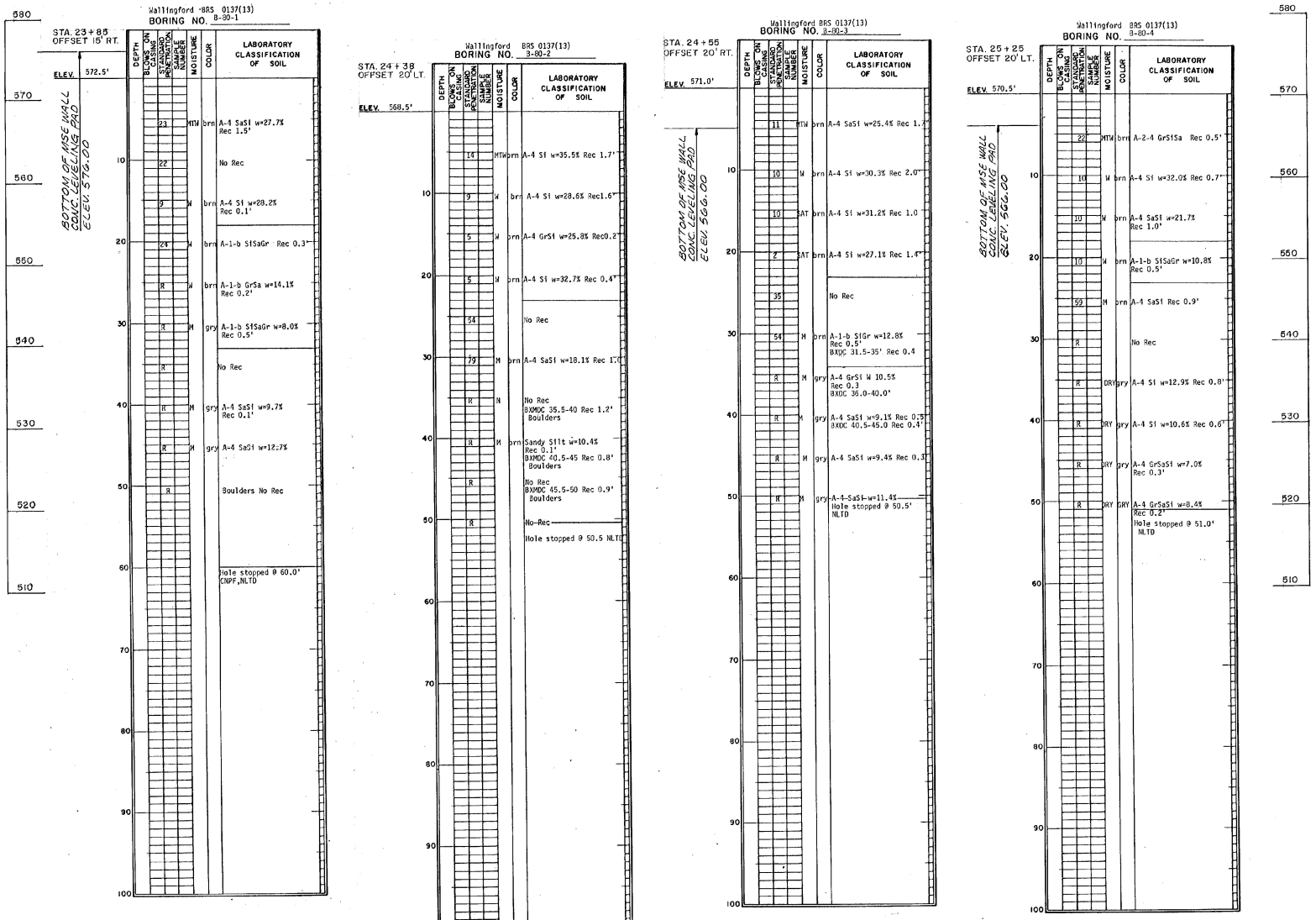
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD

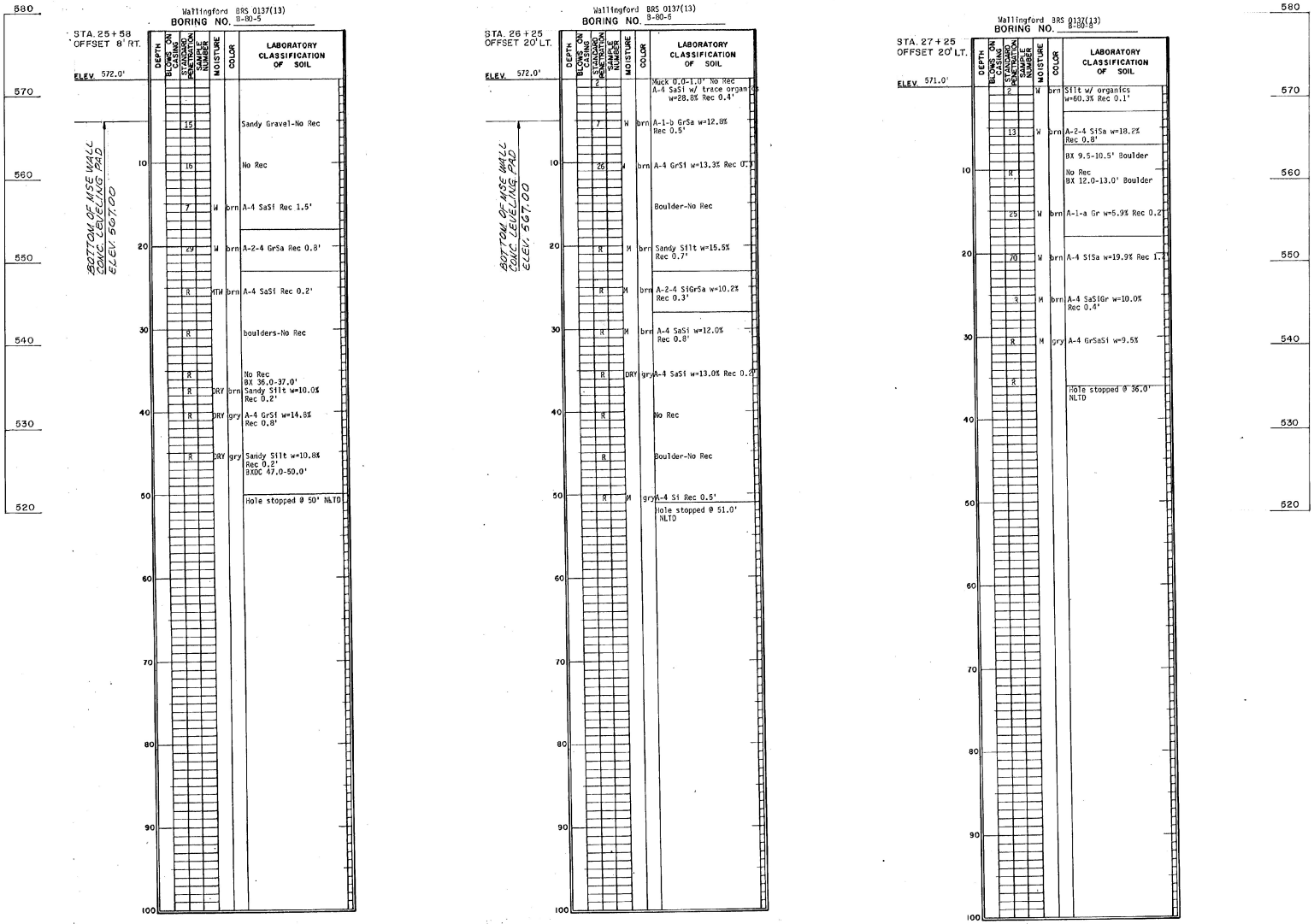
BORING INFORMATION

Designed By GRI	Drawn By RJL/SAM
Checked By EMM 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR203	Sheet 63 of 113



STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. RT. 7	Log Sta. / Surv. Sta.
U.S. RT. 7 OVER RAILROAD	
BORING LOGS	
Designed By GRI	Drawn By RJL
Checked By EMM Date	Bridge Design Supervisor Date
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR204	Sheet 64 of 113



STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. RT. 7	Log Sta. / Surv. Sta.
U.S. RT. 7 OVER RAILROAD	
BORING LOGS	
Designed By GRI	Drawn By RJL
Checked By EMM Date	Bridge Design Supervisor Date
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR205	Sheet 65 of 113

LEGEND

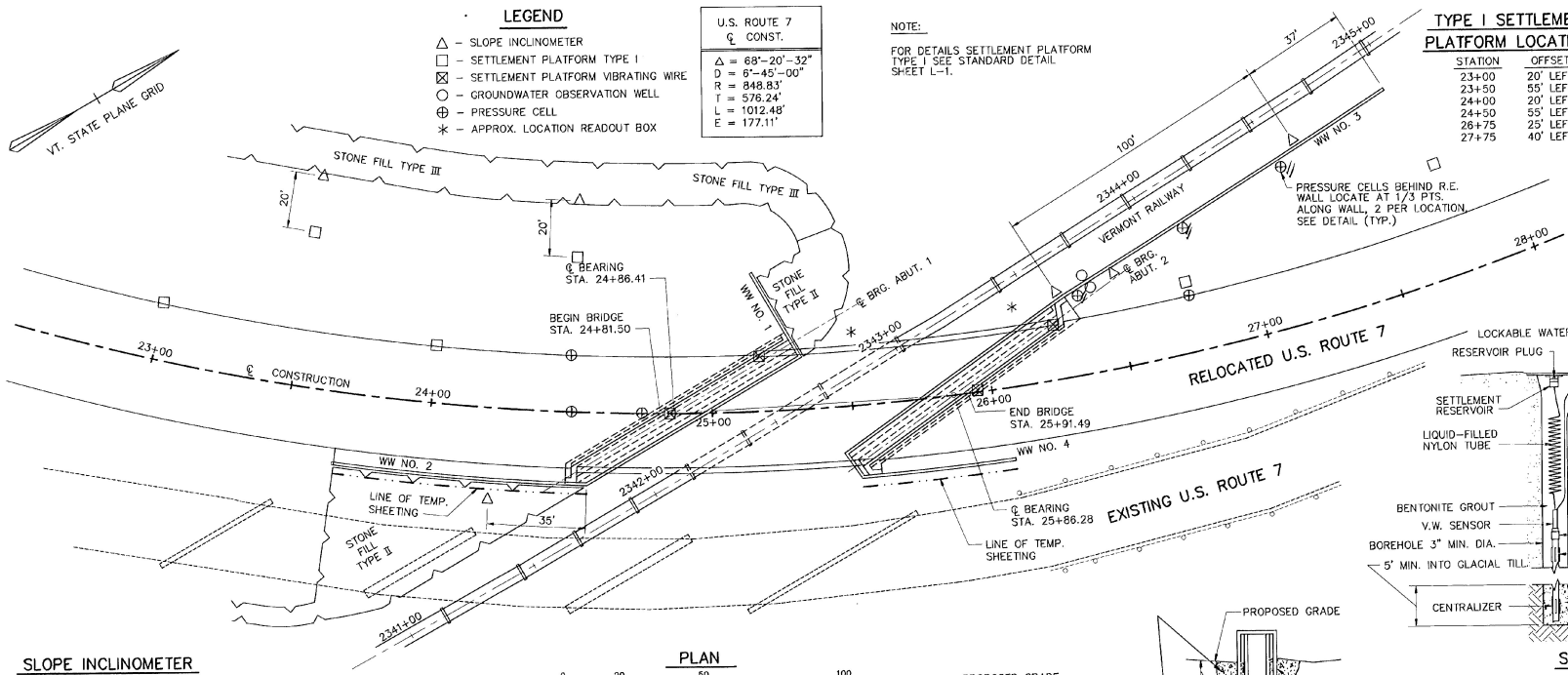
△ – SLOPE INCLINOMETER
□ – SETTLEMENT PLATFORM TYPE I
⊠ – SETTLEMENT PLATFORM VIBRATING WIRE
○ – GROUNDWATER OBSERVATION WELL
⊕ – PRESSURE CELL
✳ – APPROX. LOCATION READOUT BOX

U.S. ROUTE 7 ℄ CONST.

Δ = 68°-20'-32"
D = 6°-45'-00"
R = 848.83'
T = 576.24'
L = 1012.48'
E = 177.11'

NOTE:
FOR DETAILS SETTLEMENT PLATFORM TYPE I SEE STANDARD DETAIL SHEET L-1.

VT. STATE PLANE GRID



PRESSURE CELLS BEHIND R.E. WALL LOCATE AT 1/3 PTS. ALONG WALL, 2 PER LOCATION. SEE DETAIL (TYP.)

TYPE I SETTLEMENT PLATFORM LOCATIONS

STATION	OFFSET
23+00	20' LEFT
23+50	55' LEFT
24+00	20' LEFT
24+50	55' LEFT
26+75	25' LEFT
27+75	40' LEFT

SETTLEMENT PLATFORM VIBRATING WIRE LOCATIONS

STATION	OFFSET
24+85	℄
25+20	20' LEFT
25+90	℄
26+25	20' LEFT

PRESSURE CELLS AT BOTTOM OF EMBANKMENT LOCATIONS

STATION	OFFSET
24+50	℄
24+50	20' LEFT
24+75	℄
26+75	20' LEFT

ADDITIONAL PRESSURE CELLS ARE LOCATED BEHIND WALL NO. 3 (SEE PLAN)

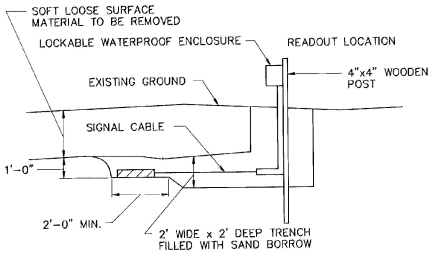
SLOPE INCLINOMETER LOCATIONS

STATION	OFFSET
23+50	75' LEFT
24+22	32' RIGHT
24+50	75' LEFT
26+29	30' LEFT
26+50	32' LEFT
27+28	65' LEFT

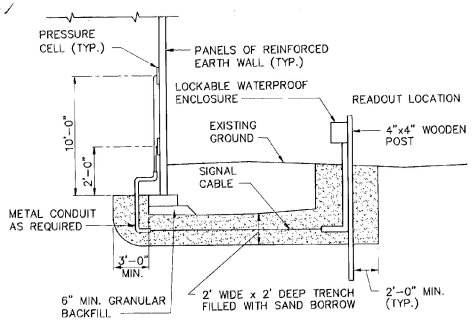
GROUNDWATER OBSERVATION WELL LOCATIONS

STATION	OFFSET
26+36	35' LEFT
26+38	30' LEFT

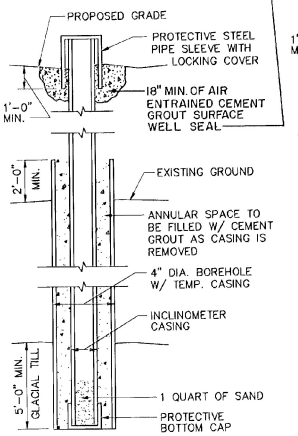
PLAN
0 20 50 100
SCALE IN FEET



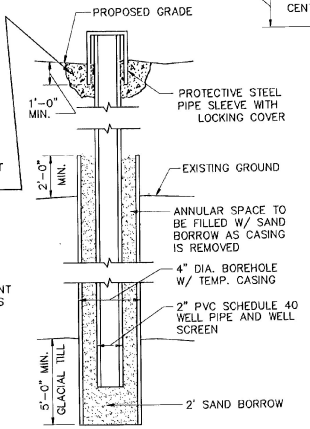
EARTH PRESSURE CELL DETAIL @ BOTTOM OF EMBANKMENT
NOT TO SCALE



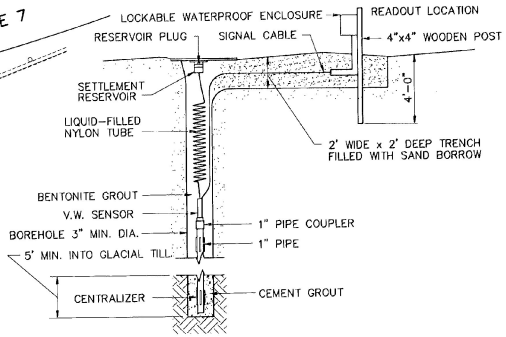
EARTH PRESSURE CELL DETAIL @ REAR FACE REINF. EARTH WALL
NOT TO SCALE



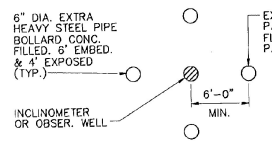
INCLINOMETER
NOT TO SCALE



GROUNDWATER OBSERVATION WELL
NOT TO SCALE



SETTLEMENT PLATFORM VIBRATING WIRE
NOT TO SCALE



PROTECTIVE BOLLARD DETAIL
NOT TO SCALE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD
MONITORING INSTRUMENT LAYOUT

Designed By SFS	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR206	Sheet 66 of 113

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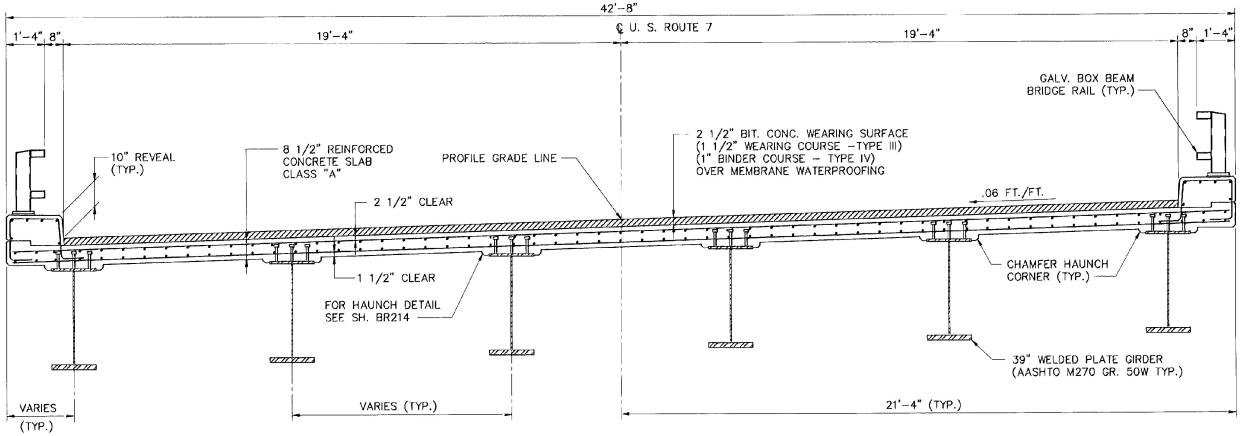
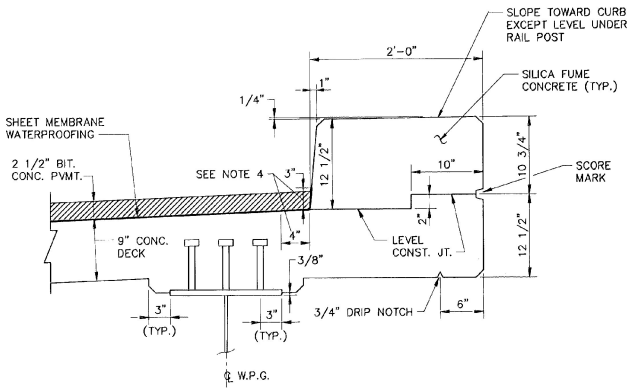
BOSTON, MASSACHUSETTS



TYPICAL BRIDGE SECTION

SCALE IN FEET

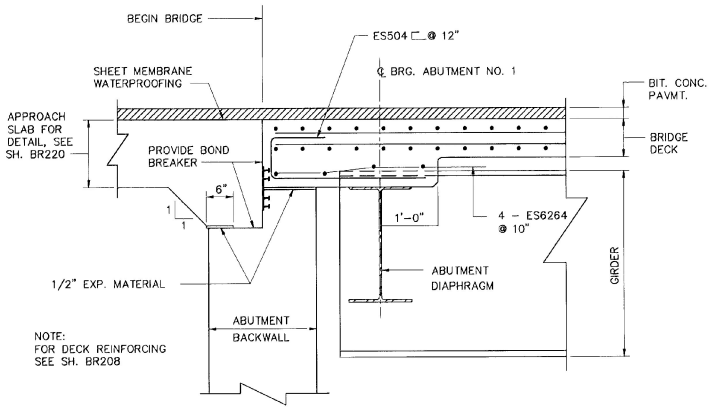


TYPICAL 2'-0" CURB SECTION

SCALE IN FEET

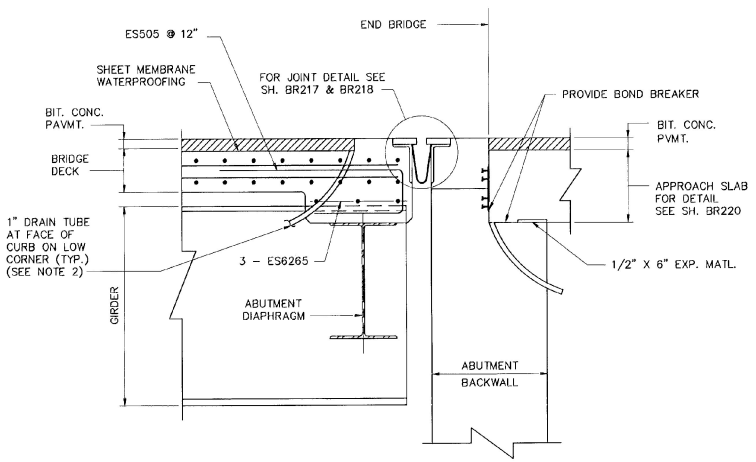
NOTES :

1. ALL SUPERSTRUCTURE REINFORCING STEEL SHALL BE EPOXY COATED.
2. 1" ø PLASTIC TUBE, THE COST OF WHICH IS SUBSIDIARY TO THE ITEM "CONCRETE, CLASS A". CARE SHALL BE TAKEN TO KEEP TUBE CLEAR DURING CONSTRUCTION. THE TOP OF THE TUBE SHALL BE RECESSED 1/4" BELOW THE TOP OF THE CONCRETE DECK, AND THE BOTTOM LOCATED 6" BELOW THE BOTTOM FLANGE OF THE NEAREST GIRDER (LOW SIDE OF THE BRIDGE).
3. FOR SHEAR CONNECTOR DETAILS SEE SH. NO. BR214.
4. INDICATES AREA ALONG DECK AND UP FACE OF CURB FOR PLACEMENT OF 2 COATS OF POLYURETHANE MEMBRANE.
5. POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING.
6. SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN.



FIXED END - ABUTMENT NO. 1 (WEST)
TYPICAL SECTION NORMAL TO ABUTMENT

SCALE IN FEET



EXPANSION END - ABUTMENT NO. 2 (EAST)
TYPICAL SECTION NORMAL TO ABUTMENT

SCALE IN FEET

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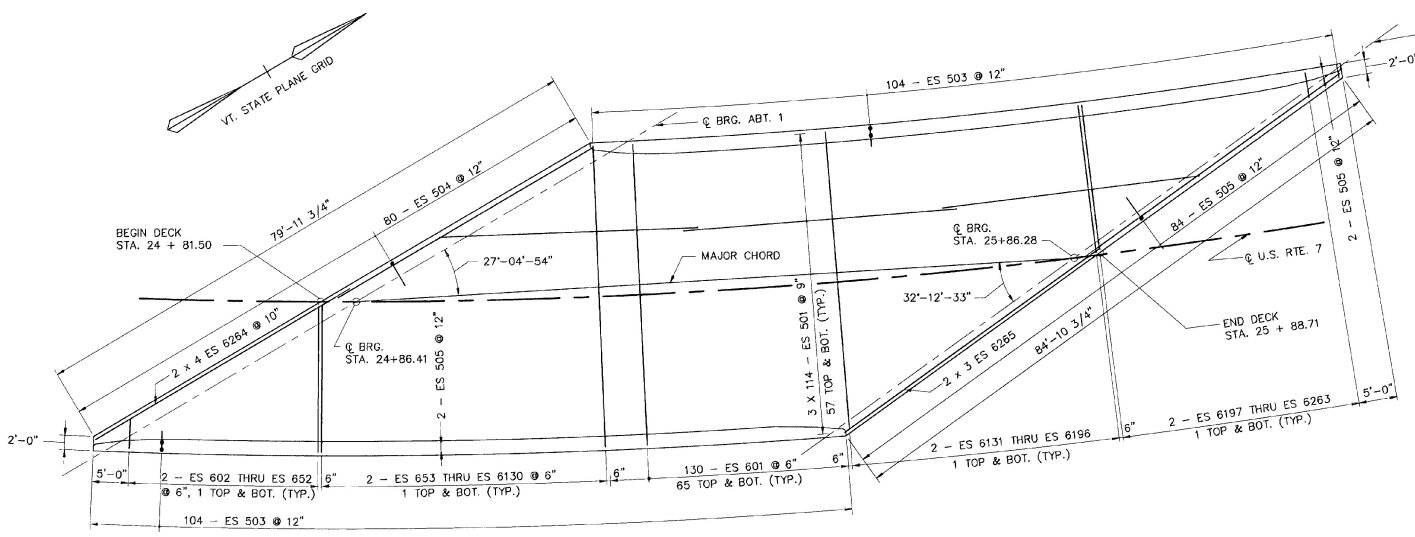
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
	Log Sta.
Highway No. U.S. ROUTE 7	Surv. Sta.

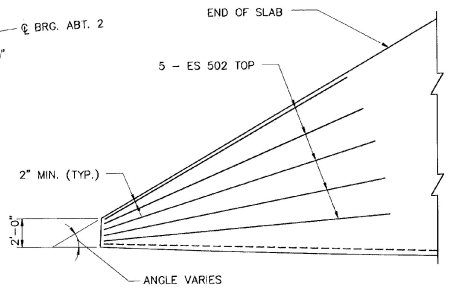
U.S. ROUTE 7 OVER RAILROAD
SUPERSTRUCTURE DETAILS

Designed By GRI	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR207	Sheet 67 of 113



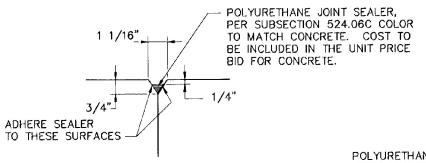
BRIDGE DECK REINFORCING PLAN

0 8 16 40
SCALE IN FEET

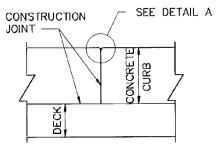


ADDITIONAL SLAB REINFORCEMENT AT ACUTE CORNERS

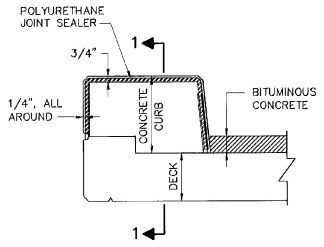
0 4 8 20
SCALE IN FEET



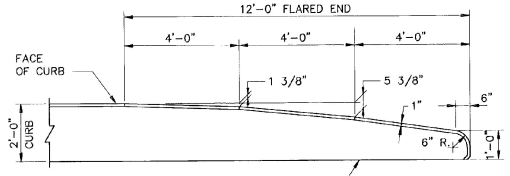
DETAIL A
NOT TO SCALE



SECTION 1–1
NOT TO SCALE



TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT
NOT TO SCALE



FLARED END DETAIL FOR 2'–0" CURB

0 1 2 3 4 5 10
SCALE IN FEET

NOTE:

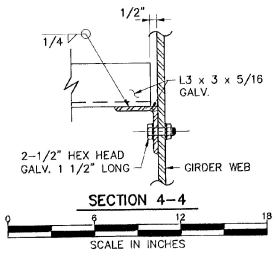
1. FOR CURB CONSTRUCTION JOINT AND BRIDGE RAILING POST LOCATION, SEE SHEET BR209.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
BRIDGE DECK REINFORCING PLAN	
Designed By GRI	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR208	Sheet 68 of 113



SECTION 4-4

SCALE IN INCHES

CURB, RAILING & SCUPPER PLAN

SCALE IN FEET

BAR DETAIL FOR GRATE

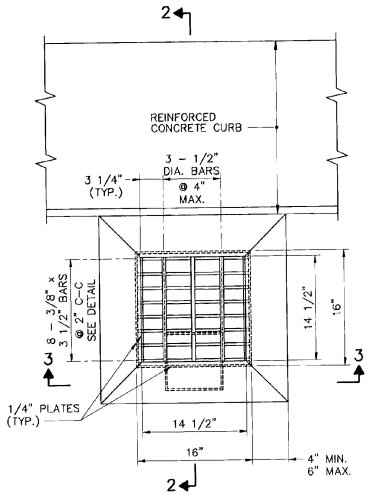
SCALE IN FEET

CURB & RAILING NOTES:

1. CURB CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 46 HOURS DELAY BETWEEN ADJACENT POURS.
2. PLACEMENT DETAILS FOR THE CURB SHALL BE SUBMITTED TO THE BRIDGE RAILING FABRICATOR BY THE CONTRACTOR.
3. BRIDGE RAIL POST SHALL BE 1'-6" MINIMUM FROM CURB CONSTRUCTION JOINTS (UNLESS OTHERWISE NOTED).
4. FOR BRIDGE RAILING DETAILS, SEE SHEETS BR210 THROUGH BR211.
5. FOR APPROACH RAIL DETAILS, SEE SHEETS BR210 THROUGH BR211.
6. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.

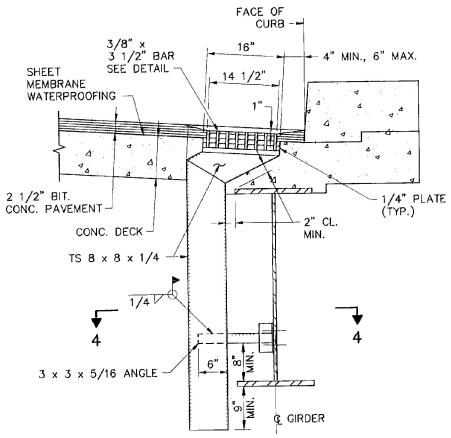
SCUPPER NOTES:

1. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 OR A501. ALL OTHER STL. SHALL CONF. TO M270 GRADE 36. THE WHOLE SCUPPER ASSEMBLY SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.
2. ALL SURFACES OF SCUPPER WHICH WILL CONTACT CONCRETE SHALL BE COATED WITH EPOXY BONDING COMPOUND IN ACCORDANCE WITH SECTION 719. THE COST OF THIS WORK SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR CONCRETE, CLASS A.
3. SCUPPERS SHALL BE PAID FOR AS STRUCTURAL STEEL (PLATE GIRDER).
4. SPECIAL CARE SHALL BE TAKEN TO SEAL WATERPROOFING MEMBRANE AROUND SCUPPERS SIMILAR TO METHOD USED AT CURB.
5. THE TOP SURFACE OF SCUPPER SHALL BE SLOPED TO MATCH ROADWAY SLOPE AND GRADE.
6. ANY GALVANIZED AREAS THAT ARE WELDED IN THE FIELD MUST BE COATED WITH AN APPROVED SEALER AFTERWARDS, ACCORDING TO VERMONT SPECIFICATION 708.02(d).



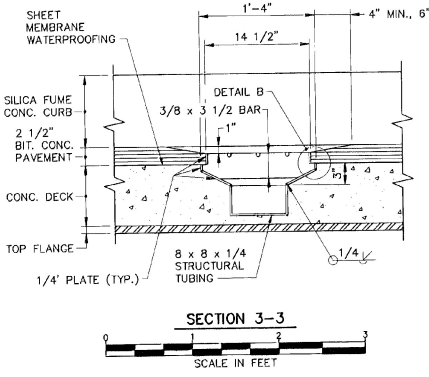
TYPICAL PLAN

SCALE IN FEET



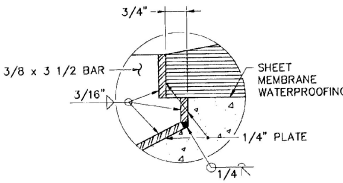
SECTION 2-2

SCALE IN FEET



SECTION 3-3

SCALE IN FEET



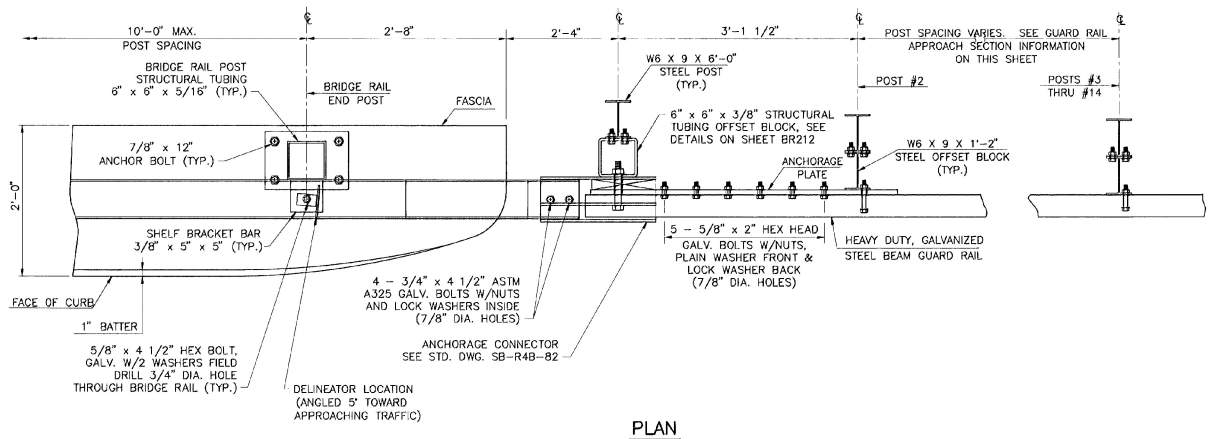
DETAIL B

SCALE IN INCHES

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
CURB, RAILING AND SCUPPER LAYOUT	
Designed By GRI	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR209	Sheet 69 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 BOYLSTON STREET, 6TH FL.
BOSTON, MASSACHUSETTS

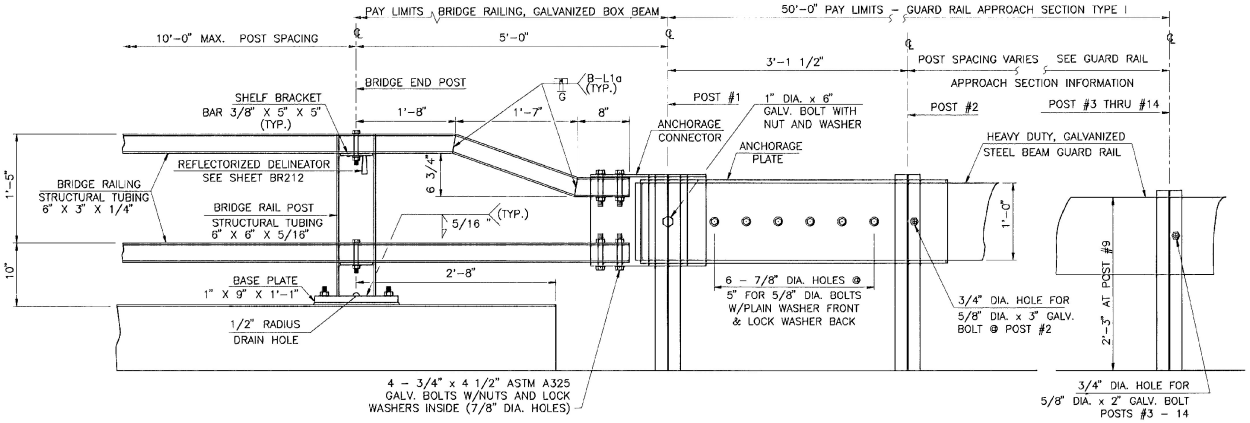


PLAN
N.T.S.

GUARD RAIL APPROACH SECTION TYPE I

POST NO.	SPACING
1	
2	3'-1 1/2"
3	3'-1 1/2"
4	3'-1 1/2"
5	3'-1 1/2"
6	3'-1 1/2"
7	3'-1 1/2"
8	3'-1 1/2"
9	3'-1 1/2"
10	4'-2"
11	4'-2"
12	4'-2"
13	6'-3"
14	6'-3"

50'-0" PAY LENGTH GUARD RAIL APPROACH SECTION, TYPE I



ELEVATION
N.T.S.

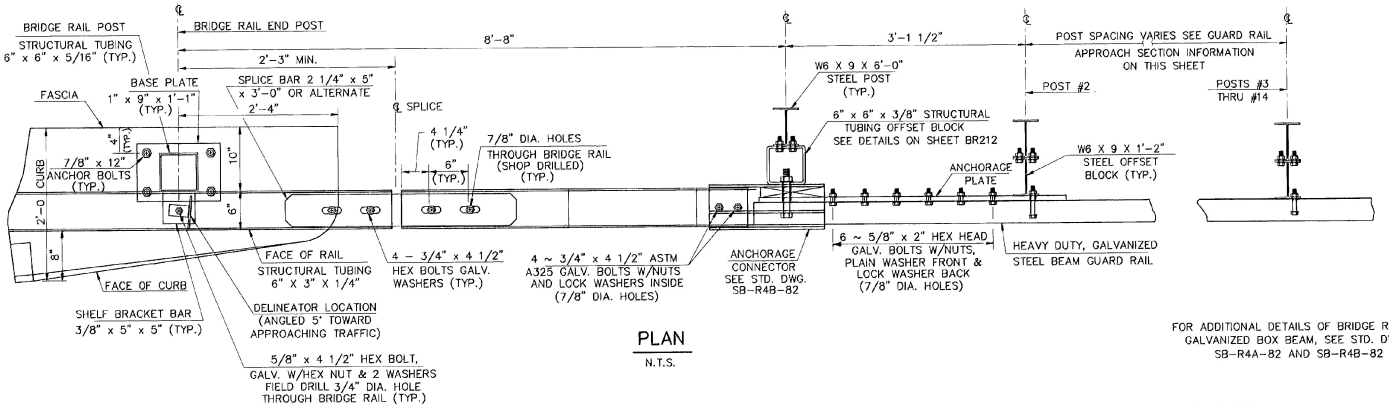
NOTES :

1. FOR ADDITIONAL INFORMATION ON THE CONNECTION/ TRANSITION DETAILS AT POST NO. 1, SEE SHEET BR212.
2. FOR ADDITIONAL DETAILS OF BRIDGE RAILING, GALVANIZED BOX BEAM, SEE STD. DWGS. SB-R4A-82 AND SB-R4B-82.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
BRIDGE RAILING TRANSITION DETAILS @ ABUT. #1	
Designed By GRI	Drawn By VAOT
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR210	Sheet 70 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



PLAN

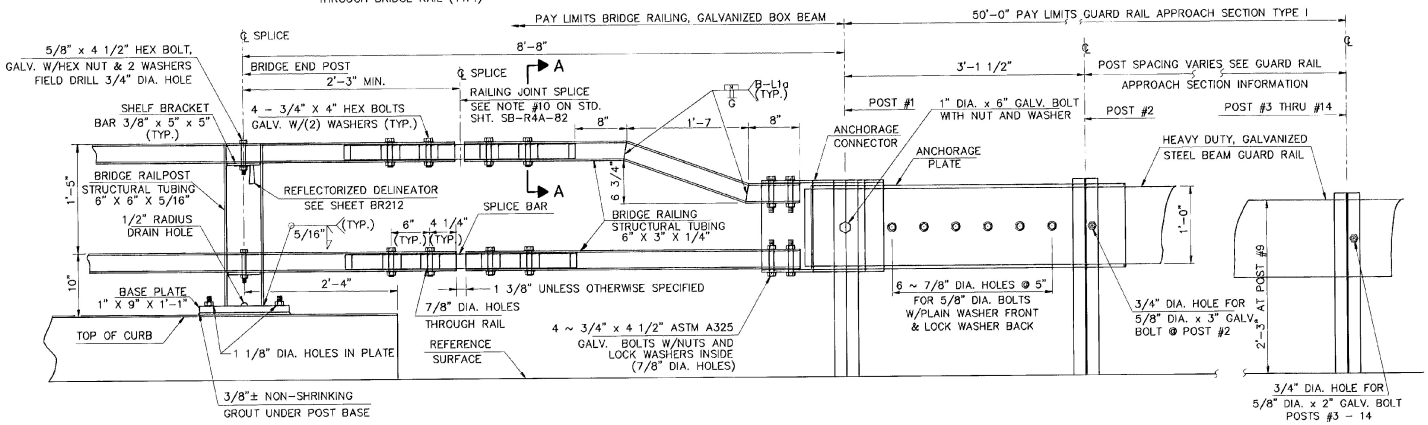
N.T.S.

FOR ADDITIONAL DETAILS OF BRIDGE RAILING, GALVANIZED BOX BEAM, SEE STD. DWGS. SB-R4A-82 AND SB-R4B-82

GUARD RAIL APPROACH SECTION TYPE I

POST NO.	SPACING
1	
2	3'-1 1/2"
3	3'-1 1/2"
4	3'-1 1/2"
5	3'-1 1/2"
6	3'-1 1/2"
7	3'-1 1/2"
8	3'-1 1/2"
9	3'-1 1/2"
10	4'-2"
11	4'-2"
12	4'-2"
13	6'-3"
14	6'-3"

50'-0" PAY LENGTH GUARD RAIL APPROACH SECTION, TYPE I



ELEVATION

N.T.S.

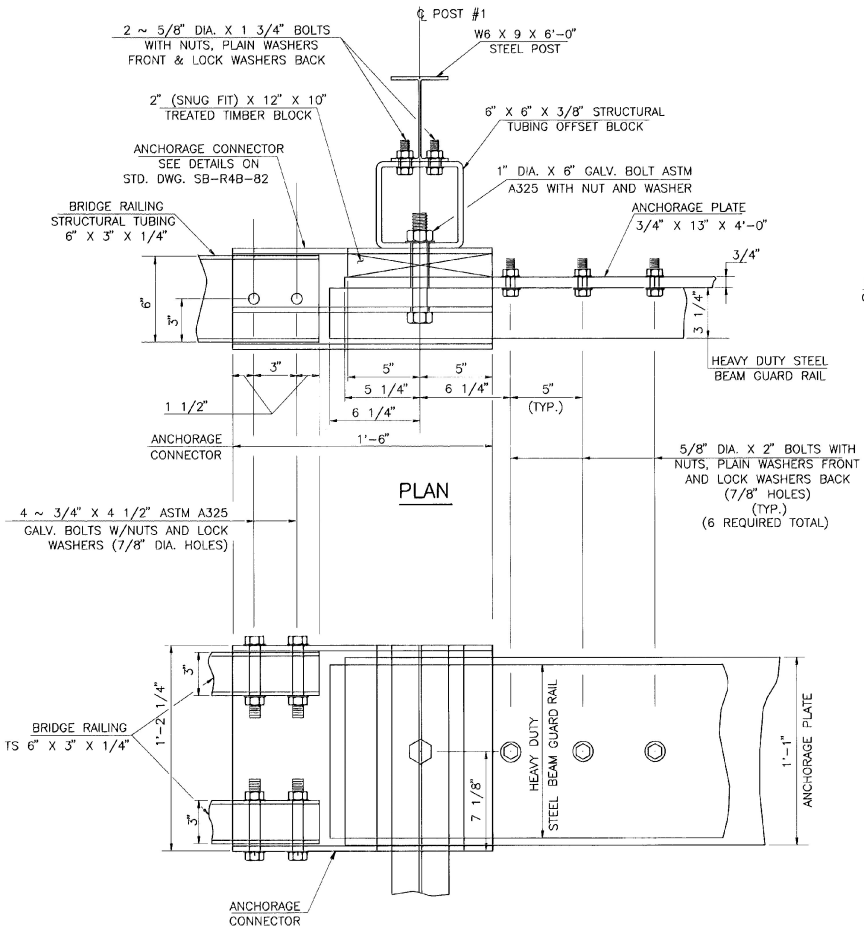
NOTES:

1. FOR ADDITIONAL INFORMATION ON THE CONNECTION/ TRANSITION DETAILS AT POST NO. 1, SEE SHEET BR212.
2. FOR SECTION A-A, SEE STANDARD SHEET SB-R4A-82.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

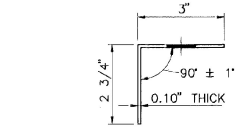
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
BRIDGE RAILING TRANSITION SECTION @ ABUT. #2	
Designed By GRI	Drawn By VAOT
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR211	Sheet 71 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

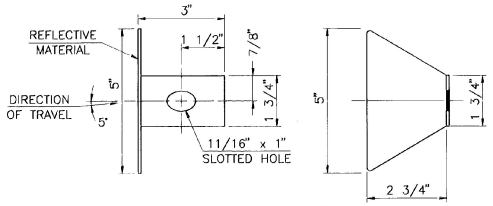


ELEVATION
CONNECTION/TRANSITION DETAILS AT POST NO. 1

SCALE IN FEET

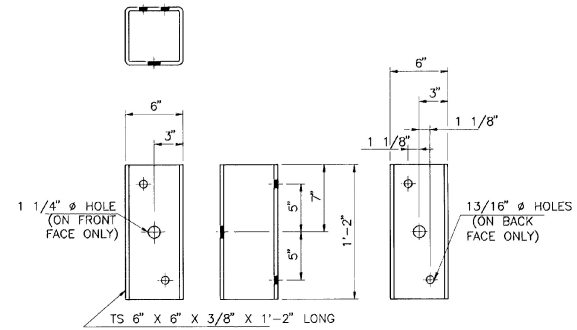


REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750. 08 AND SHALL BE ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE LEFT OR MEDIAN SIDE OF INTERSTATE ROADWAYS.



DELINEATOR DETAILS

THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 30 FEET OR CLOSEST POST. DELINEATOR SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052 – H32.



STRUCTURAL TUBING OFFSET BLOCK DETAILS

(OCCURS AT POST NO. 1 WHEN USING APPROACH RAIL UTILIZING STEEL POSTS)

BOX BEAM BRIDGE RAIL NOTES

1. BRIDGE RAILING AND GUARD RAIL APPROACH SECTIONS ARE DESIGNED IN ACCORDANCE WITH THE LATEST AASHTO SPECIFICATIONS.
2. ALL PLATES, BARS, AND ANGLES SHALL BE ASTM A36 STEEL. UNLESS OTHERWISE SPECIFIED, ALL BOLTS SHALL BE ASTM A307. STRUCTURAL STEEL TUBING SHALL BE ASTM A500 COLD-FORMED GRADE B AS MODIFIED IN SECTION 732.03(a).
3. ALL BOX BEAM BRIDGE RAILING, COMPONENTS, ANCHOR BOLTS, AND ATTACHMENT HARDWARE SHALL BE GALVANIZED TO ASTM A123 AFTER FABRICATION.
4. THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS, INCLUDING WELDING PROCEDURES TO THE STRUCTURES DIVISION, FOR APPROVAL IN ACCORDANCE WITH THE PROVISIONS OF SECTION 506.04 – SHOP DRAWINGS. ALL WELDING SHALL CONFORM WITH SECTION 506.10.
5. THE RAIL SYSTEM SHALL BE CONTINUOUS WITH EACH TUBE SECTION ATTACHED TO A MINIMUM OF TWO POSTS. JOINTS SHALL BE SPLICED AS SHOWN, WITH CONNECTIONS LOCATED ONE DIRECTLY ABOVE THE OTHER.
6. A BRIDGE RAILING JOINT SPLICE SHALL BE PROVIDED AT EACH SUPER-STRUCTURE EXPANSION JOINT. THE RAIL JOINT OPENING SHALL BE ONE INCH UNLESS OTHERWISE NOTED.
7. THE BOX BEAM RAIL SHALL BE SHOP BENT TO MATCH RADII LESS THAN 950 FEET.
8. DELINEATORS SHALL BE MOUNTED AS SHOWN ON SHTS. BR210 – BR211. PAYMENT FOR DELINEATORS SHALL BE SUBSIDIARY TO OTHER ITEMS.
9. PROCEDURE QUALIFICATION FOR ALL WELDS SHALL BE PERFORMED AND APPROVED PRIOR TO FABRICATION. WELDER QUALIFICATION WILL BE REQUIRED FOR EACH PROCEDURE. PROCEDURE AND WELDER QUALIFICATION ACCEPTANCE SHALL BE APPROVED BY RADIOGRAPHIC TESTING.

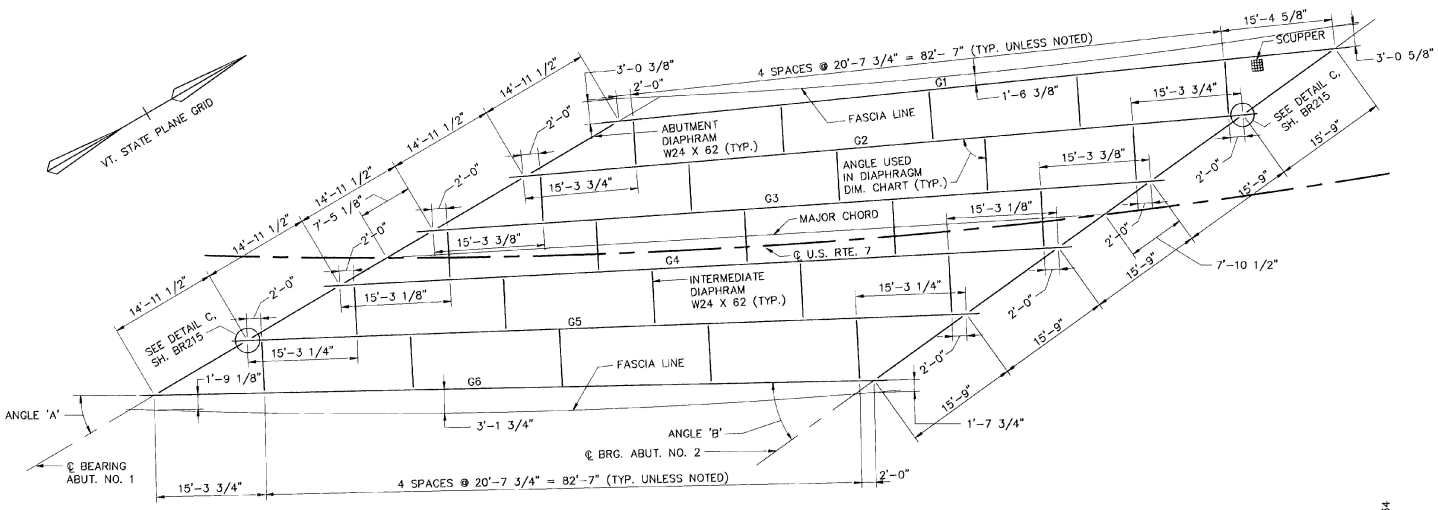
APPROACH RAIL NOTES

1. REFER TO STANDARD G-1 OR G-1d FOR ADDITIONAL APPROACH RAIL DETAILS.
2. ALL POSTS FOR HEAVY DUTY STEEL BEAM GUARD RAIL SHALL BE STEEL, IN ACCORDANCE WITH SECTION 728 "GUARD RAIL, GUIDE POST AND BARRIERS" UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.
3. APPROACH RAIL SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
4. ANCHORAGE CONNECTOR AND ANCHORAGE PLATE SHALL BE ASTM A36 STEEL GALVANIZED TO ASTM A123 AFTER FABRICATION.
5. APPROACH RAILING SHALL BE HEAVY DUTY STEEL BEAM FOR EITHER TYPE OF GUARD RAIL APPROACH SECTION.
6. ALLOWABLE DIMENSIONAL TOLERANCE FOR BENT SECTIONS IS +/- 1/16 OF AN INCH.
7. THE UNIT PRICES BID FOR EITHER TYPE OF GUARD RAIL APPROACH SECTION, SHALL INCLUDE ANCHORAGE CONNECTOR, ANCHORAGE PLATE, HEAVY DUTY STEEL BEAM GUARD RAIL, POSTS, OFFSET BLOCKS, BLOCKING, BOLTS, AND ALL NECESSARY HARDWARE.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
CONNECTION/TRANSITION DETAILS	
Designed By GRI	Drawn By VAOT
Checked By TJC Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR212	Sheet 72 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



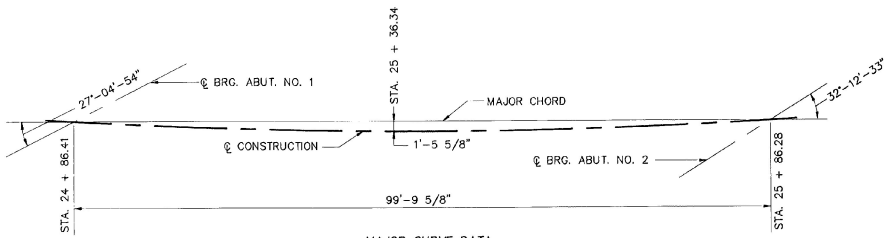
FRAMING PLAN

0 8 16 40

SCALE IN FEET

NOTES :

1. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GR. 50W EXCEPT AS NOTED.
2. GIRDERS SHALL BE CAMBERED AS SHOWN IN THE CAMBER DIAGRAM ON SHEET BR214.
3. ALL BEARING STIFFENERS SHALL BE PLUMB.
4. GIRDERS SHALL BE FABRICATED SO THAT, UNDER FULL DEAD LOAD, THE ENDS WILL BE VERTICAL.
5. CONTACT SURFACES OF BOLTED CONNECTIONS SHALL BE BLAST CLEANED IF RUSTED BEFORE CONNECTION IS MADE.
6. TOP OF STUDS SHALL EXTEND ABOVE BOTTOM LAYER OF DECK REINFORCEMENT.
7. IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 714.03 THE STRUCTURAL STEEL SHALL BE TESTED FOR IMPACT PROPERTIES BY THE CHARPY V-NOTCH TEST.
8. FOR SCUPPER LOCATION AND DETAILS, SEE SHEET BR209.
9. FOR GIRDER ELEVATION AND DETAILS, SEE SHEET BR214.
10. FOR DIAPHRAGM DETAILS, SEE SHEET BR215.
11. FOR LOCATION OF DIMENSION "C", SEE GIRDER ELEVATION, SHEET BR214.



MAJOR CURVE DATA
L = 99.87'
R = 848.83'
Δ = 06°-44'-28"

CENTERLINE CURVE LAYOUT

0 8 16 24 32

SCALE IN FEET

GIRDER DIMENSIONS

GDR. NO.	SPAN	ANGLE 'A'	ANGLE 'B'	DIMEN. "C" (SEE NOTE 11)
G1	99'-11 5/8"	24°-47'-32"	29°-55'-11"	0'-11 5/8"
G2	99'-10 3/4"	25°-42'-07"	30°-49'-46"	1'-0"
G3	99'-10 3/8"	26°-36'-46"	31°-44'-25"	1'-0 1/4"
G4	99'-10 1/8"	27°-31'-26"	32°-39'-05"	1'-0 1/4"
G5	99'-10 1/4"	28°-26'-07"	33°-33'-46"	1'-0 1/4"
G6	99'-10 3/4"	29°-20'-45"	34°-28'-25"	1'-0"

DIAPHRAGM DIMENSIONS (LENGTH = C-C GIRDERS)

GDR. NO.		1st INTERIOR		2nd INTERIOR		3rd INTERIOR		4th INTERIOR		5th INTERIOR		
		LENGTH	ANGLE W/GDR.	LENGTH	ANGLE W/GDR.	LENGTH	ANGLE W/GDR.	LENGTH	ANGLE W/GDR.	LENGTH	ANGLE W/GDR.	
G1	ABUTMENT NO. 1	6'-6 1/4"	87°-40'-37"	6'-10 1/8"	87°-45'-59"	7'-2 1/8"	87°-50'-39"	7'-6"	87°-55'-18"	7'-10"	87°-59'-23"	ABUTMENT NO. 2
G2		6'-8 3/4"	89°-19'-35"	7'-0 3/4"	88°-22'-59"	7'-4 5/8"	88°-26'-05"	7'-8 5/8"	88°-28'-55"	8'-0 1/2"	88°-31'-31"	
G3		6'-11 3/8"	89°-05'-10"	7'-3 1/4"	89°-06'-25"	7'-7 1/4"	89°-05'-20"	7'-11 1/8"	89°-08'-35"	8'-3 1/8"	89°-09'-33"	
G4		7'-1 7/8"	90°-04'-21"	7'-5 3/4"	90°-02'-57"	7'-9 5/8"	90°-01'-41"	8'-1 5/8"	90°-00'-31"	8'-5 5/8"	89°-59'-26"	
G5		7'-4 3/8"	91°-14'-41"	7'-8 3/8"	91°-10'-20"	8'-0 1/4"	91°-06'-20"	8'-4 1/4"	91°-02'-39"	8'-8 1/8"	90°-59'-15"	

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

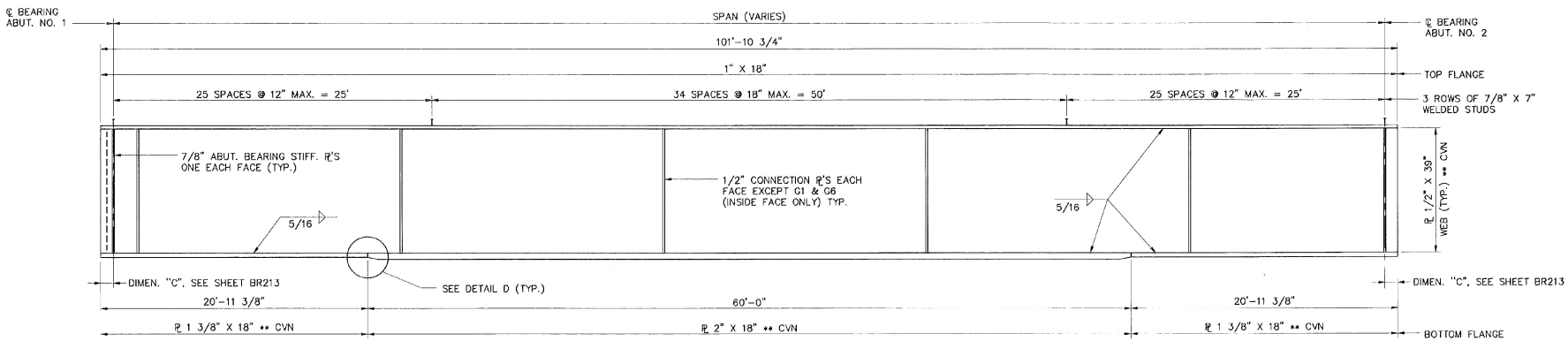
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

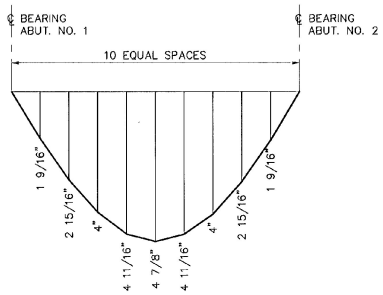
U.S. ROUTE 7 OVER RAILROAD

FRAMING PLAN

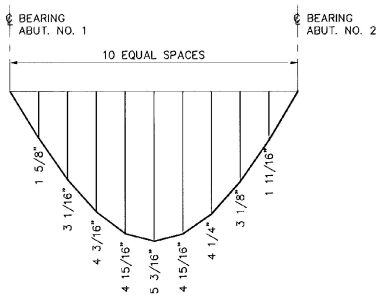
Designed By GRI	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR213	Sheet 73 of 113



GIRDER ELEVATION
NOT TO SCALE

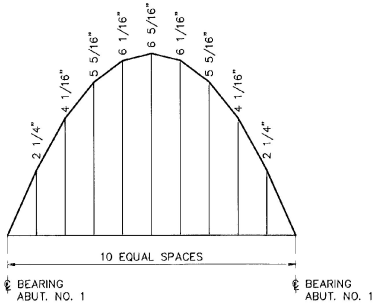


G1 & G6

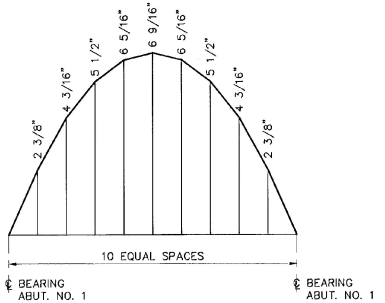


G2, G3, G4 & G5

DEAD LOAD DEFLECTION DIAGRAMS
NOT TO SCALE

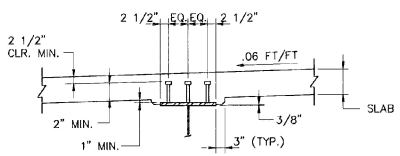


G1 & G6

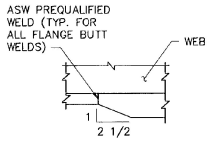


G2, G3, G4 & G5

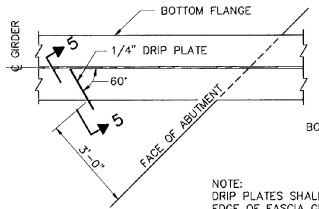
CAMBER DIAGRAMS
NOT TO SCALE



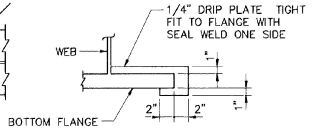
TYPICAL GIRDER HAUNCH AND SHEAR CONNECTOR DETAIL UNLESS NOTED OTHERWISE
NOT TO SCALE



DETAIL D
N.T.S.



PLAN



SECTION 5-5

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

DRIP PLATE DETAIL
NOT TO SCALE

NOTES :

1. FOR STEEL NOTES, SEE SH. BR213.
2. FOR GIRDER SPAN LENGTHS, SEE SH. BR213.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
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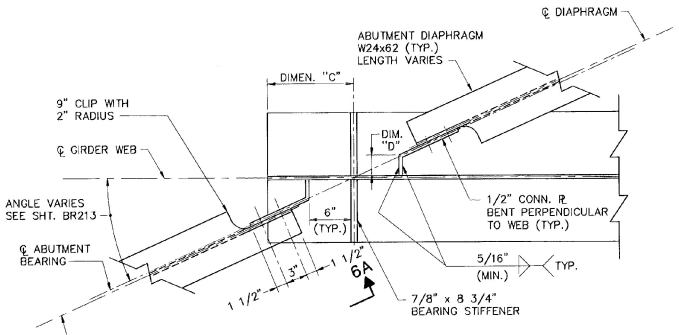
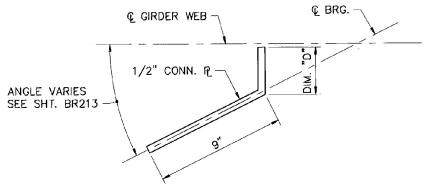
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
GIRDER ELEVATION	
Designed By GRI	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR214	Sheet 74 of 113



DETAIL C

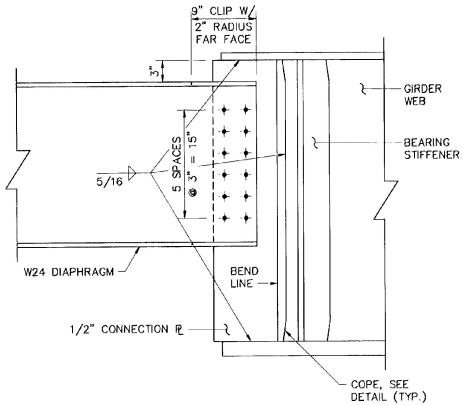
SCALE IN FEET

	DIMENSION "D"	
	ABUT. NO. 1	ABUT. NO. 2
G1	2 3/4"	3 7/16"
G2	2 7/8"	3 9/16"
G3	3"	3 11/16"
G4	3 1/8"	3 7/8"
G5	3 1/4"	4"
G6	3 3/8"	4 1/8"



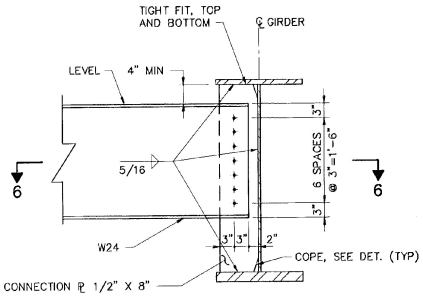
ABUTMENT CONNECTION PLATE DETAIL

SCALE IN FEET



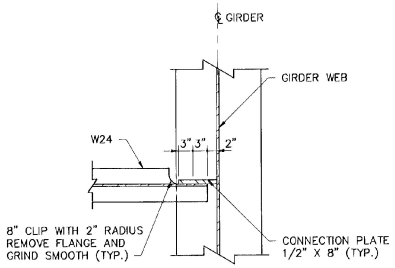
ABUTMENT DIAPHRAM CONNECTION DETAIL SECTION 6A-6A

SCALE IN FEET



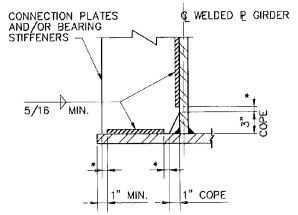
INTERMEDIATE DIAPHRAM CONNECTION DETAIL

SCALE IN FEET



SECTION 6-6

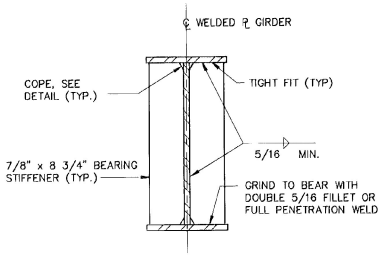
SCALE IN FEET



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

WELD TERMINATION AND COPING DETAIL

SCALE IN FEET



ABUTMENT BEARING STIFFENERS

NOT TO SCALE

NOTES :

1. ALL CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER AASHTO M164 BOLTS. ALL HOLES IN THE DIAPHRAGMS SHALL BE 15/16" DIA. ALL HOLES IN THE CONNECTOR PLATES SHALL BE 1" DIA. EXCEPT THE CONNECTOR PLATES AT THE SET OF INTERMEDIATE DIAPHRAGMS CLOSEST TO THE ABUTMENTS SHALL HAVE 1 1/8" DIA. HOLES.
2. INTERMEDIATE DIAPHRAGM BOLTS SHALL ONLY BE SNUG TIGHT UNTIL AFTER THE ENTIRE DECK HAS BEEN PLACED.
3. FOR LOCATION OF DETAIL C, SEE SHEET BR213.
4. FOR LENGTH OF DIMENSION "C", SEE SHEET BR213.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

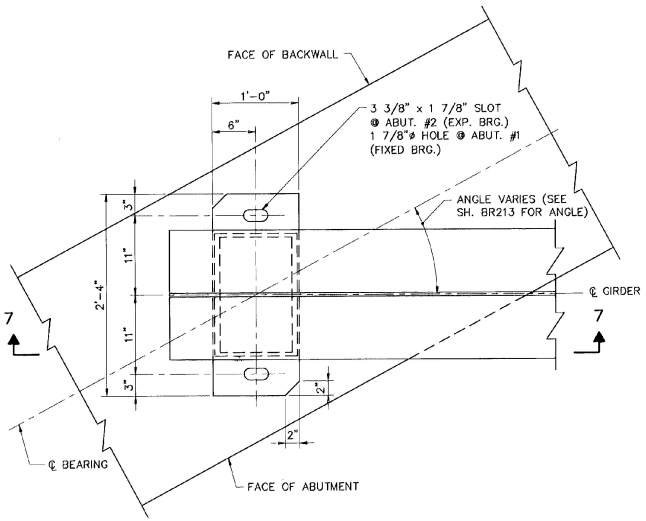
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
	Log Sta.
Highway No. U.S. ROUTE 7	Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD

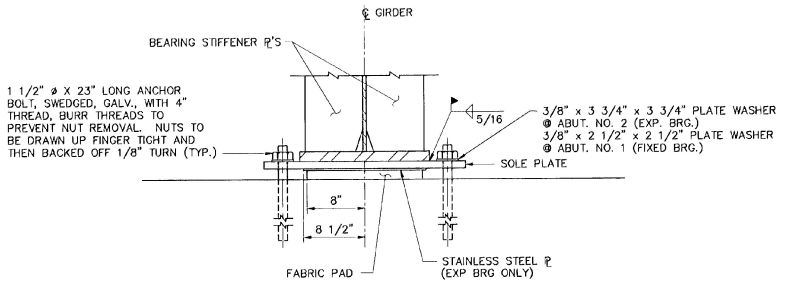
GIRDER AND DIAPHRAGM DETAILS

Designed By GRI	Drawn By RJL/JNC
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR215	Sheet 75 of 113



PLAN FABRIC PAD EXPANSION BRG. (SHOWN)
FIXED BRG. (SIMILAR)

SCALE IN FEET

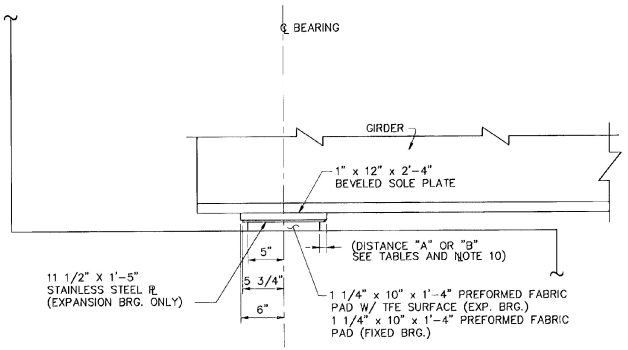


ELEVATION – FABRIC PAD BEARING

SCALE IN FEET

NOTES:

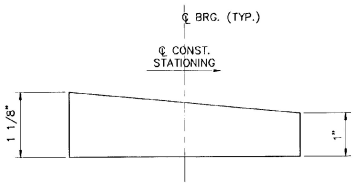
1. BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 & 731.
2. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY".
3. SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
4. FABRICATION DRAWINGS SHALL IDENTIFY THE NUMBER OF LAYERS OF VULCANIZED SHEETS AND CORRESPONDING SHEET THICKNESSES TO BE USED FOR FABRICATING THE BEARING PAD AND SHALL INCLUDE DETAILED PROCEDURES FOR BONDING THESE SHEETS TOGETHER.
5. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
6. DISTANCE "A" IS THE FINAL SETTING FOR THE BEARING PAD AFTER THE CONCRETE SLAB, CURB, PAVEMENT AND BRIDGE RAIL ARE PLACED. DISTANCE "B" IS LISTED FOR SETTING THE BEARING AFTER THE STRUCTURAL STEEL IS ERECTED AND BEFORE THE CONCRETE DECK IS POURED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO DEAD LOAD DEFLECTION. THE FINAL DISTANCE "A", AS SHOWN IN THE TABLE, MUST BE ATTAINED WITHIN 1/8 INCH.
7. DESIGN CRITERIA:
   A. BASE PLATE TO CONCRETE DESIGN PRESSURE = 1000 P.S.I. MAXIMUM
   B. MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS
   C. DESIGN LOAD PER BEARING = 86 KIPS.
8. ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M-270, GRADE 36.
9. ANCHOR BOLTS SHALL HAVE A MINIMUM OF 15" EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO SUBSECTION 714.08 IN THE "VERMONT SPECIFICATIONS".
10. ALL BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER SUBSECTION 531.04(b) & (C). IF THE BEARINGS ARE METALIZED THEY SHALL BE SEALED WITH AN APPROVED PRIMER AS SPECIFIED IN SUBSECTION 506.15(c). AREAS OF GALVANIZING OR METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALER IN ACCORDANCE WITH SUBSECTION 708.02(d).
11. ALL THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE 3/8" PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "BEARING DEVICE ASSEMBLY".



SECTION 7-7 FABRIC PAD BEARING
EXPANSION BRG. (SHOWN)
NOTE: BOLTS & BRG. ℙ NOT SHOWN

SCALE IN FEET

ABUTMENT NO. 2		
TEMP.	DIST. "A"	DIST. "B"
0° F	1 3/8"	1 7/8"
15° F	1 1/4"	1 3/4"
30° F	1 1/8"	1 5/8"
45° F	1"	1 1/2"
60° F	7/8"	1 3/8"
75° F	3/4"	1 1/4"
90° F	5/8"	1 1/8"
105° F	1/2"	1"

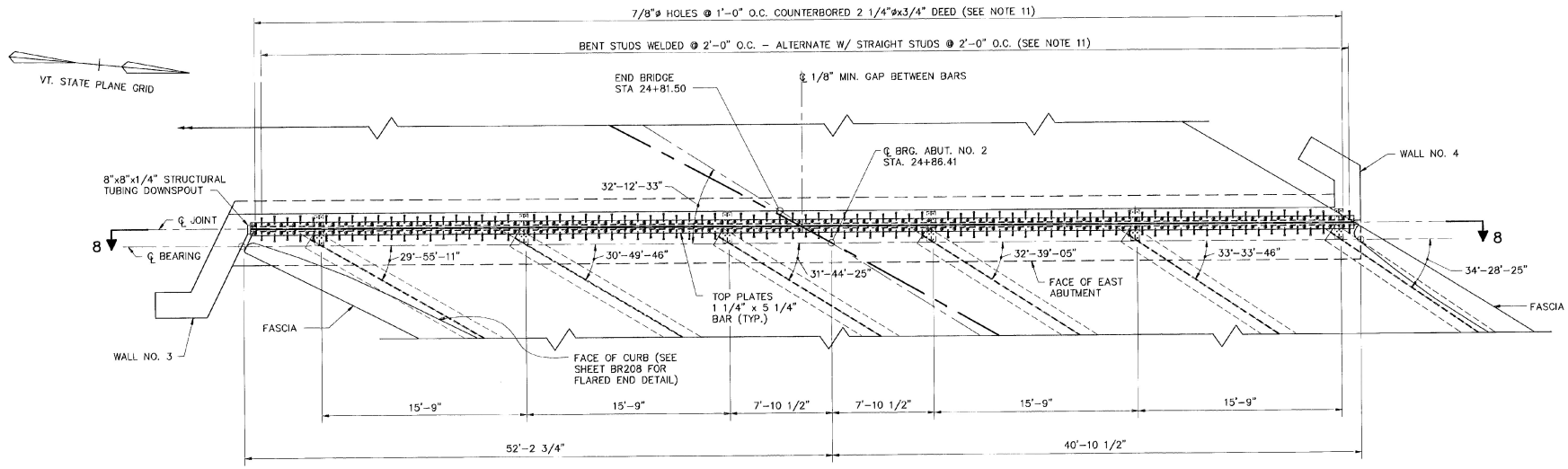


SOLE PLATE DETAIL
N. T. S.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

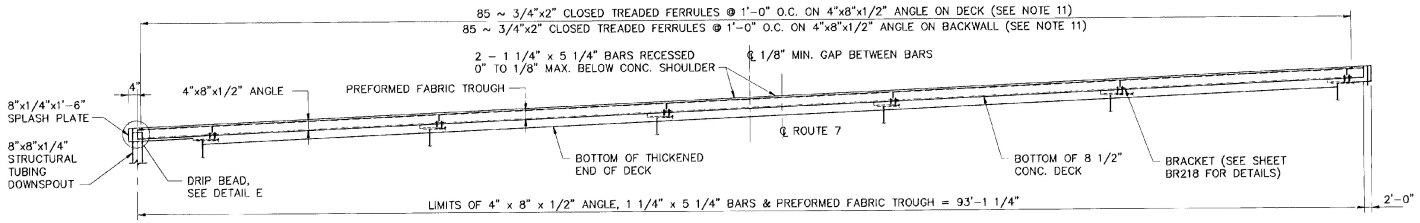
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
BEARING DETAILS	
Designed By GRI	Drawn By KGG
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR216	Sheet 76 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



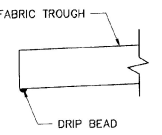
PLAN - ABUTMENT 2 (EAST) EXPANSION JOINT

0 4 8 20
SCALE IN FEET



SECTION 8-8

0 4 8 20
SCALE IN FEET



(SEE NOTE 3, SH. BR218)

DETAIL E

NOTES:

1. PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
2. BUTYL RUBBER TAPE SHALL CONFORM TO SUBSECTION 707.12 OF THE GENERAL SPECIAL PROVISIONS.
3. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK CONCRETE.
4. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36 GALVANIZED OR METALIZED AS PER SUBSECTION 506.15 (b) OR (c) UNLESS OTHERWISE NOTED.
5. THE ITEM "BRIDGE EXPANSION JOINT" SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL STEEL PLATES, ANGLES, WELDED STUDS OR RODS, PREFORMED FABRIC MATERIAL AND PLASTIC DRAIN TUBES, BUTYL RUBBER TAPE AND OTHER MISCELLANEOUS MATERIAL.
6. COAT CONCRETE CONTACT SURFACES WITH AN EPOXY BONDING COMPOUND MEETING THE REQUIREMENTS OF SUBSECTION 719.02. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516.10 "BRIDGE EXPANSION JOINTS".
7. DETAILS ON THIS SHEET ARE FOR ITEM 516.10 "BRIDGE EXPANSION JOINTS".
8. 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 BELOW THE BOTTOM OF THE ADJACENT GIRDER. THE DRAIN TUBES SHALL BE FASTENED TO THE GIRDERS USING A METHOD APPROVED BY THE ENGINEER.
9. PAYMENT FOR WATERSTOP SHALL BE SUBSIDIARY TO CONCRETE PAY ITEM.
10. THE 4" x 8" x 1/2" ANGLES SHALL BE FURNISHED AS ONE CONTINUOUS PIECE. THE 1 1/4" x 5 1/4" BARS SHALL BE FURNISHED IN TWO EQUAL PIECES.
11. ADJUST SPACING 7/8"ø HOLES, WELDED STUDS, AND CLOSED THREADED FERRULES FOR CLEARANCE IN AREAS OF BRACKETS.

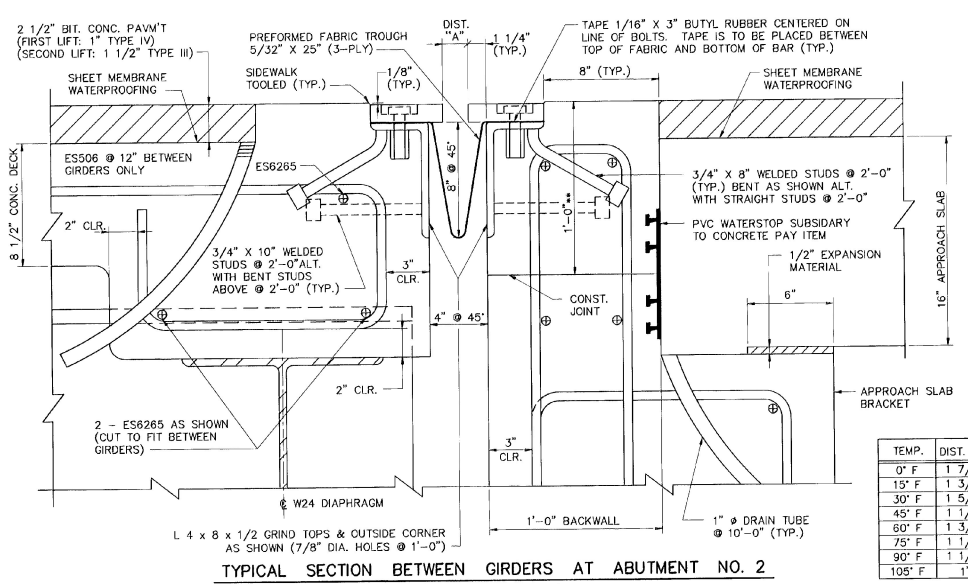
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD
EXPANSION JOINT AT ABUTMENT NO. 2

Designed By GRI	Drawn By GRI
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR217	Sheet 77 of 113

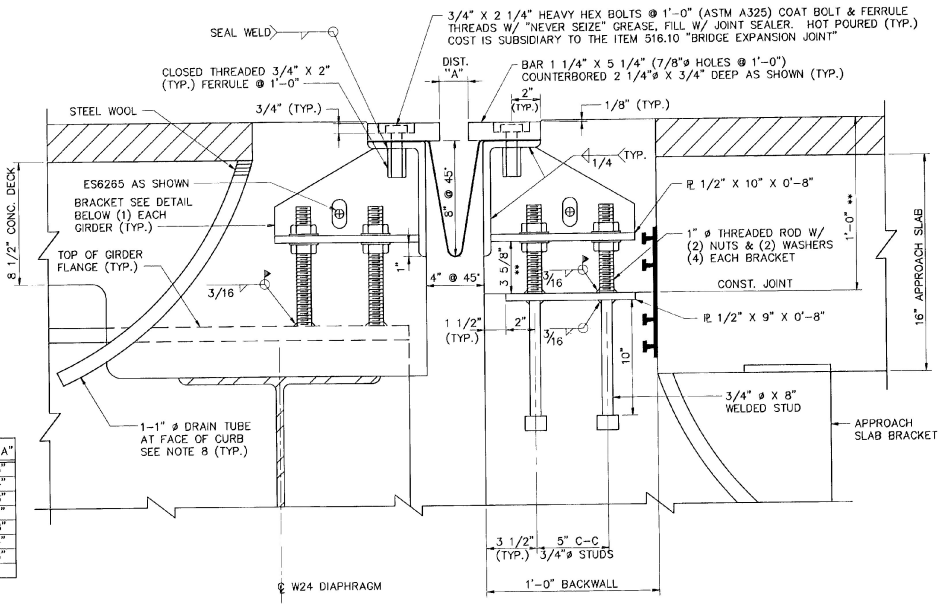


TEMP.	DIST. "A"
0° F	1 7/8"
15° F	1 3/4"
30° F	1 5/8"
45° F	1 1/2"
60° F	1 3/8"
75° F	1 1/4"
90° F	1 1/8"
105° F	1"

TYPICAL SECTION BETWEEN GIRDERS AT ABUTMENT NO. 2

(NORMAL TO ℄ BEARING)

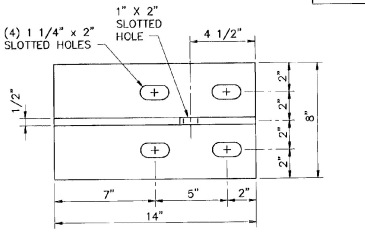
SCALE IN FEET



TYPICAL SECTION AT GIRDERS AT ABUTMENT NO. 2

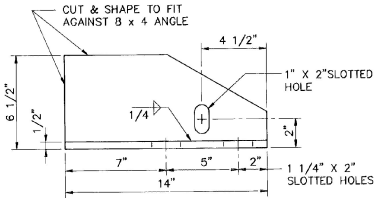
(NORMAL TO ℄ BEARING)

SCALE IN FEET



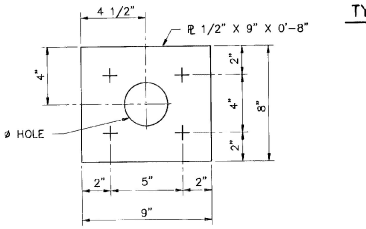
DECK BRACKET PLAN

SCALE IN FEET



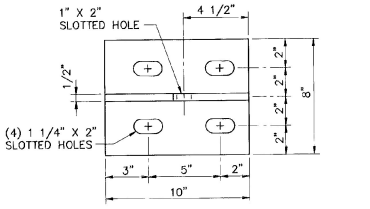
DECK BRACKET ELEVATION

SCALE IN FEET



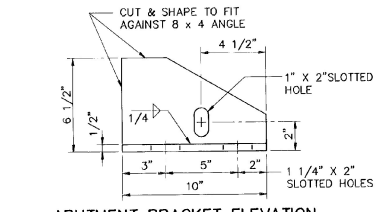
ABUTMENT PLATE PLAN VIEW

SCALE IN FEET



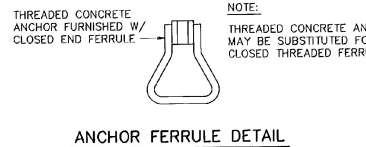
ABUTMENT BRACKET PLAN

SCALE IN FEET



ABUTMENT BRACKET ELEVATION

SCALE IN FEET

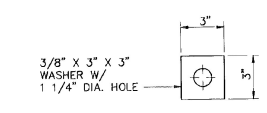


NOTE:

THREADED CONCRETE ANCHORS MAY BE SUBSTITUTED FOR CLOSED THREADED FERRULES

ANCHOR FERRULE DETAIL

SCALE IN FEET



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.

WASHER FOR BRACKET

NOTES:

1. ** THESE DIMENSIONS ARE AS DESIGNED AND MAY CHANGE DEPENDING UPON THE OUTCOME OF THE BEAM PROFILES.
2. DETAILS ON THIS SHEET ARE FOR ITEM 516.10 "BRIDGE EXPANSION JOINT".
3. A DRIP BEAD OF 1/4" X 7" STRIP OF PREFORMED MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUF. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPOUT END OF THE TROUGH. (SEE DETAIL E ON SH. BR217).
4. FABRIC TROUGH SHALL BE THROUGHLY CLEANED AND FLUSHED AFTER PAVING OPERATION.
5. THE EXPANSION JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

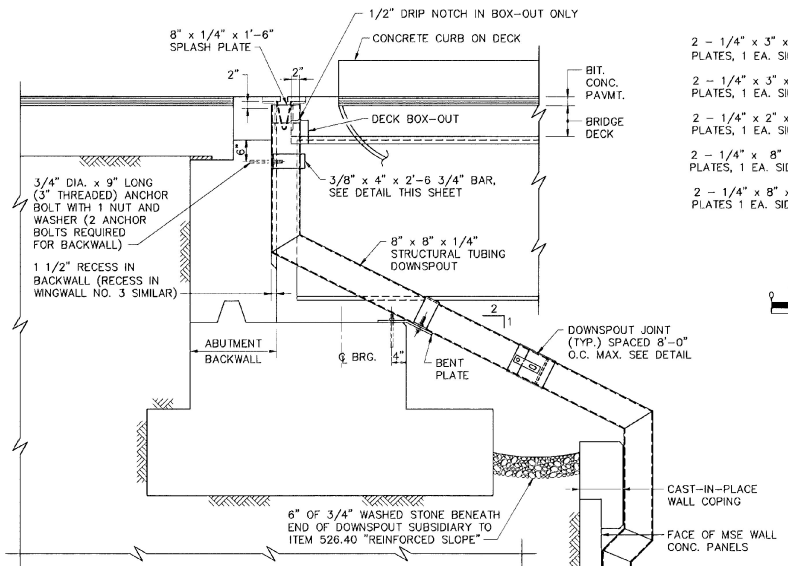
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

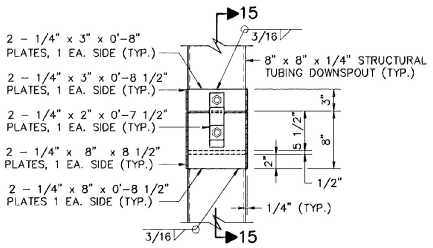
U.S. ROUTE 7 OVER RAILROAD

EXPANSION JOINT DETAILS

Designed By GRI	Drawn By RJL
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR218	Sheet 78 of 113

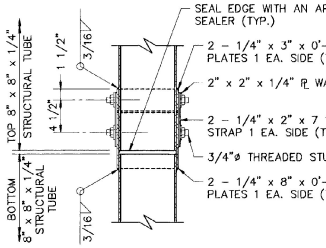
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 8TH FL.
BOSTON, MASSACHUSETTS





DOWNSPOUT JOINT DETAIL

SCALE IN FEET

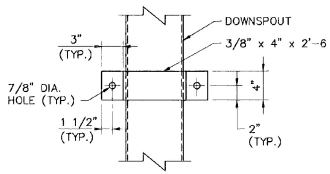


SECTION 15–15

SCALE IN FEET

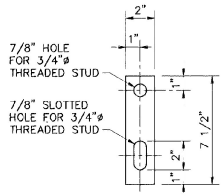
DOWNSPOUT NOTES

1. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO A-500 OR A-501.
2. ALL BARS SHALL CONFORM TO AASHTO M270 GRADE 36 AND SHALL BE GALVANIZED.
3. DOWNSPOUT SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION.
4. ALL DOWNSPOUT BOLTS AND RELATED HARDWARE SHALL BE ASTM A-307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153 (AASHTO M232).
5. WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT OR 4" BAR EITHER BY CUTTING, BURNING, WELDING, PLACING OR ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH TWO COATS OF ZINC RICH PAINT.
6. DOWNSPOUT SHALL BE PAID FOR UNDER THE ITEM 506.55 "STRUCTURAL STEEL" (PLATE GIRDER).
7. REINFORCING STEEL IN MSE WALL PANELS SHALL BE LOCATED BEFORE INSTALLING EXPANSION ANCHORS FOR DOWNSPOUT. ANCHORS SHALL BE LOCATED 1" MIN. FROM PANEL REINFORCEMENT.



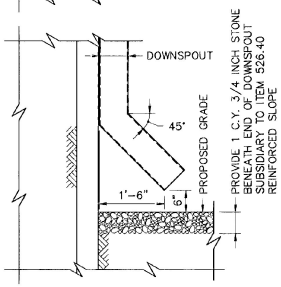
ELEVATION VIEW OF BAR

SCALE IN FEET



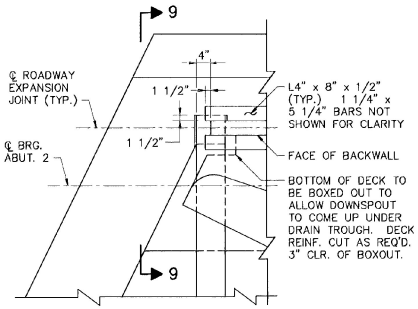
DOWNSPOUT JOINT STRAP DETAIL

SCALE IN FEET



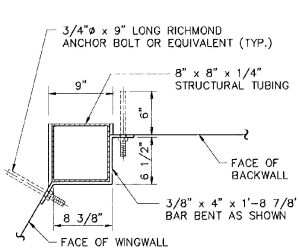
SECTION 9–9

SCALE IN FEET



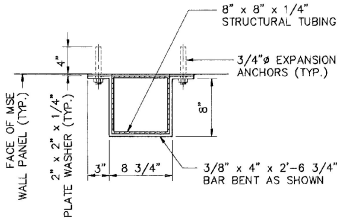
ABUTMENT NO. 2 CORNER DETAIL

SCALE IN FEET



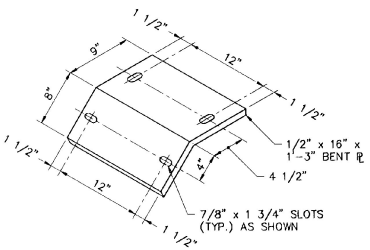
DETAILS FOR ATTACHING DOWNSPOUT TO ABUTMENT NO. 2

SCALE IN FEET



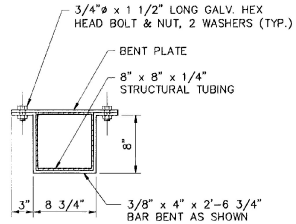
DETAILS FOR ATTACHING DOWNSPOUT TO MSE WALL PANELS

SCALE IN FEET



BENT PLATE

SCALE IN FEET



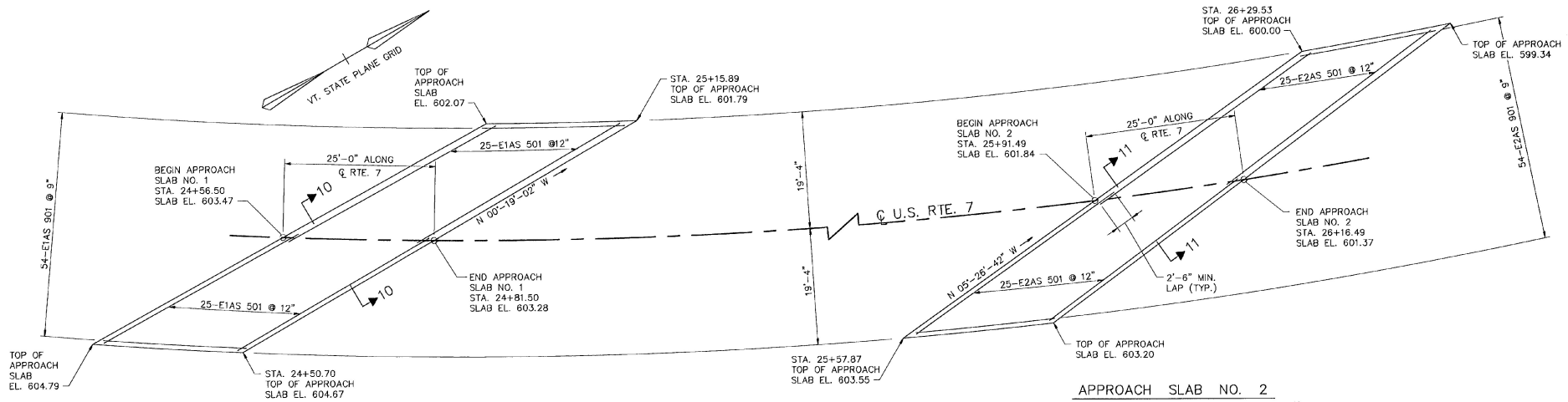
DETAILS FOR ATTACHING DOWNSPOUT TO BENT BAR

SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
DOWNSPOUT DETAILS @ ABUTMENT #1	
Designed By GRI	Drawn By SAM/JNC
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR219	Sheet 79 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

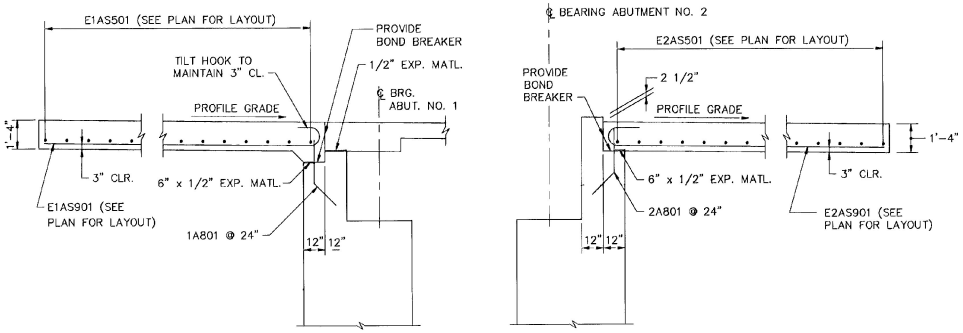


APPROACH SLAB NO. 1

SCALE IN FEET

APPROACH SLAB NO. 2

SCALE IN FEET

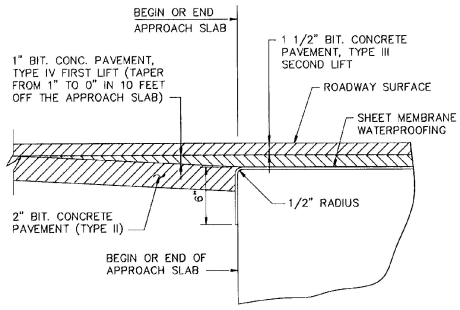


SECTION 10–10

SCALE IN FEET

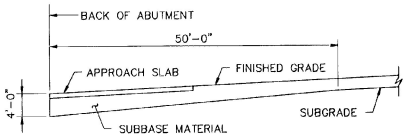
SECTION 11–11

SCALE IN FEET



DETAIL FOR SHEET MEMBRANE AT APPROACH SLAB END

NOT TO SCALE

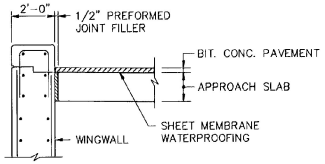


SUBBASE DETAIL AT ABUTMENTS

(ELEVATION IN CUT AND FILL)
NOT TO SCALE

NOTE :

ELEVATIONS ARE FINISHED GRADE ELEVATIONS.



DETAIL OF APPROACH SLAB AT WINGWALL

SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

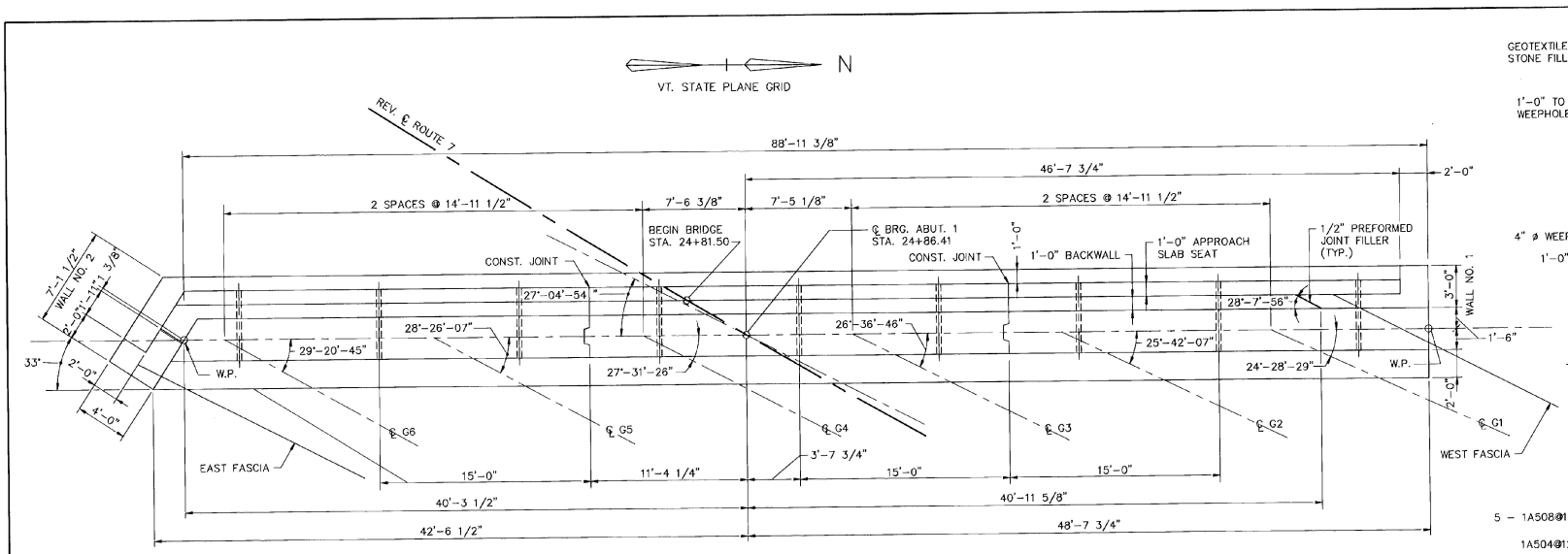
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD

APPROACH SLAB DETAILS

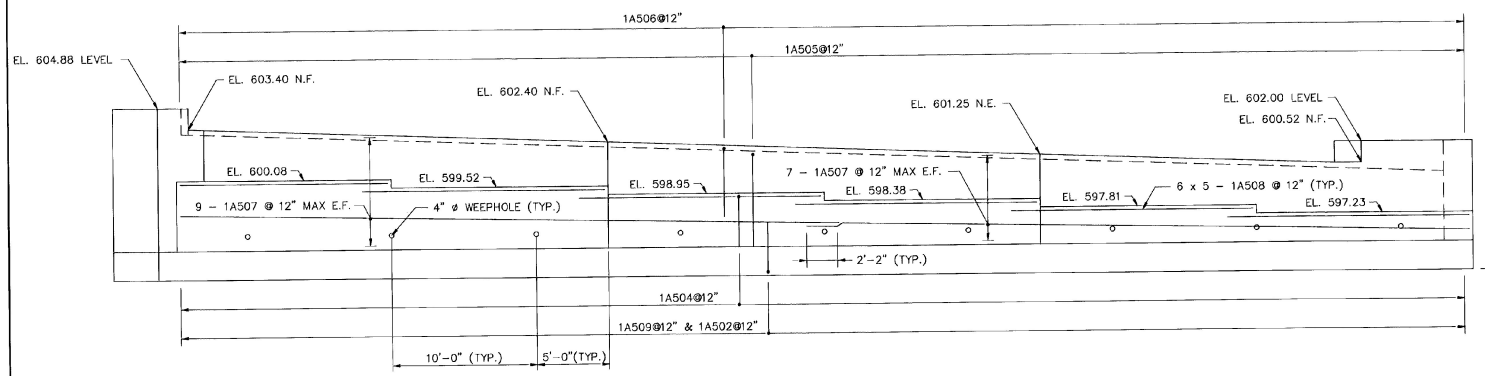
Designed By GRI	Drawn By RJL/JNC
Checked By EMM 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR220	Sheet 80 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



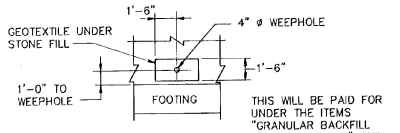
PLAN – ABUTMENT 1

SCALE IN FEET



ELEVATION – ABUTMENT 1

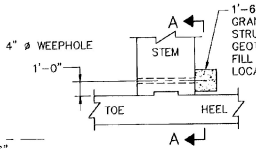
SCALE IN FEET



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

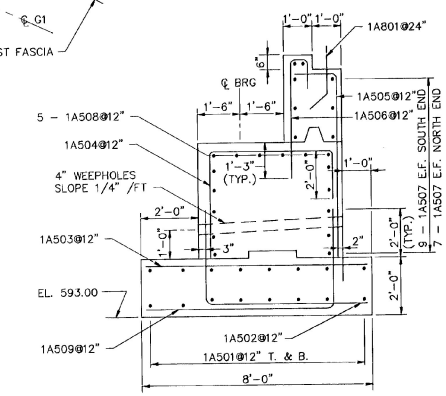
SECTION A–A

N.T.S.



TYPICAL WEEPHOLE DETAIL

N.T.S.



SECTION – ABUTMENT NO. 1

SCALE IN FEET

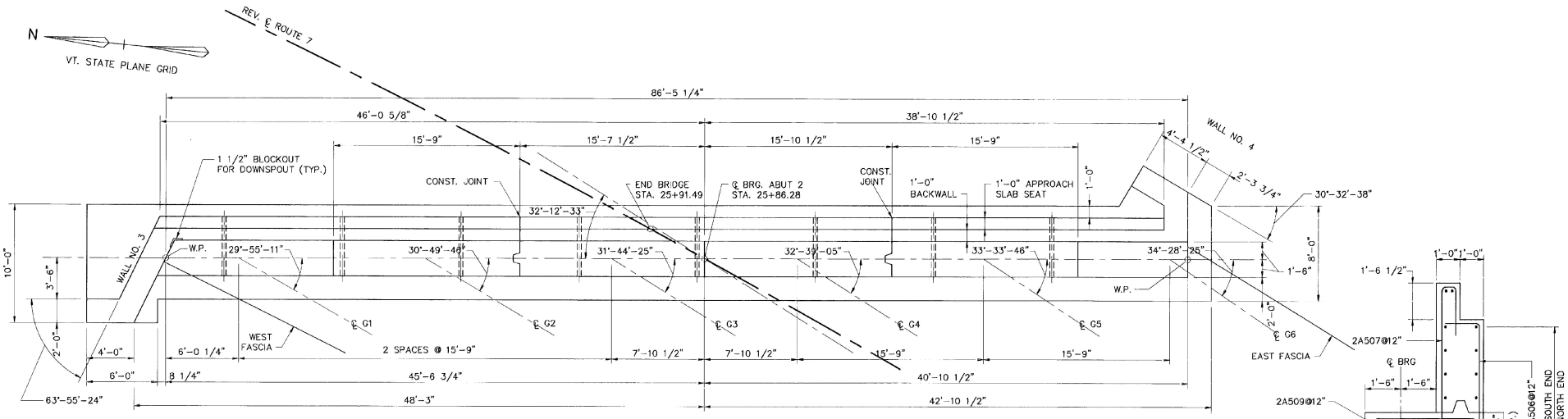
NOTES:

1. FOR FOOTING REINFORCEMENT LAYOUT SEE SHEET BR223.
2. FOR WINGWALL REINFORCEMENT LAYOUT SEE SHEET BR224.
3. N.F. DENOTES NEAR FACE
4. F.F. DENOTES FAR FACE
5. E.F. DENOTES EACH FACE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

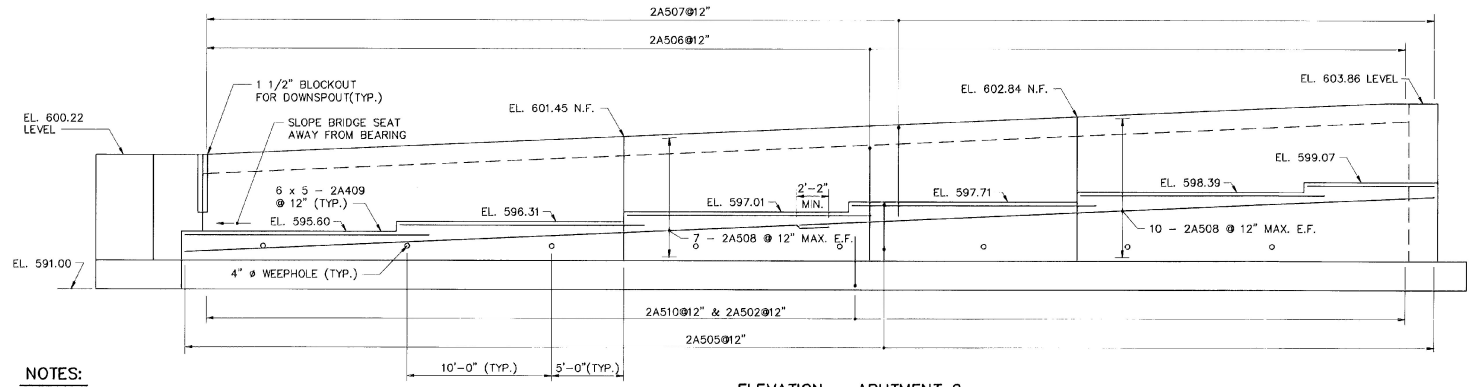
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
ABUTMENT NO. 1	
Designed By GK	Drawn By KGG/JNC
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR221	Sheet 81 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



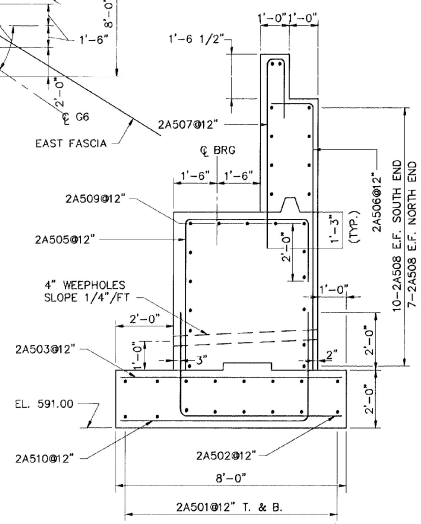
PLAN – ABUTMENT 2

SCALE IN FEET



ELEVATION – ABUTMENT 2

SCALE IN FEET



SECTION – ABUTMENT NO. 2

SCALE IN FEET

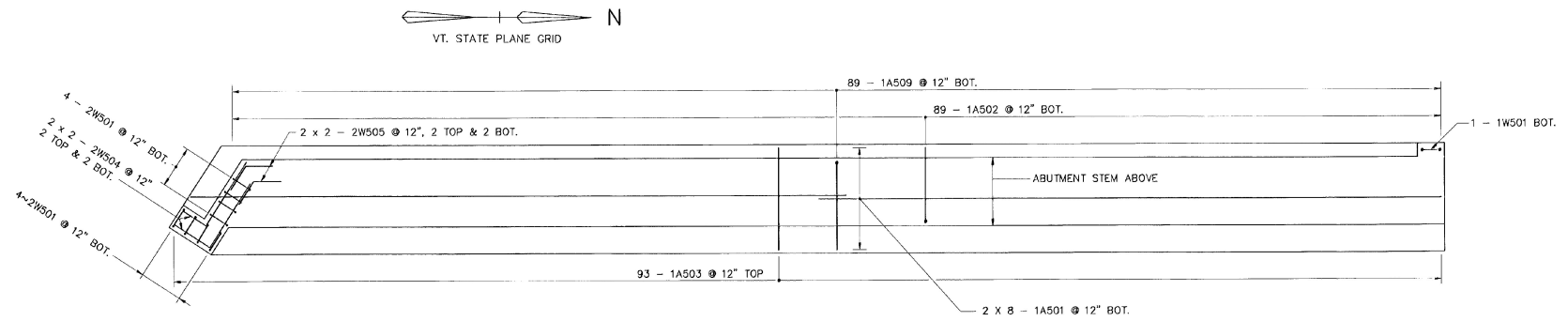
NOTES:

1. FOR FOOTING REINFORCEMENT LAYOUT SEE SHEET BR223.
2. FOR WINGWALL REINFORCEMENT LAYOUT SEE SHEET BR224.
3. N.F. DENOTES NEAR FACE
4. F.F. DENOTES FAR FACE
5. E.F. DENOTES EACH FACE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
ABUTMENT NO.2	
Designed By GK	Drawn By KGGJNC
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR222	Sheet 82 of 113

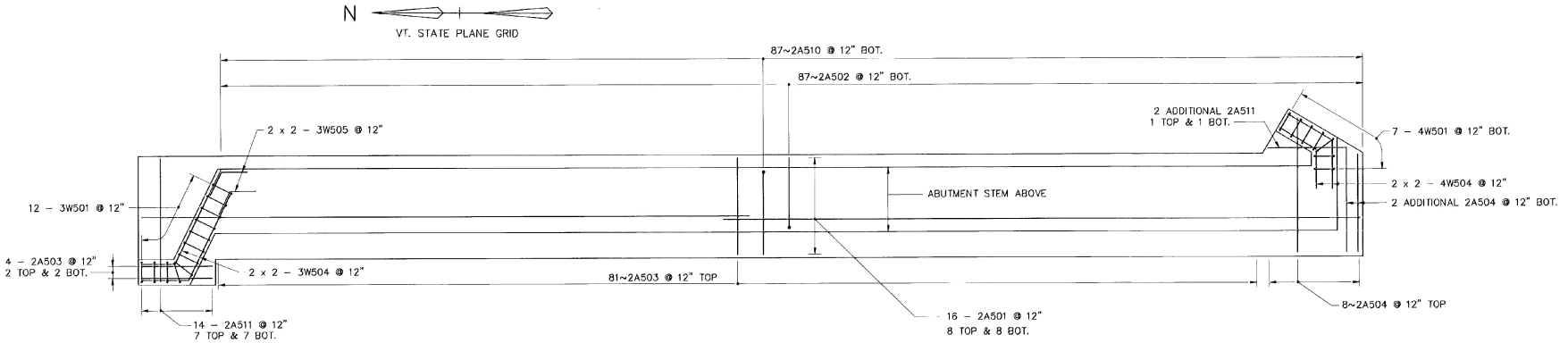
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



FOOTING PLAN – ABUTMENT NO. 1

0 4 8 20

SCALE IN FEET



FOOTING PLAN – ABUTMENT NO. 2

0 4 8 20

SCALE IN FEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

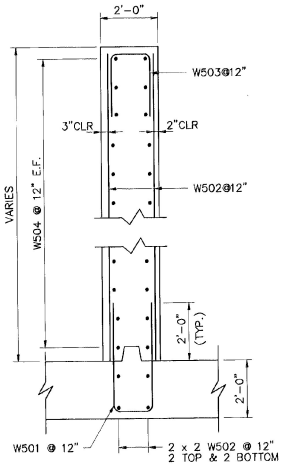
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD

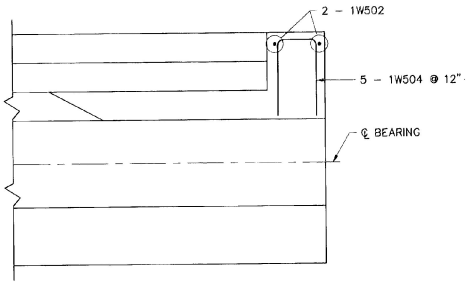
FOOTING REINFORCEMENT

Designed By GK	Drawn By KGG
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR223	Sheet 83 of 113

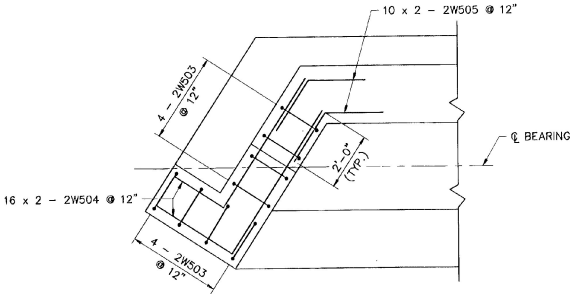
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



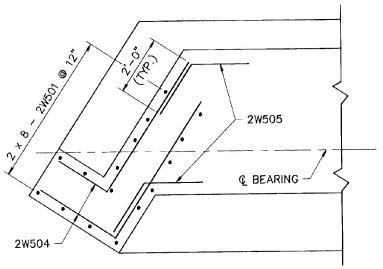
TYPICAL WALL SECTION



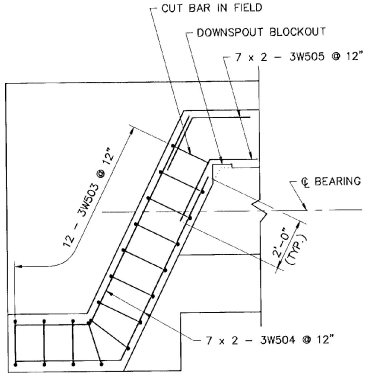
DETAIL OF WALL 1 REINFORCING



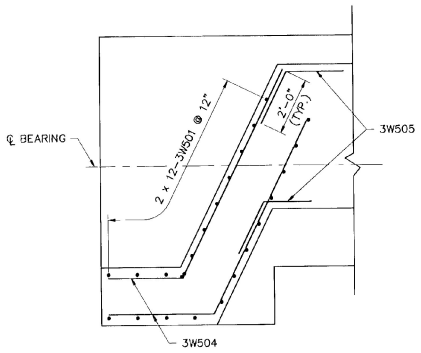
DETAIL OF WALL 2 REINFORCING
ABOVE LEVEL OF BRIDGE SEAT



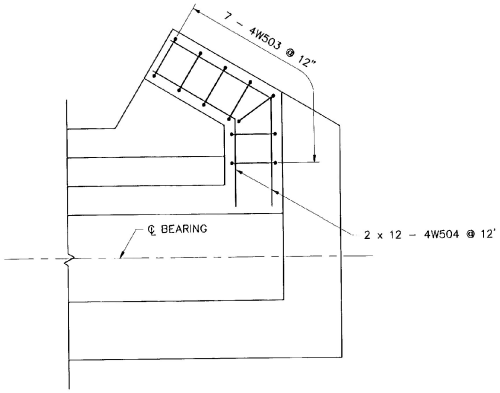
DETAIL OF WALL 2 REINFORCING
BELOW LEVEL OF BRIDGE SEAT



DETAIL OF WALL 3 REINFORCING
ABOVE LEVEL OF BRIDGE SEAT



DETAIL OF WALL 3 REINFORCING
BELOW LEVEL OF BRIDGE SEAT



DETAIL OF WALL 4 REINFORCING



NOTE :

1. TYPICAL ABUTMENT REINFORCING NOT SHOWN FOR CLARITY. SEE SHEETS BR221 AND BR222 FOR ABUTMENT STEM REINFORCING.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
WINGWALL REINFORCING DETAILS	
Designed By GK	Drawn By RJL/JNC
Checked By EMM Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR224	Sheet 84 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

REINFORCED EARTH WALL NOTES :

DESIGN CRITERIA

1. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION TECHNICAL SPECIFICATIONS FOR REINFORCED EARTH WALLS.

2. SOILS CHARACTERISTICS ASSUMED FOR DESIGN:

   SELECT GRANULAR BACKFILL
   ϕ = 34 degrees, c = 0 p.s.f., γ= 140 p.c.f.

   RANDOM BACKFILL
   ϕ = 30 degrees, c = 0 p.s.f., γ= 140 p.c.f.

   FOUNDATION MATERIAL
   ϕ = 30 degrees, c = 0 p.s.f.

3. THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF THE VAOT TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION AND HAVE BEEN PREVIOUSLY CALCULATED BY VAOT.

4. ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED EARTH VOLUME, AS DETERMINED BY THE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE STABILIZED AS DIRECTED BY THE ENGINEER.

5. REINFORCING STRIPS FOR REINFORCED EARTH WALLS SHALL BE 50mm WIDE AND 4mm THICK, AND SHALL CONFORM TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A-572 GRADE 65. GALVANIZATION SHALL BE APPLIED IN ACCORDANCE WITH ASTM A-123.

WALL CONSTRUCTION

6. STATIONS SHOWN ARE ALONG CENTERLINE OF ROADWAY.

7. REINFORCED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 4.92' EACH TO MATCH DESIRED WALL ALIGNMENT.

8. BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR REINFORCED EARTH WALLS TO A LEVEL OF 2" (±) ABOVE THE TIE STRIPS EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.

9. COMPACTION AND OPERATION EQUIPMENT SHALL BE KEPT A MINIMUM DISTANCE OF 3'-0" FROM THE BACK FACE OF THE REINFORCED EARTH PANELS. COMPACTION WITHIN 3'-0" OF THE REINFORCED EARTH PANELS SHALL BE ACHIEVED WITH AT LEAST THREE (3) PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, ROLLER OR VIBRATORY SYSTEM. NO COMPACTION DENSITY TESTS SHALL BE TAKEN WITHIN THE 3 FT. ZONE.

WALL CONSTRUCTION (CONT.)

10. IF STRUCTURES IN EXCESS OF 20' IN HEIGHT OCCUR, THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 20'. FINISHED GRADE BACKFILL SHALL BE COMPACTED TO 95% OF ASTM D-698, METHODS 'C' OR 'D', UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUARDRAIL POSTS BEHIND THE REINFORCED EARTH PANELS. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING STRIPS, INDIVIDUAL STRIPS MAY BE SKEWED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE REINFORCED EARTH COMPANY. ANY DAMAGE DONE TO THE REINFORCING STRIPS DUE TO THE INSTALLATION OF THE GUARDRAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

12. IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUARDRAIL POSTS WHICH ARE WITHIN THE REINFORCED EARTH VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING STRIPS AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE REINFORCED EARTH COMPANY TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.

13. TOP PANELS BENEATH CAST-IN-PLACE COPING SHALL HAVE #4 DOWELS PROTRUDING FROM THEIR TOP EDGE.

14. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CONSTRUCTION MANUAL AVAILABLE FROM THE REINFORCED EARTH CO.
    10 TOWER OFFICE PARK
    SUITE 318, WOBURN, MA 01801.

15. THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING STRIPS DOWNWARD TO AVOID CONFLICTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPERELEVATION AND/OR SOIL MIXING ARE ANTICIPATED.

16. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER DRAINAGE IN THE VICINITY OF THE WALL DURING CONSTRUCTION. STORM WATER RUNOFF IS TO BE COLLECTED AND DISCHARGED AWAY FROM THE WALL AND REINFORCED BACKFILL.

MATERIALS NOTES

17. NOMINAL STRIP LENGTHS

    THE REINFORCING STRIP LENGTHS SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANEL, ARE THE NOMINAL LENGTHS REQUIRED BY CALCULATION. THE ACTUAL FABRICATED STRIP LENGTHS ARE OFTEN LONGER (UP TO 6") DUE TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL LIMIT OF GRANULAR BACKFILL IS EQUAL TO THE NOMINAL STRIP LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL STRIP LENGTH IS NOT REQUIRED BY CALCULATION.

MATERIALS NOTES (CONT.)

18. SELECT BACKFILL QUANTITY

    THE SELECT BACKFILL QUANTITY INDICATED BY THE REINFORCED EARTH COMPANY IS CALCULATED BY MULTIPLYING THE NOMINAL STRIP LENGTHS SHOWN ON THE PLANS (PLUS 0 FT.) BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEATLINE CUBIC YARD QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY.

19. PANEL FINISH

    THE PRECAST PANELS FOR THIS PROJECT SHALL HAVE AN ASHLER STONE FINISH UNLESS OTHERWISE SPECIFIED. THE CONCRETE SHALL BE COLORED BAYFERROX 3950 3 1/2 %

20. CAST-IN-PLACE CONCRETE COPING

    CONCRETE FOR THE CAST-IN-PLACE COPING SHALL BE PAID FOR AS PART OF ITEM 501.22, CLASS A CONCRETE. REINFORCING IN THE COPING SHALL BE PAID FOR AS PART OF ITEM 507.17 EPOXY COATED REINFORCING STEEL.

21. NOTE TO CONTRACTORS

    ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY THE REINFORCED EARTH COMPANY:

    - PRECAST CONCRETE FACING PANELS
    - REINFORCING STRIPS
    - BOLT SETS (FOR ATTACHING PANELS TO THE REINFORCING STRIPS)
    - BEARING BLOCKS
    - RUBBER SHIMS
    - FILTER CLOTH AND ADHESIVE (FOR PANEL JOINTS ONLY)

    ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFACE OF PRECAST PANELS AND CAST-IN-PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTION CONTRACTOR. ALL SANDBLASTING, PAINTING, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE ALSO SUPPLIED/INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION.

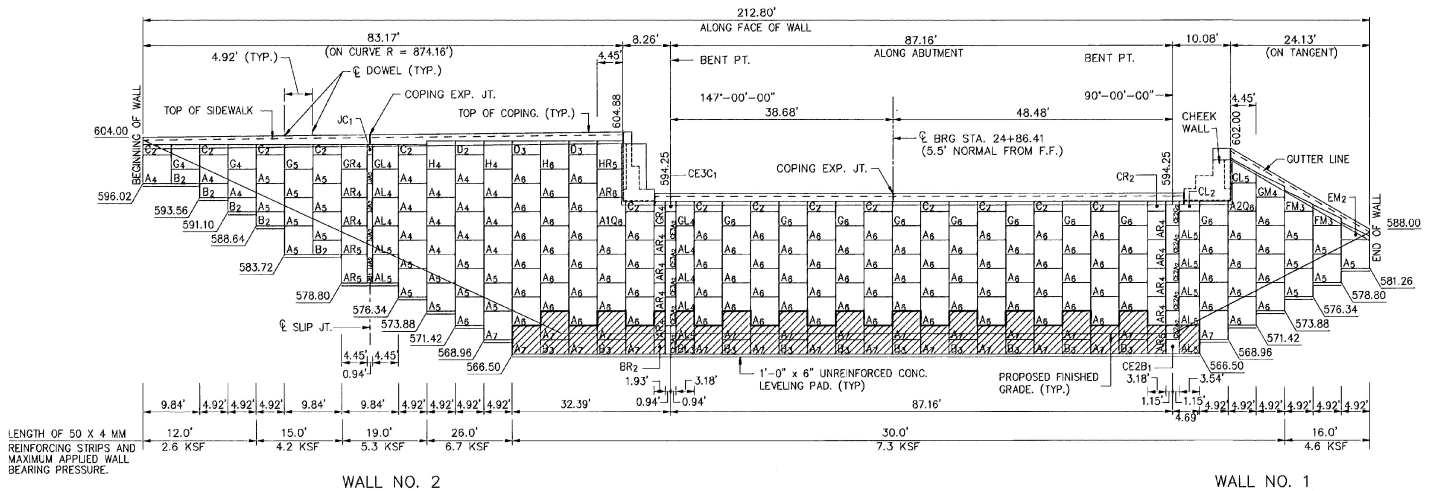
22. CONSTRUCTION SEQUENCE

    REINFORCED EARTH WALLS SHALL BE CONSTRUCTED AT ONE ABUTMENT AT A TIME. THE WALL SHALL BE CONSTRUCTED AND BACKFILLED TO THE BOTTOM OF THE ABUTMENT FOOTING ELEVATION, THEN A WAITING PERIOD OF 30 DAYS SHALL BE OBSERVED BEFORE CONTINUING WITH CONSTRUCTION AT THAT ABUTMENT. THIS PROCEDURE SHALL BE USED FOR REINFORCED EARTH WALL CONSTRUCTION AT BOTH ABUTMENTS.

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
MSE WALLS – NOTES	
Designed By LJW	Drawn By REC
Checked By AJP Date 10/94	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR225	Sheet 85 of 113



WALL NO. 2

WALL NO. 1

ELEVATION – FRONT FACE – ABUTMENT NO. 1

0 10 25 50
SCALE IN FEET

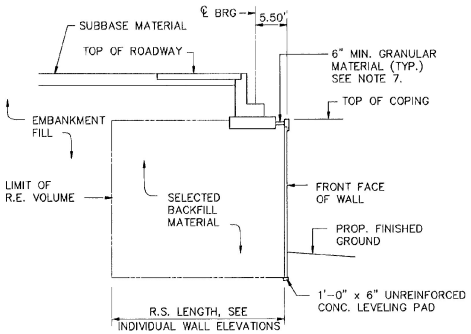
NOTES:

1. LENGTH OF LEVELING PAD IS BASED ON INDIVIDUAL PANEL WIDTHS. ℄ OF PIN TO ℄ OF PIN. USE STEP DETAIL ON SHEET BR230 TO DETERMINE THE ACTUAL LEVELING PAD STEP LOCATION.
2. FOR COPING DETAILS, SEE SHEET BR230 WALL ELEVATIONS APPLIED AT TOP OF COPING.
3. FOR TYPICAL SECTION THROUGH ROADWAY AND WALL LOCATIONS, SEE CONTRACT PLANS.
4. FOR GENERAL NOTES, SEE SHEET BR225.

   KEY: PANEL NAME — A5 — NO. OF TIE STRIPS
5. FOR STANDARD PANEL DETAILS, SEE SHEET BR230.
6. FOR WALL LOCATION, AND TYPICAL SECTION THRU ROADWAY, SEE ROADWAY DRAWNGS.

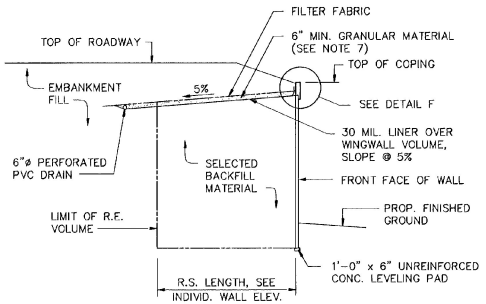
   ☐ – R6 PANELS

   ▨ – R7 PANELS
7. GRANULAR MATERIAL AT LINER SHALL CONFORM TO STANDARD 3/4 INCH STONE IN STANDARD SPECIFICATIONS TABLE 704.02B. COST FOR GRANULAR MATERIAL SHALL BE INCLUDED IN THE SQUARE FOOT COST FOR ITEM 526.40 REINFORCED SLOPE.



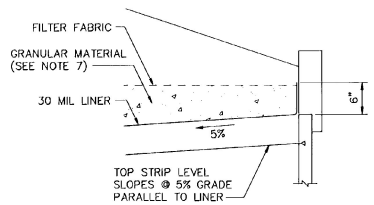
TYPICAL SECTION THRU ABUTMENT

0 10 25 50
SCALE IN FEET



TYPICAL SECTION THRU WINGWALL

0 10 25 50
SCALE IN FEET



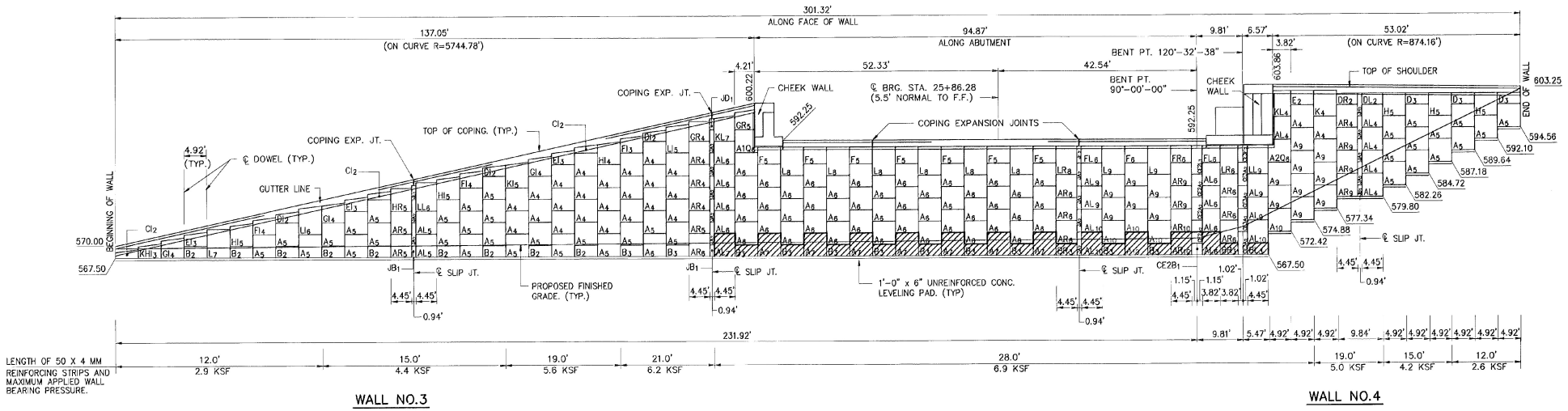
DETAIL F

NTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
MSE WALLS – ELEVATION – ABUT NO. 1	
Designed By LJW	Drawn By REC
Checked By AJP Date 10/94	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR226	Sheet 86 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



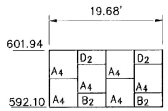
WALL NO.3

WALL NO.4

ELEVATION – FRONT FACE – ABUTMENT NO.2

0 10 25 50

SCALE IN FEET



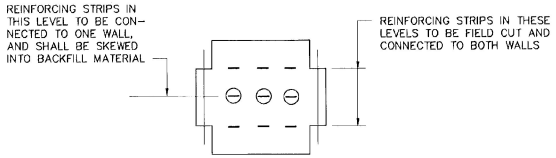
BACK–UP WALL – BACK FACE

0 10 25 50

SCALE IN FEET

NOTES:

1. FOR BACK–UP WALL LOCATION, SEE ABUT. NO. 2 LAY–OUT SHEET BR228.
2. LEVELING PAD NOT REQUIRED BENEATH THE BACK–UP WALL.



PANEL WITH 9 TIE STRIPS

NOT TO SCALE

NOTES:

1. LENGTH OF LEVELING PAD IS BASED ON INDIVIDUAL PANEL WIDTHS. C OF PIN TO C OF PIN. USE STEP DETAIL ON SHEET BR230 TO DETERMINE THE ACTUAL LEVELING PAD STEP LOCATION. STEP LOCATION.
2. FOR COPING DETAILS, SEE SHEET BR230 WALL ELEVATIONS APPLIED AT TOP OF COPING.
3. FOR TYPICAL SECTION THROUGH ROADWAY AND WALL LOCATIONS, SEE CONTRACT PLANS.
4. FOR GENERAL NOTES, SEE SHEET BR225.

KEY:
PANEL NAME A5 NO. OF TIE STRIPS

5. FOR STANDARD PANEL DETAILS, SEE SHEET BR231.
6. FOR WALL LOCATION, AND TYPICAL SECTION THRU ROADWAY, SEE ROADWAY DRAWINGS.

☐ – R6 PANELS

▨ – R7 PANELS

7. DOWNSPOUT TO EXPANSION JOINT TO BE ATTACHED TO THE R.E. FACING PANELS. DETAILS OF ATTACHMENT SHOWN ON SHEET BR219.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

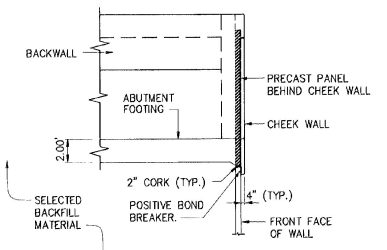
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.

U.S. ROUTE 7 OVER RAILROAD

MSE WALLS – ELEVATION – ABUT NO. 2

Designed By LJW	Drawn By REC
Checked By AJP Date 10/94	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR227	Sheet 87 of 113

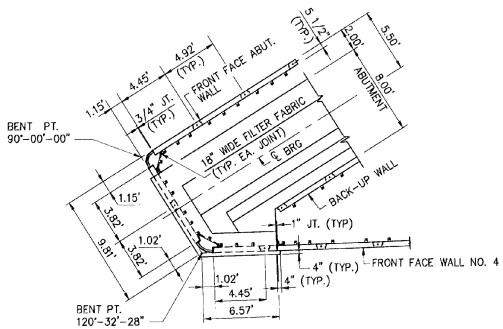
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



SECTION THRU ABUTMENT

0 5 12.5 25

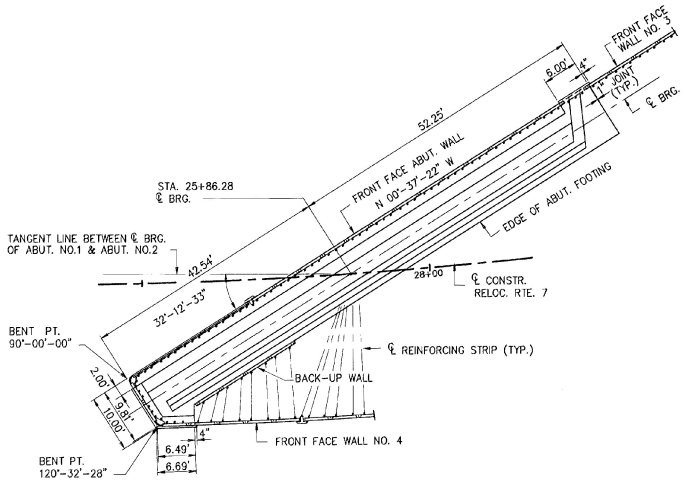
SCALE IN FEET



ABUTMENT NO.2 PANEL LAYOUT

0 5 12.5 25

SCALE IN FEET

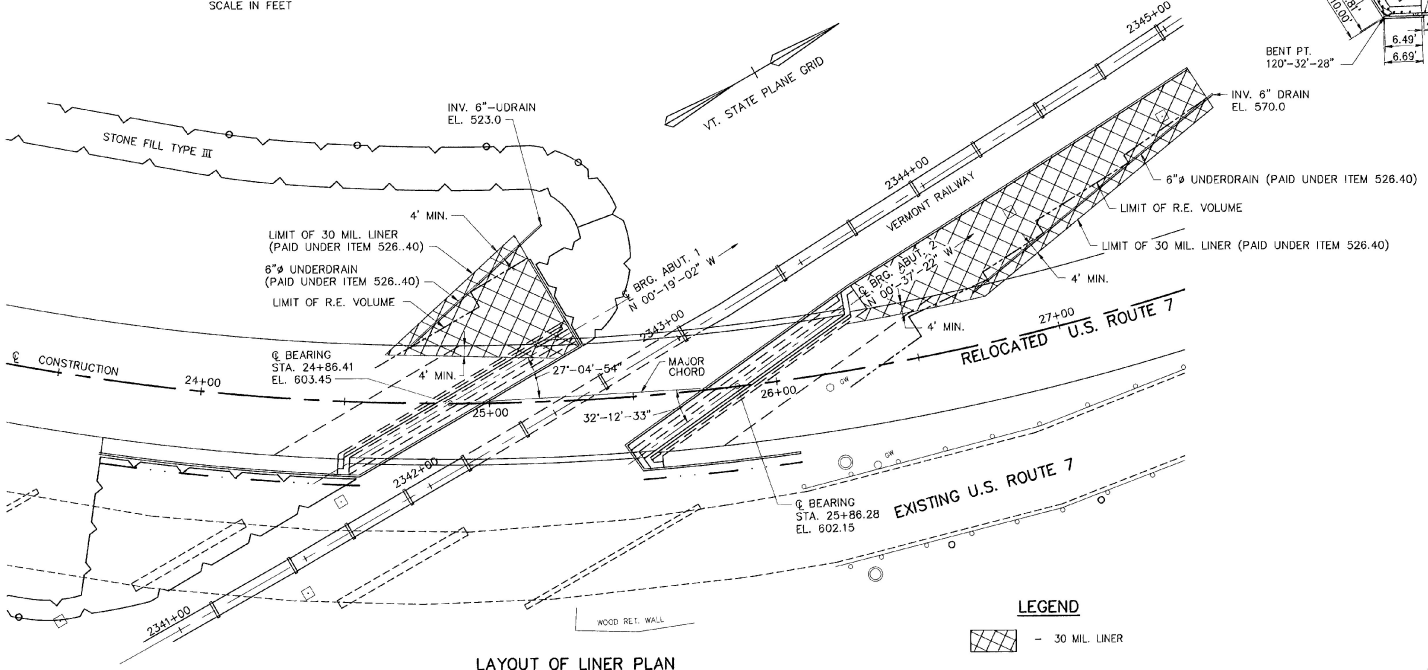


ABUTMENT NO.2 – WALL LAYOUT

(REINFORCING STRIPS ABOVE ABUT. SEAT)

0 10 25 50

SCALE IN FEET



LAYOUT OF LINER PLAN

0 20 50 100

SCALE IN FEET

LEGEND

▨ – 30 MIL. LINER

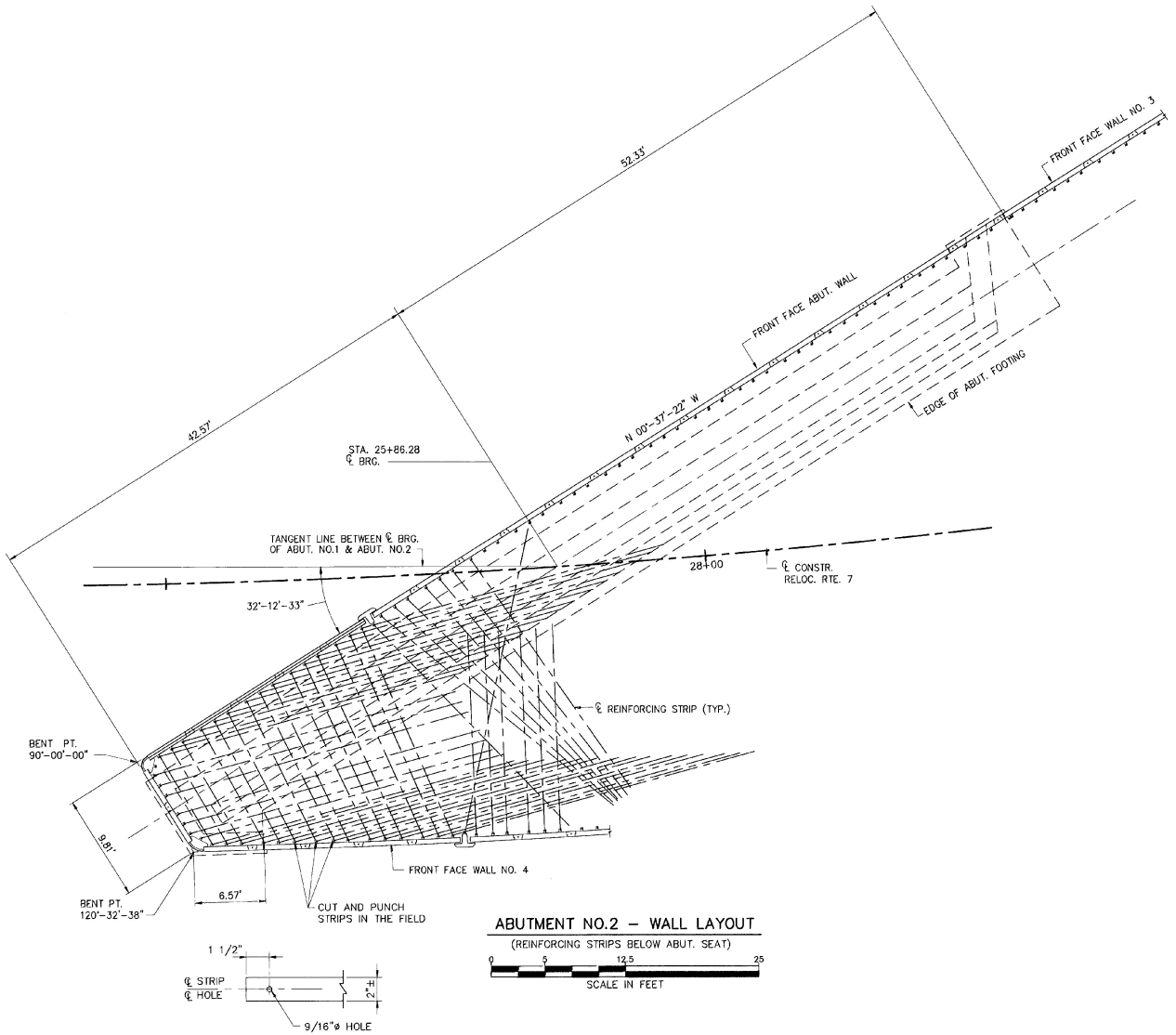
NOTES:

1. REINFORCING STRIPS IN THE AREA OF ACUTE ANGLE, SHALL BE FIELD CUT, HOLES PUNCHED, TAR COATED AND CONNECTED TO ABUT. WALL AND WALL NO. 4 & BACK-UP WALL AS SHOWN.
2. ALL VERT. JOINTS NEXT TO CORNER ELEMENTS AND CHEEK WALL SHALL HAVE 3/4" EXP. JOINT MATERIAL GLUED AND NAILED TO EDGE OF PANEL.
3. FOR ABUTMENT DETAILS, SEE BRIDGE PLANS.
4. REINFORCING STRIPS NORMAL TO BACK FACE OF PANEL NOT SHOWN FOR CLARITY REASON.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
MSE WALL – ABUT NO. 2 PLAN	
Designed By LJW	Drawn By REC
Checked By AJP Date 10/94	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR228	Sheet 88 of 113

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



ABUTMENT NO.2 – WALL LAYOUT

(REINFORCING STRIPS BELOW ABUT. SEAT)

0 5 12.5 25

SCALE IN FEET

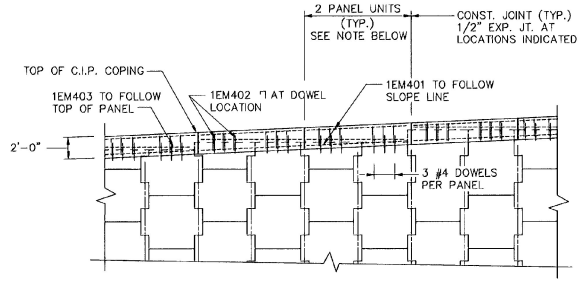
REINFORCING STRIP DETAIL

NTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
MSE WALL – ABUT. NO. 2 BIN. WALL	
Designed By LJW	Drawn By REC
Checked By AJP Date 10/94	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR229	Sheet 89 of 113

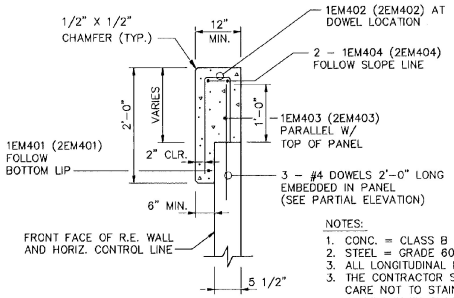
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 8TH FL.
BOSTON, MASSACHUSETTS



NOTE:
JOINTS IN COPING SHALL BE AT 2 PANEL INTERVALS AND COINCIDE APPROXIMATELY WITH PANEL JOINTS. REINFORCING STEEL SHALL BE STOPPED 2" SHORT OF EITHER SIDE OF THE CONSTRUCTION AND EXPANSION JOINTS. FOR EXPANSION JOINT LOCATIONS SEE MSE WALL ELEVATIONS.

C.I.P. COPING (3 DOWELS)
1 PARTIAL ELEVATION

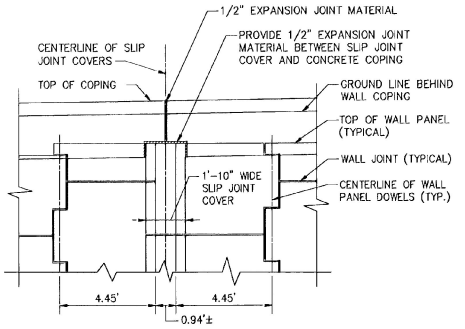
SCALE IN FEET 0 4 8 12 16



NOTES:
1. CONC. = CLASS B
2. STEEL = GRADE 60 EPOXY COATED
3. ALL LONGITUDINAL BARS ARE #4.
3. THE CONTRACTOR SHALL EXERCISE CARE NOT TO STAIN THE MSE WALL PANELS WHEN PLACING CAST-IN-PLACE CONCRETE. ANY STAINING AS A RESULT OF CONCRETE PLACEMENT SHALL BE REMOVED AT THE CONTRACTORS EXPENSE.

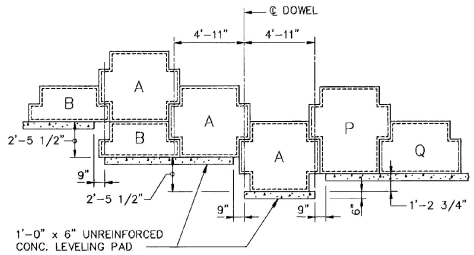
2 C.I.P. CONC. COPING DETAIL

SCALE IN FEET 0 1 2 5



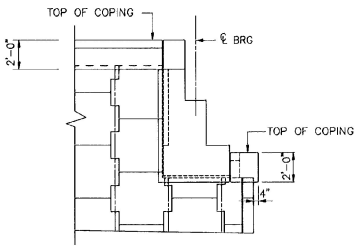
PARTIAL ELEVATION - BACK FACE
3 COPING OVER SLIP JOINT COVERS

SCALE IN FEET 0 2 4 6 8



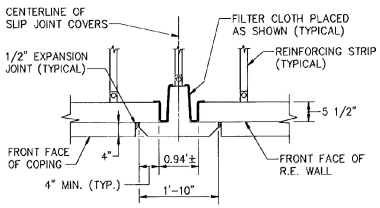
5 TYPICAL LEVELING PAD STEP DETAIL

SCALE IN FEET 0 4 8 20



6 PARTIAL ELEVATION
CONNECTION AT BRIDGE ABUT.
(ABUT. NO. 1-WALL NO. 2 SHOWN, OTHER ENDS SIMILAR)

SCALE IN FEET 0 4 8 12 16



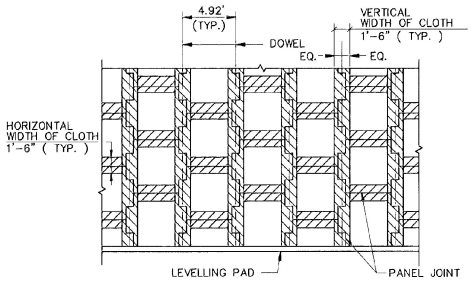
4 SLIP JOINT COVER DETAIL

SCALE IN FEET 0 1 2 3 4

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
MSE WALLS - DETAILS	
Designed By LJW	Drawn By REC
Checked By AJP Date 10/94	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR230	Sheet 90 of 113

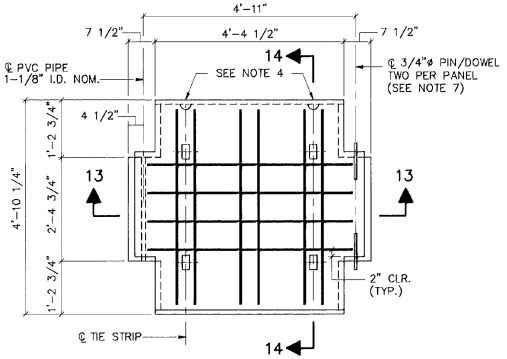
BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS



NOTE:
STRIPS OF FILTER CLOTH SHALL BE PLACED ON BACK FACE OF PANEL, OVER PANEL JOINTS. FILTER CLOTH SHALL BE ADHERED TO BACK FACE OF PANELS USING AN ADHESIVE COMPOUND SUPPLIED BY THE REINFORCED EARTH COMPANY.

FILTER CLOTH DETAIL
PARTIAL ELEVATION – BACK FACE

0 4 8 12 16
SCALE IN FEET



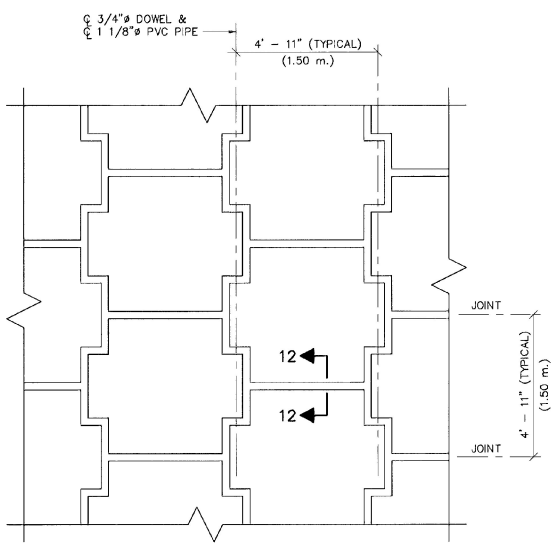
PANEL TYPE "A" WITH
R6 REINFORCEMENT
FRONT VIEW

0 1 2 3 4
SCALE IN FEET

PANEL THICKNESS	REINFORCEMENT DESIGNATION	PANEL REINFORCEMENT	MAXIMUM ALLOWABLE HORIZONTAL STRESS AT FACING (KSF)
5 1/2"	R6	6–#3 VERTICAL 4–#4 HORIZONTAL	1.60
	R7	6–#4 VERTICAL 4–#6 HORIZONTAL	2.55

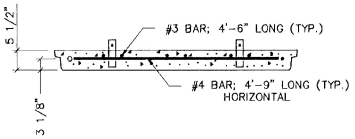
NOTES:

1. REINFORCING STEEL SHALL BE EPOXY COATED A615 GRADE 60.
2. 3/8" x 3/8" CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY).
3. ALL PANEL TYPES AND OTHER RELATED ELEMENTS WILL BE DETAILED ON SHOP DRAWINGS.
4. ALL PANELS SHALL HAVE TWO LIFTING INSERTS OF ONE TON CAPACITY EACH.
5. PANEL DESIGN THICKNESS IS 5 1/2". THICKNESS OF CONCRETE MUST INCREASE TO ACCOMODATE THE ARCHITECTURAL SURFACE FINISH THAT HAS BEEN SPECIFIED.
6. ACTUAL PANEL REINFORCEMENT FOR ALL PANEL TYPES ON THIS PROJECT IS DESIGNATED ABOVE. R6 ILLUSTRATED FOR INFORMATION ONLY.
7. EACH 3/4"ø DOWEL SHALL HAVE A TYP. LENGTH OF 10". DOWELS MAY BE GALVANIZED STEEL OR PVC ROD. A SINGLE FULL LENGTH DOWEL MAY BE USED AT THE DISCRETION OF THE MANUFACTURER.



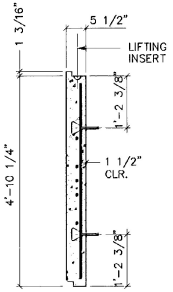
TYPICAL PANEL LAYOUT
PARTIAL ELEVATION – FRONT FACE

0 2 4 10
SCALE IN FEET



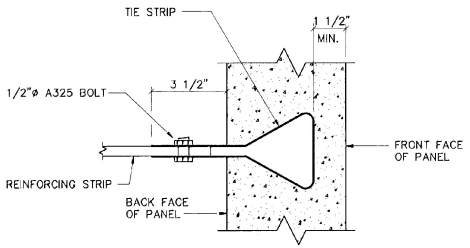
SECTION 13–13

0 1 2 3 4
SCALE IN FEET

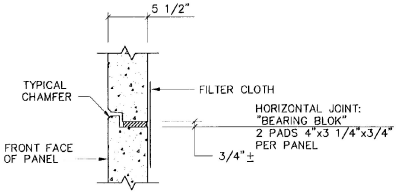


SECTION 14–14

0 1 2 3 4
SCALE IN FEET



CONNECTION DETAIL
NOT TO SCALE



SECTION 12–12

0 1 2 3
SCALE IN FEET

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

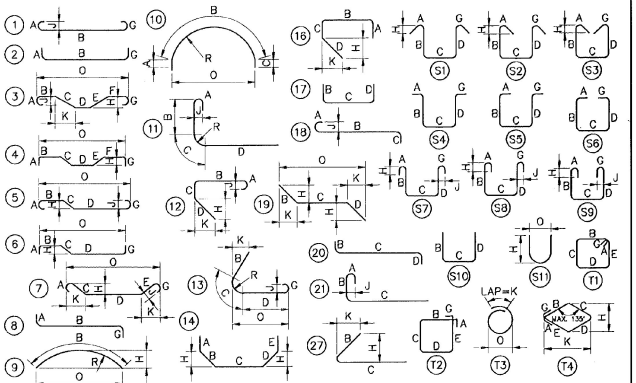
Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
MSE WALLS – STANDARD PANEL DETAILS	
Designed By LJW	Drawn By REC
Checked By AJP Date 4/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR231	Sheet 91 of 113

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
						DECK SLAB – EPOXY COATED											
	△379	5	38'-0"	ES501	STR												
	△11	5	10'-0"	ES502	STR												
	208	5	6'-11"	ES503	S5	0'-10"	1'-5"	1'-7"	1'-5"			0'-10"					
	82	5	5'-5"	ES504	S10		1'-6"	0'-9"	3'-2"								
	86	5	5'-6"	ES505	S6	0'-6"	1'-3"	0'-9"	3'-0"								
	△131	6	42'-3"	ES601	STR												
	2	6	4'-11"	ES602	STR												
	↓				↓	LENGTH VARIES IN EQUAL INCREMENTS											
	2	6	20'-7"	ES652	STR												
	2	6	20'-11"	ES653	STR												
	↓				↓	LENGTH VARIES IN EQUAL INCREMENTS											
	2	6	42'-3"	ES6130	STR												
	2	6	39'-11"	ES6131	STR												
	↓				↓	LENGTH VARIES IN EQUAL INCREMENTS											
	2	6	21'-2"	ES6196	STR												
	2	6	20'-10"	ES6197	STR												
	↓				↓	LENGTH VARIES IN EQUAL INCREMENTS											
	2	6	4'-1"	ES6283	STR												
	△9	6	42'-0"	ES8264													
	6	6	44'-0"	ES8265													
						APPROACH SLAB #1											
	△51	5	39'-3"	1EAS501	STR												
	△55	9	25'-9"	1EAS901	18	1'-9"	24'-0"										
						ABUTMENT #1											
	32	5	48'-0"	1A501	STR												
	△91	5	9'-3"	1A502	17		3'-9"	5'-6"									
	△91	5	7'-6"	1A503	STR												
	▲90	5	9'-4"	1A504	17		4'-10"	4'-6"	2'-0"								
	▲90	5	9'-2"	1A505	17		7'-8"	1'-6"									
	90	5	7'-1"	1A506	S10		1'-3"	0'-6"	5'-4"								
	32	5	45'-9"	1A507	STR												
	▲30	5	17'-0"	1A508	STR												
	△91	5	10'-3"	1A509	17		3'-9"	6'-6"									
	△42	8	3'-6"	1A801	19		1'-6"	2'-0"									
						WALL #1											
	3	5	9'-0"	1W501	S10		3'-9"	1'-6"	3'-9"								
	△3	5	6'-9"	1W502	STR												
	1	5	5'-6"	1W503	S10		2'-0"	1'-6"	2'-0"								
	7	5	6'-6"	1W504	S10		2'-6"	1'-6"	2'-6"								
						WALL #2											
	8	5	10'-6"	2W501	S10		3'-9"	1'-6"	5'-3"								
	16	5	9'-7 1/2"	2W502	STR												
	8	5	5'-6"	2W503	S10		2'-0"	1'-6"	2'-0"								
	▲24	5	9'-9"	2W504	2	3'-9"	6'-0"										
	24	5	4'-0"	2W505	19		2'-0"	2'-0"					1'-8 1/4"		1'-1"		

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
						APPROACH SLAB #2											
	△51	5	41'-6"	2EAS501	STR												
	△55	9	25'-9"	2EAS901	18	1'-9"	24'-0"										
						ABUTMENT #2											
	32	5	48'-4"	2A501	STR												
	△88	5	9'-3"	2A502	17		3'-9"	5'-6"									
	△86	5	7'-6"	2A503	STR												
	▲10	5	10'-8"	2A504	STR												
	▲87	5	10'-4"	2A505	17		5'-10"	4'-6"	2'-0"								
	▲87	5	10'-10"	2A506	17		9'-4"	1'-6"									
	87	5	9'-10"	2A507	S10		2'-6"	0'-6"	6'-10"								
	9	5	44'-6"	2A508	STR												
	▲30	5	17'-6"	2A509	STR												
	87	5	10'-9"	2A510	17		4'-3"	6'-6"									
	16	5	9'-6"	2A511	STR												
	△42	8	3'-6"	2A801	19		1'-6"	2'-0"									
						WALL #3											
	12	5	9'-0"	3W501	S10		3'-9"	1'-6"	3'-9"								
	△25	5	7'-0"	3W502	STR												
	▲12	5	5'-6"	3W503	S10		2'-0"	1'-6"	2'-0"								
	▲18	5	11'-3"	3W504	19		3'-6"	7'-9"					3'-2"		1'-6 1/2"		
	18	5	4'-0"	3W505	19		2'-0"	2'-0"					1'-9 1/2"		0'-10 1/2"		
						WALL #4											
	7	5	9'-0"	4W501	S10		3'-9"	1'-6"	3'-9"								
	14	5	10'-7"	4W502	STR												
	7	5	5'-6"	4W503	S10		2'-0"	1'-6"	2'-0"								
	▲△27	5	7'-6"	4W504	19		3'-9"	3'-9"					3'-2 3/4"		1'-11"		
						MSE WALLS – EPOXY COATED											
	22	4	9'-6"	1EM401	STR												
	132	4	3'-3"	1EM402	S10		3'-9"	1'-6"	3'-9"								
	22	4	9'-6"	1EM403	STR												
	44	4	9'-6"	1EM404	STR												
	30	4	9'-6"	2EM401	STR												
	180	4	3'-3"	2EM402	S10		1'-8"	5 1/2"	1'-1 1/2"								
	30	4	9'-6"	2EM403	STR												
	60	4	9'-6"	2EM404	STR												

NOTES :

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



ASTM STANDARD REINFORCING BARS

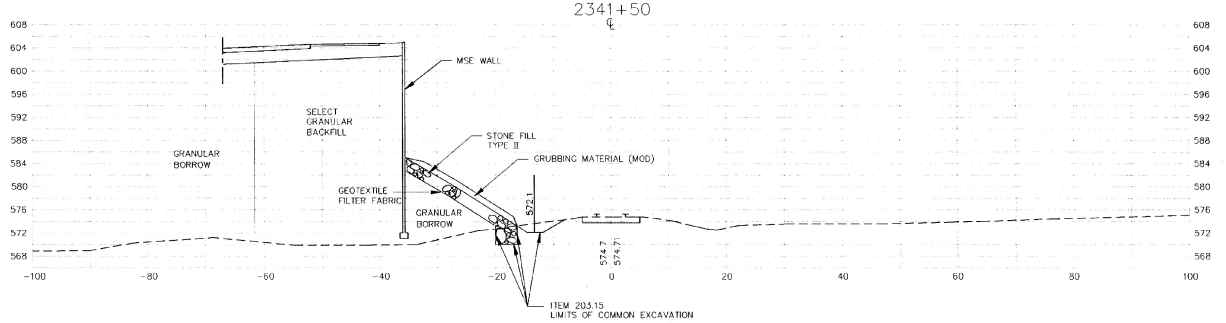
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION: DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.376	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.356
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128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

BARNES AND JARNIS, INC.
CONSULTING ENGINEERS
25 STUART STREET, 6TH FL.
BOSTON, MASSACHUSETTS

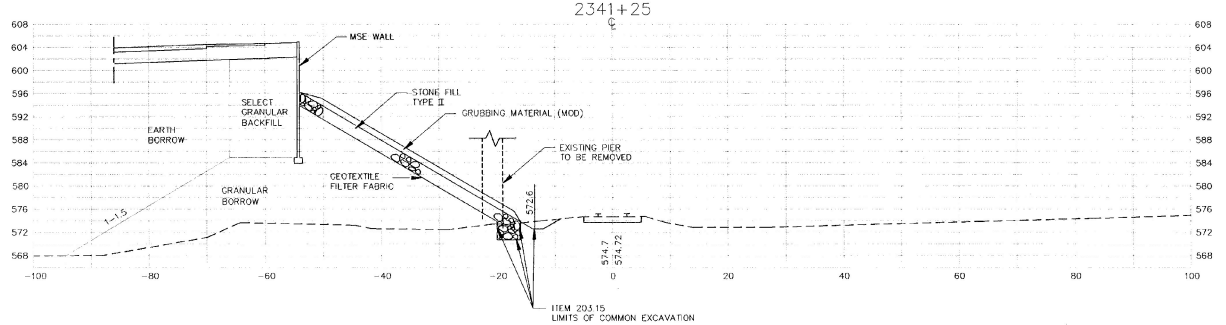
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WALLINGFORD	Bridge No. 80
Highway No. U.S. ROUTE 7	Log Sta. / Surv. Sta.
U.S. ROUTE 7 OVER RAILROAD	
REINFORCING STEEL SCHEDULE	
Designed By GRI	Drawn By KGC
Checked By EMM Date 2/95	Bridge Design Supervisor EMM Date 4/95
PROJECT WALLINGFORD	PROJECT NO. BRS 0137 (13)
I.G.C. Info.	
Bridge Sheet No. BR232	Sheet 92 of 113

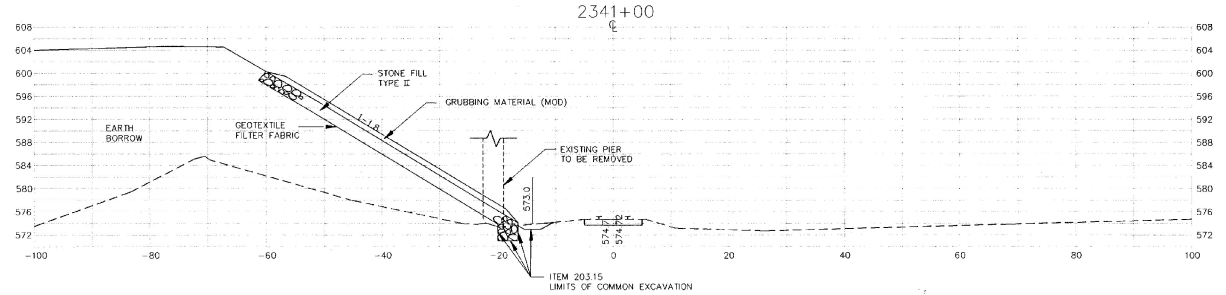
2341+50 ℄



2341+25 ℄



2341+00 ℄

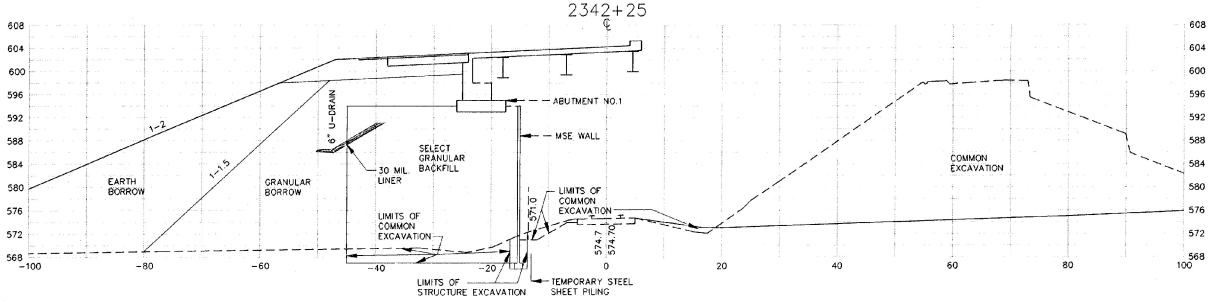


RAILROAD

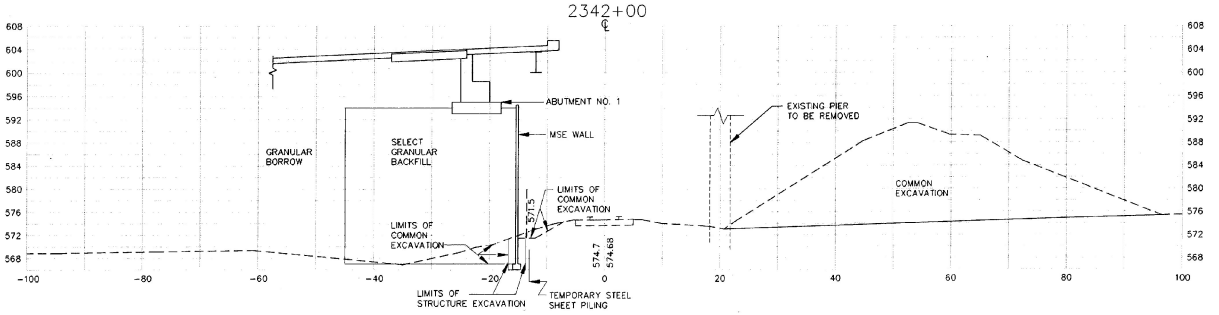
FROM STATION	2341+00	TO STATION	2341+50
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		

SHEET 93 OF 113 SHEETS

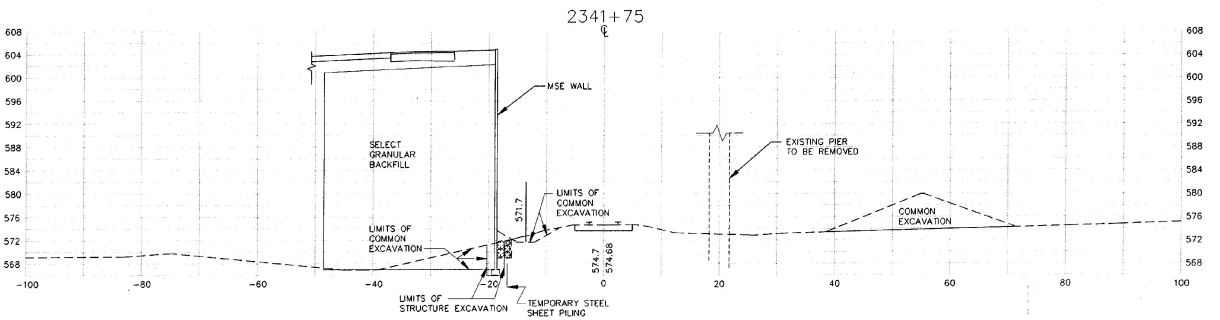
2342+25



2342+00



2341+75



RAILROAD

FROM STATION 2341+75 TO STATION 2342+25

PROJ. NAME WALLINGFOR

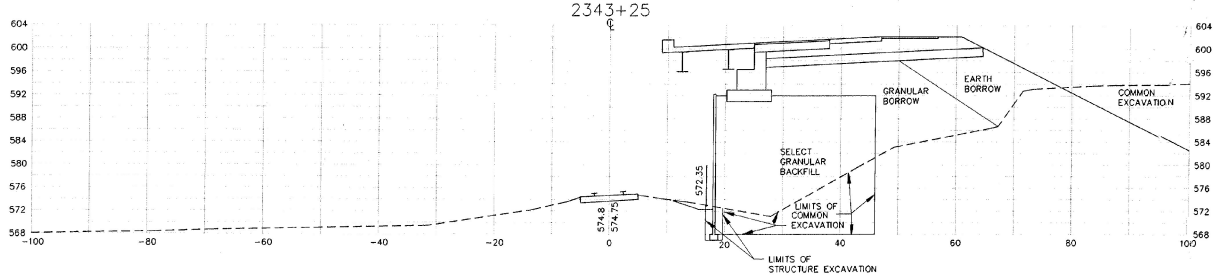
PROJ. NO. BRS 0137(2)

SURVEYED BY: VSC 07/20

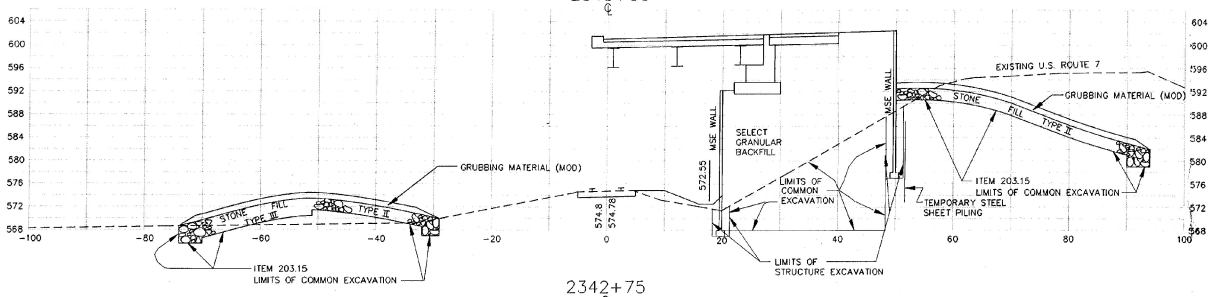
PLOTTED BY: JAC 07/95

SHEET 94 OF 113 SHEETS

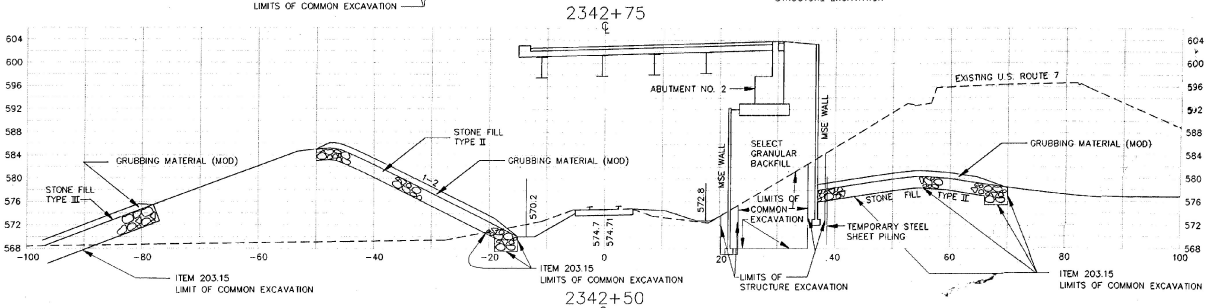
2343+25



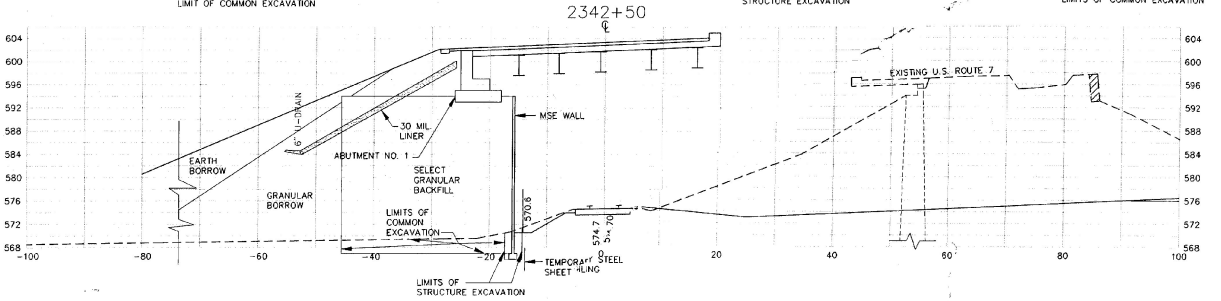
2343+00



2342+75



2342+50

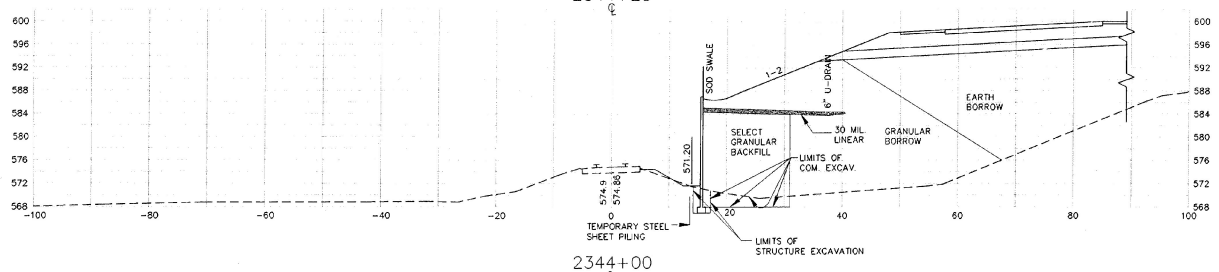


RAILROAD

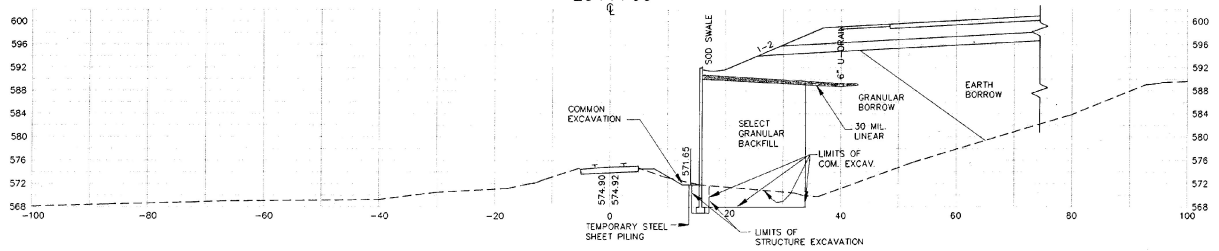
FROM STATION	2342+50
TO STATION	2343+25
PROJ. NAME	WALLINGFORD
PROJ. NO.	BRS 0137(13)
SURVEYED BY:	VSC 07/90
PLOTTED BY:	JAC 02/95

SHEET 95 OF 113 SHEETS

2344+25 ℄



2344+00 ℄



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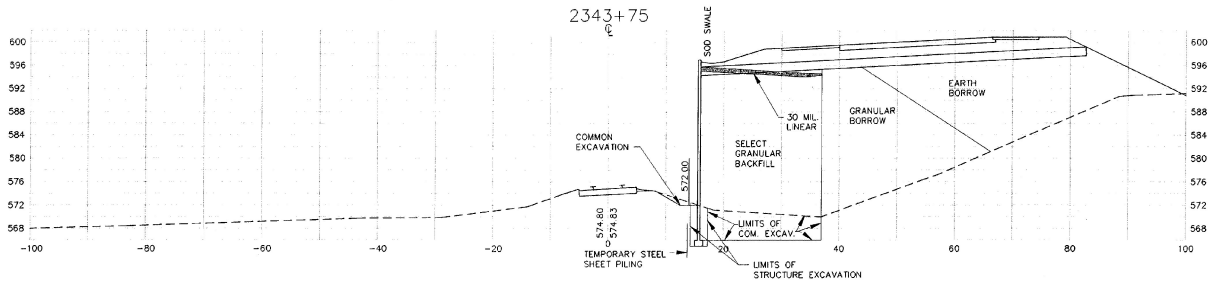

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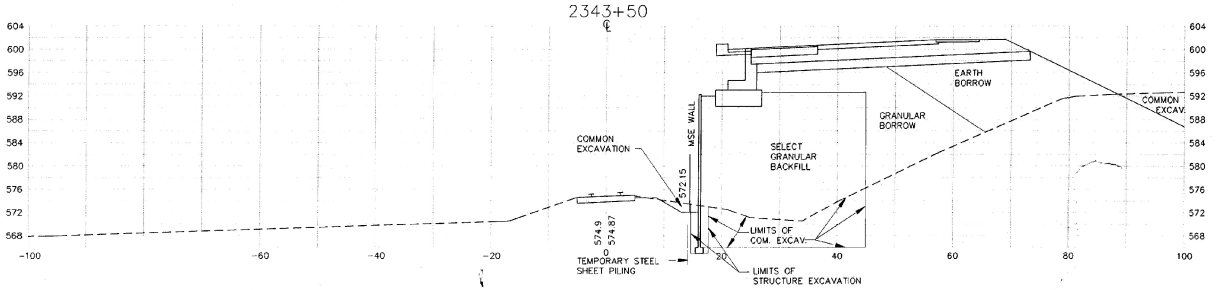
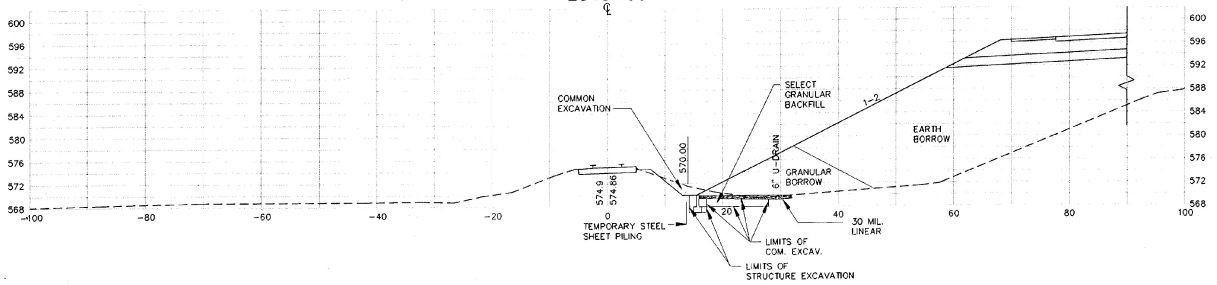


RAILROAD

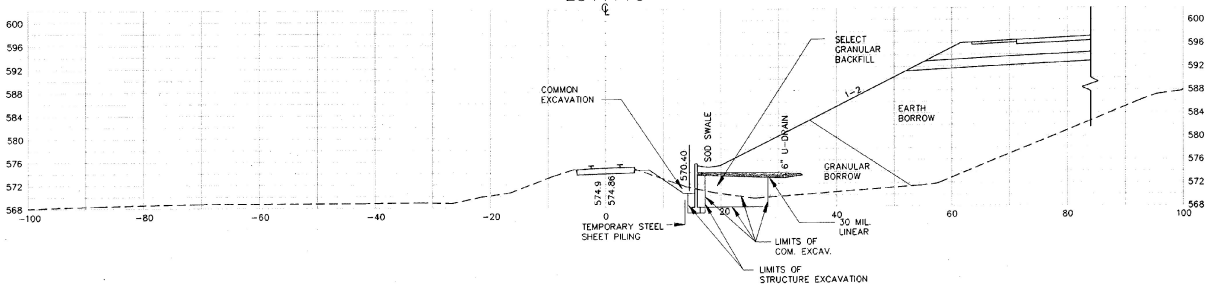
FROM STATION	2343+50
TO STATION	2344+25
PROJ. NAME	WALLINGFORD
PROJ. NO.	BRS 0137(13)
SURVEYED BY:	VSC 07/90
PLOTTED BY:	JAC 02/95

SHEET 96 OF 113 SHEETS

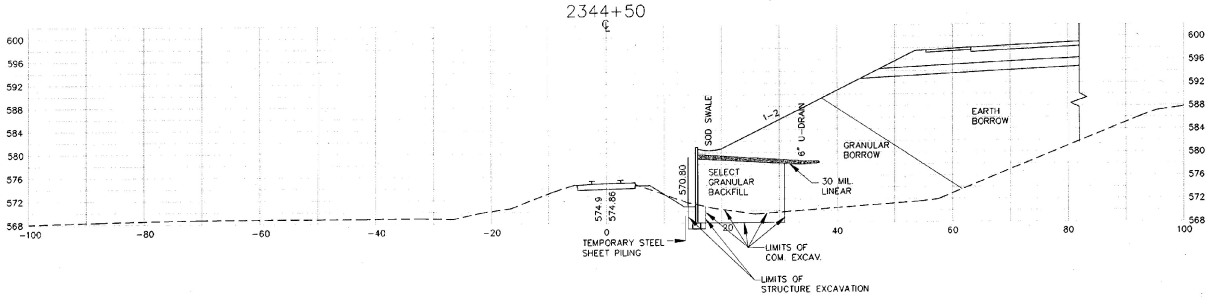
2345+00



2344+75



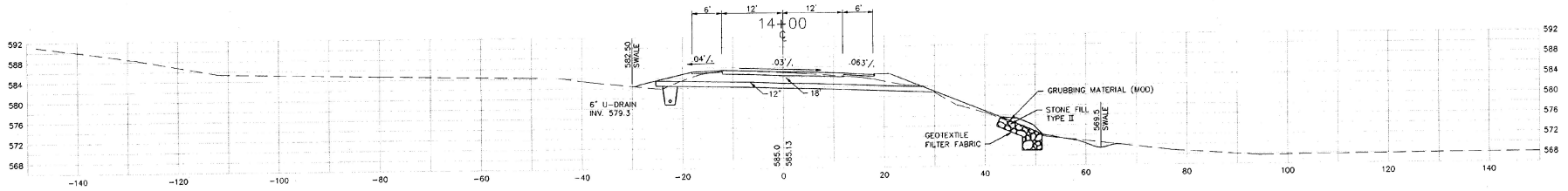
2344+50

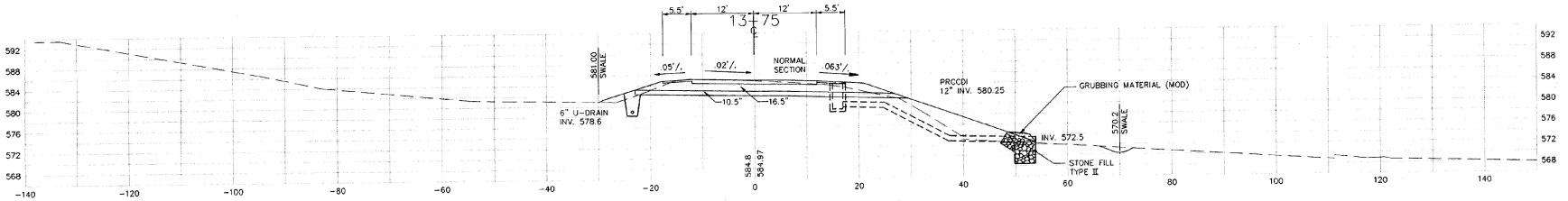


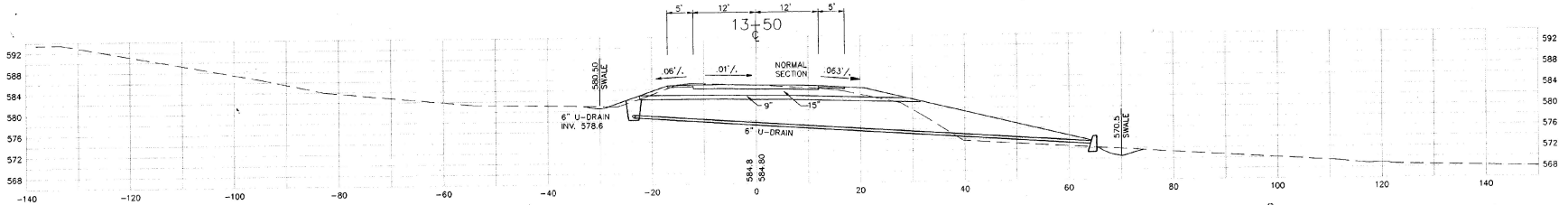
RAILROAD

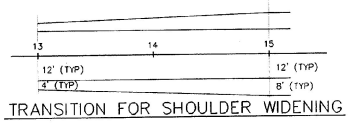
FROM STATION	2344+25	TO STATION	2345+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		

SHEET 97 OF 113 SHEETS

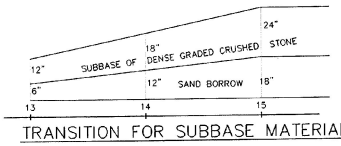




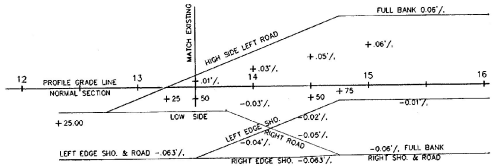




TRANSITION FOR SHOULDER WIDENING

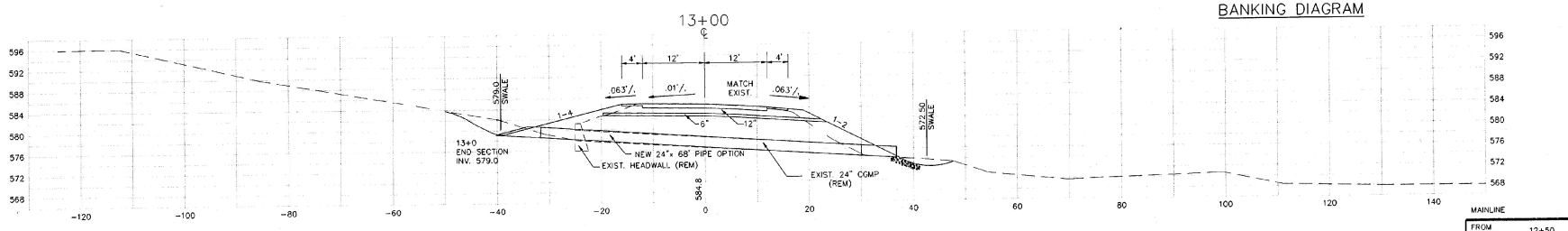


TRANSITION FOR SUBBASE MATERIALS



BANKING DIAGRAM

CONT. ON
SHEET 101



NOTE:
IF PCC PAVEMENT IS ENCOUNTERED UNDER THE EXISTING PAVEMENT IT SHALL BE REMOVED. PAYMENT WILL BE AS SOLID ROCK EXCAVATION

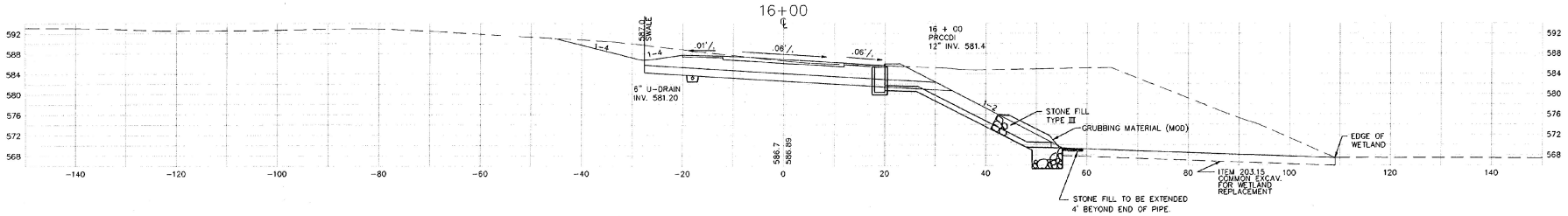
SCALE 10 FEET

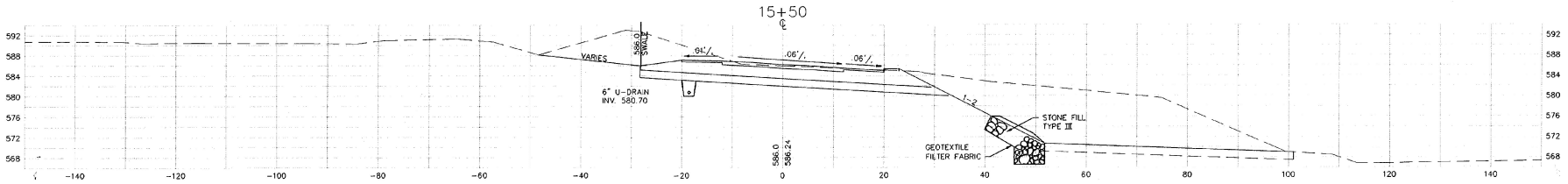
MAINLINE

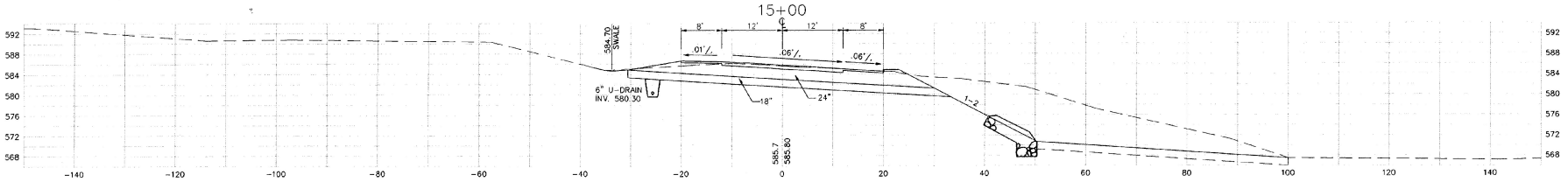
FROM STATION	12+50	TO STATION	14+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/94		

SHEET 98 OF 113 SHEETS

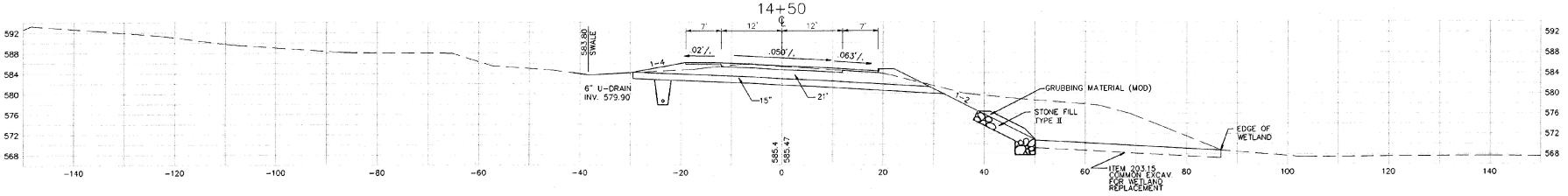
CIVIL WAL - 9813D - 98.DWG







BEGIN PROJECT
15+00 END APPROACH



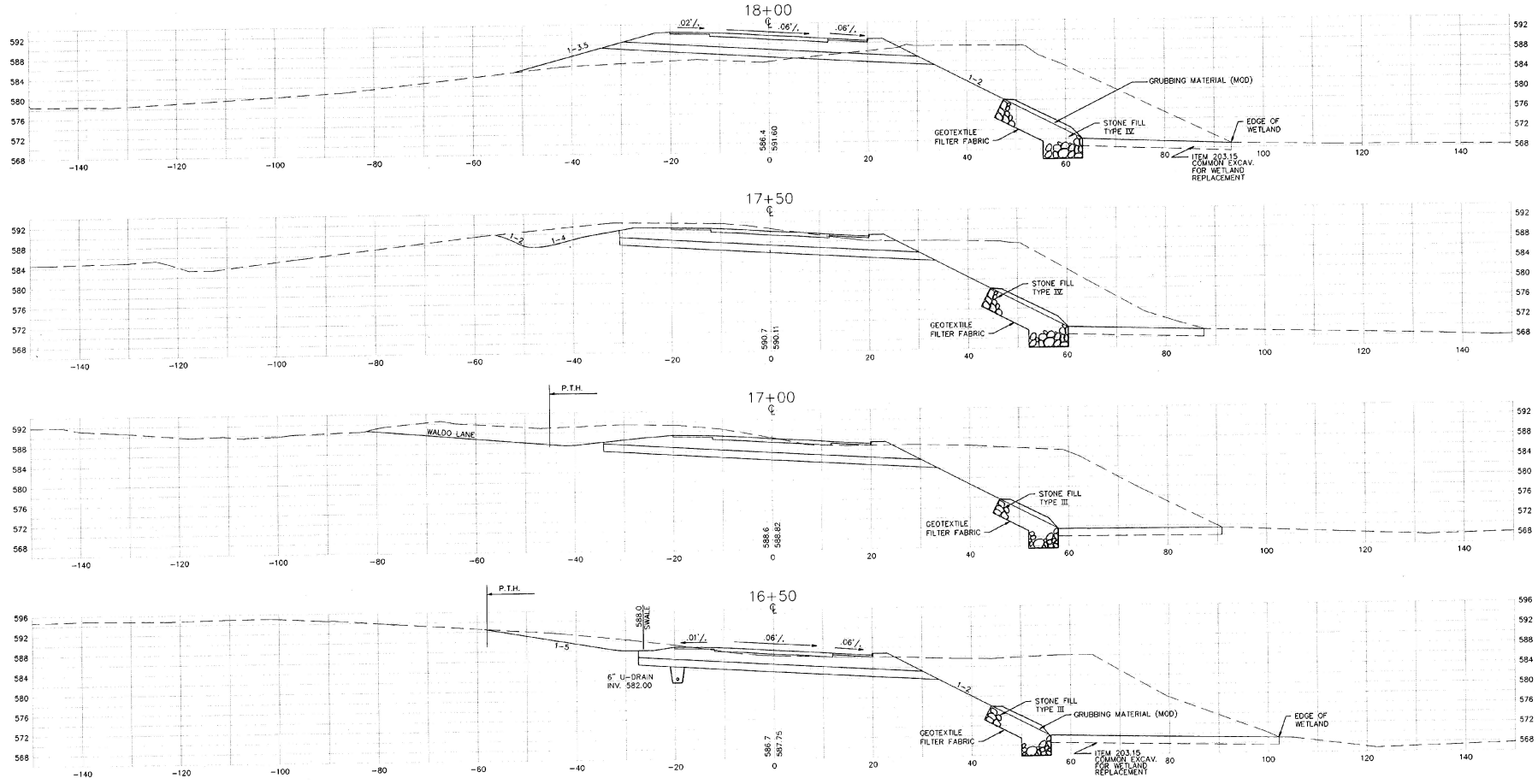
STA. 14 + 20 RT
BEGIN WETLAND RESTORATION

SCALE 10 FEET

MAINLINE

FROM STATION	14+50	TO STATION	16+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		

SHEET 99 OF 113 SHEETS

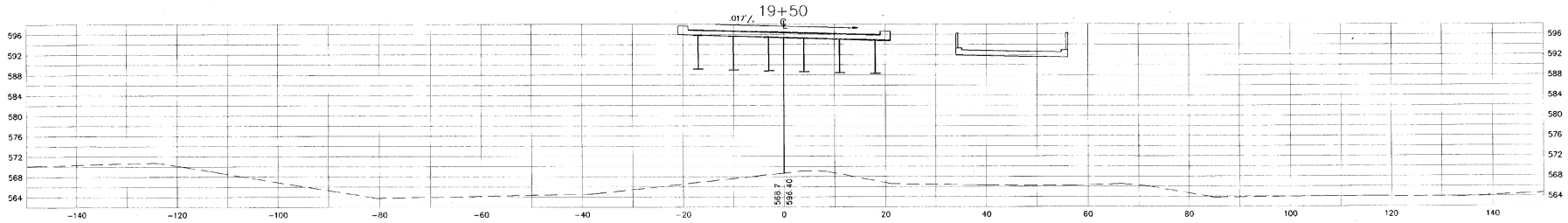


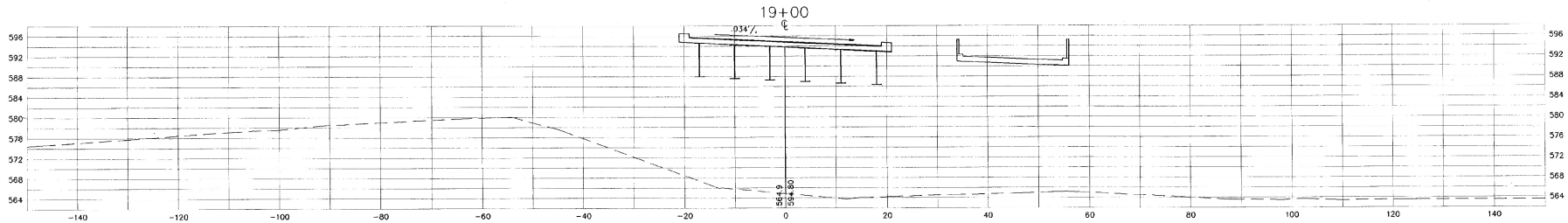
SCALE 10 FEET

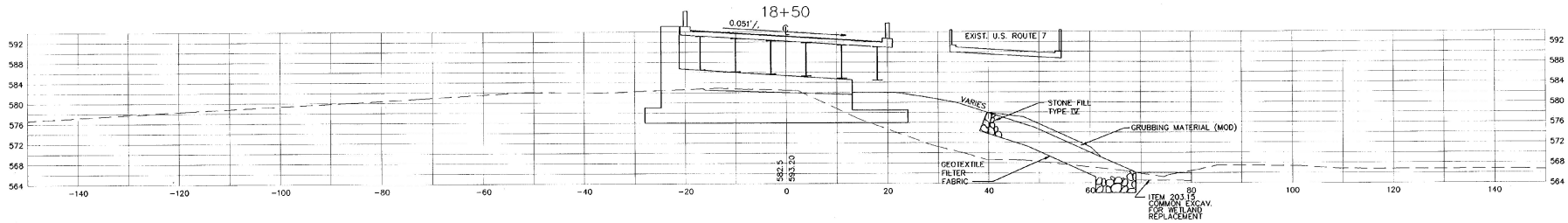
MAINLINE

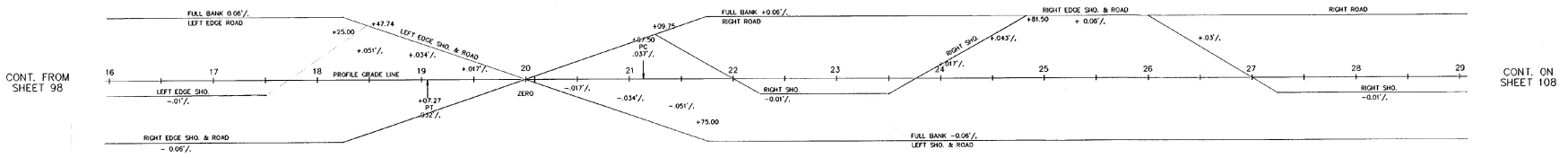
FROM STATION	16+50	TO STATION	18+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		
SHEET 100 OF 113 SHEETS			

D:\CIVIL\WALLY\91120-92.DWG (1=10)









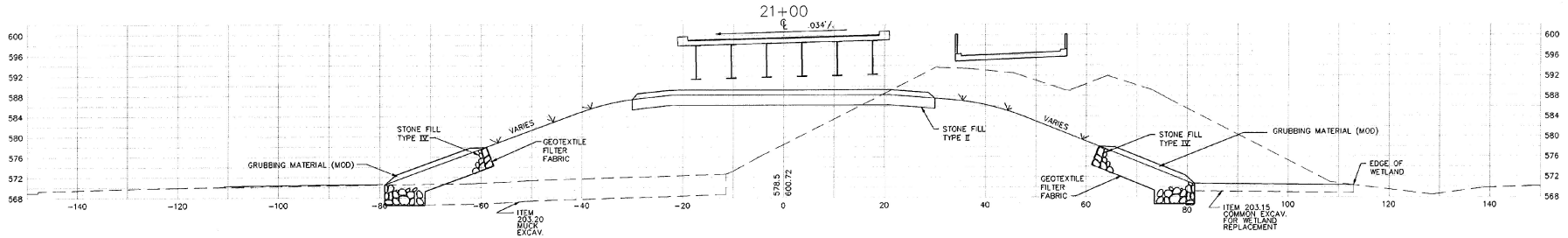
BANKING DIAGRAM

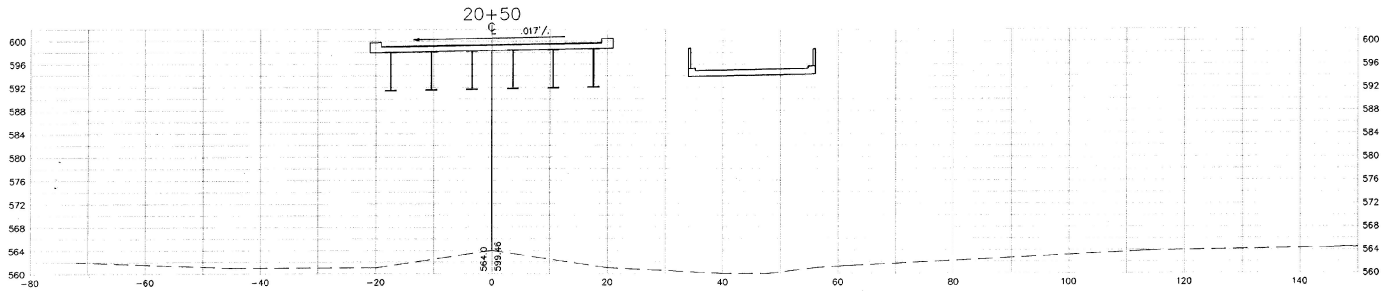
MAINLINE

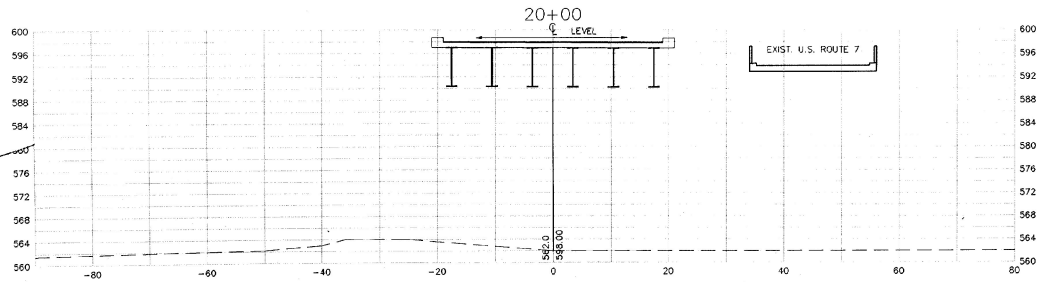
FROM STATION	18+50	TO STATION	19+50
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/91		
PLOTTED BY:	JAC 02/95		
SHEET 101 OF 113 SHEETS			

SCALE 10 FEET

D:\CIVIL\WALLY\91120-93.DWG (1=10)







SCALE 10 FEET

MAINLINE

FROM STATION 20+0 TO STATION 21+00

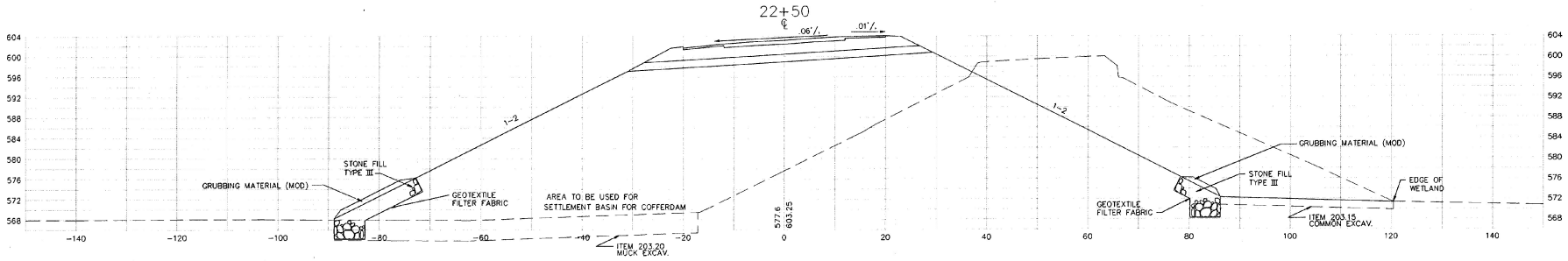
PROJ. NAME WALLINGFORD

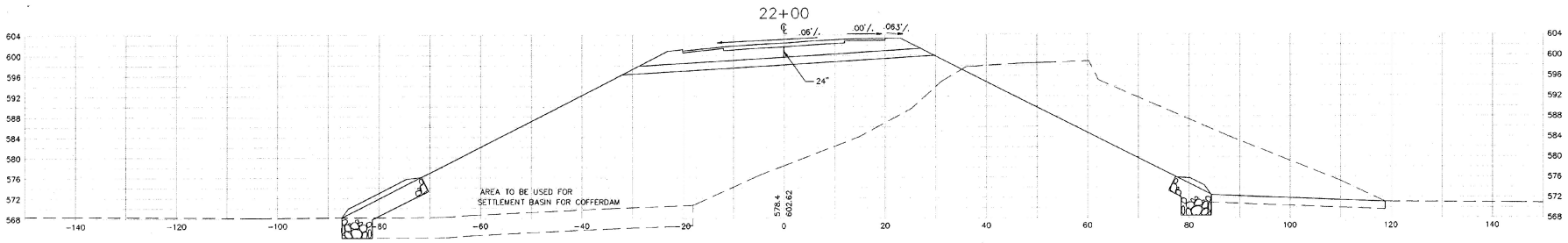
PROJ. NO. BRS 0137(13)

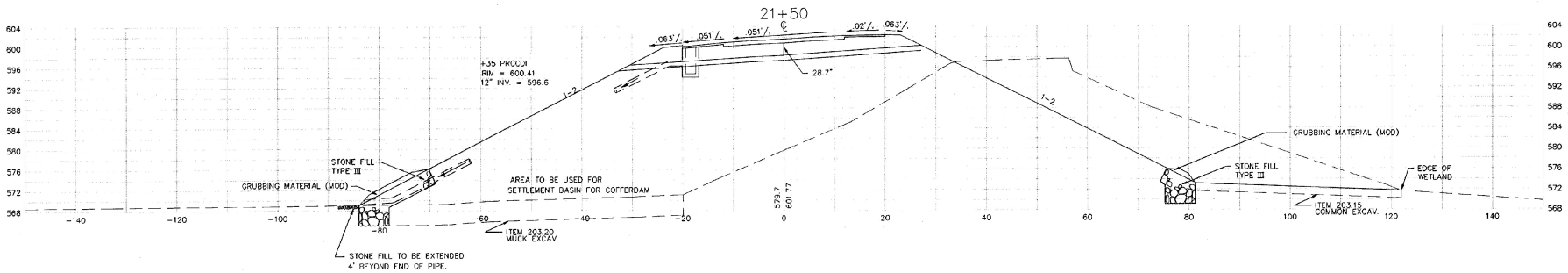
SURVEYED BY: VSC 07/91

PLOTTED BY: JAC 02/95

SHEET 102 OF 113 SHEETS





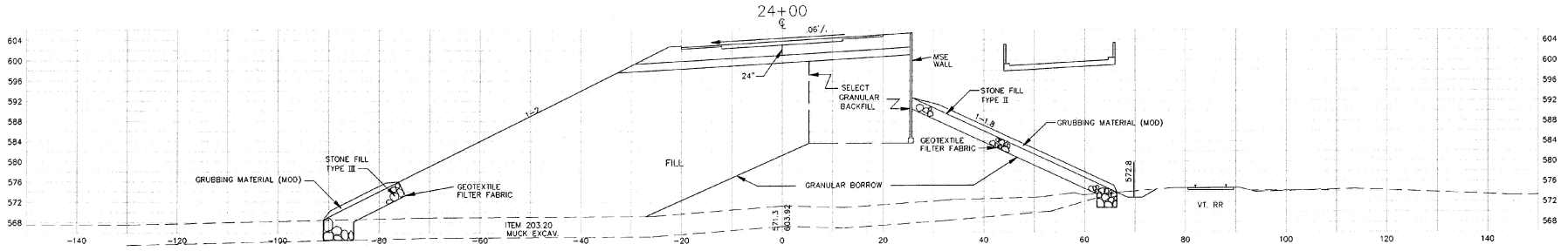


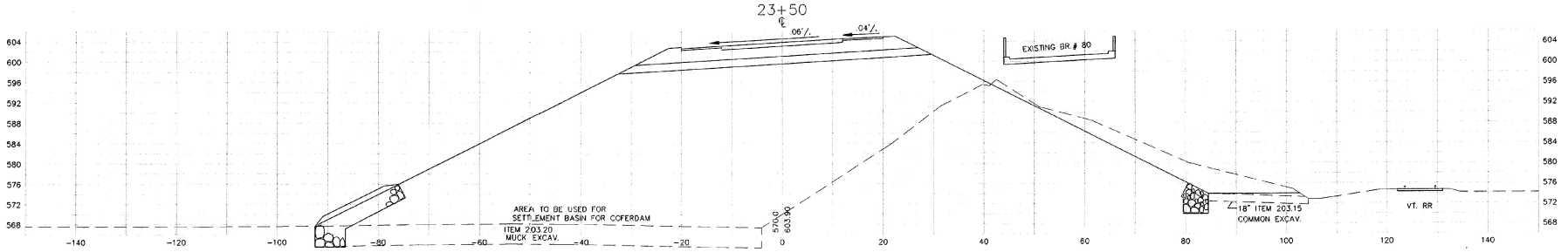
SCALE 10 FEET

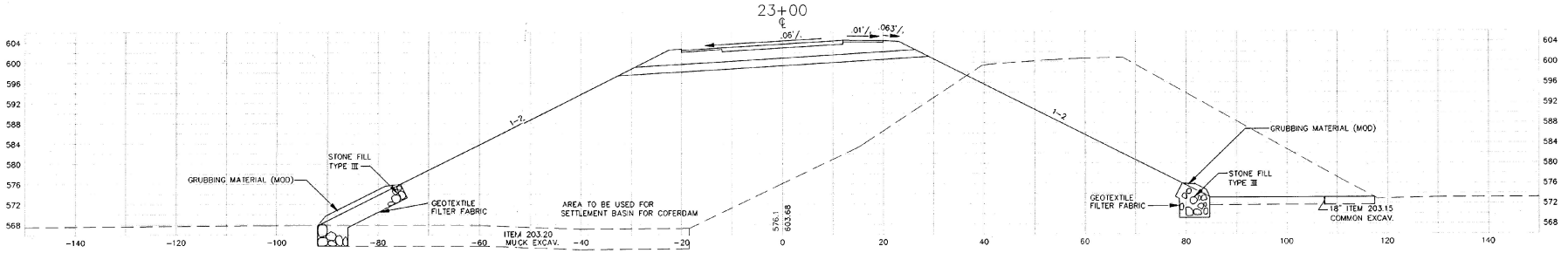
MAINLINE

FROM STATION	21+50	TO STATION	22+50
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		

SHEET 103 OF 113 SHEETS





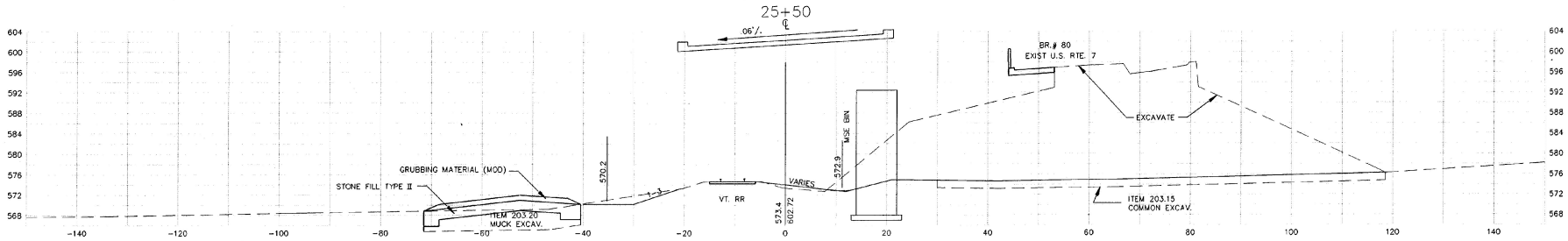


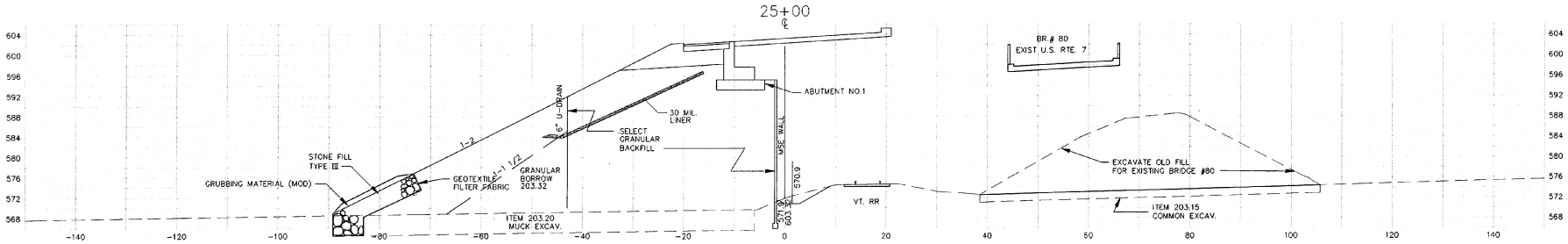
SCALE 10 FEET

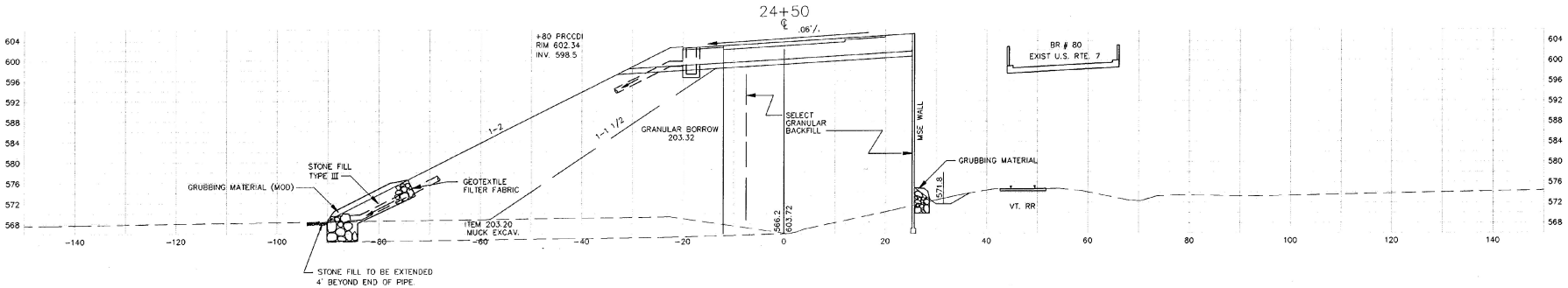
MAINLINE

FROM STATION	23+00	TO STATION	24+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 01/93		
SHEET 104 OF 114 SHEETS			

D:\CIVIL\BALL\90120-104.DWG (1=10)







SCALE 10 FEET

MAINLINE

FROM STATION	24+50	TO STATION	25+50
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		
SHEET 105 OF 113 SHEETS			

STATE OF VERMONT — DEPARTMENT OF HIGHWAYS — Asphalt Emulsion

E. MONTPELIER – PLAINFIELD F. A. P. NO. 97-E

Form Eng. 3A — Summary Sheet No. 192

STATE OF VERMONT — DEPARTMENT OF HIGHWAYS

F. A. P. NO.

Form Eng. 3A — Summary Sheet No. 192

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
	Cu. Yds.	Common Excavation	10
1,000	Cu. Yds.	Solid Rock Excavation	10
	Cu. Yds.	Borrow	11
27,000	Cu. Yds.	Common Excavation including Borrow	10–11
	Cu. Yds.	Sub-base of Field or Quarry Stone	12A
	Cu. Yds.	Sub-base of Crushed Rock or Slag	12B
			12[illegible]B
30,000	Cu. Yds.	Sub-base of Gravel	
	Cu. Yds.	Telford Base Course	12D
	Cu. Yds.	Sub-base of Sand	12E
15	Days	Patrol Maintenance	13
	Cu. Yds.	Structure Excavation	15
3049	Cu. Yds.	Broken Stone Base Course (3")	16
2542	" "	"Crushed" Stone Penetration Surface Course (2½")	22B
	Cu. Yds.	Gravel Surface Course	20A
	Cu. Yds.	Gravel Surface Course (Crushed)	20B
	Cu. Yds.	Gravel Shoulders	21
	Cu. Yds.	Bituminous Macadam Surface Course	22A
95228	Gals.	[illegible] Asphalt Emulsion Binder	22[illegible]E
	Gals.	Refined Tar	
	Cu. Yds.	One Course Cement Concrete Pavement Type A	23 A
	Cu. Yds.	One Course Cement Concrete Pavement Type B	23B
	Sq. Yds.	Bituminous Concrete Surface Course	
	Sq. Yds.	Single Bituminous Surface Treatment	25
	Sq. Yds.	Double Bituminous Surface Treatment	26
	Sq. Yds.	Natural Rock Asphalt Surface	27
	Cu. Yds.	Concrete Class AA (1-1½-3)	34AA
175	Cu. Yds.	Concrete Class A [illegible]	34A[illegible]
	Cu. Yds.	Concrete Class B (1-2½-5)	34B
9500	lbs.	Reinforcing Steel	34[illegible]
	lbs.	Structural Steel	36A
	Lump Sum	Steel Superstructure	36B
	Sq. Yds.	Waterproofing Membrane	37
350	Cu. Yds.	Cement Rubble Masonry	43
	Cu. Yds.	Dry Rubble Masonry	44
	Sq. Yds.	Repointing Masonry	45
	Lin. Ft.	6" Vitrified Clay Pipe	50B
	Lin. Ft.	8" Vitrified Clay Pipe	50C
	Lin. Ft.	10" Vitrified Clay Pipe	50D
	Lin. Ft.	12" Vitrified Clay Pipe	50E

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS		ITEM NUMBER
	Lin. Ft.	12"	Pipe	
	Lin. Ft.	15"	Pipe	
	Lin. Ft.	16"	Pipe	
	Lin. Ft.	18"	Pipe	
	Lin. Ft.	24"	Pipe	
	Lin. Ft.	30"	Pipe	
	Lin. Ft.	36"	Pipe	
912	Lin. Ft.	12" Reinf Conc	Pipe	49A
1040	Lin. Ft.	15"	Pipe	49B
	Lin. Ft.	16"	Pipe	
608	Lin. Ft.	18"	Pipe	49C
20	Lin. Ft.	24"	Pipe	49D
	Lin. Ft.	30"	Pipe	
	Lin. Ft.	36"	Pipe	
150	Lin. Ft.	Relaying Pipe Culverts		51
	Lump Sum	Temporary Bridge		55
	Lin. Ft.	Timber Piling		56
	M. B. M.	Timber Grillage		57
	Cu. Yds.	Stone Fill		60
	Cu. Yds.	Plain Rip Rap		61
75	Cu. Yds.	Rip Rap for Bank Protection (Est)		62
		Std		
1175	Lin. Ft.	[illegible] Underdrain With 6" P.C.G.M.P. Bit. Coated		65B
216	Lin. Ft.	Wood Guard Rail		66
1480	Lin. Ft.	Cable Guard Rail With Wood Posts		67A
20	Each	Guide Posts of Wood		68A
	Cu. Yds.	Plain Rubble Paving		70A
	Cu. Yds.	Grouted Rubble Paving		70B
1	Each	State or Federal Aid Markers		69
	Sq. Yds.	Plain Cement Concrete Gutter		73
	Sq. Yds.	Plain Cobble Gutter		74A
500	Sq. Yds.	Grouted Cobble Gutter		74B
	Each	Leaching Basins		75
11	Each	Catch Basins of Brick		76A
	Each	Changing Elevations of Manholes and Catch Basins		77
13	Each	Drop Inlet Grates		78

Contract Total

DETAILED SUMMARY OF QUANTITIES

Solid Rock Excavation

500	cy	Roadway (Est)
167	"	Culverts x Factor
333	"	Overrun
1000	"	Total

Common Excav Incl Borrow

13821	cy	Roadway as per plans
3321	"	Borrow
2635	"	Culverts x Factor
1360	"	Underdrain x Factor
261	"	Retaining Walls
5602	"	Overrun
27000	"	Total

Sub-base of Gravel

25881	cy	Roadway as per plans
1000	"	Driveways + Culverts
261	"	Ret Wall Backfill
2858	"	Overrun
30,000	"	Total

Concrete Class A

42.1	cy	Pipe Culverts
8.1	"	Box Culverts (Repairs)
99.3	"	Wall at Plainfield
27.3	"	Curb + Gutter + Overrun
175.0		Total

Reinforcing Steel

3620	lbs.	Pipe Culverts
600	"	Boxes
1300	"	Wall at Plainfield
1980	"	Curb, Gutter + Overrun
7500		Total

Cement Rubble Masonry

14.0	cy	Culvert Headwalls
293.5	"	Retaining Wall
42.5	"	Overrun
350.0		Total

Grouted Cobble Gutter

22.9	sq yds	As per plans
2.71		Overrun
500		Total

Type of Road CRUSHED STONE PENETRATION SURFACE COURSE WITH ASPHALT EMULSION BINDER

STATIONS FROM	STATIONS TO	EQUATIONS +	EQUATIONS −

Government Participation

Common Excavation Incl Borrow

13709 cy	Roadway as per Section
2495 "	Borrow
2635 "	Culvert x Factor
1360 "	Underdrain x Factor
261 "	Retaining Walls
5040 "	Overrun
25500 "	Total

Sub-base of Gravel

25384 cy	Roadway as per plans
1000 "	Driveway + Culverts
261 "	Ret Wall Backfill
2755 "	Overrun
29400 cy	Total

Broken Stone Base Course

2898 cy	

Broken Stone Surface Course

2416 cy	

Asphalt Emulsion

90522 gal.	

Non-Govt. Participation

Common Excavation Incl Borrow

112 cy	Roadway as per sections
826 "	Borrow
562 "	Overrun
1500 cy	

Sub-base of Gravel

497 cy	Roadway as per plans
103 "	Overrun
600 cy	

Broken-Stone Base Course

151 cy	

Broken Stone Surface Course

126 cy	

Asphalt Emulsion

4706 gals	

STATE OF VERMONT DEPARTMENT OF HIGHWAYS Std. Macadam

EMONT PELIER-PLAINFIELD A. P. NO.

Form Eng. 3A Summary Sheet No. 192

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
	Cu. Yds.	Common Excavation	10
1000	Cu. Yds.	Solid Rock Excavation	10
	Cu. Yds.	Borrow	11
27000	Cu. Yds.	Common Excavation including Borrow	10–11
	Cu. Yds.	Sub-base of Field or Quarry Stone	12A
	Cu. Yds.	Sub-base of Crushed Rock or Slag	12B
30,000	Cu. Yds.	Sub-base of Gravel	12[redacted]B
	Cu. Yds.	Telford Base Course	12D
	Cu. Yds.	Sub-base of Sand	12E
15	Day-s	Patrol Maintenance	13
	Cu. Yds.	Structure Excavation	15
3049	Cu. Yds.	Broken Stone Base Course (3)	16
	Cu. Yds.	Gravel Surface Course	20A
	Cu. Yds.	Gravel Surface Course (Crushed)	20B
	Cu. Yds.	Gravel Shoulders	21
2542	Cu. Yds.	Bituminous Macadam Surface Course 2½"	22A
100722	Gals.	Oil Asphalt	22[redacted]C
	Gals.	Refined Tar	22C
	Cu. Yds.	One Course Cement Concrete Pavement Type A	23 A
	Cu. Yds.	One Course Cement Concrete Pavement Type B	23B
	Sq. Yds.	Bituminous Concrete Surface Course	
	Sq. Yds.	Single Bituminous Surface Treatment	25
	Sq. Yds.	Double Bituminous Surface Treatment	26
	Sq. Yds.	Natural Rock Asphalt Surface	27
	Cu. Yds.	Concrete Class AA (1-1½-3)	34AA
175	Cu. Yds.	Concrete Class A [redacted]	33A [redacted]
	Cu. Yds.	Concrete Class ~~B (1-2½-5)~~	34B
7500	lbs.	Reinforcing Steel	34 [redacted]
	lbs.	Structural Steel	36A
	Lump Sum	Steel Superstructure	36B
	Sq. Yds.	Waterproofing Membrane	37
350	Cu. Yds.	Cement Rubble Masonry	43
	Cu. Yds.	Dry Rubble Masonry	44
	Sq. Yds.	Repointing Masonry	45
	Lin. Ft.	6" Vitrified Clay Pipe	50B
	Lin. Ft.	8" Vitrified Clay Pipe	50C
	Lin. Ft.	10" Vitrified Clay Pipe	50D
	Lin. Ft.	12" Vitrified Clay Pipe	50E

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS		ITEM NUMBER
	Lin. Ft.	12"	Pipe	
	Lin. Ft.	15"	Pipe	
	Lin. Ft.	16"	Pipe	
	Lin. Ft.	18"	Pipe	
	Lin. Ft.	24"	Pipe	
	Lin. Ft.	30"	Pipe	
	Lin. Ft.	36"	Pipe	
912 - 1040	Lin. Ft.	12" Reinf. Conc	Pipe	49A
	Lin. Ft.	15"	Pipe	49B
	Lin. Ft.	16"	Pipe	
608	Lin. Ft.	18"	Pipe	49C
20	Lin. Ft.	24"	Pipe	49D
	Lin. Ft.	30"	Pipe	
	Lin. Ft.	36"	Pipe	
150	Lin. Ft.	Relaying Pipe Culverts		51
	Lump Sum			
	Sum	Temporary Bridge		55
	Lin. Ft.	Timber Piling		56
	M. B. M.	Timber Grillage		57
	Cu. Yds.	Stone Fill		60
	Cu. Yds.	Plain Rip Rap		61
75	Cu. Yds.	Rip Rap for Bank Protection (Est)		62
1195	Lin. Ft.	Std [redacted] Un'erdrain With 6" P.C.G.M.P. BIT. COATED		65B
216	Lin. Ft.	Wood Guard Rail		66
1480	Lin. Ft.	Cable Guard Rail WITH WOOD POSTS		67A
20	Each	Guide Posts of Wood		68 [redacted]A
	Cu. Yds.	Plain Rubble Paving		70A
	Cu. Yds.	Grouted Rubble Paving		70B
1	EACH	STATE OR FEDERAL AID MARKERS		69
	Sq. Yds.	Plain Cement Concrete Gutter		73
	Sq. Yds.	Plain Cobble Gutter		74A
500	Sq. Yds.	Grouted Cobble Gutter		74B
	Each	Leaching Basins		75
11	Each	Catch Basins OF BRICK		76A
	Each	Changing Elevations of Manholes and Catch Basins		77
13	Each	Drop Inlet Grates		78

Contract Total DETAILED SUMMARY OF QUANTITIES

		Solid Rock Excavation		
500	cy.	Roadway (Est)		
167	"	Culverts x Factors		
333	"	Overrun		
1000	"	Total		
		Common Excav. Incl. Borrow		
13821	cy	Roadway as per plans		
3321	"	Borrow		
2635	"	Culverts x Factor		
1360	"	Underdrain x Factor		
261	"	Retaining Walls		
5602	"	Overrun		
27000	"	Total		
		Sub-base of Gravel		
25881	cy	Roadway as per plans		
1000	"	Driveways & Culverts		
261	"	Ret. Wall Backfill		
2858	"	Overrun		
30,000	"	Total		
42.1	cy	Concrete Class A Pipe Culverts		
8.1	"	Box Culverts (Repairs)		
97.5	"	Wall at Plainfield		
27.3	"	Curb & Gutter & Overrun		
175.0	"	Total		
		Reinforcing Steel		
3620	lbs	Pipe Culverts		
600	"	Boxes		
1300	"	Wall at Plainfield		
1980	"	Curb, Gutter, & Overrun		
7500		Total		
		Cement Rubble Masonry		
14.0	cy	Culvert Headwalls		
293.5	"	Retaining Walls		
42.5	"	Overrun		
350.0	"	Total		
		Grouted Cobble Gutter		
229	sqyds	As per plans		
271	"	Overrun		
500	"	Total		

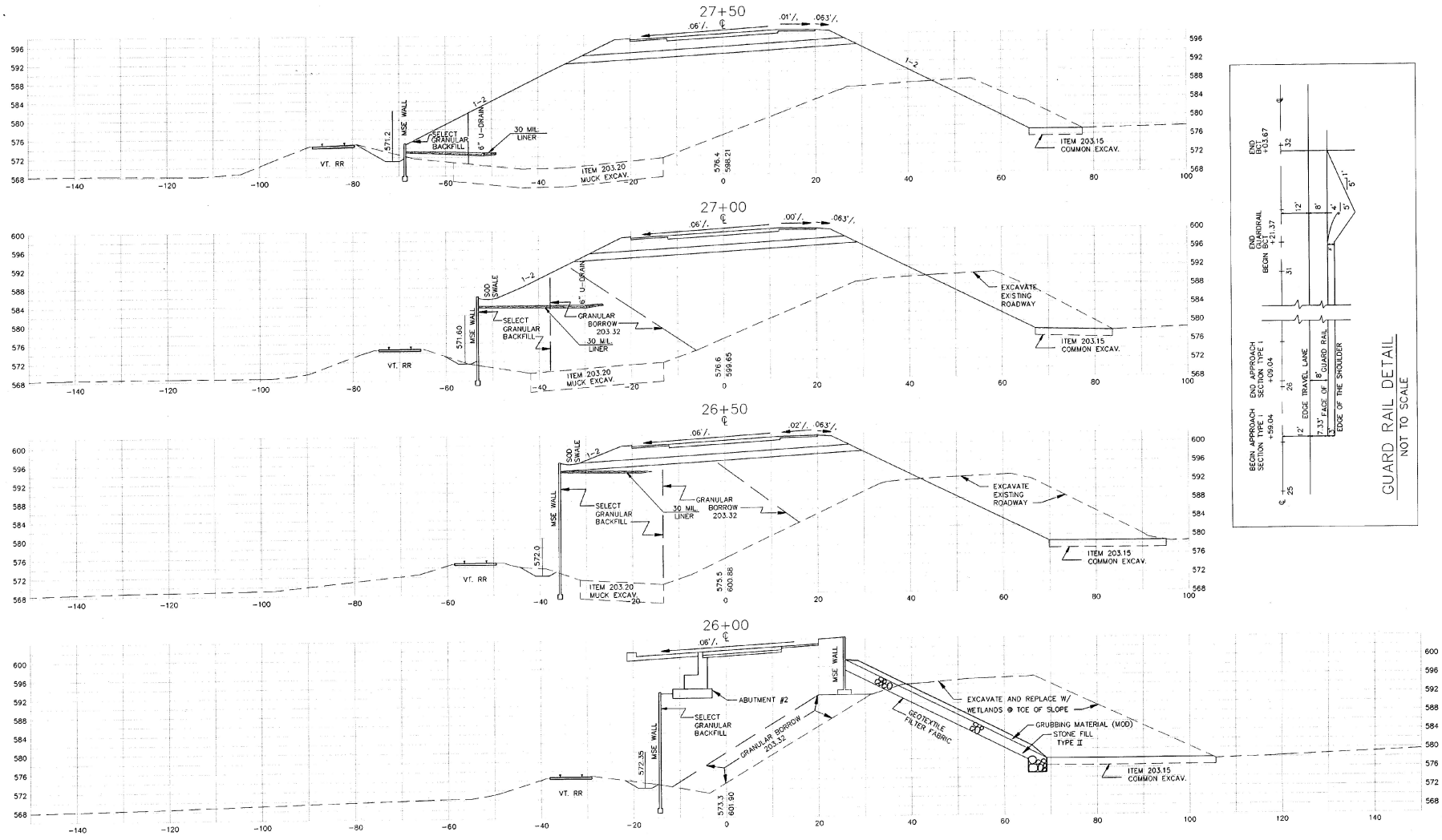
STATE OF VERMONT DEPARTMENT OF HIGHWAYS

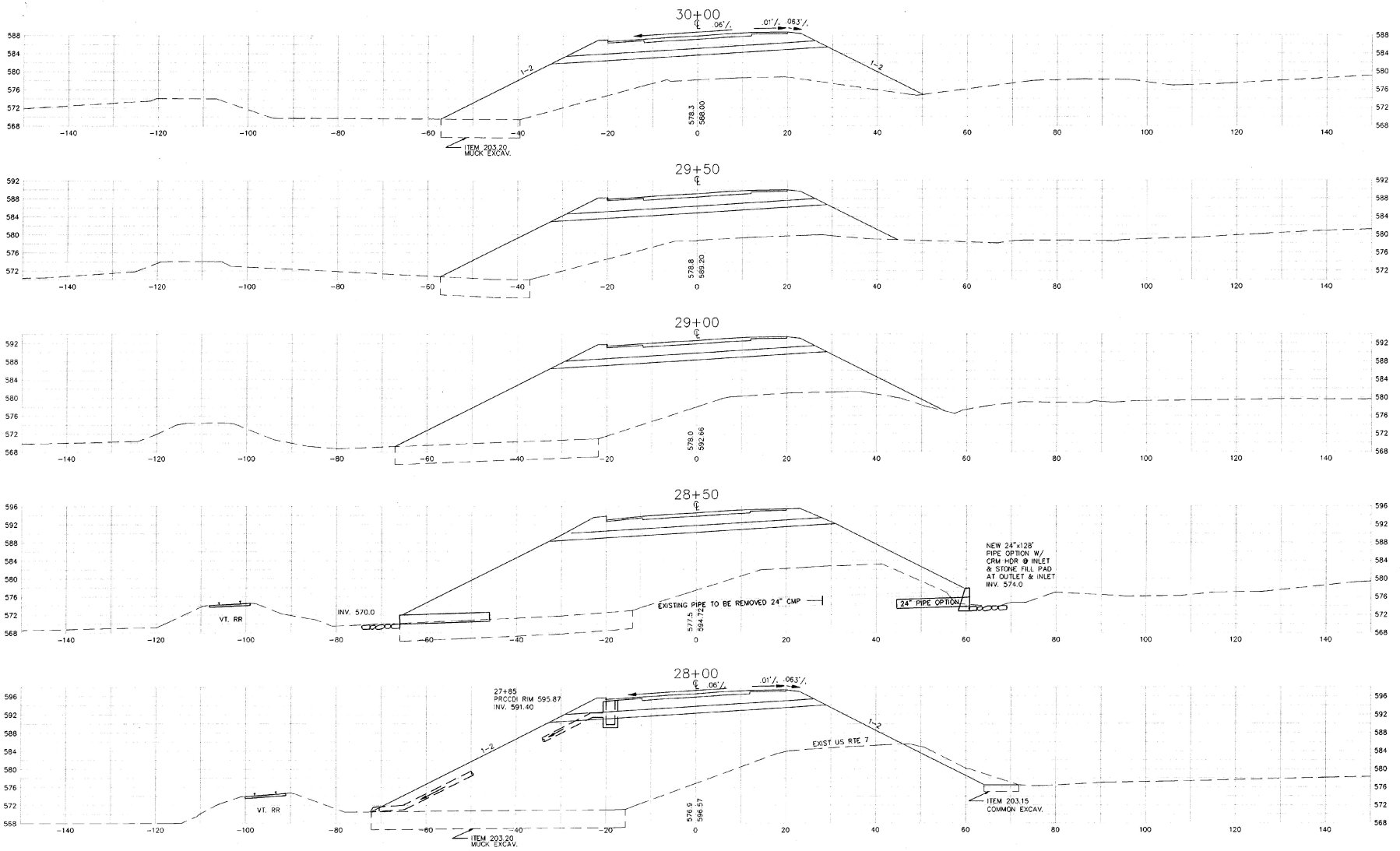
F. A. P. NO.

Form Eng. 3A Summary Sheet No. 192

Type of Road BITUMINOUS MACADAM SURFACE COURSE

STATIONS FROM	STATIONS TO	EQUATIONS +	EQUATIONS −
	Government Participation		
	Common Excavation Incl. Borrow		
	13709 cy Roadway as per Section		
	2495 " Borrow		
	2635 " Culverts x Factor		
	1360 " Underdrain x Factor		
	261 " Retaining Walls		
	5040 " Overrun		
	25500 " Total		
	Sub-base of Gravel		
	25384 cy Roadway as per plans		
	1000 " Driveway & Culverts		
	261 " Ret. Wall - Backfill		
	2755 " Overrun		
	29400 cy Total		
	Broken Stone Base Course		
	2898 cy		
	Broken Stone Surface Course		
	2416 cy		
	[redacted]A Oil Asphalt		
	95744 gals		
	Non-Govt. Participation		
	Common Excavation Inc. Borrow		
	112 cy Roadway as per Sections		
	826 " Borrow		
	562 " Overrun		
	1500 cy		
	Subbase of Gravel		
	497 cy Roadway as per plans		
	103 " Overrun		
	600 cy		
	Broken Stone Base Course		
	151 cy		
	Broken Stone Surface Course		
	126 cy		
	Oil Asphalt		
	4978 gals		

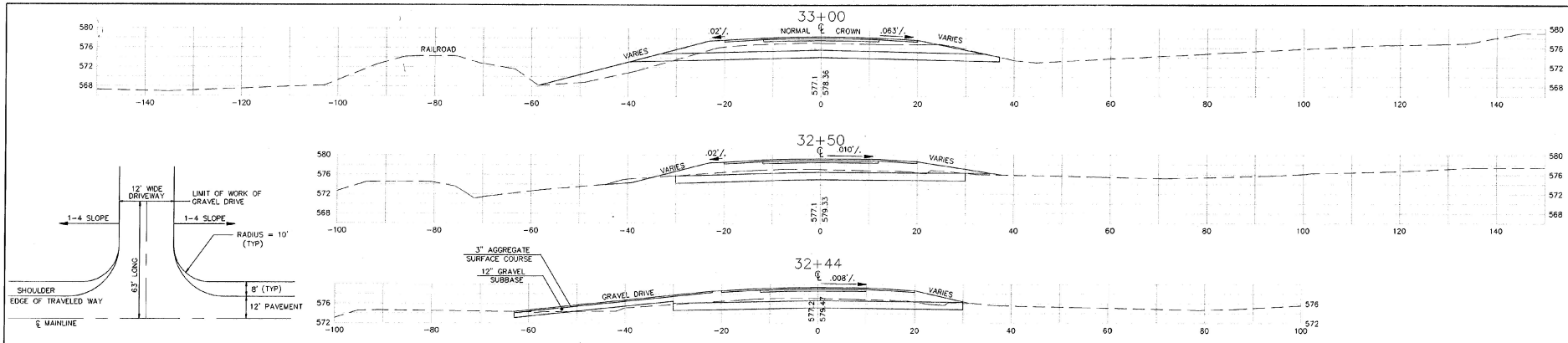

27+50
.06'/.
.01'/.
.063'/.
1:2
MSE WALL
571.2
SELECT GRANULAR BACKFILL
6" U-DRAIN
30 MIL LINER
VT. RR
ITEM 203.20 MUCK EXCAV.
576.4
598.21
ITEM 203.15 COMMON EXCAV.
27+00
.06'/.
.00'/.
.063'/.
SOD SWALE
6" U-DRAIN
571.60
SELECT GRANULAR BACKFILL
GRANULAR BORROW 203.32
30 MIL LINER
EXCAVATE EXISTING ROADWAY
576.6
599.65
26+50
.06'/.
.02'/.
.063'/.
572.0
575.5
600.86
26+00
.06'/.
ABUTMENT #2
572.35
573.3
601.90
EXCAVATE AND REPLACE W/ WETLANDS @ TOE OF SLOPE
GEOTEXTILE FILTER FABRIC
GRUBBING MATERIAL (MOD)
STONE FILL TYPE II
END BCT +03.67
END GUARDRAIL BEGIN BCT +21.37
BEGIN APPROACH SECTION TYPE I +59.04
END APPROACH SECTION TYPE I +09.04
EDGE TRAVEL LANE
GUARD RAIL
EDGE OF THE SHOULDER
GUARD RAIL DETAIL
NOT TO SCALE
SCALE 10 FEET
MAINLINE
FROM STATION 26+00 TO STATION 27+50
PROJ. NAME WALLINGFORD
PROJ. NO. BRS 0137(13)
SURVEYED BY: VSC 07/90
PLOTTED BY: JAC 02/95
SHEET 106 OF 113 SHEETS



SCALE 10 FEET

MAINLINE

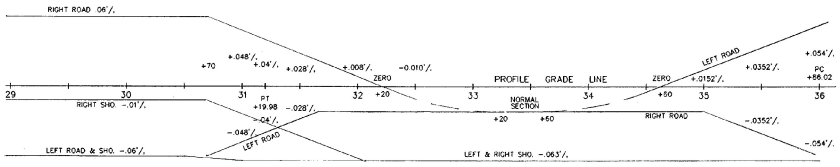
FROM STATION	28+00	TO STATION	30+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		
SHEET 107 OF 113 SHEETS			



DRIVEWAY AT STA 32+44, LT ON MAINLINE

NOT TO SCALE

CONT. FROM SHEET 101

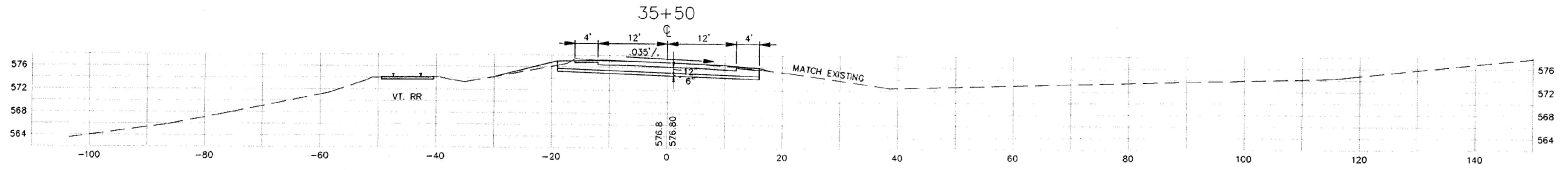


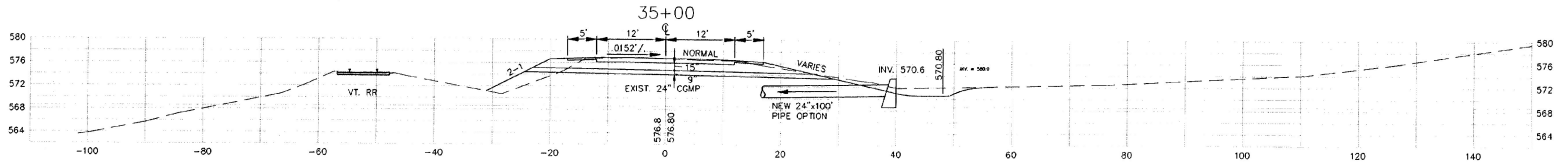
BANKING DIAGRAM

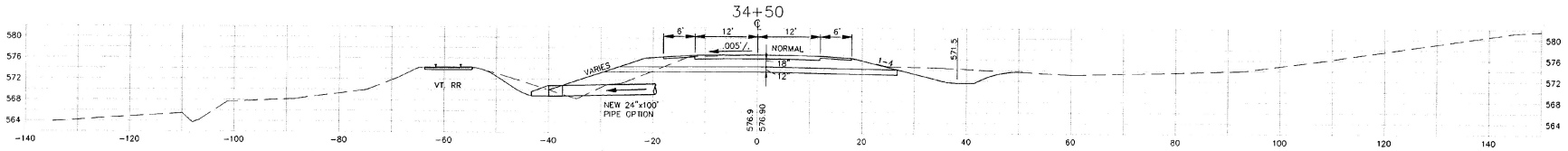
SCALE 10 FEET

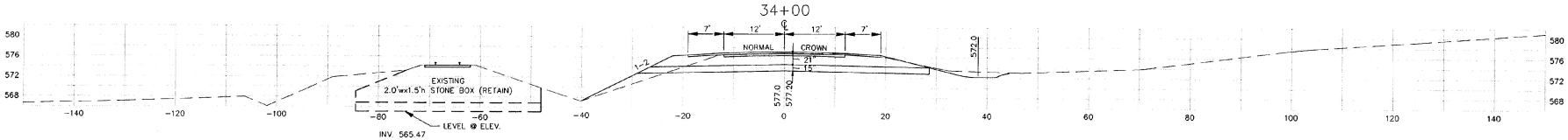
MAINLINE

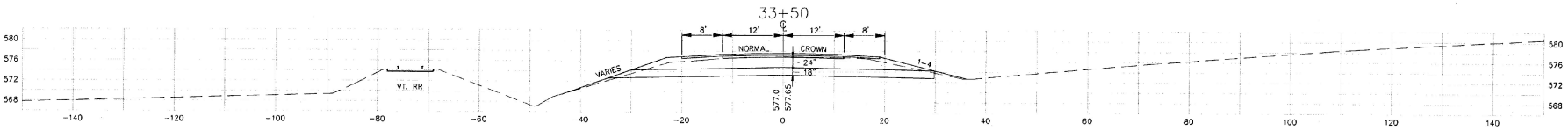
FROM STATION	30+50	TO STATION	33+00
PROJ. NAME	WALLINGFORD		
PROJ. NO.	BRS 0137(13)		
SURVEYED BY:	VSC 07/90		
PLOTTED BY:	JAC 02/95		
SHEET 108 OF 113 SHEETS			

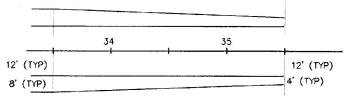




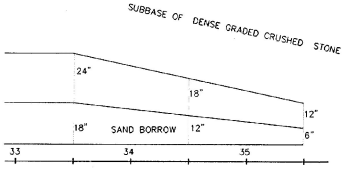








TRANSITION FOR SHOULDER NARROWING



TRANSITION FOR SUBBASE MATERIALS

SCALE 10 FEET

MAINLINE

FROM STATION	33+50
TO STATION	35+50
PROJ. NAME	WALLINGFORD
PROJ. NO.	BRS 0137(13)
SURVEYED BY:	VSC 07/90
PLOTTED BY:	JAC 03/95

SHEET 109 OF 113 SHEETS

GENERAL SHOP NOTES

SPECIFICATIONS:

— MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT, AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, ITS LATEST REVISIONS, SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1992, AND ITS LATEST REVISIONS.

MATERIAL:

— UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL TO BE AASHTO M270-50W.

— (T) INDICATES CHARPY V-NOTCH TESTING REQUIRED.

⚠ — SHOP BOLTS TO BE H.S. BOLTS ASTM A325, TYPE 3 W/1 ASTM A563 GR. DH3 HVY HEX NUT AND ONE F436 WEATHERING WASHER EACH BOLT. (UN).

— RCT INDICATES ROTATIONAL CAPACITY TESTED BOLTS. DO NOT MIX NUTS, BOLTS AND WASHERS FROM DIFFERENT CONTAINERS UNLESS ALL NUTS, BOLTS AND WASHERS HAVE THE SAME LOT NUMBER.

SHOP PROCEDURE:

— CAMBER TOLERANCE: -0, + 3/4"

— ALL RE-ENTRANT CUTS TO HAVE 1" MIN. RADIUS.

— ⊗ DENOTES THICKER SIDE OF SOLE PLATE.

— ⏚ DENOTES SET LINE.

— [RA] NOTE: "HOLES MARKED [RA] ARE TO BE SUB-PUNCHED/SUB-DRILLED $\frac{1}{4}$"⌀ UNDER SIZE AND REAMED TO FULL SIZE OR DRILLED FROM SOLID WITH CONNECTING PARTS ASSEMBLED AND MATCH MARKED".

— MINIMUM BENDING RADIUS FOR BENT PLATES

WHEN THICKNESS t	RADIUS INSIDE OF BENT PLATE
UP TO 1"	2 1/2 t
OVER 1" TO 1 1/2	3 t
OVER 1 1/2 TO 2 1/2	3 1/2 t
OVER 2 1/2 TO 4	4 t

INSPECTION:

— SHOP INSPECTION BY: E. L. CONWELL.

WELDING:

— ALL WELDING AND FABRICATION SHALL BE PERFORMED IN CONFORMANCE WITH ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE.

— FOR WELDING STIFFENERS AND CONNECTION PLATES TO GIRDERS SEE "TYP. WELDING DETAIL".

DRAWING REFERENCE:

WEB CAMBER DIAGRAMS	- PREFIXED "WC"
FLANGE SPLICES	- PREFIXED "FS"
GIRDER JOB STANDARDS	- PREFIXED "X"
SHOP ASSEMBLY DIAGRAM	- PREFIXED "SA"

NON-DESTRUCTIVE TESTING:

— ALL WEB AND FLANGE BUTT SPLICES SHALL BE RADIOGRAPHICALLY TESTED AS FOLLOWS:

BUTT SPLICES:	TESTING:
FLANGE SPLICES	100% @ TENSION SPLICE 25% @ COMPRESSION SPLICE
WEB SPLICES	1/6 WEB @ TENSION FLANGE + 25% OF REMAINDER

— DYE PENETRATION INSPECTION SHALL BE PERFORMED AT ENDS OF FLANGE AND WEB BUTT WELDS.

— MAGNETIC PARTICLE INSPECTION:
MAGNETIC PARTICLE INSPECTION IS REQUIRED ON ALL FILLET WELDS AND GROOVE WELDS NOT TESTED BY ANOTHER METHOD. INSPECTION IS REQUIRED ON 10% OF ALL WELDS GREATER THAN 10'-0 IN LENGTH AND 1'-0 OF ALL WELDS LESS THAN 10'-0 IN LENGTH IN MAIN MEMBERS.

CLEANING:

— BLAST CLEAN ALL STEEL TO SSPC-SP10 (NEAR WHITE) EXCEPT BLASTING NOT REQUIRED FOR GALVANIZED SURFACES.
BLAST CLEANING PROFILE TO BE FROM 1.5 TO 2.5 MILS DEEP.

PAINT:

— AREAS TO BE PAINTED (NOTED ON DETAIL DWGS.) SHALL BE PAINTED WITH A 3 - COAT SHOP APPLIED SYSTEM (UN) CONSISTING OF:

- PRIME COAT - CARBO ZINC 11 HS (INORGANIC ZINC) APPLIED AT 2.0 TO 6.0 MILS DFT.
- INTERMEDIATE COAT - CARBOLINE 893 (EPOXY) APPLIED AT 3.0 TO 7.0 MILS DFT.
- FINISH COAT - CARBOLINE 133HB (POLYURETHANE) APPLIED TO 3.0 TO 7.0 DFT. FINISH COAT COLOR TO BE DARK BROWN NO.20059 AS SHOWN IN FEDERAL STD.NO.595.

— PRIME COAT TO BE APPLIED WITHIN 8 HRS. OF BLAST CLEANING.

— STRIPE COAT ALL EDGES OF PLATES, ANGLES OR OTHER SHAPES, BOLTS AND NUTS PRIOR TO THE APPLICATION OF THE PRIME COAT.

⚠2

— FIELD BOLTED CONTACT SURFACES WITHIN THE AREAS TO BE PAINTED SHALL RECEIVE THE PRIME COAT ONLY WITHIN 3" OF OPEN HOLES.

— SURFACES WITHIN 2" OF FIELD WELDING (AS NOTED ON DETAILS) SHALL RECEIVE A LIGHT RUST PREVENTIVE COAT OF PRIMER , NOT TO EXCEED 1.5 MILS DFT.

— SURFACES IN CONTACT WITH CONCRETE WITHIN THE AREAS TO BE PAINTED SHALL RECEIVE A LIGHT RUST PREVENTIVE COAT OF PRIMER, NOT TO EXCEED 1.5 MILS DFT. THESE SURFACES ARE NOTED ON THE DETAIL DRAWINGS.

— TOP FLANGE OF GIRDER AS SHOWN IN SECTION-A SHALL RECEIVE A LIGHT RUST PREVENTIVE COAT OF PRIMER , NOT TO EXCEED 1.5 MILS DFT.

ALL AR
PLATES
GUSSE

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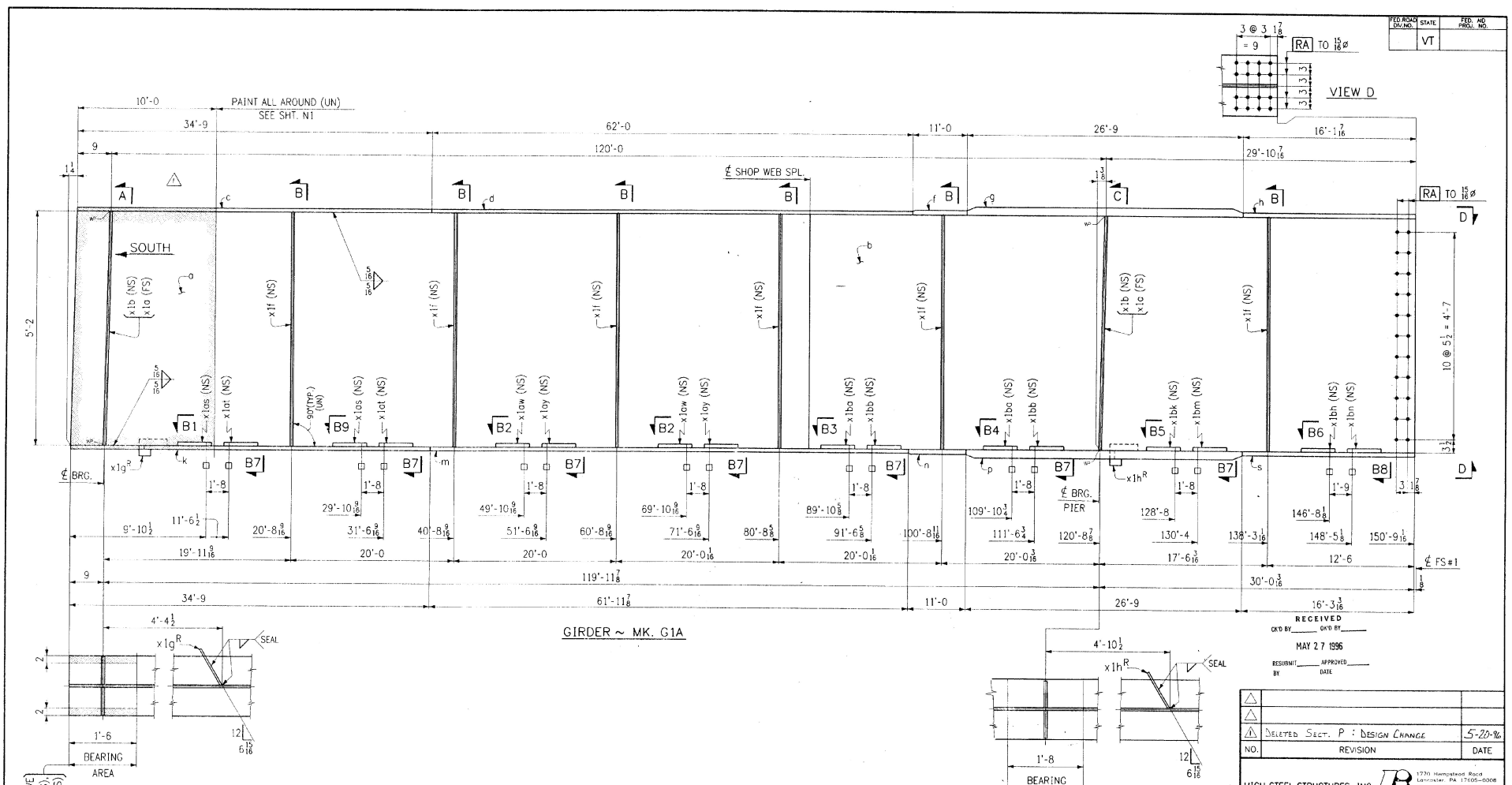
COAT OF



SECTION—A

SHOP DRAWING REVIEW
REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.
✓ 1 APPROVED
APPROVED AS NOTED
AMEND AND RESUBMIT
RS/SCTED - SEE REMARKS
Barnes and Jarvis, Inc.
60 Dayton Street
Boston, Massachusetts 02116
DATE 6-10-96 BY EMH



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

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MAY 27 1996
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

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APPROVED
APPROVED AS NOTED
AMEND AND RESUBMIT
REJECTED, SEE REMARKS
Barnes and Jarvis, Inc.
BY _____ DATE _____

NO.	REVISION	DATE
1	DELETED SECT. P : DESIGN CHANGE	5-20-96

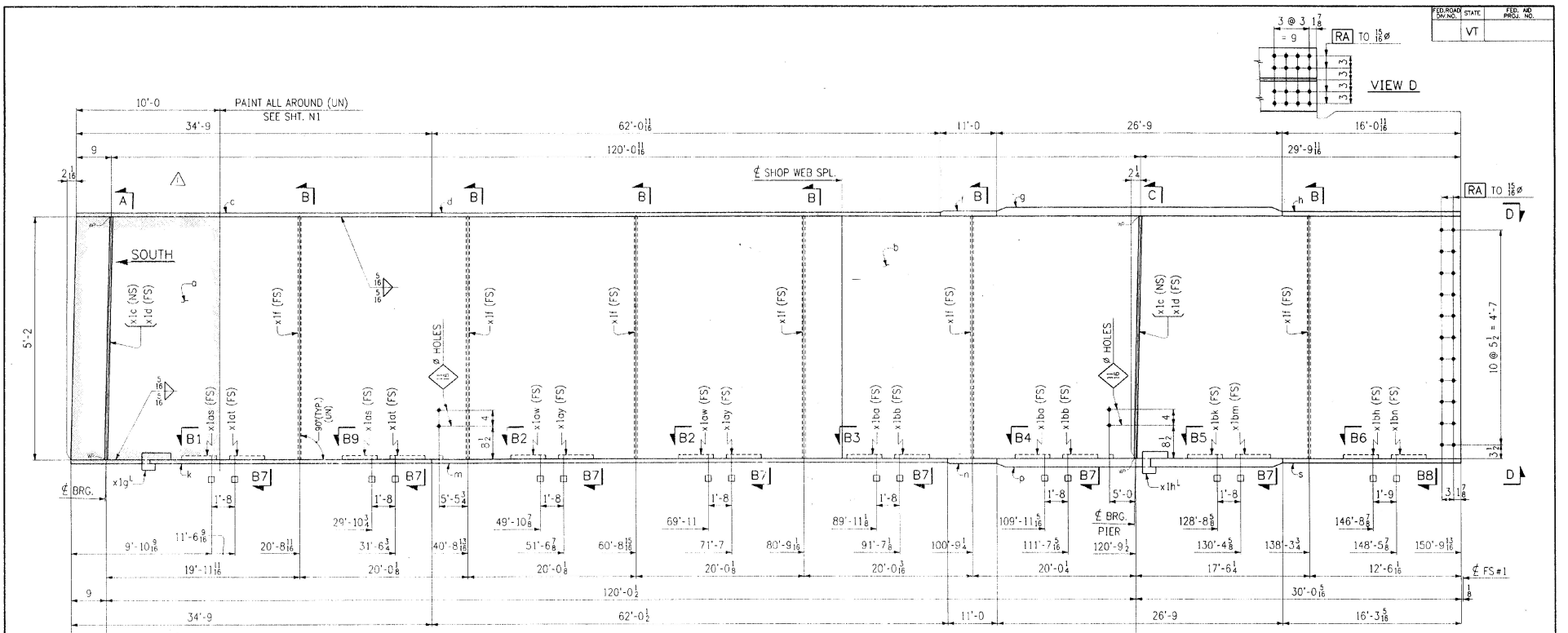
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G1A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 1-31 CK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 5 OF 24
CODE: 30

MAY 2 1 1996

400-9



GIRDER ~. MK. G6A

WORK THIS DWG. WITH DWG. 14

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RESUBMIT_____ APPROVED_____
BY_____ DATE_____

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AMEND AND RESUBMIT
REJECTED - SEE REMARKS
Barnes and Jarnis, Inc.
BY_____ DATE_____

NO.	REVISION	DATE
1	Deleted Sect. P : Design Change	5-20-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, Pa. 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G6A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13) MAY 2 1 1996
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE abs MADE BY PPF 2-1 CHK'D BY LD DATE 2-2-96
CONTRACT NUMBER VT-95367 DRAWING NUMBER 13 OF 24

FED. ROAD DIV. NO. | STATE VT | FED. AID PROJ. NO.

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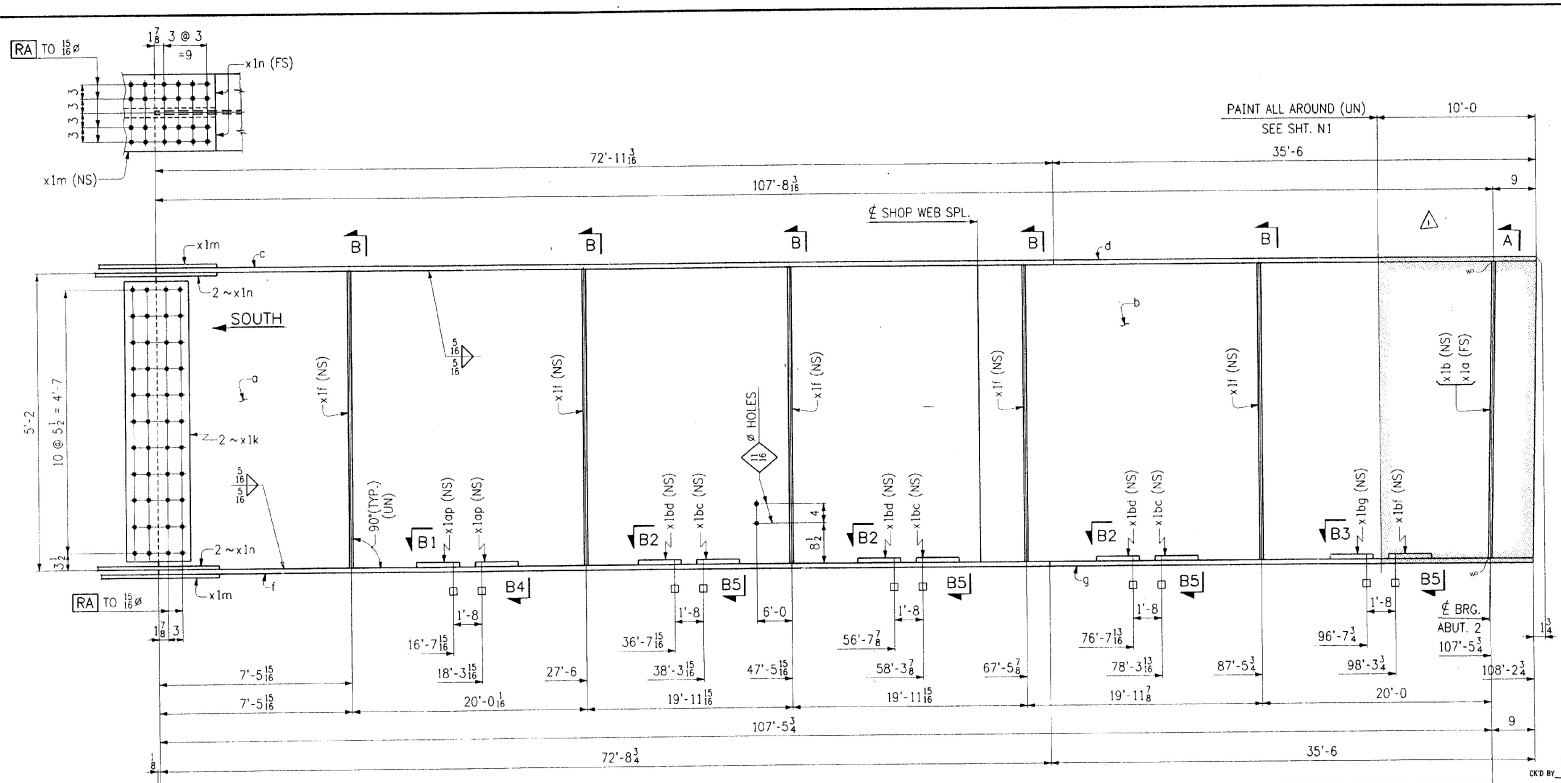
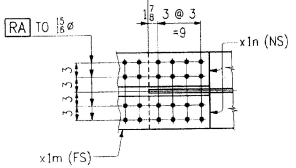
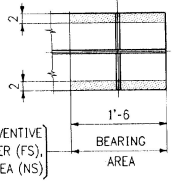
	VT	

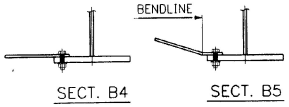


GIRDER ~ MK. G1B





PAINT LIGHT RUST PREVENTIVE COAT OF PRIMER (FS), EDGES ℄ SHADED AREA (NS)



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Barnes and Jarvis, Inc.
BY 6/10/96

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HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G1B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-2 CHK'D BY: LD DATE: 2-3-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 15 OF 24

MAY 2 1 1996

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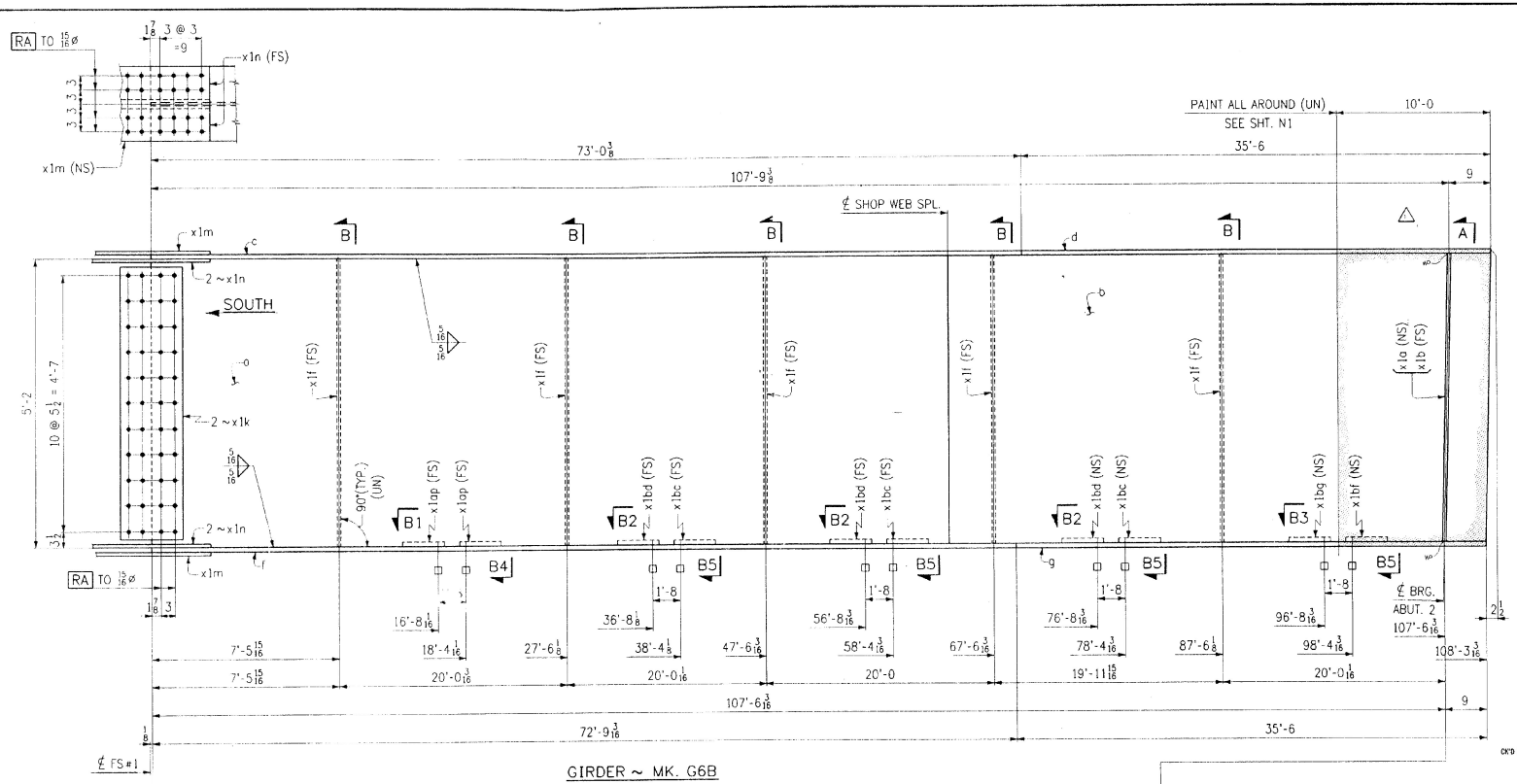
G1B-400



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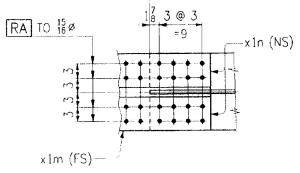
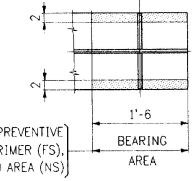
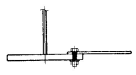




PAINT LIGHT RUST PREVENTIVE COAT OF PRIMER (FS), EDGES & SHADED AREA (NS)



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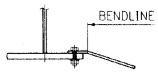

SECT. B5

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Barnes and Jarnis, Inc.
DATE 6/11/96 BY EHM

WORK THIS DWG. WITH DWG. 24

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HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone (717) 299-5211
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GIRDER G6B
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BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13) MAY 2 1 1996
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-3 CHK'D BY: LD DATE: 2-5-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 23 OF 24

400-9 G6B-400

PANEL GENERAL NOTES

1. REINFORCING BARS SHALL BE STEEL ASTM A615 GRADE 60.
2. TIE STRIPS SHALL BE STEEL ASTM A570 GRADE 50 (GALVANIZED PER ASTM A-123).
3. ALL FRONT EDGES OF PANELS, EXCEPT THE BOTTOM EDGE OF THE BOTTOM PANEL COURSE, SHALL HAVE A 3/8" CHAMFER.
4. TIE STRIPS SHALL BE PLACED WITHIN 1" OF THE DIMENSIONS SHOWN ON THE FABRICATION DRAWINGS.
5. PANEL DESIGN THICKNESS IS 5 1/2". THE QUANTITY OF CONCRETE WILL INCREASE TO ACCOMMODATE ANY ARCHITECTURAL SURFACE FINISH THAT MAY BE SPECIFIED.
6. EACH 3/4"Ø PIN SHALL BE A MINIMUM LENGTH OF 10". PINS MAY BE GALVANIZED STEEL OR PVC ROD. A SINGLE FULL LENGTH DOWEL MAY BE USED AT THE DISCRETION OF THE MANUFACTURER.
7. DIMENSIONS SPECIFIED ON INDIVIDUAL FABRICATION DRAWINGS SUPERSEDE THOSE CALLED OUT ON THE STANDARD SECTIONS AND DETAILS.
8. VERTICAL REINFORCING BARS SHALL BE PLACED 1 1/2" MIN., 2"(TYP.) FROM THE BACK FACE OF THE 5 1/2" PANEL.
9. ALL REINFORCING BARS SHALL BE STOPPED 2" CLEAR FROM ANY EDGE OF PANEL UNLESS NOTED ON INDIVIDUAL FABRICATION DRAWING OR AS INDICATED IN NOTE #10.
10. IN ALL SLOPED PANELS (xxK, xxC, xxL, xxJ, xxM, xxN, xxII, xxJJ) THE TWO (2) VERTICAL REINFORCING BARS ADJACENT TO A COMMON TIE STRIP SHALL BE OF THE SAME LENGTH.
11. NOTE DELETED
12. ALL INDIVIDUAL FABRICATION DRAWINGS ARE SHOWN BACK FACE.
13. REINFORCING BARS IN A STANDARD "A" PANEL SHALL BE AS FOLLOWS:

PANEL REINFORCEMENT

PIECE MARK	HORIZONTAL BARS	VERTICAL BARS
XX-XX-R6	4-#4	6-#3
XX-XX-R7	4-#4	6-#4

HORIZONTAL REINFORCEMENT IN THE OTHER PANEL TYPES IS PROPORTIONATE TO THEIR RELATIVE HEIGHT.

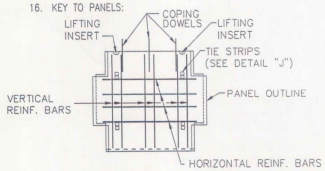
14. KEY TO PIECE MARK:

AL-4-R6-4.45'

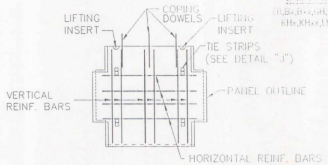
- PANEL TYPE
- MODIFICATION (ONE OR MORE)
- NUMBER OF TIE STRIPS
- PANEL REINFORCEMENT TYPE
- MODIFICATION DIMENSION (PANEL WIDTH)

15. LIFTING INSERTS SHALL BE BURKE 1 TON #79-050 RAPID LIFT ANCHOR OR EQUAL.

16. KEY TO PANELS:



BACK FACE R6



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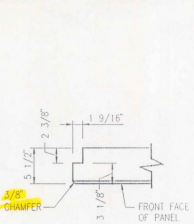

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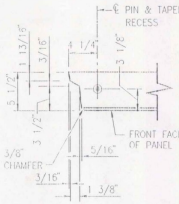

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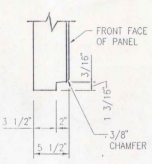

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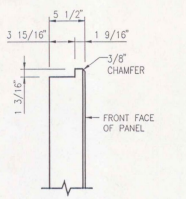

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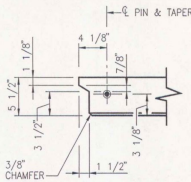

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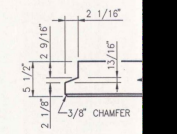
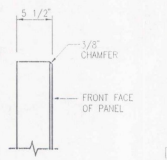
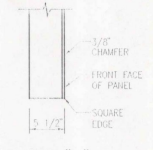


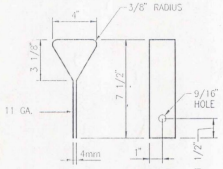
DETAIL "F"



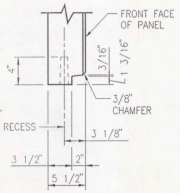
DETAIL "G"



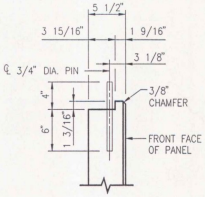
DETAIL "H"



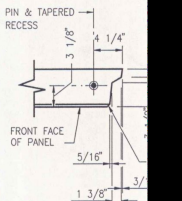
DETAIL "J"
(GENERAL NOTE No. 2)



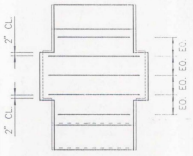
DETAIL "K"
(BOTTOM)



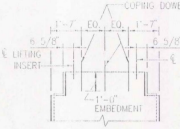
DETAIL "L"
(TOP)



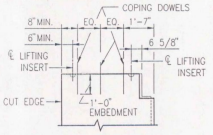
DETAIL "M"



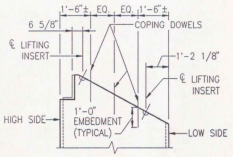
DETAIL "S"
(A,G,Gx,Gxx,H,Hx,Hxx,K,Kx, Kxx,L,Lx,Lxx,P,Px,Pxx,PH PHx,PHxx)



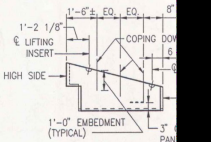
DETAIL "N"
(GENERAL NOTE No. 11)



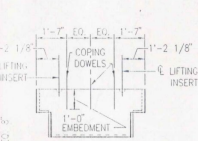
DETAIL "P"
(GENERAL NOTE No. 11)



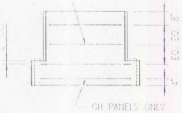
DETAIL "Q"
(GENERAL NOTE No. 11)



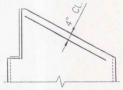
DETAIL "R"
(GENERAL NOTE No. 11)

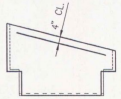


DETAIL "O"
(GENERAL NOTE No. 11)

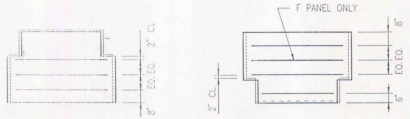


DETAIL "I"
(I,Ix,Ixx,J,Jx,L,Lx,Lxx,GHx,GHxx,KH, KHx,KHxx,LH,LHx,LHxx)



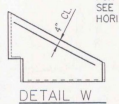


DETAIL "X"
(Dx,Dxx,Ex,Exx,Fx,Fxx)
FOR DIAGONAL BARS ONLY SEE DETAIL V FOR HORIZ. BAR LOCATIONS



DETAIL "U"
(0)

DETAIL "V"
(C,D,E,F)



DETAIL "W"
(xM,xxM,xN,xxN)
FOR DIAGONAL BARS ONLY SEE DETAILS S-S FOR HORIZ. BAR LOCATIONS

NOTES : 1. DETAILS N – X SHOWN BACKFACE
2. DETAILS S-V SHOW ALL POSSIBLE HORIZONTAL REBARS. SEE INDIVIDUAL PANEL DRAWING FOR REBAR REQUIREMENTS.

CERTIFIED RESPECT INTERNAL OF REINF STRUCTUR

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DESIGNED BY:	vng
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

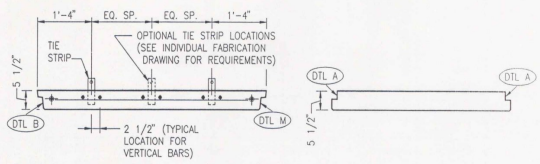
REV.	DATE	DESCRIPTION

PROJECT NAME	WALLINGFORD
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT
OWNER	VERMONT AGENCY OF TRANSPORTATION
DRAWING COVERS	GENERAL NOTES AND STANDARD SHOP DRAWING DETAILS

BR# 80

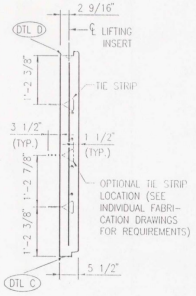
#BRS0137(13

REC'D 2 6

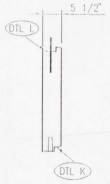


SECTION A–A

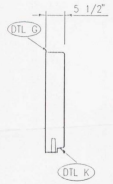
SECTION B–B



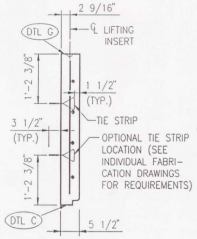
SECTION C–C



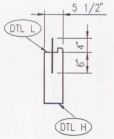
SECTION D–D



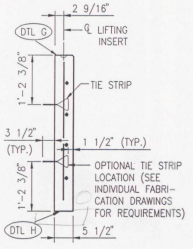
SECTION E–E



SECTION F–F



SECTION G–G



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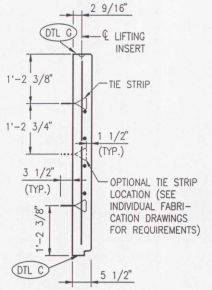
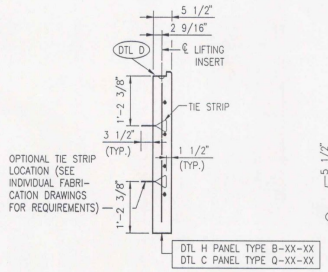
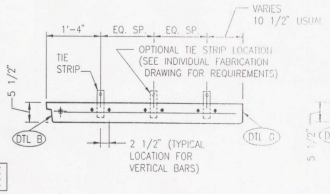


SECTION J–J



SECTION K–K

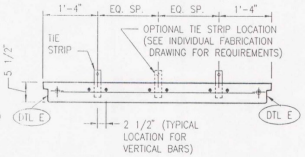
FOR LOCATION OF HORIZONTAL AND DIAGONAL REBARS SEE DETAIL S – X ON SHEET 1 OF 11.



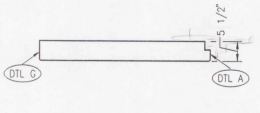
SECTION L–L



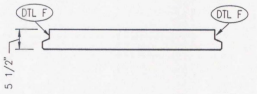
SECTION M–M



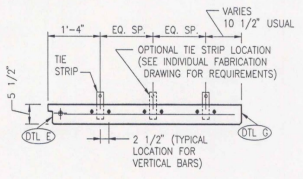
SECTION N–N



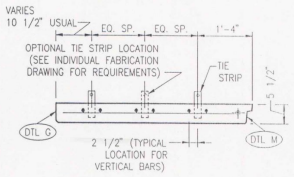
SECTION P–P



SECTION Q–Q



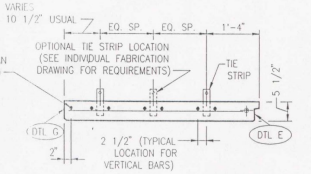
SECTION V–V



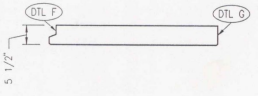
SECTION R–R



SECTION S–S



SECTION T–T



SECTION U–U

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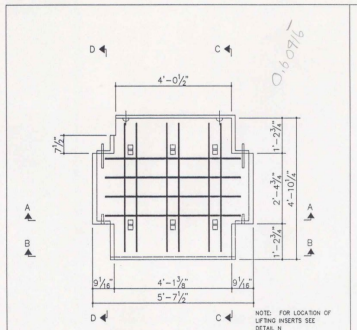
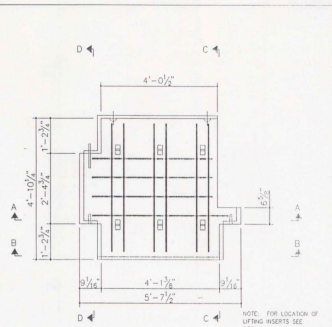
DESIGNED BY:	vng
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

REV.	DATE	DESCRIPTION

PROJECT NAME	WALLINGFORD	DATE 1/16/96
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT	CONTRACT NO. 5692
OWNER	VERMONT AGENCY OF TRANSPORTATION	DRAWING NO. 2 OF 11
DRAWING COVERS	STANDARD SHOP DRAWING SECTIONS	SCALE 3/4"=1'-0"



A1Q-6-R6



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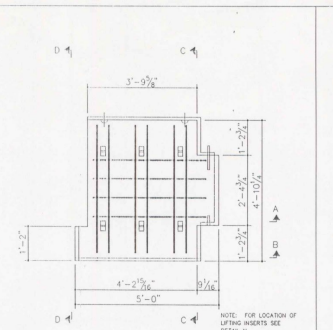
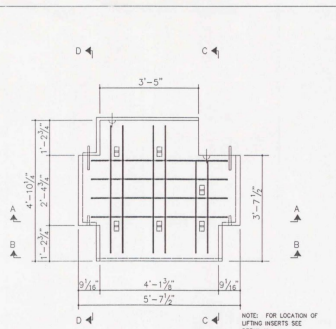
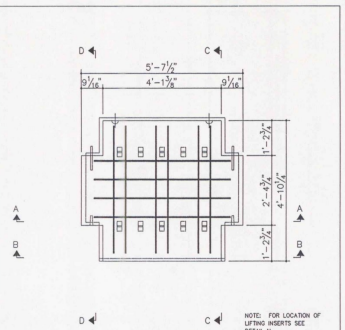


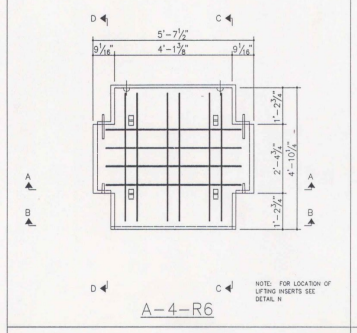
A3Q-6-R6



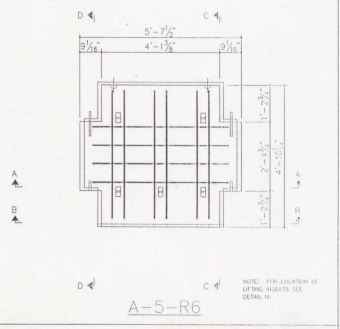
A4Q-6-R6



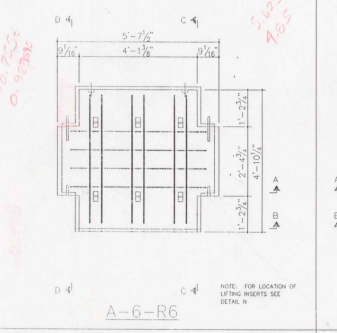
A-10-R6



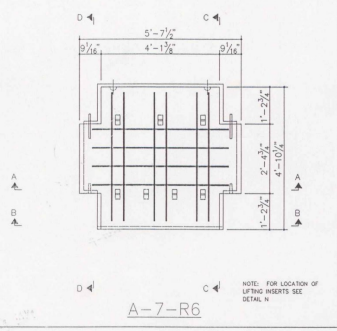
A-4-R6



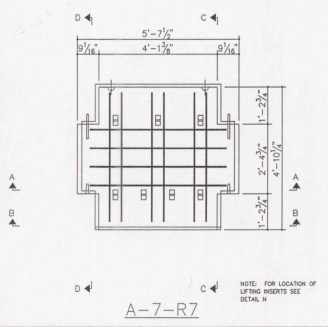
A-5-R6



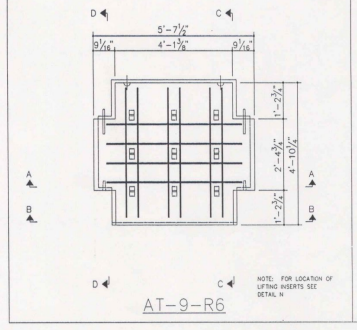
A-6-R6



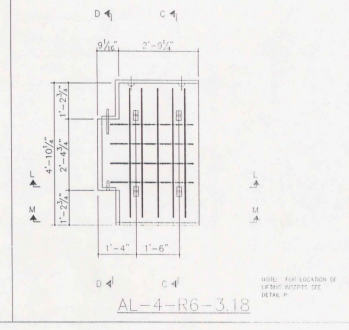
A-7-R6



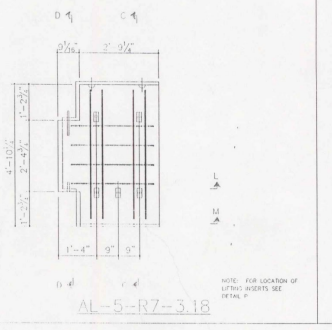
A-7-R7



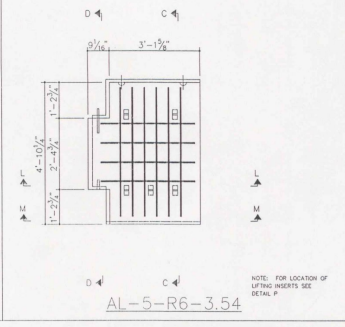
AT-9-R6



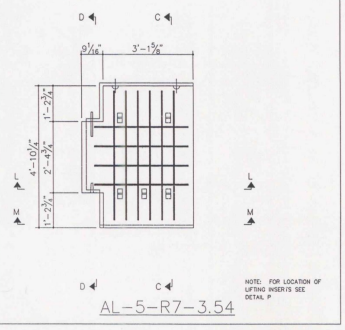
AL-4-R6-3.18



AL-5-R7-3.18



AL-5-R6-3.54



AL-5-R7-3.54

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The Reinforced Earth Company
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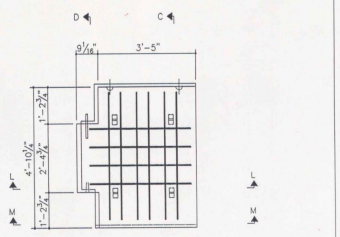
"REINFORCED EARTH" IS THE REGISTERED TRADEMARK OF THE REINFORCED EARTH COMPANY.

DESIGNED BY:	vtg
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

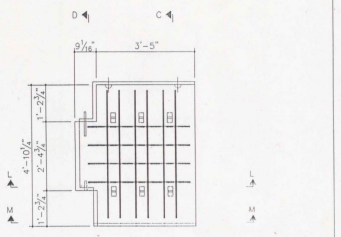
REV.	DATE	DESCRIPTION

PROJECT NAME	WALLINGFORD	DATE 1/16/96
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT	CONTRACT NO. 5692
OWNER	VERMONT AGENCY OF TRANSPORTATION	DRAWING NO. 3 OF 11
DRAWING COVERS	PANEL SHOP DRAWINGS	SCALE 1/2"=1'-0"



AL-4-R6-3.82

NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL P



AL-6-R6-3.82

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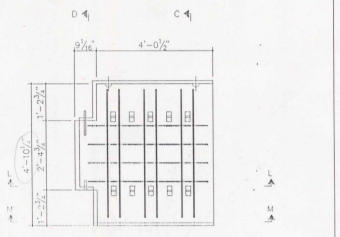
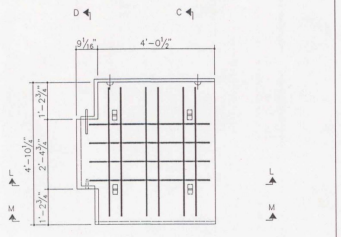


AL-10-R6-4.45

NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL P



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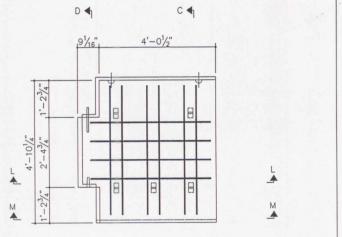

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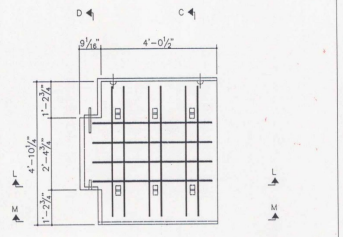

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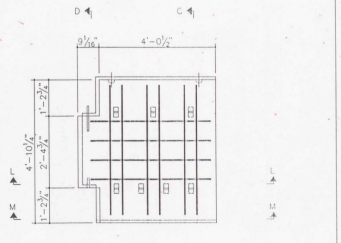

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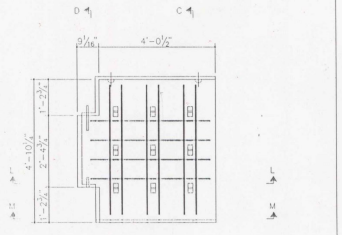
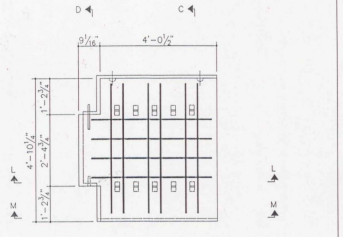


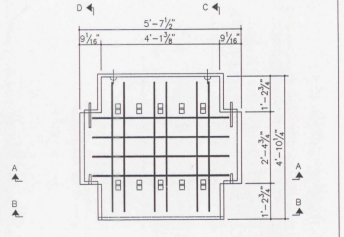
ALT-9-R6-4.45

NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL P



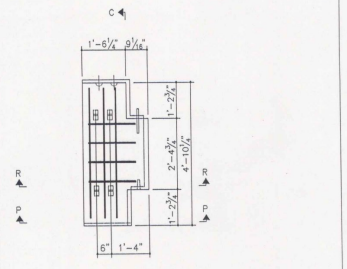
AL-10-R7-4.45

NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL P



A-10-R7

NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL N



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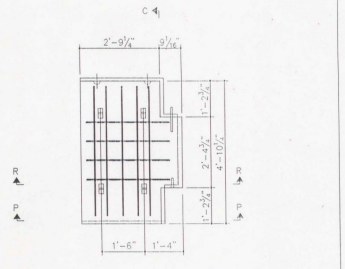
NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL P



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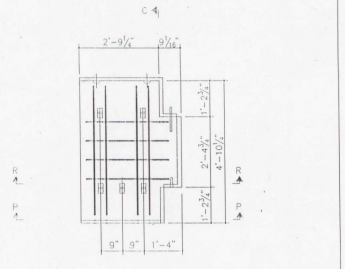
NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL P



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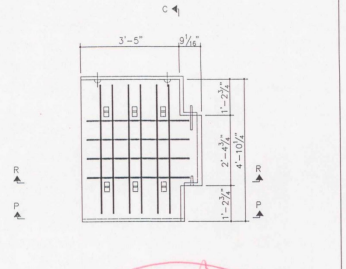
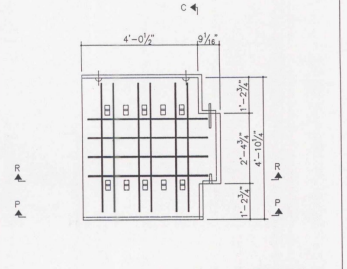


AR-6-R6-3.82

NOTE: FOR LOCATION OF LIFTING INSERTS SEE DETAIL P



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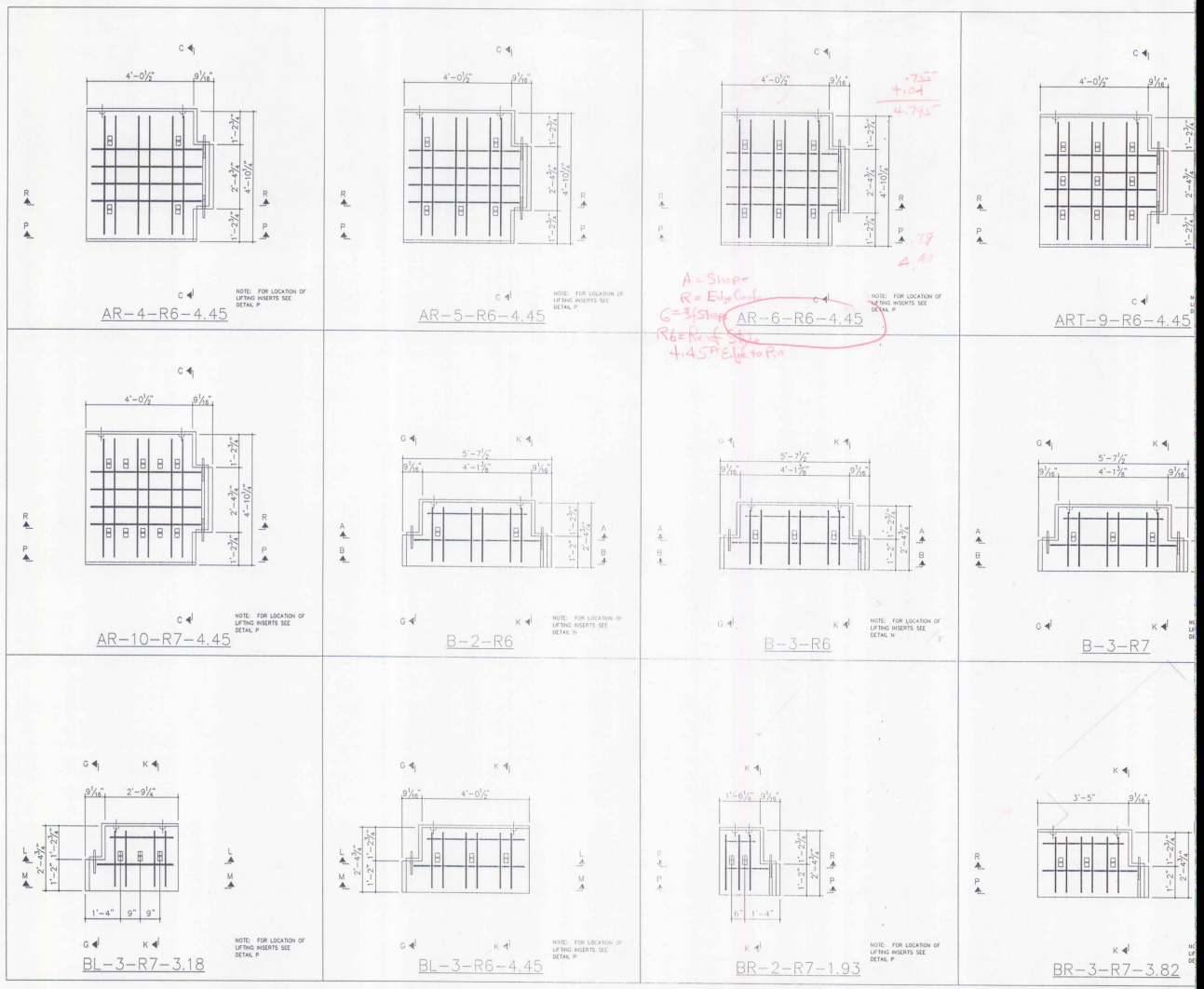
"REINFORCED EARTH" IS THE REGISTERED TRADEMARK OF THE REINFORCED EARTH COMPANY.

DESIGNED BY:	vng
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

REV.	DATE	DESCRIPTION

PROJECT NAME	WALLINGFORD	DATE 1/16/96
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT	CONTRACT NO. 5692
OWNER	VERMONT AGENCY OF TRANSPORTATION	DRAWING NO. 4 OF 11
DRAWING COVERS	PANEL SHOP DRAWINGS	SCALE 1/2"=1'-0"



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The Reinforced Earth Company

reinforced earth

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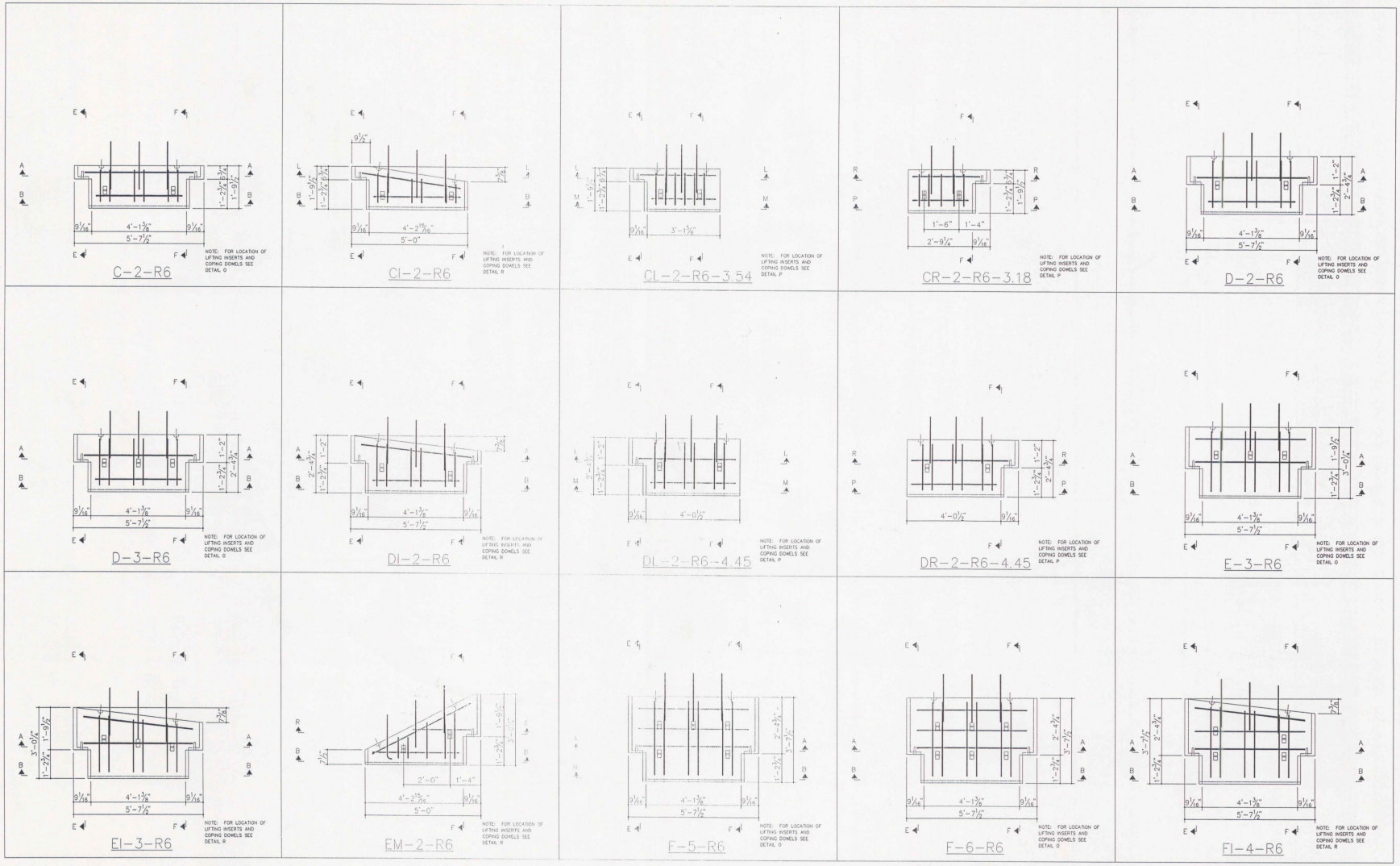
DESIGNED BY:	vng
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

REV.	DATE



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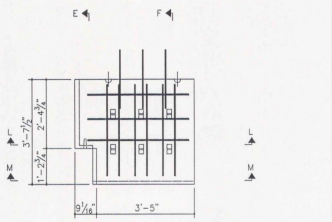
DESIGNED BY:	vng
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

REV.	DATE	DESCRIPTION

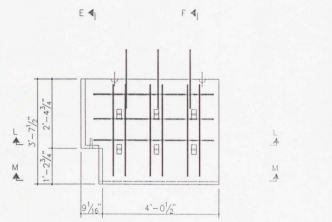
PROJECT NAME	WALLINGFORD
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT
OWNER	VERMONT AGENCY OF TRANSPORTATION
DRAWING COVERS	PANEL SHOP DRAWINGS

DATE	1/16/96
CONTRACT NO.	5692
DRAWING NO.	6 OF 11
SCALE	1/2"=1'-0"



NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL P

FL-6-R6-3.82



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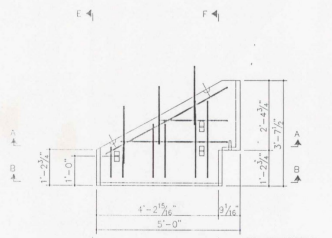
FL-6-R6-4.45

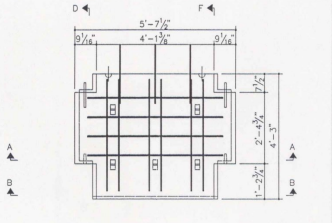


NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL R

FM-3-R6

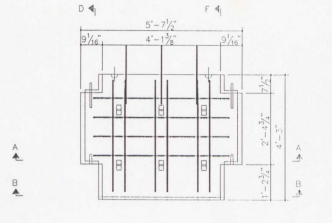


FR-6



NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL N

G-5-R6



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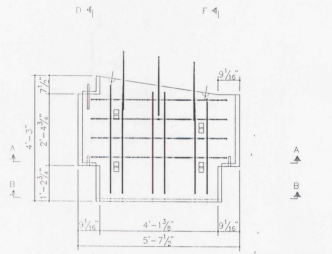
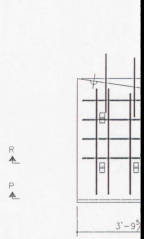
G-6-R6

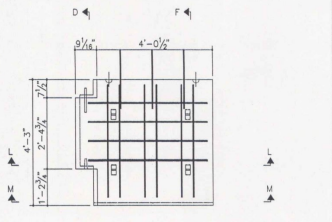


NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL Q

GI-4-R6

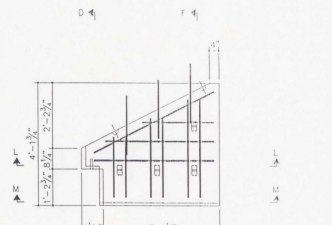


GIR-5-



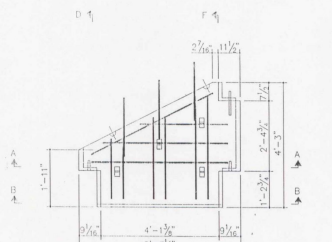
NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL P

GL-4-R6-4.45



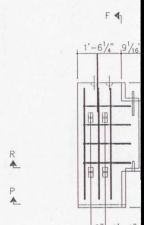
NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL P

GLM-4-R6-4.45



NOTE: FOR LOCATION OF LIFTING INSERTS AND COPING DOWELS SEE DETAIL Q

GM-4-R6



GR-4-R

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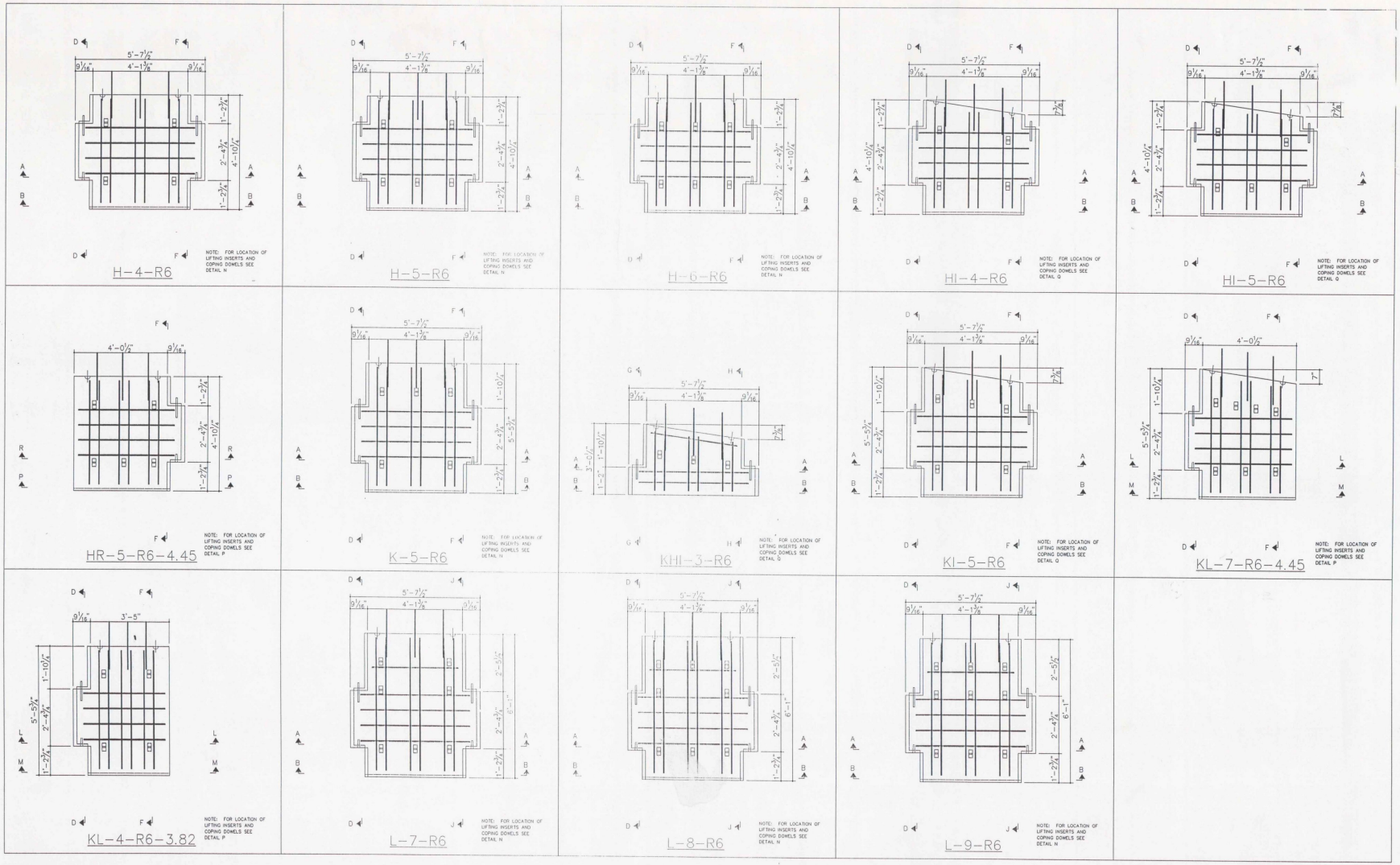
DESIGNED BY:	VNJ
PROJECT ENGR:	SRS
CHECKED BY:	KT
ENG. MANAGER	
REV.	DA



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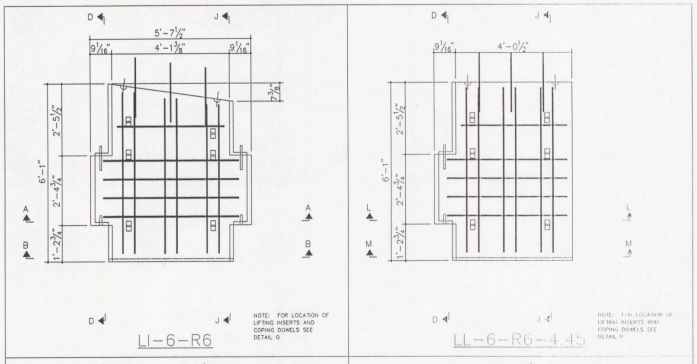
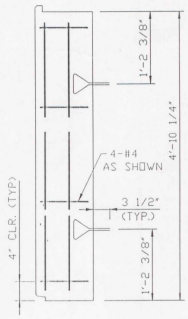
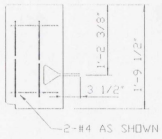
DESIGNED BY:	vng
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

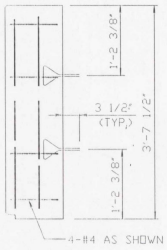
REV.	DATE	DESCRIPTION

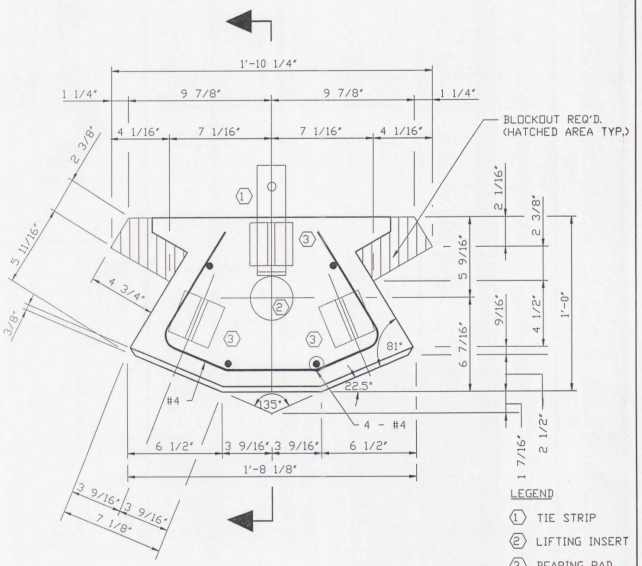
PROJECT NAME	WALLINGFORD	DATE 1/16/96
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT	CONTRACT NO. 5692
OWNER	VERMONT AGENCY OF TRANSPORTATION	DRAWING NO. 8 OF 11
DRAWING COVERS	PANEL SHOP DRAWINGS	SCALE 1/2"=1'-0"

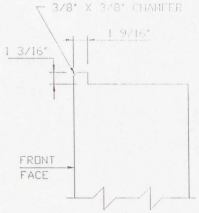


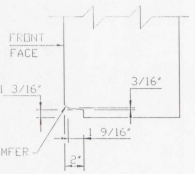


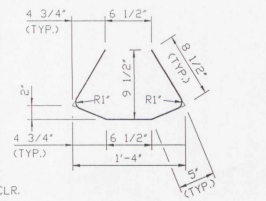












NOTE: 1 1/2" MIN.CLR. ON ALL REBAR.

KEY TO PIECE MARK

CE3A-2-R4

- CE — CORNER ELEMENT
- 3A — TYPE
- 2 — PANEL HEIGHT
- R4 — NO. OF TIE STRIPS
- PANEL REINFORCEMENT

This drawing contains information proprietary to The Reinforced Earth Company, and is being furnished for the use of STATE OF VERMONT AGENCY OF TRANS. only in connection with this project, and the information contained herein is not to be transmitted to any other organization unless specifically authorized in writing by The Reinforced Earth Company. The Reinforced Earth Company is exclusive licensee in the United States under patents issued to Henri Vidal, and the furnishing of this drawing does not constitute an expressed or implied license under the Vidal patents.

The design contained on these drawings is based on information provided by the owner. On the basis of this information, The Reinforced Earth Company has designed, and is responsible for the internal stability of the structure only. External stability, including foundation and slope stability, is the responsibility of the owner.

The Reinforced Earth Company
8614 Westwood Center Drive
Suite 1100
Vienna, Virginia 22182
(703) 821-1175

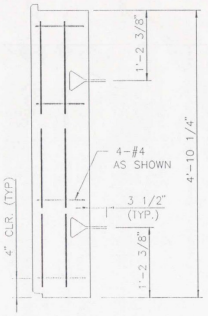
"REINFORCED EARTH" IS THE REGISTERED TRADEMARK OF THE REINFORCED EARTH COMPANY.

DESIGNED BY:	vnq
PROJECT ENGR:	JRS
CHECKED BY:	KT
ENG. MANAGER	

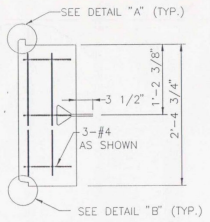
REV.	DATE	DESCRIPTION

PROJECT NAME	WALLINGFORD
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT
OWNER	VERMONT AGENCY OF TRANSPORTATION
DRAWING COVERS	PANEL SHOP DRAWINGS CORNER ELEMENT TYPE "CE3"

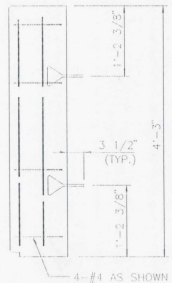
DATE	1/16/96
CONTRACT NO.	5692
DRAWING NO.	9 OF 11
SCALE	AS SHOWN



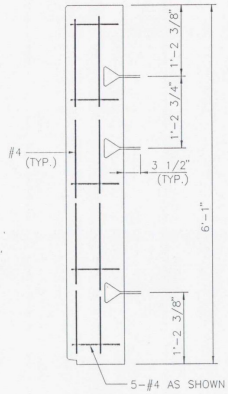
CE2A-2-R4



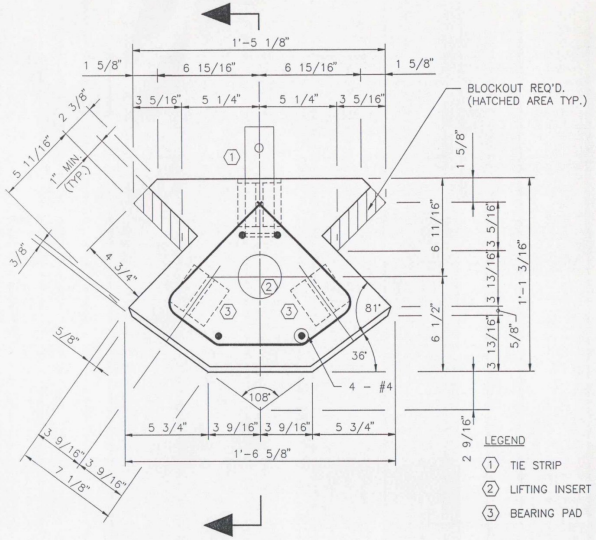
CE2B-1-R4



CE2G-2-R4

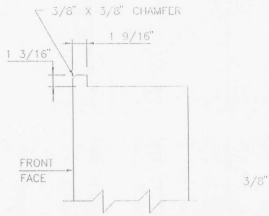


CE2L-3-R4

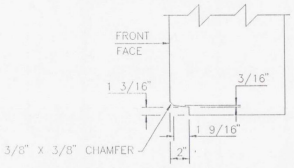


CORNER ELEMENT TYPE 2 90°± - 118°±

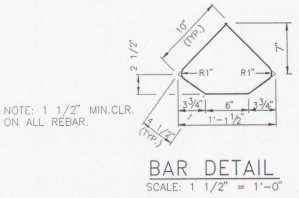
SCALE: 3" = 1'- 0"



DETAIL "A"



DETAIL "B"



BAR DETAIL

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

(DIMENSIONS SHOWN ARE OUT TO OUT)

KEY TO PIECE MARK

CE2A-2-R4

- PANEL REINFORCEMENT TYPE
- NO. OF TIE STRIPS
- PANEL HEIGHT
- TYPE
- CORNER ELEMENT

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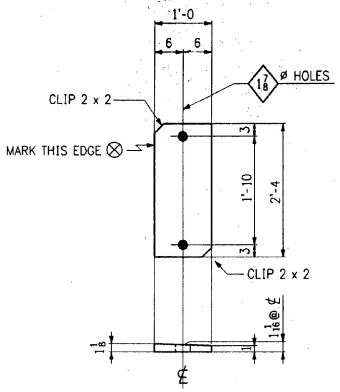
Suite 1100
Vienna, Virginia 22182
(703) 821-1175

"REINFORCED EARTH" IS THE REGISTERED TRADEMARK OF THE REINFORCED EARTH COMPANY.

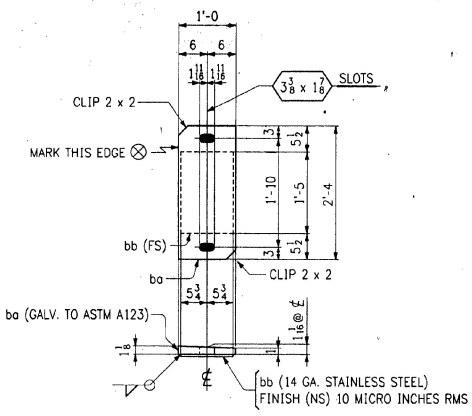
DESIGNED BY:	vng
PROJECT ENGR:	JES
CHECKED BY:	KT
ENG. MANAGER	

REV.	DATE	DESCRIPTION

PROJECT NAME	WALLINGFORD	DATE 1/16/96
LOCATION	U.S. ROUTE 7 OVER RAILROAD TOWN OF WALLINGFORD, VERMONT	CONTRACT NO. 5692
OWNER	VERMONT AGENCY OF TRANSPORTATION	DRAWING NO. 10 OF 11
DRAWING COVERS	CORNER ELEMENT TYPE "CE2"	SCALE AS SHOWN

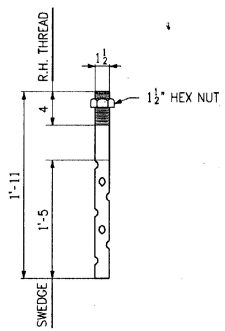


SOLE PLATES ~ MK. SP1
(ABUT. 1 - FIX) (GALV. A123)



SOLE PLATES ~ MK. SP2
(ABUT. 2 - EXP.)

Rev'd.
01-13-97



ANCHOR BOLTS ~ MK. AB1
(GALV. A153)
CODE: P

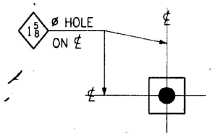


PLATE WASHERS ~ MK. W1
(ABUT. 1) (GALV. A153)
CODE: P

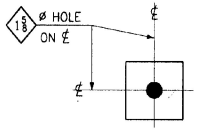
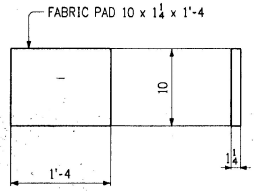
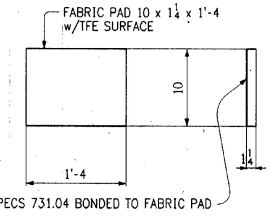


PLATE WASHERS ~ MK. W2
(ABUT. 2) (GALV. A153)
CODE: P



FABRIC PADS ~ EB1
(FIX) CODE: P



FABRIC PADS ~ EB2
(EXP.) CODE: P

FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EA.
6	SP1	PL 12 x (1⅛ x 1)	2	4	BEVELED SOLE PLATE M270-36	1 2	606.36 101.18
6	SP2	SOLE PLATE					
6	ba	PL 12 x (1⅛ x 1)	2	4	BEVELED SOLE PLATE M270-36	1 2	105.57 101.18
6	bb	PL 11½ x 14GA	1	5	STAINLESS STEEL ASTM A240, TYPE 304	1 3	4.43
		ANCHOR BOLTS					
24	AB1	1½"ø SWEDGE BOLTS	1	11	M270-36 w/1 A563 GR. A STD. HEX NUT, GALV. A153	A1 2	12.86
		WASHERS					
12	W1	BAR 2½ x ⅜	0	2½	M270-36, GALV. A153	A1 6	0.67
12	W2	BAR 3¾ x ⅜	0	3¾	M270-36, GALV. A153	A1 5	1.50
		FABRIC PADS					
6	EB1	PAD 10 x 1¼	1	4	PER VERMONT STD. SPECS. SECT. 731.01 (UN)	1 13	10.19
6	EB2	PAD 10 x 1¼	1	4	PER VERMONT STD. SPECS. SECT. 731.01 (UN)	1 13	10.19

TOTAL WEIGHT THIS DWG.
ITEM 531.10 - 1,686.66

RECEIVED
CK'D BY CK'D BY
DEC 27 1996
RESUBMIT BY APPROVED DATE

SHOP NOTE
HOLES: AS NOTED
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. N1.

CODE: 60 (UN)

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

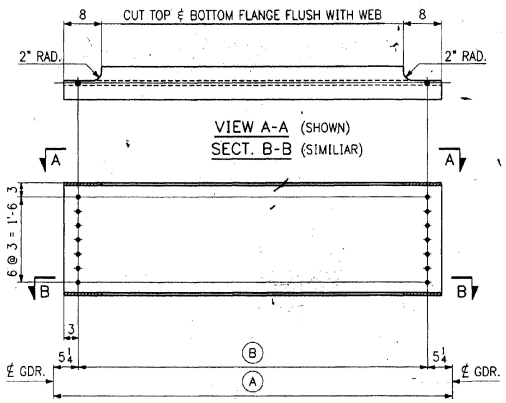
BEARINGS
U.S. ROUTE 7 OVER RAILROAD
BRIDGE NO. 80
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: JCC CHK'D BY: FM DATE: 2-20-96
CONTRACT NUMBER: VT-95368 DRAWING NUMBER: 1 OF 9

401-8 BRG-401

DEC1 91996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	



INTERMEDIATE DIAPHRAGM

MARK	Ⓐ	Ⓑ
D1	6'-6 1/4	5'-7 3/4
D2	6'-8 13/16	5'-10 5/16
D3	6'-10 3/16	5'-11 11/16
D4	6'-11 5/16	6'-0 13/16
D5	7'-0 3/4	6'-2 1/4
D6	7'-1 7/8	6'-3 3/8
D7	7'-2 1/8	6'-3 5/8
D8	7'-3 1/4	6'-4 3/4
D9	7'-4 7/16	6'-5 15/16
D10	7'-4 11/16	6'-6 3/16
D11	7'-5 13/16	6'-7 5/16
D12	7'-6 1/16	6'-7 9/16
D13	7'-7 3/16	6'-8 11/16

PAINT

PAINT

PAINT

PAINT

PAINT

MARK	Ⓐ	Ⓑ
D14	7'-8 5/16	6'-9 13/16
D15	7'-8 9/16	6'-10 1/16
D16	7'-9 3/4	6'-11 1/4
D17	7'-9 15/16	6'-11 7/16
D18	7'-11 1/8	7'-0 5/8
D19	8'-0 1/4	7'-1 3/4
D20	8'-0 1/2	7'-2
D21	8'-1 5/8	7'-3 1/8
D22	8'-3 1/16	7'-4 9/16
D23	8'-4 3/8	7'-5 1/16
D24	8'-5 9/16	7'-7 1/16
D25	8'-8 1/8	7'-9 5/8

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	WEIGHT
		DIAPHRAGMS					
1	D1	W24 x 62	6	1 3/4		3 1	381.04
1	D2	W24 x 62	6	4 1/8		3 1	394.41
1	D3	W24 x 62	6	5 3/4		3 1	401.71
1	D4	W24 x 62	6	6 7/8		3 1	407.52
1	D5	W24 x 62	6	8 1/4		3 1	414.63
1	D6	W24 x 62	6	9 3/8		3 1	420.44
1	D7	W24 x 62	6	9 3/8		3 1	421.73
1	D8	W24 x 62	6	10 3/4		3 1	427.58
1	D9	W24 x 62	7	0		3 1	434.30
1	D10	W24 x 62	7	0 1/4		3 1	435.29
1	D11	W24 x 62	7	1 3/8		3 1	441.11
1	D12	W24 x 62	7	1 3/8		3 1	442.40
1	D13	W24 x 62	7	2 3/4		3 1	448.21
1	D14	W24 x 62	7	3 7/8		3 1	454.02
1	D15	W24 x 62	7	4 1/8		3 1	455.32
1	D16	W24 x 62	7	5 1/4		3 1	461.13
1	D17	W24 x 62	7	5 1/2		3 1	462.42
1	D18	W24 x 62	7	6 5/8		3 1	468.23
1	D19	W24 x 62	7	7 3/4		3 1	474.04
1	D20	W24 x 62	7	8		3 1	475.34
1	D21	W24 x 62	7	9 1/8		3 1	481.15
1	D22	W24 x 62	7	10 3/8		3 1	488.90
1	D23	W24 x 62	7	11 3/4		3 1	494.71
1	D24	W24 x 62	8	1 1/2		3 1	501.82
1	D25	W24 x 62	8	3 3/8		3 1	514.13

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 11,202.04

RECEIVED
CCD BY _____ CCD BY _____
DEC 27 1996
RESUBMIT _____ APPROVED _____
BY DATE

SHOP NOTE
HOLES: 13/16ø
BOLTS: NONE
PAINT: AS NOTED. SEE DWG. N1.
FOR GENERAL SHOP NOTES, SEE DWG. N1.

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

DIAPHRAGMS
U.S. ROUTE 7 OVER RAILROAD
BRIDGE NO. 80
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

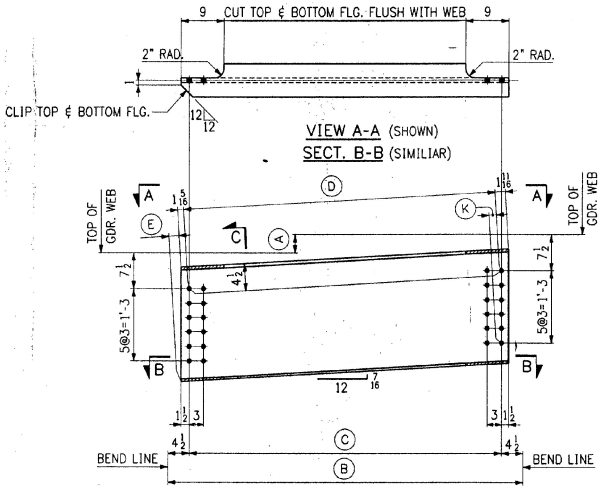
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: JCC CHK'D BY: FM DATE: 2-21-96
CONTRACT NUMBER: VT-95368 DRAWING NUMBER: 2 OF 9

CODE: 56

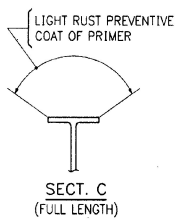
401-12

DPH401A

DEC1 91996

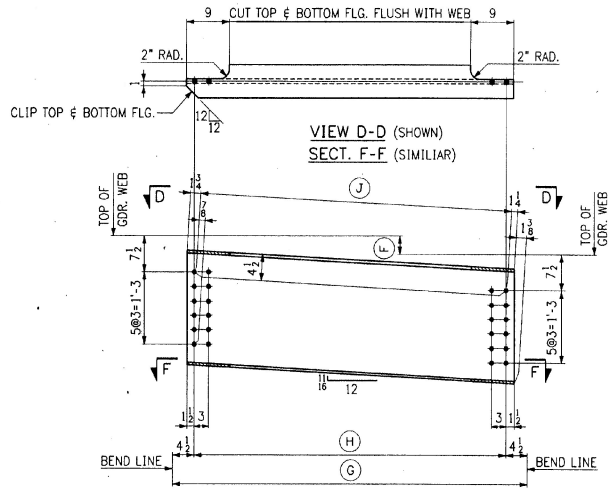


ABUTMENT DIAPHRAGMS



MARK	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓚ
D26	$5\frac{3}{4}$	$14'-4\frac{13}{16}$	$13'-7\frac{13}{16}$	$13'-7\frac{15}{16}$	$\frac{13}{16}$	$\frac{1}{2}$
D27	$5\frac{3}{4}$	14'-5	13'-8	$13'-8\frac{1}{8}$	$\frac{13}{16}$	$\frac{1}{2}$
D28	$5\frac{3}{4}$	$14'-5\frac{3}{16}$	$13'-8\frac{3}{16}$	$13'-8\frac{5}{16}$	$\frac{13}{16}$	$\frac{1}{2}$
D29	$5\frac{3}{4}$	$14'-5\frac{3}{8}$	$13'-8\frac{3}{8}$	$13'-8\frac{1}{2}$	$\frac{13}{16}$	$\frac{1}{2}$
D30	$5\frac{7}{8}$	$14'-5\frac{1}{2}$	$13'-8\frac{1}{2}$	$13'-8\frac{5}{8}$	$\frac{7}{8}$	$\frac{9}{16}$

PAINT



ABUTMENT DIAPHRAGMS

MARK	Ⓕ	Ⓖ	Ⓗ	Ⓙ
D31	9	$13'-8\frac{1}{4}$	$12'-11\frac{1}{4}$	$12'-11\frac{1}{2}$
D32	9	$13'-8\frac{3}{8}$	$12'-11\frac{3}{8}$	$12'-11\frac{5}{8}$
D33	9	$13'-8\frac{1}{2}$	$12'-11\frac{1}{2}$	$12'-11\frac{1}{4}$
D34	$9\frac{1}{8}$	$13'-8\frac{5}{8}$	$12'-11\frac{5}{8}$	$12'-11\frac{7}{8}$
D35	$9\frac{1}{8}$	$13'-8\frac{11}{16}$	$12'-11\frac{11}{16}$	$12'-11\frac{15}{16}$

FED.ROAD DIV.NO. | STATE: VT | FED. AID PROJ. NO.

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
		DIAPHRAGMS					
1	D26	W24 x 62	13	$11\frac{3}{4}$		3 12	826.71
1	D27	W24 x 62	13	$11\frac{15}{16}$		3 12	847.48
1	D28	W24 x 62	14	$0\frac{1}{8}$		3 12	868.65
1	D29	W24 x 62	14	$0\frac{5}{16}$		3 12	868.61
1	D30	W24 x 62	14	$0\frac{1}{2}$		3 12	870.89
1	D31	W24 x 62	13	$3\frac{7}{8}$		3 12	826.02
1	D32	W24 x 62	13	4		3 12	826.47
1	D33	W24 x 62	13	$4\frac{1}{8}$		3 12	847.33
1	D34	W24 x 62	13	$4\frac{1}{4}$		3 12	847.96
1	D35	W24 x 62	13	$4\frac{5}{16}$		3 12	828.28

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 8479.49

RECEIVED
DWD BY _____ DWD BY _____
DEC 27 1996
RESUBMIT _____ APPROVED _____
BY DATE

SHOP NOTE
HOLES: 13/16ø
BOLTS: NONE
PAINT: AS NOTED. SEE DWG. N1.
FOR GENERAL SHOP NOTES, SEE DWG. N1.

CODE: 56

NO.	REVISION	DATE
△		
△		
△		

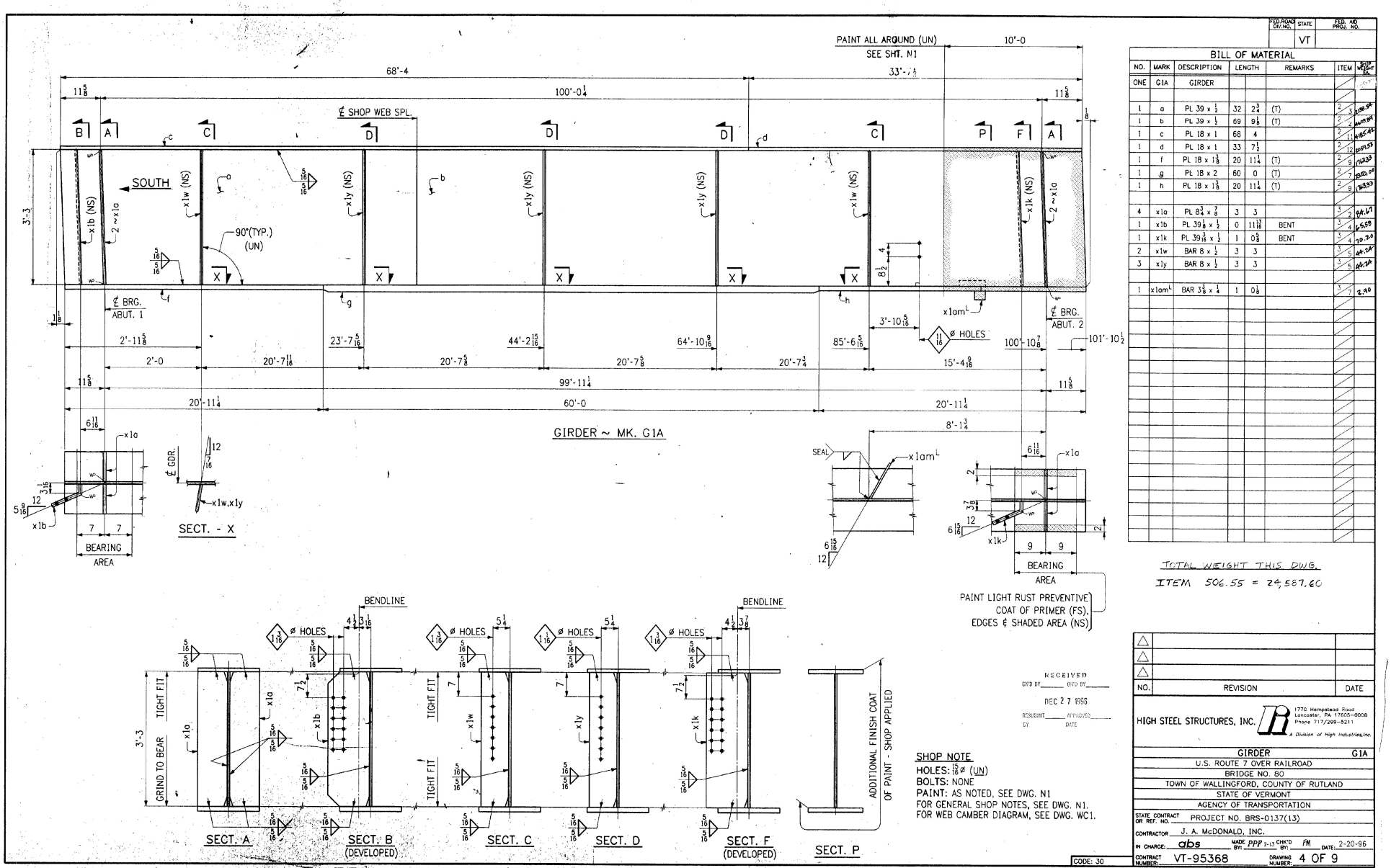
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

DIAPHRAGMS
U.S. ROUTE 7 OVER RAILROAD
BRIDGE NO. 80
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: JCC CHK'D BY: FM DATE: 2-21-96
CONTRACT NUMBER: VT-95368 DRAWING NUMBER: 3 OF 9

401-12 DPH401B

DEC 1 91996



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	WEIGHT EA.
ONE	G1A	GIRDER					
1	a	PL 39 x ½	32	2¾	(T)	2 3	2198.54
1	b	PL 39 x ½	69	9⅛	(T)	2 2	4418.84
1	c	PL 18 x 1	68	4		2 11	4185.42
1	d	PL 18 x 1	33	7½		2 12	2029.53
1	f	PL 18 x 1⅛	20	11¼	(T)	2 9	1233
1	g	PL 18 x 2	60	0	(T)	2 7	7380.00
1	h	PL 18 x 1⅜	20	11¼	(T)	2 9	1383
4	x1a	PL 8½ x ⅞	3	3		3 2	94.67
1	x1b	PL 39⅛ x ½	0	11 13/16	BENT	3 4	65.58
1	x1k	PL 39 3/16 x ½	1	0⅝	BENT	3 4	70.20
2	x1w	BAR 8 x ½	3	3		3 5	40.76
3	x1y	BAR 8 x ½	3	3		3 5	40.76
1	x1am	BAR 3⅜ x ¼	1	0⅛		3 7	2.90

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 24,587.60

RECEIVED
DEC 27 1996

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: NONE
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

CODE: 30

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

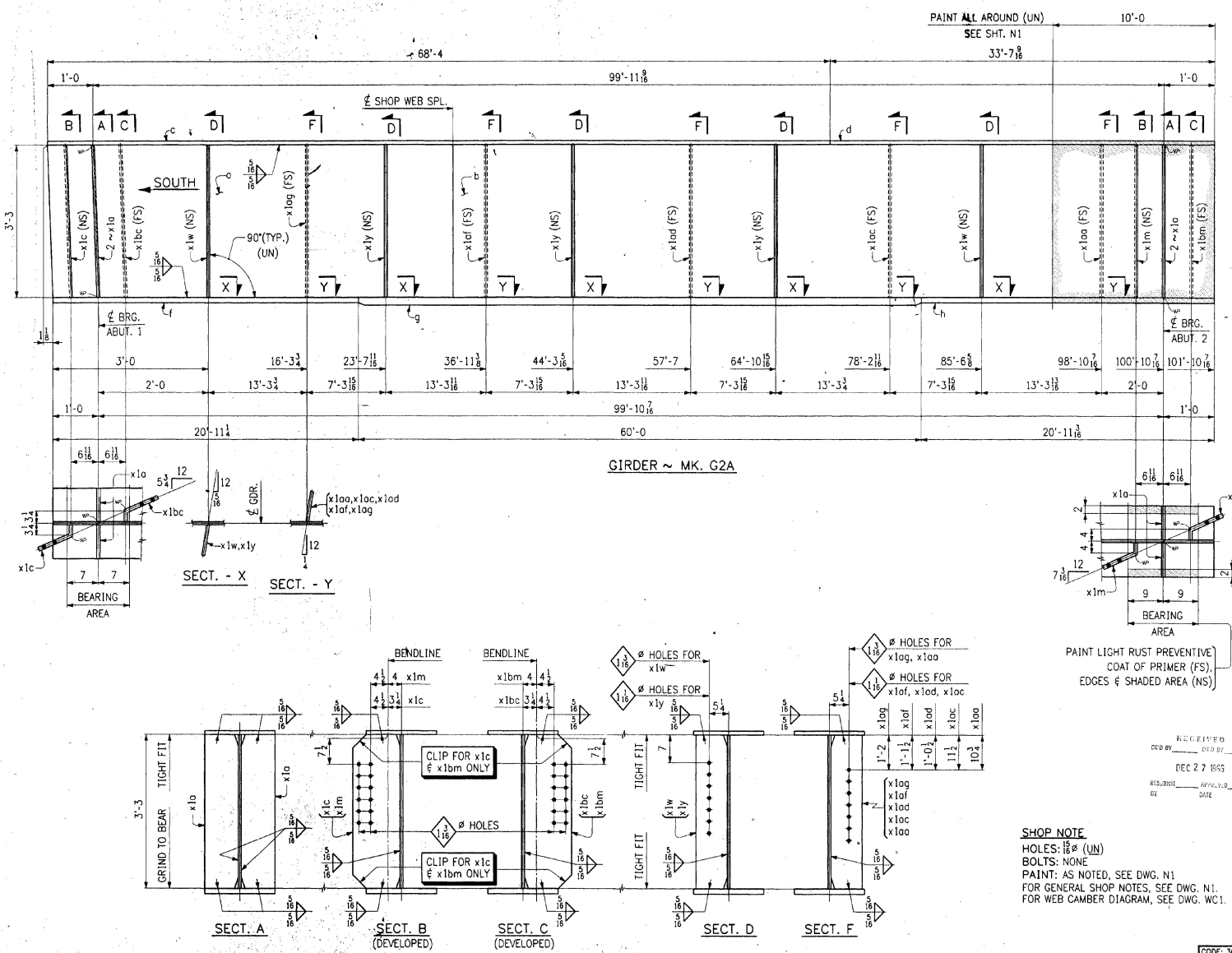
GIRDER G1A
U.S. ROUTE 7 OVER RAILROAD
BRIDGE NO. 80
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-13 CHK'D BY: FM DATE: 2-20-96
CONTRACT NUMBER: VT-95368 DRAWING NUMBER: 4 OF 9

401-9 G1A-401

DEC1 91996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	



BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	POST WEIGHT LB.
ONE	G2A	GIRDER					
1	a	PL 39 x 1/2	32	3 1/8	(T)	2 3	3,190.63
1	b	PL 39 x 1/2	69	8 11/16	(T)	2 2	5,416.88
1	c	PL 18 x 1	68	4		2 11	10,852.50
1	d	PL 18 x 1	33	7 9/16		2 12	5,207.25
1	f	PL 18 x 1 3/8	20	11 1/4	(T)	2 9	4,781.25
1	g	PL 18 x 2	60	0	(T)	2 7	7,220.63
1	h	PL 18 x 1 5/8	20	11 3/16	(T)	2 9	4,765.31
4	x1a	PL 8 1/2 x 7/8	3	3		3 2	99.47
1	x1c	PL 39 1/16 x 1/2	1	0	BENT	3 4	66.51
1	x1m	PL 39 1/8 x 1/2	1	0 1/2	BENT	3 4	70.98
1	x1bc	PL 39 1/16 x 1/2	1	0	BENT	3 4	66.51
1	x1bm	PL 39 1/16 x 1/2	1	0 3/4	BENT	3 4	70.98
2	x1w	BAR 8 x 1/2	3	3		3 5	148.27
3	x1y	BAR 8 x 1/2	3	3		3 5	148.27
1	x1aa	BAR 8 x 1/2	3	3		3 5	148.27
1	x1ac	BAR 8 x 1/2	3	3		3 5	148.27
1	x1ad	BAR 8 x 1/2	3	3		3 5	148.27
1	x1af	BAR 8 x 1/2	3	3		3 5	148.27
1	x1ag	BAR 8 x 1/2	3	3		3 5	148.27

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 24,944.54

RECEIVED
CKD BY ____ CKD BY ____
DEC 2 7 1995
RESUBMIT ____ APPROVED ____
BY DATE

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: NONE
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

CODE: 30

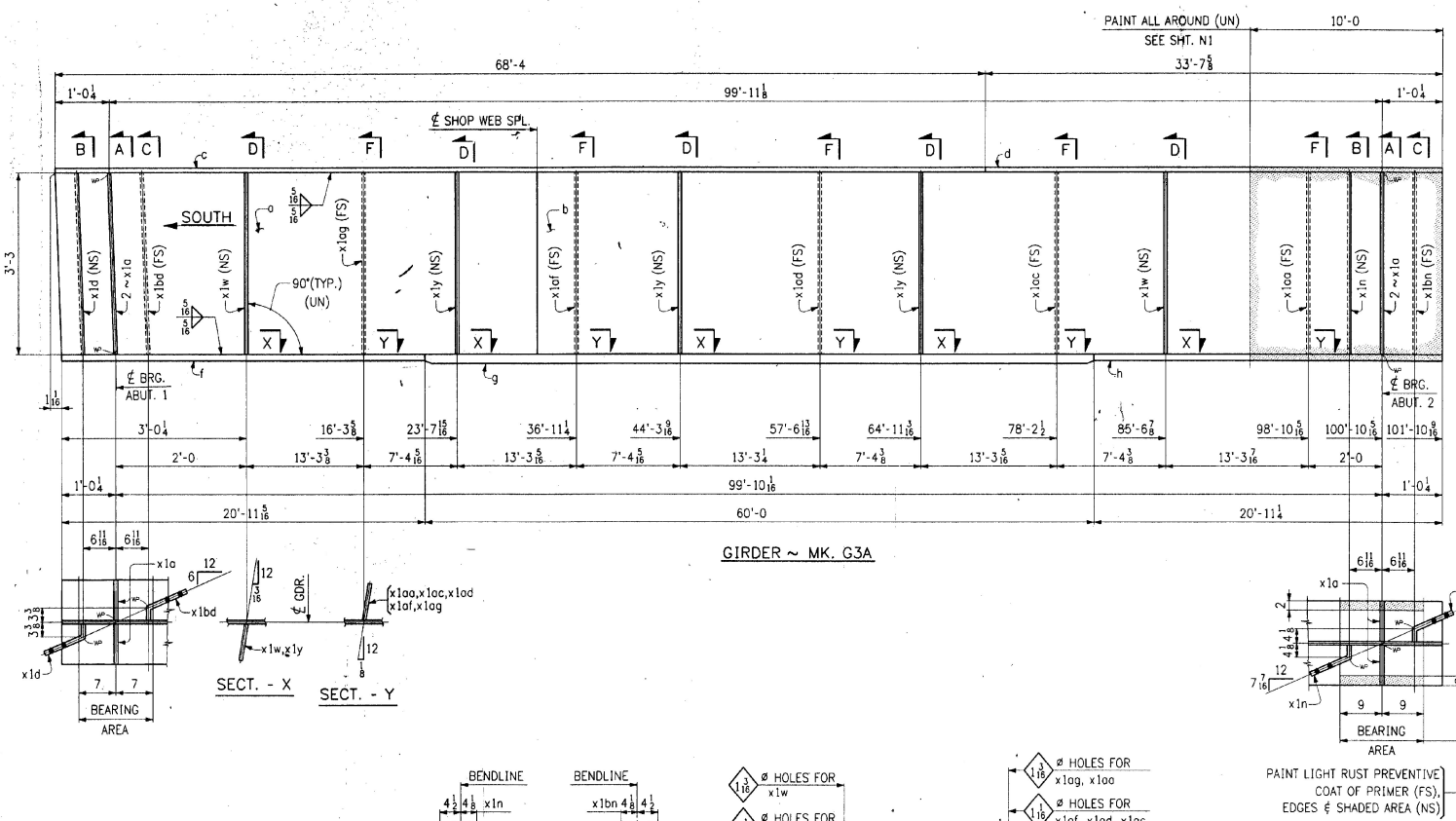
NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER	G2A
U.S. ROUTE 7 OVER RAILROAD	
BRIDGE NO. 80	
TOWN OF WALLINGFORD, COUNTY OF RUTLAND	
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)	
CONTRACTOR J. A. McDONALD, INC.	
IN CHARGE: abs MADE BY: PPP 2-14 CHK'D BY: FM DATE: 2-20-96	
CONTRACT NUMBER: VT-95368 DRAWING NUMBER: 5 OF 9	

401-9 G2A-401

DEC1 91996



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EA.
ONE	G3A	GIRDER					
1	a	PL 39 x 1/2	32	3 5/16	(T)	2 3	341.46
1	b	PL 39 x 1/2	69	8 1/16	(T)	2 2	884.57
1	c	PL 18 x 1	68	4		2 11	1165.84
1	d	PL 18 x 1	33	7 7/8		2 12	566.07
1	f	PL 18 x 1 3/8	20	11 13/16	(T)	2 9	345.27
1	g	PL 18 x 2	60	0	(T)	2 7	1030.32
1	h	PL 18 x 1 3/8	20	11 1/4	(T)	2 9	345.27
4	x1a	PL 8 3/4 x 7/8	3	3		3 2	69.67
1	x1d	PL 3 9/16 x 1/2	1	0 1/8	BENT	3 4	6.21
1	x1n	PL 3 9/8 x 1/2	1	0 1/8	BENT	3 4	7.18
1	x1bd	PL 3 9/16 x 1/2	1	0 1/8	BENT	3 4	6.21
1	x1bn	PL 3 9/8 x 1/2	1	0 1/8	BENT	3 4	7.18
2	x1w	BAR 8 x 1/2	3	3		3 5	102.27
3	x1y	BAR 8 x 1/2	3	3		3 5	102.27
1	x1aa	BAR 8 x 1/2	3	3		3 5	102.27
1	x1ac	BAR 8 x 1/2	3	3		3 5	102.27
1	x1ad	BAR 8 x 1/2	3	3		3 5	102.27
1	x1af	BAR 8 x 1/2	3	3		3 5	102.27
1	x1ag	BAR 8 x 1/2	3	3		3 5	102.27

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 24,948.88

NO.	REVISION	DATE
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RECEIVED
CK'D BY _____ CK'D BY _____
DEC 27 1995
RESUBMIT _____ APPROVED _____
BY DATE

SHOP NOTE
HOLES: 13/16ø (UN)
BOLTS: NONE
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

CODE: 30

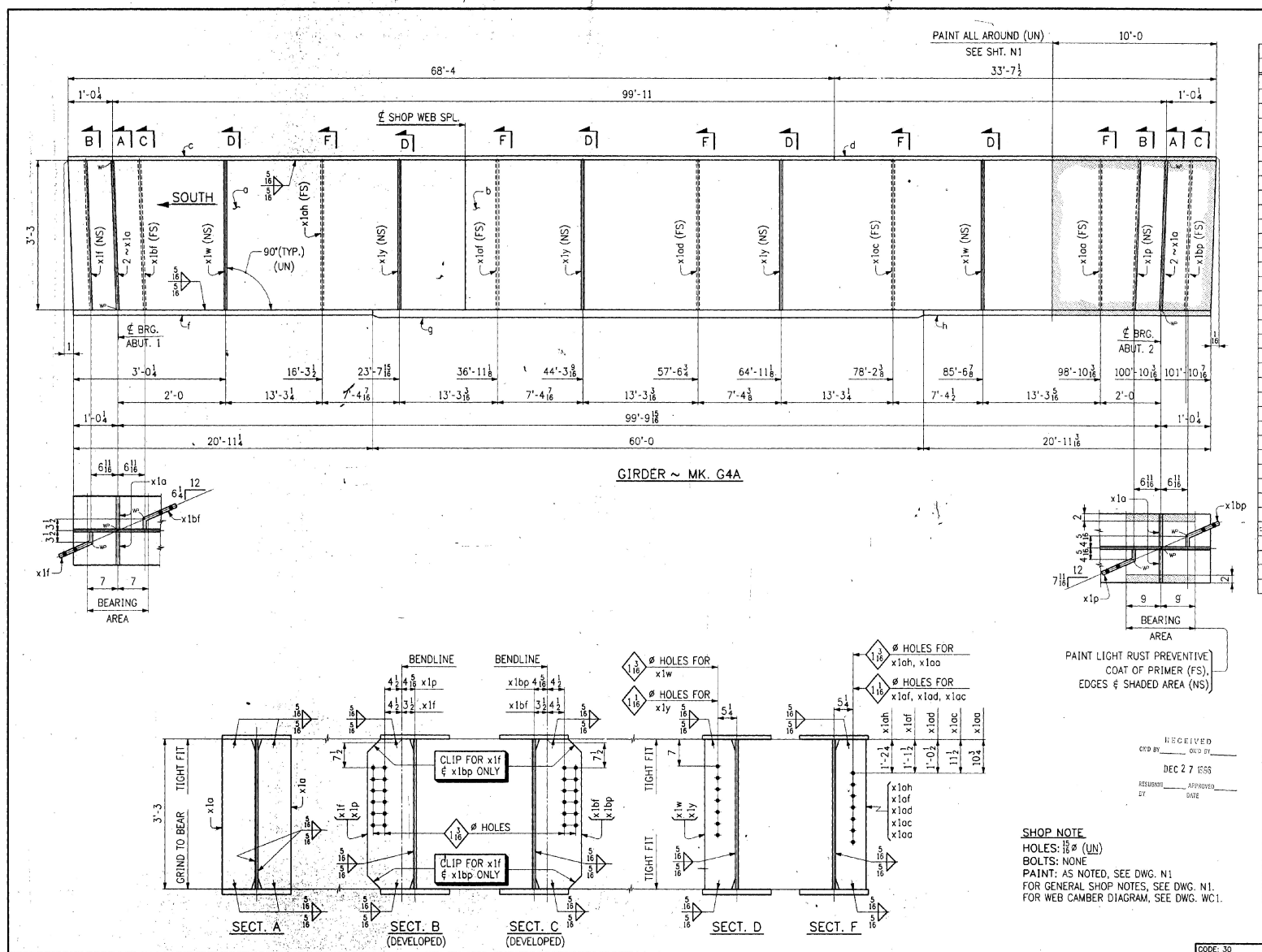
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA. 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER	G3A
U.S. ROUTE 7 OVER RAILROAD	
BRIDGE NO. 80	
TOWN OF WALLINGFORD, COUNTY OF RUTLAND	
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)	
CONTRACTOR J. A. McDONALD, INC.	
IN CHARGE abs	MADE BY: PPP 2-15 CHK'D BY: FM DATE: 2-20-96
CONTRACT NUMBER: VT-95368	DRAWING NUMBER: 6 OF 9

401-9

G3A-401

DEC1 91996



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EA.
ONE	G4A	GIRDER					
1	a	PL 39 x 1/2	32	3 1/4	(T)	2 / 3	2141.30
1	b	PL 39 x 1/2	69	8 7/16	(T)	2 / 2	4615.07
1	c	PL 18 x 1	68	4		2 / 11	2185.92
1	d	PL 18 x 1	33	7 1/2		2 / 12	2057.53
1	f	PL 18 x 1 3/8	20	11 1/4	(T)	2 / 9	1763.33
1	g	PL 18 x 2	60	0	(T)	2 / 7	7350.00
1	h	PL 18 x 1 3/8	20	11 3/16	(T)	2 / 9	1763.39
4	x1a	PL 8 3/4 x 7/8	3	3		3 / 2	84.67
1	x1f	PL 39 1/16 x 1/2	1	0 1/4	BENT	3 / 4	67.25
1	x1p	PL 39 1/8 x 1/2	1	1 1/16	BENT	3 / 4	72.46
1	x1bf	PL 39 1/16 x 1/2	1	0 1/4	BENT	3 / 4	67.90
1	x1bp	PL 39 1/8 x 1/2	1	1 1/16	BENT	3 / 4	72.96
2	x1w	BAR 8 x 1/2	3	3		3 / 5	44.27
3	x1y	BAR 8 x 1/2	3	3		3 / 5	44.27
1	x1aa	BAR 8 x 1/2	3	3		3 / 5	44.27
1	x1ac	BAR 8 x 1/2	3	3		3 / 5	44.27
1	x1ad	BAR 8 x 1/2	3	3		3 / 5	44.27
1	x1af	BAR 8 x 1/2	3	3		3 / 5	44.27
1	x1ah	BAR 8 x 1/2	3	3		3 / 5	44.27

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 24,949.61

RECEIVED
CK'D BY ____ CK'D BY ____
DEC 2 7 1996
RESUBMIT BY ____ APPROVED DATE ____

SHOP NOTE
HOLES: 15/16 Ø (UN)
BOLTS: NONE
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

NO.	REVISION	DATE
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HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

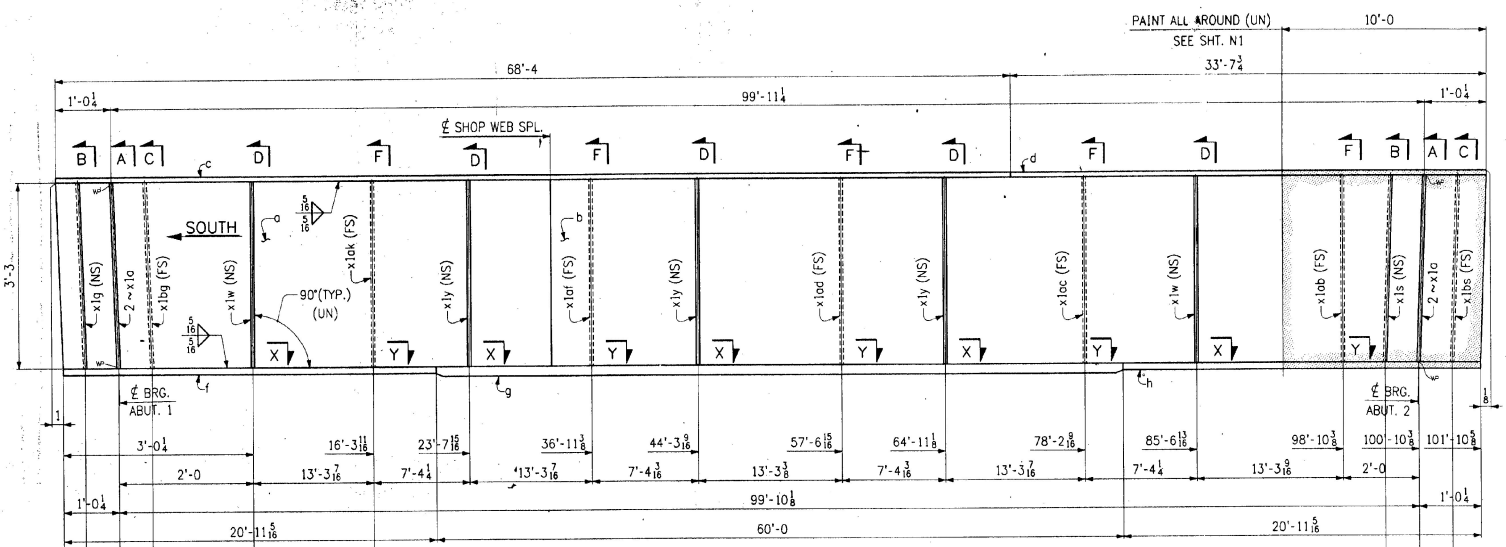
GIRDER G4A
U.S. ROUTE 7 OVER RAILROAD
BRIDGE NO. 80
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-15 CHK'D BY: FM DATE: 2-20-96
CONTRACT NUMBER: VT-95368 DRAWING NUMBER: 7 OF 9

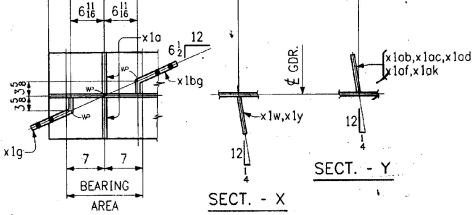
CODE: 30

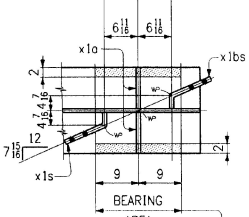
401-9 G4A-401

DEC1 91996

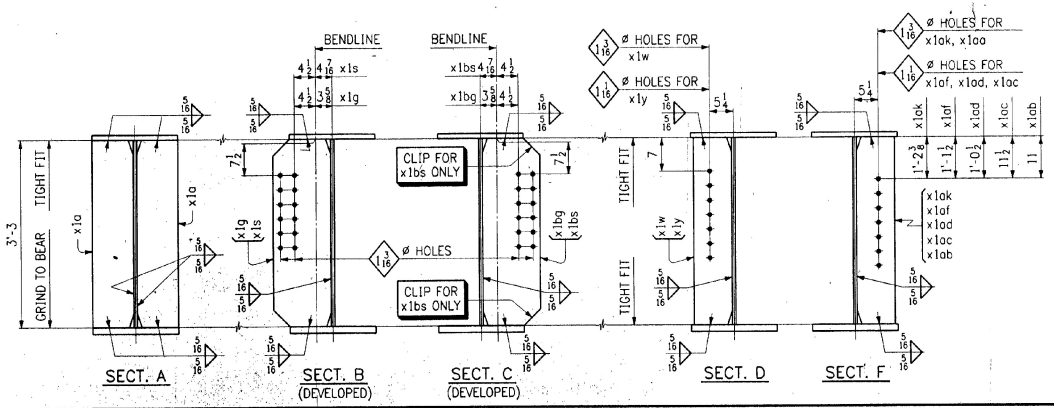


GIRDER ~ MK. G5A





PAINT LIGHT RUST PREVENTIVE COAT OF PRIMER (FS), EDGES & SHADED AREA (NS)



SHOP NOTE
HOLES: 13/16ø (UN)
BOLTS: NONE
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

CODE: 30

RECEIVED
DEC 27 1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EA.
ONE	G5A	GIRDER					
1	c	PL 39 x ½	32	3¼	(T)	2 3	2,491.20
1	b	PL 39 x ½	69	8⅜	(T)	2 2	4,918.13
1	c	PL 18 x 1	68	4		2 11	4,852.61
1	d	PL 18 x 1	33	7¾		2 12	2,421.01
1	f	PL 18 x 1⅛	20	11 5/16	(T)	2 9	1,622.71
1	g	PL 18 x 2	60	0	(T)	2 7	8,720.40
1	h	PL 18 x 1⅜	20	11 5/16	(T)	2 8	1,983.79
4	x1a	PL 8¾ x ⅞	3	3		3 2	64.67
1	x1g	PL 39 x ½	1	0⅜	BENT	3 4	68.89
1	x1s	PL 39⅛ x ½	1	1 3/16	BENT	3 4	73.02
1	x1bg	PL 39 x ½	1	0⅜	BENT	3 4	68.89
1	x1bs	PL 39⅛ x ½	1	1 3/16	BENT	3 4	73.02
2	x1w	BAR 8 x ½	3	3		3 5	44.27
3	x1y	BAR 8 x ½	3	3		3 5	44.27
1	x1ab	BAR 8 x ½	3	3		3 5	44.27
1	x1ac	BAR 8 x ½	3	3		3 5	44.27
1	x1ad	BAR 8 x ½	3	3		3 5	44.27
1	x1af	BAR 8 x ½	3	3		3 5	44.27
1	x1ak	BAR 8 x ½	3	3		3 5	44.27

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 24,956.00

NO.	REVISION	DATE
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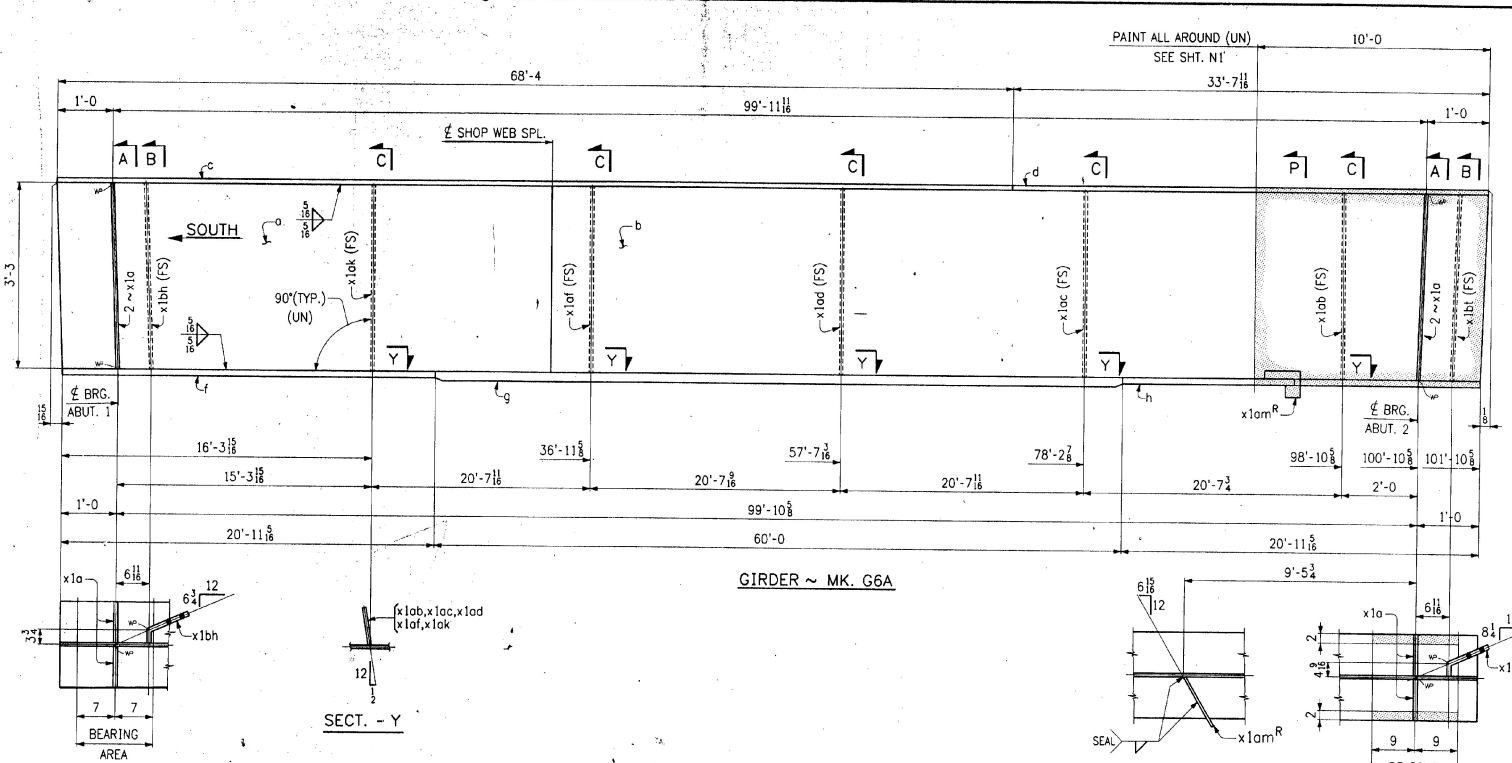
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G5A
U.S. ROUTE 7 OVER RAILROAD
BRIDGE NO. 80
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2:15 CHK'D BY: FM DATE: 2-21-96
CONTRACT NUMBER: VT-95368 DRAWING NUMBER: 8 OF 9

401-6 G5A-401

DEC1 91996



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	EXTRA WEIGHT LBS.
ONE	G6A	GIRDER					
1	a	PL 39 x 1/2	32	2 15/16	(T)	2 3	23,395.55
1	b	PL 39 x 1/2	69	8 5/8	(T)	2 2	104,327.71
1	c	PL 18 x 1	68	4		2 11	11,467.82
1	d	PL 18 x 1	33	7 11/16		2 12	2,565.28
1	f	PL 18 x 1 1/8	20	11 5/16	(T)	2 9	7,432.71
1	g	PL 18 x 2	60	0	(T)	2 7	7,350.00
1	h	PL 18 x 1 3/8	20	11 5/16	(T)	2 9	7,432.71
4	x1a	PL 8 1/4 x 7/8	3	3		3 2	78.39
1	x1bh	PL 39 x 1/2	1	0 1/2	BENT	3 4	49.42
1	x1bt	PL 39 1/8 x 1/2	1	1 1/16	BENT	3 4	73.91
1	x1ab	BAR 8 x 1/2	3	3		3 5	44.27
1	x1ac	BAR 8 x 1/2	3	3		3 5	44.27
1	x1ad	BAR 8 x 1/2	3	3		3 5	44.27
1	x1af	BAR 8 x 1/2	3	3		3 5	44.27
1	x1ak	BAR 8 x 1/2	3	3		3 5	44.27
1	x1am^R	BAR 3 3/8 x 1/4	1	0 1/8		3 7	2.90

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 24,596.50
TOTAL WT. FURNISHED ITEM 506.55 = 168,664.66
TOTAL WT. FURNISHED ITEM 531.10 = 1,686.30

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: NONE
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

RECEIVED
CK'D BY ____ CK'D BY ____
DEC 27 1995
RESUBMIT ____ APPROVED ____
BY ____ DATE ____

CODE: 30

NO.	REVISION	DATE
△		
△		
△		

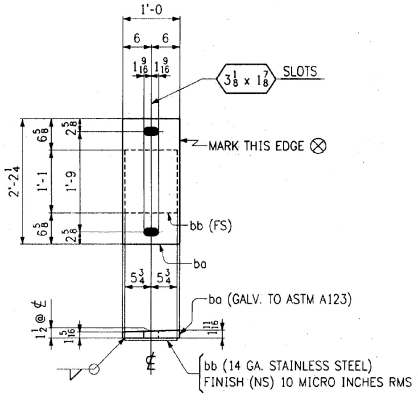
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER	G6A
U.S. ROUTE 7 OVER RAILROAD	
BRIDGE NO. 80	
TOWN OF WALLINGFORD, COUNTY OF RUTLAND	
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
STATE CONTRACT OR REF. NO.	PROJECT NO. BRS-0137(13)
CONTRACTOR	J. A. McDONALD, INC.
IN CHARGE: abs	MADE BY: PPP 2-15 CHK'D BY: FM DATE: 2-21-96
CONTRACT NUMBER:	VT-95368 DRAWING NUMBER: 9 OF 9

401-9

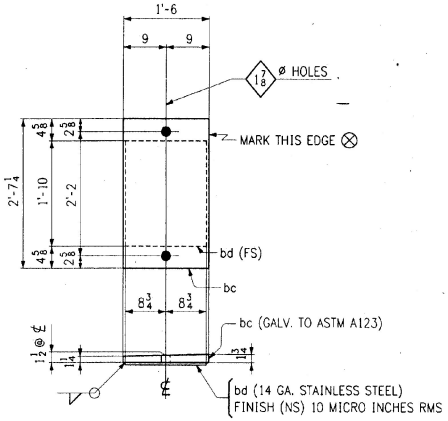
G6A-401

DEC1 91996



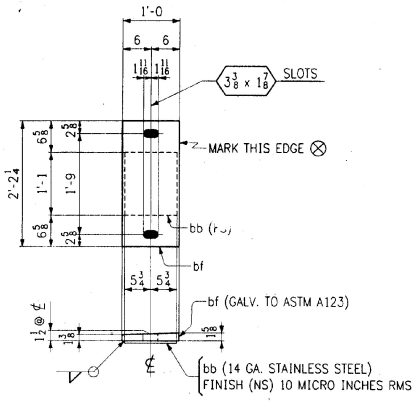
SOLE PLATES ~ MK. SP1

(ABUT. 1)



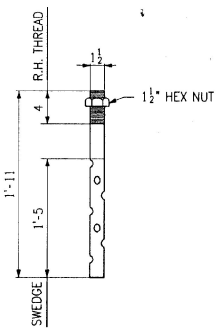
SOLE PLATES ~ MK. SP2

(PIER)



SOLE PLATES ~ MK. SP3

(ABUT. 2)



ANCHOR BOLTS ~ MK. AB1

(GALV. A153)

CODE: P

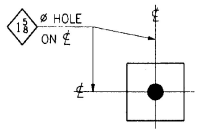


PLATE WASHERS ~ MK. W1

(ABUT.) (GALV. A153)

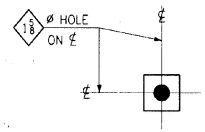
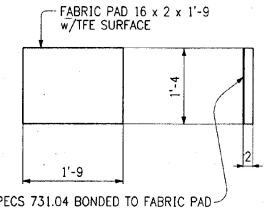


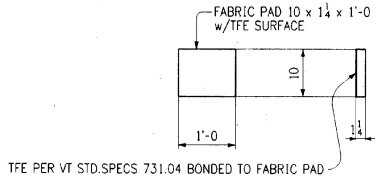
PLATE WASHERS ~ MK. W2

(PIER) (GALV. A153)



FABRIC PADS ~ EB1

(FIX) CODE: P



FABRIC PADS ~ EB2

(EXP.) CODE: P

Recv 01-13-97

RECEIVED
DEC 27 1996

SHOP NOTE
HOLES: AS NOTED
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. N1.

CODE: 60 (UN)

FED. ROAD DIV. NO. | STATE: VT | FED. AID PROJ. NO.

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHOP WEIGHT LB.
6	SP1	SOLE PLATE					137.15
6	ba	PL 12 x (11¾ x 1⅞)	2	2¼	BEVELED SOLE PLATE M270-36	1/3	139.98
6	bb	PL 11½ x 14GA	1	1	STAINLESS STEEL ASTM A240, TYPE 304	1/8	3.17
6	SP2	SOLE PLATE					247.42
6	bc	PL 18 x (17¾ x 11)	2	7¼	BEVELED SOLE PLATE M270-36	1/2	239.36
6	bd	PL 17½ x 14GA	1	10	STAINLESS STEEL ASTM A240, TYPE 304	1/7	8.16
6	SP3	SOLE PLATE					137.15
6	bf	PL 12 x (11⅜ x 1⅞)	2	2¼	BEVELED SOLE PLATE M270-36	1/5	139.98
6	bb	PL 11½ x 14GA	1	1	STAINLESS STEEL ASTM A240, TYPE 304	1/8	3.17
		ANCHOR BOLTS					
36	AB1	1½"ø SWEDGE BOLTS	1	11	M270-36 w/1 A563 GR. A STD. HEX NUT, GALV. A153	A1/2	12.46
		WASHERS					
24	W1	BAR 4 x ⅜	0	4	M270-36, GALV. A153	A1/6	1.70
12	W2	BAR 2½ x ⅜	0	2½	M270-36, GALV. A153	A1/8	0.48
		FABRIC PADS					
6	EB1	PAD 16 x 2	1	9	PER VERMONT STD. SPECS. SECT. 731.01 (UN)	1/13	34.22
12	EB2	PAD 10 x 1¼	1	0	PER VERMONT STD. SPECS. SECT. 731.01 (UN)	1/13	7.44

TOTAL WEIGHT THIS DWG.
ITEM 531.10 : 3,924.60

NO.	REVISION	DATE
△		
△		
△		

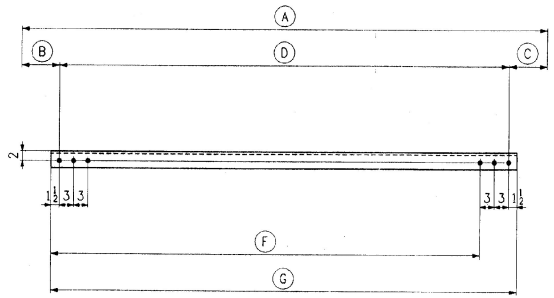
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

BEARINGS
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: JCC CHK'D BY: JE DATE: 1-31-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 1 OF 24

400-B BRG-400

DEC 19 1996



LATERAL BRACING

MARK	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓕ	Ⓖ
LB1	12'-5 3/4	1'-7	1'-9	9'-1 3/4	8'-9 1/4	9'-4 3/4
LB2	12'-4 3/8	1'-9	1'-7	9'-0 3/8	8'-7 7/8	9'-3 5/8
LB3	12'-5 3/8	1'-9	1'-7	9'-1 3/8	8'-8 7/8	9'-4 1/8
LB4	12'-4 7/8	1'-9	1'-7	9'-0 7/8	8'-8 3/8	9'-3 7/8
LB5	11'-5 1/8	1'-9	1'-7	8'-1 1/8	7'-8 5/8	8'-4 1/8
LB6	13'-0 5/8	1'-9	1'-8	9'-7 5/8	9'-3 1/8	9'-10 3/8
LB7	12'-5 3/8	1'-9	1'-7	9'-1 3/8	8'-8 7/8	9'-4 1/8
LB8	12'-6	1'-7	1'-9	9'-2	8'-9 1/2	9'-5
LB9	11'-6 1/4	1'-7	1'-9	8'-2 1/4	7'-9 1/4	8'-5 1/4
LB10	11'-10 7/8	1'-7	1'-9	8'-6 7/8	8'-2 3/8	8'-9 7/8
LB11	11'-5 1/4	1'-9	1'-7	8'-1 1/4	7'-8 3/4	8'-4 1/4
LB12	11'-9 7/8	1'-9	1'-7	8'-5 7/8	8'-1 3/8	8'-8 7/8
LB13	12'-6 1/8	1'-7	1'-9	9'-2 1/8	8'-9 5/8	9'-5 1/8
LB14	13'-1	1'-8	1'-9	9'-8	9'-3 1/2	9'-11

PAINT

FED. ROAD DIV. NO. | STATE: VT | FED. AID PROJ. NO.

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT (lbs)
		LATERAL BRACING					
1	LB1	L 3½ x 3½ x 3/8	9	4¾	PAINTED	4/7	78.84
1	LB2	L 3½ x 3½ x 3/8	9	3⅜	PAINTED	4/7	76.89
2	LB3	L 3½ x 3½ x 3/8	9	4⅛	PAINTED	4/7	77.60
11	LB4	L 3½ x 3½ x 3/8	9	3⅞		4/7	79.34
1	LB5	L 3½ x 3½ x 3/8	8	4⅛		4/7	70.92
1	LB6	L 3½ x 3½ x 3/8	9	10⅜		4/7	84.03
18	LB7	L 3½ x 3½ x 3/8	9	4⅛		4/7	79.60
10	LB8	L 3½ x 3½ x 3/8	9	5		4/7	80.04
2	LB9	L 3½ x 3½ x 3/8	8	5¼		4/7	71.72
1	LB10	L 3½ x 3½ x 3/8	8	9⅜		4/7	74.99
1	LB11	L 3½ x 3½ x 3/8	8	4¼		4/7	71.01
1	LB12	L 3½ x 3½ x 3/8	8	8⅞		4/7	74.29
1	LB13	L 3½ x 3½ x 3/8	9	5⅛		4/7	80.13
1	LB14	L 3½ x 3½ x 3/8	9	11		4/7	84.29

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 4105.94 #

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 27 1996
RESUBMIT _____ APPROVED _____
BY _____ DATE

SHOP NOTE
HOLES: 13/16 ø
BOLTS: NONE
PAINT: (AS NOTED) SEE DWG. N1.
FOR GENERAL SHOP NOTES, SEE DWG. N1.

CODE: 64

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

LATERAL BRACING
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 1-24 CHK'D BY: _____ DATE: 1-26-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 2 OF 24

400-16

DEC 1 91996

400-LB1

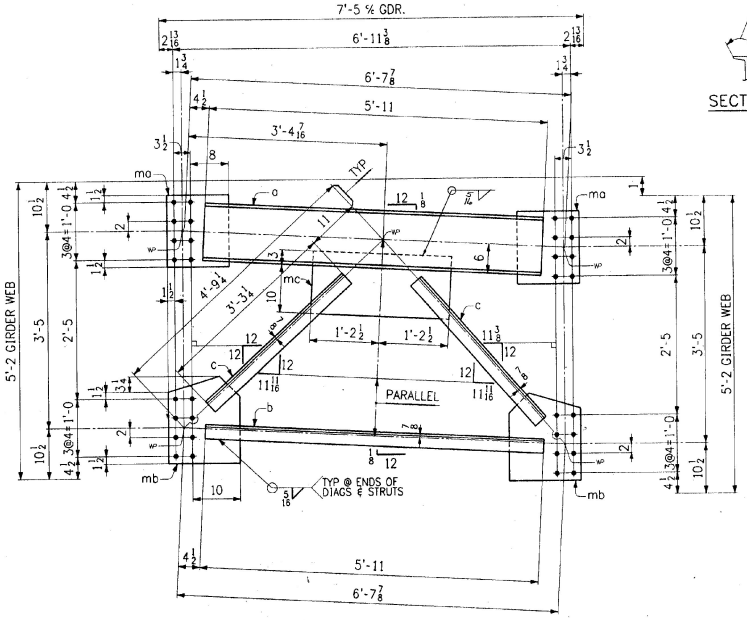
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	UNIT WEIGHT LB.
5	CF1	CROSSFRAMES					412.90
5	a	MC12 x 31	5	11		4 5	193.42
5	b	L3 x 3 x 1/8	5	11		4 2	42.40
10	c	L3 x 3 x 1/8	3	3 1/4		4 2	23.55
10	ma	PL 13 x 1/8	1	3		4 3	20.74
10	mb	PL 15 x 1/8	1	6 1/4		4 3	29.11
5	mc	PL 13 x 1/8	2	5		4 3	40.09
5	CF2	CROSSFRAMES			PAINTED		412.90
5	CF3	CROSSFRAMES			PAINTED		412.90
10	a	MC12 x 31	5	11		4 5	193.42
10	b	L3 x 3 x 1/8	5	11		4 2	42.40
20	c	L3 x 3 x 1/8	3	3 1/4		4 2	23.55
20	ma	PL 13 x 1/8	1	3		4 3	20.74
20	mb	PL 15 x 1/8	1	6 1/4		4 3	29.11
10	mc	PL 13 x 1/8	2	5		4 3	40.09

TOTAL WEIGHT THIS DWG.

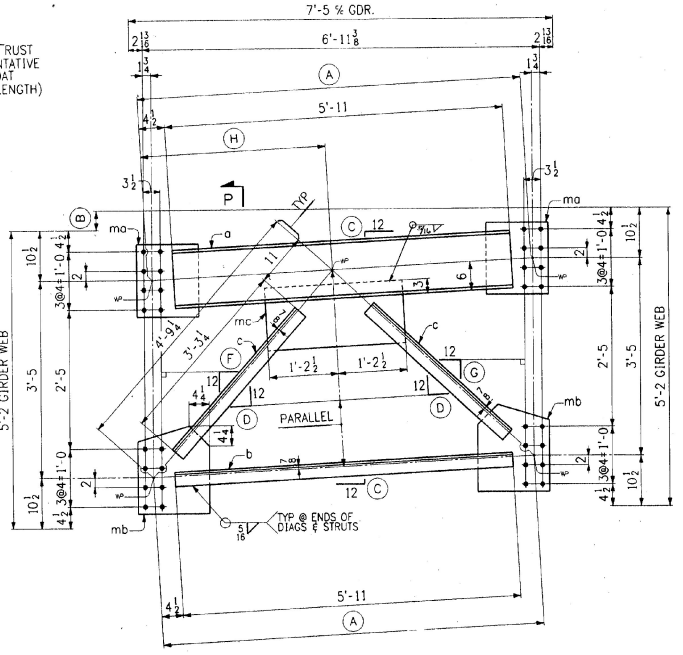
ITEM 506.55 = 6193.50#



CROSSFRAME ~ CF1

LIGHT RUST PREVENTATIVE COAT (FULL LENGTH)

SECTION P



CROSSFRAMES

PAINT	MARK	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓕ	Ⓖ	Ⓗ
	CF2	6'-8	4 3/4	11/16	11 3/4	10 7/16	10 5/8	3'-1 9/16
	CF3	6'-7 15/16	3 1/4	1/2	11 11/16	10 13/16	11 5/16	3'-2 5/16

RECEIVED
DEC 2 7 1996

SHOP NOTE

HOLES: 15/16 ø
BOLTS: NONE
PAINT: AS NOTED, SEE DWG. N1.
FOR GENERAL SHOP NOTES, SEE DWG. N1.

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

CROSSFRAMES (END & PIER)
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE abs MADE BY PPF 1-22 CHK'D BY ___ DATE 1-28-96
CONTRACT NUMBER VT-95367 DRAWING NUMBER 3 OF 24

CODE: 63

400-13 400CF1

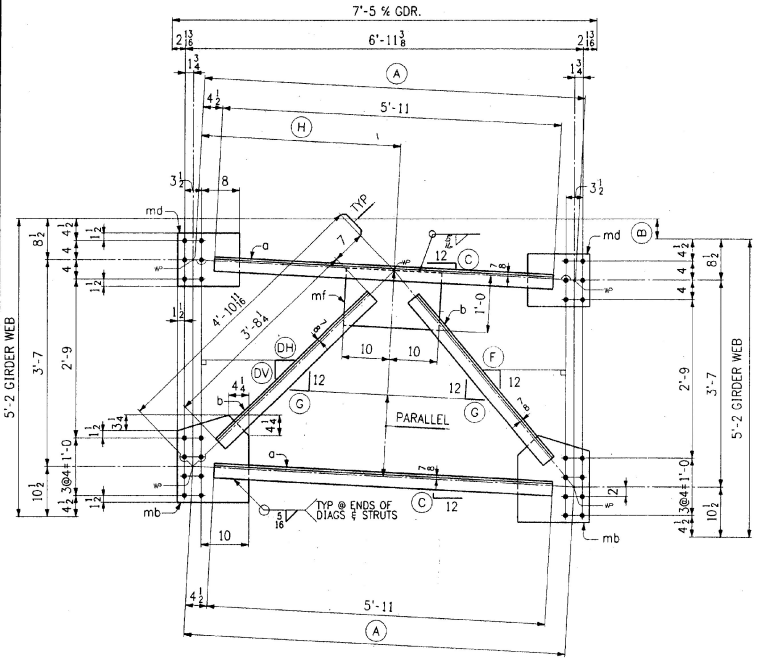
DEC 19 1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

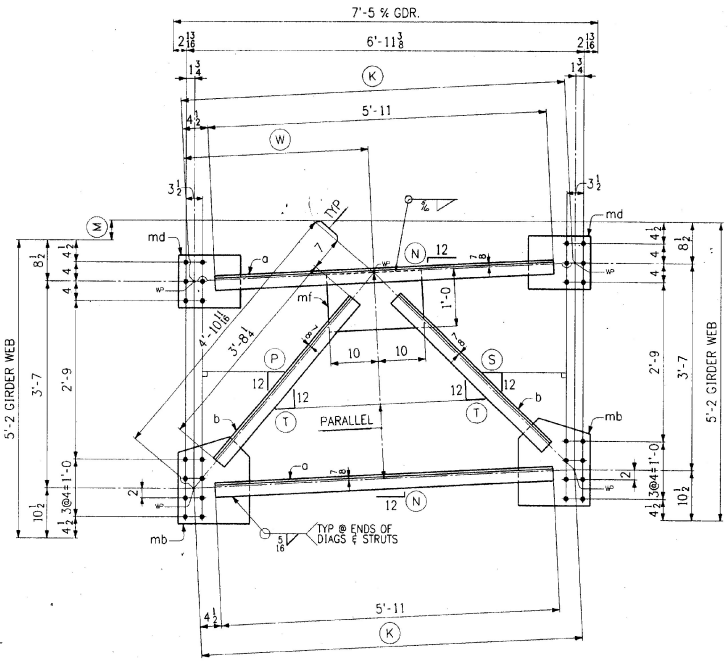
NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	STRUCTURE WEIGHT LBS.
5	CF4	CROSSFRAMES					252.44
5	CF5	CROSSFRAMES					
5	CF6	CROSSFRAMES					
5	CF7	CROSSFRAMES					
5	CF8	CROSSFRAMES					
5	CF9	CROSSFRAMES					
5	CF10	CROSSFRAMES					
5	CF11	CROSSFRAMES					
5	CF12	CROSSFRAMES					
5	CF13	CROSSFRAMES					
5	CF14	CROSSFRAMES					252.44
110	a	L3 x 3 x 5/16	5	11		4 3	42.16
110	b	L3 x 3 x 5/16	3	8 1/4		4 2	26.55
110	md	PL 11 x 3/8	1	1		4 1	15.83
110	mb	PL 15 x 3/8	1	6 1/4		4 3	29.11
55	mf	PL 12 x 3/8	1	8		4 3	25.52

TOTAL WEIGHT THIS DWG
ITEM 506.55 = 13,885.30#



INT. CROSSFRAMES

MARK	Ⓐ	Ⓑ	Ⓒ	ⒹⒽ	ⒹⓋ	Ⓕ	Ⓖ	Ⓗ
CF4	6'-8	4 1/8	5/8	12	11 3/8	10 10/16	11 3/16	3'-6 5/8
CF5	6'-7 15/16	3 3/8	1/2	12	11 7/8	10 1/4	11 3/16	3'-5 13/16
CF6	6'-7 15/16	2 3/4	7/16	11 15/16	12	10 7/16	11 3/16	3'-5 7/16
CF7	6'-7 7/8	2 1/8	5/16	11 3/4	12	10 9/16	11 1/8	3'-5 1/8
CF8	6'-7 7/8	1 1/2	1/4	11 9/16	12	10 3/4	11 1/8	3'-4 3/4
CF9	6'-7 7/8	3/8	1/16	11 1/4	12	11 1/16	11 1/8	3'-4 1/8



INT. CROSSFRAMES

MARK	Ⓚ	Ⓜ	Ⓝ	Ⓟ	Ⓢ	Ⓣ	Ⓦ
CF10	6'-7 7/8	1/4	1/16	11 1/16	11 3/16	11 1/8	3'-3 13/16
CF11	6'-7 7/8	3/4	1/8	10 15/16	11 3/8	11 1/8	3'-3 9/16
CF12	6'-7 7/8	1 1/2	1/4	10 3/4	11 9/16	11 1/8	3'-3 1/8
CF13	6'-7 7/8	2	5/16	10 5/8	11 3/4	11 1/8	3'-2 7/8
CF14	6'-7 15/16	2 3/4	7/16	10 7/16	11 15/16	11 3/16	3'-2 1/2

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 2 7 1996
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

SHOP NOTE
HOLES: 15/16 ø
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. N1.

CODE: 63

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17601-6008
Phone 717/299-5211
A Division of High Industries, Inc.

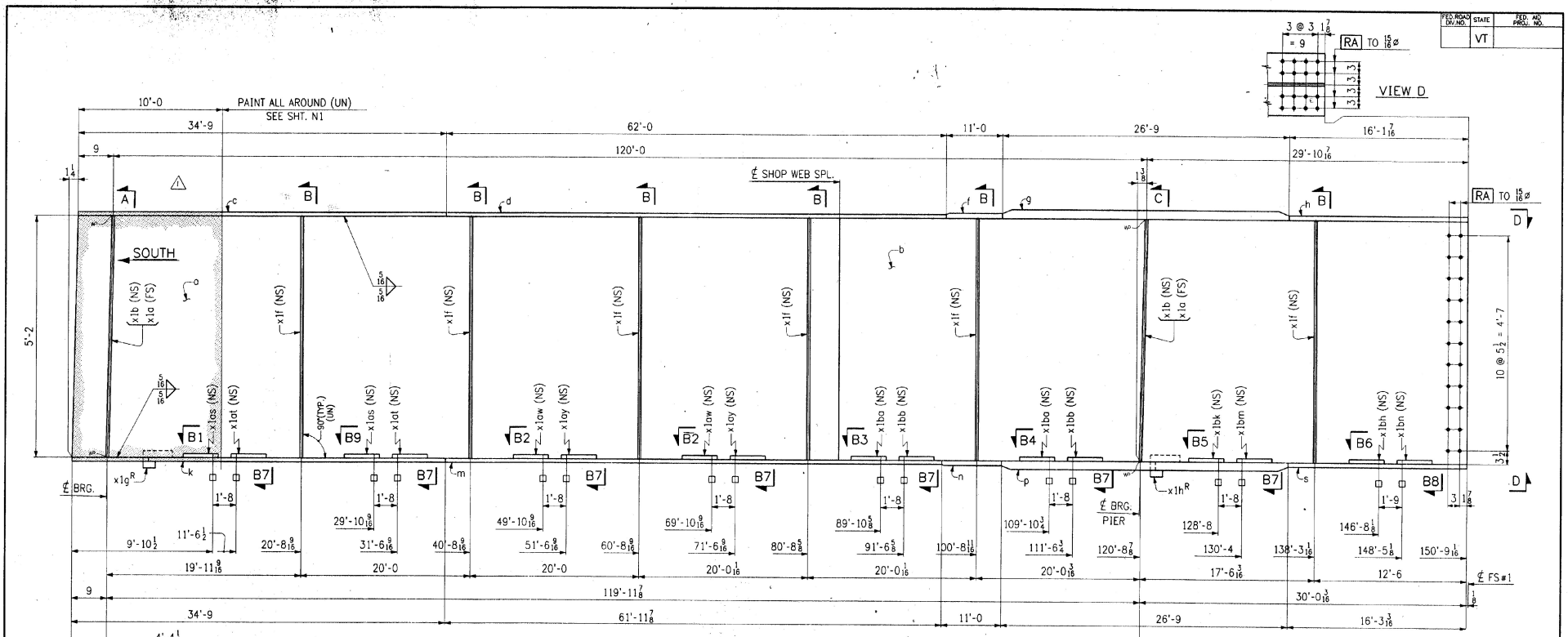
CROSSFRAMES (INT)
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 1-22 CHK'D BY: JL DATE: 1-28-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 4 OF 24

400-13

DEC 1 9 1996

400CF2



NO.	REVISION	DATE
1	DELETED SECT. P : DESIGN CHANGE	5-20-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER	G1A
U.S. ROUTE 7 OVER OTTER CREEK	
BRIDGE NO. 79	
TOWN OF WALLINGFORD, COUNTY OF RUTLAND	
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)	
CONTRACTOR: J. A. McDONALD, INC.	
IN CHARGE: abs MADE BY: PPP (-31) CHK'D BY: LD DATE: 2-2-96	
CONTRACT NUMBER: VT-95367	DRAWING NUMBER: 5 OF 24

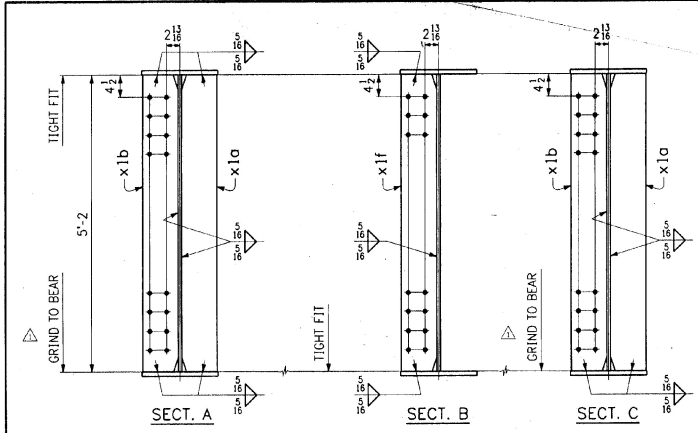
FED. ROAD DIV. NO. | STATE: VT | FED. AID PROJ. NO.

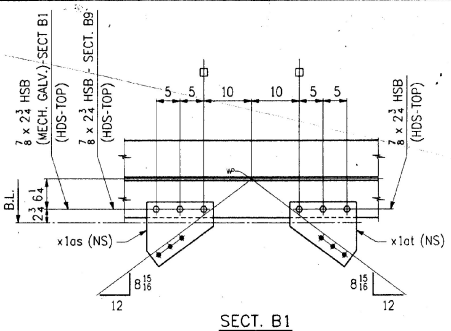
RECEIVED DEC 2 7 1996

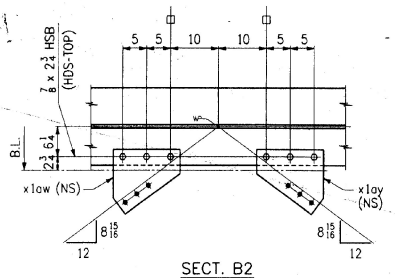
400-9

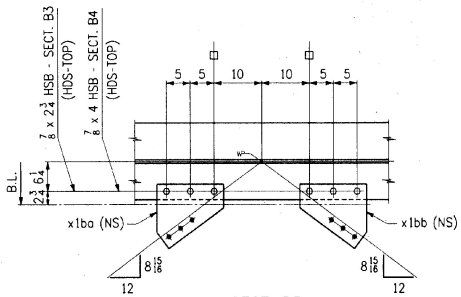
DEC 1 91996

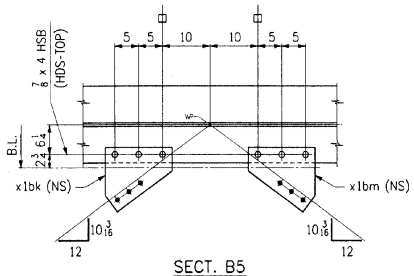
G1A-400

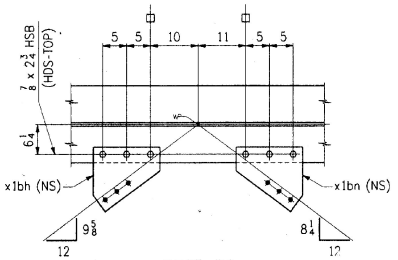












FED./ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G1A	GIRDER					
1	a	PL 62 x 5/8	88	9	(T)	2 3	1521.31
1	b	PL 62 x 5/8	62	0 1/16	(T)	2 2	1072.04
1	c	PL 16 x 15/16	34	9	(T)	2 18	473.70
1	d	PL 16 x 15/16	62	0	(T)	2 17	1014.56
1	f	PL 16 x 1 1/4	11	0	(T)	2 11	198.91
1	g	PL 16 x 2 5/16	26	9	(T)	2 9	518.85
1	h	PL 16 x 1 1/8	16	1 7/16	(T)	2 15	283.14
1	k	PL 16 x 15/16	34	9	(T)	2 18	473.70
1	m	PL 16 x 15/16	61	11 5/8	(T)	2 17	1014.56
1	n	PL 16 x 1 1/4	11	0	(T)	2 11	198.91
1	p	PL 16 x 2 3/16	26	9	(T)	2 9	518.85
1	s	PL 16 x 1 1/8	16	3 3/16	(T)	2 15	296.23
2	x1a	BAR 7 1/2 x 7/8	5	2		3 12	115.58
2	x1b	BAR 7 1/2 x 7/8	5	2		3 12	115.58
6	x1f	BAR 7 1/2 x 1/2	5	2		3 14	65.48
2	x1as	PL 14 x 3/8	1	1 1/2	BENT	3 16	20.40
2	x1at	PL 14 x 3/8	1	1 1/2	BENT	3 16	20.40
2	x1aw	PL 14 x 3/8	1	1 1/2	BENT	3 16	20.40
2	x1ay	PL 14 x 3/8	1	1 1/2	BENT	3 16	20.40
2	x1ba	PL 14 x 3/8	1	1 1/2	BENT	3 16	20.40
2	x1bb	PL 14 x 3/8	1	1 1/2	BENT	3 16	20.40
1	x1bk	PL 14 x 3/8	1	2 1/16	BENT	3 16	21.63
1	x1bm	PL 14 x 3/8	1	2 1/16	BENT	3 16	21.63
1	x1bh	PL 14 x 3/8	1	2 1/4		3 16	23.11
1	x1bn	PL 14 x 3/8	1	1 15/16		3 16	19.82
1	x1g^R	BAR 2 15/16 x 1/4	0	10 7/8		3 19	8.24
1	x1h^R	BAR 4 1/16 x 1/4	0	10 7/8		3 18	5.05
33		7/8 ø H.S. BOLTS	0	2 3/4		B1 2	—
12		7/8 ø H.S. BOLTS	0	4		B1 4	—
45		WASHERS FOR 7/8 ø H.S. BOLTS				B1 5	—
3		7/8 ø H.S. BOLTS	0	2 3/4	A325-3 W/1 A563 GR. DH HEX NUT GALV.	B1 8	—
3		WASHERS FOR 7/8 ø H.S. BOLTS			F436 GALV.	B1 9	—

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 40,795.35#

RECEIVED
CKD BY_____ CKD BY_____
DEC 27 1996
RESUBMIT_____ APPROVED_____
BY DATE

SHOP NOTE
HOLES: 15/16 ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

WORK THIS DWG. WITH DWG. 5

CODE: 30 :

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"; BOLT SPECS.	2-21-96

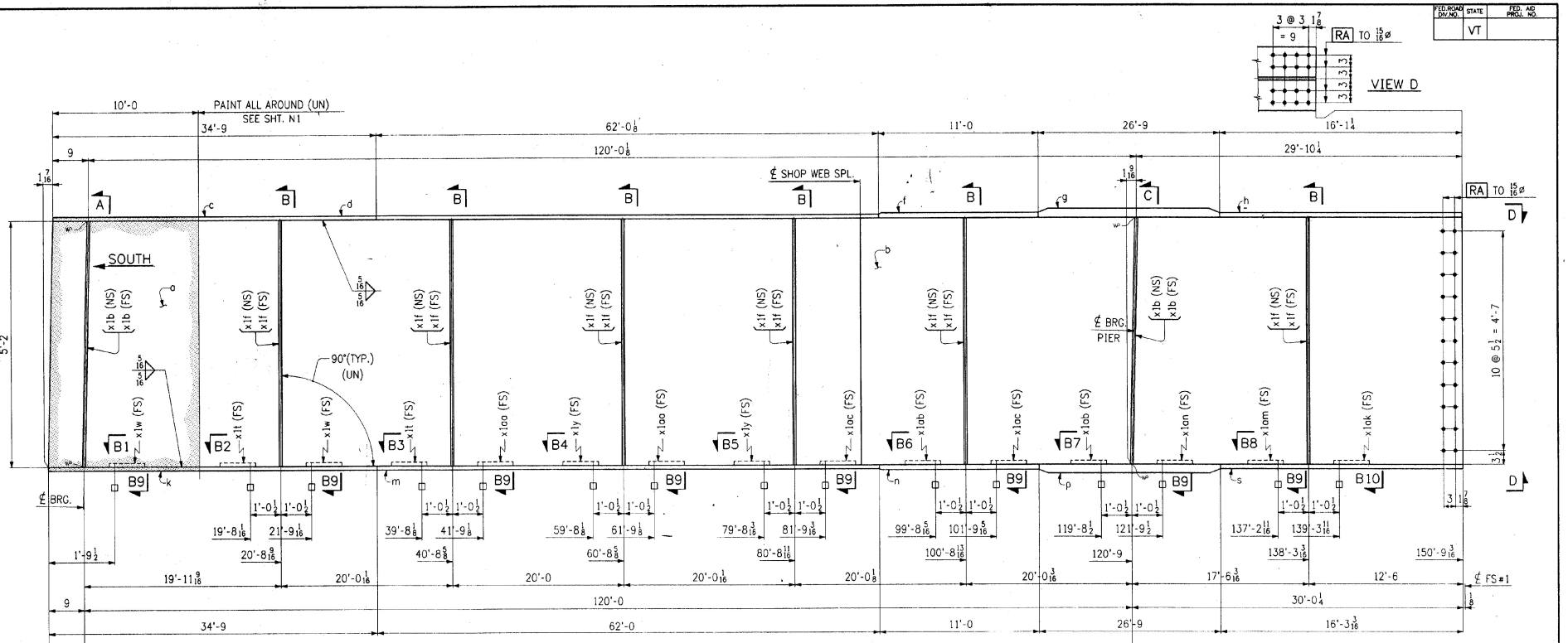
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G1A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

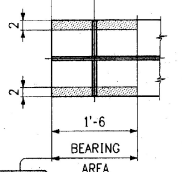
STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 1-31 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 6 OF 24

400-9 G1A-400

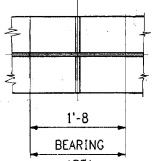
DEC1 91996

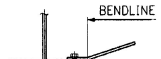


GIRDER ~ MK. G2A

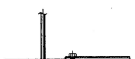


PAINT LIGHT RUST PREVENTIVE COAT OF PRIMER (FS), EDGES & SHADED AREA (NS)





SECT. B9



SECT. B10

RECEIVED
DEC 27 1996

WORK THIS DWG. WITH DWG. 8

CODE: 30

FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

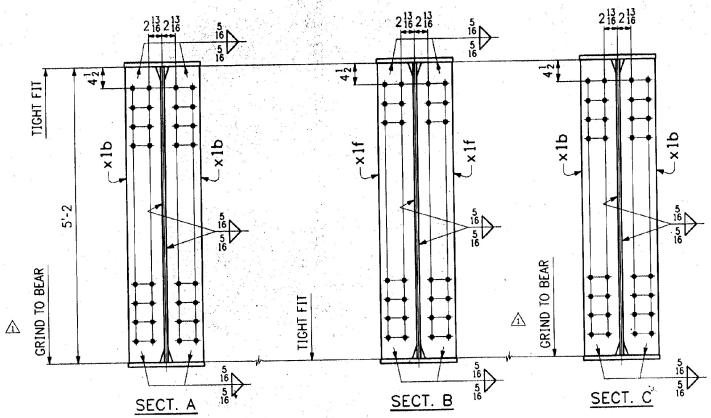
NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

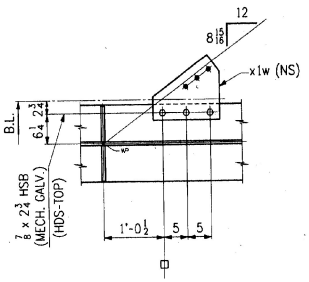
GIRDER	G2A
U.S. ROUTE 7 OVER OTTER CREEK	
BRIDGE NO. 79	
TOWN OF WALLINGFORD, COUNTY OF RUTLAND	
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
STATE CONTRACT OR REF. NO.	PROJECT NO. BRS-0137(13)
CONTRACTOR	J. A. McDONALD, INC.
IN CHARGE: abs	MADE BY: PPP CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER:	VT-95367 DRAWING NUMBER: 7 OF 24

400-9

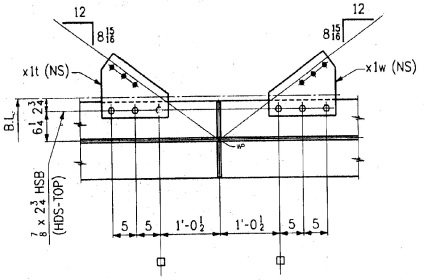
DEC 1 9 1996 G2A-400



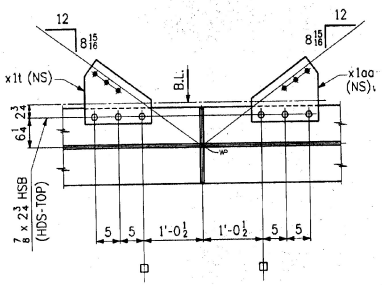
SECT. A SECT. B SECT. C



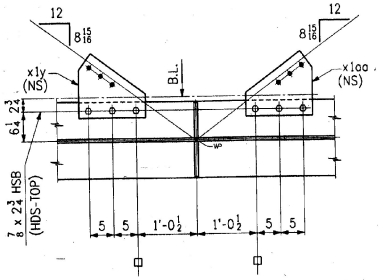
SECT. B1 (DEVELOPED)



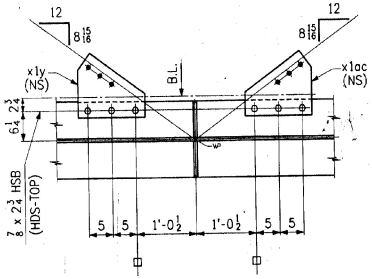
SECT. B2 (DEVELOPED)



SECT. B3 (DEVELOPED)



SECT. B4 (DEVELOPED)



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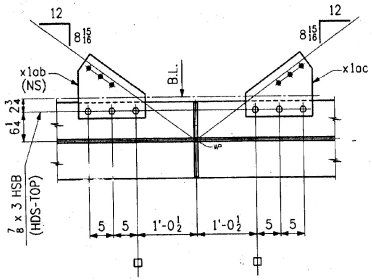
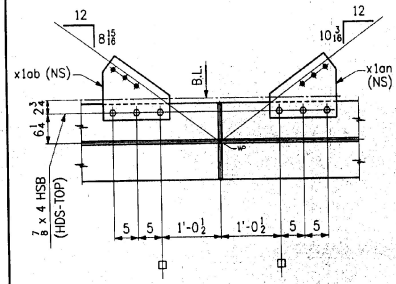
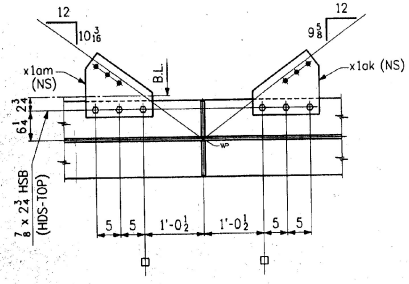


SECT. B6 (DEVELOPED)



SECT. B7 (DEVELOPED)



SECT. B8 (DEVELOPED)

FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G2A	GIRDER					
1	a	PL 62 x 5/8	88	9	(T)	2 3	1702.37
1	b	PL 62 x 3/8	62	0 5/16	(T)	2 2	817.12
1	c	PL 16 x 15/16	34	9	(T)	2 18	1173.70
1	d	PL 16 x 15/16	62	0 1/8	(T)	2 17	2145.12
1	f	PL 16 x 1 1/4	11	0	(T)	2 11	468.61
1	g	PL 16 x 2 1/16	26	9	(T)	2 9	1385.83
1	h	PL 16 x 1 1/8	16	1 1/4	(T)	2 15	496.38
1	k	PL 16 x 15/16	34	9	(T)	2 18	1173.70
1	m	PL 16 x 15/16	62	0	(T)	2 17	2144.38
1	n	PL 16 x 1 1/4	11	0	(T)	2 11	468.61
1	p	PL 16 x 2 3/16	26	9	(T)	2 9	1386.85
1	s	PL 16 x 1 1/8	16	3 3/16	(T)	2 15	496.87
4	x1b	BAR 7½ x ⅞	5	2		3 12	175.38
12	x1f	BAR 7½ x ½	5	2		3 14	467.93
2	x1w	PL 14 x ⅜	1	1½	BENT	3 16	20.19
2	x1t	PL 14 x ⅜	1	1½	BENT	3 16	20.19
2	x1y	PL 14 x ⅜	1	1½	BENT	3 16	20.19
2	x1aa	PL 14 x ⅜	1	1½	BENT	3 16	20.19
2	x1ac	PL 14 x ⅜	1	1½	BENT	3 16	20.19
2	x1ab	PL 14 x ⅜	1	1½	BENT	3 16	20.19
1	x1an	PL 14 x ⅜	1	2 13/16	BENT	3 16	27.26
1	x1am	PL 14 x ⅜	1	2 13/16	BENT	3 16	27.26
1	x1ak	PL 14 x ⅜	1	2¼		3 16	21.82
30		⅞ ø H.S. BOLTS	0	2¾		B1 2	—
6		⅞ ø H.S. BOLTS	0	3		B1 3	—
6		⅞ ø H.S. BOLTS	0	4		B1 4	—
42		WASHERS FOR ⅞ ø H.S. BOLTS				B1 5	—
3		⅞ ø H.S. BOLTS	0	2¾	A325-1 W/ A563 GR. DH HEX NUT GALV.	B1 8	—
3		WASHERS FOR ⅞ ø H.S. BOLTS			F436 GALV.	B1 9	—

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 41,167.46#

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 2 7 1996
RESUBMIT _____ APPROVED _____
BY _____ DATE

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

WORK THIS DWG. WITH DWG. 7

CODE: 30

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"; BOLT SPECS.	2-21-96

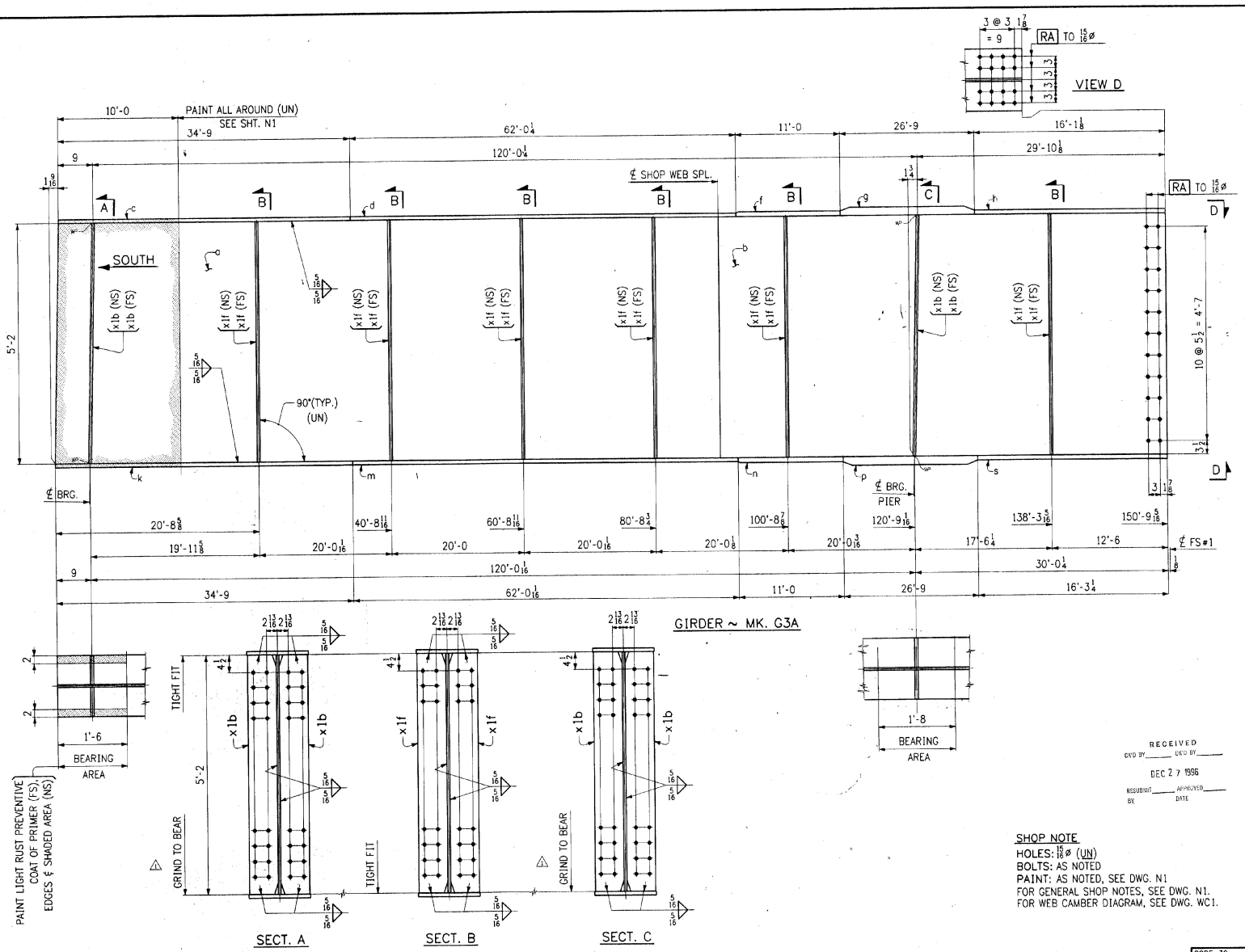
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G2A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-1 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 8 OF 24

400-B

DEC1 91996 G2A-400



FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EA.
ONE	G3A	GIRDER					
1	a	PL 62 x 5/8	88	9	(T)	2 3	1901.25
1	b	PL 62 x 5/8	62	0 15/16	(T)	2 2	1340.16
1	c	PL 16 x 15/16	34	9	(T)	2 18	1773.90
1	d	PL 16 x 15/16	62	0 1/4	(T)	2 17	3141.45
1	f	PL 16 x 1 1/4	11	0	(T)	2 11	748.44
1	g	PL 16 x 2 1/16	26	9	(T)	2 9	1248.93
1	h	PL 16 x 1 1/8	16	1 1/8	(T)	2 15	968.76
1	k	PL 16 x 15/16	34	9	(T)	2 18	1773.90
1	m	PL 16 x 15/16	62	0 1/16	(T)	2 17	3141.45
1	n	PL 16 x 1 1/4	11	0	(T)	2 11	748.44
1	p	PL 16 x 2 1/16	26	9	(T)	2 9	1248.93
1	s	PL 16 x 1 1/8	16	3 1/4	(T)	2 15	996.69
4	x1b	BAR 7 1/2 x 7/8	5	2		3 12	125.38
12	x1f	BAR 7 1/2 x 1/2	5	2		3 14	46.93

TOTAL WEIGHT THIS DWG
ITEM 506.55 = 40,862.81

RECEIVED
CKD BY ____ CKD BY ____
DEC 27 1996
RESUBMIT ____ APPROVED ____
BY DATE

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"	2-21-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, Pa 17601-0008
Phone 717/299-5211
A Division of High Industries, Inc.

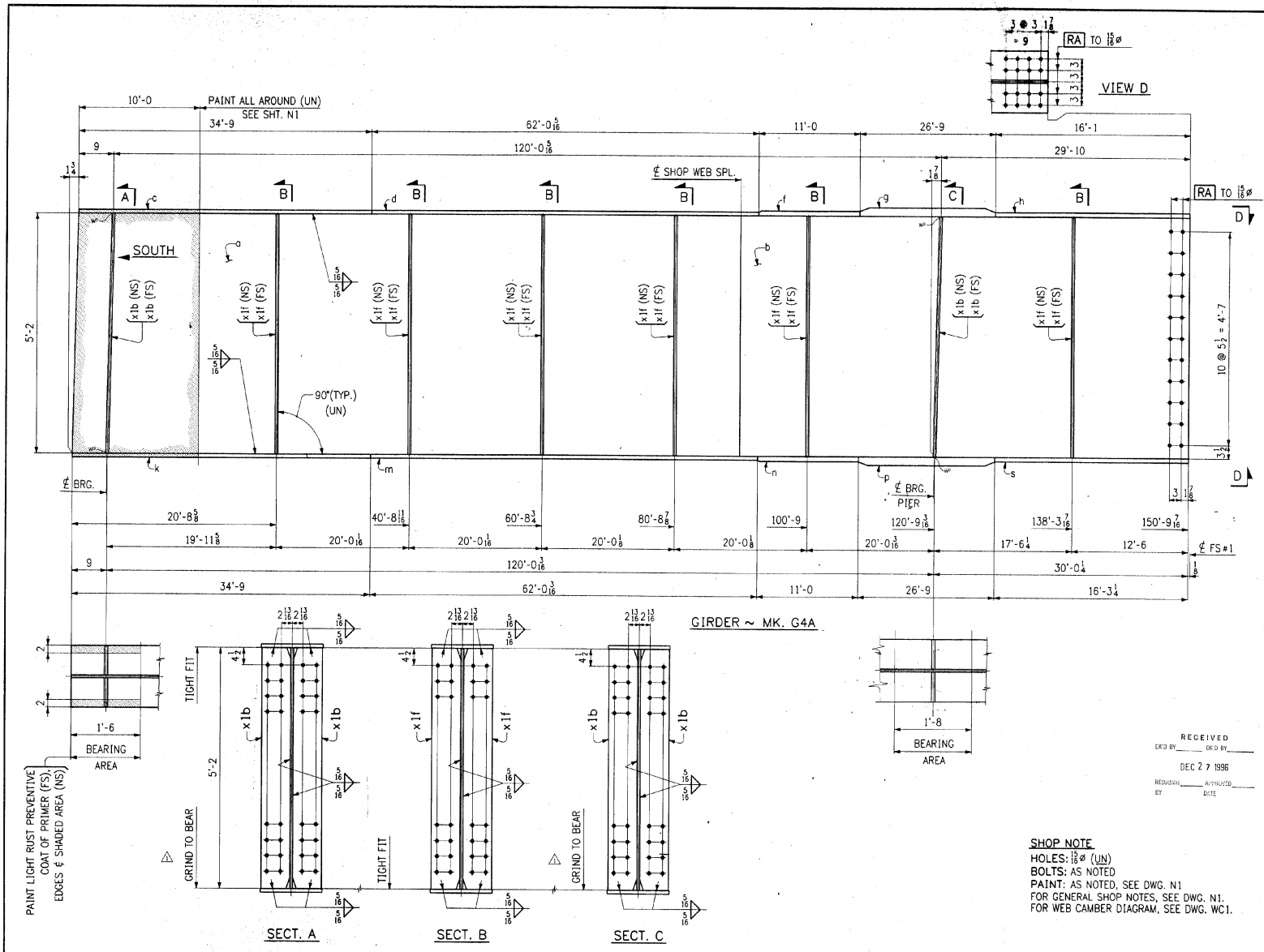
GIRDER G3A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-1 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 9 OF 24

CODE: 30

400-9

G3A-400

DEC1 91996



FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	WEIGHT
ONE	G4A	GIRDER					
1	a	PL 62 x 5/8	88	9	(T)	2 3	1202.97
1	b	PL 62 x 3/8	62	0 7/16	(T)	2 2	851.79
1	c	PL 16 x 13/16	34	9	(T)	2 18	473.10
1	d	PL 16 x 15/16	62	0 5/16	(T)	2 17	1045.31
1	f	PL 16 x 1 1/4	11	0	(T)	2 11	248.81
1	g	PL 16 x 2 3/16	26	9	(T)	2 9	1285.85
1	h	PL 16 x 1 1/8	16	1	(T)	2 15	485.10
1	k	PL 16 x 15/16	34	9	(T)	2 18	773.70
1	m	PL 16 x 15/16	62	0 5/16	(T)	2 17	1045.31
1	n	PL 16 x 1 1/4	11	0	(T)	2 11	248.81
1	p	PL 16 x 2 3/16	26	9	(T)	2 9	1285.85
1	s	PL 16 x 1 1/8	16	3 1/4	(T)	2 15	496.59
4	x1b	BAR 7 1/2 x 7/8	5	2		3 12	105.36
12	x1f	BAR 7 1/2 x 1/2	5	2		3 14	84.48

TOTAL WEIGHT THIS DWG.
ITEM 506.55= 40,564.35#

RECEIVED
DEC 2 7 1996

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"	2-21-96

SHOP NOTE
HOLES: 13/16ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

CODE: 30

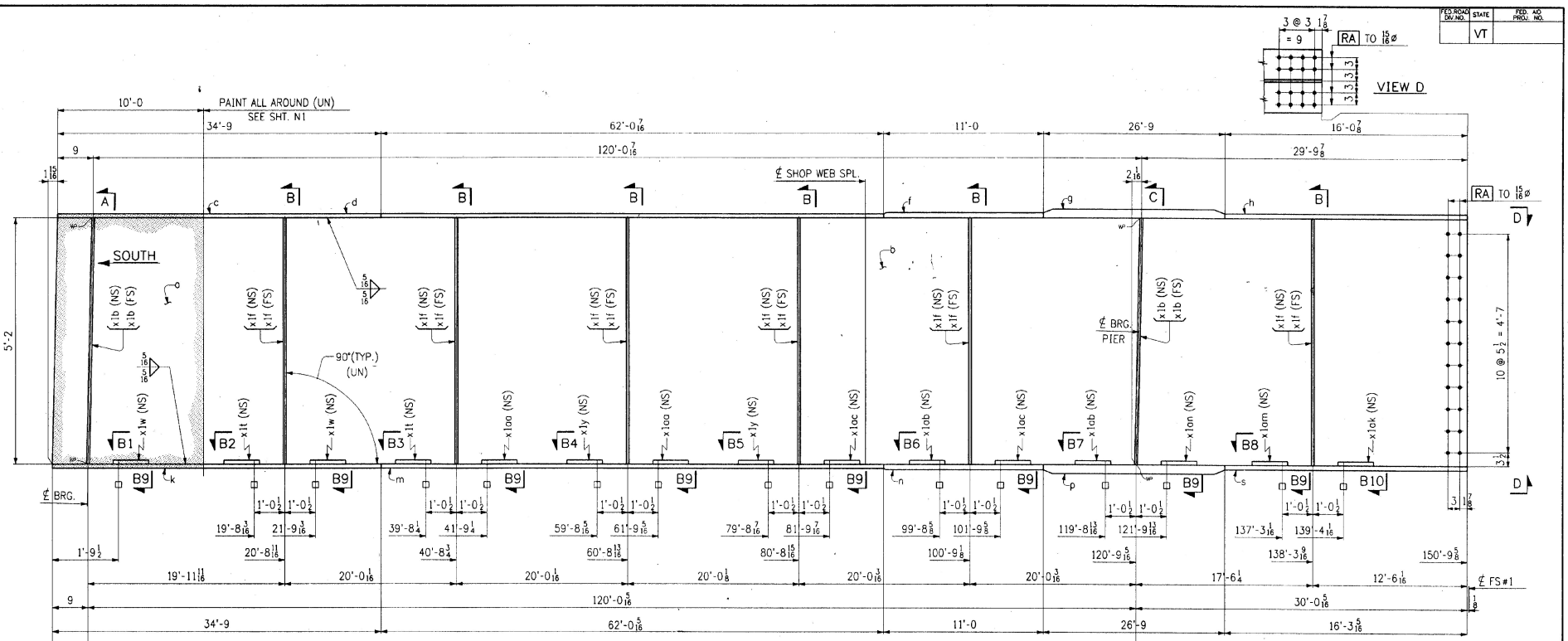
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G4A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-1 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 10 OF 24

DEC 0 1996

400-9



GIRDER ~ MK. G5A

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

RECEIVED
DEC 27 1996

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G5A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

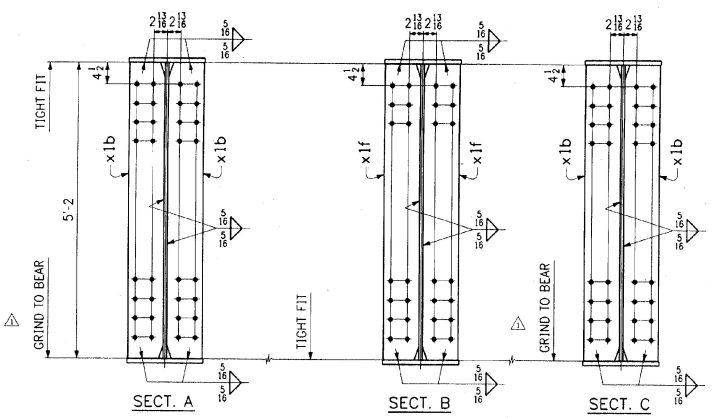
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-1 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 11 OF 24

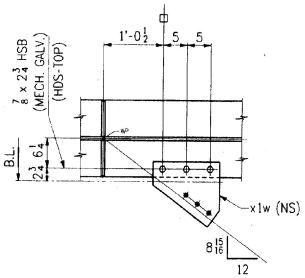
WORK THIS DWG. WITH DWG. 12

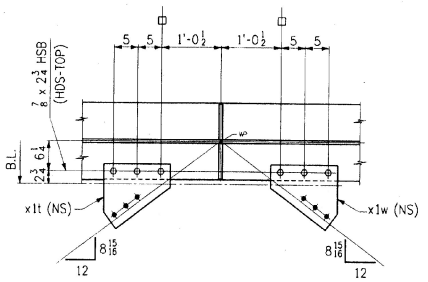
CODE: 30

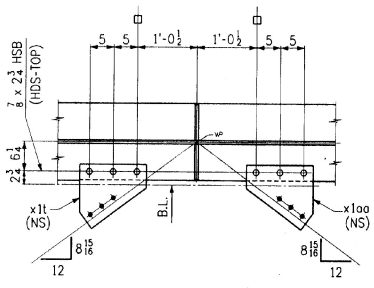
400-9 G5A-400

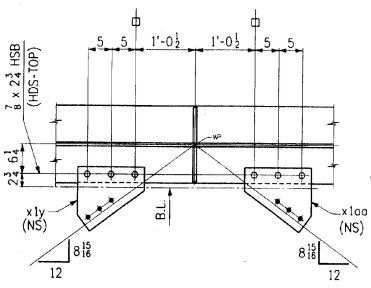
DEC1 9199

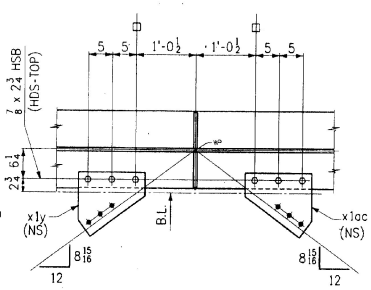


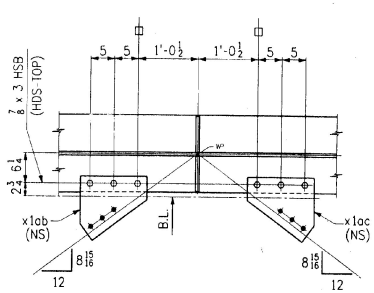


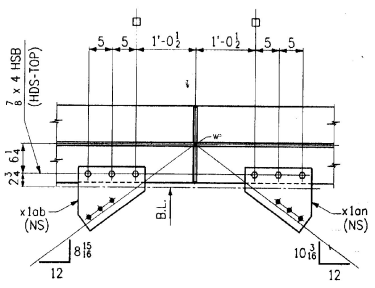


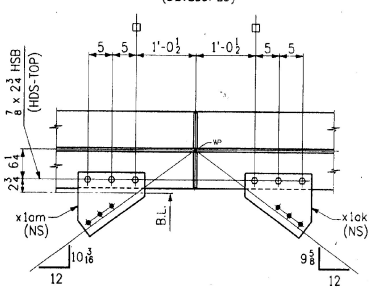












FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	WEIGHT
ONE	G5A	GIRDER					
1	a	PL 62 x 5/8	88	9	(T)	2	3,172.20
1	b	PL 62 x 5/8	62	0 3/8	(T)	2	2,162.15
1	c	PL 16 x 15/16	34	9	(T)	2	1,016.10
1	d	PL 16 x 15/16	62	0 5/16	(T)	2	1,854.69
1	f	PL 16 x 1 1/4	11	0	(T)	2	366.63
1	g	PL 16 x 2 3/16	26	9	(T)	2	865.85
1	h	PL 16 x 1 5/8	16	0 5/8	(T)	2	484.87
1	k	PL 16 x 15/16	34	9	(T)	2	1,111.79
1	m	PL 16 x 15/16	62	0 5/16	(T)	2	2,165.91
1	n	PL 16 x 1 1/4	11	0	(T)	2	366.63
1	p	PL 16 x 2 3/16	26	9	(T)	2	865.85
1	s	PL 16 x 1 5/8	16	3 5/16	(T)	2	496.81
4	x1b	BAR 7 1/2 x 3/8	5	2		3	127.35
12	x1f	BAR 7 1/2 x 1/2	5	2		3	169.93
2	x1w	PL 14 x 3/8	1	1 1/2	BENT	3	20.19
2	x1t	PL 14 x 3/8	1	1 1/2	BENT	3	20.19
2	x1y	PL 14 x 3/8	1	1 1/2	BENT	3	20.19
2	x1ac	PL 14 x 3/8	1	1 1/2	BENT	3	20.19
2	x1ac	PL 14 x 3/8	1	1 1/2	BENT	3	20.19
2	x1ab	PL 14 x 3/8	1	1 1/2	BENT	3	20.19
1	x1an	PL 14 x 3/8	1	2 13/16	BENT	3	21.05
1	x1am	PL 14 x 3/8	1	2 13/16	BENT	3	21.05
1	x1ak	PL 14 x 3/8	1	2 1/4		3	21.27
30		7/8 ø H.S. BOLTS	0	2 3/4		B1	2 —
6		7/8 ø H.S. BOLTS	0	3		B1	3 —
6		7/8 ø H.S. BOLTS	0	4		B1	4 —
42		WASHERS FOR 7/8 ø H.S. BOLTS				B1	5 —
3		7/8 ø H.S. BOLTS	0	2 1/4	A325-1 W/1 A563 DR DH HEX NUT GALV.	B1	8 —
3		WASHERS FOR 7/8 ø H.S. BOLTS			F436 GALV.	B1	9 —

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 41,173.65#

RECEIVED
CKD BY _____ OR I BY _____
DEC 27 1996
REQUEST BY _____ APPROVED _____ DATE

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

WORK THIS DWG. WITH DWG. 11

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"; BOLT SPECS.	2-21-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/295-5211
A Division of High Industries, Inc.

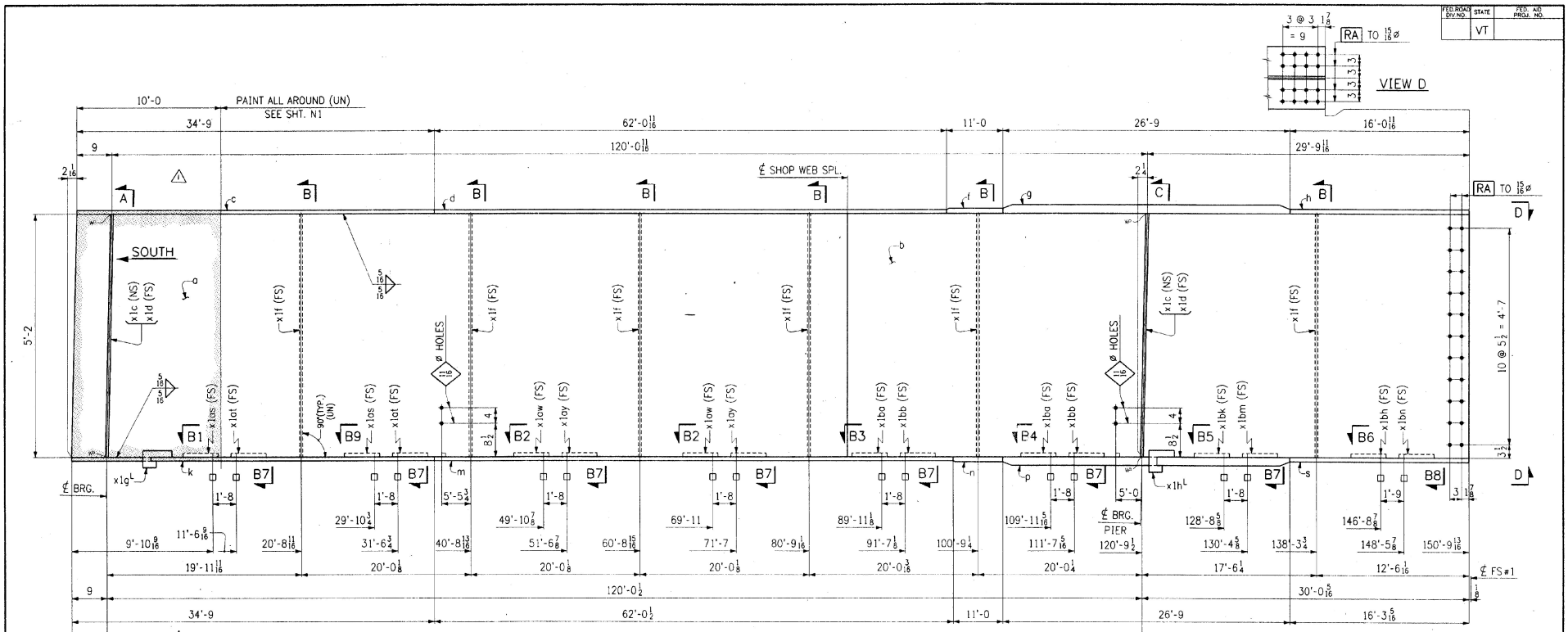
GIRDER G5A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-1 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 12 OF 24

CODE: 30

DEC1 91996

400-9 G5A-400



GIRDER ~ MK. G6A

WORK THIS DWG. WITH DWG. 14

CODE: 30

RECEIVED
DEC 2 2 1996

NO.	REVISION	DATE
1	DELETED SECT. P : DESIGN CHANGE	5-20-96

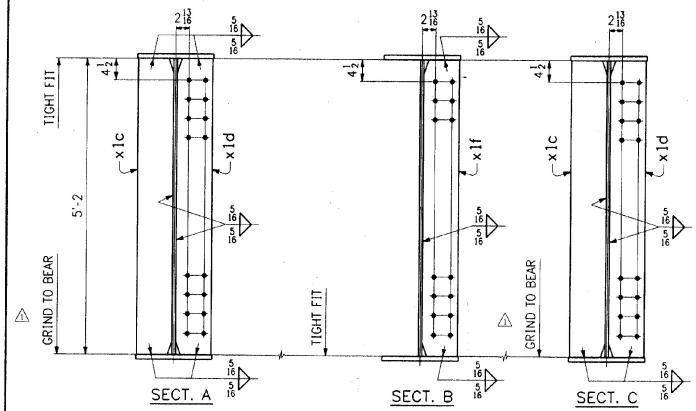
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

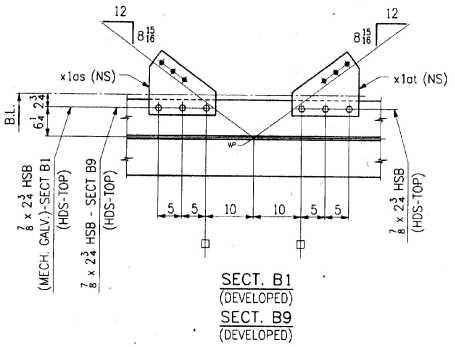
GIRDER G6A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

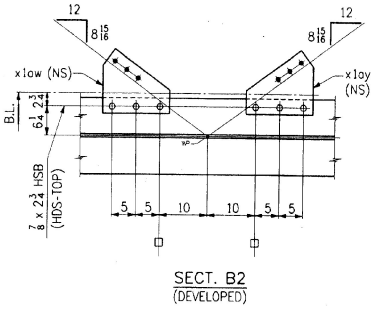
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-1 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 13 OF 24

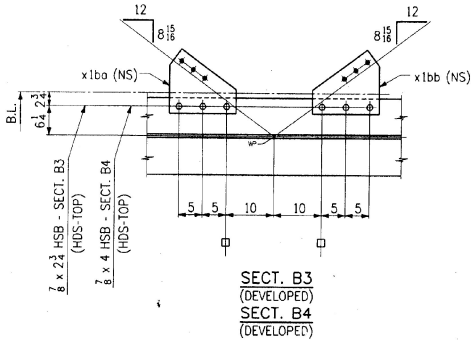
FED. ROAD DIV. NO. | STATE: VT | FED. AID PROJ. NO.

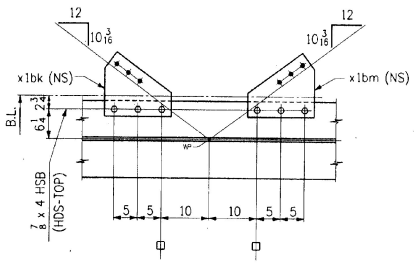
DEC 1 91996

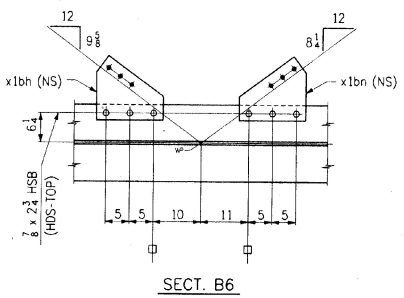












FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHOP WEIGHT
ONE	G6A	GIRDER					
1	a	PL 62 x 5/8	88	9	(T)	2	3,124.37
1	b	PL 62 x 5/8	62	0 13/16	(T)	2	2,198.10
1	c	PL 16 x 15/16	34	9	(T)	2	459.70
1	d	PL 16 x 15/16	62	0 11/16	(T)	2	837.51
1	f	PL 16 x 1 1/4	11	0	(T)	2	198.91
1	g	PL 16 x 2 5/8	26	9	(T)	2	485.55
1	h	PL 16 x 1 1/8	16	0 11/16	(T)	2	282.27
1	k	PL 16 x 15/16	34	9	(T)	2	459.70
1	m	PL 16 x 15/16	62	0 1/2	(T)	2	837.51
1	n	PL 16 x 1 1/4	11	0	(T)	2	198.91
1	p	PL 16 x 2 5/8	26	9	(T)	2	485.55
1	s	PL 16 x 1 5/8	16	3 15/16	(T)	2	284.11
2	x1c	BAR 7 1/2 x 7/8	5	2		3	12
2	x1d	BAR 7 1/2 x 7/8	5	2		3	12
6	x1f	BAR 7 1/2 x 1/2	5	2		3	14
2	x1as	PL 14 x 3/8	1	1 1/2	BENT	3	16
2	x1at	PL 14 x 3/8	1	1 1/2	BENT	3	16
2	x1aw	PL 14 x 3/8	1	1 1/2	BENT	3	16
2	x1ay	PL 14 x 3/8	1	1 1/2	BENT	3	16
2	x1ba	PL 14 x 3/8	1	1 1/2	BENT	3	16
2	x1bb	PL 14 x 3/8	1	1 1/2	BENT	3	16
1	x1bk	PL 14 x 3/8	1	2 1/16	BENT	3	16
1	x1bm	PL 14 x 3/8	1	2 1/16	BENT	3	16
1	x1bh	PL 14 x 3/8	1	2 1/4		3	16
1	x1bn	PL 14 x 3/8	1	1 5/16		3	16
1	x1g'	BAR 2 15/16 x 1/4	0	10 3/8		3	19
1	x1h'	BAR 4 15/16 x 1/4	0	10 3/8		3	18
33		7/8 ø H.S. BOLTS	0	2 3/4		B1	4
12		7/8 ø H.S. BOLTS	0	4		B1	4
45		WASHERS FOR 7/8 ø H.S. BOLTS				B1	5
3		7/8 ø H.S. BOLTS	0	4	A325-1 W/1 A563 GR. DH HEX NUT GALV.	B1	8
3		WASHERS FOR 7/8 ø H.S. BOLTS			F436 GALV.	B1	9

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 40,805.99#

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 2 7 1996
RESUBMIT _____ APPROVED _____
BY DATE

SHOP NOTE
HOLES: 15/16 ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

WORK THIS DWG. WITH DWG. 13

CODE: 30

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"; BOLT SPECS.	2-21-96

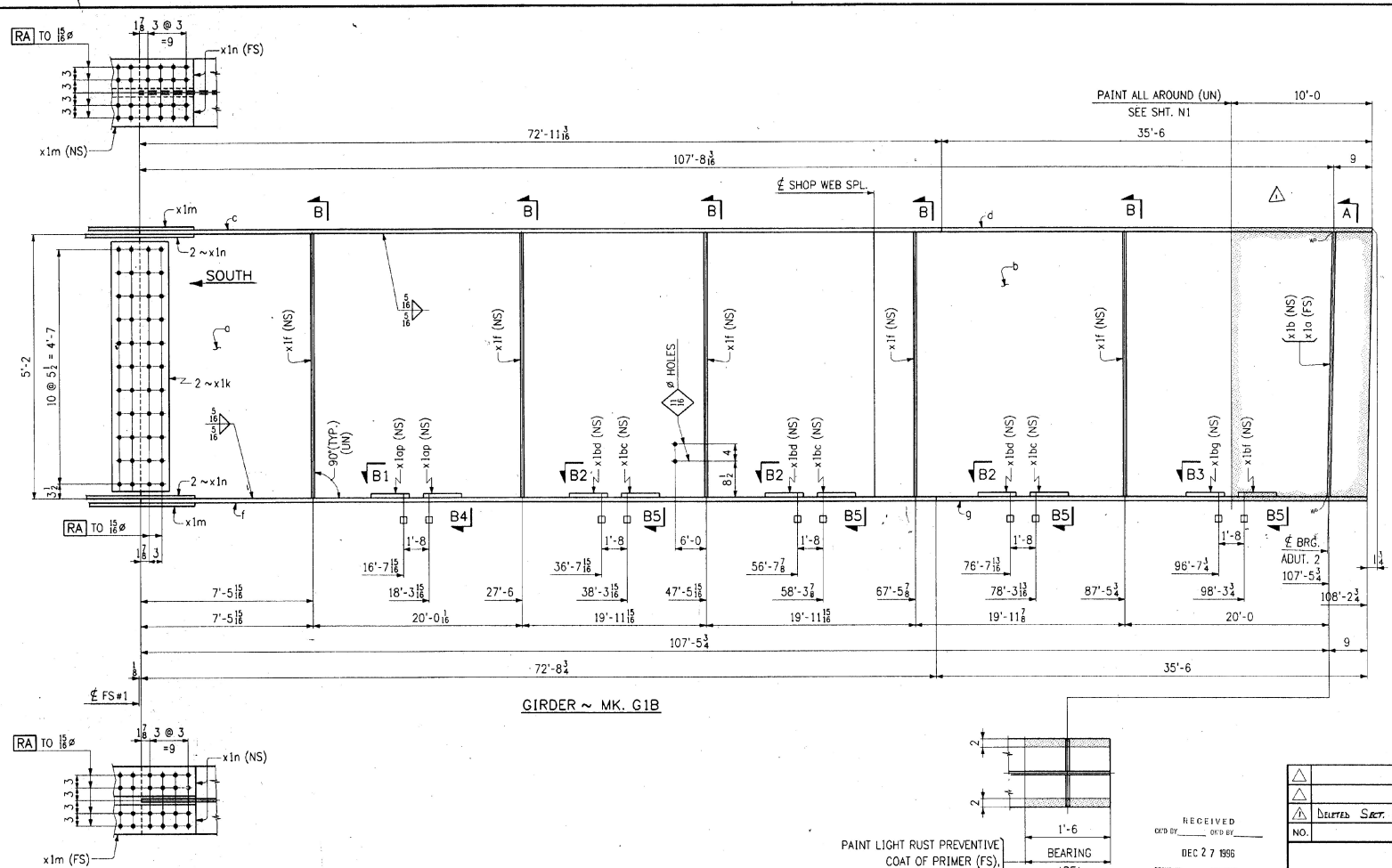
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G6A
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-1 CHK'D BY: LD DATE: 2-2-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 14 OF 24

400-9 GBSA-400

DEC1 91996



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 27 1996
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

NO.	REVISION	DATE
1	DELETED SECT. P : DESIGN CHANGE	5-20-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G1B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

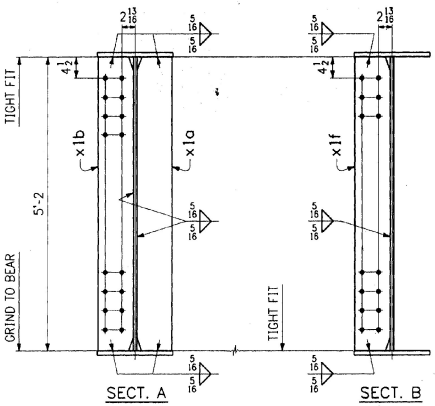
STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-2 CHK'D BY: LD DATE: 2-3-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 15 OF 24

WORK THIS DWG. WITH DWG. 16

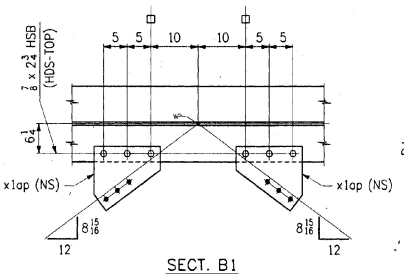
CODE: 30

400-9 G1B-400

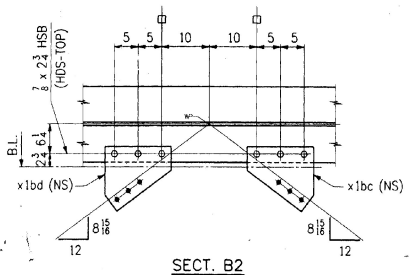
DEC 1 91996



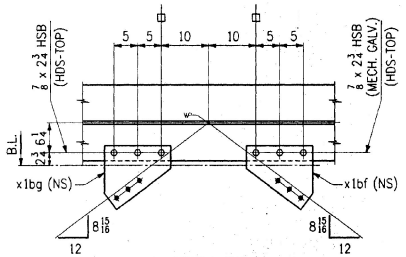
SECT. A SECT. B



SECT. B1



SECT. B2
(DEVELOPED)



SECT. B3
(DEVELOPED)

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHOP WEIGHT
ONE	G1B	GIRDER					
1	a	PL 62 x 5/8	65	6 7/16	(T)	2/4	1441.40
1	b	PL 62 x 5/8	42	10 3/4	(T)	2/5	1034.10
1	c	PL 16 x 1 1/8	72	11 3/16	(T)	2/13	1441.10
1	d	PL 16 x 1 1/8	35	6	(T)	2/14	474.38
1	f	PL 16 x 1 1/8	72	8 3/4	(T)	2/13	1752.80
1	g	PL 16 x 1 1/8	35	6	(T)	2/14	474.38
2	x1k	PL 5/8 x 5/16	1	1	(T)	3/6	130.27
2	x1m	PL 16 x 5/8	2	1	(T)	3/4	30.49
4	x1n	BAR 7 x 3/4	2	1	(T)	3/2	37.72
1	x1a	BAR 7 1/2 x 7/8	5	2		3/12	115.38
1	x1b	BAR 7 1/2 x 7/8	5	2		3/12	115.38
5	x1f	BAR 7 1/2 x 1/2	5	2		3/14	165.33
2	x1ap	PL 14 x 3/8	1	1 1/2		3/16	32.10
3	x1bd	PL 14 x 3/8	1	1 1/2	BENT	3/16	32.10
3	x1bc	PL 14 x 3/8	1	1 1/2	BENT	3/16	32.10
1	x1bg	PL 14 x 3/8	1	1 1/2	BENT	3/16	32.10
1	x1bf	PL 14 x 3/8	1	1 1/2	BENT	3/16	32.10
27		7/8 ø H.S. BOLTS	0	2 3/4		B1/2	—
27		WASHERS FOR 7/8 ø H.S. BOLTS				B1/5	—
3		7/8 ø H.S. BOLTS	0	2 3/4	A325-1 W/1 A563 GR. DH HEX. NUT GALV.	B1/8	—
3		WASHERS FOR 7/8 ø H.S. BOLTS			F436 GALV.	B1/9	—

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 28,860.75 #

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 27 1996
RESUBMIT _____ APPROVED _____
BY DATE

SHOP NOTE
HOLES: 15/16 ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

WORK THIS DWG. WITH DWG. 15

CODE: 30

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"; BOLT SPECS.	2-21-96

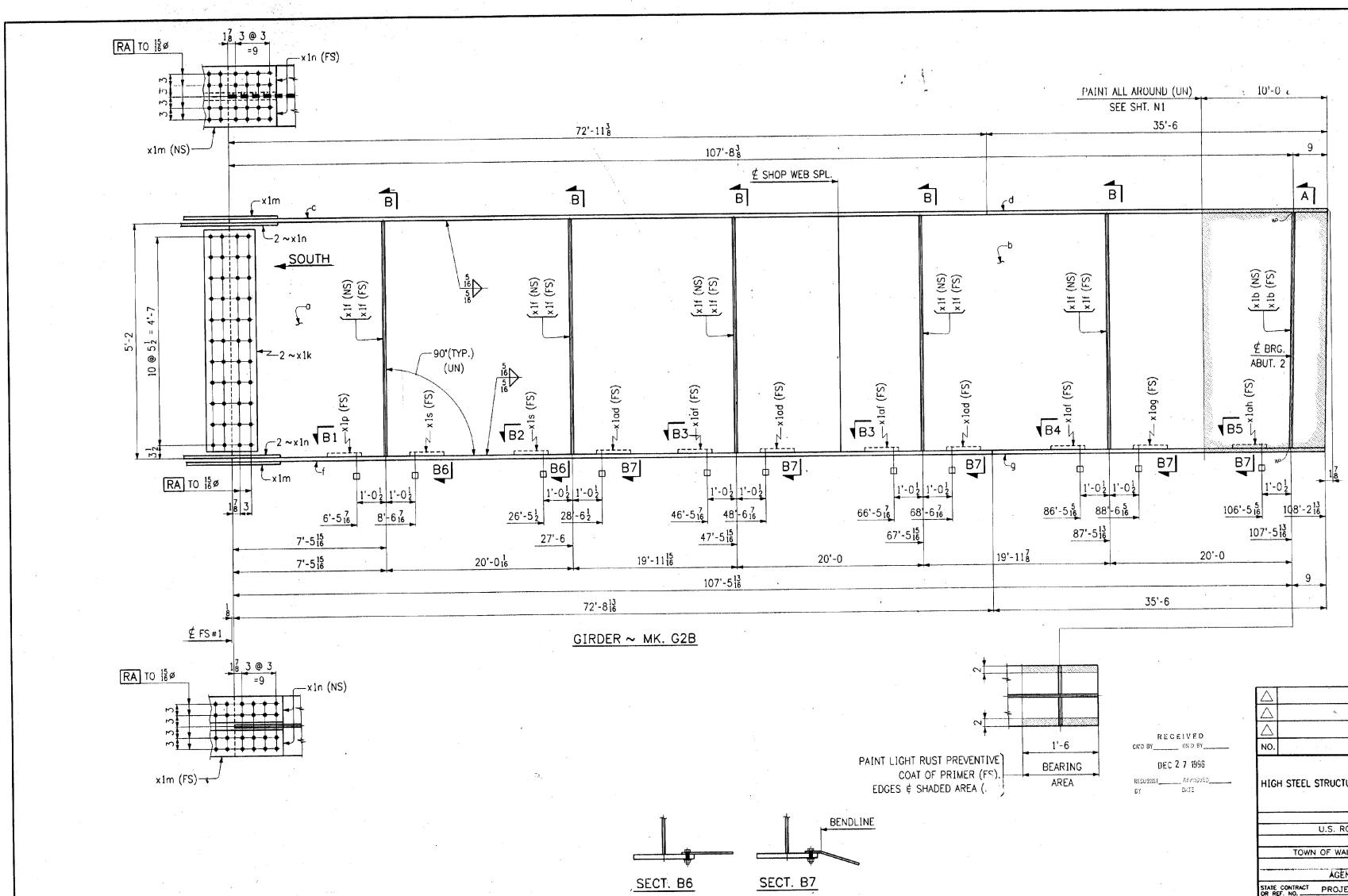
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G1B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-2 CHK'D BY: LD DATE: 2-3-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 16 OF 24

400-9 G1B-400

DEC 1 9 1996



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

RECEIVED
CK'D BY ____ CK'D BY ____
DEC 27 1996
RESUBMIT ____ APPROVED ____
BY ____ DATE ____

WORK THIS DWG. WITH DWG. 18

NO.	REVISION	DATE
△		
△		
△		

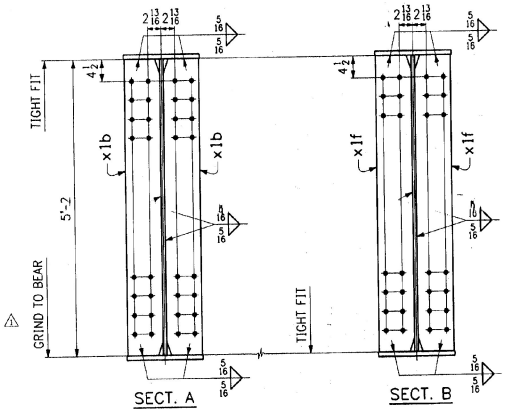
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G2B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

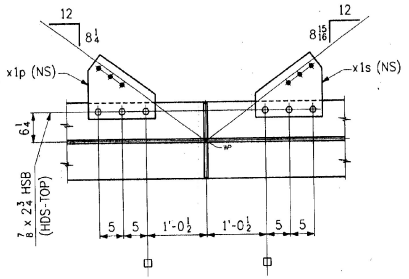
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-2 CHK'D BY: LD DATE: 2-3-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 17 OF 24

CODE: 30

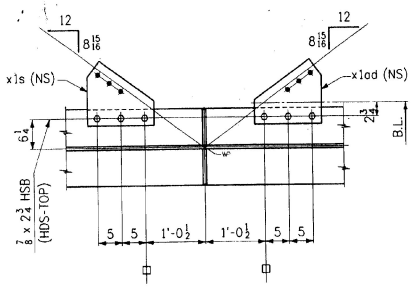
400-9 DEC 1 9 1996 G2B-400



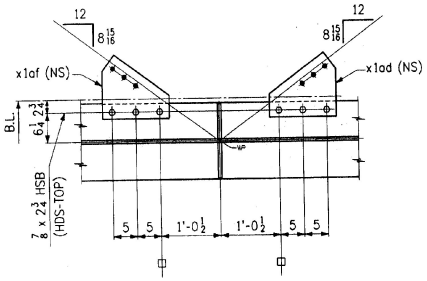
SECT. A SECT. B



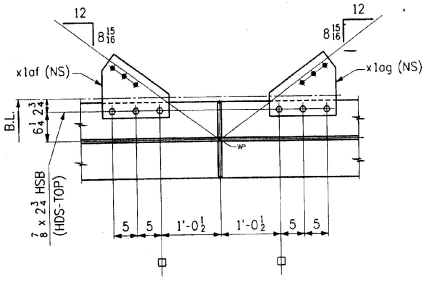
SECT. B1



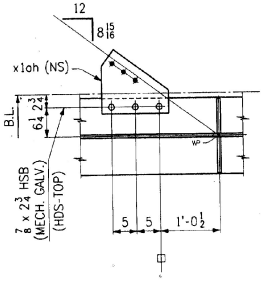
SECT. B2
(DEVELOPED) FOR x1ad ONLY



SECT. B3
(DEVELOPED)



SECT. B4
(DEVELOPED)



SECT. B5
(DEVELOPED)

FED. ROAD DIV. NO. | STATE: VT | FED. AID PROJ. NO.

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	WEIGHT EA.
ONE	G2B	GIRDER					22615.5#
1	a	PL 62 x 5/8	65	6 1/2	(T)	2 4	1012.19
1	b	PL 62 x 5/8	42	10 7/8	(T)	2 5	1657.34
1	c	PL 16 x 1 1/8	72	11 1/8	(T)	2 13	1148.06
1	d	PL 16 x 1 1/8	35	6	(T)	2 14	414.36
1	f	PL 16 x 1 1/8	72	8 15/16	(T)	2 13	1429.98
1	g	PL 16 x 1 1/8	35	6	(T)	2 14	414.36
2	x1k	PL 58 x 5/16	1	1	(T)	3 6	30.47
2	x1m	PL 16 x 5/8	2	1	(T)	3 4	20.89
4	x1n	BAR 7 x 1/2	2	1	(T)	3 2	37.21
2	x1b	BAR 7 1/2 x 7/8	5	2		3 12	65.36
10	x1f	BAR 7 1/2 x 1/2	5	2		3 14	65.36
1	x1p	PL 14 x 3/8	1	0 7/8		3 16	10.80
2	x1s	PL 14 x 3/8	1	1 1/2		3 16	32.40
3	x1ad	PL 14 x 3/8	1	1 1/2	BENT	3 16	32.40
3	x1af	PL 14 x 3/8	1	1 1/2	BENT	3 16	32.40
1	x1ag	PL 14 x 3/8	1	1 1/2	BENT	3 16	32.40
1	x1ah	PL 14 x 3/8	1	1 1/2	BENT	3 16	32.40
30		7/8 ø H.S. BOLTS	0	2 3/4		B1 2	—
30		WASHERS FOR 7/8 ø H.S. BOLTS				B1 5	—
3		7/8 ø H.S. BOLTS	0	2 3/4	A325-1 W/1 A563 GR. DH HEX NUT GALV.	B1 8	—
3		WASHERS FOR 7/8 ø H.S. BOLTS F436 GALV.				B1 9	—

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 29,212.55#

RECEIVED
CK'D BY_____ CK'D BY_____
DEC 27 1996
RESUBMIT_____ APPROVED_____
BY DATE

SHOP NOTE
HOLES: 15/16 ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

WORK THIS DWG. WITH DWG. 17

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"; BOLT SPECS.	2-21-96

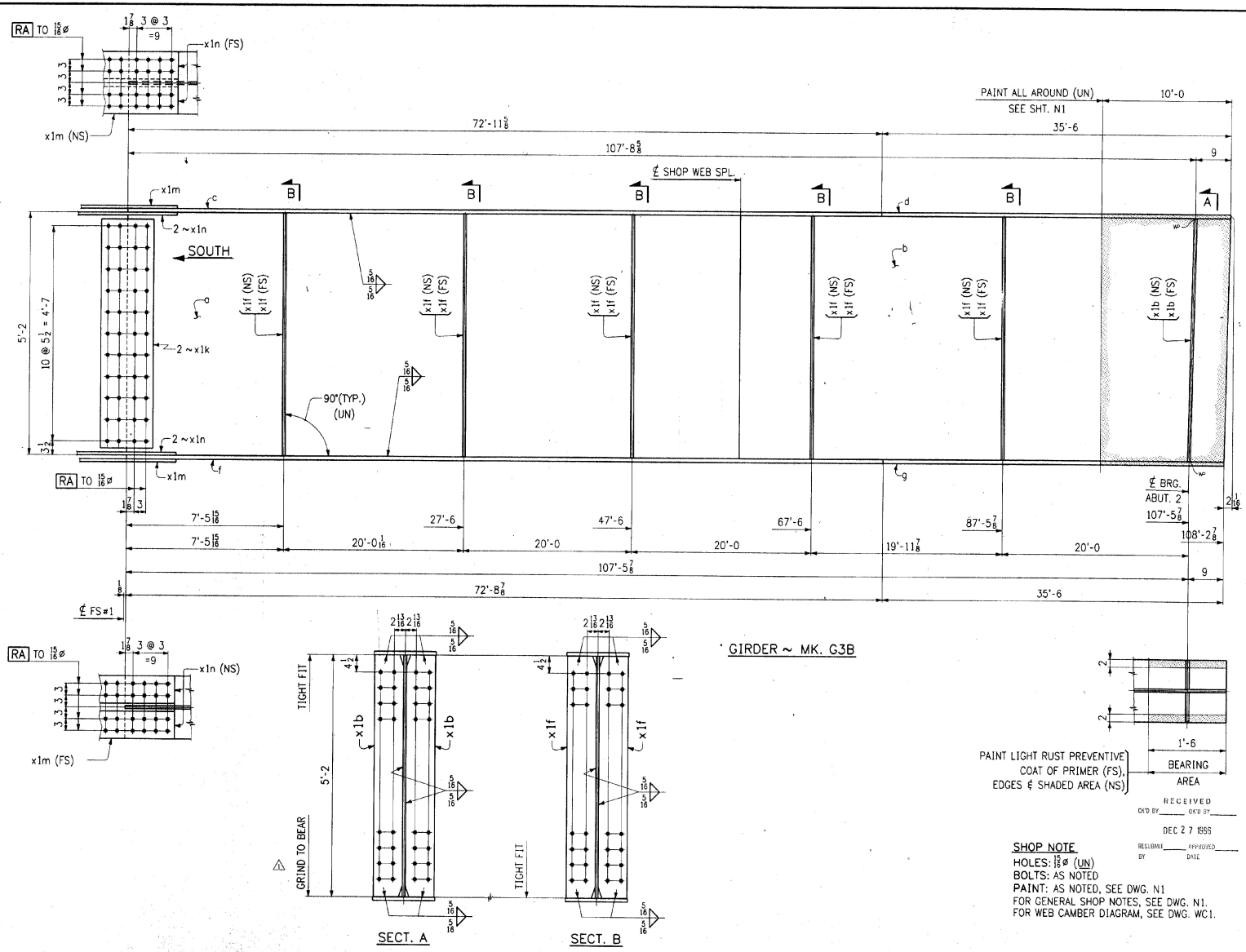
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G2B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-2 CHK'D BY: LD DATE: 2-3-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 18 OF 24

CODE: 30
400-9
G2B-400

DEC1 91996



FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G3B	GIRDER					506.55
1	a	PL 62 x 5/8	65	5 9/16	(T)	2 4	506.55
1	b	PL 62 x 3/8	42	11 13/16	(T)	2 5	506.55
1	c	PL 16 x 1 1/8	72	11 5/8	(T)	2 13	506.55
1	d	PL 16 x 1 1/8	35	6	(T)	2 14	506.55
1	f	PL 16 x 1 1/8	72	8 7/8	(T)	2 3	506.55
1	g	PL 16 x 1 1/8	35	6	(T)	2 14	506.55
2	x1k	PL 58 x 9/16	1	1	(T)	3 6	506.55
2	x1m	PL 16 x 5/8	2	1	(T)	3 4	506.55
4	x1n	BAR 7 x 3/4	2	1	(T)	3 2	506.55
2	x1b	BAR 7 1/2 x 7/8	5	2		3 12	506.55
10	x1f	BAR 7 1/2 x 1/2	5	2		3 14	506.55

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 28,997.10 #

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 27 1995
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

CODE: 30

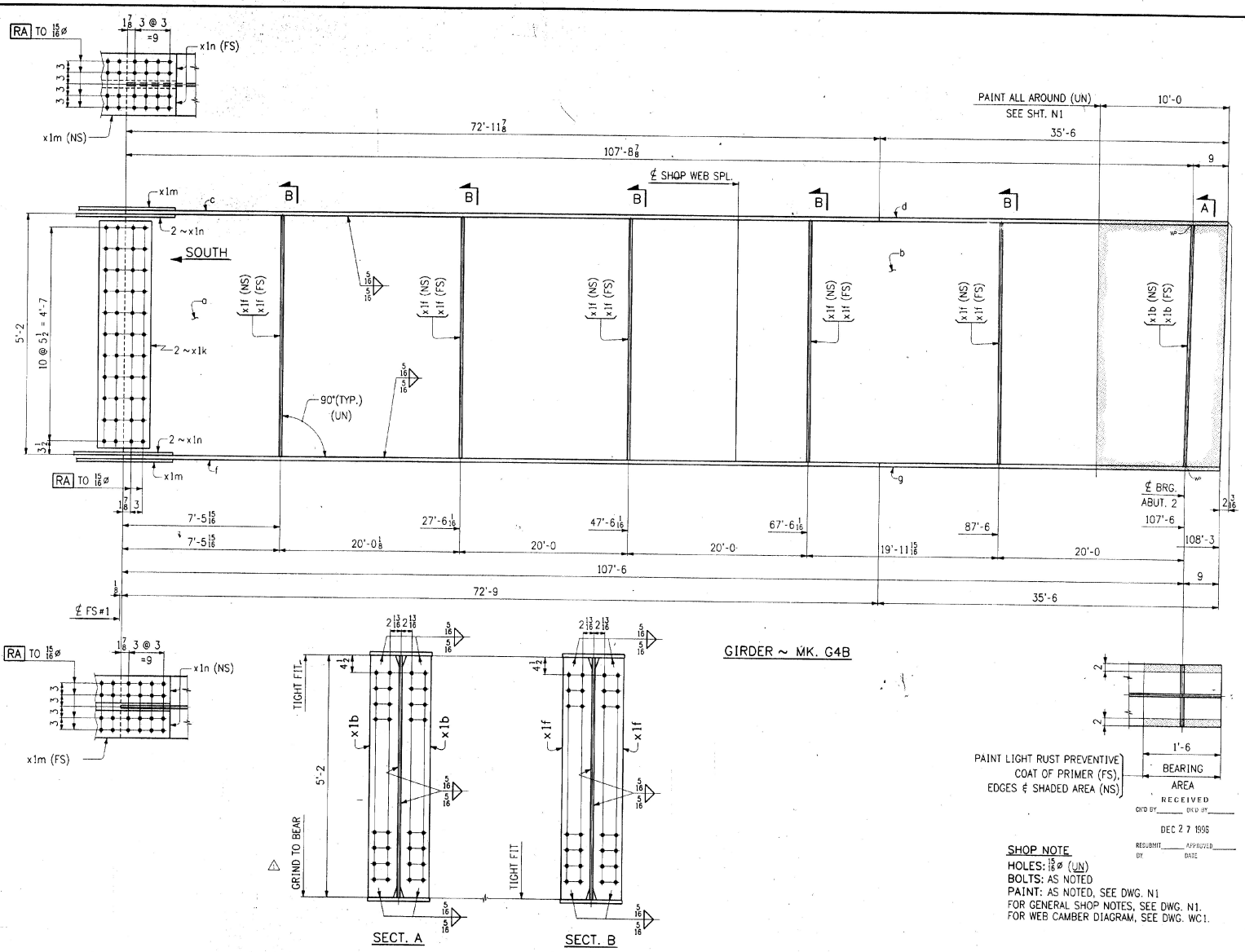
NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"	2-21-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G3B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-3 CHK'D BY: LD DATE: 2-3-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 19 OF 24

400-9

DEC 1 91996



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	GROUP WEIGHT
ONE	G4B	GIRDER					
1	a	PL 62 x 5/8	65	6 11/16	(T)	2 4	4 @ 44.23
1	b	PL 62 x 5/8	42	11 7/16	(T)	2 5	5 @ 40.06
1	c	PL 16 x 1 1/8	72	11 7/8	(T)	2 13	13 @ 170.91
1	d	PL 16 x 1 1/8	35	6	(T)	2 14	14 @ 94.38
1	f	PL 16 x 1 1/8	72	9	(T)	2 13	13 @ 155.59
1	g	PL 16 x 1 1/8	35	6	(T)	2 14	14 @ 94.38
2	x1k	PL 5/8 x 5/16	1	1	(T)	3 6	6 @ 1.27
2	x1m	PL 16 x 5/8	2	1	(T)	3 4	4 @ 0.89
4	x1n	BAR 7 x 3/4	2	1	(T)	3 2	2 @ 2.22
2	x1b	BAR 7 1/2 x 2/16	5	2		3 12	12 @ 3.8
10	x1f	BAR 7 1/2 x 1/2	5	2		3 14	14 @ 6.8

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 29,001.75#

SHOP NOTE
HOLES: 15/16ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

RECEIVED
DEC 2 7 1995
CK'D BY ____ DWG BY ____
RESUBMIT ____ APPROVED ____
BY DATE

CODE: 30

NO.	REVISION	DATE
△		
△		
1	CHANGED "MILL" TO "GRIND"	2-21-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

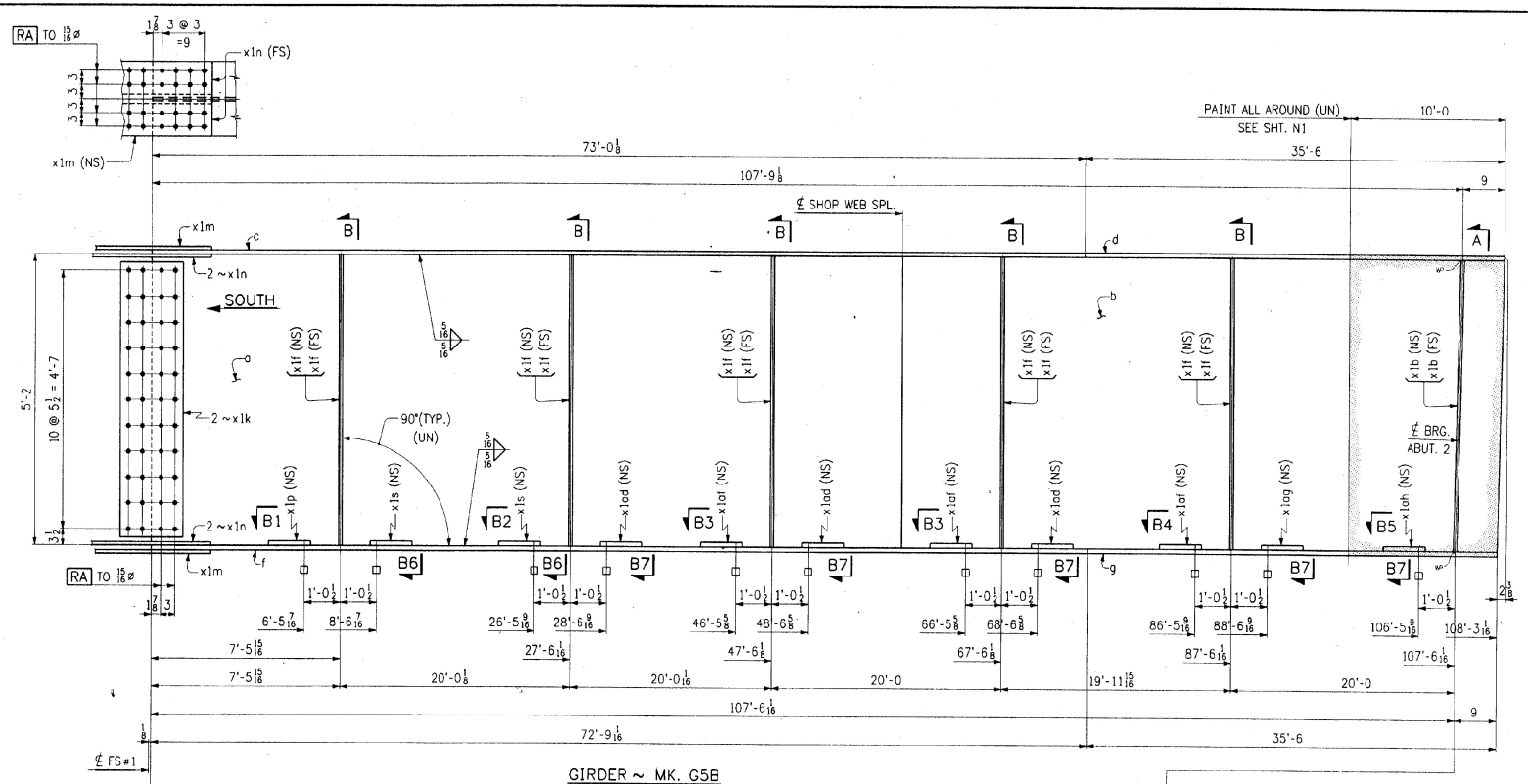
GIRDER G4B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 2-3 CHK'D BY: LD DATE: 2-3-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 20 OF 24

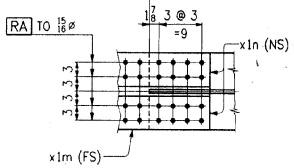
400-9 G4B-400

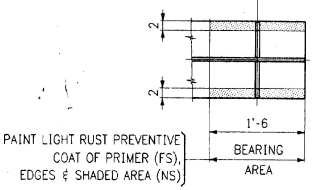
DEC1 91996

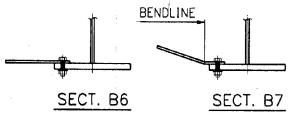
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	



GIRDER ~ MK. G5B







RECEIVED
CK'D BY _____ GR'D BY _____
DEC 27 1996
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

WORK THIS DWG. WITH DWG. 18

CODE: 30

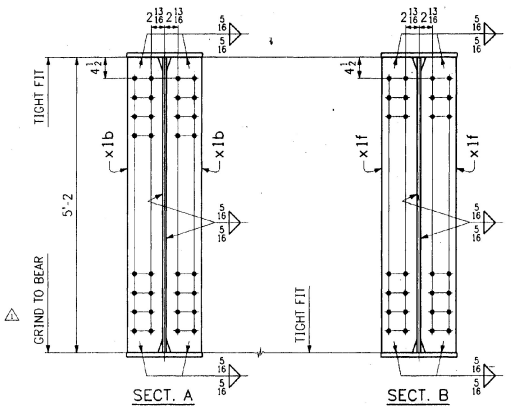
NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

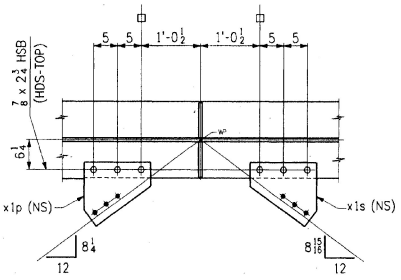
GIRDER	G5B
U.S. ROUTE 7 OVER OTTER CREEK	
BRIDGE NO. 79	
TOWN OF WALLINGFORD, COUNTY OF RUTLAND	
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)	
CONTRACTOR J. A. McDONALD, INC.	
IN CHARGE: abs	MADE BY: PPF 2-3 CHK'D BY: LD DATE: 2-5-96
CONTRACT NUMBER: VT-95367	DRAWING NUMBER: 21 OF 24

400-9 G5B-400

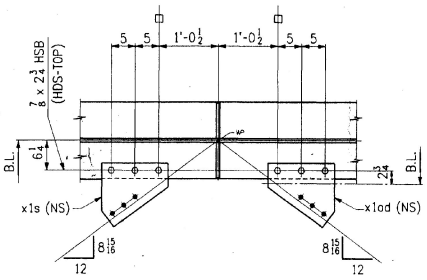
DEC 1 91996



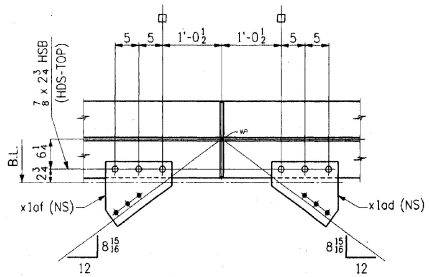
SECT. A SECT. B



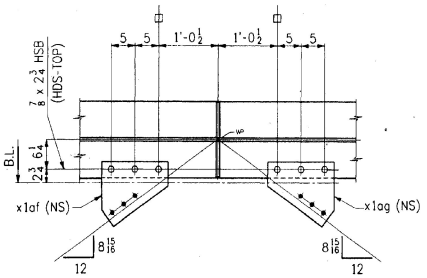
SECT. B1



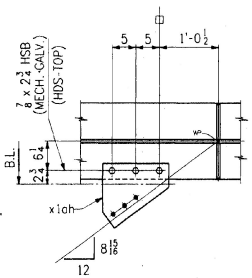
SECT. B2
(DEVELOPED FOR x1ad ONLY)



SECT. B3
(DEVELOPED)



SECT. B4
(DEVELOPED)



SECT. B5

					FED.ROAD DIV.NO.	STATE / FED. AID PROJ. NO.
						VT

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G5B	GIRDER					
1	a	PL 62 x 5/8	65	6 1/4	(T)	2/4	1024.78
1	b	PL 62 x 5/8	42	11 1/8	(T)	2/5	1048.01
1	c	PL 16 x 1 1/8	73	0 1/8	(T)	2/13	1047.89
1	d	PL 16 x 1 1/8	35	6	(T)	2/14	1024.36
1	f	PL 16 x 1 1/8	72	9 1/16	(T)	2/13	1046.36
1	g	PL 16 x 1 1/8	35	6	(T)	2/14	1024.36
2	x1k	PL 58 x 9/16	1	1	(T)	3/6	128.47
2	x1m	PL 16 x 5/8	2	1	(T)	3/4	70.89
4	x1n	BAR 7 x 1/2	2	1	(T)	3/2	93.32
2	x1b	BAR 7 1/2 x 7/8	5	2		3/12	115.36
10	x1f	BAR 7 1/2 x 1/2	5	2		3/14	192.43
1	x1p	PL 14 x 3/8	1	0 3/8		3/16	18.18
2	x1s	PL 14 x 3/8	1	1 1/2		3/16	32.10
3	x1ad	PL 14 x 3/8	1	1 1/2	BENT	3/16	32.10
3	x1af	PL 14 x 3/8	1	1 1/2	BENT	3/16	32.10
1	x1ag	PL 14 x 3/8	1	1 1/2	BENT	3/16	32.10
1	x1ah	PL 14 x 3/8	1	1 1/2	BENT	3/16	10.70
30		7/8 ø H.S. BOLTS	0	2 3/4		B1/2	—
30		WASHERS FOR 7/8 ø H.S. BOLTS				B1/5	—
3		7/8 ø H.S. BOLTS	0	2 3/4	A325-1 W/1 A563 GR. DH HEX NUT GALV.	B1/8	—
3		WASHERS FOR 7/8 ø H.S. BOLTS			F436 GALV.	B1/9	—

TOTAL WEIGHT THIS DWG.
ITEM 506.55 = 29,225.28#

RECEIVED
CK'D BY _____ CK'D BY _____
DEC 2 7 1996
REQUEST _____ APPROVED _____
BY DATE

SHOP NOTE
HOLES: 15/16 ø (UN)
BOLTS: AS NOTED
PAINT: AS NOTED, SEE DWG. N1
FOR GENERAL SHOP NOTES, SEE DWG. N1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.

WORK THIS DWG. WITH DWG. 21

CODE: 30

NO.	REVISION	DATE
1	CHANGED "MILL" TO "GRIND"; BOLT SPECS.	2-21-96

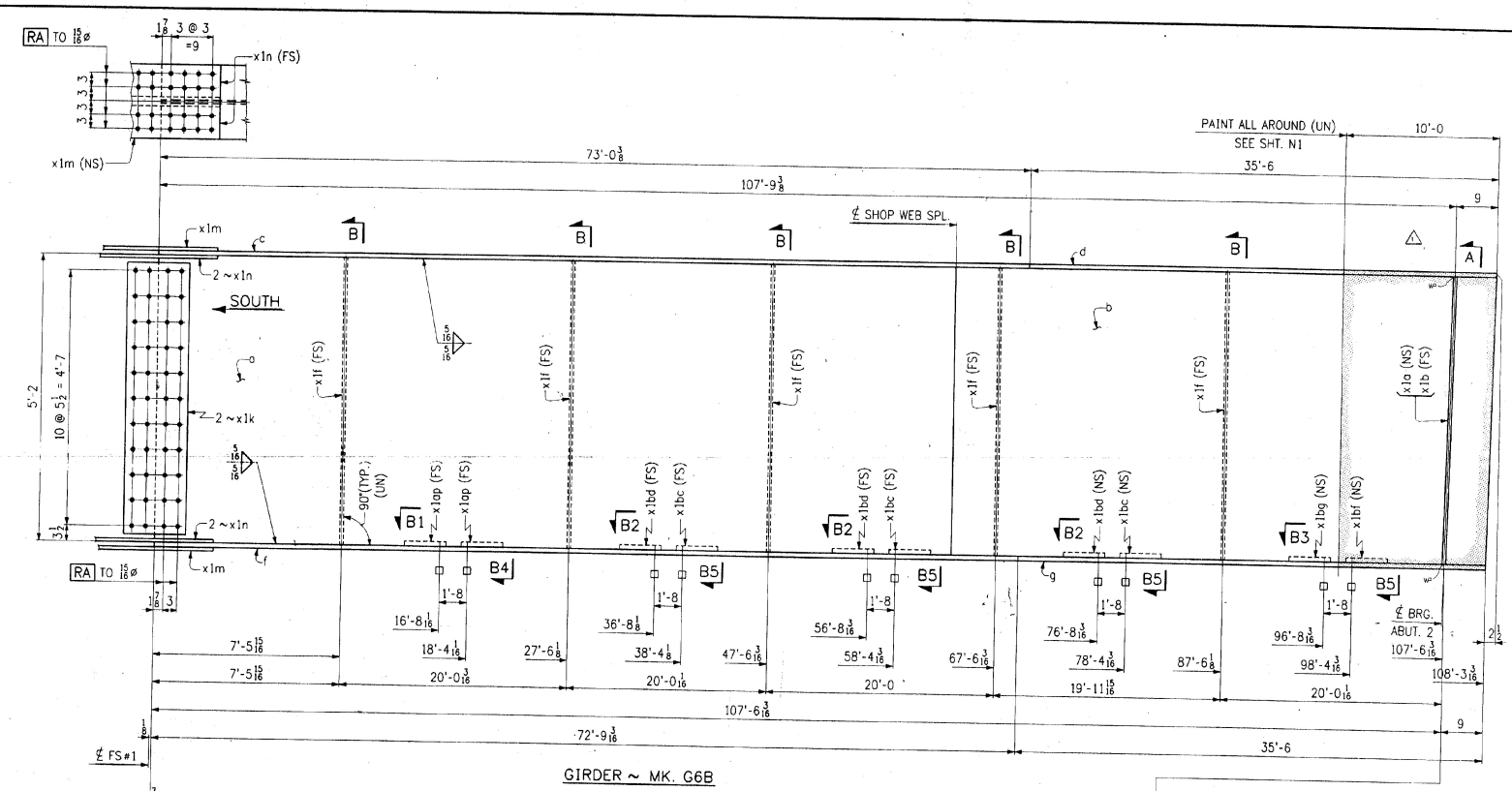
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/290-5211
A Division of High Industries, Inc.

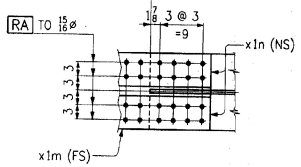
GIRDER G5B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

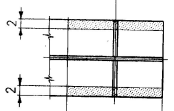
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-3 CHK'D BY: LD DATE: 2-5-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 22 OF 24

400-S G95B-400

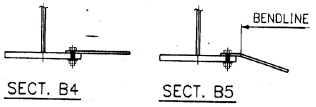
DEC 1 9 1996







PAINT LIGHT RUST PREVENTIVE COAT OF PRIMER (FS), EDGES & SHADED AREA (NS)



WORK THIS DWG. WITH DWG. 24

CODE: 30

RECEIVED
OK'D BY _____ OK'D BY _____
DEC 27 1995
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

NO.	REVISION	DATE
1	DELETED SECT. P: DESIGN CHANGE	5-20-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

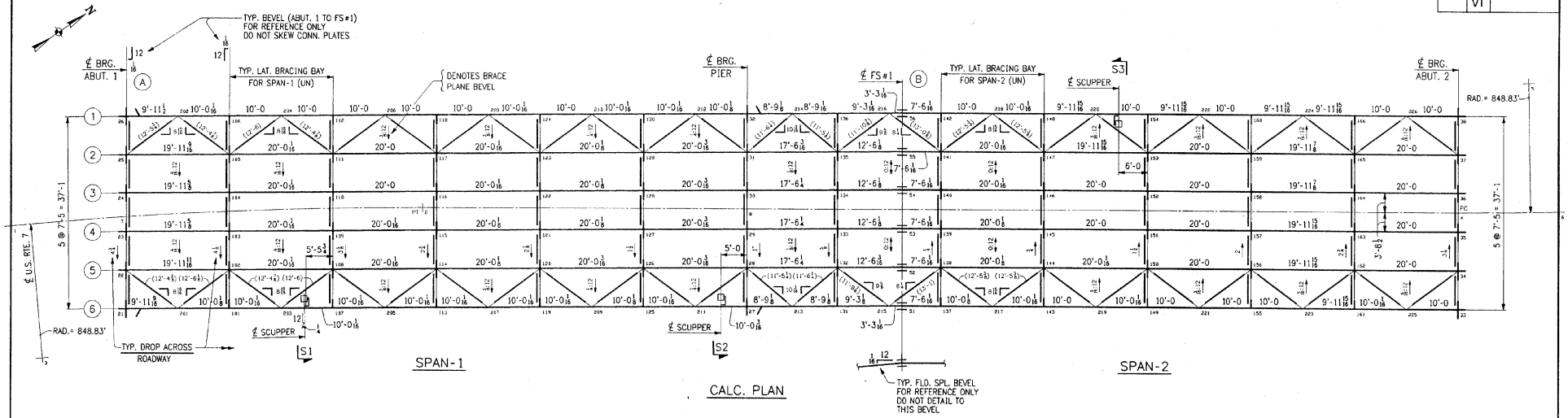
GIRDER G6B
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPF 2-3 CHK'D BY: LD DATE: 2-5-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: 23 OF 24

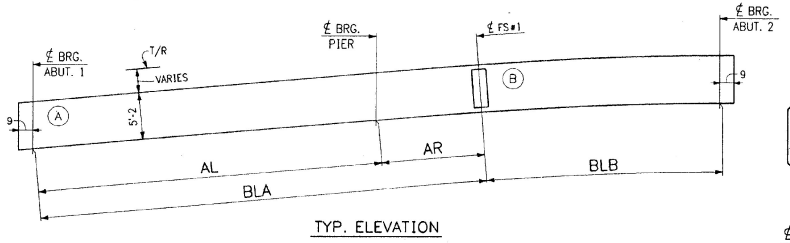
400-9 G6B-400

DEC1 91996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

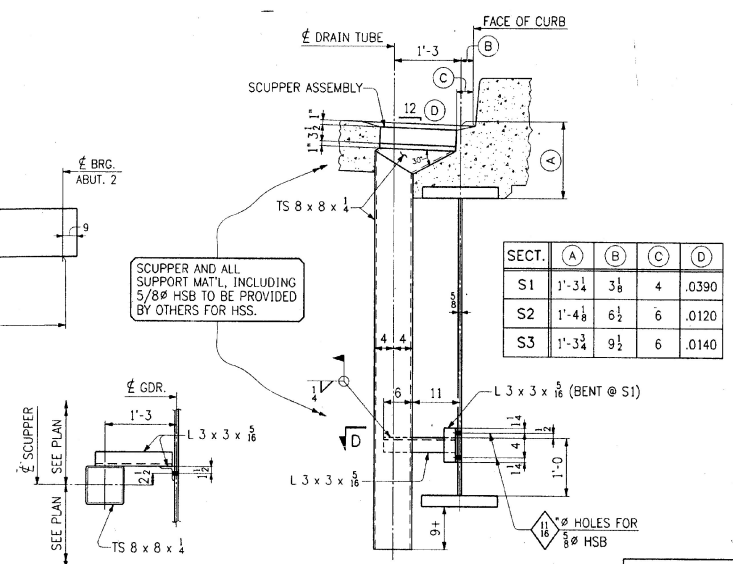


CALC. PLAN



TYP. ELEVATION

LINE	BLA	AL	AR	BLB
1	150'-0 3/16	119'-11 7/8	30'-0 5/16	107'-5 7/8
2	150'-0 5/16	120'-0	30'-0 5/16	107'-5 15/16
3	150'-0 7/16	120'-0 1/16	30'-0 3/8	107'-6
4	150'-0 9/16	120'-0 3/16	30'-0 3/8	107'-6 1/8
5	150'-0 3/4	120'-0 5/16	30'-0 7/16	107'-6 3/16
6	150'-0 15/16	120'-0 1/2	30'-0 7/16	107'-6 5/16



SECTION D

SECTIONS S1,S2,S3

SECT.	A	B	C	D
S1	1'-3 1/4	3 1/8	4	.0390
S2	1'-4 1/8	6 1/2	6	.0120
S3	1'-3 3/4	9 1/2	6	.0140

SHOP DRAWING REVIEW
REVIEWED FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTIONS OF DIMENSIONS OR DETAILS.
Bennett and Jurado, Inc.
MAR 22 1996

NOTES:

1. ALL LONGITUDINAL DIMS. ARE SLOPING ALONG BOTT. OF WEB IN "CAMBERED" POSITION.
2. TRANSVERSE DIMS. ARE HORIZONTAL.
3. ⟶ DENOTES DROP (FINAL). ARROW POINTS TO LOW END.
4. ALL BRG. STIFFS. ARE VERTICAL.
5. INT. CONN. PLATES ARE NORMAL TO BOTTOM FLG.
6. FOR LAYOUTS SEE DWG. WS2.

THIS IS A WORK (W) DRAWING. ITS FUNCTION IS TO PROVIDE BASIC DIMENSIONS AND CONCEPTS FOR USE IN THE PREPARATION OF THE SHOP DETAILS. IT IS NOT INTENDED TO BE USED FOR ERECTION OR FABRICATION.

NO.	REVISION	DATE
△		
△		
△		

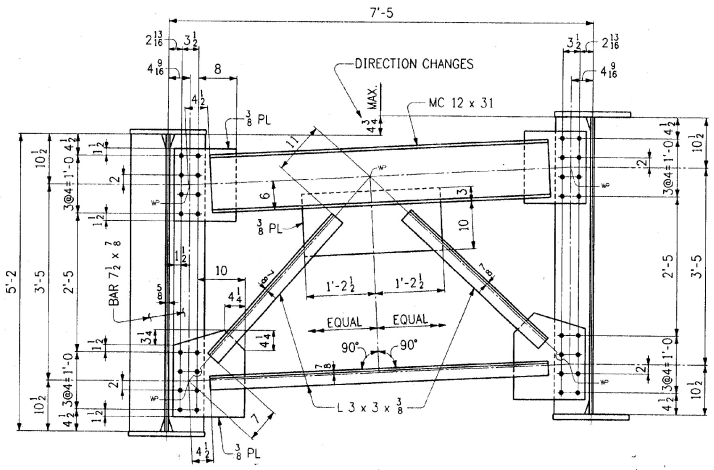
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

WORKSHEET - CALC. PLAN
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

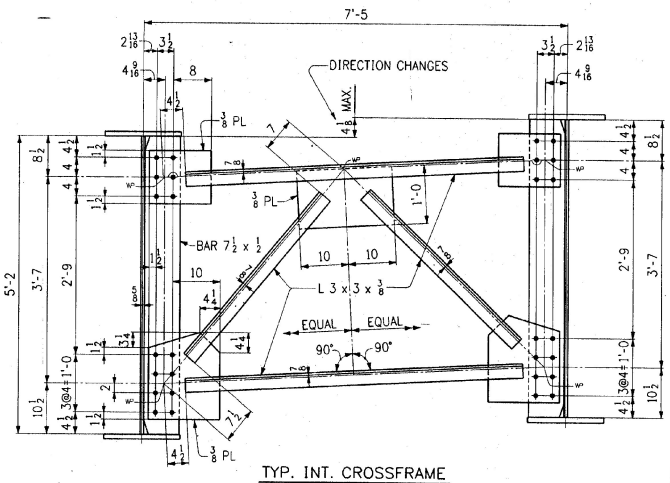
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: LD 12-12 CHK'D BY: DATE: 1-6-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: WS1

400-2 CPLN400A

FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

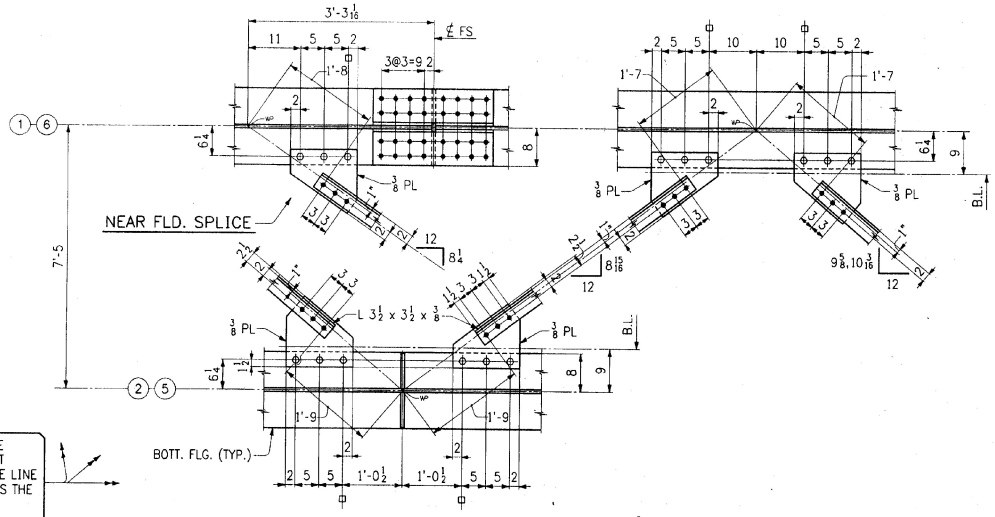


TYP. END AND PIER CROSSFRAME
(CFK14)



TYP. INT. CROSSFRAME
(CFK14)

NOTE:
ALL HOLES TO BE $\frac{15}{16}$ø FOR $\frac{7}{8}$ø HSB's.



TYP. LATERAL BRACING

DETAILER NOTE: CARE MUST BE EXERCISED IN THE ASSIGNMENT OF GUSSET PLATE MARKS. GAGE LINE FOR HOLES IS NOT THE SAME AS THE "WL" AND PLATES CANNOT BE TURNED UPSIDE DOWN.

SHOP DRAWING REVIEW
REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.
APPROVED
AS NOTED OR AS CORRECTED
APPROVED AND RESUBMIT
REJECTED. SEE REMARKS
Barnes and Jarnis, Inc.
DATE: MAR 22 1996 BY:

NO.	REVISION	DATE
△		
△		
△		

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

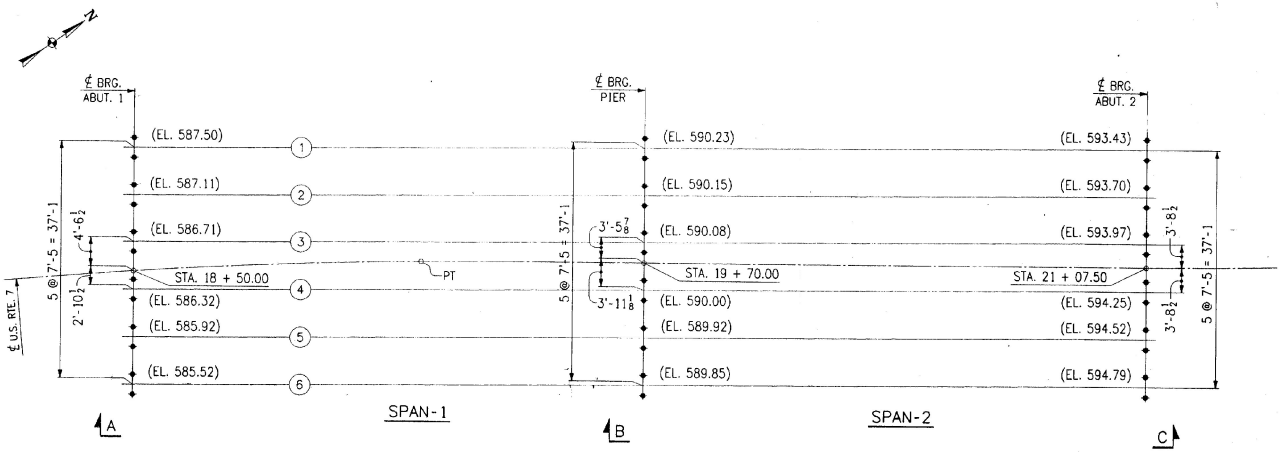
THIS IS A WORK (W) DRAWING. ITS FUNCTION IS TO PROVIDE BASIC DIMENSIONS AND CONCEPTS FOR USE IN THE PREPARATION OF THE SHOP DETAILS. IT IS NOT INTENDED TO BE USED FOR ERECTION OR FABRICATION.

WORKSHEET - LAYOUTS
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

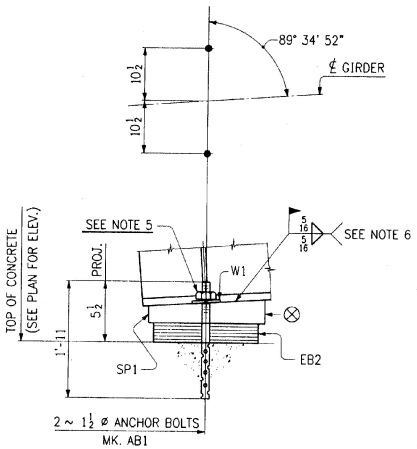
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: LD 12-12 CHK'D BY: JK DATE: 1-6-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: WS2

400-3 LYOT400A

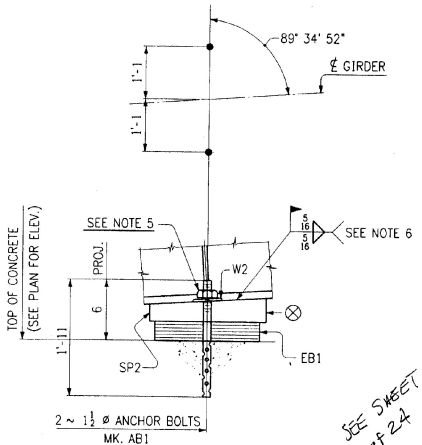
FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	



ANCHOR BOLT PLAN

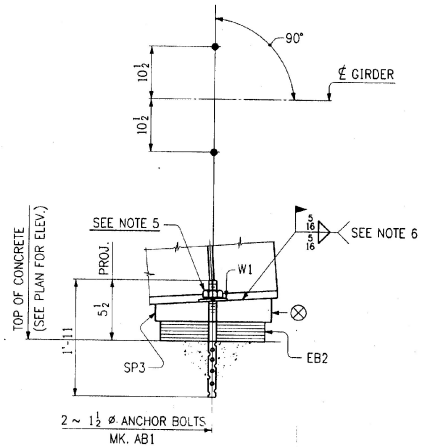


SECT. A
(TYP. @ ABUT. 1)



SECT. B
(TYP. @ PIER)

SEE SHEET 1 of 24 — 9 more pages



SECT. C
(TYP. @ ABUT. 2)

SHOP DRAWING REVIEW
REVIEW SHEET GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.
Barnes and Jones, Inc.
MAR 22 1996

NOTES:

1. ALL DIMENSIONS ARE GIVEN HORIZONTALLY.
2. ELEVATIONS ARE GIVEN TO TOP OF CONCRETE PAD.
3. ANCHOR BOLT SETTINGS MUST BE EXACT IN EVERY DETAIL IN ACCORDANCE WITH THIS DRAWING.
4. ANCHOR BOLTS ARE FURNISHED BY HIGH STEEL STRUCTURES, INC., AND SET BY OTHERS.
5. BACK NUT OFF ⅛" FROM FINGER TIGHT AND BURR THE THREADS.
6. AREAS OF GALVANIZING DAMAGED BY FIELD WELDING SHALL BE PAINTED WITH AN APPROVED SEALER IN ACCORDANCE WITH SUBSECTION 708.02(d).
7. ⊗ DENOTES THICK EDGE OF SOLE PLATE.

NO.	REVISION	DATE
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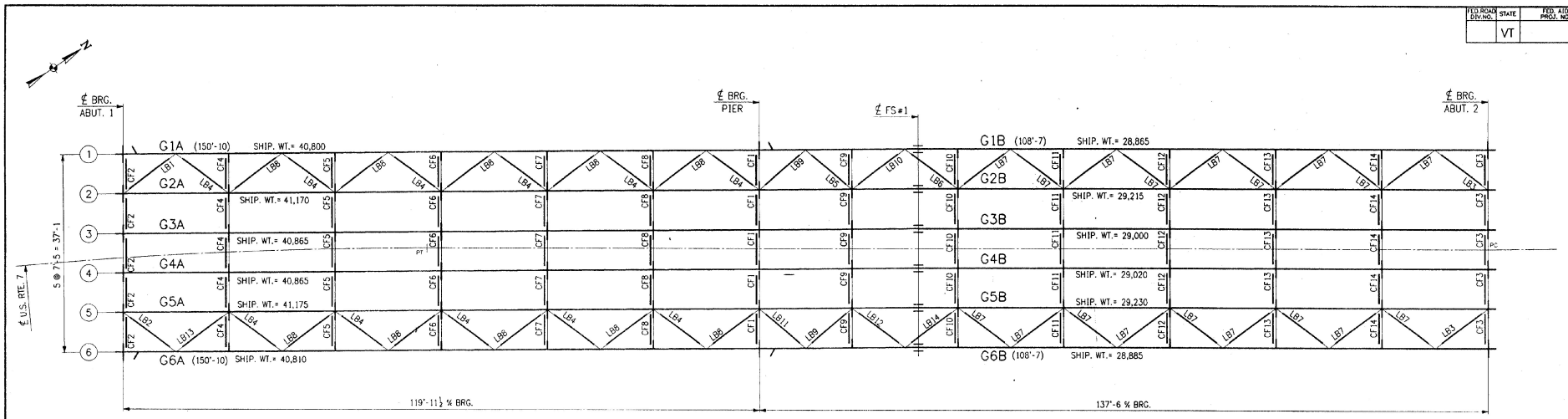
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

ANCHOR BOLT PLAN
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: JCC CHK'D BY: [illegible] DATE: 1-31-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: E1

400-7 APLN400

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	



ERECTOR NOTE: ALL BOLTS MUST BE LOCATED IN ACCORDANCE WITH THIS LIST OF FIELD CONNECTIONS. HIGH STEEL STRUCTURES WILL NOT BE RESPONSIBLE FOR FURNISHING ADDITIONAL BOLTS OR FOR ANY OTHER RELATED COSTS OR DAMAGES RESULTING FROM IMPROPER LOCATION OF BOLTS.

LIST OF FIELD CONNECTIONS

ONE WASHER PER BOLT UNLESS NOTED OTHERWISE

LINE	ACTUAL NO. REQ'D.	BOLT DIAM.	BOLT LENGTH	BOLTS / CONN.	# OF CONNS.	GRIP	THICKNESS OF PCS. CONNECTED	PIECES CONNECTED AND REMARKS	
1	192	7/8	3 3/4	32	6	2 1/2	1 1/8 3/4 3/8	FS#1 (TOP FLG.)	(RCT)
2	192	7/8	3 3/4	32	6	2 1/2	1 1/8 3/4 3/8	FS#1 (BOTT FLG.)	
3	264	7/8	3	44	6	1 3/4	7/8 3/8 3/8	FS#1 (WEB)	
4									
5	1540	7/8	2 1/4	28	55	7/8	1/2 3/8	INT. CFS TO GIRDER	
6	160	7/8	2 1/2	32	5	1 1/4	7/8 3/8	PIER CFS TO GIRDER	
7	320	7/8	2 1/2	32	10	1 1/4	7/8 3/8	END CFS TO GIRDER (GALV.)	
8									
9	288	7/8	2	6	48	3/4	3/8 3/8	LATERAL BRACING TO GUSSET PL	
10	24	7/8	2	6	4	3/4	3/8 3/8	LATERAL BRACING TO GUSSET PL ADJACENT TO ABUTS. (GALV.)	
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

FIELD BOLT SUMMARY
(4% ADDITIONAL BOLTS ADDED)

ASTM A325 TYPE 3 BOLTS WITH HVY. HEX HEAD AND ASTM A563 GRADE DH3 HVY. HEX NUT	(RCT)
400 - 7/8 ø HIGH STRENGTH BOLTS x 0'-3 3/4	
275 - 7/8 ø HIGH STRENGTH BOLTS x 0'-3	
167 - 7/8 ø HIGH STRENGTH BOLTS x 0'-2 1/2	
1602 - 7/8 ø HIGH STRENGTH BOLTS x 0'-2 1/4	
300 - 7/8 ø HIGH STRENGTH BOLTS x 0'-2	
2744 ROUND, FLAT F436 W WASH. FOR 7/8"ø H.S. BOLTS	

FIELD BOLT SUMMARY
(4% ADDITIONAL BOLTS ADDED)

ASTM A325 TYPE 1 BOLTS WITH HVY. HEX HEAD AND ASTM A563 GRADE DH HVY. HEX NUT (MECH. GALV. B-695 CLASS 50)	(RCT) (GALV.)
335 - 7/8 ø HIGH STRENGTH BOLTS x 0'-2 1/2	
25 - 7/8 ø HIGH STRENGTH BOLTS x 0'-2	
360 ROUND, FLAT F436 (GALV.) WASH. FOR 7/8"ø H.S. BOLTS	

NOTES:

NO CREDIT WILL BE ALLOWED FOR WORK PERFORMED BY OTHERS IN REPLACING OR CORRECTING MATERIALS OR WORKMANSHIP COVERED BY THIS DRAWING UNLESS EXPRESSLY AUTHORIZED BY HIGH STEEL STRUCTURES, INC.

FIELD CONNECTIONS TO BE MADE WITH 7/8ø HIGH STRENGTH (A325, TYPE 3) OR 7/8ø (A325,TYPE-1-GALV.) BOLTS.

ALL DIMENSIONS ARE GIVEN HORIZONTALLY (UN).

DIMENSIONS GIVEN THUS: (150'-10) ARE THE SHIPPING LENGTHS OUT TO OUT OF FASCIA GIRDERS.

HIGH STEEL STRUCTURES, INC. DOES NOT SUPPLY STUD SHEAR CONNECTORS, EXP.DAM MATERIAL,FIELD TOUCH UP PAINT OR PAINTING,OR FIELD CLEANING.

WORK THIS DRAWING WITH DRAWING SA1.

FOR BEARINGS SEE SHEET E1.

NOTICE: WEIGHTS OF MEMBERS LISTED ON THESE DRAWINGS ARE ESTIMATED WEIGHTS AND ACTUAL WEIGHTS WILL VARY. HIGH STEEL STRUCTURES, INC. WILL NOT BE RESPONSIBLE FOR ANY ERECTION PROCEDURES, SHIPPING PROCEDURES, ETC. DEVELOPED USING ESTIMATED WEIGHTS AS SHOWN.

ERECTOR NOTE: ELEVATIONS AND/OR CAMBER CHECKS OF FIELD SPLICES MUST BE COMPLETED PRIOR TO FINAL BOLTING. HIGH STEEL STRUCTURES IS TO BE NOTIFIED AND CONSULTED, PRIOR TO FINAL BOLTING, IF SPLICE ELEVATIONS ARE NOT WITHIN ACCEPTABLE TOLERANCE. THE CORRECTION OF ANY UNACCEPTABLE SPLICES AFTER FINAL BOLTING WILL BE AT NO COST TO HIGH STEEL STRUCTURES.

NOTICE TO ERECTOR & CONTRACTOR: A PORTION OF THIS STRUCTURAL STEEL (10'-0 FROM ABUTS.) IS BEING DELIVERED WITH THE FINAL FINISH COAT APPLIED. YOUR SPECIAL ATTENTION REQUIRES EXTREME CARE AND APPROPRIATE EQUIPMENT FOR HANDLING DURING ERECTION AND SUBSEQUENT FIELD OPERATIONS. HIGH STEEL STRUCTURES, INC. WILL NOT BE RESPONSIBLE FOR ANY TOUCH-UP REQUIRED DUE TO YOUR FAILURE TO PROPERLY PROTECT FINISH PAINT.

ALL FIELD BOLTS THRU BOTTOM FLANGE ARE TO HAVE HEADS UP.

ALL FIELD BOLTS THRU WEB OF FASCIA GIRDERS ARE TO HAVE HEADS ON OUTSIDE OF WEB.

"RCT" INDICATES ROTATIONAL CAPACITY TESTED BOLTS. DO NOT MIX NUTS, BOLTS AND WASHERS FROM DIFFERENT CONTAINERS UNLESS ALL NUTS, BOLTS AND WASHERS HAVE THE SAME LOT NUMBER.

SHOP DRAWING REVIEW
REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.
APPROVED
APPROVED AS NOTED
APPROVED AS CORRECTED
RESUBMIT CORRECTED COPY
Barnes and Tucker, Inc.
MAR 22 1996 BY: EMM

NO.	REVISION	DATE
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HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

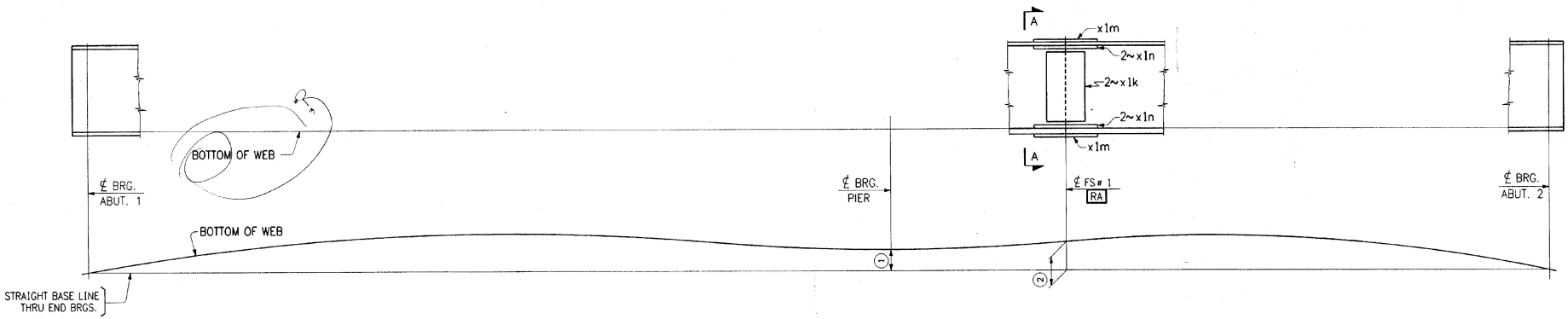
ERECTION PLAN
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 1-22 CHK'D BY: DATE: 2-5-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: E2

400-1

RECEIVED MAR 01 1996

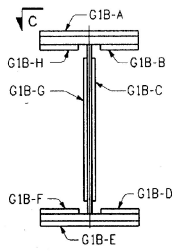
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	



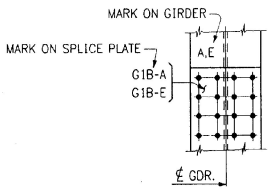
LINE REAMING DIAGRAM

LINE	1	2
1	$1\frac{3}{4}$	$4\frac{1}{4}$
2	$1\frac{13}{16}$	$4\frac{5}{16}$
3	$1\frac{7}{8}$	$4\frac{3}{8}$
4	$1\frac{15}{16}$	$4\frac{7}{16}$
5	$2\frac{1}{16}$	$4\frac{1}{2}$
6	$2\frac{3}{16}$	$4\frac{5}{8}$

SHOP DRAWING REVIEW
REVIEW IS FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR ITEMS.
APPROVED
APPROVED AS NOTED
APPROVED AND RESUBMIT
REJECTED, SEE REMARKS
Barnes and Jarnis, Inc.
80 Boylston Street
Boston, Massachusetts 02116
DATE MAR 22 1996 BY [illegible]



SECT. A-A FOR G1B
(G2B–G6B SIMILAR)



VIEW C

NOTES:

1. HOLES MARKED RA ARE TO BE SUB-PUNCHED/SUB-DRILLED 1/4 ø UNDER SIZE AND REAMED TO FULL SIZE OR DRILLED FROM SOLID WITH CONNECTING PARTS ASSEMBLED AND MATCH MARKED. FINAL HOLES TO BE $\frac{5}{16}$ ø.
2. ALL SPLICE PLATES ARE MATCH MARKED AFTER REAMING, AS SHOWN IN SECT. A-A THE MATCH MARKS ON THE SPLICE MATERIAL CONSIST OF THE MARK OF THE GIRDER THEY ARE SHIPPED WITH AND A SUFFIX. THE MARKINGS ARE LOCATED ON THE STEEL AT THE END OF THE SPLICE MATERIAL WHICH IS ON THE GIRDER IT IS SHIPPED WITH. THE CORRESPONDING SUFFIX (A,B,C,etc) IS MARKED NEAR THE SPLICE PLATE ON THE GIRDER (SEE VIEW C).
3. FOR GIRDER MARKS SEE DWG. E2.

NO.	REVISION	DATE
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HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

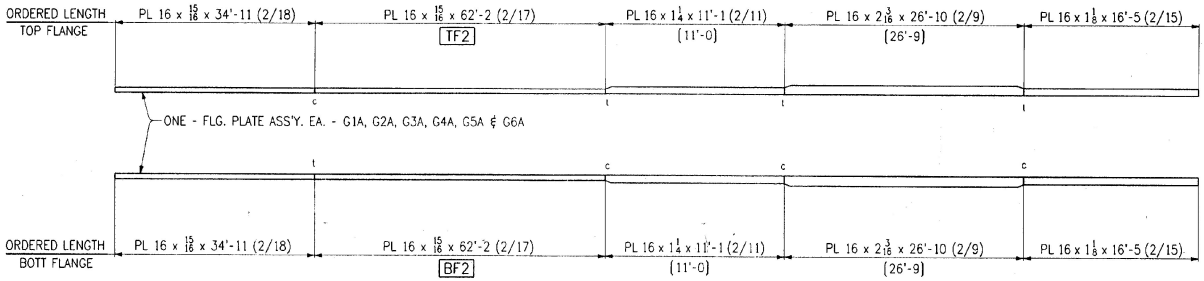
SHOP ASSEMBLY DIAGRAM
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: LD 1-29 CHK'D BY: [illegible] DATE: 1-30-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: SA1

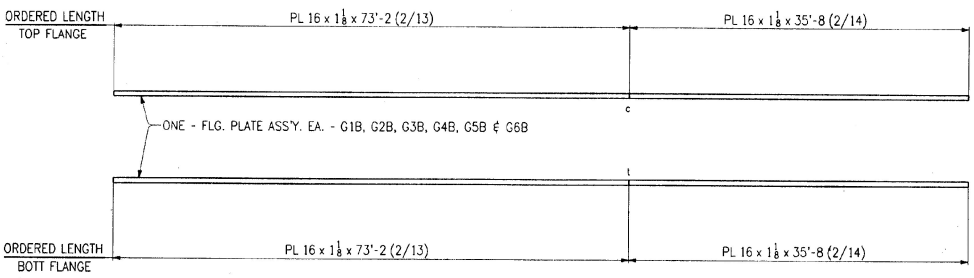
400-4 SA1-400

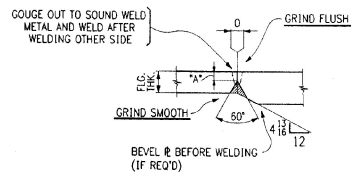
MAR 01 1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	



GIRDER	BF2	TF2
G1A	[61'-11 7/8]	[62'-0 1/16]
G2A	[62'-0]	[62'-0 1/8]
G3A	[62'-0 1/16]	[62'-0 1/4]
G4A	[62'-0 3/16]	[62'-0 5/16]
G5A	[62'-0 5/16]	[62'-0 7/16]
G6A	[62'-0 1/2]	[62'-0 11/16]





TYP.FLG. SPLICE DET.
(B-L2c-S)

FLG. THK.	"A"
15/16	5/16
1 1/8	3/8
1 1/4	7/16

SHOP DRAWING REVIEW
REVIEWED FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.
APPROVED
APPROVED AS NOTED
AMEND AND RESUBMIT
REVISE AND RESUBMIT
Barnes and Jarnis, Inc.
DATE MAR 22 1996 BY EMM

NOTES:

1. FOR GENERAL SHOP NOTES SEE DRAWING N1.
2. THE LETTERS "t" & "c" AT FLANGE SPLICES INDICATE TENSION AND COMPRESSION SPLICES RESPECTIVELY.
3. SPLICES MARKED (t) TO BE RADIOGRAPHICALLY TESTED 100%. SPLICES MARKED (c) TO BE RADIOGRAPHICALLY TESTED 25%.
4. ALL FLANGE PLATES REQUIRE CHARPY V-NOTCH TESTING.
5. DIMENSIONS SHOWN THUS: [11'-0] ARE THE ACTUAL DIMENSIONS THAT WILL APPEAR ON THE DETAIL DRAWINGS.

NO.	REVISION	DATE
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HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

FLANGE SPLICE DETAILS
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

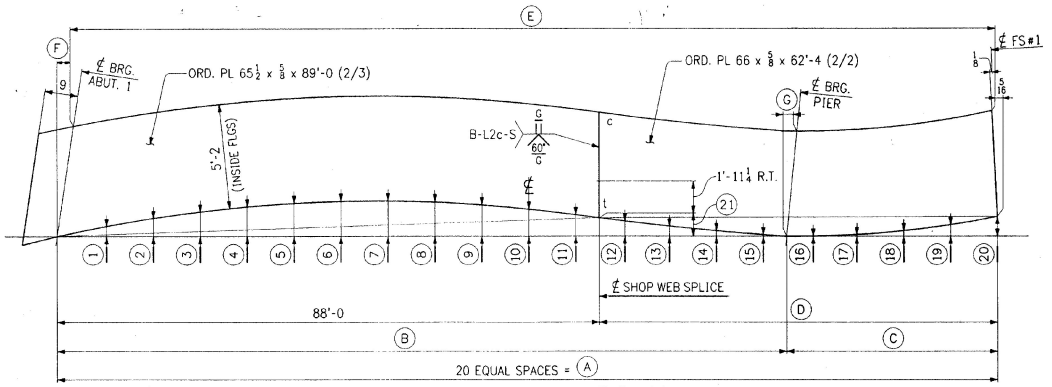
STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: LD 1-15 CHK'D BY: Z DATE: 1-22-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: FS1

CODE: 30

400-4 FS1-400

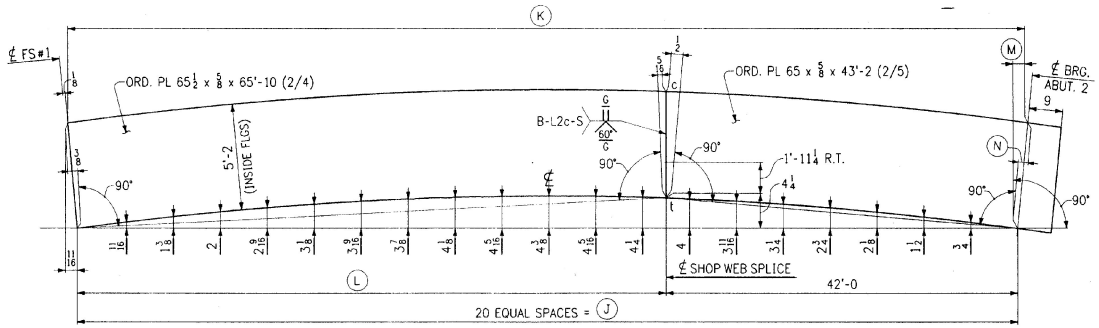
MAR 0 1 1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	



CAMBER DIAGRAM FOR G1A THRU G6A

MARK	A	B	C	D	E	F	G	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
G1A	150'-0 1/16	119'-11 7/8	30'-0 3/16	62'-0 1/16	149'-10 7/16	1 1/4	1 3/8	7/16	7/8	1 5/16	1 5/8	1 15/16	2 1/16	2 1/8	2	1 7/8	1 11/16	1 7/16	1 1/16	11/16	3/8	1/8	0	3/8	7/8	1 7/16	2 1/16	1 3/16
G2A	150'-0 3/16	120'-0	30'-0 3/16	62'-0 3/16	149'-10 3/8	1 7/16	1 9/16	7/16	7/8	1 5/16	1 11/16	1 15/16	2 1/8	2 1/8	2 1/16	1 15/16	1 3/4	1 7/16	1 1/8	11/16	3/8	1/8	0	3/8	7/8	1 7/16	2 1/16	1 1/4
G3A	150'-0 5/16	120'-0 1/8	30'-0 1/4	62'-0 5/16	149'-10 3/8	1 5/8	1 3/4	7/16	7/8	1 5/16	1 11/16	2	2 1/16	2 3/16	2 1/16	2	1 3/4	1 1/2	1 1/8	3/4	7/16	1/8	0	3/8	13/16	1 7/16	2	1 1/4
G4A	150'-0 7/16	120'-0 3/16	30'-0 1/4	62'-0 7/16	149'-10 5/16	1 3/4	1 7/8	7/16	7/8	1 3/8	1 3/4	2 1/16	2 1/4	2 5/16	2 1/4	2 1/16	1 13/16	1 9/16	1 3/16	3/4	7/16	1/8	0	5/16	13/16	1 3/8	2	1 5/16
G5A	150'-0 9/16	120'-0 5/16	30'-0 5/16	62'-0 9/16	149'-10 5/16	1 15/16	2 1/16	7/16	15/16	1 3/8	1 13/16	2 1/8	2 5/16	2 3/8	2 3/8	2 3/16	1 15/16	1 5/8	1 1/4	13/16	7/16	1/8	0	5/16	13/16	1 5/16	1 15/16	1 3/8
G6A	150'-0 13/16	120'-0 1/2	30'-0 5/16	62'-0 13/16	149'-10 3/8	2 1/16	2 1/4	7/16	15/16	1 7/16	1 7/8	2 3/16	2 7/16	2 1/2	2 1/2	2 1/4	2	1 11/16	1 5/16	7/8	1/2	3/16	0	5/16	3/4	1 5/16	1 7/8	1 3/8



CAMBER DIAGRAM FOR G1B THRU G6B

MARK	J	K	L	M	N
G1B	107'-5 3/4	107'-8 3/16	65'-5 3/4	1 3/4	1 1/4
G2B	107'-5 15/16	107'-8 3/8	65'-5 15/16	1 7/8	1 3/8
G3B	107'-6 1/8	107'-8 5/8	65'-6 1/8	2 1/16	1 9/16
G4B	107'-6	107'-8 7/8	65'-6	2 3/16	1 11/16
G5B	107'-6 1/16	107'-9 1/8	65'-6 1/16	2 3/8	1 7/8
G6B	107'-6 3/16	107'-9 3/8	65'-6 3/16	2 1/2	2

SHOP DRAWING REVIEW
REVIEW IS FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.
APPROVED
APPROVED AS NOTED
APPROVED FOR LIMITED USE
NO EXCEPTIONS TAKEN
Barnes and Jurris, Inc.
BY: Thomas Gray
DATE: MAR 22 1996

NOTES:
1. FOR GENERAL SHOP NOTES SEE DRAWING N1.
2. THE LETTERS "t" & "c" AT WEB SPLICES INDICATE TENSION AND COMPRESSION REGIONS OF SPLICES RESPECTIVELY.
3. R.T. DEPTH ON WEB PLATE SPLICES INCLUDES 1/6 OF THE WEB DEPTH PLUS 25% OF THE REMAINDER TO BE RADIOGRAPHICALLY TESTED.
4. ALL WEB PLATES REQUIRE CHARPY V-NOTCH TEST.

NO.	REVISION	DATE
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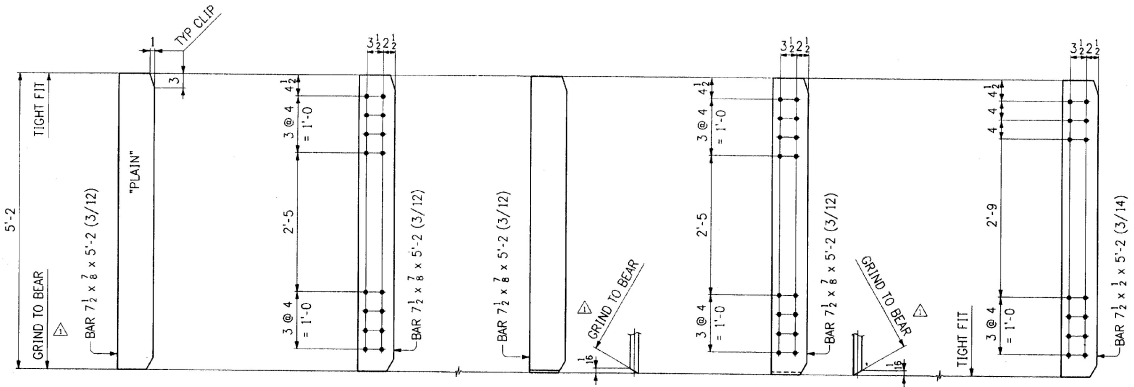
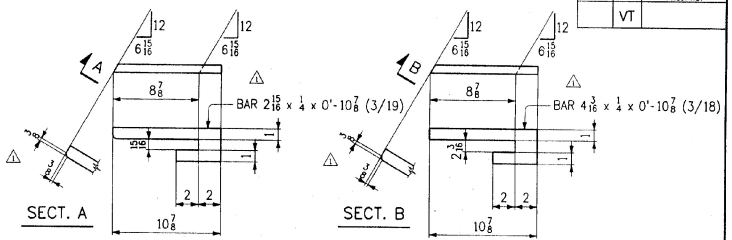
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

WEB CAMBER DIAGRAMS
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

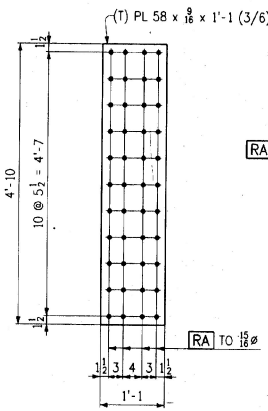
STATE CONTRACT OR REF. NO.: PROJECT NO. BRS-0137(13)
CONTRACTOR: J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: LD 1-16 CHK'D BY: DATE: 1-23-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: WC1
CODE: 30



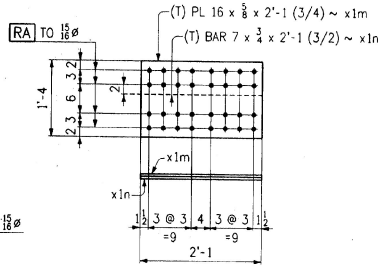
4 ~ BRG. STIFF. MK. x1a | 28 ~ BRG. STIFF. MK. x1b | 2 ~ BRG. STIFF. MK. x1c | 2 ~ BRG. STIFF. MK. x1d | 110 ~ CONN. PL. MK. x1f



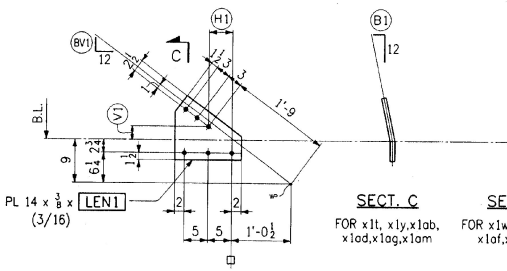
1 EA. ~ DRIP PLATE MK. x1g$^{R}_{L}$ | 1 EA. ~ DRIP PLATE MK. x1h$^{R}_{L}$



12 ~ SPLICE PL MK. x1k



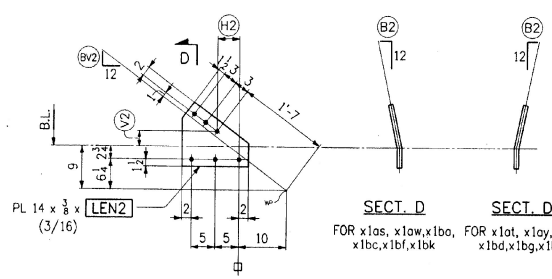
12 ~ SPLICE PL MK. x1m
24 ~ SPLICE PL MK. x1n



LATERAL GUSSET PLATES

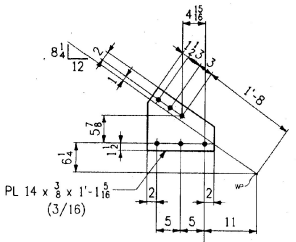
MARK	No. REQ'D	BV1	H1	V1	LEN1	B1
x1p	2	8 1/4	5 3/8	2 1/16	1'-0 5/8	FLAT
x1s	4	8 15/16	4 15/16	2 3/4	1'-1 1/2	FLAT
x1t	4	8 15/16	4 15/16	2 3/4	1'-1 1/2	9/16
x1w	4					
x1y	4	8 15/16	4 15/16	2 3/4	1'-1 1/2	3/8
x1aa	4					
x1ab	4	8 15/16	4 15/16	2 3/4	1'-1 1/2	1/4
x1ac	4					
x1ad	6	8 15/16	4 15/16	2 3/4	1'-1 1/2	3/16
x1af	6					
x1ag	2	8 15/16	4 15/16	2 3/4	1'-1 1/2	5/16
x1ah	2					
x1ak	2	9 5/8	4 1/2	3 3/8	1'-2 1/4	FLAT
x1am	2	10 3/16	4 1/8	3 13/16	1'-2 13/16	1/8
x1an	2					





LATERAL GUSSET PLATES

MARK	No. REQ'D	BV2	H2	V2	LEN2	B2
x1ap	4	8 15/16	4 5/8	3 1/8	1'-1 1/2	FLAT
x1as	4	8 15/16	4 5/8	3 1/8	1'-1 1/2	9/16
x1at	4					
x1aw	4	8 15/16	4 5/8	3 1/8	1'-1 1/2	3/8
x1ay	4					
x1bo	4	8 15/16	4 5/8	3 1/8	1'-1 1/2	1/4
x1bb	4					
x1bc	6	8 15/16	4 5/8	3 1/8	1'-1 1/2	3/16
x1bd	6					
x1bf	2	8 15/16	4 5/8	3 1/8	1'-1 1/2	5/16
x1bg	2					
x1bh	2	9 5/8	4 3/16	3 11/16	1'-2 1/4	FLAT
x1bk	2	10 3/16	3 13/16	4 1/16	1'-2 13/16	1/8
x1bm	2					



2 ~ LATERAL GUSSET PLATES ~ x1bn

SHOP NOTE
HOLES: 15/16 ø (UN)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. N1.

CODE: 30

FED./ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

NO.	REVISION	DATE
△		
△		
△	CHANGED "MILL" TO "GRIND" x1g,x1h - REVISED CORNER CLIPS & BILLING	2-19-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, Pa. 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER JOB STANDARDS
U.S. ROUTE 7 OVER OTTER CREEK
BRIDGE NO. 79
TOWN OF WALLINGFORD, COUNTY OF RUTLAND
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. BRS-0137(13)
CONTRACTOR J. A. McDONALD, INC.
IN CHARGE: abs MADE BY: PPP 1-25 CHK'D BY: LD DATE: 2-1-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: X1

400-9

STD-400A

FED.ROAD DIV.NO.	STATE	FED. AID PROJ. NO.
	VT	

GENERAL SHOP NOTES

SPECIFICATIONS:

— MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT, AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, ITS LATEST REVISIONS, SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1992, AND ITS LATEST REVISIONS.

MATERIAL:

— UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL TO BE AASHTO M270-50W.

— (T) INDICATES CHARPY V-NOTCH TESTING REQUIRED.

⚠ — SHOP BOLTS TO BE H.S. BOLTS ASTM A325, TYPE 3 W/1 ASTM A563 GR. DH3 HVY HEX NUT AND ONE F436 WEATHERING WASHER EACH BOLT. (UN).

— RCT INDICATES ROTATIONAL CAPACITY TESTED BOLTS. DO NOT MIX NUTS, BOLTS AND WASHERS FROM DIFFERENT CONTAINERS UNLESS ALL NUTS, BOLTS AND WASHERS HAVE THE SAME LOT NUMBER.

SHOP PROCEDURE:

— CAMBER TOLERANCE: -0, + 3/4"

— ALL RE-ENTRANT CUTS TO HAVE 1" MIN. RADIUS.

— ⊗ DENOTES THICKER SIDE OF SOLE PLATE.

— ⏚ DENOTES SET LINE.

— RA NOTE: "HOLES MARKED RA ARE TO BE SUB-PUNCHED/SUB-DRILLED $\frac{1}{4}$"ø UNDER SIZE AND REAMED TO FULL SIZE OR DRILLED FROM SOLID WITH CONNECTING PARTS ASSEMBLED AND MATCH MARKED".

— MINIMUM BENDING RADIUS FOR BENT PLATES

WHEN THICKNESS t	RADIUS INSIDE OF BENT PLATE
UP TO 1"	2 1/2 t
OVER 1" TO 1 1/2	3 t
OVER 1 1/2 TO 2 1/2	3 1/2 t
OVER 2 1/2 TO 4	4 t

INSPECTION:

— SHOP INSPECTION BY: E. L. CONWELL.

WELDING:

— ALL WELDING AND FABRICATION SHALL BE PERFORMED IN CONFORMANCE WITH ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE.

— FOR WELDING STIFFENERS AND CONNECTION PLATES TO GIRDERS SEE "TYP. WELDING DETAIL".

DRAWING REFERENCE:

WEB CAMBER DIAGRAMS	- PREFIXED "WC"
FLANGE SPLICES	- PREFIXED "FS"
GIRDER JOB STANDARDS	- PREFIXED "X"
SHOP ASSEMBLY DIAGRAM	- PREFIXED "SA"

NON-DESTRUCTIVE TESTING:

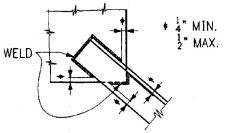
— ALL WEB AND FLANGE BUTT SPLICES SHALL BE RADIOGRAPHICALLY TESTED AS FOLLOWS:

BUTT SPLICES:	TESTING:
FLANGE SPLICES	100% @ TENSION SPLICE 25% @ COMPRESSION SPLICE
WEB SPLICES	1/6 WEB @ TENSION FLANGE + 25% OF REMAINDER

— DYE PENETRATION INSPECTION SHALL BE PERFORMED AT ENDS OF FLANGE AND WEB BUTT WELDS.

— MAGNETIC PARTICLE INSPECTION:
MAGNETIC PARTICLE INSPECTION IS REQUIRED ON ALL FILLET WELDS AND GROOVE WELDS NOT TESTED BY ANOTHER METHOD. INSPECTION IS REQUIRED ON 10% OF ALL WELDS GREATER THAN 10'-0 IN LENGTH AND 1'-0 OF ALL WELDS LESS THAN 10'-0 IN LENGTH IN MAIN MEMBERS.

ALL AROUND WELDS TO CROSSFRAME GUSSET PLATES TO BE TERMINATED FROM EDGE OF GUSSET PLATE OR ANGLE AS INDICATED.



CROSSFRAME WELDING DETAIL

CLEANING:

— BLAST CLEAN ALL STEEL TO SSPC-SP10 (NEAR WHITE) EXCEPT BLASTING NOT REQUIRED FOR GALVANIZED SURFACES.
BLAST CLEANING PROFILE TO BE FROM 1.5 TO 2.5 MILS DEEP.

PAINT:

— AREAS TO BE PAINTED (NOTED ON DETAIL DWGS.) SHALL BE PAINTED WITH A 3 - COAT SHOP APPLIED SYSTEM (UN) CONSISTING OF:

- PRIME COAT - CARBO ZINC 11 HS (INORGANIC ZINC) APPLIED AT 2.0 TO 6.0 MILS DFT.
- INTERMEDIATE COAT - CARBOLINE 893 (EPOXY) APPLIED AT 3.0 TO 7.0 MILS DFT.
- FINISH COAT - CARBOLINE 133HB (POLYURETHANE) APPLIED TO 3.0 TO 7.0 DFT. FINISH COAT COLOR TO BE DARK BROWN NO.20059 AS SHOWN IN FEDERAL STD.NO.595.

— PRIME COAT TO BE APPLIED WITHIN 8 HRS. OF BLAST CLEANING.

— STRIPE COAT ALL EDGES OF PLATES, ANGLES OR OTHER SHAPES, BOLTS AND NUTS PRIOR TO THE APPLICATION OF THE PRIME COAT.

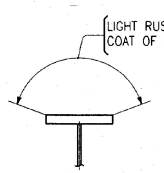
— OUTSIDE SURFACES OF FASCIA GIRDERS, AS NOTED ON DETAIL DRAWINGS, SHALL RECEIVE AN ADDITIONAL COAT OF THE FINISH PAINT.

— FIELD BOLTED CONTACT SURFACES WITHIN THE AREAS TO BE PAINTED SHALL RECEIVE THE PRIME COAT ONLY WITHIN 3" OF OPEN HOLES.

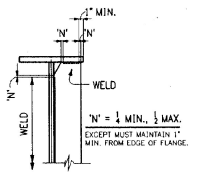
— SURFACES WITHIN 2" OF FIELD WELDING (AS NOTED ON DETAILS) SHALL RECEIVE A LIGHT RUST PREVENTIVE COAT OF PRIMER , NOT TO EXCEED 1.5 MILS DFT.

— SURFACES IN CONTACT WITH CONCRETE WITHIN THE AREAS TO BE PAINTED SHALL RECEIVE A LIGHT RUST PREVENTIVE COAT OF PRIMER, NOT TO EXCEED 1.5 MILS DFT. THESE SURFACES ARE NOTED ON THE DETAIL DRAWINGS.

— TOP FLANGE OF GIRDER AS SHOWN IN SECTION-A SHALL RECEIVE A LIGHT RUST PREVENTIVE COAT OF PRIMER , NOT TO EXCEED 1.5 MILS DFT.



SECTION–A



TYP. WELDING DETAIL

SHOP DRAWING REVIEW
REVIEWED FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.
APPROVED
APPROVED AS NOTED
AMEND AND RESUBMIT
RECEIVED (NO EXCEPTIONS TAKEN)
Burgess and Jarrils, Inc.
DATE MAR 22 1996 BY

NO.	REVISION	DATE
⚠	ADDED SHOP BOLT NOTE	2-21-96

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GENERAL SHOP NOTES
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IN CHARGE: abs MADE BY: JE CHK'D BY: SG DATE: 1-27-96
CONTRACT NUMBER: VT-95367 DRAWING NUMBER: N1

400-22 GN400

Not in CPS

Vermont Agency of Transportation

Phase III- Interstate

#090303-01

INITIALS

Hanger 5254

DONE

Vermont Agency of
Transportation
Phase III- Interstate
#090303-01

INITIALS

Hanger 5284 DONE

WALLINGFORD BRS 0137 (13)

BR # 79 - CONCRETE CALCULATIONS