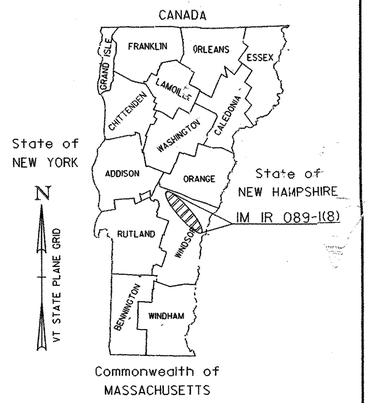
INDEX OF SHEETS

SEE SHEET #2

STATE OF VERMONT

AGENCY OF TRANSPORTATION

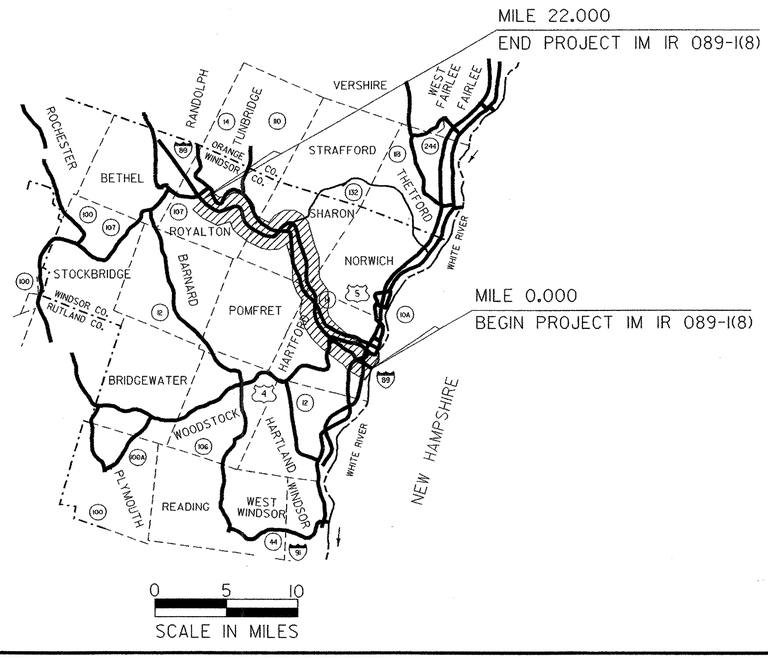
PROPOSED IMPROVEMENT
TOWNS OF HARTFORD, SHARON & ROYALTON
COUNTY OF WINDSOR
INTERSTATE ROUTE 89



BEGINNING AT MILEMARKER 0.000 AND EXTENDING NORTHERLY 22.000 MILES (NORTHBOUND & SOUTHBOUND LANES).

LENGTH OF ROADWAY 116,160.00 FEET= 22.000 MILES
LENGTH OF PROJECT 116,160.00 FEET= 22.000 MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES UPGRADING SIGNS, REPLACEMENT OF DELINEATORS ON RAMPS, GUARDRAIL AND BRIDGE RAIL, REPLACEMENT/REHABILITATION AND INSTALLATION OF R.O.W. FENCE, IMPROVEMENTS TO DRAINAGE AND OTHER SAFETY RELATED ITEMS.



TRAFFIC DATA

MM 0.00 to I-91 Int.10		I-91 Int.10 to I-89 Int.1	
1996 AADT	31530	1996 AADT	20060
2016 AADT	47930	2016 AADT	30490
2016 ADTT	4225	2016 ADTT	3495
2016 DHV	5415	2016 DHV	4270
2016 %T	4	2016 %T	8
2016 %D:	NB=57% SB=43%	2016 %D:	NB=53% SB=47%

I-89 Int.1 to I-89 Int.2		I-89 Int.2 to I-89 Int.3	
1996 AADT	13330	1996 AADT	9780
2016 AADT	20260	2016 AADT	14520
2016 ADTT	2290	2016 ADTT	1815
2016 DHV	2835	2016 DHV	2035
2016 %T	7	2016 %T	8
2016 %D:	NB=55% SB=45%	2016 %D:	NB=51% SB=49%

DESIGN SPEED V=65 MPH

TRAFFIC DATA	SECTION OF I-89	1996-2016	1996-2036
ESALS	MM 0.00 to I-91 Int.10	29,732,000	94,749,000
	I-91 Int.10 to I-89 Int.1	28,906,000	91,737,000
	I-89 Int.1 to I-89 Int.2	16,883,000	53,861,000
	I-89 Int.2 to I-89 Int.3	13,382,000	43,103,000

RECORD PLANS

CONTRACTOR: MORRILL CONSTRUCTION INC. – NORTH HAVERHILL, NH
RESIDENT ENGINEER: WILL STODDARD
CONSTRUCTION BEGAN: MARCH 28, 2001
CONSTRUCTION COMPLETE: MAY 29, 2003
RECORD PLANS BY: WILL STODDARD AND N. GARBACIK

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

BY M.R. Gadbois For W.H. Stoddard RESIDENT ENGINEER
DATE March 24, 2008

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

CONVENTIONAL SIGNS

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

UNLESS OTHERWISE INDICATED, THE DRAWINGS AND DETAILS OF THESE PLANS ARE NOT TO SCALE.

DATUM
VERTICAL N/A
HORIZONTAL N/A

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.

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

APPROVED _____ DATE 3/12/08
DIRECTOR OF PROJECT DEVELOPMENT

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED Mark D. Richt DATE 5-24-08
DIVISION ADMINISTRATOR

PROJECT Hartford-Sharon-Royalton
AC IM IR 089-1(8)
SHEET 1 OF 260 SHEETS

/sqda/87a008/da008.dgn

INDEX OF SHEETS

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2.	INDEX OF SHEETS	D-4	FLUSHING BASINS, END SECTION, ELBOWS	06-01-94	E-141	REGULATORY SIGN DETAILS	09-20-95
3 -7.	QUANTITY SHEETS		TYPICAL WATERFALL FOR CULVERTS UP TO AND		E-142	REGULATORY SIGN DETAILS	09-20-95
8 -12.	BLANKS		INCLUDING 48'' DIA.		E-143	REGULATORY SIGN DETAILS	09-20-95
13 -20.	GUARDRAIL ITEM SUMMARY SHEETS		EXTENSION SERVICE BOX AND CURB STOP		E-144	REGULATORY SIGN DETAILS	03-29-99
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32 -45.	EARTHWORK AND DRAINAGE SUMMARY SHEETS		UNDERDRAIN FLUSHING BASIN		E-146	REGULATORY SIGN DETAILS	09-20-95
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51.	SHARON INTERCHANGE #2 LAYOUT		SEE SHEETS D-9,10,11 FOR TOP SECTION		E-161	W-SHAPED STEEL SIGN POST	08-18-95
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181.	WOVEN WIRE FENCE W/ STEEL POSTS (MOD.) DETAIL		ONE LANE CLOSED		F-2	CHAIN LINK FENCE, TYPE I	06-01-94
182.	CONSTRUCTION APPROACH SIGNING SHEET	E-104	MAINLINE TRAFFIC CONTROL DIVIDED HIGHWAY	02-03-99		DRIVE GATE FOR CHAIN LINK FENCE,TYPE I	
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184-191.	EXISTING SIGN LAYOUT SHEETS	E-104A	PAVEMENT MARKING DETAILS - DIVIDED HIGHWAY	12-27-96	F-4	CHAIN LINK FENCE, TYPE II	06-01-94
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203-236.	TRAFFIC SIGN SUMMARY SHEETS	E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	08-08-95	G-1	STEEL BEAM GUARDRAIL (50MPH & OVER)	01-03-00
237-240.	SIGN DETAIL SHEETS	E-107	DELINEATION, BARRICADES AND DETOURS FOR	08-08-95		HEAVY DUTY STEEL BEAM GUARDRAIL	
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242-260.	DETOUR SHEETS FOR CROSSOVERS AT MM 9.70 & 13.00	E-107A	BREAKAWAY BARRICADE DETAILS	08-08-95	G-1D	HEAVY DUTY STEEL BEAM GUARDRAIL	01-03-00
		E-108	CONSTRUTION ZONE LONGITUDINAL DETAILS	08-18-95		STEEL BEAM MEDIAN BARRIER	
		E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	08-08-95		ANCHOR FOR STEEL BEAM RAIL	
		E-111	MINOR MAINTENANCE OPERATION	03-11-97	G-16	STEEL BEAM GUARDRAIL ATTACHMENTS TO	06-01-94
		E-112	TYPICAL MOVING MAINTENANCE OPERATIONS	01-23-97		EXISTING BRIDGE	
A-60	SLOPES IN SOLID ROCK EXCAVATION (50 MPH & OVER) 06-01-94	E-120	STANDARD SIGN PLACEMENT - EXPRESSWAY & FREEWAY	08-08-95		TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL	
B-5	SLOPE GRADING, EMBANKMENTS, MUCK 06-01-94	E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-95	G-18	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER	06-01-94
B-11	UNDERDRAIN - ROCK SUBGRADE, SLOPE STABILIZ. 06-01-94	E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	08-08-95	G-19	GENERIC GRADING PLANS FOR GUARDRAIL END	10-21-98
B-17	GUARDRAIL, BRIDGES, REST AREA, TURNOUTS 02-23-95	E-126	TYPICAL FREEWAY INTERCHANGE SIGNING	02-01-00		TERMINALS	
C-1	CURBS, BITUMINOUS CONCRETE SIDEWALKS 01-03-00	E-127	ROUTE MARKINGS AT RURAL INTERSECTIONS	08-08-95	SB-R4A-82	BRIDGE RAILING GALVANIZED BOX BEAM	09-19-89
	GRANITE SLOPE EDGING, VERTICAL GRANITE	E-130	TYPE ''B'' GUIDE SIGN, ATTACHMENT DETAILS	08-08-95	SB-R4B-82	GUARDRAIL APPROACH SECTION TYPE-I & TYPE II	03-30-88
	CURB, PRECAST REINFORCED CONCRETE CURB,	E-131	GUIDE SIGN DETAILS	08-08-95	T-1	TEMPORARY EROSION CONTROL DETAILS	06-01-94
	TREATED TIMBER CURB	E-132	GENERAL MOTORIST SERVICE SIGN DETAILS	08-18-95	T-2	TEMPORARY EROSION CONTROL DETAILS	06-01-94
D-2	C.R.M. HEADWALLS, UNDERDRAIN 06-01-94	E-133	SERVICE SIGN DETAILS	08-08-95			
	C.R.M. HEADWALLS & RETAINING WALLS	E-134	BRIDGE NUMBER PLAQUE	08-08-95			
	RIPRAP LIGHT TYPE SLOPE HEADWALL	E-135	INTERSTATE ROUTE MARKER SIGN DETAIL	08-18-95			
	REINFORCED CONCRETE HEADWALL	E-136A	U.S. ROUTE MARKER - SIGN DETAILS	08-08-95			
	UNDERDRAIN & CARRIER PIPE CONSTRUCTION DETAILS	E-136B	STATE ROUTE MARKER - SIGN DETAILS	08-08-95			
		E-136C	STATE NUMBERED TOWN HIGHWAY - SIGN DETAILS	08-08-95			
		E-138	MILEMARKER DETAILS - STATE &TOWN HIGHWAYS	08-08-95			
		E-139	MILEMARKER DETAILS - INTERSTATE	04-01-98			

DATUM
VERTICAL N/A
HORIZONTAL N/A

SURVEYED BY N/A DATE N/A
DRAWN BY NUTTER DATE 5/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008.dgn
IPARM FILE da008ind.i DATE PLOTTED 21-NOV-2000
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 2 OF 260 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

TRNG.	EROSION CONTROL		BRIDGE			ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ESTIMATE AND ROUNDING
						1	1	LS	CLEARING AND GRUBBING (PLUS INDIVIDUAL TREES AND STUMPS)	201.10	EST.
						5	5	AC	CLEARING AND GRUBBING (PLUS INDIVIDUAL TREES AND STUMPS) (MOD.)	201.11	EST.
						15	15	EA	THINNING AND TRIMMING (MOD.)	201.31	EST.
						11000	11000	CY	COMMON EXCAVATION	203.15	-
						46500	46500	CY	SOLID ROCK EXCAVATION	203.16	-
						5000	5000	CY	UNCLASSIFIED EXCAVATION (MOD.)	203.17	EST.
						12000	12000	LF	UNCLASSIFIED DITCHING (CLEAN DITCH)	203.18	230
						100	100	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	EST.
						300	300	CY	EVCAVATION OF SURFACES AND PAVEMENTS	203.28	-
						20000	20000	CY	EARTH BORROW	203.30	-
						300	300	CY	SAND BORROW	203.31	34
						1000	1000	CY	GRANULAR BORROW	203.32	42
						5000	5000	CY	ROCK BORROW	203.33	109
						1000	1000	SY	FINE GRADING-SUBGRADE	203.40	42
						10000	10000	LF	SHOULDER BERM REMOVAL	203.99	EST.
	1100					5000	6100	CY	TRENCH EXCAVATION OF EARTH	204.20	-
						150	150	CY	TRENCH EXCAVATION OF ROCK	204.21	46
						750	750	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	650
						200	200	LF	DRILLING & BLASTING SOLID ROCK (MOD)	205.10	EST.
			1280			5720	7000	SY	COLD PLANING-BIT. PAVEMENT	210.10	-
						100	100	CY	EXCAVATION OF CLASS I CONTAM. SOILS	215.20	EST.
						100	100	CY	EXCAVATION OF CLASS II CONTAM. SOILS	215.21	EST.
	2200					5625	7825	CY	SUBBASE OF DENSE GRADED CRSHD STONE	301.35	-
						10300	10300	CY	AGGREGATE SHOULDERS (TRUCK MEASURE)	402.11	237
			4			16	20	CWT	EMULSIFIED ASPHALT	404.65	5
			247			3753	4000	TON	BITUMINOUS CONCRETE PAVEMENT PG 70-28	406.25	-
						1	1	LU	PRICE ADJUSTMENT-ASPHALT CEMENT (N.A.B.I.)	406.50	-
						100	100	CY	CONCRETE, CLASS B	501.25	17.4
			815				815	CY	SILICA FUME CONCRETE	501.60	4
			88930			2600	91777	LB	REINFORCING STEEL	507.15	247
			10200				10200	LF	DRILLING AND GROUTING OF DOWELS	507.16	-
			1290				1290	GAL	WATER REPELLANT	514.10	-
			45				45	LF	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG TYPE)	516.10	-
			150				150	LF	JOINT SEALER, PREFORMED NEOPRENE	524.15	1
			8658				8658	LF	REMOVAL OF EXISTING RAILING	525.10	-
			8665				8665	LF	BRIDGE RAILING - NETC TWO RAIL	525.33	-
			1000				1000	SY	REMOVAL OF BRIDGE PAVEMENT	529.10	9
			715				715	CY	REMOVAL OF CONCRETE OR MASONARY	529.25	2
			290				290	SY	REPAIR OF CONC. SUPERSTRUCTURE SURFACE CLASS II	580.11	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		BITUMINOUS CONCRETE PAVEMENT
		INT.#10 RAMP 'C'
106	TON	TYPE III
126	TON	TYPE II
380	TON	TYPE I
		FULL WIDTH SAG AREAS (5 EST.)
375	TON	TYPE III
750	TON	TYPE I
		PARTIAL WIDTH SAG AREAS (3 EST.)
130	TON	TYPE III
260	TON	TYPE I
		SHIM & LEVEL COURSE (EST.)
100	TON	TYPE IV
		SLIDE AREA @ SB OUT 21.12
2	TON	TYPE IV, III & I
		GUARDRAIL SHEETS
9	TON	TYPE III
		BRIDGE SHEETS
247	TON	TYPE III
		DETOUR SHEETS
700	TON	TYPE III & II
		TYPE IV
60	TON	INT. #10 RAMP 'C'
185	TON	SAG AREAS
1	TON	SLIDE AREA @ SB OUT 21.12
573	TON	ROUNDING & EST. QTY.
4000	TON	TOTAL
		COLD PLANING
457	SY	RAMP 'C' INT.#10
510	SY	SOUTHBOUND SLIDE AREA
2675	SY	FULL WIDTH SAG AREAS (5 EST.)
801	SY	PARTIAL WIDTH SAG AREAS (3 EST.)
381	SY	DRAINAGE SHEETS
896	SY	ROUNDING & EST. QTY
5720	SY	TOTAL
		SOLID ROCK EXCAVATION
45622	CY	DRAINAGE SHEETS
878	CY	ROUNDING
46500	SY	TOTAL
		TEMPORARY TRAFFIC BARRIER
33390	LF	BRIDGE SHEETS
16475	LF	NB DETOUR SHEETS
2520	LF	SB SLIDE @ 7.35
900	LF	SB SLIDE @ 11.62
900	LF	SB SLIDE @ 21.12
1120	LF	SB DECEL. LANE
295	LF	ROUNDING
55600	LF	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
1158	CY	RAMP 'C' INT.#10
2125	CY	SLIDE AREA @ SB OUT 7.35
660	CY	SLIDE AREA @ SB OUT 11.62
560	CY	SLIDE AREA @ SB OUT 21.12
115	CY	ROYALTON REST AREA
315	CY	GUARDRAIL SHEETS
5575	CY	DRAINAGE SHEETS
492	CY	ROUNDING
11000	CY	TOTAL
		SUBBASE OF DENSE GRADED CRSHD STONE
879	CY	RAMP 'C' INT #10
5	CY	SLIDE AREA @ SB OUT 21.12
5	CY	GUARDRAIL SHEETS
4506	CY	DETOUR
230	CY	ROUNDING
5625	CY	TOTAL
		TRENCH EXCAVATION OF EARTH
2516	CY	DESIGNED DRAINAGE (INCL. UNDERDRAIN)
160	CY	SAG AREAS
2324	CY	QTY. FOR EST. PIPES
5000	CY	TOTAL
		TEMP. EROSION CONTROL (INCL. W/EROSION CONTROL ITEMS)
1100	CY	TRENCH EXCAVATION OF EARTH
1100	CY	STONE FILL, TYPE I
9800	SY	GEOTEXTILE FOR SILT FENCE
660	LB	SEED - WINTER RYE
44	TON	HAY MULCH
4400	SY	EROSION MATTING
2200	CY	SUBBASE OF DENSE GRADED CRSHD STONE
2000	EA	HAY BALES FOR EROSION CONTROL
		EARTH BORROW
6336	CY	EARTHWORKS & DRAINAGE SHEETS
9408	CY	GUARDRAIL SHEETS
805	CY	ROYALTON REST AREA
3179	CY	SB SLIDE AREA @ MM 7.35
272	CY	ROUNDING
20000	CY	TOTAL

SURVEYED BY N/A DATE N/A
DRAWN BY NUTTER DATE 3/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sqda/87a008/da008.dgn
IPARM FILE da008a01.i DATE PLOTTED 21-NOV-2000
PROJ. NAME Hartford Sharon Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 3 OF 260 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

TRNG.	EROSION CONTROL		BRIDGE			ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ESTIMATE AND ROUNDING
						500	500	LF	12'' CSP .064	601.0005	116
						150	150	LF	15'' CSP .064	601.0010	138
						1050	1050	LF	18'' CSP .064	601.0015	300
						150	150	LF	24'' CSP .064	601.0025	96
						150	150	LF	30'' CSP .079	601.0036	102
						150	150	LF	36'' CSP .079	601.0046	118
						90	90	LF	42'' CSP .109	601.0052	50
						150	150	LF	48'' CSP .109	601.0057	102
						750	750	LF	18'' PCCSP (PI) .064	601.0615	EST.
						150	150	LF	24'' PCCSP (PI) .064	601.0625	EST.
						150	150	LF	30'' PCCSP (PI) .079	601.0636	EST.
						150	150	LF	36'' PCCSP (PI) .079	601.0646	EST.
						225	225	LF	48'' PCCSP (PI) .109	601.0657	EST.
						275	275	LF	18'' RCP CLASS III	601.0815	175
						150	150	LF	24'' RCP CLASS III	601.0825	134
						150	150	LF	30'' RCP CLASS III	601.0835	EST.
						150	150	LF	30'' RCP CLASS IV	601.0836	EST.
						150	150	LF	36'' RCP CLASS III	601.0845	126
						150	150	LF	42'' RCP CLASS III	601.0850	142
						150	150	LF	48'' RCP CLASS III	601.0855	EST.
						10	10	EA	12'' CSP ELBOW .064	601.5005	6
						20	20	EA	18'' CSP ELBOW .064	601.5015	14
						10	10	EA	15'' CSPES .064	601.6010	EST.
						10	10	EA	18'' CSPES .064	601.6015	6
						10	10	EA	24'' CSPES .064	601.6025	EST.
						5	5	EA	30'' CSPES .079	601.6036	EST.
						5	5	EA	36'' CSPES .079	601.6046	4
						5	5	EA	42'' CSPES .109	601.6052	EST.
						5	5	EA	48'' CSPES .109	601.6057	EST.
						1500	1500	LF	RELAYING PIPE CULVERTS	601.99	396
						70000	70000	LF	CLEANING CULVERT PIPE IN PLACE (0'' - 24'' DIA. INCLUSIVE) (MOD.)	601.995	EST.
						2000	2000	LF	CLEANING CULVERT PIPE IN PLACE (GREATER THAN 24'' DIA.)	601.996	EST.
						2	2	CY	CEMENT RUBBLE MASONRY	602.15	EST.
						5	5	EA	CONCRETE CATCH BASIN W/CI GRATE	604.10	EST.
						10	10	EA	CONCRETE MANHOLE W/CI COVER	604.11	EST.
						25	25	EA	PRC CURB DROP INLET W/ CAST IRON GRATE	604.30	16
						10	10	EA	CHANGE ELEV OF DI, CB, OR MH	604.40	EST.

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

SURVEYED BY N/A DATE N/A
DRAWN BY KML DATE 3/95
SQUAD LEADER BOMBARDIER

DESIGN FILE NO. sada/87a008/da008.dgn
IPARM FILE da008a02.i DATE PLOTTED 12-MAR-1999

PROJ. NAME Hartford Sharon Royalton

PROJ. NO. IM IR 089-1(8)

SHEET 4 OF 260 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

TRNG.	EROSION CONTROL		BRIDGE			ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ESTIMATE AND ROUNDING
						200	200	EA	REHABILITATION OF DI, CB, OR MH CL I	604.412	EST.
						10	10	EA	REHABILITATION OF DI, CB, OR MH CL I(MOD)	604.412	EST.
						200	200	EA	REHABILITATION OF DI, CB, OR MH CL II	604.415	EST.
						10	10	EA	REHABILITATION OF DI, CB, OR MH CL III	604.418	EST.
						25	25	EA	CAST IRON GRATE W/FRAME TYPE A	604.45	13
						10	10	EA	CAST IRON GRATE W/FRAME TYPE B	604.46	9
						1000	1000	LF	6'' UNDERDRAIN	605.10	728
						100	100	LF	8'' UNDERDRAIN	605.11	EST.
						100	100	LF	10'' UNDERDRAIN	605.12	EST.
						100	100	LF	12'' UNDERDRAIN	605.13	50
						200	200	LF	6'' UNDERDRAIN CARRIER PIPE	605.20	190
						25	25	LF	12'' UNDERDRAIN CARRIER PIPE	605.23	19
						10	10	EA	UNDERDRAIN FLUSHING BASIN	605.95	8
						150	150	HR	BULLDOZER RENTAL, TYPE I	608.10	EST.
						150	150	HR	POWER GRADER RENTAL	608.15	EST.
						150	150	HR	ALL PURP. EXCAVATOR RENTAL, TYPE I	608.25	EST.
						150	150	HR	POWER BROOM RENTAL	608.30	EST.
						500	500	HR	TRUCK RENTAL	608.37	EST.
						150	150	HR	LOADER RENTAL, TYPE I	608.40	EST.
	2000						2000	CY	STONE FILL, TYPE I	613.10	674
	6000						6000	CY	STONE FILL, TYPE II	613.11	268
	250						250	CY	STONE FILL, TYPE III	613.12	EST.
	3000						3000	CY	STONE FILL, TYPE IV	613.13	2140
						5600	5600	LF	GRANITE SLOPE EDGING	616.20	90
						46000	46000	LF	TREATED TIMBER CURB	616.35	509
			1760				1760	LF	CAST IN PLACE CONCRETE CURB, TYPE B	616.28	-
						6500	6500	LF	REMOVING AND RESETTING CURB	616.40	150
			8693			1907	10600	LF	REMOVAL OF EXISTING CURB	616.41	78
						1500	1500	TON	BIT. CONCRETE GUTTERS & TRAFFIC ISLANDS	616.47	637 •
						1000	1000	EA	YIELDING MARKER POSTS	619.17	658
						1500	1500	LF	CHAIN-LINK FENCE, 4 FEET	620.11	180
						57000	57000	LF	CHAIN-LINK FENCE, 6 FEET	620.12	800
						48	48	LF	GATE FOR CHAIN-LINK FENCE, 6 FEET	620.16	EST.
						100	100	EA	BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 4 FEET	620.20	EST.
						850	850	EA	BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 6 FEET	620.21	EST.
						45000	45000	LF	WOVEN WIRE FENCE W/STEEL POSTS	620.25	1160
						20000	20000	LF	WOVEN WIRE FENCE W/STEEL POSTS (MOD)	620.25	220
						2	2	EA	DRIVE GATE FOR WOVEN WIRE FENCE	620.30	EST.

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

• NOTE : 501 TONS ARE FOR THE TREATED TIMBER CURB AREA UNDER THE FILLETS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

SURVEYED BY N/A DATE N/A
DRAWN BY NUTTER DATE 3/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sqda/87a008/da008.dgn
IPARM FILE da008a03.i DATE PLOTTED 21-NOV-2000
PROJ. NAME Hartford Sharon Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 5 OF 260 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

TRNG.	EROSION CONTROL		BRIDGE			ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ESTIMATE AND ROUNDING
						800	800	EA	STEEL BRACE FOR WOVEN WIRE FENCE	620.40	EST.
						18000	18000	LF	REMOVAL OF EXISTING FENCE	620.55	EST.
						82000	82000	LF	REMOVAL OF EXISTING FENCE (MOD.)	620.55	EST.
						5000	5000	LF	BARBED WIRE FENCE	620.60	EST.
			2400			200	2600	LF	SNOW BARRIER - GALVANIZED	620.75	80
						146000	146000	LF	STEEL BEAM GUARDRAIL	621.20	692.5
						750	750	LF	STEEL BEAM GUARDRAIL	621.20	225
									(W / 8' STEEL POSTS) (MOD.)		
						125	125	EA	MANUFACTURED TERMINAL SECTION (FLARED)	621.505	12
						15	15	EA	MANUFACTURED TERMINAL SECTION (TANGENT)	621.505	EST.
			15				15	EA	ENERGY ABSORPTION ATTENUATOR	621.57	-
									(SAND FILLED PLASTIC BARRELS)		
						175	175	EA	ANCHOR FOR STEEL BEAM GUARDRAIL	621.60	28
			44				44	EA	GUARDRAIL APPR. SECTION, NETC 2 RAIL	621.72	-
			200				200	LF	ALUMINUM APPROACH RAILING	621.74	-
						1500	1500	LF	REMOVING AND RESET GUARDRAIL	621.75	EST.
						500	500	EA	REPLACE GUARDRAIL POST ASSEMBLY	621.76	145
						1000	1000	EA	REPLACE GUARDRAIL BEAM UNIT	621.77	97
						7900	7900	LF	ADJUST HEIGHT OF GUARDRAIL	621.79	37.5
						125000	125000	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	708.5
						8	8	EA	REMOVAL AND DISPOSAL OF GUIDE POSTS	621.81	-
						750	750	EA	REMOVAL AND DISPOSAL OF GUIDE POSTS(MOD)	621.81	EST.
			24390			19110	43500	LF	TEMPORARY TRAFFIC BARRIER	621.90	689
			1400			4100	5500	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.
			1250			3250	4500	HR	FLAGGERS	630.15	EST.
						1	1	LS	FIELD OFFICE-ENGINEERS	631.10	-
			1				1	LS	TESTING EQUIPMENT - CONCRETE	631.16	-
						1	1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-
						1	1	LU	FIELD OFFICE-TELEPHONE (N.A.B.I.)	631.25	-
3120							3120	HR	EMPLOYEE TRAINEESHIP	634.10	EST.
			.25			.75	1	LS	MOBILIZATION	635.10	EST.
			.25			.75	1	LS	TRAFFIC CONTROL	641.10	EST.
						4	4	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	EST.
						4	4	EA	PORTABLE ARROW BOARD	641.16	EST.
						500	500	LF	PAINTED CURB	646.27	EST.
			1500				1500	LF	DURABLE 4'' WHITE LINE	646.40	102
			1500				1500	LF	DURABLE 4'' YELLOW LINE	646.41	102
			27607			6393	34000	LF	DURABLE 6'' WHITE LINE	646.414	343
			19709			3291	23591	LF	DURABLE 6'' YELLOW LINE	646.415	591
						900	900	LF	DURABLE 8'' WHITE LINE	646.42	70
						400	400	LF	DURABLE 12'' WHITE LINE	646.44	EST.
						200	200	LF	DURABLE 24'' STOP BAR	646.46	-
						87	87	EA	DURABLE LETTER OR SYMBOL	646.50	-
			1500				1500	LF	TEMPORARY 4'' WHITE LINE	646.60	103

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

REVISED 12/14/00 AJB

SURVEYED BY N/A DATE N/A
DRAWN BY NUTTER DATE 3/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sada/87a008/da008.dgn
IPARM FILE da008a04.i DATE PLOTTED 12-DEC-2000
PROJ. NAME Hartford Sharon Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 6 OF 260 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

TRNG.	EROSION CONTROL		BRIDGE			ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ESTIMATE AND ROUNDING
			1500				1500	LF	TEMPORARY 4'' YELLOW LINE	646.61	103
			54850			47150	102000	LF	TEMPORARY 6'' WHITE LINE	646.614	440
			41784			43216	85000	LF	TEMPORARY 6'' YELLOW LINE	646.615	92
						2600	2600	LF	TEMPORARY 8'' WHITE LINE	646.62	30
						400	400	LF	TEMPORARY 12'' WHITE LINE	646.64	EST.
			30				30	LF	TEMPORARY 24'' STOP BAR	646.66	-
			3461			3039	6500	EA	LINE STRIPING TARGET	646.73	EST.
			21660			75340	97000	SF	BLACK PVMT. MARKING MASKING TAPE	646.86	414
	52000						52000	SY	GEOTEXTILE UNDER STONE FILL	649.31	EST.
						1000	1000	SY	GEOTEXTILE FOR UNDERDRAIN LINING	649.41	460
	10000						10000	SY	GEOTEXTILE FOR SILT FENCE	649.51	200
	1320						1320	LB	SEED	651.15	EST.
	660						660	LB	SEED-WINTER RYE	651.17	EST.
	11000						11000	LB	FERTILIZER	651.18	EST.
	44						44	TON	AGRICULTURAL LIMESTONE	651.20	EST.
	88						88	TON	HAY MULCH	651.25	EST.
	2000						2000	EA	HAY BALES FOR EROSION CONTROL	651.26	EST.
						2000	2000	CY	TOPSOIL	651.35	611
						100	100	SY	GRUBBING MATERIAL	651.40	EST.
	6400						6400	SY	EROSION MATTING	654.10	225
						2500	2500	SF	TRAFFIC SIGNS, TYPE A	675.20	EST.
						1650	1650	SF	TRAFFIC SIGNS, TYPE B	675.21	13
						180	180	SF	TRAFFIC SIGNS, TYPE B (MOD.)	675.21	EST.
						7800	7800	LF	FLANGED CHANNEL SIGN POST	675.301	80
						4600	4600	LB	W-SHAPED STEEL SIGN POST	675.31	48
						300	300	LB	TUBULAR ALUMINUM SIGN POST	675.32	20
						7700	7700	LB	TUBULAR STEEL SIGN POST	675.33	49
						11	11	EA	FOUNDATION FOR W-SHAPE STEEL POST 24'' DIAMETER	675.41	-
						4	4	EA	FOUNDATION FOR W-SHAPE STEEL POST 30'' DIAMETER	675.42	-
						72	72	EA	FOUNDATION FOR TUBULAR STEEL POST	675.43	-
						434	434	EA	REMOVING SIGNS	675.50	-
						11	11	EA	ERECTING SALVAGE SIGNS	675.60	-
						2250	2250	EA	DELINEATORS W/STEEL POSTS	676.10	-
						1300	1300	EA	REMOVAL OF EXISTING DELINEATORS	676.12	-
						1000	1000	EA	REMOVE & REPLACE REFLECTOR UNITS	676.15	EST.
			1				1	EA	TEMPORARY TRAFFIC SIGNAL SYSTEM	678.40	-
			1				1	EA	TEMPORARY DETECTOR	678.42	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

SURVEYED BY N/A DATE N/A
DRAWN BY NUTTER DATE 3/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sada/87a008/da008.dgn
IPARM FILE da008a05.I DATE PLOTTED 20-NOV-2000
PROJ. NAME Hartford Sharon Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 7 OF 260 SHEETS

HARTFORD-ROYALTON

AC IM IR 089-1(8)

GUARDRAIL SUMMARY

NORTHBOUND (OUTSIDE)	COMMON EXC.	EARTH BORROW	EXC. OF SURFACES	SHLDR. BERM REMOVAL	AGGREGATE SHOULDER	REM.& RESET CURB	REMOVAL OF CURB	BIT. CONC. MIXTURE (MOD.)	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL (MOD.)	M.T.S.	M.T.S. (MOD.)	ANCHOR FOR G.RAIL	REM.&RESET GUARDRAIL	GUARDRAIL POST	GUARDRAIL BEAM	ADJ. HEIGHT GUARDRAIL	REM.&DISP. GUARDRAIL	REM.&DISP. POSTS	TOPSOIL	REM. & REFL. REFLECTOR	BIT. CONC. CURBING
	203.15	203.30	203.38	203.99	402.11	616.40	616.41	616.47	621.20	621.20	621.505	621.505	621.60	621.75	621.76	621.77	621.79	621.80	621.81	651.35	676.15	900.12
MM-MM	(CY)	(CY)	(CY)	(LF)	(CY)	(LF)	(LF)	(TON)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(LF)	(LF)	(EA.)	(CY)	(EA.)	(LF)
0.04-INT#10 "A" 22+00					120			62.17	807.5							18		775			19	1518
INT#10 "A" 24+00-30+00LT																		300				
INT#10 "B" 0+00-11+50																						
INT#10 "B" 11+50-12+38							184	22.85														
INT#10 "G" 0+00-9+29				775	12																	
0.53 - 0.61	16.67		2.27		36				302		1		1			6		275				
0.80 - 1.05			1.40		228		39	61.05	650							18		650			27	1226
1.10 - 1.11					24				427				1					400			51	
1.43 - 2.14	23.2	222.1		1265	144			36.33	3002		1		1					2742.5		28.3		728
2.26 - 2.39	10.2				60		250	6	327		1		1			4		50		2.3	19	237
2.45 - 2.72	7.4				96		1100	20	200		1					13	400	100			35	1091
2.95 - 3.11	16.1	166.6			96				875		1					2		200		21.2	46	
3.18 - 3.46					53		735	35.99	364.5				1		1	3	1025	475				737
3.68 - 3.83	28.2				24				827		1		1								1	
INT#1 "A" 0+85-2+15 LT					24		130											100				
INT#1 "A" 4+55-5+65 LT																		100				
INT#1 "A" 4+80-5+85 RT																						
INT#1 "B"13+85-"A"1+57LT					0	175		8.51														
INT#1 "B"13+85-15+85 RT							220						1		1	4	175			5.68	1	
3.88 - 3.92		9.52			6				262.5		1							50		36	31	1162
4.04 - 4.32	43.3	120.52			360		1115	21.7	1037.5		1					2		1000		1.4	21	550
4.58 - 4.88	40.4				156		550	8.34	1739.5		1		1					1614		22	5	995
5.03 - 5.38	71.5	19.7			396			28.08	2364.5		1		1			6		1904		15.3	21	960
5.52 - 5.99	33.1	78.6			264			22.15	150		1							187.5			14	
6.56 - 6.58									2602		1		1					2546		3.9	13	
7.69 - 8.18	33	142.2			120				727		1		1					596			4	440
8.55 - 8.72	40.2				216			10	352			1	1					186			1	
9.35 - 9.42	6.5				18				514.5		1		1					500			1	
9.43 - 9.47	4				6			15	389.5		1		1			1		355		4.4		
9.75 - 9.85	33.1	6			84				577		1							432		15.6		
10.77 - 10.88	25.7	67.9			120				1162.5				1					355			3	
10.88 - 11.08		52.17			48			5	952		1		1					720		11.8	4	357
11.17 - 11.35	33.1	82.1			240			7	714.5		1		1					457		4.5		333
12.27 - 12.44	25.7	5.93			80				1364.5		1		1					1150				
INT#2 "B" 0+00-14+00	8.1				24				700		1							700				
13.25 - 13.39	7.4	10.4			12																	
SHEET TOTALS:	506.87	983.74	3.67	2040	3167	175	4323	370.17	23391.5		20	1	18		2	77	1600	18920.0		172.38	317	10334.0

165 INSTALLED

GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.605	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL OF GUIDE POSTS 621.80	GUARDRAIL ITEMS (EA) STL.BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL HW/ STL. PSTS 910.20 621.20	SUB. OF DEN. GR. CRSH STONE CY 304.35	REMARKS
NORTHBOUND		OUTSIDE																									
0.04	22+00	RAMP A	64	32		13					1500	1500	19														SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
HARTFORD INT.		#10																									
RAMP A	24+00	30+00	LT																87.5	52	1		1				SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
RAMP B	0+00	11+50								1150																	SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
RAMP B	11+50	12+38									88																SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
RAMP F	0+00	14+25								1425																	SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
RAMP F	14+25	14+34									69																SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
RAMP G	0+00	9+29								929			4														SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
0.53	0.61		23	8		3		18	2										25	27	1		1				SEE HARTFORD INTERCHANGE #10 LAYOUT SHT 49
0.80	1.05		54	27		11						200	3			50		1	200	200	1						REPLACE EX. APPR. RAIL
1.10	1.11															26		1	400	402			1				REPLACE EX. APPR. RAIL
1.43	1.67		82	25	550	10		75	5										150	162.5	1						
1.67	2.14		121	22		9		18	2			750	9						2140.5	2475			1				EXTEND SOUTH TO MM 1.67 & NORTH TO MM 1.90, REPLACE ALL RAIL
2.26	2.39		32	12		5		18	2										50	125	1						EXTEND SOUTH W/MTS
2.45	2.72		63	27		11		18	2										50	162.5			2				EXTEND NORTH 25', BURY IN BACKSLOPE SOUTH END
2.98	3.11		51	12		5		75	5										37.5	37.5	1						
3.18	3.46		86	29		11		18	2			200	3						112.5	214.5	1		1				(MM 3.46=2+90RT RAMP B QUECHEE INT. #1)
3.75	3.83		50					18	2											427	1		1				
QUECHEE INT.		#1																									
RAMP A	0+85	2+15	RT							130			2														SEE QUECHEE INTERCHANGE #1 LAYOUT SHT 50
RAMP A	4+55	5+65	LT																110								SEE QUECHEE INTERCHANGE #1 LAYOUT SHT 50
RAMP A	4+80	5+85	RT																105								SEE QUECHEE INTERCHANGE #1 LAYOUT SHT 50
RAMP B	13+85	LT - RAMP A	1+57	LT						293																	SEE QUECHEE INTERCHANGE #1 LAYOUT SHT 50
RAMP B	13+85	15+15	RT							130			2														SEE QUECHEE INTERCHANGE #1 LAYOUT SHT 50
3.88	3.92		34					18	2										100	177			2				SEE QUECHEE INTERCHANGE #1 LAYOUT SHT 50, BURY IN BACKSLOPE
4.04	4.32		56	25		10		50	2										37.5	200	1						EXTEND SOUTH TO MM 4.04 & REPAIR SINK HOLE
4.58	4.73		38					18	2										739	825			2				BURY IN BACKSLOPE
4.73	4.88		32	13		5	4												37.5	187.5			1				EXTEND SOUTH TO MM 4.73
5.03	5.37		97					75	5			1775	22						1690	1802	1		1				
5.55	5.99		117									1060	13						1901	2300			2				BURY IN BACKSLOPE
7.69	8.18		120					18	2										2534	2539.5	1		1				
8.53	8.72		39					18	2			530	7						581	977	1		1				
9.39	9.42		14					18	2										211	275	1		1				WRAP INTO DRIVE
9.43	9.47		9	4		2													25		1						WRAP INTO DRIVE @ SOUTH END AND NORTH TIE INTO NEW RAIL @ MM 9.47
9.47	9.52		11																264	277			1				
SHEET 13 TOTALS:			1193	236	550	95	4	473	39	4057	1657	6015	84			76		2	11588	13845	14		20				

SEE REVISED SHEETS 12A - 18A

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION
NOTE: 78 TONS OF ITEM 616.47 FOR FILLETS

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Ross DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sadg/87g008/da008gr.dgn
IFARM FILE da008g01.i DATE PLOTTED 2-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 13 OF 260 SHEETS

HARTFORD-ROYALTON — **GUARDRAIL SUMMARY** — SH.2

AC IM IR 089-1(8)

NORTHBOUND (OUTSIDE)	COMMON EXC.	EARTH BORROW	EXC. OF SURFACES	SHOULDER BERM REMOVAL	AGGREGATE SHOULDER	REM & RESET CURB	OF CURB REMOVAL	BIT. CONC. GUTTER (MOD.)	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL (MOD.)	M.T.S.	M.T.S. (MOD.)	ANCHOR FOR GRAIL	REM &RESET GUARDRAIL	GUARDRAIL POST	GUARDRAIL BEAM	GUARDRAIL ADJ. HEIGHT	REM.&DISP. GUARDRAIL	REM.&DISP. POSTS	TOPSOIL	REM. & REPL. REFLECTOR	BIT. CONC. CURBING
	203.15	203.30	203.38	203.99	402.11	616.40	616.41	616.47	621.20	621.20	621.505	621.505	621.60	621.75	621.76	621.77	621.79	621.80	621.81	651.35	676.15	900.12
MM-MM	(CY)	(CY)	(CY)	(LF)	(CY)	(LF)	(LF)	(TON)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(LF)	(LF)	(EA.)	(CY)	(EA.)	(LF)
13.43-13.53					0				527				1					525				
13.80-13.87	28.2	55.04			120				312.5		1					4		225		7.6		
13.94-14.01								7.99	377				1					375				302
14.31-14.38	23.4				36				312.5		1					4		226				
14.58-14.64	36.2				0			1	437.5							6		490				105
14.70-14.72									102				1					113				
14.88-15.17	33.1	24.1			228		1190	38.01	214.5		1				4	14		112.5		7.2	43	1187
15.45-15.96	40.2	48			312			44.09	2839.5		1		1		4	4		2733		4.2	1	1364
16.17-16.30	30.6	160.01			158			8.98	764.5		1		1					657		17.4	2	365
16.47-16.82	28.2	22.5			216			45.54	1864.5		1		1					1814		8.8	1	1643
16.94-17.25	28.2	63.6			204		1362	36.03	177		1		1			45	1500	100		9.4	28	1366
17.48-18.02	28.2	57.6			300		2175	81.93	1500		1		1		2	29	787.5	1327		5.8	13	
18.06-19.59	33.1				192			68.01	7316.5		1		1					6470		9.6	66	3845
19.70-20.16	23.2	17.07			278			86.13	2277		1		1					2112		3.8	15	1778
20.41-20.71	40.2	74.3			258		650	38.03	1102		1		1			2	450	700		14.4		620
20.78-20.91	13	9.95			81			11.03	677		1		1					562.5		5.7	2	237
21.11-21.31	10.2			200	141		675	14.02	1052		1		1					950		2		684
21.54-21.70					0				739.5		1		1				162.5	912.5				
21.75-21.96	6.5			87.5	102			32	1050			1						875		0.8	10	44
SHEET TOTALS:	402.5	532.17		287.5	2626		6052	512.79	23642.5		13	1	14		10	108	2900.0	21279.5		96.7	181	13540.0

GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.505	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL OF GUIDE POSTS 621.80	GUARDRAIL ITEMS (EA) STL.BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL (W/O STL. PSTS)(MOD) 621.20	SUB. OF DEN. GR. CRSH STONE CY 304.55	REMARKS
NORTHBOUND		OUTSIDE																									
9.75	9.85		34					18	2										370	502	1		1				
10.77	10.88		29					18	2										422	577	1		1				
10.94	11.08		31					18	2										422	727			2				BURY IN BACKSLOPE
11.17	11.35		44					18	2			265	3						792	952	1		1				
12.27	12.44		33					18	2			370	5						475	877	1		1				
SHARON	INT. *2																										
RAMP B																											
0+00	14+00	RT	80					75	5										1150	1377	1		1				SEE SHARON INT. *2 LAYOUT SHT 51
14+85	15+50	LT											2														SEE SHARON INT. *2 LAYOUT SHT 51
15+30	LT												1														SEE SHARON INT. *2 LAYOUT SHT 51
15+65	15+90	RT								105																	SEE SHARON INT. *2 LAYOUT SHT 51
VT 132	RAMP D																										
10+30	1+00	LT											1														SEE SHARON INT. *2 LAYOUT SHT 51
11+80 LT	0+80	RT											3														SEE SHARON INT. *2 LAYOUT SHT 51
13.25	13.39		35	11		4		18	2							187.5		1	50	300	1						REPLACE EX. APPR. RAIL, NORTH END ATTACH TO NEW APPR. RAIL
13.43	13.53		24									100	1					1	422	502			1				SOUTH END ATTACH TO APPR. RAIL REMOVE 100' BIT. CONC. CURB & REPLACE W/ TREATED TIMBER
13.78	13.85		20					18	2							225		1		325	1						REPLACE EX. APPR. RAIL, ATTACH NORTH END TO BRIDGE APPR. RAIL
14.00	14.07															375		1		352			1				REPLACE EX. APPR. RAIL
14.31	14.38		14					18	2							225		1		325	1		1				REPLACE EX. APPR. RAIL, NEW STEEL BEAM ATTACH TO APPR. RAIL
14.58	14.64		25									100				250		2		275							REPLACE APPR. RAIL, TIE BRIDGES # 17 & # 18 TOGETHER
14.70	14.72															113		1	113	102			1				REPLACE APPR. RAIL
14.90	15.17		89	29		11		75	5			125	2						187.5	164.5	1			15			USE FLARE PLUS MTS, REMOVE TEXAS TWIST
15.43	15.96		117					18	2			1320	17						2693	2777	1		1				
16.17	16.30		53	14		6		75	5			320	4						687.5	687.5	1		1	15			USE FLARE PLUS MTS
16.47	16.82		97					75	5			1640	21						1742	1802	1		1	15			USE FLARE PLUS MTS
16.94	17.25		82	32		13		18	2										25	52	1		1				EXTEND NORTH TO MM 17.25, REMOVE TEXAS TWIST @ 16.94 & REPLACE W/MTS
17.48	17.54		37	6		2		75	5										112.5	189.5	1			15			USE FLARE PLUS MTS
17.54	18.08		117	46		18		75	5			538	7						25	537.5							EXTEND SOUTH TO MM 17.54 & NORTH TO MM 18.08
18.08	18.22		36					18	2										739	750							
18.22	19.02		167	75		30		18	2			800	10						3750	3752							EXTEND NORTH TO 19.02 MM 18.40 - 18.97
19.02	19.25		54	21		8		18	2										1050	1050							
19.25	19.58		70									850	11						1742	1752			1				
SHEET 14 TOTALS:			1288	234		92		684	56	105		6428	88			1375.5		8	16969.5	20707	14		16	60			

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION
NOTE: 80 TONS OF ITEM 616.47 FOR FILLETS

SEE REVISED SHEETS 12A - 18A

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Ross DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sada/87a008/dg008gr.dgn
IPARM FILE da008a02.i DATE PLOTTED 2-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 14 OF 260 SHEETS

HARTFORD-ROYALTON

AC IM IR 089-1(8)

GUARDRAIL SUMMARY

NORTHBOUND (MEDIAN)	COMMON EXC.	EARTH BORROW	EXC. OF SURFACES	SHOULDER BERM REMOVAL	AGGREGATE SHOULDER	REM.& RESET CURB	REMOVAL OF CURB	BIT. CONC. GUTTER (MOD.)	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL (MOD.)	M.T.S.	M.T.S. (MOD.)	ANCHOR FOR G.R.RAIL	REM.&RESET GUARDRAIL	GUARDRAIL POST	GUARDRAIL BEAM	ADJ. HEIGHT GUARDRAIL	REM.&DISP. GUARDRAIL	REM.&DISP. POSTS	TOPSOIL	REM. & REPL. REFLECTOR	BIT. CONC. CURBING
	203.15	203.30	203.38	203.99	402.11	616.40	616.41	616.47	621.20	621.20	621.505	621.505	621.60	621.75	621.76	621.77	621.79	621.80	621.81	651.35	676.15	900.12
MM-MM	(CY)	(CY)	(CY)	(LF)	(CY)	(LF)	(LF)	(TON)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(LF)	(LF)	(EA.)	(CY)	(EA.)	(LF)
0.04-0.40																						
0.28-0.57	6.5			1625	12				1627.5			1	1					1025			2	
0.95-1.05	7.4				24				400		1							238				
1.10-1.11									102				1					176				
3.91-3.95	34.6				66				164.5		1		1									
6.51-6.56									177			1	1									
7.04-7.64	84				168			29	3289.5		1		1			4		3198			6	1073
7.71-8.02	50.3	87.5			800			40.08	1652		1		1					1770		16.8	6	1244
8.03-8.19	33.3	76.5			96			21	727		1							814		7	3	588
8.23-8.37		10.4							1050				1					661				
8.55-8.93	74.6	129.6			254.45			32.18	1764.5		1		1					1720		6.1	3	1137
9.00-9.57	58.6	18.4			248			16.01	2677		1		1					2148		12.9	3	714
9.72-12.79	49.4	511.2			1032			~~57.68~~	16127		1		1		2	2	50	15973		52.3	27	2464
13.30-13.46	7.4	10.4			24				539.5		1		1					335				
13.80-13.96	28.2	0.3			72				437.5		1		1					339		10.1	2	
14.30-14.38	28.2	57.9			96				350		1							228		15.1		
14.54-14.64									425									339				
14.68-14.70									89.5				1					113			1	
17.49-17.53		323.52			0				127			1	1									

GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.505	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL OF GUARD POSTS 621.8	GUARDRAIL ITEMS (EA) STL.BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL UP/W STL. PSTS(INCID) 621.20	SUB. OF GEN. GR. CRSH STONE CY 301.35	REMARKS
NORTHBOUND		OUTSIDE																									
19.75	20.04		75	31		12		18	2										25	50	1						EXTEND SOUTH
20.04	20.16		25																634	702			1				EXTEND NORTH
20.41	20.64		57	16		6		75	5			413	5						150	412.5	1			15			USE FLARE PLUS MTS, EXTEND NORTH TO MM 20.64
20.64	20.71		25					18	2										317	464.5			1				
20.78	20.91		32	11		4		18	2			200	3						50	227	1		1				
21.11	21.31		48	18	875	7		18	2										50	239.5	1		1				
21.54	21.70		57	5		2		75	5										927	802	1	8	1				SEE ROYALTON REST AREA DETAIL SHT 55
21.76	21.96		57	18		7		18	2			125	2						25	175	1						ATTACH STEEL BEAM TO EX. APPR. RAIL
NORTHBOUND		MEDIAN																									
0.04	0.40												178														MINUS DISTANCE OF U-TURN
0.30	0.35		18	6		2		18	2										25	37.5	1		1				
0.95	1.05		46	6		2		75	5							25		1	25	300	1						REPLACE EX. APPR. RAIL
1.10	1.11															26		1		52			1				REPLACE EX. APPR. RAIL
7.04	7.64		152					75	5			900	11						3115	3164.5	1		1				
7.71	8.02		91					75	5			1060	13						1637	1652	1		1	15			USE FLARE PLUS MTS
8.03	8.19		54					75	5			530	7						686	727	1		1				
8.23	8.37		54					75	5										634	714.5			2	15			BURY IN BACK SLOPE
8.55	8.93		74					18	2			1220	15						1637	1689.5	1		1				
9.00	9.19		53					18	2										898	1175	1						
9.19	9.57		81									1160	23						1584	2014.5			1				EXTEND SOUTH FROM MM 9.27 TO MM 9.19 AND CONNECT RAIL, NEW TREATED TIMBER CURB FROM MM 9.35-9.57 & PAVED GUTTERS EVERY 225'
9.76	12.10		519					75	5			2535	41						12302	12352	1			15			USE FLARE PLUS MTS, TREATED TIMBER CURB AND BIT. CONC GUTTERS (EVERY 225') FROM MM 11.70-11.95
12.10	12.57		100									1425	18						1954	2500							ATTACH RAIL AT 12.10
12.57	12.79		43																528	1077			1				ATTACH RAIL AT 12.57, EXTEND NORTH TO MM 12.79
13.35	13.40		28					695	75							325		2		437.5	2						REPLACE EX. APPR. RAIL
13.83	13.87		28					500	75							225		2		437.5	2						REPLACE EX. APPR. RAIL
14.34	14.38		28					330	75							225		2		437.5	2						REPLACE EX. APPR. RAIL
14.54	14.64		20					495	75							300		2		387.5							NEW STEEL BEAM TO ATTACH BR. #17 APPR. RAIL TO BR. #18 APPR. RAIL & REPLACE EX. APPR. RAIL
19.95													5														REHAB PAVED GUTTER
21.92	21.96		28					495	75							800				437.5	2						ATTACH NEW TO EX. APPR. RAIL
SHEET 15 TOTALS:			1793	111	875	42		3259	431			9568	321			1926		10	27213.5	32665.5	22	8	15	60			

SEE REVISED SHEETS 12A - 18A

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION
NOTE: 124 TONS OF ITEM 616.47 FOR FILLETS

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Nutter DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sqda/87a008/da008gr.dgn
1PARM FILE da008a03.1 DATE PLOTTED 14-NOV-2000
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 15 OF 260 SHEETS

SHEET TOTALS:	462.5	1225.7		1625	2692.45			195.95	31726.5		11	3	14		2	6	50	29075		120.3	53	7220
HARTFORD-ROYALTON									**GUARDRAIL SUMMARY**													SH.4
AC IM IR 089-1(8)																						
SOUTHBOUND (OUTSIDE)	COMMON EXC.	EARTH BORROW	EXC. OF SURFACES	SHOULDER BERM REMOVAL	AGGREGATE SHOULDER	REM.& RESET CURB	REMOVAL OF CURB	BIT. CONC GUTTER (MOD.)	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL (MOD.)	M.T.S	M.T.S (MOD.)	ANCHOR FOR G.RAIL	REM.&RESET GUARDRAIL	GUARDRAIL POST	GUARDRAIL BEAM	ADJ. HEIGHT GUARDRAIL	REM.&DISP. GUARDRAIL	REM.&DISP. POSTS	TOPSOIL	REM. & REPL. REFLECTOR	BIT. CONC. CURBING
	203.15	203.30	203.38	203.99	402.11	616.40	616.41	616.47	621.20	621.20	621.505	621.505	621.60	621.75	621.76	621.77	621.79	621.80	621.81	651.35	676.15	900.12
MM-MM	(CY)	(CY)	(CY)	(LF)	(CY)	(LF)	(LF)	(TON)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(LF)	(LF)	(EA.)	(CY)	(EA.)	(LF)
05.41-5.20	44.2	48.8		50	92				339.5		1		1	31.25		6		37.5		13.8	20	
05.85-5.73	40.2	72.7		250	158		230	3.11	277		1		1	6.25		2		50		10.8	16	230
06.06-5.96	40.2	51		100	132				177		1		1	62.5				37.5		22		
06.36-6.20	40.2	108.8		300	120				214.5		1		1			6		87.5		16.4	21	
06.71-6.61									139.5				1		1	5					14	
08.45-7.13	75.7	13.9			810.32			59.04	6754		2		2			5		5714		7	8	3026
08.75-8.50	7.4	41.7			195.23			13.06	1139.5		1		1					1032				500.5
09.41-8.89	40.2	104			60				2464.5		1		1			6		1654		10.8	6	
09.65-9.48	40.2	271.8			252			24.02	739.5		1		1					658		41.3		504
09.87-9.78	28.2	370.4			84				577		1		1					274		15.7		
12.10-10.15	80.4	95.9			901			144.23	10167		2		2					9855		18.9	40	3859
13.41-13.29								14	664.5				1					530				290
13.57-13.45	6.5				72			14.03	575			1						462.5				392
13.87-13.83								1	152				1					150				60
14.05-13.94	40.2	62.8			144			7	500		1							490		10.2		329
14.29-14.20	25.7	37.9			72				452		1		1					319		3.8		
14.35-14.33					12				127				1					110				
14.64-14.53									387.5						6	10		446			1	130
14.72-14.68	28.2				84				175		1		1			4		221		12		
15.22-14.97	25.7				210			34.02	1239.5		1		1					1177		2.6		1027
15.66-15.55	28.2	11.6			96				502		1		1					350		9.3		
16.30-16.20	7.4	4.1			24				539.5		1		1					224		1.1		
16.73-16.64	23.2	192.1			108				464.5		1		1					162.5		16.6		
17.34-16.95	40.2	1.4			342			60.14	2002		1		1					1922		9		1758
17.55-17.49	6.5				24				364.5			1	1					162.5				
17.99-17.73	28.2	7.2			204			40.01	1327		1		1					1298		3.2		1095
18.27-18.13	7.4				12				714.5		1		1					336		0.9		
18.50-18.33	16.1	25.3			156			13.99	814.5		1		1					538		6		436
19.72-19.40					6													102				
19.89-19.77	7.4				24				2627		1		1					316.5		3.1		
20.19-19.93	35.5				234				1302		1		1					1234		2.9		~~780~~
20.67-20.45	13	8.64			168			24.02	1152		1		1					1016		1.8		780
20.99-20.90	35.5	165.09		337.5	102				552		1		1					350		12.3	4	
21.43-21.12	7.4			90	68		1050	36.04	777		1		1			2	775	452		2.1		1036
21.95-21.87					48			19.99	477				1					475		2.1		490
INT#2 VT132 13.15-12.26	6.5				720			228.26	5652	525		1	1					6233.5	1		14	5762

GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.505	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL OF GUIDE POSTS 621.80	GUARDRAIL ITEMS (EA) STL.BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL (W/O STL. PSTS/MMD) 621.20	SUB. OF DEN. GR. CRSH STONE CY 304.35	REMARKS
OUTBOUND		OUTSIDE																									
0.04	23+75	RAMP D	48	15		6		18	2										50	325	1						SEE HARTFORD INT.10 RAMP D SHEET 49 (SL 23+75 RT=MM 0.23)
0.53	0.60		18	5		2		18	2										37.5	37.5	1						
RAMP C																											
6+75	4+25		14	3				18	2										200	202	1		1				SEE HARTFORD INT. #10 RAMP C DETAIL SHEET 155
0.89	1.04		31	15		6										25		1	737.5	737.5	1		1				
1.08	1.25		39	15		6		18	2							25		1	125	237.5	1						SOUTH END REPLACE EX. APPR. RAIL
1.33	1.51		44	3		1		18	2										162.5	914.5	1		1				
2.58	2.69		47	8		3		75	5			188	2						50	187.5							EXTEND TO MM 2.69 & TIE TO NEW STEEL BEAM
2.69	2.75		18					18	2			160	2						264	302	1						REPLACE CABLE W/ STEEL BEAM
3.03	3.10																			375	1		1				PLACE NEW RAIL
3.26	3.46		41					18	2			580	7						686	864.5	1		1				
3.93	3.98		36	4		2		75	5										212.5	214.5	1		1				
QUECHEE INT. #1																											
RAMP CD 0+27	5+40 MED.									1040																	SEE QUECHEE INTERCHANGE LAYOUT SHT 50
RAMP CD 1+75 RT US4	120+00 LT		21					18	2										270	377	1		1				SEE QUECHEE INTERCHANGE LAYOUT SHT 50
RAMP CD 2+00 LT US4	115+50 LT		23					36	4										205	275	2						SEE QUECHEE INTERCHANGE LAYOUT SHT 50
RAMP CD 6+17 MED	RAMP C 9+34 LT									325																	SEE QUECHEE INTERCHANGE LAYOUT SHT 50
4.03	4.36		74	19		8		75	5			250	3						37.5	264.5	1		1				EXTEND NORTH TO 4.36 W/MTS, EXTEND SOUTH TO 4.03
4.76	4.93		41	15		6		18	2										62.5	189.5	1		1				EXTEND SOUTH 25'
5.20	5.41		51	18		7		18	2										37.5	275	1		1				
5.73	5.85		38	12				18	2			160	3						50	250	1		1				
5.96	6.06		28	8		3		18	2			150	2						37.5	177	1		1				
6.20	6.36		62	15		6		75	5										152	202	1		1	15			EXTEND 100' OF RAIL ON NORTH END, USE FLARE PLUS MTS & EXTEND SOUTH 25'
6.61	6.71		25	10	450	4														114.5			1				
7.13	7.70		117					18	2			1265	16						2640	2775							
7.70	8.02		73					18	2			1375	17						1584	1664.5	1						
8.07	8.45		86					18	2			315	4						1954	2002	1		1				
8.53	8.75		57					18	2			425	5						1056	1127	1		1				
9.00	9.39		66					18	2										1478	1902	1		1				
9.48	9.63		53					75	5			475	6						686	702	1		1				
SHEET 16 TOTALS:			1151	165	450	60		717	63	1365		5343	67			50	2		12775	16694.5	24		18	15			

SEE REVISED SHEETS 12A – 18A

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION
NOTE: 65 TONS OF ITEM 616.47 FOR FILLETS

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Ross DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sqda/87q008/dq008gr.dgn
IPARM FILE dq008q04.i DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 16 OF 260 SHEETS

SHEET TOTALS:	825.7	1692.1		1127.5	5832.6		1280	735.96	46528.5	525	28	3	34	100.00	7	46	775	38477.0	1	255.7	144	21705
HARTFORD-ROYALTON									**GUARDRAIL SUMMARY**													SH.5
AC IM IR 089-1(8)																						
SOUTHBOUND (OUTSIDE)	COMMON EXC.	EARTH BORROW	EXC. OF SURFACES	SHOULDER BERM REMOVAL	AGGREGATE SHOULDER	REM.& RESET CURB	REMOVAL OF CURB	BIT. CONC. GUTTER (MOD.)	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL (MOD.)	M.T.S.	M.T.S. (MOD.)	ANCHOR FOR G.RAIL	REM.&RESET GUARDRAIL	GUARDRAIL POST	GUARDRAIL BEAM	ADJ. HEIGHT GUARDRAIL	REM.&DISP. GUARDRAIL	REM.&DISP. POSTS	TOPSOIL	REM. & REPL. REFLECTOR	BIT. CONC. CURBING
	203.15	203.30	203.38	203.99	402.11	616.40	616.41	616.47	621.20	621.20	621.505	621.505	621.60	621.75	621.76	621.77	621.79	621.80	621.81	651.35	676.15	900.12
MM-MM	(CY)	(CY)	(CY)	(LF)	(CY)	(LF)	(LF)	(TON)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(LF)	(LF)	(EA.)	(CY)	(EA.)	(LF)
#1"CD"1+75-US4120+00LT					12			5.99	252		1		1					275				130
#1"CD"2+00-US4115+50LT					12			4.01	162.5		2							225				
00.59-0.53	20.4	47			60				339.5		1		1					200			1	
01.04-0.89					84			24	1602				1					850			1	
01.25-1.08	7.4				18				1050		1							750		0.6		
01.51-1.33	7.4				120				527		1		1					162.5		0.9	2	
02.79-2.58	23.2				77			26.99	639.5		1			12.5	1	3		37.5			8	299
03.15-3.03	6.5				12				602			1	1		1	4					7	
03.52-3.26	19.5	4.4			96			29.96	775		1					4		75	8	6	17	564
03.98-3.93									127				1				37.5	50				
04.41-4.03	25.7	58.2			116		774	26	352		1		1			12		50		4.4	27	489
04.93-4.76	33.1	79.8		712.5	68				189.5		1		1					62.5		14.1	21	
INT#1"CD"0+27-5+40 MED						1039		20														
INT#1"CD"6+17.-"C"9+34LT					144	646		16												67.8		
INT#10"D" 23+75-MM 0.04	7.4	10.4			48				745			1						656			1	
INT#10"F" 14+25-14+94			2.96				240	28.01														

CVB 03/14/06

16.6

GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.505	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL OF GUIDE POSTS 621.81	GUARDRAIL ITEMS (EA) STL.BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL (W/8' STL. PSTS)(W/D) 621.20	SUB. OF DEN. GR. CRSH STONE CY 304.35	REMARKS
SOUTHBOUND		OUTSIDE																									
9.87	9.87		37					75	5										264	352	1		1	15			USE FLARE PLUS MTS
10.15	11.12		198									2375	30						4858	4964.5			1				
11.12	12.07		224					75	5			4550	57						4700	5075	1			15			EXTEND NORTH 50' W/FLARE. CONNECT TO NEW STEEL BEAM GUARDRAIL @ MM 11.12
12.26	13.15		187	90	4487.5	37		18	2			750	9						652	237.5			1		525		CONNECT TO RAIL ON RAMP & USE GUARDRAIL (MOD) FROM MM 12.85 TO MM 12.75 (525')
SHARON 13.15	INT. #2 OUT																										
	6+50 VT132	RT 72						18	2			1750	22						1565	1800	1						SEE SHARON INTERCHANGE #2 LAYOUT SHT 51
RAMP A																											
10+30	10+50	RT											1														SEE SHARON INTERCHANGE #2 LAYOUT SHT 51
RAMP A	RAMP B																										
11+25	15+25	LT								405																	SEE SHARON INTERCHANGE #2 LAYOUT SHT 51
RAMP B																											
15+65	15+90	RT									105																SEE SHARON INTERCHANGE #2 LAYOUT SHT 51 REPLACE BIT. CURB W/ GRANITE SLOPE EDGING (105')
RAMP C																											
11+45	11+80	RT									67																SEE SHARON INTERCHANGE #2 LAYOUT SHT 51 REPLACE BIT. CURB W/ GRANITE SLOPE EDGING (75')
RAMP C	RAMP D																										
11+40	1+50	LT								418																	SEE SHARON INTERCHANGE #2 LAYOUT SHT 51
13.29	13.41		21					18	2			265	3					1	530	527			1				CONNECT TO NEW APPR. RAIL
13.45	13.57		33	6		3		18	2			225	3			150		1	50	250	1						SOUTH END REPLACE NEW APPR. RAIL, EXTEND NORTH 50'
13.83	13.87		13					18	2							150		1		150	1						ATTACH TO NEW APPR. RAIL
13.94	14.03		46	6		3		75	5							150		1	25	287.5	1			15			REPLACE EX. APPR. RAIL, USE FLARE PLUS MTS
14.20	14.28		23					18	2										317	414.5	1		1				
14.33	14.35															112.5		1		87.5			1				REPLACE EX. APPR. RAIL
14.53	14.64		20													225		2		362.5							REPLACE EX. APPR. RAIL SECTION NORTH END BR. 17, NEW STEEL BEAM TO ATTACH BR. #17 APPR. RAIL TO BR. #18 APPR. RAIL
14.68	14.71		34					75	5							225		1	25	200	1		1	15			ATTACH TO NEW APPR. RAIL, USE FLARE PLUS MTS
14.97	15.08		17									365	5						370	564.6			1				
15.08	15.22		38	14		6		18	2			125	2						75	175	1						
15.55	15.64		24					18	2										317	464.5	1		1				
16.20	16.29		25					18	2										211	439.5	1		1				
16.64	16.70		37					75	5										158	314.5	1		1				
16.95	17.31		97					75	5			1825	20						1900	1902	1		1	15			USE FLARE PLUS MTS
17.49	17.55		17	4		2		18	2										162.5	302	1		1				
17.73	18.01		64					18	2			1110	14						1214	1452	1		1				
18.13	18.23		26					18	2										370	502	1		1				
18.33	18.46		39					18	2			475	6						581	652	1		1				
19.40	19.72		78	2		1		18	2				160						112.5	1764.5	1		1				EXTEND NORTH 250' W/MELT, EXTEND SOUTH TO MM 19.40, PAVE EX. BIT. CONC. GUTTER 12' X 1060' ADJACENT TO LEDGE
19.77	19.88		29					18	2										211	577	1		1				
19.93	20.21		64					18	2										1214	1452	1		1				
20.45	20.66		50					18	2										1062.5	1062.5	1		1				
20.90	20.99		44	5	262.5	2		75	5										87	212.5	1		1	15			EXTEND NORTH USE FLARE PLUS MTS
21.12	21.36		57	25	1237.5	10	5	18	2				2						50	27	1		1			5	PAVE & REPAIR SHOULDER @ 21.12
21.87	21.95		22										2						45	407							ATTACH TO EX. APPR. RAIL
SHEET 17 TOTALS:			1634	152	5987.5	64	5	867	73	823	172	14237	339			1012.5		8	21503.5	26998.5	23		23	90	525	5	

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION
NOTE: 101 TONS OF ITEM 616.47 FOR FILLETS

SEE REVISED SHEETS 12A – 18A

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Ross DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sqda/87a008/da008gr.dgn
iPARM FILE da008a05.i DATE PLOTTED 2-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 17 OF 260 SHEETS

Sheet Number: 17

SHEET TOTALS:	150.6	199.8	2.96	712.5	867	1685	1014	180.96	7363.0		10	2	8	12.5	2	23	37.5	3393.5		93.8	85	1482
HARTFORD-ROYALTON									GUARDRAIL SUMMARY													SH.6
AC IM IR 089-1(8)																						
SOUTHBOUND (MEDIAN)	COMMON EXC.	EARTH BORROW	EXC. OF SURFACES	SHOULDER BERM REMOVAL	AGGREGATE SHOULDER	REM.& RESET CURB	REMOVAL OF CURB	BIT. CONC. GUTTER (MOD.)	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL (MOD.)	M.T.S.	M.T.S. (MOD.)	ANCHOR FOR G.RAIL	REM.&RESET GUARDRAIL	GUARDRAIL POST	GUARDRAIL BEAM	ADJ. HEIGHT GUARDRAIL	REM.&DISP. GUARDRAIL	REM.&DISP. POSTS	TOPSOIL	REM. & REPL REFLECTOR	BIT. CONC. CURBING
	203.15	203.30	203.38	203.99	402.11	616.40	616.41	616.47	621.20	621.20	621.505	621.505	621.60	621.75	621.76	621.77	621.79	621.80	621.81	651.35	676.15	900.12
MM-MM	(CY)	(CY)	(CY)	(LF)	(CY)	(LF)	(LF)	(TON)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(LF)	(LF)	(EA.)	(CY)	(EA.)	(LF)
00.08-0.04	7.4				24				232.5		1							200				
00.65-0.54	28.2	36.3			72				1027		1		1					737.5		10.7	3	
00.79-0.75	7.4				18				177		1		1					150				
01.04-1.00					12				52				1					175				
01.14-1.09	39.7				36				325		1							240		19.1		
01.96-1.38	16.1				72			33.96	3429		1		1					3059		3.8	9	
04.03-3.93	6.5				12				527			1	1					225				
06.52-5.02	8.1	21.9			36				7627		1		1					7195		9.4	11	
06.56-6.48		302.5							127			1	1					200				
6.70															1	2					3	
06.98-6.93																					2	
08.02-7.75	33.1	120.5			162				1602		1		1					1302		7.6	3	
08.17-8.06	50.3	8.8			78				752				2					475		1.6		
09.63-9.49	6.5				24				789.5			1	1					634			8	
09.87-9.81	28.2	353			120				502		1		1					290		33.1	3	
13.54-13.44&13.40-13.31	6.5				12				941.5			1	1					339				
13.87-13.85									102				1					109				
14.01-13.94	28.2				60				350		1					4		223		3.3	1	
14.62-14.53&14.37-14.35									502				1					451				
14.72-14.68	52	54.6			60				337.5		1							214		8		
17.53-17.52		20.9							127			1	1					200				
20.20-18.46	16.1	30.6			375			103.1	9189.5		1		1		2	13		9517		11.1	6	3878
EMERGENCY TURN-OUT																						
10.27		146.1			78										765	03/14/05						
10.65		125.2			78																	
11.00		62.0	8		~~126~~ 78																	
11.40		52.2			78																	
11.85		93.9			78																	
12.35		125.2			78																	

GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.505	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL GUIDE POSTS 621.80	GUARDRAIL ITEMS (EA) STL.BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL W/F STL. PSTS(INCD) 621.20	SUB. OF DEN. GR. CRSH STONE CY 301.35	REMARKS
SOUTHBOUND		MEDIAN																									
0.04	0.08		38					75	5										187.5	212.5	1			15			USE FLARE PLUS MTS
0.44	0.47		25					100	25										262.5	262.5							REPLACE EX. PIER RING GUARDRAIL ACCORDING TO DETAIL SHEET #53
																											FLATTEN APPR. SLOPES TO 1-8 MIN.
0.54	0.59		25					100	25										475	475							REPLACE EX. PIER RING GUARDRAIL ACCORDING TO DETAIL SHEET #53
																											FLATTEN APPR. SLOPES TO 1-8 MIN.
0.75	0.79		38	2		1		75	5										50	214.5	1		1	15			USE FLARE PLUS MTS
1.00	1.04															25		1	150				1				REMOVE EX. RAIL, ATTACH MTS TO NEW APPR. RAIL
1.09	1.14		35					75	5							25		1	212.5	212.5	1			15			REPLACE EX. APPR. RAIL, USE FLARE PLUS MTS
																											SOUTH END ATTACH TO NEW APPR. RAIL
1.38	1.96		147					75	5										2957	3014.5	1		1	15			USE FLARE PLUS MTS
3.93	3.95		25					100	25										475	475							REPLACE EX. PIER RING GUARDRAIL, FLATTEN APPR. SLOPES 1-8 MIN.
5.02	5.60		123																2534	3062.5			1				EXTEND NORTH TO MM 5.60
5.60	6.43		200					75	5										4330	4352	1						
6.53	6.56		25					100	25										225	225							REPLACE EXISTING PIER RING GUARDRAIL, AND FLATTEN
																											APPR. SLOPES TO 1-8 MIN.
6.93	6.98		25					625	75							225		2		437.5	2						REPLACE EX. APPR. RAIL
7.75	8.00		57					18	2										1267	1302	1		1				EXTEND NORTH
8.06	8.17		48					75	5										475	552	1		1	15			USE FLARE PLUS MTS
9.49	9.63		37					18	2										634	739.5	1		1				
9.81	9.87		41					75	5										317	377	1		1	15			USE FLARE PLUS MTS
13.44	13.48		25					595	75							325		2		437.5	2						REPLACE EX. APPR. RAIL
13.94	13.98		25					480	75							220		2		437.5	2						REPLACE EX. APPR. RAIL
14.53	14.62		20													325		2		450							REPLACE EX. APPR. RAIL SECTIONS & ATTACH STEEL BEAM BETWEEN
																											BRIDGE # 17 & BRIDGE # 18
14.68	14.72		25					430	75							325.5		2		437.5	2						REPLACE EX. APPR. RAIL
17.52	17.53		25	3		1		75	20										225	225							REPLACE EX. PIER RING, FLATTEN APPR. SLOPES TO 1-8 MIN.
18.46	20.15		362					75	5			3900	49						8395	8402	1		1				
SHEET 18 TOTALS:			1346	5		2		2616	389			3900	49			1220.5		10	23171.5	25866	18		7	90			

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION
NOTE: 49 TONS OF ITEM 616.47 FOR FILLETS

SEE REVISED SHEETS 12A – 18A

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Nutter DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sqda/87q008/da008gr.dan
IPARM FILE da008g06.I DATE PLOTTED 14-NOV-2000
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 18 OF 260 SHEETS

SHEET TOTALS:	334.3	949.1			1689				137.06	28718.5		11	5	17		3	19		25935.5		107.7	49	3878
HARTFORD-ROYALTON										**GUARDRAIL SUMMARY**													SH.7
AC IM IR 089-1(8)																							
BRIDGES I89 OVER/UNDERPASSES	COMMON EXC.	EARTH BORROW	EXC. OF SURFACES	SHOULDER BERM REMOVAL	AGGREGATE SHOULDER	REM & RESET CURB	REMOVAL OF CURB	BIT. CONC. GUTTER (MOD)	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL (MOD.)	M.T.S.	M.T.S. (MOD.)	ANCHOR FOR G.RAIL	REM &RESET GUARDRAIL	GUARDRAIL POST	GUARDRAIL BEAM	ADJ. HEIGHT GUARDRAIL	REM &DISP. GUARDRAIL	REM &DISP. POSTS	TOPSOIL	REM. & REPL. REFLECTOR	BIT. CONC. CURBING
	203.15	203.30	203.38	203.99	402.11	616.40	616.41	616.47	621.20	621.20	621.505	621.505	621.60	621.75	621.76	621.77	621.79	621.80	621.81	651.35	676.15	900.12
MM-MM	(CY)	(CY)	(CY)	(LF)	(CY)	(LF)	(LF)	(TON)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(LF)	(LF)	(EA.)	(CY)	(EA.)	(LF)
BRIDGE #2									1328.5				4					1285				
BRIDGE #6					144																	
BRIDGE #7					24				416				4									
BRIDGE #9	20.8				41				328.5				4									
BRIDGE #12 N&S	20.9								686.5				3						2			
BRIDGE #14									853.5				4					550				
BRIDGE #15					60																	
BRIDGE #16					144																	
BRIDGE #17					72																	
BRIDGE #18					144																	
BRIDGE #19									228.5				4									
BRIDGE #23									889				4			1		540				
BRIDGE #24	20.8	20.8			36				1328.5				4					1250	3	24		
BRIDGE #25					6				145.5	458			4					505				
BRIDGE #8 US#4	23.2				84				325		1			25		4		450				
BRIDGE #10	20.9	0.4							381				3					329		10		
BRIDGE #21		50.6			24				1233				4					1256		12		
SHEET TOTALS:	106.6	71.8			779				8143.5	458	1		42	25		5		6165	5	46		
GRAND TOTALS:	2789.07	5654.46	6.63	5792.50	17653.00	1860.00	12669.0	2132.89	169614.0	983.00	64.00	15.00	147.00	137.50	26.00	284.00	5362.50	143245.5	6.00	892.58	829.00	58158.50

+3.0 (6)

+1 (1)

+75 (SHEET #5)

2135.89 (08-03) 5/15/05 Ved 7109 4-22-05

193320.5 (163) 05/19/05 Ved 7109 4-22-05

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GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.505	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL GUARDRAIL POSTS 621.61	GUARDRAIL ITEMS (EA) STL. BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL W/6"STL. PSTS/MOD 621.20	SUB. OF DEN. GR. CRSH STONE CY 305.58	REMARKS
BRIDGES																											
I-89 UNDERPASSES *																											
BRIDGE	#2	0.04																									
T-78E	LT	(EAST)	14					18	2										155	162.5			1				USE G-1D FOR APPR.
	RT		21					18	2										350	350			1				USE G-1D FOR APPR.
T-78W	LT	(WEST)	26					18	2										455	475			1				USE G-1D FOR APPR.
	RT		20					18	2										315	325			1				USE G-1D FOR APPR.
BRIDGE	#7	3.27																									
T-46E	LT		13					18	2											137.5			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
T-46W	LT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		13					18	2											137.5			1				USE STEEL BEAM W/G-1D FOR APPR.
BRIDGE	#9	4.30																									
T-10E	LT		2					18	2											52			1				WRAP STEEL BEAM INTO DRIVE
	RT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
T-10W	LT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		13					18	2											137.5			1				USE STEEL BEAM W/G-1D FOR APPR.
BRIDGE	#12N	8.02																									
T-13E	LT		13					18	2											137.5			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		3																	77			1				WRAP STEEL BEAM RAIL INTO PODUNK RD.
T-13W	LT																			187.5							STEEL BEAM BETWEEN BR. 12N & 12S
	RT																			175							STEEL BEAM BETWEEN BR. 12N & 12S
BRIDGE	#12S	8.02																									
T-13W	LT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		13					18	2											137.5			1				USE STEEL BEAM W/G-1D FOR APPR.
BRIDGE	#14	12.34																									
T-11E	LT		29					18	2											550			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
	RT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
T-11W	LT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		13					18	2											137.5			1				USE STEEL BEAM W/G-1D FOR APPR.
BRIDGE	#19	15.02																									
T-4E	LT		3																	64.5			1				WRAP STEEL BEAM INTO FIELD DRIVE
	RT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
T-4W	LT		9					18	2											50			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		9					18	2											50			1				USE STEEL BEAM W/G-1D FOR APPR.
BRIDGE	#23	19.94																									
T-36E	LT		31					18	2										540	600			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
	RT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
T-36W	LT		10					18	2											62.5			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		13					18	2											137.5			1				USE STEEL BEAM W/G-1D FOR APPR.
BRIDGE	#24	21.28																									
T-6E	LT		9					18	2											50			1				USE STEEL BEAM W/G-1D FOR APPR.
	RT		25					18	2										470	450			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
T-6W	LT		17					18	2										240	250			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
	RT		20					18	2										320	325			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
BRIDGE	#25	21.92																									
T-35E	LT		17					18	2										250	250			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
	RT		15					18	2										190	200			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
T-35W	LT		10					18	2										65	62.5			1				REPLACE EX. CABLE W/STEEL BEAM W/G-1D & EXTEND TO BRIDGE
	RT		12					18	2											125			1				USE STEEL BEAM W/G-1D FOR APPR.
I-89 OVERPASSES																											
BRIDGE	#8	3.93																									
US#4E	RT		2													25		1	50	50			1				REPLACE EX. APPR. RAIL & 50' OF EX. STEEL BEAM RAIL
	LT		14					18	2							25		1	50	25			1				REPLACE EX. APPR. RAIL BURY IN BACKSLOPE
US#4W	RT		15					18	2							175		1		162.5			1				REPLACE EX. APPR. RAIL ADD NEW ST. BEAM RAIL BURY IN BACKSLOPE
	LT		15					18	2							150		1		162.5			1				REPLACE EX. APPR. RAIL ADD NEW ST. BEAM RAIL BURY IN BACKSLOPE
BRIDGE	#10	6.54																									
T-36E	LT		13					18	2								25		42	137.5			1				EXTEND W/G-1D FOR APPR., AL. APPR. RAIL
	RT		10					18	2								25		42	62.5			1				EXTEND W/G-1D FOR APPR., AL. APPR. RAIL
T-36W	LT		15					18	2								25		225	200			1				EXTEND W/G-1D FOR APPR., AL. APPR. RAIL
	RT																25		20				1				AL. APPR. RAIL W/G-1D
BRIDGE	#21	17.52																									
T-13E	LT		33					18	2								25		638	650			1				EXTEND W/G-1D FOR APPR.
	RT		13					18	2								25		160	150			1				EXTEND W/G-1D FOR APPR.
T-13W	LT		10					18	2								25		33	62.5			1				EXTEND W/G-1D FOR APPR.
	RT		25					18	2								25		425	450			1				EXTEND W/G-1D FOR APPR.
SHEET 19 TOTALS:			648					792	88							375	200	4	5035	8531			48				

NOTE: REFER TO STANDARD G-16 FOR UNDERPASS GUARDRAIL ATTACHMENTS.

SEE REVISED SHEETS 12A – 18A

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Ross DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sada/87g008/da008gr.dgn
IPARM FILE da008g07.1 DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 19 OF 260 SHEETS

GUARDRAIL ITEM DETAIL SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	AGGREGATE SHOULDERS CY	REPLACE GUARDRAIL BEAM UNIT EA	ADJUST GUARDRAIL HEIGHT LF	REPLACE GUARDRAIL POST ASSEMBLY EA	BIT. CONC. PAVT. TON	EARTH BORROW CY	TOPSOIL CY	R & R CURB LF GRANITE	REMOVAL OF CURB LF	TREATED TIMBER CURB LF	BIT. CONC. GUTTER & TRAF. ISLANDS TON	EXIST. GUARDRAIL (LF) STEEL BEAM	EXIST. GUARDRAIL (LF) CABLE	APPROACH RAIL REMOVAL OF EXIST. LF	APPROACH RAIL NEW LF	APPROACH RAIL NEW EA	GUARDRAIL ITEMS (LF) REMOVAL & DISPOSAL-621.80	GUARDRAIL ITEMS (LF) STEEL BEAM W/STL. PSTS 621.20	GUARDRAIL ITEMS (EA) M.T.S. 621.505	GUARDRAIL ITEMS (EA) REMOVAL & DISPOSAL OF GUARD POSTS 621.81	GUARDRAIL ITEMS (EA) STL.BM. ANCHOR 621.60	COMMON EXCAV. 203.15	STEEL BEAM GUARDRAIL (W/O STL. PSTS)(MOD) 621.20	SUB. OF DEN. GR. CRSH STONE CY 304.45	REMARKS
NORTHBOUND																											
SHEET	13 TOTALS:		1193	236	550	95	4	473	39	4057	1657	6015	84			76		2	11588	13845	14		20				
SHEET	14 TOTALS:		1288	234		92		684	56	105		6428	88			1375.5		8	16969.5	20707	14		16	60			
SHEET	15 TOTALS:		1793	111	875	42		3259	431			9568	321			1926		10	27213.5	32665.5	22	8	15	60			
SOUTHBOUND																											
SHEET	16 TOTALS:		1151	165	450	60		717	63	1365		5343	67			50		2	12775	16694.5	24		18	15			
SHEET	17 TOTALS:		1634	152	5987.5	64	5	867	73	823	172	14237	339			1012.5		8	21503.5	26998.5	23		23	90	525	5	USE GUARDRAIL (MOD) MM 12.75 - 12.85 (525'), REMOVED CURB TO BE REPLACED W/ GRANITE SLOPE EDGING
SHEET	18 TOTALS:		1346	5		2		2616	389			3900	49			1220.5		10	23171.5	25866	18		7	90			
UNDERPASSES & OVERPASSES																											
SHEET	19 TOTALS:		648					792	88							375	200	4	5035	8531			48				
																			118256								
																6035.5			+6035.5								
GRAND TOTALS:			9053	903	7862.5	355	9	9408	1139	6350	1829	45491	948				200	44	124291.5	145307.5	115	8	148	315	525	5	APPROACH RAIL : ITEM # 621.72 IS EA., ITEM # 621.74 IS LF

NOTES: WHEN REMOVING GUARDRAIL WITH HEAVY DUTY ANCHOR POSTS, REMOVAL OF GUARDRAIL INCLUDES THE HEAVY DUTY ANCHOR POST REMOVAL.
GRAND TOTALS FOR REMOVAL OF GUARDRAIL INCLUDE ALUM. APPROACH RAIL, CABLE RAIL & BEAM RAIL.
WHEN REPLACING GUARDRAIL PANELS W/ TREATED TIMBER CURB THE TREATED TIMBER CURB SHALL ALSO BE REPLACED.
501 TONS OF ITEM 616.47 FOR AREA UNDER FILLETS

SEE REVISED SHEETS 12A - 18A

NOTE: M.T.S. = MANUFACTURED TERMINAL SECTION

GUARDRAIL ITEM DETAIL SHEET

DRAWN BY Nutter DATE 9/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. sqda/87a008/da008gr.dgn
IPARM FILE da008g08.i DATE PLOTTED 14-NOV-2000
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 20 OF 260 SHEETS

Fence Summary Hartford-Sharon-Royalton AC IM IR 089-1(8)																	
MM to MM	Location	201.11 Clearing & Grub	620.11 4FT CL	620.12 6ft CL	620.16 Gate for 6 ft CL	620.20 Brac for 4ft CL	620.21 Brac for 6ft CL	620.25 W W F w/S P	620.25 W W F (MOD)	620.30 Gate for W W F	620.40 Brac for W W F	620.55 Rem of Fence	620.55 Rem of fence (MOD)	620.60 Barbed Wire Fence	Field measured by	Date
Northbound																
0.05 TO I-91 NB RT	RT	0.328													PKP & TAC	12/04/2001
0.06 Bridge 2	RT			244			12						244		PKP & BT	12/03/2002
0.60 (Dist 4 yard and Ramada Inn)	RT			1702			26						1403		TJQ & BT	11/19/2002
I-91SB 70.15 to I-89 1.05 NB	RT			3075			34						3075		WRS	12/03/2001
1.10 to 1.47	RT			1971			18						1971		WRS	12/07/2001
1.75 to 1.90	RT			809			14						809		TJQ	06/05/2002
1.75 to 2.55	RT	0.702													WRS	12/07/2001
2.10 to 2.45	RT			1769			34						1769		TJQ	06/08/2002
3.27 TH 46	RT			258			14						153.5		TJQ	06/04/2002
3.90 to exit 1 ramp	RT	0.815						1328					977		TJQ	07/17/2002
3.95 to 4.04	RT							504					504		PKP	05/01/2003
4.15 to 4.25	RT							999					999		TJQ	05/06/2002
4.29 to 4.47	RT			943			18						921		SC	12/27/2001
4.47 to 4.60	RT			870			16						870		TJQ	04/17/2002
4.60 to 4.74	RT								722				722		TJQ	05/06/2002
4.83 to 5.01	RT							1277					1277		TJQ	05/06/2002
5.01 to 5.77	RT			3916			58						3916		TJQ	05/07/2002
5.62 to 6.10	RT	0.233													TJQ	04/24/2002
5.77 to 6.20	RT			2189			34						2189		TJQ	05/06/2002
6.20 to 6.60	RT			1927			26						1927		CEG	12/20/2002
6.54 to 6.66 bridge	RT			134			4						134		TJQ	05/06/2002
6.60 to 6.70	RT	0.085						927			4		927		TJQ	05/22/2002
6.91 to 8.20	RT	0.488													WRS	12/03/2001
6.91 to 6.95	RT								328				328		TJQ	05/21/2002
7.74 to 7.90	RT							655					655		TJQ	05/21/2002
7.90 to 8.13	RT	0.129		1493			34						1408		TJQ	06/18/2002
8.13 to 8.20	RT	0.034						374					374		TJQ	05/21/2002
8.20 to 8.60	RT	0.264						2020				6 2746			CPH	05/11/2001
8.60 to 8.86	RT	0.010						111				1374			CPH	05/04/2001

FENCE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

LANE	BRIDGE	MILE MARKER	MILE MARKER	R.O.W. NEW WOVEN WIRE FENCE LF	R.O.W. NEW WOVEN WIRE FENCE (MODIFIED) FOR CATTLE FENCE LF			NEW CHAIN LINK FENCE LF 4 FT	NEW CHAIN LINK FENCE LF 6 FT	CLEARING AND GRUBBING (MODIFIED) 201.11	SNOW FENCE SNOW BARRIER GALVANIZED (BRIDGE QTY.) LF	REMARKS
NORTHBOUND:		0.60							1600'			USE 6' C.L. TO ENCLOSE DIST # 4 OFFICE
		I-91 SB	I-89 NB									
		70.90	1.05						7500'			USE 6' C.L. AREA BEHIND HOWARD JOHNSONS
	BR#6-N	1.05									120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
		1.10	1.45						1850'			
		1.75	1.90						800'			
		2.10	2.45						1850'			
		2.95	3.01	300'								
	TH #46	3.27							240'			USE 40' AT TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
		4.15	4.25	1060'								
	TH #10	4.29	4.31						100'			USE AT TH-10 BOX AS SNOW FENCE (1' IN FROM WING WALL)
		4.31	4.60						1550'			
		4.60	4.74		750'							
		5.00	5.01	50'								STREAM CROSSING
		5.01	6.10						5750'			
		6.20	6.60						2100'			BREAK FOR TH (MM 6.53 - 6.54 +/-)
		6.60	6.70	525'								
		6.91	6.95		500'							ROAD TO PASTURE
		7.74	7.90	850'								STREAM CROSSING @ 7.74
		7.90	8.20						1600'			
		8.01	8.02						60'			USE AS SNOW FENCE AT TH BOX (1' IN FROM WING WALLS) LT & RT
		8.20	8.60	2125'						2125'		SEE FENCE NOTE #2 PAGE 47
		8.78	8.83					200'				ALONG TOP OF LEDGE CUT NORTH OF REST AREA
		8.78	8.86					450'				BETWEEN MAINLINE & REST AREA
		9.00	9.78	4125'						4125'		REPLACE GATE AT MM 9.43
	ACCESS ROAD	9.81	9.85						460'			USE 60' AS, SNOW FENCE - TH BOX (1' IN FROM WING WALLS) LT & RT
		9.86	10.90	5500'						5500'		
		10.90	10.91	50'								STREAM CROSSING
		10.91	12.25	7075'						7075'		
	TH #11	12.25	12.50						1360'			USE 60' AS SNOW FENCE AT-UNDERPASS AT MM 12.35 (1' IN FROM WING WALLS) LT & RT
		12.50	13.15	3600'						3600'		
	BR#15-N	13.40	13.43								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
		13.74	13.87						700'			
	BR#16-N	13.88	13.94								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
		14.10	14.38	1480'						1480'		
		14.33	14.38									
	BR#17-N	14.38	14.53								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
		14.53	14.64						600'			
	BR#18-N	14.64	14.68								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
		14.72	15.03		1640'							
SHEET 26 TOTALS:				26740'	2890'			650'	28395'	23905'	600'	

SEE REVISED SHEETS 25A - 30A

DRAWN BY KML DATE 1/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. Sqda/87a008/da008fn.dgn
IPARM FILE da008fOLI DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 26 OF 260 SHEETS

Fence Summary Hartford-Sharon-Royalton AC IM IR 089-1(8)

Northbound

MM to MM	Location	201.11 Clearing & Grub	620.11 4FT CL	620.12 6ft CL	620.16 Gate for 6 ft CL	620.20 Brac for 4ft CL	620.21 Brac for 6ft CL	620.25 W W F w/S P	620.25 W W F (MOD)	620.30 Gate for W W F	620.40 Brac for W W F	620.55 Rem of Fence	620.55 Rem of fence (MOD)	620.60 Barbed Wire Fence	Field measured by	Date
8.78 to 8.83	RT	0.020	144			2							144		CPH	04/25/2001
8.78 to 8.86	RT		445			4							445		TJQ	07/10/2001
8.78 to 8.86	RT		30												TJQ	07/25/2001
8.86 to 9.10	RT	0.086										942			CPH	05/02/2001
9.00 to 9.10								574							CPH	05/04/2001
9.10 to 9.43	RT	0.160						1891		1		1744			CPH	05/02/2001
9.43 to 9.65	RT	0.114						914				1257			CPH	05/02/2001
9.47	RT							125			6				TJQ	06/13/2001
9.65 to 9.78	RT	0.067						746					729		CPH	05/04/2001
9.78 to 9.86	RT	0.068						562					562		TJQ	05/15/2001
9.81 to 9.85	RT			432			16				2				TJQ	06/25/2002
9.81	LT			411			16						244		TJQ	06/25/2001
9.86 to 10.03	RT	0.091						978					978		TJQ	05/15/2001
10.03 to 10.14	RT	0.048						529					529		CPH	05/15/2001
10.14 to 10.20	RT							423					423		CPH	05/15/2001
10.20 TO 11.07	RT	0.482						4640				4640			TJQ	06/01/2001
11.07 to 12.31	RT	0.650						6991				6991			TJQ	06/07/2001
12.31 to 12.50	RT	0.111		1166			15						904		TJQ	06/27/2001
12.50 to 13.15	RT	0.348						3807					3807		TJQ	06/13/2001
13.15 to 13.30	RT	0.071						427			2		427		TJQ	07/11/2001
13.45 to 13.69	RT	0.145						442			1	442			TJQ	07/10/2001
13.74 TO 13.87	RT	0.095		794			12				1	794			TJQ	07/24/2001
13.87 to 14.10	RT	0.105						420					420		TJQ	05/14/2001
13.88	LT			65			2								TJQ	08/08/2001
13.94	LT			46			2								TJQ	08/08/2001
14.10 to 14.30	RT	0.101						1200					1200		TJQ	07/11/2001
14.33 to 14.38	RT	0.027		289			8					289			TJQ	07/25/2001
14.53	RT			132			2						258		TJQ	08/08/2001
14.53	LT			50			2								TJQ	08/08/2001
14.60	LT			59			4								TJQ	10/16/2001
14.53 to 14.64	RT	0.080						598				598			TJQ	07/25/2001
14.64 Bridge	RT			133			2						133		TJQ	08/08/2001

FENCE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

LANE	BRIDGE	MILE MARKER	MILE MARKER	R.O.W. NEW WOVEN WIRE FENCE LF	R.O.W. NEW WOVEN WIRE FENCE (MODIFIED) FOR CATTLE FENCE LF	NEW CHAIN LINK FENCE LF 4 FT	NEW CHAIN LINK FENCE LF 6 FT	CLEARING AND GRUBBING (MODIFIED) 20LH	SNOW FENCE SNOW BARRIER GALVANIZED (BRIDGE QTY.) LF	REMARKS
NORTHBOUND:	TH #4	15.02					40'			USE AT TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
		15.03	15.07				215'			
		15.07	15.19		175'					REPAIR FENCE AS REQUIRED (EST. QTY. OF NEW FENCE)
		15.55	15.73				1000'			
		16.25	16.77		2600'			2600'		3 STREAM CROSSINGS ALONG RUN
		16.77	16.96		1025'					
		16.94	17.23		1550'			1550'		
		17.50	17.52				100'			USE ON BOTH SIDES OF TH #13
		17.55	17.79	1280'				1280'		
		17.79	17.80	50'						STREAM CROSSING
		17.81	18.10	1550'				1550'		
	RESERVOIR ROAD	18.10	18.90				4275'			FENCE ON BOTH SIDES OF RESERVOIR ROAD @ MM 18.16, USE 40' AT TH BOX (1' IN FROM WING WALLS) AS SNOW FENCE
		18.90	19.93	5450'						
	TH #36	19.93	21.22	1600'			200'			REPLACE FENCE FROM 20.92-21.22, USE 40' AT TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
		21.22	21.28				320'			
	TH #6	21.28	21.53				1400'			USE 40' AT TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
		21.63	21.91							REPAIR CATTLE FENCE AS REQUIRED
		21.88	21.89		60'			60'		FOR CATTLE PASS
	TH #35	21.91	21.92				40'			USE 40' AT TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
		21.92	21.96	200'						
SHEET 27 TOTALS:				10130'	5410'		7590'	7040'		

SEE REVISED SHEETS 25A - 30A

DRAWN BY	KML DATE 1/94
SQUAD LEADER	BOMBARDIER
DESIGN FILE NO.	Sqda/87a008/da008fn.dgn
IPARM FILE	da008f02.i DATE PLOTTED 12-MAR-1999
PROJ. NAME	HARTFORD-SHARON-ROYALTON
PROJ. NO.	IM IR 089-1(8)
SHEET	27 OF 260 SHEETS

Fence Summary Hartford-Sharon-Royalton AC IM IR 089-1(8)

Northbound

MM to MM	Location	201.11 Clearing & Grub	620.11 4FT CL	620.12 6ft CL	620.16 Gate for 6 ft CL	620.20 Brac for 4ft CL	620.21 Brac for 6ft CL	620.25 W W F w/S P	620.25 W W F (MOD)	620.30 Gate for W W F	620.40 Brac for W W F	620.55 Rem of Fence	620.55 Rem of fence (MOD)	620.60 Barbed Wire Fence	Field measured by	Date
14.64	LT			53			2								TJQ	10/16/2001
14.68	LT			60			2								TJQ	08/08/2001
14.72	RT			200			2						200		TJQ	08/08/2001
14.72 to 15.03	RT	0.157							1513			1513			TJQ	07/25/2001
15.02	RT			186			5						60		TJQ	08/08/2001
15.03 to 15.07	RT	0.021		186			3						186		TJQ	08/08/2001
15.10 TO 15.12	RT							282			4	282			PKP	12/17/2002
15.55 to 15.73	RT	0.090		1020			10				1		1020		TJQ	08/22/2001
16.25 to 16.77	RT	0.242							2637				2637		TJQ	08/22/2001
16.77 to 16.96	RT	0.089							1022				1022		TJQ	09/06/2001
16.94 to 17.23	RT	0.152							1684		2		1684		TJQ	09/06/2001
17.50	RT	0.037		407			8						407		TJQ	10/31/2001
17.55 to 17.85	RT	0.136						1485					1485		TJQ	09/18/2001
17.85 to 18.10	RT	0.130						1414					1414		TJQ	09/19/2001
18.10 to18.30	RT	0.095		1039			18						1039		TJQ	10/16/2001
18.30 to 18.90	RT	0.342		3726			43					3726			TJQ	10/31/2001
18.90 to 19.93	RT	0.482						5246			2		5246		TJQ	09/19/2001
19.93 to 21.96	RT	0.625													TJQ	10/31/2001
20.60 to 20.75	RT							887			4	681			PKP	12/17/2002
20.88 to 20.95	RT							372			2		372		PKP	12/04/2002
21.00 to 21.05	RT							123					123		PKP	12/04/2002
21.09 to 21.10	RT							50					50		PKP	12/04/2002
21.22 to 21.55	RT	0.154		1681			50					1515			TJQ	10/23/2002
21.53 to 21.78	RT							1176				1344			PKP	12/17/2002
21.82 21.89	RT								353			353			PKP	12/17/2002
21.89 to 21.91	RT	0.013		280			16					138			TJQ	09/25/2002
21.91 to 21.96	RT								594		2	594			PKP	12/17/2002
NB total		8.722	619	33715			582	44497	8853		39	31963	55701			

FENCE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

LANE	BRIDGE	MILE MARKER	MILE MARKER	R.O.W. NEW WOVEN WIRE FENCE LF	R.O.W. NEW WOVEN WIRE FENCE (MODIFIED) FOR CATTLE FENCE LF	R.O.W.	R.O.W.	NEW CHAIN LINK FENCE LF 4 FT	NEW CHAIN LINK FENCE LF 6 FT	CLEARING AND GRUBBING (MODIFIED) 201.11	SNOW FENCE SNOW BARRIER GALVANIZED (BRIDGE QTY.) LF	REMARKS
SOUTHBOUND:		0.16	0.25	480′								
	RAMP 'C' SL	20+00	1.05						3250′			
		1.00	1.05						255′			
	BR#6-S	1.05	1.09								240′	QUANTITY INCLUDES BOTH NB & SB LT & RT SIDE OF BRIDGE
		1.09	1.30						1125′			
		2.30	2.55						1325′			
		3.03							150′			
		3.10	3.58						2575′			
	TH #46	3.27							250′			USE 50′ AT TH BOX (1′ IN FROM WING WALL) AS SNOW FENCE
	TH #45	3.58							1500′			ALONG RAMP 'C' - QUECHEE INTERCHANGE #1
		3.94	4.21						1430′			
		4.21	4.23	100′								STREAM CROSSING
	TH #10	4.27	4.33						300′			USE 40′ AT UNDERPASS @ OLD QUECHEE RD. (1′ IN FROM WING) AS SNOW FENCE
		4.33	4.55						1175′			EXTEND - BARN TO TOWN RD.
		4.55	4.65		550′							
		4.83	4.86		150′							
		4.91	4.93		100′							
		5.25	5.27	100′								
		5.27	5.28	50′								
		5.35	5.37	100′								
		5.45	5.48	150′								
		5.50	5.51	50′								
		5.61	5.62	50′								
		5.71	5.77	400′								
		5.98	6.02	200′								
		6.12	6.13	50′								
		6.21	6.22	50′								
		6.27	6.31	200′								
		6.51	6.62						580′			
		6.90	7.47	300′								NEEDS REPAIRS
		7.47	7.62						800′			
		7.74	7.80						450′			STREAM CROSSINGS @ 7.74 & 7.77
		7.80	7.95		800′							
		7.95	8.01						210′			EITHER SIDE OF T.H. BOX
	TH #13	7.95	7.98						75′			USE 75′ AT TH BOX (1′ IN FROM WING WALLS) AS SNOW FENCE
		8.00	8.21		1110′							INSTALL NEW CATTLE FENCE
		8.25	8.29						210′			
		8.45	8.49	200′								
		8.55	8.63						430′			
		8.63	8.65					100′				FOR STREAM CROSSING & REMOVE FENCE IN R. AREA BY STATUE
		8.65	9.14	900′								REPAIR FENCE AS REQUIRED (EST. QTY. OF NEW FENCE)
		9.14	9.45		1650′							
SHEET 28 TOTALS:				3380′	4360′			100′	16090′		240′	

DRAWN BY KML DATE 1/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. Sqda/87a008/da008fn.dgn
IPARM FILE da008f03.I DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 28 OF 260 SHEETS

Fence Summary Hartford-Sharon-Royalton AC IM IR 089-1(8)

MM to MM	Location	201.11 Clearing & Grub	620.11 4FT CL	620.12 6ft CL	620.16 Gate for 6 ft CL	620.20 Brac for 4ft CL	620.21 Brac for 6ft CL	620.25 W W F w/S P	620.25 W W F (MOD)	620.30 Gate for W W F	620.40 Brac for W W F	620.55 Rem of Fence	620.55 Rem of fence (MOD)	620.60 Barbed Wire Fence	Field measured by	Date
Southbound																
0.05 to 0.25	LT	0.116													WRS	11/28/2001
0.06	LT			270			12						270		PKP	12/04/2002
Int 10 Ramp C 20+00 to SB 1.05	LT	0.129		1887			26						1887		TJQ	11/20/2002
1.05 to 1.62	LT	0.230													WRS	11/28/2001
1.09 to 1.30	LT			1096			18					1096				
1.30 to 1.56	LT			1498			24					1498			TJQ	09/11/2002
2.30 to 2.55	LT	0.133		1205			28					1205			TJQ	09/11/2002
2.99 to 3.27	LT			1169			24	242				1411			TJQ	09/11/2002
3.00 to Exit 1 Ramp C 9+00+/-	LT	0.388													WRS	11/28/2001
3.27 to Exit 1 Ramp C 6+50+/-	LT			2662			44	274				2936			TJQ	07/31/2002
3.27 TH #46	LT			279			14						180		TJQ	06/05/2002
3.44 to 3.52	LT							472					472		PKP	12/04/2002
3.94 to 4.21	LT	0.131		1409			24						1409		TJQ	07/17/2002
4.21 to 4.23	LT	0.029							627		4		876		PKP	12/17/2002
4.27 to 4.30	LT	0.029		129			9					45			TJQ	08/28/2002
4.57 to 4.65	LT	0.039		393			5						393		PKP	12/04/2002
4.64 to 4.75	LT								593				593		PKP	12/04/2002
4.83 to 4.86	LT	0.015							105				105		PKP	12/04/2005
4.91 to 4.93	LT	0.010													TJQ	05/22/2002
5.60 to 5.63	LT							139					139		PKP	12/04/2002
5.70 to 5.75	LT	0.030						284					284		PKP	12/04/2002
5.98 to 6.02	LT	0.019						136					136		PKP	12/04/2002
6.12 to 6.13	LT	0.005						154					154		PKP	12/04/2002
6.21 to 6.22	LT							36					36		PKP	12/04/2002
6.21 to 6.27	LT	0.030													TJQ	05/22/2002
6.27 to 6.31	LT	0.019						290					290		PKP	12/04/2002
6.51 to 6.60	LT	0.044		451			14						451		TJQ	07/17/2002
6.93 Bridge #11	LT			73			2						73		PKP	12/04/2002

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FENCE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

LANE	BRIDGE	MILE MARKER	MILE MARKER	R.O.W. NEW WOVEN WIRE FENCE LF	R.O.W. NEW WOVEN WIRE FENCE (MODIFIED) FOR CATTLE FENCE LF			NEW CHAIN LINK FENCE LF 4 FT	NEW CHAIN LINK FENCE LF 6 FT	CLEARING AND GRUBBING (MODIFIED) 20LH	SNOW FENCE SNOW BARRIER GALVANIZED (BRIDGE QTY.) LF	REMARKS
SOUTHBOUND:		9.53	10.20		3550'							
	ACCESS ROAD	9.83		50'					60'			USE 60' AT ROAD BOX (1' IN FROM WING WALLS) AS SNOW FENCE
		10.45	10.46	50'								
		10.88	10.92					200'				STREAM CROSSING
		10.92	10.93	50'								
		10.97	10.99	100'								
		11.02	11.07	250'								
		11.08	11.09	50'								
		11.31	11.32	50'								
		11.63	11.65	100'								
		11.98	11.99	50'								
		11.97	12.12						800'			
	TH #11	12.33	12.35					170'	40'			USE 40' C.L. 6' HIGH @ UNDERPASS (1' IN FROM WING WALL) AS SNOW FENCE
		12.35	12.40	250'								
		12.45	12.47	100'								
		12.59	12.61	100'								
		12.70	12.72	100'								
	BR#15-S	13.40	13.43								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
	BR#16-S	13.87	13.95								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
	BR#17-S	14.38	14.53								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
		14.53	14.64						580'			
	BR#18-S	14.64	14.68								120'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
		14.67	14.99		1700'				300'			CHAIN LINK BY FARM HOUSE
	TH #4	14.99	15.25		1220'				40'			USE 40' C.L. AT THE TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
		15.25	17.50							12100'		
		15.69	15.70	50'								
		17.15	17.16	50'								
		17.45	17.55	550'								FENCE BOTH SIDES OF TH
		17.85	17.86	50'								
		17.98	17.99	50'								
	RESERVOIR ROAD	18.16							40'			USE 40' AT THE ROAD BOX (1' IN FROM THE WING WALL) AS SNOW FENCE
		18.65	18.70	275'								
		19.00	19.90							4800'		
	TH #36	19.95	19.97					200'	40'			USE 40' C.L. 6' HIGH AT THE TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
		19.97	20.05	425'								
SHEET 29 TOTALS:				2750'	6470'			570'	1900'	16900'	480'	

SEE REVISED SHEETS 25A - 30A

DRAWN BY KML DATE 1/99
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. Sqdo/87a008/da008fn.dgn
IPARM FILE da008f04.I DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 29 OF 260 SHEETS

Fence Summary Hartford-Sharon-Royalton AC IM IR 089-1(8)

Southbound

MM to MM	Location	201.11 Clearing & Grub	620.11 4FT CL	620.12 6ft CL	620.16 Gate for 6 ft CL	620.20 Brac for 4ft CL	620.21 Brac for 6ft CL	620.25 W W F w/S P	620.25 W W F (MOD)	620.30 Gate for W W F	620.40 Brac for W W F	620.55 Rem of Fence	620.55 Rem of fence (MOD)	620.60 Barbed Wire Fence	Field measured by	Date
6.93 Bridge #11	RT			65			2						65		PKP	12/04/2002
7.25 to 7.42	LT							877			4		877		TJQ	12/12/2001
7.47 to 7.62	LT	0.073		817			12						817		TJQ	07/17/2002
7.75 to 7.81	LT			322			12						169		TJQ	07/03/2002
7.80 to 7.97	LT	0.082							632				632		PKP	12/04/2002
7.98 to 8.01	LT			448			18						358		TJQ	06/18/2002
8.01	RT			515			24						289		TJQ	06/18/2002
8.00 to 8.21	LT	0.102							1110				1110		PKP	12/04/2002
8.25 to 8.29	LT	0.019		179			4						179		TJQ	07/03/2002
8.47 to 8.57	LT	0.009						558					558		PKP	12/04/2002
8.55 to 8.63	LT	0.039		508			8						508		TJQ	07/03/2002
8.68 to 8.90	LT							1212					1212		PKP	12/04/2002
9.12 to 9.14	LT							173					173		PKP	12/04/2002
9.15 to 9.45	LT	0.150							1591				1591		TJQ	05/08/2002
9.53 to 10.20	LT	0.325							3588				3588		TJQ	11/20/2002
9.82 to 9.83	LT			80			8								TJQ	11/20/2002
10.20 to 12.95	LT	1.400													WRS	11/26/2002
10.45 to 11.08	LT							494			4		494		PKP	12/04/2002
11.09 to 11.97	LT							1120			7		1120		PKP	12/04/2002
11.97 to 12.12	LT			756			18						756		PKP	12/04/2002
12.33 to 12.35	LT			229			11						229		PKP	12/04/2002
12.35 to 12.45	LT							340					340		PKP	12/04/2002
12.59 to 12.61	LT							148					148		PKP	12/04/2002
12.70 to 12.72	LT							60					60		PKP	12/04/2002
13.40 park & ride	LT			31			1						31		PKP	12/04/2002
13.39 to 13.43	RT			111			4								TJQ	11/20/2002
13.83 to 13.85	LT	0.026		288			8						288		TJQ	11/20/2002
13.95	LT	0.013		141			4						141		TJQ	11/20/2002
14.18 to 14.20	LT	0.010						106					106		TJQ	11/20/2002
14.32 to 14.36	LT	0.034		374			6						374		TJQ	11/20/2002
14.53 to 14.64	LT	0.056		613			12						613		TJQ	11/20/2002
14.67 to 14.68	LT			122			2						122		TJQ	11/06/2002
14.67 to 14.93	LT	0.192							1453				1453		TJQ	11/06/2002

FENCE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

LANE	BRIDGE	MILE MARKER	MILE MARKER	R.O.W. NEW WOVEN WIRE FENCE LF	R.O.W. NEW WOVEN WIRE FENCE (MODIFIED) FOR CATTLE FENCE LF			NEW CHAIN LINK FENCE LF 4 FT	NEW CHAIN LINK FENCE LF 6 FT	CLEARING AND GRUBBING (MODIFIED) 201.8	SNOW FENCE SNOW BARRIER GALVANIZED (BRIDGE QTY.) LF	REMARKS
SOUTHBOUND:												
		20.47	20.48	50'								
		20.64	20.65	50'								
		20.65	20.75						525'			
		20.75	20.90						790'			HORSE SHOW ARENA
		21.22	21.26	240'								
	TH #6	21.28							40'			USE 40' AT TH BOX (1' IN FROM THE WING WALL) AS SNOW FENCE
		21.33	21.38	250'								
		21.55							500'			
		21.75	21.80	250'								
		21.80	21.92		650'							
		21.88	21.89						60'			FOR SNOW FENCE OVER CATTLE PASS
	TH #35	21.92	21.97						310'			USE 40' AT TH BOX (1' IN FROM WING WALL) AS SNOW FENCE
SHEET 30 TOTALS:				840'	650'				2225'			

SEE REVISED SHEETS 25A – 30A

DRAWN BY	KML DATE 1/94
SQUAD LEADER	BOMBARDIER
DESIGN FILE NO.	Sqda/87a008/da008fn.dgn
IPARM FILE	da008f05.i DATE PLOTTED 12-MAR-1999
PROJ. NAME	HARTFORD-SHARON-ROYALTON
PROJ. NO.	IM IR 089-1(8)
SHEET	30 OF 260 SHEETS

Fence Summary Hartford-Sharon-Royalton AC IM IR 089-1(8)

Southbound

MM to MM	Location	201.11 Clearing & Grub	620.11 4FT CL	620.12 6ft CL	620.16 Gate for 6 ft CL	620.20 Brac for 4ft CL	620.21 Brac for 6ft CL	620.25 W W F w/S P	620.25 W W F (MOD)	620.30 Gate for W W F	620.40 Brac for W W F	620.55 Rem of Fence	620.55 Rem of fence (MOD)	620.60 Barbed Wire Fence	Field measured by	Date
14.93 to 15.01	LT			618			28						491		TJQ	11/06/2002
15.01 to 15.11	LT	0.113							592				592		TJQ	11/06/2002
15.11 to 15.12	LT							176			4				TJQ	11/06/2002
15.25 to 15.69	LT	0.218													TJQ	06/26/2001
15.55 to 15.57	LT	0.025						279					279		TJQ	11/20/2002
16.75 to 16.76	LT	0.013						144					144		TJQ	11/20/2002
16.99 to 17.01	LT	0.011						118					118		TJQ	11/06/2002
17.14 to 17.16	LT	0.034						372					372		TJQ	11/06/2002
17.25 to 17.32	LT	0.037						402					402		TJQ	11/06/2002
17.40 to 17.48	LT							430					430		TJQ	11/06/2002
17.48 to 17.50	LT	0.047		84			4						84		TJQ	11/06/2002
18.14 to 18.15	LT							100					100		TJQ	11/06/2002
18.15 to 18.17	LT	0.031		331			18						243		TJQ	11/06/2002
18.17 to 18.18	LT	0.025						273					273		TJQ	11/06/2002
18.65 to 18.70	LT							167				167			PKP	12/17/2002
18.74 to 18.75	LT							50				50			PKP	12/17/2002
19.65 to 19.95	LT	0.090						941			2		941		TJQ	11/20/2002
19.95 to 19.97	LT	0.022		385			20						244		TJQ	11/06/2002
20.63 to 20.90	LT	0.140		1525			22					1525			TJQ	10/23/2002
21.14 to 21.16	LT							95				95			PKP	12/17/2002
21.20 to 21.26	LT							460			4	411			PKP	12/17/2002
21.26 to 21.28	LT	0.061		660			26	229					732		TJQ	11/06/2002
21.28 to 21.55	LT	0.122		1330			16					1330			TJQ	09/25/2002
21.80 to 21.92	LT								688			688			PKP	12/17/2002
21.88 to 21.96	LT	0.039													TJQ	11/20/2002
21.88 to 21.92	LT			342			16					187			TJQ	09/15/2002
21.92 to 21.96	LT			185			2					185			TJQ	09/15/2002
21.96	RT			50			2								TJQ	09/15/2002
SB totals		4.954		23630			552	11351	10979		29	12829	31594			
Project totals		13.676	619	57345		6	1134	55344	19832		68	44792	86791			

30A

FENCE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

LANE	BRIDGE	MILE MARKER	MILE MARKER	R.O.W. NEW WOVEN WIRE FENCE LF	R.O.W. NEW WOVEN WIRE FENCE (MODIFIED) FOR CATTLE FENCE LF			NEW CHAIN LINK FENCE LF 4 FT	NEW CHAIN LINK FENCE LF 6 FT	CLEARING AND GRUBBING (MODIFIED) 201.1	SNOW FENCE SNOW BARRIER GALVANIZED (BRIDGE QTY.) LF	REMARKS
NORTHBOUND:												
SHEET 26 TOTALS:				26740'	2890'			650'	28395'	23305'	600'	
SHEET 27 TOTALS:				10130'	5410'				7590'	7040'		
SOUTHBOUND:												
SHEET 28 TOTALS:				3380'	4360'			100'	16090'		240'	
SHEET 29 TOTALS:				2750'	6470'			570'	1900'	16900'	480'	
SHEET 30 TOTALS:				840'	650'				2225'			
I-89 OVER NECRR	BR#1	0.02									240'	QUANTITY INCLUDES BOTH NB & SB LT & RT SIDES OF BRIDGE
RAMP C OVER I-89	BR#3	0.45									240'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
US 4 OVER I-89	BR#8	3.93									240'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
T-36 OVER I-89	BR#10	6.54									240'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
T-13 OVER I-89	BR#21	17.52									240'	QUANTITY INCLUDES BOTH LT & RT SIDE OF BRIDGE
GRAND TOTALS:				43840'	19780'			1320'	56200'	47845'	2520'	NOTE : 1145' OF 6' C.L. USED AS SNOW FENCE

SEE REVISED SHEETS 25A – 30A

DRAWN BY	KML DATE 1/94
SQUAD LEADER	BOMBARDIER
DESIGN FILE NO.	Sgda/37g008/da008fn.dgn
IPARM FILE	da008f06.i DATE PLOTTED 12-MAR-1999
PROJ. NAME	HARTFORD-SHARON-ROYALTON
PROJ. NO.	IM IR 089-1(8)
SHEET	31 OF 260 SHEETS

HARTFORD-ROYALTON — DRAINAGE SUMMARY — SH.1

AC IM IR 089-1(8)

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS. EXC.	UNCLASS. DITCH	UNCLASS. CHAN. EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL. FOR STRUCT.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
0.04	MED																					
0.04-0.40	MED						93.86															
0.05	OUT																					
0.09	OUT																					
0.11	MED																					
0.15	OUT																					
0.17	CL							114.8		2.7												
0.18	OUT				50																	
0.23	OUT									2.4						6						
0.26	CL							10.4		1.9								8				
0.28	OUT																					
0.32	OUT							10.4		1						6						
0.34	CL							10.4		3.6									8			
0.36-0.53	OUT													5.1	396							
0.59	MED							26.1														
INT #10																						
RAMP G 2+50 RT					125																	
RAMP C 39+00 LT														1.8	84.1							
RAMP G 5+75 RT					65																	
RAMP A 29+00 LT										3.4						6						
0.82	OUT																					
0.84	MED	3.9						10.4														
0.85	OUT									7.6						14						
0.85-0.87	OUT				151																	
0.88	OUT							10.4		12.4								12				
0.94	OUT				280			20.9		21.9			8.4			30						
0.94-1.00	OUT	1843			260																	
0.96	OUT							10.4		21.9								32				
1.01	OUT				15			10.4		25.6			5			36						
1.04	OUT									23.3			3.7			40						
1.10	OUT																					
1.18	MED							20.9		3.2								20				
1.19	OUT				55																	
1.24	CL				25			10.4		20.6	1.4											
1.33	OUT				20					14.2												
SHEET TOTALS:		1846.9			1046.0		93.86	265.9		165.7	1.4		17.1	6.9	480.1	138.0		72.0	8.0			

0314

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA	PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
NORTHBOUND:																															
0.04		MED					2															1		1							REHAB MEDIAN DI
0.04	0.40	MED															178														PAVE BITUMINOUS CONCRETE GUTTER (MINUS U-TURN) & REGRADE U-TURN SLOPES
0.05		OUT								18							3					1									REHAB CURB DI & REPAVE DITCH
0.11		MED					2															1		1							REHAB MEDIAN DI TO MATCH REGRADED U-TURN SLOPE
0.17		CL			125					96								207						2		II	125			60	INLET CLEAN DITCH TO CRADLE HEADWALL & DEBRIS RACK, OUTLET NEW STONE PAD & CLEAN DITCH
0.18		OUT			24		10	1	1-45°	18	32	.064										2		2		I	1				REHAB MED DI, OUTLET REPLACE 45° ELBOW, 32' OF PIPE, NEW STONE PAD
																										II	10				& REHAB CURB DI
0.23		OUT								12												1									REHAB CURB DI
0.26		OUT			13		4			18	16	.064												1		I	1				OUTLET REPLACE 16' OF PIPE, NEW ES & NEW STONE PAD
0.27		OUT								12												1									REHAB CURB DI
0.28		OUT		15						12												1									REHAB CURB DI & FLATTEN SLOPE
0.32		OUT			15					12	20	.064										1									REHAB CURB DI & REPLACE LAST 20' OF PIPE
0.36	0.45	OUT		500			300	75	UDR	6	30											1		1				50			FLATTEN SLOPE TO 1-4, REHAB DI @ 0.41 & EXTEND 6" UDR TO MATCH SLOPE
RAMP G	HARTFORD	INT.	* 10																												
2+50		RT			13												2	38								I	13				PAVE EXIST. BITUMINOUS CONCRETE GUTTER, STONE LINE OUTLET DITCH
5+75		RT			13												2	38								I	13				PAVE EXIST. BITUMINOUS CONCRETE GUTTER, STONE LINE OUTLET DITCH
0.82		OUT								12												1		1							REHAB CURB DI
0.84	U-TURN	MED					25	5														1		1							REGRADE U-TURN SLOPES, REHAB DI
0.88		OUT								12												1		1						10	REHAB CURB DI, OUTLET CLEAN DITCH
0.88		OUT			22		8			18	32	.064												1		I	1				REPLACE 32' OF PIPE & NEW STONE PAD
0.90		OUT								54														1						30	OUTLET CLEAN DITCH
0.94		OUT			11		4			12	16	.064												1	1	I	1				NEW CURB DI, OUTLET REPLACE 16' OF PIPE
0.94	1.00	OUT		50			25																			II	1035				REGRADE FAILED SLOPE
0.96		OUT			18		7		1-20°	18	36	.064												1		I	1				OUTLET REPLACE 24' OF PIPE & NEW STONE PAD
1.01		OUT								12												1									REHAB CURB DI
1.05		OUT					4																			I	10				REPAIR WASH OUT @ CORNER OF BRIDGE
1.10		OUT								12												1									REHAB CURB DI
1.18	U-TURN	MED					25	5		18	24	.064																			REGRADE U-TURN SLOPES, EXTEND PIPE 12' EACH SIDE OF U-TURN
1.19		OUT								60														2						60	INLET & OUTLET CLEAN DITCH
1.24		OUT			7		3						18	8	III									1							RELAY 1 SECTION & EXTEND 8'
1.39		CL			9	3	3			24										2.7	12.5			1		I	1			80	INLET REPLACE FULL HW & CLEAN DITCH, OUTLET CLEAN DITCH & NEW STONE PAD
1.46		CL			18	2	4			48	8	.109								1.7	10.4			2		II	7				MEDIAN CLEAN DITCH, OUTLET REMOVE HW, REPLACE 8' OF PIPE, NEW STONE PAD & HW
1.47		MED			33		12						48											1							RELAY LAST 16' OF PIPE, BOLT LAST 3 SECTIONS
1.56		CL			12	10	3			30	8	.079								3.5	16.7			2		II	3			60	MED REPLACE FULL HW & 8' OF PIPE, INLET & OUTLET CLEAN DITCHES, OUTLET STONE PAD
1.63		CL								30														2						30	MED CLEAN DITCH, OUTLET REMOVE MES & CLEAN DITCH
1.70		CL			30		9						36											2		II	35			60	MED CLEAN DITCH, OUTLET RELAY 24' OF PIPE, CLEAN & STONE LINE DITCH, NEW STONE PAD & REMOVE ROPES
1.76		CL			30		9			24														2						60	INLET CLEAN DITCH, OUTLET RELAY 20' OF PIPE, CLEAN DITCH
1.87		MED																													REHAB DI
SHEET	32 TOTALS:			565	393	15	459	86		12	36	.064	18	8	III		185	283		7.9	39.6	16		30	1	I	42			450	
									1-20°	18	140	.064														II	1215				
									1-45°																						
										30	8	.079																			
										48	8	.109																			
									UDR	6	30																	50			

SEE REVISED DRAINAGE SHEETS 31A - 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008d01.i DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 32 OF 260 SHEETS

HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

NORTH BOUND		48" CSP	15" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS V	36" RCP CLASS III	12" CSP ELBOW	15" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF DI	REHAB OF DI, CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
0.04	MED																		
0.04-0.40	MED																	1	
0.05	OUT																	1	
0.09	OUT																		1
0.11	MED																	1	
0.15	OUT																		1
0.17	CL								2										1
0.18	OUT																		
0.23	OUT																		1
0.26	CL																	1	
0.28	OUT																		1
0.32	OUT																		1
0.34	CL																	1	
0.36-0.53	OUT																	1	
0.59	MED																	1	
INT.#10																			
RAMP G 2+50 RT																			
RAMP C 39+00 LT																		1	
RAMP G 5+75 RT																			
RAMP A 29+00 LT								1											
0.82	OUT																		1
0.84	MED																		
0.85	OUT							1											1
0.85-0.87	OUT																		
0.88	OUT								1										1
0.94	OUT							2									1		
0.94-1.00	OUT																		
0.96	OUT								1										
1.01	OUT							2									1		
1.04	OUT							2									1		
1.10	OUT																		1
1.18	MED													2					
1.19	OUT																		
1.24	CL		24													15			
1.33	OUT															20			
SHEET TOTALS:			24.0					8.0	4.0					2.0		35.0	3.0	8.0	10.0

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BK.FILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM * 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
NORTHBOUND:																															
2.19		OUT			3		3						30														I	3				OUTLET NEW STONE PAD
2.22		OUT			25		8						24					20				1		1			I	3			20	MED REHAB DI, OUTLET RELAY & BOLT LAST 3 SECTIONS OF PIPE
2.35		OUT																				1										REHAB CURB DI
2.50		OUT			13		5						18																		10	OUTLET RELAY & BOLT LAST 2 SECTIONS
2.51		OUT			13		5		1-20'	12	20	.064										1										REHAB CURB DI & REPLACE 20' OF PIPE
2.56		OUT																				1										REHAB CURB DI
2.68		OUT								12												1		1							10	REHAB CURB DI, OUTLET CLEAN DITCH
2.72		OUT																				1		1								REHAB DI
2.78		CL			38		13						24	16	III			20				1		1			I	3			20	REHAB DI, OUTLET REPLACE 16' OF PIPE, BOLT LAST 3 SECT. & NEW STONE PAD
2.92		OUT								18														1							20	OUTLET CLEAN DITCH
3.11		OUT			62	1	11						42	8	III			59						2			II	32			40	OUTLET REMOVE CRADLE HW, BOLT LAST 3 SECTIONS, CLEAN DITCH & NEW STONE PAD
3.22	U-TURN	MED				25	5															1										RAISE DI 1' ON SOUTH SIDE & REGRADE U-TURN SLOPES
3.39		OUT/MED					2			18												2		2							40	REHAB DI'S & CLEAN DITCHES
3.48		OUT			19		7						18											1			I	1			20	OUTLET RELAY & BOLT LAST 3 SECTIONS OF PIPE & NEW STONE PAD
QUECHEE	INT. *1																															
RAMP A																																
0+85		RT					2						24				2					1		1							40	REHAB DI, PAVE EX. BIT. CONC. GUTTER & CLEAN DITCH
1+25		LT					2						18									1		1							40	INLET REHAB DI & CLEAN DITCH
5+25		LT			25								48											1			II	25				NEW STONE LINED DITCH
5+65		RT			25								48											1			II	25				NEW STONE LINED DITCH
RAMP B																																
9+27		RT					2						24									1		1							40	REHAB DI & CLEAN DITCH
15+15		RT					2						24				2					1		1							40	REHAB DI, CLEAN DITCH & PAVE EXISTING BIT. CONC. GUTTER
3.76		OUT																													10	OUTLET CLEAN DITCH
3.78		OUT			23		9			18																						RELAY 30' OF PIPE
3.78		OUT					23			48																						BACKFILL AROUND HEADWALL OF 48'' PIPE
3.85		OUT					2						18									1		1							40	REHAB DI & CLEAN DITCHES
3.89		OUT					2						24									1		1							40	REHAB DI & CLEAN DITCHES
3.90		MED					2						24									1		1							40	REHAB DI & CLEAN DITCHES
3.92		MED																				1		1								REHAB DI
3.94		OUT					2						30									1		1							60	INLET REHAB DI & CLEAN DITCH, OUTLET CLEAN DITCH
4.01		OUT					3						18	16	III									1							20	OUTLET CLEAN DITCH, EXTEND PIPE 16' & REGRADE SLOPE TO 1-4
4.07		OUT			1								18											2								OUTLET SHORTEN PIPE 4' & CONSTRUCT DITCH
4.09		OUT					25																									REPAIR SLOPE
4.13		OUT								24														1							20	OUTLET CLEAN DITCH
4.14		OUT								12																					20	INLET REHAB DI & OUTLET CLEAN DITCH
4.22	U-TURN	MED					25	5					18	20	III	1																REGRADE U-TURN SLOPES & RAISE DI TO MEET SLOPE, EXTEND PIPE & MES
4.22		OUT			5		2			18												1		1		1					50	NEW CURB DI OUTLET INTO EXISTING DI, REHAB EXISTING DI & CLEAN DITCH
4.31		OUT								12	4	.064										1										REHAB DI TO MEET NEW CURB LINE
SHEET	33 TOTALS:				252	1	182	10	1-20'	12	24	.064	18	36	III	1	4	99				22		26		1	I	10			640	
													24	16	III												II	82				
													42	8	III																	

SEE REVISED DRAINAGE SHEETS 31A - 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008d02.i DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 33 OF 260 SHEETS

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.3

AC IM IR 089-1(8)

NORTH BOUND		REHAB OF DI. CLASS II (MOD)	C.I.GRATE W/FRAME "A"	C.I.GRATE W/FRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH. BASIN	BULLDOZER, RENTAL	EXCAVATOR, RENTAL	TRUCK, RENTAL	LOADER, RENTAL	BIT. CONC. GUTTER, (MOD)	MARKER POST	REM. & RESET G.RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL, TYPE I	STONEFILL, TYPE II	STONEFILL, TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES, EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(EA.)
0.04	MED													1										
0.04-0.40	MED												122.09											8
0.05	OUT																							
0.09	OUT													1										
0.11	MED													1										
0.15	OUT																							
0.17	CL							1						1	12.5				18.5					
0.18	OUT													1										
0.23	OUT													1										
0.26	CL													1										
0.28	OUT																							
0.32	OUT													1										
0.34	CL													1	12.5									
0.36-0.53	OUT								16	28.5	39.5			3										6
0.59	MED									13	16			1										
INT.#10																								
RAMP G 2+50 RT													3					10.4						
RAMP C 39+00 LT									14															
RAMP G 5+75 RT													3					4.2						
RAMP A 29+00 LT																								
0.82	OUT													1										
0.84	MED													1										
0.85	OUT													1										
0.85-0.87	OUT																							
0.88	OUT																							
0.94	OUT														12.5									
0.94-1.00	OUT														275				1399.5		457.8			
0.96	OUT																							
1.01	OUT														12.5									
1.04	OUT													1	12.5									
1.10	OUT																							
1.18	MED													2										
1.19	OUT																							12
1.24	CL													2										
1.33	OUT																							
SHEET TOTALS:								1.0	30.0	41.5	55.5		128.09	21.0	337.5			14.6	1418.0		457.8			26.0

055A

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
NORTHBOUND:																															
4.47		OUT											30											1							30	OUTLET CLEAN DITCH
4.85		OUT					2			18												1		1							20	INLET REHAB CURB DI, OUTLET CLEAN DITCH
4.89		OUT																													30	OUTLET CLEAN PAVED DITCH
4.92		OUT					2			18												1		1							40	REHAB DI & CLEAN DITCH
5.15		MED					2						18									1		1							60	MEDIAN REHAB DI, CLEAN DITCH & OUTLET CLEAN DITCH
5.18		OUT								12												1		1							10	INLET REHAB CURB DI, OUTLET CLEAN DITCH
5.23		OUT								18												1										REHAB CURB DI
5.30		CL					4			18												2		2							100	REHAB MEDIAN DI & OUTSIDE CURB DI & CLEAN DITCHES
5.35		OUT								12												1		1							10	REHAB CURB DI, OUTLET CLEAN DITCH
5.37		OUT								18														1							20	OUTLET CLEAN DITCH
5.58		MED								24												1	1-A									REHAB DI & REPLACE TYPE A GRATE
5.63		OUT								36																					30	OUTLET CLEAN DITCH
5.73		CL					2			18												2		1							40	MEDIAN REHAB DI & CLEAN DITCH, OUTLET REHAB CURB DI
5.78		OUT			16		6			12	24	.064										1		1			I	1			20	REHAB CURB DI, OUTLET REPLACE 24' OF PIPE & NEW STONE PAD
5.83		OUT								12												1		1							10	REHAB CURB DI, OUTLET CLEAN DITCH
5.95		OUT			24					18												1										REHAB CURB DI & RELAY 36' PIPE
6.23		CL					4			18												2		2							80	REHAB MED & OUTSIDE DI & CLEAN MED DITCHES
6.30		CL					4			18												2		1							100	REHAB MED & OUTSIDE DI & CLEAN MED DITCHES
6.40		MED					2			24												1		1							70	REHAB DI & CLEAN INLET & OUTLET DITCHES
6.47		MED											18									1		1							40	REHAB DI & CLEAN DITCH
6.53		CL					2						30									1		1							60	REHAB MED DI & CLEAN DITCH
6.54		OUT					2						18									1		1							40	REHAB DI & CLEAN DITCH
6.58		CL								30												1		1							60	REHAB MED DI & CLEAN DITCH, OUTLET CLEAN DITCH
6.62		MED								18														1							20	OUTLET CLEAN DITCH
6.63	U-TURN	MED					25	5		18	10	.064				1																REGRADE U-TURN SLOPES, EXTEND PIPE 10' SOUTH & NEW MES
6.65	6.67	MED			74		21			18	80	.064								3.0	270		1-A	1								NEW DI & PIPE TO TIE INTO EXISTING DI AT MED 6.67
6.67		CL					2						18									2		1							40	REHAB MED & CURB DI & CLEAN MED DITCH
7.12		OUT								36														1							30	INLET CLEAN DITCH
7.22		OUT			4	5	30			18	8	.064										1										REMOVE HW, EXTEND PIPE 8', NEW DI & GRADE TO DRAIN
7.33		OUT																														CLEAN PLUGGED DI
7.33	7.34	MED		40																							I	82				REGRADE FAILED SLOPE W/ STONE FILL
7.38		MED								18														1							20	OUTLET CLEAN DITCH
7.45		CL					2			24												1		2							60	OUTSIDE REHAB DI & CLEAN DITCH, MED OUTLET CLEAN DITCH
7.52		MED					2			12												1		1		1					40	REHAB CURB DI, NEW PRCCDI TIE TO MED DI
7.56		MED					2			12												2		2							60	REHAB MED & CURB DI, MED CLEAN DITCH
SHEET 34 TOTALS:				40	118	5	116	5		12	24	.064								3.0	270	30	2-A	30		1	I	83			1140	
										18	98	.064				1																

SEE REVISED DRAINAGE SHEETS 31A - 069A

DRAWN BY	Squad A
SQUAD LEADER	BOMBARDIER
DATE	7/94
DESIGN FILE NO.	/sada/87a008/da008dr.dgn
IPARM FILE	da008d03.i
DATE PLOTTED	12-MAR-1999
PROJ. NAME	HARTFORD-SHARON-ROYALTON
PROJ. NO.	IM IR 089-1(8)
SHEET	34 OF 260 SHEETS

EARTHWORK AND DRAINAGE SUMMARY SHEET

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.4

AC IM IR 089-1(8)

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS EXC.	UNCLASS DITCH	UNCLASS CHAN EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL. FOR STRUCT.	GRADED GRAV.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30		301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)		(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
1.39	CL				174			31.3		9.1	1.8				2.7	12.5							
1.47	CL				115			10.4		6.9	1.9				1.7	10.4							
1.56	CL				30			31.3		16.8	2.2				3.5	16.7					10		
1.63	CL				25			10.4		31.2											20		
1.70	CL				80			73		85.9	1.6				1.4	8.3							
1.77	CL				50			31.3		24.2	1				1	6.3				8			
1.85-1.88	MED				160																		
1.87	CL							10.4		31.5	1.3												
2.01	MED				29																		
2.06	MED				20			20.8		7.8					0.8	6.3			10				
2.19	CL							10.4		29.8	1.8												
2.22	CL				110			10.4		19.2													
2.34	OUT	14.8																					
2.35	CL				98					10.7									12				
2.40	CL				17																		
2.50	CL				31					8.9													
2.51	OUT				30			10.4		15	0.4			5			32						
2.52	OUT				29																		
2.56	CL	232			10					29.3													
2.63	CL																						
2.68	OUT																						
2.72	CL																						
2.78	CL				75					35.9													
2.86	CL																						
2.92	OUT				23																		
3.11	OUT				15			20.9		46.7													
3.22	CL				18			10.4															
3.24	OUT				25					23													
3.27	CL				50																		
3.34	MED				10																		
3.39	CL				22																		
3.41	OUT				24																		
3.45	MED				54																		
3.48	OUT				15			10.4		18													
3.72	MED																						
SHEET TOTALS:		246.8			1339.0			291.8		449.9	12.0			5.0	11.1	60.5	32.0		22.0	8.0	30.0		

034.4

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR./EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	CRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA	PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
NORTHBOUND:																															
7.79		MED			31		12		2-15"	12	50	.064											1		1		I	1				REHAB CURB DI, REPLACE SLOPE PIPE & NEW STONE PAD
7.89		CL			30	1	9			36	24	.079											1		2		II	5			50	OUTSIDE REHAB DI & CLEAN DITCH, MEDIAN REMOVE CRADLE HW @ OUTLET REPLACE 24' OF PIPE & NEW STONE PAD
7.92		MED			11		4			12	16	.064											1		2		I	1			10	REHAB CURB DI & CLEAN DITCH, REPLACE 16' OF PIPE & NEW STONE PAD
7.92		CL								24															1						20	OUTLET CLEAN DITCH
7.98		MED								12													1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
8.02	U-TURN	MED					25	5		18	16	.064				1							1		1						20	EXTEND PIPE 16' & NEW MES ON NORTH SIDE, CLEAN DITCH, REGRADE
										12	4	.064																			U-TURN SLOPE, RAISE DI, CAP & OUTLET PIPE INTO DI
8.12		MED			16	1	6			12	24	.064											1		1		I	1			10	REHAB CURB DI, REMOVE FULL HW, REPLACE 24' OF PIPE & NEW STONE PAD
8.13		CL			28	2	8			42										1.5	10.4				2		II	5			30	INLET REPLACE CRADLE HW, OUTLET CLEAN DITCH, RELAY 20' OF PIPE & NEW STONE PAD
8.26		CL			16					18	20	.064													2							OUTLET REPLACE 20' OF PIPE
8.31		CL			45	3	15			48	32	.109								1.7	10.4				2		II	7			30	INLET REPLACE CRADLE HW & 8' OF PIPE, OUTLET REMOVE CRADLE HW, REPLACE 24' OF PIPE & NEW STONE PAD
8.41		CL					2			24													1		2						60	OUTSIDE REHAB DI & CLEAN DITCH, MEDIAN CLEAN DITCH
8.46		MED			12	1	5						18	8	III																	REMOVE FULL HEADWALL, RELAY 8' OF PIPE & ADD 8' OF NEW PIPE
8.56		OUT			13	1	4			18	16	.064								1.8	12.5				1		I	1			40	INLET REPLACE FULL HW, OUTLET RELAY 30' OF PIPE, REPLACE 16' OF PIPE & NEW STONE PAD
8.58		MED								12													1									REHAB CURB DI
8.60		OUT								12													1									REHAB CURB DI
8.64		OUT			26	7	4			48	8	.109								8.0	20.9				2		II	14			40	INLET REPLACE FULL HW & 8' OF PIPE, OUTLET CLEAN DITCH, STONE PAD @ INLET AND OUTLET
8.65		CL			5					18												2		2	1						20	NEW PRCCDI OUTLET IN EXISTING DI, CAP & REHAB EXISTING DI & OUTLET CLEAN DITCH
										12	4	.064																			
8.71		MED								12												1		1						10	REHAB CURB DI, OUTLET CLEAN DITCH
8.76		CL			13	1	4			12	4	.064										2		2	1					80	REHAB OUT & CURB DI, NEW PRCCDI OUTLET IN EXIS. CURB DI, CAP EXIS. CURB DI, CLEAN DITCHES & RELAY 30' OF PIPE
8.77		OUT					2			18												1		1							REHAB DI
8.90		OUT					2			18												1		1						60	REHAB DI & CLEAN DITCH, OUTLET CLEAN DITCH
8.95		OUT					2			18												1								40	REHAB DI & CLEAN DITCH
9.02		CL					4			18												2		1						40	REHAB MED & OUT DI & CLEAN DITCHES
9.04		MED			20	1	6						30												1		II	3			30	OUTLET REMOVE CRADLE HW, RELAY & BOLT LAST 2 SECTIONS OF PIPE & NEW STONE PAD
9.10		CL			15	2	5						24							2.1	193		1-B	1						20	INLET REMOVE HEADWALL, REPLACE W/ NEW DI, OUTLET RELAY 16' OF PIPE & CLEAN DITCHES
9.15		OUT					2			18												1		1						40	REHAB DI & CLEAN DITCH
9.22		OUT					2			18												1		1						40	REHAB DI & CLEAN DITCH
9.37		OUT			12	1	3			30	8	.079								3.5	16.7			1		II	3			30	INLET REPLACE FULL HW, REPLACE 8' OF PIPE & OUTLET NEW STONE PAD
9.43		OUT			39		15			18	60	.064				1															NORTH END NEW 40' OF PIPE & SOUTH END NEW 20' OF PIPE W/MES
9.50		MED								12												1		1						10	MOVE CURB DI TO MATCH NEW CURB LINE, OUTLET CLEAN DITCH
9.55		OUT			4	5	5						18									1		1							NEW DI, REMOVE RCPES & REGRADE DITCH
9.62		MED								18														1						20	OUTLET CLEAN DITCH
9.66	U-TURN	MED					15	5																							REGRADE DITCH
9.72		MED			8		3						18																	40	OUTLET RELAY 8' OF PIPE, DITCH 10' & INLET CLEAN DITCH
SHEET 35 TOTALS:					344	26	174	10	2-15"	12	102	.064	18	8	III					18.6	263.9	23	1-B	36	2	I	4			800	
										18	112	.064				2										II	37				
										30	8	.079																			
										36	24	.079																			
										48	40	.109																			

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008d04.I DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 35 OF 260 SHEETS

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.5

AC IM IR 089-1(8)

NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS V	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
1.39	CL																		
1.47	CL																		
1.56	CL																		
1.63	CL																		
1.70	CL						32									28			
1.77	CL															20			
1.85-1.88	MED																		
1.87	CL															16		1	
2.01	MED																		
2.06	MED																		
2.19	CL				8											24			
2.22	CL															16			
2.34	OUT																		
2.35	CL								1										1
2.40	CL																	1	
2.50	CL															16			
2.51	OUT							1									1		
2.52	OUT																		
2.56	CL															12		1	1
2.63	CL																	1	1
2.68	OUT																		1
2.72	CL																	1	
2.78	CL															16		1	
2.86	CL																	1	
2.92	OUT																		
3.11	OUT															32			
3.22	CL																	1	
3.24	OUT															20			
3.27	CL																	1	
3.34	MED																		
3.39	CL																	1	1
3.41	OUT																		
3.45	MED																		
3.48	OUT															24		1	
3.72	MED																	1	
SHEET TOTALS:					8.0		32.0	1.0	1.0							224.0	1.0	12.0	5.0

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BRJ /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	RCP EA	METAL END SECT. ITEM NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619J7 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
NORTHBOUND:																															
9.81		MED			22					72																	II	22				OUTLET CONSTRUCT STONE PAD
9.91		OUT			2	4				24										1.8	12.5			1								REMOVE EXIST. HW. NEW CRADLE HW
9.95		MED								12												1										REHAB CURB DI
10.04		MED			15																	1					I	20				STONE FILL TO REPAIR SLOPE FAILURE & REHAB CURB DI
10.05		MED																				1										REHAB DI
10.14		OUT			2	4				24										1.8	12.5			1								REMOVE EXIST. HW. NEW CRADLE HW
10.21		OUT								12												1										REHAB CURB DI
10.43		OUT								18												1		1								REHAB DI
10.45		OUT								18														1							20	OUTLET CLEAN DITCH
10.52		OUT																														STONE FILL TO REPAIR SLOPE FAILURE
10.68		OUT					2			18												1		1							40	REHAB DI & CLEAN DITCH
10.72		OUT																				1		1								REHAB DI
11.05	11.20	OUT	1300																													REMOVE BOULDER & ROCKCUT
11.25		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
11.34		OUT								18														1							20	OUTLET CLEAN DITCH
11.47		CL								18												2		2							50	REHAB MEDIAN & OUTSIDE DI'S & CLEAN DITCHES
11.52	11.56	OUT																													210	REPAIR SLOPE FAILURE, CLEAN DITCH ON 1ST BENCH & REPAIR SLOPE ABOVE BENCH
11.57		OUT								18												1		1								REHAB DI
11.61		OUT																				1		1								REHAB DI
11.68		CL					10			18												2		2							100	REHAB MEDIAN & OUTSIDE DI'S & CLEAN DITCHES
11.81		OUT																				1		1								REHAB DI
11.87		OUT																				1		1								REHAB DI
12.00		OUT								36														1							30	INLET CLEAN DITCH
12.06		MED					2			18												1		1							40	REHAB DI & CLEAN DITCH
12.10	12.20	OUT	3500	50																												REMOVE BOULDER & ROCKCUT
12.15		MED	250																													REMOVE LOOSE BLOCKS BY SCALING BACK TO EXISTING FRACTURE PLANES
12.20		OUT								18														1								
12.41		CL								12												2		1							10	REHAB MED & CURB DI & OUT MOVE PRCCDI TO NEW CURB LINE, CLEAN DITCH
12.46		MED								12												1										REHAB CURB DI
12.51		MED								18												1										REHAB CURB DI
12.56		MED								24												1										REHAB CURB DI
12.59		OUT																													40	OUT CLEAN DITCH LINE
12.69		MED			21		7						18	8	III									1			I	1			20	OUTLET REPLACE 8' OF PIPE, BOLT LAST 3 SECTIONS OF PIPE & CLEAN DITCH & NEW STONE PAD
12.89		OUT																				1		1								REHAB DI
12.97	13.02	OUT	3900																													REMOVE BOULDER & ROCKCUT
13.04		OUT																				1		1								REHAB DI
13.11	U-TURN	MED					25	5		18	14	.064										1										REGRADE U-TURN SLOPES, EXTEND PIPE 14' TO EXISTING DI & RAISE & CAP DI
SHARON RAMP B	INT. #2																															
14+95	15+20	LT															2															REPAVE BITUMINOUS CONCRETE GUTTER
15+20		LT															1															REPAVE BITUMINOUS CONCRETE GUTTER
RAMP D																																
0+80		LT															1															REPAVE BITUMINOUS CONCRETE GUTTER
1+00	6+00	RT																													500	CLEAN DITCH LINE
1+00	8+75	LT																													775	CLEAN DITCH LINE
VT 132																																
10+25		LT															3															REPAVE BITUMINOUS CONCRETE GUTTER
12+00		LT																													40	CLEAN DITCH
13.58		MED					2			24												1		1							40	REHAB DI & CLEAN DITCH
13.62		MED					2			24														1							40	REHAB DI & CLEAN DITCH
13.66		OUT					2			24														1							40	REHAB DI & CLEAN DITCH
13.82		MED					2			24												1		1							40	REHAB DI, RAISE TO MATCH GRADE OF BULLNOSE SLOPE & CLEAN DITCH
SHEET 36 TOTAL:			40550	50	62	8	54	5		18	14	.064	18	8	III		7			3.6	25	29		27			I	21			2065	
																											II	22				

SEE REVISED DRAINAGE SHEETS 31A - 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008d05.1 DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 36 OF 260 SHEETS

HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

NORTH BOUND		REHAB OF DI. CLASS II (MOD)	C.I.GRATE V/FRAME "A"	C.I.GRATE V/FRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH. BASIN	BULLDOZER RENTAL	EXCAVATOR RENTAL	TRUCK RENTAL	LOADER RENTAL	BIT. CONC. GUTTER (MOD)	MARKER POST	REM. & RESET G.RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL TYPE I	STONEFILL TYPE II	STONEFILL TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
1.39	CL													2				2.6	8.1					
1.47	CL													2				3.2	18.7					
1.55	CL													1	12.5			3.2	8.9					
1.63	CL													1	12.5			3.6						
1.70	CL												2	2				2.1						
1.77	CL													1					2					
1.85-1.88	MED																							
1.87	CL						14							1				2.7	8.9					
2.01	MED													1										
2.06	MED													1				1.6	5.9					
2.19	CL													1					2.8					
2.22	CL													2					3					2
2.34	OUT																							
2.35	CL													1										
2.40	CL													1										
2.50	CL													2										
2.51	OUT													1	12.5									
2.52	OUT													1		1								
2.56	CL				60									1					926		348	100		
2.63	CL													1										
2.68	OUT																							
2.72	CL													2										
2.78	CL													2										
2.86	CL													2										
2.92	OUT																							
3.11	OUT													1					5.3					
3.22	CL													1										
3.24	OUT																		4.3					
3.27	CL													2										
3.34	MED													1										
3.39	CL													1										
3.41	OUT																							
3.45	MED													1										
3.48	OUT													1					6.6					
3.72	MED													1										
SHEET TOTALS:					60.0		14.0						2.0	38.0	37.5	1.0		19.0	1000.5		348.0	100.0		2.0

036A

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM * 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
NORTHBOUND:																															
13.86		CL								24												2										REHAB DI'S
13.95		OUT								18												1										REHAB CURB DI
14.08		OUT																				1										REHAB DI
14.10	14.20	OUT	220																													REMOVE BOULDERS & ROCKCUT MATERIAL AS REQUIRED & REGRADE SLOPE
14.24		OUT								24														1							20	INLET CLEAN DITCH
14.57		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
14.77	U-TURN	MED			12		25	5		18	16	.064								2.3	200	1	1-A									REGRADE U-TURN SLOPES, NEW DI CONNECT TO EXIST. DI, RAISE EXIST. DI & CAP
14.98	U-TURN	MED			15		29	5		18	16	.064												2							40	U-TURN CULVERT CLEAN DITCH, REPLACE 8' OF PIPE LT & RT & OUTLET & REGRADE U-TURN SLOPES
15.01		CL					4			18												2		2							80	MEDIAN & CURB REHAB DI'S & CLEAN DITCHES
15.07		OUT								12												1										REHAB CURB DI
15.10		CL		150														150									II	150				FILL AROUND OUTLET HW OF BR #20
15.11		OUT								12												1										REHAB CURB DI
15.12		OUT																									II	78				STONE FILL TO REPAIR SLOPE FAILURES (50' X 10' X 3' & 20' X 10' X 3')
15.16		MED																									II	6				REPAIR SINK HOLE (10' X 5' X 3')
15.38		OUT								18														1							20	OUTLET CLEAN DITCH
15.44		OUT		10	15		25	5		18	20	.064												1							20	OUTLET EXTEND PIPE 20', RECONSTRUCT BACK SLOPE & CLEAN DITCH
15.51		OUT			23		8						24											1			I	1			20	OUTLET BOLT & RELAY 36' OF PIPE & NEW STONE PAD
15.56		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
15.57		OUT								48														1							40	OUTLET CLEAN DITCH
15.61		CL								18												1		1							20	REHAB CURB DI & OUTLET CLEAN DITCH
15.71		OUT																									II	50				REPAIR FAILED SLOPE
15.78		OUT			27		9						18											1			I	1			20	OUTLET RELAY 32' OF PIPE & BOLT LAST 3 SECTIONS & NEW STONE PAD
15.94		OUT			14		5						18											1			I	1			20	OUTLET RELAY 16' OF PIPE & BOLT LAST 2 SECTIONS & NEW STONE PAD
16.03		OUT		30			25	5		42	40	.109												1							100	OUTLET EXTEND PIPE 40', RECONSTRUCT SLOPE & CLEAN DITCH
16.11		OUT					25	5		18	20	.064												1							20	OUTLET CLEAN DITCH, EXTEND PIPE & RECONST. SLOPE
16.20		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
16.35		OUT								18														1							20	OUTLET CLEAN DITCH
16.56		OUT								12												1										REHAB CURB DI
16.70		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
16.71		CL			30		9			36												1		2			II	5			100	MEDIAN REHAB DI, OUTLET RELAY 20' OF PIPE, CLEAN DITCH & NEW STONE PAD
16.74		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
16.79		OUT								36														1							30	OUTLET CLEAN DITCH
16.98		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
17.02		OUT			17		6																				I	1				STONE FILL TO REPAIR SLOPE FAILURE
17.04		OUT								18												1										REHAB CURB DI
17.12		OUT			17		6			18	24	.064												1			I	1			20	OUTLET REPLACE 24' & RELAY 40' OF PIPE, REGRADE SLOPE, CLEAN DITCH & NEW STONE PAD
17.15		OUT			72		10	3		18	24	.064										1		1			I	1			20	REHAB CURB DI, OUTLET REGRADE SLOPE, REPLACE 24' & RELAY 110' OF PIPE & NEW STONE PAD
17.20		OUT								12												1										REHAB CURB DI
17.33	17.45	OUT	200																													REMOVE BOULDERS & ROCKCUT
17.65		OUT								12												1		1							10	REHAB CURB DI & OUTLET CLEAN DITCH
SHEET 37 TOTAL:			420	190	242		186	28		18	120	.064						150		2.3	200	22	1-A	27			I	6			680	
											40	.1															II	28				

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. ../sqda/87a008/da008dr.dgn
IPARM FILE da008d06.I DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 37 OF 260 SHEETS

HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	36" RCP CLASS IV	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF ID	REHAB OF D CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
INT#1																			
RAMP A 0+85 RT																			1
RAMP A 1+25 LT																		1	
RAMP A 5+25 LT																			
RAMP A 5+65 RT																24			
RAMP B 8+25 LT																		1	
RAMP B 9+27 RT																		1	
RAMP B 11+50 LT																		1	
RAMP B 15+15 RT																		1	
3.76	OUT																		
3.78	CL								1							9		1	
3.85	CL																	1	
3.89	CL																		
3.90	MED																		
3.94	OUT																	1	
3.95-3.96	MED																		
4.01	CL		16													8			
4.07	MED																		
4.09	OUT																		
4.13	CL																		
4.14	OUT																		1
4.22	CL													1				1	1
4.22-5.83	MED																	1	
4.31	CL																		1
4.37	OUT																		
4.39	MED																		1
4.47	CL															16			
4.62-4.78	CL																	1	
4.85	CL																	1	1
4.89	OUT																		
4.90	OUT																		
4.92-4.95	CL																		
5.00	CL																	1	
5.08	CL															22		1	
5.13	OUT																		
SHEET TOTALS:			16.0						1.0					1.0		79.0		14.0	6.0

037A

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM * 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
NORTHBOUND:																															
17.69		OUT								18												1									REHAB CURB DI
17.77		OUT								18												1									REHAB CURB DI
17.81		OUT								18												1									REHAB CURB DI
17.86		MED																				1									REHAB DI & GRADE DITCH TO DRAIN
17.86		OUT																				1									REHAB CURB DI
17.90		OUT								12												1		1						10	REHAB DI & OUTLET CLEAN DITCH
17.93		CL								18												2								40	OUTSIDE REHAB CURB DI, MEDIAN REHAB DI & CLEAN DITCH
17.97		OUT								12												1									REHAB CURB DI
18.35		CL																				2									REHAB DI'S
18.39		CL								18												2		1						40	OUTSIDE REHAB CURB DI, MEDIAN REHAB DI & CLEAN DITCH
18.40		CL			32		11			30	32	.079												1			II	3			OUTLET REPLACE 32' OF PIPE & NEW STONE PAD
18.41		CL																				2		1							REHAB MED & CURB DI
18.85		CL								18												1		1							MEDIAN REHAB DI
18.98		MED																				1		1							MEDIAN REHAB DI
19.30		MED					10																								REPAIR SINK HOLE
19.43		OUT								12												1									REHAB CURB DI
19.48		OUT								12												1									REHAB CURB DI
19.53		OUT								12												1								10	REHAB CURB DI & OUTLET CLEAN DITCH
19.55		OUT								12												1									REHAB CURB DI
19.81		OUT								12												1									REHAB CURB DI
19.82		MED					10																								REPAIR SINK HOLE
19.85		OUT					20			12												1									REHAB CURB DI & REPAIR SINK HOLE
19.88		MED					2			24												1		1						40	REHAB DI & CLEAN DITCH
19.90		OUT								12												1									REHAB CURB DI
19.95		CL			11		2			18												2		1		1				40	MED. REHAB DI & CLEAN DITCH, OUTSIDE REHAB CURB DI & COVER, NEW PRCCDI OUTLET TO EXIST. DI
										12	4	.064																			
20.00		OUT								12												1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
20.10		CL					2			18												2		2						60	MEDIAN REHAB DI & CLEAN DITCH, OUTSIDE REHAB CURB DI & OUTLET CLEAN DITCH
20.49		OUT								12												1									REHAB CURB DI
20.53		OUT								12												1									REHAB CURB DI
20.63		OUT			35		47			18	30	.064	18	24	III				2.1	193			1-A	3			I	1		20	OUTLET REPLACE & BOLT LAST 3 SECTIONS OF PIPE, NEW STONE PAD, CLEAN DITCH, NEW DI & PIPE TIE TO EX. DI, REPAIR DITCH & SLOPE
20.83		OUT																						1						50	OUTLET CLEAN DITCH
20.90		OUT								18							3							1							OUTLET PAVE EX. BIT. CONC. GUTTER
21.08		OUT																				1	1-B								REPLACE THROATED DI TOP W/ GRATE TOP
21.18		CL					5			18												2		1						20	MEDIAN REHAB DI & CLEAN DITCH, OUTSIDE REHAB CURB DI
21.41	21.58	OUT																													ROYALTON REST AREA SEE SHEET *55
21.23		OUT					30			12												1									REHAB CURB DI
21.27		OUT								18												1		1						20	REHAB CURB DI & OUTLET CLEAN DITCH
21.69		OUT								24														1						20	OUTLET CLEAN DITCH
21.87	U-TURN	MED					25	5		18	48	.064																			REGRADE U-TURN SLOPES, EXTEND PIPE 36' ON NORTH END & 12' ON SOUTH END
21.87		OUT								18												1									REHAB CURB DI
21.93		OUT																													REHAB CURB DI
21.95		CL																													DEBRIS
SHEET 38 TOTALS:					78		164	5		12	4	.064	18	24	III	3			2.1	193	40	1-A	20		1	I	1			380	
										18	78	.064										1-B				II	3				
										30	32	.079																			

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008d07.I DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 38 OF 260 SHEETS

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.7

AC IM IR 089-1(8)

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS. EXC.	UNCLASS. DITCH	UNCLASS. CHAN. EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL. FOR STRUCT.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
INT#1																						
RAMP A 0+85 RT					90																	
RAMP A 1+25 LT								5.2														
RAMP A 5+25 LT																						
RAMP A 5+65 RT					20			20.9		45.6	1.2											
RAMP B 8+25 LT																						
RAMP B 9+27 RT								15.7														
RAMP B 11+50 LT																						
RAMP B 15+15 RT								5.2														
3.76	OUT				10																	
3.78	CL				20					23.1								14				
3.85	CL																					
3.89	CL																					
3.90	MED																					
3.94	OUT				70																	
3.95-3.96	MED				55																	
4.01	CL				37			20.9		11												
4.07	MED				25																	
4.09	OUT							10.4														
4.13	CL				15			31.3		61.7									30			
4.14	OUT				17																	
4.22	CL				40			31.3		47.4								22				
4.22-5.83	MED							10.4														
4.31	CL																					
4.37	OUT				12																	
4.39	MED																					
4.47	CL				68			10.4		21.5												
4.62-4.78	CL				36																	
4.85	CL																					
4.89	OUT				40																	
4.90	OUT																					
4.92-4.95	CL							10.4														
5.00	CL							10.4														
5.08	CL				15			10.4		22.4												
5.13	OUT				15																	
SHEET TOTALS:					585.0			192.9		232.7	1.2							36.0	30.0			

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BRJ. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
OUTBOUND:																															
0.11		OUT			1					18												1		2			I	1			20	MED REHAB DI, OUTLET CLEAN DITCH & NEW STONE PAD
HARTFORD INT. 10																															
RAMP D 26+93		RT								24														1							40	OUTLET CLEAN DITCH
0.40		OUT								18														1							10	OUTLET CLEAN DITCH
0.43		OUT								48														1			II	5			50	STONE FILL @ INLET
0.59		OUT			20		7						18											1			I	1			20	OUTLET RELAY, EXCAV. & BOLT LAST 3 SECTIONS, CLEAN DITCH & NEW STONE PAD
0.66		OUT			20		7						18											1			I	1				OUTLET RELAY LAST 2 SECTIONS, EXCAV. & BOLT LAST 3 SECTIONS, & NEW STONE PAD
0.77		OUT			10								18											1			I	1			20	OUTLET RELAY LAST 2 SECTIONS, CLEAN DITCH & NEW STONE PAD
HARTFORD INT. 10																															
RAMP C																															
50+38	52+50	RT	1252		120				UDR	6	212	1-FB												1					350			NEW UDR TO OUTLET @ STONE PAD FOR MM 0.77 W/ FB @ 52+50
									CARR	6	10																				
0.90		OUT																													20	INLET CLEAN DITCH
1.10		MED								18												1										REHAB DI
1.26		MED																													20	CLEAN OUTLET DITCH
1.41		CL					2			24												1		1							30	INLET REHAB DI & CLEAN DITCH, OUTLET CLEAN DITCH
1.48		MED			18	10	4						48							8	20.9			2			II	7				INLET REPLACE FULL HW, RELAY 48' OF PIPE & OUTLET NEW STONE PAD
1.51		OUT			10		25																				II	10				REGRADE SLOPE
1.57	1.62	OUT																													250	GRADE DITCH TO DRAIN
1.63		MED			28		9						30											1			II	3			30	OUTLET RELAY LAST 16' OF PIPE, BOLT LAST 3 SECTIONS & NEW STONE PAD
1.71		MED			32		10						36	24	III									1			II	5			30	OUTLET REPLACE LAST 24' OF PIPE, BOLT LAST 3 SECTIONS & NEW
2.01		CL			19		7						18									1									40	MED. RELAY 16', BOLT LAST 3 SECTIONS & OUTSIDE REHAB DI
2.06	2.07	OUT								18										0.2												NEW COVER FOR ROUND THROATED DI
2.07		CL			13		10						18									1	1-A	1			I	1			20	INLET REHAB DI, OUTLET RELAY LAST 2 SECTIONS & NEW STONE PAD
2.20		CL					4						24									2									80	REHAB MED & OUT DI'S & CLEAN DITCHES
2.26	2.31	OUT		10			3			36																	II	20			200	STONE FILL @ HW & FAILED SLOPE
2.30		MED					2			24												1	1-A								40	MEDIAN REHAB DI & CLEAN DITCH, REPLACE TYPE A GRATE
2.69		OUT					2			12												1										REHAB CURB DI
2.86		MED																				2									80	RAISE DI'S & GRADE DITCHES
2.92		MED																				2									80	RAISE DI'S & GRADE DITCHES
3.04		OUT		10																							II	25				REPAIR WASH
3.05		OUT			7	10				48										8	20.9			1			II	7				INLET REPLACE FULL HW, OUTLET NEW STONE PAD
3.11		OUT			30		2						42							1.5	10.4			1							40	RELAY 16' OF PIPE, CONSTRUCT CRADLE HEADWALL, BOLT LAST 3 SECTIONS & CLEAN DITCH
3.21		OUT					2						24									1		1							40	REHAB DI & CLEAN DITCH
3.23		OUT			9		23			24	20	.064								2.7	12.5			1			I	1			20	INLET NEW FULL HW, OUTLET REPLACE 20' OF PIPE, NEW STONE PAD & REPAIR SLOPE
3.37		OUT			1					12												1		1			I	1			10	REHAB DI TO MATCH NEW CURB LINE, OUTLET CLEAN DITCH & NEW STONE PAD
3.45		OUT			8		2			18	8	.064												1			I	1			20	OUTLET REPLACE 8' OF PIPE, NEW STONE PAD & CLEAN DITCH
3.51		OUT																				1		1								REHAB DI
QUECHEE INT. #1																															
RAMP CD	0+30	CL			39								60					96									II	39			60	INLET NEW STONE DITCH, OUTLET CLEAN DITCH
RAMP CD	1+40	MED																				1		2							20	REHAB MEDIAN DI, OUTLET CLEAN DITCH
RAMP CD	3+50	MED																				1		2							20	REHAB MEDIAN DI, OUTLET CLEAN DITCH
RAMP C	10+25	RT											30											1							100	CLEAN DITCH
RAMP C	12+00	RT					2						24									1		1							20	REHAB DI & CLEAN DITCH
RAMP D	8+25	LT-RT			2								30									1		2			II	2			60	INLET REHAB DI, OUTLET CLEAN DITCH & NEW STONE PAD
RAMP D	9+00	RT			1								24											1			I	1			40	OUTLET CLEAN DITCH & NEW STONE PAD
SHEET 39 TOTALS:			125	10	388	20	178																								153	
													8.0																			
													8.0																			
									UDR	6	212	1-FB																				
									CARR	6	10																				

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sada/87a008/da008dr.dgn
IPARM FILE da008d08.1 DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 39 OF 260 SHEETS

HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

NORTH BOUND		REHAB OF DI. CLASS II (MOD)	C.I.GRATE "A" W/FRAME	C.I.GRATE "B" W/FRAME	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER, RENTAL	EXCAVATOR, RENTAL	TRUCK, RENTAL	LOADER, RENTAL	BIT. CONC. GUTTER,(MOD)	MARKER POST	REM. & RESET G.RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL, TYPE I	STONEFILL, TYPE II	STONEFILL, TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES, EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
INT#1														1										
RAMP A 0+85 RT														1										
RAMP A 1+25 LT														1										
RAMP A 5+25 LT														1										
RAMP A 5+65 RT														1										
RAMP B 8+25 LT														1										
RAMP B 9+27 RT														1										
RAMP B 11+50 LT														1										
RAMP B 15+15 RT														1										
3.76	OUT													1										
3.78	CL													2										
3.85	CL													1										
3.89	CL													1										
3.90	MED													1										
3.94	OUT																							
3.95-3.96	MED													2		1								
4.01	CL													1										
4.07	MED																							
4.09	OUT													1				9.2						2
4.13	CL																							
4.14	OUT													2	50									
4.22	CL													1										
4.22-5.83	MED													1										
4.31	CL													1										
4.37	OUT													1										
4.39	MED													2					3.6					3
4.47	CL													6										
4.62-4.78	CL													1										
4.85	CL																							
4.89	OUT												2											
4.90	OUT													4					9.2					
4.92-4.95	CL													1										2
5.00	CL													1										
5.08	CL																							
5.13	OUT																							
SHEET TOTALS:													2.0	40.0	50.0	1.0		9.2	12.8					7.0

C 39A

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM * 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																															
4.22		OUT								18												1		1							REHAB CURB DI
4.30		OUT								12												1		1						10	REHAB CURB DI, OUTLET CLEAN DITCH
4.33		OUT																				1		1							REHAB CURB DI
4.77		OUT			1					18														1			I	1		20	INLET CLEAN DITCH & OUTLET NEW STONE PAD
5.03		OUT					10																								REPAIR SINK HOLE
5.24		OUT																				1		1							REHAB CURB DI
5.30		OUT								12												1		1						10	REHAB CURB DI, OUTLET CLEAN DITCH
5.34		OUT			5					42														1			II	5		30	INLET CLEAN DITCH & OUTLET NEW STONE PAD
5.79		OUT																				1		1							REHAB CURB DI & OUTLET CUT OFF 4'
5.97		OUT								12												1									REHAB CURB DI TO MATCH NEW CURB LINE
5.98		OUT			5					48										0.8	6.3										REPLACE HW, REPAIR FAILED SLOPE
5.99		OUT			32		11			30														1			II	2		30	OUTLET RELAY 4 SECTIONS OF PIPE, NEW STONE PAD & CLEAN DITCH
6.05		OUT																				1		1							REHAB DI
6.11		OUT																					1-A	1							NEW TYPE A GRATE
6.16		OUT				1				18	6	.064						20		0.8	6.3			1			II	10			INLET REMOVE EXIST. HW, EXTEND PIPE 6' & CONSTRUCT NEW CRADLE HW & FILL 2 SINK HOLES IN SLOPE
6.22		OUT					20			12												1		1						10	REHAB CURB DI, OUTLET CLEAN DITCH & REPAIR SINK HOLES
6.38		CL					2			24												1		1						60	INLET REHAB DI & CLEAN DITCH, OUTLET CLEAN DITCH
6.47		OUT		20	70	7	150	15	2-20°	18	40	.064								7	616	1	2-A	4			I	1		80	REPLACE 2 DI'S, REHAB 1 DI, RELAY 70' OF PIPE, CLEAN DITCH ON THIRD BENCH. EROSION MATTING 208 SY & EST. 40' OF PIPE & 2 ELBOWS & NEW STONE PAD @ OUTLET
																											II	25			
6.55		OUT					2			18												1		1						40	REHAB DI & CLEAN DITCH
6.63		OUT			2		5			18							2							1			I	2		20	FILL BEHIND HW, CUT 2' OFF PIPE & PAVE EXIST. BIT. CONC. GUTTER
6.92		OUT								18														1						20	OUTLET CLEAN DITCH
7.00	7.01	CL			30																										MED & OUT REPAIR SINK HOLES
7.01		OUT								18														1						20	OUTLET CLEAN DITCH
7.14		OUT											36											1						20	OUTLET CLEAN DITCH
7.17		MED					2			18												1								40	REHAB DI & CLEAN DITCH
7.28	7.31	OUT		775			525											1900									II	1300			SAME TREATMENT AS S.B. SLIDE AREA DETAILS @ MM 7.35
7.28	7.39	MED		675		8	565			18	10	.064						1975		2.6	231			2			I	575			SEE SOUTHBOUND SLIDE AREA DETAILS @ MM 7.35
7.34	7.39	OUT		1275	100	5	1000		2-15° 2-20°	12 18	112 114	.064 .064						3125						2		1	I II	1 2175			SEE SOUTHBOUND SLIDE AREA DETAILS @ MM 7.35
7.39		CL		5						18												1		1						20	MED REHAB DI & GRADE TO DRAIN, OUTLET CLEAN DITCH
7.42		OUT								12												1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
7.50		OUT								12												1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
7.53		MED					2			24												1		1						20	REHAB DI & CLEAN DITCH
7.55		OUT								12												1									REHAB CURB DI
7.56		OUT					30																				II	30			REPAIR HOLE IN SLOPE & STONE LINE DITCH
7.61		OUT								30														1						30	OUTLET CLEAN DITCH
7.62		OUT								18														1						20	OUTLET CLEAN DITCH
SHEET 40 TOTALS:				30	245	1	834	5	2-15° 2-20°	1 1	112 170	.06 .06						20		2.2	85	1		1			I II	58 54			520	

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008d09.i DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 40 OF 260 SHEETS

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.10

AC IM IR 089-1(8)

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS EXC.	UNCLASS DITCH	UNCLASS CHAN EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL FOR STRUCT.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
5.15	CL									4.2												
5.18	OUT				35					4.7						10						
5.23	CL									8												
5.30	CL				36																	
5.35	OUT				78																	
5.37	CL				23																	
5.43	CL				16																	
5.50	CL				8																	
5.58	CL			6	14																	
5.63	CL				60																	
5.73	CL				20					6.9						20						
5.78	OUT							31.3		10.1						22						
5.83	OUT				15																	
5.90	MED																					
5.95	CL				10			20.9		75.8								40				
6.05-6.17	CL				28																	
6.23	CL				9			10.4														
6.30	CL				112																	
6.40	CL				47																	
6.47	CL																					
6.53	CL																					
6.58	CL				140																	
6.63	MED																					
6.67	MED																					
7.12	OUT																					
7.17	OUT																					
7.22	OUT							62.6		6.1	4			1.7	150			10				
7.25	OUT				21																	
7.27	OUT																					
7.33-7.34	CL																					
7.27-7.35	OUT							417.4	5.5	537.1	143.5	79										
7.38-7.40	OUT			3																		
7.45	CL				65																	
7.50-7.57	MED	194																				
7.52	CL													1	53							
SHEET TOTALS:		194.0		9.0	737.0			542.6	5.5	652.8	147.5	79.0		2.7	203.0	52.0		50.0				

CHANGED 8.7 W/ COLL 8.7

270.80 12.62 6.8 CHT 5/05

-266.39 -130.89

040A

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR./EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM NO. 616.47 TON	GEO.FOR STONE FILL SY	GRANL. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																															
7.71		OUT			11		3			15	12	.064										1		1			I	1			10	REHAB CURB DI, RELAY LAST 2 SECTIONS OF PIPE & NEW STONE PAD @ OUTLET
7.72		OUT			15	1	4			24	8	.064												1			I	1			40	INLET CLEAN DITCH, OUTLET REMOVE CRADLE HW, RESET 3 LENGTHS OF PIPE
7.81		OUT			20		2			12	30	.064										1		1							10	REHAB DI, REPLACE 30' OF PIPE & CLEAN DITCH
7.87		OUT			16		6			12	24	.064										1		2			I	1				INLET REHAB DI, OUTLET REPLACE 24' OF PIPE & NEW STONE PAD
7.92		OUT								12												1										REHAB CURB DI
7.96		OUT								18														1							20	OUTLET CLEAN DITCH
7.97		OUT								12												1										REHAB CURB DI
8.11		CL			20	1	5			42														1			II	5			30	REMOVE CRADLE HW, OUTLET RELAY 12' PIPE & NEW STONE PAD
8.15		OUT			9	1	3			12	12	.064										1		1			I	1			10	REHAB CURB DI, OUTLET REMOVE HW, REPLACE 12' OF PIPE & NEW STONE PAD
8.21		OUT			10																						II	25				OUTLET NEW STONE LINED DITCH
8.22		CL								18														1			II	5			20	OUTLET CLEAN & STONE LINE DITCH
8.54		OUT								12												1										REHAB CURB DI
8.57		OUT					20			12												1										REHAB CURB DI & OUTLET REPAIR SLOPE
8.65		CL			35		2		URD	6	30											1		1					50		60	REHAB DI & CLEAN DITCH, OUTLET CLEAN DITCH, REPLACE 30' UDR & RELAY LAST 30' OF 24" PIPE
										24																					
8.75		MED					2			18												1		1							60	REHAB DI, CLEAN & REGRADE DITCH, OUTLET CLEAN DITCH
8.84		OUT			15		25	10		30								48						1			II	15				SHARON SOUTHBOUND REST AREA- OUTLET USE 8' X 25' STONE PAD W/GEOTEXTILE UNDER STONE FILL, FILL EROSION AREA
8.93		CL			19		6			18												2		2			I	2			100	MED REHAB DI & CLEAN DITCH, OUTLET REHAB DI, RELAY & BOLT LAST 3 SECTIONS & NEW STONE PAD
9.00		CL			20		7						18											2			I	1			20	INLET RESET PIPE, OUTLET CLEAN DITCH, RELAY & BOLT LAST 3 SECTIONS & NEW STONE PAD
9.47		CL											18											1							20	OUTLET CLEAN DITCH
9.49		OUT								12												1										REHAB CURB DI
9.54		OUT								12												1										REHAB CURB DI
9.62		CL								18														1							20	OUTLET CLEAN DITCH
9.70		CL					2						24											2							60	CLEAN DITCHES
9.82		CL								66														1							40	OUTLET CLEAN DITCH
9.93		CL			9	2	3			24	8	.064								3.7	18.8			2			I	1			20	INLET REPLACE FULL HW & 8' OF PIPE, OUTLET NEW STONE PAD & CLEAN DITCH
10.00		OUT			1								24														I	1			20	OUTLET CLEAN DITCH & NEW STONE PAD
10.17		CL			3	2	5	1					24							1.7	150		1-A	1							20	INLET REMOVE HW & REPLACE W/ NEW DI, OUTLET CLEAN & REGRADE DITCH
10.21		OUT					20																									REPAIR SLOPE
10.26		CL			29					30														2			II	3			20	EXCAVATE PIPE ENDS, FLUSH PIPE & OUTLET CLEAN DITCH & NEW STONE PAD
10.38		CL			5	1				18										1.8	12.5			2			I	1			20	INLET REPLACE FULL HW, OUTLET CLEAN DITCH, FILL WASH OUT AREA W/ STONE FILL & NEW STONE PAD
																											II	22				
10.58		CL			14		3			36	8	.079				1								1			II	4				INLET REPLACE 8' OF PIPE, NEW MES & OUTLET NEW STONE PAD
10.66		OUT								12												1		1							10	REHAB CURB DI, OUTLET CLEAN DITCH
10.73		OUT								18												1										REHAB CURB DI
10.78		OUT								18												1										REHAB CURB DI
10.84		CL					2			18												2									60	REHAB MED. & OUT DI'S & CLEAN DITCHES
10.89		CL					2			18												2									60	REHAB MED. & OUT DI'S & CLEAN DITCHES
SHEET 41 TOTALS:					251	8	112	11		1	66	.06						48			18	2					I	1			750	
										1	12	.06																				
										2	16	.06																				
										36	8	.079				1																
									UDR	6	30																		50			

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008dl0.i DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 41 OF 260 SHEETS

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR./EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CORRUGATED STEEL PIPE L	CORRUGATED STEEL PIPE TH	REINFORCED CONCRETE PIPE D	REINFORCED CONCRETE PIPE L	REINFORCED CONCRETE PIPE CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM * 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																																
7.71		OUT			11		3			15	12	.064										1		1			I	1			10	REHAB CURB DI, RELAY LAST 2 SECTIONS OF PIPE & NEW STONE PAD @ OUTLET
7.72		OUT			15	1	4			24	8	.064												1			I	1			40	INLET CLEAN DITCH, OUTLET REMOVE CRADLE HW, RESET 3 LENGTHS OF PIPE
7.81		OUT			20		2			12	30	.064										1		1							10	REHAB DI, REPLACE 30' OF PIPE & CLEAN DITCH
7.87		OUT			16		6			12	24	.064										1		2			I	1				INLET REHAB DI, OUTLET REPLACE 24' OF PIPE & NEW STONE PAD
7.92		OUT								12												1										REHAB CURB DI
7.96		OUT								18														1							20	OUTLET CLEAN DITCH
7.97		OUT								12												1										REHAB CURB DI
8.11		CL			20	1	5			42														1			II	5			30	REMOVE CRADLE HW, OUTLET RELAY 12' PIPE & NEW STONE PAD
8.15		OUT			9	1	3			12	12	.064										1		1			I	1			10	REHAB CURB DI, OUTLET REMOVE HW, REPLACE 12' OF PIPE & NEW STONE PAD
8.21		OUT			10																						II	25				OUTLET NEW STONE LINED DITCH
8.22		CL								18														1			II	5			20	OUTLET CLEAN & STONE LINE DITCH
8.54		OUT								12												1										REHAB CURB DI
8.57		OUT					20			12												1										REHAB CURB DI & OUTLET REPAIR SLOPE
8.65		CL			35		2		URD	6	30											1		1					50		60	REHAB DI & CLEAN DITCH, OUTLET CLEAN DITCH, REPLACE 30' UDR & RELAY LAST 30' OF 24" PIPE
										24																						
8.75		MED					2			18												1		1							60	REHAB DI, CLEAN & REGRADE DITCH, OUTLET CLEAN DITCH
8.84		OUT			15		25	10		30								48						1			II	15				SHARON SOUTHBOUND REST AREA- OUTLET USE 8' X 25' STONE PAD W/GEOTEXTILE UNDER STONE FILL, FILL EROSION AREA
8.93		CL			19		6			18												2		2			I	2			100	MED REHAB DI & CLEAN DITCH, OUTLET REHAB DI, RELAY & BOLT LAST 3 SECTIONS & NEW STONE PAD
9.00		CL			20		7						18											2			I	1			20	INLET RESET PIPE, OUTLET CLEAN DITCH, RELAY & BOLT LAST 3 SECTIONS & NEW STONE PAD
9.47		CL											18											1							20	OUTLET CLEAN DITCH
9.49		OUT								12												1										REHAB CURB DI
9.54		OUT								12												1										REHAB CURB DI
9.62		CL								18														1							20	OUTLET CLEAN DITCH
9.70		CL					2						24											2							60	CLEAN DITCHES
9.82		CL								66														1							40	OUTLET CLEAN DITCH
9.93		CL			9	2	3			24	8	.064								3.7	18.8			2			I	1			20	INLET REPLACE FULL HW & 8' OF PIPE, OUTLET NEW STONE PAD & CLEAN DITCH
10.00		OUT			1								24														I	1			20	OUTLET CLEAN DITCH & NEW STONE PAD
10.17		CL			3	2	5	1					24							1.7	150		1-A	1							20	INLET REMOVE HW & REPLACE W/ NEW DI, OUTLET CLEAN & REGRADE DITCH
10.21		OUT					20																									REPAIR SLOPE
10.26		CL			29					30														2			II	3			20	EXCAVATE PIPE ENDS, FLUSH PIPE & OUTLET CLEAN DITCH & NEW STONE PAD
10.38		CL			5	1				18										1.8	12.5			2			I	1			20	INLET REPLACE FULL HW, OUTLET CLEAN DITCH, FILL WASH OUT AREA W/ STONE FILL & NEW STONE PAD
																											II	22				
10.58		CL			14		3			36	8	.079				1								1			II	4				INLET REPLACE 8' OF PIPE, NEW MES & OUTLET NEW STONE PAD
10.66		OUT								12												1		1							10	REHAB CURB DI, OUTLET CLEAN DITCH
10.73		OUT								18												1										REHAB CURB DI
10.78		OUT								18												1										REHAB CURB DI
10.84		CL					2			18												2									60	REHAB MED. & OUT DI'S & CLEAN DITCHES
10.89		CL					2			18												2									60	REHAB MED. & OUT DI'S & CLEAN DITCHES
SHEET	41	TOTALS:			251	8	122	11		12	66	.064						48		7.2	181.3	21	1-A	30			I	10			750	
										15	12	.064															II	79				
										24	16	.064																				
										36	8	.079				1																
									UDR	6	30																		50			

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008d10.i DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 41 OF 260 SHEETS

EARTHWORK AND DRAINAGE SUMMARY SHEET

HARTFORD-ROYALTON | **DRAINAGE SUMMARY** | SH.11

AC IM IR 089-1(8)

NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS IV	36" RCP CLASS III	15" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPRS	15" CSPRS	18" CSPRS	36" CSPRS	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF DI	REMAR OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
5.15	CL															8		1	
5.18	OUT							1											1
5.23	CL																		1
5.30	CL																	1	1
5.35	OUT																		1
5.37	CL																	1	
5.43	CL																	1	
5.50	CL																		
5.58	CL																		
5.63	CL																		
5.73	CL																	2	1
5.78	OUT							1								5			1
5.83	OUT																		1
5.90	MED																	1	
5.95	CL								1							46			1
6.05-6.17	CL																	1	
6.23	CL																	1	
6.30	CL																	1	
6.40	CL																	1	
6.47	CL																	1	
6.53	CL																	1	
6.58	CL																		
6.63	MED																		
6.67	MED																		
7.12	OUT																	1	
7.17	OUT																		
7.22	OUT																		
7.25	OUT																		
7.27	OUT																	1	
7.33-7.34	CL																	1	
7.27-7.35	OUT																		
7.38-7.40	OUT																		
7.45	CL																		
7.50-7.57	MED																		
7.52	CL																	2	1
SHEET TOTALS:								2.0	1.0							59.0		18.0	9.0

041A

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR./EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																															
10.94		CL					2			18												2		2							60	REHAB MED. & CURB DI'S & CLEAN DITCHES
10.97		OUT								12												1										REHAB CURB DI
11.02		CL								18												1		1							20	REHAB CURB DI, OUTLET CLEAN DITCH
11.08		CL					2			18												2		2							60	REHAB OUT DI & RAISE MED. DI TO MATCH SLOPE
11.12		CL			19		7						18	16	III									1			I	1			20	OUTLET RELAY 2 SECTIONS OF PIPE, EXTEND PIPE 16', CLEAN DITCH, REPAIR SLOPE, BOLT LAST 3 SECTIONS & NEW STONE PAD
11.62		OUT								12												1										REHAB CURB DI
11.62		OUT		660			935			24	30	.064						1825						2			I	400		1400		STONE LINE EROSION AREA FROM 75' RT TO RT.14, SEE SHEET 154 & STONE LINE DITCH ON RT. 14 W/ STONE FILL, TYPE IV
11.68		MED					2			18												1		1			IV	660			40	REHAB DI & CLEAN DITCH
11.68		OUT								12												1										REHAB CURB DI
11.72		OUT								12												1										REHAB CURB DI
11.77		OUT								12												1										REHAB CURB DI
11.82		CL								18												2		1								REHAB MED & OUT DI'S
11.87		CL								18												2		1								REHAB MED & OUT DI'S
12.00		OUT								36														1							20	OUTLET CLEAN DITCH
12.10	12.20	MED	1300					68																								12.16 ~ THE UPPER THIRD OF CUT NEEDS TO BE REMOVED
12.38		CL								18												2		1								REHAB CURB DI & MED DI
12.43		OUT								12												1										REHAB CURB DI
12.47		OUT								12												1										REHAB CURB DI
12.53		OUT								18												1										REHAB DI
12.57		OUT								18												1										REHAB CURB DI
12.63	12.64	MED	1800																													REMOVE LOOSE BLOCKS BY SCALING BACK TO EXISTING FRACTURE PLANES
12.73		OUT								12												1										REHAB CURB DI
12.79		OUT								12												1										REHAB CURB DI
12.83		OUT								24												1		1							20	REHAB CURB DI & OUTLET CLEAN DITCH
12.89		MED								24												1		1							100	RAISE DI TO MATCH SLOPE, GRADE DITCH TO DRAIN
13.03		OUT								12												1										REHAB CURB DI
13.10		OUT								12												1										REHAB CURB DI
13.10		OUT								18														1							20	OUTLET CLEAN DITCH
13.24		OUT								24														1							20	OUTLET CLEAN DITCH
13.26		OUT								24														1							20	OUTLET CLEAN DITCH
SHARON RAMP A	INT. #2																															
10+30		RT															1															REPAVE EXIST. BITUMINOUS CONCRETE GUTTER
11+25	14+50	LT								12																					325	CLEAN DITCH LINE
11+75		RT								12												1										REHAB CURB DI
14+50		RT								12												1										REHAB CURB DI
17+50		RT								12												1										REHAB CURB DI
20+33		RT								12												1										REHAB CURB DI
22+26		RT								12												1										REHAB CURB DI
SHEET 42 TOTALS:			3100	660	19		948	68		24	30	.064	18	16	III		1	1825				32		18			I IV	401 660		1400	725	

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY	Squad A
DATE	7/94
SQUAD LEADER	BOMBARDIER
DESIGN FILE NO.	/sqda/87a008/da008dr.dgn
IFARM FILE	da008dll.i
DATE PLOTTED	12-MAR-1999
PROJ. NAME	HARTFORD-SHARON-ROYALTON
PROJ. NO.	IM IR 089-1(8)
SHEET	42 OF 260 SHEETS

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR./EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM * 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																															
10.94		CL					2			18												2		2							60	REHAB MED. & CURB DI'S & CLEAN DITCHES
10.97		OUT								12												1										REHAB CURB DI
11.02		CL								18												1		1							20	REHAB CURB DI, OUTLET CLEAN DITCH
11.08		CL					2			18												2		2							60	REHAB OUT DI & RAISE MED. DI TO MATCH SLOPE
11.12		CL			19		7						18	16	III									1			I	1			20	OUTLET RELAY 2 SECTIONS OF PIPE, EXTEND PIPE 16', CLEAN DITCH, REPAIR SLOPE, BOLT LAST 3 SECTIONS & NEW STONE PAD
11.62		OUT								12												1										REHAB CURB DI
11.62		OUT		660			935			24	30	.064						1825						2			I	400		1400		STONE LINE EROSION AREA FROM 75' RT TO RT.14, SEE SHEET 154 &
																											IV	660				STONE LINE DITCH ON RT. 14 W/ STONE FILL, TYPE IV
11.68		MED					2			18												1		1							40	REHAB DI & CLEAN DITCH
11.68		OUT								12												1										REHAB CURB DI
11.72		OUT								12												1										REHAB CURB DI
11.77		OUT								12												1										REHAB CURB DI
11.82		CL								18												2		1								REHAB MED & OUT DI'S
11.87		CL								18												2		1								REHAB MED & OUT DI'S
12.00		OUT								36														1							20	OUTLET CLEAN DITCH
12.10	12.20	MED	1300					68																								12.16 ~ THE UPPER THIRD OF CUT NEEDS TO BE REMOVED
12.38		CL								18												2		1								REHAB CURB DI & MED DI
12.43		OUT								12												1										REHAB CURB DI
12.47		OUT								12												1										REHAB CURB DI
12.53		OUT								18												1										REHAB DI
12.57		OUT								18												1										REHAB CURB DI
12.63	12.64	MED	1800																													REMOVE LOOSE BLOCKS BY SCALING BACK TO EXISTING FRACTURE PLANES
12.73		OUT								12												1										REHAB CURB DI
12.79		OUT								12												1										REHAB CURB DI
12.83		OUT								24												1		1							20	REHAB CURB DI & OUTLET CLEAN DITCH
12.89		MED								24												1		1							100	RAISE DI TO MATCH SLOPE, GRADE DITCH TO DRAIN
13.03		OUT								12												1										REHAB CURB DI
13.10		OUT								12												1										REHAB CURB DI
13.10		OUT								18														1							20	OUTLET CLEAN DITCH
13.24		OUT								24														1							20	OUTLET CLEAN DITCH
13.26		OUT								24														1							20	OUTLET CLEAN DITCH
SHARON RAMP A	INT. *2																															
10+30		RT															1															REPAVE EXIST. BITUMINOUS CONCRETE GUTTER
11+25	14+50	LT								12																					325	CLEAN DITCH LINE
11+75		RT								12												1										REHAB CURB DI
14+50		RT								12												1										REHAB CURB DI
17+50		RT								12												1										REHAB CURB DI
20+33		RT								12												1										REHAB CURB DI
22+26		RT								12												1										REHAB CURB DI
SHEET 42 TOTALS:			3100	660	19		948	68		24	30	.064	18	16	III		1	1825				32		18			I	401		1400	725	
																											IV	660				

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008dll.i DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 42 OF 260 SHEETS

EARTHWORK AND DRAINAGE SUMMARY SHEET

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.12

AC IM IR 089-1(8)

NORTH BOUND		REHAB OF DI. CLASS II (MOD)	C.I.GRATE "A" FRAME	C.I.GRATE "A" FRAME "D"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH. BASIN	BULLDOZER RENTAL	EXCAVATOR RENTAL	TRUCK RENTAL	LOADER RENTAL	BIT. CONC. GUTTER,(MOD)	MARKER POST	REM. & RESET G.RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL TYPE I	STONEFILL TYPE II	STONEFILL TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES, EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
5.15	CL													1										
5.18	OUT																							
5.23	CL													1										
5.30	CL													1										
5.35	OUT																							
5.37	CL													1										
5.43	CL													1										
5.50	CL													2		1								
5.58	CL													1										
5.63	CL													1										
5.73	CL													1				5.8						
5.78	OUT																	1.3						
5.83	OUT																							
5.90	MED													1										
5.95	CL													2					19.3		11			
6.05-6.17	CL													7										
6.23	CL													2										
6.30	CL													1										
6.40	CL													1										
6.47	CL													2										
6.53	CL													2										
6.58	CL													1										
6.63	MED													1										
6.67	MED													1										
7.12	OUT													1										
7.17	OUT													1		1								
7.22	OUT			1																				
7.25	OUT																							
7.27	OUT													1										
7.33-7.34	CL													1										
7.27-7.35	OUT				349	108	104	1		4			3									1024		6
7.38-7.40	OUT													1										
7.45	CL													1		1								
7.50-7.57	MED																		150.6		256			
7.52	CL													1		1								
SHEET TOTALS:				1.0	349.0	108.0	104.0	1.0		4.0			3.0	38.0		4.0		7.1	169.9		267.0	1024.0		6.0

C427

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																															
RAMP C																															
6+25	12+00	LT																												575	CLEAN DITCH LINE
7+00	11+35	RT																				1								435	REHAB DI & CLEAN DITCH LINE
13.35		OUT								12												1									REHAB CURB DI
13.46		OUT																				1									REHAB CURB DI
13.49		CL								18														1						40	OUTLET CLEAN PIPE END & DITCH
13.74	U-TURN	MED			9		26	5		18	8	.064								2.8	239	1	1-A	2			I	1			REGRADE U-TURN SLOPES, NEW DI TIE TO EXIST. DI, RAISE & CAP EXIST. DI & OUTLET FILL 3' X 3' X 3' SINK HOLE
13.85		OUT			1					12												1					I	1		10	REHAB CURB DI, OUTLET CLEAN DITCH & NEW STONE PAD
14.29		OUT								18														1						20	OUTLET CLEAN DITCH
14.56		OUT								12												1									REHAB CURB DI
14.85		OUT																				1		1							REHAB DI
15.04		OUT								12												1									REHAB CURB DI TO MEET NEW CURB LINE
15.09		OUT								12												1									REHAB DI
15.19		OUT								12																				20	CLEAN AROUND DI
15.71										12												1								10	REHAB DI & GRADE DITCH
16.03		OUT								36														1			II	15		30	OUTLET CLEAN DITCH & NEW STONE PAD
16.21		OUT								24														1						20	INLET CLEAN DITCH
16.35		OUT																						1						20	INLET CLEAN DITCH
16.42		CL								18												2		2						80	REHAB OUTSIDE & MED DI'S & CLEAN DITCHES
16.54		MED								24												1		1						40	REHAB MED DI & CLEAN DITCH
16.61		OUT																				1		1							REHAB DI
16.63		MED								18												1		1						40	REHAB MED DI & CLEAN DITCH
16.96		OUT								12												1									REHAB CURB DI TO MATCH NEW CURB LINE
17.00		OUT		50						12									100			1					I	50			REHAB CURB DI TO MATCH NEW CURB LINE & FIX 5 SINK HOLES IN MED
17.03		OUT			11					12	4	.064										1			1						REHAB & CAP EXIST. DI, NEW PRCCDI TO BE TIED TO EXIST. DI
17.07		OUT								12												1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
17.12		OUT			20		40			12												1									REHAB DI TO MATCH CURB, RELAY LAST 3 SECT. OF PIPE & REGRADE SLOPE
17.16		OUT			16		6			12												1					I	2			REHAB CURB DI TO MATCH NEW CURB LINE, RELAY LAST 3 SECTION OF PIPE & STONE PAD @ OUTLET
17.20		OUT			6			2		12	8	.064										1		1			II	75		10	REHAB CURB DI, OUTLET CLEAN DITCH & REPLACE LAST SECTION OF PIPE & STONE LINE DITCH
17.36		OUT																				1		1							REHAB DI
17.77		OUT								18												1									REHAB CURB DI
17.81		CL								18												2		1							REHAB CURB & MED DI'S
17.86		OUT								18												1		1						20	REHAB CURB DI & OUTLET CLEAN DITCH
17.90		OUT								12												1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
18.25		OUT					2			18												1		1						40	REHAB DI & CLEAN DITCH
18.39		OUT								18												1		1						20	REHAB DI, OUTLET CLEAN DITCH
18.43		OUT																												20	CLEAN PAVED GUTTER
18.48		OUT					2			18												1		1						40	REHAB DI & CLEAN DITCH
18.80	18.85	OUT		10														10				1					I	5		200	STONE FILL@ INLET & REGRADE DITCH TO DRAIN
19.03		OUT																				1		1							REHAB DI
19.09		OUT					2			24												1		1						40	REHAB DI & CLEAN DITCH
SHEET 43 TOTALS:				60	63		8			12	0							10	00	.8	39	3		4			I	5		1750	
										8	0																	60			

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008di2.1 DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 43 OF 260 SHEETS

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM • 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																															
RAMP C																															
6+25	12+00	LT																												575	CLEAN DITCH LINE
7+00	11+35	RT																				1								435	REHAB DI & CLEAN DITCH LINE
13.35		OUT								12												1									REHAB CURB DI
13.46		OUT																				1									REHAB CURB DI
13.49		CL								18														1						40	OUTLET CLEAN PIPE END & DITCH
13.74	U-TURN	MED			9		26	5		18	8	.064								2.8	239	1	1-A	2			I	1			REGRADE U-TURN SLOPES, NEW DI TIE TO EXIST. DI, RAISE & CAP EXIST. DI & OUTLET FILL 3' X 3' X 3' SINK HOLE
13.85		OUT			1					12												1					I	1		10	REHAB CURB DI, OUTLET CLEAN DITCH & NEW STONE PAD
14.29		OUT								18														1						20	OUTLET CLEAN DITCH
14.56		OUT								12												1									REHAB CURB DI
14.85		OUT																				1		1							REHAB DI
15.04		OUT								12												1									REHAB CURB DI TO MEET NEW CURB LINE
15.09		OUT								12												1									REHAB DI
15.19		OUT								12																				20	CLEAN AROUND DI
15.71										12												1								10	REHAB DI & GRADE DITCH
16.03		OUT								36														1			II	15		30	OUTLET CLEAN DITCH & NEW STONE PAD
16.21		OUT								24														1						20	INLET CLEAN DITCH
16.35		OUT																						1						20	INLET CLEAN DITCH
16.42		CL								18												2		2						80	REHAB OUTSIDE & MED DI'S & CLEAN DITCHES
16.54		MED								24												1		1						40	REHAB MED DI & CLEAN DITCH
16.61		OUT																				1		1							REHAB DI
16.63		MED								18												1		1						40	REHAB MED DI & CLEAN DITCH
16.96		OUT								12												1									REHAB CURB DI TO MATCH NEW CURB LINE
17.00		OUT		50						12									100			1					I	50			REHAB CURB DI TO MATCH NEW CURB LINE & FIX 5 SINK HOLES IN MED
17.03		OUT			11					12	4	.064										1				1					REHAB & CAP EXIST. DI, NEW PRCCDI TO BE TIED TO EXIST. DI
17.07		OUT								12												1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
17.12		OUT			20		40			12												1									REHAB DI TO MATCH CURB, RELAY LAST 3 SECT. OF PIPE & REGRADE SLOPE
17.16		OUT			16		6			12												1					I	2			REHAB CURB DI TO MATCH NEW CURB LINE, RELAY LAST 3 SECTION OF PIPE & STONE PAD @ OUTLET
17.20		OUT			6			2		12	8	.064										1		1			II	75		10	REHAB CURB DI, OUTLET CLEAN DITCH & REPLACE LAST SECTION OF PIPE & STONE LINE DITCH
17.36		OUT																				1		1							REHAB DI
17.77		OUT								18												1									REHAB CURB DI
17.81		CL								18												2		1							REHAB CURB & MED DI'S
17.86		OUT								18												1		1						20	REHAB CURB DI & OUTLET CLEAN DITCH
17.90		OUT								12												1		1						10	REHAB CURB DI & OUTLET CLEAN DITCH
18.25		OUT					2			18												1		1						40	REHAB DI & CLEAN DITCH
18.39		OUT								18												1		1						20	REHAB DI, OUTLET CLEAN DITCH
18.43		OUT																												20	CLEAN PAVED GUTTER
18.48		OUT					2			18												1		1						40	REHAB DI & CLEAN DITCH
18.80	18.85	OUT		10														10									I	5		200	STONE FILL@ INLET & REGRADE DITCH TO DRAIN
19.03		OUT																				1		1							REHAB DI
19.09		OUT					2			24												1		1						40	REHAB DI & CLEAN DITCH
SHEET	43 TOTALS:			60	63		78	7		12	12	.064						10	100	2.8	239	33	1-A	24		1	I	59		1750	
										18	8	.064															II	90			

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008dl2.1 DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 43 OF 260 SHEETS

EARTHWORK AND DRAINAGE SUMMARY SHEET

HARTFORD-ROYALTON																				SH.13
AC IM IR 089-1(8)																				
NORTH BOUND		REHAB OF DI CLASS I (MOD.)	6" UND. (MOD.)	MEMBRANE	SOLID ROCK EXC. (MOD)	EROSION MATTING	AGGREGATE SHOULDERS	ROOT WADS	FISH LUNKERS											
		604.412	605.10	900.123	203.16	654.10	402.11	900.10	900.13											
MM-MM	POS.	(EA.)	(LF)	(SF)	(CY)	(SY)	(CY)	(LS)	(LS)											
5.15	CL																			
5.18	OUT																			
5.23	CL																			
5.30	CL																			
5.35	OUT																			
5.37	CL																			
5.43	CL																			
5.50	CL																			
5.58	CL																			
5.63	CL																			
5.73	CL																			
5.78	OUT																			
5.83	OUT																			
5.90	MED																			
5.95	CL																			
6.05-6.17	CL																			
6.23	CL																			
6.30	CL																			
6.40	CL																			
6.47	CL																			
6.53	CL																			
6.58	CL																			
6.63	MED																			
6.67	MED																			
7.12	OUT																			
7.17	OUT																			
7.22	OUT																			
7.25	OUT																			
7.27	OUT																			
7.33-7.34	CL																			
7.27-7.35	OUT	3	434	11295																
7.38-7.40	OUT																			
7.45	CL																			
7.50-7.57	MED																			
7.52	CL																			
SHEET TOTALS:		3.0	434.0	11295.0																

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR. /EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM. NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM # 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SOUTHBOUND:																															
19.34		MED					2			24												1		1							40	REHAB DI & CLEAN DITCH
19.40	19.72	OUT															160														REPAVE BIT. CONC. GUTTER ADJACENT TO LEDGE
19.42		CL					2			30												2		2							REHAB MED & OUT DI & GRADE AROUND DI @ OUTLET
19.50		OUT			20				UDR	12	50	1-FB										1		2					90		UNDERDRAIN FROM SPRING OUTLET IN EXISTING DI W/FLUSHING BASIN @ INLET
									CARR	12	6																				
19.52		MED					2			36												1		1							40	REHAB DI & GRADE AROUND DI @ OUTLET
19.64		OUT																													REMOVE ROCK FROM DITCH
19.68		CL								36												1		2							90	MED REHAB DI & CLEAN DITCH, OUTSIDE CLEAN DITCH
19.75	19.77	OUT																													100	CLEAN DITCH
19.80		CL		10	30		40			30								20		3.5	16.7										RELAY 20'. NEW FULL HW. REMOVE EXISTING HW & FILL SINK HOLES IN MED
19.90		MED		370			700			24								1000								II	370				REPAIR FAILED SLOPE
20.47		OUT								12												1									REHAB CURB DI
20.52		OUT								12												1									20	REHAB CURB DI & OUTLET CLEAN DITCH
21.02		OUT					10																									REPAIR SINK HOLE
21.12		OUT		560			650											550								I	100		375		STONE LINE 75' X 50' EROSION AREA, SEE SHEETS 17 & 154
																										IV	200				
21.17		OUT								12												1		1							10	REHAB CURB DI TO MATCH NEW CURB LINE & OUTLET CLEAN DITCH
21.27		OUT			11					12	4	.064										1				1						REHAB EXIST. DI & CAP, NEW PRCCDI TIE TO EXIST. DI
21.33		OUT								12												1										REHAB DI
21.62		OUT								18												1	1-A									REHAB THROATED DI
21.75	21.85	OUT	300																													SCALE LEDGE
21.77		OUT								18												1		1								REHAB DI
21.92		OUT								12												1										REHAB CURB DI TO MATCH NEW CURB LINE
21.95		CL								18												2		1							40	REHAB CURB & MEDIAN DI'S & CLEAN DITCH
SHEET	44 TOTALS:		300	1240	61		1406			12	4	.064					160	1570		3.5	16.7	16	1-A	11		1	I	100	90	375	340	
									URD	12	50	1-FB															II	370				
									CARR	12	6																IV	200				

SEE REVISED DRAINAGE SHEETS 31A – 069A

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sadd/87a008/da008dr.dgn
IPARM FILE da008di3.i DATE PLOTTED 12-MAR-1998
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 44 OF 260 SHEETS

HARTFORD-ROYALTON											DRAINAGE SUMMARY													SH.14
AC IM IR 089-1(8)																								
NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS EXC.	UNCLASS DITCH	UNCLASS CHAN EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	DRAIN. INFT. FOR STRUCT.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
7.56	MED																					
7.62	OUT				75																	
7.73	MED									1.7												
7.79	MED									19.8						48						
7.85	OUT				150																	
7.89	CL				91			31.3		68.1	1.5											
7.88	MED				66					5.1												
7.92	CL				20			31.3		176.3	2.2		1.8			48			30			
7.95	MED							125.2														
7.98	MED				6					24.9						60						
8.02	MED							10.4		43.1			30.9	3.7	294			40				
8.07	MED	15			25																	
8.12	MED							20.9		39	0.9					80						
8.13	CL							41.7		53	3.2			1.5	10.4							
8.26	CL																					
8.31	CL							20.9		28.9	2.2											
8.36	CL				15			20.8		6.9	1.5			1.7	150							
8.41	CL				40			114.8		13.1	1.6											
8.46	CL				98			20.9		46	2.6											
8.56	OUT	8.9								32.9	1.3			1.8	12.5			4				
8.58	MED				10			10.4		23.3						36						
8.60	CL				15			5.2		2.1						7						
8.64	OUT	21						20.9		31.1	9.9			8	20.9							
8.65	CL							10.4		8				1	25			16				
8.71	CL				15																	
8.76	CL																					
8.77	OUT																					
8.90	CL																					
8.94	OUT			3				10.4														
9.02	CL																					
9.04	CL							20.9		50.2												
9.10	CL				32			41.7		64.1	2.2			2.1	193							
9.15	OUT							10.4														
9.20-9.30	OUT			8																		
9.22	CL				36					10.4												
SHEET TOTALS:		44.9		11.0	694.0			568.5		748.0	29.1		32.7	19.8	705.8	279.0		60.0	30.0			

EARTHWORK AND DRAINAGE SUMMARY SHEET FOR HARTFORD-SHARON-ROYALTON IR 089-1(8)

MILE MARKER	MILE MARKER	POS.	SOLID ROCK EXCAV. CY	COMM. EXCAV. CY	TRENCH EXCAV. EARTH CY	TRENCH EXCAV. ROCK CY	EARTH BR./EXCAV. MATERIAL CY	TOPSOIL CY	CSP ELBOWS EA	CORRUGATED STEEL PIPE D	CSP L	CSP TH	REINFORCED CONCRETE PIPE D	RCP L	RCP CL	METAL END SECT. EA	ITEM NO. 616.47 TON	GEO.FOR STONE FILL SY	GRAN. BKFILL STRUCT. CY	CONC. CL B CY	REIN STEEL LBS	REHAB DI EA	GRATE TYPE EA	ITEM * 619.17 EA		PRCCDI EA	STONE FILL TYPE	STONE FILL CY	GEO.FOR UNDER-DRAIN SY	EROSION MATTING SY	CLEAN DITCH LF	REMARKS
SHEET	32 TOTAL:			565	393	15	459	86		12	36	.064	18	8	III		185	283		7.9	39.6	16		30		1	I	42			450	
									1-20°	18	140	.064														II	1215				
									1-45°																						
										30	8	.079																			
										48	8	.109																			
									UDR	6	30																	50			
SHEET	33 TOTAL:				252	1	182	10	1-20°	12	24	.064	18	36	III	1	4	99				22		26		1	I	10			640	
													24	16	III												II	82				
													42	8	III																
SHEET	34 TOTAL:			40	118	5	116	5		12	24	.064								3.0	270	30	2-A	30		1	I	83			1140	
										18	98	.064				1																
SHEET	35 TOTAL:				344	26	174	10	2-15°	12	102	.064	18	8	III					18.6	263.9	23	1-B	36		2	I	4			800	
										18	112	.064				2											II	37				
										30	8	.079																			
										36	24	.079																			
										48	40	.109																			
SHEET	36 TOTAL:		40550	50	62	8	54	5		18	14	.064	18	8	III		7			3.6	25	29		26			I	21			2065	
																											II	22				
SHEET	37 TOTAL:		420	190	242		186	28		18	120	.064						150		2.3	200	22	1-A	27			I	6			680	
										42	40	.109															II	289				
SHEET	38 TOTAL:				78		164	5		12	4	.064	18	24	III		3			2.1	193	40	1-A	20		1	I	1			380	
										18	80	.064															II	3				
										30	32	.079																			
SHEET	39 TOTAL:		1252	20	388	20	123			18	8	.064	36	24	III			96		20.4	64.7	20	2-A	31			I	9	350		1530	
										24	8	.064															II	98				
									UDR	6	212	1-FB																			
									CARR	6	10																				
SHEET	40 TOTAL:			2750	245	21	2324	15	2-15°	12	112	.064					2	7020		11.2	859.6	18	3-A	33		1	I	580			520	
									4-20°	18	170	.064															II	3547				
SHEET	41 TOTAL:				251	8	122	11		12	66	.064						48		7.2	181.3	21	1-A	30			I	10			750	
										15	12	.064															II	79				
										24	16	.064																			
										36	8	.079				1															
									UDR	6	30																	50			
SHEET	42 TOTAL:		3100	660	19		948	68		24	30	.064	18	16	III		1	1825				32		18			I	401		1400	725	
																											IV	660				
SHEET	43 TOTAL:			60	63		78	7		12	12	.064						10	100	2.8	239	33	1-A	24		1	I	59			1750	
										18	8	.064															II	90				
SHEET	44 TOTAL:		300	1240	61		1406			12	4	.064					160	1570		3.5	16.7	16	1-A	11		1	I	100	90	375	340	
									UDR	12	50	1-FB															II	370				
									CARR	12	6																IV	200				
GRAND	TOTALS:		45622	5575	2516	104	6336	250	3-15°	12	384	.064	18	100	III		362	11101	100	82.6		322	12-A	342		9	I	1326		1775	11770	
									1-20°			.064	24	16	III						2352.8		1-B				II	5732				
										15	12	.064	36	24	III												IV	860				
									5-20°	18	750	.064	42	8	III																
									1-45°							4															
										24	54	.064																			
										30	48	.079																			
										36	32	.079				1															
										42	40	.109																			
										48	48	.109																			
									UDR	12	50	1-FB																540			
									CARR	12	6																				
									UDR	6	272	1-FB																			
									CARR	6	10																				

SEE REVISED DRAINAGE SHEETS 31A – 069A

* SOLID ROCK EXCAVATION ITEM # 203.16

EARTHWORK AND DRAINAGE SUMMARY SHEET

DRAWN BY Squad A DATE 7/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008dr.dgn
IPARM FILE da008dl4.i DATE PLOTTED 12-MAR-1999
PROJ. NAME HARTFORD-SHARON-ROYALTON
PROJ. NO. IM IR 089-1(8)
SHEET 45 OF 260 SHEETS

HARTFORD-ROYALTON											DRAINAGE SUMMARY										SH.15
AC IM IR 089-1(8)																					
NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS IV	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PR/CDI	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
7.56	MED																	1	1
7.62	OUT																		
7.73	MED																		
7.79	MED							1											1
7.85	OUT																		
7.89	CL															20		1	
7.88	MED																		
7.92	CL							2									1	1	
7.95	MED																		
7.98	MED							2											1
8.02	MED																		1
8.07	MED																		
8.12	MED							1											1
8.13	CL															20			
8.26	CL																		
8.31	CL															20			
8.36	CL															7			
8.41	CL			24												5		1	
8.46	CL			16												16			
8.56	OUT															48			
8.58	MED							1											1
8.60	CL							1											1
8.64	OUT	10																	
8.65	CL								1							8			2
8.71	CL																		1
8.76	CL																	1	1
8.77	OUT																	2	
8.90	CL																	2	
8.94	OUT																	1	
9.02	CL																	2	
9.04	CL															24			
9.10	CL															32			
9.15	OUT																	1	
9.20-9.30	OUT																		
9.22	CL															16		1	
SHEET TOTALS:		10.0		40.0				8.0	1.0							216.0	1.0	14.0	11.0

045A

HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

NORTH BOUND		REHAB OF DI, CLASS II (MOD)	C.I.GRATE, W/FRAME "A"	C.I.GRATE, W/FRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER, RENTAL	EXCAVATOR, RENTAL	TRUCK, RENTAL	LOADER, RENTAL	BITT. CONC. GUTTER,(MOD D)	MARKER POST	REM. & RESET G'RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL, TYPE I	STONEFILL, TYPE II	STONEFILL, TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES, EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
7.56	MED													1										
7.62	OUT																							
7.73	MED							1						1										
7.79	MED													1										
7.85	OUT																							
7.89	CL						48							1	28.5			5.2						
7.88	MED						20																	
7.92	CL						35							2	28.5				56					
7.95	MED														12.5									
7.98	MED																							
8.02	MED													1										
8.07	MED												2					16.4						
8.12	MED																	2.1	7.1					
8.13	CL																							
8.26	CL													2		1								
8.31	CL														12.5				18					
8.36	CL		1											1		1		1						
8.41	CL													2		1								
8.46	CL						72							2		1		10.4			39			
8.56	OUT													1				10.2						
8.58	MED													1										
8.60	CL													2										
8.64	OUT																	5.2	20.8					
8.65	CL																							
8.71	CL													1										
8.76	CL																							
8.77	OUT													1										
8.90	CL													2		1								
8.94	OUT													1										
9.02	CL													2										
9.04	CL													2					19.2		49			
9.10	CL		1				10							2	16			7.2						
9.15	OUT													1		1								
9.20-9.30	OUT																							
9.22	CL													2										
SHEET TOTALS:			2.0				185.0	1.0					2.0	32.0	98.0	6.0		57.7	121.1		88.0			

046 A

NOTES AND SEEDING FORMULA

SLOPES & LEDGE

1. IN AREAS WHERE EXCAVATION IS TO TAKE PLACE IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO KEEP DAMAGE OF EXISTING PAVEMENT TO A MINIMUM ON THE TRAVELED LANES. A QUANTITY OF COLD PLANING-BITUMINOUS PAVEMENT, BITUMINOUS CONCRETE PAVEMENT AND TRAFFIC MARKINGS HAVE BEEN ADDED TO THE CONTRACT FOR SHOULDER AND/OR LANE REPAIR.
2. ROCK SCALINGS & OTHER EXCAVATION FROM THIS PROJECT SHALL BE USED IN THE FOLLOWING MANNER:

A) ROCK SCALINGS SHALL BE USED AS ROCK / STONE FILL ON THIS PROJECT. SEE GUARDRAIL ITEM DETAIL SUMMARY SHEETS AND EARTHWORK AND DRAINAGE SUMMARY SHEETS FOR LOCATIONS AND APPROXIMATE QUANTITIES.

ALL SOLID ROCK EXCAVATION WITH CROSS SECTIONS SHALL BE PAID AS IN PLACE MEASUREMENT ALL UNCLASSIFIED EXCAVATION, TYPE II SHALL BE PAID FOR AS TRUCK MEASUREMENT (FACTOR DIVIDED BY 1.35). SEE SPECIFICATION BOOK, SUBSECTION 203.13 (K).

B) IF EXCAVATED MATERIAL IS TO BE USED TO REGRADE DESIGNATED AREAS AND/OR TO FLATTEN SLOPES AND ELIMINATE GUARDRAIL, AS DIRECTED BY THE ENGINEER, THE FOLLOWING PROCEDURE WILL BE FOLLOWED:
SLOPES:

1) AT THE DECISION OF THE ENGINEER TOPSOIL MAY BE STRIPPED FROM AREAS THAT ARE TO HAVE SLOPES FLATTENED OR FILLED. EXCAVATION AND PLACEMENT OF THIS MATERIAL WILL BE PAID FOR UNDER COMMON EXCAVATION.
2) THE STATE WILL PAY, AT CONTRACT UNIT PRICES, ANY WORK PERFORMED ON DRAINAGE STRUCTURES WHICH MUST BE EXTENDED OR RAISED.
3) AREA WILL BE SEEDED PER FORMULA SHOWN AND PAID UNDER APPROPRIATE SEEDING ITEMS.
4) EXISTING GUARDRAIL WILL BE REMOVED, REMOVAL TO BE PAID AS REMOVAL OF EXISTING GUARDRAIL. GUARDRAIL WILL NOT BE REMOVED UNTIL AREA IS COMPLETELY FILLED.
NOTE: WHEN THE FLATTENING OF SLOPES IN ONE AREA HAS BEEN STARTED IT SHALL BE COMPLETED BEFORE ANOTHER AREA IS STARTED.
THE RESIDENT ENGINEER WILL DESIGNATE SLOPE AREAS TO BE FLATTENED.
TO AVOID POSSIBLE ROW LIMITATIONS SLOPE FLATTENING FOR ELIMINATION OF GUARDRAIL WILL TAKE PLACE @ RESIDENT ENGINEER'S DISCRETION. THE EXACT STATIONS AND QUANTITIES WILL BE DETERMINED IN THE FIELD. IT IS PROBABLE THAT THERE WILL NOT BE ENOUGH EXCAVATED MATERIAL AVAILABLE TO FLATTEN THE SLOPES IN GENERAL AND IN ALL THE AREAS NOTED.
THE ITEM OF EARTH BORROW HAS BEEN ADDED FOR THIS PURPOSE.
5) THE RESIDENT ENGINEER MAY DETERMINE THAT OTHER THAN NOTED LEDGE CUTS MAY NEED SCALING. THE ADDITIONAL DESIGNATED AREAS WILL BECOME PART OF THIS CONTRACT.

C) ALL EXCESS ROCK EXCAVATION ON THIS PROJECT THAT WILL NOT BE USED TO FLATTEN SLOPES OR OTHERWISE BE INCORPORATED INTO PROJECT FEATURES SHALL REMAIN THE PROPERTY OF THE STATE OF VERMONT. THE CONTRACTOR SHALL LOAD THE EXCESS ROCK ON SUITABLE TRANSPORT AND DELIVER IT TO THE AGENCY'S MAINTENANCE FACILITY LOCATED IN ROYALTON OFF VT RT 107 APPROX. 1.1 MILES FROM I-89 EXIT 3.

FENCE

1. IF ADDITIONAL AREAS OF DOWN OR DAMAGED FENCE ARE ENCOUNTERED, THEY SHALL BE REPLACED UNDER THIS CONTRACT AND PAID @ CONTRACT UNIT PRICES.
2. IN AREAS WHERE FENCE IS TO BE CLEARED, AN AREA APPROXIMATELY 4' WIDE SHALL BE CLEARED ON THE STATE'S SIDE OF THE RIGHT OF WAY LINES. THE COST OF THIS CLEARING SHALL BE PAID UNDER THE ITEM CLEARING & GRUBBING (MOD.).
3. NEW R.O.W. FENCE IS TO BE PLACED 6'' INSIDE R.O.W. LINE OR AS DIRECTED BY ENGINEER. WHEN FENCE IS NOT PLACED 6'' INSIDE R.O.W. VAOT ROW SIGNS SHALL BE PLACED ALONG THE R.O.W. LINE AT INTERVALS OF APPROXIMATELY 100' - 150' APART. AN ESTIMATED QUANTITY OF TYPE "A" SIGNS AND POSTS HAVE BEEN ADDED FOR THIS PURPOSE & 2 SIGNS PLACED BACK TO BACK PER POST.

GENERAL

1. IF A MINOR PROBLEM NOT CAUSED BY THE CONTRACTORS NEGLIGENCE WITH DRAINAGE, FENCE OR OTHER ITEMS IS DISCOVERED BY THE ENGINEER, DISTRICT TRANSPORTATION ADMNISTRATOR OR THE CONTRACTOR DURING CONTRUCTION, WHICH IS NOT NOTED IN THE PLANS, THE PROBLEM MAY BE REQUIRED TO BE CORRECTED UNDER THIS CONTRACT AS DIRECTED BY THE ENGINEER.
2. ALL STEEL BEAM GUARDRAIL WILL HAVE STEEL POSTS EXCEPT WHERE INDICATED ON THE PLANS.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REMOVE AND RESET MILE MARKER POSTS AND DELINEATOR POSTS WHEN WORK MAY CAUSE DAMAGE TO THEM. ANY SUCH WORK WILL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS AND NOT PAID FOR DIRECTLY.
4. CLEARING AND GRUBBING
A) CLEAR ZONE - 30' FROM EDGE OF TRAVEL WAY
B) TREES & BRUSH WILL BE REMOVED AT BASE, FACE AND 20' FROM TOP OF LEDGE CUTS.
5. ESTIMATED DELINEATOR BUTTON (COLOR) TOTALS FOR INFORMATION ONLY.
6. REMOVAL OF GUARDRAIL WILL INCLUDE REMOVAL OF TREATED TIMBER AND BIT. CONC. CURB WHERE APPLICABLE.
7. ALL TREATED TIMBER CURB SHALL BE BACKED UP WITH ITEM 402.11, AGGRREGATE SHOULDERS.

DRAINAGE

1. WHEN CONCRETE PIPE IS RELAYED OR EXTENDED, THE FINAL THREE SECTIONS SHALL BE RESTRAINED WITH CONNECTING DEVICES AS DESCRIBED IN SUBSECTION 601.07 OF THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. WHEN IT IS NOTED ON THE PLANS THAT 2-3-4 SECTIONS OF PIPE ARE TO BE RELAYED THIS IS ONLY AN ESTIMATE. WHEN PIPE IS EXCAVATED, THE RESIDENT ENGINEER WILL DETERMINE HOW MUCH MUST BE RELAYED.
3. AN ESTIMATED QUANTITY OF PIPE HAS BEEN ADDED TO THE PLANS SO THAT DAMAGED PIPE MAY BE REPLACED INSTEAD OF RELAYED AS PER THE ENGINEER.
4. ANY PIPE WHICH IS REMOVED AND NOT RELAYED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE STATE'S RIGHT-OF-WAY.
5. TRENCH EARTH AND STONE FILL QUANTITIES SHOWN ON THESE PLANS ARE ESTIMATES ONLY.
6. A QUANTITY OF GRANULAR BACKFILL FOR STRUCTURES HAS BEEN ADDED TO THE PROJECT FOR POSSIBLE USE IN RELAYING OR REPLACING PIPES.
7. IF END SECTIONS ARE TO BE USED ON R.C.P. PIPES, METAL END SECTIONS OF A LARGER SIZE SHALL BE USED AND PAID AS METAL END SECTIONS. A QUANTITY OF VARIOUS SIZED END SECTIONS HAVE BEEN ESTIMATED FOR USE BY THE RESIDENT ENGINEER. AN ESTIMATED QUANTITY OF CAST IRON GRATES, TYPE A AND TYPE B HAVE BEEN ADDED TO THE CONTRACT TO BE USED AT THE DISCRETION OF THE ENGINEER.
8. SOME OF THE DRAINAGE WORK WILL REQUIRE THE CONTRACTOR TO REMOVE TREES AND BRUSH. THE COST OF THIS WORK WILL BE PAID UNDER THE ITEM OF CLEARING AND GRUBBING.
9. AN ESTIMATED QUANTITY OF CLEANING PIPE CULVERTS IN PLACE HAS BEEN ADDED TO THE PROJECT.
10. AN ESTIMATED QUANTITY OF GUARDRAIL ANCHORS, GUARDRAIL POSTS, AND GUARDRAIL PANELS HAS BEEN ADDED TO THE CONTRACT. THESE ITEMS ARE TO BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER TO REPAIR ANY ANCHORS OR GUARDRAIL THAT ARE DAMAGED.
11. GEOTEXTILE UNDER STONE FILL SHALL BE PLACED UNDER ALL NEW STONE PADS AND IN THE REPAIR OF ANY EROSION AREAS. THE FABRIC IS TO BE PLACED AFTER THE AREA HAS BEEN LEVELED AND BEFORE STONE FILL IS PLACED. AN ESTIMATED QUANTITY HAS BEEN ADDED TO THE PROJECT.

SEEDING FORMULA
RURAL AREAS

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

GENERAL NOTES

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

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

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

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

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

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

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

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

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

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.015 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.

NOTES & SEEDING FORMULA

NOTES BY Ross DATE 1/95
SQUAD LEADER Nyquist
DESIGN FILE NO. /sqda/87a008/da008det.dgn
IPARM FILE da008not.i DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 47 OF 260 SHEETS

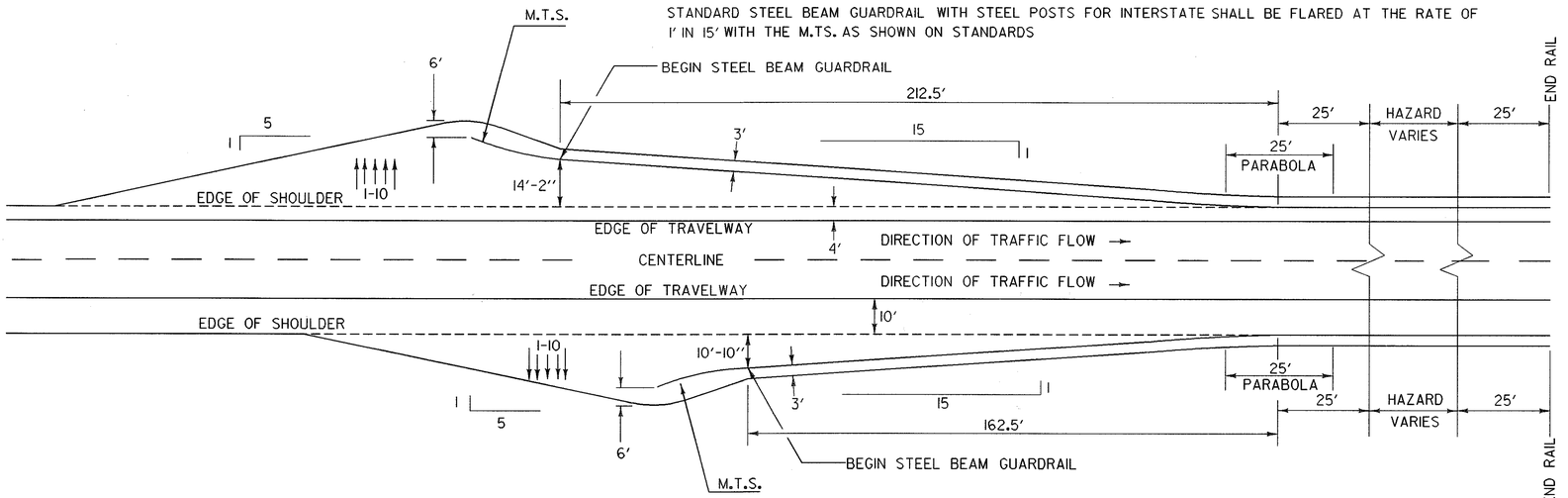
HARTFORD-ROYALTON | **DRAINAGE SUMMARY** | SH.17

AC IM IR 089-1(8)

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS EXC.	UNCLASS DITCH	UNCLASS CHAN. EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL FOR STRUCT.	DENSE GRADED GRAN.	CONCRETE GLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
9.33	OUT				18																	
9.37	CL							10.4		24.7												
9.43	OUT							31.3		4.1								25				
9.50	MED							31.3		23						50						
9.53	MED																					
9.55	CL							20.8		11				2.1	193							
9.55-9.62	MED									83.3												
9.62	MED							10.4		1.1								8				
9.68	CL				10																	
9.70	MED																	50				
9.72	CL							5		13.1												
9.81	MED																					
9.91	CL																					
9.95	MED				15					15.3						27						
10.01	OUT									3	1.8			1.08	42							
10.03	MED	53																				
10.04	MED									12.1			1			28						
10.05	MED									12.7			1			24						
10.08	MED									2.7												
10.09	OUT									16	5.3			4.9	71							
10.14	CL									6.8	3			2.7	48							
10.21	CL																					
10.26	CL	133			50																	
10.38	CL				15																	
10.43	CL				8																	
10.45	CL				189			10.4		6.6	1.3			1.7	150			4				
10.50	OUT									31.1	0.9			2.1	193			20				
10.50-10.53	MED				90																	
10.52	OUT	66																				
10.57	OUT				10																	
10.60	OUT																					
10.68	OUT				20																	
10.72	OUT																					
10.97	OUT									5.6	1.4			1.8	12.5							
11.05-11.20	OUT			501.6						7.8	2.2			2.7	12.5							
SHEET TOTALS:		252.0		501.6	425.0			119.6		280.0	15.9		2.0	19.1	722.0	129.0		107.0				

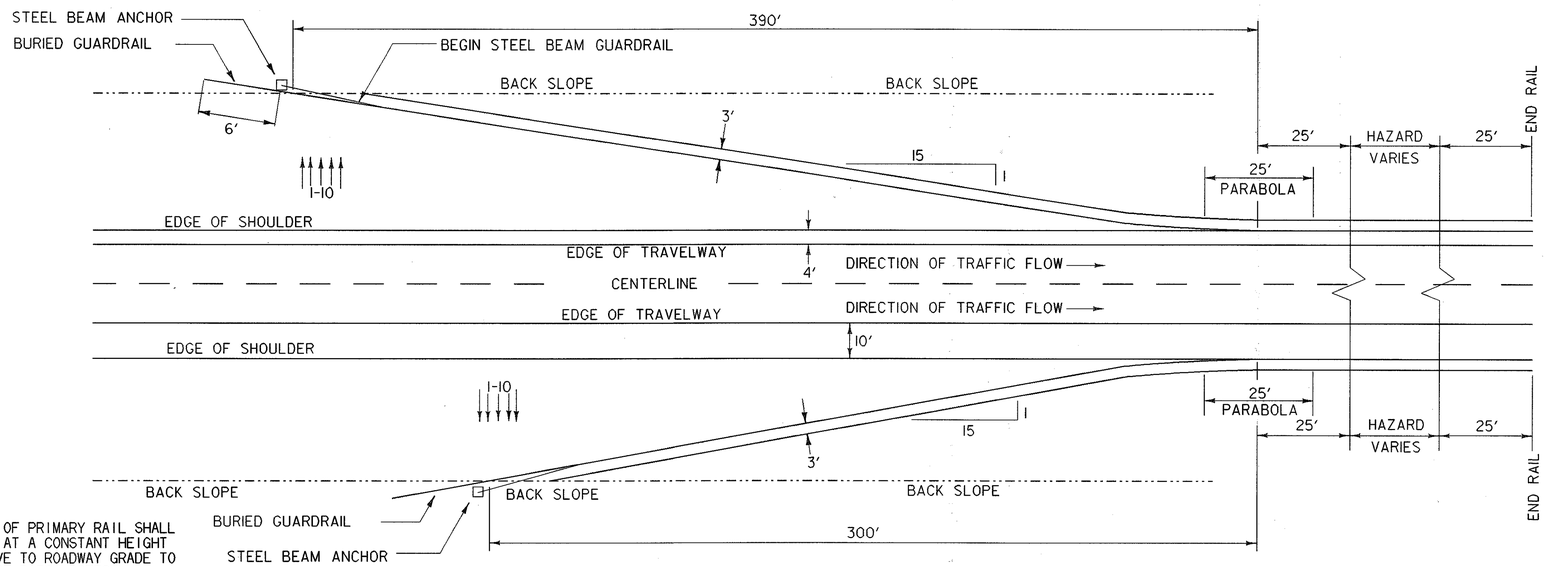
C47A

GUARDRAIL DETAILS



TAPER DETAIL WITH MANUFACTURED TERMINAL SECTION (M.T.S.)

NOT TO SCALE

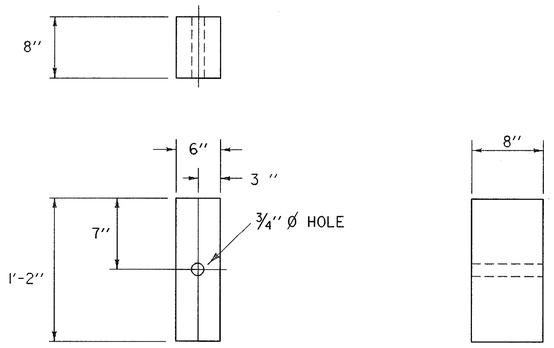


1. HEIGHT OF PRIMARY RAIL SHALL REMAIN AT A CONSTANT HEIGHT RELATIVE TO ROADWAY GRADE TO POINT OF DITCH BOTTOM.

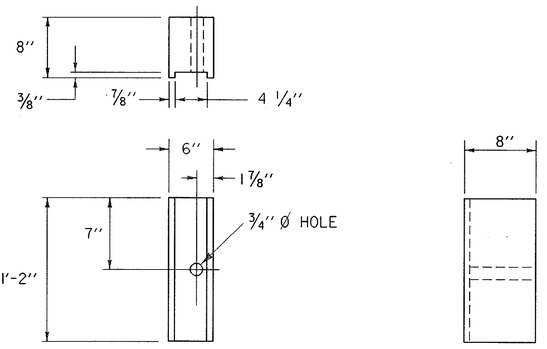
2. ADDITION OF RUB RAIL IS REQUIRED WHEN OPENING BENEATH PRIMARY RAIL EXCEEDS 18" RUB RAIL EXTENDS FROM THE EDGE OF SHOULDER TO THE BACK SLOPE.

BURIED IN BACK SLOPE DETAIL

NOT TO SCALE



BLOCK, WOOD - ROUTED
6" X 8" X 1'-2"
FOR USE W/ WOOD POSTS ONLY



BLOCK, WOOD - ROUTED
6" X 8" X 1'-2"
FOR USE W/ STEEL POSTS ONLY

NOTES:

1. BLOCKS SHALL BE MADE OF TIMBER WITH A STRESS GRADE OF 1200 PSI OR MORE. TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU OR OTHER APPRPRIATE ASSOCIATION. TIMBER FOR BLOCKS SHALL BE ROUGH SAWN (UNPLANED) WITH DIMENSIONS INDICATED. THE SIZE TOLERANCE OF ROUGH SAWN BLOCKS IN THE DIRECTION OF THE BOLT HOLES SHALL BE NOT MORE THAN +/- 1/4".
2. SUPPLY WOOD BLOCKS PER AASTO M 168.
3. TREAT WITH PRESERVATIVE PER AASTO M 133.

NOT TO SCALE

GUARDRAIL DETAILS

DRAWN BY	Ross
DATE	10/94
SQUAD LEADER	Nyquist
DESIGN FILE NO.	/sqda/87a008/da008det.dgn
IPARM FILE	da008gr3.i
DATE PLOTTED	12-MAR-1999
PROJ. NAME	Hartford-Sharon-Royalton
PROJ. NO.	IM IR 089-1(8)
SHEET	48 OF 260 SHEETS

HARTFORD-ROYALTON | **DRAINAGE SUMMARY** | SH.18

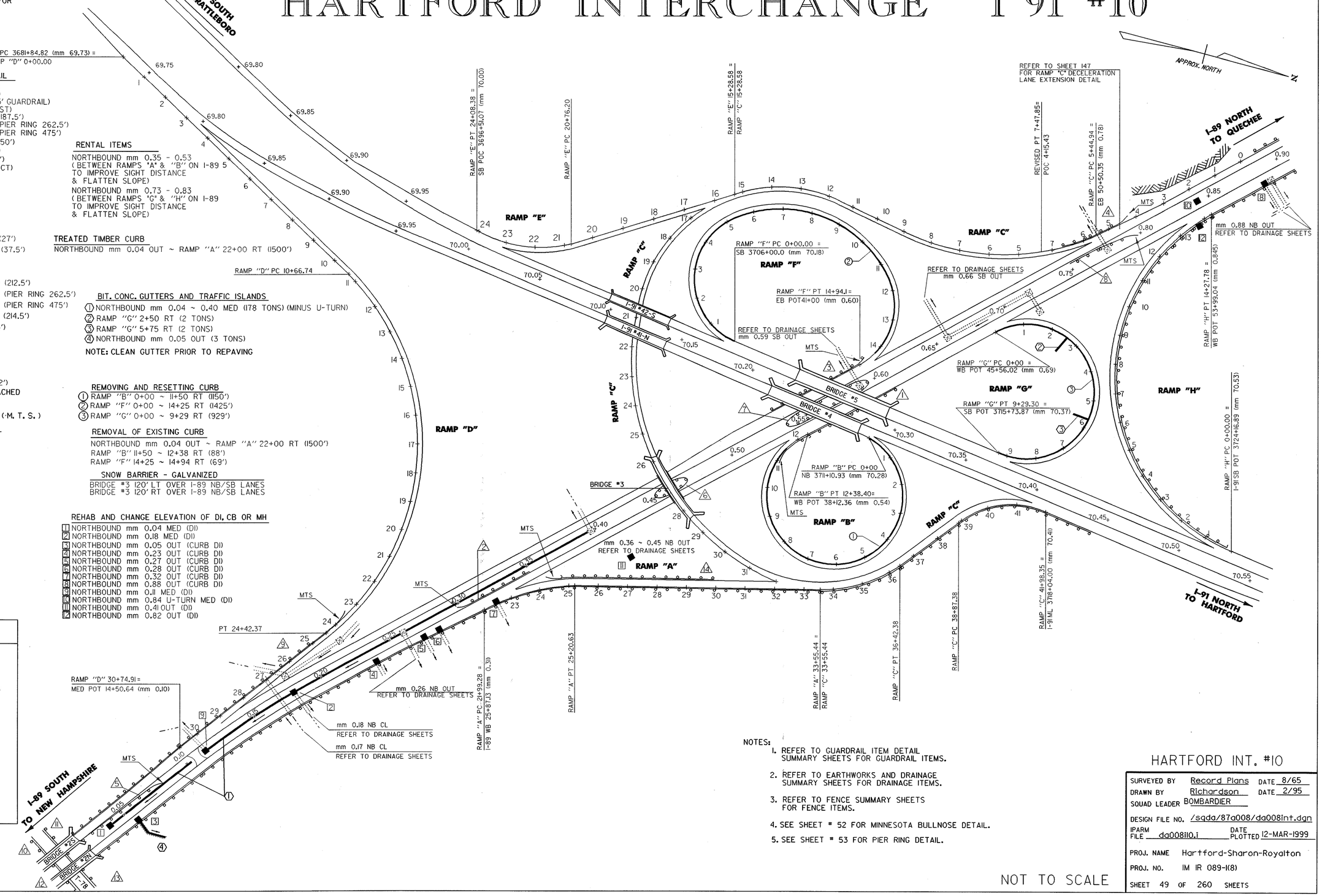
AC IM IR 089-1(8)

NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	36" RCP CLASS IV	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPFES	15" CSPFES	18" CSPFES	36" CSPFES	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
9.33	OUT																		
9.37	CL																		
9.43	OUT													2					
9.50	MED							1											1
9.53	MED																	1	
9.55	CL		8													4			
9.55-9.62	MED																		
9.62	MED																		
9.68	CL																		
9.70	MED																		
9.72	CL															16		1	
9.81	MED																		
9.91	CL																		
9.95	MED							1								6			1
10.01	OUT																		
10.03	MED																		
10.04	MED							1											1
10.05	MED							2											1
10.08	MED																		
10.09	OUT																		
10.14	CL																		
10.21	CL																	1	
10.26	CL																	1	
10.38	CL																		
10.43	CL																	1	
10.45	CL																		
10.50	OUT																		
10.50-10.53	MED																		
10.52	OUT																		
10.57	OUT																		
10.60	OUT																	1	
10.68	OUT																	1	
10.72	OUT																	1	
10.97	OUT																		
11.05-11.20	OUT																	1	
SHEET TOTALS:			8.0					5.0						2.0		26.0		9.0	4.0

C48A

HARTFORD INTERCHANGE I 91 #10

NOTE:
CONSTRUCTION NOTES ARE ONLY FOR AREA SHOWN ON LAYOUT.



REMOVAL AND DISPOSAL OF GUARDRAIL

NORTHBOUND mm 0.53 OUT (25' BCT)
NORTHBOUND mm 0.30 MED (25' BCT)
RAMP "A" 24+00 LT (25' BCT & 12.5' GUARDRAIL)
RAMP "A" 30+00 LT (50' TEXAS TWIST)
SOUTHBOUND mm 0.04 ~ 0.08 MED (187.5')
SOUTHBOUND mm 0.44 ~ 0.47 MED (PIER RING 262.5')
SOUTHBOUND mm 0.54 ~ 0.59 MED (PIER RING 475')
SOUTHBOUND mm 0.75 ~ 0.79 MED (50')
SOUTHBOUND mm 0.59 OUT (25' BCT)
RAMP "C" 6+00 RT ~ 4+50 RT (150')
RAMP "D" 27+00 ~ 27+25 RT (25' BCT)
TH-*78E LT (155')
TH-*78E RT (350')
TH-*78W LT (455')
TH-*78W RT (315')

RENTAL ITEMS

NORTHBOUND mm 0.35 - 0.53 (BETWEEN RAMPS "A" & "B" ON I-89 5 TO IMPROVE SIGHT DISTANCE & FLATTEN SLOPE)
NORTHBOUND mm 0.73 - 0.83 (BETWEEN RAMPS "G" & "H" ON I-89 TO IMPROVE SIGHT DISTANCE & FLATTEN SLOPE)

STEEL BEAM GUARDRAIL

1. NORTHBOUND mm 0.59 ~ 0.61 OUT (27')
2. NORTHBOUND mm 0.30 ~ 0.31 MED (37.5')
3. SOUTHBOUND mm 0.59 OUT (37.5')
4. RAMP "C" 6+50 ~ 4+50 RT (202')
5. SOUTHBOUND mm 0.04 ~ 0.08 MED (212.5')
6. SOUTHBOUND mm 0.44 ~ 0.47 MED (PIER RING 262.5')
7. SOUTHBOUND mm 0.54 ~ 0.59 MED (PIER RING 475')
8. SOUTHBOUND mm 0.75 ~ 0.79 MED (214.5')
9. RAMP "D" 27+25 ~ 24+00 RT (325')
10. TH-*78E LT (162.5')
11. TH-*78E RT (350')
12. TH-*78W LT (475')
13. TH-*78W RT (325')
14. RAMP "A" 29+50 ~ 30+00 LT (52')

NOTE : TH-*78 GUARDRAIL TO BE ATTACHED PER STD G-16 @ BRIDGE END

TREATED TIMBER CURB

NORTHBOUND mm 0.04 OUT ~ RAMP "A" 22+00 RT (1500')

BIT. CONC. GUTTERS AND TRAFFIC ISLANDS

1. NORTHBOUND mm 0.04 ~ 0.40 MED (178 TONS) (MINUS U-TURN)
2. RAMP "G" 2+50 RT (2 TONS)
3. RAMP "G" 5+75 RT (2 TONS)
4. NORTHBOUND mm 0.05 OUT (3 TONS)

NOTE: CLEAN GUTTER PRIOR TO REPAVING

REMOVING AND RESETTING CURB

1. RAMP "B" 0+00 ~ 11+50 RT (1150')
2. RAMP "F" 0+00 ~ 14+25 RT (1425')
3. RAMP "G" 0+00 ~ 9+29 RT (929')

REMOVAL OF EXISTING CURB

NORTHBOUND mm 0.04 OUT ~ RAMP "A" 22+00 RT (1500')
RAMP "B" 11+50 ~ 12+38 RT (88')
RAMP "F" 14+25 ~ 14+94 RT (69')

SNOW BARRIER - GALVANIZED

BRIDGE #3 120' LT OVER I-89 NB/SB LANES
BRIDGE #3 120' RT OVER I-89 NB/SB LANES

REHAB AND CHANGE ELEVATION OF DI, CB OR MH

1. NORTHBOUND mm 0.04 MED (DI)
2. NORTHBOUND mm 0.18 MED (DI)
3. NORTHBOUND mm 0.05 OUT (CURB DI)
4. NORTHBOUND mm 0.23 OUT (CURB DI)
5. NORTHBOUND mm 0.27 OUT (CURB DI)
6. NORTHBOUND mm 0.28 OUT (CURB DI)
7. NORTHBOUND mm 0.32 OUT (CURB DI)
8. NORTHBOUND mm 0.88 OUT (CURB DI)
9. NORTHBOUND mm 0.11 MED (DI)
10. NORTHBOUND mm 0.84 U-TURN MED (DI)
11. NORTHBOUND mm 0.41 OUT (DI)
12. NORTHBOUND mm 0.82 OUT (DI)

MANUFACTURED TERMINAL SECTION (M.T.S.) ITEM # 621.505

NORTHBOUND mm 0.53 OUT
NORTHBOUND mm 0.30 MED
RAMP "A" 24+25 LT
NORTHBOUND mm 0.80 OUT
SOUTHBOUND mm 0.60 OUT
RAMP "C" 4+25 RT
SOUTHBOUND mm 0.08 MED
SOUTHBOUND mm 0.79 MED
RAMP "D" 23+75 RT
TH-*78E LT
TH-*78E RT
TH-*78W LT
TH-*78W RT

ANCHOR FOR STEEL BEAM RAIL

NORTHBOUND mm 0.61 OUT
RAMP "A" 30+00 LT
RAMP "C" 6+75 RT
SOUTHBOUND mm 0.75 MED

LEGEND

- EXISTING DI
- EXISTING DI- REHAB
- PAVED GUTTER
- CLEAN DITCH
- LEDGE
- EXISTING GUARDRAIL

DATUM

VERTICAL N/A
HORIZONTAL N/A

NOTES:
1. REFER TO GUARDRAIL ITEM DETAIL SUMMARY SHEETS FOR GUARDRAIL ITEMS.
2. REFER TO EARTHWORKS AND DRAINAGE SUMMARY SHEETS FOR DRAINAGE ITEMS.
3. REFER TO FENCE SUMMARY SHEETS FOR FENCE ITEMS.
4. SEE SHEET * 52 FOR MINNESOTA BULLNOSE DETAIL.
5. SEE SHEET * 53 FOR PIER RING DETAIL.

NOT TO SCALE

HARTFORD INT. #10

SURVEYED BY	Record Plans	DATE	8/65
DRAWN BY	Richardson	DATE	2/95
SQUAD LEADER	BOMBARDIER		
DESIGN FILE NO.	/sqda/87a008/da008int.dgn		
IPARM FILE	da008110.i	DATE PLOTTED	12-MAR-1999
PROJ. NAME	Hartford-Sharon-Royalton		
PROJ. NO.	IM IR 089-1(8)		
SHEET	49 OF 260 SHEETS		

HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

NORTH BOUND		REHAB OF D.I. CLASS II (MOD)	C.I.GRATE, W/FRAME 'A'	C.I.GRATE W/FRAME 'B'	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER RENTAL	EXCAVATOR RENTAL	TRUCK RENTAL	LOADER RENTAL	BIT. CONC. GUTTER (MOD)	MARKER POST	REM. & RESET G.RAIL	REM. & RESET MARKER (MOD)	TOPSOIL	STONEFILL TYPE I	STONEFILL TYPE II	STONEFILL TYPE IV	UNDER-DRAIN STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES, EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
9.33	OUT																		24.7					
9.37	CL													1										
9.43	OUT													1										
9.50	MED													1										
9.53	MED													2				2.4						
9.55	CL			1																				
9.55-9.62	MED													1										
9.62	MED													2		2								
9.68	CL									10.7														
9.70	MED													2		2								
9.72	CL														12.5				31					
9.81	MED													1					1					
9.91	CL													1		1								
9.95	MED													1										
10.01	OUT														12.5				35.5		50			
10.03	MED																							
10.04	MED																							
10.05	MED													1										
10.08	MED													1					2.7					
10.09	OUT													1				2.6						2
10.14	CL													2				0.9						
10.21	CL													2					1					
10.26	CL													2		1			121		175		5.7	4
10.38	CL													2		2								
10.43	CL													1				1.9						
10.45	CL		1											1				1.9	8.3		11			
10.50	OUT		1																44		60			
10.50-10.53	MED																							
10.52	OUT													1										
10.57	OUT													1		1								
10.60	OUT													1										
10.68	OUT													1										
10.72	OUT																							
10.97	OUT																							
11.05-11.20	OUT																							
SHEET TOTALS:			2.0	1.0						10.7				32.0	25.0	9.0		9.7	269.2		296.0		5.7	6.0

C492

QUECHEE INTERCHANGE #1

NOTE : CONSTRUCTION NOTES ARE ONLY FOR AREA SHOWN ON LAYOUT.

REMOVAL AND DISPOSAL OF GUARDRAIL
RAMP "A" 4+55 ~ 5+65 LT (110')
RAMP "A" 4+80 ~ 5+85 RT (105')
RAMP "CD" 1+75 RT ~ US #4 120+00 LT (270')
RAMP "CD" 2+05 LT ~ US #4 116+90 LT (205')
US #4 BRIDGE#8 (4) ALUMINUM APPR. RAIL SECTIONS (375')
NORTHBOUND mm 3.18 ~ 3.20 OUT. (112.5')
NORTHBOUND mm 3.88 ~ 3.92 OUT (100')
SOUTHBOUND mm 3.91 ~ 3.95 MED. (PIER RING 475')
SOUTHBOUND mm 3.29 ~ 3.42 OUT. (686')
SOUTHBOUND mm 3.95 ~ 3.97 OUT. (212.5')

STEEL BEAM GUARDRAIL
1 RAMP "CD" 1+75 RT ~ US #4 119+75 LT (377')
2 RAMP "CD" 2+00 LT ~ US #4 115+50 LT (275')
3 US #4 92+66 ~ 94+28.5 LT ATTACH TO NEW BRIDGE APPR. RAIL (162.5') *
4 US #4 92+66 ~ 94+28.5 RT ATTACH TO NEW BRIDGE APPR. RAIL (162.5') *
5 NORTHBOUND mm 3.18 ~ 3.46 OUT. (214.5')
6 NORTHBOUND mm 3.88 ~ 3.92 OUT. (177') *
7 SOUTHBOUND mm 3.26 ~ 3.46 OUT. (864.5')
8 SOUTHBOUND mm 3.93 ~ 3.95 MED. PIER RING (475')
9 SOUTHBOUND mm 3.93 ~ 3.98 OUT. (214.5')

• BURY GUARDRAIL IN BACK SLOPE

MANUFACTURED TERMINAL SECTION (M.T.S.) ITEM # 621.505
US #4 115+50 LT
US #4 120+00 LT
NORTHBOUND mm 3.18 OUT.
SOUTHBOUND mm 3.46 OUT.
SOUTHBOUND mm 3.98 OUT.
RAMP "CD" 2+25 LT

BIT. CONC. GUTTERS AND TRAFFIC ISLANDS
1 RAMP "A" 0+85 RT (2 TONS)
2 RAMP "B" 15+15 RT (2 TONS)
NOTE: CLEAN GUTTER PRIOR TO REPAVING

DRAINAGE NOTES FOR DITCH WORK
RAMP "A" 5+25 LT NEW STONE DITCH AT OUTLET OF 48" RCP
RAMP "A" 5+65 RT NEW STONE DITCH AT OUTLET OF 48" RCP
RAMP "CD" 0+30 RT NEW STONE DITCH AT INLET OF 60" RCP
RAMP "CD" 1+40 MED INLET REHAB DI, OUTLET CLEAN DITCH
RAMP "CD" 3+50 MED INLET REHAB DI, OUTLET CLEAN DITCH

REHAB AND CHANGE ELEVATION OF DI, CB OR MH
1 RAMP "A" 0+85 RT (DI)
2 RAMP "A" 1+25 LT (DI)
3 RAMP "B" 9+27 RT (DI)
4 RAMP "B" 15+15 RT (DI)
5 RAMP "C" 12+00 RT (DI)
6 RAMP "CD" 1+40 LT (DI)
7 RAMP "CD" 3+50 LT (DI)
8 RAMP "D" 8+25 LT (DI)
9 NORTHBOUND mm 3.39 MED ISLAND (DI)
10 NORTHBOUND mm 3.85 OUT. (DI)
11 NORTHBOUND mm 3.89 OUT. (DI)
12 NORTHBOUND mm 3.90 MED. (DI)
13 NORTHBOUND mm 3.94 OUT. (DI)
14 SOUTHBOUND mm 3.37 OUT. (CURB DI)

ANCHOR FOR STEEL BEAM RAIL
NORTHBOUND mm 3.46 (NB mm = 2+90 RT RAMP "B")
RAMP "CD" 1+77 RT
SOUTHBOUND mm 3.26 OUT.
SOUTHBOUND mm 3.93 OUT.
NORTHBOUND mm 3.92 OUT.
US #4 BRIDGE #8 (WEST LT)
US #4 BRIDGE #8 (WEST RT)
US #4 BRIDGE #8 (EAST LT)
US #4 BRIDGE #8 (EAST RT)
RAMP "A" 9+50 RT

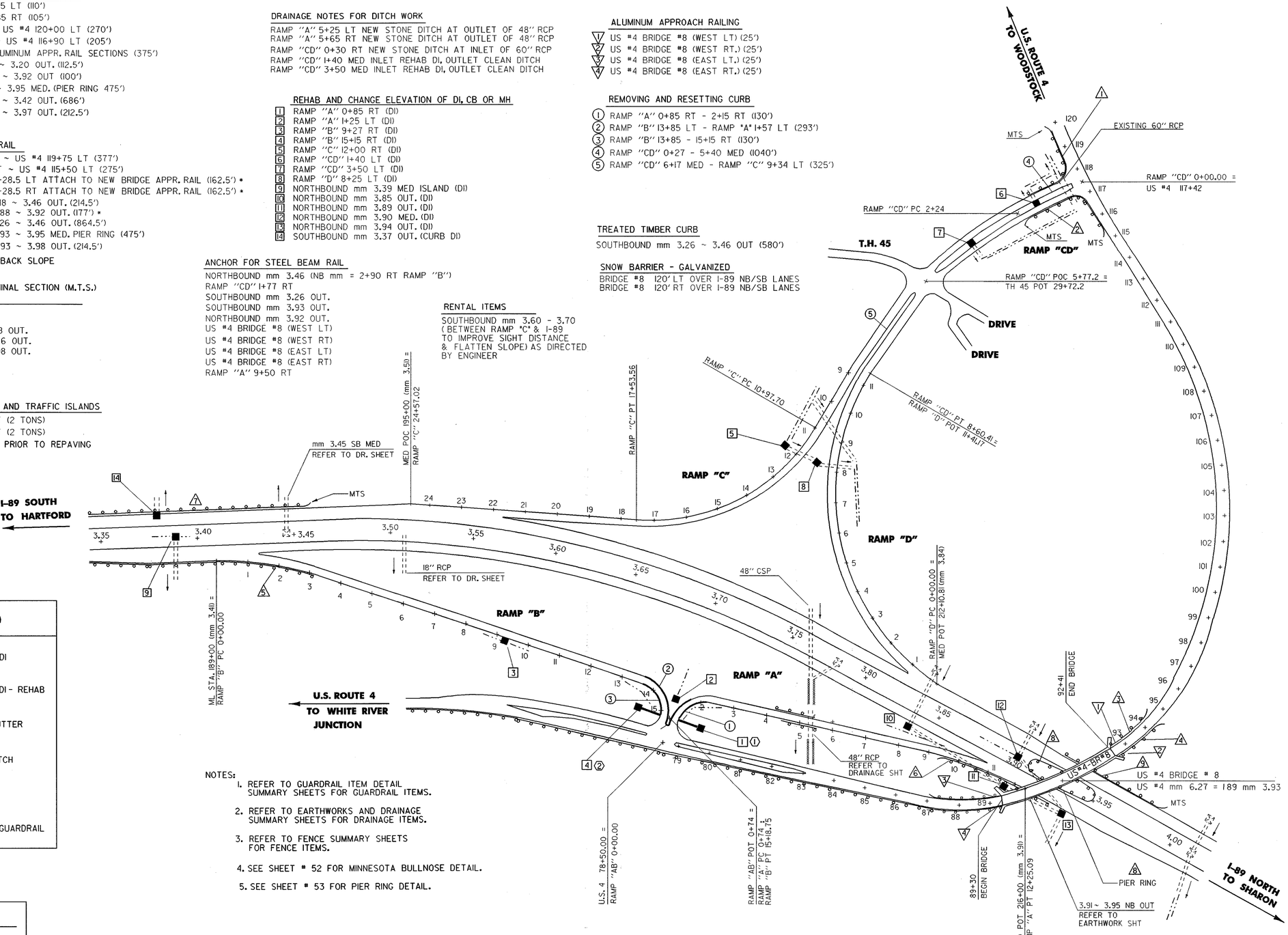
RENTAL ITEMS
SOUTHBOUND mm 3.60 ~ 3.70 (BETWEEN RAMP "C" & I-89 TO IMPROVE SIGHT DISTANCE & FLATTEN SLOPE) AS DIRECTED BY ENGINEER

ALUMINUM APPROACH RAILING
1 US #4 BRIDGE #8 (WEST LT) (25')
2 US #4 BRIDGE #8 (WEST RT.) (25')
3 US #4 BRIDGE #8 (EAST LT.) (25')
4 US #4 BRIDGE #8 (EAST RT.) (25')

REMOVING AND RESETTING CURB
1 RAMP "A" 0+85 RT ~ 2+15 RT (130')
2 RAMP "B" 13+85 LT ~ RAMP "A" 1+57 LT (293')
3 RAMP "B" 13+85 ~ 15+15 RT (130')
4 RAMP "CD" 0+27 ~ 5+40 MED (1040')
5 RAMP "CD" 6+17 MED ~ RAMP "C" 9+34 LT (325')

TREATED TIMBER CURB
SOUTHBOUND mm 3.26 ~ 3.46 OUT (580')

SNOW BARRIER - GALVANIZED
BRIDGE #8 120' LT OVER I-89 NB/SB LANES
BRIDGE #8 120' RT OVER I-89 NB/SB LANES



LEGEND
- EXISTING DI
- EXISTING DI - REHAB
- PAVED GUTTER
- CLEAN DITCH
- LEDGE
- EXISTING GUARDRAIL

NOTES:
1. REFER TO GUARDRAIL ITEM DETAIL SUMMARY SHEETS FOR GUARDRAIL ITEMS.
2. REFER TO EARTHWORKS AND DRAINAGE SUMMARY SHEETS FOR DRAINAGE ITEMS.
3. REFER TO FENCE SUMMARY SHEETS FOR FENCE ITEMS.
4. SEE SHEET # 52 FOR MINNESOTA BULLNOSE DETAIL.
5. SEE SHEET # 53 FOR PIER RING DETAIL.

NOT TO SCALE

DATUM
VERTICAL N/A
HORIZONTAL N/A

QUECHEE INT. #1

SURVEYED BY Record Plans DATE 7/63
DRAWN BY Richardson DATE 2/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008int.dgn
IPARM FILE da008101.I DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 50 OF 260 SHEETS

HARTFORD-ROYALTON

AC IM IR 089-1(6)

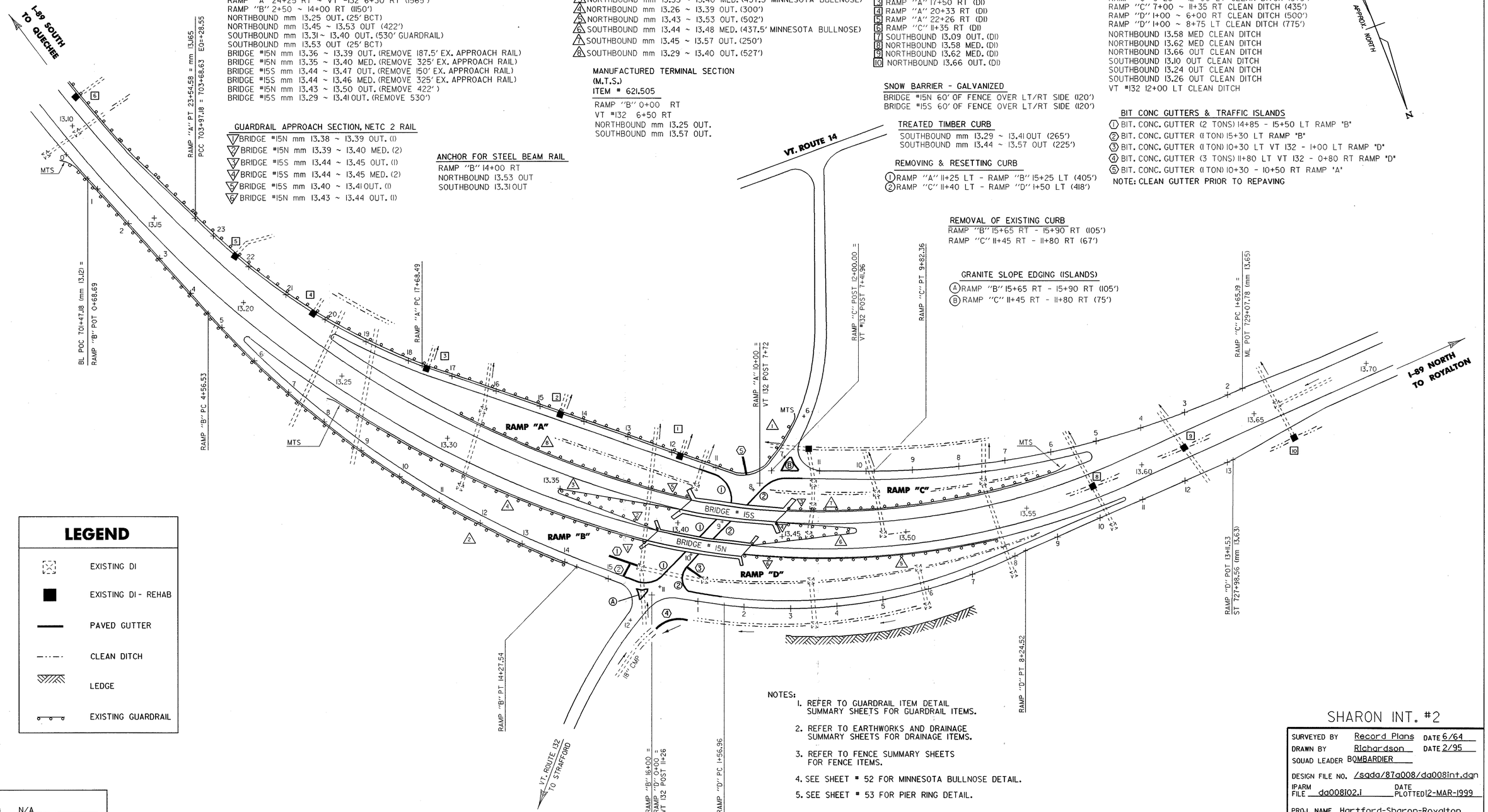
DRAINAGE SUMMARY

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS. EXC.	UNCLASS. DITCH	UNCLASS. CHAN. EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL FOR STRUCT.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
11.08	CL				27																	
11.22	OUT																					
11.25	OUT				100					18.9	0.9		2.3			30						
11.26	OUT									9.5	5.3			3.5	16.7							
11.34	OUT				49																	
11.40	OUT			15.4																		
11.43	OUT				12																	
11.47	CL																					
11.52-11.56	OUT	225			125																	
11.52	OUT																					
11.57	OUT																					
11.61	OUT																					
11.68	CL				270																	
11.77	OUT				60																	
11.81	OUT																					
11.87	OUT																					
12.00	OUT							10.4		19.1	2.2			4.9	16.7							
12.06	CL							5.2														
12.10-12.20	OUT	29658	19592																			
12.10-12.20	CL			1546.2																		
12.20	OUT																					
12.25	OUT																					
12.29	OUT																					
12.41	CL				15			5.2														
12.46	CL				19			5.2		4.1												
12.51	CL							10.4														
12.55	OUT				25																	
12.56	MED																					
12.59	OUT				30																	
12.60-12.63	CL			1730.5																		
12.69	CL							5.2		20.5												
12.78	OUT				25																	
12.89	OUT																					
12.96	OUT				10																	
12.97-13.05	OUT			185																		
SHEET TOTALS:		29883	19592	3477.1	767.0			41.6		72.1	8.4		2.3	8.4	33.4	30.0						

050A

SHARON INTERCHANGE #2

NOTE : CONSTRUCTION NOTES ARE ONLY FOR AREA SHOWN ON LAYOUT.



REMOVAL AND DISPOSAL OF GUARDRAIL

RAMP "A" 24+25 RT ~ VT #132 6+30 RT (1565')
RAMP "B" 2+50 ~ 14+00 RT (1150')
NORTHBOUND mm 13.25 OUT. (25' BCT)
NORTHBOUND mm 13.45 ~ 13.53 OUT (422')
SOUTHBOUND mm 13.31 ~ 13.40 OUT. (530' GUARDRAIL)
SOUTHBOUND mm 13.53 OUT (25' BCT)
BRIDGE #15N mm 13.36 ~ 13.39 OUT. (REMOVE 187.5' EX. APPROACH RAIL)
BRIDGE #15N mm 13.35 ~ 13.40 MED. (REMOVE 325' EX. APPROACH RAIL)
BRIDGE #15S mm 13.44 ~ 13.47 OUT. (REMOVE 150' EX. APPROACH RAIL)
BRIDGE #15S mm 13.44 ~ 13.46 MED. (REMOVE 325' EX. APPROACH RAIL)
BRIDGE #15N mm 13.43 ~ 13.50 OUT. (REMOVE 422')
BRIDGE #15S mm 13.29 ~ 13.41 OUT. (REMOVE 530')

GUARDRAIL APPROACH SECTION, NETC 2 RAIL

1. BRIDGE #15N mm 13.38 ~ 13.39 OUT. (1)
2. BRIDGE #15N mm 13.39 ~ 13.40 MED. (2)
3. BRIDGE #15S mm 13.44 ~ 13.45 OUT. (1)
4. BRIDGE #15S mm 13.44 ~ 13.45 MED. (2)
5. BRIDGE #15S mm 13.40 ~ 13.41 OUT. (1)
6. BRIDGE #15N mm 13.43 ~ 13.44 OUT. (1)

ANCHOR FOR STEEL BEAM RAIL

RAMP "B" 14+00 RT
NORTHBOUND 13.53 OUT
SOUTHBOUND 13.31 OUT

STEEL BEAM GUARDRAIL

1. SOUTHBOUND mm 13.15 OUT ~ VT #132 6+50 RT (1800')
2. RAMP "B" 0+25 ~ 14+00 RT (1377')
3. NORTHBOUND mm 13.35 ~ 13.40 MED. (437.5' MINNESOTA BULLNOSE)
4. NORTHBOUND mm 13.26 ~ 13.39 OUT. (300')
5. NORTHBOUND mm 13.43 ~ 13.53 OUT. (502')
6. SOUTHBOUND mm 13.44 ~ 13.48 MED. (437.5' MINNESOTA BULLNOSE)
7. SOUTHBOUND mm 13.45 ~ 13.57 OUT. (250')
8. SOUTHBOUND mm 13.29 ~ 13.40 OUT. (527')

MANUFACTURED TERMINAL SECTION (M.T.S.) ITEM # 621.505

RAMP "B" 0+00 RT
VT #132 6+50 RT
NORTHBOUND mm 13.25 OUT.
SOUTHBOUND mm 13.57 OUT.

REHAB AND CHANGE ELEVATION OF DI, CB OR MH

1. RAMP "A" 11+75 RT (DI)
2. RAMP "A" 14+50 RT (DI)
3. RAMP "A" 17+50 RT (DI)
4. RAMP "A" 20+33 RT (DI)
5. RAMP "A" 22+26 RT (DI)
6. RAMP "C" 11+35 RT (DI)
7. SOUTHBOUND 13.09 OUT. (DI)
8. NORTHBOUND 13.58 MED. (DI)
9. NORTHBOUND 13.62 MED. (DI)
10. NORTHBOUND 13.66 OUT. (DI)

SNOW BARRIER - GALVANIZED

BRIDGE #15N 60' OF FENCE OVER LT/RT SIDE (120')
BRIDGE #15S 60' OF FENCE OVER LT/RT SIDE (120')

TREATED TIMBER CURB

SOUTHBOUND mm 13.29 ~ 13.41 OUT (265')
SOUTHBOUND mm 13.44 ~ 13.57 OUT (225')

REMOVING & RESETTING CURB

1. RAMP "A" 11+25 LT - RAMP "B" 15+25 LT (405')
2. RAMP "C" 11+40 LT - RAMP "D" 1+50 LT (418')

REMOVAL OF EXISTING CURB

RAMP "B" 15+65 RT - 15+90 RT (105')
RAMP "C" 11+45 RT - 11+80 RT (67')

GRANITE SLOPE EDGING (ISLANDS)

A. RAMP "B" 15+65 RT - 15+90 RT (105')
B. RAMP "C" 11+45 RT - 11+80 RT (75')

DRAINAGE NOTES FOR DITCH WORK

RAMP "A" 11+25 ~ 14+50 LT CLEAN DITCH (325')
RAMP "C" 6+25 ~ 12+00 LT CLEAN DITCH (575')
RAMP "C" 7+00 ~ 11+35 RT CLEAN DITCH (435')
RAMP "D" 1+00 ~ 6+00 RT CLEAN DITCH (500')
RAMP "D" 1+00 ~ 8+75 LT CLEAN DITCH (775')
NORTHBOUND 13.58 MED CLEAN DITCH
NORTHBOUND 13.62 MED CLEAN DITCH
NORTHBOUND 13.66 OUT CLEAN DITCH
SOUTHBOUND 13.10 OUT CLEAN DITCH
SOUTHBOUND 13.24 OUT CLEAN DITCH
SOUTHBOUND 13.26 OUT CLEAN DITCH
VT #132 12+00 LT CLEAN DITCH

BIT CONC GUTTERS & TRAFFIC ISLANDS

1. BIT. CONC. GUTTER (2 TONS) 14+85 - 15+50 LT RAMP "B"
2. BIT. CONC. GUTTER (1 TON) 15+30 LT RAMP "B"
3. BIT. CONC. GUTTER (1 TON) 10+30 LT VT 132 - 1+00 LT RAMP "D"
4. BIT. CONC. GUTTER (3 TONS) 11+80 LT VT 132 - 0+80 RT RAMP "D"
5. BIT. CONC. GUTTER (1 TON) 10+30 - 10+50 RT RAMP "A"

NOTE: CLEAN GUTTER PRIOR TO REPAVING

LEGEND

- EXISTING DI
- EXISTING DI - REHAB
- PAVED GUTTER
- CLEAN DITCH
- LEDGE
- EXISTING GUARDRAIL

NOTES:

1. REFER TO GUARDRAIL ITEM DETAIL SUMMARY SHEETS FOR GUARDRAIL ITEMS.
2. REFER TO EARTHWORKS AND DRAINAGE SUMMARY SHEETS FOR DRAINAGE ITEMS.
3. REFER TO FENCE SUMMARY SHEETS FOR FENCE ITEMS.
4. SEE SHEET # 52 FOR MINNESOTA BULLNOSE DETAIL.
5. SEE SHEET # 53 FOR PIER RING DETAIL.

DATUM
VERTICAL N/A
HORIZONTAL N/A

NOT TO SCALE

SHARON INT. #2

SURVEYED BY	Record Plans	DATE	6/64
DRAWN BY	Richardson	DATE	2/95
SQUAD LEADER	BOMBARDIER		
DESIGN FILE NO.	/sgda/87g008/dg008int.dgn		
IPARM FILE	dg008102.i	DATE PLOTTED	12-MAR-1999
PROJ. NAME	Hartford-Sharon-Royalton		
PROJ. NO.	IM IR 089-1(8)		
SHEET 51	OF 260 SHEETS		

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.21

AC IM IR 089-1(8)

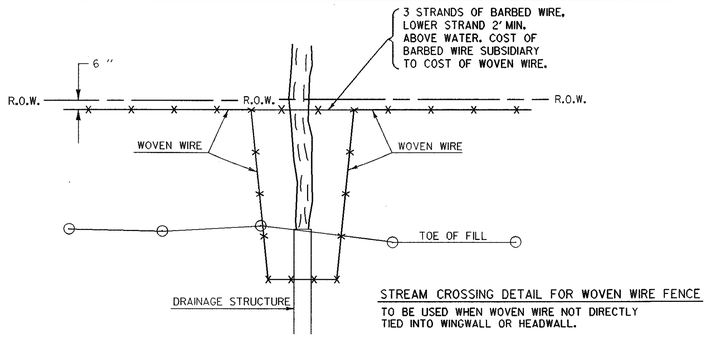
NORTH BOUND		48" CSP	15" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS V	36" RCP CLASS III	12" CSP ELBOW	15" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCGDI	CHANGE ELEV. OF DI	REPAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
11.08	CL																		
11.22	OUT																	1	
11.25	OUT							2									1		
11.26	OUT																		
11.34	OUT																		
11.40	OUT																		
11.43	OUT																	1	
11.47	CL																	2	
11.52-11.56	OUT																		
11.52	OUT																	1	
11.57	OUT																	1	
11.61	OUT																	1	
11.68	CL																	1	
11.77	OUT																		
11.81	OUT																	1	
11.87	OUT																	1	
12.00	OUT																		
12.06	CL																	1	
12.10-12.20	OUT																	1	
12.10-12.20	CL																	1	
12.20	OUT																	1	
12.25	OUT																	1	
12.29	OUT																	1	
12.41	CL																	1	2
12.46	CL															8		1	1
12.51	CL																	1	1
12.55	OUT																		
12.56	MED																		1
12.59	OUT																		
12.60-12.63	CL																		
12.69	CL			8												8		2	
12.78	OUT																	1	
12.89	OUT																	1	
12.96	OUT																		
12.97-13.05	OUT																		
SHEET TOTALS:				8.0				2.0								16.0	1.0	23.0	5.0

1951R

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.22

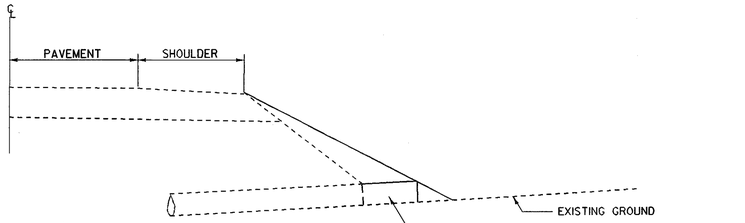
AC IM IR 089-1(8)

NORTH BOUND		REHAB OF DI. CLASS II (MOD)	C.I.GRATE W/FRAME 'A'	C.I.GRATE W/FRAME 'B'	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER RENTAL	EXCAVATOR RENTAL	TRUCK RENTAL	LOADER RENTAL	BIT. CONC. GUTTER (MOD)	MARKER POST	REM. & RESET G.RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL TYPE I	STONEFILL TYPE II	STONEFILL TYPE IV	UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
11.08	CL													2		2								
11.22	OUT													1										
11.25	OUT													1	25	1								
11.26	OUT																	3.3						
11.34	OUT																							
11.40	OUT																							
11.43	OUT													1		1								
11.47	CL													2										
11.52-11.56	OUT																		194.8					
11.52	OUT													1										
11.57	OUT													1										
11.61	OUT													2		1								
11.68	CL													1										
11.77	OUT													1										
11.81	OUT													1										
11.87	OUT													2		1								
12.00	OUT													1				3.1	20.4					
12.06	CL													2										
12.10-12.20	OUT									24.65				1		1			1795.8		2588			
12.10-12.20	CL													2										
12.20	OUT													1										
12.25	OUT													2		1								
12.29	OUT																							
12.41	CL													1										
12.46	CL													1		1								
12.51	CL													2										
12.55	OUT													1		1								
12.56	MED													1										
12.59	OUT																							
12.60-12.63	CL													2										
12.69	CL													3		1		3.7						
12.78	OUT													2		1								
12.89	OUT													1										
12.96	OUT													1										
12.97-13.05	OUT																							
SHEET TOTALS:										24.65				40.0	25.0	12.0		10.1	2011.0		2588.0			

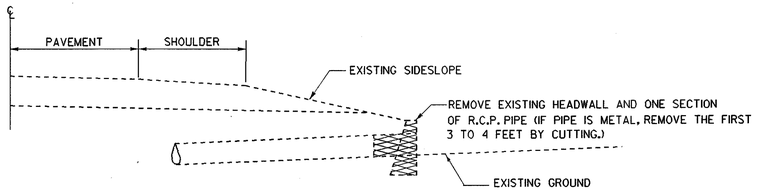


STREAM CROSSING DETAIL FOR WOVEN WIRE FENCE

TO BE USED WHEN WOVEN WIRE NOT DIRECTLY TIED INTO WINGWALL OR HEADWALL.



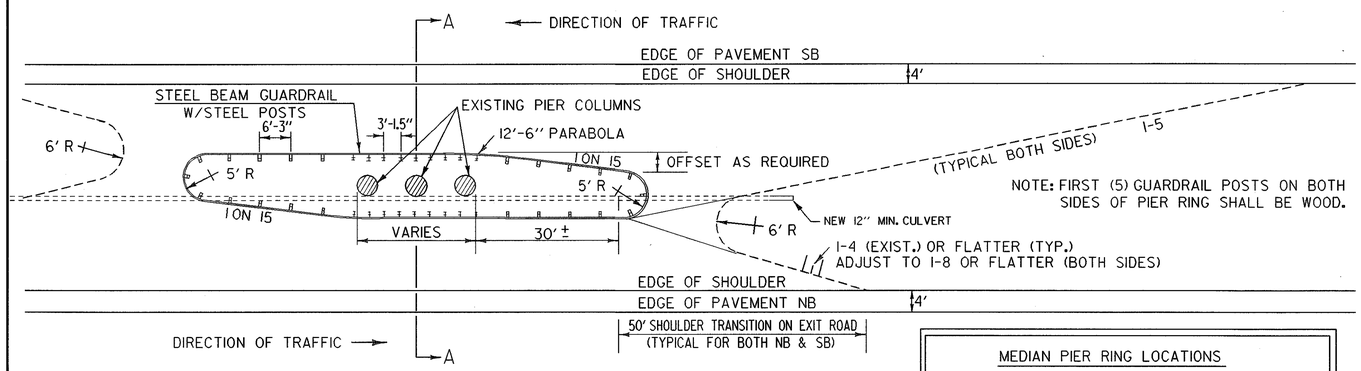
TYPICAL PROPOSED TREATMENT



TYPICAL EXISTING CONDITION

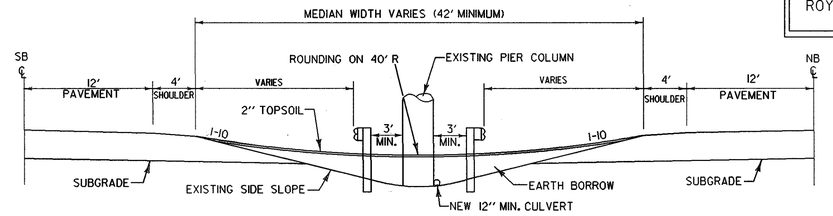
HEADWALL TREATMENT DETAILS

FOR LOCATIONS AND QUANTITIES, SEE THE DRAINAGE SUMMARY SHEETS.



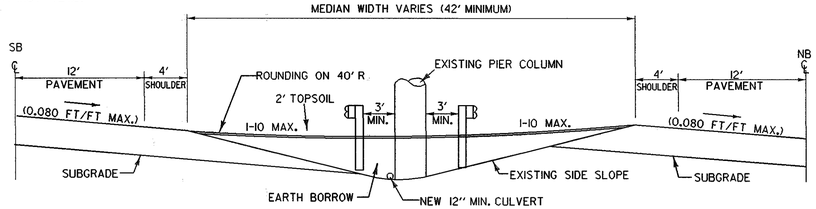
TYPICAL PIER RING INSTALLATION

MEDIAN PIER RING LOCATIONS
HARTFORD - RAMP "C" OVER I-89 MM 0.44~0.47
HARTFORD - I-91 OVER I-89 MM 0.54~0.59
HARTFORD - US-4 OVER I-89 MM 3.93~3.95
HARTFORD - T-36 OVER I-89 MM 6.53~6.56
ROYALTON - T-13 OVER I-89 MM 17.52~17.53



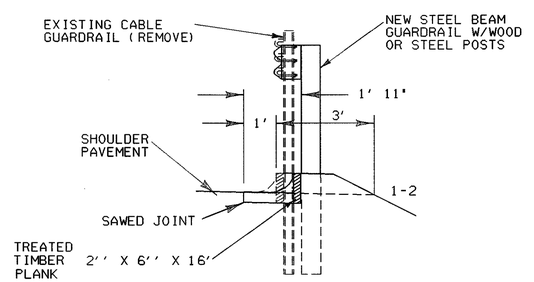
SECTION A-A

NOTE: TO ACCOMMODATE BORROW PLACEMENT, DOWN SPOUTS CONNECTED TO PIER COLUMNS WILL REQUIRE LENGTH ADJUSTMENTS. PAYMENT FOR THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO ALL OTHER CONTRACT ITEMS.



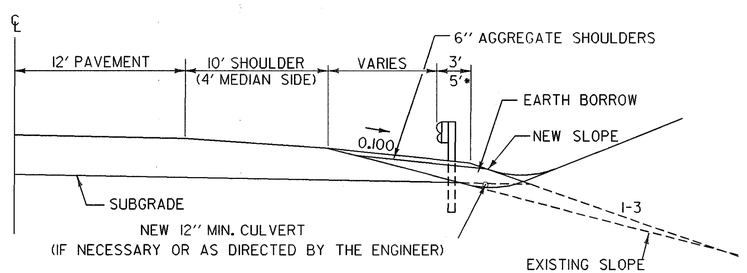
SECTION A-A (CASE II: BANKED SECTION)

NOTE: DIFFERENCE IN CROSS-SLOPES OF SHOULDER SURFACE AND SURFACE OF NEW EARTH BORROW FILL AREA TO BE NO GREATER THAN 0.1. (EXAMPLE, FOR SHOULDER CROSS-SLOPE OF 0.080 AS SHOWN, SUGGEST A SLOPE IN THE OPPOSITE DIRECTION OF 0.017 FOR THE NEW FILL AREA.)



NOTE: THE SAWED JOINT IS TO BE 2", DEEP THIS WORK WILL BE CONSIDERED SUBSIDIARY TO ITEM # 616. THE BITUMINOUS CONCRETE PAVEMENT UNDER THE FILLET WILL BE PAID FOR AT THE UNIT PRICE OF ITEM # 616.47.

DETAIL OF TREATED TIMBER CURB & FILLET



DETAIL OF SHOULDER TREATMENT AT GUARDRAIL WIDENING AREA

*OFFSET SHALL BE 5' BEHIND END OF MANUFACTURED TERMINAL SECTION (M.T.S.).

NOT TO SCALE

PIER RING AND MISC. DETAIL SHEET

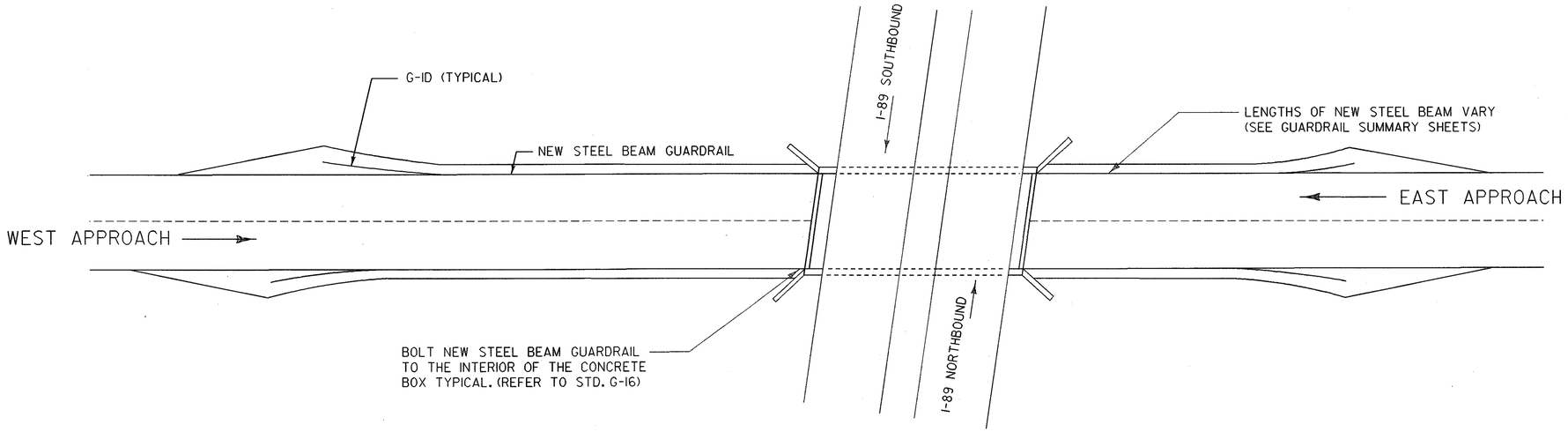
DRAWN BY sqda DATE 4/89
SQUAD LEADER Nyquist
DESIGN FILE NO. /sqda/87a008/da008det.dgn
PRF FILE da008prg.i DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 53 OF 260 SHEETS

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.23

AC IM IR 089-1(8)

NORTH BOUND		REHAB OF DI CLASS I (MOD.)	6" UNIT (MOD.)	MEMBRANE	SOLID ROCK EXC (MOD.)	EROSION MATTING	AGGREGATE SHOULDERS	ROOT WADS	FISH LURKERS
		604.412	605.10	900.123	203.16	654.10	402.11	900.10	900.13
MM-MM	POS.	(EA.)	(LF)	(SF)	(CY)	(SY)	(CY)	(LS)	(LS)
11.08	CL								
11.22	OUT								
11.25	OUT								
11.26	OUT								
11.34	OUT								
11.40	OUT								
11.43	OUT								
11.47	CL								
11.52-11.56	OUT								
11.52	OUT								
11.57	OUT								
11.61	OUT								
11.68	CL								
11.77	OUT								
11.81	OUT								
11.87	OUT								
12.00	OUT								
12.06	CL								
12.10-12.20	OUT				30592.8	3133			
12.10-12.20	CL								
12.20	OUT								
12.25	OUT								
12.29	OUT								
12.41	CL								
12.46	CL								
12.51	CL								
12.55	OUT								
12.56	MED								
12.59	OUT								
12.60-12.63	CL								
12.69	CL								
12.78	OUT								
12.89	OUT								
12.96	OUT								
12.97-13.05	OUT								
SHEET TOTALS:					30592.8	3133.0			

I-89 OVER TOWN HIGHWAY GUARDRAIL DETAIL



I-89 UNDERPASSES

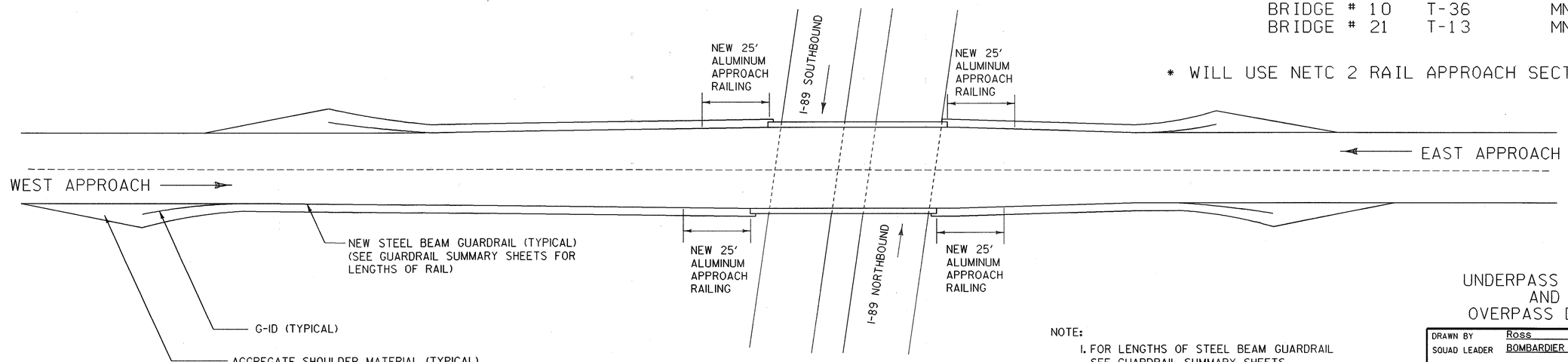
BRIDGE # 2	T-78	MM 0.04
BRIDGE # 7	T-46	MM 3.27
BRIDGE # 9	T-10	MM 4.30
BRIDGE # 12N	T-13	MM 8.02
BRIDGE # 12S	T-13	MM 8.02
BRIDGE # 14	T-11	MM 12.34
BRIDGE # 19	T-4	MM 15.02
BRIDGE # 23	T-36	MM 19.94
BRIDGE # 24	T-6	MM 21.28
BRIDGE # 25	T-35	MM 21.92

I-89 UNDERPASS GUARDRAIL DETAIL

I-89 OVERPASSES

*BRIDGE # 8	US-4	MM 3.93
BRIDGE # 10	T-36	MM 6.54
BRIDGE # 21	T-13	MM 17.52

* WILL USE NETC 2 RAIL APPROACH SECTIONS



NOTE:
1. FOR LENGTHS OF STEEL BEAM GUARDRAIL SEE GUARDRAIL SUMMARY SHEETS.

NOT TO SCALE

UNDERPASS DETAIL
AND
OVERPASS DETAIL

DRAWN BY	Ross DATE 12/94
SQUAD LEADER	BOMBARDIER
DESIGN FILE NO.	/Sqda/87a008/da008.dgn
PRF FILE	da008brl.l DATE PLOTTED 12-MAR-1999
PROJ. NAME	HARTFORD-SHARON-ROYALTON
PROJ. NO.	IM IR 089-1(8)
SHEET 54	OF 260 SHEETS

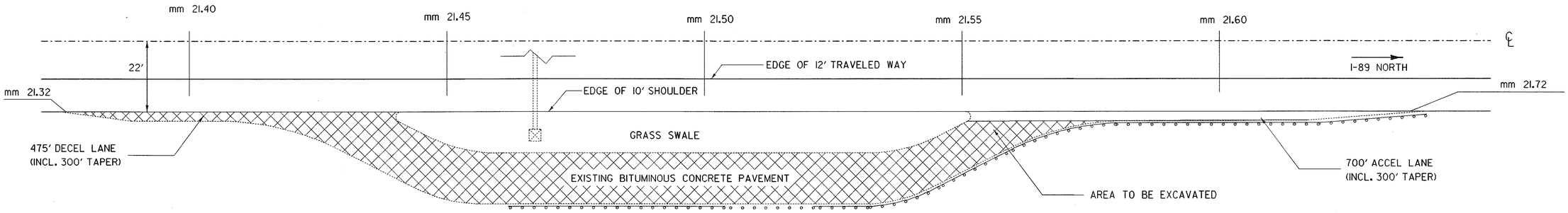
HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.24

AC IM IR 089-1(8)

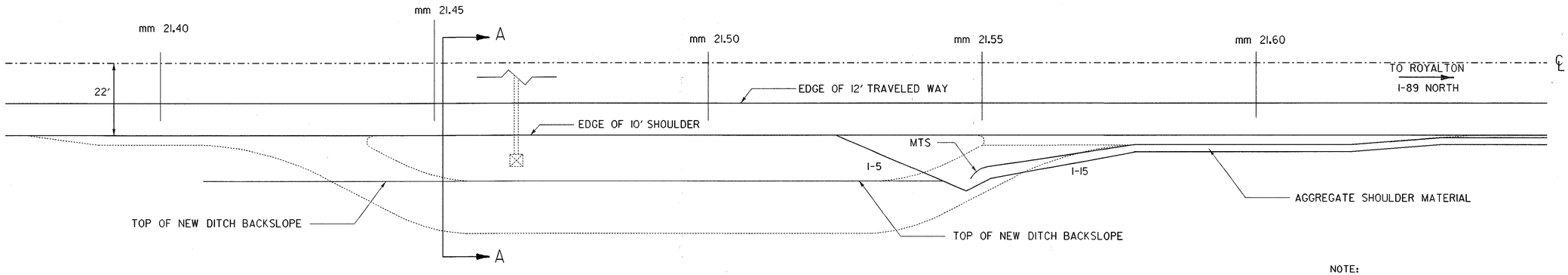
NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS EXC.	UNCLASS DITCH	UNCLASS. CHAN EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL. FOR STRUCT.	GRANULAR GRAV.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35		501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)		(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
13.04	OUT																						
13.08	CL																						
13.11	MED				15																		
INT #2																							
RAMP B 11+20 LT																							
"B" 14+95-15+20LT																							
RAMP D 0+80 LT										1.3			1										
"D" 1+00-6+00 RT																							
"D" 1+00-8+75 LT																							
VT 132 12+00 LT																							
13.58	MED																						
13.60	OUT							10.4		23.6	2.6				1	6.3							
13.62	MED																						
13.66	CL																						
13.75	CL				40					6.9					1.8	12.5							
13.82	CL				90																		
13.86	CL																						
13.95	CL																						
14.00	CL				40																		
14.08	CL																						
14.10-14.20	OUT			284.6																			
14.24	CL																						
14.35	CL																						
14.57	OUT																						
14.76	OUT																						
14.77	MED							52.2		11.1					1.7	150			14				
14.90	OUT							10.4															
14.96	CL				28			20.9		1.9													
14.98	MED				230					1.1													
15.01	CL																						
15.07	OUT				10																		
15.08	MED																						
15.10	CL					93		41.7															
15.11	OUT									6.2													
15.12	OUT							177.4															
SHEET TOTALS:				284.6	453.0	93.0		313.0		~~56.1~~ 67.4	2.6		1.0		4.5	168.8	~~12.0~~ 24		14.0				

054a

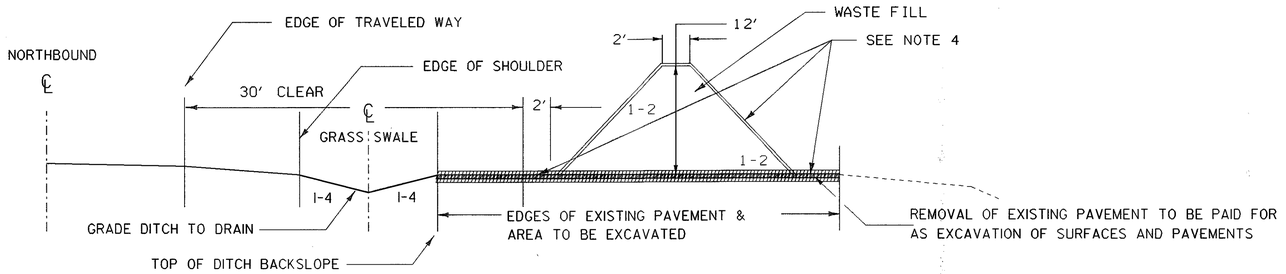
ROYALTON REST AREA DETAIL



EXISTING PLAN VIEW



PROPOSED PLAN VIEW



SECTION A - A

NOTE:
BERM TO BE 300' +/- TO CONTROL LIGHT & NOISE LEVELS TO THE HOUSE BEHIND THE REST AREA

REMOVAL AND DISPOSAL OF GUIDE POSTS

mm 21.51 ~ mm 21.52 RT.

REMOVAL AND DISPOSAL OF GUARDRAIL

mm 21.48 ~ mm 21.51RT.
mm 21.52 ~ mm 21.65 RT.

MANUFACTURED TERMINAL SECTION

mm 21.54

STEEL BEAM GUARDRAIL

mm 21.55 ~ 21.70 OUT.

EXCAVATION OF SURFACES PAVEMENTS

REMOVE EXISTING BIT. PAVEMENT (300 CY)

RENTAL ITEMS

EXCAVATE DRAINAGE SWALE

NOTE:

1. FOR LENGTHS OF NEW STEEL BEAM GUARDRAIL SEE GUARDRAIL SUMMARY SHEETS.
2. REFER TO SHEET 47 FOR SEEDING FORMULA.
3. EXISTING BARRIER AT ENTRANCE IS TO BE RETURNED TO THE DISTRICT GARAGE. PAYMENT SUBSIDARY TO TRAFFIC CONTROL.
4. COVER EXCAVATED AREA & BERM WITH 2'' TOPSOIL, EARTH BORROW, OR EXCAVATED MATERIAL @ THE DIRECTION OF THE ENGINEER , MULCH AND SEED

DATUM
VERTICAL N/A
HORIZONTAL N/A

REVISED 12/14/00 AJB

NOT TO SCALE

ROYALTON REST AREA DETAIL

SURVEYED BY N/A DATE N/A
DRAWN BY Richardson DATE 2/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008int.dgn
IPARM FILE da008rra.i DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 55 OF 260 SHEETS

HARTFORD-ROYALTON

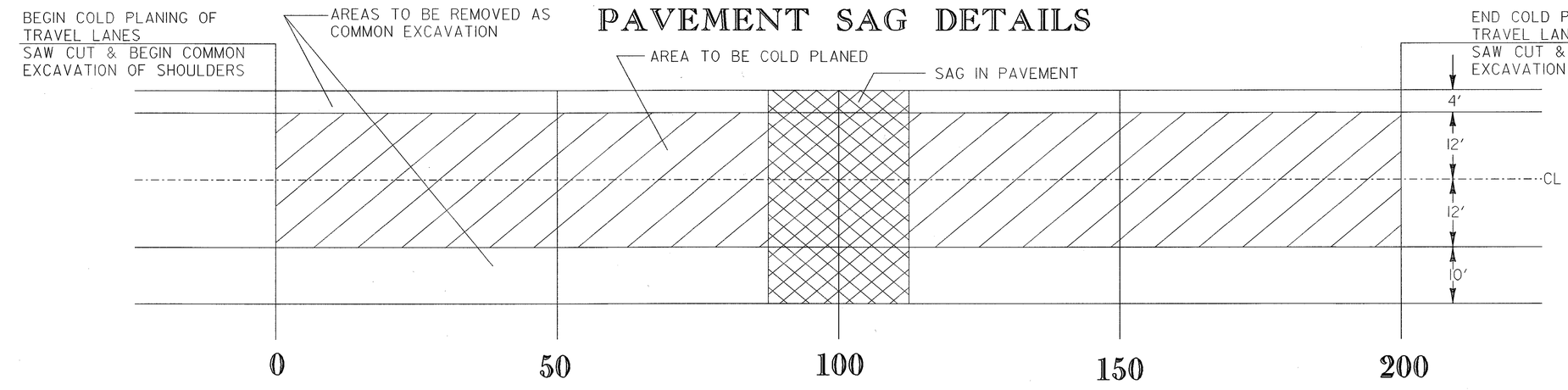
AC IM IR 089-1(8)

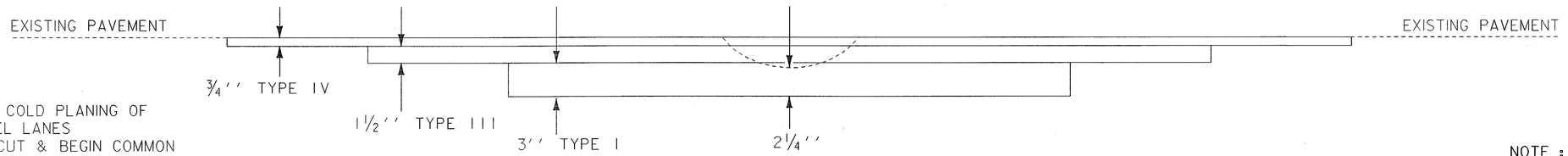
DRAINAGE SUMMARY

NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS IV	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
13.04	OUT																	1	
13.08	CL																		1
13.11	MED																		
INT #2																			
RAMP B 11+20 LT																		1	
"B" 14+95-15+20LT																		1	
RAMP D 0+80 LT																			
"D" 1+00-6+00 RT																		1	
"D" 1+00-8+75 LT																		2	
VT 132 12+00 LT																			
13.58	MED																	1	
13.60	OUT			16												6			
13.62	MED																		
13.66	CL																	2	
13.75	CL																		
13.82	CL																		
13.86	CL																		2
13.95	CL																	1	1
14.00	CL																	1	
14.08	CL																	2	
14.10-14.20	OUT																		
14.24	CL																		
14.35	CL																	1	
14.57	OUT																		1
14.76	OUT																	1	
14.77	MED																	1	
14.90	OUT																		
14.96	CL															12		2	
14.98	MED												2						
15.01	CL																	1	1
15.07	OUT																		1
15.08	MED																	1	
15.10	CL																		
15.11	OUT							1								14			1
15.12	OUT																		
SHEET TOTALS:				16.0				1.0					2.0			32.0		20.0	8.0

CS5A

PAVEMENT SAG DETAILS





PROFILE OF COLD PLANING DEPTH

TRENCH EXCAVATION OF EARTH *
20 CY EST.

* IF DEEMED NECESSARY BY RESIDENT ENGINEER TO DETERMINE IF SAG IS CAUSED BY BROKEN CULVERT, SINK HOLE OR OTHER PROBLEMS TO BE PAID AT THE CONTRACT UNIT PRICE.

COMMON EXCAVATION FOR SHOULDERS
200' (14' WIDE) EST. 45 CY

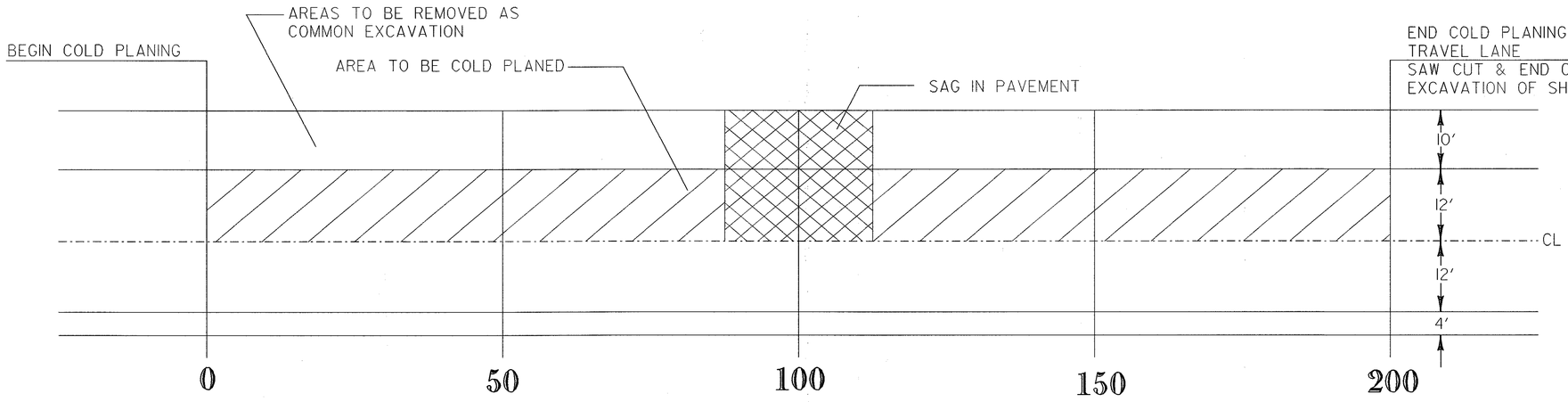
COLD PLANING-BIT. PAVEMENT
200' (24' WIDTH) 535 SY
FOR COLD PLANE DEPTHS SEE PROFILE

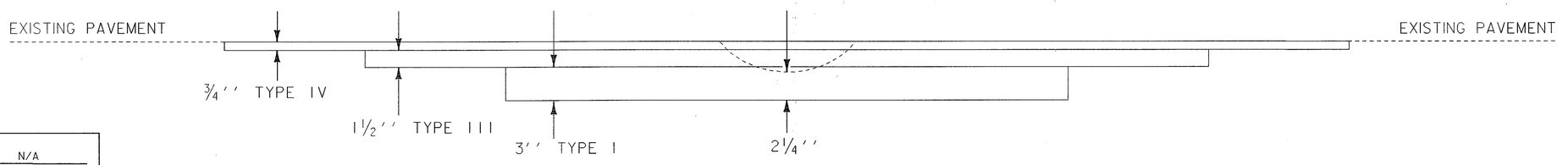
BIT. CONC. PAVEMENT

TYPE IV	- 37 TONS
TYPE III	- 74 TONS
TYPE I	- 148 TONS

EMULSIFIED ASPHALT
1.11 CWT-(TO BE PLACED BETWEEN TYPE III AND TYPE I)

NOTE : LOCATIONS AND TREATMENT TYPICAL TO BE DETERMINED BY THE ENGINEER.





PROFILE OF COLD PLANING DEPTH

TRENCH EXCAVATION OF EARTH *
20 CY EST.

* IF DEEMED NECESSARY BY RESIDENT ENGINEER TO DETERMINE IF SAG IS CAUSED BY BROKEN CULVERT, SINK HOLE OR OTHER PROBLEMS TO BE PAID AT THE CONTRACT UNIT PRICE.

COMMON EXCAVATION FOR SHOULDERS
200' (10' WIDE) 33 CY EST.

COLD PLANING-BIT. PAVEMENT
200' (12' WIDTH) 267 SY
FOR COLD PLANE DEPTHS SEE PROFILE

BIT. CONC. PAVEMENT

TYPE IV	- 22 TONS
TYPE III	- 43 TONS
TYPE I	- 86 TONS

EMULSIFIED ASPHALT
1.00 CWT-(TO BE PLACED BETWEEN TYPE III AND TYPE I)

NOT TO SCALE

PAVEMENT SAG DETAILS

DATUM
VERTICAL N/A
HORIZONTAL N/A

SURVEYED BY N/A DATE
DRAWN BY Richardson DATE 3/95
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008int.dgn
IPARM FILE da008sag.i DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 56 OF 260 SHEETS

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.26

AC IM IR 089-1(8)

NORTH BOUND		REHAB OF D. CLASS II (MOD)	C.I.GRATE W/FRAME "A"	C.I.GRATE W/FRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER RENTAL	EXCAVATOR RENTAL	TRUCK RENTAL	LOADER RENTAL	BIT. CONC. GUTTER (MOD)	MARKER POST	REM. & RESET G.RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL TYPE I	STONEFILL TYPE II	STONEFILL TYPE IV	UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
13.04	OUT													1										
13.08	CL													2		1								
13.11	MED													1										
INT #2																								
RAMP B 11+20 LT																								
"B" 14+95-15+20LT													5.34											
RAMP D 0+80 LT													2.67											
"D" 1+00-6+00 RT																		6						
"D" 1+00-8+75 LT																								
VT 132 12+00 LT										0.5			2.67				1.6							
13.58	MED													1										
13.60	OUT																							
13.62	MED													1										
13.66	CL													1										
13.75	CL													3				3.1						
13.82	CL																							
13.86	CL																							
13.95	CL													1										
14.00	CL													1										
14.08	CL													3		2								
14.10-14.20	OUT																							
14.24	CL													1										
14.35	CL													2										
14.57	OUT																							
14.76	OUT													1		1								
14.77	MED		1																					
14.90	OUT																							
14.96	CL													2										
14.98	MED													2										
15.01	CL													1										
15.07	OUT																							
15.08	MED													1										
15.10	CL									14	9								556	550	409		97	
15.11	OUT																							
15.12	OUT																							
SHEET TOTALS:			1.0							14.5	9.0		10.68	25.0		4.0	1.6	9.1	556.0	550.0	409.0		97.0	

056A

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PROJECT DESCRIPTIONS

BRIDGES: 6 (MM 1.1), 15 (MM 13.4), 16 (MM 13.9), 17 (MM 14.4), AND 18 (MM 15.1) NORTH AND SOUTH

THE WORK FOR THESE BRIDGES INCLUDES THE REPLACEMENT OF THE APPROACH AND BRIDGE RAILING. REPLACEMENT OF THE CURBS, PLACEMENT OF SNOW FENCE, TRAFFIC CONTROL AND WATER REPELLENT APPLICATION TO THE EXISTING ABUTMENTS, PIERS AND NEW CURBS.

BRIDGE #8 (MM 4.0) US 4

THE WORK FOR THIS BRIDGE INCLUDES THE REPLACEMENT OF THE APPROACH AND BRIDGE RAILING. REPLACEMENT OF THE CURBS, PLACEMENT OF WIDE BAND JOINT, PLACEMENT OF SNOW FENCE, COLD PLANING, PAVING THE BRIDGE, TRAFFIC CONTROL AND WATER REPELLENT APPLICATION TO THE EXISTING ABUTMENTS, PIERS AND NEW CURBS.

BRIDGES 10 (MM 6.5) TH 36 AND BRIDGE 21 (MM 17.5) TH 13

THE WORK FOR THESE BRIDGES INCLUDES THE REPLACEMENT OF THE APPROACH RAILING, MODIFICATION OF THE CURB ENDS AT ALL CORNERS OF THESE TWO BRIDGES, PLACEMENT OF SNOW FENCE, TRAFFIC CONTROL AND WATER REPELLENT APPLICATION TO THE EXISTING ABUTMENTS, PIERS AND CURBS.

BRIDGE 1 (MM 0.0) NORTH & SOUTH

THE WORK FOR THIS BRIDGE INVOLVES ONLY THE PLACEMENT OF SNOW FENCE ON TO THE VERMONT SPAN OF I-89 NORTHBOUND AND I-89 SOUTHBOUND (OVER N.E.C.R.R) EXISTING BRIDGE RAILING. (SEE SHEET BRI27 FOR DETAILS)

BRIDGE 3 (MM 0.5) I-89 UNDER I-91 (RAMP C)

THE WORK FOR THIS BRIDGE INVOLVES THE PLACEMENT OF SNOW FENCE ON TO THE EXISTING RAILING.

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED 1990, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, AND ITS LATEST REVISIONS.
2. NO SURVEY WAS TAKEN ON THIS PROJECT. INFORMATION SHEETS INCLUDED IN THE PLANS WERE TAKEN FROM ORIGINAL PLANS AND ARE FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD CHECKING ANY AND ALL DIMENSIONS APPLICABLE TO THIS WORK.
3. REMOVAL OF CONCRETE CURBS FOR EACH BRIDGE SHALL BE PAID FOR UNDER THE ITEM 529.25 "REMOVAL OF CONCRETE OR MASONRY".
4. THE CONCRETE USED FOR THE NEW CURB DETAILS WILL BE "SILICA FUME CONCRETE" AND WILL BE PAID FOR UNDER ITEM 501.60.
5. THE EXISTING CONCRETE SHALL BE THOROUGHLY CLEANED OF ANY LOOSE OR FOREIGN MATERIAL AND COATED WITH NEAT CEMENT PASTE BEFORE PLACING NEW CONCRETE AS PER SUBSECTION 501.13 (b).
6. MINIMUM COVER FOR REINFORCING STEEL IN CURBS SHALL BE THREE (3) INCHES.
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. REINFORCING PLACEMENT TOLERANCES SHALL BE:
   SPACING: ± 1"
   CLEARANCE: ± 1/4"
9. THE FOLLOWING ARE THE ALLOWABLE STRESSES USED FOR DESIGN OF THESE PLANS:
   CONCRETE: f'c = 4000 PSI fc = 1600 PSI
   SILICA FUME CONCRETE: f'c = 5000 PSI fc = 2000 PSI
   REINFORCING STEEL: Fs = 24,000 PSI (GRADE 60)
10. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68° F.
11. WATER REPELLENT SHALL BE APPLIED TO THE EXPOSED CONCRETE ON THE NEW CURBS FROM THE FACE OF CURB TO THE DRIP BEAD ON THE UNDERSIDE OF THE EXISTING BRIDGE DECK. SEE NOTE 24 ALSO.
12. NOT USED
13. DURING BRIDGE PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO ENSURE THAT NO DAMAGE OCCURS TO THE EXISTING SHEET MEMBRANE, FINGER PLATE JOINTS, VERTICAL PLATE JOINTS, PLUG-TYPE JOINTS OR SAW CUTS. IF DAMAGE OCCURS, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIRS AT THE CONTRACTOR'S EXPENSE.
14. ALL FABRIC OR METAL TROUGHS AND DOWNSPOUTS SHALL BE THOROUGHLY FLUSHED BY THE CONTRACTOR WITH THE COST TO BE SUBSIDIARY TO ALL OTHER ITEMS IN THE CONTRACT.
15. FOLLOWING PAVING, ANY BITUMINOUS CONCRETE PAVEMENT THAT BECOMES LODGED IN THE EXPANSION JOINTS OR THAT ENTERS DRAIN TROUGHS, SCUPPERS, OR DOWNSPOUTS WILL BE REMOVED BY THE CONTRACTOR AT NO EXPENSE TO THE STATE.
16. WHENEVER THE CONTRACTOR IS WORKING AT ANY PARTICULAR BRIDGE SITE, TRAFFIC IS TO BE CONTROLLED AND MAINTAINED AT ALL TIMES AS SPECIFIED IN THE TRAFFIC CONTROL PLANS.
17. THE EXISTING ALUMINUM BRIDGE RAILING AND RELATED POSTS WILL BE REMOVED UNDER ITEM 525.10, "REMOVAL OF EXISTING RAILING". THE EXISTING RAILING AND POSTS WILL BECOME THE PROPERTY OF THE STATE AND WILL BE DELIVERED TO THE DISTRICT #4 GARAGE IN ROYALTON. SEE SPECIAL PROVISIONS.
18. THE EXISTING GRANITE BRIDGE CURB WILL BE REMOVED UNDER ITEM 616.41, "REMOVAL OF EXISTING CURB". REASONABLE CARE SHALL BE USED WHILE COMPLETING THIS WORK. THE GRANITE CURB SHALL BE SALVAGED AND REMAIN THE PROPERTY OF THE STATE AND SHOULD BE DELIVERED TO THE DISTRICT #4 GARAGE IN ROYALTON. SEE SPECIAL PROVISIONS.
19. a) IF DURING WORK ON THE BRIDGE CURBING AND RAILING, IT APPEARS THAT DEBRIS, NEW CONCRETE OR WATER REPELLENT MAY FALL ON I-89 OR TOWN HIGHWAYS UNDER THE INTERSTATE, THEN THE CONTRACTOR SHALL CLOSE ONE LANE TO TRAFFIC AND FOLLOW STANDARD E-110 OR OTHER MEANS AS APPROVED BY THE ENGINEER. THIS WORK WILL BE SUBSIDIARY TO THE TRAFFIC CONTROL ITEM.
    b) WHEN WORKING OVER THE RAILROAD TRACKS, THE CONTRACTOR SHALL PREVENT DEBRIS, NEW CONCRETE, REINFORCING, ETC. FROM CREATING A HAZARD TO THE TRACKS. THE CONTRACTOR SHALL USE NETS, SCAFFOLDING OR OTHER MEANS APPROVED BY THE ENGINEER IN THE FIELD TO PREVENT HAZARDS TO THE TRACKS. THIS WORK WILL BE SUBSIDIARY TO THE ITEM "REMOVAL OF CONCRETE OR MASONRY". SEE SPECIAL PROVISIONS.
20. THE CURB JOINTS AT THE ABUTMENTS SHALL BE RESEALED WITH POLYURETHANE JOINT SEALER. THIS WORK WILL BE SUBSIDIARY TO ITEM 501.60, "SILICA FUME CONCRETE".

GENERAL NOTES (CONTINUED)

21. THE RUBBLE CREATED BY THE REMOVAL OF THE GRANITE END BLOCKS, GRANITE CURB AND CONCRETE CURB SHALL NOT BE LEFT AT THE BRIDGE SITE, BUT SHALL BE DISPOSED OF PROPERLY AS APPROVED BY THE RESIDENT ENGINEER.
22. THE EXISTING WOODEN SNOW FENCE ATTACHED TO THE EXISTING BRIDGE RAILING SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR. THIS WORK WILL BE SUBSIDIARY TO ITEM 620.75, "SNOW BARRIER-GALVANIZED".
23. THE WEEP TUBES LOCATED ALONG THE CURB LINES SHALL BE PLUGGED FROM THE UNDERSIDE OF THE DECK EXCEPT FOR THOSE WEEP TUBES LOCATED AT THE EXPANSION JOINTS. THE METHOD OF PLUGGING THE WEEP TUBES SHALL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO THIS WORK BEING DONE. THIS WORK WILL BE SUBSIDIARY TO ITEM 529.25, "REMOVAL OF CONCRETE OR MASONRY".
24. WATER REPELLENT WILL BE APPLIED TO ALL EXPOSED CONCRETE OF THE EXISTING ABUTMENTS AND THE PIERS ON BRIDGE 8, 6NB &6SB, 15NB & 15SB, 16NB & 16SB, 17NB & 17SB, 18NB & 18SB.
25. AN ESTIMATED QUANTITY FOR ITEM 580.11, "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II" HAS BEEN INCLUDED FOR EACH BRIDGE. THIS PAY ITEM IS TO BE USED AS DEEMED NECESSARY BY THE ENGINEER IN THE FIELD.

GENERAL NOTES - BRIDGES 10 & 21

1. THERE WILL BE GAPS BETWEEN THE APPROACH RAILING AND BRIDGE RAILING WHILE THE BRIDGE RAILING IS REMOVED TO REPLACE THE CURB ENDS. THEREFORE, THE CONTRACTOR MUST FOLLOW THE TRAFFIC CONTROL DETAILS ON SHEET BR 104 TO ENSURE THE SAFETY OF THE TRAVELLING PUBLIC DURING CONSTRUCTION. THE CONTRACTOR WILL BE ALLOWED TO WORK ON THE CURB ON ONLY ONE SIDE OF THE BRIDGE AT A TIME.
2. LOCATION OF THE EXISTING U-BARS ARE NOT KNOWN. DRILL AND GROUT S501'S (AS SHOWN ON THE REINFORCEMENT PLANS FOR EACH BRIDGE) TO MAINTAIN A MAXIMUM SPACING OF 12" AS DIRECTED BY THE ENGINEER.
3. AS DIRECTED BY THE ENGINEER, ANY EXISTING "U" BARS RUSTED OR BROKEN OFF DURING THE REMOVAL OF CONCRETE SHALL BE REMOVED AND REPLACED BY S501 DOWELS AS REQUIRED TO PROVIDE THE NECESSARY VERTICAL REINFORCEMENT. AN ADDITIONAL QUANTITY OF S501'S HAVE BEEN INCLUDED IN THE REINFORCING STEEL SCHEDULE. ALSO, AN ADDITIONAL QUANTITY OF THE ITEM "DRILLING AND GROUTING DOWELS" HAS BEEN INCLUDED.
4. THE CONCRETE WILL BE POURED BACK TO THE ORIGINAL CURB GRADE AND ALL SCOREMARKS WILL BE FORMED TO MATCH EXISTING.
5. WATER REPELLENT WILL BE APPLIED TO THE EXPOSED CONCRETE ON THE CURBS FROM THE FACE OF CURB TO THE DRIP BEAD ON THE UNDERSIDE OF THE DECK. THIS WATER REPELLENT APPLICATION WILL BE FOR THE ENTIRE LENGTH OF THE CURBS (NEW CURB END TREATMENTS AND EXISTING CURB). THE CONTRACTOR WILL USE EXTREME CARE WHEN APPLYING THE WATER REPELLENT TO THE CURBS TO INSURE THAT THE TRAVELLING PUBLIC ON I-89 DO NOT INCUR DAMAGE TO THEIR VEHICLES FROM THE WATER REPELLENT.
6. WATER REPELLENT WILL BE APPLIED TO ALL EXPOSED CONCRETE ON THE EXISTING ABUTMENTS AND PIERS.
7. SEE REFERENCE SHEETS BR 172 TO BR 178.

STANDARDS

NUMBER	DATE
C-1	01/03/00
E-100	01/06/97
E-101	03/10/97
E-102	08/08/95
E-102A	08/08/95
E-103	09/23/98
E-105	09/24/98
E-106	08/08/95
E-107	08/08/95
E-107A	08/08/95
E-110	08/08/95
E-120	08/08/95
E-121	08/08/95
E-140	08/30/96
E-171A	08/09/95
E-172	08/09/95
G-18	06/01/94
SB-R4a-82	09/19/89
SB-R4b-82	03/30/88

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I 89	Log Sta.
	Surv. Sta.

GENERAL AND TRAFFIC CONTROL NOTES

Designed By C. MEUNIER	Drawn By STRI
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vtst_cadd\Filingcabinets\87a008\Structures\sa008dtl.dgn	sa008gen1
Bridge Sheet No. BR 100	Sheet 57 of 260

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.27

AC IM IR 089-1(8)

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS EXC.	UNCLASS DITCH	UNCLASS. CHAN. EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL. FOR STRUCT.	DENSE GRADED AGGR. GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
15.16	CL							5.2														
15.17	MED																					
15.22	CL									16.1												
15.33	CL				31					5.3												
15.38	CL																					
15.44	CL				17			20.9		1.5								10				
15.51	CL							10.4		16.8												
15.56	CL									4.5												
15.57	OUT				90					44.7												
15.61	OUT				22					1.6												
15.66	MED																					
15.71	CL							20.9		26.7												
15.78	CL									13.7			2.2									
15.85	OUT							20.9														
15.94	CL									12.9												
16.03	CL							67.8		6.4												30
16.11	CL				45			31.3		2.9								30				
16.20	OUT				18																	
16.23	CL				20					149.6	1.8											
16.35	CL				20			31.3		14												
16.47	CL				35			20.9		42.9												
16.54	CL							10.2		8.6												
16.56	OUT																					
16.61	OUT							52														
16.65	OUT																					
16.70	CL				40																	
16.71	CL				50			20.8		21.3												
16.74	OUT				145			10.4		30.9						68						
16.79	OUT				90			20.9		20.6												
16.80	OUT				21																	
16.95	MED																					
16.98	OUT				30					13.3						28						
17.02	CL	104			30																	
17.04	CL																					
17.12	OUT							104.3		37.8								14				
SHEET TOTALS:		104.0			704.0			448.2		492.1	1.8		2.2			96.0		54.0				30.0

057A

BRIDGE QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

ITEM NO.	ITEM	UNIT	BRIDGE 1 NB & SB (MM 0.0)	BRIDGE 3 I-91 RAMP C (MM 0.5)	BRIDGE 6 NORTHBOUND (MM 1.1)	BRIDGE 6 SOUTHBOUND (MM 1.1)	BRIDGE 8 (MM 4.0)	BRIDGE 10 (MM 6.5)	BRIDGE 15 NORTHBOUND (MM 13.4)	BRIDGE 15 SOUTHBOUND (MM 13.4)	BRIDGE 16 NORTHBOUND (MM 13.9)	BRIDGE 16 SOUTHBOUND (MM 13.9)	BRIDGE 17 NORTHBOUND (MM 14.4)	BRIDGE 17 SOUTHBOUND (MM 14.4)	BRIDGE 18 NORTHBOUND (MM 15.1)	BRIDGE 18 SOUTHBOUND (MM 15.1)	BRIDGE 21 (MM 17.5)	TOTAL	FINAL
210.10	COLD PLANING	SY	0	0	0	0	1280	0	0	0	0	0	0	0	0	0	0	1280	
404.65	EMULSIFIED ASPHALT	CWT	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	
406.25	BITUMINOUS CONCRETE PAVEMENT (PG 70-28)	TON	0	0	6	6	144	1	5	5	10	11	22	22	7	7	1	247	
501.60	SILICA FUME CONCRETE	CY	0	0	37	35	64	5	33	33	76	84	167	168	52	54	3	811	
507.15	REINFORCING STEEL	LB	0	0	4510	4380	6410	370	4020	4060	8230	8980	17940	18100	5740	6000	190	88930	
507.16	DRILLING AND GROUTING DOWELS	LF	0	0	510	510	780	50	470	480	940	1020	2030	2050	640	670	50	10200	
514.10	WATER REPELLENT	GAL	0	0	50	50	80	50	50	50	150	150	220	220	80	80	60	1290	
516.10	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG TYPE)	LF	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	45	
524.15	JOINT SEALER, PREFORMED NEOPRENE	LF	0	0	17	17	27	0	17	17	0	0	0	0	27	27	0	149	
525.10	REMOVAL OF EXISTING RAILING	LF	0	0	449	429	677	0	397	401	796	878	1760	1766	542	563	0	8658	
525.33	BRIDGE RAILING - NETC TWO RAIL	LF	0	0	450	430	677	0	398	401	797	879	1761	1767	542	563	0	8665	
529.10	REMOVAL OF BRIDGE PAVEMENT	SY	0	0	50	48	76	15	45	45	89	98	196	197	61	61	10	991	
529.25	REMOVAL OF CONCRETE OR MASONRY	CY	0	0	32	30	57	4	28	28	67	74	148	148	46	47	4	713	
580.11	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACES, CLASS II	SY	0	0	20	20	10	0	20	20	10	10	60	60	30	30	0	290	
616.28	CAST IN PLACE CONCRETE CURB, TYPE B	LF	0	0	160	160	160	0	160	160	160	160	160	160	160	160	0	1760	
616.41	REMOVAL OF EXISTING CURB	LF	0	0	446	426	674	29	394	398	793	875	1757	1763	539	560	39	8693	
620.75	SNOW BARRIER - GALVANIZED	LF	240	240	120	120	240	240	120	120	120	120	120	120	120	120	240	2400	
621.57	ENERGY ABSORBTION ATTENUATOR (SAND FILLED PLASTIC BARRELS)	EA	0	0	0	0	2	4	0	0	2	0	0	0	0	3	4	15	
621.72	GUARD RAIL APPROACH SECTION, NETC 2 RAIL	EA	0	0	4	4	4	0	4	4	4	4	4	4	4	4	0	44	
621.74	ALUMINUM APPROACH RAILING	LF	0	0	0	0	0	100	0	0	0	0	0	0	0	0	100	200	
621.90	TEMPORARY TRAFFIC BARRIER	LF	0	0	1060	1040	1110	250	1010	1010	3110	3110	3110	3110	3110	3110	250	24390	
630.10	UNIFORM TRAFFIC OFFICERS	HR	80	80	110	110	110	15	110	110	110	110	110	110	110	110	15	1400	
631.15	FLAGGERS	HR	80	50	100	100	100	10	100	100	100	100	100	100	100	100	10	1250	
631.16	TESTING EQUIPMENT CONCRETE	LS	0	0	0.08	0.08	0.08	0.06	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	1.0	
635.10	MOBILIZATION	LS																0.25	
641.10	TRAFFIC CONTROL	LS																0.25	
646.40	DURABLE 4" WHITE LINE	LF	0	0	0	0	1398	0	0	0	0	0	0	0	0	0	0	1398	
646.41	DURABLE 4" YELLOW LINE	LF	0	0	0	0	1398	0	0	0	0	0	0	0	0	0	0	1398	
646.414	DURABLE 6" WHITE LINE	LF	0	0	1793	1780	0	0	1756	1758	3420	3420	3420	3420	3420	3420	0	27607	
646.415	DURABLE 6" YELLOW LINE	LF	0	0	1434	1424	0	0	1405	1406	2340	2340	2340	2340	2340	2340	0	19709	
646.60	TEMPORARY 4" WHITE LINE	LF	0	0	0	0	1397	0	0	0	0	0	0	0	0	0	0	1397	
646.61	TEMPORARY 4" YELLOW LINE	LF	0	0	0	0	1397	0	0	0	0	0	0	0	0	0	0	1397	
646.614	TEMPORARY 6" WHITE LINE	LF	0	0	5714	5694	0	0	5608	5614	5370	5370	5370	5370	5370	5370	0	54850	
646.615	TEMPORARY 6" YELLOW LINE	LF	0	0	2857	2847	0	0	2804	2856	5070	5070	5070	5070	5070	5070	0	41784	
646.66	TEMPORARY 24" STOP BAR	LF	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	30	
646.73	LINE STRIPING TARGETS	EA	0	0	429	427	140	0	421	424	270	270	270	270	270	270	0	3461	
646.86	BLACK PVMT. MARKING MASKING TAPE	SF	0	0	1072	1068	600	0	970	970	2830	2830	2830	2830	2830	2830	0	21660	
678.40	TEMPORARY TRAFFIC SIGNAL SYSTEM	EA	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
678.42	TEMPORARY DETECTOR	EA	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	

REVISED 12/14/00 AJB

/strl/87a008/sa008qnt.dgn
sa008qnt.i
PLOTTED:12-DEC-2000

BRIDGE AT STATION
LOCATION

PREPARED BY: STRI CHECKED BY: CWM
SUPERVISOR: G.S. ROGERS

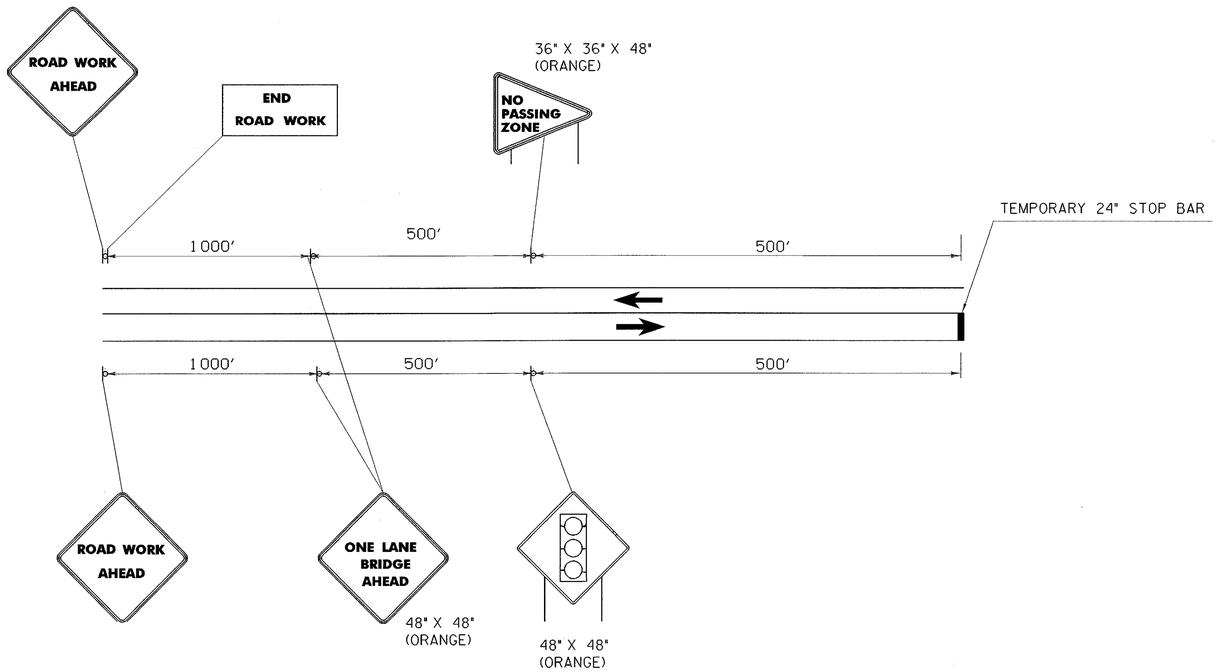
PROJECT: HARTFORD/SHARON/ROYALTON PROJECT NO: IM IR 089-1(8)
BR 101 OF SHEET NO: 58 OF 260

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.28

AC IM IR 089-1(8)

NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS V	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCCON	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
15.16	CL																		
15.17	MED																	1	
15.22	CL															16		1	
15.33	CL															8		1	
15.38	CL																	1	
15.44	CL																	1	
15.51	CL															24		1	
15.56	CL															12			1
15.57	OUT															20			
15.61	OUT															8			1
15.66	MED																	1	
15.71	CL									1						31		1	
15.78	CL		16															1	
15.85	OUT																		
15.94	CL		8													8			
16.03	CL																	1	
16.11	CL																	1	
16.20	OUT																		1
16.23	CL	34																	
16.35	CL			16												16		1	
16.47	CL															32		2	
16.54	CL															13			
16.56	OUT																		1
16.61	OUT																		
16.65	OUT																		
16.70	CL																	1	1
16.71	CL															20			
16.74	OUT							2											1
16.79	OUT															20			
16.80	OUT																		
16.95	MED																	1	
16.98	OUT							1											1
17.02	CL																		
17.04	CL																	1	1
17.12	OUT								1							44			
SHEET TOTALS:		34.0	24.0	16.0				3.0	1.0	1.0						272.0		17.0	8.0

1558A



CONSTRUCTION APPROACH SIGNING FOR BRIDGE 8 (MM 4.0)

NTS

TRAFFIC CONTROL NOTES FOR ALL BRIDGES

1. THE TEMPORARY TRAFFIC CONTROL LAYOUT AND SIGNING SHOWN ON THE SHEETS BRI04 THRU BR 110 ARE APPROXIMATE. SEE SPECIFICATIONS AND APPPROPRIATE STANDARDS FOR ADDITIONAL INFORMATION.
2. REFER TO CONSTRUCTION APPROACH SIGNING SHEET FOR RECOMMENDED LAYOUT OF PERMANENT CONSTRUCTION SIGNS ON I-89 TO CONSTRUCTION WORK AREAS. ANY SIGNIFICANT CHANGE FROM DETAILS SHOWN WILL HAVE TO BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.
3. SEE STANDARD SHEET E-103, E-104 & E-104A FOR ADDITIONAL REQUIREMENTS PERTAINING TO REMOVAL OF EXISTING PAVEMENT MARKINGS AND PLACEMENT OF TEMPORARY TRAFFIC BARRIER.
4. SEE STANDARD SHEET E-106 FOR ADDITIONAL TRAFFIC CONTROL MEASURES AT EXIT RAMPS AND COLD PLANING OPERATIONS.
5. EXISTING PERMANENT HIGHWAY SIGNS WHICH CONFLICT WITH THE SUCCESSFUL IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN ARE SUBJECT TO BE TEMPORARILY COVERED OR REMOVED AT THE DIRECTION OF THE RESIDENT ENGINEER. PAYMENT FOR THE COVERING OR REMOVAL AND SUBSEQUENT RE-ESTABLISHMENT SHALL BE SUBSIDIARY TO THE ITEM TRAFFIC CONTROL.
6. SEE STANDARD SHEET E-105 FOR ADDITIONAL INFORMATION PERTAINING TO CONSTRUCTION VEHICLE TURNING AND SIGNING.
7. TEMPORARY SOLID LINES FOR THOSE BRIDGES ON THE INTERSTATE SHALL BE APPLIED AS FOLLOWS:
   6" WHITE ON CENTER AND RIGHT EDGE LINES
   6" YELLOW ON LEFT EDGE LINES
   SEE STANDARD SHEET E-103 FOR ADDITIONAL INFORMATION.
8. SEE SHEET BR 103 FOR APPLICATION INFORMATION FOR TEMPORARY SOLID LINES ON BRIDGE 8 (US 4 OVER I-89).
9. LINE STRIPING TARGETS, SPACED AT 20' INTERVALS, SHALL BE APPLIED TO ALL TEMPORARY SOLID LINES AND THEIR COLOR SHALL CORRESPOND TO THE LINE APPLIED TO. SEE STANDARDS SHEET E-103 FOR ADDITIONAL INFORMATION.
10. THE "TRAFFIC CONTROL" DETAILS SHOWN ON SHEETS BR 104 - BR 108 SHALL BE ADHERED TO. HOWEVER, DURING WORKING HOURS WHEN THE CONTRACTOR NEEDS TO CLOSE ONE LANE OF TRAFFIC, THE CONTRACTOR WILL FOLLOW THE TRAFFIC CONTROL DETAILS ON STD. E-110 COST FOR THIS WORK WILL BE SUBSIDIARY TO THE ITEM "TRAFFIC CONTROL".

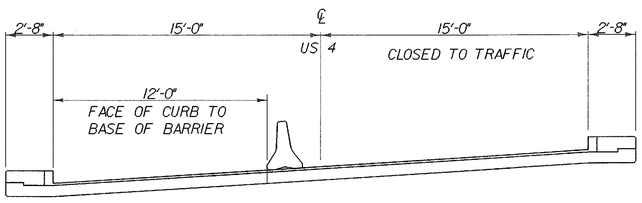
ATTENUATOR NOTES

AN ENERGY ABSORPTION ATTENUATOR WILL BE PLACED AS SHOWN ON THE TRAFFIC CONTROL PLAN SHEET FOR BRIDGES 16, 17 & 18 TO ALLOW THE CONTRACTOR ACCESS TO THE WORK AREA. THESE ATTENUATORS WILL BE PAID FOR UNDER ITEM 621.57, "ENERGY ABSORPTION ATTENUATOR".

THE ATTENUATOR SHALL MEET THE REQUIREMENTS OF THE 1996 AASHTO "ROADSIDE DESIGN GUIDE", AND SHALL BE DESIGNED FOR A 4500 LB VEHICLE TRAVELING AT 65 MPH.

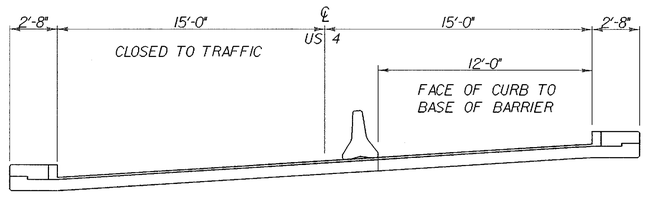
IF THE ATTENUATOR IS DAMAGED BY AN ERRANT VEHICLE, ANY COST TO THE CONTRACTOR FOR REPLACEMENT OF ANY PART OR ALL OF THE ATTENUATOR SHALL BE PAID AS "EXTRA WORK" PER SECTION 109.06 .

AN ADDITIONAL ATTENUATOR HAS BEEN INCLUDED IN THE QUANTITY FOR "ENERGY ABSORPTION ATTENUATOR". SEE SPECIAL PROVISIONS.



PHASE I - CLOSURE OF THE NORTHERNMOST LANE

NTS



PHASE II - CLOSURE OF THE SOUTHERNMOST LANE

NTS

BRIDGE 8

SEE SHEET 78 FOR CURB REPLACEMENT DETAILS

REVISED 12/14/00 AJB

PLOTTED: 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 8
Highway No. I-89	Log Sta. / Surv. Sta.
TRAFFIC CONTROL FOR BRIDGE 8	
ON U.S. ROUTE 4 OVER I-89	
Designed By C. MEUNIER	Drawn By M.PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C:\Wrtfc.caddV11\ingcabInet$\87a008\Structures\sa008trf.dgaa008111J	
Bridge Sheet No. BR 102	Sheet 59 of 260

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.29

AC IM IR 089-1(8)

NORTH BOUND		REHAB OF DI. CLASS II (MOD)	C.I.GRATE W/FRAME "A"	C.I.GRATE W/FRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER RENTAL	EXCAVATOR RENTAL	TRUCK RENTAL	LOADER RENTAL	BIT. CONC. GUTTER (MOD)	MARKER POST	REM. & RESET GUARD RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL TYPE I	STONEFILL TYPE II	STONEFILL TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
15.16	CL																		20					
15.17	MED													1										
15.22	CL													2		1								
15.33	CL													2										
15.38	CL													1										
15.44	CL													1										
15.51	CL													1					4.8					
15.56	CL													1										
15.57	OUT																							
15.61	OUT																							
15.66	MED													1										
15.71	CL													1										
15.78	CL												2.67*	1										
15.85	OUT														12.5				33.3					
15.94	CL													1										
16.03	CL									11.5	26			1										
16.11	CL						22							1										
16.20	OUT																							
16.23	CL					38								1					9.26			67		
16.35	CL													2										
16.47	CL													2				9.4						
16.54	CL													2										
16.56	OUT																		5					
16.61	OUT																							
16.65	OUT									1.5					12.5				32.3					4
16.70	CL													2										
16.71	CL														12.5									
16.74	OUT													1										
16.79	OUT																	6						
16.80	OUT																							
16.95	MED													1										
16.98	OUT																							
17.02	CL									0.5					12.5				83.3		161			
17.04	CL													1										
17.12	OUT														12.5				6					
SHEET TOTALS:						38.0	22.0			13.5	26.0		2.67	27.0	62.5	1.0		15.4	194.0		161.0	67.0		4.0

059A

COLORS: BLACK TEXT & BORDER
WHITE REFL. BACKGROUND
MATERIALS: PER STD. E-142

PHASING DIAGRAM AND SPECIAL NOTES FOR EACH LOCATION

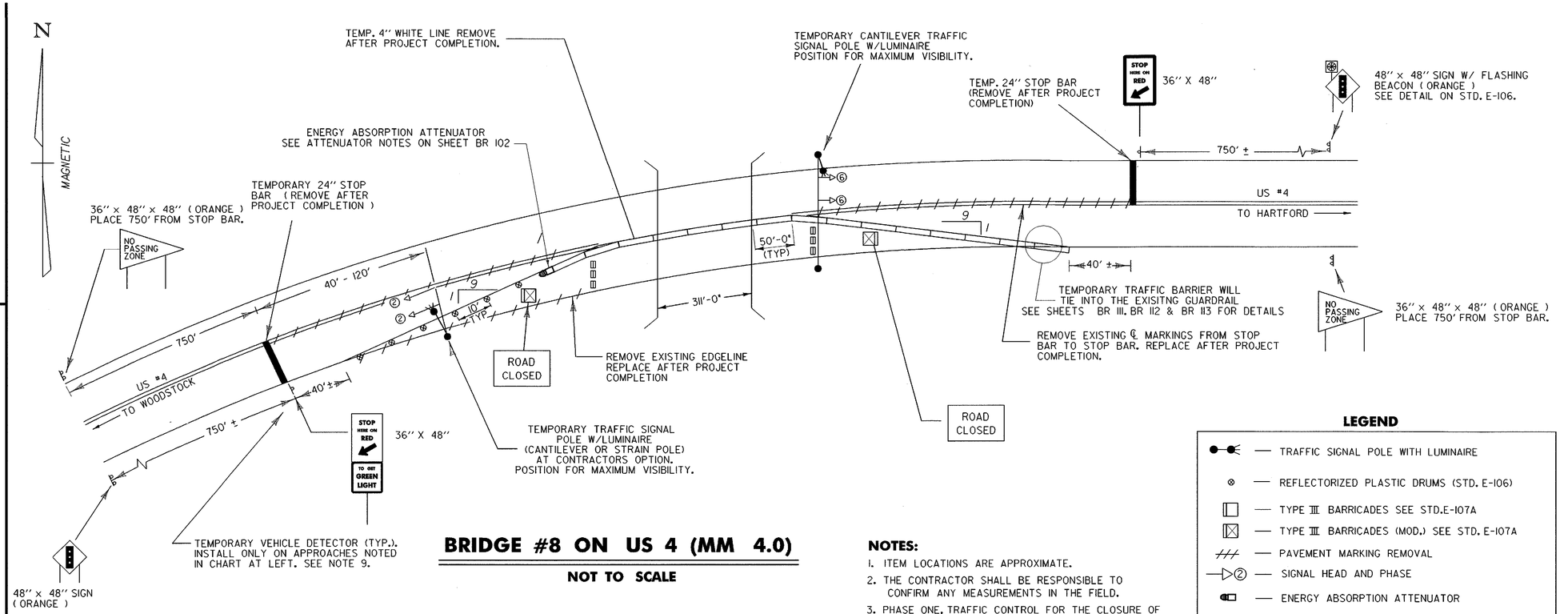
PHASE	2			6			4		
MINIMUM	12	3	17	50	3	17			
EXTENSION		2							
MAXIMUM	20	3	17	50	3	17			
HEAD 2	G	Y	R	R	R	R			
HEAD 6	R	R	R	G	Y	R			
HEAD 4									

APPROACH 4 IS A SIDE STREET APPROACH - IF REQUIRED

SPECIAL REQUIREMENTS

APPROACH	TEMPORARY VEHICLE DETECTOR	FLASHING BEACON ON ADVANCED WARNING SIGN
2	X	X
6		
4		

ENTER CHECK MARK IN APPROPRIATE BOX WHEN REQUIRED ON THIS PROJECT



BRIDGE #8 ON US 4 (MM 4.0)

NOT TO SCALE

LEGEND

- TRAFFIC SIGNAL POLE WITH LUMINAIRE
- REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- TYPE III BARRICADES SEE STD.E-107A
- TYPE III BARRICADES (MOD.) SEE STD. E-107A
- PAVEMENT MARKING REMOVAL
- SIGNAL HEAD AND PHASE
- ENERGY ABSORPTION ATTENUATOR
- TEMPORARY TRAFFIC BARRIER
- FLASHING BEACON

NOTES:

1. ITEM LOCATIONS ARE APPROXIMATE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM ANY MEASUREMENTS IN THE FIELD.
3. PHASE ONE, TRAFFIC CONTROL FOR THE CLOSURE OF THE SOUTHERN LANE AS SHOWN, PHASE TWO, FOR CLOSURE OF THE NORTHERN LANE, IS OPPOSITE OF THAT SHOWN.

GENERAL
TEMPORARY TRAFFIC SIGNAL NOTES

1. DESIGN OF THE SIGNAL SUPPORT(S) AND ANY REQUIRED GUYING IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. SIGNAL TIMING/TIMING ADJUSTMENTS REQUESTED BY THE RESIDENT ENGINEER SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD AND PAYMENT SHALL BE SUBSIDIARY TO THE TRAFFIC SIGNAL ITEM. THE ALL-RED CLEARANCE INTERVAL IS BASED ON AN ASSUMED SPEED OF 10-20 MPH. THE RESIDENT ENGINEER SHALL MAKE SEVERAL TRIAL RUNS TO DETERMINE THE PROPER ALL-RED CLEARANCE INTERVAL.
3. SIGNAL FACES SHALL CONSIST OF 12'' LENSES. (RED, YELLOW, AND GREEN)
4. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16 1/2 FEET NOR MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY, SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE ROADWAY. CAUTION SHOULD BE USED TO INSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADE.
5. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER OF FACES.
6. SIGNAL HEADS MAY BE HUNG ON A SPAN WIRE OR ON A CANTILEVER MAST ARM. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLY IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE POST MOUNTED, LOCATED AT A DISTANCE NO GREATER THAN 14 1/2 FEET FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40 FEET FROM THE SIGNAL HEAD. CONSULT THE M.U.T.C.D. FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.
7. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.
8. THE SIGNAL SYSTEM SHALL CONSIST OF POLES, SIGNS AND POSTS, WARNING SIGN, LUMINAIRES, FLASHING BEACONS AND SIGNAL EQUIPMENT TO PROVIDE FOR AN ADEQUATE DESIGN. IT ALSO INCLUDES PERMITS AND COST ASSOCIATED WITH PROVIDING ELECTRICAL POWER.
9. THE CONTRACTOR SHALL PROVIDE AN ACTUATED CONTROLLER. THE APPROACHES NOTED SHALL HAVE A TEMPORARY VEHICLE DETECTOR. THE CONTROLLER, DETECTOR AND ALL OTHER SIGNAL EQUIPMENT SHALL MEET OR EXCEED ALL NEMA STANDARDS.
10. ON SEMI-ACTUATED SIGNAL, PARTICULARLY WITH LONG BRIDGES, THE CONTROLLER SHOULD BE LOCATED ON THE SAME SIDE OF THE BRIDGE AS THE DETECTOR.
11. INTERVAL TIMING SHOWN IN SECONDS.
12. INTERCONNECT BETWEEN SIGNAL POLES BY WHATEVER MEANS POSSIBLE OR CONVENIENT TO PROVIDE FOR A SAFE INSTALLATION.
13. PLACE TEMPORARY POLES BEHIND GUARDRAIL WHERE POSSIBLE.
14. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL NOT BE PLACED SO AS TO CREATE A HAZARD TO THE TRAVELLING PUBLIC.
15. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL, INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.
16. A 400 FOOT WATT MERCURY OR 200 WATT HPS LUMINAIRE AND MAST ARM SHALL BE PROVIDED ON A POLE ON EACH APPROACH AT A MOUNTING HEIGHT OF 30' ABOVE ROADWAY CENTERLINE. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE RESIDENT ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT.
17. STOP BARS SHALL BE LOCATED A MINIMUM OF 40' AND A MAXIMUM OF 120' FROM THE NEAREST SIGNAL HEAD.
18. PAYMENT FOR THE VEHICLE LOOP DETECTOR ITEM SHALL BE ITEM 678.42, "TEMPORARY DETECTOR" (EACH).
19. THE SIGNS AND ASSOCIATED POSTS AS SHOWN ON THIS SHEET AND NOTED BELOW ARE SUBSIDIARY TO THE TEMPORARY TRAFFIC SIGNAL SYSTEM (''STOP HERE ON RED'', ''SIGNAL AHEAD'', "NO PASSING ZONE" AND ''TO GET GREEN LIGHT'' ETC.) THE TEMPORARY STOP BARS SHOULD BE PAID UNDER THE TEMPORARY 24'' STOP BAR ITEM.
20. SEE STD. E-140 FOR ''STOP HERE ON RED'' SIGN DETAIL AND E-101 FOR ''SIGNAL AHEAD'' SYMBOL SIGN. THE "SIGNAL AHEAD" SIGN SHALL HAVE AN ORANGE BACKGORUND (REFLECTORIZED). SEE STANDARD E-121FOR SIGN PALCEMENT. SEE STANDARD E-171A AND E-172 FOR ADDITIONAL INFORMATION ON SIGNALS AND DETECTORS.
21. A ''SIGNAL AHEAD'' SIGN SHALL BE PLACED AT LEAST 750' FROM THE SIGNAL OR AT A POSITION TO BE DETERMINED BY THE ENGINEER. ALL POSTS SHALL BE CONSIDERED AS SUBSIDIARY TO THE TEMPORARY TRAFFIC SIGNAL ITEM.
22. THE ''NO PASSING'' SIGN SHALL BE USED TO PREVENT PASSING FOR 750' IN ADVANCE OF THE STOP BAR. THE SIGN SHALL BE PER STANDARD E-102.
23. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND STATE INSPECTOR.
24. ALL SIGNAL RELATED SIGNS SHALL BE REMOVED OR COVERED WHEN THE SIGNALS ARE NOT OPERATING.
25. REMOVE EXISTING CENTERLINE PAVEMENT MARKINGS FROM THE STOP BAR TO THE BRIDGE DECK ON THE APPROACHES. THIS SHALL BE PAID FOR AS "REMOVAL OF EXISTING PAVEMENT MARKINGS". REPLACEMENT OF THE LINE WILL BE PAID FOR UNDER THE ITEM 646.41- "DURABLE 4" YELLOW LINE".
26. THE ''TO GET GREEN LIGHT'' SIGN IS TO BE USED ONLY ON APPROACHES WITH VEHICLE DETECTORS.
27. IN SITUATIONS WHERE EXISTING PASSING ZONES EXTEND THROUGH THE AREA BETWEEN THE STOP BAR AND THE ''NO PASSING ZONE'' SIGN, THEN TEMPORARY DOUBLE YELLOW LINES SHALL BE INSTALLED FROM THE STOP BAR TO THE "NO PASSING ZONE" SIGN. THESE MARKINGS SHALL BE PAID UNDER THE "TEMPORARY 4" YELLOW LINE" ITEM.
28. PAYMENT FOR TEMPORARY BARRIER USED SHALL BE MADE UNDER THE APPROPRIATE ITEM.
29. ANY ADDITIONAL TEMPORARY PAVEMENT MARKINGS REQUIRED SHALL BE PAID FOR UNDER THE PAY ITEM "TEMPORARY 4" YELLOW LINE" OR "TEMPORARY 4" WHITE LINE".

/users/str1/87a008/sa008ts.dgn/sa008112J

/traf/misc/onewayrd.dgn : onewayrd.i

ORIGINAL PREPARED NOV. 1986

DATE	REVISIONS	BY
5/88	LENGTHEN LOOPS, ADDED "GREEN LIGHT" SIGN, UPDATE STD.'S	DSP
3/91	ADD PAVEMENT MARKING NOTES & PHASE DIAGRAM	DSP
6/93	DELETE DETOUR&CHG.NOTES	RPD
9/95	MAJOR REVISIONS	EGF

ONE-WAY ROADWAY WITH TEMPORARY TRAFFIC SIGNAL

BRIDGE NO. 8 (US 4)

PREPARED BY M.PELOQUIN DATE 6/98
CHECKED BY C.MEUNIER DATE 11/98
DESIGN SUPERVISOR ROGERS DATE 11/98
PROJ. HARTFORD-SHARON-ROYALTON IM/R089-1(8)

SHEET BR 103

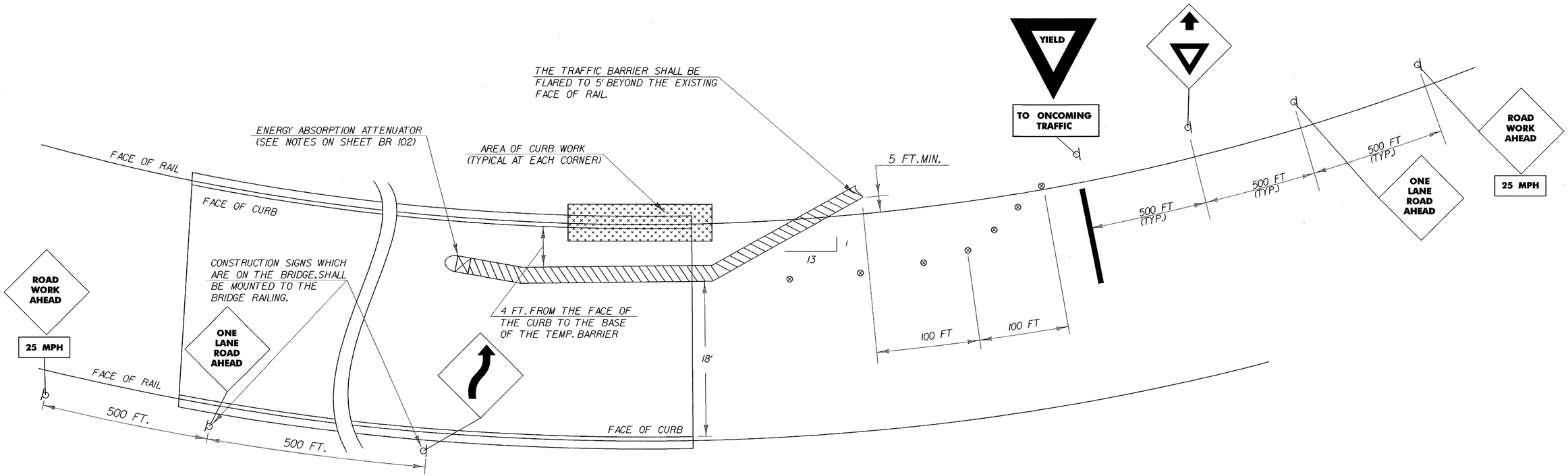
SHEET 60 OF 260 SHEETS

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.30

AC IM IR 089-1(8)

NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS EXC.	UNCLASS DITCH	UNCLASS CHAN EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL FOR STRUCT.	GRADED GRAV.	SLOPED GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35		501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)		(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
17.15	OUT							93.9		56.8	4.1								40				
17.20	OUT				20					9.7							12						
17.33-17.45	CL			54																			
17.51	OUT				38					2.1							8						
17.55	OUT				5					3.7									10				
17.62	MED							5.2															
17.65	OUT				10					7.1							14						
17.69	CL				20																		
17.77	CL				8																		
17.80-17.81	OUT																						
17.81	CL									12.5									20				
17.86	CL																						
17.90	OUT				25			104.3		83.6													
17.93	CL							5.2															
17.97	OUT				12																		
18.02	CL							5.2		10.2													
18.07	MED							5.3															
18.13	MED							10.4															
18.15	OUT				40					48.8	1.8												
18.25	CL																						
18.35	CL																						
18.39	OUT																						
18.40	CL							156.5		7.2											10		
18.41	CL							5.2															
18.48	MED																						
18.60	MED																						
18.69	MED							10.4															
18.77	MED																						
18.85	CL							5.2															
18.98	MED							5.2															
19.09	CL							41.7		11.4										20			
19.25	CL				46			5.2															
19.34	OUT				55																		
19.43	OUT																						
19.48	OUT							10.4		13.3							24						
SHEET TOTALS:				54.0	279.0			469.3		266.4	5.9						58.0		70.0	20.0	10.0		

060A



TRAFFIC CONTROL FOR BRIDGES :
10 - TH 36 OVER I-89 (MM 6.5)
21 - TH 10 OVER I-89 (MM 17.5)

N.T.S.

NOTES: BRIDGES 10, 21

1. THE TRAFFIC CONTROL DETAILS ARE TYPICAL FOR EACH CURB FLARE. ONLY ONE CURB FLARE MAY BE CONSTRUCTED AT ANY ONE TIME.
2. IF AN ATTENUATOR IS DAMAGED BY AN ERRANT VEHICLE, ANY COST SHALL BE PAID AS "EXTRA WORK" PER SECTION 109.06.
3. SEE REFERENCE SHEETS BR 172 TO BR 178 FOR ADDITIONAL INFORMATION.

LEGEND

- ⊗ — REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- ⊠ — TYPE III BARRICADES (MOD.) SEE STD. E-107A
- /// —
- ▽▽▽▽ — TEMPORARY TRAFFIC BARRIER
- ⊠ — ENERGY ABSORPTION ATTENUATOR
- —— — TEMPORARY PAVEMENT MARKINGS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 10 & 21
Highway No. 189	Log Sta.
	Surv. Sta.

TRAFFIC CONTROL FOR BRIDGES 10 & 21

Designed By C. MEUNIER	Drawn By P.T. LONSDALE
Checked By C.W. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C:\Vrafts.cadd\Fillingcabinets\87a008\Structures\sa008trf.dgn008113J	
Bridge Sheet No. BR 104	Sheet 61 of 260

PLOTTED 20-NOV-2000

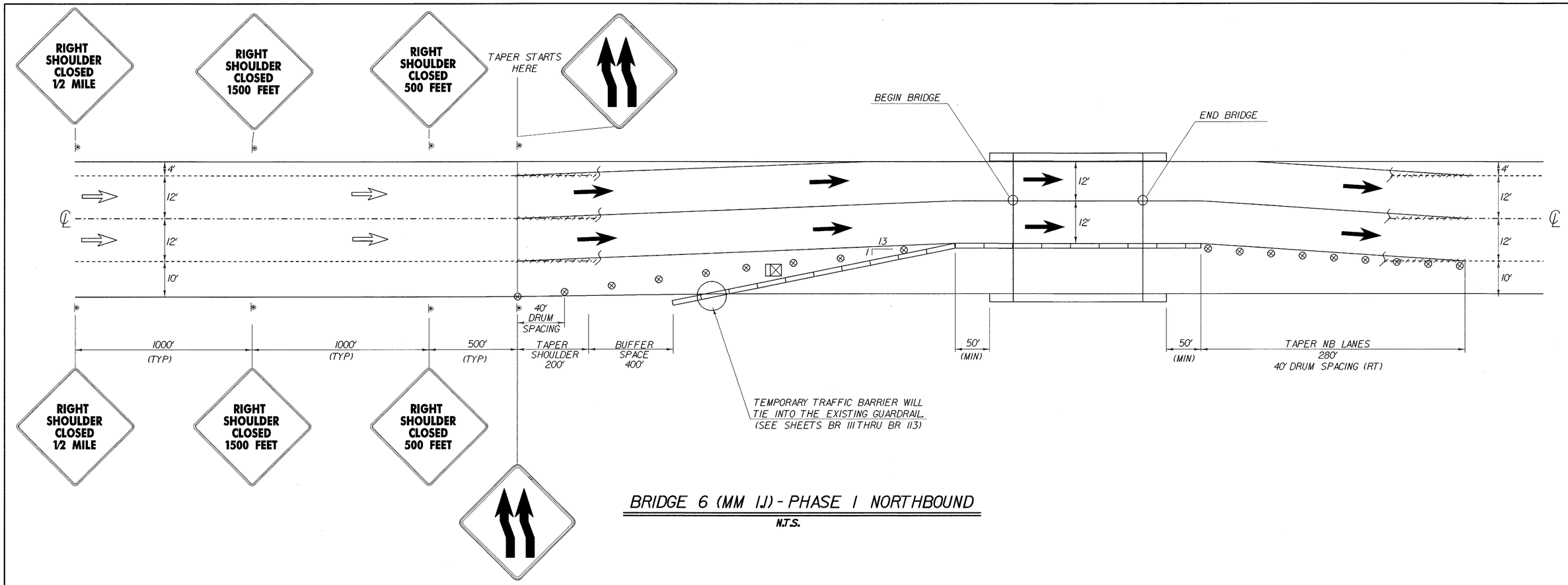
HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

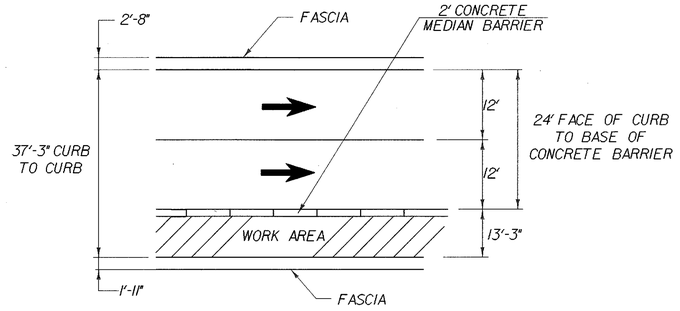
SH.31

NORTH BOUND		48" CSP	15" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS IV	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
17.15	OUT								1							20			1
17.20	OUT							1											1
17.33-17.45	CL																	4	
17.51	OUT																		
17.55	OUT																		
17.62	MED																	1	
17.65	OUT							1											1
17.69	CL																	1	1
17.77	CL																	1	1
17.80-17.81	OUT																		
17.81	CL								1									1	1
17.86	CL																	1	1
17.90	OUT															60			1
17.93	CL																	1	1
17.97	OUT																		1
18.02	CL																	1	
18.07	MED																	1	
18.13	MED																	1	
18.15	OUT															20			
18.25	CL																	1	
18.35	CL																	1	1
18.39	OUT																		1
18.40	CL																		
18.41	CL																	1	1
18.48	MED																		
18.60	MED																		
18.69	MED																	1	
18.77	MED																	1	
18.85	CL																	1	
18.98	MED																	1	
19.09	CL									1								1	
19.25	CL																	1	
19.34	OUT																		
19.43	OUT																		1
19.48	OUT							2											1
SHEET TOTALS:								4.0	2.0	1.0						100.0		22.0	15.0



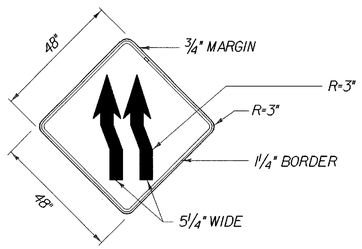
BRIDGE 6 (MM 1.1) - PHASE 1 NORTHBOUND

N.T.S.



BR 6 (MM 1.1) LANE WIDTH AVAILABLE

N.T.S



COLORS BLACK ON ORANGE (SEE STD.E-102 FOR ADDITIONAL INFORMATION)

NOTES

1. BRIDGE 6 SOUTHBOUND (PHASE 1) IS SIMILAR TO BRIDGE 6 NORTHBOUND (PHASE 1)
2. USE STD. E-103 IN CONJUNCTION WITH THESE DETAILS

LEGEND

- TEMPORARY DIRECTION OF FLOW
- ORIGINAL DIRECTION OF FLOW
- REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- TYPE III BARRICADES (MOD.) SEE STD. E-107A
- PAVEMENT MARKING REMOVAL
- TEMPORARY TRAFFIC BARRIER
- EXISTING PAVEMENT MARKINGS
- EXISTING ROADWAY CENTERLINE
- TEMPORARY PAVEMENT MARKINGS

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 6
Highway No. I 89	Log Sta.
	Surv. Sta.

TRAFFIC CONTROL FOR BRIDGE 6
NORTHBOUND & SOUTHBOUND (PHASE 1)

Designed By C. MEUNIER	Drawn By M.PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C.\\vtdot.caddv1\lingcabinet$\97a008\Structures\sa008trf.dgn	sa008114J
Bridge Sheet No. BR 105	Sheet 62 of 260

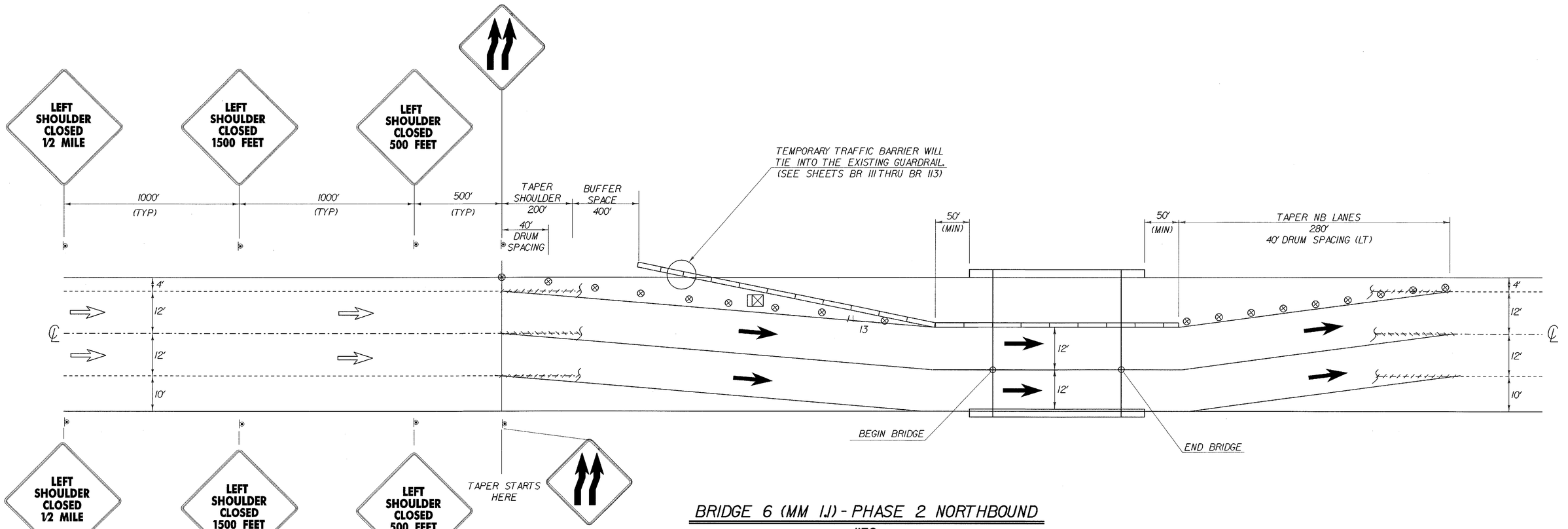
HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

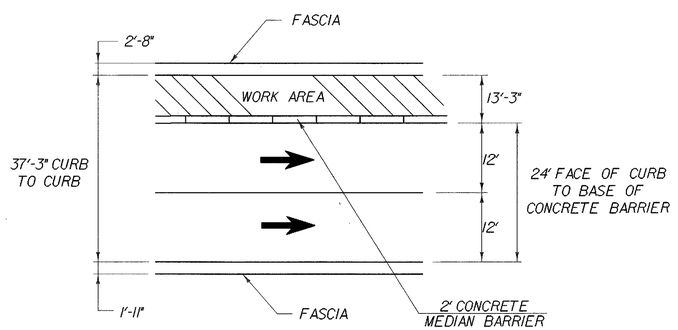
NORTH BOUND		REHAB OF DI, CLASS II (MOD)	C.I.GRATE, W/FRAME "A"	C.I.GRATE, W/FRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH. BASIN	BULLDOZER, RENTAL	EXCAVATOR, RENTAL	TRUCK, RENTAL	LOADER, RENTAL	BIT. CONC. GUTTER,(MOD)	MARKER POST	REM. & RESET G.RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL, TYPE I	STONEFILL, TYPE II	STONEFILL, TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES, EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
17.15	OUT								4		7.5			1	12.5									
17.20	OUT													1	12.5									
17.33-17.45	CL													5		3								
17.51	OUT														12.5									
17.55	OUT																							
17.62	MED													1										
17.65	OUT													1										
17.69	CL													1										
17.77	CL													1										
17.80-17.81	OUT									1					12.5				194		274			
17.81	CL																							
17.86	CL																							
17.90	OUT														12.5				23.6					
17.93	CL													1										
17.97	OUT													1										
18.02	CL													1					10.2					
18.07	MED													1										
18.13	MED													1										
18.15	OUT																							6
18.25	CL													2										
18.35	CL													1										
18.39	OUT																							
18.40	CL														12.5									
18.41	CL													1										
18.48	MED													1										
18.60	MED													1										
18.69	MED													1										
18.77	MED													1										
18.85	CL													1										
18.98	MED													1										
19.09	CL													1	12.5				11.1					
19.25	CL													1	16									
19.34	OUT														16									
19.43	OUT																							
19.48	OUT														16				4.4					
SHEET TOTALS:									4.0	1.0	7.5			28.0	135.5	3.0			243.3		274.0			6.0

PCA



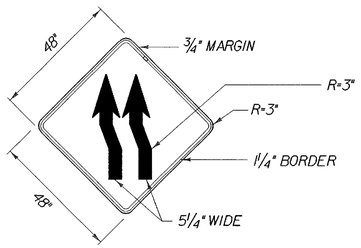
BRIDGE 6 (MM 1.1) - PHASE 2 NORTHBOUND

N.T.S.



BR 6 (MM 1.1) LANE WIDTH AVAILABLE

N.T.S.



COLORS BLACK ON ORANGE (SEE STD. E-102 FOR ADDITIONAL INFORMATION)

NOTES

1. BRIDGE 6 SOUTHBOUND (PHASE 2) IS SIMILAR TO BRIDGE 6 NORTHBOUND (PHASE 2)
2. USE STD. E-103 IN CONJUNCTION WITH THESE DETAILS

LEGEND

- TEMPORARY DIRECTION OF FLOW
- ORIGINAL DIRECTION OF FLOW
- REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- TYPE III BARRICADES (MOD.) SEE STD. E-107A
- PAVEMENT MARKING REMOVAL
- TEMPORARY TRAFFIC BARRIER
- EXISTING PAVEMENT MARKINGS
- EXISTING ROADWAY CENTERLINE
- TEMPORARY PAVEMENT MARKINGS

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 6
Highway No. I 89	Log Sta. / Surv. Sta.

TRAFFIC CONTROL FOR BRIDGES 6
NORTHBOUND & SOUTHBOUND (PHASE 2)

Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

I.G.C.\\vaccadd\Illingcabinet$\87a008\Structures\sa008trf.dgn sa008115J

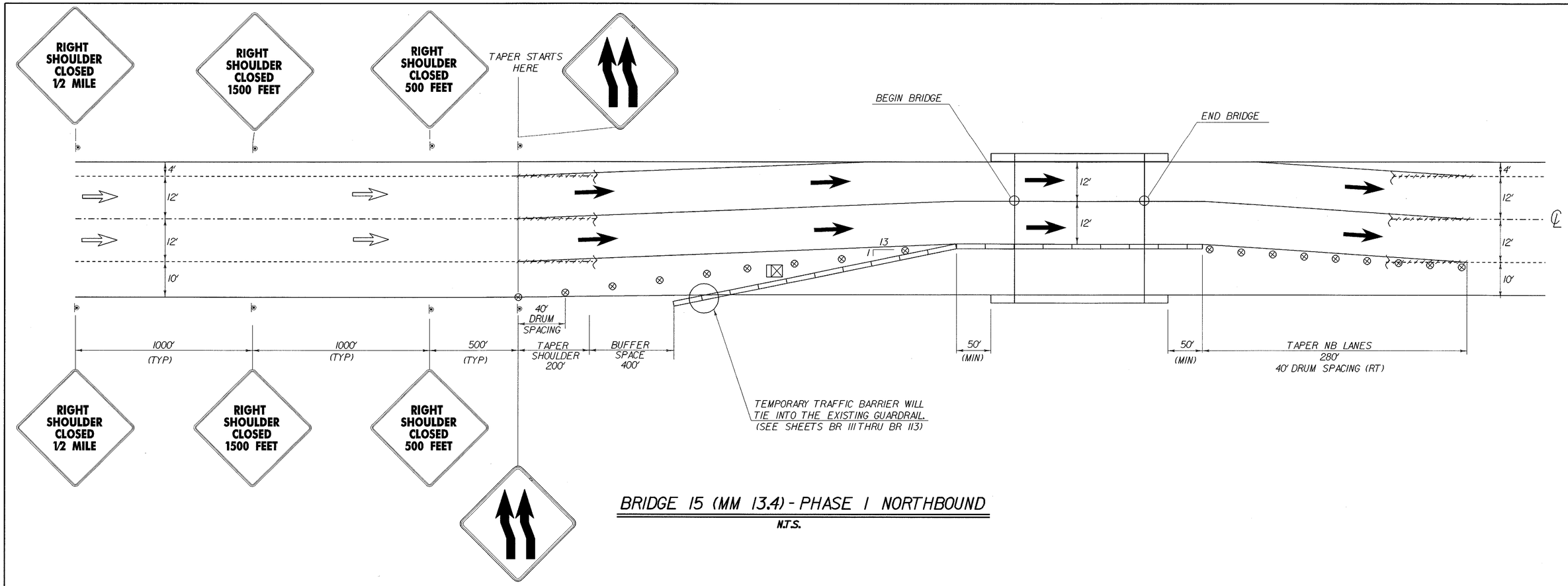
Bridge Sheet No. BR 106 Sheet 63 of 260

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.33

AC IM IR 089-1(8)

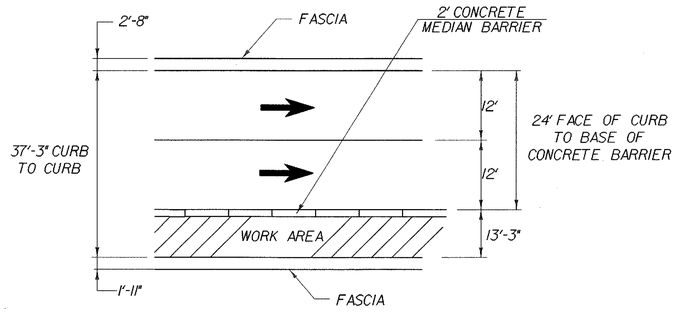
NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS. EXC.	UNCLASS. DITCH	UNCLASS. CHAN. EXC.	EXCV. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL. FOR STRUCT.	DENSE GRADED GRAV.	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
19.53	OUT				20					20.7						40						
19.55	OUT									18.3						20						
19.57	CL						1.36			27.6			2.75									
19.68	CL							5.2					3.09									
19.77	CL				70																	
19.81	OUT				20																	
19.82	MED																					
19.84	MED							6.84														
19.85	CL				50			10.4		2.3												
19.88	MED							8.85														
19.90	OUT									5.7												
19.92	MED												3.09									
19.95	CL							5.2						1.2	107.1							
20.00	OUT									8.9						14						
20.04	CL							5.2					3.09									
20.10	CL				140					10.7			2.5					16				
20.15	CL				140																	
20.25	CL							5.2														
20.32	MED																					
20.38	CL																					
20.45-20.47	CL				25			5.2														
20.49	OUT				27																	
20.53	CL							5.2														
20.63	CL							20.9		9.8												
20.69	CL				7					11.2												
20.83	CL				82																	
20.90	CL												3.6									
20.96	CL																					
21.02	CL																					
21.08	CL							10.4														
21.18	CL				5																	
21.23	OUT																					
21.27	CL				10			5.2														
21.36	CL																					
21.41-21.58	OUT	1539					472															
SHEET TOTALS:		1539.0			596.0		473.36	93.79		115.2			18.1	1.2	107.1	74.0		16.0				

063A



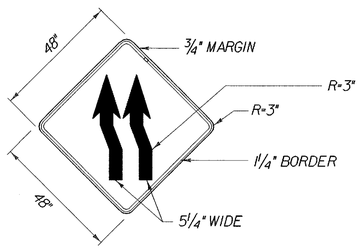
BRIDGE 15 (MM 13.4) - PHASE I NORTHBOUND

N.T.S.



BR 6 (MM 1.1) LANE WIDTH AVAILABLE

N.T.S



COLORS BLACK ON ORANGE (SEE STD.E-102 FOR ADDITIONAL INFORMATION)

NOTES

1. BRIDGE 15 SOUTHBOUND (PHASE I) IS SIMILAR TO BRIDGE 15 NORTHBOUND (PHASE I)
2. TRAFFIC CONTROL AND BRIDGE RAIL REPLACEMENT WORK FOR BRIDGE 15 NORTHBOUND & SOUTHBOUND CANNOT BE DONE AT THE SAME TIME AS THE TRAFFIC CONTROL FOR BRIDGES 16, 17 & 18.
3. USE STD.E-103 IN CONJUNCTION WITH THESE DETAILS

LEGEND

- TEMPORARY DIRECTION OF FLOW
- ORIGINAL DIRECTION OF FLOW
- REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- TYPE III BARRICADES (MOD.) SEE STD. E-107A
- PAVEMENT MARKING REMOVAL
- TEMPORARY TRAFFIC BARRIER
- EXISTING PAVEMENT MARKINGS
- EXISTING ROADWAY CENTERLINE
- TEMPORARY PAVEMENT MARKINGS

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

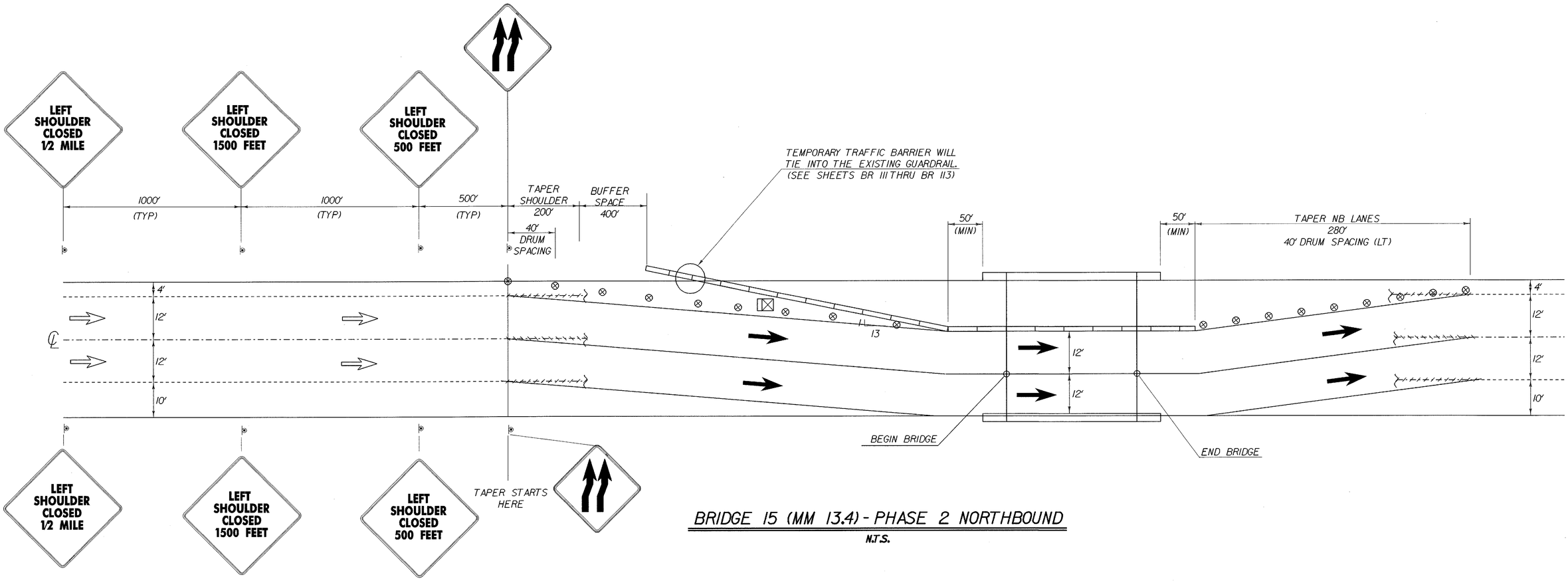
Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 6
Highway No. I 89	Log Sta.
	Surv. Sta.
TRAFFIC CONTROL FOR BRIDGE 15 NORTHBOUND & SOUTHBOUND (PHASE I)	
Designed By C. MEUNIER	Drawn By M.PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C.\\proto_cadd\Illngcabinet$\87a008\Structures\sa008trf.dgn	sa008116J
Bridge Sheet No. BR 107	Sheet 64 of 260

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.34

AC IM IR 089-1(8)

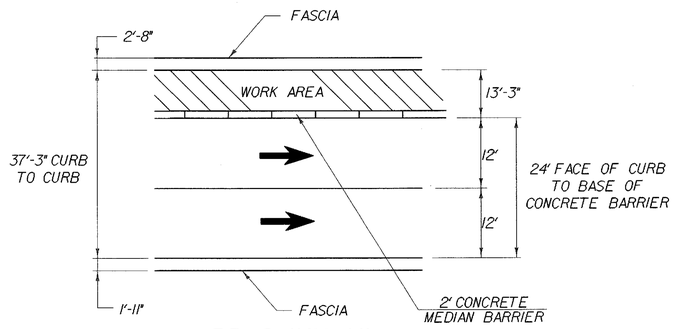
NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS IV	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCCDI	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
19.53	OUT							1											1
19.55	OUT							1											1
19.57	CL															16		1	
19.68	CL																	2	
19.77	CL																	1	
19.81	OUT																		1
19.82	MED																		
19.84	MED																		
19.85	CL																		2
19.88	MED																	1	
19.90	OUT																		1
19.92	MED																		
19.95	CL																	1	1
20.00	OUT							1											1
20.04	CL																	1	
20.10	CL																	1	1
20.15	CL																		
20.25	CL																	1	
20.32	MED																	1	
20.38	CL																	1	
20.45-20.47	CL																	1	
20.49	OUT																		1
20.53	CL																	1	1
20.63	CL		8															1	
20.69	CL															8		1	
20.83	CL																	1	
20.90	CL																	1	
20.96	CL																	1	
21.02	CL																	1	
21.08	CL																	1	1
21.18	CL																	1	1
21.23	OUT																		1
21.27	CL																	1	1
21.36	CL																	1	
21.41-21.58	OUT																		
SHEET TOTALS:			8.0					3.0								24.0		23.0	15.0

0698



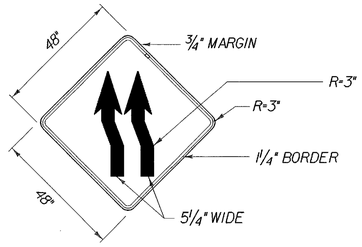
BRIDGE 15 (MM 13.4) - PHASE 2 NORTHBOUND

N.T.S.



BR 6 (MM 1.1) LANE WIDTH AVAILABLE

N.T.S.



COLORS BLACK ON ORANGE (SEE STD.E-102 FOR ADDITIONAL INFORMATION)

NOTES

1. BRIDGE 15 SOUTHBOUND (PHASE 2) IS SIMILAR TO BRIDGE 15 NORTHBOUND (PHASE 2)
2. TRAFFIC CONTROL AND BRIDGE RAIL REPLACEMENT WORK FOR BRIDGE 15 NORTHBOUND & SOUTHBOUND CANNOT BE DONE AT THE SAME TIME AS THE TRAFFIC CONTROL FOR BRIDGES 16, 17 & 18.
3. USE STD.E-103 IN CONJUNCTION WITH THESE DETAILS

LEGEND

- TEMPORARY DIRECTION OF FLOW
- ORIGINAL DIRECTION OF FLOW
- REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- TYPE III BARRICADES (MOD.) SEE STD. E-107A
- PAVEMENT MARKING REMOVAL
- TEMPORARY TRAFFIC BARRIER
- EXISTING PAVEMENT MARKINGS
- EXISTING ROADWAY CENTERLINE
- TEMPORARY PAVEMENT MARKINGS

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

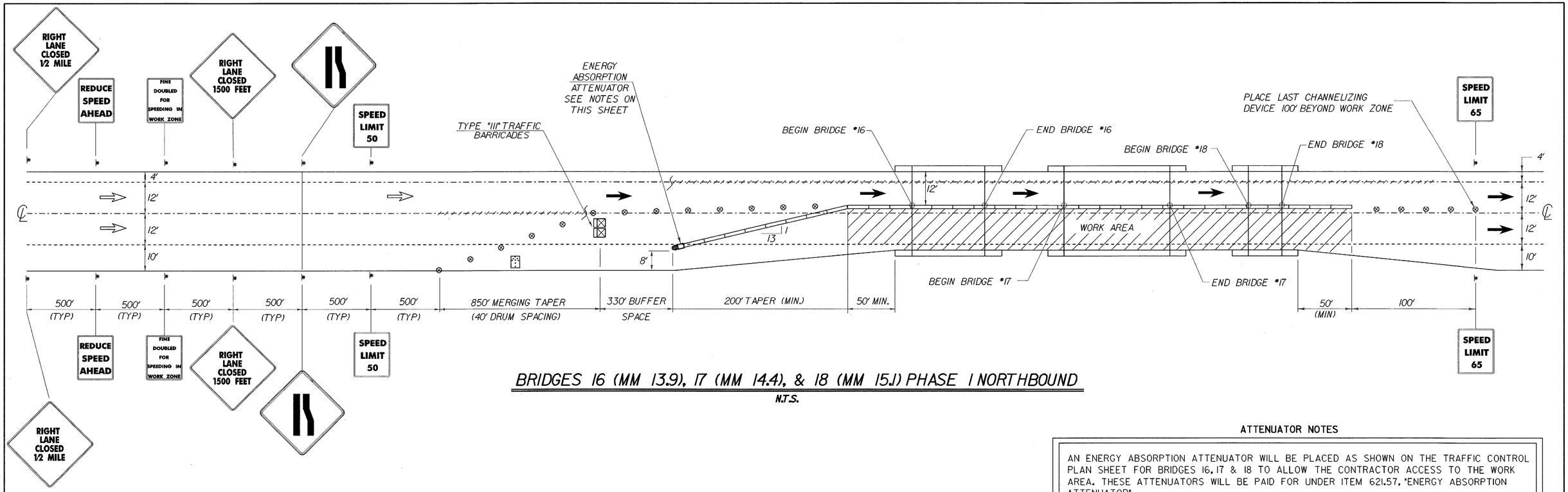
Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 6
Highway No. 189	Log Sta. / Surv. Sta.
TRAFFIC CONTROL FOR BRIDGE 15	
NORTHBOUND & SOUTHBOUND (PHASE 2)	
Designed By C. MEUNIER	Drawn By M.PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.C.C.\\vrafs\cadd\Tillingcabinets\37a008\Structures\sa008trf.dgn sa008trf.1	
Bridge Sheet No. BR 108	Sheet 65 of 260

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.35

AC IM IR 089-1(8)

NORTH BOUND		REHAB OF DI, CLASS II (MOD)	C.I.GRATE, W/FRAME "A"	C.I.GRATE, W/FRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER, RENTAL	EXCAVATOR, RENTAL	TRUCK, RENTAL	LOADER, RENTAL	BIT. CONC. GUTTER,(MOD)	MARKER POST	REM. & RESET G'RAIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL, TYPE I	STONEFILL, TYPE II	STONEFILL, TYPE IV	STONE UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES, EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
19.53	OUT														16									
19.55	OUT																		1					
19.57	CL												8.03	1					8.3					
19.68	CL												5.5 *	2										
19.77	CL													2					10.4					
19.81	OUT																							
19.82	MED													1										
19.84	MED												6.68 *											
19.85	CL														12.5									
19.88	MED												6.68 *	1										
19.90	OUT														12.5									
19.92	MED												2.5 *											
19.95	CL												6.67 *	1										
20.00	OUT														12.5									
20.04	CL												4.51 *	1										
20.10	CL												4 *	1	16				97.2		181			
20.15	CL													1										
20.25	CL													2										
20.32	MED																							
20.38	CL													2		1								
20.45-20.47	CL													1										
20.49	OUT																							
20.53	CL													1										
20.63	CL													2										
20.69	CL													2										
20.83	CL													1										
20.90	CL									73			2.5	2							1443			
20.96	CL													2										
21.02	CL									34.5	5.5			2		1					745			
21.08	CL													2		1								
21.18	CL													1										
21.23	OUT																							
21.27	CL													1										
21.36	CL													2										
21.41-21.58	OUT									8														
SHEET TOTALS:										115.5	5.5		47.07	34.0	69.5	3.0			116.9		2369.0			

D65A



BRIDGES 16 (MM 13.9), 17 (MM 14.4), & 18 (MM 15.1) PHASE 1 NORTHBOUND

N.T.S.

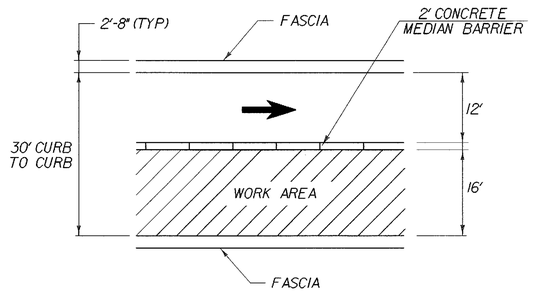
ATTENUATOR NOTES

AN ENERGY ABSORPTION ATTENUATOR WILL BE PLACED AS SHOWN ON THE TRAFFIC CONTROL PLAN SHEET FOR BRIDGES 16, 17 & 18 TO ALLOW THE CONTRACTOR ACCESS TO THE WORK AREA. THESE ATTENUATORS WILL BE PAID FOR UNDER ITEM 621.57, "ENERGY ABSORPTION ATTENUATOR".

THE ATTENUATOR SHALL MEET THE REQUIREMENTS OF THE 1996 AASHTO "ROADSIDE DESIGN GUIDE", AND SHALL BE DESIGNED FOR A 4500 LB VEHICLE TRAVELING AT 65 MPH.

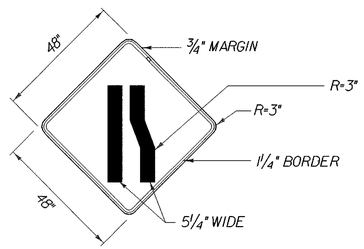
IF THE ATTENUATOR IS DAMAGED BY AN ERRANT VEHICLE, ANY COST TO THE CONTRACTOR FOR REPLACEMENT OF ANY PART OR ALL OF THE ATTENUATOR SHALL BE PAID AS "EXTRA WORK" PER SECTION 109.06 .

AN ADDITIONAL ATTENUATOR HAS BEEN INCLUDED IN THE QUANTITY FOR "ENERGY ABSORPTION ATTENUATOR". SEE SPECIAL PROVISIONS.



BR 16, 17, & 18 LANE WIDTH AVAILABLE

N.T.S.



COLORS BLACK ON ORANGE (SEE STD.E-102 FOR ADDITIONAL INFORMATION)

LEGEND

- TEMPORARY DIRECTION OF FLOW
- ORIGINAL DIRECTION OF FLOW
- REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- TYPE III BARRICADES (MOD.) SEE STD. E-107A
- PAVEMENT MARKING REMOVAL
- TEMPORARY TRAFFIC BARRIER
- EXISTING PAVEMENT MARKINGS
- EXISTING ROADWAY CENTERLINE
- TEMPORARY PAVEMENT MARKINGS
- ENERGY ABSORPTION ATTENUATOR
- FLASHING ARROW PANEL

20-NOV-2000

NOTES

1. BRIDGE 16, 17, & 18 SOUTHBOUND (PHASE 1) IS SIMILAR TO BRIDGE 16, 17, & 18 NORTHBOUND (PHASE 1)
2. USE STD. E-103 IN CONJUNCTION WITH THESE DETAILS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 17 & 18
Highway No. 189	Log Sta. / Surv. Sta.
TRAFFIC CONTROL FOR BRIDGES 16, 17 & 18	
NORTHBOUND & SOUTHBOUND (PHASE 1)	
Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C.\\trafficcadd\Filingcabinets\87a008\Structures\sa0008trf.dgn 20081181	
Bridge Sheet No. BR 109	Sheet 66 of 260

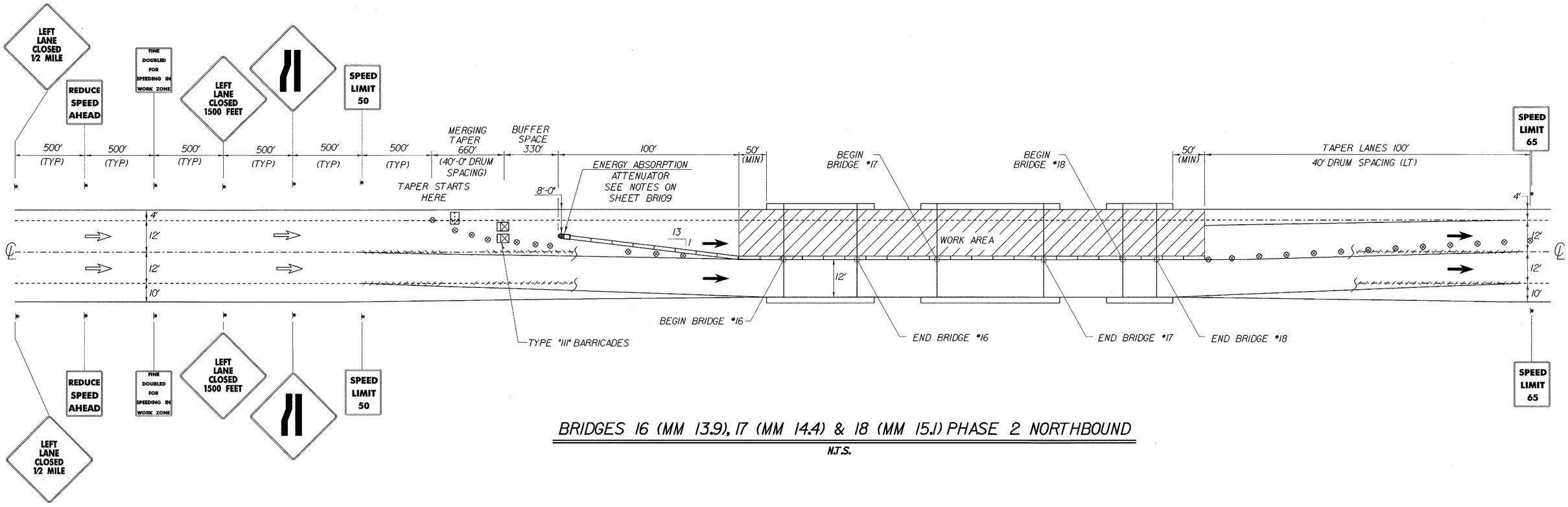
HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

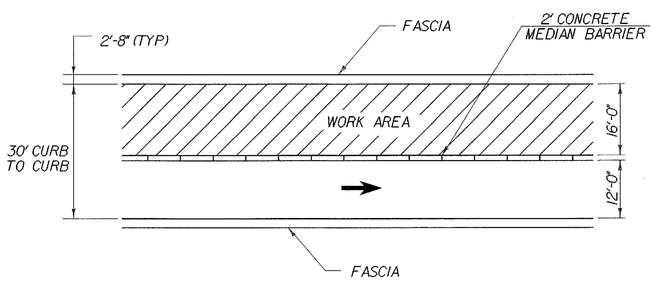
NORTH BOUND		REHAB OF DI CLASS I (MOD.)	6" UNIT (MOD.)	MEMBRANE	SOLID ROCK EXC (MOD)	EROSION MATTING	AGGREGATE SHOULDERS	ROOT WADS	FISH LUNKERS
		604.412	605.10	900.123	203.16	654.10	402.11	900.10	900.13
MM-MM	POS.	(EA.)	(LF)	(SF)	(CY)	(SY)	(CY)	(LS)	(LS)
19.53	OUT								
19.55	OUT								
19.57	CL								
19.68	CL								
19.77	CL								
19.81	OUT								
19.82	MED								
19.84	MED						9		
19.85	CL								
19.88	MED						9.5		
19.90	OUT								
19.92	MED								
19.95	CL						9.5		
20.00	OUT								
20.04	CL								
20.10	CL								
20.15	CL								
20.25	CL								
20.32	MED								
20.38	CL								
20.45-20.47	CL								
20.49	OUT								
20.53	CL								
20.63	CL								
20.69	CL								
20.83	CL								
20.90	CL								
20.96	CL								
21.02	CL								
21.08	CL								
21.18	CL								
21.23	OUT								
21.27	CL								
21.36	CL								
21.41-21.58	OUT								
SHEET TOTALS:							28.0		

066A



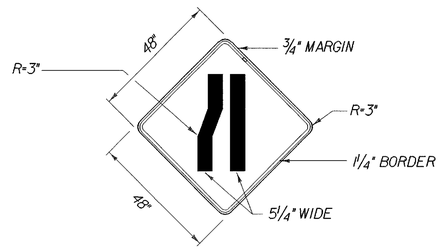
BRIDGES 16 (MM 13.9), 17 (MM 14.4) & 18 (MM 15.1) PHASE 2 NORTHBOUND

N.T.S.



BR 17 (MM 14.4) & 18 (MM 15.1) LANE WIDTH AVAILABLE

N.T.S.



COLORS BLACK ON ORANGE (SEE STD.E-102 FOR ADDITIONAL INFORMATION)

LEGEND

- TEMPORARY DIRECTION OF FLOW
- ORIGINAL DIRECTION OF FLOW
- REFLECTORIZED PLASTIC DRUMS (STD. E-106)
- TYPE III BARRICADES (MOD.) SEE STD. E-107A
- PAVEMENT MARKING REMOVAL
- TEMPORARY TRAFFIC BARRIER
- EXISTING PAVEMENT MARKINGS
- EXISTING ROADWAY CENTERLINE
- TEMPORARY PAVEMENT MARKINGS
- ENERGY ABSORPTION ATTENUATOR
- FLASHING ARROW PANAL

20-NOV-2000

NOTES

1. BRIDGE 16,17 & 18 SOUTHBOUND (PHASE 2) IS SIMILAR TO BRIDGE 16,17 & 18 NORTHBOUND (PHASE 2)
2. USE STD.E-103 IN CONJUNCTION WITH THESE DETAILS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 17 & 18
Highway No. 189	Log Sta. / Surv. Sta.
TRAFFIC CONTROL FOR BRIDGES 16, 17 & 18 NORTHBOUND & SOUTHBOUND (PHASE 2)	
Designed By C. MEUNIER	Drawn By M.PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C.\\vaftr2\cadd\Filingcabinet\87a008\Structures\sa0081rf.dgn	
Bridge Sheet No. BR 110	Sheet 67 of 260

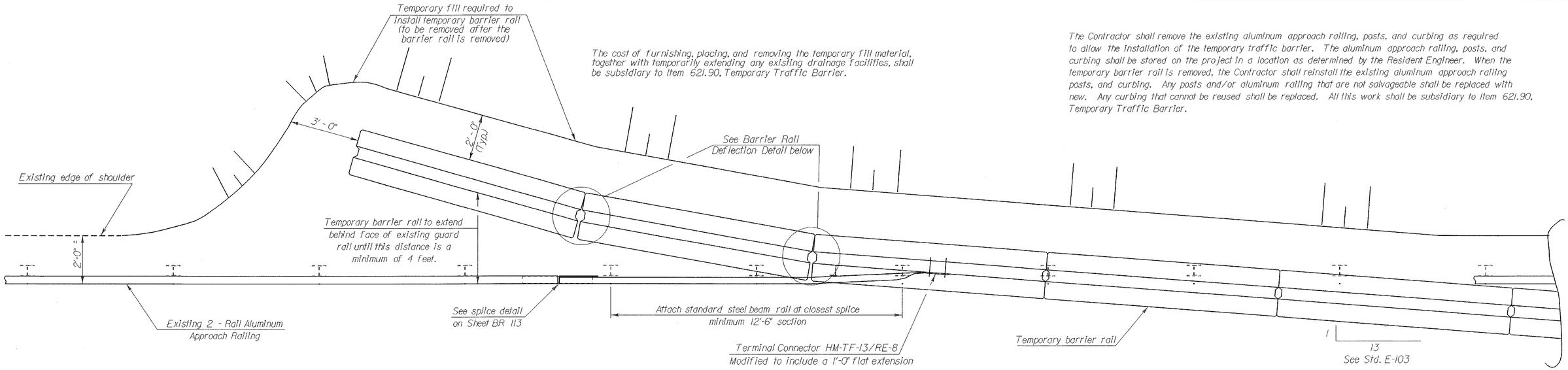
HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

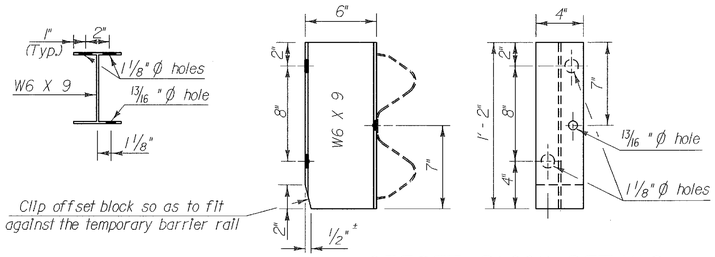
NORTH BOUND		COMMON EXC.	SOLID ROCK EXC.	UNCLASS. EXC.	UNCLASS. DITCH	UNCLASS. CHAN. EXC.	EXC. OF SURFACES	EARTH BORROW	SAND BORROW	TRENCH EARTH EXC.	TRENCH ROCK EXC.	GRAN. BKFL FOR STRUCT.	GRADED GRAV.	DENSE GRADED CLASS B	CONCRETE CLASS B	REIN. STEEL	12" CSP	15" CSP	18" CSP	24" CSP	30" CSP	36" CSP	42" CSP
		203.15	203.16	203.17	203.18	203.27	203.28	203.30	203.31	204.20	204.21	204.30	301.35	501.25	507.15	601.0005	601.0010	601.0015	601.0025	601.0036	601.0046	601.0052	
MM-MM	POS.	(CY)	(CY)	(CY)	(LF)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(LB)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
21.46	CL																						
21.69	CL				12			5.2		13.4													
21.78	CL							10.4															
21.82	OUT							10.4															
21.87	CL							41.7									26						
21.88	CL																						
21.93	OUT																						
21.95	CL																						
SHEET TOTALS:					12.0			67.7		13.4							26.0						

1674



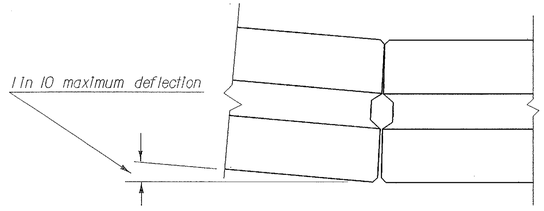
PLAN VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY BARRIER RAIL AND EXISTING ALUMINUM RAIL

1/2" = 1'-0"



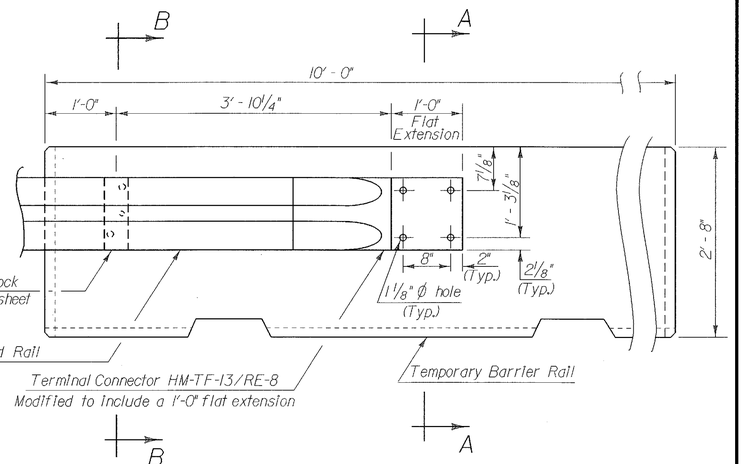
OFFSET BLOCK DETAILS

1" = 6"



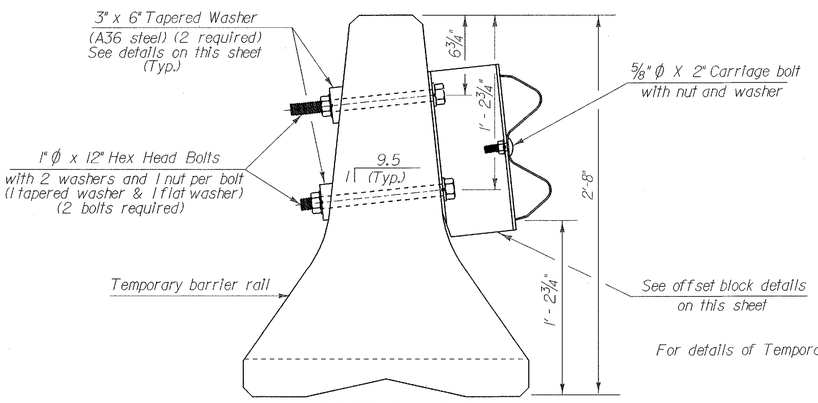
BARRIER RAIL DEFLECTION DETAIL

NTS



ELEVATION VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY BARRIER RAIL AND EXISTING GUARD RAIL

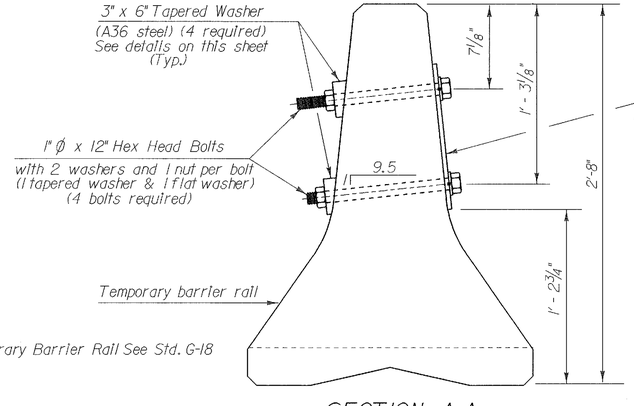
1" = 1'-0"



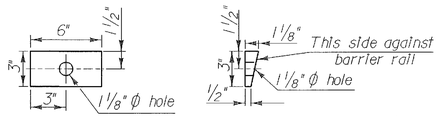
For details of Temporary Barrier Rail See Std. G-18

SECTION B-B

1" = 6"



SECTION A-A



TAPERED WASHER DETAILS

1" = 6"

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I 89	Log Sta.
	Surv. Sta.

POSITIVE CONNECTION DETAILS BETWEEN BARRIER RAIL & EXISTING ALUMINUM RAILING

Designed By C. MEUNIER	Drawn By S. MAGNAN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G. C:\Work\cadd\Illingcabinets\87a008\Structures\sa008trf.dgn0008tdl1	
Bridge Sheet No. BR 111	Sheet 68 of 260

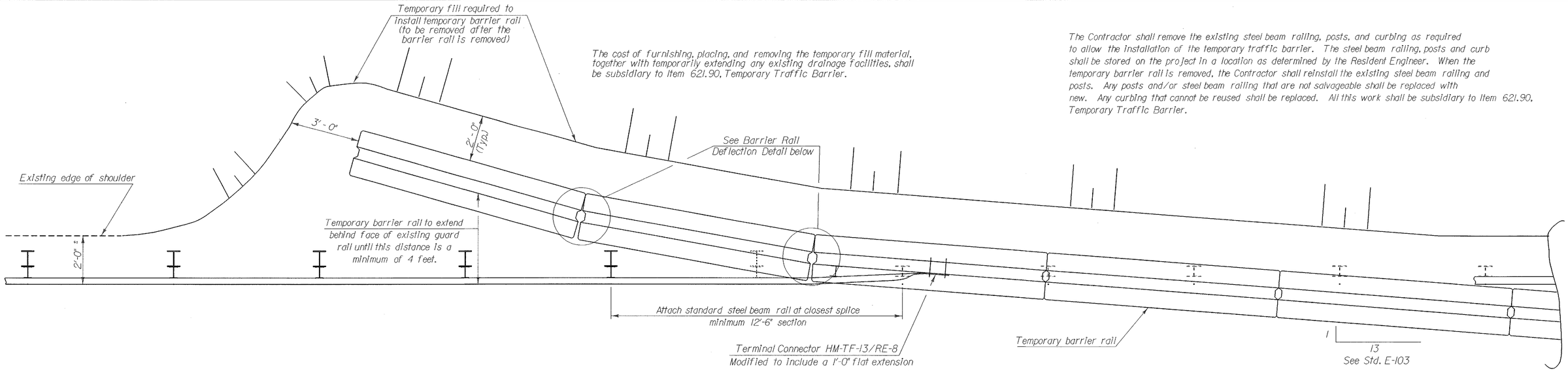
HARTFORD-ROYALTON

AC IM IR 089-1(8)

DRAINAGE SUMMARY

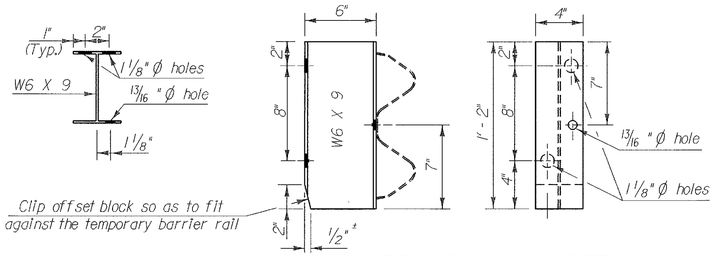
NORTH BOUND		48" CSP	18" RCP CLASS III	24" RCP CLASS III	30" RCP CLASS III	30" RCP CLASS IV	36" RCP CLASS III	12" CSP ELBOW	18" CSP ELBOW	24" CSP ELBOW	30" CSP ELBOW	12" CSPES	15" CSPES	18" CSPES	36" CSPES	RELAY OF PIPE	PRCIDI	CHANGE ELEV. OF DI	REHAB OF DI CLASS I
		601.0057	601.0815	601.0825	601.0835	601.0836	601.0845	601.5005	601.5015	601.5025	601.5036	601.6005	601.6010	601.6015	601.6046	601.99	604.30	604.40	604.412
MM-MM	POS.	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(EA.)	(LF)	(EA.)	(EA.)	(EA.)
21.46	CL																	1	
21.69	CL															8			1
21.78	CL																	1	
21.82	OUT																	1	
21.87	CL																		1
21.88	CL																	1	
21.93	OUT																		1
21.95	CL																	1	1
SHEET TOTALS:																8.0		5.0	4.0

068A



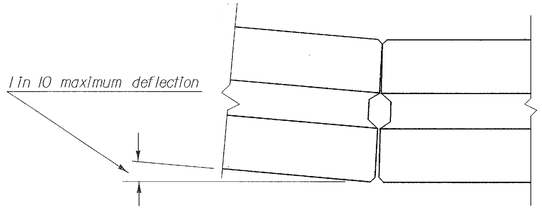
PLAN VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY BARRIER RAIL AND EXISTING STEEL BEAM GUARD RAIL

1/2" = 1'-0"



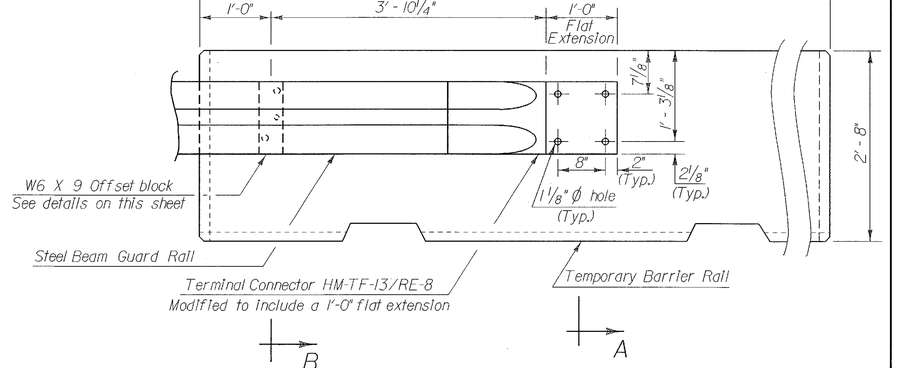
OFFSET BLOCK DETAILS

1" = 6"



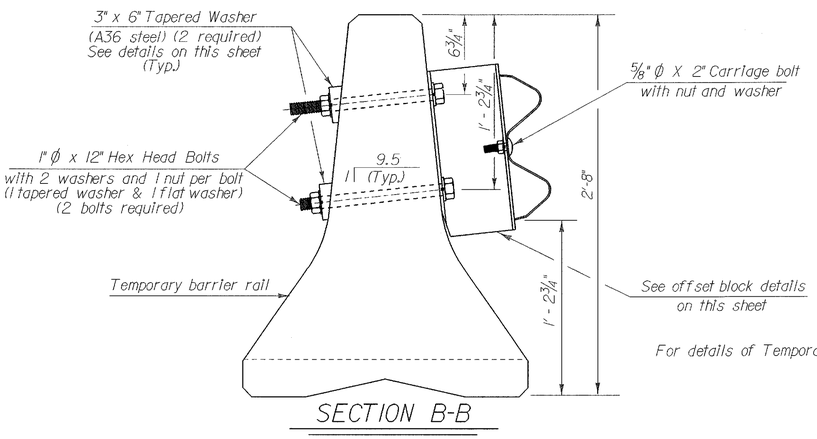
BARRIER RAIL DEFLECTION DETAIL

NTS



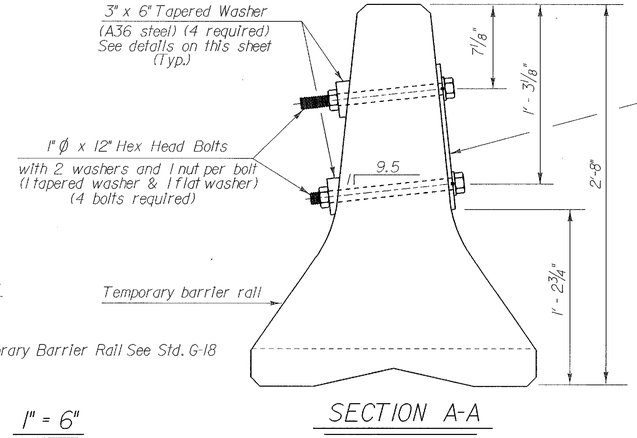
ELEVATION VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY BARRIER RAIL AND EXISTING GUARD RAIL

1" = 1'-0"

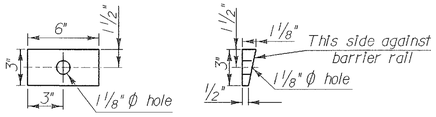


SECTION B-B

1" = 6"



SECTION A-A



TAPERED WASHER DETAILS

1" = 6"

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. 189	Log Sta.
	Surv. Sta.

POSITIVE CONNECTION DETAILS BETWEEN BARRIER RAIL & EXISTING STEEL BEAM RAILING

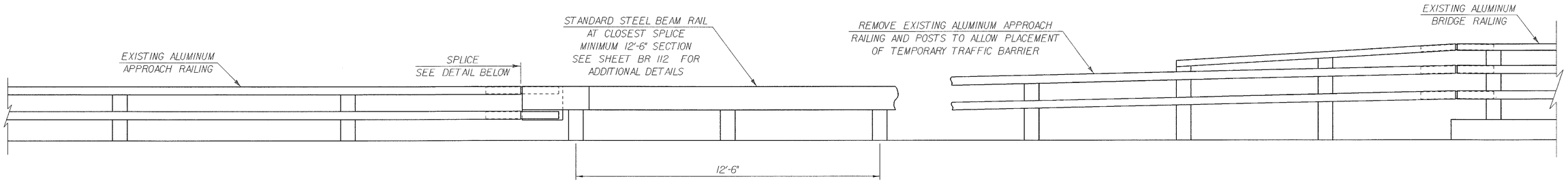
Designed By C. MEUNIER	Drawn By S. MAGNAN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C:\Projects\cadd\Fillingcabinet\$\87a008\Structures\sa008trf.dgn008td2J	
Bridge Sheet No. BR 112	Sheet 69 of 260

HARTFORD-ROYALTON — **DRAINAGE SUMMARY** — SH.39

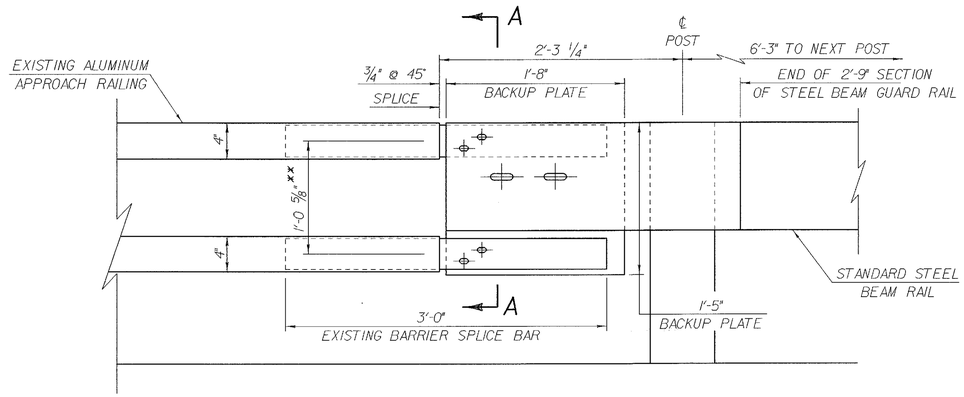
AC IM IR 089-1(8)

NORTH BOUND		REHAB OF DI. CLASS II (MOD)	C.I.GRATE "WFRAME "A"	C.I.GRATE "WFRAME "B"	6" UND.	8" UND.	6" UND. CARRIER	UND. FLUSH BASIN	BULLDOZER RENTAL	EXCAVATOR RENTAL	TRUCK RENTAL	LOADER RENTAL	BIT. CONC. GUTTER (MOD)	MARKER POST	REM. & RESET GABIL	REM. OF MARKER (MOD)	TOPSOIL	STONEFILL TYPE I	STONEFILL TYPE II	STONEFILL TYPE IV	GEO. UNDER STONE	GEO. FOR UND.	GEO. FOR SILT FENCE	HAY BALES EROSION
		604.412	604.45	604.46	605.10	605.11	605.20	605.95	608.10	608.25	608.37	608.40	616.47	619.17	621.75	621.81	651.35	613.10	613.11	613.13	649.31	649.41	649.51	651.26
MM-MM	POS.	(EA.)	(EA.)	(EA.)	(LF)	(LF)	(LF)	(EA.)	(HR.)	(HR.)	(HR.)	(HR.)	(TON)	(EA.)	(LF)	(EA.)	(CY)	(CY)	(CY)	(CY)	(SY)	(SY)	(SY)	(EA.)
21.46	CL													2										
21.69	CL													2										
21.78	CL													2										
21.82	OUT													1										
21.87	CL													1		1								
21.88	CL													1		1								
21.93	OUT																							
21.95	CL																							
SHEET TOTALS:														9.0		2.0								

069A



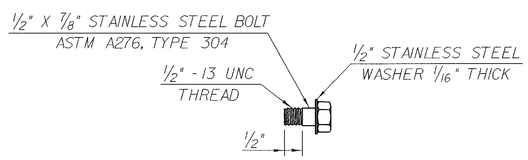
ELEVATION



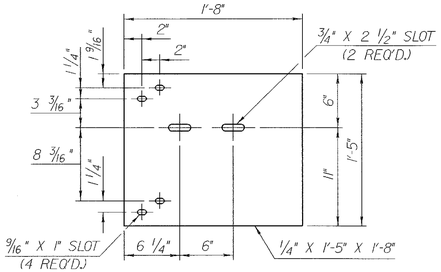
SPLICE DETAIL

** DIMENSION SHOULD BE FIELD VERIFIED AT EACH LOCATION

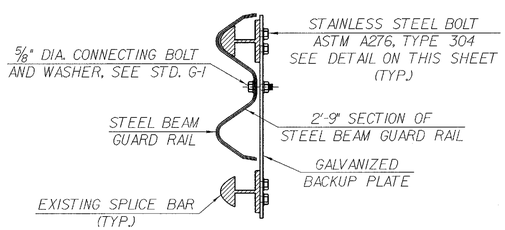
NOTE:
1. REMOVE EXISTING RAIL TO EXPOSE BARRIER RAIL SPLICE.
2. ATTACH NEW BACKUP PLATE TO EXISTING BARRIER RAIL SPLICE.
3. ATTACH STEEL BEAM RAIL SECTION TO BACKUP PLATE AND THEN TO TEMPORARY TRAFFIC BARRIER.



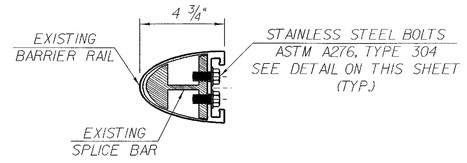
STAINLESS STEEL BOLT DETAIL



BACK-UP PLATE DETAIL



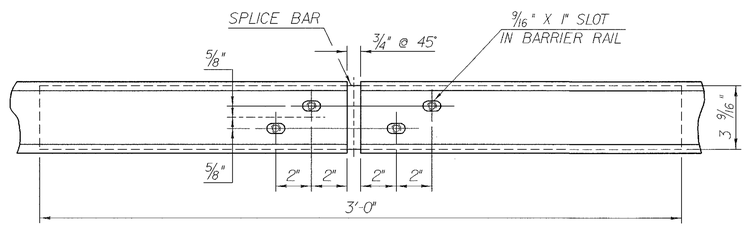
SECTION A - A



TYPICAL SECTION THROUGH BARRIER RAIL SPLICE

NOTE

1. SEE REFERENCE SHEETS BR 169 TO BR 171 FOR ADDITIONAL DETAILS.



SPLICE BAR DETAIL

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
	Log Sta.
Highway No. 189	Surv. Sta.

SPLICE CONNECTION DETAILS FOR ALUMINUM APPROACH RAILING

Designed By C. MEUNIER	Drawn By S. MAGNAN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G. C:\Work\caddv\Tillingcabinets\87a008\Structures\sa008trf.dgn008td3J	
Bridge Sheet No. BR 113	Sheet 70 of 260

PLOTTED 20-NOV-2000

CURVE DATA

Δ = 56°-45'-10" RT
D = 3°30'
R = 1637.02'
T = 884.27'
L = 1621.51'
E = 223.56
BANK: 15/16 "/FT

EASTBOUND SPIRAL DATA

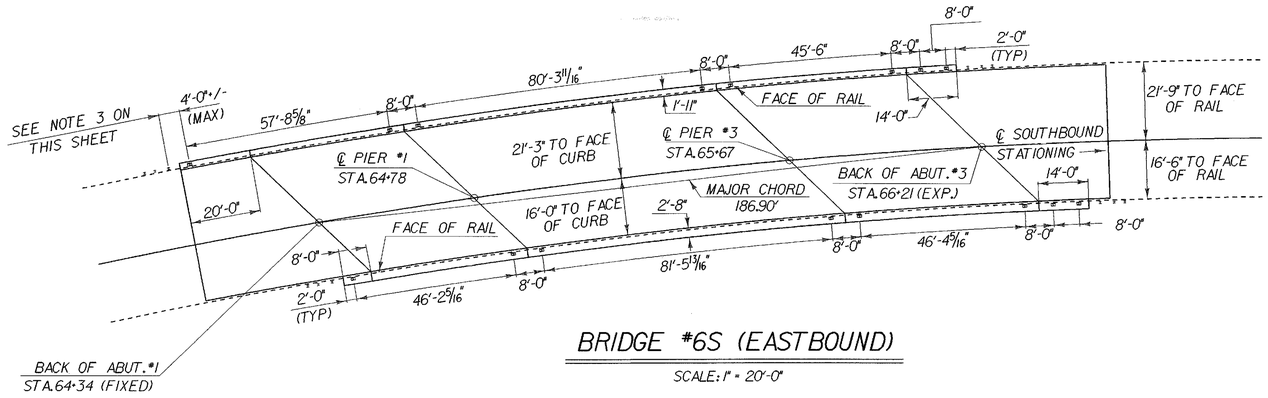
θ_s = 5°-15'	Δ_c = 44°-40'-10"	θ_s = 6°-50'
L_s = 300.00	L_c = 1276.27	L_s = 390.48
p = 2.29		p = 3.88
K = 149.96		K = 195.15
X_c = 299.75		X_c = 389.92
Y_c = 9.16		Y_c = 15.51
T_s = 1037.36		T_s = 1079.61
LT = 200.09		LT = 260.51
ST = 100.08		ST = 130.34
LC = 299.89		LC = 390.23

T.S. = 60°06.54
S.C. = 63°06.54
C.S. = 75°82.81
S.T. = 79°73.29 = 78°77.09

WESTBOUND SPIRAL DATA

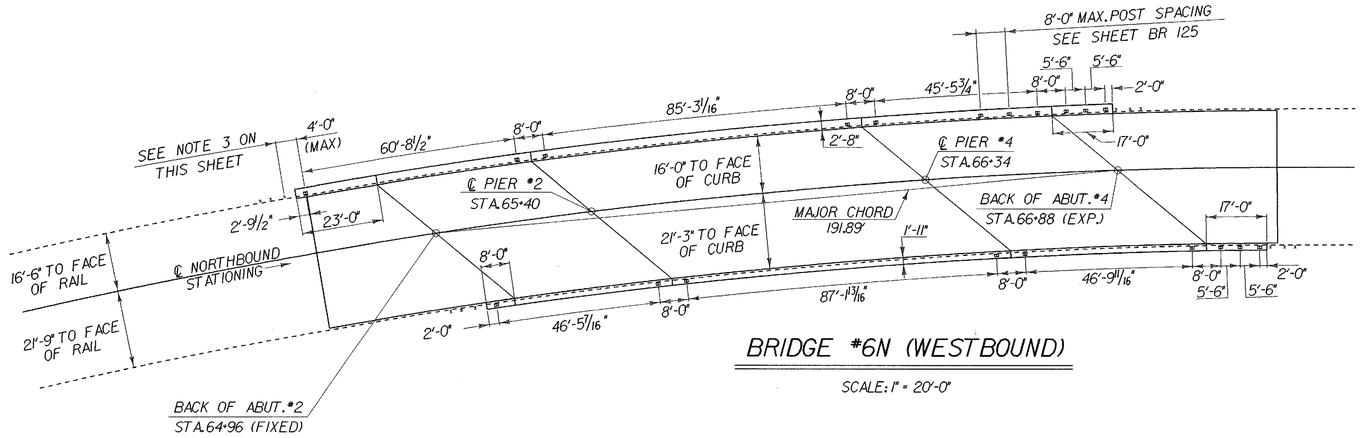
θ_s = 5°-15'	Δ_c = 46°-15'-10"
L_s = 300.00	L_c = 1321.51
p = 2.29	
K = 149.96	
X_c = 299.75	
Y_c = 9.16	
LT = 200.09	
ST = 100.08	
LC = 299.89	

T.S. = 59°28.41
S.C. = 62°25.41
C.S. = 75°46.92 = 75°49.32
S.T. = 78°46.92 = 78°49.32



BRIDGE #6S (EASTBOUND)

SCALE: 1" = 20'-0"



BRIDGE #6N (WESTBOUND)

SCALE: 1" = 20'-0"

NOTES

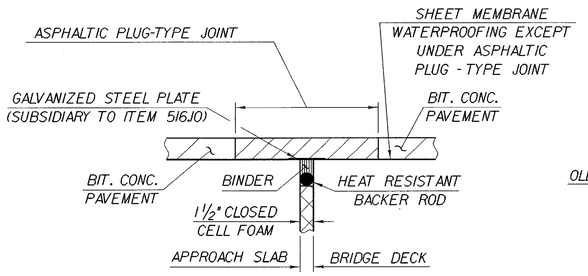
1. NO SURVEY WAS TAKEN ON THIS PROJECT. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE TAKEN OFF THE ORIGINAL PLANS. SEE THE FOLLOWING REFERENCE SHEETS BR 137 - BR 141.
2. ALL CURB AND BRIDGE RAIL DIMENSIONS AND RADII SHOULD BE FIELD CHECKED PRIOR TO THE SUBMITTAL OF THE BRIDGE RAIL SHOP DRAWINGS.
3. SEE SHEETS BR 125, BR 126A & BR 126B FOR GUARD RAIL END TREATMENT AND POST SPACING.
4. SEE SHEET BR 124 FOR THE DETAILS AT A VERTICAL PLATE EXPANSION JOINT.
5. THE "FASCIA SIDE" (LT OR RT) IS GIVEN WITH RESPECT TO STATIONING.

BRIDGE #	FASCIA SIDE	PAY LENGTH FOR NETC RAIL (FT) & BRIDGE CURB LENGTH (FT)
6N	LT	230'-5 5/16"
	RT	219'-4 15/16"
6S	LT	219'-6 5/16"
	RT	210'-0 1/16"

PLOTTED 20-NOV-2000

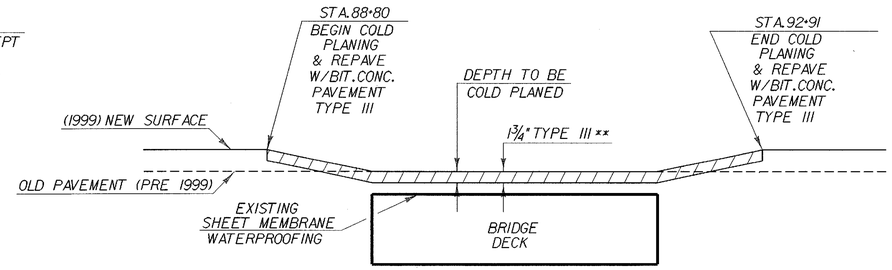
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 6N & 6S
Highway No. I 89	Log Sta. / Surv. Sta.
LAYOUT BRIDGES 6 (MM 1.) NORTHBOUND & 6 (MM 1.) SOUTHBOUND OVER U.S. ROUTE 5	
Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/96	Bridge Design Supervisor G.S. ROGERS Date 11/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G. C:\Wrafts\cadd\Filingcabinet#\87a008\Structures\sa008nul.dgn008b06J	
Bridge Sheet No. BR 114	Sheet 71 of 260



WIDE BAND PAVEMENT JOINT DETAIL

NTS



BRIDGE COLD PLANE DETAIL (N.T.S.)

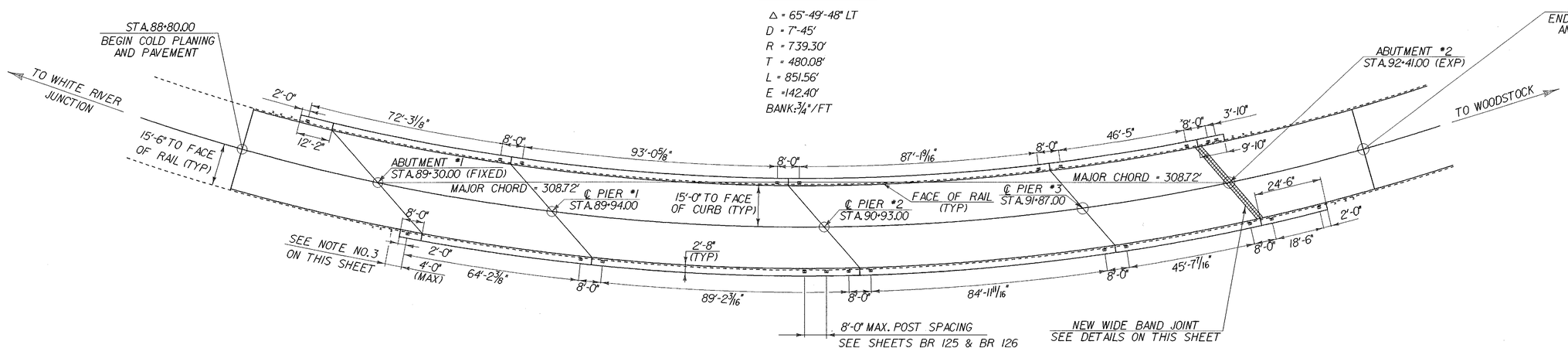
** THE PAVEMENT ON THE BRIDGE IS TO BE COLD PLANED 1¾". THE RESIDENT ENGINEER SHALL PROFILE THE ROAD PRIOR TO THE PLACEMENT OF THE NEW BITUMINOUS CONCRETE PAVEMENT IN ORDER TO OBTAIN A "SMOOTH" TRANSITION FROM THE (1999) NEW SURFACE TO THE NEW PAVEMENT ON THE BRIDGE.

BRIDGE PAVEMENT NOTES

1. THE WEARING COURSE SHALL BE TYPE III, ITEM 406.25, "BITUMINOUS CONCRETE PAVEMENT" ALL LIQUID ASPHALT USED IN BITUMINOUS CONCRETE PAVEMENT SHALL BE PG 70-28.
2. EMULSIFIED ASPHALT SHALL BE APPLIED ON THE EXISTING PAVEMENT SURFACES AT THE RATE OF 0.015 GAL/SY OR AS DIRECTED BY THE ENGINEER.
3. BITUMINOUS CONCRETE PAVEMENT TOLERANCE SHALL EQUAL 1/4" +/-.
4. COLD PLANING SHALL BE COMPLETED ACCORDING TO TYPICAL OR AS DENOTED OTHERWISE ON PLANS.
5. DURING BRIDGE PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO ENSURE THAT NO DAMAGE OCCURS TO THE EXISTING SHEET MEMBRANE OR VERTICAL PLATE JOINTS. IF DAMAGE OCCURS, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIRS AND IT WILL BE AT THE CONTRACTOR'S EXPENSE.
6. THE WIDE BAND JOINT SHALL BE INSTALLED AT ABUTMENT NO. 2.
7. US 4 IS BEING RESURFACED PRIOR TO THE COMMENCEMENT OF THIS WORK. THIS IS LABELED AS (1999) NEW SURFACE. SEE SPECIAL PROVISIONS.

CURVE DATA

△ = 65°-49'-48" LT
D = 7°-45'
R = 739.30'
T = 480.08'
L = 851.56'
E = 142.40'
BANK: 3/4"/FT



BRIDGE #8

SCALE: 1" = 20'-0"

NOTES

1. NO SURVEY WAS TAKEN ON THIS PROJECT. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE TAKEN OFF THE ORIGINAL PLANS. SEE THE FOLLOWING REFERENCE SHEETS BR 142 TO BR 145.
2. ALL CURB AND BRIDGE RAIL DIMENSIONS AND RADII SHOULD BE FIELD CHECKED PRIOR TO THE SUBMITTAL OF THE BRIDGE RAIL SHOP DRAWINGS.
3. SEE SHEETS BR 125, BR 126A AND BR 126B FOR GUARD RAIL END TREATMENT AND POST SPACING.
4. SEE SHEET BR 124 FOR THE DETAILS AT A VERTICAL PLATE EXPANSION JOINT.
5. THE "FASCIA SIDE" (LT OR RT) IS GIVEN WITH RESPECT TO STATIONING.

BRIDGE #	FASCIA SIDE	PAY LENGTH FOR NETC RAIL (FT) & BRIDGE CURB LENGTH (FT)
8	LT	338'-8 5/16"
	RT	338'-5 11/16"

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 8 (MM 4.0)
Highway No. 189	Log Sta.
	Surv. Sta.

LAYOUT BRIDGE 8 (MM 4.0)
ON U.S. ROUTE 4 OVER I-89

Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/96	Bridge Design Supervisor G.S. ROGERS Date 11/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

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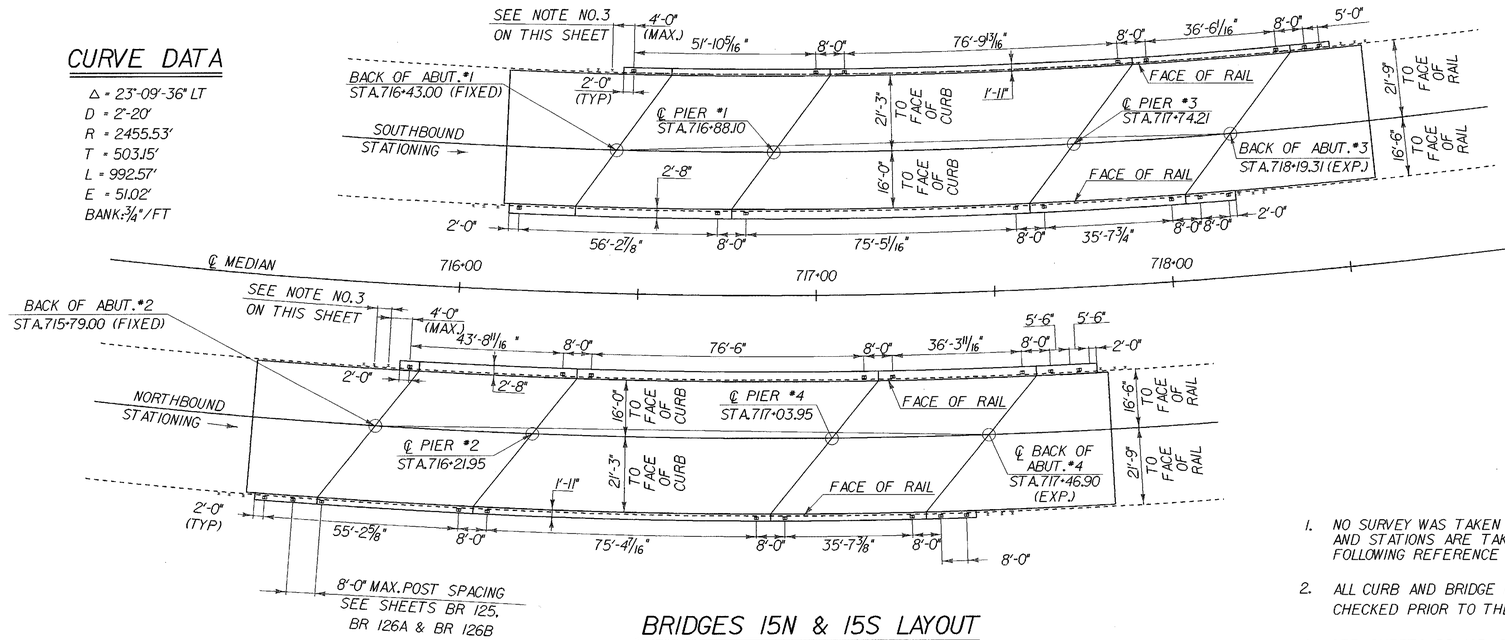
Bridge Sheet No. BR 115 Sheet 72 of 260

CURVE DATA

Δ = 23°-09'-36" LT
D = 2°-20'
R = 2455.53'
T = 503.15'
L = 992.57'
E = 51.02'
BANK: 3/4"/FT



BRIDGES 15N & 15S LAYOUT

SCALE: 1" = 20'-0"

NOTES

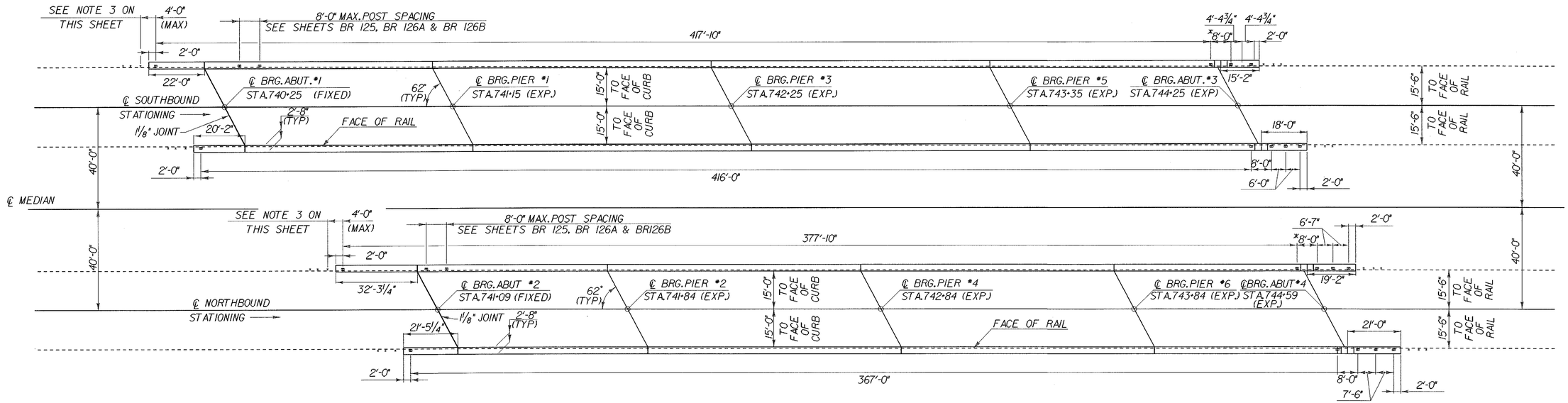
1. NO SURVEY WAS TAKEN ON THIS PROJECT. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE TAKEN OFF THE ORIGINAL PLANS. SEE THE FOLLOWING REFERENCE SHEETS BR 146 TO BR 148.
2. ALL CURB AND BRIDGE RAIL DIMENSIONS AND RADII SHOULD BE FIELD CHECKED PRIOR TO THE SUBMITTAL OF THE BRIDGE RAIL SHOP DRAWINGS.
3. SEE SHEETS BR 125, BR 126A AND BR 126B FOR GUARD RAIL END TREATMENT AND POST SPACING.
4. SEE SHEET BR 124 FOR THE DETAILS AT A VERTICAL PLATE EXPANSION JOINT.
5. THE "FASCIA SIDE" (LT OR RT) IS GIVEN WITH RESPECT TO STATIONING.

BRIDGE #	FASCIA SIDE	PAY LENGTH FOR NETC RAIL (FT) & BRIDGE CURB LENGTH (FT)
15N	LT	195'-6 3/8"
	RT	202'-2 1/16"
15S	LT	198'-2 1/16"
	RT	203'-3 11/16"

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 15N & 15S
Highway No. 189	Log Sta.
	Surv. Sta.
LAYOUT BRIDGES 15 (MM 13.4) NORTHBOUND & 15 (MM13.4) SOUTHBOUND OVER VT. ROUTE 132	
Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/96	Bridge Design Supervisor G.S. ROGERS Date 11/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G. C:\Wrafts.cadd\Fillingcabinets\87a008\Structures\sa008nul.dgn sa008bl5J	
Bridge Sheet No. BR 116	Sheet 73 of 260



BRIDGES 16N & 16S LAYOUT

SCALE: 1" = 20'-0"

NOTES

1. NO SURVEY WAS TAKEN ON THIS PROJECT. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE TAKEN OFF THE ORIGINAL PLANS. SEE THE FOLLOWING REFERENCE SHEETS BR 149 TO BR 153.
2. ALL CURB AND BRIDGE RAIL DIMENSIONS SHOULD BE FIELD CHECKED PRIOR TO THE SUBMITTAL OF THE BRIDGE RAIL SHOP DRAWINGS.
3. SEE SHEETS BR 125, BR 126A & BR 126B FOR GUARD RAIL END TREATMENT AND POST SPACING.
4. SEE SHEET BR 123 FOR THE DETAILS AT A FINGER PLATE EXPANSION JOINT.
5. THE "FASCIA SIDE" (LT OR RT) IS GIVEN WITH RESPECT TO STATIONING.

BRIDGE #	FASCIA SIDE	PAY LENGTH FOR NETC RAIL (FT) & BRIDGE CURB LENGTH (FT)
16N	LT	403'
	RT	394'
16S	LT	439'
	RT	440'

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 16N & 16S
Highway No. 189	Log Sta. / Surv. Sta.

BRIDGES 16 (MM 13.9) NORTHBOUND & 16 (MM 13.9) SOUTHBOUND OVER T.H. 17 AND FAY BROOK

Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/96	Bridge Design Supervisor G.S. ROGERS Date 11/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

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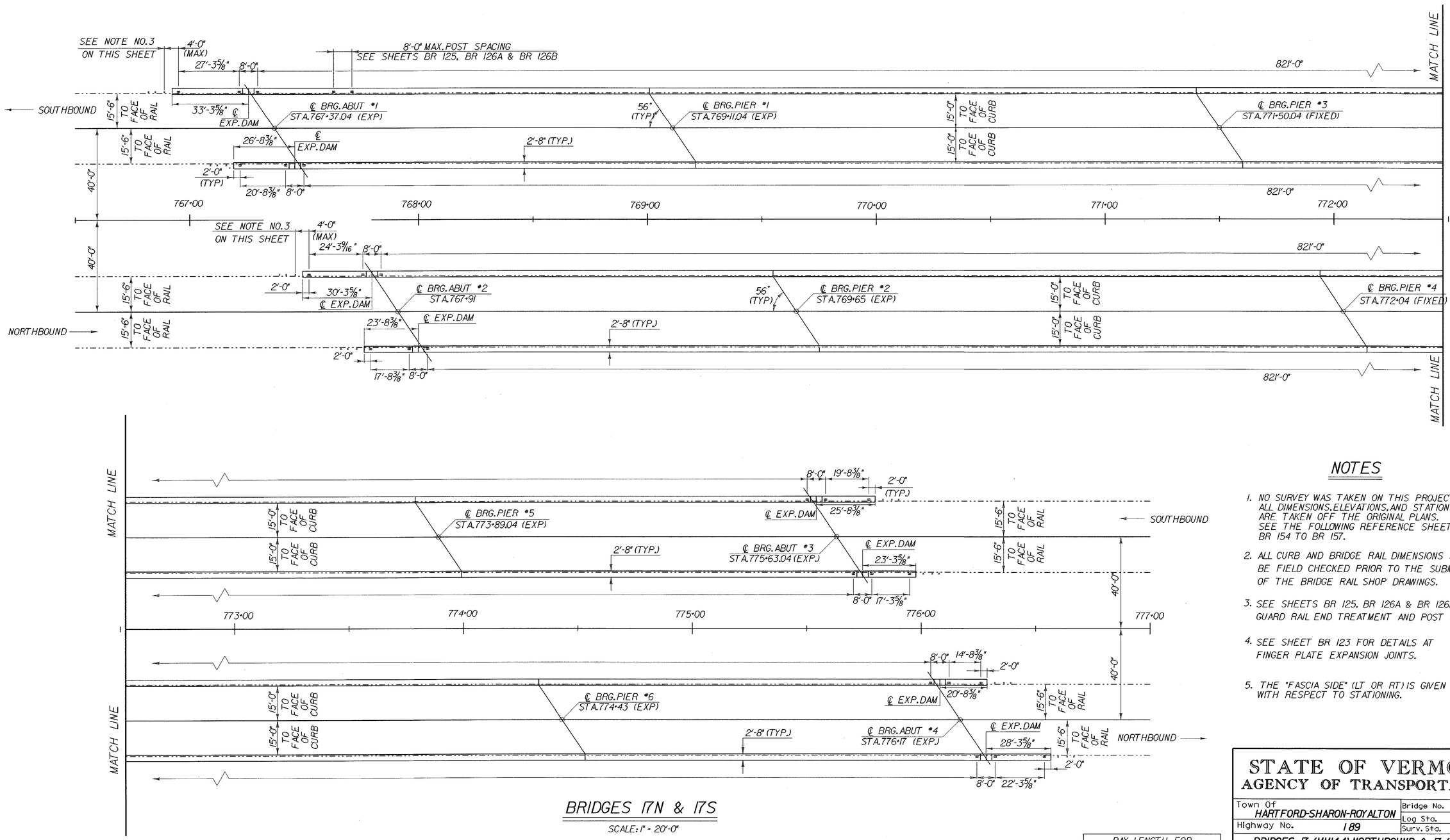
Bridge Sheet No. BR 117 Sheet 74 of 260



BRIDGES 17N & 17S

SCALE: 1" = 20'-0"

NOTES

1. NO SURVEY WAS TAKEN ON THIS PROJECT. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE TAKEN OFF THE ORIGINAL PLANS. SEE THE FOLLOWING REFERENCE SHEETS BR 154 TO BR 157.
2. ALL CURB AND BRIDGE RAIL DIMENSIONS SHOULD BE FIELD CHECKED PRIOR TO THE SUBMITTAL OF THE BRIDGE RAIL SHOP DRAWINGS.
3. SEE SHEETS BR 125, BR 126A & BR 126B FOR GUARD RAIL END TREATMENT AND POST SPACING.
4. SEE SHEET BR 123 FOR DETAILS AT FINGER PLATE EXPANSION JOINTS.
5. THE "FASCIA SIDE" (LT OR RT) IS GIVEN WITH RESPECT TO STATIONING.

BRIDGE #	FASCIA SIDE	PAY LENGTH FOR NETC RAIL (FT) & BRIDGE CURB LENGTH (FT)
17N	LT	880'-0"
	RT	881'-0"
17S	LT	888'-0"
	RT	879'-0"

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 17N & 17S
Highway No. 189	Log Sta. / Surv. Sta.

BRIDGES 17 (MM14.4) NORTHBOUND & 17 (MM14.4) SOUTHBOUND OVER VT. ROUTE 14 AND WHITE RIVER

Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/96	Bridge Design Supervisor G.S. ROGERS Date 11/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 189-1(8)

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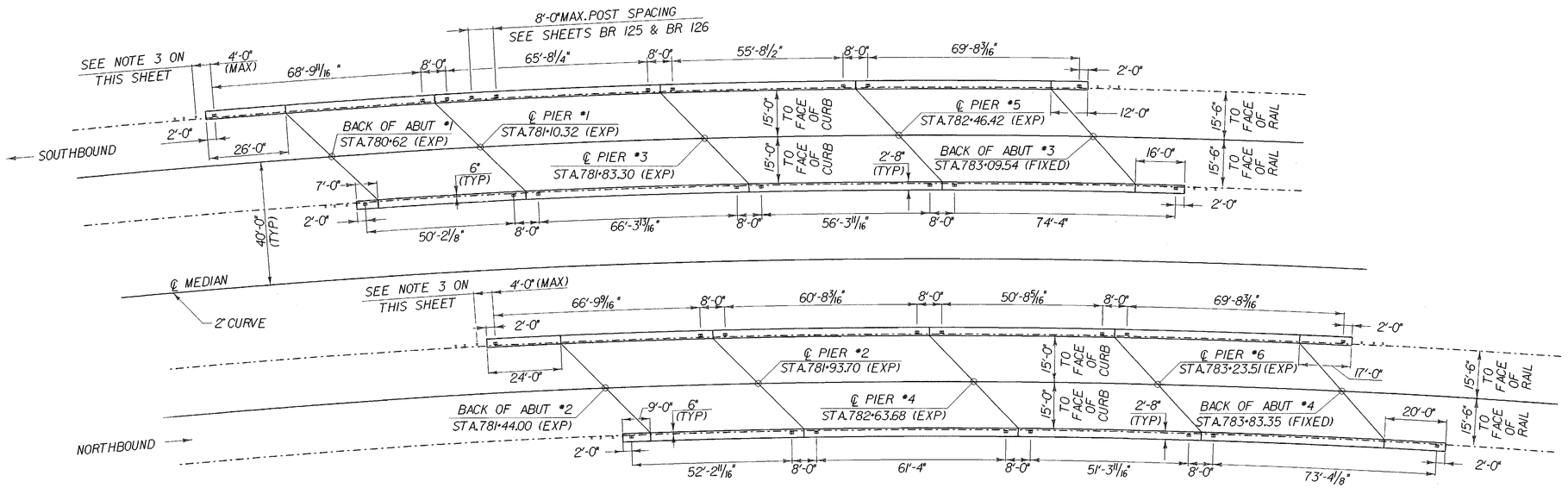
Bridge Sheet No. BR 118 Sheet 75 of 260



MEDIAN CURVE DATA

Δ = 31°-59'-57" RT
D = 2°
R = 2864.79'
T = 821.44'
L = 1599.96'
E = 115.45
BANK: 5/8"/FT

BRIDGES 18N & 18S

SCALE: 1" = 20'-0"

NOTES

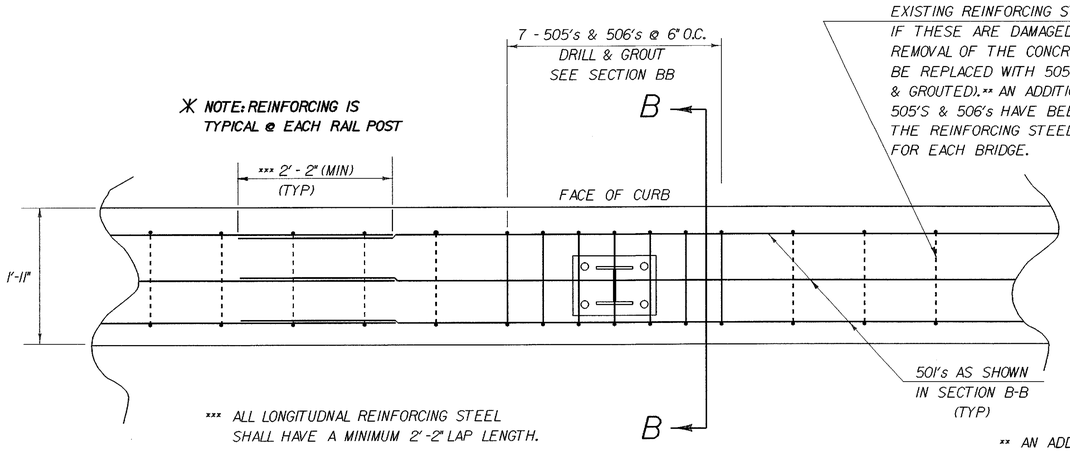
1. NO SURVEY WAS TAKEN ON THIS PROJECT. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE TAKEN OFF THE ORIGINAL PLANS. SEE THE FOLLOWING REFERENCE SHEETS BR 158 TO BR 162.
2. ALL CURB AND BRIDGE RAIL DIMENSIONS AND RADII SHOULD BE FIELD CHECKED PRIOR TO THE SUBMITTAL OF THE BRIDGE RAIL SHOP DRAWINGS.
3. SEE SHEETS BR 125, BR 126A & BR 126B FOR GUARD RAIL END TREATMENT AND POST SPACING.
4. SEE SHEET BR 124 FOR THE DETAILS AT A VERTICAL PLATE EXPANSION JOINT.
5. THE "FASCIA SIDE" (LT OR RT) IS GIVEN WITH RESPECT TO STATIONING.

BRIDGE #	FASCIA SIDE	PAY LENGTH FOR NETC RAIL (FT) & BRIDGE CURB LENGTH (FT)
18N	LT	275'-10 1/4"
	RT	266'-2 1/2"
18S	LT	287'-10 5/8"
	RT	275'-1 3/4"

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 18N & 18S
Highway No. I 89	Log Sta.
	Surv. Sta.
BRIDGES 18 (MM 15.1) NORTHBOUND & 18 (MM 15.1) SOUTHBOUND OVER T.H. 3 AND N.E.C.R.	
Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/96	Bridge Design Supervisor G.S. ROGERS Date 11/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vtfile\cadd\Tiingcabinet$\87a008\Structures\sa008nul.dgn sa008bl8j	
Bridge Sheet No. BR 119	Sheet 76 of 260

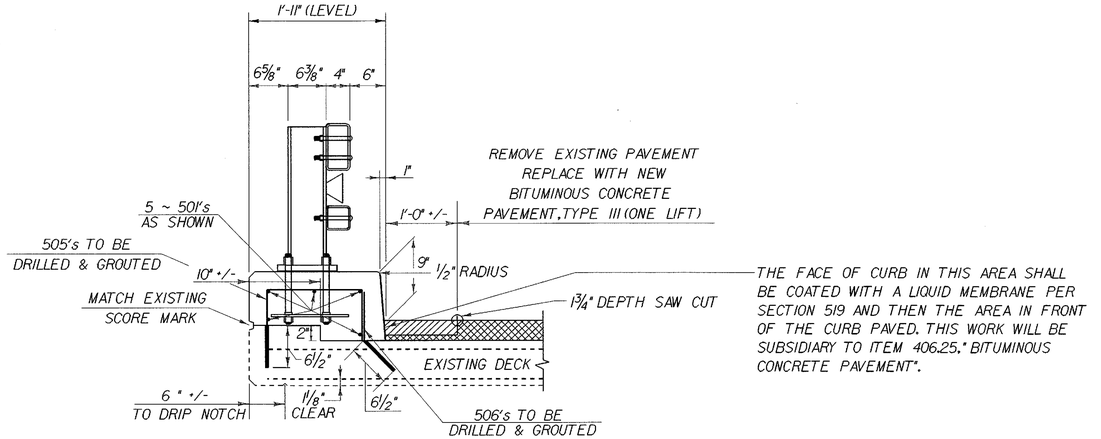


*** ALL LONGITUDNAL REINFORCING STEEL SHALL HAVE A MINIMUM 2'-2" LAP LENGTH.

POST ANCHOR REINFORCING (1'-11" CURB)

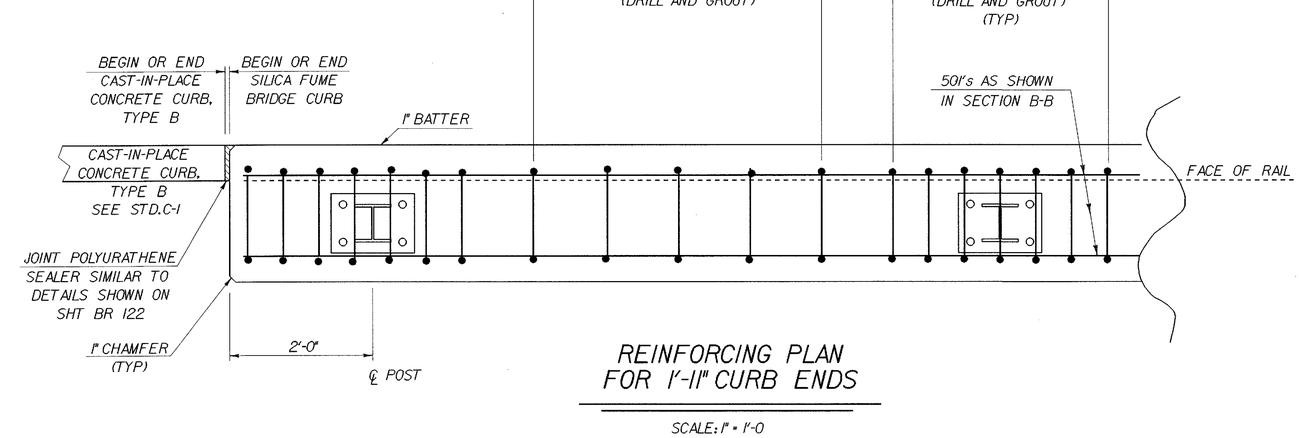
SCALE: 1" = 1'-0"

** AN ADDITIONAL QUANTITY OF "DRILLING AND GROUTING DOWELS HAS BEEN INCLUDED IN THIS QUANTITY FOR EACH BRIDGE.



SECTION B-B

SCALE: 1"=1'-0"



REINFORCING PLAN FOR 1'-11" CURB ENDS

SCALE: 1" = 1'-0

* THE EXISTING REINFORCING STIRRUPS SHALL ALL BE REPLACED IN THE CURBS AT EACH CORNER OF EACH BRIDGE. THE 505'S & 506'S SHALL BE DRILLED AND GROUTED A MINIMUM OF 9" INTO THE EXISTING WINGWALLS OR APPROACH SLABS.

NOTES:

1. AREAS OF THE EXISTING WINGWALL OR APPROACH SLABS THAT BECOME EXPOSED AS A RESULT OF THE CONSTRUCTION OF THE NEW CURB END TREATMENTS WILL BE COATED WITH A LIQUID MEMBRANE PER SECTION 519 AND THEN PAVED.
2. ALL EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED CLEAN. THE EXISTING CONCRETE AND ALL REINFORCING STEEL SHALL BE THOROUGHLY WETTED AND THE CONCRETE COATED WITH NEAT CEMENT GROUT APPLIED AS PER SUBSECTION 501.13(b) OF THE STANDARD SPECIFICATIONS. PAYMENT FOR THE WORK WILL BE SUBSIDIARY TO ITEM 501.60, "SILCA FUME CONCRETE".
3. REINFORCING STEEL SHALL HAVE 3" CLEAR COVER EVERYWHERE UNLESS OTHERWISE NOTED.
4. BRIDGES WITH 1'-11" CURB INCLUDE BR 6NB (RT), 6SB (LT), 15NB (RT), AND 15SB (LT) (LT AND RT ARE WITH RESPECT TO STATIONING)

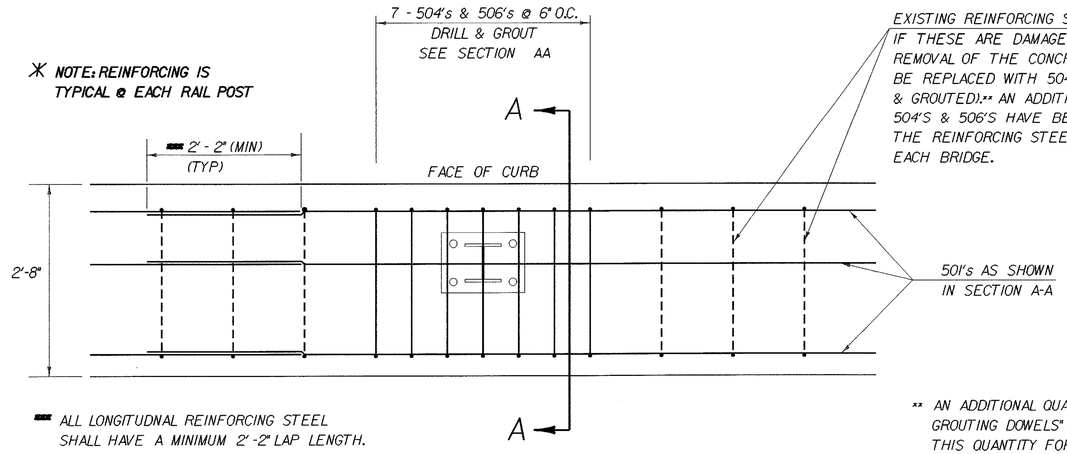
PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

NEW CURB DETAILS FOR 1'-11" CURB

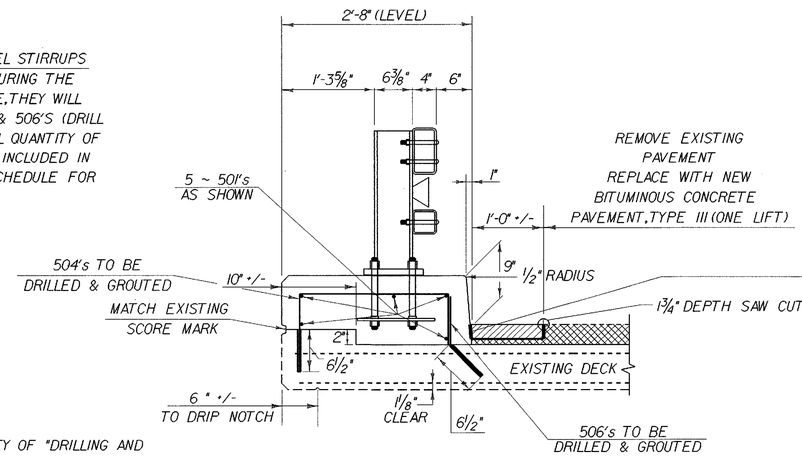
Designed By C. MEUNIER	Drawn By M.PELOQUIN
Checked By C.MEUNIER Date 11/98	Bridge Design Supervisor G. S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vdot\...\sa008d11.dgn sa008cel1	
Bridge Sheet No. BR 120	Sheet 77 of 260



EXISTING REINFORCING STEEL STIRRUPS IF THESE ARE DAMAGED DURING THE REMOVAL OF THE CONCRETE, THEY WILL BE REPLACED WITH 504'S & 506'S (DRILL & GROUTED).** AN ADDITIONAL QUANTITY OF 504'S & 506'S HAVE BEEN INCLUDED IN THE REINFORCING STEEL SCHEDULE FOR EACH BRIDGE.

POST ANCHOR REINFORCING (2'-8" CURB)

SCALE: 1" = 1'-0"

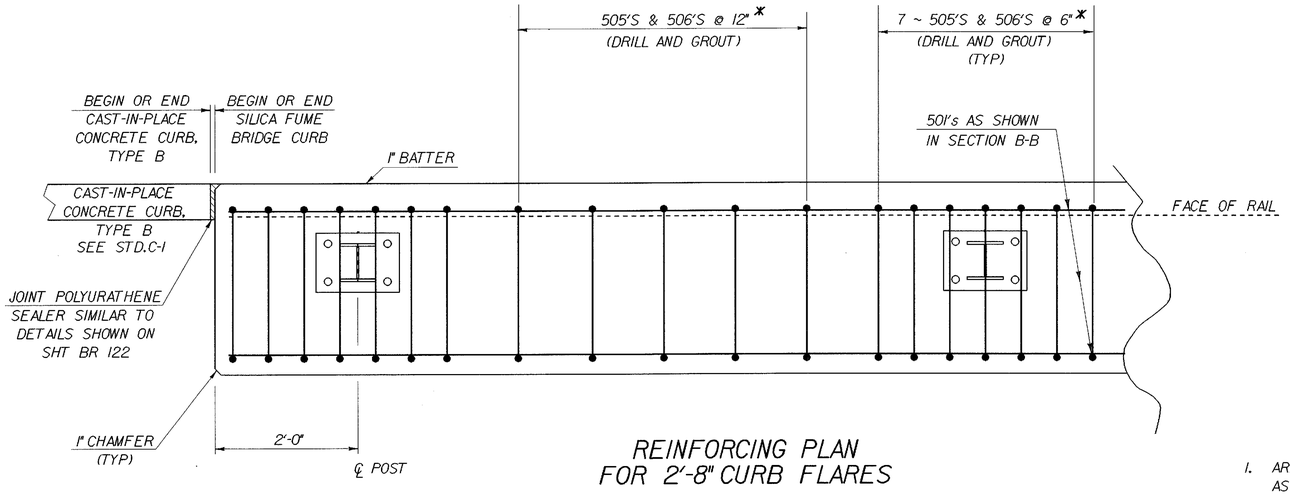


THE FACE OF CURB IN THIS AREA SHALL BE COATED WITH A LIQUID MEMBRANE PER SECTION 519 AND THEN THE AREA IN FRONT OF THE CURB PAVED. THIS WORK WILL BE SUBSIDIARY TO ITEM 406.25, "BITUMINOUS CONCRETE PAVEMENT".

SECTION A-A

SCALE: 1"=1'-0"

** AN ADDITIONAL QUANTITY OF "DRILLING AND GROUTING DOWELS" HAS BEEN INCLUDED IN THIS QUANTITY FOR EACH BRIDGE.



REINFORCING PLAN FOR 2'-8" CURB FLARES

SCALE: 1" = 1'-0

* THE EXISTING REINFORCING STIRRUPS SHALL ALL BE REPLACED IN THE CURB AT EACH CORNER OF EACH BRIDGE. THE 504'S & 506'S SHALL BE DRILLED AND GROUTED A MINIMUM OF 9" INTO THE EXISTING WINGWALLS OR APPROACH SLABS.

NOTES:

1. AREAS OF THE EXISTING WINGWALL OR APPROACH SLABS THAT BECOME EXPOSED AS A RESULT OF THE CONSTRUCTION OF THE NEW CURB END TREATMENTS WILL BE COATED WITH A LIQUID MEMBRANE PER SECTION 519 AND THEN PAVED.
2. ALL EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED CLEAN. THE EXISTING CONCRETE AND ALL REINFORCING STEEL SHALL BE THOROUGHLY WETTED AND THE CONCRETE COATED WITH NEAT CEMENT GROUT APPLIED AS PER SUBSECTION 501.13(b) OF THE STANDARD SPECIFICATIONS. PAYMENT FOR THE WORK WILL BE SUBSIDIARY TO ITEM 501.60, "SILCA FUME CONCRETE".
3. REINFORCING STEEL SHALL HAVE 3" CLEAR COVER EVERYWHERE UNLESS OTHERWISE NOTED.
4. BRIDGES WITH 2'-8" CURB INCLUDE BR 6NB (LT), 6SB (RT), 8, 15NB (LT), 15SB (RT), 16NB, 16SB, 17NB, 17SB, 18NB, AND 18SB (LT AND RT ARE WITH RESPECT TO STATIONING)

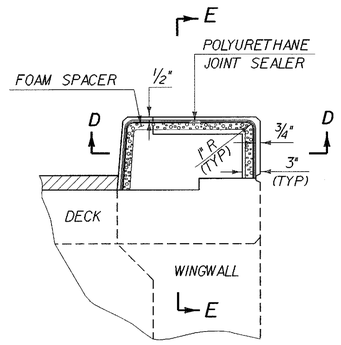
PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

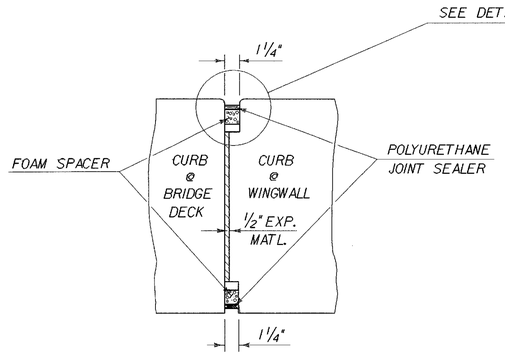
Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

NEW CURB DETAILS FOR 2'-8" CURB

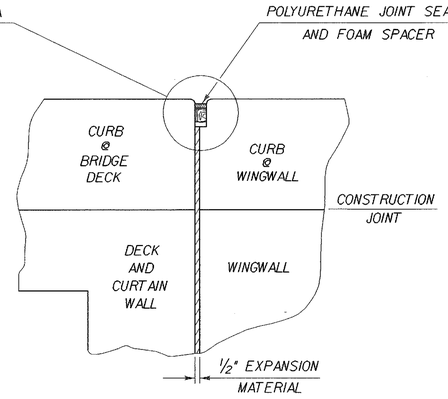
Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G. S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vtfs6...\cadd\Illingcabinets\97a008\Structures\sa008dt11.dgn	sa008ce21
Bridge Sheet No. BR 121	Sheet 78 of 260



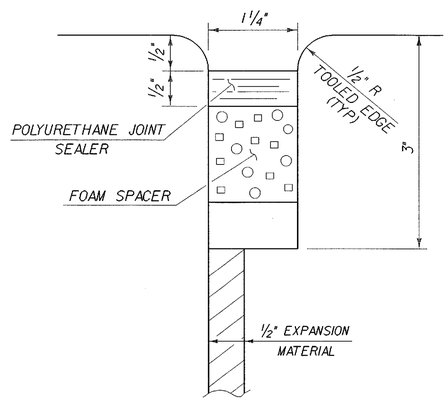
TYPICAL SECTION THROUGH CURB JOINT AT FIXED END OF BRIDGE BETWEEN END OF BRIDGE AND LONGITUDINAL WINGWALL



SECTION D - D

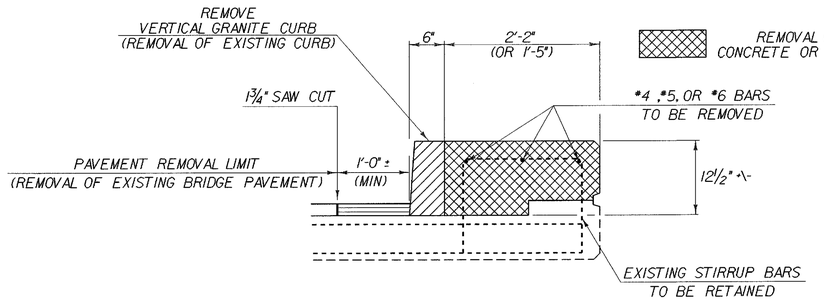


SECTION E - E



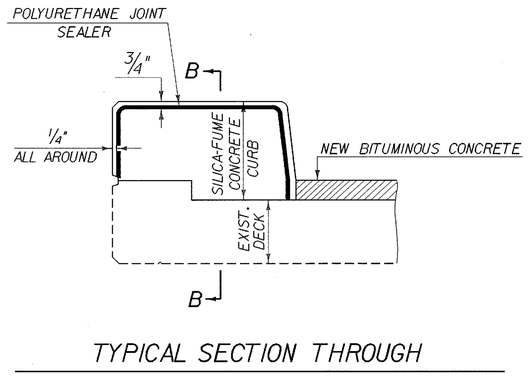
DETAIL "A"

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

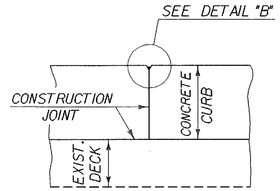


EXISTING CURB REMOVAL DETAIL ON BRIDGE

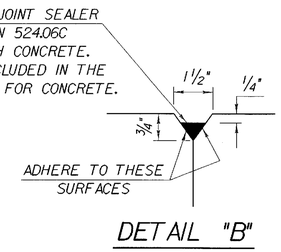
SCALE: 1" = 1'-0"



TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT



SECTION B - B



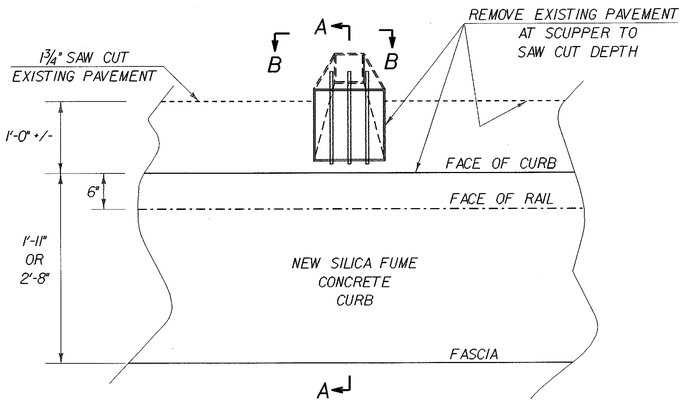
DETAIL "B"

NOTES:

1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER AND SHALL BE 1'-0" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.

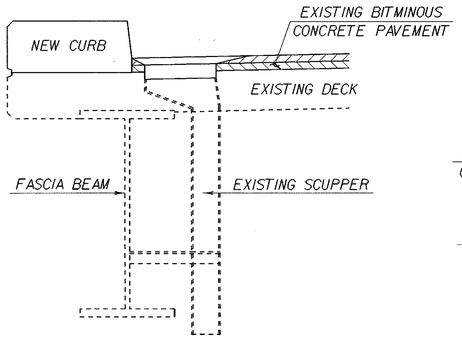
EXISTING SCUPPER DETAILS AND NOTES

THE CONTRACTOR WILL USE CARE WHEN ENCOUNTERING SCUPPERS. THE CONTRACTOR SHALL REMOVE THE EXISTING PAVEMENT AS SHOWN ON THE CURB DETAIL SHEETS. WHEN THE CONTRACTOR REPAVES THE 1'-0" ± STRIP OF PAVEMENT AT THE FACE OF CURB, THE CONTRACTOR WILL NEED TO INSURE THAT THE PAVEMENT AT THE SCUPPERS TAPERS TO INSURE THAT THE WATER WILL DRAIN TO THE SCUPPERS. THIS WORK WILL BE SUBSIDIARY TO ITEM 406.25, "BITUMINOUS CONCRETE PAVEMENT".



EXISTING SCUPPER PLAN VIEW

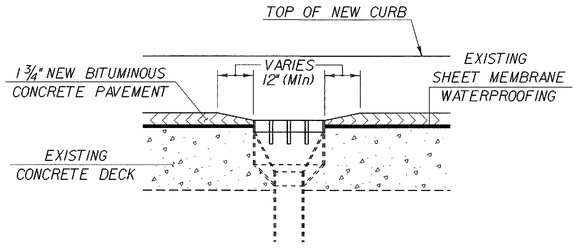
SCALE: 1" = 1'-0"



SECTION A - A

SCALE: 1" = 1'-0"

* FOR ADDITIONAL DETAILS, SEE REFERENCE SHEET BR 168 (DETAIL "A")



SECTION B - B

N.T.S.

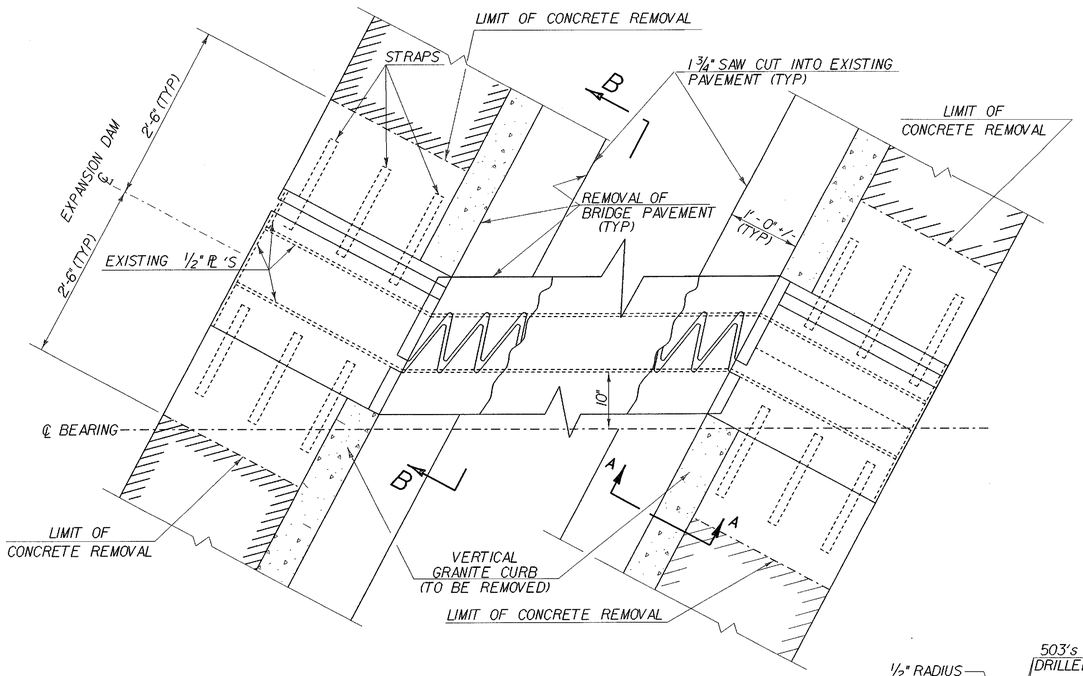
PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

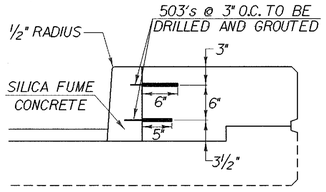
CURB DETAILS

Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 2/95	Bridge Design Supervisor G. S. ROGERS Date 2/95
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. (c)/e#_cadd\Filingcabinet\$\BTa008\Structures\sca008dt1.dgn sca008ce31	
Bridge Sheet No. BR 122	Sheet 79 of 260



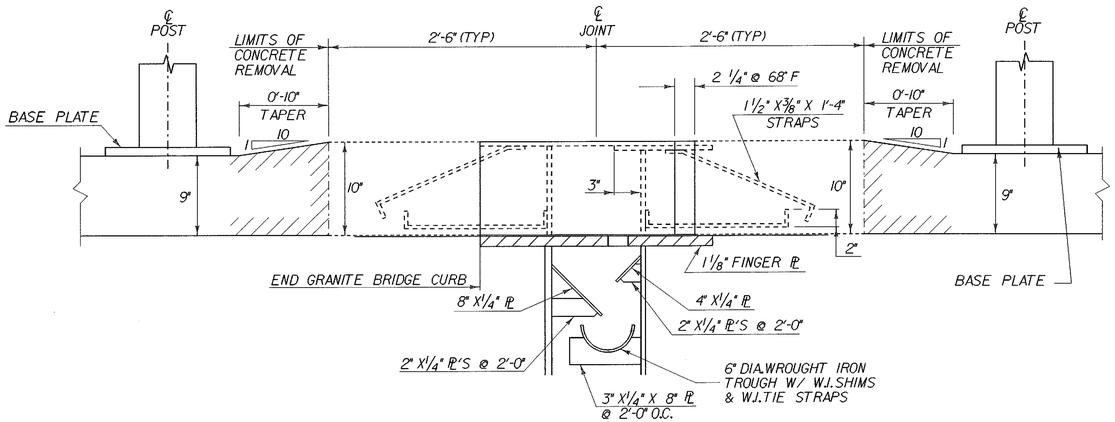
FINGER PLATE DETAIL

SCALE: 1" = 1'-0"



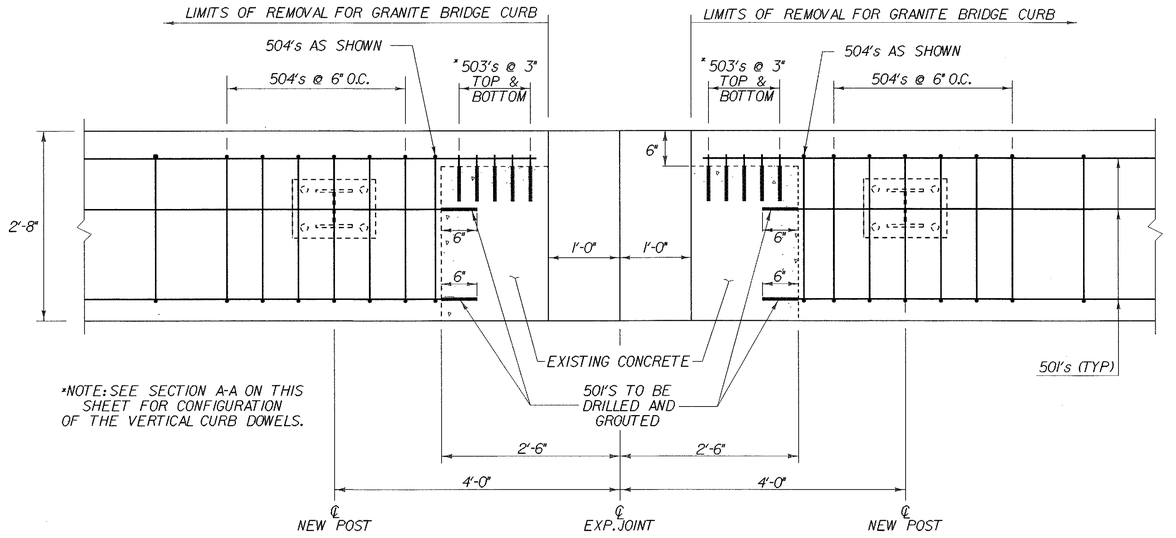
SECTION A-A

NO SCALE



SECTION B-B

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



*NOTE: SEE SECTION A-A ON THIS SHEET FOR CONFIGURATION OF THE VERTICAL CURB DOWELS.

DETAIL OF REINFORCING FOR NETC RAIL POSTS AT THE FINGER PLATE EXPANSION JOINTS

SCALE: 1"=1'-0"

DETAIL OF POST SPACING FOR FINGER PLATE EXPANSION JOINT

SCALE: 1"=1'-0"

NOTES

1. ALL OF THE EXISTING CURB CONCRETE DOWN TO THE SCOREMARK WILL BE REMOVED TO WITHIN 2'-6" OF THE CENTERLINE OF THE FINGER PLATE JOINT.
2. ALL OF THE VERTICAL GRANITE CURB ON THE BRIDGES WILL BE REMOVED AND REPLACED WITH SILICA FUME CONCRETE.
3. IN THE AREAS WHERE THE VERTICAL CURB IS REMOVED BEYOND THE LIMITS OF THE CONCRETE REMOVAL, THE VERTICAL GRANITE CURB WILL BE REPLACED WITH SILICA FUME CONCRETE. SEE SECTION A-A ON THIS SHEET FOR DETAILS.
4. CARE WILL BE TAKEN IN THE AREAS OF THE FINGER PLATE EXPANSION TO ENSURE THAT NO DAMAGE IS DONE TO THE FINGER PLATE EXPANSION DEVICE OR THE STRAPS THAT ANCHOR THE DEVICE.
5. SEE REFERENCE SHEETS BR 153 (BRIDGE 16) AND SHEET BR 157 (BRIDGE 17) FOR ADDITIONAL DETAILS.
6. IF THERE IS CONCRETE SPALLING OF THE CURB AND/OR DECK AREA AT THE FINGER PLATE EXPANSION JOINT THEN ALL CONCRETE WILL BE REMOVED TO THE CURB PLATE AND REPLACED WITH ITEM 501.60 "SILICA FUME CONCRETE". THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE POSITION OF THE EXPANSION JOINT PLATES IN THE CURB AS DIRECTED BY THE ENGINEER IN THE FIELD.

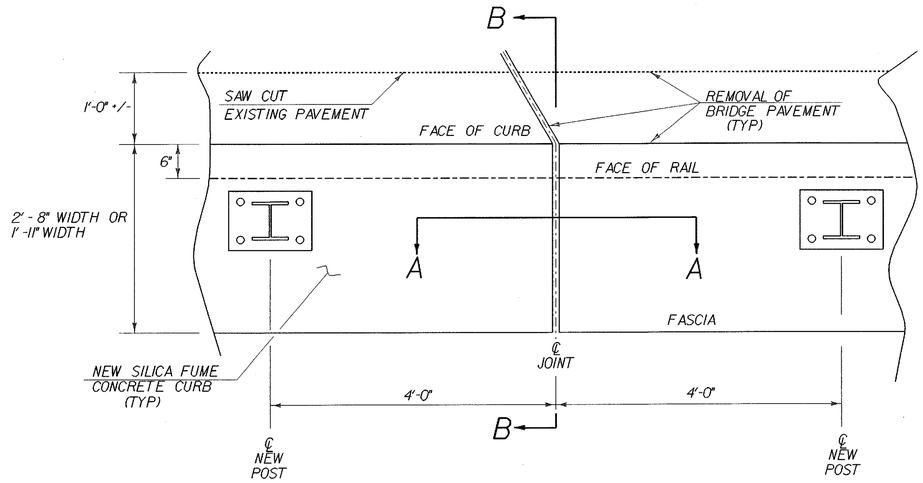
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 16N&S AND 17N&S
Highway No. 189	Log Sta. / Surv. Sta.

FINGER PLATE EXPANSION JOINT DETAILS
BRIDGES 16 N & S AND 17 N &S

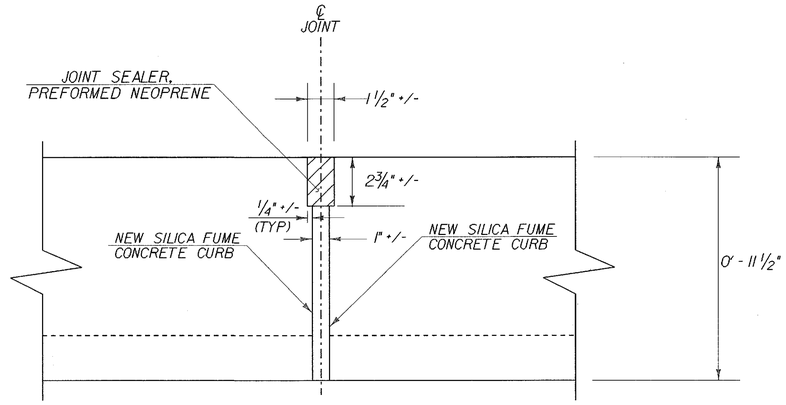
Designed By C. MEUNIER	Drawn By STRI
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G.S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

I.C.C. No. c:\projects\...\sa0008dtl.dgn sa0008fpl.j
Bridge Sheet No. BR 123 Sheet 80 of 260



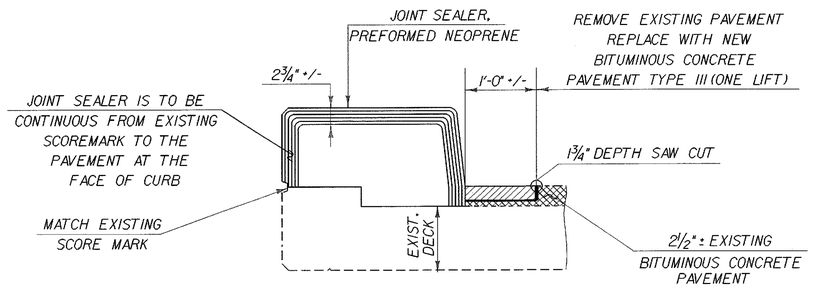
DETAIL FOR POST SPACING AT A VERTICAL PLATE EXPANSION JOINT

SCALE: 1"=1'-0"



SECTION A-A

SCALE: 1"= 3'-0"



SECTION B-B

NTS

NOTES

1. ALL CONCRETE SHALL BE REMOVED UP TO THE VERTICAL PLATES ON EITHER SIDE OF THE EXPANSION JOINT.
2. THE NEW POSTS WILL BE SPACED SO THAT THE CENTERLINE OF THE POST IS 4'-0" FROM THE CENTERLINE OF THE JOINT ON EITHER SIDE OF THE EXPANSION JOINT.
3. THE EXISTING JOINT SEALER MATERIAL WILL BE REPLACED WITH PREFORMED NEOPRENE. THIS WILL BE PAID FOR WITH ITEM 524.15, "JOINT SEALER, PREFORMED NEOPRENE".
4. THE DETAILS SHOWN ON THIS SHEET ARE DETAILED FOR A JOINT OPENING OF 1 1/2" OPENING. THE SIZE OF THE JOINT SEALER, PREFORMED NEOPRENE SHALL BE (1 1/2 TO 1 3/4 X THE WIDTH) OF THE JOINT OPENING.
5. BRIDGES WITH VERTICAL PLATE JOINTS INCLUDE BR 8, 6NB, 6SB, 15NB, 15SB, AND 18NB & 18SB
6. SEE REFERENCE SHEETS BR 163 TO BR 167 FOR ADDITIONAL DETAILS.

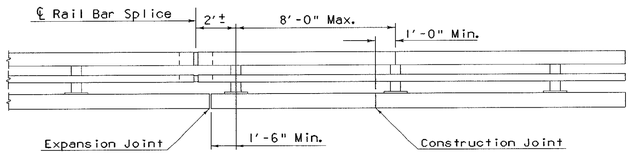
PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

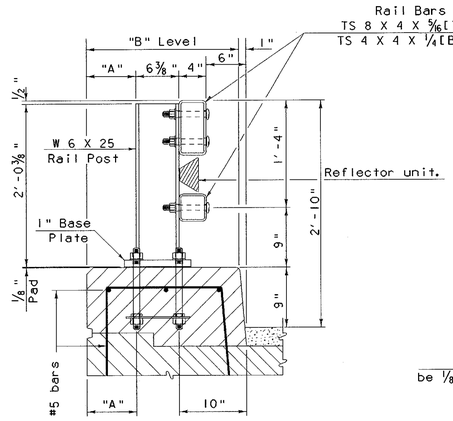
Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 8,6NB,6SB,15NB,15SB,18NB,18SB
Highway No. I-89	Log Sta.
	Surv. Sta.

CURB DETAILS AT VERTICAL PLATE JOINTS

Designed By C. MEUNIER	Drawn By M. PELOQUIN
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G. S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vtdfs\...\caddv7\illngcabinet$\87a008\Structures\sa008d11.dgn sa008vpj1	
Bridge Sheet No. BR 124	Sheet 81 of 260

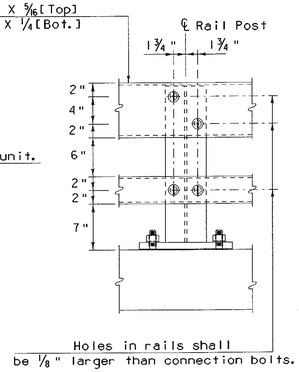


BRIDGE RAILING ELEVATION

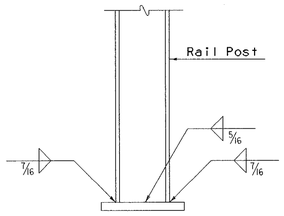


TYPICAL SECTION

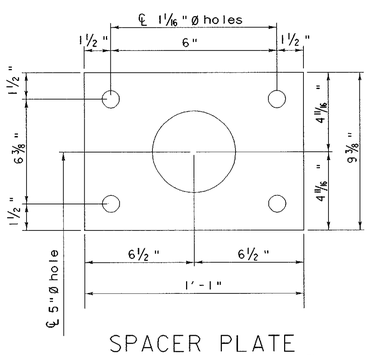
DIMENSION INDEX		
CURB WIDTH	"A"	"B"
1'-11"	6 5/8"	1'-10"
2'-8"	1'-3 5/8"	2'-7"



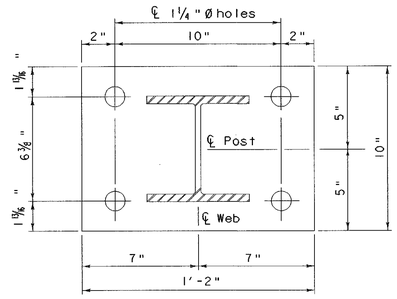
ELEVATION



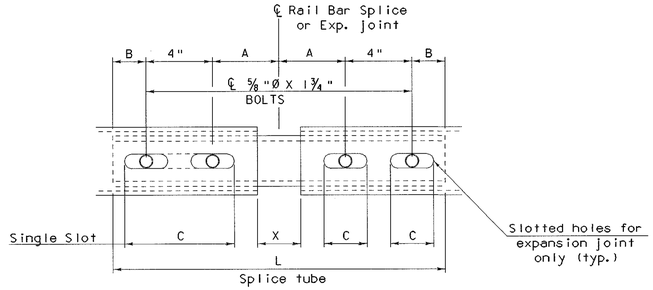
BASE WELD DETAIL



SPACER PLATE



POST & BASE PLATE

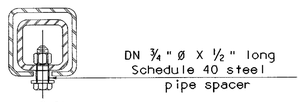


RAIL BAR SPLICE & EXP. JOINT DETAIL

[Bottom View]

SPLICE & EXPANSION JOINT TABLE					
T	A	B	C	L	X
Splice	4"	2"	--	20"	3/4"
≤4"	4"	2"	2 1/2"	20"	2 1/2"
>4" ≤ 6 1/2"	5 1/2"	2 3/8"	3 1/2"	23 3/4"	4"
>6 1/2" ≤ 9"	6 1/2"	3 3/8"	9"*	27 3/4"	5"
>9" ≤ 13"	8 1/2"	4 3/8"	11"*	33 3/4"	7"

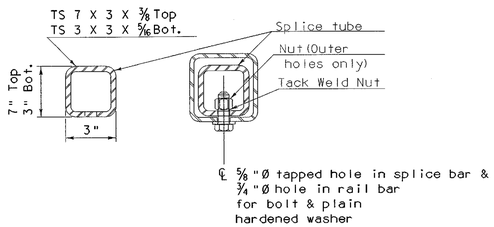
T = Total Movement * = Single Slot



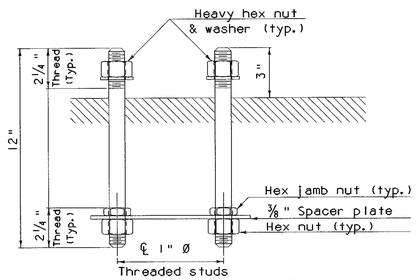
℄ 5/8" Ø tapped hole in splice bar &
1 1/8" X "C" slot in rail bar
for bolt & plain
hardened washer

EXPANSION JOINT SECTION

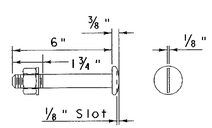
For details not shown, see
"Rail Bar Splice Section"



RAIL BAR SPLICE SECTION



RAIL POST ANCHORAGE



3/4" Ø M164 (TYPE I) ROUND HEAD BOLT

[with washer & prevailing
torque type lock nut]
[See Note No. 9]

Only full diameter body
bolts will be allowed.

EXPANSION TABLE "T" (in.)

BRIDGE NO.	SPAN 1	SPAN 2	SPAN 3	SPAN 4	
6 NORTHBOUND	1/2"	1"	5/8"	——	(SIMPLE SPANS)
6 SOUTHBOUND	1/2"	1 1/8"	5/8"	——	(SIMPLE SPANS)
8	3/4"	1 3/16"	1 1/8"	5/8"	(SIMPLE SPANS)
15 NORTHBOUND	1/2"	1"	1/2"	——	(SIMPLE SPANS)
15 SOUTHBOUND	1/2"	1"	1/2"	——	(SIMPLE SPANS)
16 NORTHBOUND	4 1/8"				(CONTINUOUS)
16 SOUTHBOUND	4 11/16"				(CONTINUOUS)
17 NORTHBOUND	4 7/8"		4 7/8"		(CONTINUOUS)
17 SOUTHBOUND	4 7/8"		4 7/8"		(CONTINUOUS)
18 NORTHBOUND	5/8"	11/16"	11/16"	11/16"	(SIMPLE SPANS)
18 SOUTHBOUND	5/8"	7/8"	3/4"	3/4"	(SIMPLE SPANS)

NOTES

1. All work and materials shall conform to the provisions of Section 525 - Railings of the Standard Specifications for Construction.

2. Tubing and posts shall meet the requirements of Section 732 - Railing materials of the Standard Specifications for Construction.

3. All exposed cut or sheared edges shall be rounded to a 1/16" radius and be free of burrs.

4. Rail posts shall be set normal to grade.

5. Sections of rail bar shall be attached to a minimum of two [2] rail posts and preferably to at least four [4] posts.

6. Rail bar expansion joints shall be provided in any rail bay spanning a superstructure expansion joint. Expansion joint width shall be "X" at 45 °F and will be adjusted in the field by the Engineer.

7. All parts shall be galvanized after fabrication in accordance with AASHTO M111, except that hardware shall meet the requirements of AASHTO M232.

8. Rail posts anchoring nuts shall be tightened to a snug fit and given an additional 1/8 turn.

9. Rail bars shall be attached using 3/4" full diameter body AASHTO M164 (Type I) round head bolts inserted through the face of the bar. Holes in posts shall be 1/16" larger than the bolt size.

10. Holes in rails for rail bar attachment may be field - drilled. Holes shall be coated with an approved zinc - rich paint prior to erection.

11. Any bending of rail shall be by shop procedure only.

12. The Fabricator shall submit Shop drawings, including welding procedures to the Structures Section for approval in accordance with the provisions of Section 506.04 - Shop Drawings. All welding shall conform with Section 506.10.

13. The drop-weight tear test in section 732 shall not apply to the structural tubing on this sheet.

14. Rail posts and base plates shall be tested for impact properties in accordance w/ ASTM A370 CHARPY IMPACT TESTING using a Type A Specimen.

MATERIALS

Rail bars.....ASTM A500, Grade B or ASTM A501
Rail posts & base plate.....ASTM A709/A709M, Grade 50
All other shapes & plates.....ASTM A709/A709M, Grade 36
Anchor studs.....ASTM A449
All other bolts [unless noted].....AASHTO M164, Type 1

Nuts for AASHTO M164 shall comply with AASHTO M291.
Nuts for anchor studs shall comply w/ ASTM A563.

Washers shall comply with AASHTO M293 (ASTM F436) specification.

1/8" pad shall comply with standard specification subsection 731.01 or 731.02.

SET SCREWS FOR DELINEATION DEVICES SHALL CONFORM TO ASTM SPECIFICATION F880, CONDITION CW, ALLOY TYPE 304.

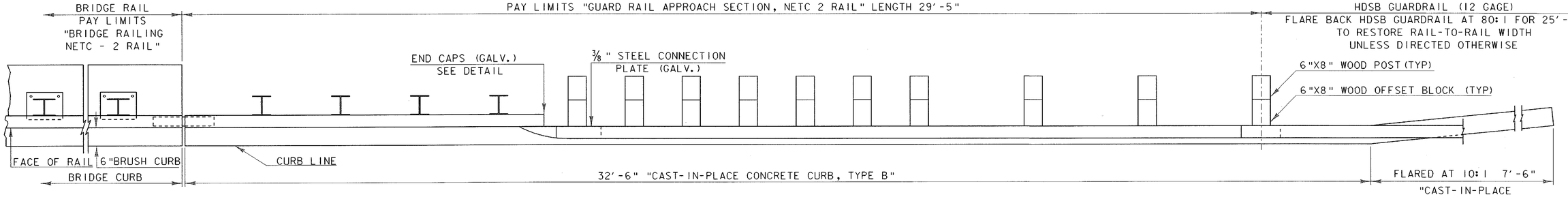
PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.

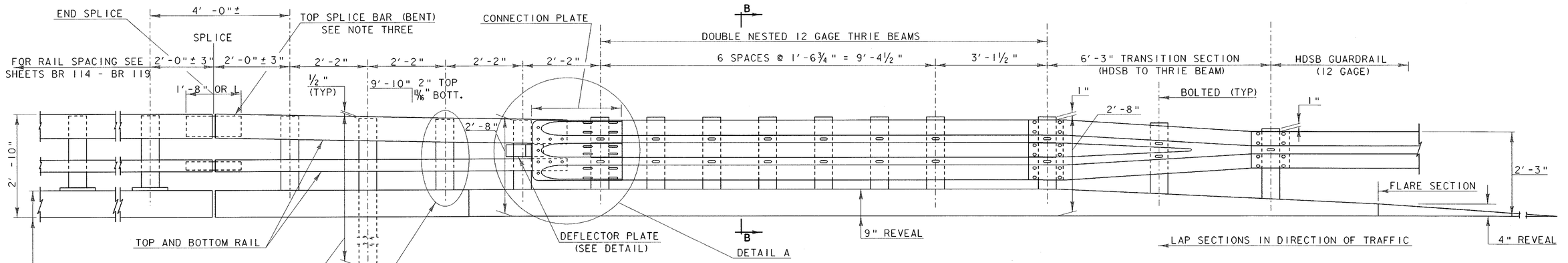
N.E.T.C. BRIDGE RAIL DETAILS

Designed By C. MEUNIER	Drawn By VAOT
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G. S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vtfss...cadd\V11\ngcabinets\67a008\Structures\sa008dt1.dgn sa008rd11	
Bridge Sheet No. BR 125	Sheet 82 of 260



PLAN VIEW - APPROACH RAIL

SCALE 3/4" = 1'-0



ELEVATION VIEW - APPROACH RAIL

SCALE 3/4" = 1'-0

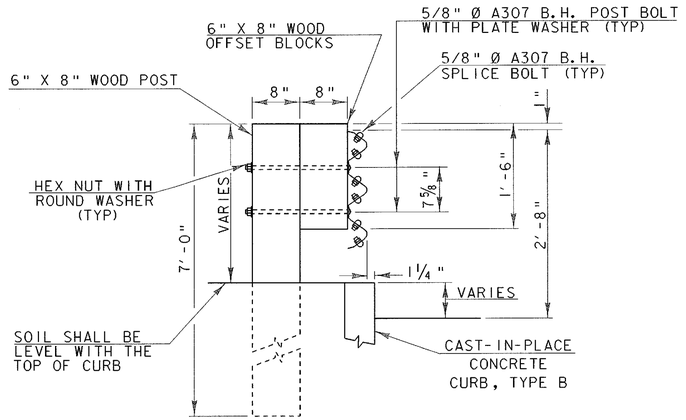
NOTES:

1) ALL BRIDGE APPROACH RAIL MATERIALS, DIMENSION SIZES, AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL UNLESS OTHERWISE NOTED.
2) CARRIAGE BOLTS SHALL BE ASTM A307 AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED).
3) WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2).
4) REFER TO SHEETS BR 125 & BR 126B FOR ADDITIONAL DETAILS, NOTES, AND MATERIALS SPECIFICATIONS.
5) THE REFLECTORIZED ALUMINUM DELINEATION IS TO BE ERECTED EVERY 30' (OR THE CLOSEST POST) WITH 2 NO. 8 X 3/4" SELF TAPPING SCREWS. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.
6) REFLECTIVE MATERIAL SHALL MEET REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVERS LEFT AND SILVER ON THEIR RIGHT.
7) THE CONCRETE CURB WILL BE PAID FOR AS ITEM 616.28, "CAST-IN-PLACE CONCRETE CURB, TYPE B."

PLOTTED 20-NOV-2000

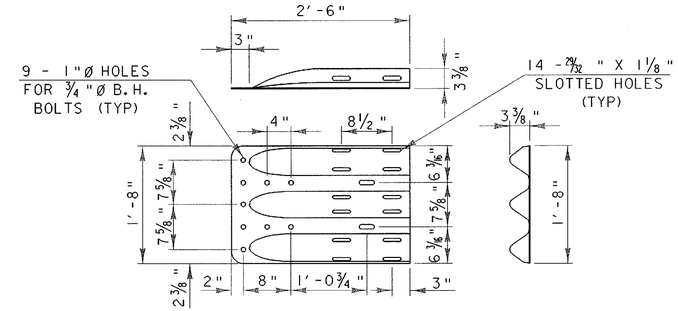
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.
GUARD RAIL APPROACH SECTION	
NETC 2 RAIL (SHEET 1 OF 2)	
Designed By C.P.WILLIAMS	Drawn By D.G.BASSETT
Checked By C.MEUNIER Date 11/98	Bridge Design Supervisor G.S.ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C.\\vafs9...cadd\v7\lingcabinet\$\87a008\Structures\sa008dtl.dgn sa008rd91	
Bridge Sheet No. BR 126A	Sheet 83A of 260



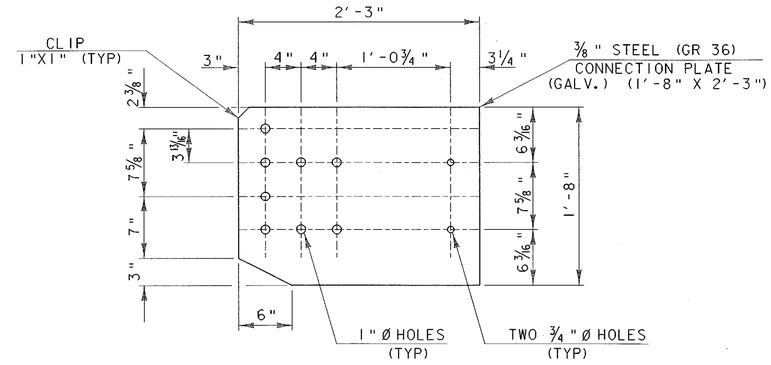
SECTION B-B (POST RAIL ASSEMBLY)

SCALE 1" = 1'-0



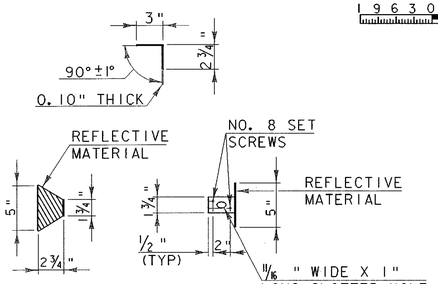
THRIE-BEAM TERMINAL CONNECTOR

SCALE 1" = 1'-0



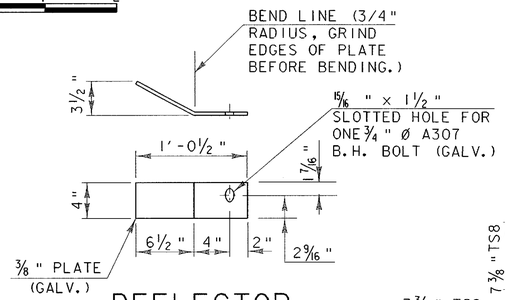
CONNECTION PLATE

SCALE 1½" = 1'-0



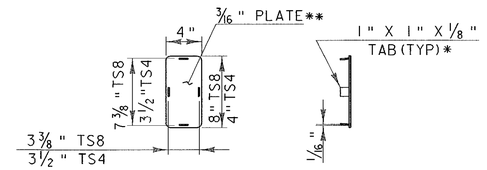
DELINEATION DEVICE DETAILS

SCALE 1½" = 1'-0



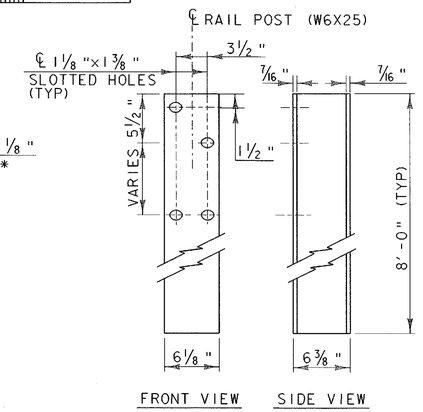
DEFLECTOR PLATE DETAIL

SCALE 1½" = 1'-0



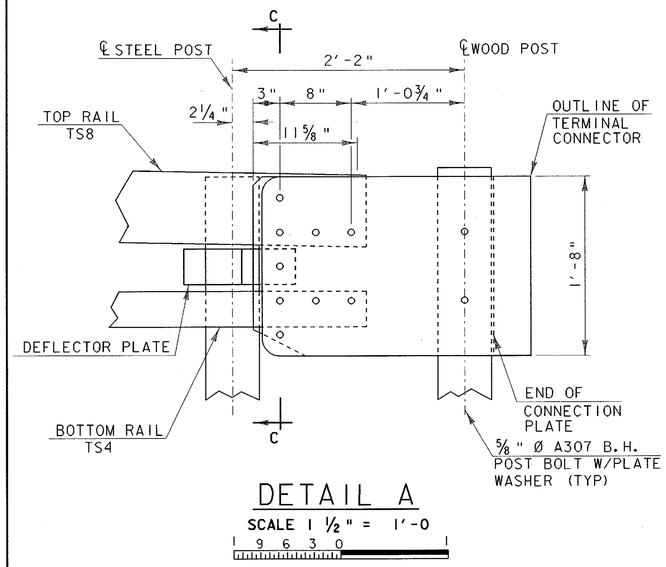
END CAP DETAIL

SCALE 1½" = 1'-0



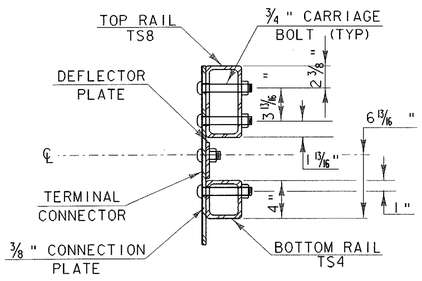
RAIL POST

SCALE 1½" = 1'-0



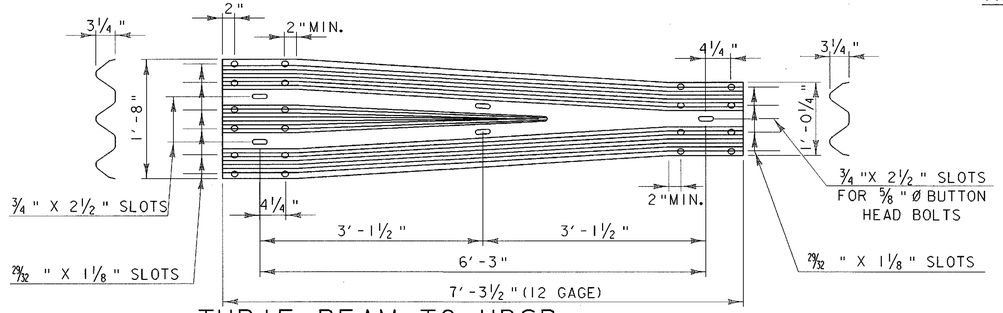
DETAIL A

SCALE 1½" = 1'-0



SECTION C-C (CONNECTION PLATE)

SCALE 1½" = 1'-0



THRIE-BEAM TO HDSB TRANSITION SECTION

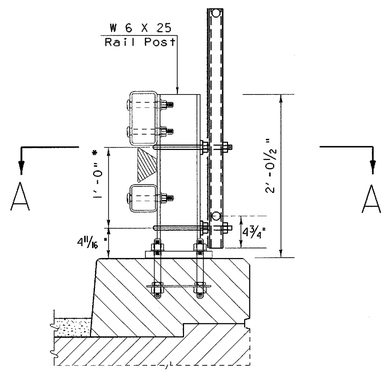
SCALE 1" = 1'-0

* WELD TABS TO END CAP PLATE IN TAPERED POSITION SO CAP CAN BE JAMMED INTO END OF RAIL TUBE.
** ROUND CORNERS ½" RADIUS (TYP)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

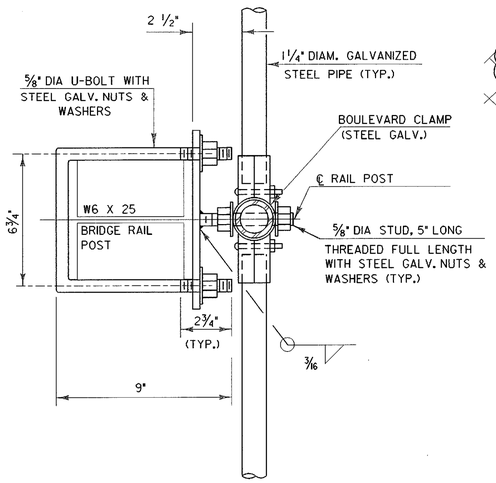
Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta. / Surv. Sta.
GUARD RAIL APPROACH SECTION	
NETC 2 RAIL (SHEET 2 OF 2)	
Designed By C.P.WILLIAMS	Drawn By D.G.BASSETT
Checked By C.MEUNIER Date 11/98	Bridge Design Supervisor G.S.ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vafss...cadd\Villingcabinet$\97a008\Structures\sa008df1.dgn sa008r101	
Bridge Sheet No. BR 126B	Sheet 83B of 260

PLOTTED 20-NOV-2000

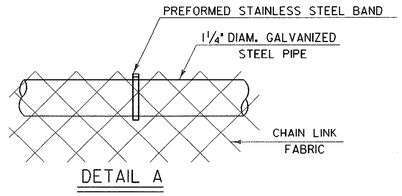


TYPICAL SECTION

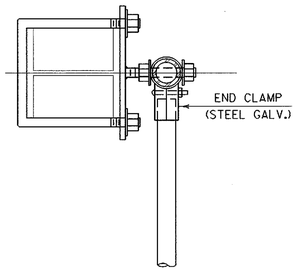
NOTE: FOR DIMENSIONS SEE SHEETS BR 125, BR 126A & BR 126B.



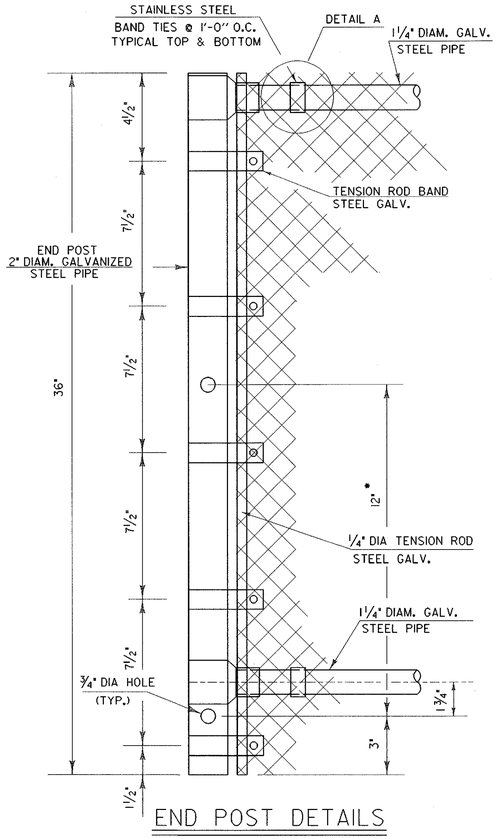
SECTION A-A



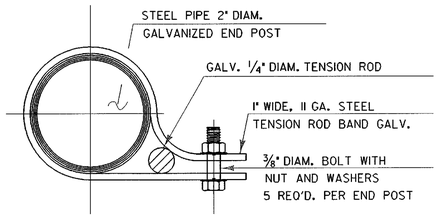
DETAIL A



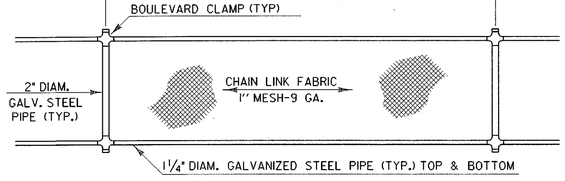
PLAN VIEW AT END POST



END POST DETAILS



TENSION ROD BAND



ELEVATION SNOW BARRIER

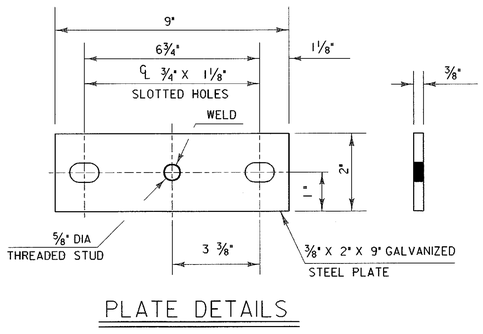
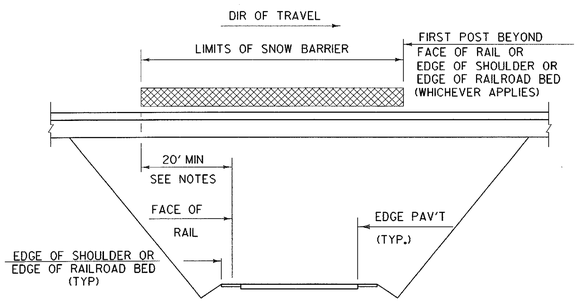


PLATE DETAILS



SCHEMATIC SNOW BARRIER LIMITS

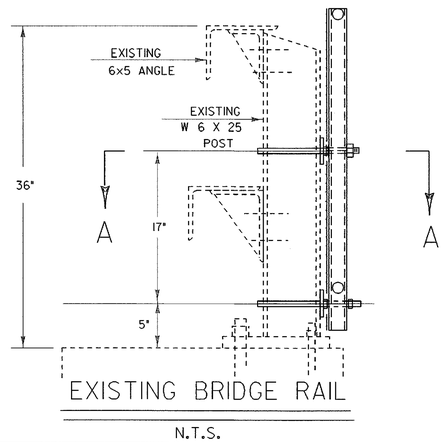
NOTES

1. THREADS OF STUDS AND U-BOLTS TO BE 5/8-11 UNC.
2. ALL CONNECTION PLATES TO BE GALVANIZED AFTER FABRICATION.
3. 1¼" PIPE LENGTH SHALL BE FIELD CUT TO FIT POST SPACING.
4. CHAIN LINK FABRIC TO BE KNUCKLED TOP AND BOTTOM.
5. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE SPECIFICATIONS FOR ASTM A307, ASTM A563 AND ASTM F436, RESPECTIVELY.
6. ALL STEEL PLATES SHALL CONFORM TO THE SPECIFICATION FOR AASHTO M270 GRADE 36.
7. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-181 WITH HARDWARE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF AASHTO M-111 OR AASHTO M-232 WHICHEVER IS APPLICABLE. ALL BOLTS, NUTS AND WASHERS SHALL BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH THE ABOVE AASHTO REQUIREMENTS OR MECHANICALLY GALVANIZED USING A MECHANICALLY DEPOSITED PROCESS CONFORMING TO THE REQUIREMENTS OF AASHTO M-298, CLASS 110.
8. GALVANIZED CHAIN-LINK FABRIC SHALL BE TYPE I (ZINC) CLASS D AS SPECIFIED IN AASHTO M-181.
9. SNOW BARRIER SHALL BEGIN AT THE BRIDGE RAIL POST WHICH WILL PROVIDE A MIN. DISTANCE OF 20' (AS SHOWN) OR AS DIRECTED BY THE ENGINEER.
10. ALL REFERENCES TO THE DIAMETERS OF GALVANIZED STEEL PIPE SHALL REFER TO THE OUTSIDE DIAMETER (O. D.).

*17" FOR BRIDGES 1 (NB AND SB)

BRIDGE 1 NB & SB (I-89 OVER THE RAILROAD)

1. SNOWFENCE SHALL BE ADDED TO THE SPAN LOCATED IN VERMONT (MM 0.110).
2. THE SNOW FENCE DETAILS FOR N.E.T.C. RAIL SHOWN ON THIS SHEET WILL BE USED TO FABRICATE THE SNOW FENCE FOR THIS EXISTING BRIDGE RAILING. HOWEVER, THE DIMENSION FOR THE SPACING BETWEEN THE "U" BOLTS SHALL BE 17" (IN LIEU OF 12").
3. IF THE CONTRACTOR NEEDS TO CLOSE ONE LANE OF TRAFFIC DURING WORKING HOURS IN ORDER TO PLACE THE SNOW FENCE, THE CONTRACTOR SHALL FOLLOW STD. E103 FOR A TEMPORARY LANE CLOSURE. THIS WORK WILL BE SUBSIDIARY TO THE "TRAFFIC CONTROL" ITEM.
4. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE EXISTING BRIDGE RAIL COMPONENTS BEFORE ORDERING THE SNOW FENCE FOR THIS SITE.
5. PAYMENT FOR THE INSTALLATION OF THIS SNOW FENCE SHALL BE MADE UNDER ITEM 620.75.



EXISTING BRIDGE RAIL

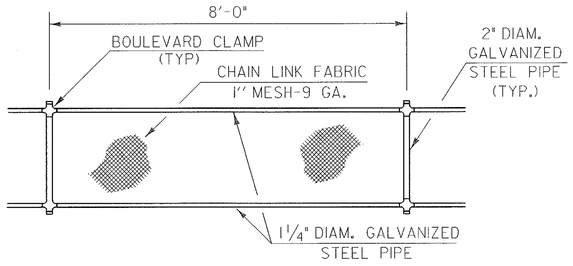
N.T.S.

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

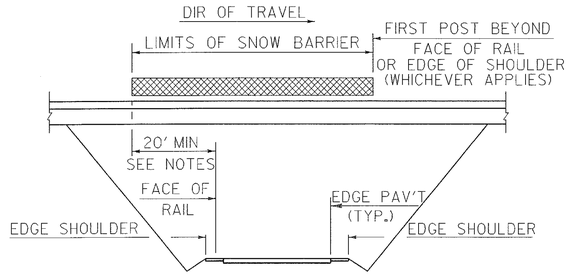
Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.
SNOW FENCE DETAILS FOR N.E.T.C. BRIDGE RAIL	
Designed By C. MEUNIER	Drawn By VAOT
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G. S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vaot.cadd\Filingcabinets\87a008\Structures\sa008d11.dgn	sa008rd31
Bridge Sheet No. BR 127	Sheet 84 of 260

SNOW FENCE DETAILS
(FOR USE IN CONJUNCTION WITH 3 RAIL ALUMINUM BRIDGE RAILING)



ELEVATION SNOW BARRIER

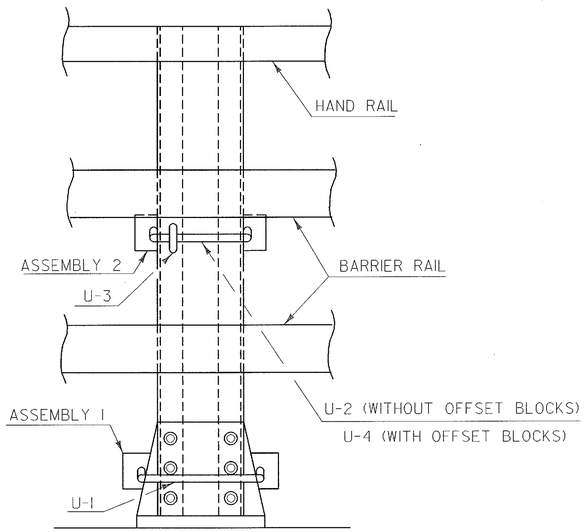
N.T.S.



SCHEMATIC SNOW BARRIER LIMITS

N.T.S.

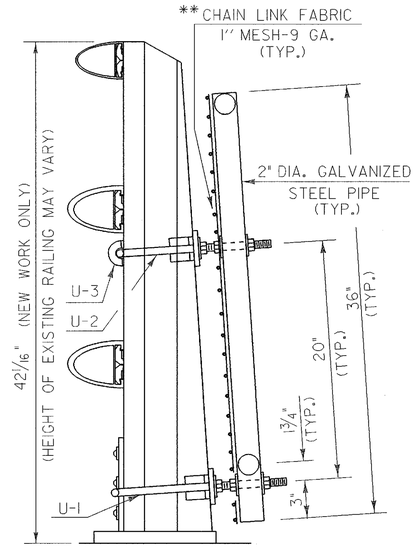
** THE CHAIN LINK FABRIC MESH IS TO BE INSTALLED AS SHOWN, WHICH IS ON THE BRIDGE RAIL (OR ℄) SIDE OF THE ASSEMBLY. (TYP.)



ELEVATION VIEW

(SNOWFENCE NOT SHOWN FOR PURPOSES OF CLARITY)

N.T.S.



3-RAIL ALUMINUM WITHOUT OFFSET BLOCKS

N.T.S.

GENERAL NOTES

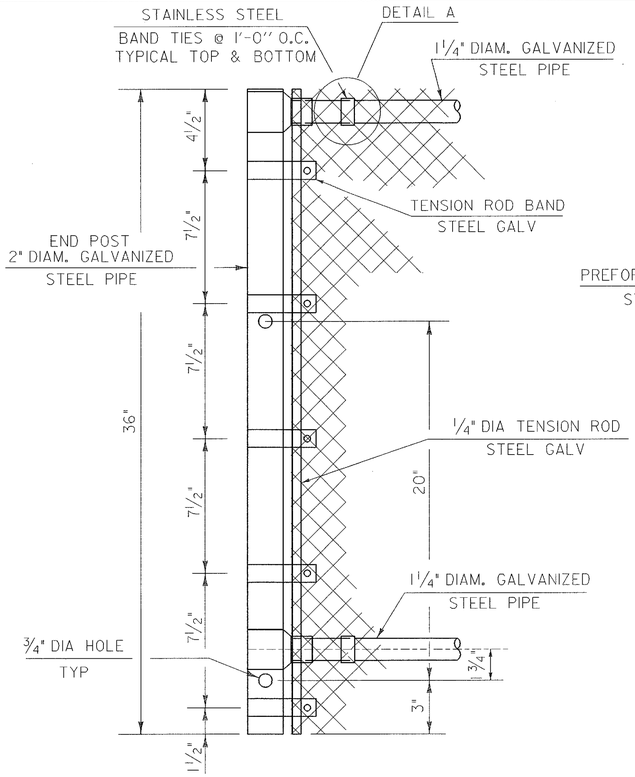
1. THREADS OF STUDS AND U-BOLTS TO BE 5/8-11 UNC.
2. ALL CONNECTION PLATES TO BE GALVANIZED AFTER FABRICATION.
3. 1 1/4" PIPE LENGTH SHALL BE FIELD CUT TO FIT POST SPACING.
4. CHAIN LINK FABRIC TO BE KNUCKLED TOP AND BOTTOM.
5. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE SPECIFICATIONS FOR ASTM A307, ASTM A563 AND ASTM F436, RESPECTIVELY.
6. ALL STEEL PLATES SHALL CONFORM TO THE SPECIFICATION FOR AASHTO M270 GRADE 36.
7. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-181 WITH HARDWARE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF AASHTO M-111 OR AASHTO M-232 WHICHEVER IS APPLICABLE. ALL BOLTS, NUTS AND WASHERS SHALL BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH THE ABOVE AASHTO REQUIREMENTS OR MECHANICALLY GALVANIZED USING A MECHANICALLY DEPOSITED PROCESS CONFORMING TO THE REQUIREMENTS OF AASHTO M-298, CLASS 110.
8. GALVANIZED CHAIN-LINK FABRIC SHALL BE TYPE I (ZINC) CLASS D AS SPECIFIED IN AASHTO M-181.
9. SNOW BARRIER SHALL BEGIN AT THE BRIDGE RAIL POST WHICH WILL PROVIDE A MINIMUM DISTANCE OF 20' (AS SHOWN) OR AS DIRECTED BY THE ENGINEER.
10. SEE SHEET BR 129 FOR DETAILS OF THE END POST, TENSION ROD BAND AND U-BOLT ASSEMBLIES.
11. ALL REFERENCES TO THE DIAMETERS OF GALVANIZED STEEL PIPE SHALL REFER TO THE OUTSIDE DIAMETER (O. D.).
12. ALL DIMENSIONS ON THIS SHEET ARE IN INCHES UNLESS OTHERWISE NOTED.

PLOTTED 20-NOV-2000

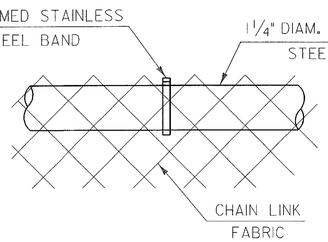
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. 189	Log Sta. / Surv. Sta.
SNOW FENCE DETAILS FOR 3 - RAIL ALUMINUM BRIDGE RAIL	
Designed By C. MEUNIER	Drawn By D.W. NEWTON
Checked By C. MEUNIER Date 2/95	Bridge Design Supervisor G.S. ROGERS Date 8-98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. No. c:\cadd\filingcabinets\87a008\Structures\sa008dtl.dgn sa008rd41	
Bridge Sheet No. BR 128	Sheet 85 of 260

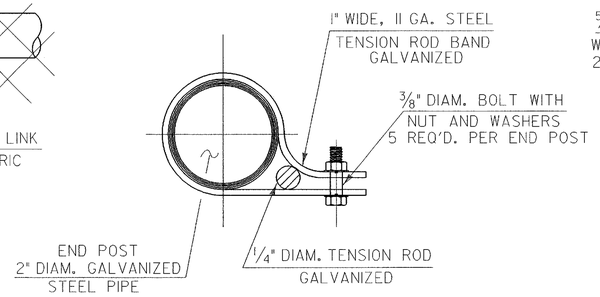
SNOW FENCE DETAILS
FOR USE IN CONJUNCTION WITH ALUMINUM BRIDGE RAILING



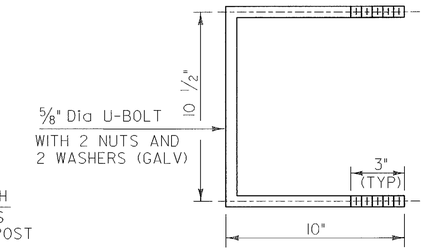
END POST DETAILS



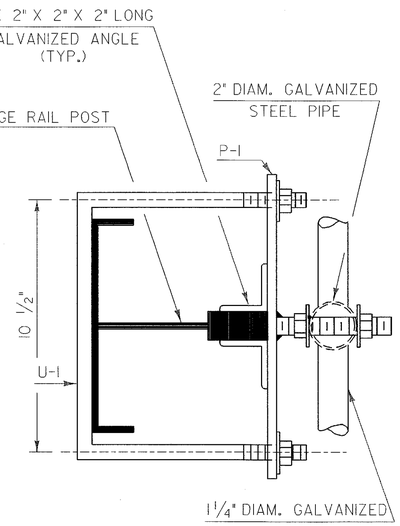
DETAIL A



TENSION ROD BAND

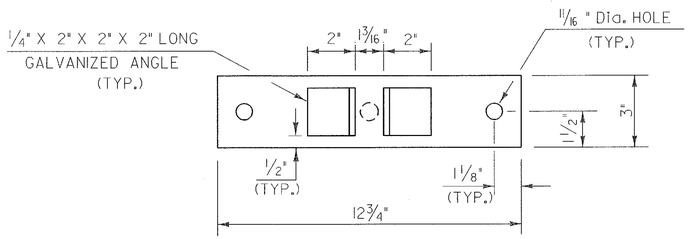


U-1

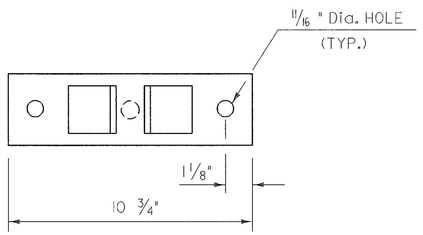


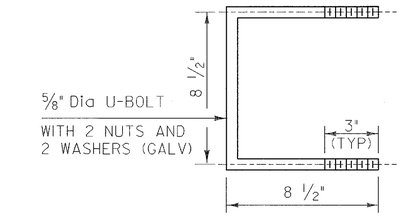
ASSEMBLY 1

(ASSEMBLY 1 CONSISTS OF U-1 AND P-1 AS SHOWN)

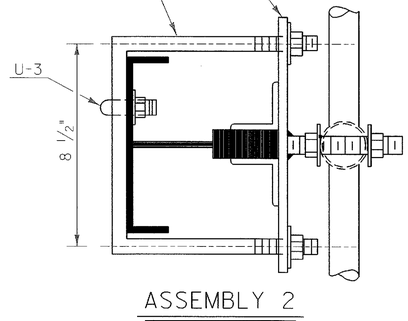


FRONT VIEW



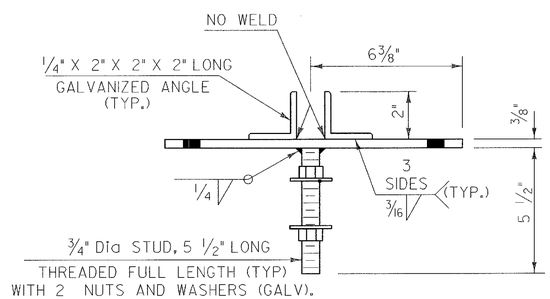


U-2

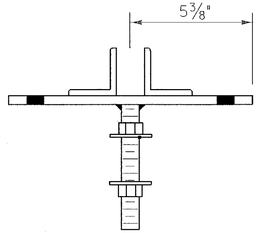


ASSEMBLY 2

(FOR ALUMINUM RAIL WITHOUT OFFSET BLOCKS, ASSEMBLY 2 CONSISTS OF U-2, U-3 AND P-2 AS SHOWN)

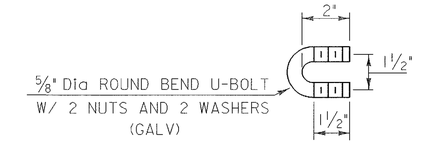


PLAN VIEW



NOTE: SAME DIMENSIONS AND DETAILS AS P-1 EXCEPT AS SHOWN ABOVE

P-2



U-3

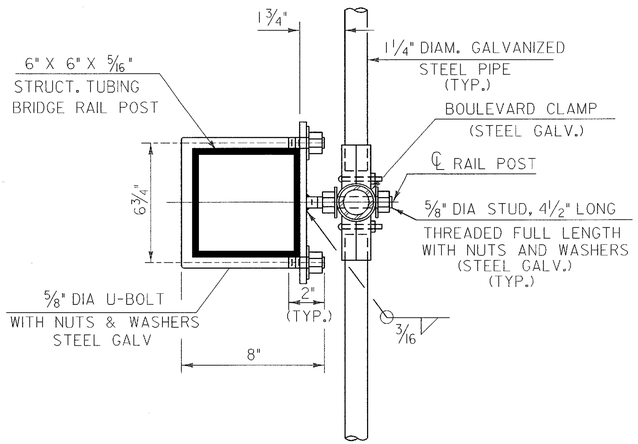
DETAILS ON THIS SHEET ARE NOT TO SCALE
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED

PLOTTED 20-NOV-2000

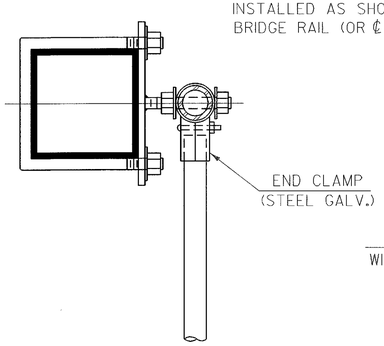
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 10 & 21
Highway No. 189	Log Sta.
	Surv. Sta.
SNOW FENCE DETAILS FOR	
3 - RAIL ALUMINUM BRIDGE RAIL	
Designed By C. MEUNIER	Drawn By D.W. NEWTON
Checked By C. MEUNIER Date 7/98	Bridge Design Supervisor G.S. ROGERS Date 8-98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
LG.C. Works c:\cadd\Filingcabinets\87a008\Structures\sa008d11.dgn sa008rd51	
Bridge Sheet No. BR 129	Sheet 86 of 260

SNOW FENCE DETAILS
(FOR USE IN CONJUNCTION WITH GALVANIZED BOX BEAM)

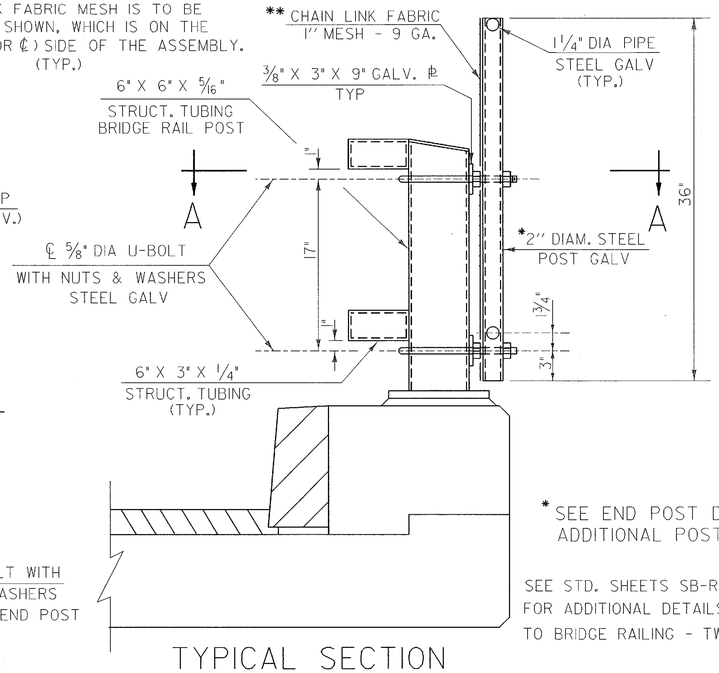


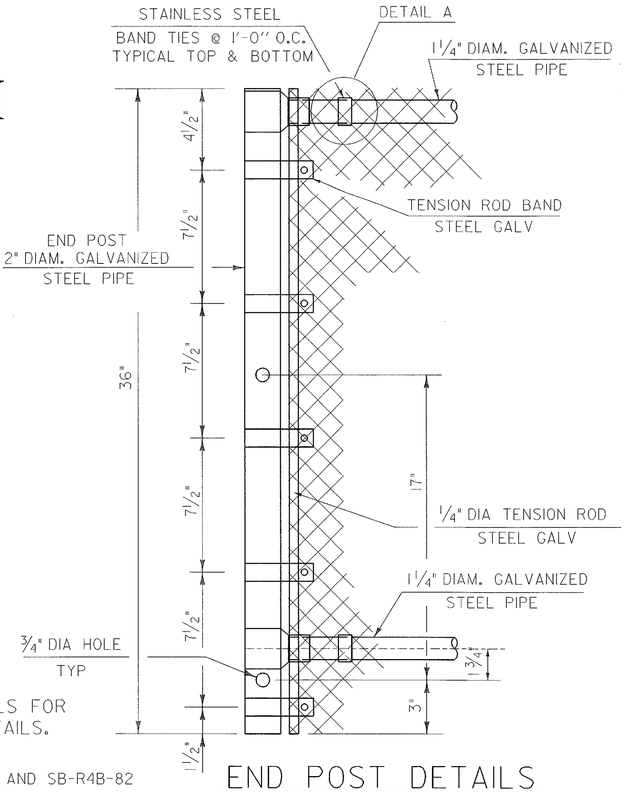
SECTION A-A



PLAN VIEW AT END POST

** THE CHAIN LINK FABRIC MESH IS TO BE INSTALLED AS SHOWN, WHICH IS ON THE BRIDGE RAIL (OR ℄) SIDE OF THE ASSEMBLY. (TYP.)





END POST DETAILS

* SEE END POST DETAILS FOR ADDITIONAL POST DETAILS.

SEE STD. SHEETS SB-R4A-82 AND SB-R4B-82 FOR ADDITIONAL DETAILS RELATIVE TO BRIDGE RAILING - TWO RAIL GALVANIZED BOX BEAM

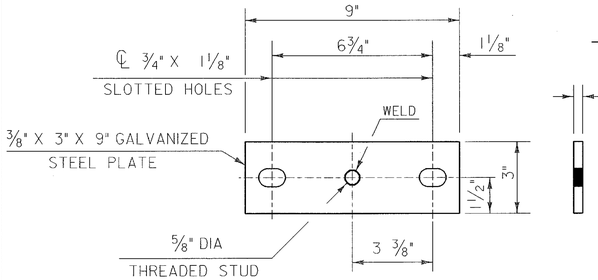
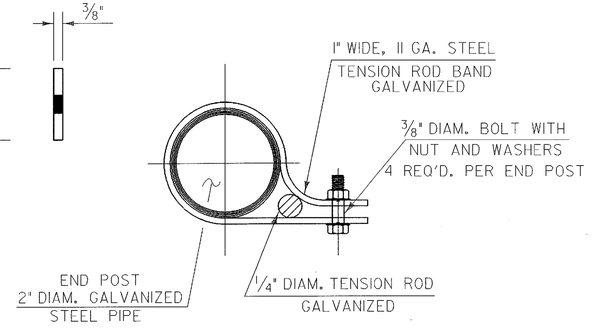
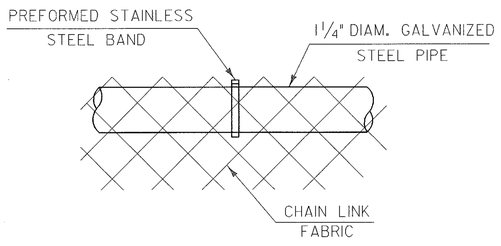


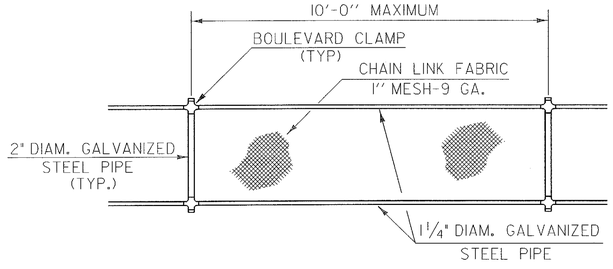
PLATE DETAILS



TENSION ROD BAND

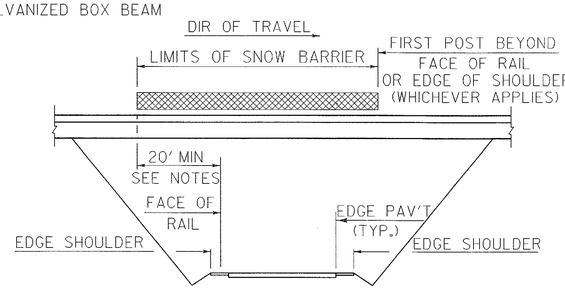


DETAIL A



ELEVATION SNOW BARRIER

TYPICAL SECTION



SCHEMATIC SNOW BARRIER LIMITS

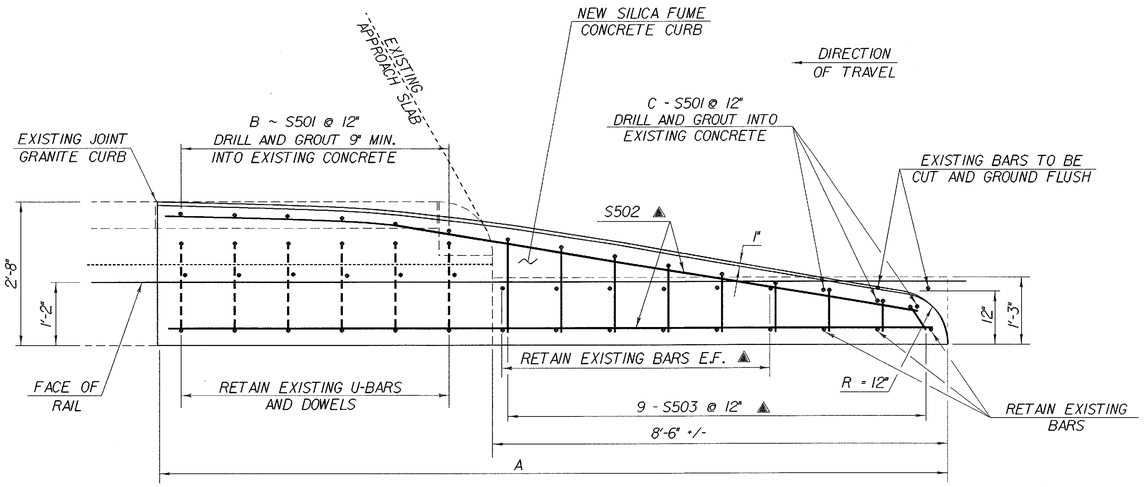
GENERAL NOTES

1. THREADS OF STUDS AND U-BOLTS TO BE 5/8-11 UNC.
2. ALL CONNECTION PLATES TO BE GALVANIZED AFTER FABRICATION.
3. 1 1/4" PIPE LENGTH SHALL BE FIELD CUT TO FIT POST SPACING.
4. CHAIN LINK FABRIC TO BE KNUCKLED TOP AND BOTTOM.
5. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE SPECIFICATIONS FOR ASTM A307, ASTM A536 AND ASTM F436, RESPECTIVELY.
6. ALL STEEL PLATES SHALL CONFORM TO THE SPECIFICATION FOR AASHTO M270 GRADE 36.
7. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-181 WITH HARDWARE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF AASHTO M-111 OR AASHTO M-232 WHICHEVER IS APPLICABLE. ALL BOLTS, NUTS AND WASHERS SHALL BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH THE ABOVE AASHTO REQUIREMENTS OR MECHANICALLY GALVANIZED USING A MECHANICALLY DEPOSITED PROCESS CONFORMING TO THE REQUIREMENTS OF AASHTO M-298, CLASS 110.
8. GALVANIZED CHAIN-LINK FABRIC SHALL BE TYPE I (ZINC) CLASS D AS SPECIFIED IN AASHTO M-181.
9. SNOW BARRIER SHALL BEGIN AT THE BRIDGE RAIL POST WHICH WILL PROVIDE A MIN. DISTANCE OF 20' (AS SHOWN) OR AS DIRECTED BY THE ENGINEER.
10. ALL REFERENCES TO THE DIAMETERS OF GALVANIZED STEEL PIPE SHALL REFER TO THE OUTSIDE DIAMETER (O. D.).

DETAILS ON THIS SHEET NOT TO SCALE
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED

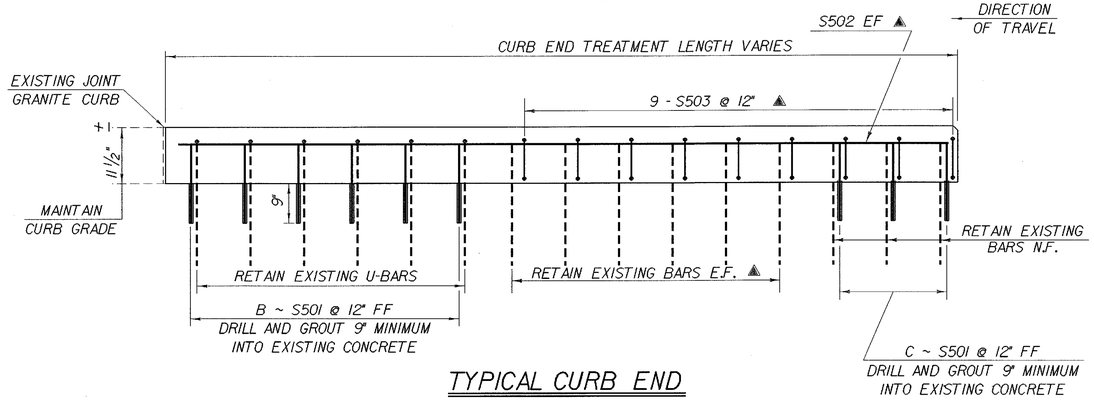
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. I-89	Log Sta.
	Surv. Sta.
SNOW FENCE DETAILS FOR BOX BEAM RAIL (BR 3 (MM 0.5)	
Designed By C. MEUNIER	Drawn By VAOT
Checked By C. MEUNIER Date 11/98	Bridge Design Supervisor G. S. ROGERS Date 11/98
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\nfs...\cadd\Illingcabinets\87a008\Structures\sa008dtl.dgn sa008rd6J	
Bridge Sheet No. BR 130	Sheet 87 of 260



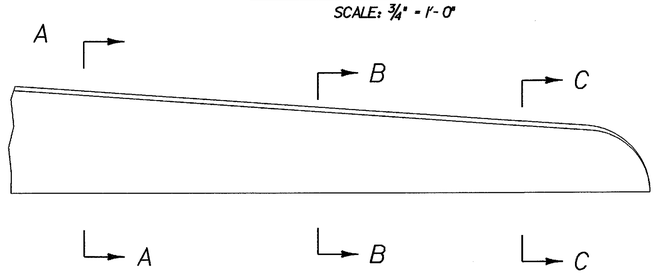
CURB END TREATMENT PLAN FOR 2'-8 "WIDE CURB (BR 10)

N.T.S.



TYPICAL CURB END TREATMENT ELEVATION

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

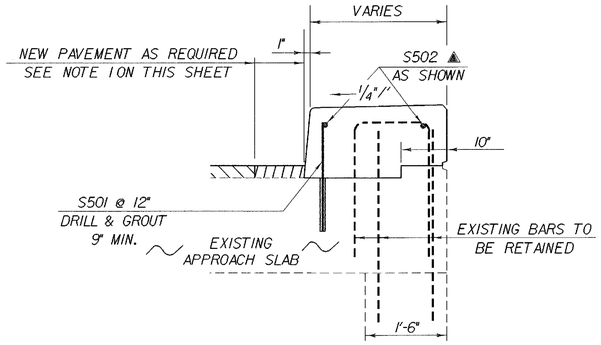


TYPICAL CURB END TREATMENT PLAN

NOTE:

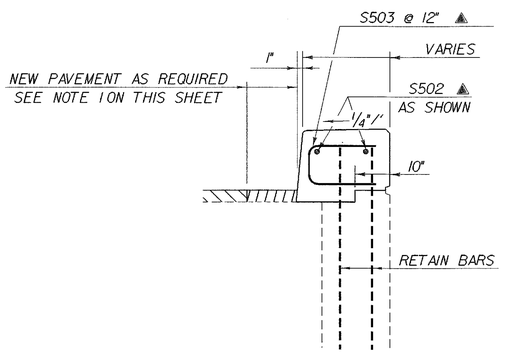
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR UNLESS OTHERWISE SPECIFIED

BRIDGE	CURB	A	B	C
10 (TH 36)	N.W.	17'-9 5/8"	10	4
10 (TH 36)	N.E.	17'-6"	10	4
10 (TH 36)	S.W.	13'-10 3/4"	6	3
10 (TH 36)	S.E.	14'-7 1/4"	7	3



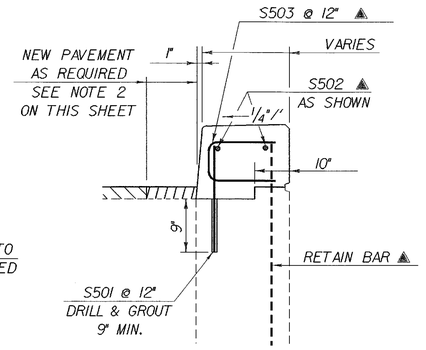
SECTION A - A

NTS



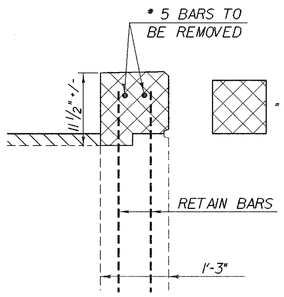
SECTION B - B

NTS



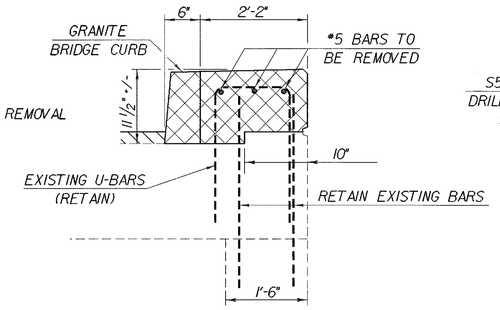
SECTION C - C

NTS



ELEVATION VIEW OF EXISTING CURB END (1'-3")

NTS



ELEVATION VIEW OF EXISTING CURB END (2'-8")

NTS

NOTES:

1. AREAS OF THE EXISTING WINGWALL OR APPROACH SLABS THAT BECOME EXPOSED AS A RESULT OF THE CONSTRUCTION OF THE NEW CURB END TREATMENTS WILL BE COATED WITH A LIQUID MEMBRANE PER SECTION 519 AND THEN PAVED.
2. ALL EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED CLEAN. THE EXISTING CONCRETE AND ALL REINFORCING STEEL SHALL BE THOROUGHLY WETTED AND THE CONCRETE COATED WITH NEAT CEMENT GROUT APPLIED AS PER SUBSECTION 501.13(b) OF THE STANDARD SPECIFICATIONS. PAYMENT FOR THE WORK WILL BE SUBSIDIARY TO ITEM 501.60, "SILCA FUME CONCRETE".

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

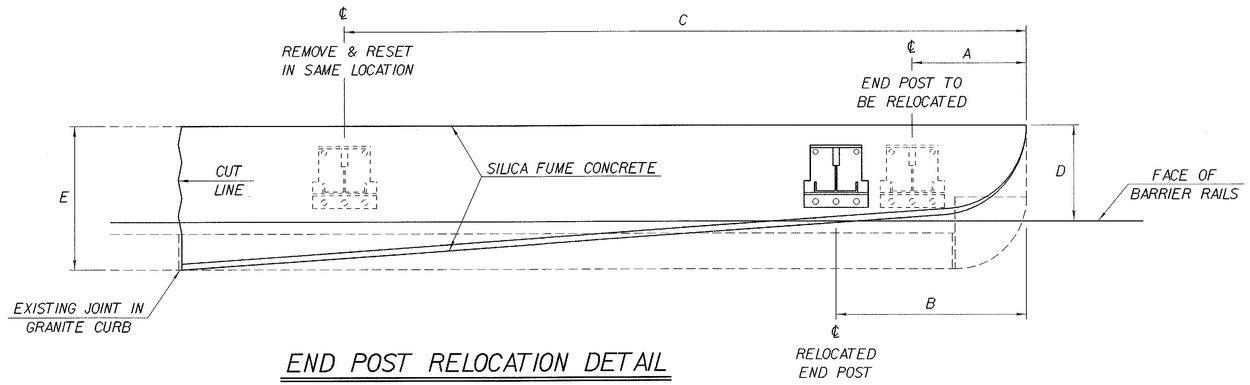
Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 10
Highway No. I 89	Log Sta.
	Surv. Sta.

CURB END DETAILS FOR BRIDGE 10 (MM 6.5)
T.H. 36 OVER I-89

Designed By C. MEUNIER	Drawn By S. MAGNAN/P.T. LONSDALE
Checked By C.W. MEUNIER Date 10/96	Bridge Design Supervisor G.S. ROGERS Date 10/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

I.G.C.\\[illegible]:cadd\r1\ngcabinet$\87a008\Structures\sa008dt1.dgn sa008ce41

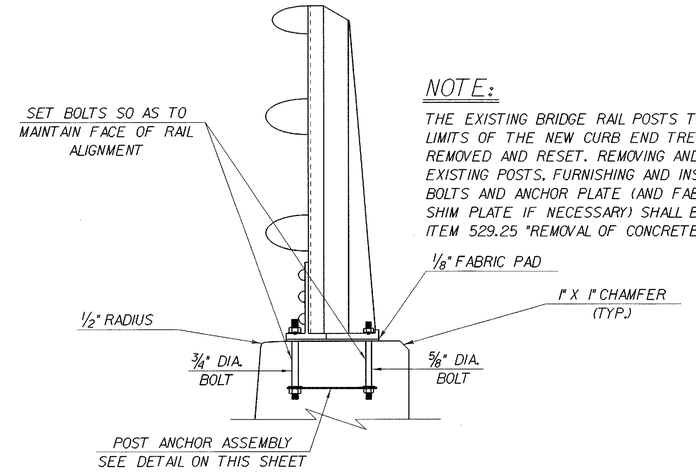
Bridge Sheet No. BR 131 Sheet 88 of 260



END POST RELOCATION DETAIL

N T S

BRIDGE	CURB	A	B	C	D	E
10 (TH 36)	N.W.COR.	1'-0"	2'-8"	9'-0"	1'-2"	2'-8"
10 (TH 36)	N.E.COR.	1'-1 1/4"	2'-8"	9'-1 1/4"	1'-2"	2'-8"
10 (TH 36)	S.W.COR.	1'-0"	2'-8"	9'-0"	1'-2"	2'-8"
10 (TH 36)	S.E.COR.	1'-0"	2'-8"	9'-0"	1'-2"	2'-8"
21 (TH 13)	S.W.COR.	1'-10 7/8"	2'-8"	6'-10 7/8"	1'-2"	2'-8"
21 (TH 13)	S.E.COR.	1'-8 3/8"	2'-8"	7'-9 5/8"	1'-2"	2'-8"
21 (TH 13)	N.W.COR.	1'-6"	2'-8"	6'-2 3/8"	1'-2"	2'-8"
21 (TH 13)	N.E.COR.	1'-8 3/8"	2'-8"	7'-10 7/8"	1'-2"	2'-8"

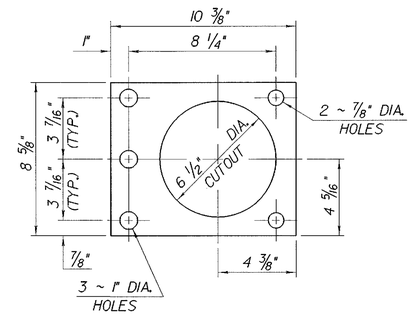


NOTE:

THE EXISTING BRIDGE RAIL POSTS THAT ARE WITHIN THE LIMITS OF THE NEW CURB END TREATMENT SHALL BE REMOVED AND RESET. REMOVING AND RESETTING THE EXISTING POSTS, FURNISHING AND INSTALLING NEW ANCHOR BOLTS AND ANCHOR PLATE (AND FABRIC PAD AND ALUMINUM SHIM PLATE IF NECESSARY) SHALL BE SUBSIDIARY TO THE ITEM 529.25 "REMOVAL OF CONCRETE OR MASONRY".

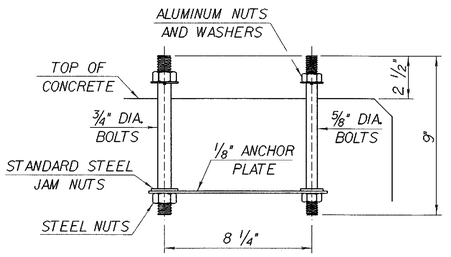
TYPICAL POST RESET IN NEW CURB END TREATMENT

N T S



ANCHOR PLATE

SCALE: 3" = 1'-0"



POST ANCHOR ASSEMBLY

SCALE: 3" = 1'-0"

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 10 (MM 6.51) & 21 (MM 17.51)
Highway No. 189	Log Sta. / Surv. Sta.

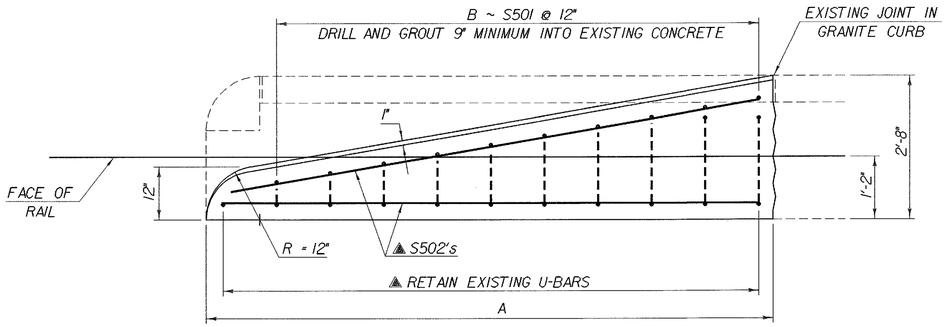
CURB END DETAILS FOR BRIDGES 10 & 21
T.H. 36 OVER I-89 AND T.H. 13 OVER I-89

Designed By C. MEUNIER	Drawn By M.PELOQUIN
Checked By J.P. SPILAK Date 2/95	Bridge Design Supervisor G.S. ROGERS Date 2/95
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

I.G.C. \\vtdot_caddv1\llngcabinet$\87a008\Structures\sa008dt11.dgn sa008ce5J

Bridge Sheet No. BR 132 Sheet 89 of 260

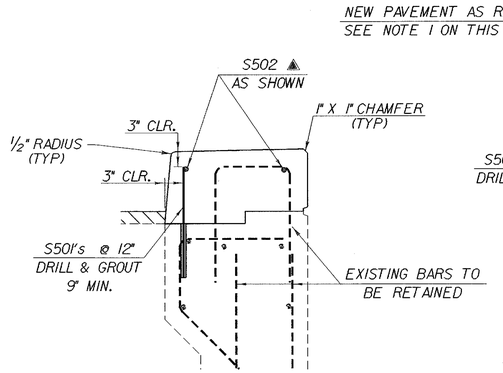
PLOTTED 20-NOV-2000



CURB END TREATMENT PLAN FOR 2'-8" WIDE CURBS

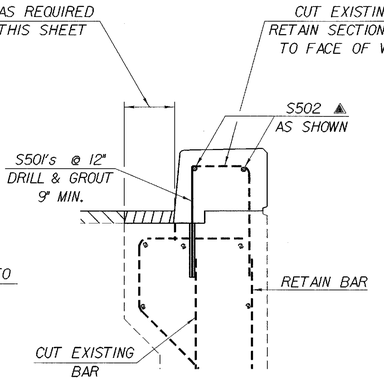
SCALE: 3/4" = 1'-0"

BRIDGE	CURB	A	B
21 (TH13)	W.B. LT.	9'-4 3/4"	10
21 (TH13)	W.B. RT.	9'-0"	10
21 (TH13)	E.B. LT.	9'-3 5/8"	10
21 (TH13)	E.B. RT.	9'-10 3/4"	10



SECTION A - A

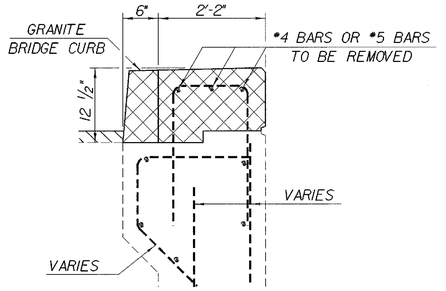
NTS



SECTION B - B

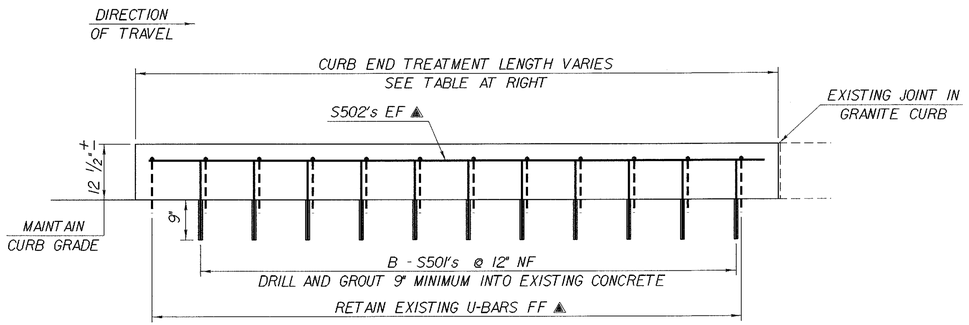
NTS

▨ = LIMITS OF REMOVAL



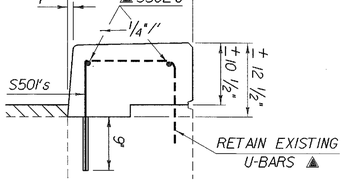
ELEVATION VIEW OF EXISTING CURB END

NTS



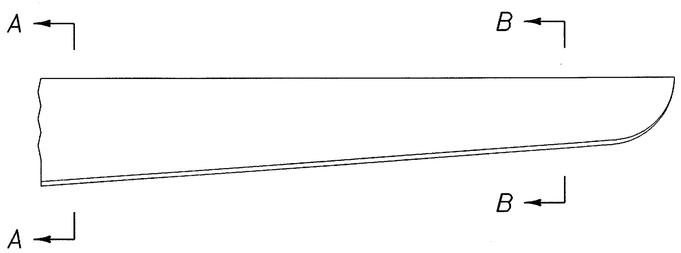
TYPICAL CURB END TREATMENT ELEVATION

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



TYPICAL CURB END TREATMENT SECTION

SCALE: 1" = 1'-0"



TYPICAL CURB END TREATMENT PLAN

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR UNLESS OTHERWISE SPECIFIED

NOTES:

1. AREAS OF THE EXISTING WINGWALL OR APPROACH SLABS THAT BECOME EXPOSED AS A RESULT OF THE CONSTRUCTION OF THE NEW CURB END TREATMENTS WILL BE COATED WITH A LIQUID MEMBRANE PER SECTION 519 AND THEN PAVED.
2. ALL EXPOSED REINFORCING STEEL SHALL BE SAND BLASTED CLEAN. THE EXISTING CONCRETE AND ALL REINFORCING STEEL SHALL BE THOROUGHLY WETTED AND THE CONCRETE COATED WITH NEAT CEMENT GROUT APPLIED AS PER SUBSECTION 501.13(b) OF THE STANDARD SPECIFICATIONS. PAYMENT FOR THE WORK WILL BE SUBSIDIARY TO ITEM 501.60, "SILCA FUME CONCRETE".
3. REINFORCING STEEL SHALL HAVE 3" CLEAR COVER EVERYWHERE UNLESS OTHERWISE NOTED.

PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

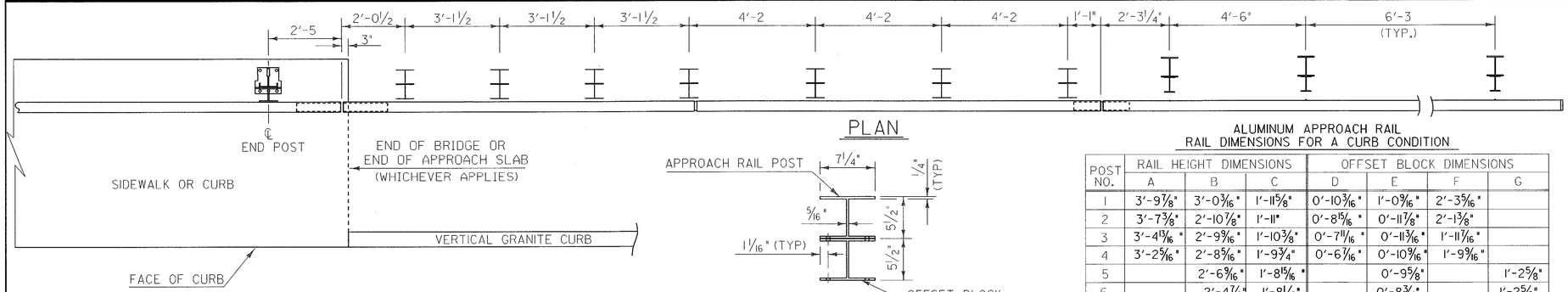
Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 21
Highway No. I-89	Log Sta.
	Surv. Sta.

CURB END DETAILS FOR BRIDGE 21 (MM 17.5)
T.H. 13 OVER I-89

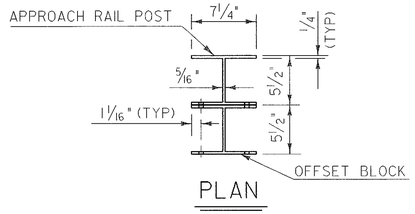
Designed By C. MEUNIER	Drawn By S. MAGNAN
Checked By J.P. SPILAK Date 2/95	Bridge Design Supervisor G.S. ROGERS Date 2/95
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

I.G.C. \\vtfs8...cadd\Villngcabinet\87a008\Structures\sa008dtl.dgn sa008ce6J

Bridge Sheet No. BR 133 Sheet 90 of 260



PLAN



PLAN

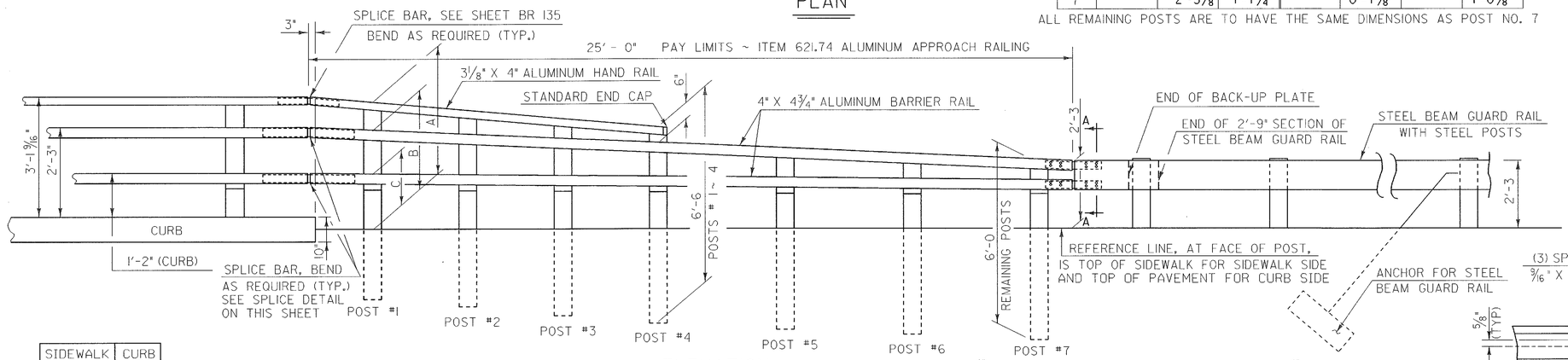
ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A CURB CONDITION

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	3'-9 7/8"	3'-0 3/16"	1'-11 5/8"	0'-10 3/16"	1'-0 9/16"	2'-3 5/16"	
2	3'-7 3/8"	2'-10 7/8"	1'-11"	0'-8 15/16"	0'-11 7/8"	2'-1 3/8"	
3	3'-4 13/16"	2'-9 9/16"	1'-10 3/8"	0'-7 11/16"	0'-11 3/16"	1'-11 7/16"	
4	3'-2 5/16"	2'-8 5/16"	1'-9 3/4"	0'-6 7/16"	0'-10 9/16"	1'-9 9/16"	
5		2'-6 9/16"	1'-8 15/16"		0'-9 5/8"		1'-2 5/8"
6		2'-4 7/8"	1'-8 1/8"		0'-8 3/4"		1'-2 5/8"
7		2'-3 1/8"	1'-7 1/4"		0'-7 7/8"		1'-0 7/8"

ALL REMAINING POSTS ARE TO HAVE THE SAME DIMENSIONS AS POST NO. 7

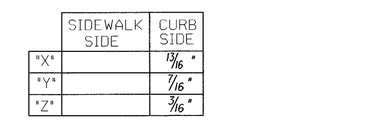
NOTES

1. POSTS 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE SHEETS BR 165 AND BR 167 FOR THE EXISTING ALUMINUM BRIDGE RAILING DETAILS.
5. THE COST OF ALL MATERIALS AND LABOR FOR THE SPLICE BETWEEN THE ALUMINUM APPROACH RAILING AND THE STEEL BEAM GUARD RAIL SHALL BE SUBSIDIARY TO ITEM 621.74, ALUMINUM APPROACH RAILING.
6. DETAILS ARE SHOWN FOR TRANSITION TO THE EXISTING 3 RAIL ALUMINUM BRIDGE RAILING.
7. DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.

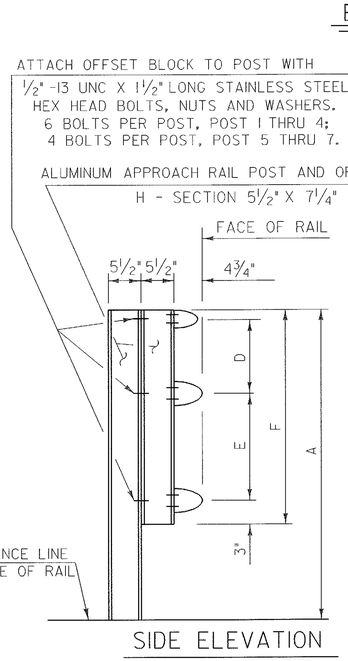


ELEVATION

	SIDEWALK SIDE	CURB SIDE
"X"		13/16"
"Y"		7/16"
"Z"		3/16"

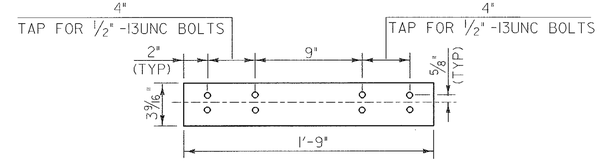


FRONT ELEVATION

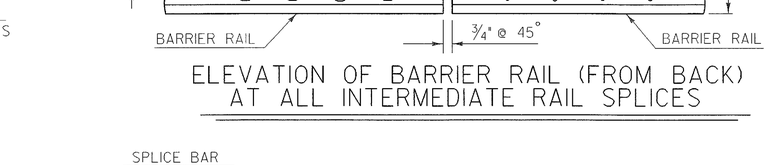


SIDE ELEVATION

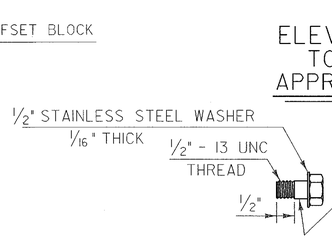
APPROACH RAIL DETAILS



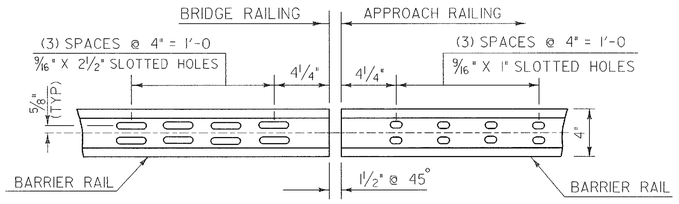
ELEVATION OF BARRIER RAIL SPLICE BAR
TO BE USED AT TRANSITION BETWEEN
APPROACH RAIL & GUARD RAIL (FROM BACK)



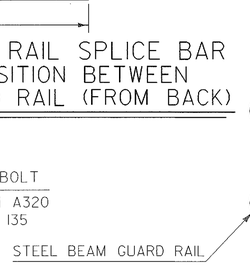
ELEVATION OF BARRIER RAIL (FROM BACK)
AT ALL INTERMEDIATE RAIL SPLICES

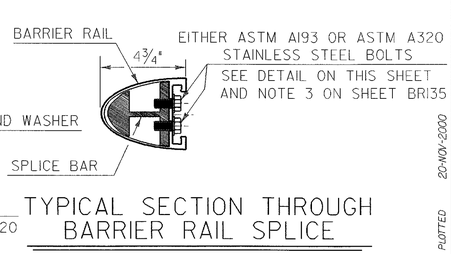


STAINLESS STEEL BOLT DETAILS



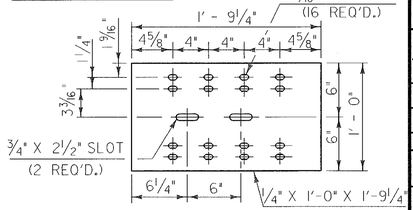
ELEVATION OF BARRIER RAIL (FROM BACK)





TYPICAL SECTION THROUGH
BARRIER RAIL SPLICE

SECTION A-A



BACK-UP PLATE DETAILS

20-NOV-2000
PLOTTED

STATE OF VERMONT
AGENCY OF TRANSPORTATION

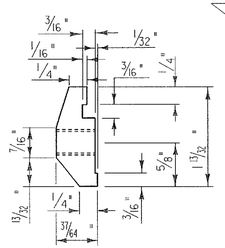
Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 10 & 21
Highway No. 189	Log Sta.
	Surv. Sta.

ALUMINUM APPROACH RAILING DETAILS FOR
BRIDGES 10 (MM 6.5) & 21 (MM 17.5) (SHEET 1 OF 2)

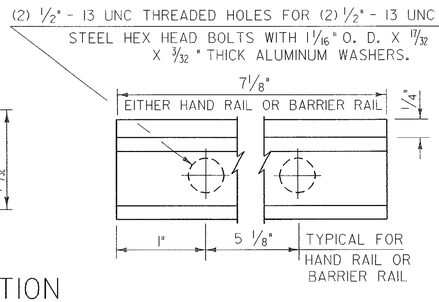
Designed By C.W. MEUNIER	Drawn By VAOT
Checked By C.W. MEUNIER Date 10/96	Bridge Design Supervisor G.S. ROGERS Date 10/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)

I.G.C. Info. caddVillingcabinets\BT0008\Structures\sa008d11.dgn sa008rd8J

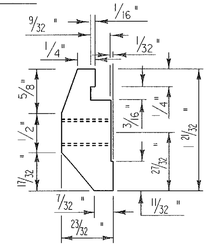
Bridge Sheet No. BR 134 Sheet 91 of 260



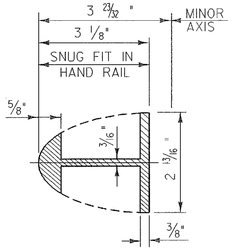
POST CONNECTION HAND RAIL SECTION



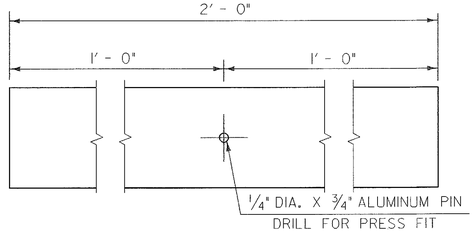
POST CONNECTION ELEVATION



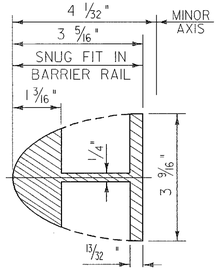
POST CONNECTION BARRIER RAIL SECTION



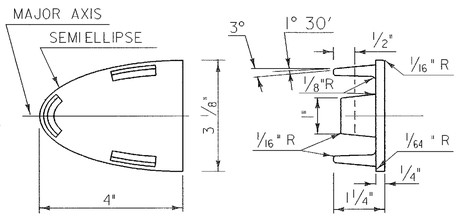
HAND RAIL SPLICE SECTION



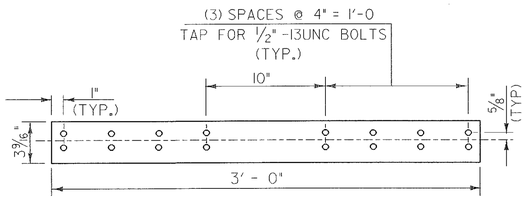
ELEVATION OF HAND RAIL SPLICE BAR



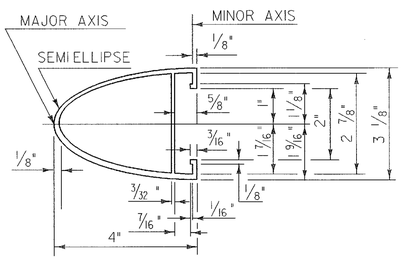
BARRIER RAIL SPLICE SECTION



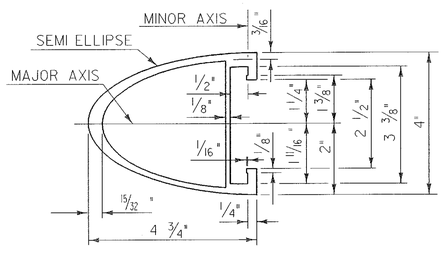
HAND RAIL END CAP



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

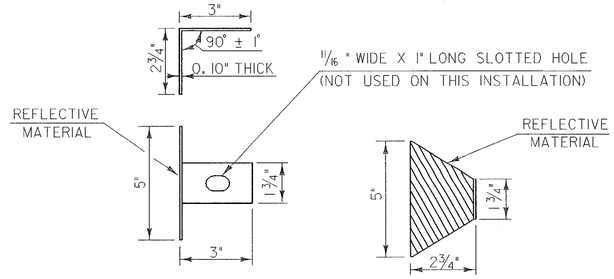


HAND RAIL SECTION



BARRIER RAIL SECTION

(SEE SHEET BR 134 FOR ELEVATION OF BARRIER RAIL)



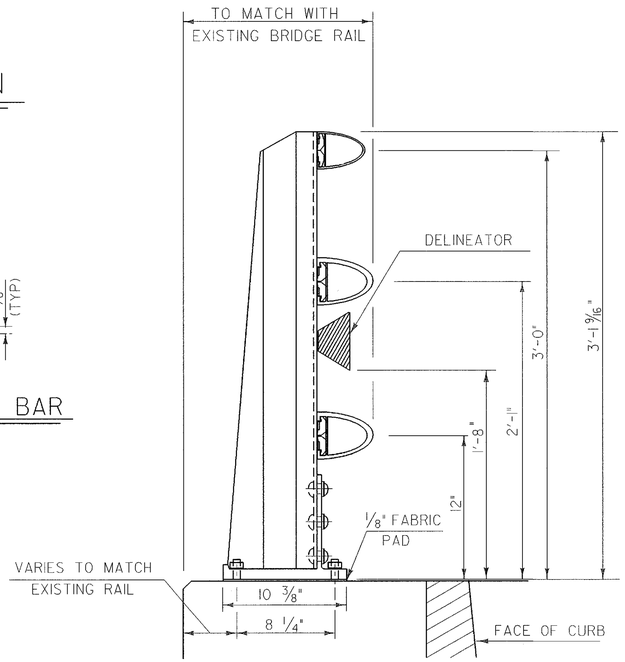
THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 30 FEET (OR CLOSEST POST) WITH 2 NO. 8 X 3/4" SELF-TAPPING SCREWS.

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

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

PAYMENT SHALL BE SUBSIDIARY TO ALUMINUM APPROACH RAIL.

DELINEATOR DETAILS AND NOTES



SIDE ELEVATION OF THREE RAIL TO BE USED ON CURB SIDE

RAIL POST DETAILS ON SUPERSTRUCTURE

NOTES

1. ALUMINUM SPLICE BARS, CONNECTION BARS AND RAILS SHALL CONFORM TO ASTM B221 ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS F_y = 35,000 PSI.
2. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
3. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS SHALL BE EITHER ASTM A193 OR ASTM A320. EITHER ONE SHALL BE CLASS 1, B8 GRADE AISI 304 WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI. NUTS FOR EITHER OF THE ABOVE BOLTS SHALL BE ASTM A194, GRADE 8, STAINLESS STEEL WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI.
4. WHENEVER FEASIBLE, BARRIER RAIL AND HAND RAIL SECTIONS SHALL BE FULL LENGTH SECTIONS (25') AND, WHEN POSSIBLE SHALL BE ATTACHED TO THREE POSTS. RAILS SHALL BE SPLICED INTERMITTENTLY AS REQUIRED AND SPLICES SHALL OCCUR WITHIN THE SAME PANEL.
5. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
6. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
7. THE CONCRETE CONTACT SURFACES WHERE THE EXISTING POSTS ARE TO BE RESET SHALL BE BUSH HAMMERED AND/OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 1/4" SHALL BE WITH 1/16" AND 1/8" SHIMS. CORRECTIONS EXCEEDING 1/4" SHALL BE WITH EPOXY MORTAR CONFORMING WITH SECTION 530.
8. SHIMS AND 1/8" FABRIC BEARING PADS SHALL BE 10 3/4" SQUARE WITH SLOTTED HOLES SIZED AND LOCATED THE SAME AS THE POST BASE DETAIL. FABRIC BEARING PADS SHALL CONFORM TO SUBSECTION 731.01 OR 731.02. SHIM MATERIAL SHALL BE ASTM B 209 ALLOY 1100-0.

NOTE: DIMENSIONS SHOWN REGARDING RAIL HEIGHTS ARE FROM THE REFERENCE SHEET AND ARE TO BE FIELD CHECKED BY THE RESIDENT ENGINEER AND THE CONTRACTOR PRIOR TO ORDERING NEW APPROACH RAIL. (SEE SHEETS BR 169 TO BR 171)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No. 10 & 21
Highway No. 189	Log Sta. / Surv. Sta.
ALUMINUM APPROACH RAILING DETAILS FOR BRIDGES 10 (MM 6.5) & 21 (MM 17.5) (SHEET 2 OF 2)	
Designed By C.W. MEUNIER	Drawn By VAOT
Checked By C.W. MEUNIER Date 10/96	Bridge Design Supervisor G.S. ROGERS Date 10/96
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. Info: d_cadd\Filingcabinet\$\BTA008\Structures\sa008dtl.dgn sa008rd7.1	
Bridge Sheet No. BR 135	Sheet 92 of 260

PLOTTED 20-NOV-2000

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				BRIDGE 6 NORTHBOUND													
*	91	5	27-6	6S501N	STR												
	242	5	3-10	6S504N	17		1-1	2-1	0-8								
	225	5	3-1	6S505N	17		1-1	1-4	0-8								
	467	5	1-2½	6S506N	19		0-6½	0-8									
				BRIDGE 6 SOUTHBOUND													
*	91	5	26-4	6S501S	STR												
	242	5	3-10	6S504S	17		1-1	2-1	0-8								
	225	5	3-1	6S505S	17		1-1	1-4	0-8								
	467	5	1-2½	6S506S	19		0-6½	0-8									
				BRIDGE 8													
*	131	5	28-1	8S501	STR												
	716	5	3-10	8S504	17		1-1	2-1	0-8								
	716	5	1-2½	8S506	19		0-6½	0-8									
				BRIDGE 15 NORTHBOUND													
*	81	5	27-2	15S501N	STR												
	209	5	3-10	15S504N	17		1-1	2-1	0-8								
	217	5	3-1	15S505N	17		1-1	1-4	0-8								
	426	5	1-2½	15S506N	19		0-6½	0-8									
				BRIDGE 15 SOUTHBOUND													
*	81	5	27-3	15S501S	STR												
	217	5	3-10	15S504S	17		1-1	2-1	0-8								
	217	5	3-1	15S505S	17		1-1	1-4	0-8								
	434	5	1-2½	15S506	19		0-6½	0-8									
				BRIDGE 16 NORTHBOUND													
*	151	5	28-11	16S501N	STR												
	40	5	0-8	16S503N	STR												
	822	5	3-10	16S504N	17		1-1	2-1	0-8								
	822	5	1-2½	16S506N	19		0-6½	0-8									
				BRIDGE 16 SOUTHBOUND													
*	161	5	29-6	16S501S	STR												
	40	5	0-8	16S503S	STR												
	902	5	3-10	16S504S	17		1-1	2-1	0-8								
	902	5	1-2½	16S506S	19		0-6½	0-8									
				BRIDGE 17 NORTHBOUND													
*	331	5	28-9	17S501N	STR												
	40	5	0-8	17S503N	STR												
	1796	5	3-10	17S504N	17		1-1	2-1	0-8								
	1796	5	1-2½	17S506N	19		0-6½	0-8									
				BRIDGE 17 SOUTHBOUND													
*	331	5	29-0	17S501S	STR												
	40	5	0-8	17S503S	STR												
	1812	5	3-10	17S504S	17		1-1	2-1	0-8								
	1812	5	1-2½	17S506S	19		0-6½	0-8									

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				BRIDGE 18 NORTHBOUND													
*	111	5	27-0	18S501N	STR												
	588	5	3-10	18S504N	17		1-1	2-1	0-8								
	588	5	1-2½	18S506N	19		0-6½	0-8									
				BRIDGE 18 SOUTHBOUND													
*	121	5	26-0	18S502S	STR												
	612	5	3-10	18S504S	17		1-1	2-1	0-8								
	612	5	1-2½	18S506S	19		0-6½	0-8									
				BRIDGE 10													
				NORTHWEST CORNER													
*	17	5	1-6	10S501NW	STR												
	3	5	17-3	10S502NW	STR	▲											
	9	5	3-5	10S503NW	17	▲	1-6	0-5	1-6								
				NORTHEAST CORNER													
	17	5	1-6	10S501NE	STR												
	2	5	17-0	10S502NE	STR	▲											
	9	5	3-5	10S503NE	17	▲	1-6	0-5	1-6								
				SOUTHWEST CORNER													
	12	5	1-6	10S501SW	STR												
	2	5	13-4	10S502SW	STR	▲											
	9	5	3-5	10S503SW	17	▲	1-6	0-5	1-6								
				SOUTHEAST CORNER													
	13	5	1-6	10S501SE	STR												
	2	5	14-1	10S502SE	STR	▲											
	9	5	3-5	10S503SE	17	▲	1-6	0-5	1-6								
				BRIDGE 21													
				SOUTHWEST CORNER													
	17	5	1-6	21S501SW	STR												
	2	5	8-10	21S502SW	STR	▲											
				SOUTHEAST CORNER													
	13	5	1-6	21S501SE	STR												
	4	5	8-6	21S502SE	STR	▲											
				NORTHWEST CORNER													
	12	5	1-6	21S501NW	STR												
	2	5	8-10	21S502NW	STR	▲											
				NORTHEAST CORNER													
	16	5	1-6	21S501NE	STR												
	3	5	9-4	21S502NE	STR	▲											

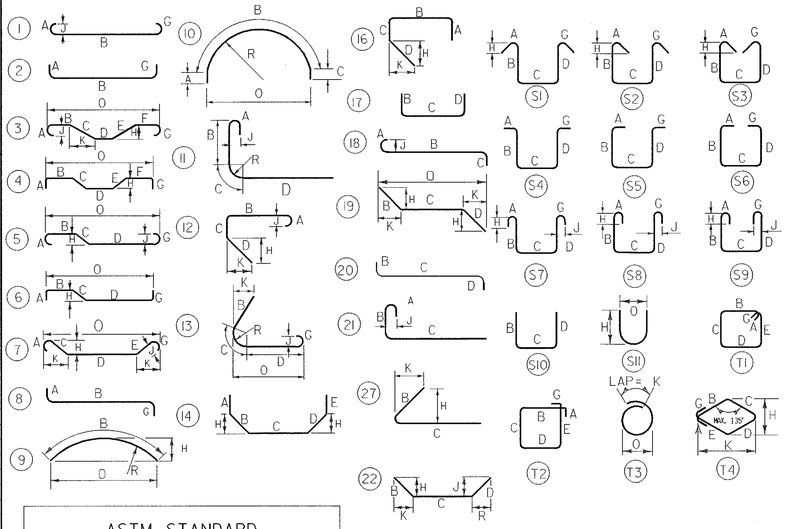
MARK KEY

EXAMPLE: 6S05N

BRIDGE NO. 6 — NORTHBOUND

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 615-91). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	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

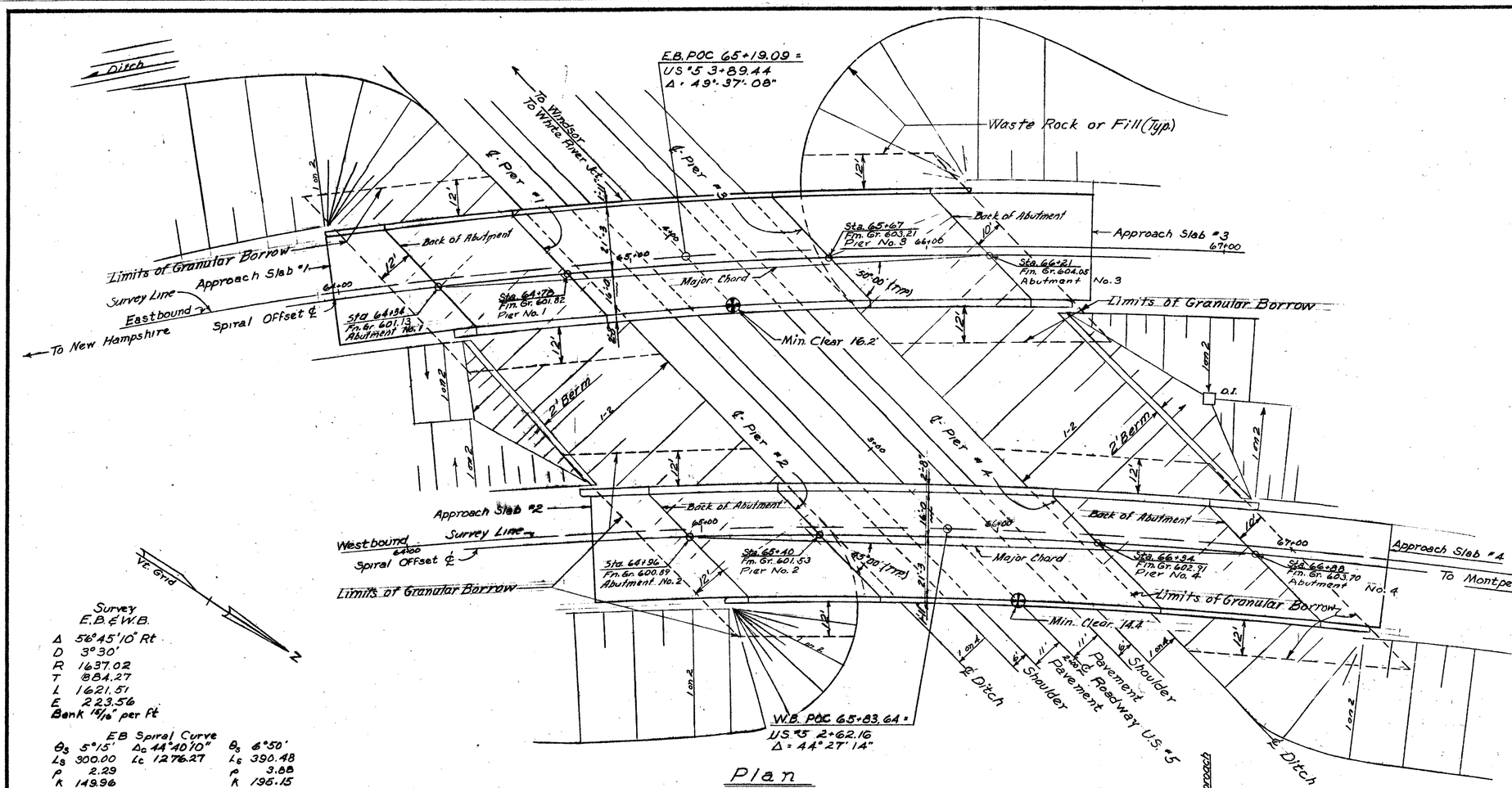
PLOTTED 20-NOV-2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of HARTFORD-SHARON-ROYALTON	Bridge No.
Highway No. 189	Log Sta.
	Surv. Sta.

REINFORCING STEEL SCHEDULE

Designed By C. MEUNIER	Drawn By S. MAGNAN
Checked By J.P. SPILAK Date 2/95	Bridge Design Supervisor G.S. ROGERS Date 2/95
PROJECT HARTFORD-SHARON-ROYALTON	PROJECT NO. IM IR 089-1(8)
I.G.C. \\vtfp\coddf\filingcabinet$\87d008\Structures\sa008qnt.dgn sa008barl	
Bridge Sheet No. BR 136	Sheet 93 of 260



Plan

Survey
E.B. & W.B.

Δ	56°45'10" Rt
D	3°30'
R	1637.02
T	884.27
L	1621.51
E	223.56

Bank 1⅝" per ft

EB Spiral Curve

θ_s	5°15'	Δ_c	44°40'10"
L_s	300.00	L_c	1276.27
p	2.29		
k	149.96		
X_c	299.75		
Y_c	9.16		
T_s	1037.36		
LT	200.09		
ST	100.08		
LC	299.89		

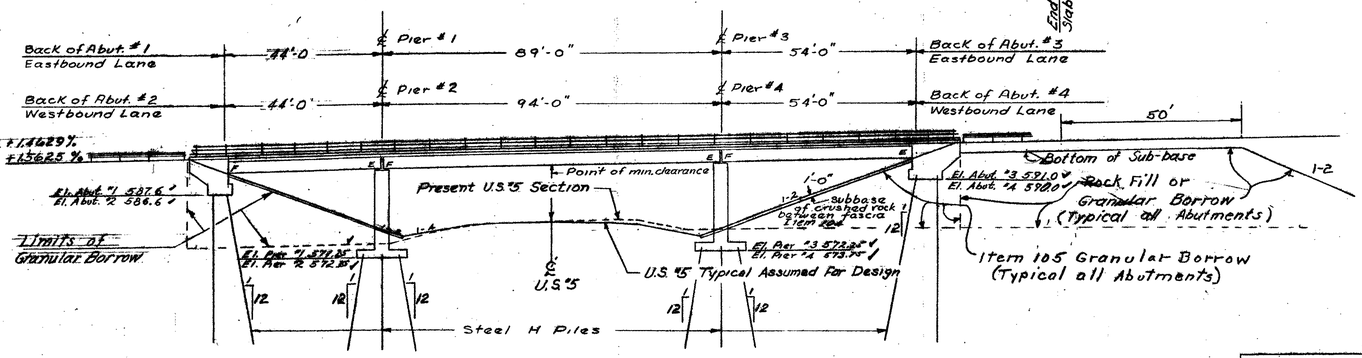
T.S. 60+06.54
S.C. 63+06.54
C.S. 75+82.81
S.T. 79+73.29 = 78+77.09

WB Spiral Curve

θ_s	5°15'	Δ_c	46°15'10"
L_s	300.00	L_c	1321.51
p	2.29	LT	200.09
k	149.96	ST	100.08
X_c	299.75	LC	299.89
Y_c	9.16	TS	59+28.41
		SC	62+25.41
		CS	75+46.92 = 75+49.32
		ST	78+46.92 = 78+49.32

Spiral Offsets

EB		WB	
63+93	2.72' Rt	64+50	2.51' Rt
64+00	2.73' Rt	64+53	2.51' Rt
64+24	2.77' Rt	64+86	2.52' Rt
64+50	2.81' Rt	65+00	2.53' Rt
64+76	2.85' Rt	65+40	2.54' Rt
65+00	2.89' Rt	65+50	2.55' Rt
65+50	2.97' Rt	66+00	2.56' Rt
65+67	2.99' Rt	66+34	2.57' Rt
66+00	3.04' Rt	66+50	2.58' Rt
66+21	3.07' Rt	66+88	2.58' Rt
66+50	3.12' Rt	67+00	2.58' Rt
66+56	3.13' Rt	67+25	2.59' Rt



ELEVATION

GENERAL NOTES

1. Elevation datum sea level based on nearest U.S. Government Vertical Control.
2. For details of Bearing Devices see Std. Sheet SCB-D8-65.
3. For details of Curtain Walls at Bearing Devices see Std. Sheet SCB-D9-65 Detail A.
4. All piling shall be 12 BP 53 Steel H-Piles driven to point bearing on ledge. Elevations shown on the plans are anticipated ledge elevations for design purposes.
5. For additional notes see Std. Sheet SCB-D1-65.

LIST OF BRIDGE SHEETS

Br. 100 Plan & Elevation - E.B. & W.B.
Br. 101 Plan & Elevation - E.B.
Br. 102 Plan & Elevation - W.B.
Br. 103 Bridge Quantity Sheet
Br. 104 Preliminary Information Sheet.
Br. 105-106 Boring Logs
Br. 107 Eastbound Framing Plan; Curve, Curb, & Railing Layouts
Br. 108 Westbound Framing Plan; Curve, Curb, & Railing Layouts
Br. 109-112 Details of Approach Slabs No. 1-4.
Br. 113-116 Abutments No. 1-4 Details
Br. 117-120 Pier No. 1-4 Details
Br. 121-124 Reinforcing Steel Schedules.

BRIDGE STANDARDS

SCB-37.25-65	
SCB-D1-65 → N Bgdn Bridges	SCB-D7-65 → diaph., num. anc. bolts
SCB-D2-65 → Pier Exp. - I Beam	SCB-D8-65 → bearing devices
SCB-D3-65 → Exp. Pl. & drain trough	SCB-D9-65 → curt. wall & elev.
SCB-D4-65 → Curb Layout	SB-R2-65 → Rail
SCB-D5-65 → Reinf. @ Pier	SB-R1-64 Sheets 1 & 2. → Rail
SCB-D6-65 → Stepped details	

REFERENCE SHEETS

I-89 Roadway Plan Sheet Sta. 61 to 77
I-89 Roadway Profile Sheet Sta. 61 to 77
I-89 Roadway Sections E.B. Sta. 61+00 to 68+50.
I-89 Roadway Sections W.B. Sta. 61+00 to 68+00.
U. S. 5 Roadway Sections Sta. 0+50 to 7+50.
Std. Sheet G-3a.
Std. Sheet B-17

Bridge #6N & 6S

BR. 100 OF 124

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford
ROUTE NO. I 89 LOG STA.
INTERSTATE OVER U.S. 5
PLAN AND ELEVATION
SCALE 1" = 20'
SURVEYED BY VAN WAGENEN

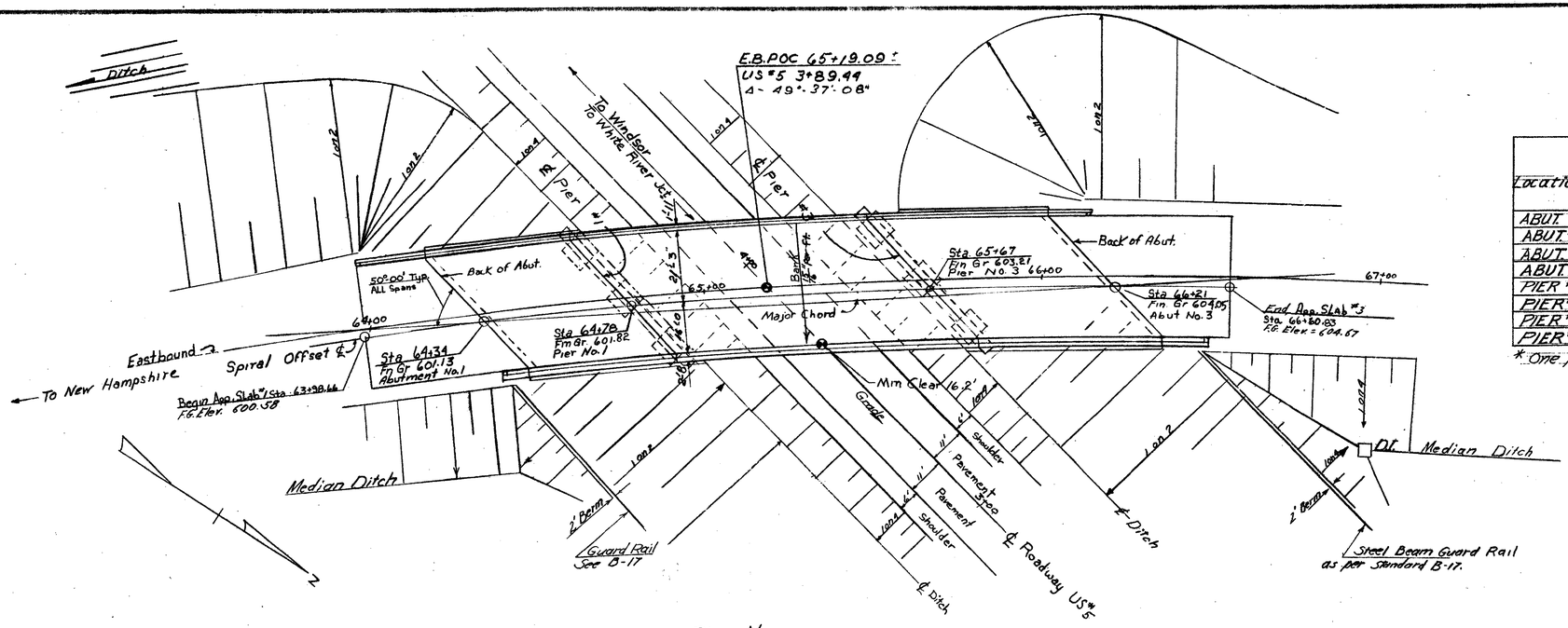
Preliminary Information Approval

Recommended For Approval — Bridge Engineer — 7/15/69 Date
Recommended For Approval — Asst. Chief Engineer
Approved By — Chief Engineer

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

Bridge Sheet No. BR 137 Sheet 94 of 260

K+E

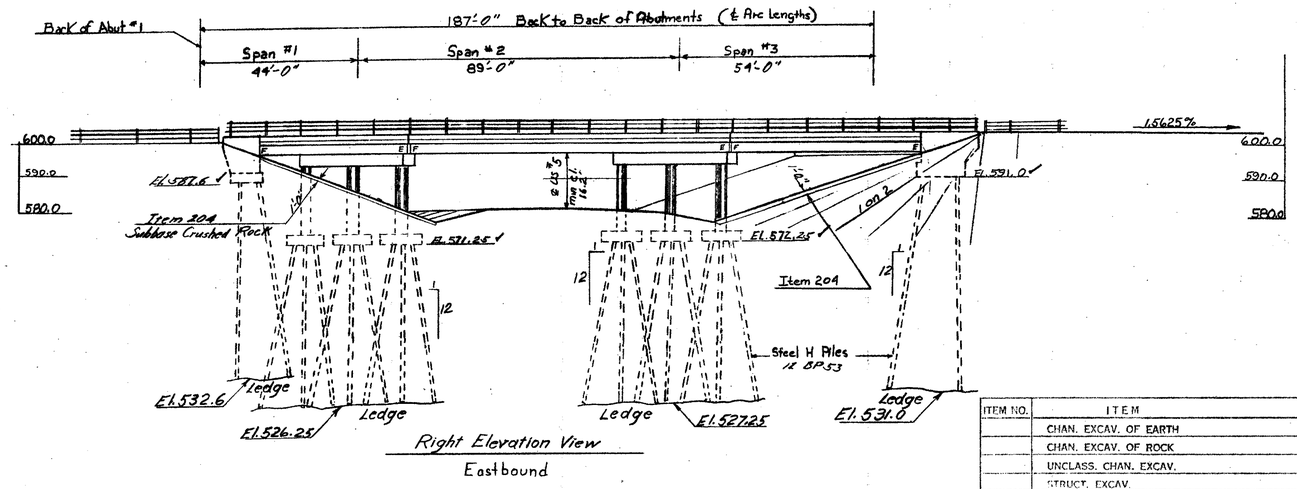


Plan View

ESTIMATED PILE SPLICES

Location	No. Piles	Size	Est. Length of Piles	To be paid for only if used: Splices allowed for Piles not Exceeding Plan Length	Splices Estimated for Piles Exceeding Plan Length
ABUT. #1	15	12BP53	55 ft	0	3
ABUT. #2	16		70 ft.	16	4
ABUT. #3	15		60 ft.	0	3
ABUT. #4	17		55 ft.	0	4
PIER #1	21		45 ft.	0	5
PIER #2	21		45 ft.	0	5
PIER #3	21		45 ft.	0	5
PIER #4	21	12BP53	45 ft.	0	5

* One pile splice for each pile length over 60 ft.



Right Elevation View
Eastbound

BR #6

BR. 101 OF 124

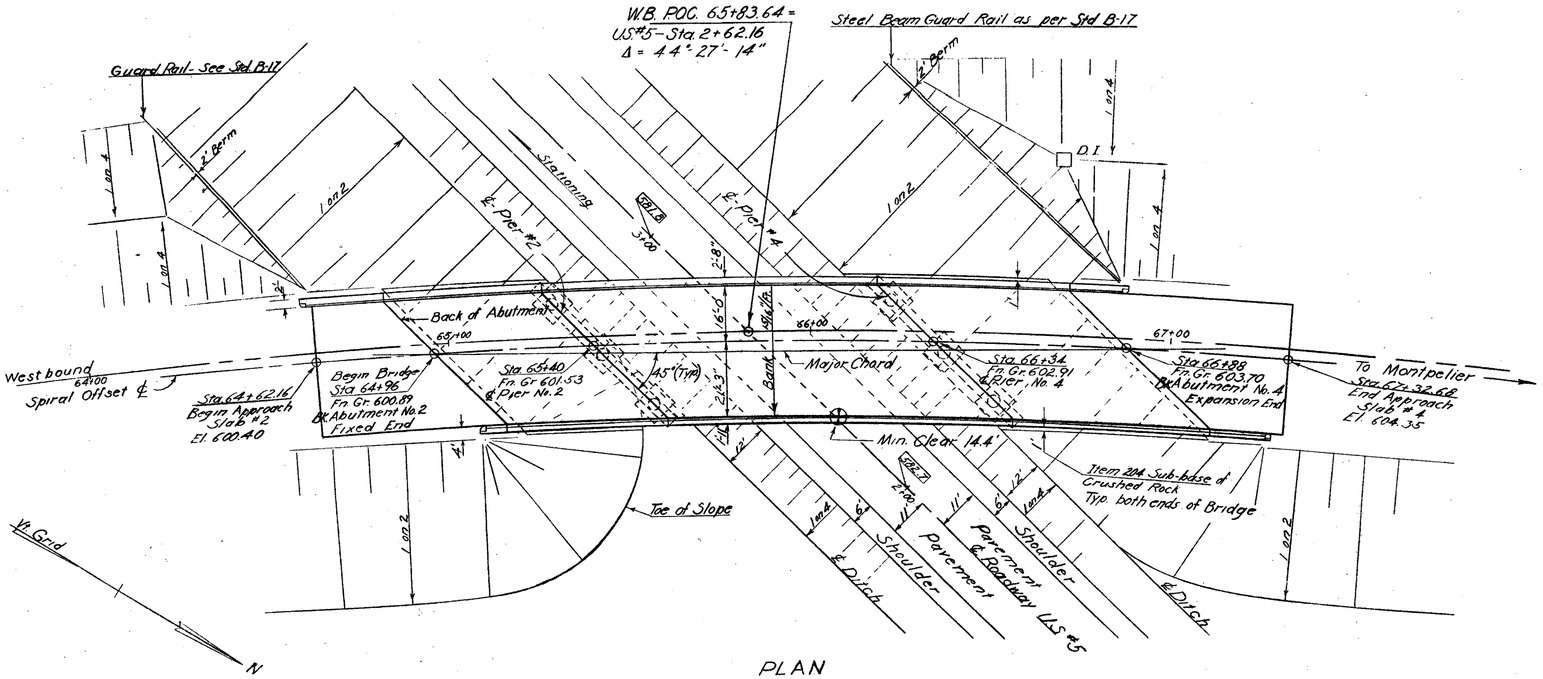
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
	UNTREATED TIMBER PILING	L.F.				

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

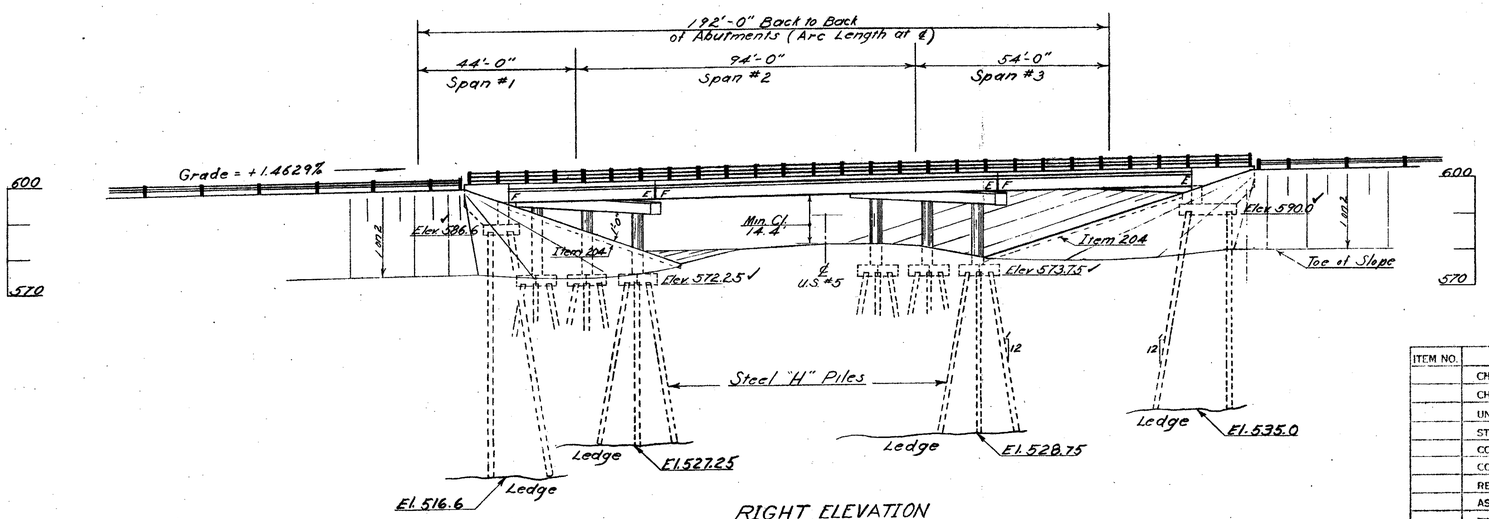
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD
ROUTE NO. I-89 LOG STA 65+50
Interstate over U.S. #5
Eastbound Plan & Elevation
SCALE 1"=20"
SURVEYED BY VAN WAGENEN

Bridge Sheet No. BR 138 Sheet 95 of 260



PLAN
Scale 1" = 20'



RIGHT ELEVATION
Scale 1" = 20'

WESTBOUND BRIDGE

BR #6

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

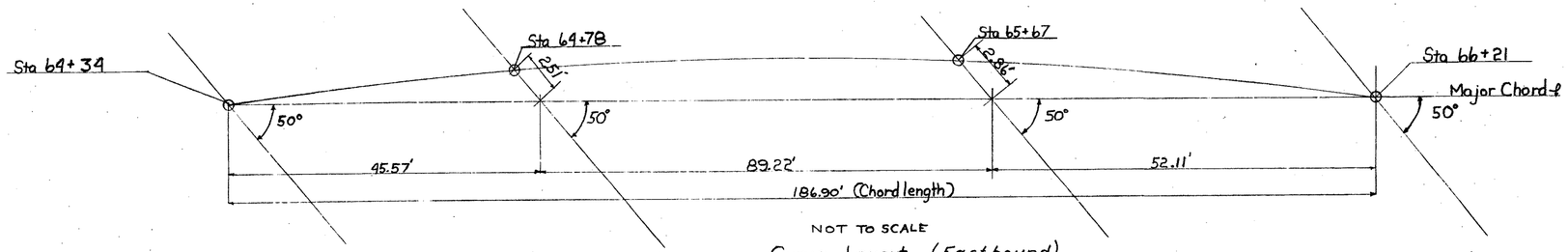
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
	UNTREATED TIMBER PILING	L.F.				

BR. 102 OF 124

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

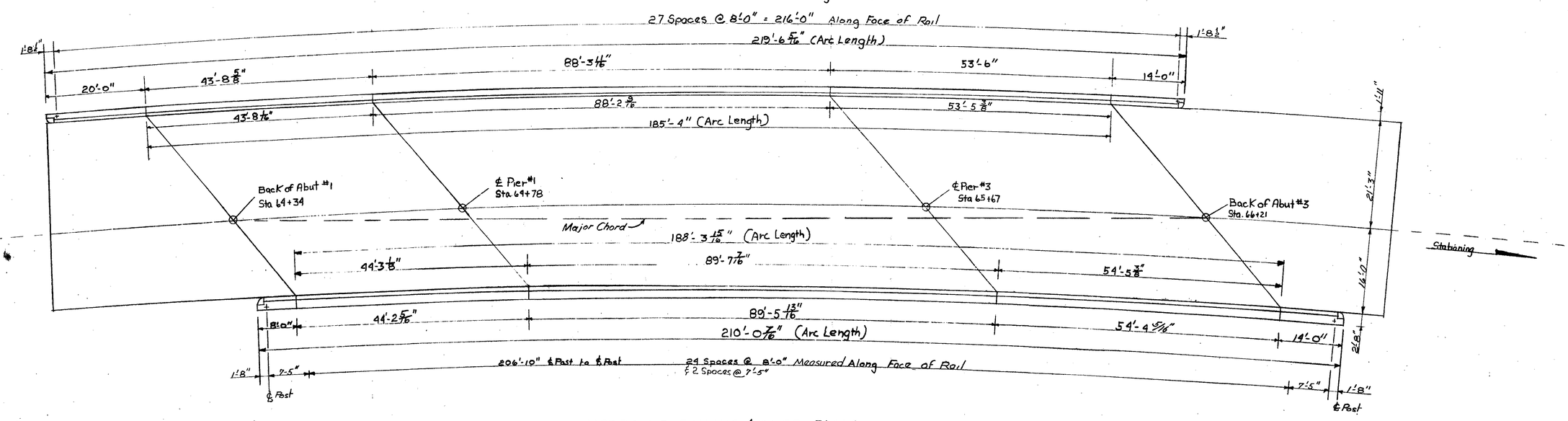
TOWN OF HARTFORD
ROUTE NO. I 89 LOG STA. 65+50
INTERSTATE OVER U.S. #5
PLAN AND RIGHT ELEVATION (WB)
SCALE 1" = 20'
SURVEYED BY Van Wagenen
D. Bartlett CHECKED BY X

Bridge Sheet No. BR 139 Sheet 96 of 260



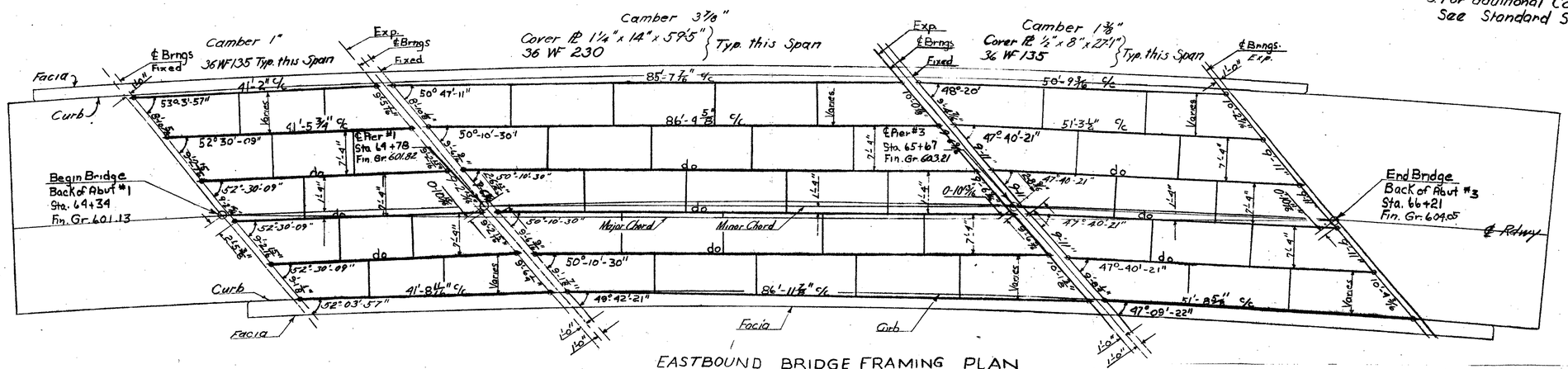
NOT TO SCALE

Curve Layout (Eastbound)



EASTBOUND RAILING & CURB PLANS

Scale: 1" = 10'-0"



EASTBOUND BRIDGE FRAMING PLAN

Scale 1" = 10'

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

NOTES.

1. For additional details of Bridge Railing see Std. Sheets SB-R1-64 & SB-R2-65
2. For additional details of Granite Curb see Std. Sheets SCB-D4-65 & SCB-D6-65.
3. For additional Cover Pl & Diaphragm Details, See Standard Sheet SCB-D7-65.

BR #6

BR. 107 OF 124

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

TOWN OF Hartford

ROUTE NO. I-89 LOG STA.

EASTBOUND I89 over US#5

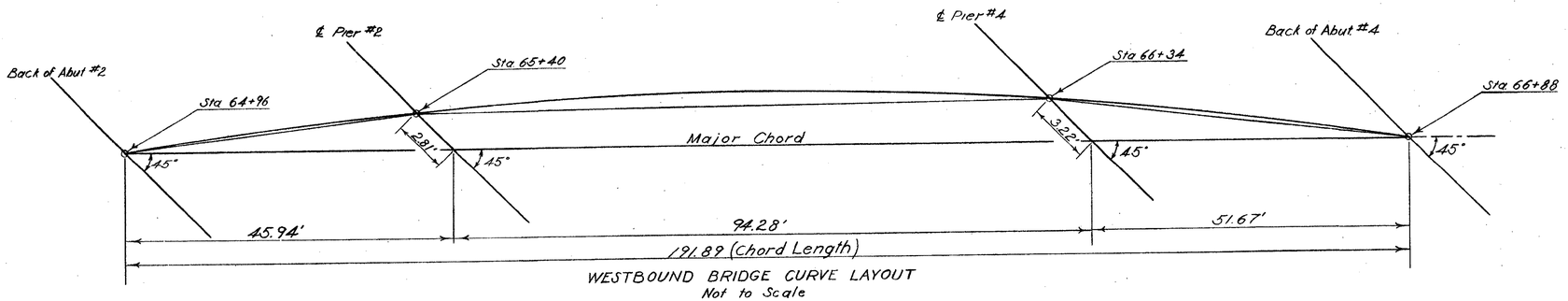
Framing Plan; Curve, Curb, & Railing Layouts

SCALE As Noted

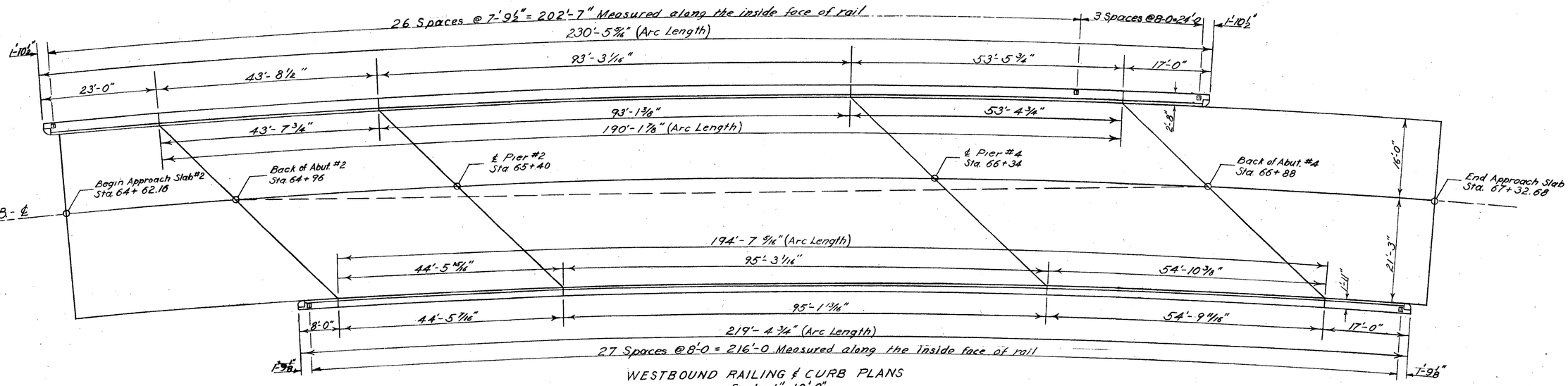
SURVEYED BY

Bridge Sheet No. BR 1HD Sheet 97 of 260

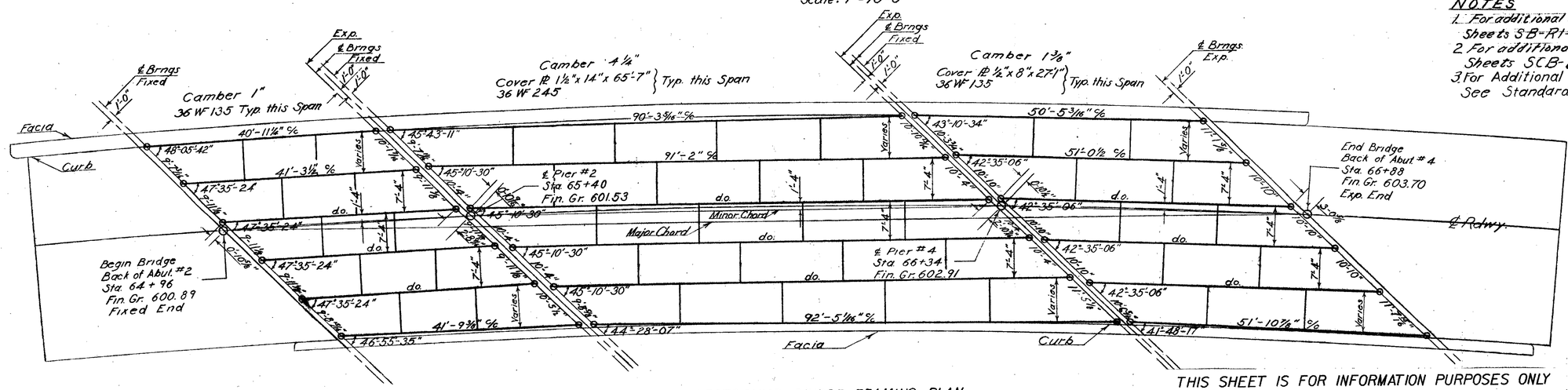
K+E



WESTBOUND BRIDGE CURVE LAYOUT
Not to Scale



WESTBOUND RAILING ℄ CURB PLANS
Scale: 1" = 10'-0"



WESTBOUND BRIDGE FRAMING PLAN
Scale 1" = 10'

NOTES
1. For additional details of Bridge Railing see Std. Sheets SB-R1-64 ℄ SB-R2-65
2. For additional details of Granite Curb see Std. Sheets SCB-D4-65 ℄ SCB-D6-65
3. For Additional Cover Pl ℄ Diaphragm Details, See Standard Sheet SCB-D7-65.

BR #6

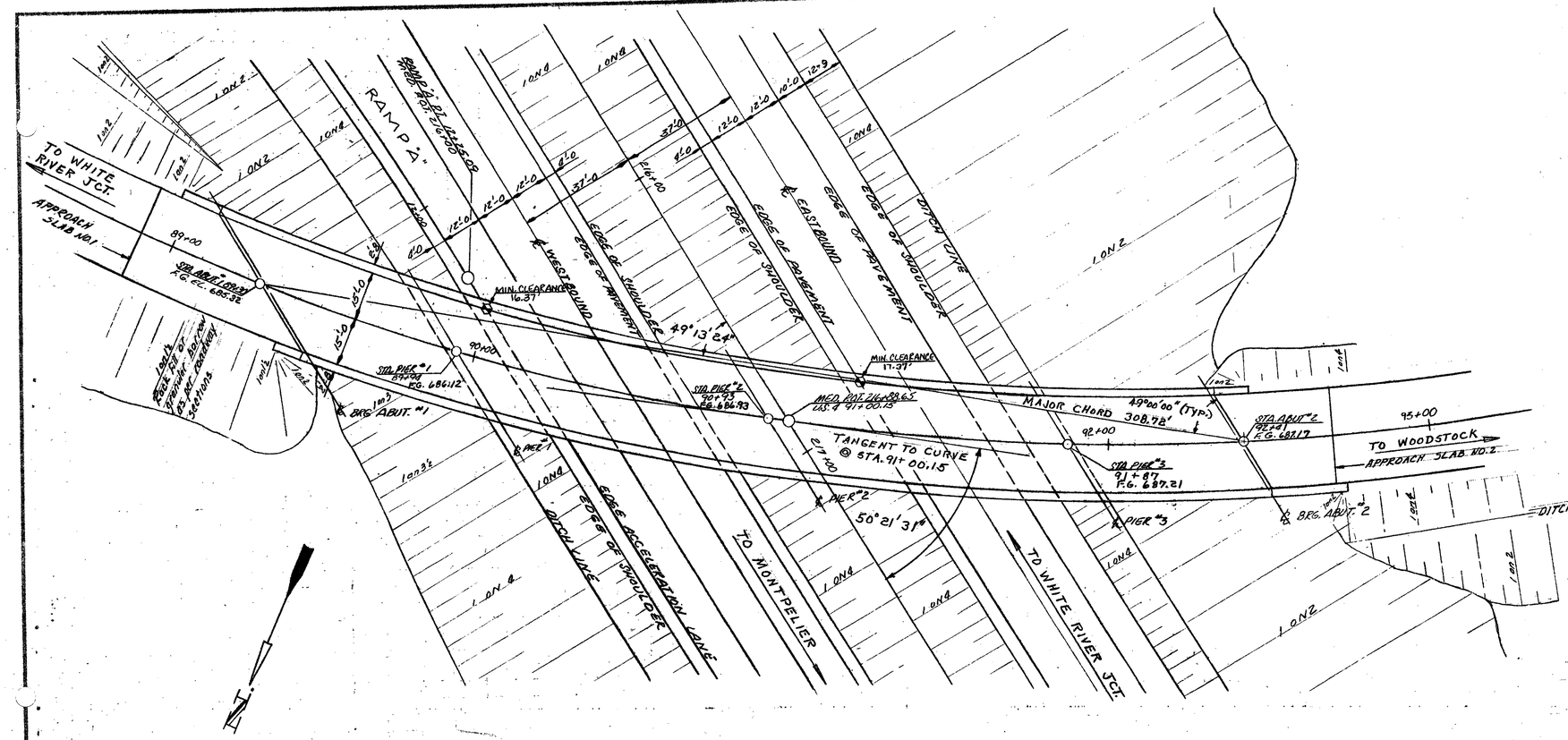
BR. 108 OF 124

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford
ROUTE NO. I89 LOG STA.
WESTBOUND I89 over US #5
Framing Plan; Curve, Curb, & Railing Layouts
SCALE As Noted
DRAWN BY

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

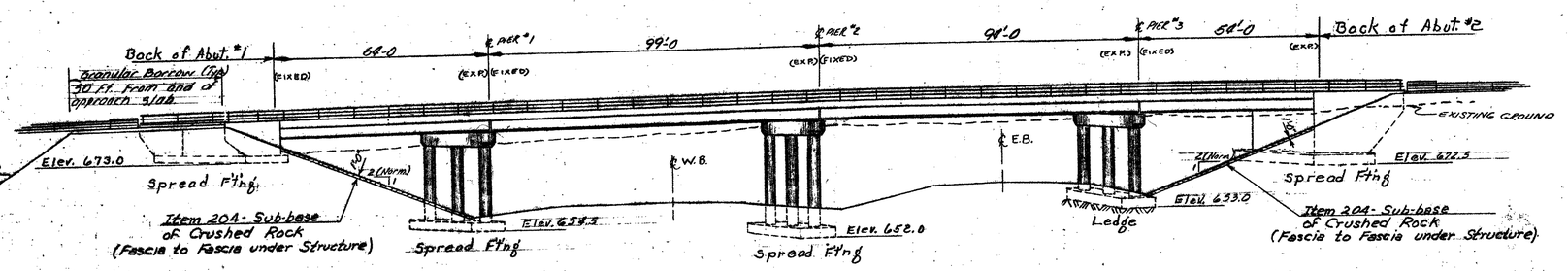
Bridge Sheet No. BR 141 Sheet 98 of 260



PLAN

P.V.I. 90+75
Elev. 687.64
350' V.C.

+ 1.5817 %
- 0.2821 %



ELEVATION

GENERAL NOTES:-

1- Elevation datum is sea level based on nearest U.S. Government vertical control.
2- For additional notes see SCB-01-65

LIST OF SHEETS:-

BR 200 - Plan and Elevation
201 - Bridge Quantity Sheet
202 - Preliminary Information Sheet
203 - Borings
204 - Superstructure Spans "1 & "2
205 - Superstructure Spans "3 & "4
206 - Approach Slab No. 1
207 - Approach Slab No. 2
208 - Abutment No. 1
209 - Abutment No. 2
210 - Pier No. 1
211 - Pier No. 2
212 - Pier No. 3
BR. 213-214- Reinforcing Steel Schedules

STANDARD SHEETS

6-3a
SCB-30-65
SCB-D1 THRU D9-65
SB-R1-64 Sheets 1 and 2
SB-R3-64

Bridge # 8

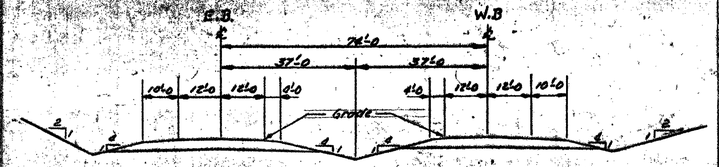
BR 200 OF 214

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD
ROAD No. U.S. #4 BRIDGE No.
U.S. #4 OVER I-89
PLAN & ELEVATION
SCALE 1" = 20'-0
SURVEYED BY

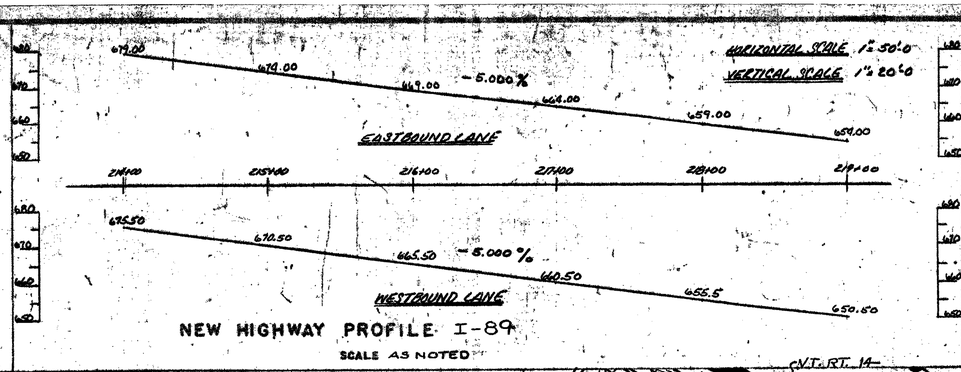
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

Bridge Sheet No. BR 142 Sheet 99 of 260



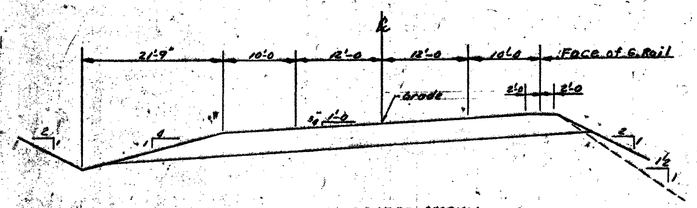
NEW HIGHWAY SECT. STA. TO STA.

SCALE 1" = 20'-0

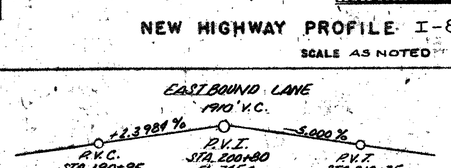


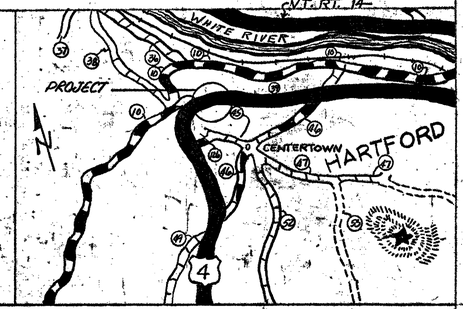
NEW HIGHWAY PROFILE I-89

SCALE AS NOTED

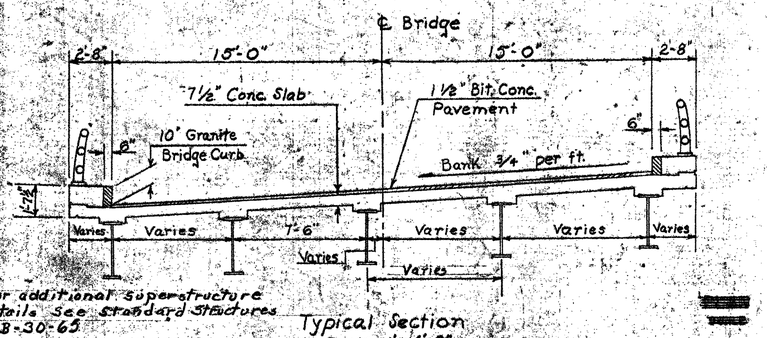


MAXIMUM BANKED SECTION
U.S. ROUTE "4
1" = 10'-0



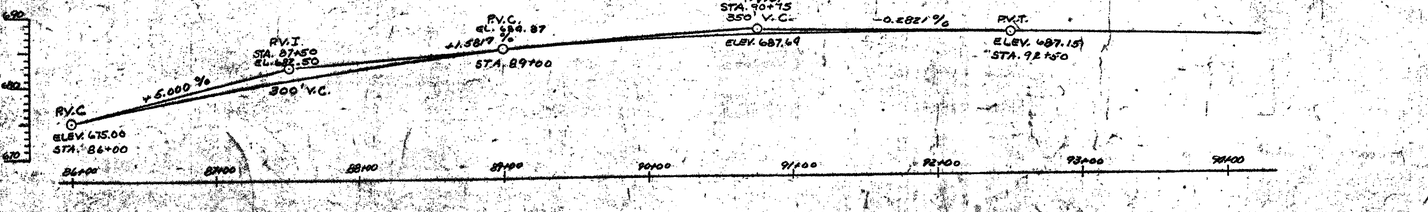


PROJECT LOCATION



For additional superstructure details see standard Structures SCB-30-63

Typical Section
Scale 1"=4'-0"



PROFILE OF U.S. ROUTE #4

SCALE AS NOTED

HIGHWAY NO. I-89 NAME OF HIGHWAY

STRUCTURE NO. COUNTY WINDSOR TOWN HARTFORD

PROJECT NO I-89-1(22) LOCATION INTERSTATE 89 UNDER U.S. ROUTE "4"

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE
3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE COST OF REMOVAL
5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE
6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT
7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY H.W.
8 EXTREME HIGH WATER AT EXISTING STRUCTURE
9 SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
SPAN OF EXISTING BRIDGE DOWNSTREAM WATERWAY TO EXTREME H.W.
10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
11 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE
12 IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED
13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE 4 SPAN SIMPLE COMPOSITE WF BEAM SCB-30-63
2 RECOMMENDED CLEAR SPAN OR SPANS 69-99-94-59
MEASURED PARALLEL TO ℄ NEW HIGHWAY 69-99-94-59
MEASURED AT RIGHT ANGLES TO ℄ STREAM N.A.
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO N.A.
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE N.A.
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE N.A. SOURCE OF INFORMATION N.A.
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? N.A.
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? N.A. IS ORDINARY RISE RAPID? N.A.
8 LOW WATER ELEVATION AT NEW STRUCTURE N.A.
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE N.A. CHARACTER OF TERRAINE
10 IS STREAM EVER DRY? N.A.
11 VELOCITY OF STREAM AT HIGH WATER STAGE N.A. ESTIMATED DISCHARGE N.A.
12 AREA FULL OPENING N.A. AREA BELOW ORDINARY H.W. N.A.
13 CHARACTER OF SCOUR N.A. DRIFT N.A. ICE N.A.
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE N.A.
15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION N.A.
16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NO BOTH SIDES N.A.
17 RECOMMENDED TYPE OF PAVEMENT 10 BITUMINOUS CONCRETE
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. 108 ONE OR TWO WAYS TWO PROBABLE COST N.A.
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE N.A.
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 2 Tons/sq.ft. SHOULD PILES BE USED? No SIZE, LENGTH

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

BR # 8

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

BR 202 OF 214

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

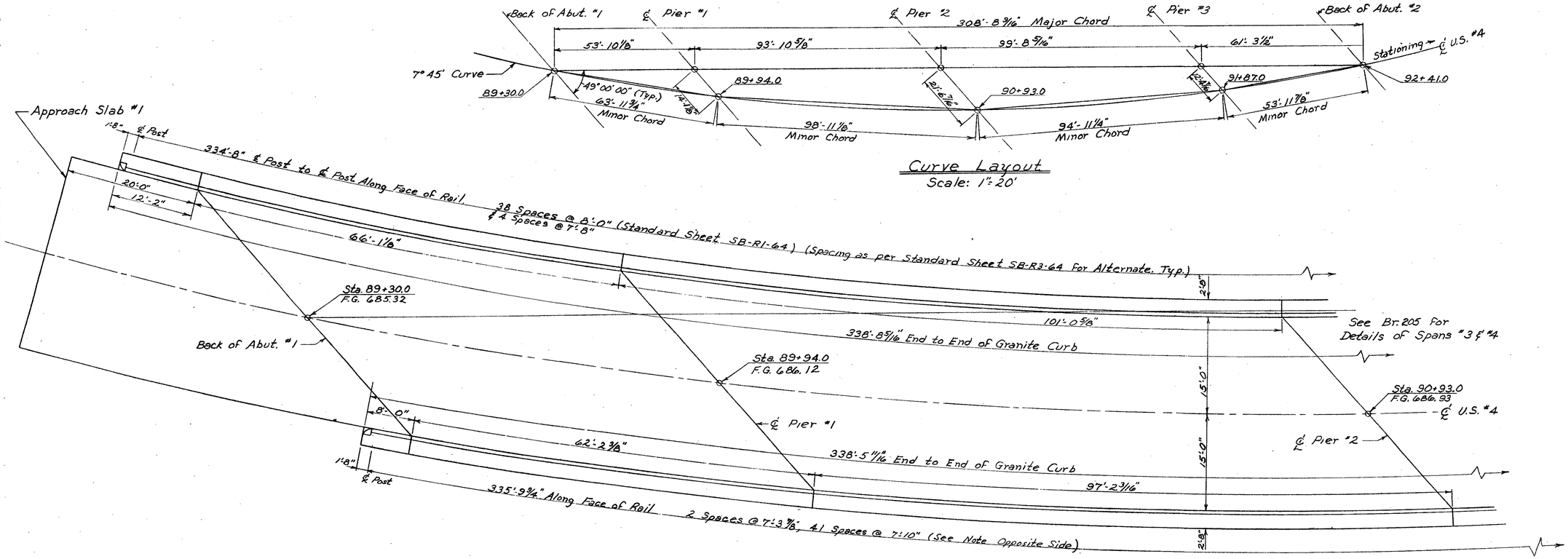
I-89 IN THE TOWNS OF
HARTFORD
ROUTE NO 4 LOG STA 217+00
U.S. ROUTE "4 OVER I-89

Recommended for Approval Lyn Born Bridge Engineer 8/24/64 Date

Recommended for Approval R.H. Arnold Asst. Chief Engineer

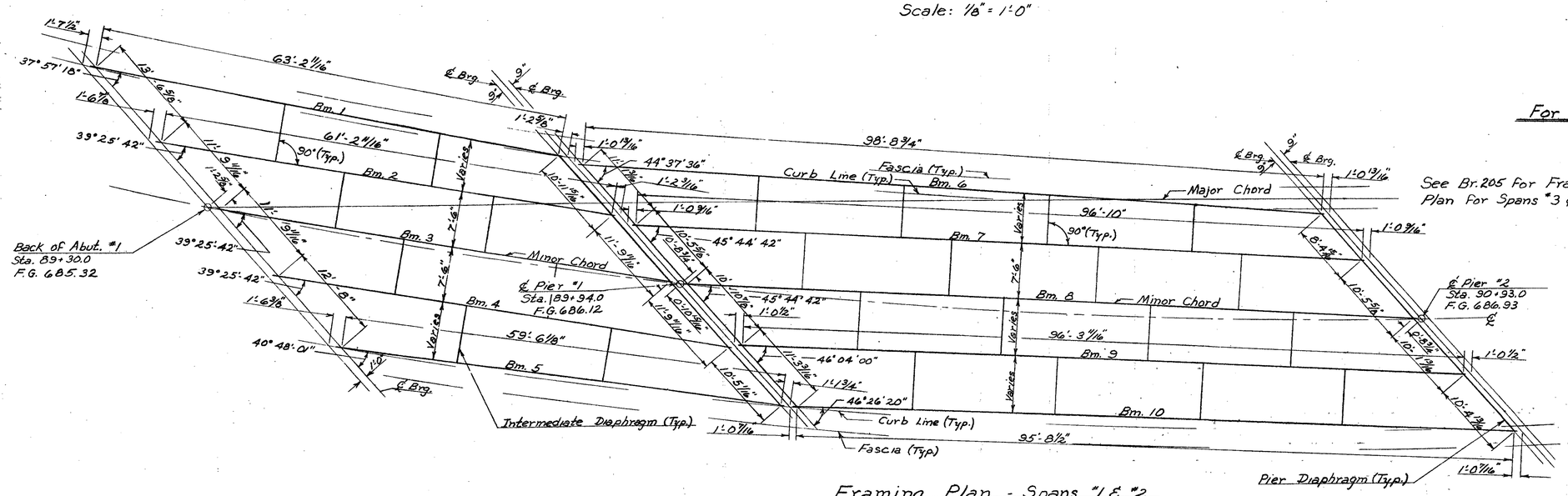
Approved by A.D. Bishop Chief Engineer

Bridge Sheet No. BR 143 Sheet 100 of 260



Curve Layout
Scale: 1" = 20'

Superstructure Plan - Spans #1 & #2
Scale: 1/8" = 1'-0"



Framing Plan - Spans #1 & #2
Scale: 1/8" = 1'-0"

For Superstructure Notes see Br. 205

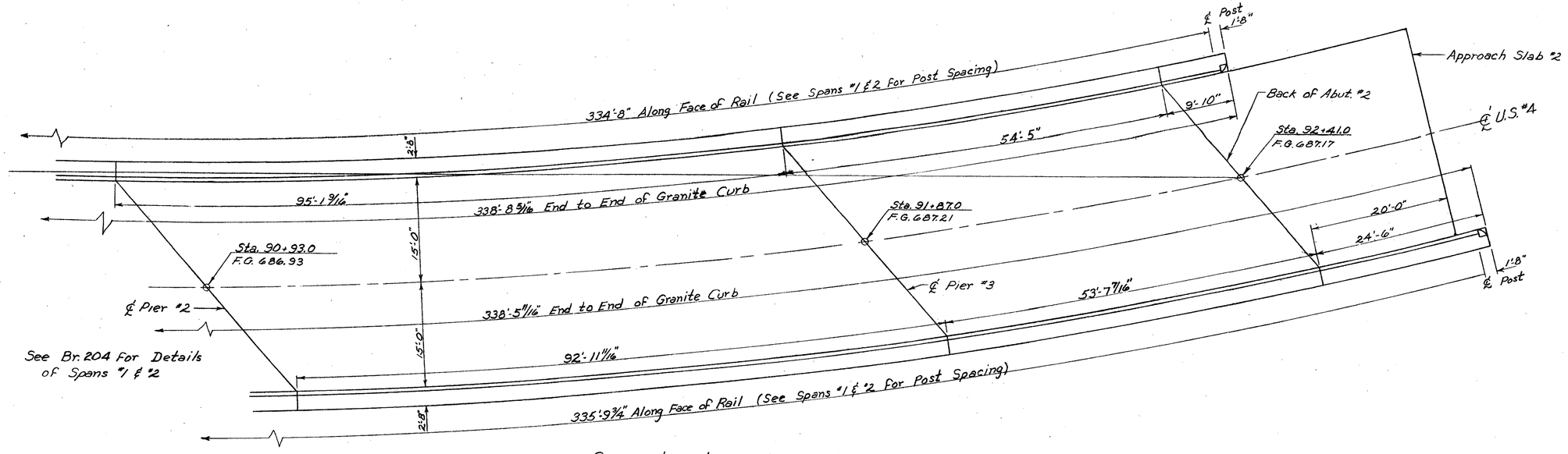
Br. 204 of 214

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford
ROUTE NO. U.S. #4 LOG STA.
U.S. #4 over I 89
Superstructure - Spans #1 & #2
SCALE As noted
BY

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM 1R 089-1(6)

Bridge Sheet No. BR 144 Sheet 101 of 260

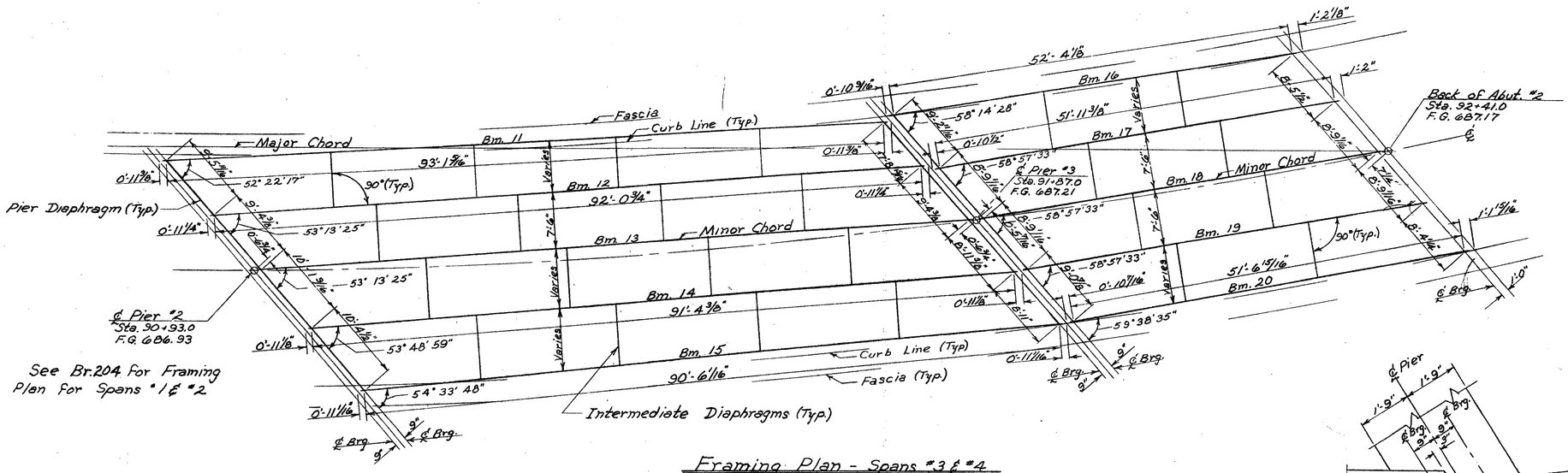


Superstructure Plan - Spans #3 & #4

Scale: 1/8" = 1'-0"

Notes

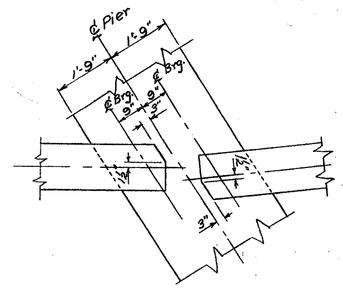
1. For Beam sizes and Cover Plate sizes and lengths see Standard Sheet SCB-30-65 & SCB-D7-65, Detail "C".
2. For additional details of diaphragms see Standard Sheet SCB-D7-65, Details "A", "D", "E".
3. For Typical Section of Superstructure see Br. 202
4. For additional Superstructure details see Standard Sheets SCB-D1-65 thru SCB-D9-65.
5. No Scuppers are to be used on this bridge.
6. For General Notes see Br. 200



See Br. 204 for Framing Plan for Spans #1 & #2

Framing Plan - Spans #3 & #4

Scale: 1/8" = 1'-0"



Details of WF Cut-offs @ Piers

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

(Note: Cut top flange only)

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

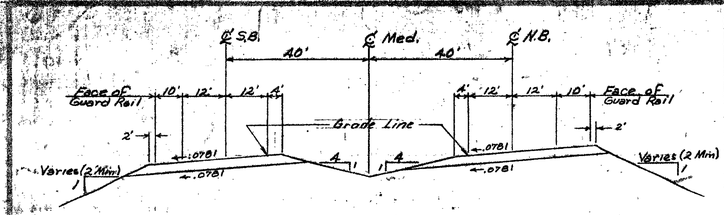
BR #8

Br. 205 of 214

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

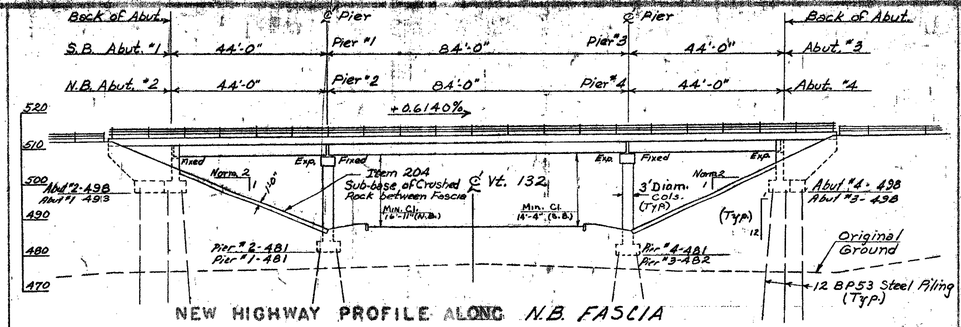
TOWN OF Hartford
ROUTE NO. U.S. #4 LOG OF
U.S. #4 over I 89
Superstructure - Spans #3 & #4
SCALE As noted

Bridge Sheet No. BR 145 Sheet 102 of 260



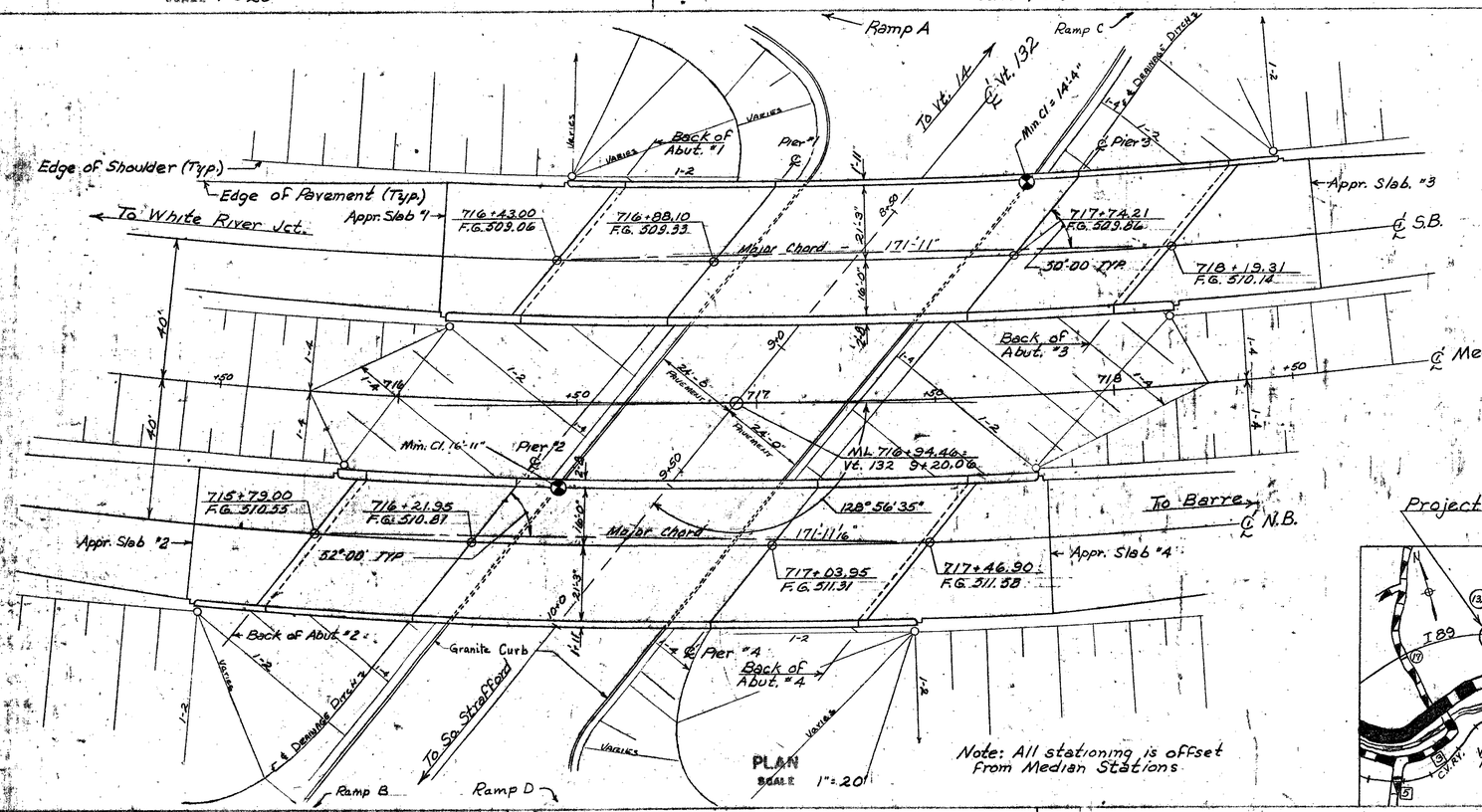
NEW HIGHWAY SECT. STA. 715+00 TO STA. 720+00

SCALE 1" = 20'



NEW HIGHWAY PROFILE ALONG N.B. FASCIA

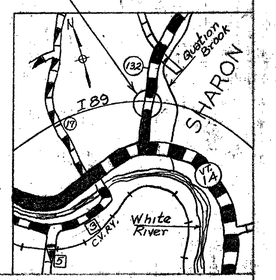
SCALE 1" = 20'

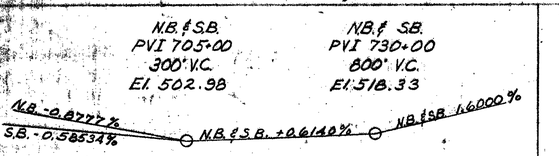


PLAN

SCALE 1" = 20'

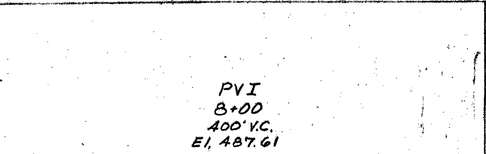
Note: All stationing is offset from Median Stations



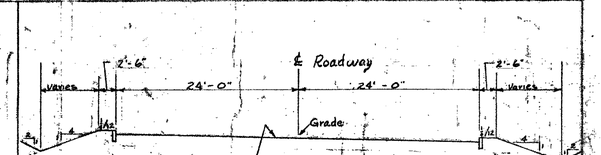


Profile of Proposed I 89

Not to scale



Profile of New Vt. 132



New Vt. 132 Section

Sta. 8+58 to 10+14 Shown

Max Bank - 8 per foot 1:4 1 Pt.

Scale: 1" = 10'

HIGHWAY NO I 89 NAME OF HIGHWAY

STRUCTURE NO S-5 B-12 COUNTY Windsor TOWN Sharon

PROJECT NO I 89-1(7) Cont. 4 LOCATION Interstate 89 over Vt. 132

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE
3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE — COST OF REMOVAL
5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE
6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT
7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE — WATERWAY TO ORDINARY H.W.
8 EXTREME HIGH WATER AT EXISTING STRUCTURE — WATERWAY TO EXTREME H.W.
9 SPAN OF EXISTING BRIDGE UPSTREAM — WATERWAY TO EXTREME H.W.
SPAN OF EXISTING BRIDGE DOWNSTREAM
10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
11 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE
12 IF NOT, AT WHAT ELEVATION IS RELIEF AFFORDED
13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE Simple Spans - WF Beams w/ Concrete Deck
2 RECOMMENDED CLEAR SPAN OR SPANS 44 (Non composite) - 84 (Composite) - 44 (Non composite)
MEASURED PARALLEL TO ℄ NEW HIGHWAY 44'-84'-44'
MEASURED AT RIGHT ANGLES TO ℄ STREAM N.A.
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO N.A.
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE N.A.
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE N.A. SOURCE OF INFORMATION N.A.
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? N.A.
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? N.A. IS ORDINARY RISE GRADUAL? N.A.
8 LOW WATER ELEVATION AT NEW STRUCTURE N.A.
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE N.A. CHARACTER OF TERRAIN N.A.
10 IS STREAM - EVER DRY? N.A.
11 VELOCITY OF STREAM AT HIGH WATER STAGE N.A. ESTIMATED DISCHARGE N.A.
12 AREA FULL OPENING N.A. AREA BELOW ORDINARY H.W. N.A.
13 CHARACTER OF SCOUR N.A. DRIFT N.A. ICE N.A.
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE N.A.
15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION N.A.
16 ARE SIDEWALKS REQUIRED, IF SO, ON WHAT SIDE No
17 RECOMMENDED TYPE OF PAVEMENT 7½" Concrete & 2" Bituminous
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. N.A. ONE OR TWO WAYS PROBABLE COST
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE N.A.
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 45 Tons/sq. ft. SHOULD PILES BE USED? Yes

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

Note: For details of Superstructure see Std. SCB-3.725-66
For notes regarding design criteria see Std SCB-DI-66

* TABLE OF PILE LENGTHS

LOCATION	BOTTOM OF FOOTING	ESTIMATED LENGTH
Abut "1"	493.0	60'
Abut "2"	498.0	80'
Pier "1"	481.0	30'
Pier "2"	481.0	45'
Pier "3"	482.0	50'
Pier "4"	481.0	30'
Abut "3"	498.0	55'
Abut. "4"	498.0	55'

Bridge # 15N & 15S

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

Recommended for Approval Lin Byam Bridge Engineer 3/23/65 Date

Recommended for Approval R.J. Crandall Asst. Chief Engineer

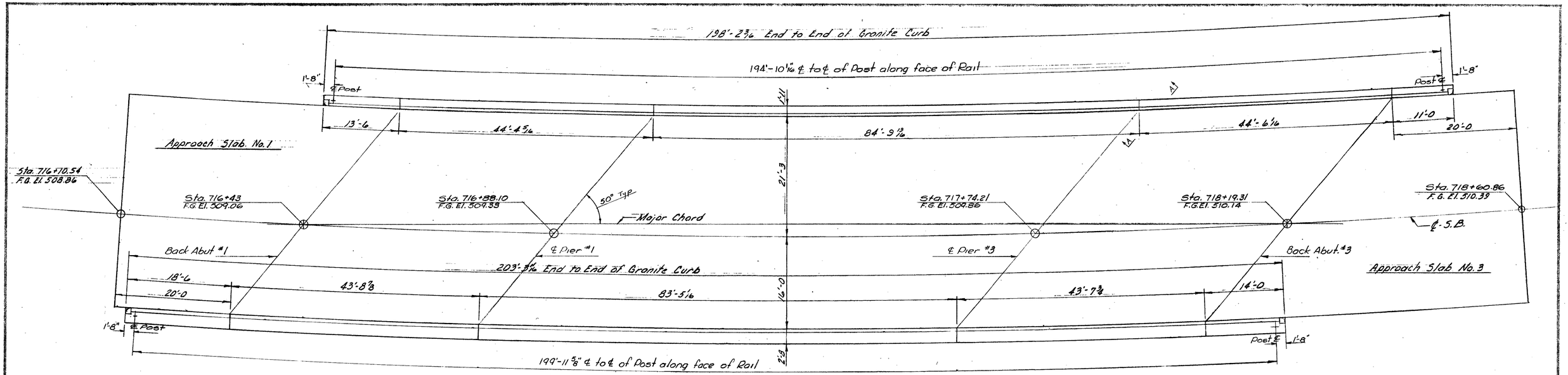
Approved by A.O. Finkle Chief Engineer

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

I 89 over Vt. 132 IN THE TOWNS OF HARTFORD - SHARON

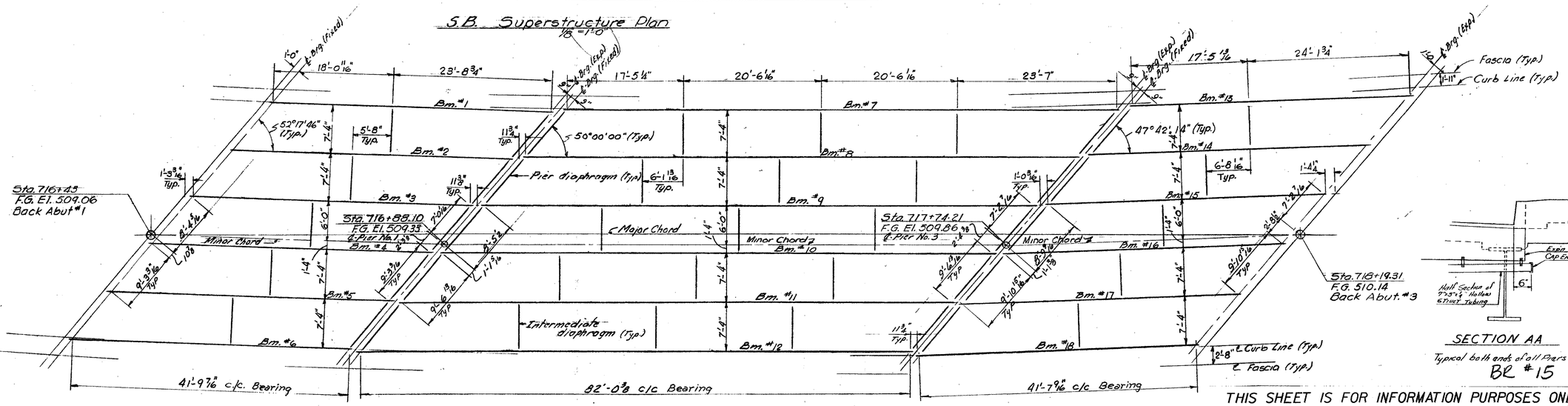
ROUTE NO I 89 STA 717+0

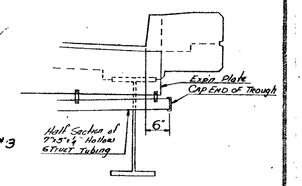
Bridge Sheet No. BR 146 Sheet 103 of 260



S.B. Superstructure Plan

1/8"=1'-0"





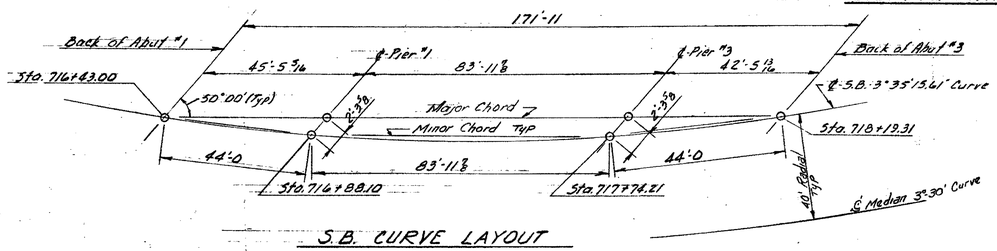
SECTION AA

Typical both ends of all Piers

BR #15

S.B. FRAMING PLAN

SCALE 1/8"=1'-0"



S.B. CURVE LAYOUT

Not To Scale

(Note:- Stationing is offset from Median)

CAMBER

44' Span : 1"

84' Span : 3 1/2"

NOTES:-

1- For General Notes see BR 300
2- For Beam sizes and Cover Plate sizes and lengths see Standard Sheets SCB-37.25-65 and SCB-D7-65, Detail "C."
3- For additional details of diaphragms see Standard Sheet SCB-D7-65, Details A, D & E.
4- Typical Sections of Superstructure as per Standard Sheet SCB-37.25-65 except modified as necessary for bank of 9"/ft. left.
5- No Scuppers are to be used on this bridge
6- For details of W.F. cut-offs at the Piers see BR. 307
7- For Additional Superstructure Details See Standard Sheets SCB-D1-65 Thru. SCB-D9-65.
8- For Details of Shear Connectors on 84 foot Spans See Standard Sheets SCB 37.25-65 and SCB D2-65 Detail B
9- For Details of Bridge Railing, see Standard SB RI-64 Sh. 1 of 2 and SB. R2-65. Post spacing not to exceed maximum shown on Standards with ℄ Posts 1'-0 min from Curb Joints.

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

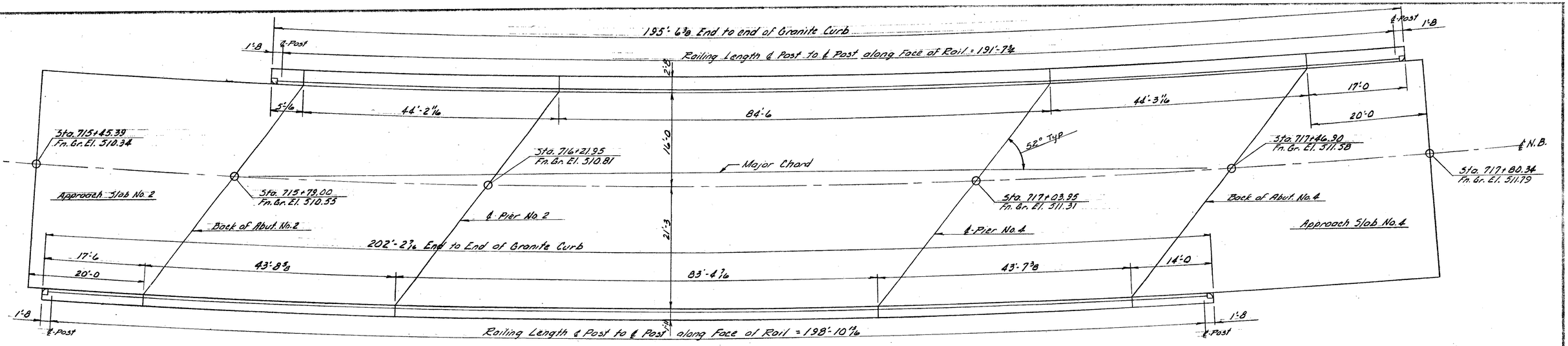
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 717+0

I-89 OVER VT. 132

S.B. SUPERSTRUCTURE

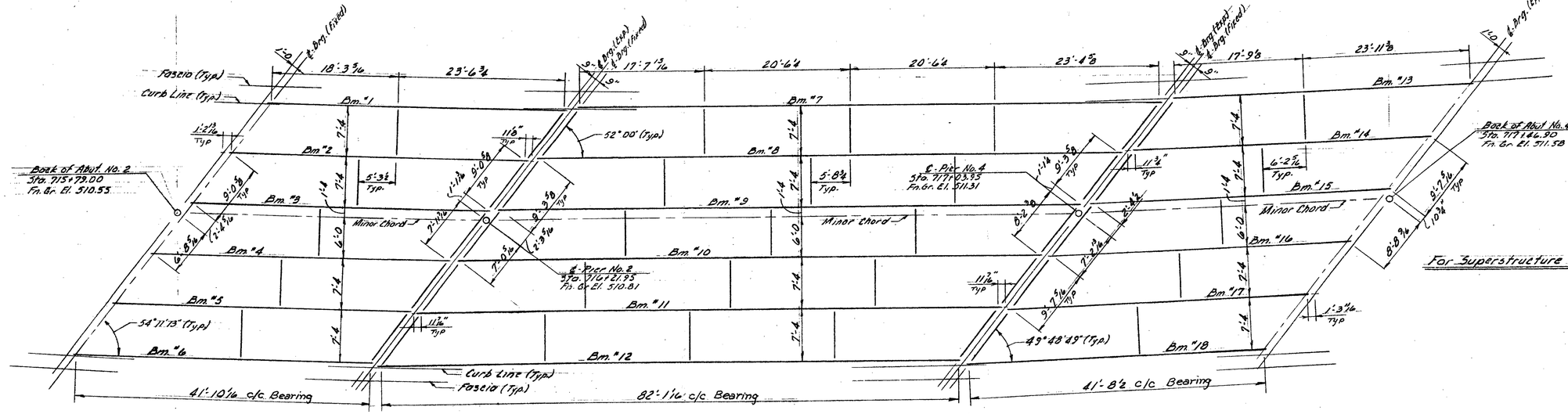
SCALE As Shown

Bridge Sheet No. BR 147 Sheet 104 of 260



N.B. SUPERSTRUCTURE PLAN

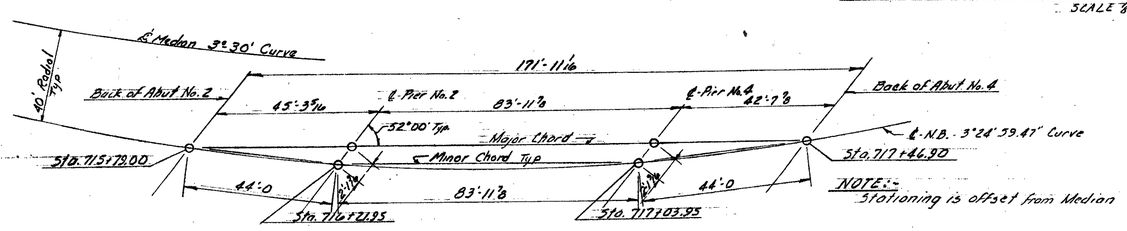
SCALE ⅜"=1'-0



For Superstructure Notes See BR. 306

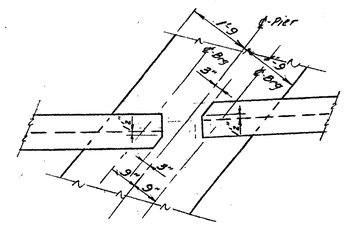
N.B. FRAMING PLAN

SCALE ⅛"=1'-0



N.B. CURVE LAYOUT

Not To Scale



DETAIL OF WF CUTOFFS @ PIERS

SCALE ½"=1'-0

(Note:- Cut top flange only.)

CAMBER

44' Span: 1"

84' Span: 3½"

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

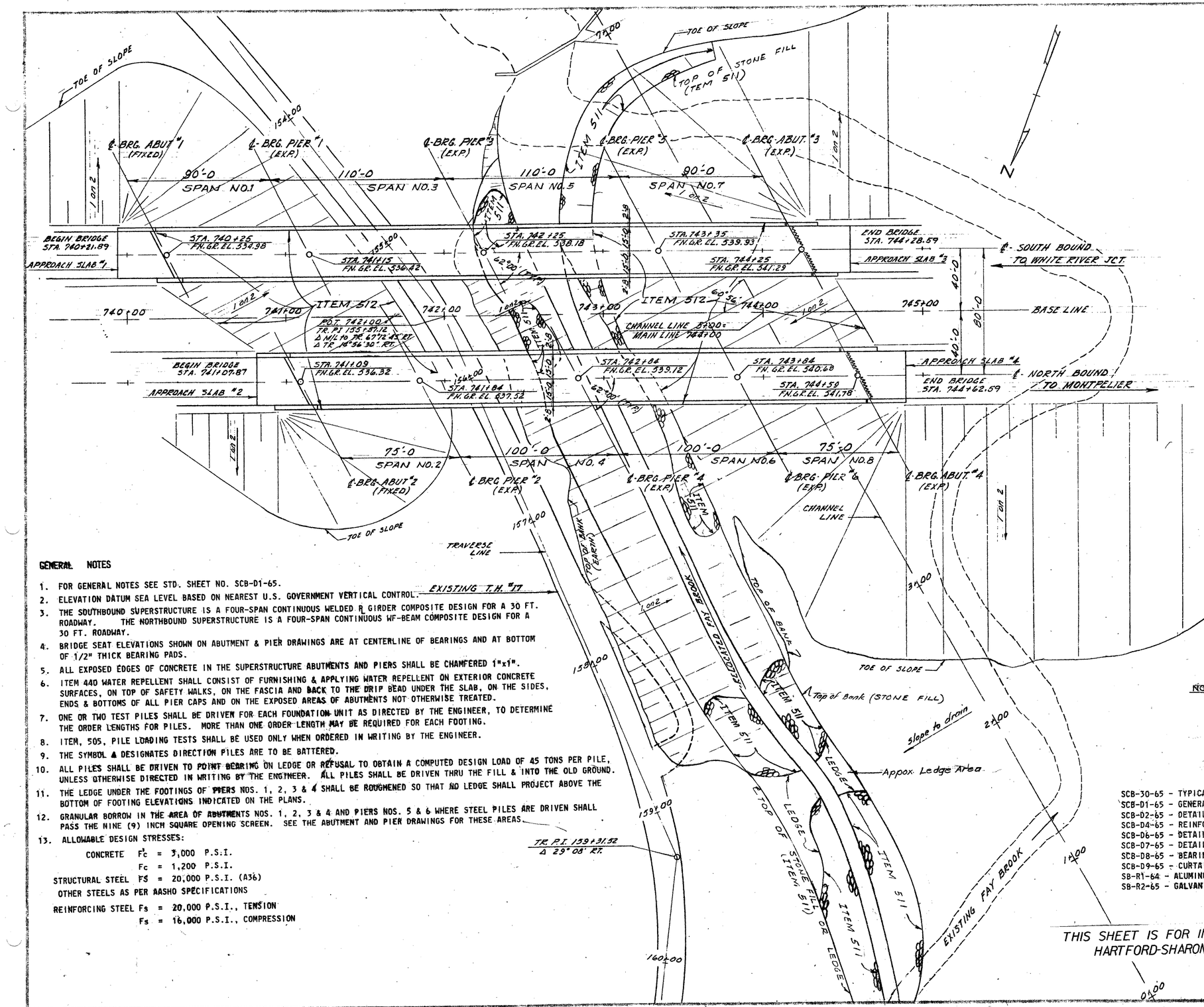
BR #15

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I-89 STA. 717+0

I-89 OVER VT #132
N.B. SUPERSTRUCTURE
SCALE As shown

Bridge Sheet No. BR 148 Sheet 105 of 260



GENERAL NOTES

1. FOR GENERAL NOTES SEE STD. SHEET NO. SCB-D1-65.
2. ELEVATION DATUM SEA LEVEL BASED ON NEAREST U.S. GOVERNMENT VERTICAL CONTROL.
3. THE SOUTHBOUND SUPERSTRUCTURE IS A FOUR-SPAN CONTINUOUS WELDED ℄ GIRDER COMPOSITE DESIGN FOR A 30 FT. ROADWAY. THE NORTHBOUND SUPERSTRUCTURE IS A FOUR-SPAN CONTINUOUS WF-BEAM COMPOSITE DESIGN FOR A 30 FT. ROADWAY.
4. BRIDGE SEAT ELEVATIONS SHOWN ON ABUTMENT & PIER DRAWINGS ARE AT CENTERLINE OF BEARINGS AND AT BOTTOM OF 1/2" THICK BEARING PADS.
5. ALL EXPOSED EDGES OF CONCRETE IN THE SUPERSTRUCTURE ABUTMENTS AND PIERS SHALL BE CHAMFERED 1"x1".
6. ITEM 440 WATER REPELLENT SHALL CONSIST OF FURNISHING & APPLYING WATER REPELLENT ON EXTERIOR CONCRETE SURFACES, ON TOP OF SAFETY WALKS, ON THE FASCIA AND BACK TO THE DRIP BEAD UNDER THE SLAB, ON THE SIDES, ENDS & BOTTOMS OF ALL PIER CAPS AND ON THE EXPOSED AREAS OF ABUTMENTS NOT OTHERWISE TREATED.
7. ONE OR TWO TEST PILES SHALL BE DRIVEN FOR EACH FOUNDATION UNIT AS DIRECTED BY THE ENGINEER, TO DETERMINE THE ORDER LENGTHS FOR PILES. MORE THAN ONE ORDER LENGTH MAY BE REQUIRED FOR EACH FOOTING.
8. ITEM, 505, PILE LOADING TESTS SHALL BE USED ONLY WHEN ORDERED IN WRITING BY THE ENGINEER.
9. THE SYMBOL ▲ DESIGNATES DIRECTION PILES ARE TO BE BATTERED.
10. ALL PILES SHALL BE DRIVEN TO POINT BEARING ON LEDGE OR REFUSAL TO OBTAIN A COMPUTED DESIGN LOAD OF 45 TONS PER PILE, UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. ALL PILES SHALL BE DRIVEN THRU THE FILL & INTO THE OLD GROUND.
11. THE LEDGE UNDER THE FOOTINGS OF PIERS NOS. 1, 2, 3 & 4 SHALL BE ROUGHENED SO THAT NO LEDGE SHALL PROJECT ABOVE THE BOTTOM OF FOOTING ELEVATIONS INDICATED ON THE PLANS.
12. GRANULAR BORROW IN THE AREA OF ABUTMENTS NOS. 1, 2, 3 & 4 AND PIERS NOS. 5 & 6 WHERE STEEL PILES ARE DRIVEN SHALL PASS THE NINE (9) INCH SQUARE OPENING SCREEN. SEE THE ABUTMENT AND PIER DRAWINGS FOR THESE AREAS.
13. ALLOWABLE DESIGN STRESSES:

CONCRETE	F'_c	= 3,000 P.S.I.
	Fc	= 1,200 P.S.I.
STRUCTURAL STEEL	Fs	= 20,000 P.S.I. (A36)
OTHER STEELS AS PER AASHO SPECIFICATIONS		
REINFORCING STEEL	Fs	= 20,000 P.S.I., TENSION
	Fs	= 16,000 P.S.I., COMPRESSION

LIST OF SHEETS

BR-100	PLAN
BR-101	ELEVATION AND BORING PLAN
BR-102	BRIDGE QUANTITY SHEET
BR-103	BRIDGE QUANTITY SHEET - CONTINUED
BR-104	PRELIMINARY INFORMATION
BR-105	BORING LOG
BR-106	BORING LOG
BR-107	FRAMING PLAN AND DETAILS - SOUTHBOUND
BR-108	FRAMING PLAN AND DETAILS - NORTHBOUND
BR-109	TYPICAL SUPERSTRUCTURE SECTION AND DETAILS - NORTHBOUND AND SOUTHBOUND
BR-110	TYPICAL BRACING, CROSS-FRAME & MISC. DETAILS - SOUTHBOUND
BR-111	TYPICAL EXPANSION DAM PLAN AND DETAILS AT ABUTMENT NO. 3 & 4
BR-112	ROCKER BEARINGS
BR-113	ABUTMENT NO. 1 - SOUTHBOUND
BR-114	ABUTMENT NO. 1 - WING WALLS - SOUTHBOUND
BR-115	ABUTMENT NO. 2 - NORTHBOUND
BR-116	ABUTMENT NO. 2 - WING WALLS - NORTHBOUND
BR-117	ABUTMENT NO. 3 - SOUTHBOUND
BR-118	ABUTMENT NO. 3 - WING WALLS - SOUTHBOUND
BR-119	ABUTMENT NO. 4 - NORTHBOUND
BR-120	ABUTMENT NO. 4 - WING WALLS - NORTHBOUND
BR-121	PIER NO. 1 - SOUTHBOUND & PIER NO. 2 - NORTHBOUND
BR-122	PIER NO. 3 - SOUTHBOUND & PIER NO. 4 - NORTHBOUND
BR-123	PIER NO. 5 - SOUTHBOUND & PIER NO. 6 - NORTHBOUND
BR-124	APPROACH SLAB NO. 1 - SOUTHBOUND
BR-125	APPROACH SLAB NO. 2 - NORTHBOUND
BR-126	APPROACH SLAB NO. 3 - SOUTHBOUND & NO. 4 - NORTHBOUND
BR-127	REINFORCING STEEL - ABUTMENT NO. 1 AND ABUTMENT NO. 2
BR-128	REINFORCING STEEL - ABUTMENT NO. 3 AND ABUTMENT NO. 4
BR-129	REINFORCING STEEL - PIERS NO. 1 & 2 INCLUSIVE; SUPERSTRUCTURE (N.B. & S.B.) AND APPROACH SLABS
BR-130	REINFORCING STEEL - PIERS NO. 3 THRU NO. 6.
BR-131	FAY BROOK CHANNEL SECTIONS, CHANNEL LINE STA-1 + 00 - STA-0 + 75
BR-132	" " " " " " STA-0 + 50 - STA 0 + 00
BR-133	" " " " " " STA 0 + 25 - STA 0 + 75
BR-134	" " " " " " STA 1 + 00 - STA 2 + 50
BR-135	" " " " " " STA 2 + 75 - STA 3 + 25
BR-136	" " " " " " STA 3 + 50 - STA 4 + 00
BR-137	" " " " " " STA 4 + 25 - STA 4 + 75
BR-138	" " " " " " STA 5 + 00 - STA 5 + 50
BR-139	" " " " " " STA 5 + 75 - STA 6 + 25
BR-140	FAY BROOK CHANNEL SECTIONS, CHANNEL LINE STA 6 + 50 - STA 7 + 00

REFERENCE SHEETS

INTERSTATE PLAN (SCALE 1" = 50') ℄ STA. 735 + 00 TO 751 + 00 (1-SHEET)
PROFILE OF INTERSTATE, N.B. & S.B. ℄ STA. 735 + 00 TO STA. 751 + 00 (1-SHEET)
TOWN HIGHWAY NO. 17 SECTIONS, ℄ STA. 150 + 00 TO STA 157 + 50 (4-SHEETS)
INTERSTATE SECTIONS, ℄ STA. 739 + 00 TO STA. 745 + 00 (6-SHEETS)

NOTE: ALL WELDING SHALL CONFORM TO A.W.S. SPECIFICATIONS (D2.0-66) FOR WELDED HIGHWAY & RAILROAD BRIDGES.

STANDARD SHEETS

SCB-30-65 - TYPICAL SECTION & QUANTITIES-30 FT. ROADWAY
SCB-D1-65 - GENERAL NOTES & INFORMATION
SCB-D2-65 - DETAILS : A, B & C
SCB-D4-65 - REINFORCEMENT AT ABUTMENTS
SCB-D6-65 - DETAILS : A, B & F
SCB-D7-65 - DETAILS : C & D
SCB-D8-65 - BEARING DEVICES: DETAIL A
SCB-D9-65 - CURTAIN WALL AT BEARING: DETAIL A
SB-R1-64 - ALUMINUM BRIDGE RAILING: SHEETS : 1&2 OF 2
SB-R2-65 - GALVANIZED METAL BRIDGE RAILING

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM 1R 089-1(8)

SCHOENFELD ASSOCIATES, INC.
CONSULTING ENGINEERS
210 SOUTH ST. BOSTON, MASS.

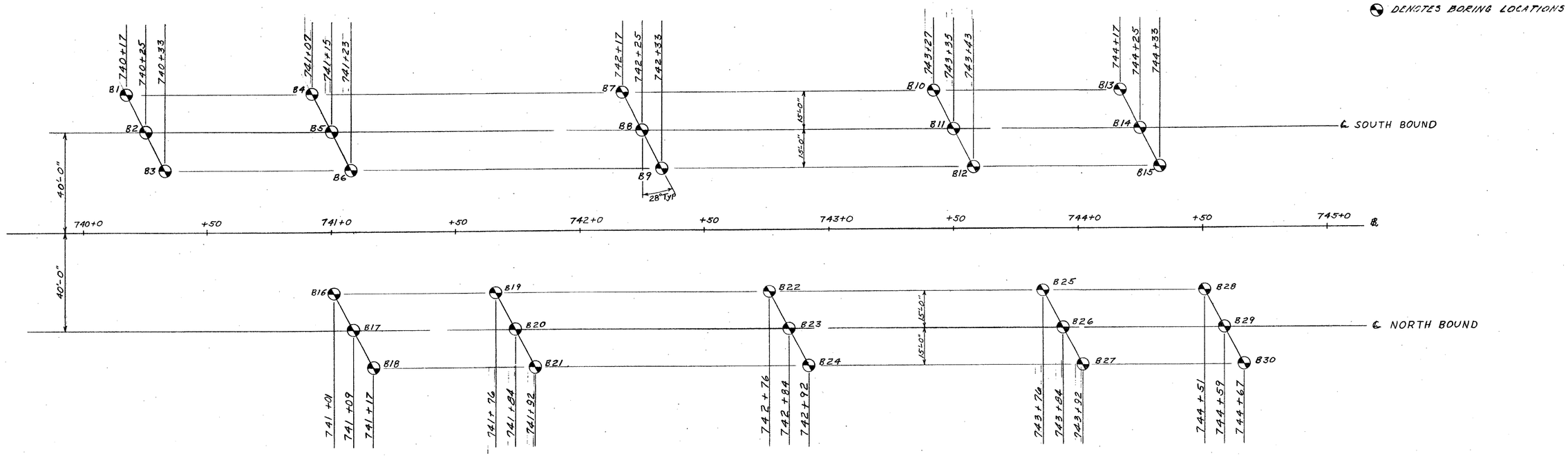
Bridge # 16N & 16S

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: SHARON
TOWN OF SHARON
ROUTE No. I-89 LOG STA.
I-89 OVER T.H. #17 AND FAY BROOK
PLAN
SCALE 1 IN. = 30 FT.

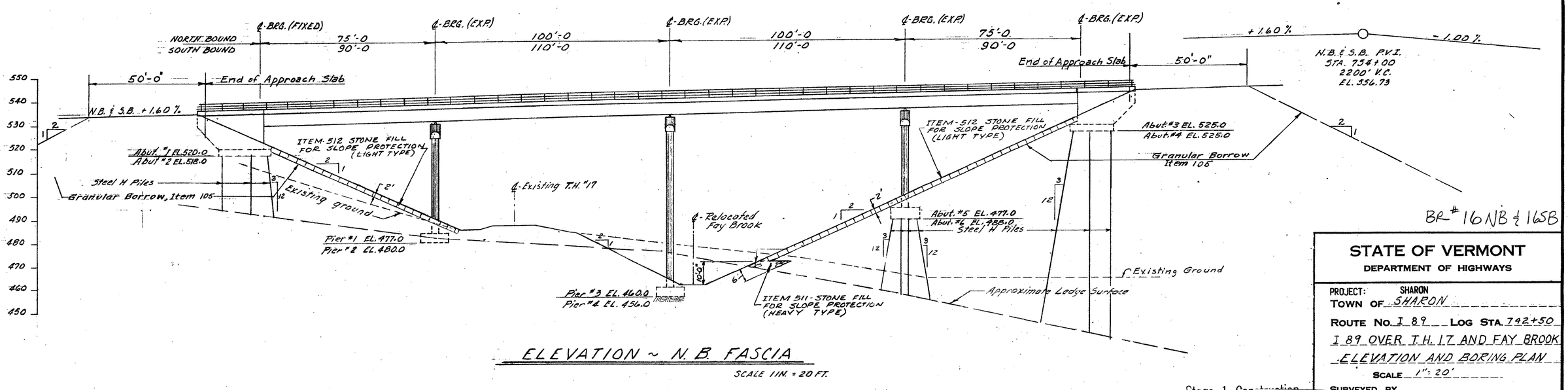
Stage 1 Construction

Bridge Sheet No. BR 140 Sheet 106 of 260



BORING PLAN

SCALE 1"= 20'



ELEVATION ~ N.B. FASCIA

SCALE 1 IN. = 20 FT.

BR # 16 NB & 16 SB

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: SHARON
TOWN OF SHARON
ROUTE NO. I 89 LOG STA. 742+50
I 89 OVER T.H. 17 AND FAY BROOK
ELEVATION AND BORING PLAN
SCALE 1"= 20'
SURVEYED BY

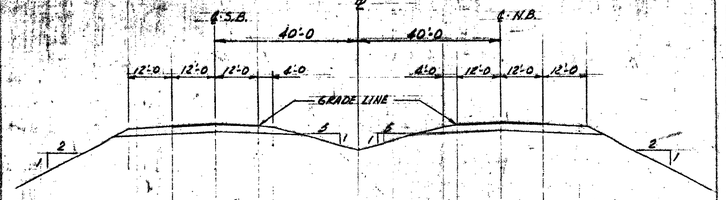
Stage 1 Con[illegible]

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM 1R 089-1(8)

SCHOENFELD A
210 SOUT
BOSTON

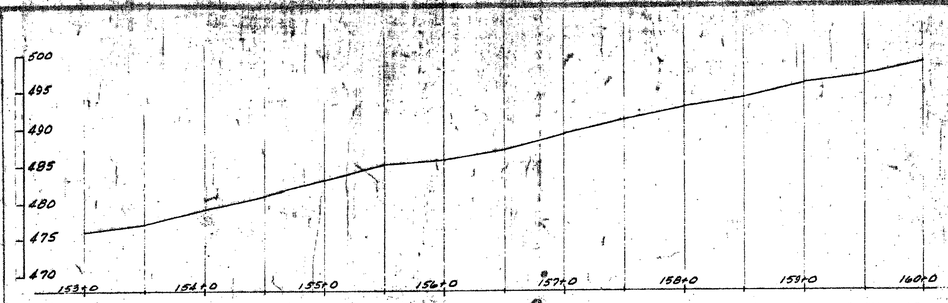
Bridge Sheet No. BR 150 Sheet 107 of 260

H&E PHOENIX #298 B. L. N. INC. #7088



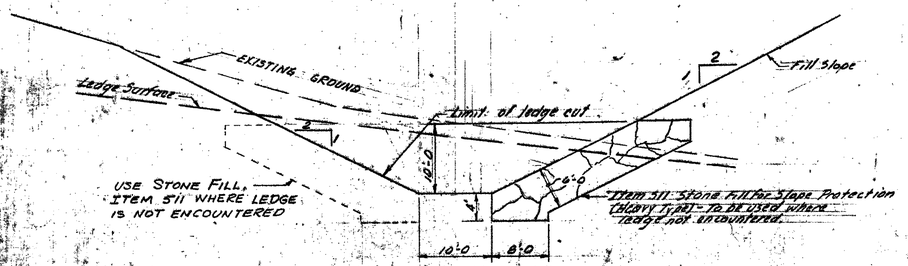
NEW HIGHWAY SECT. STA. 740+0 TO STA. 749+0

SCALE 1 IN. = 20 FT.



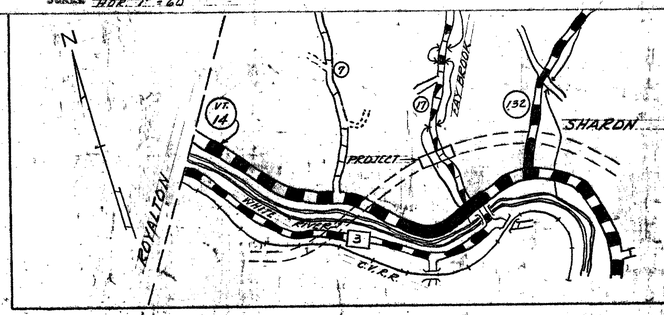
EXISTING ═══ HIGHWAY PROFILE ALONG ℄ TOWN HIGHWAY NO. 17

SCALE VERT. 1" = 10'
HOR. 1" = 40'



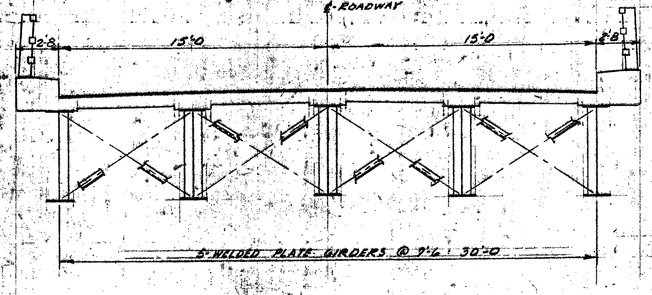
TYPICAL CHANNEL SECTION 2+50 TO 5+50

SCALE 1 IN. = 10 FT.



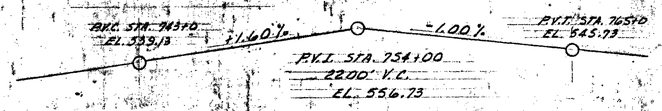
PROJECT LOCATION

SCALE 1 IN. = 0.5 MILE

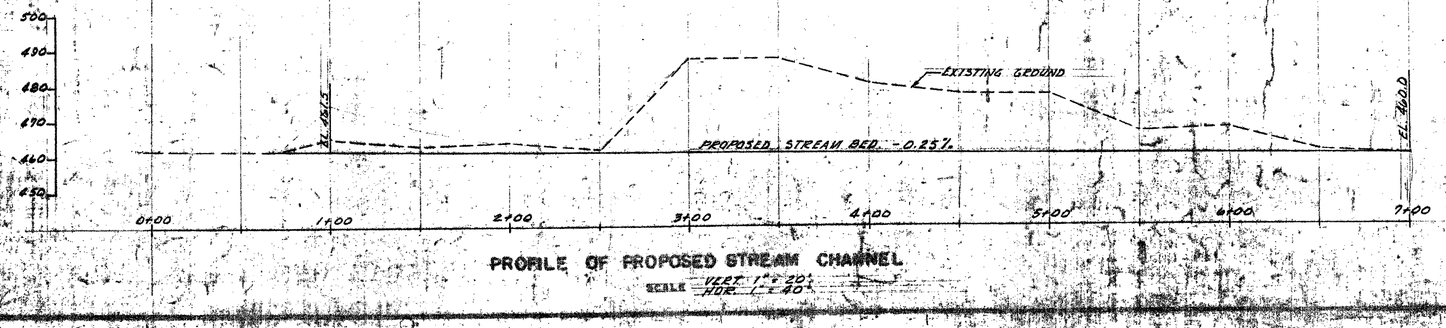


TYPICAL BRIDGE SECTION - N.B. & S.B.

SCALE 1 IN. = 4 FT.



I-89 GRADES - N.B. & S.B.



PROFILE OF PROPOSED STREAM CHANNEL

SCALE VERT. 1" = 20'
HOR. 1" = 40'

HIGHWAY NO. I-89 NAME OF HIGHWAY INTERSTATE

STRUCTURE NO. COUNTY WINDSOR TOWN SHARON

PROJECT NO I-89-1(30)C/1 LOCATION SHARON

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE
3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE COST OF REMOVAL
5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE
6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT
7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY H.W.
8 EXTREME HIGH WATER AT EXISTING STRUCTURE
9 SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
SPAN OF EXISTING BRIDGE DOWNSTREAM WATERWAY TO EXTREME H.W.
10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
11 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE
12 IF NOT, IN WHAT ELEVATION IS RELIEF AFFORDED
13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE FOUR SPAN CONTINUOUS WELDED PLATE GIRDER (STD-30-62 Mod.)
2 RECOMMENDED CLEAR SPAN OR SPANS N.B. - 75'-100'-100'-75' S.B. 90'-110'-110'-90'
MEASURED PARALLEL TO ℄ NEW HIGHWAY N.B. = 350', S.B. = 400'
MEASURED AT RIGHT ANGLES TO ℄ STREAM N.B. 313', S.B. 365'
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO NO
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE 464.0
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE 469.0 SOURCE OF INFORMATION 30 yr. Storm DPE Chart
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? Yes
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NO IS ORDINARY HIGH WATER No
8 LOW WATER ELEVATION AT NEW STRUCTURE 461.0
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE 5,470 CHARACTER OF TERRAIN Mountainous
10 IS STREAM EVER DRY? No
11 VELOCITY OF STREAM AT HIGH WATER STAGE 6.5 Ft/sec. ESTIMATED DISCHARGE 1100 C.F.S.
12 AREA FULL OPENING AREA BELOW ORDINARY H.W.
13 CHARACTER OF SCOUR Slight DRIFT Slight Slight
14 ESTIMATED DRAINAGE AREA; ABOVE NATURAL OR ARTIFICIAL STORAGE
15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION 60 Ft ±
16 ARE SIDEWALKS REQUIRED, IF SO, ON WHAT SIDE No
17 RECOMMENDED TYPE OF PAVEMENT REINFORCED CONCRETE (9") BITUMINOUS CONCRETE (4")
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. ONE OR TWO WAYS PROBABLE COST
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 5 Tons/Ft² SHOULD PILES BE USED? Yes
45 Tons/Pile

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

TABLE OF ESTIMATED PILE LENGTHS

LOCATION	LENGTH
Abut No. 1	25 Ft.
Abut. No. 2	30 Ft.
Abut. No. 3	105 Ft.
Abut. No. 4	95 Ft.
Pier No. 5	40 Ft.
Pier No. 6	35 Ft.

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

BR #16NB & 16SB

BR-104

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE IN THE TOWN OF SHARON
ROUTE NO. I-89 LOG STA.
OVER I.H. "17" AND FAY BROOK
PRELIMINARY INFORMATION

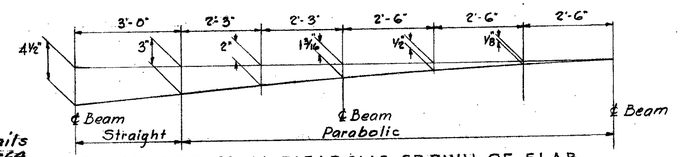
Recommended for Approval	E. H. Dickney, Const. Engineer	12/2/65 Date
Recommended for Approval	Lunn Bjorn, Bridge Engineer	12/2/65 Date
Recommended for Approval	R. H. Gould, Asst. Chief Engineer	12/2/65 Date
Approved by	A. D. Bishop, Chief Engineer	

SCHOENFELD ASSOCIATES, INC.
210 SOUTH STREET
BOSTON, 11, MASS.

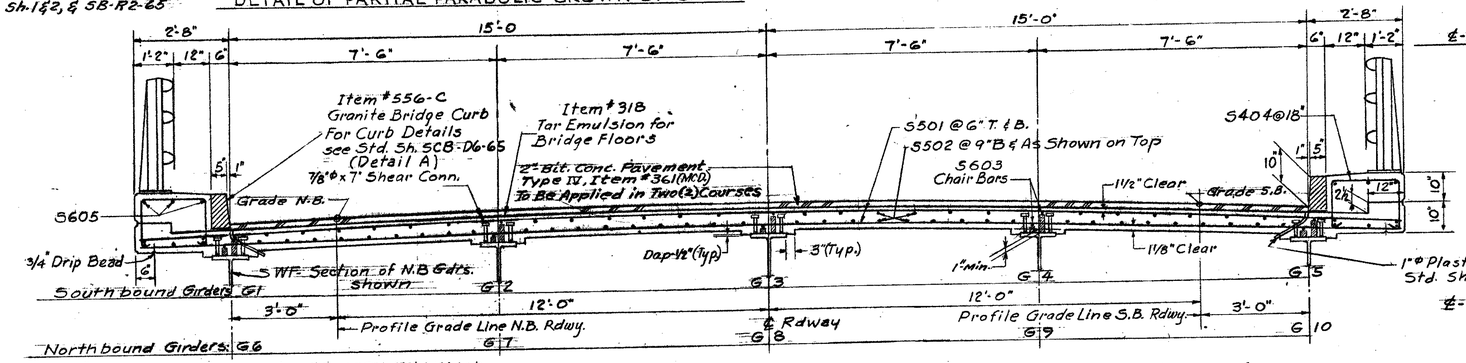
Bridge Sheet No. BR 16 | Sheet 108 of 260

E-4047

Note: For Railing Details See Std. Sh. SB-R1-64, Sh. 1 & 2, & SB-R2-65

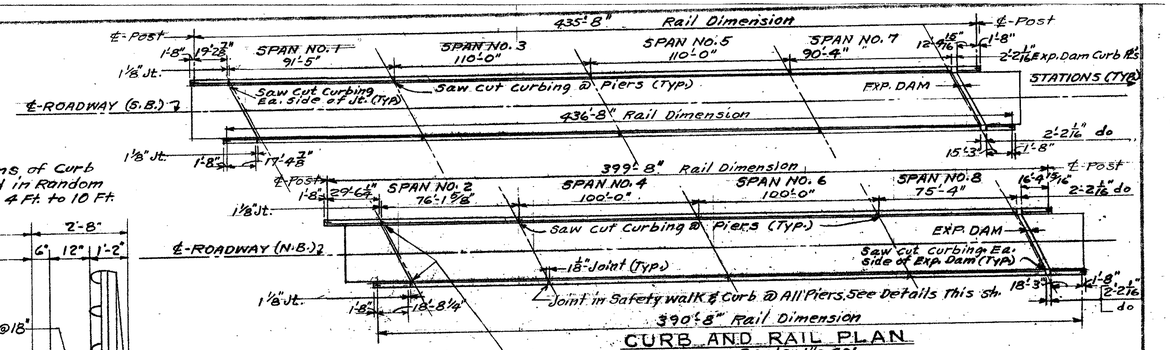


DETAIL OF PARTIAL PARABOLIC CROWN OF SLAB



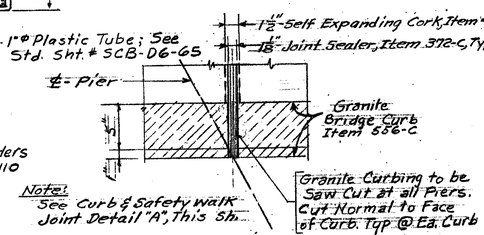
NOTE: Floor slab to be Concrete Class A-A 7½" thick dapped as shown at beam haunch, surface to be finished with a self-propelled Concrete Finishing Machine.

Note: Straight Sections of Curb Shall be Furnished in Random Lengths of From 4 Ft. to 10 Ft.



CURB AND RAIL PLAN
Scale: 1" = 40'

Joint in Safety walk & Curb @ Abutments Nos. 1 & 2. For Details See BR-124 & BR-125. Granite Curbing to be Saw cut Normal to Face of Curb @ All Abutments.



Note: See Curb & Safety Walk Joint Detail "A", This Sh.

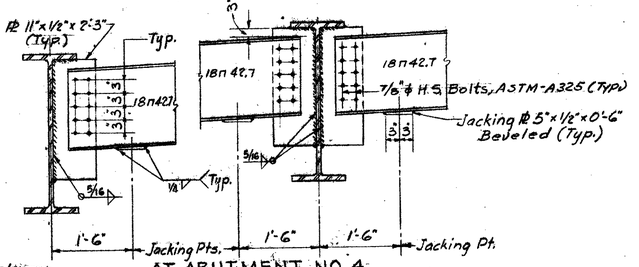
TYP. DETAIL - CURBING AT PIERS
Scale: 1½" = 1'-0"

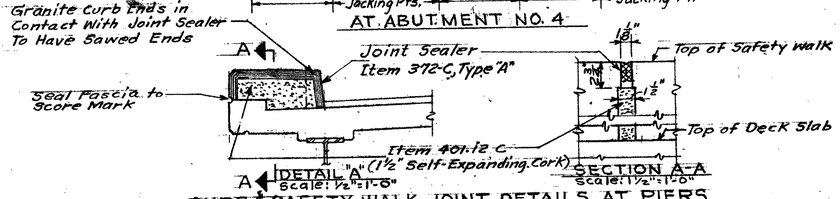
NOTES

1. FOR GENERAL NOTES SEE SH. # BR-100.
2. FOR FIXED JOINT & SLAB DETAIL AT ABUTMENT NO. 1 SEE SH. # BR-113.
3. FOR FIXED JOINT DETAIL AT ABUTMENT NO. 2 SEE STD. SH. # SCB-D2-65, DETAIL A.
4. FOR SLAB DETAIL AT PIERS SEE STD. SH. # SCB-D2-65, DETAIL A.
5. FOR SLAB BEAM HAUNCH DETAIL SEE STD. SH # SCB-D2-65, DETAIL C, & SCB-D6-65 & TYPICAL SECTION THIS SHEET.
6. FOR DETAIL OF CURTAIN WALL AT ABUTMENT #2 SEE STD SH. # SCB-D9-65 & SCB-D2-65.
7. FOR PLAN AND REINFORCEMENT LAYOUT AT ABUTMENTS SEE STD. SH. # SCB-D4-65.
8. FOR EXPANSION DAM ASSEMBLY DETAILS AT ABUTMENTS 3 & 4 SEE SH. # BR-111.
9. FOR ADDITIONAL DIAPHRAGM DETAILS SEE STD. SH. # SCB-D7-65, DETAILS A & D.

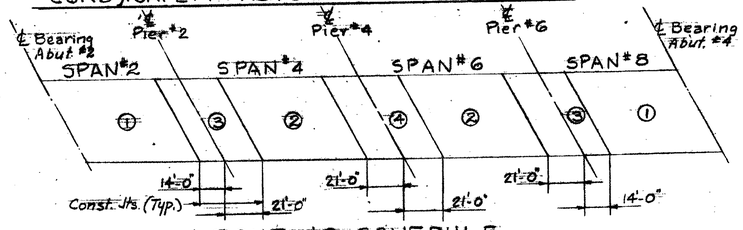
TYPICAL SECTION - N.B. & S.B.
Scale: ½" = 1'-0"

Note: For Section of S.B Girders & Cross Frames see Sh. # BR-110



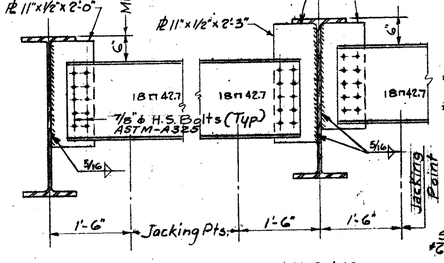


CURB & SAFETY WALK JOINT DETAILS AT PIERS



POURING SCHEDULE
(N.B. ROADWAY)
No Scale

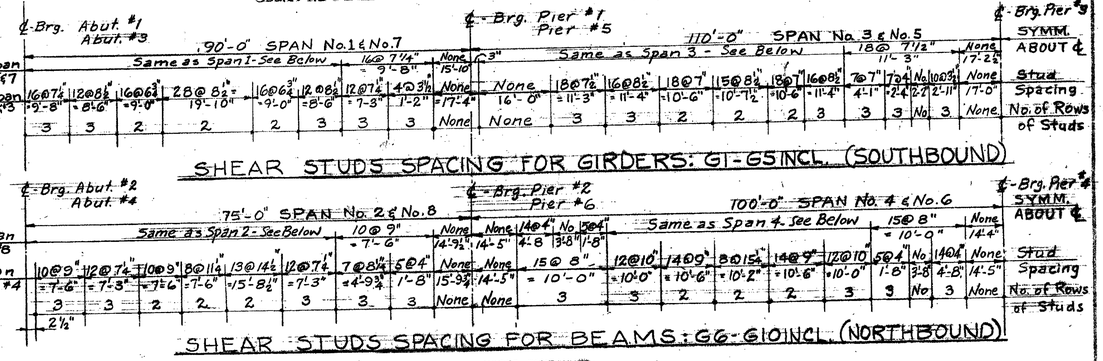
NOTE: Pour 3 & 4 can be made at the same time



AT PIERS: No 2 & 6

DIAPHRAGM DETAILS
Scale: 3/4" = 1'-0"

For Details of Cross Frames at S.B. Roadway See Sh. # BR-110
For Detail of Intermediate Diaphragms, At N.B. Girders See Std. Sh. SCB-D7-65, Detail "D."

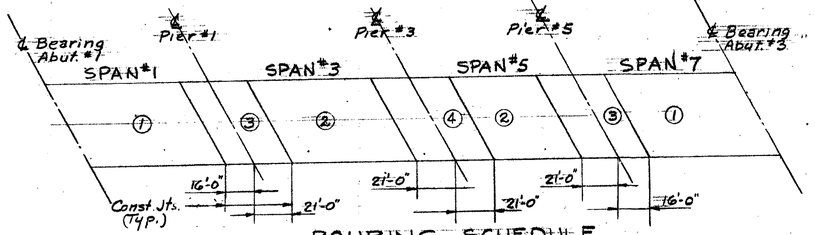


SHEAR STUDS SPACING FOR GIRDERS: G1-G5 INCL. (SOUTHBOUND)

SHEAR STUDS SPACING FOR BEAMS: G6-G10 INCL. (NORTHBOUND)

NOTES CONTINUED:

10. DETAILED DRAWINGS FOR THE LAYOUT OF THE GRANITE CURB, ITEM 556-C, SHALL BE SUBMITTED IN TRIPLICATE TO THE STATE FOR APPROVAL PRIOR TO FABRICATION OR SHIPMENT.
11. FOR SLAB AND JOINT DETAILS AT FIXED END, ABUTMENT NO. 1 SEE SH. # BR-113.



POURING SCHEDULE
(S.B. ROADWAY)
No Scale

NOTE: Pour 3 & 4 can be made at same time.

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

BR #16 NB & 16SB

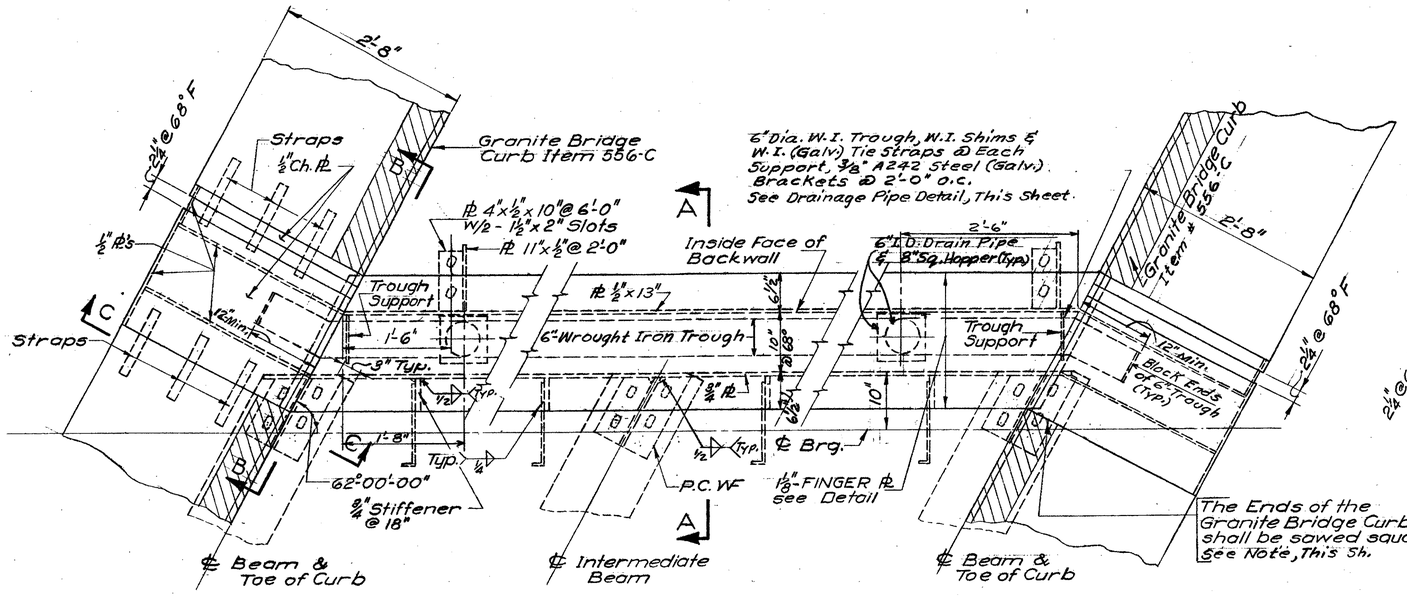
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 742 + 50
I - 89 OVER T.H. 17 & FAY BROOK
TYP. SUPERSTRUCTURE SECTION & DETAILS (N.B. & S.B.)
SCALE AS SHOWN
IN CHARGE ARNOLD KATZ

SCHOENFELD ASSOCIATES
210 SOUTH STREET
BOSTON 11, MASS.

Bridge Sheet No. BR 152 Sheet 109 of 260

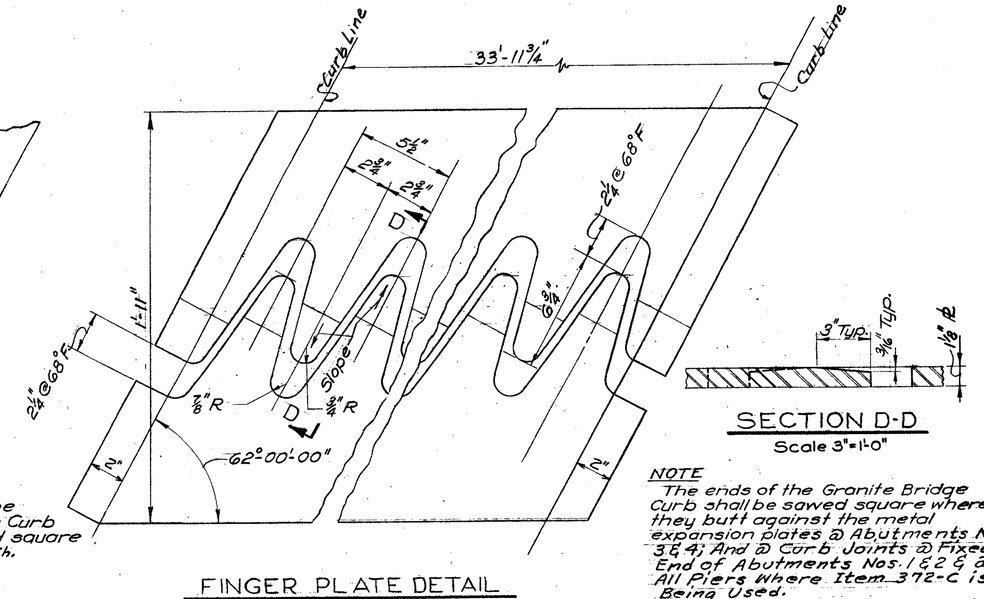
Stage 1 Construction



PLAN - EXPAN. ASSEMBLY

Scale 1"=1'-0"

Note:
The Expansion Dam is to be Furnished in Two Sections With Separate Brackets @ The Center Beam.



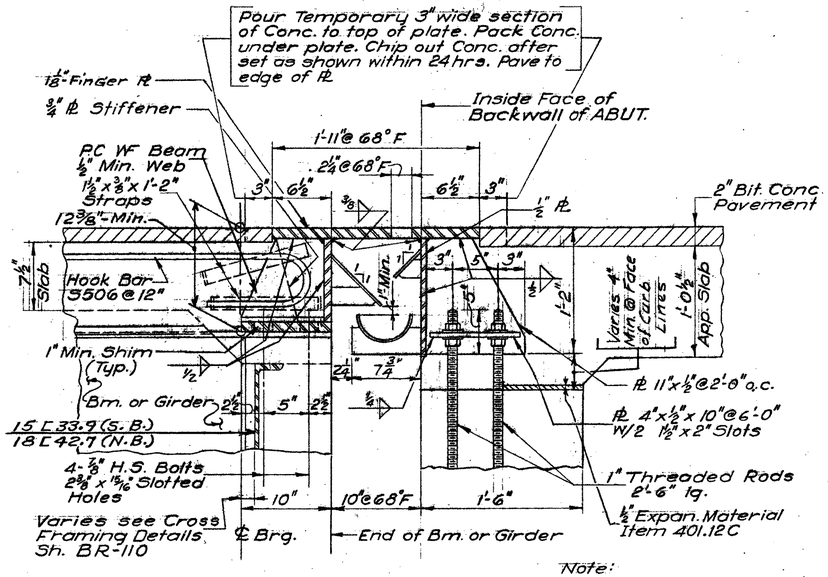
FINGER PLATE DETAIL

Scale 3"=1'-0"

SECTION D-D

Scale 3"=1'-0"

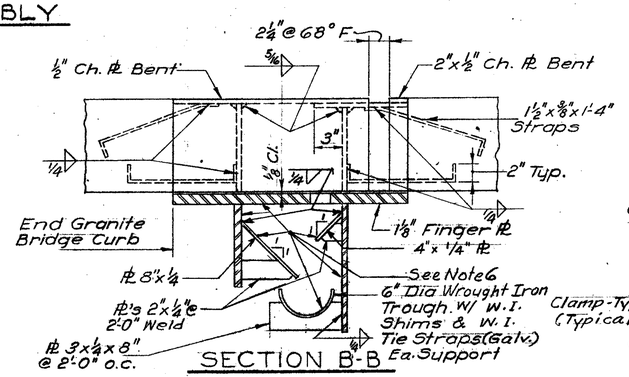
NOTE
The ends of the Granite Bridge Curb shall be sawed square where they butt against the metal expansion plates @ Abutments Nos. 3 & 4; And @ Curb Joints @ Fixed End of Abutments Nos. 1 & 2 & @ All Piers Where Item 372-C is Being Used.
See Curb & Rail Plan & Curb & Joint Details, Sh. # BR-109.



SECTION A-A

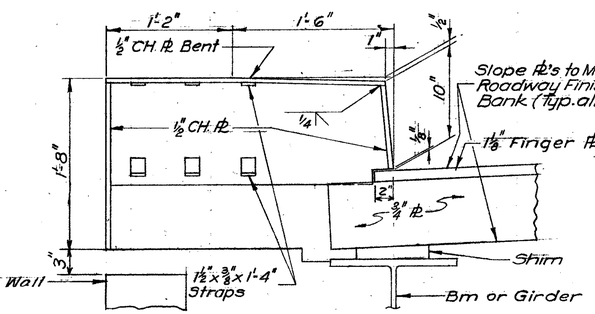
Scale 1½"=1'-0"

Note:
For add'tl. Trough details see Section B-B



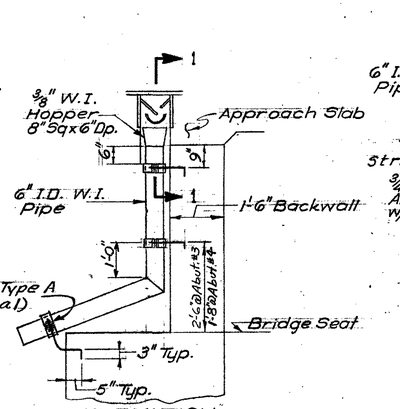
SECTION B-B

Scale 1½"=1'-0"



SECTION C-C

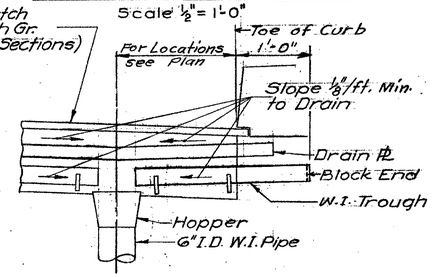
Scale 1½"=1'-0"



ELEVATION

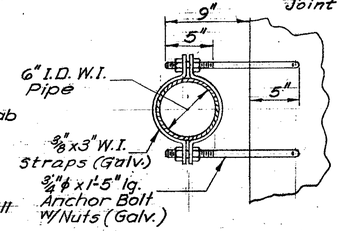
DRAINAGE PIPE DETAIL

Scale ½"=1'-0"



SECTION 1-1

No Scale



CLAMP DETAIL TYPE A

Scale 1½"=1'-0"

NOTES CONTINUED:

6. THREE (3) COATS OF PAINT (IN ACCORDANCE WITH ITEM 404.030, SHALL BE APPLIED TO THE INTERIOR SURFACES OF EXPANSION DAM PRIOR TO ERECTION.

BR # 16NB & 16SB

NOTES

1. FOR GENERAL NOTES SEE SH. # BR-100.
2. ALL PARTS OF THE EXPANSION JOINT ASSEMBLY WHICH ARE EXPOSED TO WATER AFTER ERECTION SHALL BE ASTM A242 STEEL. PLATES COMPETELY EMBEDDED IN CONCRETE MAY BE ASTM A36 STEEL.
3. FOR DETAILS OF GRANITE BRIDGE CURB SEE STD. SH SCB-D6-65, DETAIL A.
4. USE ¼" WELDS FOR CONNECTING PLATES & BRACKETS FOR 6" DIA. TROUGH.
5. FINGERS TO BE SYMMETRICAL ABOUT ℄ OF FINGER PLATE. FLAME CUT FROM 21" X 1 1/8" PLATE.

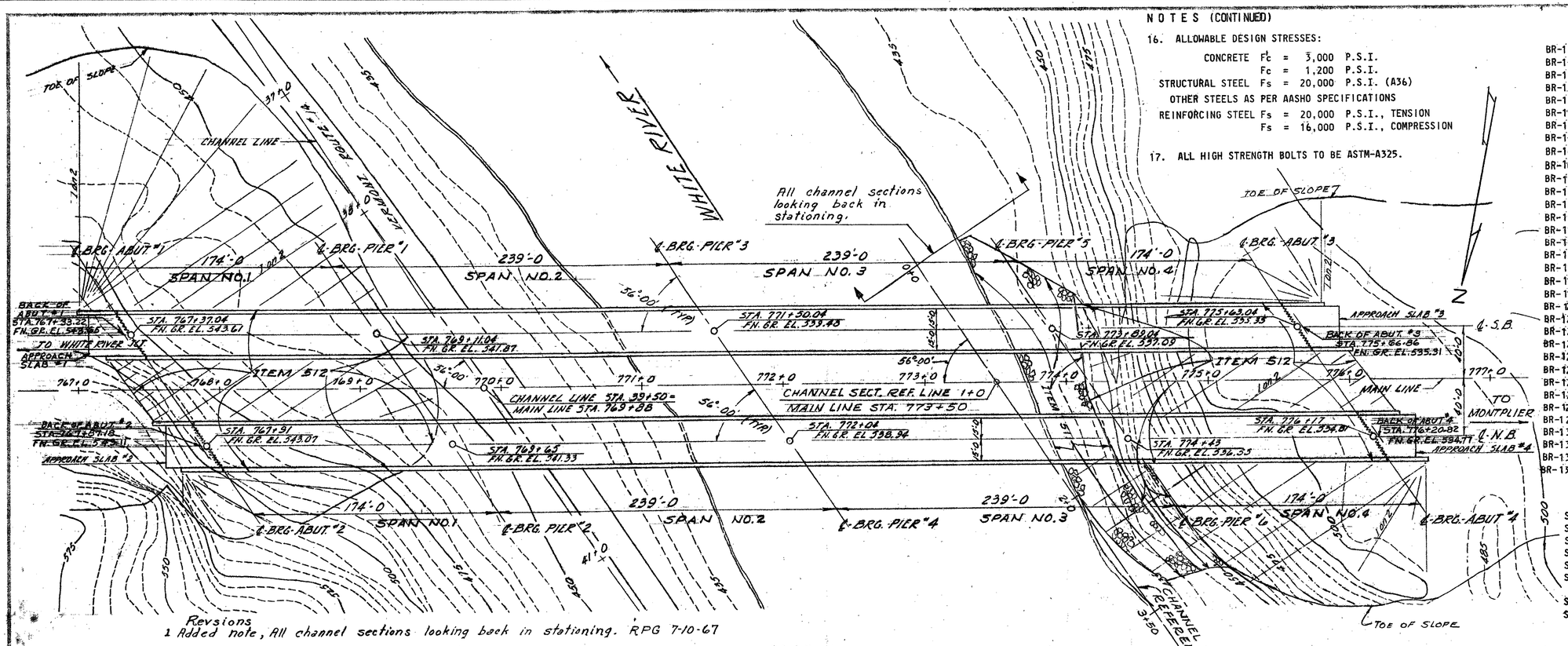
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

PROJECT SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 742 + 50
I - 89 OVER T.H. 17 AND FAY BROOK
EXPANSION DAM PLAN & DETAILS AT ABUT. # 3 & 4
SCALE AS SHOWN
ARNOLD D. KATZ

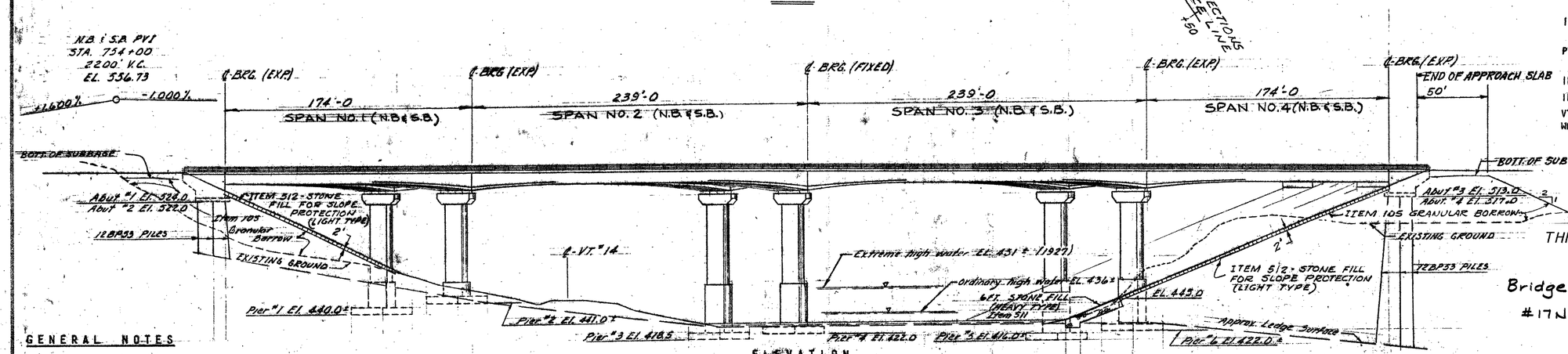
SCHOENFELD
210 S
BOSTON 11, MASS.

Bridge Sheet No. BR153 Sheet 110 of 260

Stage 1 Construction



PLAN



ELEVATION

Revsions
1 Added note, All channel sections looking back in stationing. RPG 7-10-67

NOTES (CONTINUED)

16. ALLOWABLE DESIGN STRESSES:

CONCRETE F_c^1 = 3,000 P.S.I.
F_c = 1,200 P.S.I.
STRUCTURAL STEEL F_s = 20,000 P.S.I. (A36)
OTHER STEELS AS PER AASHO SPECIFICATIONS
REINFORCING STEEL F_s = 20,000 P.S.I., TENSION
F_s = 16,000 P.S.I., COMPRESSION

17. ALL HIGH STRENGTH BOLTS TO BE ASTM-A325.

LIST OF SHEETS

BR-100 PLAN AND ELEVATION
BR-101 BRIDGE QUANTITY SHEET
BR-102 BRIDGE QUANTITY SHEET - CONTINUED
BR-103 PRELIMINARY INFORMATION
BR-104 BORING PLAN & LOG
BR-105 BORING LOG
BR-106 BORING LOG
BR-107 FRAMING PLAN & GIRDER DETAILS - SPAN NO. 1 & 4-N.B. & S.B.
BR-108 FRAMING PLAN & GIRDER DETAILS - SPAN NO. 2 & 3-N.B. & S.B.
BR-109 TYPICAL SUPERSTRUCTURE SECTIONS & DETAILS - N.B. & S.B.
BR-110 TYPICAL BRACING & MISC. GIRDER DETAILS - N.B. & S.B.
BR-111 EXPANSION DAM ASSEMBLY & DETAILS - N.B. & S.B.
BR-112 ROCKER BEARINGS, N.B. & S.B.
BR-113 ABUTMENT NO. 1 - SOUTHBOUND
BR-114 ABUTMENT NO. 1 - WINGWALLS & DETAILS - S.B.
BR-115 ABUTMENT NO. 2 - NORTHBOUND
BR-116 ABUTMENT NO. 2 - WINGWALLS & DETAILS - N.B.
BR-117 ABUTMENT NO. 3 - SOUTHBOUND
BR-118 ABUTMENT NO. 3 - WINGWALLS & DETAILS - S.B.
BR-119 ABUTMENT NO. 4 - NORTHBOUND
BR-120 ABUTMENT NO. 4 WINGWALLS & DETAILS - N.B.
BR-121 PIER NO. 1 - SOUTHBOUND
BR-122 PIER NO. 2 - NORTHBOUND
BR-123 PIER NO. 3 - SOUTHBOUND & PIER NO. 4 - NORTHBOUND
BR-124 PIER NO. 5 - SOUTHBOUND & PIER NO. 6 - NORTHBOUND
BR-125 PIER WALKWAY & MISCELLANEOUS DETAILS - N.B. & S.B.
BR-126 APPROACH SLAB NO. 1-S.B. & APPROACH SLAB NO. 2 - N.B.
BR-127 APPROACH SLAB NO. 3 - S.B. & APPROACH SLAB NO. 4 - N.B.
BR-128 REINFORCING STEEL - ABUTMENT NO. 1
BR-129 REINFORCING STEEL - ABUTMENT NO. 2
BR-130 REINFORCING STEEL - ABUTMENT NO. 3
BR-131 REINFORCING STEEL - ABUTMENT NO. 4
BR-132 REINFORCING STEEL - PIERS NO. 1 THRU NO. 4
BR-133 REINF. STEEL - PIERS NOS. 5 & 6; SUPERSTRUCTURES-N.B.&S.B.; APPROACH SLABS NOS. 1 TO 4

STANDARD SHEETS

SCB-30-65 - TYP. SECTION & QUANTITIES - 30 FT. ROADWAY
SCB-D1-65 - GENERAL NOTES & INFORMATION
SCB-D2-65 - DETAILS A, B & C
SCB-D4-65 - REINFORCEMENT AT ABUTMENTS
SCB-D6-65 - DETAILS A, B & F
SCB-D7-65 - DETAIL C
SB-R1-64 - ALUMINUM BRIDGE RAILING; SHEETS 1 & 2 OF 2
SB-R2-65 - GALVANIZED METAL BRIDGE RAILING

REFERENCE SHEETS

INTERSTATE PLAN (SCALE 1" = 50') ℄ STA. 767+00 TO STA. 783+00 (1-SHEET)
PROFILE OF INTERSTATE N.B. & S.B., ℄ STA. 767+00 TO STA. 783+00 (1-SHEET)
INTERSTATE SECTIONS ℄ STA. 767+00 TO STA 770+50 (8-SHEETS)
INTERSTATE SECTIONS ℄ STA 774+00 TO STA. 777+00 (4-SHEETS)
VT. RTE. NO. 14 SECTIONS ℄ STA. 35+00 TO STA. 42+00 (7-SHEETS)
WHITE RIVER CHANNEL LINE SECTIONS STA. 0+00 TO STA. 3+50 (4-SHEETS)

GENERAL NOTES

1. FOR GENERAL NOTES SEE STD. SHEET NO. SCB-D1-65.
2. ELEVATION DATUM SEA LEVEL BASED ON NEAREST U.S. GOVERNMENT VERTICAL CONTROL.
3. THE SUPERSTRUCTURE (N.B. & S.B.) IS A FOUR-SPAN CONTINUOUS WELDED PLATE GIRDER COMPOSITE DESIGN FOR A 30 FT. ROADWAY.
4. BRIDGE SEAT ELEVATIONS SHOWN ON ABUTMENT & PIER DRAWINGS ARE AT CENTERLINE OF BEARINGS AND AT BOTTOM OF 1/2" THICK BEARING PADS.
5. ALL EXPOSED EDGES OF CONCRETE IN THE SUPERSTRUCTURE, ABUTMENTS AND PIERS SHALL BE CHAMFERED 1" X 1".
6. ITEM 440, WATER REPELLENT SHALL CONSIST OF FURNISHING AND APPLYING WATER REPELLENT ON TOP OF THE SAFETY WALKS, ON THE FASCIA, BACK TO THE DRIP NOTCH UNDER THE SLAB ON THE SIDES, ENDS, AND BOTTOM OF ALL PIER CAPS AND ON THE EXPOSED AREAS OF ABUTMENTS NOT OTHERWISE TREATED.
7. ONE OR TWO TEST PILES SHALL BE DRIVEN FOR EACH FOUNDATION UNIT AS DIRECTED BY THE ENGINEER. TO DETERMINE THE ORDER LENGTHS FOR PILES. MORE THAN ONE ORDER LENGTH MAY BE REQUIRED FOR EACH FOOTING.
8. ITEM 505, PILE LOADING TESTS SHALL BE USED ONLY WHEN ORDERED IN WRITING BY THE ENGINEER.
9. THE SYMBOL ▲ DESIGNATES DIRECTION PILES ARE TO BE BATTERED.
10. ALL PILES SHALL BE DRIVEN TO POINT BEARING ON LEDGE OR REFUSAL TO OBTAIN A COMPUTED DESIGN LOAD OF 45 TONS PER PILE, UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. ALL PILES SHALL BE DRIVEN THRU THE FILL & INTO THE OLD GROUND AND TO REFUSAL.
11. THE LEDGE UNDER THE FOOTINGS OF ALL PIERS SHALL BE ROUGHENED SO THAT NO LEDGE SHALL PROJECT ABOVE THE BOTTOM OF FOOTING ELEVATIONS INDICATED ON THE PLANS.
12. GRANULAR BORROW IN THE AREA OF THE ABUTMENTS, WHERE STEEL PILES ARE DRIVEN, SHALL PASS THE NINE (9) INCH SQUARE OPENING SCREEN. SEE THE ABUTMENT DRAWINGS FOR THESE AREAS.
13. ANY ADDITIONAL HORIZONTAL AND VERTICAL SPLICES NOT SHOWN AND WHICH MAY BE REQUIRED DUE TO SHIPPING LIMITATIONS, WILL BE FURNISHED BY THE STEEL FABRICATOR WITH NO ADDITIONAL COST. THE FABRICATOR SHALL FURNISH DESIGN CALCULATIONS, AND DETAILS TO THE ENGINEER FOR APPROVAL.
14. ALL STATIONS ARE IN REFERENCE TO THE BASELINE.
15. ALL WELDING SHALL CONFORM TO AWS SPECIFICATIONS (D 2.0-66) FOR WELDED HIGHWAY AND RAILROAD BRIDGES.

SCHOENFELD ASSOCIATES, INC.
CONSULTING ENGINEERS

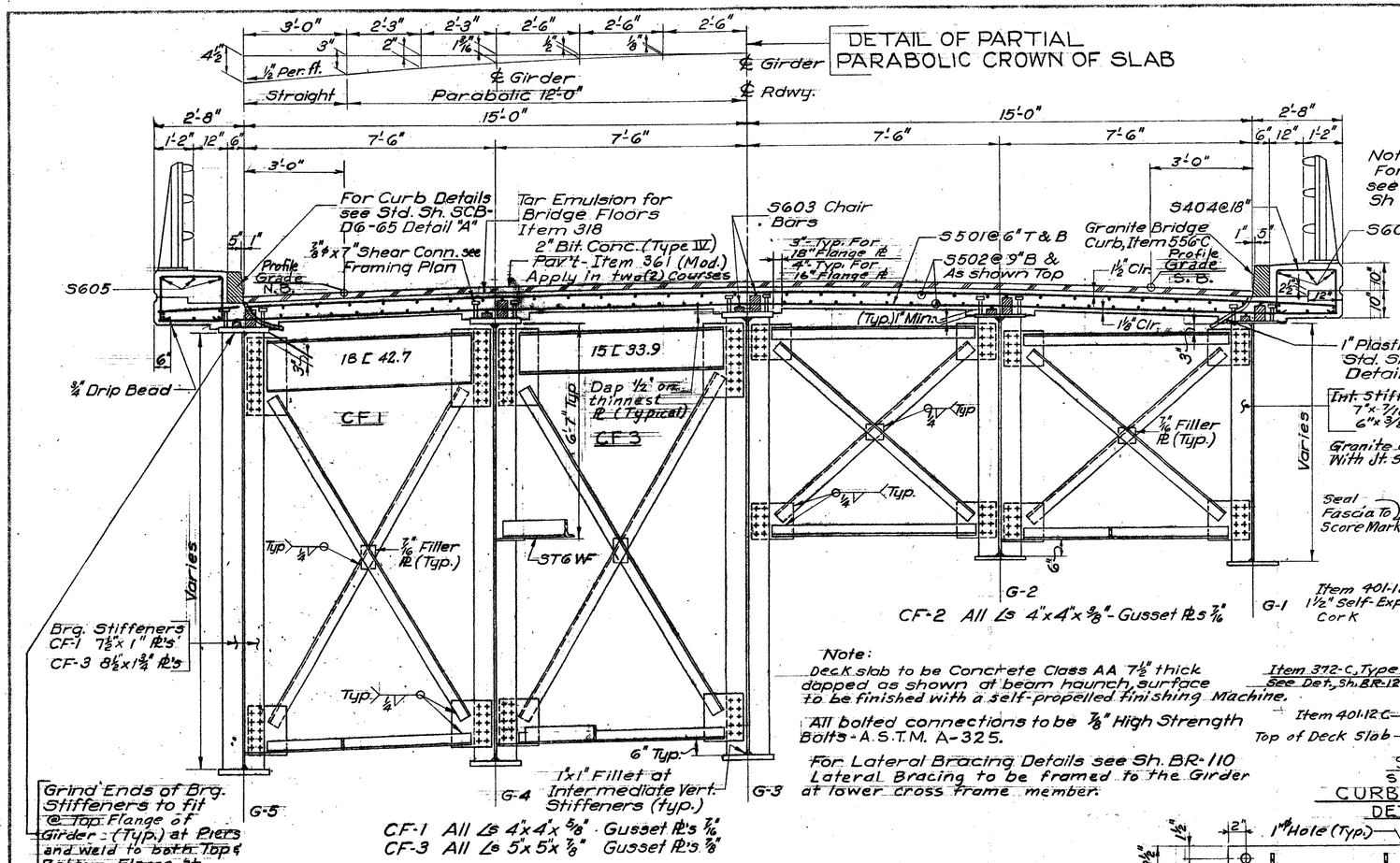
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

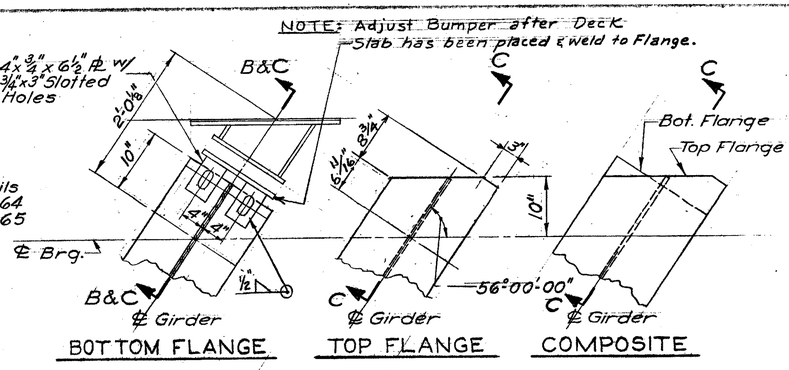
Bridge #17N & 17S

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: SHARON
TOWN OF SHARON
ROUTE NO. I-89 LOG STA. 772+0
I-89 OVER VT 14 AND WHITE RIVER
PLAN AND ELEVATION
SCALE 1IN. = 40 FT.

Bridge Sheet No. BR 154 Sheet 111 of 260



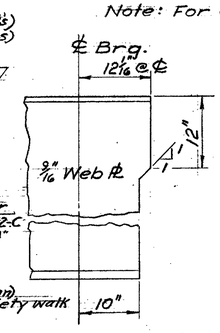


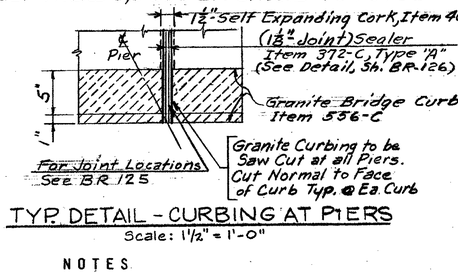
GIRDER FLANGES AT ABUTMENTS

Scale 1"=1'-0"

Note: For Girder make up see Br. Sheets 107 & 108

Note For Railing Details see Std. Sh. SB-R1-64 Sh 1 & 2 & SB-R2-65





TYP. DETAIL - CURBING AT PIERS

Scale: 1½" = 1'-0"

DETAIL "A"

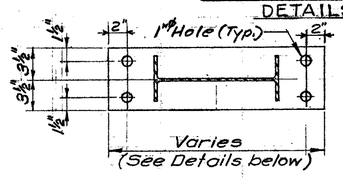
Scale: 1½" = 1'-0"

SECTION C-C

Scale 1" = 1'-0"

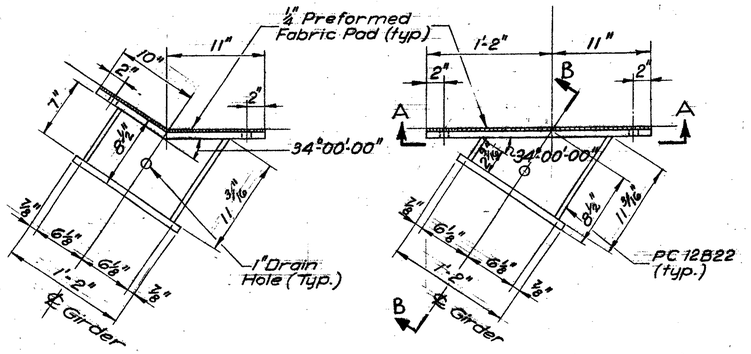
Typical for all Girder Ends @ Abutments

CURB & SAFETY WALK JOINT DETAILS AT PIERS



TYPICAL SECTION

Scale ½" = 1'-0"



TYPE 1 (4 Req'd.)

ABUT.	
1	G-5
2	G-10
3	G-1
4	G-6

TYPE 2 (12 Req'd)

ABUT.	
1	G-2, 3 & 4
2	G-7, 8 & 9
3	G-2, 3 & 4
4	G-7, 8 & 9

TYPE 3 (4 Req'd.)

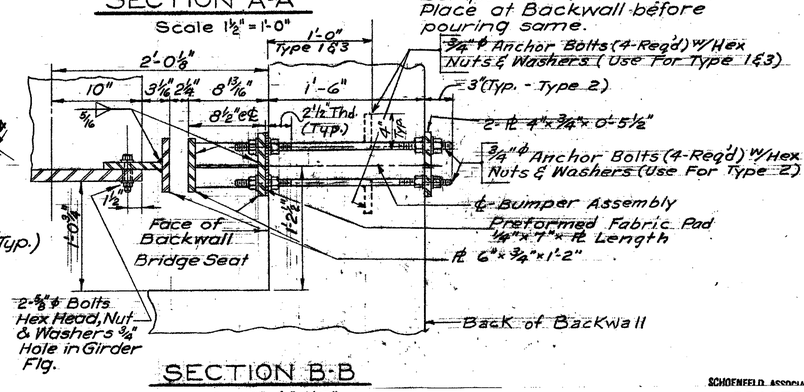
ABUT.	
1	G-1
2	G-6
3	G-5
4	G-10

DETAIL OF GIRDER BUMPERS

Scale 1½" = 1'-0"

NOTE
Bumper Guard Assembly including All Bolts & Slide ℄'s conn. to Girder to be Galvanized.

NOTE:
Bumper Guards to be set in Place at Backwall before pouring same.



SECTION A-A

Scale 1½" = 1'-0"

SECTION B-B

Scale 1½" = 1'-0"

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

SCHOENFELD ASSOCIATES, INC.

NOTES

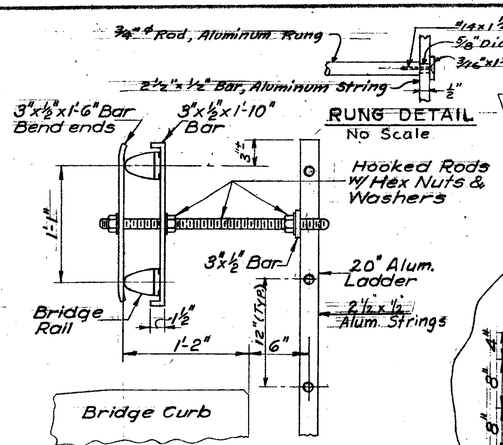
1. FOR GENERAL NOTES SEE SH. # BR-100
2. FOR FRAMING PLAN & GIRDER DETAILS SEE SH. # BR-107 & BR-108.
3. FOR TYPICAL BRACING & MISC. GIRDER DETAILS SEE SH. # BR-110.
4. FOR SLAB BEAM HAUNCH DETAIL SEE STD. SH. # SCB-D2-65, DETAIL C, & SCB-D6-65.
5. FOR REINFORCEMENT LAYOUT AT ABUTMENTS SEE STD. SH. # SCB-D4-65.
6. FOR EXPANSION DAM ASSEMBLY DETAILS AT ABUTMENTS SEE SH. # BR-111.
7. FOR SLAB DETAIL AT PIERS SEE STD. SH. # SCB-D2-65, DETAIL A.
8. BITUMINOUS CONCRETE PAVEMENT, ITEM 361 (MOD.), TYPE IV, IS TO BE APPLIED IN TWO (2) COURSES ON BRIDGE DECKS.
9. USE THE STANDARD 3 INCH HAUNCH FOR THE 18 INCH TOP FLANGE AND INCREASE TO A 4 INCH HAUNCH FOR THE 16 INCH FLANGE.

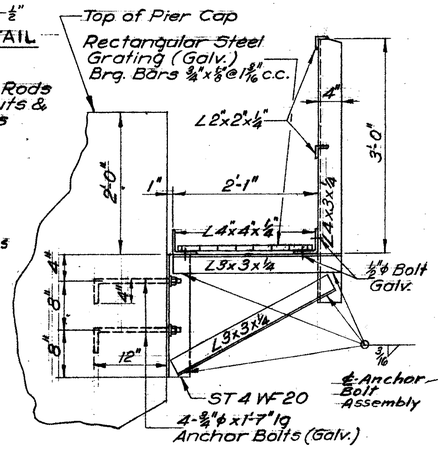
BR # 17 NB & 17 SB

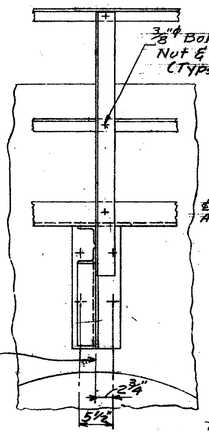
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

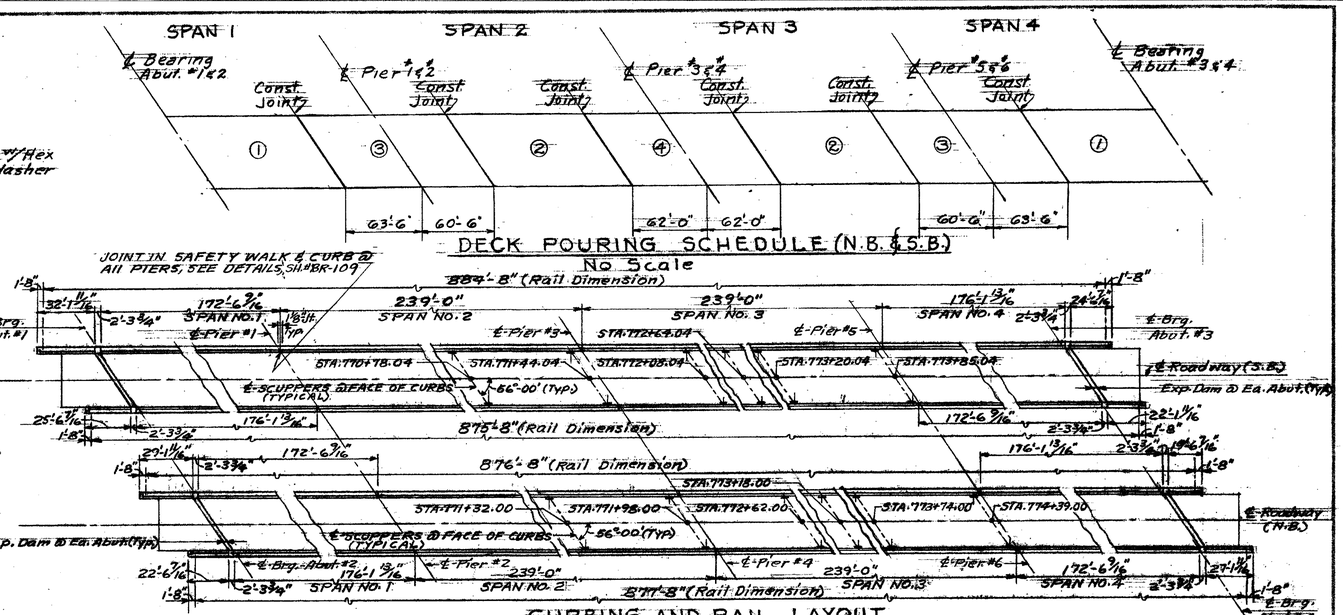
PROJECT SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 772 + 00
I - 89 OVER VT. #14 & WHITE RIVER
TYP. SUPERSTRUCTURE SEC. & DETAILS - N.B. & S.B.
SCALE AS SHOWN
IN CHARGE ARNOLD KATZ
A. WOLTI

Bridge Sheet No. BR 155 Sheet 112 of 260

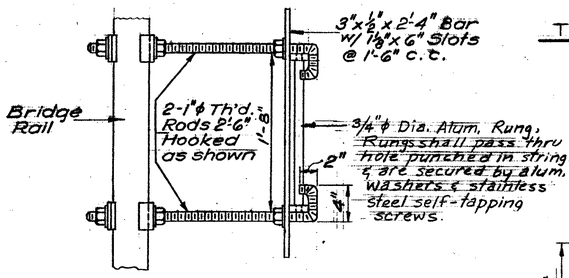




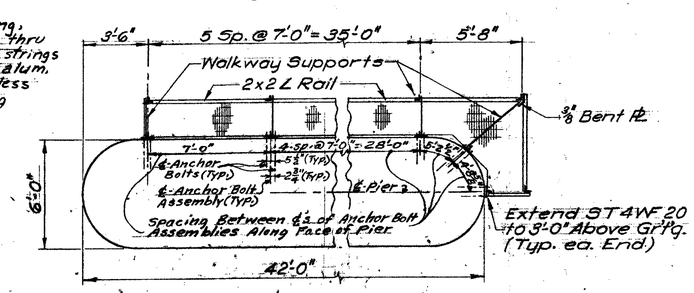




NOTE:
SCUPPERS SHOWN ON PLAN ABOVE THUS: FACE OF CURB
℄ SCUPPERS @ FACE OF CURB

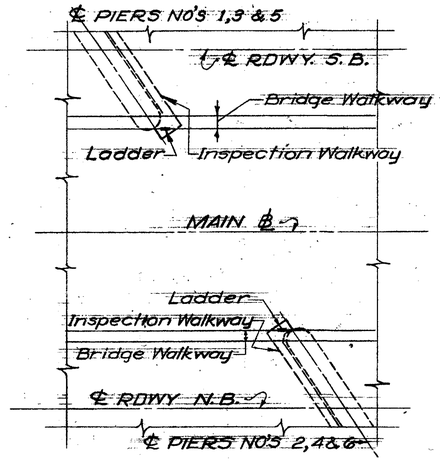


NOTE: Provide one (1) Ladder At Each Pier And Attachments. Ladder to be Alum. (6061-T6) or Alternate Lightweight Aluminum Alloys As Approved By The Engineer. Attachments to be A-36 Steel, Galvanized To ASTM A-123. Length of Ladders To Be Determined in the Field And As Directed By The Engineer. Ladders Are to Extend From Top of Bridge Rail, As Shown, To Deck of Walkways Below.



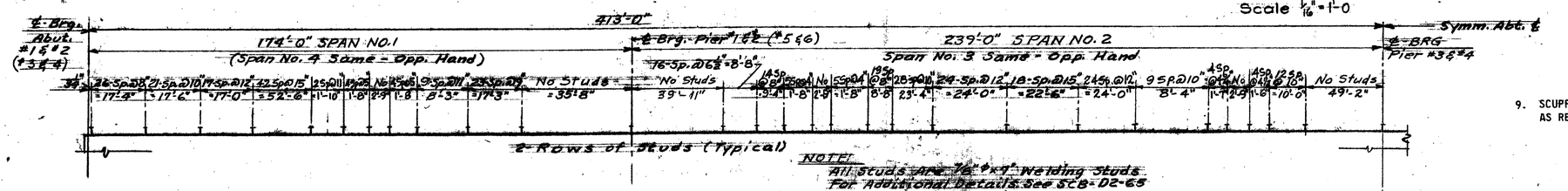
PIER INSPECTION WALKWAY DETAILS

All walkway members shall be ASTM A-36 Steel, Galvanized after fabrication to ASTM A-123.
Walkways are req'd. on PIERS 1 thru 6 incl.
Payment For These Items: Walkway, Supports Grating, Ladder & Rails To Be Included in Structural Steel Item #404-B



NOTES

1. FOR GENERAL NOTES SEE SH. # BR-100.
2. ALL RAILS TO BE SPLICED AT EXPANSION JOINTS WITH A 4" GAP AT THE SPLICE.
3. FOR RAILING DETAILS SEE STD. SH. # SB-R1-64 SH. 1 & 2 AND SB-R2-65.
4. FOR TYPICAL SLAB SECTION SEE SH. # BR-109.
5. ALL WALKWAY MEMBERS SHALL BE ASTM A-36. WALKWAYS ARE REQUIRED ON PIERS #1 THRU 6 INCLUSIVE.
6. STRAIGHT SECTIONS OF CURB SHALL BE FURNISHED IN RANDOM LENGTHS FROM 4 TO 10 FEET.
7. DETAILED DRAWINGS FOR THE LAYOUT OF THE GRANITE CURB, ITEM 556-C, SHALL BE SUBMITTED IN TRIPLICATE TO THE STATE FOR APPROVAL PRIOR TO FABRICATION OR SHIPMENT.
8. ALL GALVANIZING TO MEET ASTM A-123 REQUIREMENTS.
9. SCUPPER LOCATIONS MAY BE ADJUSTED AS REQUIRED.



NOTE:
All Studs Are 7/8" ϕ x 7" Welding Studs
For Additional Details See SCB-D2-65

SHEAR STUD SPACING - TYPICAL FOR ALL GIRDERS
No Scale

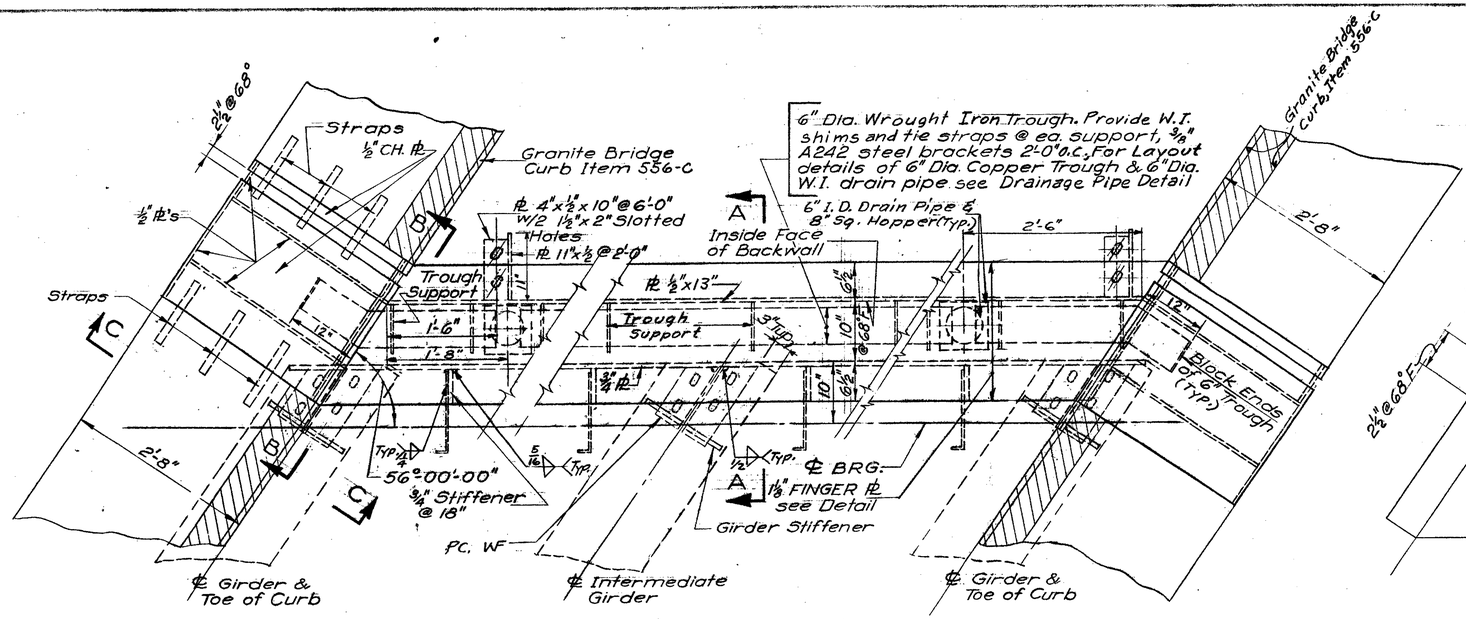
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

BR #17 NB & 17 SB

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 772 + 00
I - 89 OVER VT. #14 & WHITE RIVER
PIER WALKWAY & MISCELLANEOUS DETAILS-N.B. & S.B.
SCALE AS SHOWN
IN CHARGE ARNOLD KATZ

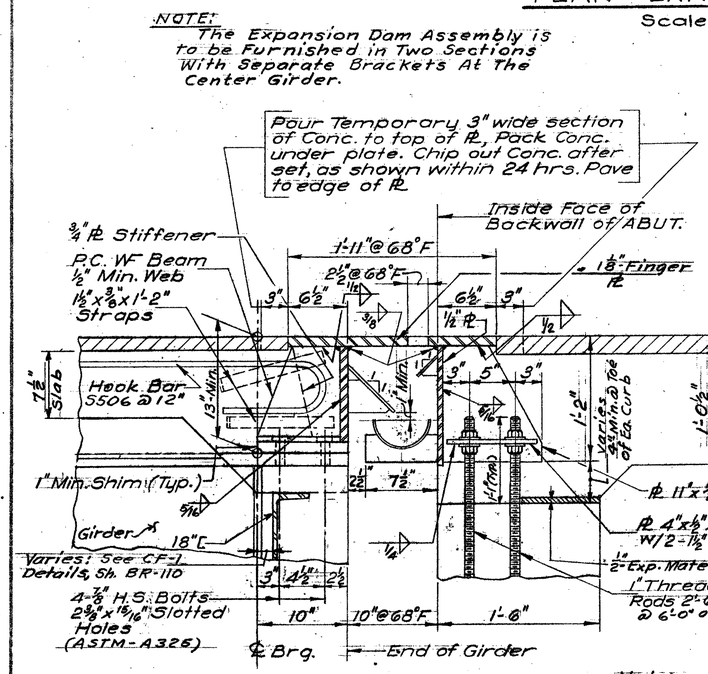
Bridge Sheet No. BR 156 Sheet 113 of 260



PLAN - EXPAN. ASSEMBLY

Scale 1"=1'-0"

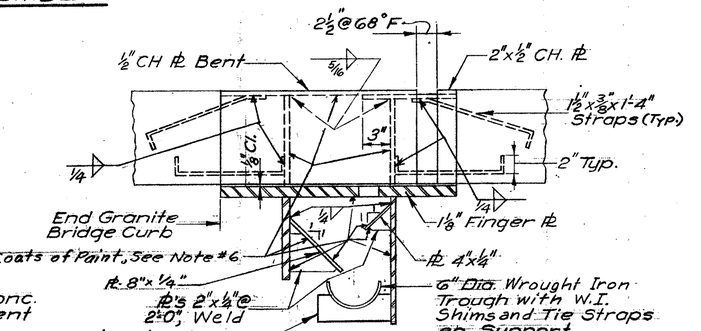
NOTE:
The Expansion Dam Assembly is to be Furnished in Two Sections With Separate Brackets At The Center Girder.



SECTION A-A

Scale 1½"=1'-0"

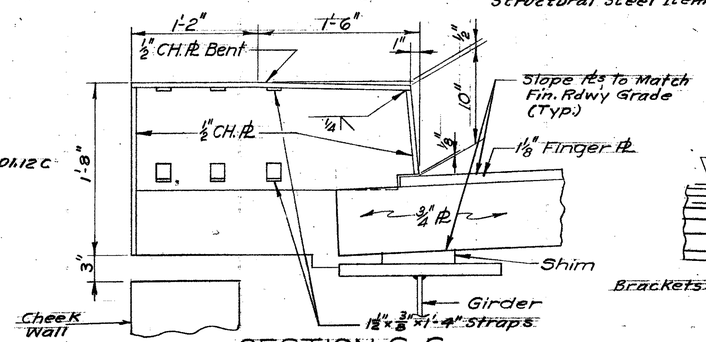
Note:
For add'l. Trough details see Section B-B



SECTION B-B

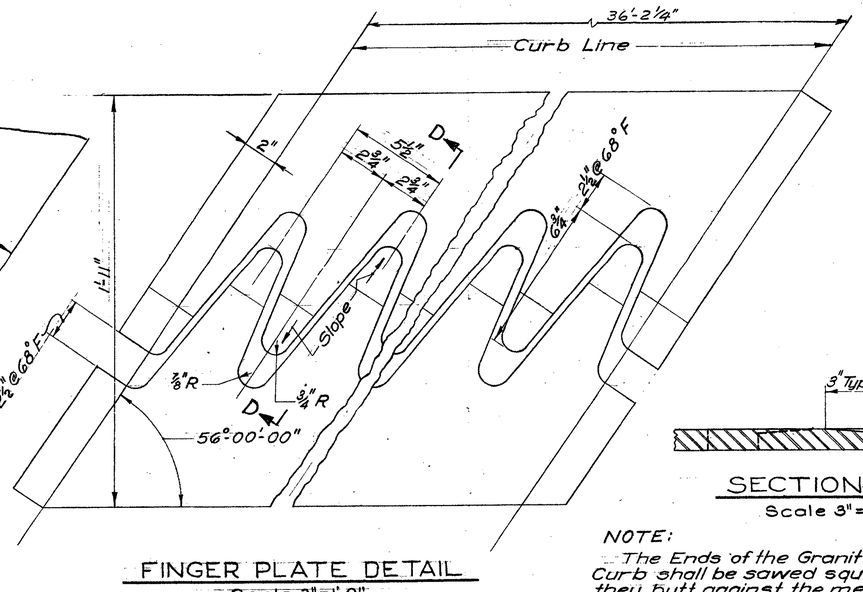
Scale 1½"=1'-0"

NOTE:
Payment For Drainage Pipe, & Clamps To Be Included in Structural Steel Item #404-A



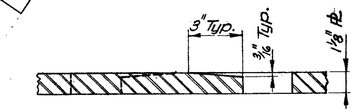
SECTION C-C

Scale 1½"=1'-0"



FINGER PLATE DETAIL

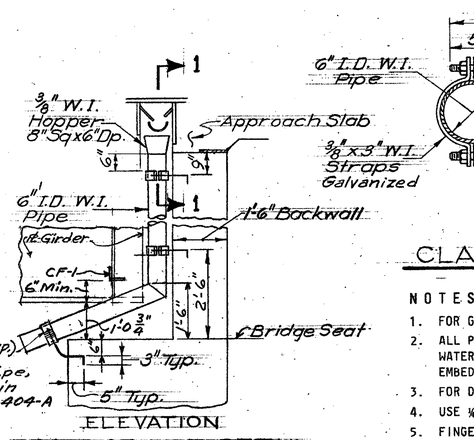
Scale 3"=1'-0"



SECTION D-D

Scale 3"=1'-0"

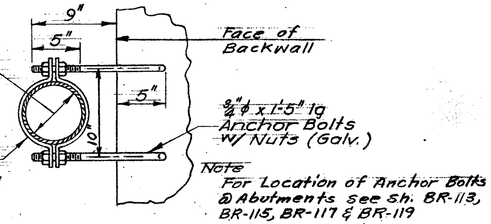
NOTE:
The Ends of the Granite Bridge Curb shall be sawed square where they butt against the metal expansion plates.



ELEVATION

DRAINAGE PIPE DETAIL

Scale ½"=1'-0"



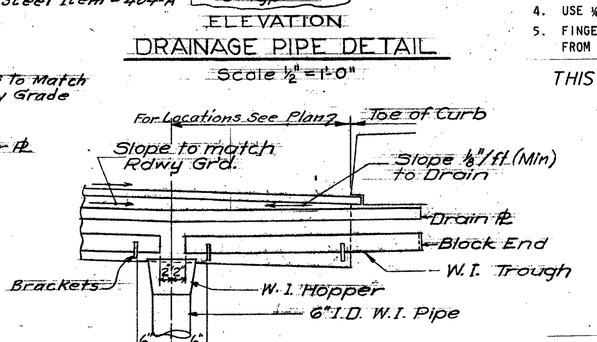
CLAMP DETAIL TYPE A

No Scale

BR #17NB & 17SB

NOTES

1. FOR GENERAL NOTES SEE SH. # BR-100
2. ALL PARTS OF THE EXPANSION JOINT ASSEMBLY WHICH ARE EXPOSED TO WATER AFTER ERECTION SHALL BE ASTM, A242 STEEL. PLATES COMPLETELY EMBEDDED IN CONCRETE MAY BE ASTM A36 STEEL.
3. FOR DETAIL OF GRANITE BRIDGE CURB SEE STD SH. #SCB-D6-65, DETAIL A
4. USE ¼" WELDS FOR CONNECTING PLATES & BRACKETS FOR 6" DIA. TROUGH.
5. FINGERS TO BE SYMMETRICAL ABOUT ℄ OF FINGER PLATE, FLAME CUT FROM 21" X 1⅛" PLATE.



SECTION 1-1

Scale 1"=1'-0"

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

PROJECT SHARON

TOWN OF SHARON

ROUTE No. I-89 STA. 772 + 00

I - 89 OVER VT. #14 & WHITE RIVER

EXPANSION DAM ASSEMBLY & DETAILS - NB. & SB.

SCALE AS SHOWN

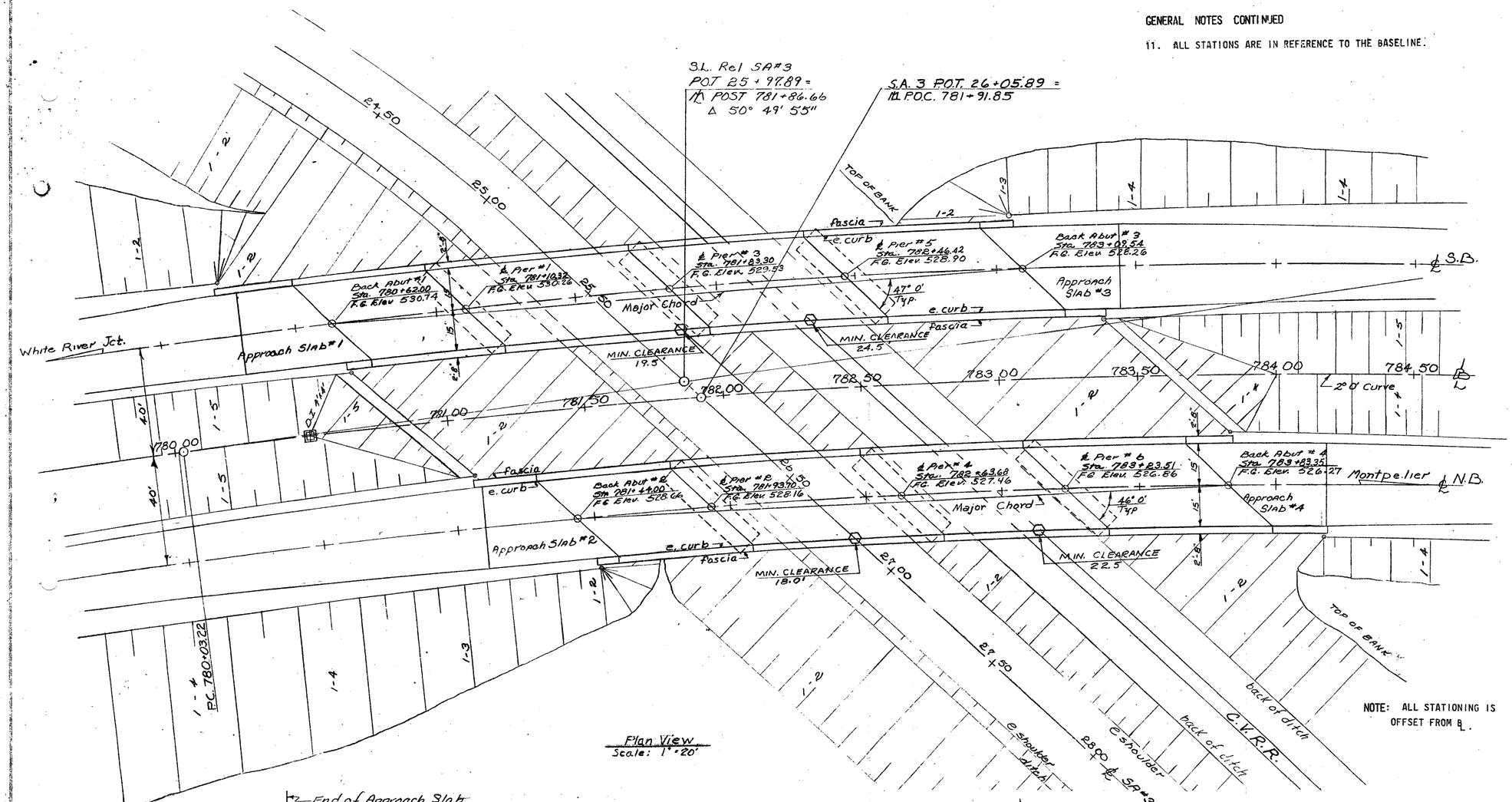
IN CHARGE ARNOLD KATZ

SCHOENFELD 210 SI BOSTO

Bridge Sheet No. BR 157 Sheet 114 of 260

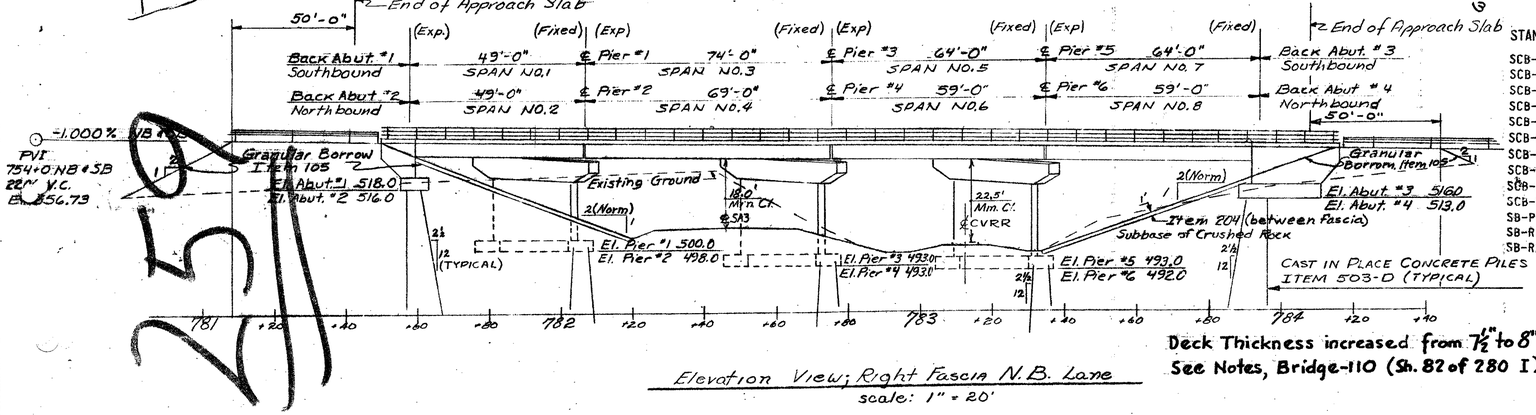
NOTE (CONTINUED)

6. THREE COATS OF PAINT (IN ACCORDANCE WITH ITEM 404.03D) IS TO BE APPLIED TO THE INTERIOR SURFACES OF EXPANSION DAMS PRIOR TO ERECTION.



Plan View
Scale: 1" = 20'

NOTE: ALL STATIONING IS OFFSET FROM ℄.



Elevation View; Right Fascia N.B. Lane
scale: 1" = 20'

Deck Thickness increased from 7½" to 8"
See Notes, Bridge-110 (Sh. 82 of 280 I)

GENERAL NOTES CONTINUED

11. ALL STATIONS ARE IN REFERENCE TO THE BASELINE.

LIST OF SHEETS

BR - 100	PLAN AND ELEVATION
BR - 101	BRIDGE QUANTITY SHEET
BR - 102	BRIDGE QUANTITY SHEET - CONTINUED
BR - 103	PRELIMINARY INFORMATION
BR - 104	BORING LOG
BR - 105	BORING LOG
BR - 106	BORING LOG
BR - 107	BORING LOG
BR - 108	BORING LOG
BR - 109	SUPERSTRUCTURE PLANS AND DETAILS
BR - 110	TYPICAL SUPERSTRUCTURE SECTION AND DETAILS
BR - 111	FRAMING PLAN AND DETAILS - SOUTHBOUND
BR - 112	FRAMING PLAN AND DETAILS - NORTHBOUND
BR - 113	FRAMING SCHEDULES AND DETAILS
BR - 114	ABUTMENT NO. 1 - SOUTHBOUND
BR - 115	ABUTMENT NO. 2 - NORTHBOUND
BR - 116	ABUTMENTS NO. 1 & NO. 2 - WING WALL DETAILS
BR - 117	ABUTMENT NO. 3 - SOUTHBOUND
BR - 118	ABUTMENT NO. 4 - NORTHBOUND
BR - 119	ABUTMENTS NO. 3 & NO. 4 - WING WALL DETAILS
BR - 120	PIER NO. 1 - SOUTHBOUND & PIER NO. 2 - NORTHBOUND
BR - 121	PIER NO. 3 & PIER NO. 5 - SOUTHBOUND
BR - 122	PIER NO. 4 & PIER NO. 6 - NORTHBOUND
BR - 123	PIER DETAILS
BR - 124	APPROACH SLAB NO. 1 SOUTHBOUND
BR - 125	APPROACH SLAB NO. 2 NORTHBOUND
BR - 126	APPROACH SLAB NO. 3 SOUTHBOUND
BR - 127	APPROACH SLAB NO. 4 NORTHBOUND
BR - 128	REINFORCING STEEL - ABUTMENTS NOS. 1 & 2
BR - 129	REINFORCING STEEL - ABUTMENTS NOS. 3 & 4
BR - 130	REINFORCING STEEL - PIER NOS. 1, 2, 4 & 5
BR - 131	REINFORCING STEEL - PIERS NOS. 3 & 6; SUPERSTRUCTURES 1 THRU 8 & APPROACH SLABS 1 THRU 4

GENERAL NOTES

1. FOR GENERAL NOTES SEE STD. SHEET NO. SCB-D1-65.
2. ELEVATION DATUM SEA LEVEL BASED ON NEAREST U.S.GOVERNMENT VERTICAL CONTROL.
3. THE SUPERSTRUCTURE (N.B.&S.B.) IS A 4-SIMPLE WF-BEAM COMPOSITE SPANS DESIGN FOR A 30 FT. ROADWAY.
4. BRIDGE SEAT ELEVATIONS SHOWN ON ABUTMENT & PIER DRAWINGS ARE AT CENTER LINE OF BEARINGS AND AT BOTTOM OF 1/8" THICK BEARING PADS.
5. ALL EXPOSED EDGES OF CONCRETE IN THE SUPERSTRUCTURE, ABUTMENTS AND PIERS SHALL BE CHAMFERED 1"x 1".
6. ITEM, 440, WATER REPELLENT SHALL CONSIST OF FURNISHING AND APPLYING WATER REPELLENT ON TOP OF THE SAFETY WALKS ON THE FASCIA, AND BACK TO THE DRIP NOTCH UNDER THE SLAB, ON THE SIDES, ENDS, AND BOTTOM AT ALL PIER CAPS AND ON THE EXPOSED ~~AREAS~~ OF ABUTMENTS NOT OTHERWISE TREATED.
7. ONE OR TWO TEST PILES SHALL BE DRIVEN FOR EACH FOUNDATION UNIT AS DIRECTED BY THE ENGINEER, TO DETERMINE THE ORDER LENGTHS FOR PILES. MORE THAN ONE ORDER LENGTH MAY BE REQUIRED FOR EACH FOOTING.
8. PILING SHALL BE REQUIRED TO DEVELOP A BEARING CAPACITY OF NOT LESS THAN 40 TONS PER PILE AND PENETRATE A MIN. OF 10'
9. ITEM, 505, PILE LOADING TESTS SHALL BE USED ONLY WHEN ORDERED IN WRITING BY THE ENGINEER.
10. FOR MAJOR CHORD & MINOR CHORD LAYOUT DIAGRAMS, SEE BR 111 & BR-112, FOR FASCIA STRINGER LAYOUT DIAGRAM SEE BR-113. THE SYMBOL Δ DESIGNATES DIRECTION OF PILE BATTER.

STANDARD SHEETS

SCB-D3-65 - PIER EXP. ℄ & DRAIN TROUGH DETAILS
SCB-30-65 - TYP. SECTION & QUANTITIES - 30 FT. RDWY.
SCB-D1-65 - GENERAL NOTES & INFORMATION.
SCB-D2-65 - DETAILS : A, B & C.
SCB-D4-65 - REINFORCEMENT AT ABUTMENTS
SCB-D5-65 - REINFORCEMENT AT PIERS
SCB-D6-65 - DETAILS : A, B & D
SCB-D7-65 - DETAILS : A, B, C, D & E
SCB-D8-65 - BEARING DEVICES; DETAILS : A & B
SCB-D9-65 - CURTAIN WALL AT BEARING; DETAIL : A.
SB-P1-65 - CAST IN PLACE CONCRETE PILING
SB-R1-64 - ALUMINUM BRIDGE RAILING SHEETS 1 OF 2 & 2 OF 2.
SB-R2-65 - GALVANIZED METAL BRIDGE RAILING

REFERENCE SHEETS

INTERSTATE PLAN (SCALE 1" = 50') ℄ STA. 767 + 00 TO STA.799 + 00 (2-SHEETS)
PROFILE OF INTERSTATE, N.B.&S.B. ℄ STA. 767 + 00 TO STA.799 + 00 (2-SHEETS)
PLAN & PROFILE, RELOCATED SA#3, ℄ STA. 11 + 50 TO STA 43 + 00 (2-SHEETS)
RELOCATED SA#3 SECTIONS, STA. 23 + 00 TO STA. 32 + 50 (3-SHEET)
INTERSTATE SECTIONS, ℄ STA. 780 + 00 TO STA. 784 + 50 (2-SHEET)

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

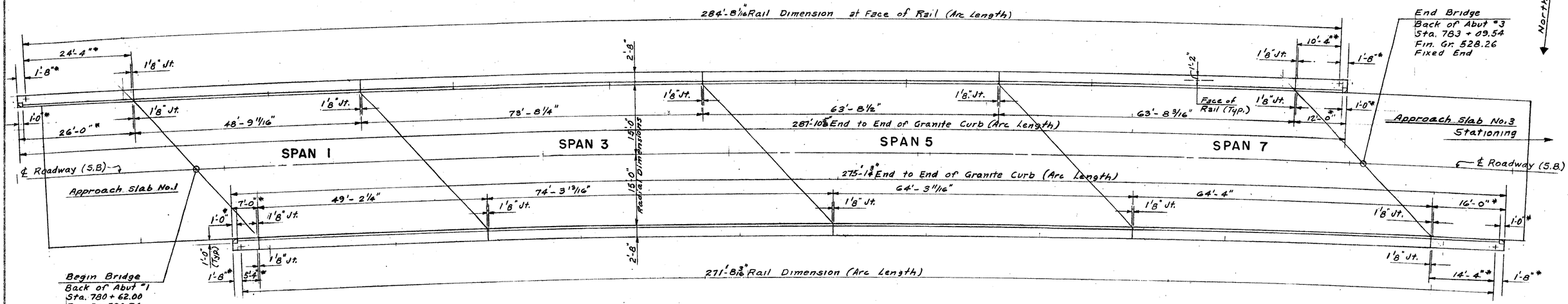
Bridge # 18N & 18S

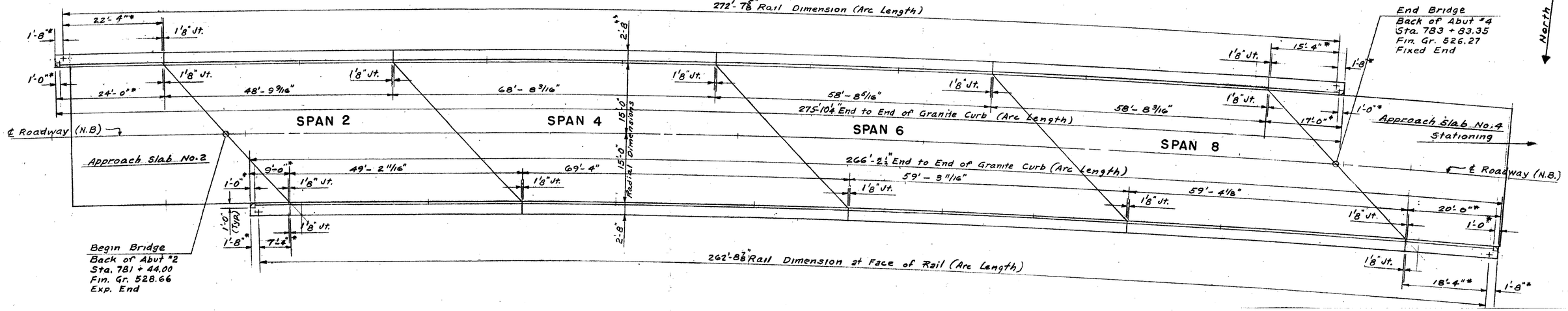
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT SHARON - ROYALTON
Town of Sharon.
ROAD NO. I-89 BRIDGE NO.
I-89 over SA # 3 & C.V.R.R.
Plan & Elevation
SCALE As Shown
SURVEYED BY

Bridge Sheet No. BR 158 Sheet 115 of 260

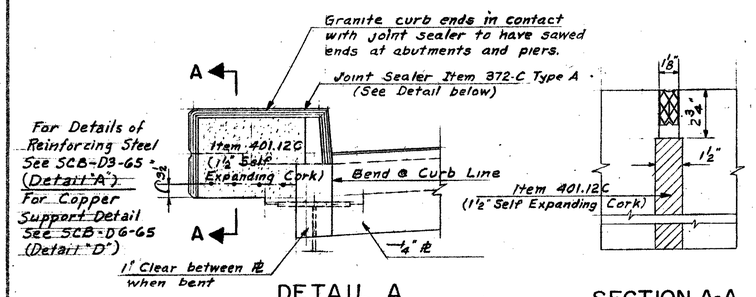
Stage 1 Construction





CURBING & RAIL LAYOUT

Scale: 1" = 10'-0"



DETAIL A

EXPANSION JOINT IN CURBS AT PIERS AND ABUTMENTS

Scale: 3/4" = 1'-0"

SECTION A-A

Scale: 3" = 1'-0"

Note - For Reinforcing Steel @ Pier Joints, See Std. SCB-D5-65

NOTES

ALL RAILS TO BE SPLICED AT EXPANSION POINTS WITH A 4" GAP AT THE SPLICE.

FOR RAILING DETAILS SEE STD. SH. SB-R1-64 SH. 1 & 2 AND SB-R2-65.

ALL DIMENSIONS ARE ARC LENGTHS EXCEPT AS NOTED AND THOSE MARKED WITH * WHICH ARE STRAIGHT LINE DISTANCES.

DETAILED DRAWINGS FOR THE LAYOUT OF THE GRANITE CURB, ITEM 556-C, SHALL BE SUBMITTED IN TRIPLICATE TO THE STATE OF VERMONT DEPARTMENT OF HIGHWAY, FOR APPROVAL PRIOR TO FABRICATION OR SHIPMENT. THE CURB JOINTS WHERE ITEM 372-C IS TO BE USED SHALL BE SAWED JOINTS, THE STRAIGHT SECTIONS OF CURB SHALL BE FURNISHED IN RANDOM LENGTHS OF 4'-0" TO 10'-0".

Deck Thickness increased from 7½" to 8"
See Notes, Bridge-100 (82 of 280 Stage I)

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

BR 1BNB 185B

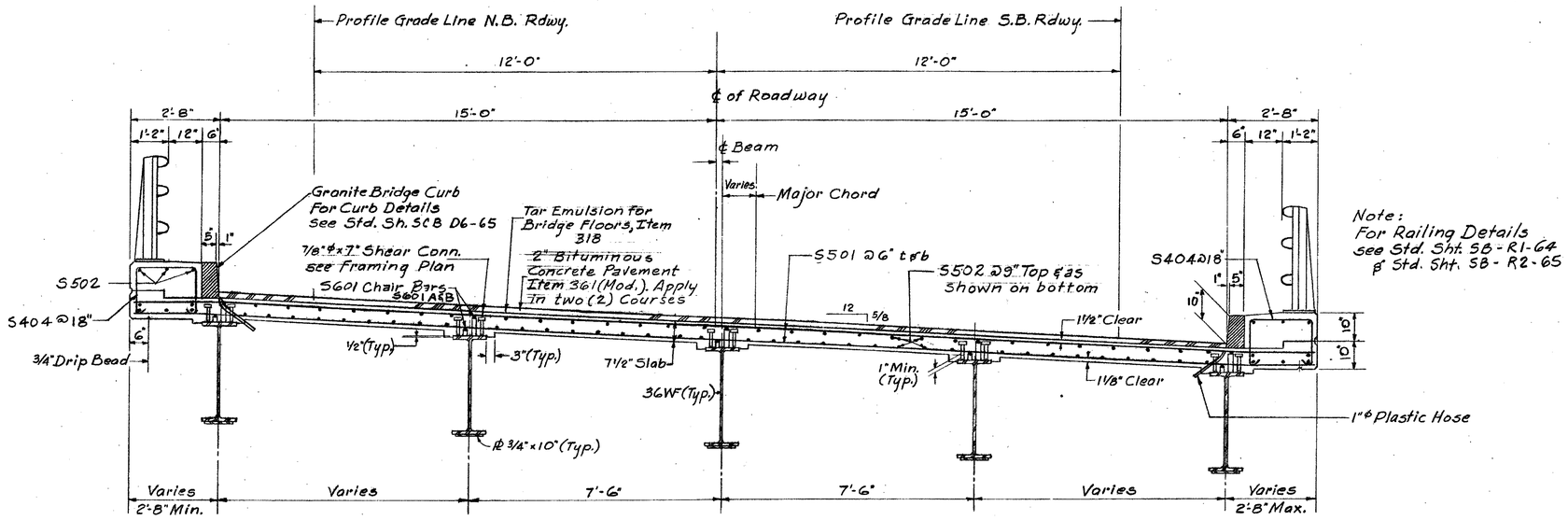
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT SHARON - ROYALTON
TOWN OF SHARON
ROUTE No. I-89 STA. 781 + 91.85
I - 89 OVER SA #3 & C.V.R.R.
SUPERSTRUCTURE PLANS AND DETAILS
SCALE AS SHOWN
ARNOLD D. KATZ

SCHOENFEL
210 1
BOSTC...

Bridge Sheet No. BR 159 Sheet 116 of 260

Stage I Construction



Note:
For Railing Details
see Std. Sht. SB-R1-64
& Std. Sht. SB-R2-65

Note:
Floor Slab to be Concrete Class A-A ~~8"~~ thick, dapped as shown at beam haunch, surface to be finished with a self-propelled Finishing Machine.

RECORD PLANS NOTE:
Tops of all Wings raised ½" to compensate for additional ½" in Deck Thickness.
No adjustment of Beam Seat Elevations; All Abutments and Piers.
No adjustment in Fin.Gr. Elevations, Haunches computed from Beam Profiles and 8" Deck.

TYPICAL SECTION
Scale: 1/2"=1'-0"

NOTES

1. FOR GENERAL NOTES SEE SH. # BR-100
2. FOR FIXED BEARING DETAILS SEE STD. SH. # SCB-D8-65, DETAIL A.
3. FOR EXPANSION BEARING DETAILS AT ABUTMENTS NOS. 1 & 2 & PIERS NOS. 2, 3, 4, 5 & 6 SEE STD. SH. # SCB-D8-65, DETAIL A.
4. FOR EXPANSION BEARING DETAILS AT PIER NO. 1 SEE STD. SH. # SCB-D8-65, DETAIL B.
5. FOR CURTAIN WALL AT ABUTMENTS & SLAB DETAIL AT PIERS SEE STD SH. # SCB-D2-65, DETAIL A.
6. FOR STUD SHEAR CONNECTOR SCHEDULE, DIAPHRAGM SCHEDULE, FASCIA STRINGER LAYOUT DIAGRAM & STATIONS AND OFFSETS AND FIN. GRADES AT COMPUTED POINTS SEE SH. # BR-113.
7. FOR STRINGER SCHEDULES, CURVE & CHORD LAYOUT, DIAGRAMS AND STATIONS AND OFFSETS AND FIN. GRADES AT COMPUTED POINTS SEE SH. # BR-111 & BR-112.
8. FOR DIAPHRAGM DETAILS, INTERIOR WF BEAM CUT-OFFS AT PIERS AND COVER PLATE DETAILS SEE SH. # SCB-D7-65, DETAILS A, B, C, D & E.
9. FOR WF BEAM END DETAIL & CUT-OFFS AT ABUTMENTS SEE STD. SH. # SCB-D8-65, DETAIL B, AND STD. SH. # SCB-D9.65, DETAIL A.
10. FOR DETAIL OF CURTAIN WALL AT ABUTMENTS SEE STD. SH. # SCB-D9-65.
11. FOR PLAN & REINFORCEMENT LAYOUT AT PIERS SEE STD. SH. # SCB-D5-65.
12. FOR PIER EXPANSION JOINT AND DRAIN TROUGH DETAIL FOR ALL PIERS SEE STD. SH. # SCB-D3-65 DETAILS A, B, C, D & E.
13. FOR BEAM HAUNCH SEE STD. SH. # SCB-D2-65 DETAIL C.
14. ALL FIELD CONNECTIONS TO BE MADE WITH 7/8" ϕ HIGH STRENGTH BOLTS WITH 15/16" ϕ HOLES.
15. THE BITUMINOUS CONCRETE PAVEMENT, ITEM 361 (MOD.) SHALL BE APPLIED IN TWO (2) COURSES.

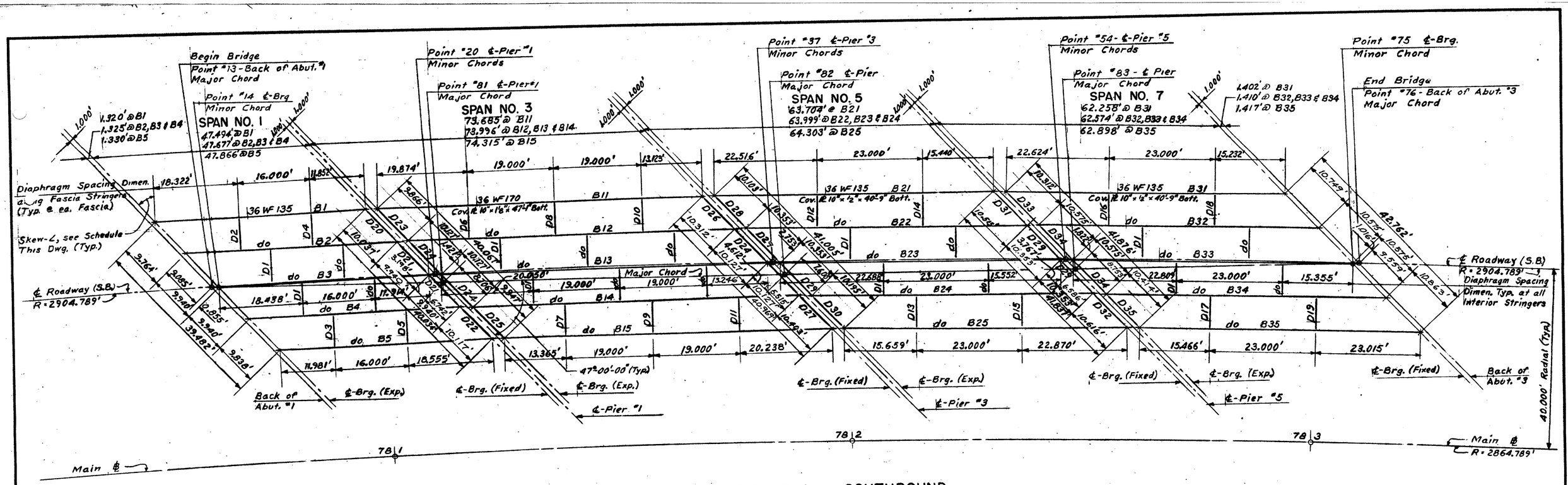
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT SHARON-ROYALTON
TOWN OF SHARON
ROUTE No I-89 LOC STA 781+91-85
I-89 OVER SA #3 & C.V.R.R.
TYPICAL SUPERSTRUCTURE SECTION & DETAILS
SCALE AS SHOWN
IN CHARGE ARNOLD KATZ

SCHOENFELD ASSOC
210 SOUTH S
BOSTON 11,

Bridge Sheet No. BR160 Sheet 117 of 260



FRAMING PLAN - SOUTHBOUND

Scale: 1" = 10.000'

NOTES

1. FOR FRAMING NOTES SEE SH. # BR-310.

STRINGER SCHEDULE SOUTHBOUND ROADWAY

	BEAM NO.	SKEW * ANGLE 00°-00'-00"	SPAN OF BEAMS ℄-℄ Brgs FT.	LENGTH OF BEAMS (OUT-OUT) FT. **	DEAD LOAD DEFLECTION IN.	CAMBER IN.
SPAN NO. 1	B1	40-45-54.69	46.174	47.02	7/16	1 1/8
	B2	41-01-14.40	46.352	48.10	1/2	
	B3					
	B4					
	B5	41-16-48.18	46.536	48.37	7/16	
SPAN NO. 3	B11	41-57-15.10	70.997	73.12	15/8	2 3/4
	B12	42-13-14.88	71.296	73.09	1 11/16	
	B13					
	B14					
	B15	42-29-28.80	71.603	73.82	1 5/8	
SPAN NO. 5	B21	43-18-08.12	60.956	63.20	1 1/8	2
	B22	43-34-54.48	61.240	63.07	1 1/4	2 1/8
	B23					
	B24					
	B25	43-51-56.04	61.529	63.79	1 1/8	2
SPAN NO. 7	B31	44-32-17.55	60.856	62.76	1 1/8	2
	B32	44-49-48.82	61.164	63.04	1 1/4	2 1/8
	B33					
	B34					
	B35	45-07-35.85	61.481	63.40	1 1/8	2

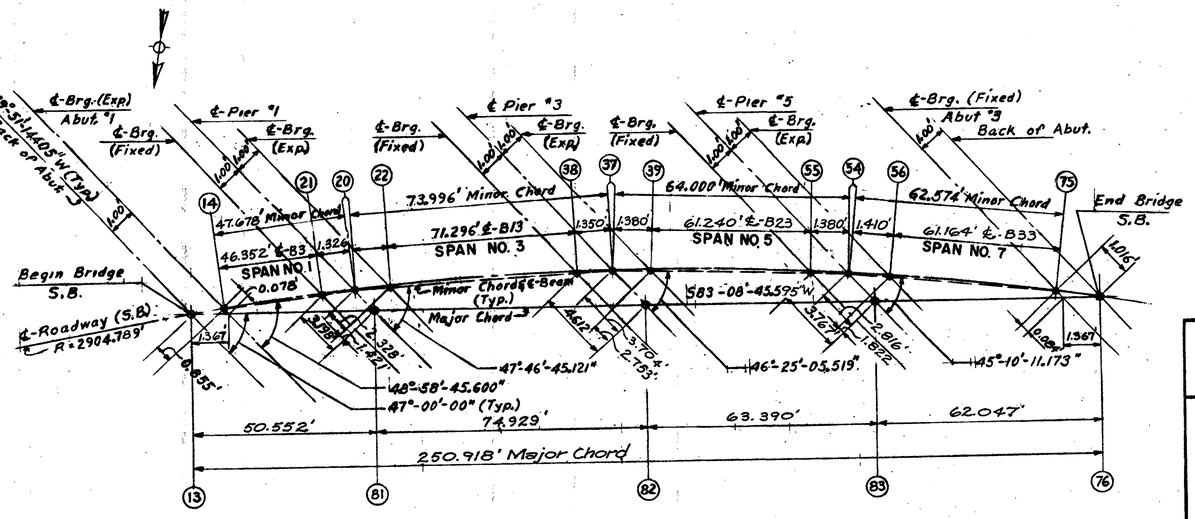
NOTES:

* Skew-∠ is Computed Angle Between ℄-Bearing @ Abutment & Pier With a Line Normal to ℄ of Beam.

** Out to out Length of Beams to Be Verified By Steel Fabricator.

STATIONS, OFFSETS & FIN. GRADE AT COMPUTED POINTS SOUTHBOUND ROADWAY

POINT NO.	STATION	OFFSET FROM MAIN ℄ FT. - RIGHT	FIN. GRADE ELEVATION FT.
13	780 + 62.000	40.000	530.74
14	780 + 63.297	40.000	530.73
20	781 + 10.320	40.000	530.26
21	781 + 09.012	39.989	530.26
22	781 + 11.651	39.983	530.23
37	781 + 83.300	40.000	529.53
38	781 + 81.968	39.983	529.53
39	781 + 84.661	39.985	529.50
54	782 + 46.420	40.000	528.90
55	782 + 45.058	39.985	528.90
56	782 + 47.810	39.985	528.87
75	783 + 08.133	40.000	528.28
76	783 + 09.540	40.000	528.26



CURVE & CHORD LAYOUT - S.B. ROADWAY

No Scale

THIS SHEET IS FOR INFORMATION PURPOSES ONLY

HARTFORD-SHARON-ROYALTON IM 1R 089-1(8)

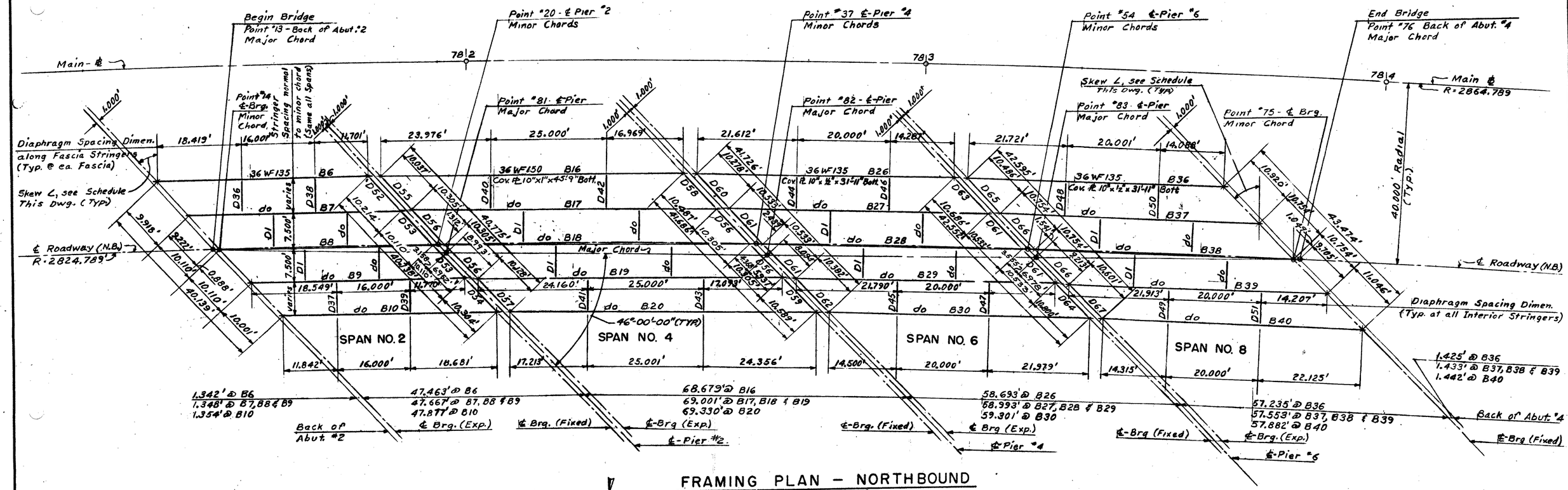
SCHOENFELD AS
210 SOUTH
BOSTON 1

BR 18

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

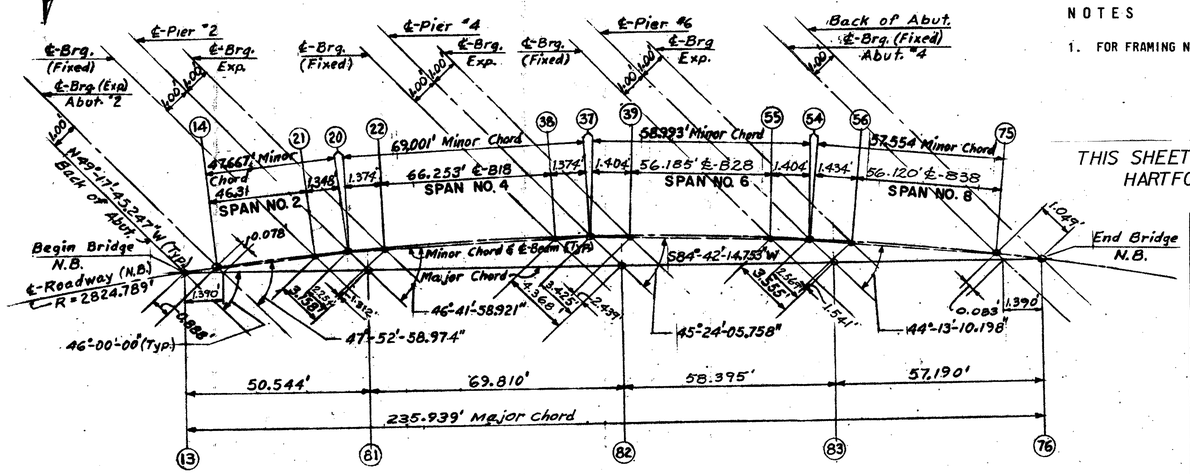
PROJECT SHARON - ROYALTON
TOWN OF SHARON
ROUTE No. I-89 STA. 781 + 91.00
I - 89 OVER SA 3 & C.V.R.R.
FRAMING PLAN SOUTHBOUND & TYPICAL SECTION
SCALE AS SHOWN
IN CHARGE ARNOLD KATZ

Bridge Sheet No. BR 161 Sheet 118 of 260



FRAMING PLAN – NORTHBOUND

Scale: 1" = 10.000'



CURVE & CHORD LAYOUT - N.B. ROADWAY

No Scale

STRINGER SCHEDULE NORTHBOUND ROADWAY

	BEAM NO.	SKEW ANGLE 00°-00'-00"	SPAN OF BEAMS ℄-℄ Brgs FT.	LENGTH OF BEAMS (OUT-OUT) FT. **	DEAD LOAD DEFLECTION IN.	CAMBER IN.
SPAN NO. 2	B6	41-50-38.40	46.121	47.96	7/16	1 1/16
	B7	42-07-01.03	46.319	48.10	1/2	
	B8					
	B9					
	B10	42-23-39.31	46.523	48.38		
SPAN NO. 4	B16	43-00-56.50	66.945	68.18	1 7/16	2 3/8
	B17	43-18-01.08	66.253	67.78	1 9/16	2 1/2
	B18					
	B19					
	B20	43-35-21.55	66.570	68.83	1 7/16	2 3/8
SPAN NO. 6	B26	44-18-02.42	55.899	58.19	7/8	1 5/8
	B27	44-35-54.24	56.185	58.04	15/16	
	B28					
	B29					
	B30	44-54-03.13	56.479	58.80	7/8	
SPAN NO. 8	B36	45-28-12.72	55.810	57.74	7/8	
	B37	45-46-49.80	56.120	58.04	15/16	
	B38					
	B39					
	B40	46-05-44.46	56.440	58.38	7/8	

* Skew ∠ is Computed Angle Between ℄ Bearing @ Abutment ℄ Pier With a Line Normal to ℄ of Beam.

** Out to Out Length of Beams To Be Verified By Steel Fabricator.

STATIONS, OFFSETS & FIN. GRADE AT COMPUTED POINTS NORTHBOUND ROADWAY

POINT NO.	STATION	OFFSET FROM MAIN ℄ FT. - RIGHT	FIN. GRADE ELEVATION FT.
13	781+44.000	40.000	528.66
14	781+45.356	40.000	528.65
20	781+93.700	40.000	528.16
21	781+45.356	40.011	528.18
22	781+95.093	40.016	528.15
37	782+63.680	40.000	527.46
38	782+62.286	40.016	527.48
39	782+65.104	40.014	527.45
54	783+23.510	40.000	526.86
55	783+22.085	40.014	526.88
56	783+24.964	40.014	526.85
75	783+61.860	40.000	526.28
76	783+83.350	40.000	526.27

NOTES

1. FOR FRAMING NOTES SEE SH. # BR-310.

BR 18

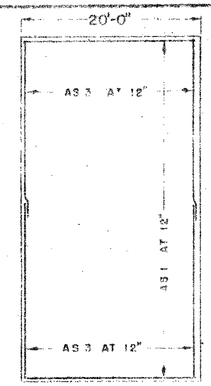
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

SCHOENFELD AS
210 SOUTH
BOSTON 11

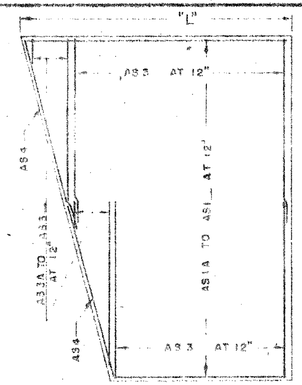
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT SHARON - ROYALTON
TOWN OF SHARON
ROUTE No. I-89 STA. 781+91.85
I-89 OVER SA #3 & C.V.R.R.
FRAMING PLAN & DETAILS NORTH BOUND
SCALE AS SHOWN
IN CHARGE ARNOLD KATZ
DRAWN BY E. W. CHECKED BY A. WOLTI

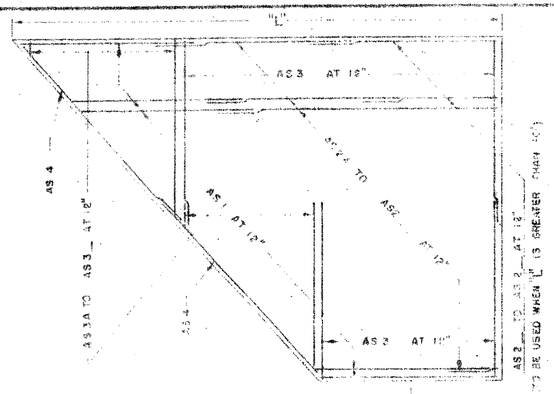
Bridge Sheet No. BR 162 Sheet 119 of 260



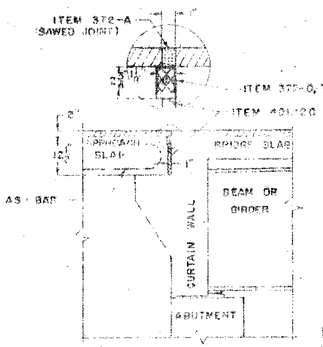
DETAIL "A" - SQUARE



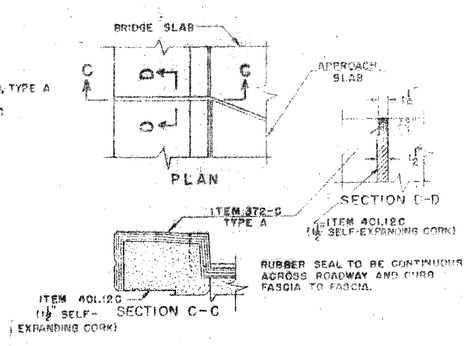
DETAIL "B" - "L" LESS THAN 35'



DETAIL "C" - "L" GREATER THAN 35'



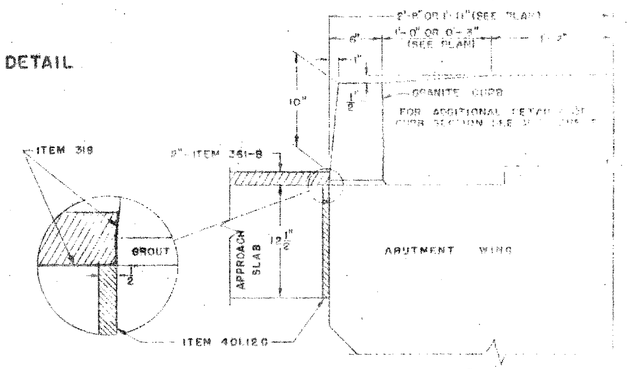
SECTION B-B



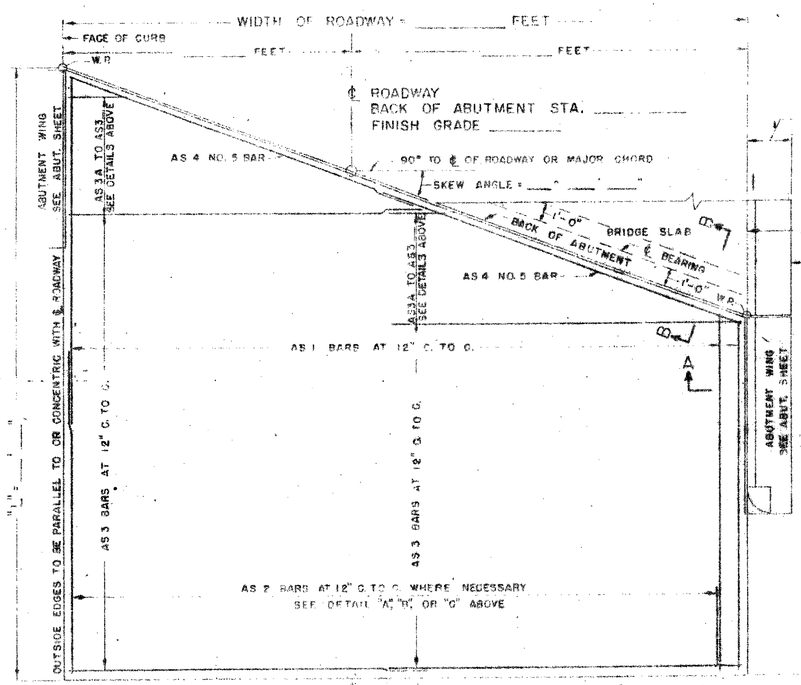
CURB JOINT DETAIL

DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

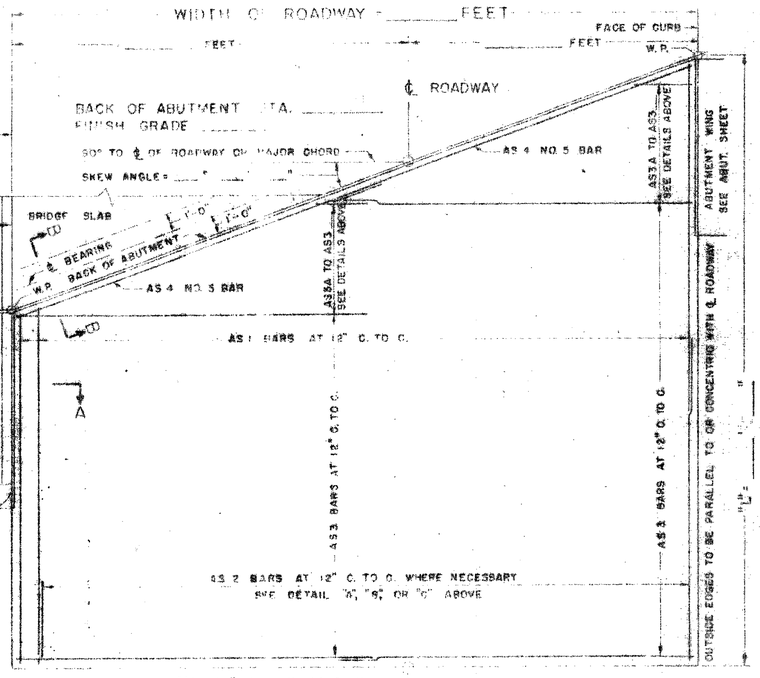
MATERIAL TO BE PREMOLDED NEOPRENE [illegible]
(OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



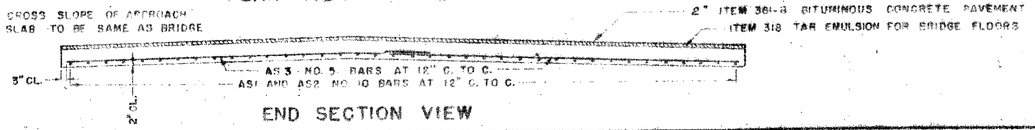
SECTION A-A



PLAN VIEW TYPE 1



PLAN VIEW TYPE 2

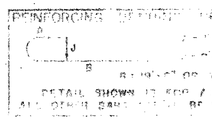


END SECTION VIEW

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1960, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.

2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE, SEE, BUT SHALL BE A MINIMUM OF 40 BAR DIAMETERS.



LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
319	TAR EMULSION FOR BRIDGE FLOORS	GAL.
361-B	BITUMINOUS CONCRETE PAVEMENT	TONS
372-A	JOINT SEALER - HOT POURED	L.F.
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.
401-B	CONCRETE CLASS B	CY.
408	REINFORCING STEEL	LB.

PROJECT
TOWN OF
ROUTE NO. STR.

NOT TO SCALE

REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED 4/15/65 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED 6/23/65 W.B.T.
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2", QUANTITY TOTALS REMOVED. 12/7/65. W.B.T.

DRAWN BY: W.B.T. Jan. 1965
TRACED BY: W.B.T. Jan. 1965
CHECKED BY: W.M.S. Feb. 1965

RECOMMENDED FOR APPROVAL: [signature] BRIDGE ENGINEER 2/4/65 DATE
RECOMMENDED FOR APPROVAL: [signature] ASSISTANT CHIEF ENGINEER 2/4/65 DATE
APPROVED BY: [signature] CHIEF ENGINEER 2/4/65 DATE

DETAILS OF APPROACH SLAB FOR (WIDTH) FOOT BRIDGE

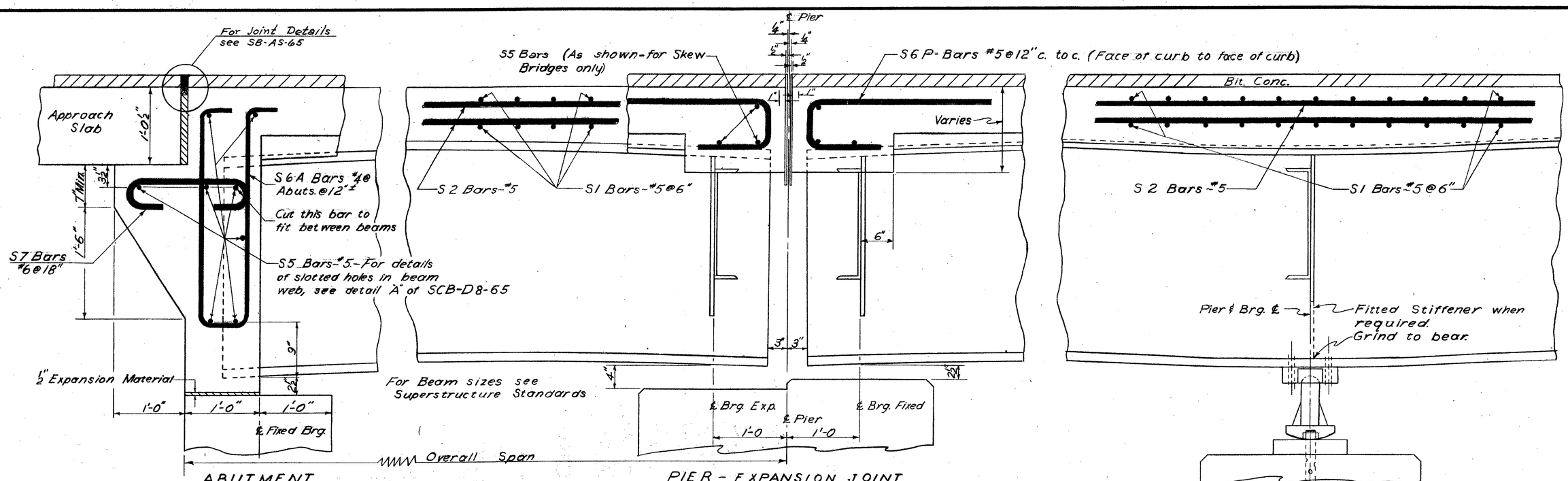
TO BE USED FOR BRIDGE AT STATION
LOCATION

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(6)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUC
SB-AS-6

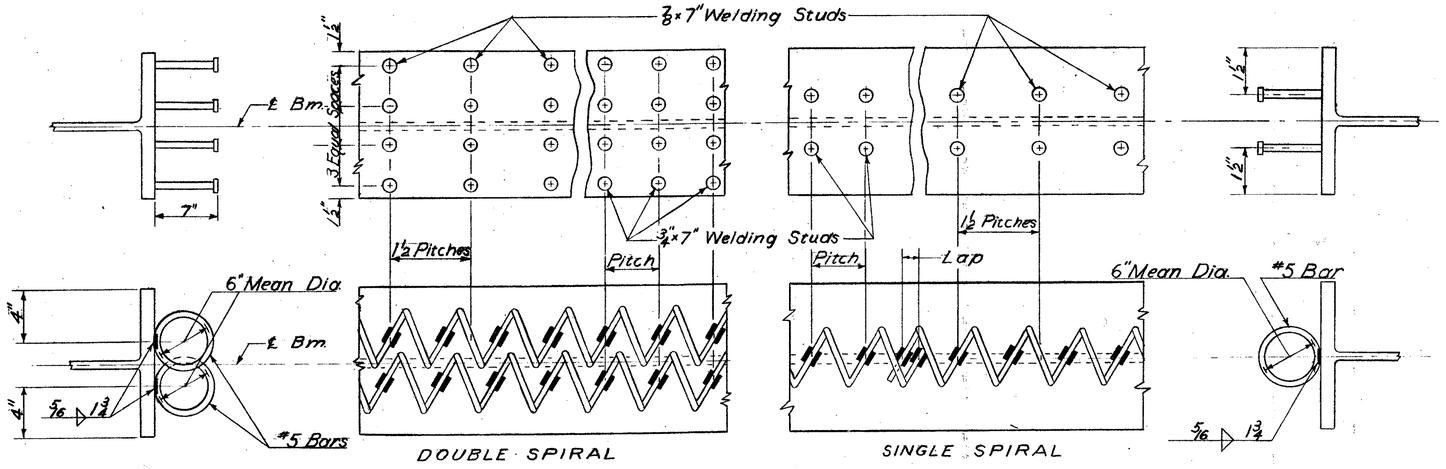
Bridge Sheet No. BR 163 Sheet 120 of 260

231



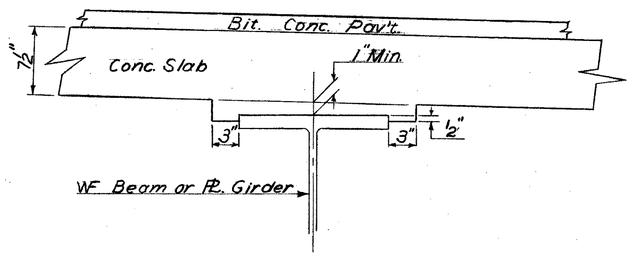
ELEVATION VIEWS

(A)



SHEAR CONNECTOR DETAILS

(B)



BEAM HAUNCH

(C)

REVISIONS & CORRECTIONS

Drawn By: XX 12/1/62 Revised WGT 1/25/65
Traced By: XX 12/1/62 Revised WGT 1/25/65
Checked By: EEP WMS, RSH 12/7/62 Rev. WMS 1/26/65

Recommended For Approval — Bridge Engineer — 2/4/65 Date
Recommended For Approval — Assist. Chief Engineer — 2/4/65 Date
Approved By — Chief Engineer — 2/4/65 Date

DETAILS OF WF BEAM BRIDGES

(A) ELEVATION VIEWS
(B) SHEAR CONNECTOR DETAILS
(C) BEAM HAUNCH DETAIL

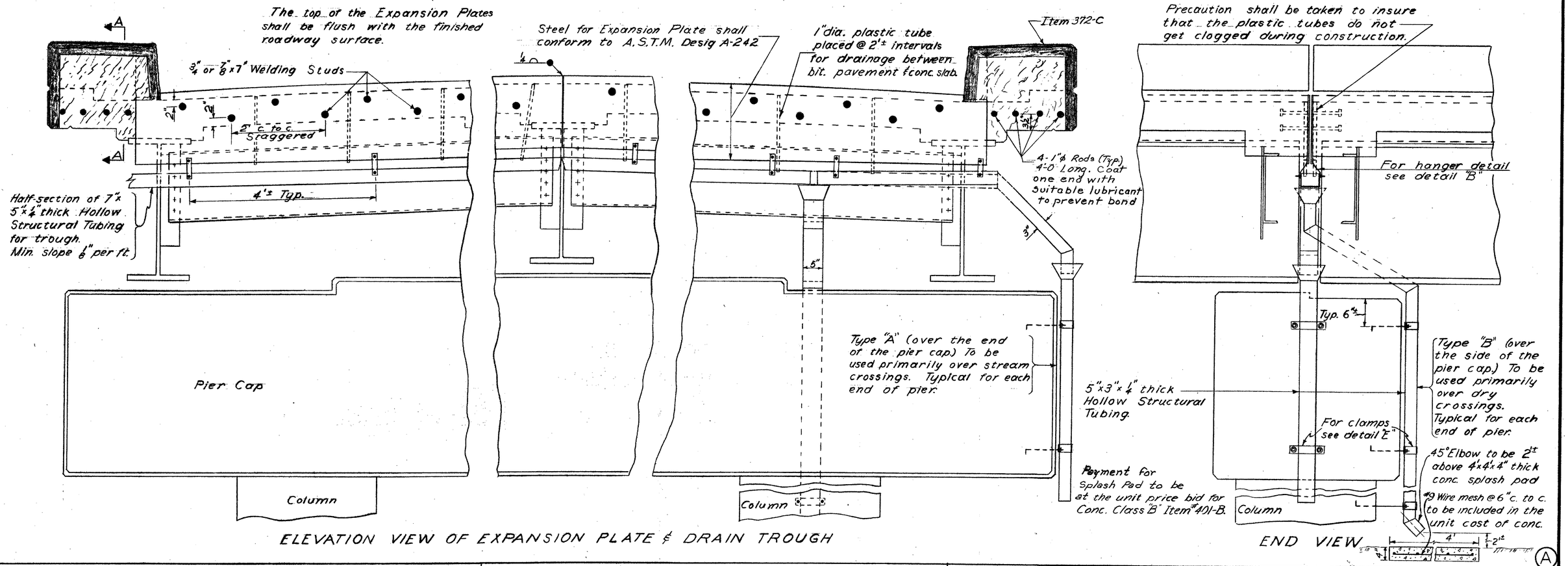
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM 1R 089-1(8)

VERMONT
DEPARTMENT OF HIGHWAYS
STRUCTURE STANDARDS

SCB-D2-65

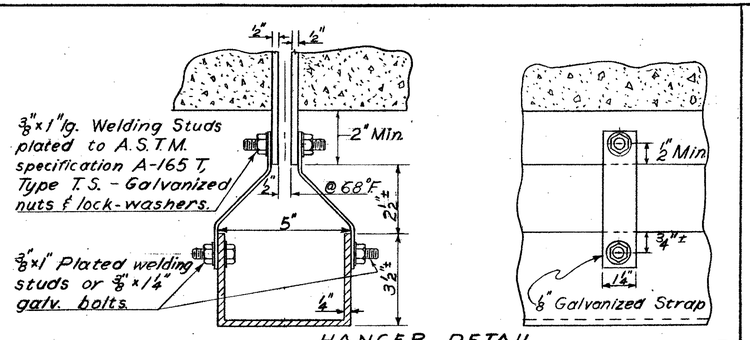
Bridge Sheet No. BR 164 Sheet 121 of 268

NE PRINTRITE NYLON REPRODUCIBLE VELLUM R. L. H. INC. 65200

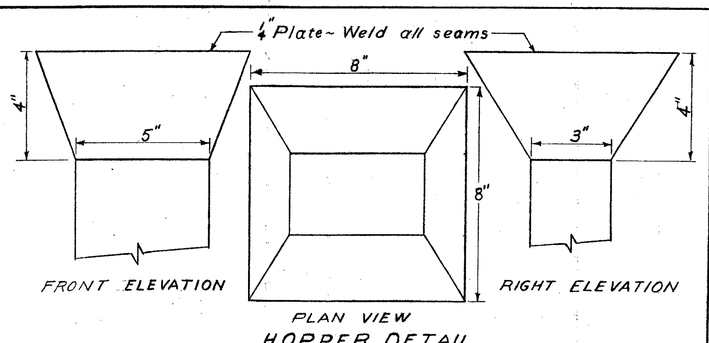


ELEVATION VIEW OF EXPANSION PLATE & DRAIN TROUGH

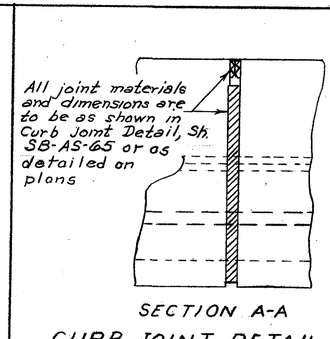
END VIEW (A)



HANGER DETAIL (B)

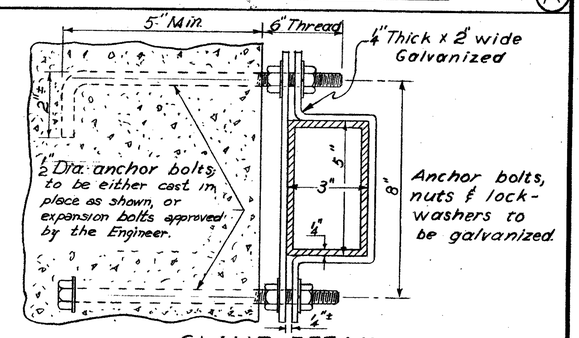


HOPPER DETAIL (C)



SECTION A-A

CURB JOINT DETAIL (D)



CLAMP DETAIL (E)

Clamps are to be spaced not greater than 8'-0" c.c.

REVISIONS & CORRECTIONS

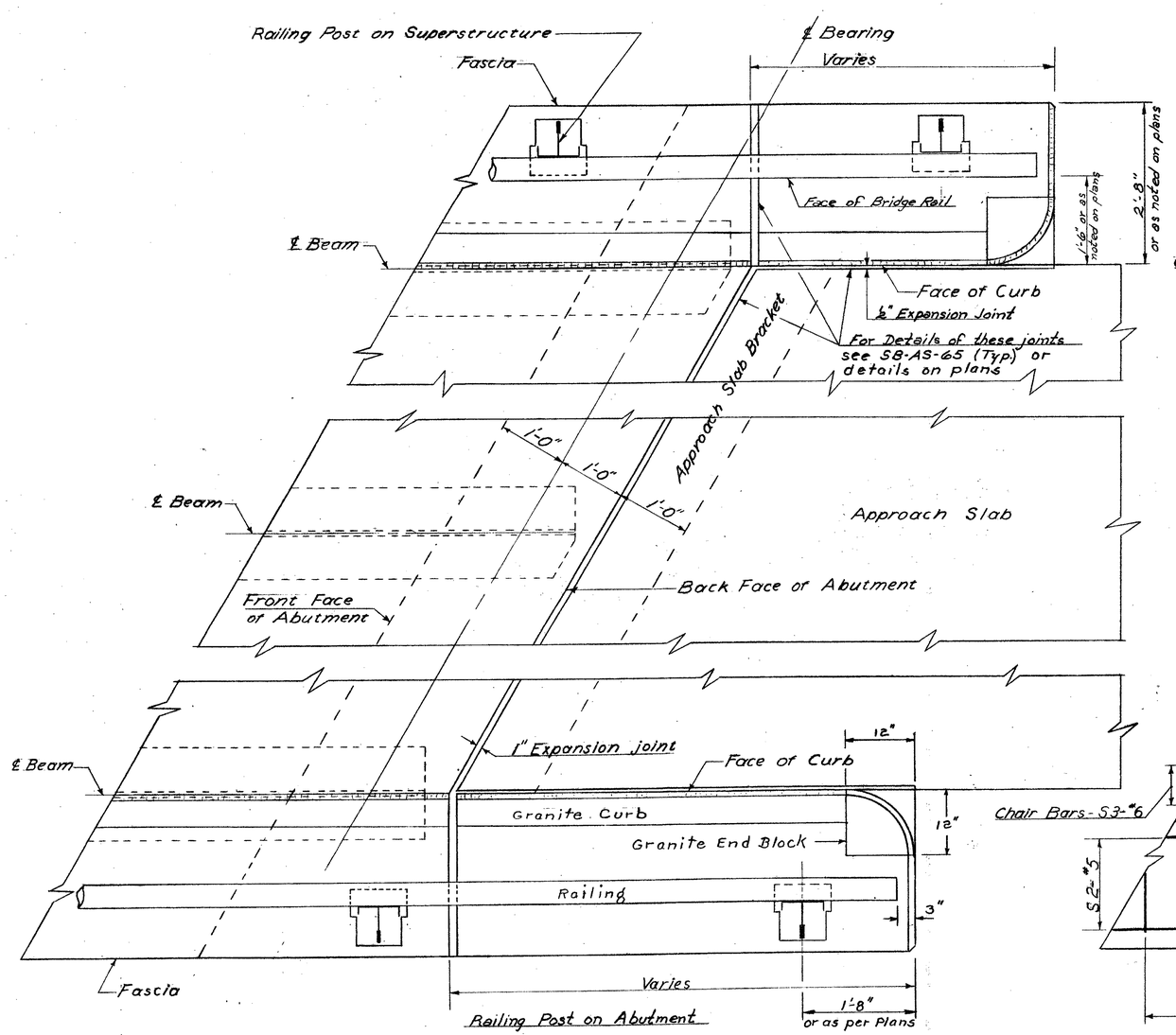
Drawn By: XX 12/1/62 Revised-WT-1/25/65
Traced By: XX 12/1/62 Revised-WT-1/25/65
Checked By: E.E.P. WMS. RSH 12/1/62 Rev. WMS 1/30/65
Recommended _____ 2/4/65
For Approval Bridge Engineer Date
Recommended _____ 2/4/65
For Approval Assist. Chief Engineer Date
Approved By _____ 2/4/65
Chief Engineer Date

DETAIL OF WF BEAM BRIDGES
PIER EXPANSION PLATES & DRAIN TROUGH DETAILS

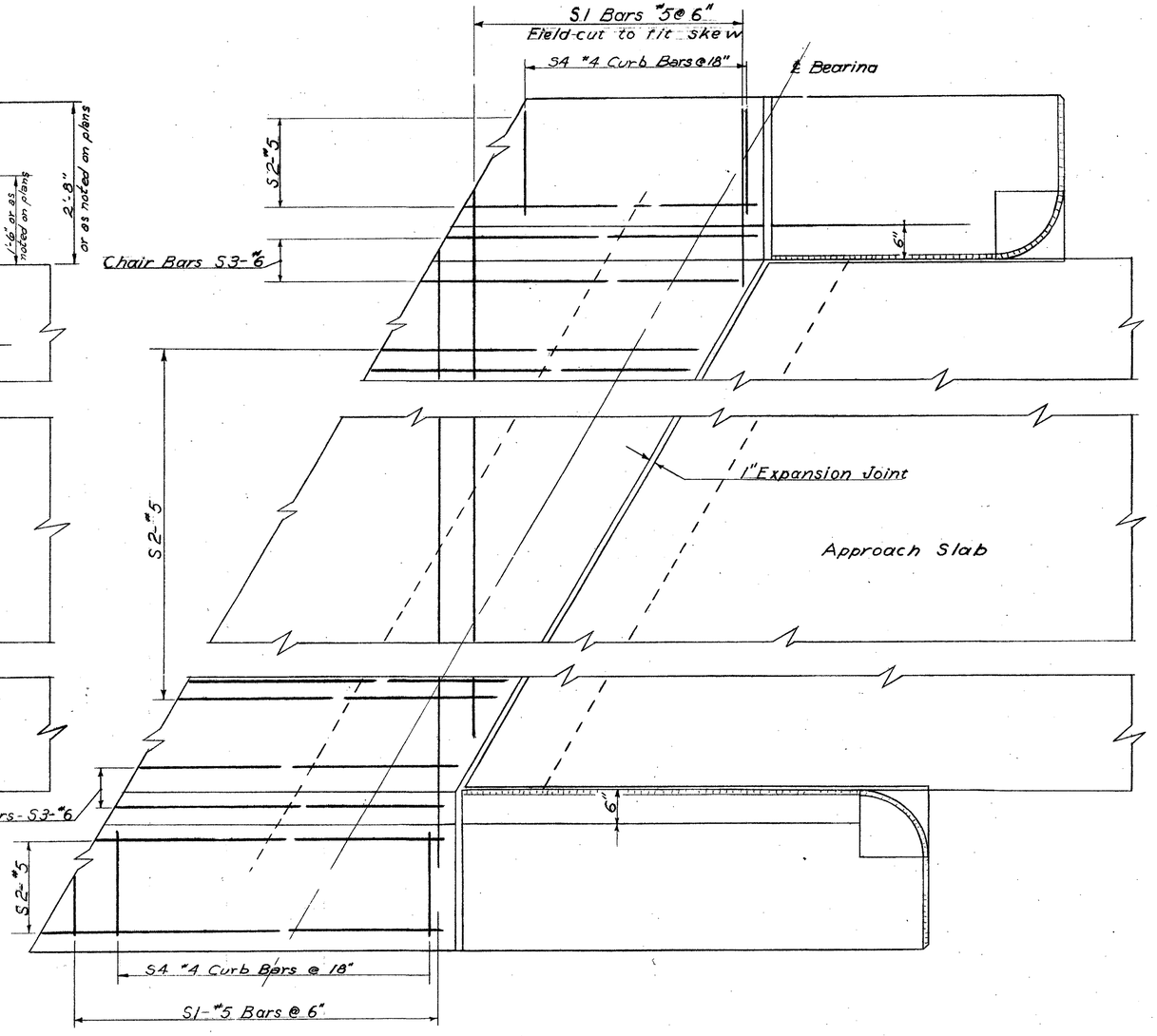
THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

VERMONT
DEPARTMENT OF HIGHWAYS
STRUCTURE STANDARDS

SCB-D3-65



PLAN AT ABUTMENT



REINFORCEMENT LAYOUT AT ABUTMENT

REVISIONS & CORRECTIONS

Drawn By: ~~WK~~ 12/1/62 Revised-WT-11/25/65
Traced By: ~~WK~~ 12/1/62 Revised-WT-11/25/65
Checked By: ~~EEP WMS, RSH~~ 12/1/62 Rev. WMS 11/29/65
Recommended For Approval — Bridge Engineer — 2/4/65 Date
Recommended For Approval — Assist. Chief Engineer — 2/4/65 Date
Approved By — Chief Engineer — 2/4/65 Date

DETAILS OF WF BEAM BRIDGES

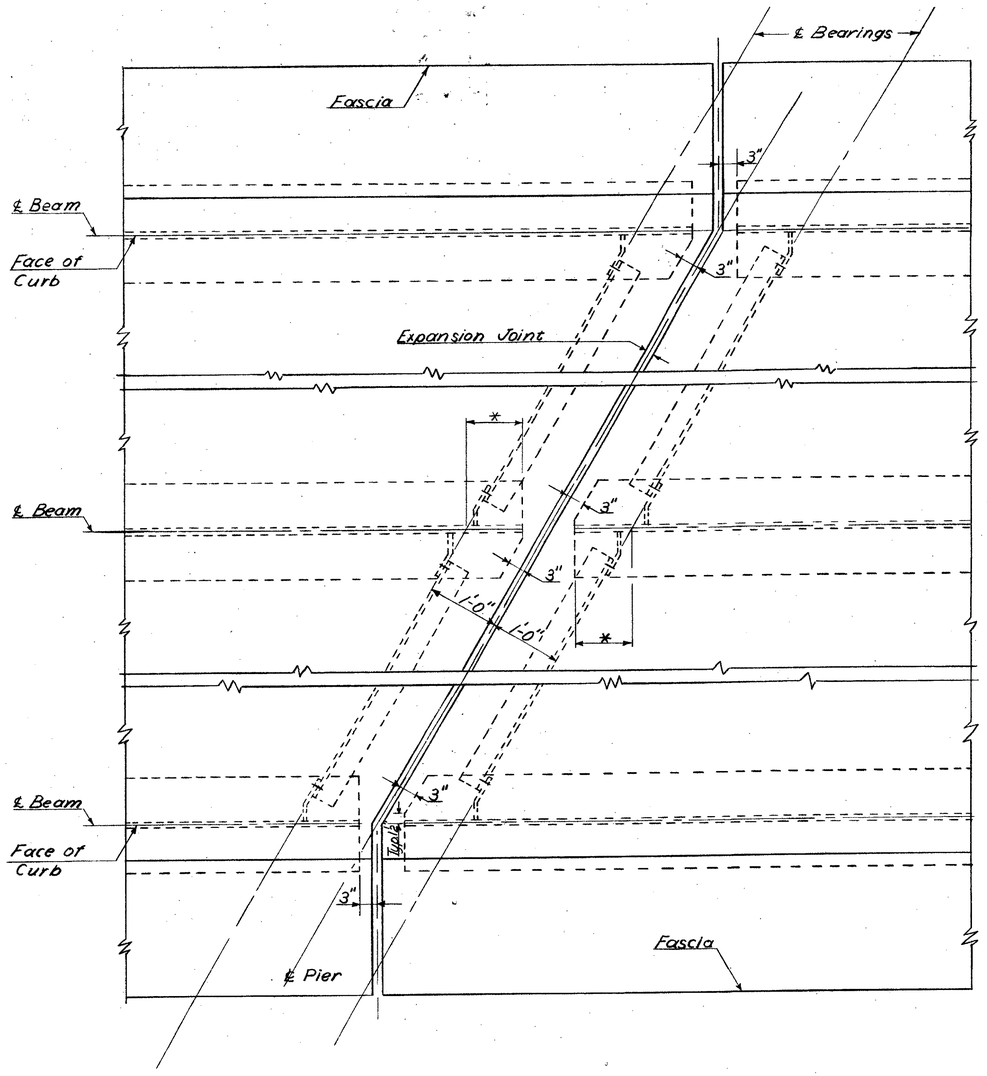
PLAN & REINFORCEMENT LAYOUT AT ABUTMENT.

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM 1R 089-1(8)

VERMONT DEPARTMENT OF HIGHWAYS
STRUCTURE STANDARDS

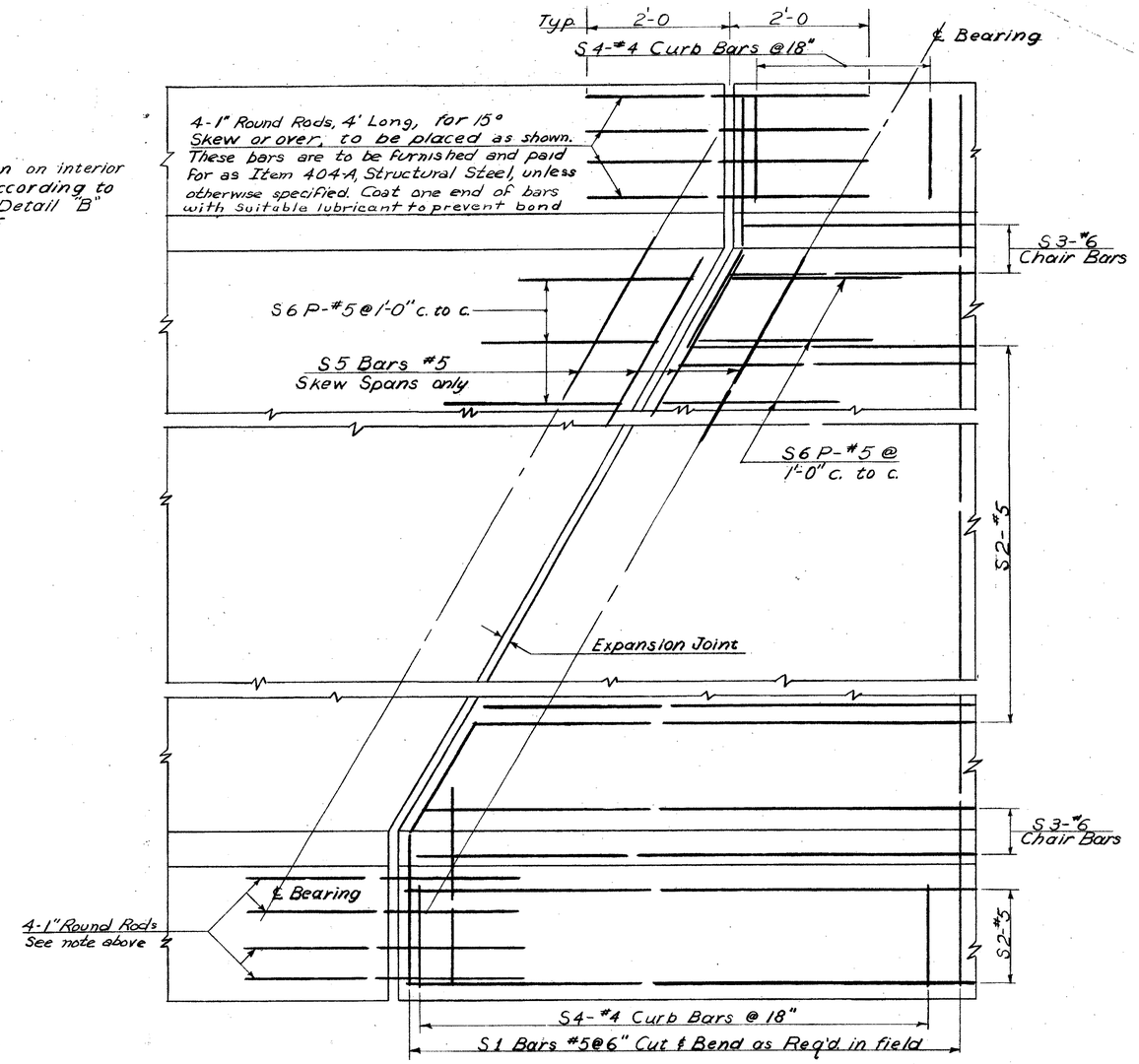
Bridge Sheet No. BR 166 Sheet 123 of 260

SCB-D4-65



* This dimension on interior beams varies according to the skew. See Detail "B" of SCB-D 7-65

PLAN AT PIER



REINFORCEMENT LAYOUT AT PIER

REVISIONS & CORRECTIONS

Drawn By: ~~XX~~-12/1/62 Revised-WT-1/25/65
Traced By: ~~XX~~-12/1/62 Revised-WT-1/25/65
Checked By: E.E.P. WMS, RSH-12/1/62 Rev. Hughes WMS

Recommended For Approval — Bridge Engineer — 2/4/65 Date
Recommended For Approval — Assist. Chief Engineer — 2/4/65 Date
Approved By — Chief Engineer — 2/4/65 Date

DETAILS OF WF BEAM BRIDGES
PLAN & REINFORCEMENT LAYOUT AT PIER

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

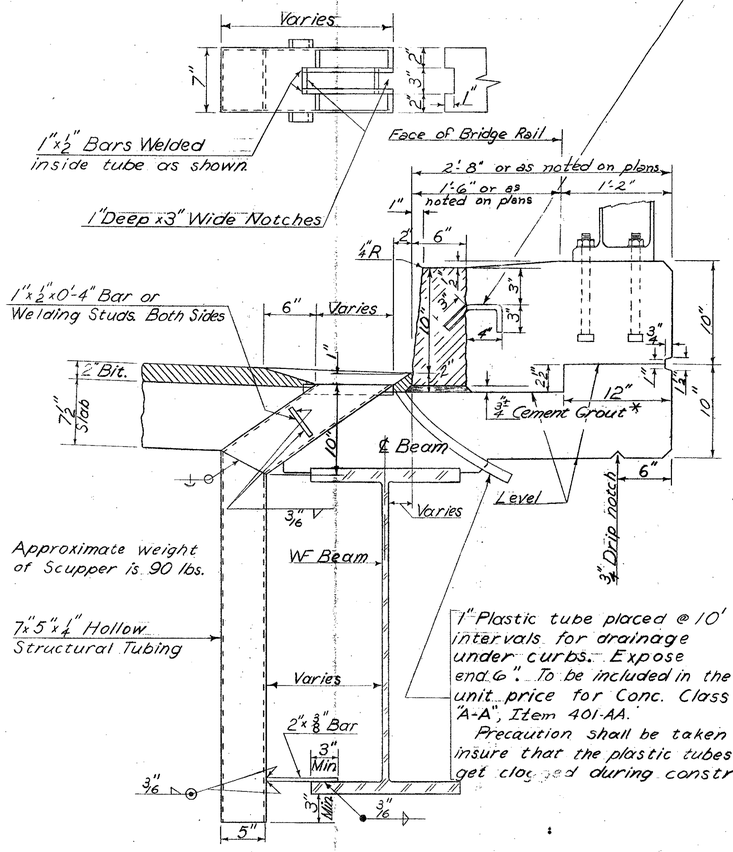
VERMONT
DEPARTMENT OF HIGHWAYS
STRUCTURE STANDARDS

Bridge Sheet No. ~~BR 167~~ Sheet 124 of 260

SCB-D5-65

*After aligning the curbs, both horizontally & vertically on steel wedges, cement grout shall be forced under the curbs completely filling all voids.

*4 Bar 12" from either end. (Two required for each curb section.) Drilling & leading of bars to be paid for under the Unit Price bid for Item 556-C.



1" Plastic tube placed @ 10' intervals for drainage under curbs. Expose end 6". To be included in the unit price for Conc. Class "A-A", Item 401-AA.

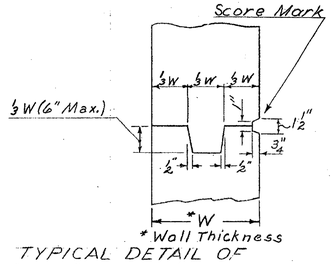
Precaution shall be taken to insure that the plastic tubes do not get clogged during construction.

End scupper to be placed midway between ℄ of Brg & first diaphragm assembly. Intermediate scuppers to be placed midway between diaphragm assemblies.

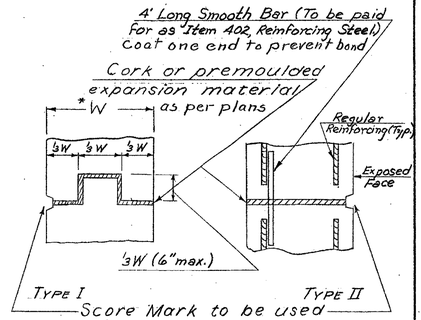
SCUPPER & CURB DETAILS (A)

Construction joints shall be placed as indicated on the plans.

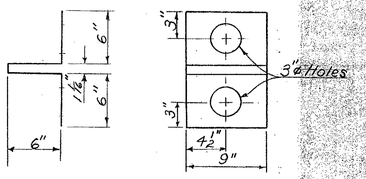
Horizontal score marks shall be placed as indicated on the plans or as directed by the Engineer.



TYPICAL DETAIL OF CONST. JOINT & SCORE MARKS (B)

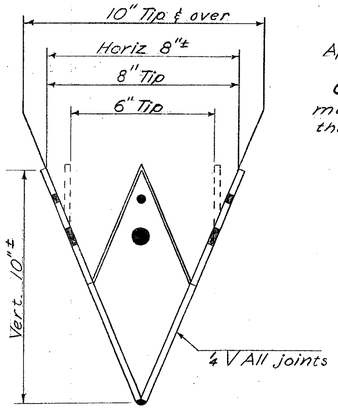


DETAILS OF VERTICAL EXPANSION JOINTS (C)



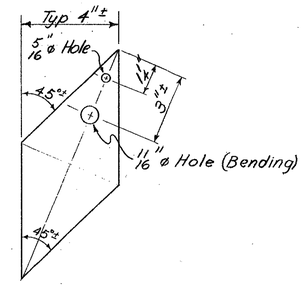
Support shall be 16 oz. copper. Place supports @ 2' intervals. Furnishing & placing of supports shall be included in the unit price bid for concrete, Item 401.

DETAIL OF COPPER SUPPORT FOR EXPANSION MATERIAL (D)



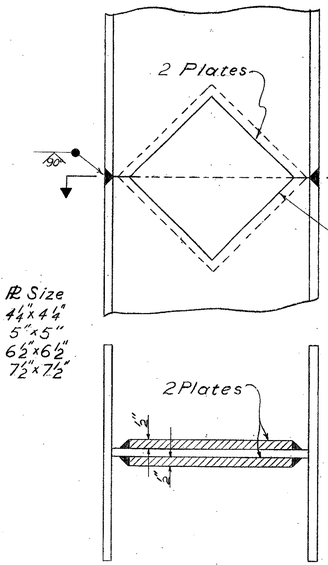
Approximate Weight = 6½ lbs.

Other types of shoes may be furnished with the approval of the Engineer.



4 Pls 4"± x ¼" x 5 5/8"±

DETAIL OF STEEL SHOE FOR TIMBER PILES (E)



H-Piles	Pl Size
8BP	4¼"x4¼"
10 BP	5"x5"
12 BP	6½"x6½"
14 BP	7½"x7½"

Prefabricated Pile Splice may be used with the approval of the Engineer.

DETAIL OF PILE SPLICE (F)

REVISIONS & CORRECTIONS

W 1-20-66
W 3-7-66

Drawn By: XX-12/1/62 Revised-WT-1/25/65
Traced By: XX-12/1/62 Revised-WT-1/25/65
Checked By: EEP.WMS.RSH-12/1/62 Rev WMS 1/25/65

Recommended For Approval — Bridge Engineer — 2/4/65 Date
Recommended For Approval — Assist. Chief Engineer — 2/4/65 Date
Approved By — Chief Engineer — 2/4/65 Date

DETAILS OF WF BEAM BRIDGES

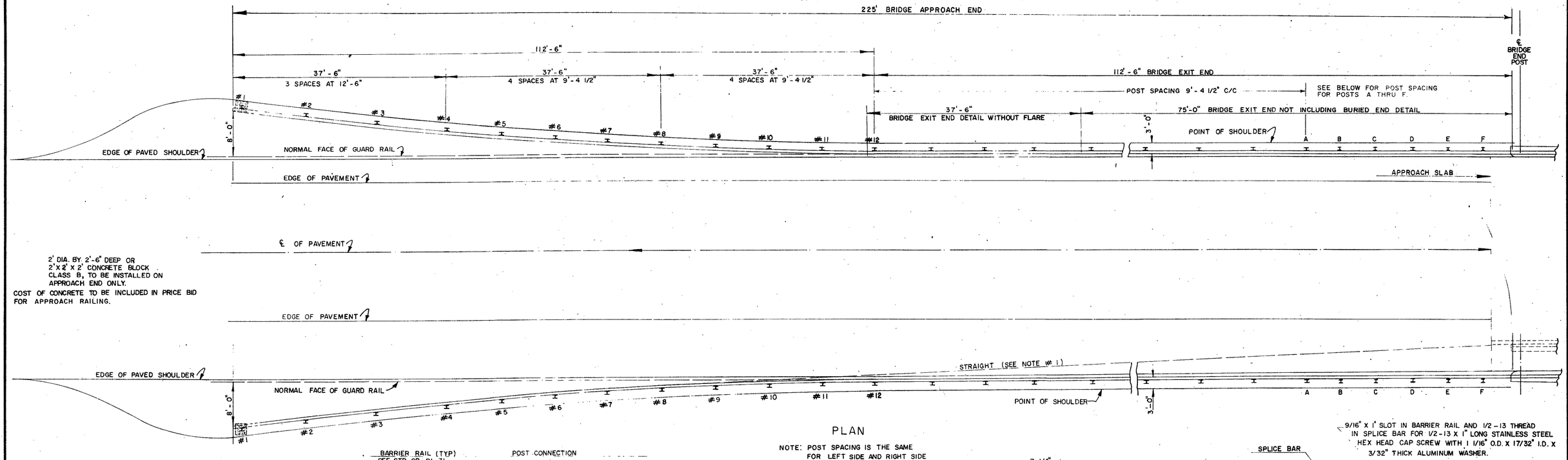
(A) SCUPPER & CURB DETAILS
(B)(C)(D) CONSTRUCTION DETAILS
(E)(F) PILE DETAILS

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(68)

VERMONT
DEPARTMENT OF HIGHWAYS
STRUCTURE STANDARDS

Bridge Sheet No. BR 168 Sheet 175 of 260

SCB-D6-65



PLAN

2' DIA. BY 2'-6" DEEP OR 2'X2' X 2' CONCRETE BLOCK CLASS B, TO BE INSTALLED ON APPROACH END ONLY.
COST OF CONCRETE TO BE INCLUDED IN PRICE BID FOR APPROACH RAILING.

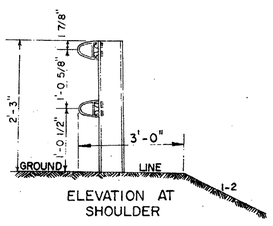
NOTE: POST SPACING IS THE SAME FOR LEFT SIDE AND RIGHT SIDE

BARRIER RAIL (TYP) SEE STD SB-RI-71 SHEET 2 OF 2

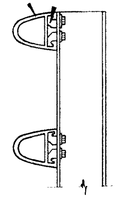
POST CONNECTION SEE STD SB-RI-71 SHEET 2 OF 2

TABLE OF OFFSETS *	
POST NO.	DISTANCE
1	7'-9 3/4"
2	6'-4 1/4"
3	4'-10 1/2"
4	3'-6 3/4"
5	2'-8 3/4"
6	2'-0"
7	1'-4 3/4"
8	0'-10 1/2"
9	0'-6"
10	0'-2 3/4"
11	0'-0 3/4"
12	NORMAL

* OFFSET GIVEN FROM NORMAL GUARD RAIL LINE TO FACE OF RAIL.



ELEVATION AT SHOULDER



TYPICAL CROSS-SECTION AT POST

NOTES

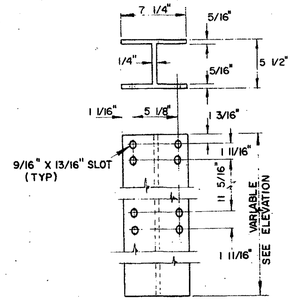
1.- ON BRIDGES THAT ARE LESS THAN FULL SHOULDER WIDTH, THE RAIL SHALL BE PLACED ON A STRAIGHT TAPER FROM THE BRIDGE END POST UNTIL IT INTERCEPTS THE FLARED SECTION ON TANGENT.

2.- ALL POSTS MAY BE FABRICATED OR EXTRUDED ALUMINUM OR FABRICATED STEEL.

3.- ALL STEEL PARTS TO BE GALVANIZED AFTER FABRICATION.

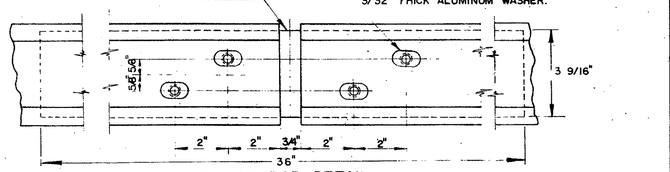
4.- ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.

5.- FOR DETAILS NOT SHOWN, SEE SB-RI-71, SHEETS 1 AND 2



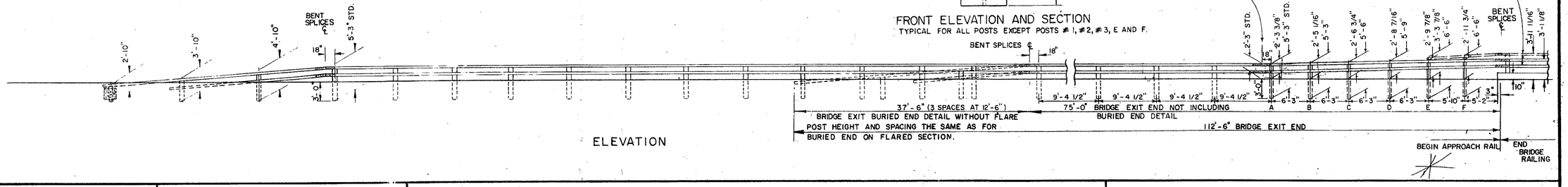
FRONT ELEVATION AND SECTION
TYPICAL FOR ALL POSTS EXCEPT POSTS #1, #2, #3, E AND F.

9/16" X 1" SLOT IN BARRIER RAIL AND 1/2-13 THREAD IN SPLICE BAR FOR 1/2-13 X 1" LONG STAINLESS STEEL HEX HEAD CAP SCREW WITH 1 1/16" O.D. X 17/32" I.D. X 3/32" THICK ALUMINUM WASHER.



SPLICE BAR DETAIL

ADDITIONAL DETAILS SAME AS BARRIER RAIL SPLICE DETAILS, STD. SB-RI-71, SHEET 2 OF 2, EXCEPT NO DIMPLES



ELEVATION

REVISIONS AND CORRECTIONS

JULY 12, 1972 NOTE ADDED ON UNEVEN POST SPACING
DEC. 16, 1980 - INCREASED SHOULDER WIDENING FOR GUARD RAIL.

APPROVED: Dec 6, 1971 DATE
R.N. Arnold CHIEF ENGINEER
E.J. Richney ASST. CHIEF ENGINEER
G.M. Lane HIGHWAY ENGINEER

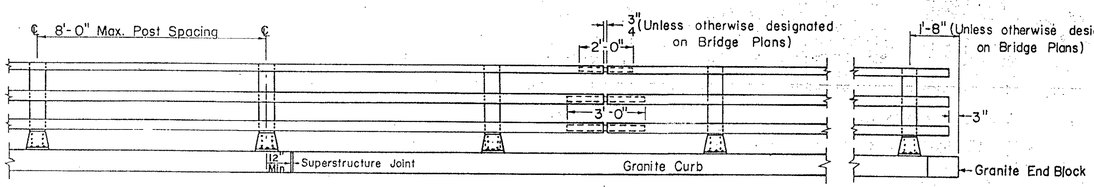
APPROACH RAILING 2 RAIL ALUMINUM

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD - SHARON - ROYALTON
IM IR 089-1(8)

VERMONT AGENCY OF TRANSPORTATION

STANDARD G-9

Bridge Sheet No. BR 169 Sheet 126 of 260

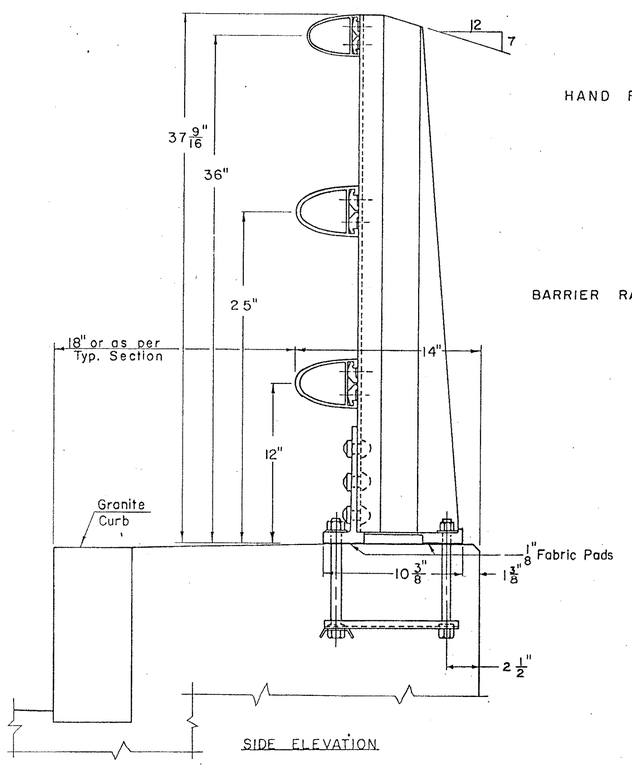


ELEVATION

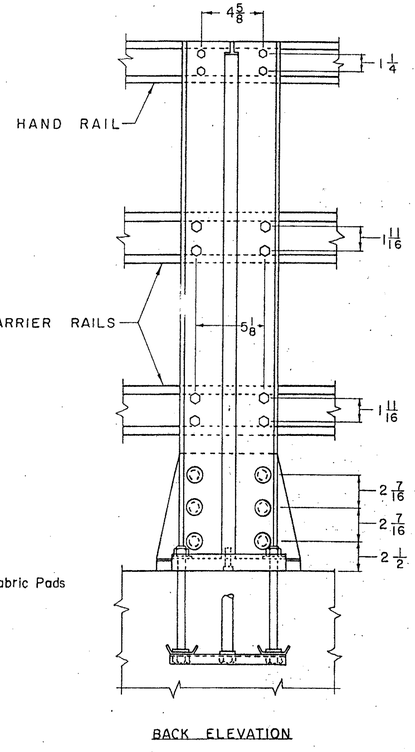
Note: Rail posts are to be set normal to grade unless otherwise designated on Bridge Plans.

Allowable stresses:

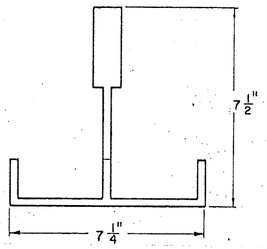
Railing	21,000 p.s.i.
Post	17,000 p.s.i.



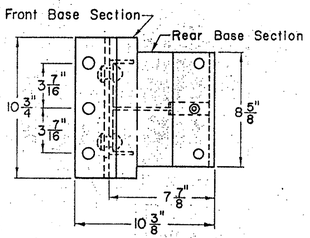
SIDE ELEVATION



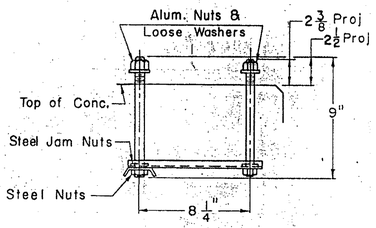
BACK ELEVATION



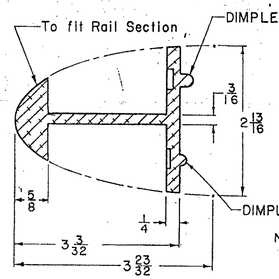
POST SECTION



BOTTOM VIEW OF BASE

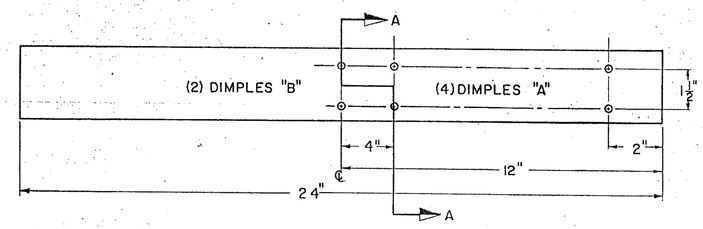


POST ANCHOR ASSEMBLY



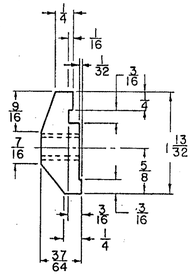
SECTION A-A

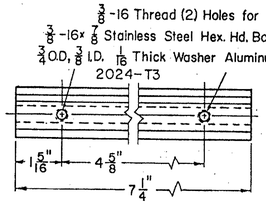
Note: For details of Dimples see Section B-B, SB-RI-64, Sheet 2 of 2.



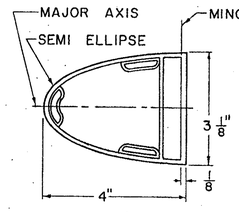
ELEVATION

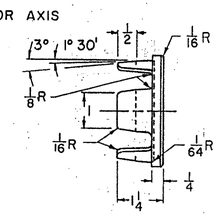
HAND RAIL SPLICE DETAILS



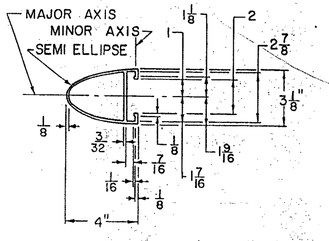


HAND RAIL POST CONNECTION





HAND RAIL END CAP



HAND RAIL SECTION

GENERAL NOTES

DESIGN SPECIFICATIONS: Designed in accordance with 1964 Interim A.A.S.H.O. Specifications and current A.S.T.M. Standards.

1. Open holes as noted.
2. Aluminum bolts shall be made from material conforming to A.S.T.M. B 211, alloy 2024-T4, and shall have an anodic coating .0002 in. minimum thickness with dichromate or boiling water seal.
3. Material for Anchor Bolts shall conform to either (a) A.S.T.M. A 276 type 430 Stainless Steel except with a minimum of 100,000 p.s.i. ultimate strength; or (b) A.S.T.M. A 325 High Strength Steel bolts with suitable nuts and plain hardened washers, galvanized in accordance with A.S.T.M. A 123.
4. Material for set screws and cap screws to be stainless steel A.S.T.M. A276.
5. Material for aluminum nuts shall be A. S. T. M. B 211 Alloy 6061- T6 or Alloy 6262-T9 with suitable lubricant. Aluminum nuts to be American Standard finished hexagon thick nuts class 2B thread. Lower steel nuts shall conform to A.S.T.M. A307. All nuts to comply with American hex. A.S.A. Spec. B 18.2.
6. Exposed ends of rail tube shall be closed with drive-in type rail end caps. Caps may be either: (a) Aluminum alloy permanent mold castings complying to A.S.T.M. Spec. B108 Alloy SG 70A or B; or (b) Sand mold castings complying to A.S.T. M. Spec. B26 Alloy SG 70 A.
7. Weld filler wire shall be A.S.T.M. B 285, Alloy ER-5356. All welding shall be metal inert gas process.
8. End of tube sections are to be sawed or milled. Cut ends are to be true, smooth, and free from burrs or ragged edges.
9. Railing system shall be continous, with each rail section attached to a min. of three posts. Each joint in rail length shall be spliced as detailed, with splices occurring in the same panel.
10. Anchor bolts are to be preset in concrete. For spacing of railing posts see Bridge Plans.
11. Railing is to be paid for per lineal foot and the cost shall include all hardware and post connections necessary to erect railing.
12. Material for posts, post bases, splice bars, and rails shall be A. S. T. M. B 221, Alloy 6061-T6
13. Material for aluminum washers shall be A.S.T.M. B-209 Alloy Alclad 2024-T3. Material for rivets shall be A.S.T.M. B-316 Alloy 6061 heat treated to the T6 temper. Rivets shall be button head and cone point, cold driven as per drawing. Alternate rivet material shall be A.S.T.M. B221 Alloy 6061-T6
14. Material for anchor channel bars shall conform to A.S.T.M. A7 or A36.
15. All aluminum surfaces in contact with post pads shall be given 1 shop coat of zinc chromate paint.
16. Prior to fabrication shop drawings shall be submitted to the Department of Highways for approval.
17. Fabric pad shall be preformed fabric in accordance with A.A.S.H.O. Spec. 2.10.3.(K) and shall be furnished by the railing fabricator. Pads shall be two pieces each 3" wide under each post.

RAIL POST DETAILS

Revisions & Corrections

1. Barrier Rail Depth increased to 4" for 8'-0" Post Spacing. Nov. 25, 1964. W.B.T.
2. Aluminum alloys revised to current ASTM Standards, Weld filler wire added. Jan. 12, 1965. W.B.T.
3. Minor corrections to conform to manufacturer's current tooling practices. Jan. 28, 1965. W.B.T.
4. Alternate rivet material added. Mar. 23, 1965. W.B.T.
5. Alloy designations revised. Dec. 8, 1965. W.B.T.
6. Alloy 6063-T6 removed from Note 12, bolt projections increased from 1 5/8 & 2 to 2 3/8 & 2 1/2 June 21, 1966. W.B.T.

Drawn By:	W B T Oct. 1964	
Traced By:	W B T Oct. 1964	
Checked By:	W.M.S. Oct. 1964	
Recommended for Approval:	Louis M. Bazin, Bridge Engineer	10/29/64 Date
Recommended for Approval:	R. H. Conwell, Assistant Chief Engineer	10/30/64 Date
Approved:	C. D. Bridge, Chief Engineer	10/30/64 Date

ALUMINUM BRIDGE RAILING DETAILS

Revisions & Corrections (Cont.)

7. Permanent mold castings for rail end cap added. Nov. 8, 1966. W.M.S.
8. Allowable stresses in railing and post added. Dec. 5, 1966. W.M.S.
9. Optional stainless or high-strength steel anchor bolts allowed. Dec. 5, 1966. W.M.S.

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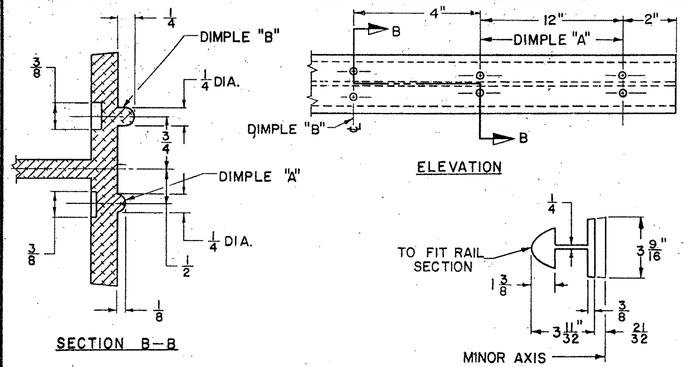
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURES

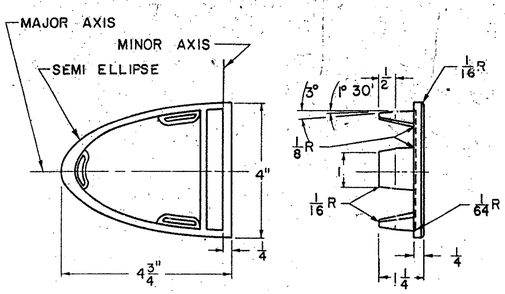
SB-RI-64

Sheet 1 of 2

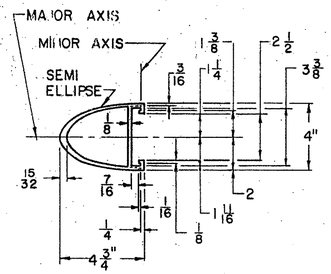
Bridge Sheet No. BE 170 Sheet 127 of 260



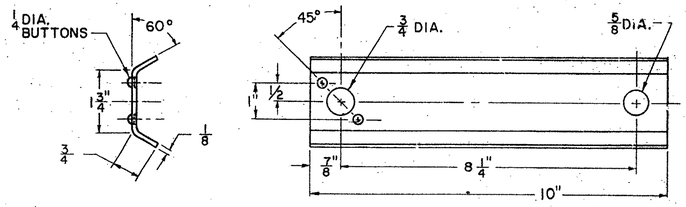
BARRIER RAIL SPLICE DETAILS

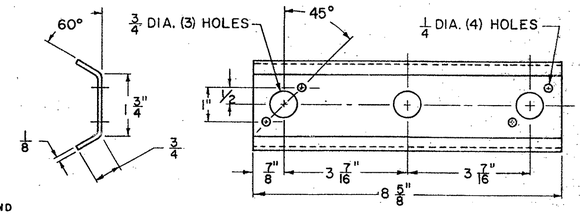


BARRIER RAIL END CAP

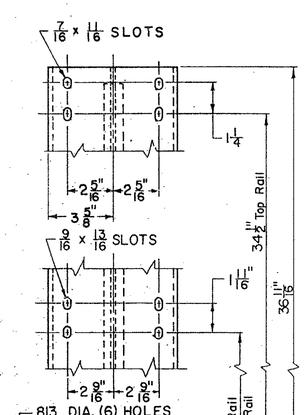


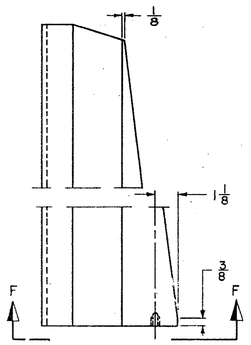
BARRIER RAIL SECTION



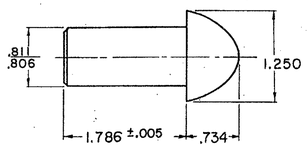


ANCHOR CHANNEL BARS

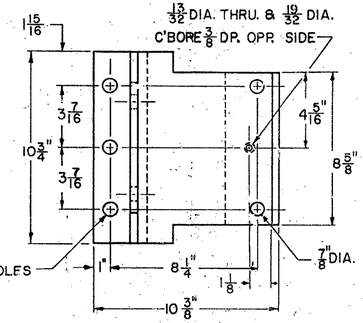




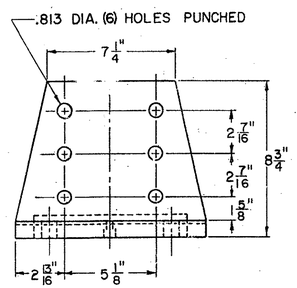
POST DETAILS



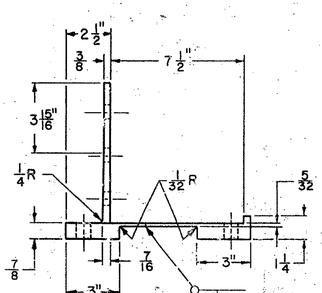
RIVET DETAIL



PLAN

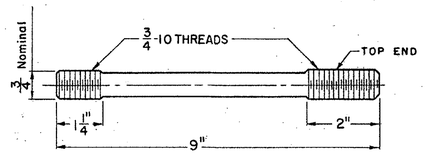


FRONT ELEVATION

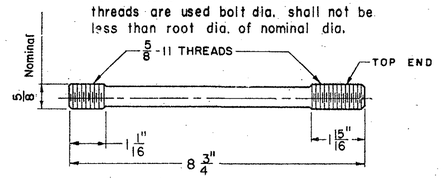


SECTION

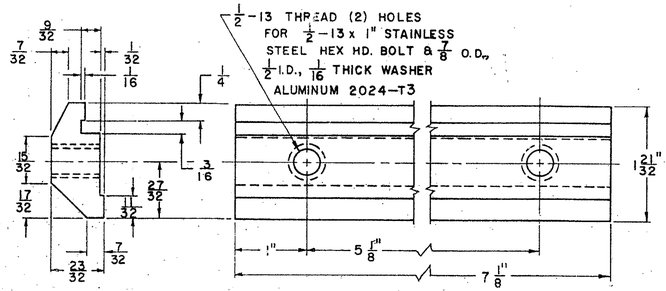
POST BASE DETAILS



Note: If cut threads are used bolt dia. shall not be less than nominal dia. If rolled threads are used bolt dia. shall not be less than root dia. of nominal dia.



ANCHOR BOLTS



POST CONNECTION

Notes for Anchor Bolt Nuts and Loose Washers

1. 3/4 & 5/8 American Standard Finished Hexagon Steel Nuts on bottom end.
2. 3/4 & 5/8 American Standard Finished Hexagon Thick Aluminum Nuts on top end.
3. 3/4 & 5/8 American Standard Finished Hexagon Steel Jam Nuts on top of Anchor Channel Bars.

Revisions & Corrections

1. Barrier Rail Depth increased to 4" for 8'-0" Post Spacing, Nov. 25, 1964. W.B.T.
2. Aluminum alloys revised to current A.S.T.M. Standards. Jan. 12, 1965. W.B.T.
3. Minor corrections to conform to manufacturer's current tooling practices. Jan. 28, 1965. W.B.T.
4. Post base anchor bolt hole size increased. Dec. 30, 1965. W.B.T.
5. " " " " " " revised. Nov. 8, 1966. W.M.S.

Drawn By:	WBT Oct. 1964	
Traced By:	WBT Oct. 1964	
Checked By:	WMS Oct. 1964	
Recommended for Approval:	Louis M. Bonn, Bridge Engineer	10/13/64 Date
Recommended for Approval:	R N Cromwell, Assistant Chief Engineer	10/29/64 Date
Approved:	A D Tuttle, Chief Engineer	10/30/64 Date

ALUMINUM BRIDGE RAILING DETAILS

HARTFORD - SHARON - ROYALTON
IM IR 089 - 1(8)

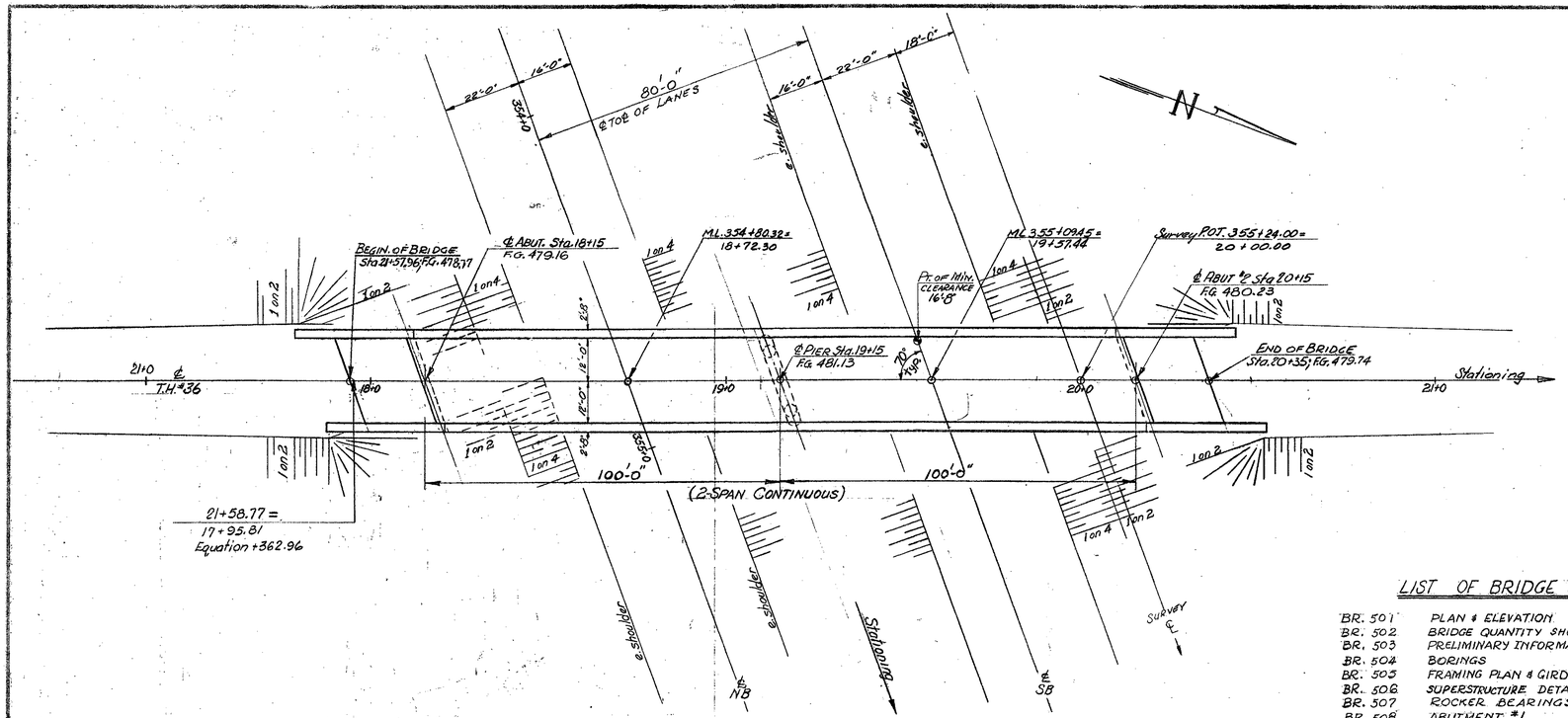
THIS SHEET IS FOR INFORMATION PURPOSES ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURES

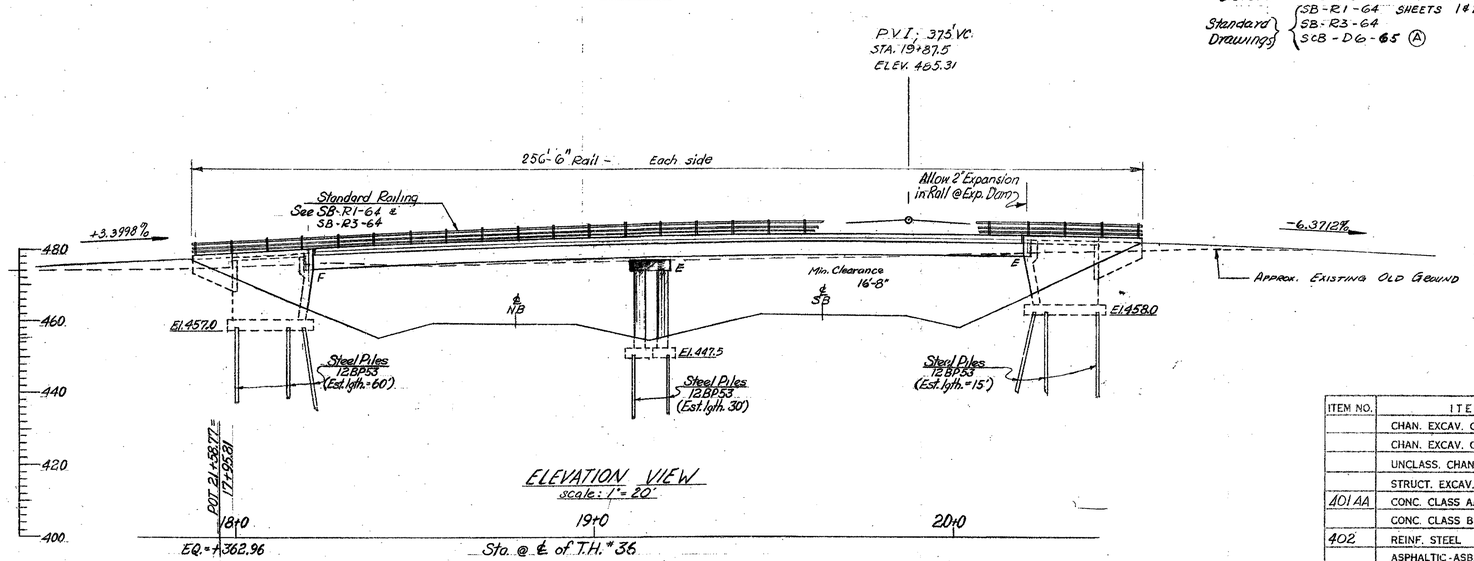
SB-RI-64

Sheet 2 of 2

Bridge Sheet No. BR 171 Sheet 128 of 260



PLAN VIEW
scale 1"=20'



ELEVATION VIEW
scale: 1"=20'

GENERAL NOTES

SPECIFICATIONS: All materials and construction shall conform to the State of Vermont, Department of Highways, Standard Specifications for Highway and Bridge Construction dated April 1964, and A.A.S.H.O. Standard Specifications for Highway Bridges dated 1964 together with the latest revisions. Welding shall conform to Specifications for Welded Highway and Railway Bridges of the American Welding Society, AWS D2.0-63.

Design is for HS20-44 loading modified for the National System of Interstate Highways, applied in accordance with the provisions of the A.A.S.H.O. Standard Specifications. Article 1.2.8.

STRUCTURAL STEEL: (See Design Stresses Below) Unless otherwise noted on the plans, all structural steel shall conform with A.S.T.M. Designation A-36-62T.

Unless otherwise detailed, all field connections shall be made with 7/8" high strength bolts (A325) using 15/16" holes. Where connections are not detailed on the plans, they shall be detailed by the fabricator and submitted to the State for approval.

Details of shear connectors shall be submitted to the State for approval. After the structural steel has been erected, elevations on the top of the plate girders shall be taken under the direction of the engineer to determine the final grade.

No scuppers required.

PAINT: The final coat of field paint shall be dark green, unless otherwise directed by the engineer.

CONCRETE: (See Design Stresses below) All concrete in the superstructure shall be Class "AA" and all concrete in the substructures and abutment slabs shall be Class "B".

All exposed edges of concrete shall be chamfered 1" x 1".

Construction joints shall be as indicated on the standards unless otherwise indicated on the plans.

REINFORCING STEEL: (See Design Stresses below) The slab reinforcing (S501 bars) shall be cut in the field to fit the skewed end. The cut-off bars shall be used at the opposite end of the span.

Minimum cover for reinforcing steel, measured from the surface of the reinforcement, shall be 2" unless otherwise specified.

PILES: Steel piles shall be driven to refusal unless otherwise directed by the engineer.

GENERAL: All dimensions given are at 68°F. and are measured horizontally or vertically unless otherwise noted.

Borings indicated on the drawings have been made for design purposes only and are not warranted to show actual sub-surface conditions.

The entire exposed top surfaces of the abutment bridge seats and pier shall be coated with Item 407 Asphaltic-Asbestos coating 1/2" thick. This item shall be applied after all painting and incidental items are completed.

Unless otherwise designated, all expansion material shall not contain asphalt or bituminous material and it shall conform with A.A.S.H.O. designation M153 TYPE II.

Where bituminous concrete pavement is called for as a wearing surface on bridge decks and approach slabs it shall be a dense graded top course material, applied in one course, one and one-half inches (1 1/2") thick.

Water Repellent, Item 440, shall be applied to top of the safety walks on the facia and back to the drip head under the slab, on the sides, ends and bottoms of pier cap, and on exposed areas of abutments not otherwise treated.

LIST OF BRIDGE SHEETS

BR. 501	PLAN & ELEVATION
BR. 502	BRIDGE QUANTITY SHEET
BR. 503	PRELIMINARY INFORMATION
BR. 504	BORINGS
BR. 505	FRAMING PLAN & GIRDER DETAILS
BR. 506	SUPERSTRUCTURE DETAILS
BR. 507	ROCKER BEARINGS
BR. 508	ABUTMENT #1
BR. 509	ABUTMENT #2.
BR. 510	ABUTMENT DETAILS
BR. 511	PIER DETAILS
BR. 512	REINFORCING SCHEDULE
Standard Drawings	SB-R1-64 SHEETS 1&2; SB-R3-64; SCB-D6-65 (A)

DESIGN STRESSES

STRUCTURAL STEEL: A36-62T-20,000 PSI.
A441-63T-27,000 PSI. FOR 3/4" AND UNDER
24,000 PSI. FOR 3/4" TO 1 1/2"
22,000 PSI. FOR 1 1/2" TO 4"

CONCRETE: CLASS "AA" AND "B". f'_c=3,000 PSI f_c = 1200 PSI.

REINFORCING STEEL: 20,000 PSI.

BOLTS: 13,500 PSI. SHEAR-FRICTION CONNECTIONS
20,000 PSI. SHEAR-BEARING CONNECTIONS

BR #10

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM-IR-089-1(6)

Stage 1 Construction

SUPERSTRUCTURE

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
401 AA	CONC. CLASS AA [redacted]	C.Y.	177			
	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.	40175			
	ASPHALTIC-ASB. COATING	S.Y.				
405	SHEAR CONNECTORS (2560 Studs)	L.S.	1			
318	Tar Emulsion for Bridge Floors	Gal.	216			
361 B	Bit. Conc. Pav't.	Tons	45			
372 A	Joint Sealer - Hot Poured	L.F.	26			
372 C	Joint Sealer - Preformed Type B	L.F.	33			
404 A	Structural Steel	Lbs	185500			
556 C	Granite Bridge Curb	L.F.	473			
572	Bridge Railing	L.F.	513			
440	Water Repellent	Gal.	23			

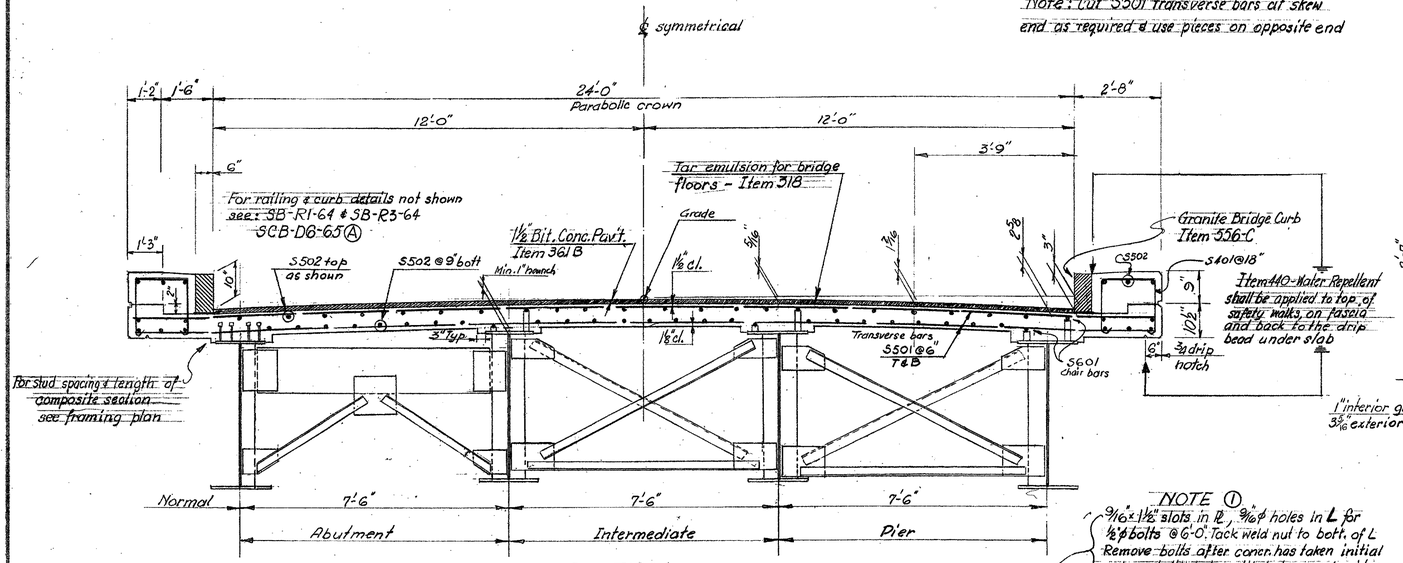
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford
ROUTE NO. ____ LOG STA. ____
T.H.*36 OVER I-89
PLAN & ELEVATION
SCALE As noted
SURVEYED BY ____
DRAWN BY E.H.I. CHECKED BY R.A.D.

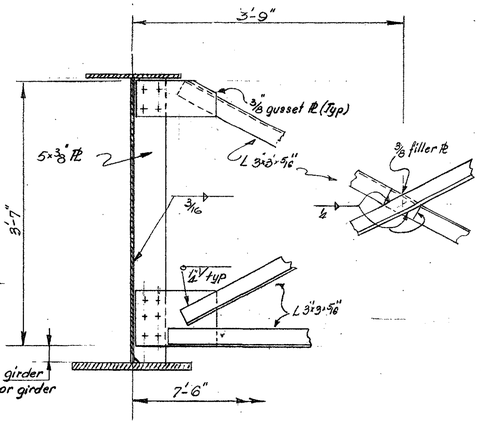
Bridge Sheet No. BR 1?2 Sheet 129 of 260

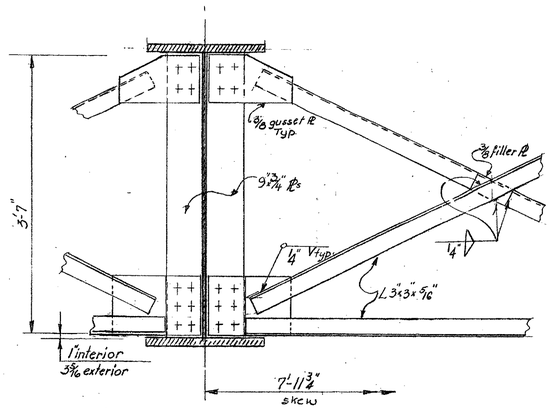
BR 501 of 512 Sheets

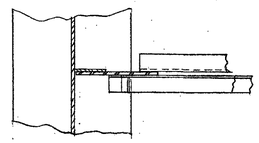
Note: Cut S501 transverse bars at skew end as required & use pieces on opposite end

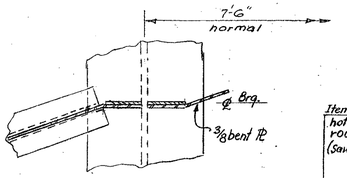


SECTION
scale 1/2" = 1 ft.



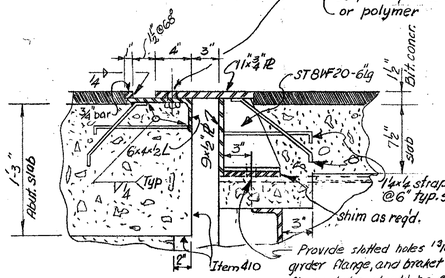



INTERMEDIATE



PIER

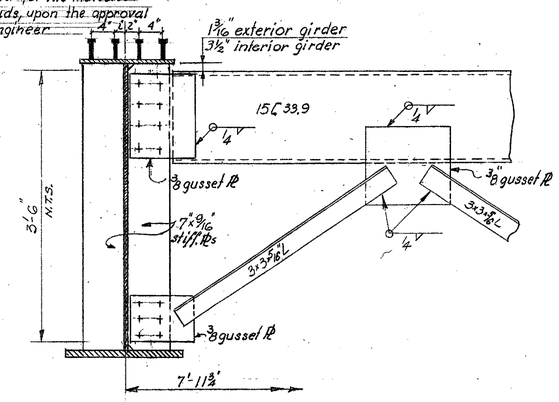
NOTE ①
9/16" x 1½" slots in Pl, 9/16"ϕ holes in L for ½"ϕ bolts @ 6'-0". Tack weld nut to bott. of L. Remove bolts after concr. has taken initial set, and fill holes with hot poured rubber or polymer

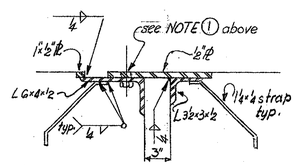


Provide slotted holes 9/16" x 1½" lg. in the girder flange, and bracket flange. Girder flange holes should be @ 90° to those in bracket flange

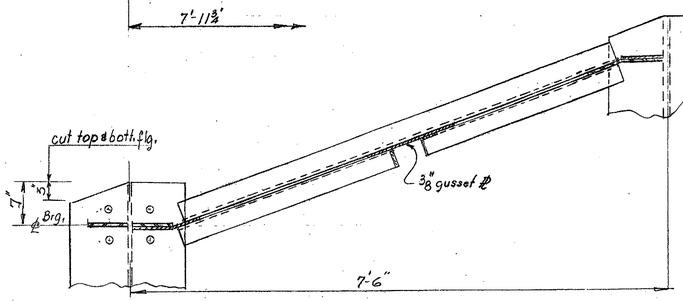
SECTION A-A
scale 1½ = 1 ft.

Note: Channels, spiral reinforcing or other mech. shear connector devices may be substituted for the indicated welded studs, upon the approval of the Engineer

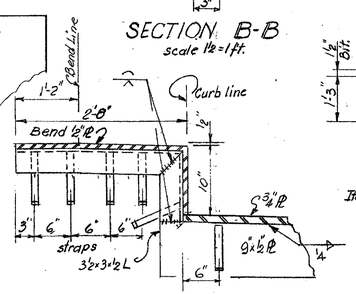




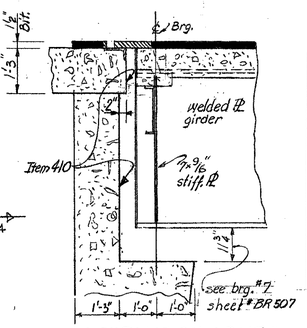
SECTION B-B
scale 1½ = 1 ft.



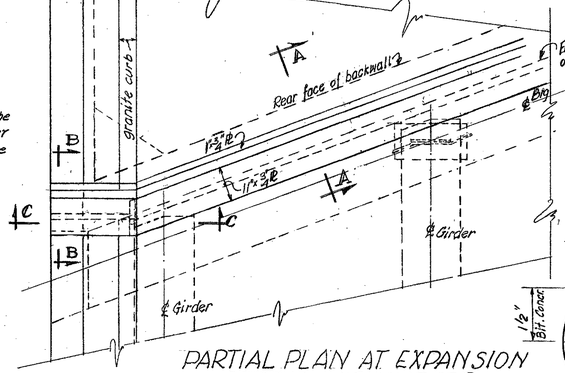
END DIAPHRAGM-ABUTMENTS
scale 1" = 1 ft.



SECTION C-C
scale 1" = 1 ft.

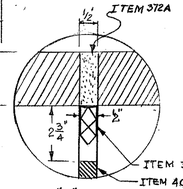


EXPANSION ABUT.
scale ½" = 1 ft.



PARTIAL PLAN AT EXPANSION DAM - ABUTMENT 2
scale ½" = 1 ft.

ITEM 372 C - TYPE B
JOINT SEALER - PREFORMED



DETAIL "A" NOT TO SCALE

FIXED ABUTMENT
scale ½" = 1 ft.

BR # 10

Stage 1 Construction

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD

ROUTE NO. [redacted] STA.

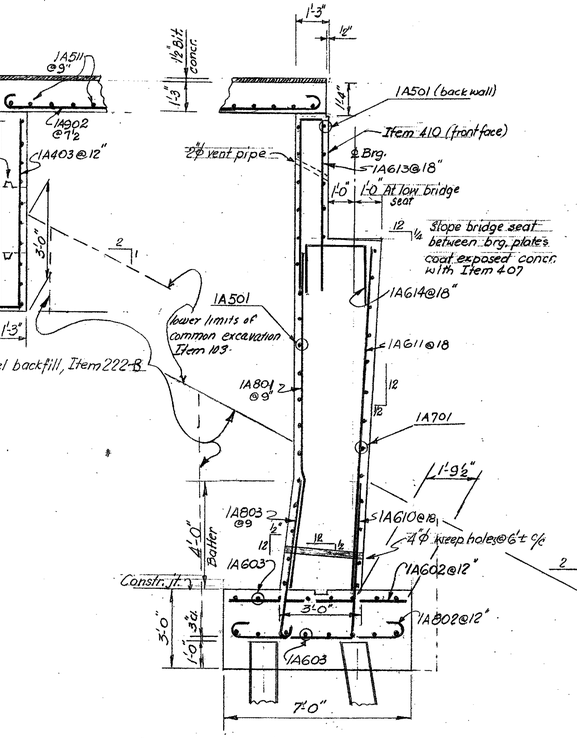
T.H. 36 OVER INTERSTATE 89

TYP. SUPERSTRUCTURE DETAILS

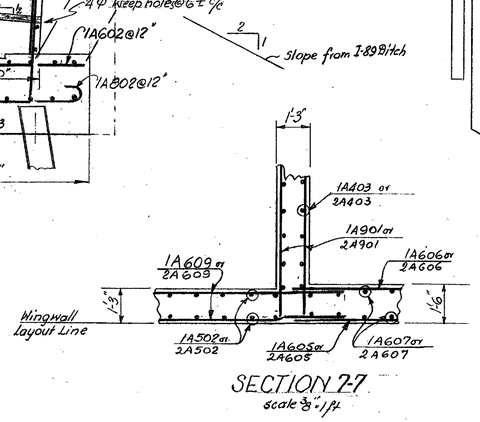
SCALE As noted

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

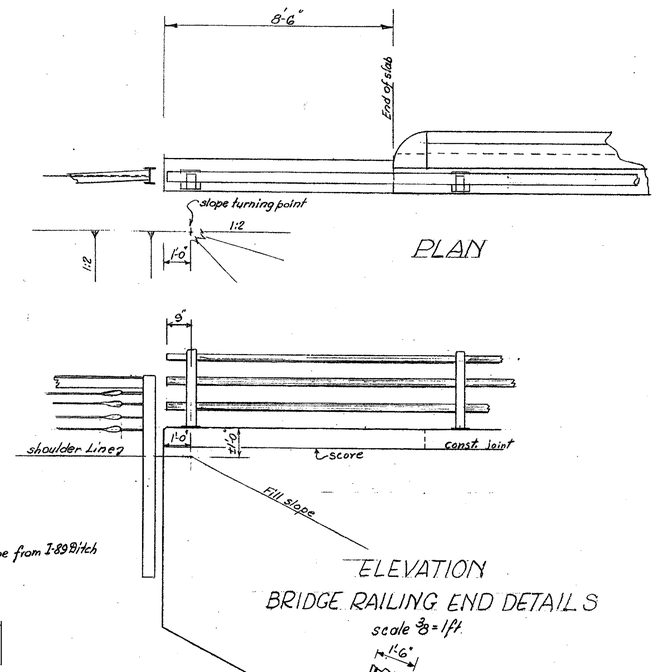
Bridge Sheet No. BR 173 Sheet 130 of 260



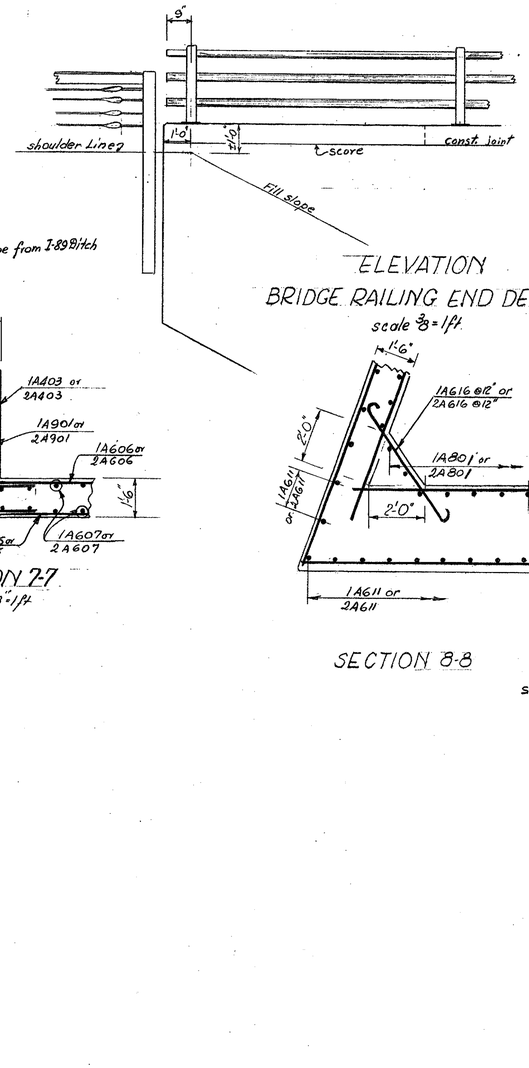
ABUTMENT #1-SECTION 5-5
scale ⅜"=1ft.



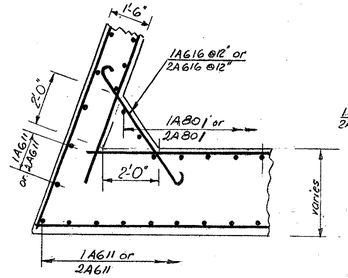
SECTION 7-7
scale ⅜"=1ft.



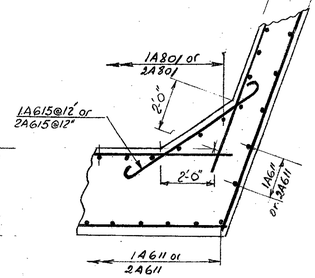
PLAN



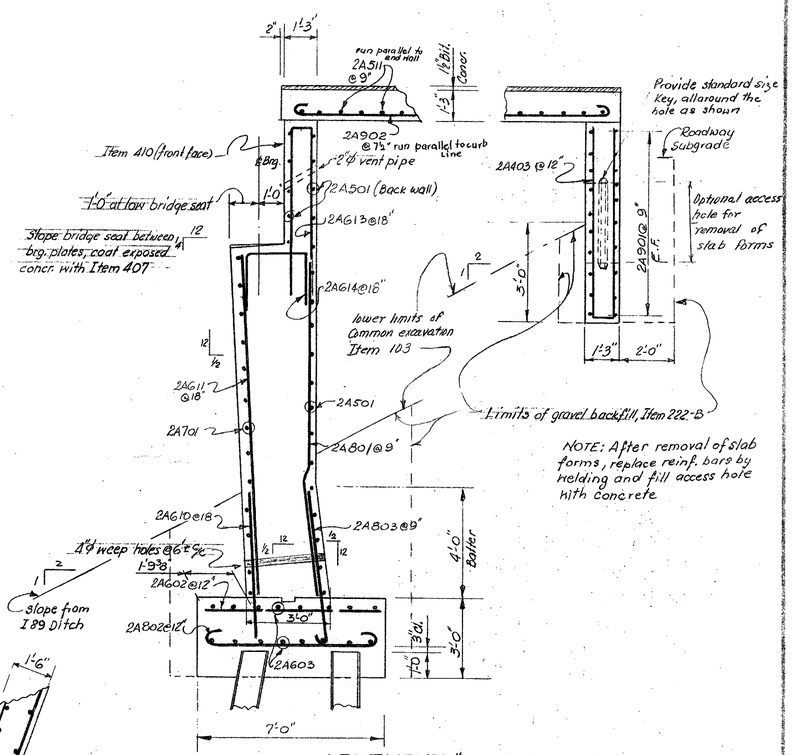
ELEVATION
BRIDGE RAILING END DETAILS
scale ⅜"=1ft.



SECTION 8-8



SECTION 9-9
scale ⅜"=1ft



ABUTMENT #2-SECTION 6-6
scale ⅜"=1ft.

BR #10

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM 18-089-1(6)

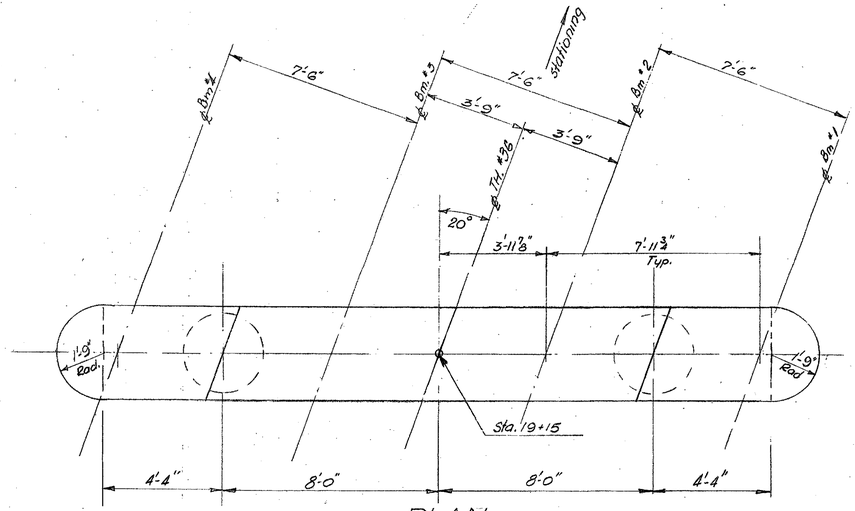
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				
	UNTREATED TIMBER PILING	L. F.				

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

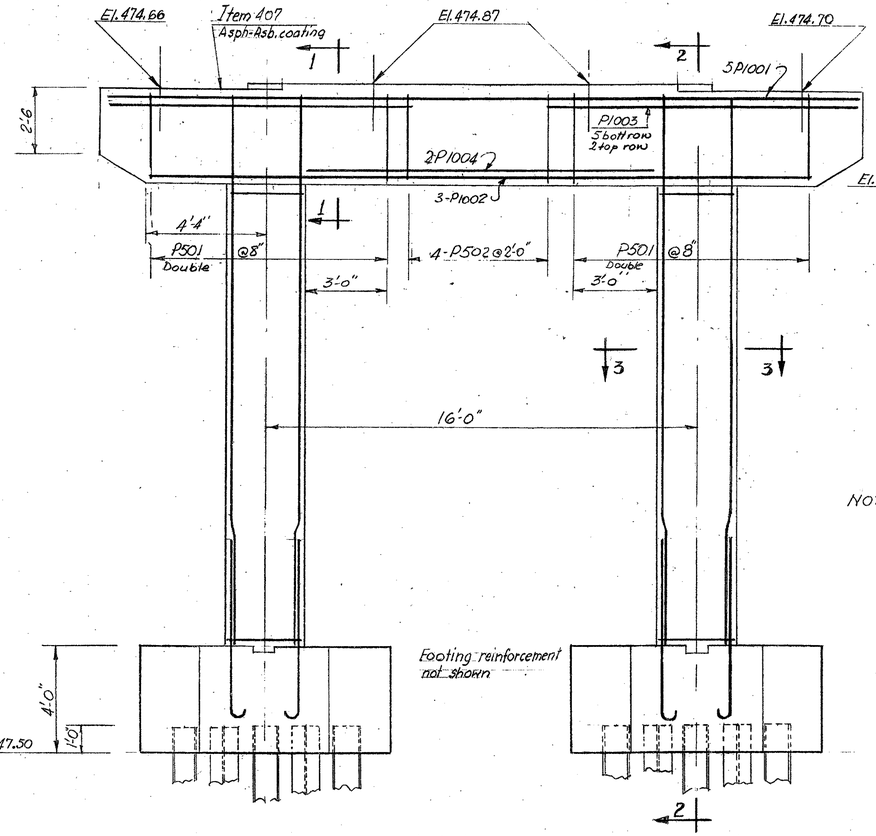
TOWN OF HARTFORD
ROAD NO. ____ BRIDGE NO. ____
T.H. #36 over INTERSTATE 89
ABUTMENT DETAILS
SCALE as noted
SURVEYED BY ____
DRN. ____ PLM

Bridge Sheet No. BR 174 Sheet 131 of 260

BR #10 cl 50



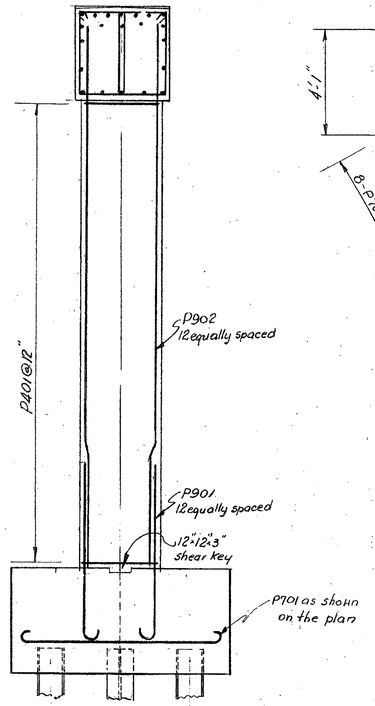
PLAN
scale ⅜"=1ft



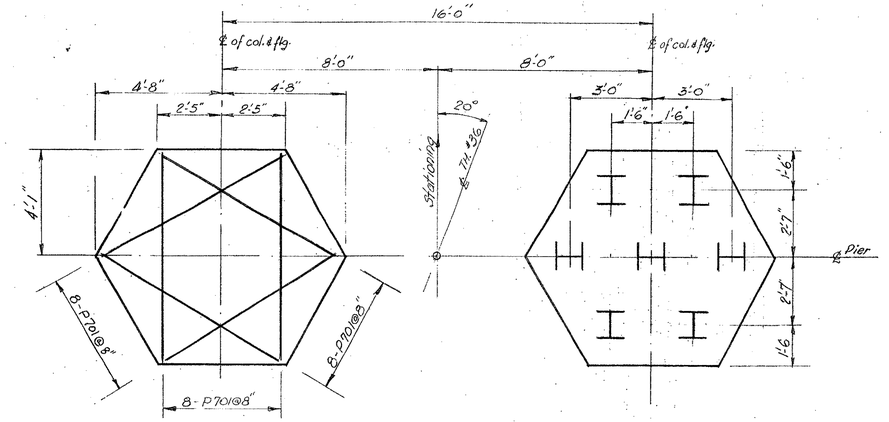
ELEVATION
scale ⅜"=1ft

EXPANSION BEARINGS:
see bearing type #6
on Rocker Brg's sheet.

NOTE: Water Repellent, Item 440, shall be applied on the sides, ends and bottom of pier cap.

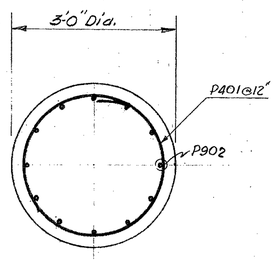


SECTION 2-2
scale ⅜"=1ft

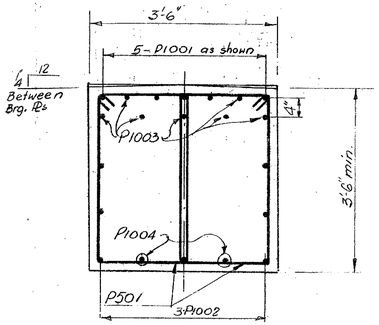


PILING & REINFORCING PLAN
scale ⅜"=1ft

All piles shall be 12BP53 driven to ledge. Design Load 45 Tons per pile



SECTION 3-3
scale ¾"=1ft



SECTION 1-1
scale ¾"=1ft

BK #10

	NO. PILES	SIZE	Estimated Length	Splices allowed for piles not exceeding plan (to be paid for only i	Splices estimated for piles
LEFT COLUMN	7	12BP53	30'	NONE	
RIGHT COLUMN	7	12BP53	30'	NONE	

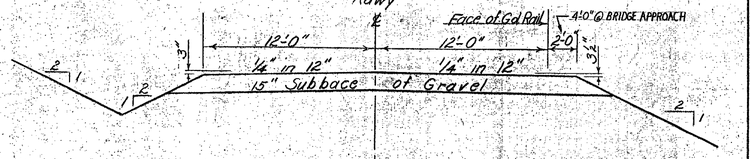
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
109	STRUCT. EXCAV.	C.Y.	42			
	CONC. CLASS AA (MOD.)	C.Y.				
101B	CONC. CLASS B [redacted]	C.Y.	41			
402	REINF. STEEL	LBS.	6,230			
407	ASPHALTIC-ASB. COATING	S.Y.	10			
	TREATED TIMBER PILING	L.F.				
504	SPLICES FOR STEEL PILING	EA.	4			
503C	STEEL PILING (12 BP 53)	L.F.	420			
	UNTREATED TIMBER PILING	L.F.				
501	Furn. Equip. for Driving Piles	L.S.	Req'd.			
440	WATER REPELLENT	GAL.	4			

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD
ROAD NO. _____ BRIDGE NO. _____
TH #36 over INTERSTATE 89
PIER DETAILS
SCALE as noted
SURVEYED BY

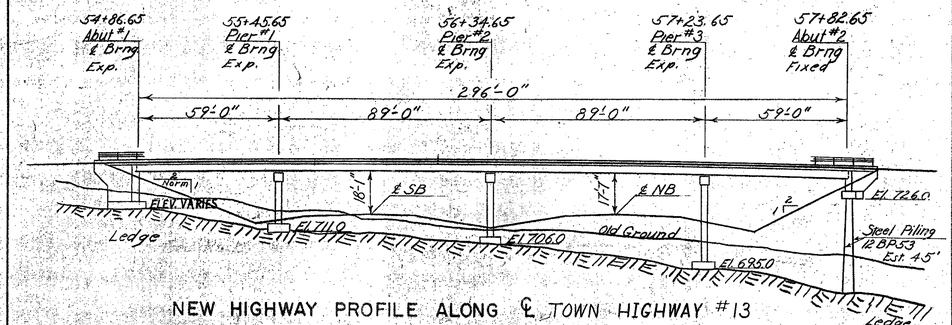
Bridge Sheet No. BR175 Sheet 132 of 260



Normal Section
T.H. #13

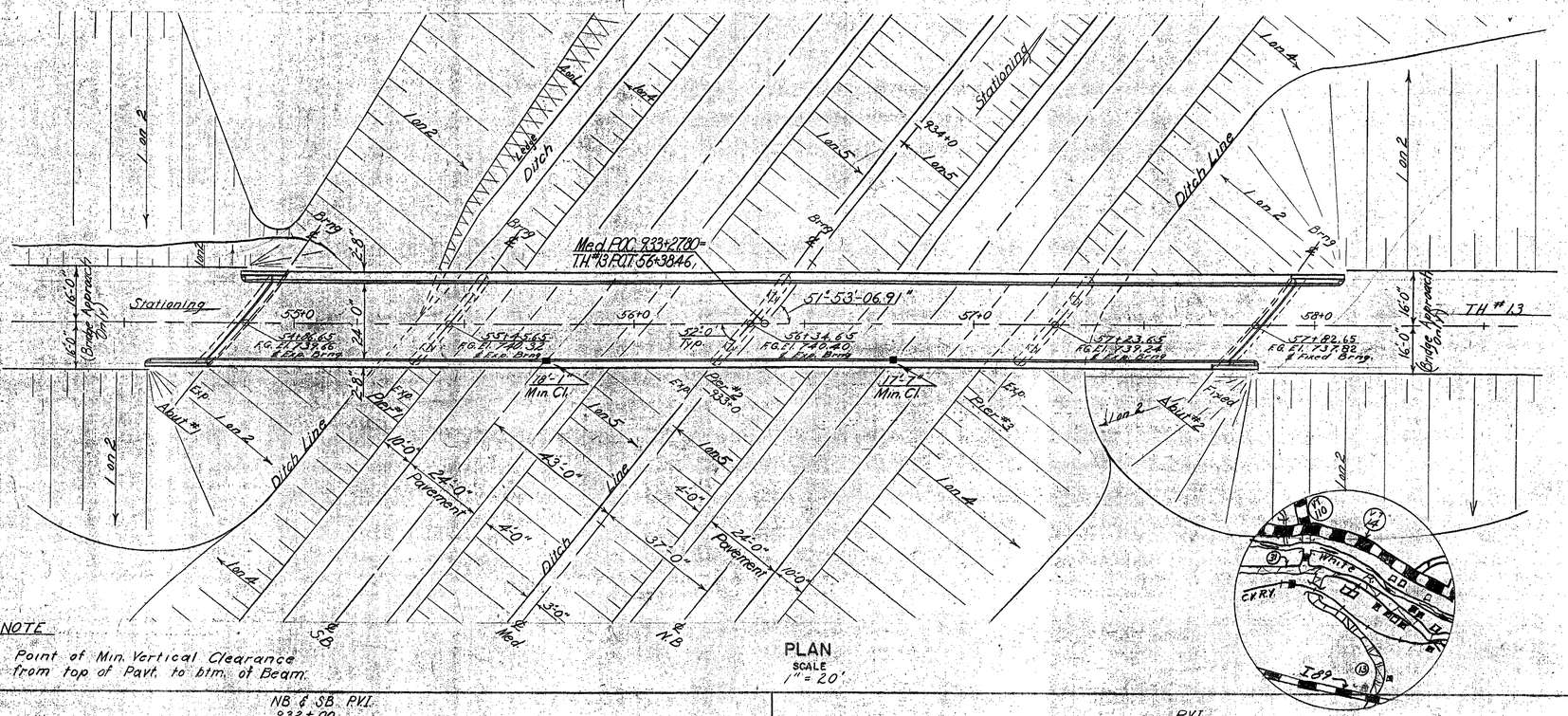
NEW HIGHWAY SECT. STA. TO STA.

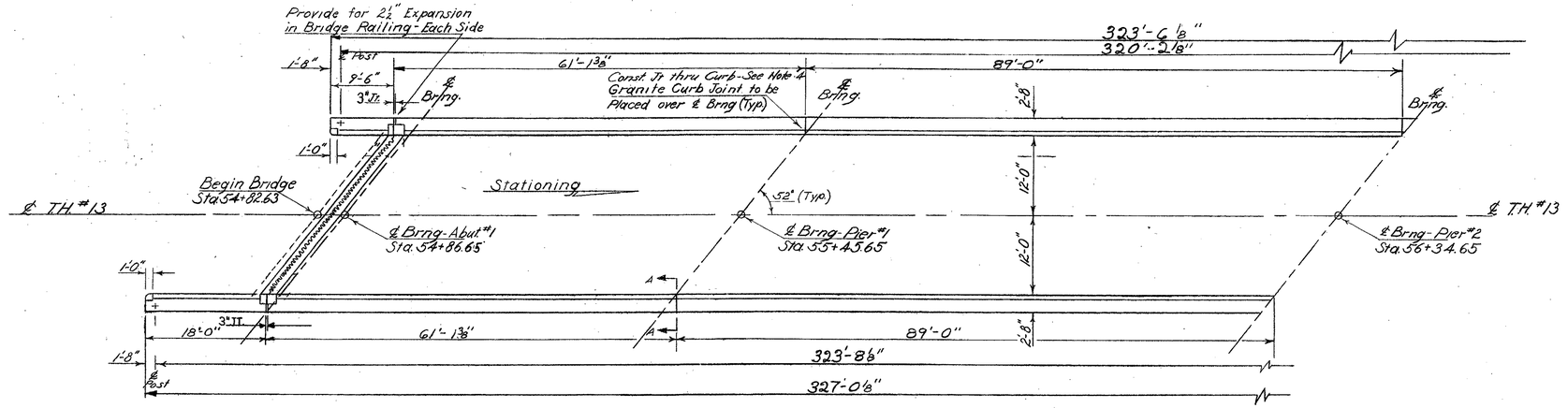
SCALE 1" = 5'

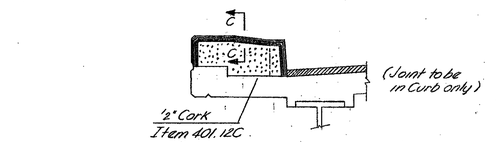


NEW HIGHWAY PROFILE ALONG ℄ TOWN HIGHWAY #13

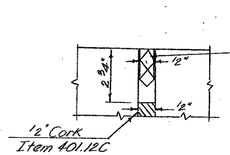
SCALE 1" = 30'


Med POC 933+27.80=
TH #13 P.O.T. 56+38.46,
51°-53'-06.91"
Stationing
5+50
56+0
57+0
58+0
TH #13
Ditch Line
Ditch Line
Lane 2
Lane 5
Lane 4
Lane 1
Grass
Grass
Bridge Approach
16'-0"
24'-0"
Pavement
10'-0"
43'-0"
4'-0"
37'-0"
130'
Med.
SB
NB
Exp.
Abut #1
Pier #1
Pier #2
Pier #3
Abut #2
Fixed
18'-1"
Min. Cl.
17'-7"
Min. Cl.
Exp.
Fix.
Exp.
Fix.
Exp.
Fix.
Exp.
Fix.
Fixed
Bridge Approach
16'-0"
24'-0"
Pavement
10'-0"
Ditch Line
Lane 2
Lane 5
Lane 4
Lane 1
Lane 2
Lane 2
Lane 5
Lane 5
Lane 4
Lane 1
Lane 2
Grass
Grass
Yield
Ditch
Ditch Line
Lane 2
Lane 2
Stationing
934+0
Brng
Brng
Brng

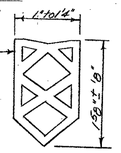




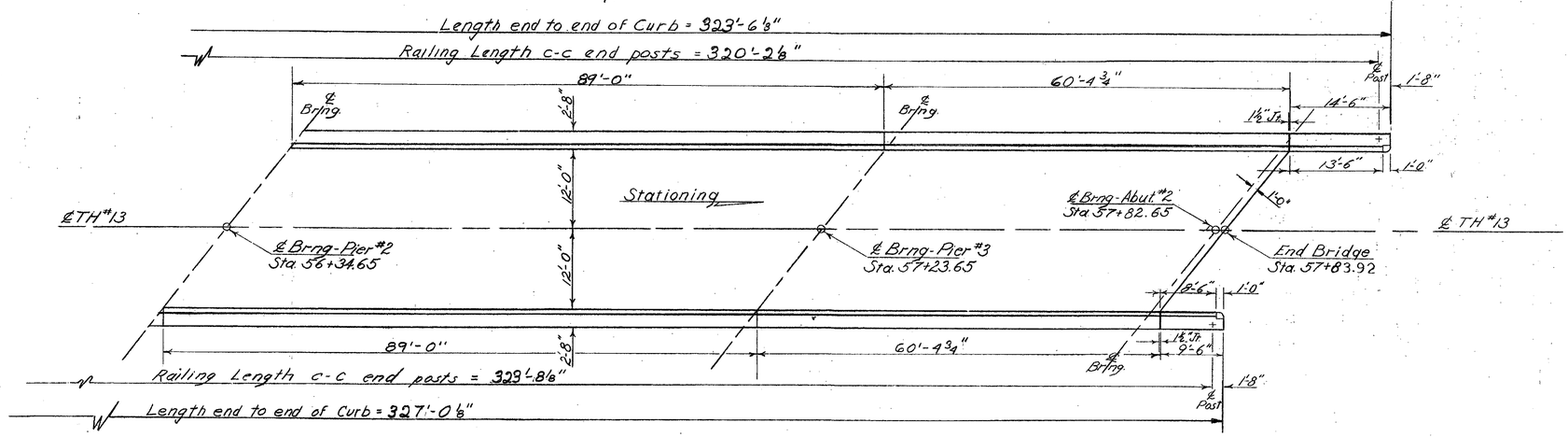
SECTION A-A
Scale 2"=1'-0"



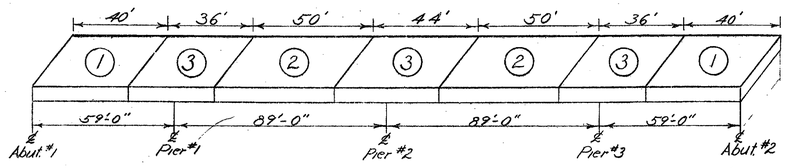
Section C-C
Scale 1½"=1'-0"



Item 372-C, Type B Joint Sealer - Preformed Material to be premolded neoprene rubber. (Other configurations that satisfy specifications may be used.



CURB AND RAIL PLAN
Scale: 1" = 10'



SLAB POUR SEQUENCE
N.T.S.

Notes:
1. For details of Granite Bridge Curb, see Std. Sh. SCB-D6-65 (A).
2. For details of Bridge Railing, see Std. Sh. SB-R1-64, Sh. 1 & 2, or SB-R2-65
3. Provide construction jt. in curb pour with sawed ends on Granite Curb and Item 372-C (Type B). Typical @ all Piers.
4. SHOP DRAWINGS FOR ITEM 556-C. GRANITE BRIDGE CURB SHALL BE SUBMITTED TO THE VT. DEPT. OF HIGHWAYS FOR APPROVAL BEFORE FABRICATION. LENGTH OF INDIVIDUAL STONES SHALL VARY FROM 4' MIN. TO 10' MAX.

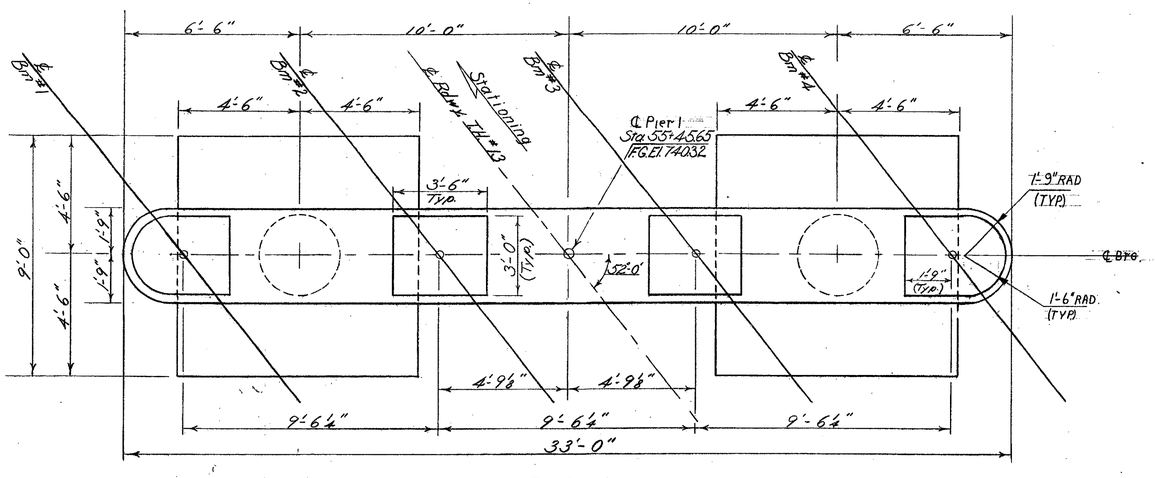
BR #21

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM 18-089-1(8)

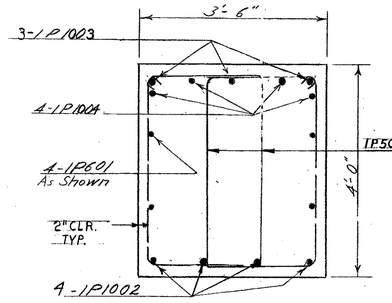
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT — ROYALTON
TOWN OF
ROUTE No I-89 STA. 933+28
I89 UNDER TOWN HIGHWAY #13
CURB & RAIL PLAN
SCALE As Noted
IN CHARGE W.M. Smith

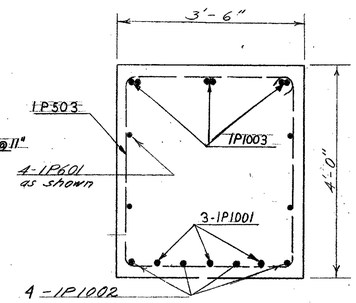
Bridge Sheet No. BR 177 Sheet 134 of 260



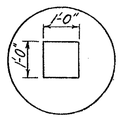
PLAN
Scale: ⅜" = 1'-0"

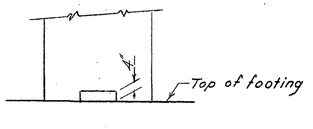


SECTION B-B
Scale: ¾" = 1'-0"

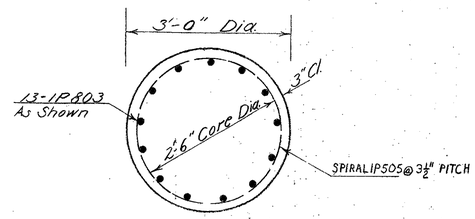


SECTION C-C
Scale: ¾" = 1'-0"



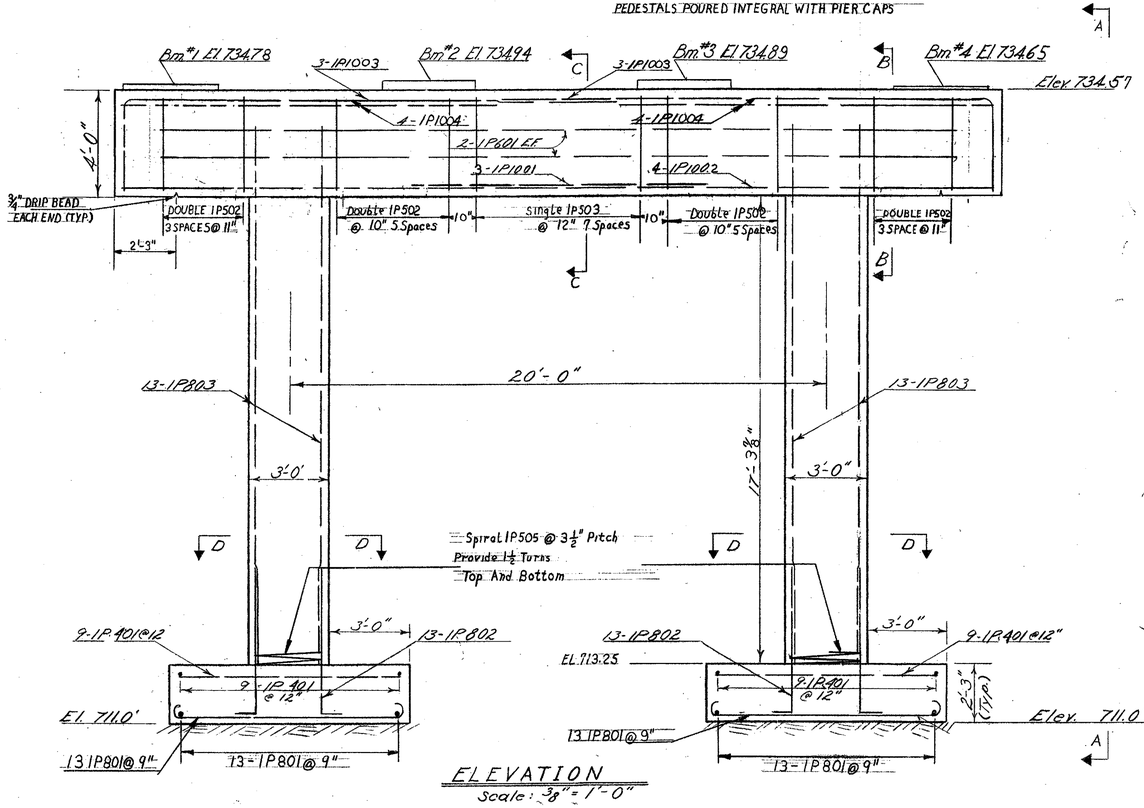


CONSTRUCTION JOINT DETAIL
Scale: ½" = 1'-0"

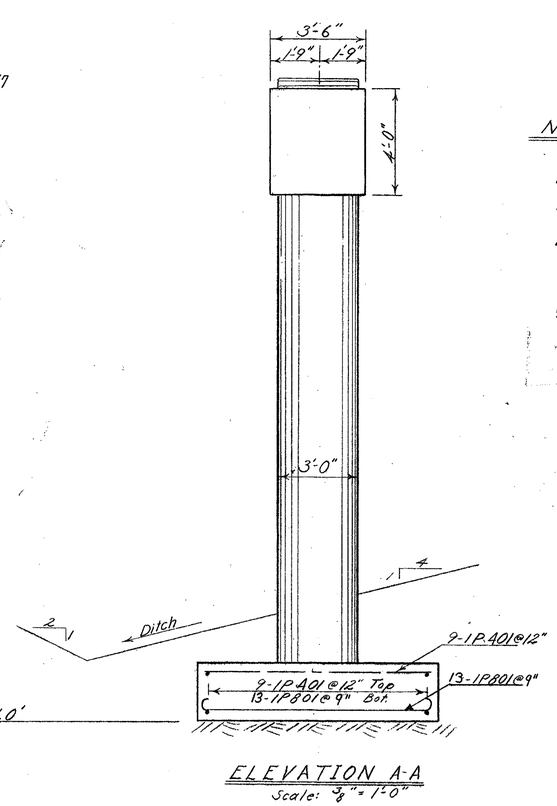


SECTION D-D
Scale: ¾" = 1'-0"

PEDESTALS POURED INTEGRAL WITH PIER CAPS



ELEVATION
Scale: ⅜" = 1'-0"



ELEVATION A-A
Scale: ⅜" = 1'-0"

NOTES

Bl # 21

1. For General Notes, see BR. 100.
2. All concrete in footing shall be Class B. All concrete in Columns and Cap shall be Class A-A.
3. The sides, ends, and bottom of the Pier Cap shall be coated with Item 440, Water Repellent.
4. All Spiral Reinforcement Shall conform to AASHO Designation M32-60 Cold drawn steel wire for Concrete Reinforcement and Shall be paid for under item 402 reinforcing Steel.
5. PIER FOOTINGS ARE DESIGNED FOR A BEARING PRESSURE OF 4 TONS/SQ FT.

THIS SHEET IS FOR INFORMATION PURPOSES ONLY
HARTFORD-SHARON-ROYALTON IM IR 089-1(8)

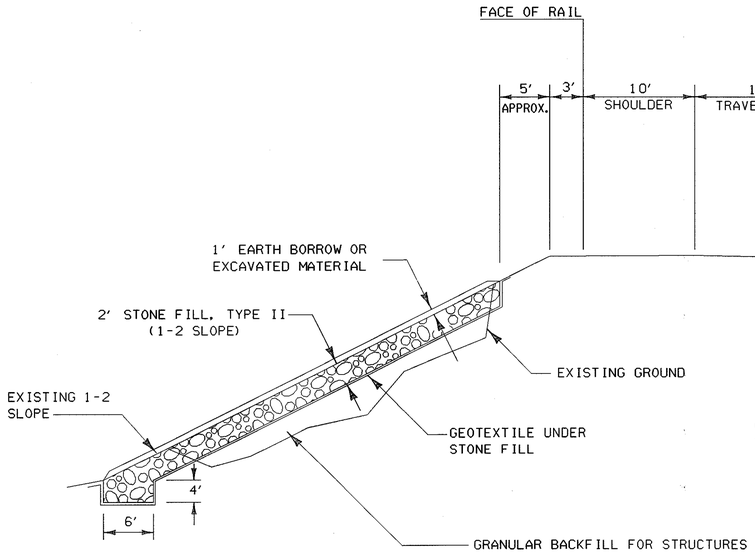
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT .. ROYALTON
TOWN OF
ROUTE No 189 STA. 233+28
I 89 UNDER TOWN HIGHWAY # 13
PIER #1
SCALE As Shown
IN CHARGE W. M. Smith

Bridge Sheet No. BR 178 Sheet 135 of 260

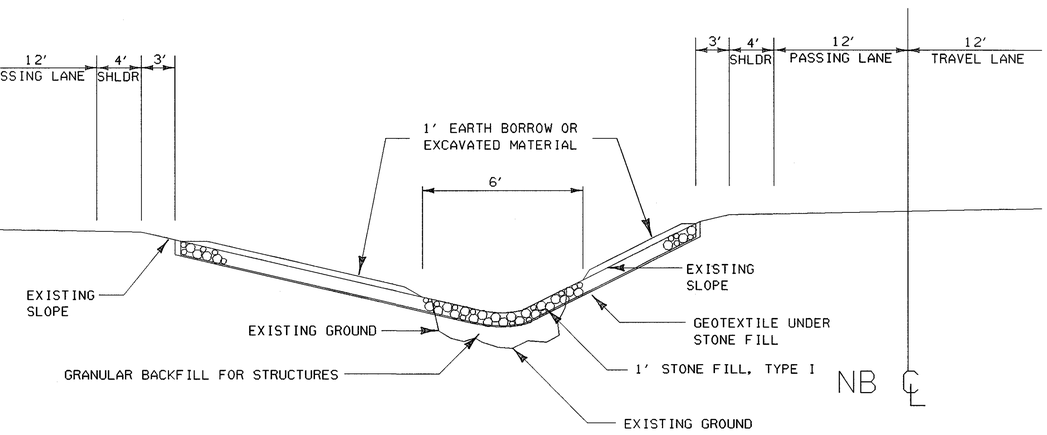
SOUTHBOUND I-89 SLIDE AREA TYPICAL

MM 7.28 ~ 7.39 (STA. 393+75 ~ 400+50)



SIDE SLOPE DETAIL FOR

MM 7.28 - 7.31 & MM 7.34 - 7.39



MEDIAN DETAIL FOR

MM 7.28 - 7.39

NOTE : MORE EROSION MAY HAVE OCCURED SINCE CROSS SECTIONS WERE TAKEN IN 1997. MORE GRANULAR BACKFILL FOR STRUCTURES MAY BE NEEDED BY THE CONTRACTOR.

NOT TO SCALE

SB SLIDE AREA DETAIL

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	Ross	DATE	4/95
SQUAD LEADER	Nyquist		
DESIGN FILE NO.	/sqda/87a008/da008det.dgn		
IPARM FILE	da008ssa.I	DATE PLOTTED	12-MAR-1999
PROJ. NAME	Hartford-Sharon-Royalton		
PROJ. NO.	IM IR 089-1(8)		
SHEET	136 OF 260 SHEETS		

DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

STONE FILL, TYPE II
FOR SLOPE STABILIZATION

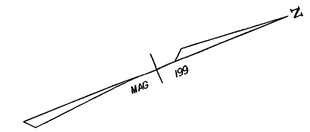
393+98 - 395+57 LT
396+50 - 398+75 LT

SPECIAL DITCH W/
STONE FILL, TYPE I

395+75 - 399+50 RT (MED)

EARTH BORROW
OR EXCAVATED MATERIAL

393+98 - 395+57 LT
396+50 - 398+75 LT



STONE FILL, TYPE I
FOR SLOPE STABILIZATION *

393+89 - 399+50 SB MEDIAN
393+89 - 399+50 NB MEDIAN

EARTH BORROW
OR EXCAVATED MATERIAL *

393+89 - 399+50 SB MEDIAN
393+89 - 399+50 NB MEDIAN

* SEE TYPICAL FOR DETAILS

SEE TYPICAL FOR TREATMENTS FROM 393+75 TO 396+50 FOR MED & OUT

397+00 SB CL
EXIST. 18" ACCOMP - RETAIN
REMOVE EXIST. DI @ INLET, 18" X 114' CSP w/ 2- 20° ELBOWS,
ELBOW & HW @ OUTLET
NEW DI @ INLET, 18" ACCOMP FROM 1ST
& HW & STONE PAD @ OUTLET

398+50 SB LT
EXIST. 12" X 112' ACCOMP - DI & HW - REMOVE
NEW 12" X 112' DTION PIPE, DI & HW w/ 1-20° ELBOW
& HW & STONE PAD @ OUTLET & PRCCDI @ INLET

399+51 SB CL
EXISTING 18" X 148'
ACCOMP - RETAIN

BND
WOVEN WIRE FENCE
BRUSH
GUIDE POST
2-MED POP
LG POP
SM BOX ELDER
2-SM ASH
3-SM BOX ELDER
WOODS
LEDGE
GR
POB Sta 396+00.00
POE Sta 400+50.00
396+00
397+00
398+00
399+00
400+00
400+50

DATUM
VERTICAL ASSUMED
HORIZONTAL ASSUMED

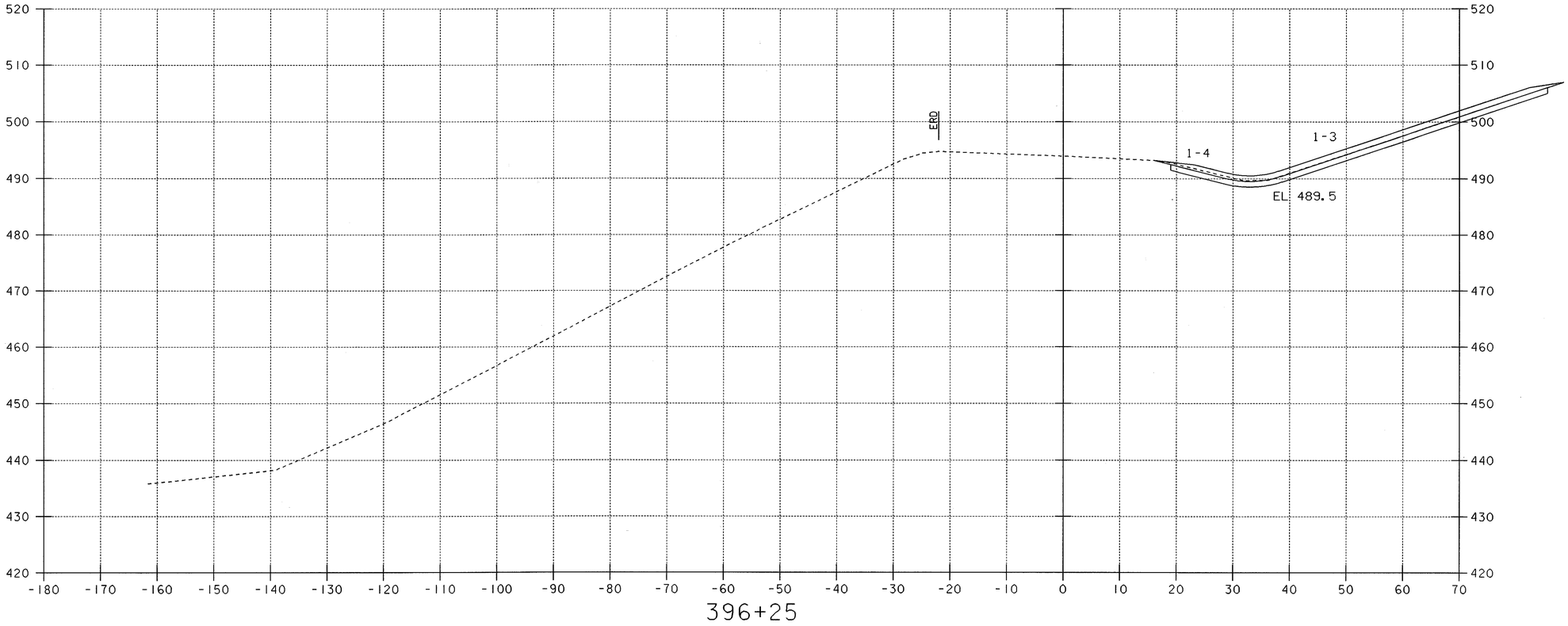
S.B. SLIDE AREA MM 7.35 (397+66)

0 20 40
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/da008wrk.dgn	
IPARM FILE NAME: slide101.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: GILMAN	SURVEY DATE:
SQUAD LEADER: BOMBARDIER	DRAWN BY: Richardson
	SHEET: 137 OF 260

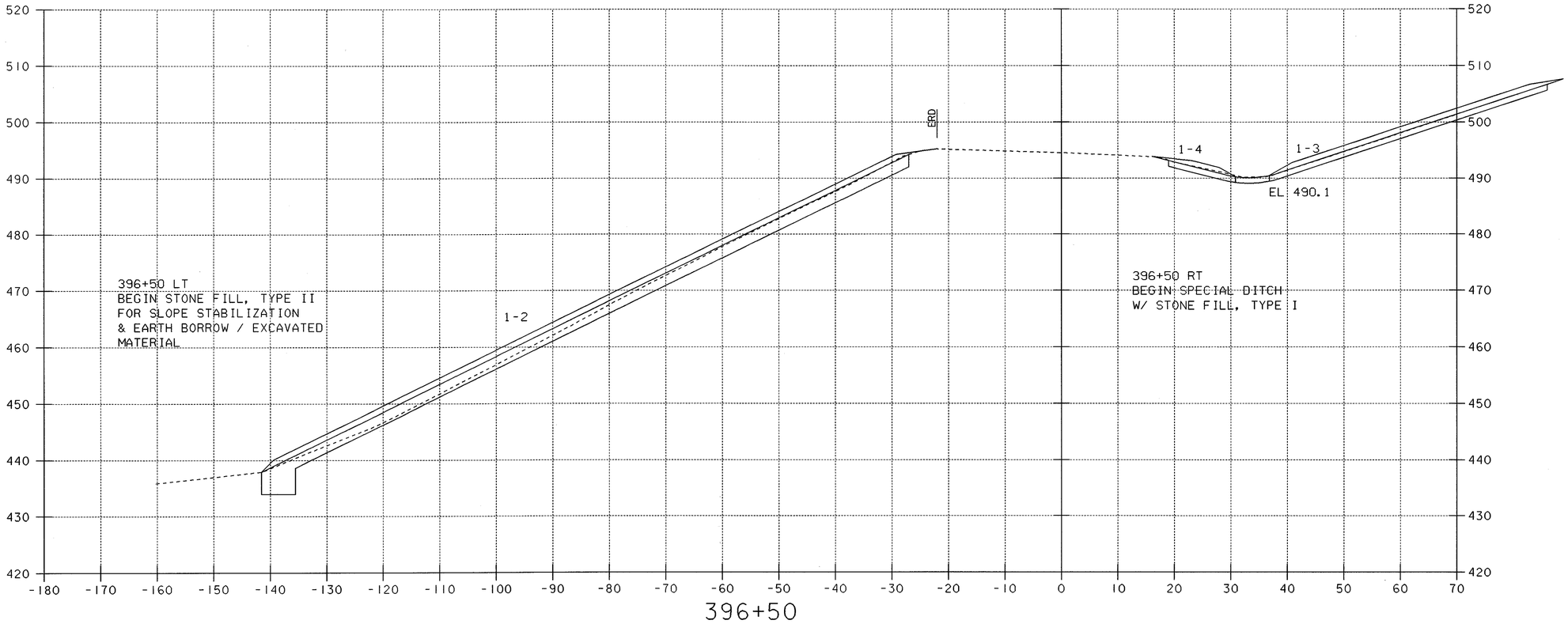
0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: sildex01.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 138 OF 260



0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex02.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 139 OF 260



0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex03.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 140 OF 260

396+75

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex04.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 141 OF 260

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex05.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 142 OF 260

397+25

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex06.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 143 OF 260

397+50

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex07.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 144 OF 260

397+75

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex08.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 145 OF 260

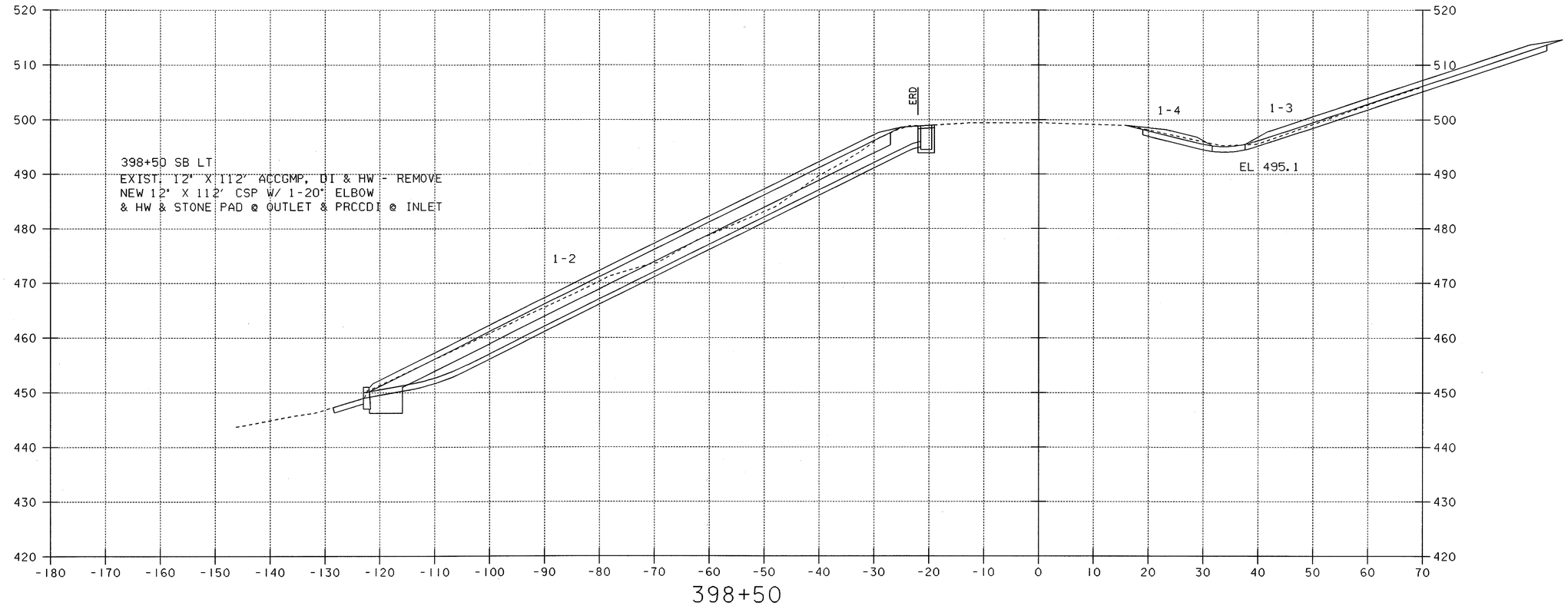
0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex09.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 146 OF 260

398+25

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidex10.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 147 OF 260

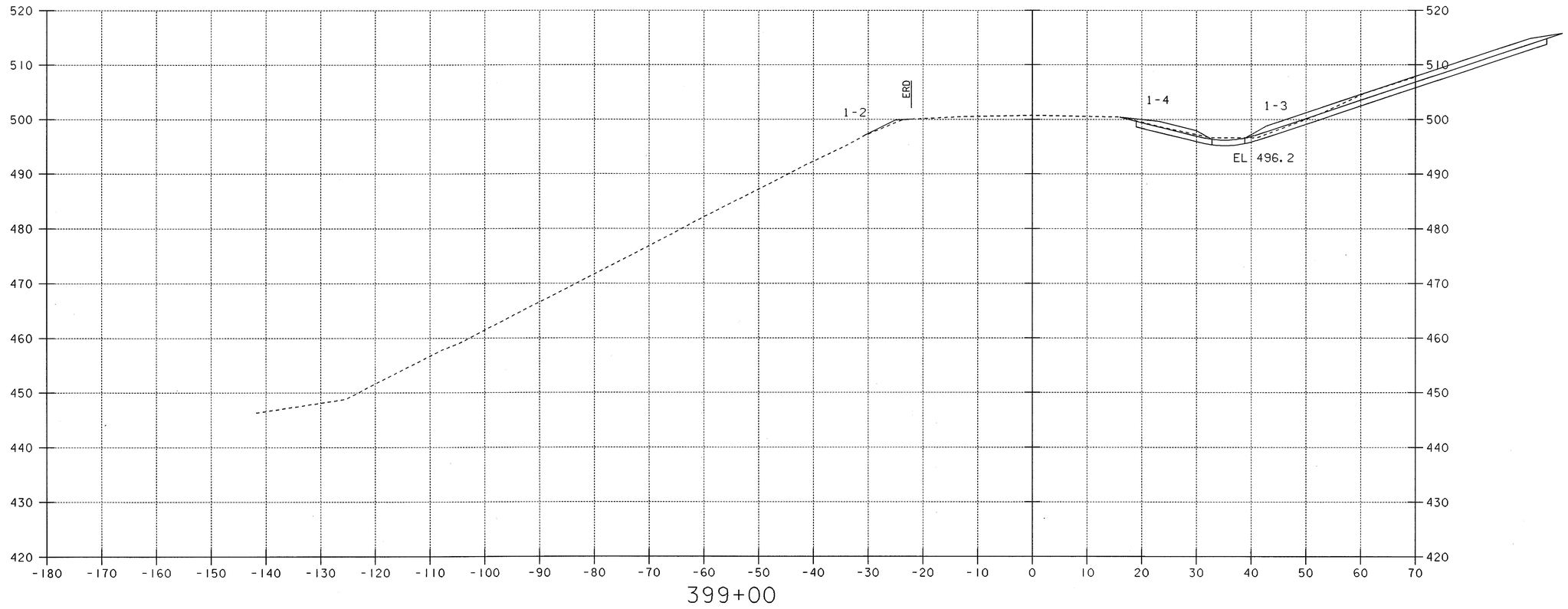


0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidexII.I	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 148 OF 260

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidexl2.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 149 OF 260



0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: slidexl3.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 150 OF 260

399+25

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/T8a008/da008wrk.dgn IPARM FILE NAME: slidex14.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 151 OF 260

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn	
IPARM FILE NAME: slidex15	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 152 OF 260

399+75

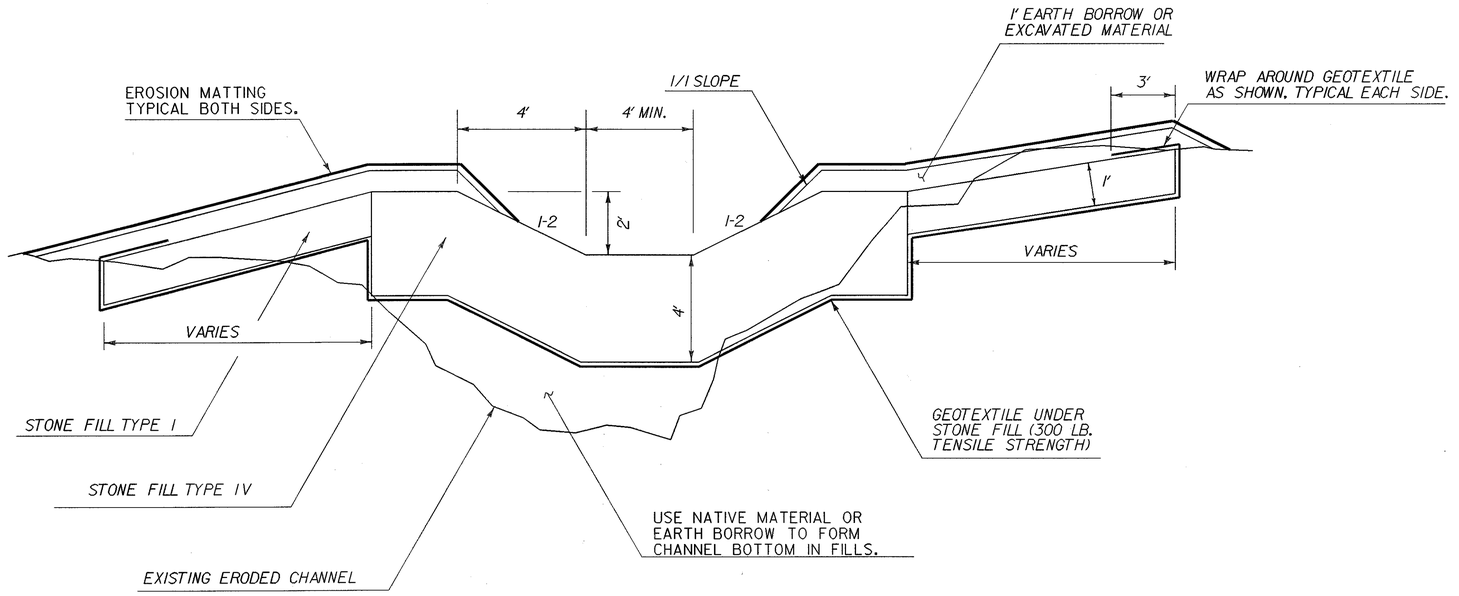
0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/78a008/da008wrk.dgn IPARM FILE NAME: sildex16.i	PLOT DATE: 12-MAR-1999
DRAWN BY: Richardson	
	SHEET: 153 OF 260

: Sheet Number: 153

CHANNEL REPAIR TYPICAL SECTION DETAIL

WASHOUT AREAS
MM 11.62 OUT
MM 21.12 OUT



CHANNEL REPAIR TYPICAL SECTION DETAIL

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	Ross	DATE	4/95
SQUAD LEADER	Nyquist		
DESIGN FILE NO.	/sqda/87a008/da008det.dgn		
IFARM FILE	da008crt	DATE PLOTTED	12-MAR-1999
PROJ. NAME	Hartford-Sharon-Royalton		
PROJ. NO.	IM IR 089-1(8)		
SHEET	154 OF 260 SHEETS		

DATUM
VERTICAL N/A
HORIZONTAL N/A

NOT TO SCALE

HARTFORD INTERCHANGE RAMP "C" (S.B.) TYPICAL

I-89 STATION 48+70 ~ 56+70

MATERIAL TOLERANCES:	
PAVEMENT	± 1/4''
SUBBASE	± 1''
SAND	± 1''

DECEL LANE & SHOULDER :

- 3/4'' BITUMINOUS CONCRETE PAVEMENT, TYPE IV
- 1 1/2'' BITUMINOUS CONCRETE PAVEMENT, TYPE III
- 2 '' BITUMINOUS CONCRETE PAVEMENT, TYPE II
- 6 1/2'' BITUMINOUS CONCRETE PAVEMENT, TYPE I (2 LIFTS)

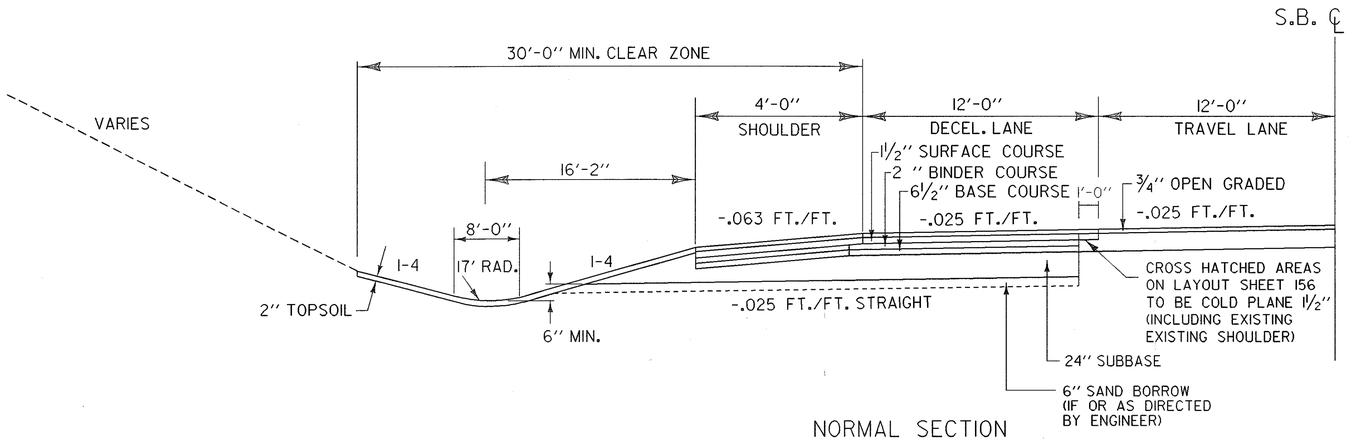
} PG 70 - 28

EMULSIFIED ASPHALT TO BE APPLIED BETWEEN SUCCESSIVE COURSES OF PAVEMENT @ 0.015 GAL/S.Y. OR AS DIRECTED BY THE ENGINEER

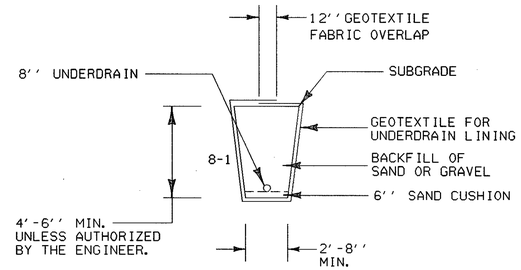
NOTE :THE CONTRACTOR MAY OPT TO USE BCP, TYPE II IN LIEU OF BCP, TYPE I

24'' SUBBASE OF DENSE GRADED CRUSHED STONE

6'' SAND BORROW (AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER)

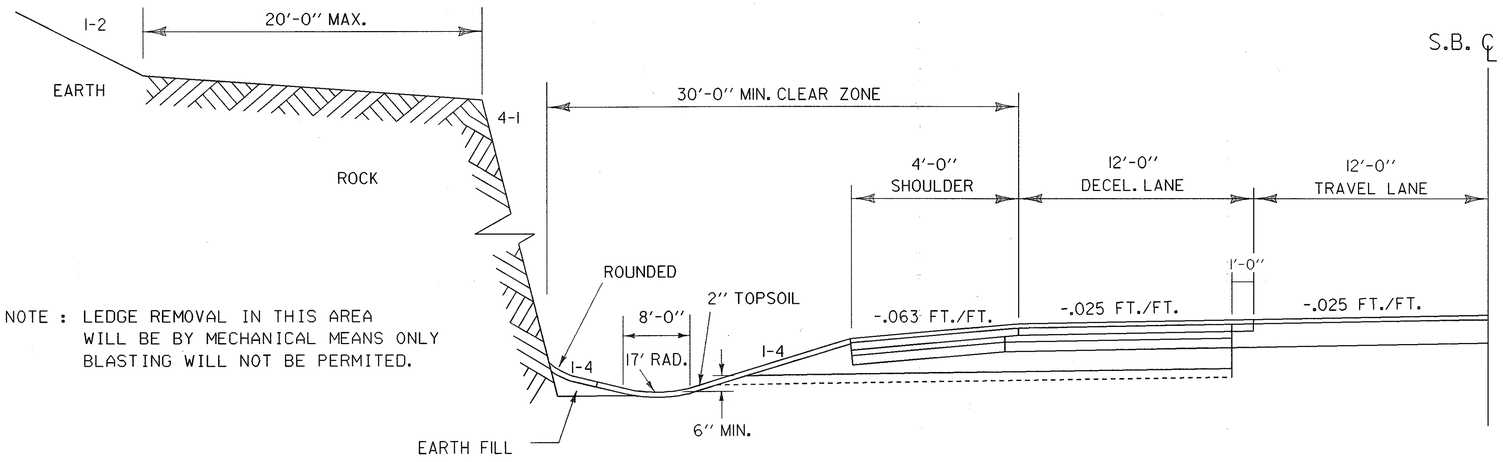


NORMAL SECTION



UNDERDRAIN CONSTRUCTION

NOTE: CONSTRUCT UNDERDRAIN PER STANDARD D-2.



NOTE : LEDGE REMOVAL IN THIS AREA WILL BE BY MECHANICAL MEANS ONLY BLASTING WILL NOT BE PERMITED.

SLOPES IN SOLID ROCK EXCAVATION

FOR DRILLING AND BLASTING OF SOLID ROCK SUBGRADE AND SLOPES IN SOLID ROCK EXCAVATION, SEE STD SHEET A-60

NOT TO SCALE

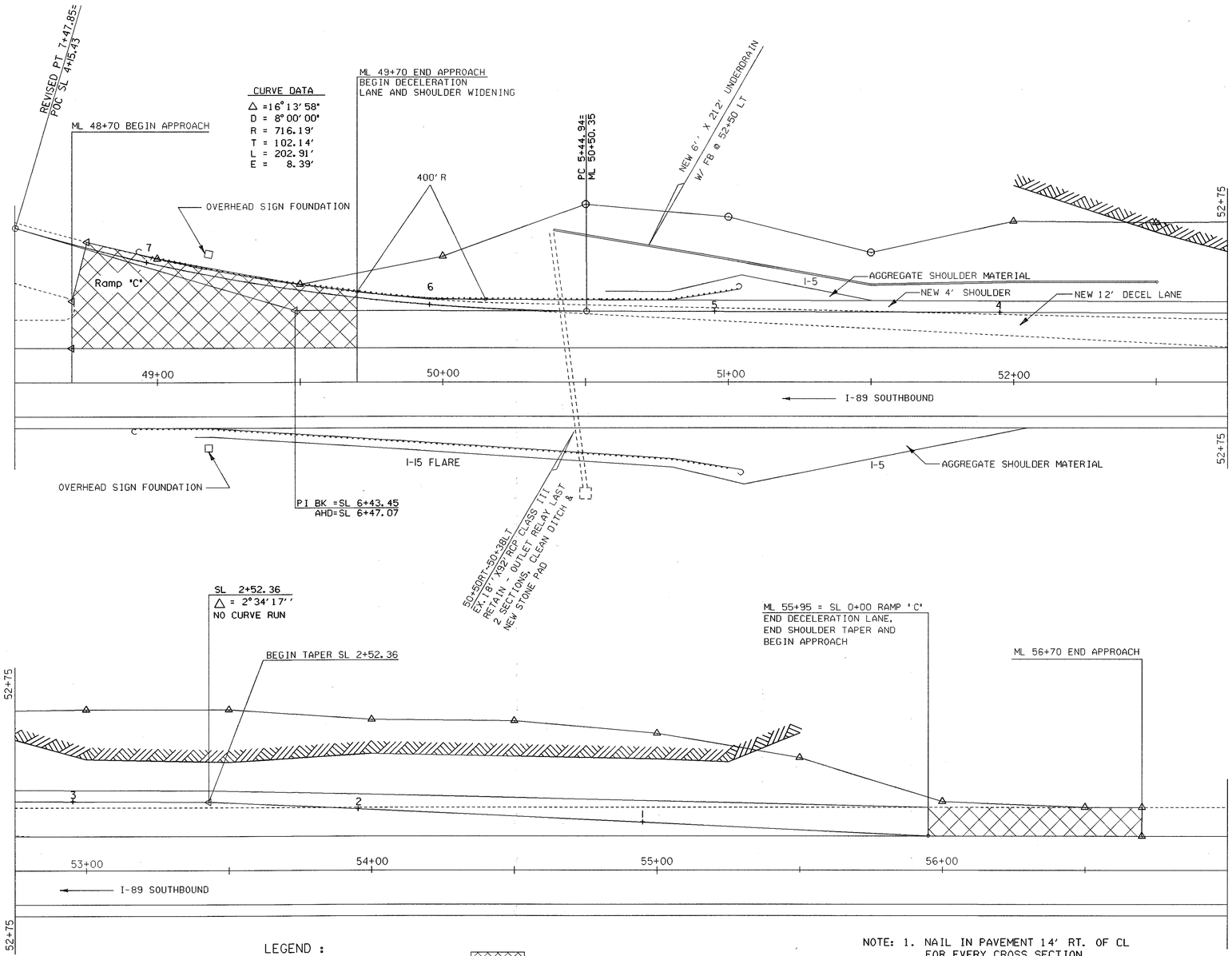
HARTFORD INTERCHANGE RAMP "C" TYPICAL

DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	ROSS	DATE	1/94
SQUAD LEADER	BOMBARDIER		
DESIGN FILE NO.	/Sqda/87a008/da008int.dgn		
IPARM FILE	da008typ.i	DATE PLOTTED	12-MAR-1999
PROJ. NAME	Hartford-Sharon-Royalton		
PROJ. NO.	IM IR 089-1(8)		
SHEET	155 OF 260 SHEETS		

HARTFORD INTERCHANGE #10

RAMP "C" DECELERATION LANE LAYOUT



APPROX. NORTH

LEGEND :

COLD PLANE AREA

NOTE: 1. NAIL IN PAVEMENT 14' RT. OF CL FOR EVERY CROSS SECTION.

2. FOR PAVEMENT MARKINGS SEE STD E-191

3. REFER TO GUARDRAIL ITEM DETAIL SUMMARY SHEETS FOR GUARDRAIL ITEMS.

0 20 40

SCALE IN FEET

DATUM

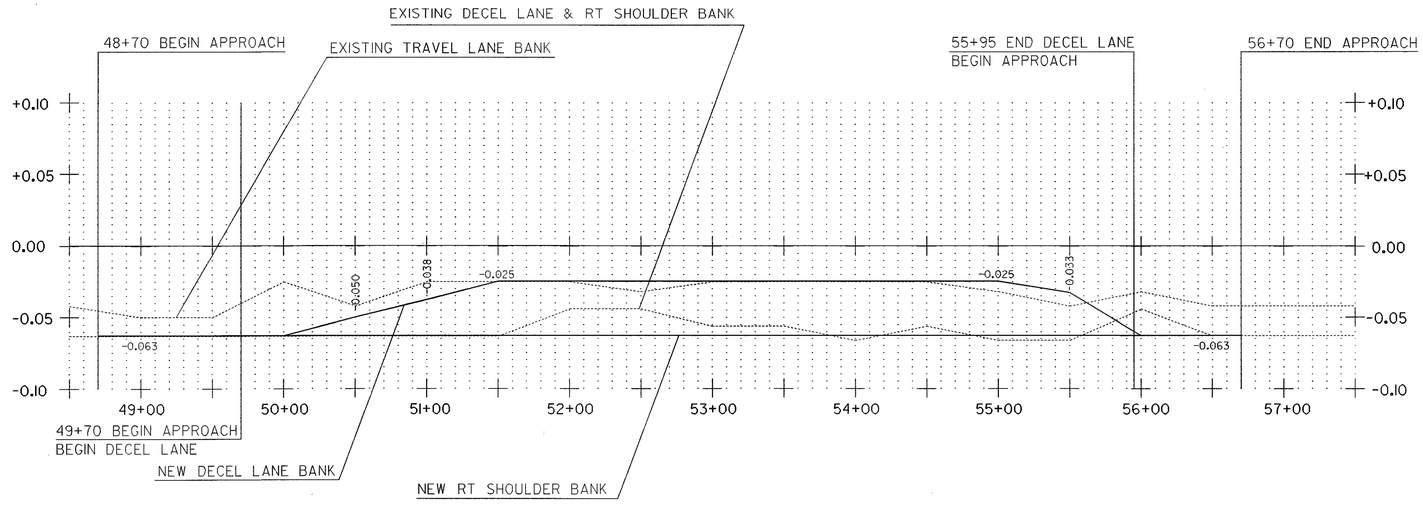
VERTICAL ASSUMED

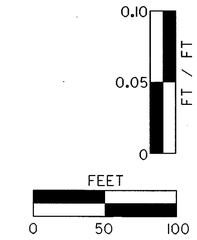
HORIZONTAL N/A

HARTFORD INT.#10 RAMP "C"
DECELERATION LANE LAYOUT

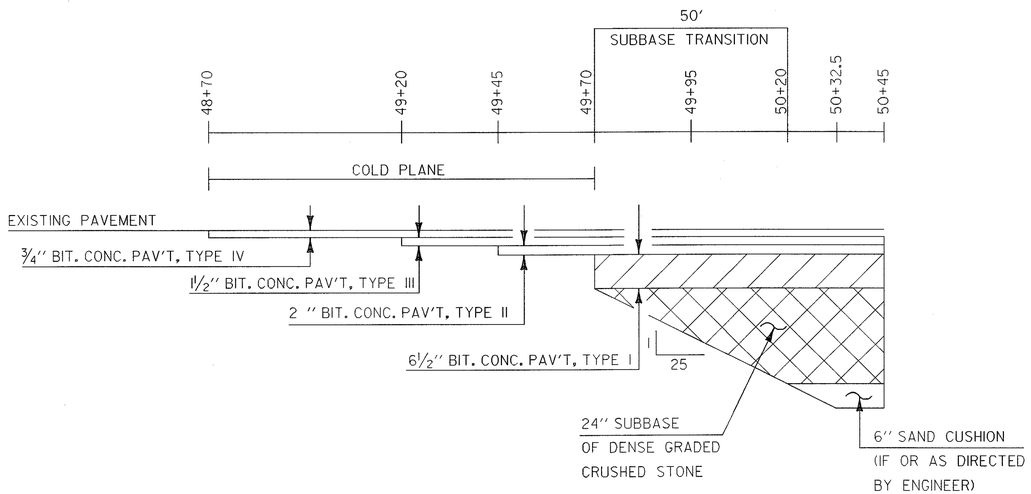
SURVEYED BY	ZAMBON	DATE	1/92
DRAWN BY	ROSS	DATE	1/94
SQUAD LEADER	BOMBARDIER		
DESIGN FILE NO.	/Sqda/87a008/da008int.dgn		
IPARM FILE	da008rpc.i	DATE PLOTTED	12-MAR-1999
PROJ. NAME	HARTFORD-SHARON-ROYALTON		
PROJ. NO.	IM IR 089-1(8)		
SHEET	156 OF 260 SHEETS		

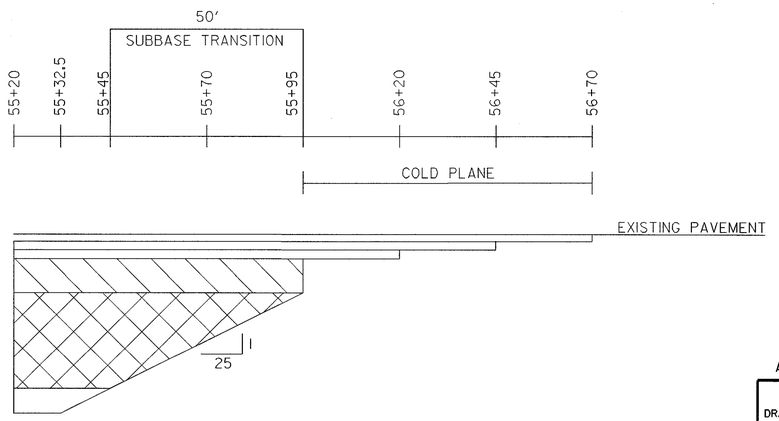
HARTFORD RAMP "C" BANKING DIAGRAM





HARTFORD RAMP "C" MATERIAL TRANSITION DIAGRAM

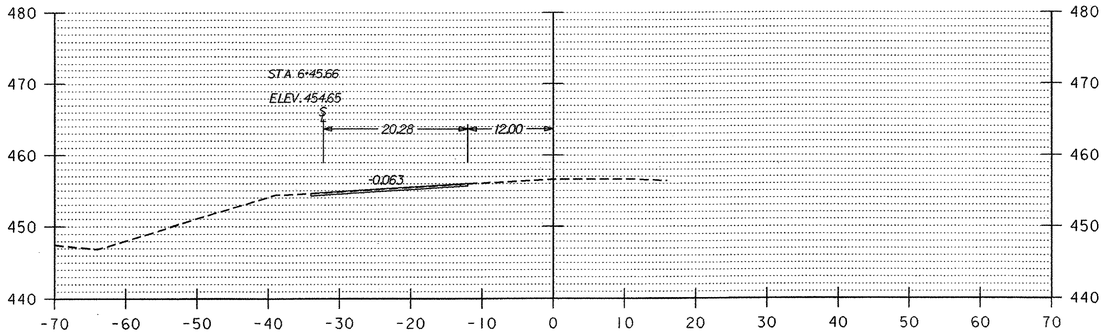




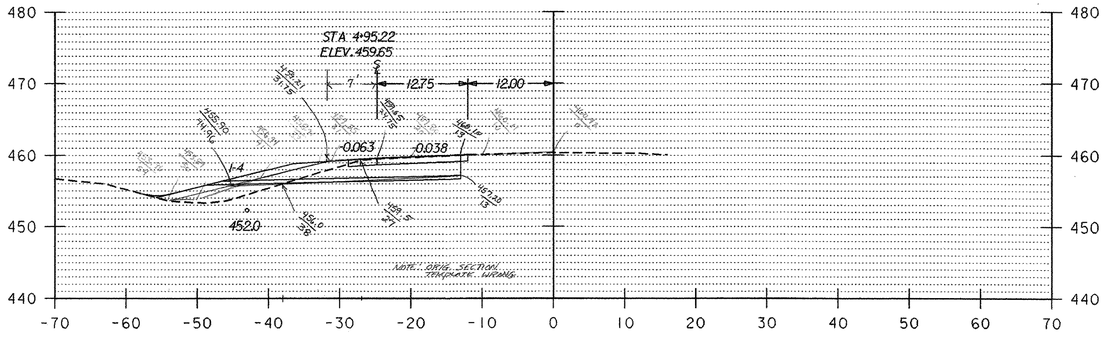
NOT TO SCALE

HARTFORD RAMP "C" BANKING
AND MATERIAL TRANSITION DIAGRAMS

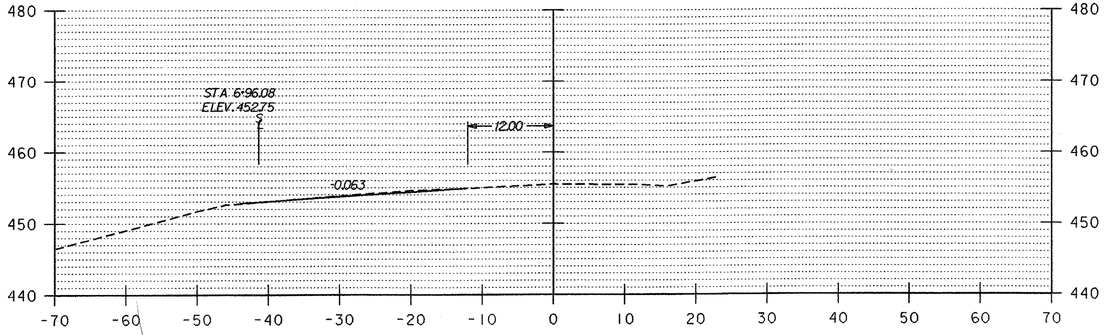
DRAWN BY Richardson DATE 2-94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008int.dgn
IPARM FILE da008bnk.I DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 157 OF 260 SHEETS



49+50

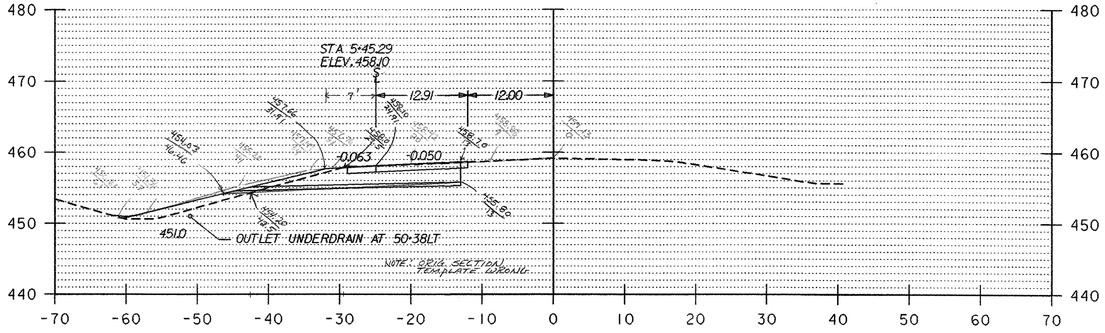


51+00

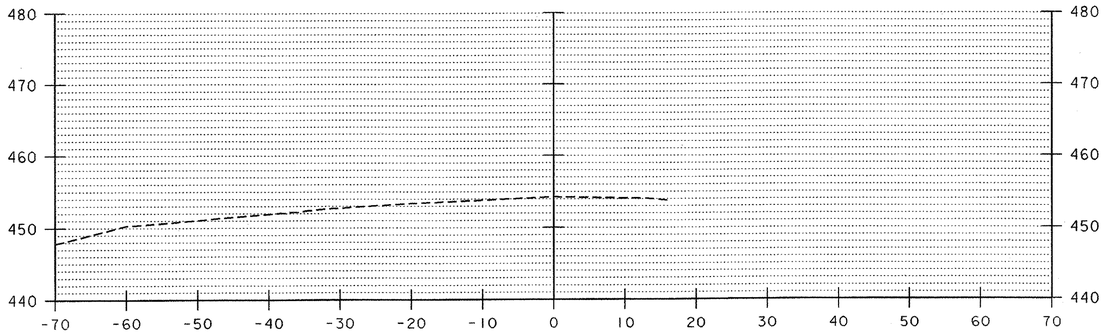


49+00

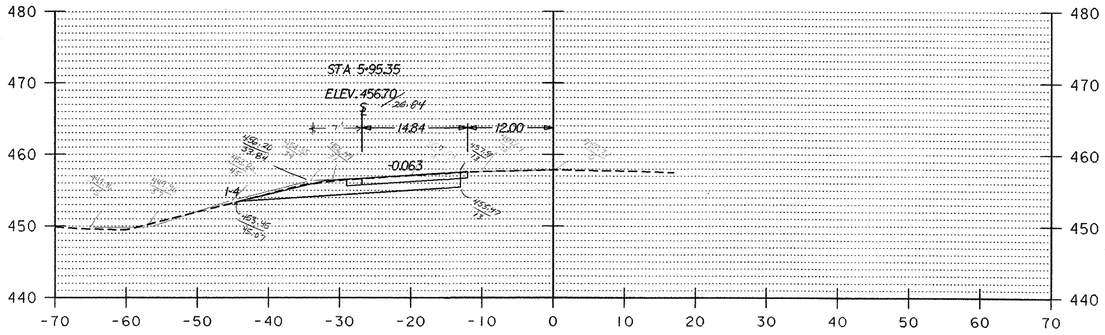
BEGIN APPROACH 48+70



50+50



48+50



NOTE: NO SAND CUSHION USED

50+00

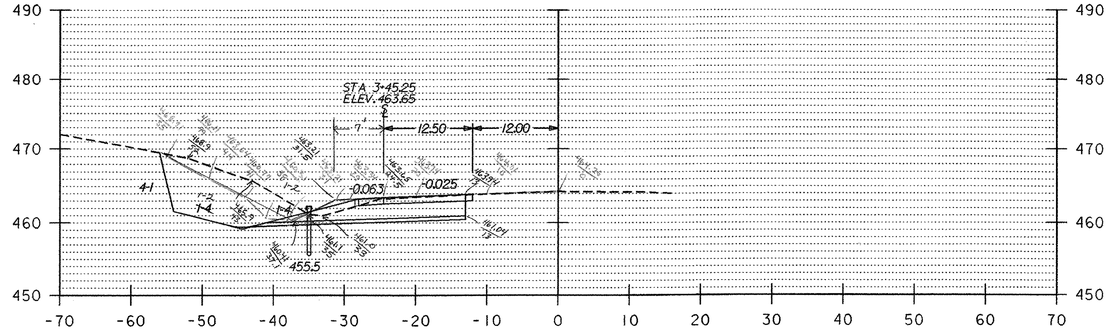
END APPROACH, BEGIN DECELERATION LANE 49+70 LT

48+50 - 51+00

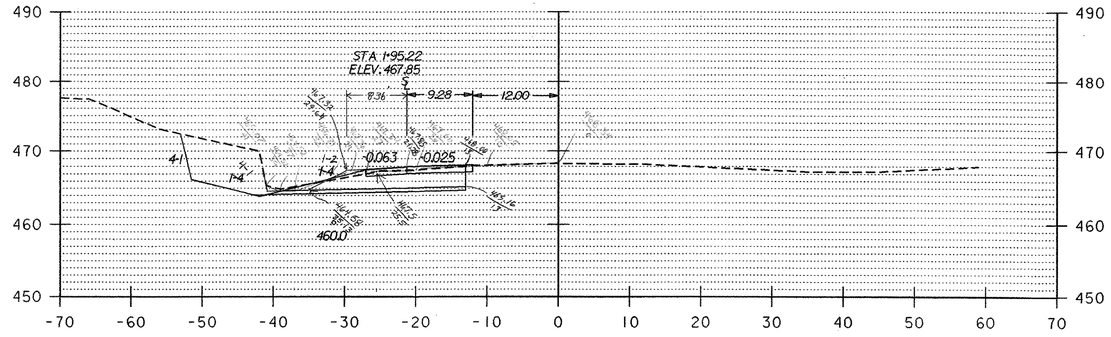
DATUM
VERTICAL ASSUMED
HORIZONTAL N/A

0 10 20
SCALE IN FEET

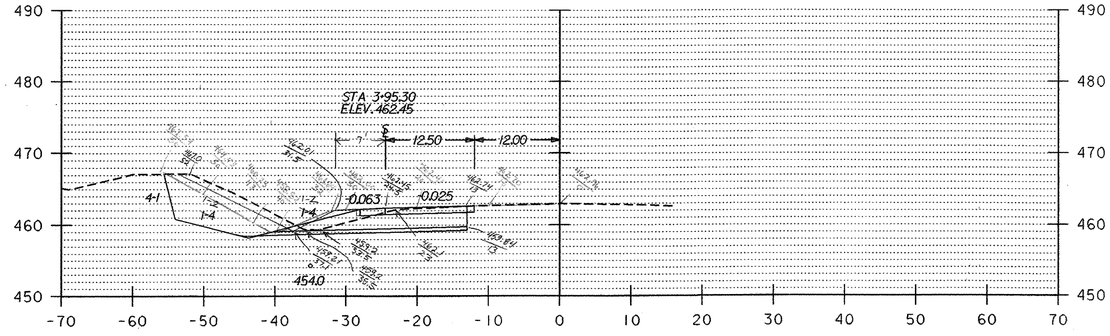
SURVEYED BY Zambon DATE 1/92
DRAWN BY Ross DATE 10/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008int.dgn
IPARM FILE da008xsl.i DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 158 OF 260 SHEETS



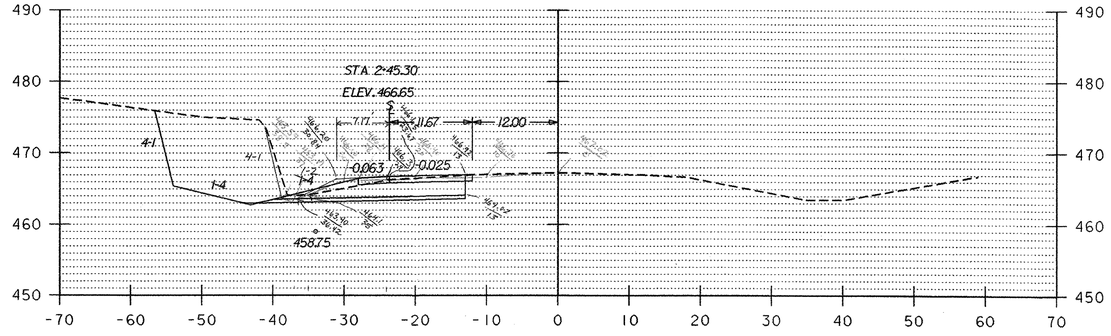
52+50



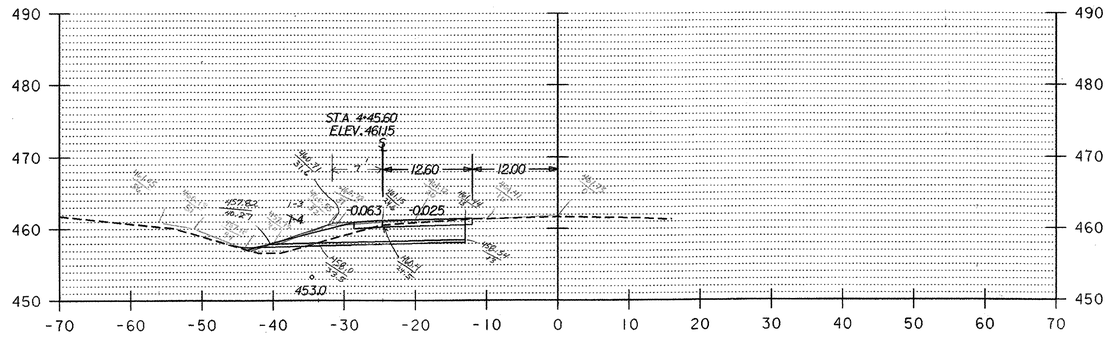
54+00



52+00

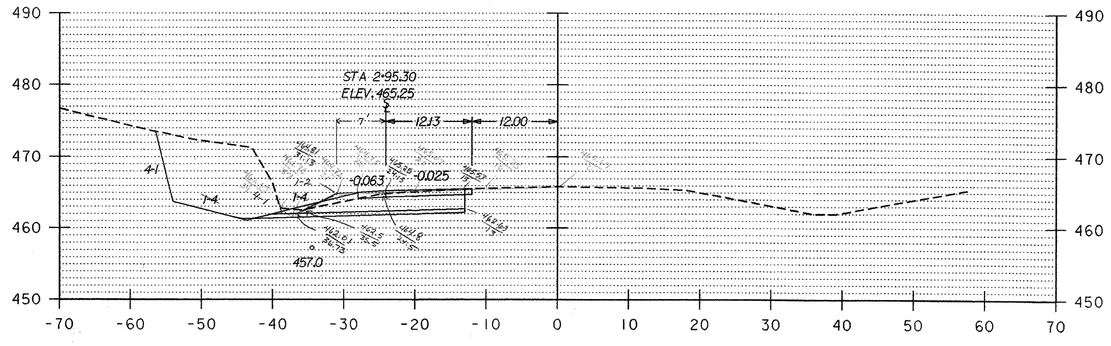


53+50



51+50

NOTE: NO SAND CUSHION USED



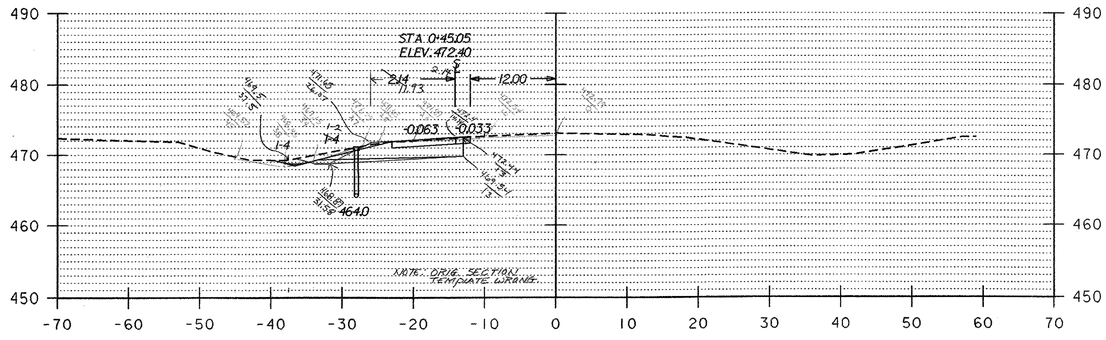
53+00

51+50 - 54+00

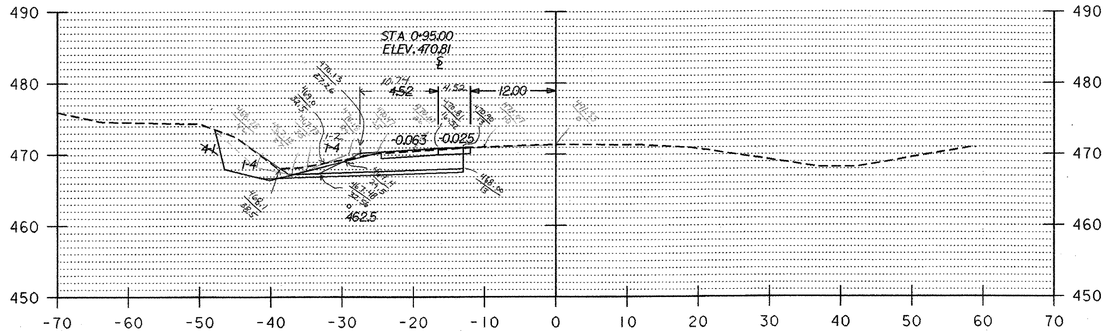
DATUM	
VERTICAL	ASSUMED
HORIZONTAL	N/A

0 10 20
SCALE IN FEET

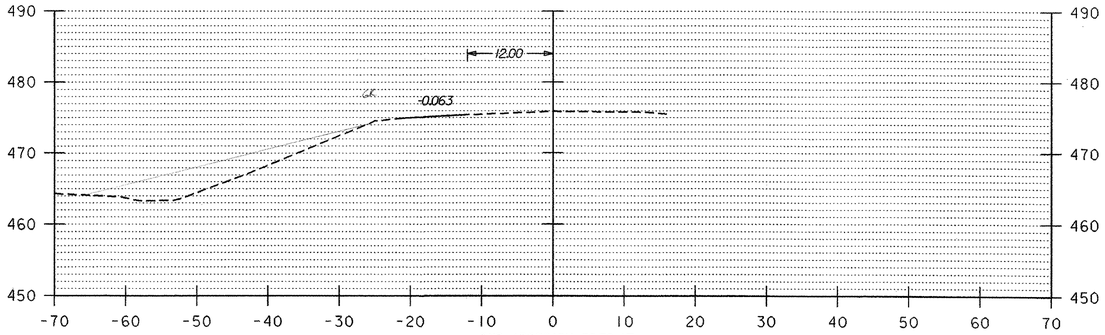
SURVEYED BY	Zambon	DATE 1/92
DRAWN BY	Ross	DATE 10/94
SQUAD LEADER	BOMBARDIER	
DESIGN FILE NO.	/sqda/87a008/da008int.dgn	
IPARM FILE	da008xs2.i	DATE PLOTTED 12-MAR-1999
PROJ. NAME	Hartford-Sharon-Royalton	
PROJ. NO.	IM IR 089-1(8)	
SHEET 159 OF 260 SHEETS		



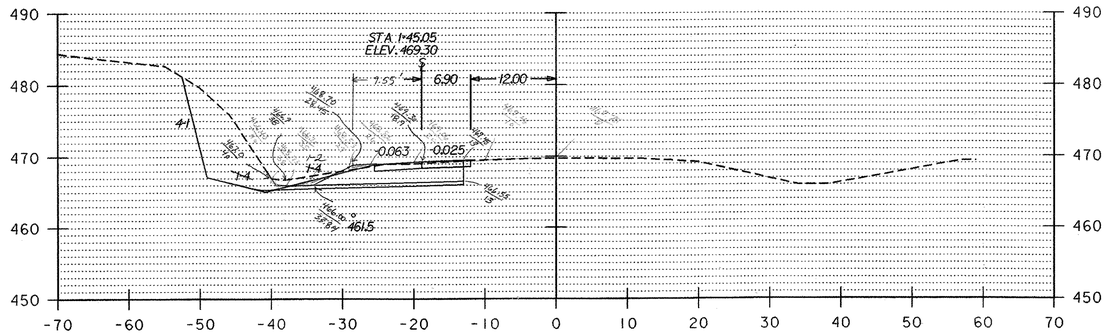
55+50



55+00

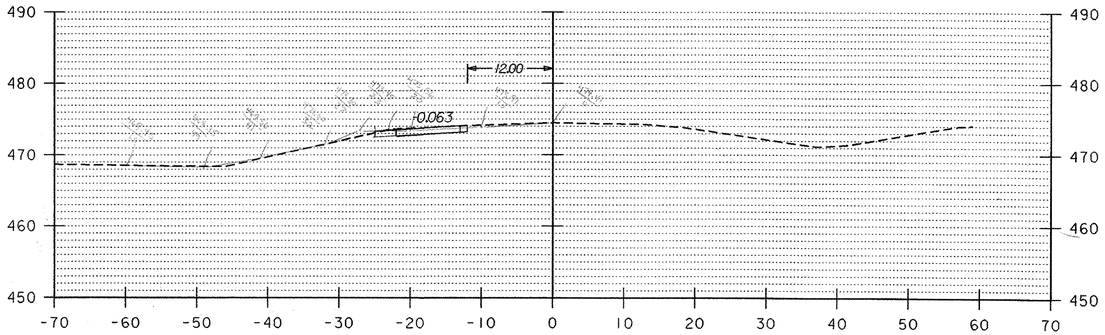


56+50



54+50

NOTE: NO SAND CUSHION USED



56+00

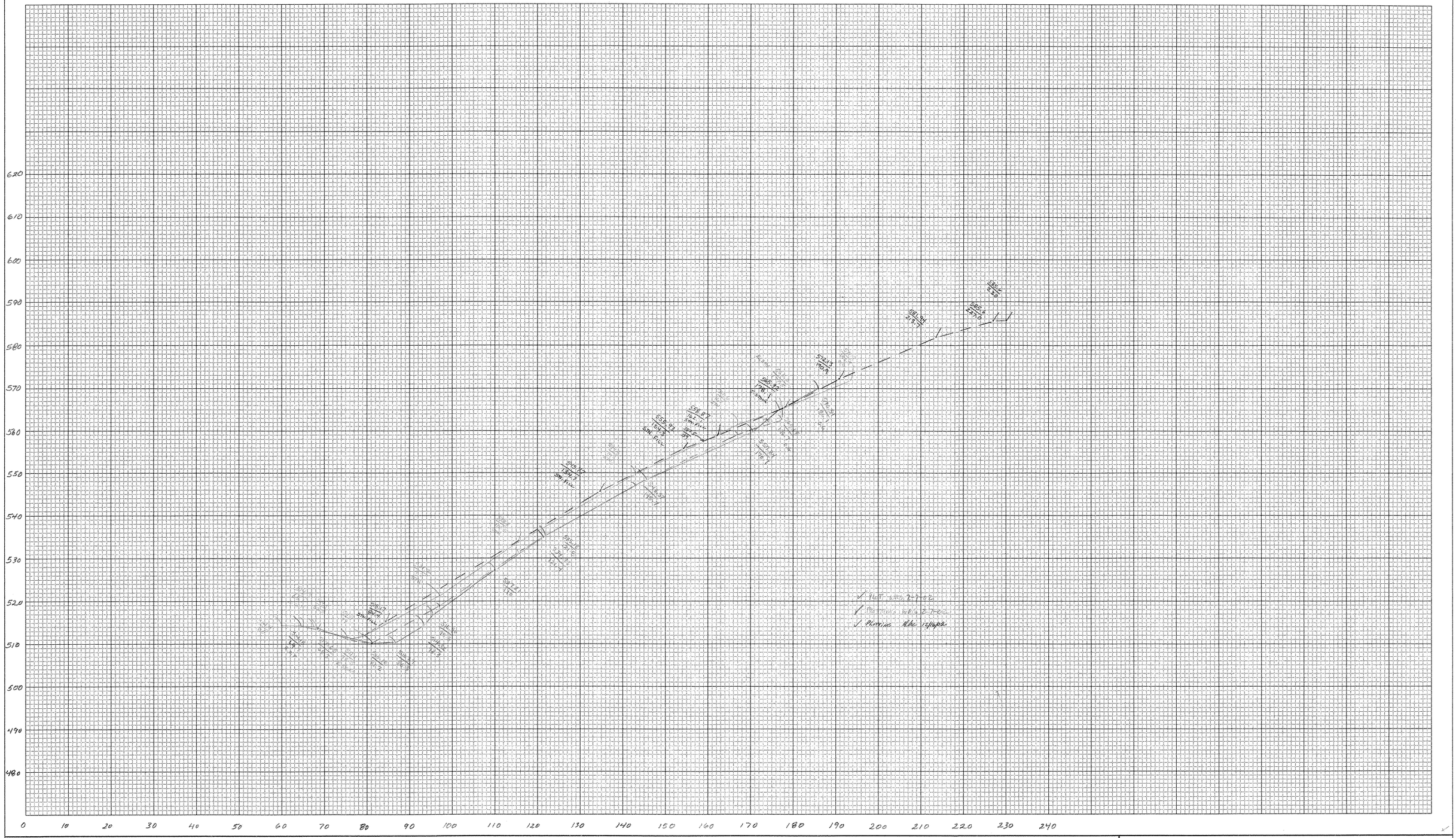
END DECELERATION LANE
BEGIN APPROACH 55+95 LT

54+50 - 56+00

DATUM
VERTICAL ASSUMED
HORIZONTAL N/A

0 10 20
SCALE IN FEET

SURVEYED BY Zambon DATE 1/92
DRAWN BY Ross DATE 10/94
SQUAD LEADER BOMBARDIER
DESIGN FILE NO. /sqda/87a008/da008int.dgn
IPARM FILE da008xs3.I DATE PLOTTED 12-MAR-1999
PROJ. NAME Hartford-Sharon-Royalton
PROJ. NO. IM IR 089-1(8)
SHEET 160 OF 260 SHEETS



BUTT STAGE FILL

647+75 (NB OUTSIDE) LEDGE REMOVAL

CROSS SECTION SHEET

PROJECT NAME: HARTFORD - ROYALTON

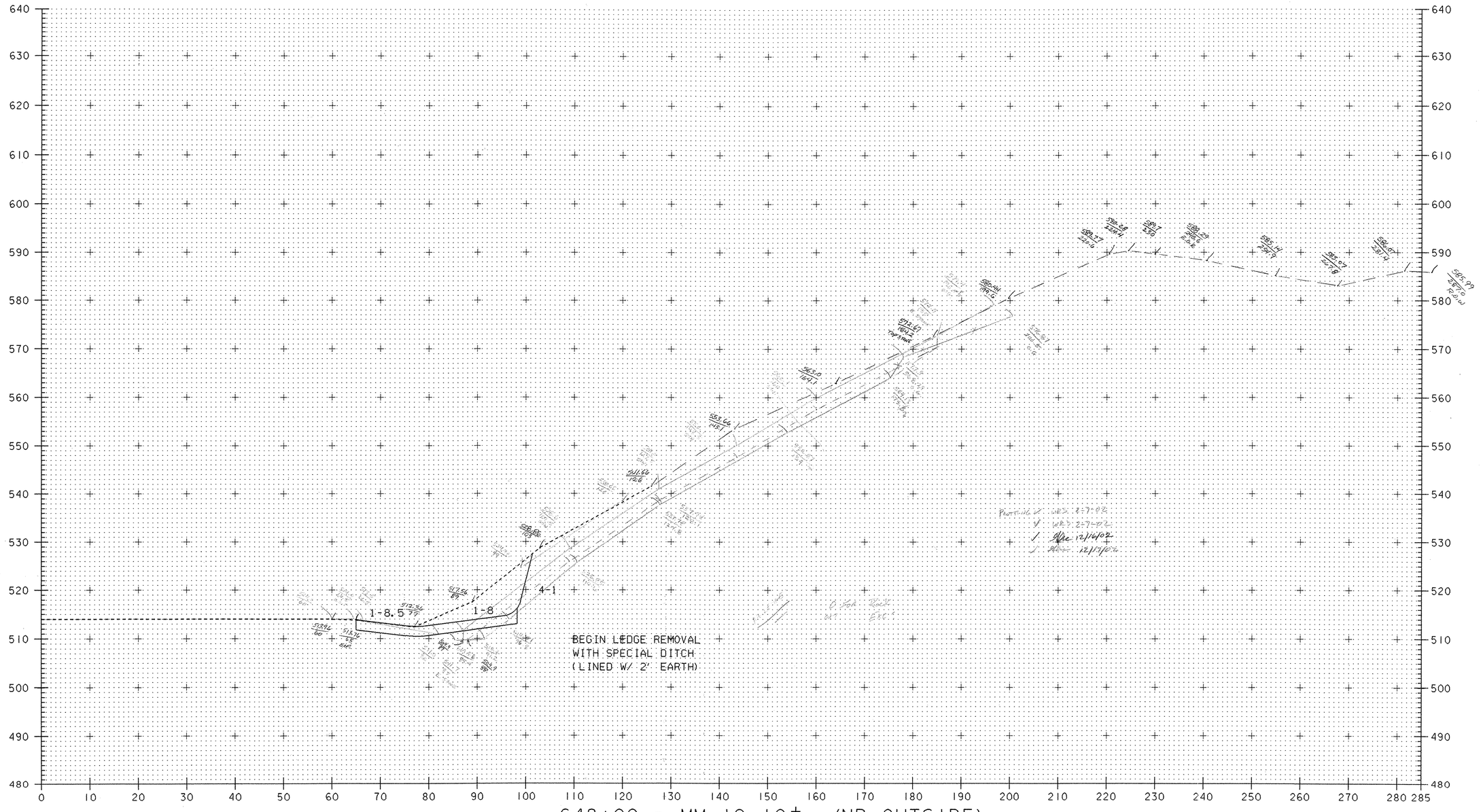
PROJECT NUMBER: IM IR 089-1(8)

FILE NAME: _____ PLOT DATE: 05-JUN-2000 09

PROJECT LEADER: _____ DRAWN BY: _____

DESIGNED BY: _____ CHECKED BY: _____

const: g:/common/cadd/e-xsection.dgn SHEET 160A OF _____



648+00 = MM 12.10± (NB OUTSIDE)
LEDGE REMOVAL

SCALE IN FEET

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mml2.dgn
IPARM FILE NAME: ml2xs01.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 161 OF 260

648+25 (NB OUTSIDE)

LEDGE REMOVAL

0 10 20

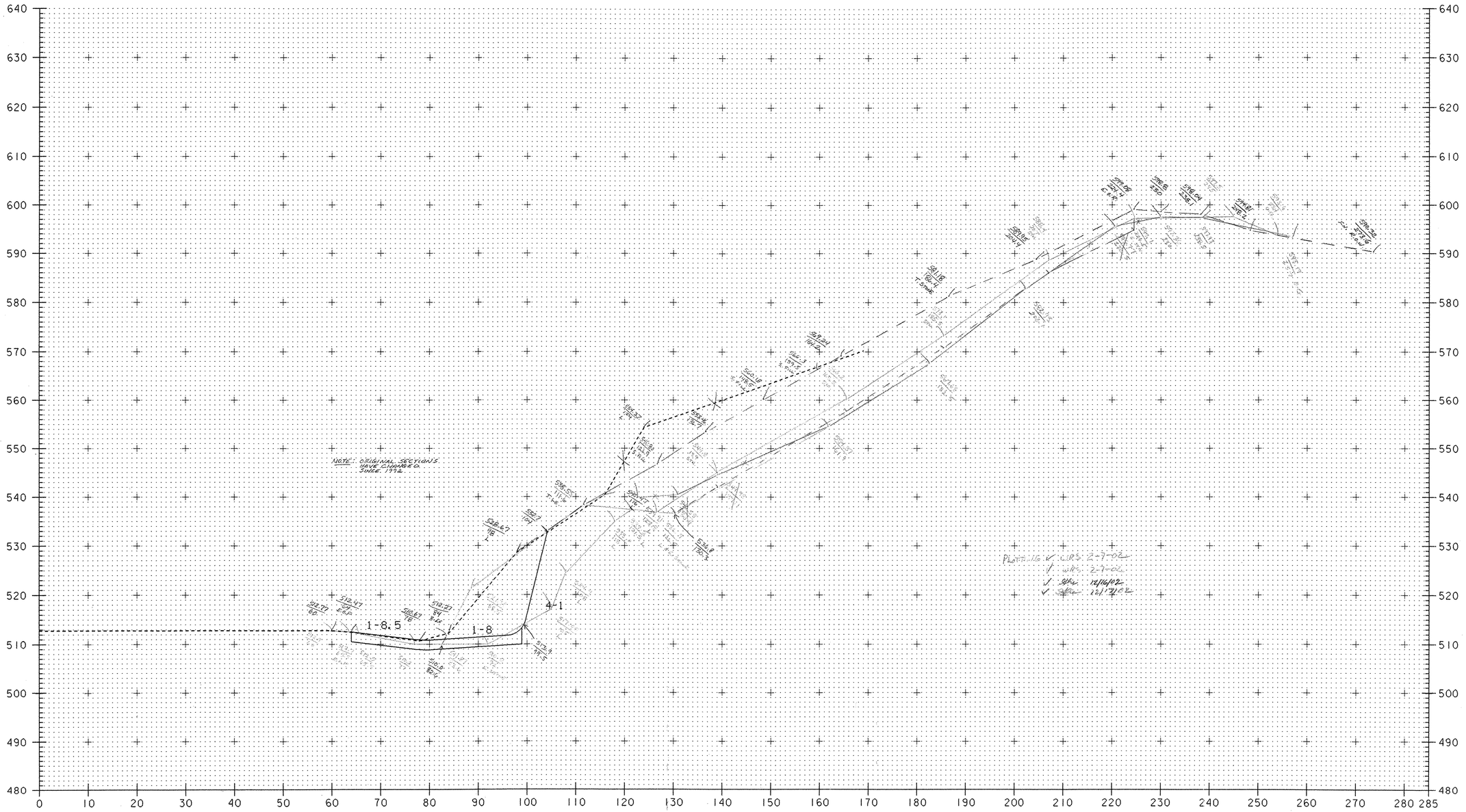
SCALE IN FEET

DATUM

VERTICAL assumed 500

HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mml2.dgn	
IPARM FILE NAME: ml2xs02.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: fall 92
SQUAD LEADER: a. kreis	DRAWN BY: jf gruchacz
	SHEET: 162 OF 260



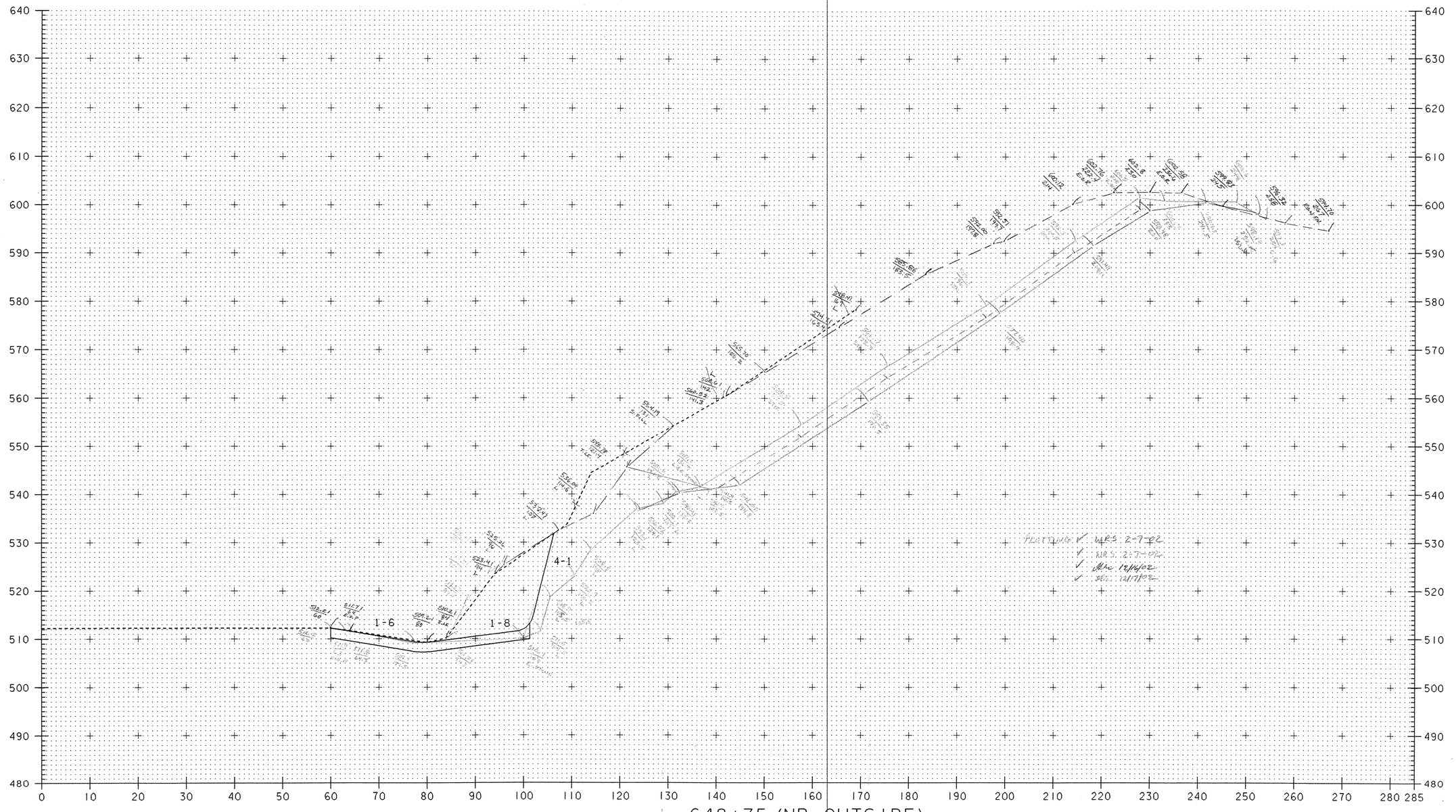
648+50 (NB OUTSIDE)
LEDGE REMOVAL

SCALE IN FEET: 0 10 20

DATUM	
VERTICAL	assumed 500
HORIZONTAL	n/a

PROJECT:	PROJECT NO.:
HARTFORD-ROYALTON	IM IR 089-1(8)

DESIGN FILE NAME:	/sqda/87a008/mml2.dgn	
IPARM FILE NAME:	ml2xs03.i	PLOT DATE: 12-MAR-1999
SURVEYED BY:	gilman	SURVEY DATE: fall 92
SQUAD LEADER:	a. kreis	DRAWN BY: jf gruchacz
		SHEET: 163 OF 260



648+75 (NB OUTSIDE)

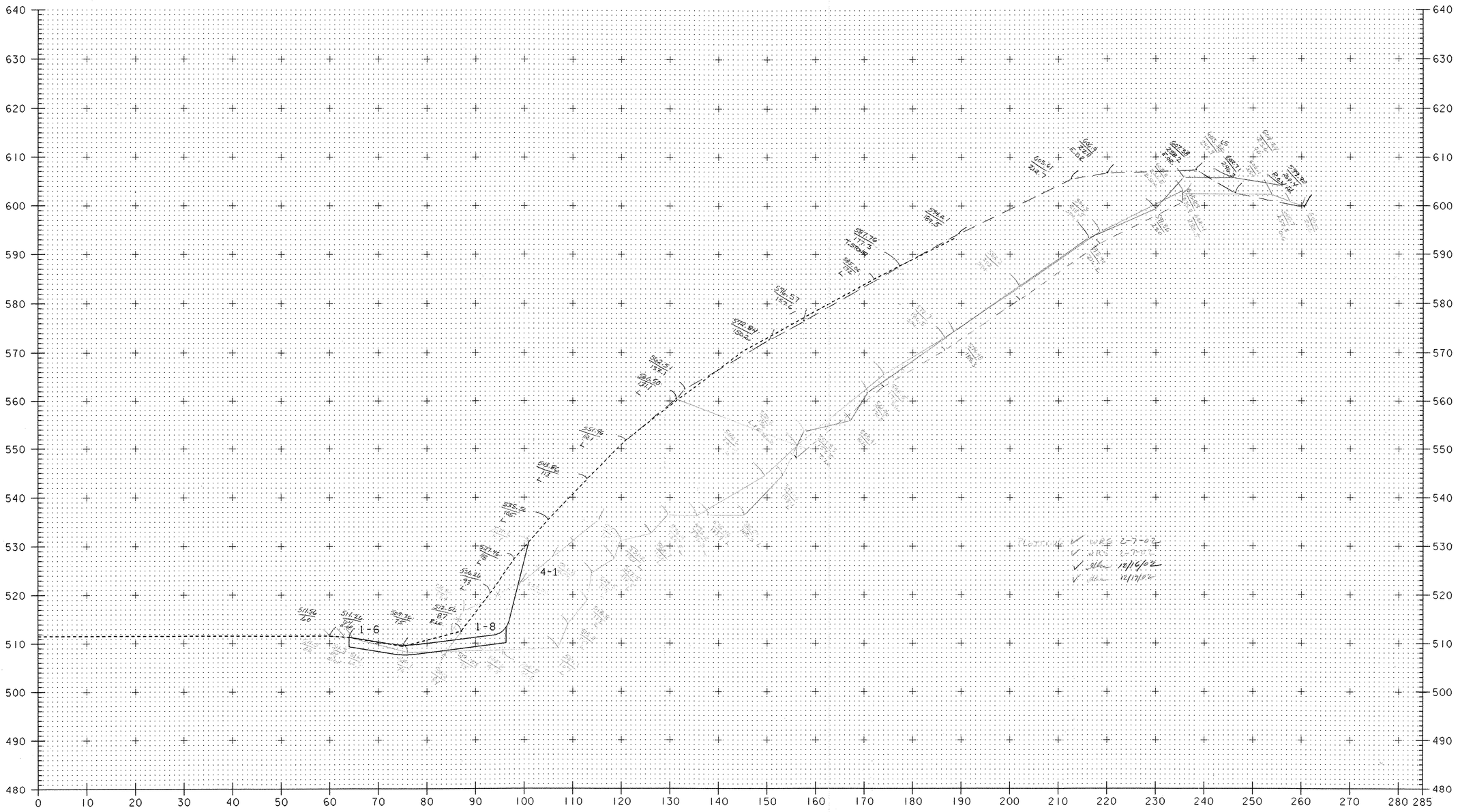
LEDGE REMOVAL

PLOTTING ✓ WRS 2-7-92
✓ WRS 2-7-92
✓ MM 12/14/92
✓ MM 12/17/92

0 10 20
SCALE IN FEET

DATUM	
VERTICAL	assumed 500
HORIZONTAL	n/a

PROJECT: HARTFORD-ROYALTON		PROJECT NO.: IM IR 089-1(8)	
DESIGN FILE NAME:	/sqda/87a008/mml2.dgn		
IPARM FILE NAME:	ml2xs04.i	PLOT DATE:	12-MAR-1999
SURVEYED BY:	gilman	SURVEY DATE:	fall 92
SQUAD LEADER:	a. kreis	DRAWN BY:	jf gruchacz
		SHEET:	164 OF 260



649+00 (NB OUTSIDE)

LEDGE REMOVAL

0 10 20

SCALE IN FEET

DATUM

VERTICAL assumed 500

HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON

PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mml2.dgn

IPARM FILE NAME: ml2xs05.i

SURVEYED BY: gllman

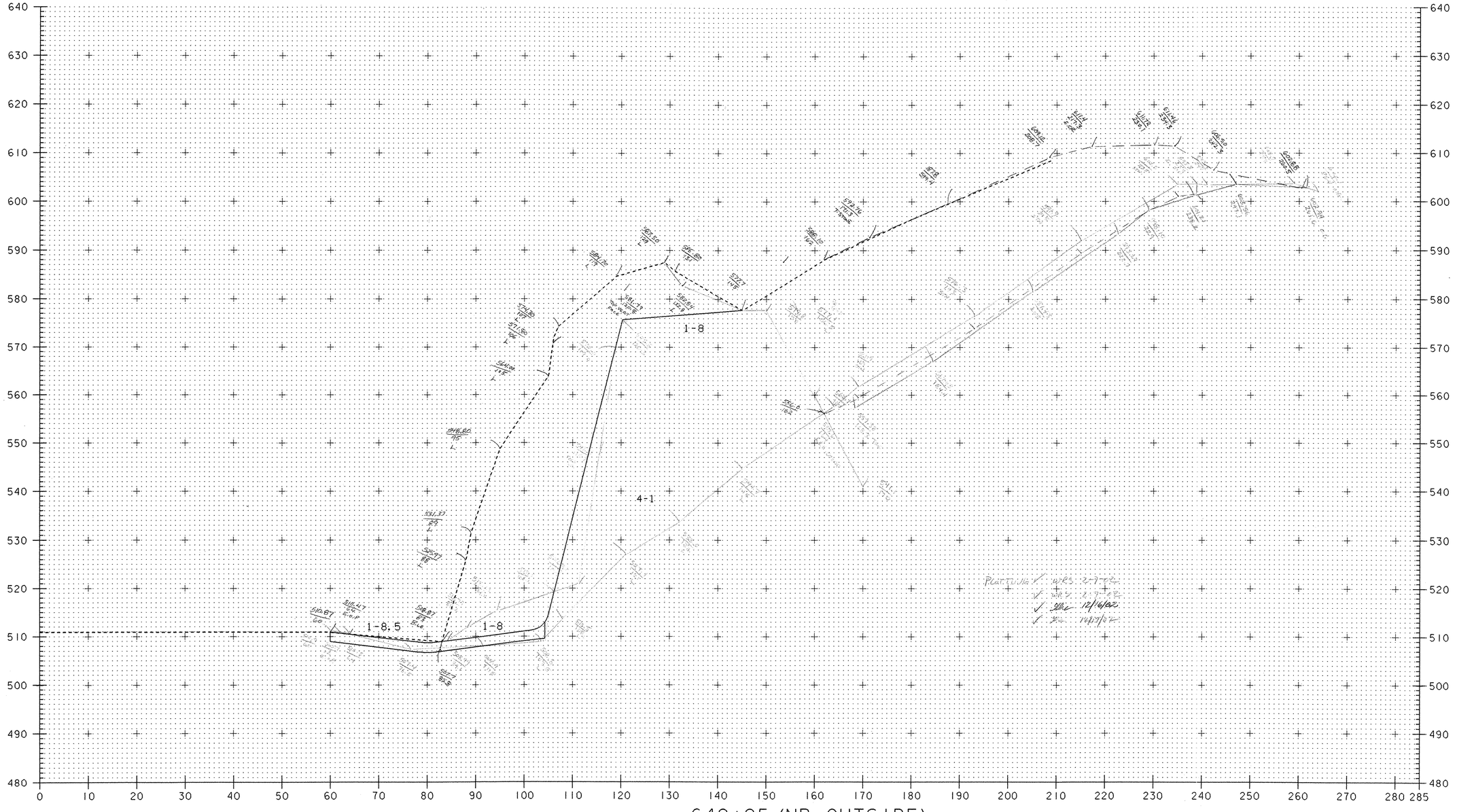
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999

SURVEY DATE: fall 92

DRAWN BY: jf gruchacz

SHEET: 165 OF 260



649+25 (NB OUTSIDE)

LEDGE REMOVAL

SCALE IN FEET 0 10 20

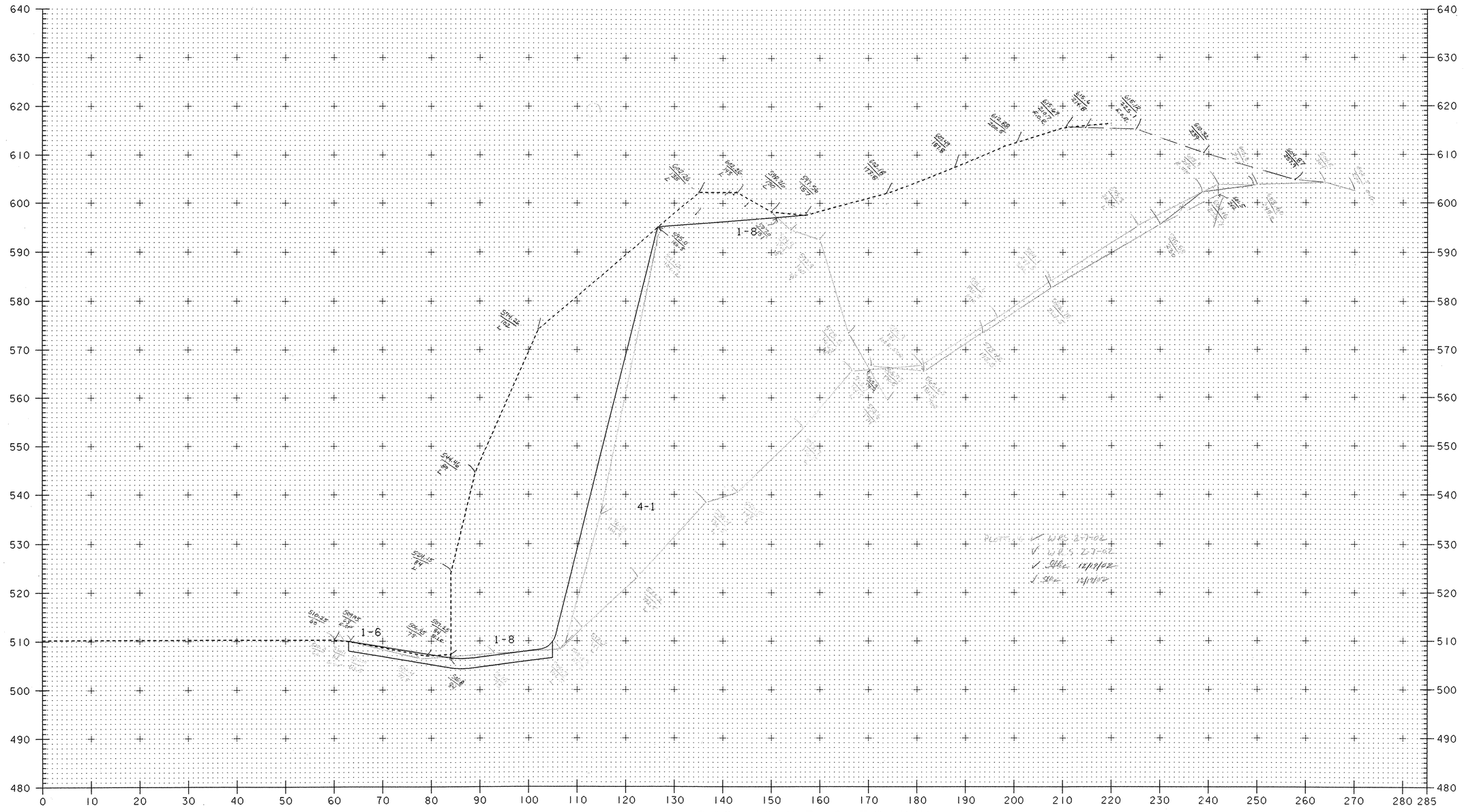
DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON

PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mml2.dgn
IPARM FILE NAME: ml2xs06.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 166 OF 260



649+50 (NB OUTSIDE)

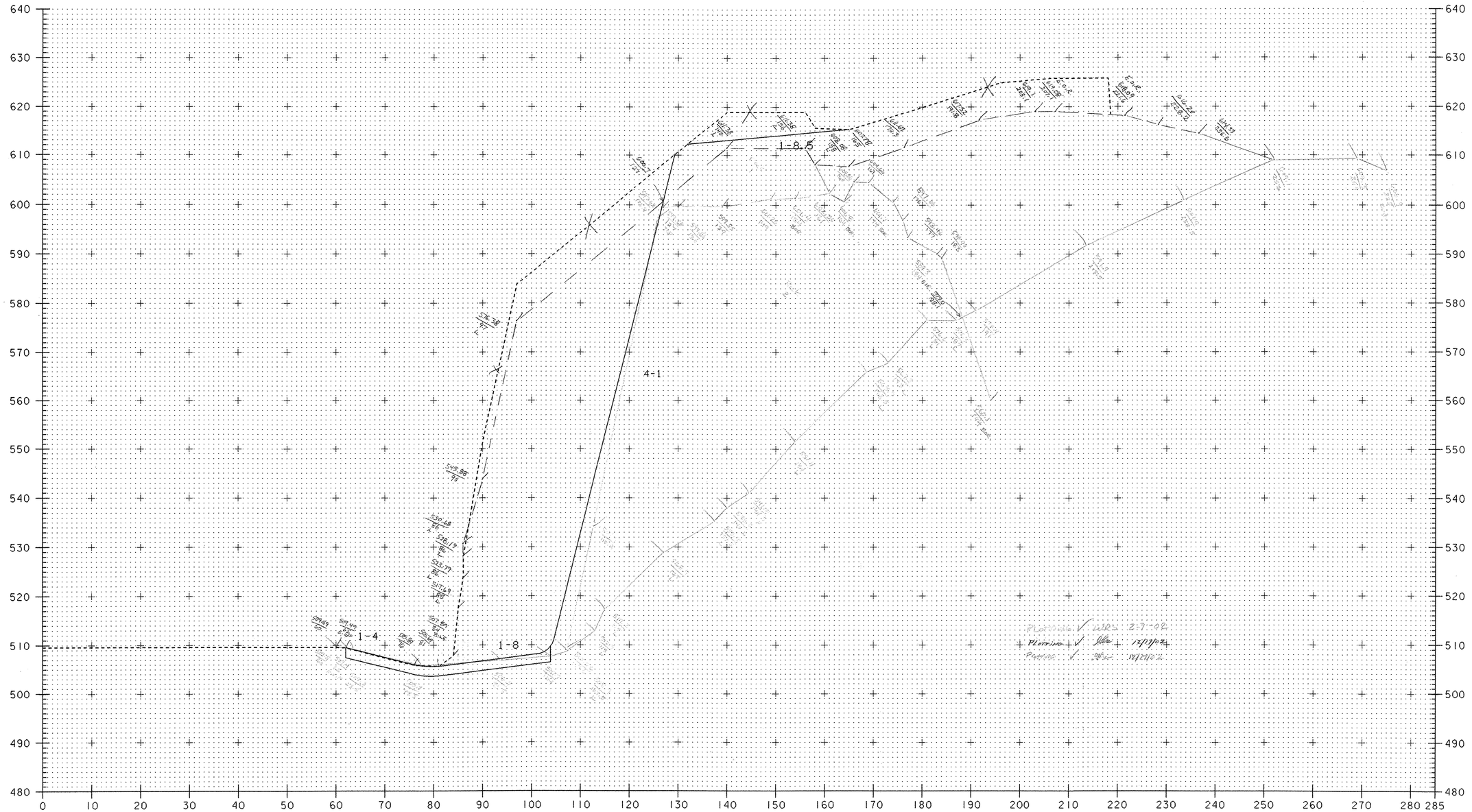
LEDGE REMOVAL

0 10 20

SCALE IN FEET

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mm12.dgn	
IPARM FILE NAME: m12xs07.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: fall 92
SQUAD LEADER: a. kreis	DRAWN BY: jf gruchacz
	SHEET: 167 OF 260



649+75 (NB OUTSIDE)

LEDGE REMOVAL

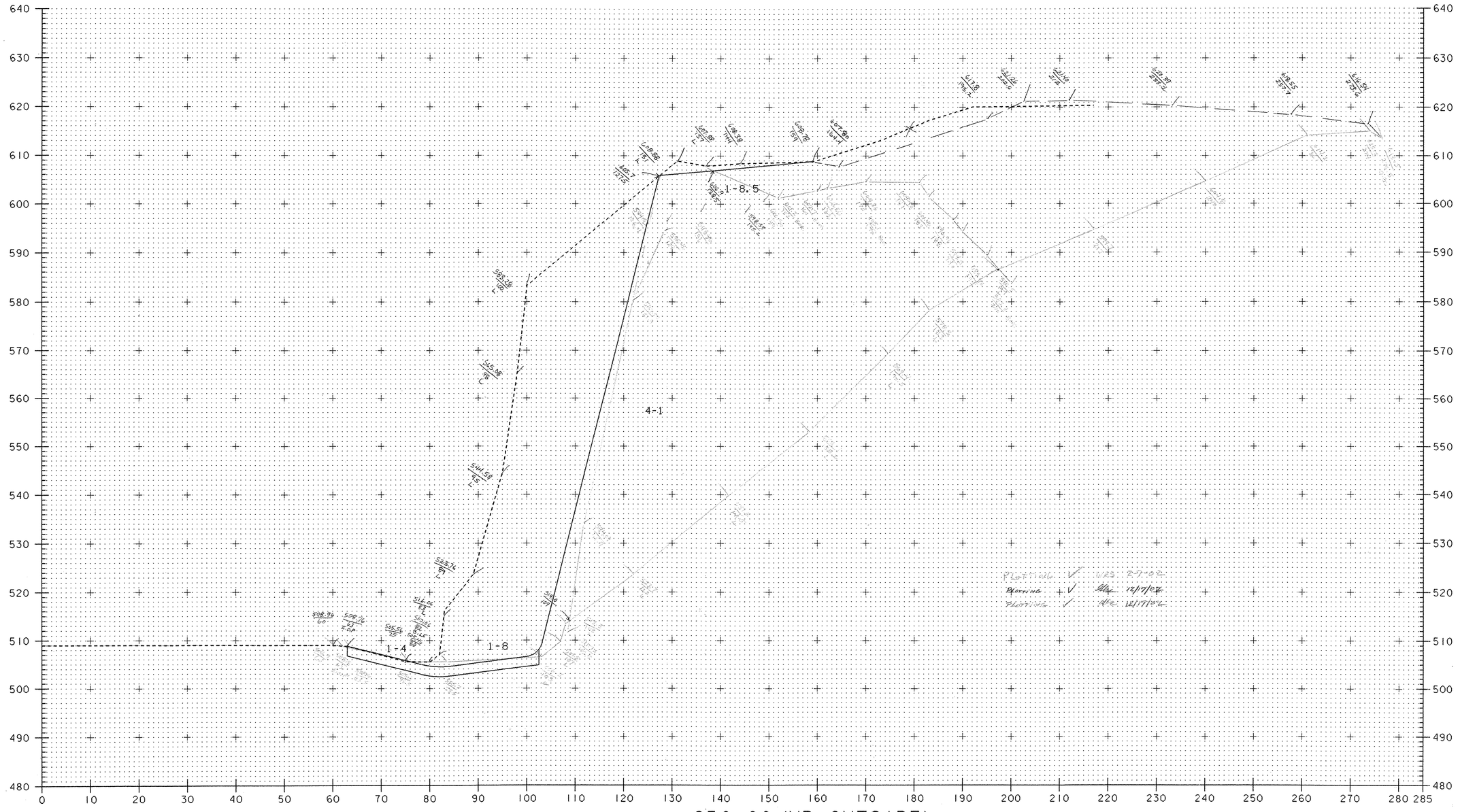
SCALE IN FEET 0 10 20

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mml2.dgn
IPARM FILE NAME: ml2xs08.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 168 OF 260



650+00 (NB OUTSIDE)

LEDGE REMOVAL

0 10 20

SCALE IN FEET

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

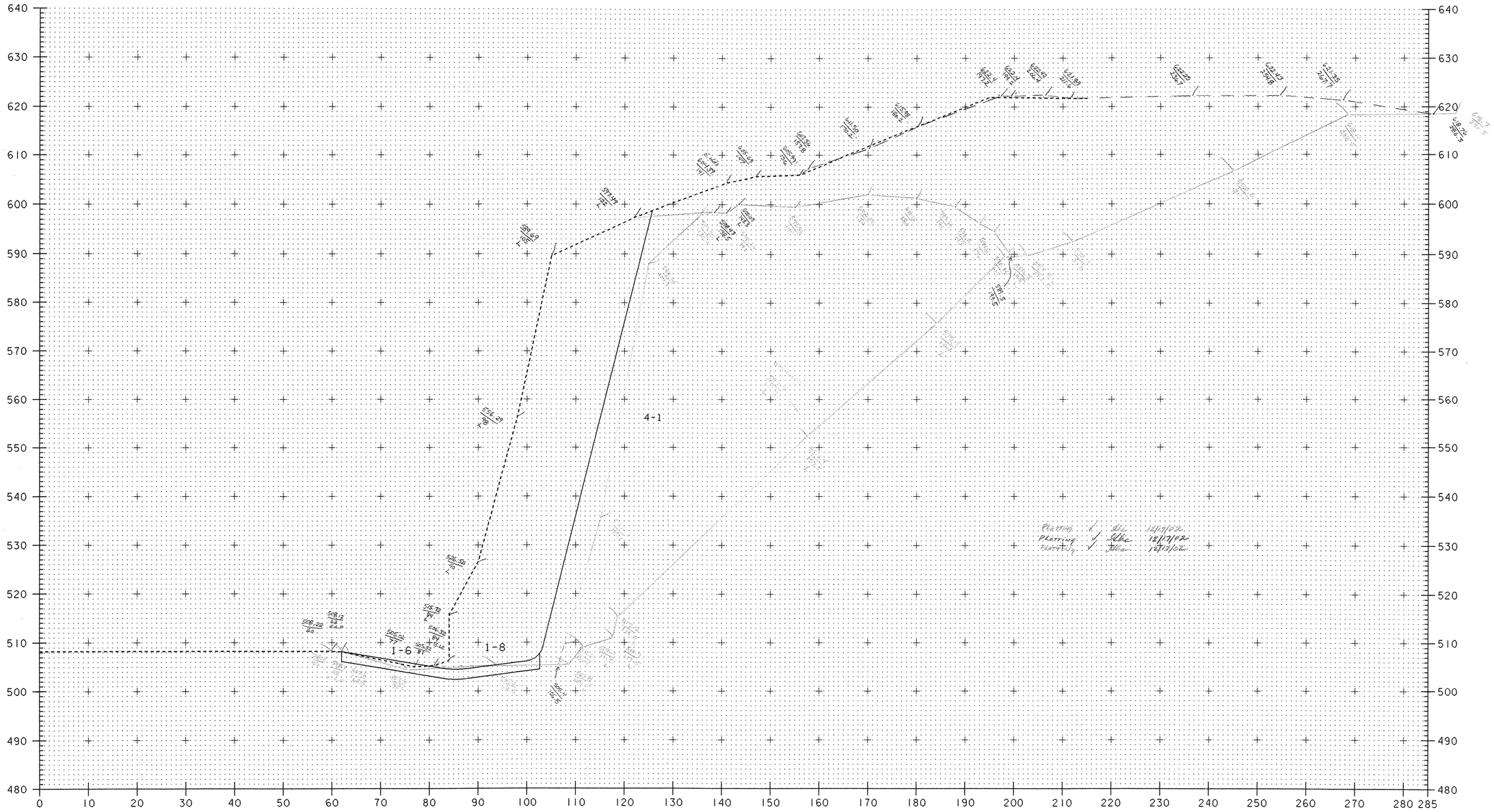
PROJECT: HARTFORD-ROYALTON

PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mml2.dgn
IPARM FILE NAME: ml2xs09.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 169 OF 260

: Sheet Number: 170



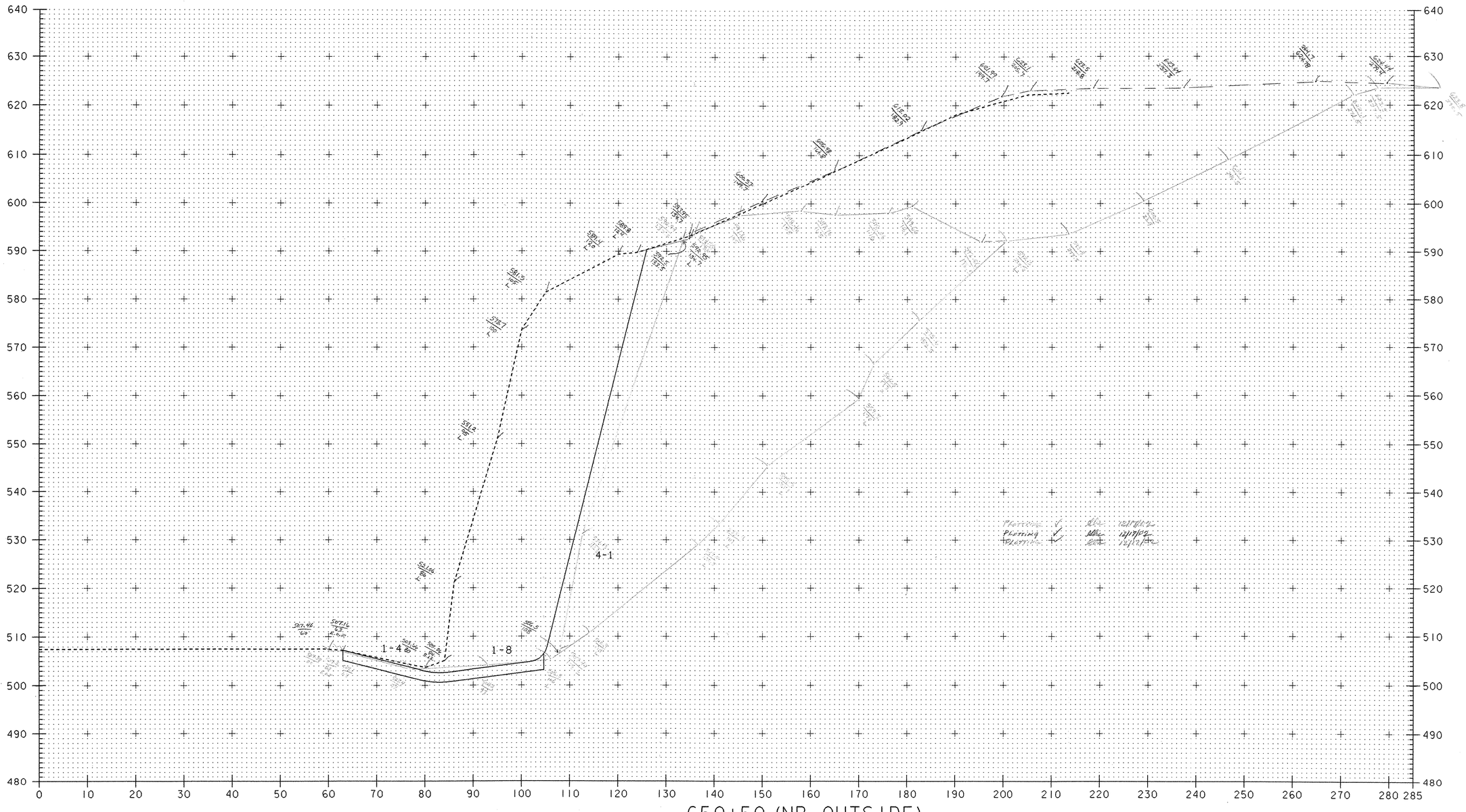
650+25 (NB OUTSIDE)

LEDGE REMOVAL

SCALE IN FEET 0 10 20

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mml2.dgn	
IPARM FILE NAME: ml2xs10.1	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: fall 92
SQUAD LEADER: a. kreis	DRAWN BY: jf gruchacz
	SHEET: 170 OF 260



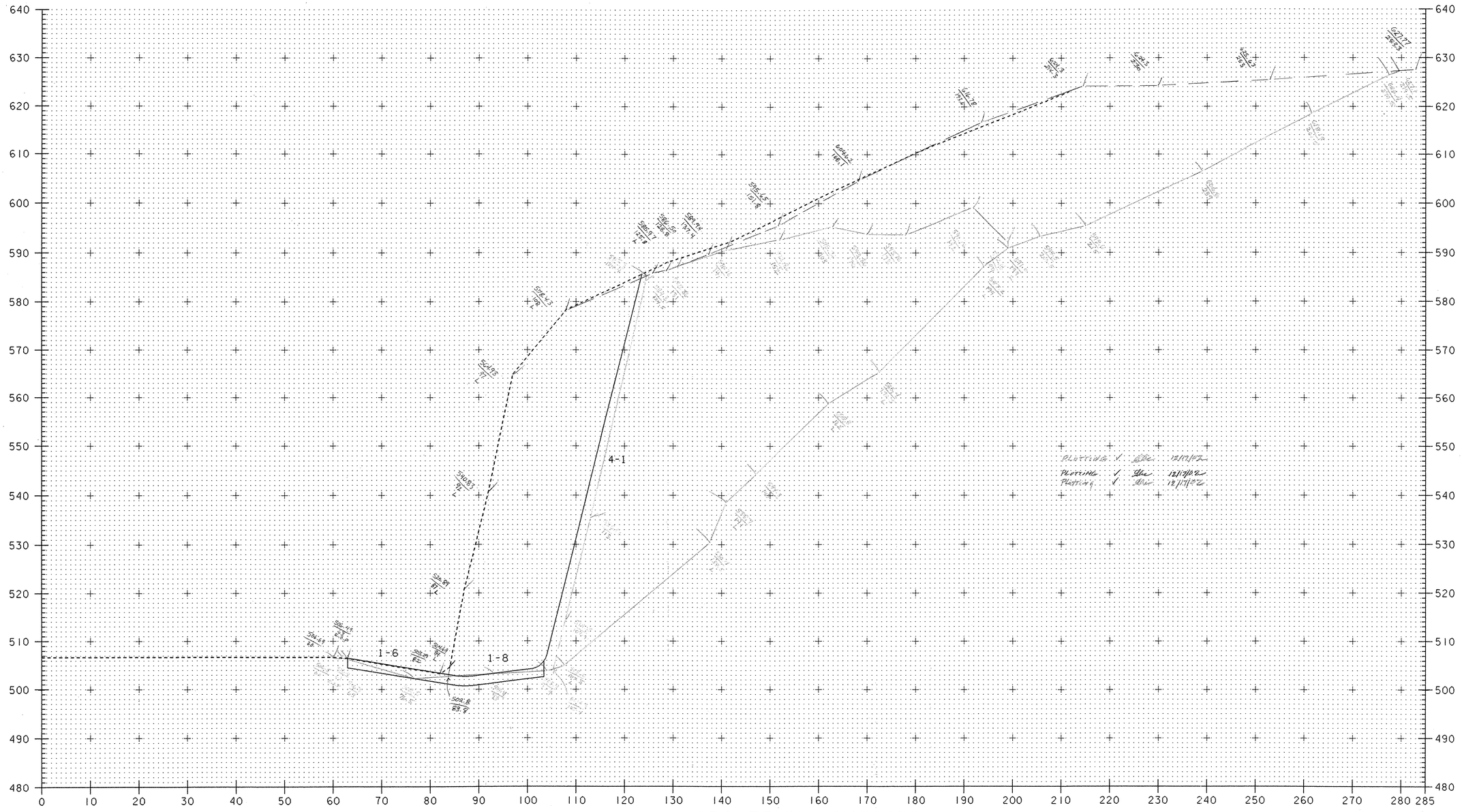
650+50 (NB OUTSIDE)

LEDGE REMOVAL

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

0 10 20
SCALE IN FEET

PROJECT: HARTFORD-ROYALTON
PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mm12.dgn
IPARM FILE NAME: m12xsll.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis
PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 171 OF 260



650+75 (NB OUTSIDE)

LEDGE REMOVAL

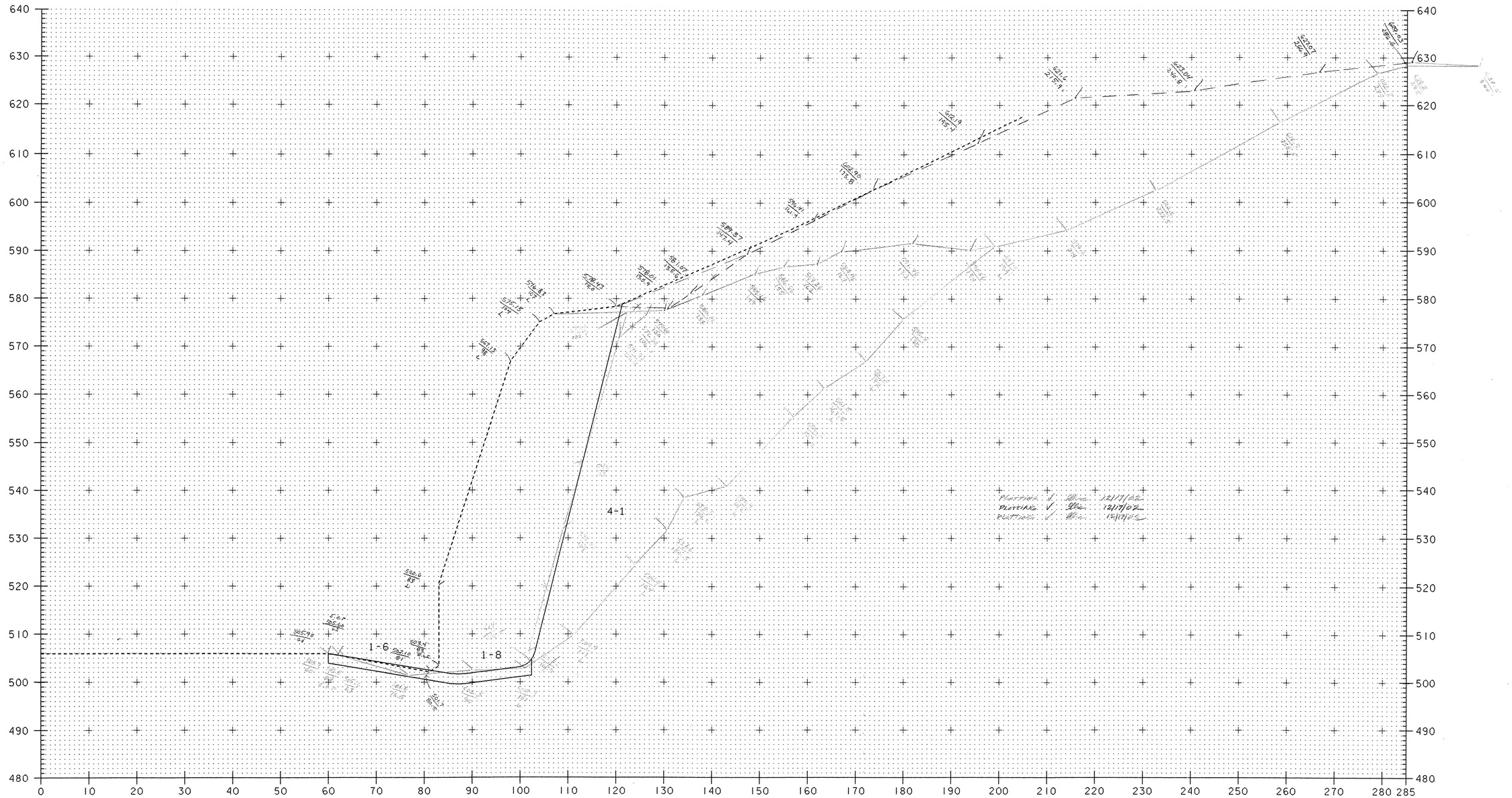
SCALE IN FEET 0 10 20

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mm12.dgn
IPARM FILE NAME: m12xsl2.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 172 OF 260



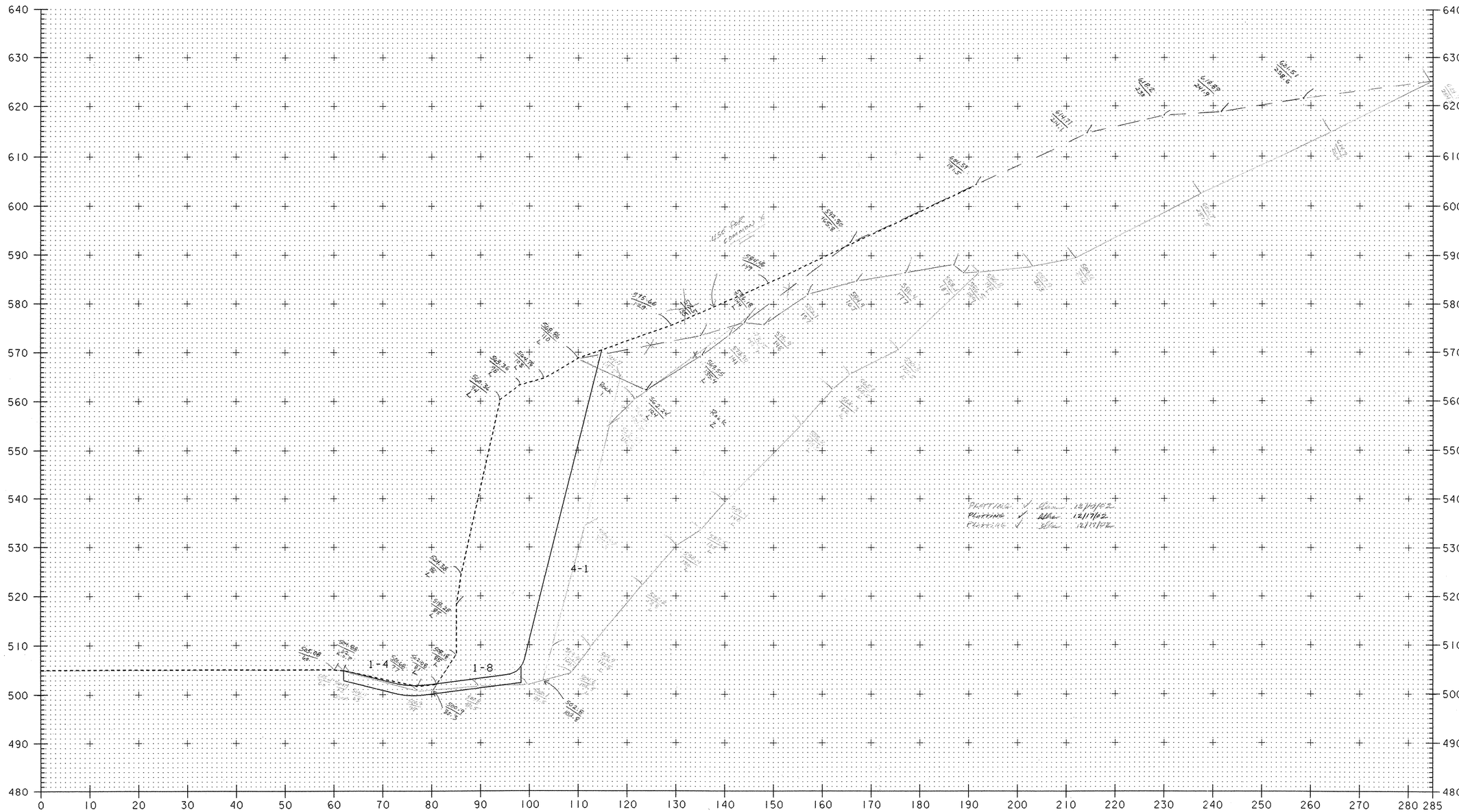
651+00 (NB OUTSIDE)

LEDGE REMOVAL

SCALE IN FEET: 0 10 20

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mm12.dgn	
IPARM FILE NAME: m12xsl3.i	
SURVEYED BY: gilman	PLOT DATE: 12-MAR-1999
SQUAD LEADER: a. kreis	SURVEY DATE: fall 92
	DRAWN BY: jf gruchacz
	SHEET: 173 OF 260



651+25 (NB OUTSIDE)

LEDGE REMOVAL

SCALE IN FEET 0 10 20

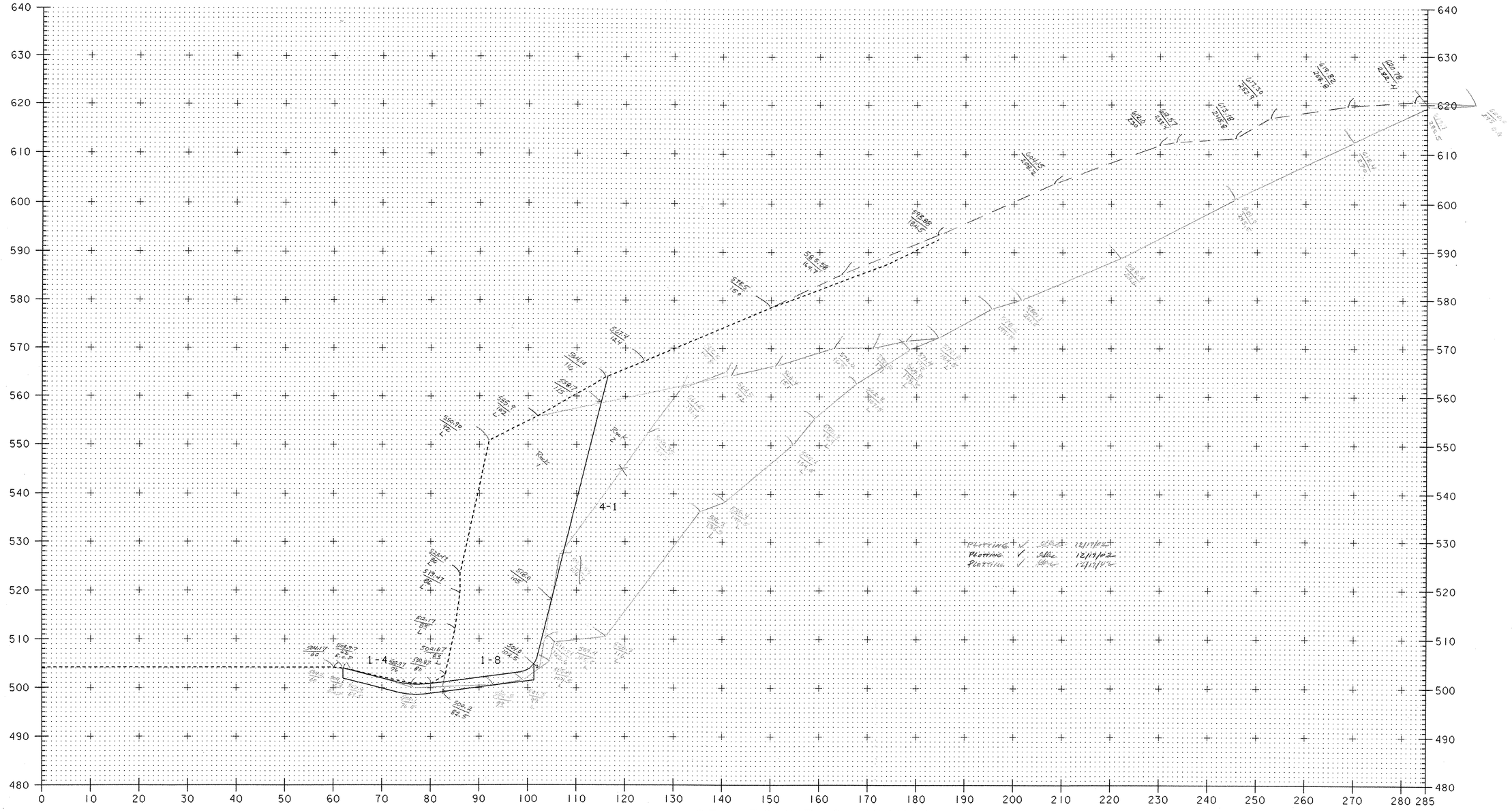
DATUM
VERTICAL assumed 500
HORIZONTAL n/a

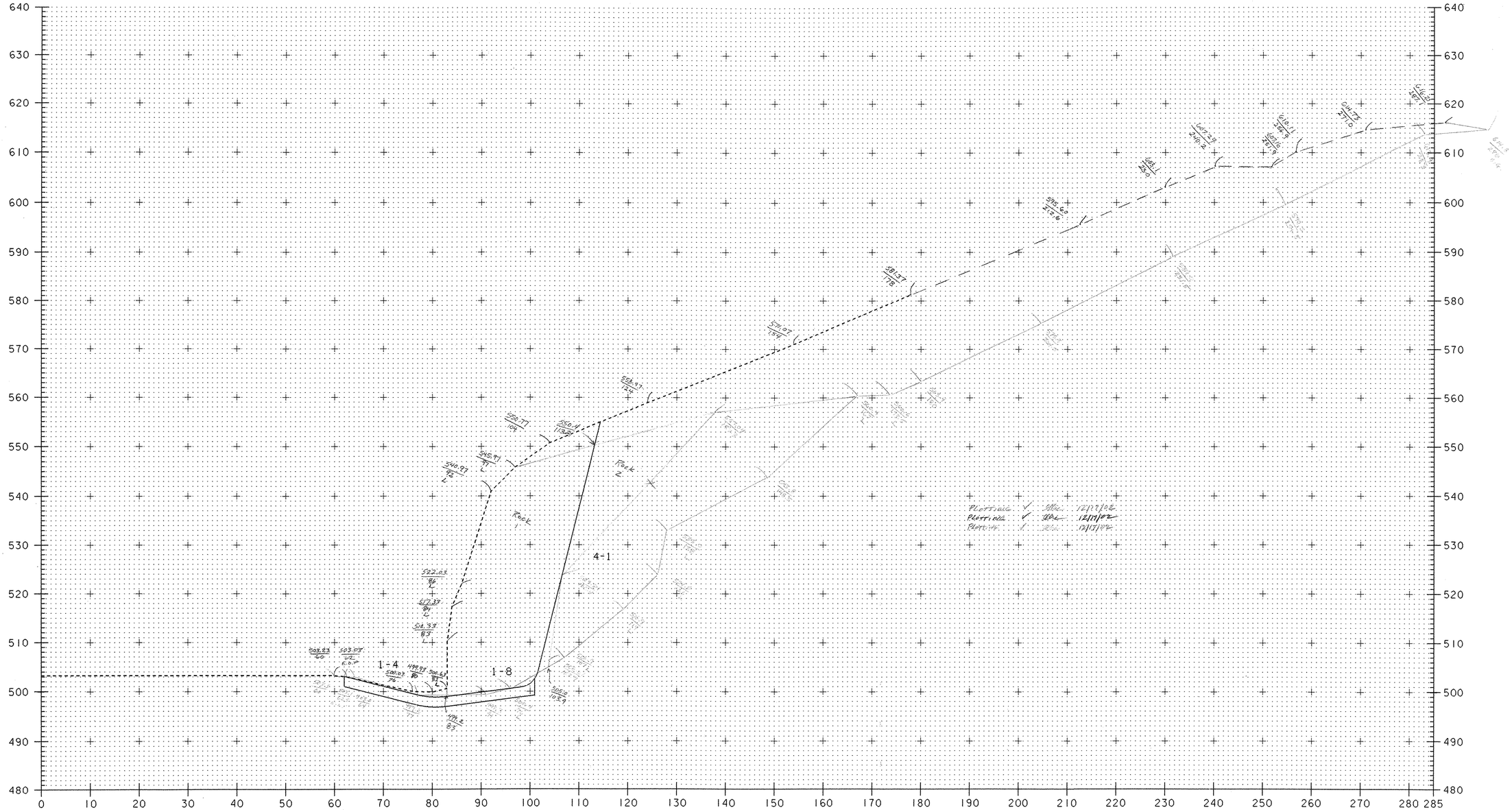
PROJECT: HARTFORD-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mml2.dgn
IPARM FILE NAME: ml2xsl4.i
SURVEYED BY: gllman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 174 OF 260

: Sheet Number: 174


4-1
1-4
1-8
Rock
Rock
Rock



651+75 (NB OUTSIDE)

LEDGE REMOVAL

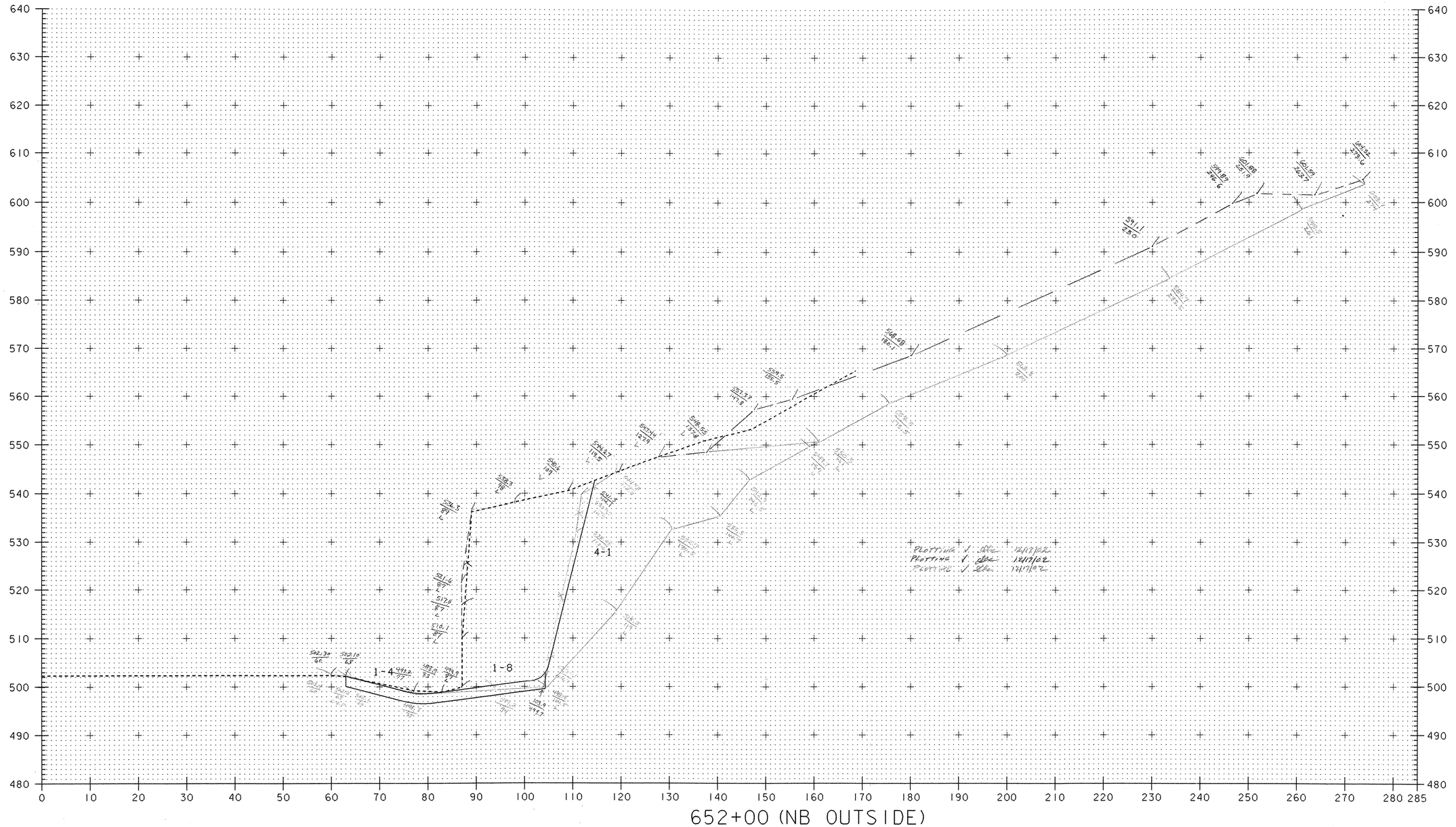
SCALE IN FEET 0 10 20

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqdo/87a008/mml2.dgn
IPARM FILE NAME: ml2xsl6.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 176 OF 260



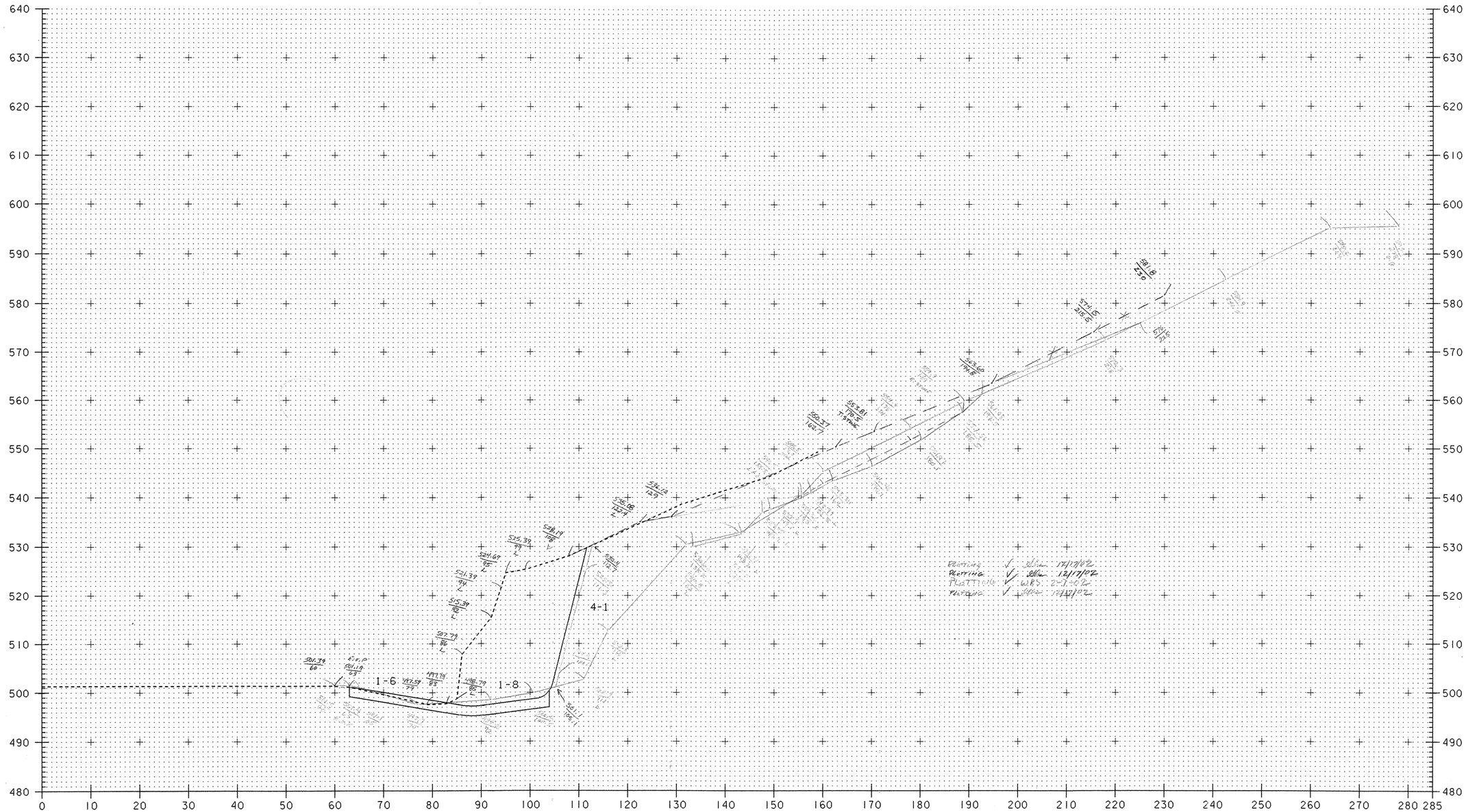
652+00 (NB OUTSIDE)

LEDGE REMOVAL

SCALE IN FEET 0 10 20

DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mml2.dgn	
IPARM FILE NAME: ml2xsl7.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: fall 92
SQUAD LEADER: a. kreis	DRAWN BY: jf gruchacz
	SHEET: 177 OF 260



652+25 (NB OUTSIDE)

LEDGE REMOVAL

SCALE IN FEET 0 10 20

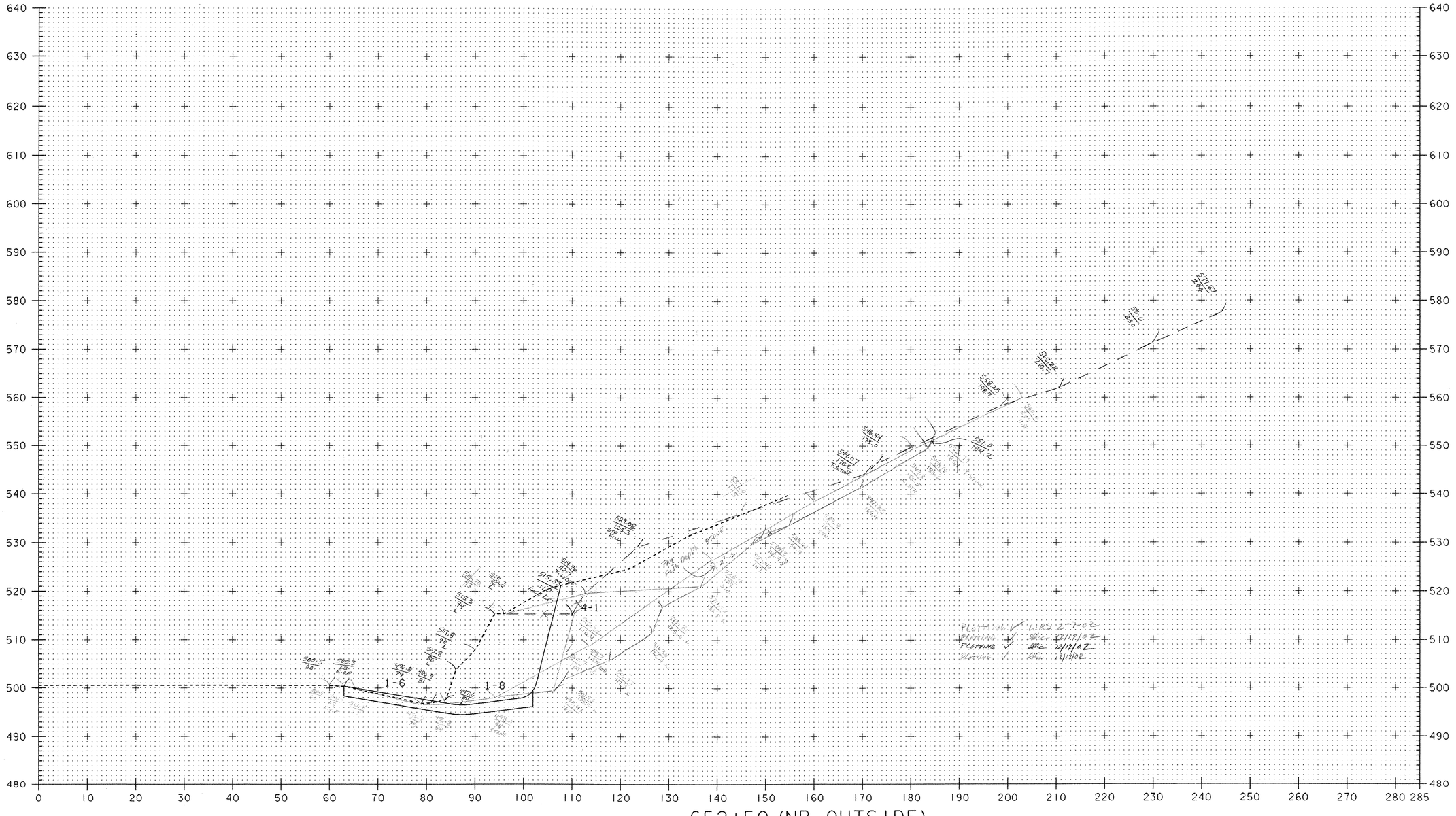
DATUM
VERTICAL assumed 500
HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON

PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /sqda/87a008/mml2.dgn
IPARM FILE NAME: ml2xsl8.i
SURVEYED BY: gilman
SQUAD LEADER: a. kreis

PLOT DATE: 12-MAR-1999
SURVEY DATE: fall 92
DRAWN BY: jf gruchacz
SHEET: 178 OF 260



652+50 (NB OUTSIDE)

LEDGE REMOVAL

0 10 20

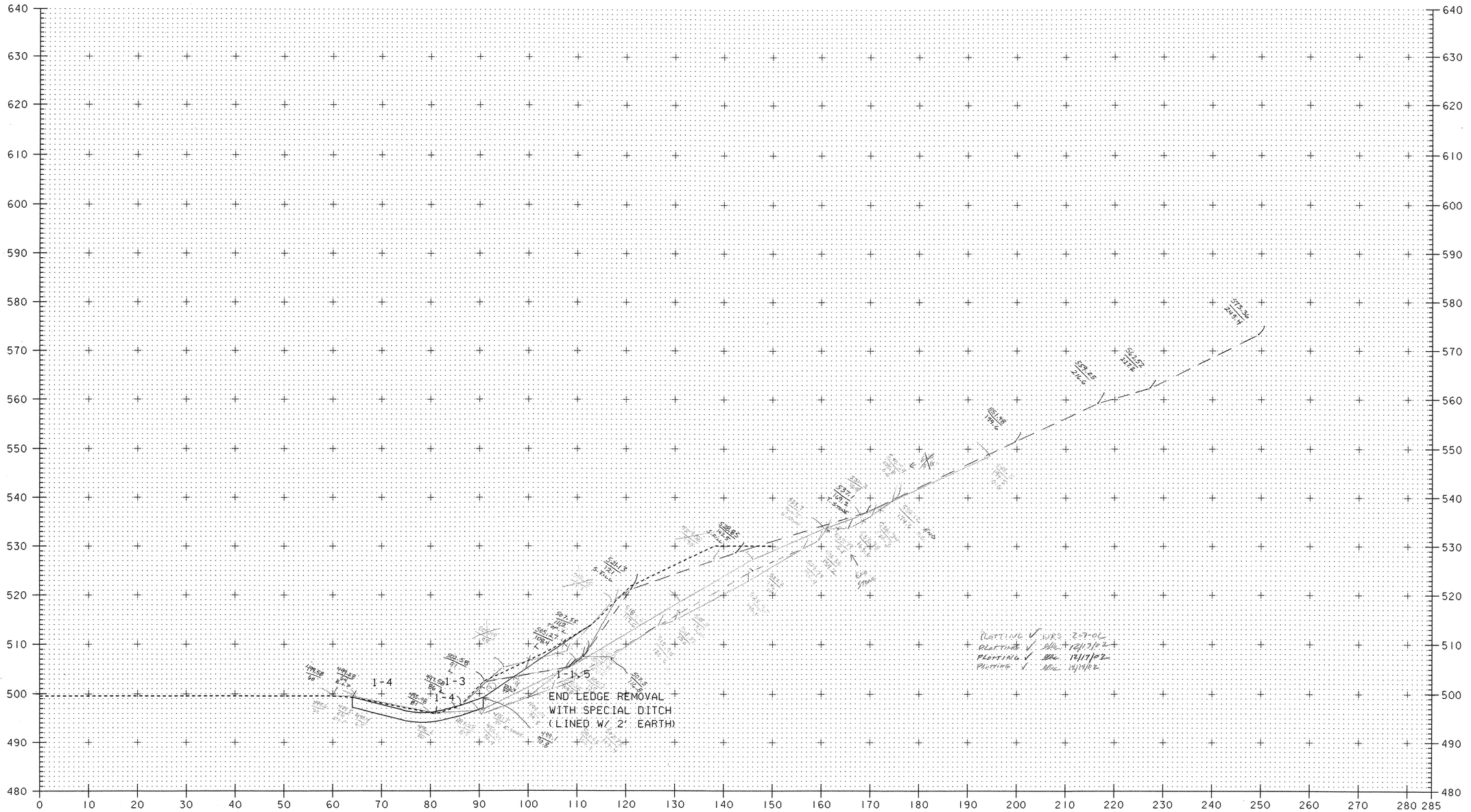
SCALE IN FEET

DATUM

VERTICAL assumed 500

HORIZONTAL n/a

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mm12.dgn	
IPARM FILE NAME: m12xsl9.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: fall 92
SQUAD LEADER: a. kreis	DRAWN BY: jf gruchacz
	SHEET: 179 OF 260



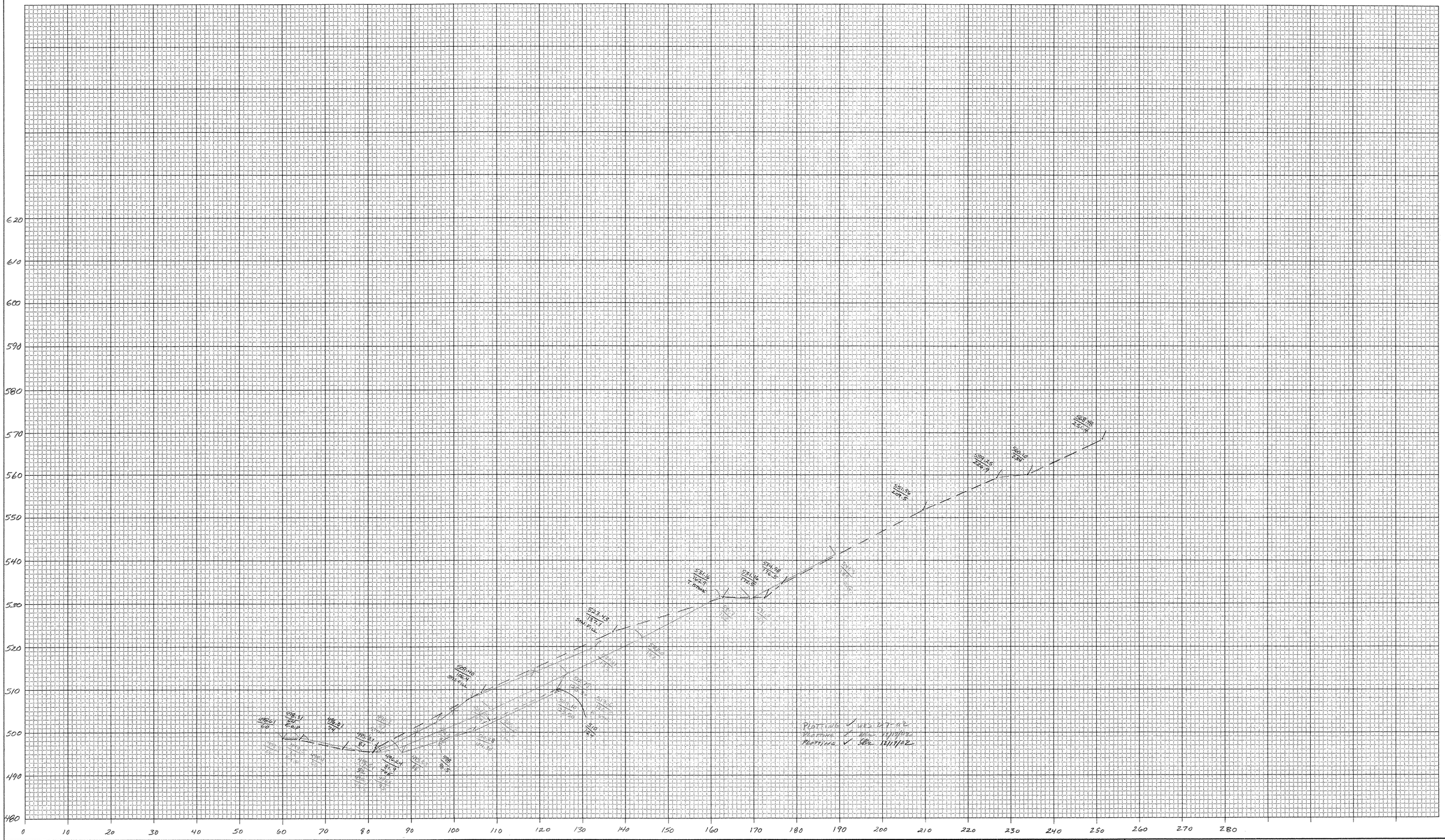
652+75 (NB OUTSIDE)

LEDGE REMOVAL

SCALE IN FEET 0 10 20

DATUM	
VERTICAL	assumed 500
HORIZONTAL	n/a

PROJECT: HARTFORD-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008/mm12.dgn	
IPARM FILE NAME: mi2xs20.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: fall 92
SQUAD LEADER: a. kreis	DRAWN BY: jf gruchacz
	SHEET: 180 OF 260

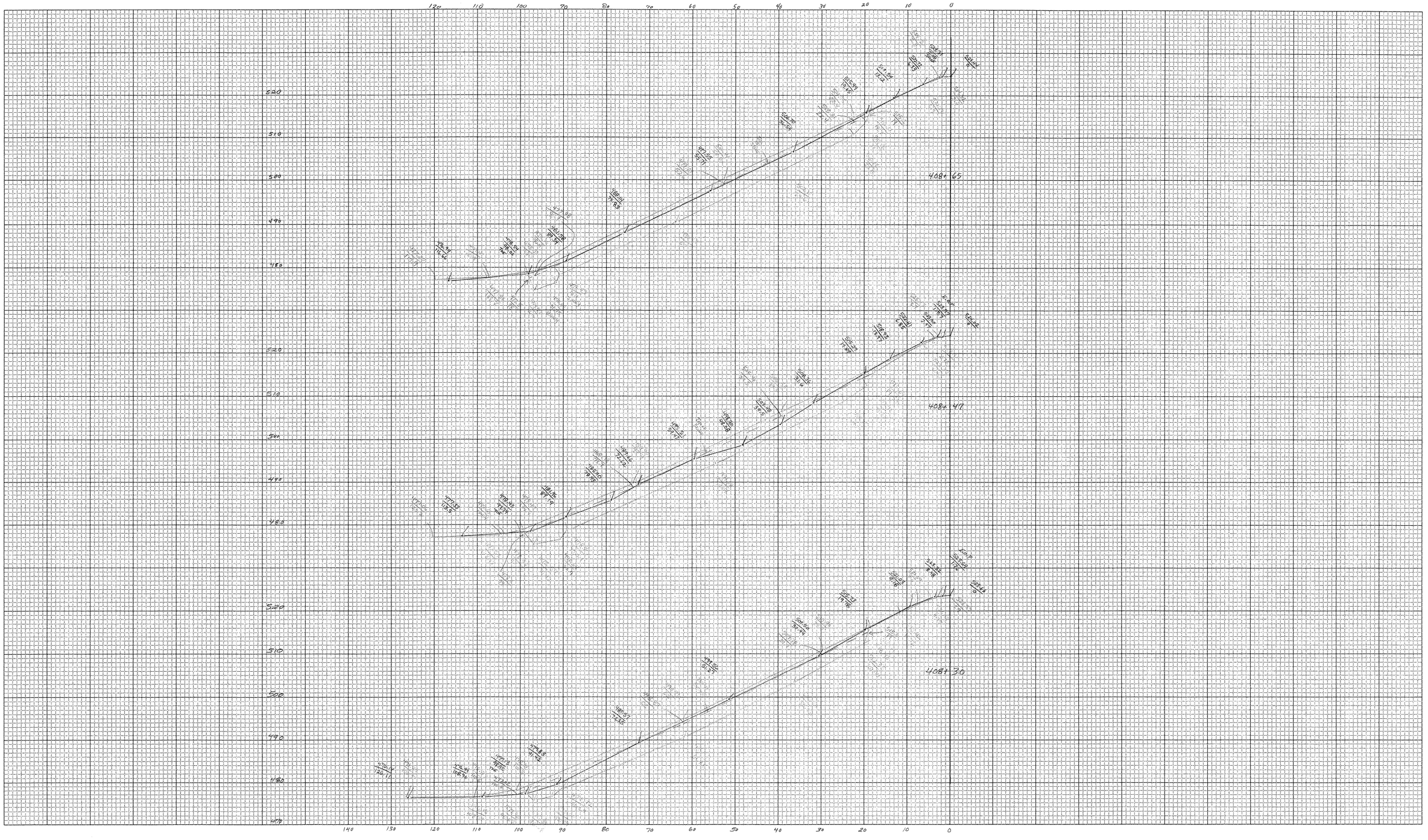


SUBGRADE STONE FILL

653+00 (NB OUTSIDE) LEDGE REMOVAL

CROSS SECTION SHEET

PROJECT NAME:	HARTFORD - ROYALTON
PROJECT NUMBER:	IMIR 089-1(8)
FILE NAME:	
PROJECT LEADER:	
DESIGNED BY:	
const: g:/common/cadd/e-xsection.dgn	
PLOT DATE:	05-JUN-2000 09
DRAWN BY:	
CHECKED BY:	
SHEET	190A OF



CROSS SECTION SHEET

PROJECT NAME: HARTFORD-SHARON ROYALTON

PROJECT NUMBER: IM IR 089-1(8)

FILE NAME: SLIDE AREA 7.28 SB LT

PROJECT LEADER: _____

DESIGNED BY: _____

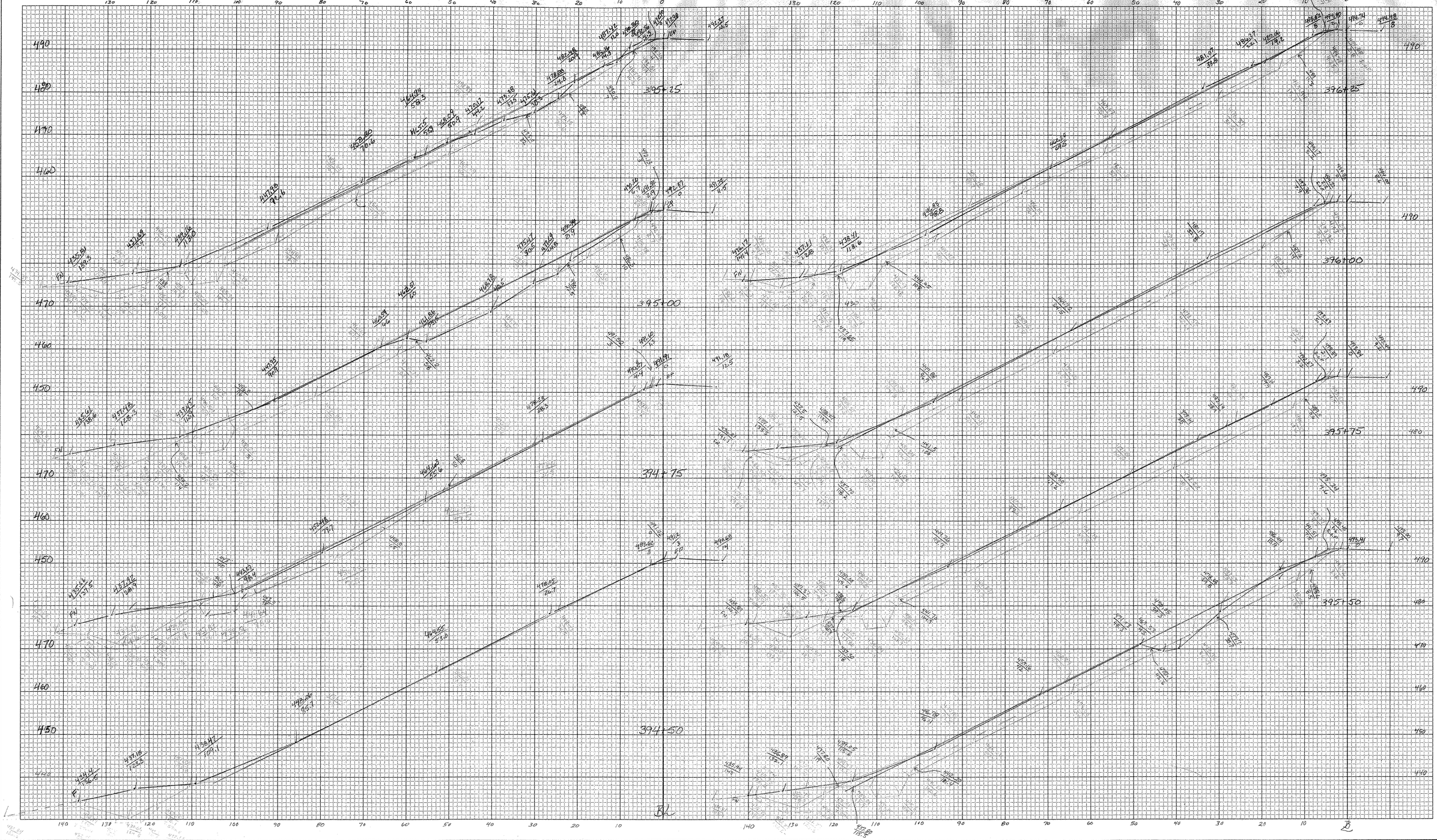
const: g:/common/cadd/e-xsection.dgn

PLOT DATE: 05-JUN-2000 09

DRAWN BY: _____

CHECKED BY: _____

SHEET A02 OF _____



CROSS SECTION SHEET

PROJECT NAME: HARTFORD - ROYALTON

PROJECT NUMBER: ACIM FR 089-1(8)

FILE NAME: SLIDE AREA 7.28~ SBLT
PROJECT LEADER: _____
DESIGNED BY: _____
const: g:/common/cadd/e-xsection.dgn

PLOT DATE: 05-JUN-2000 09
DRAWN BY: _____
CHECKED BY: _____
SHEET 18 OF _____

CROSS SECTION SHEET

PROJECT NAME: HARTFORD - ROYALTON

PROJECT NUMBER: IM IR 089-1(8)

FILE NAME: SLIDE AREA #7.28 SB LT

PROJECT LEADER:

DESIGNED BY:

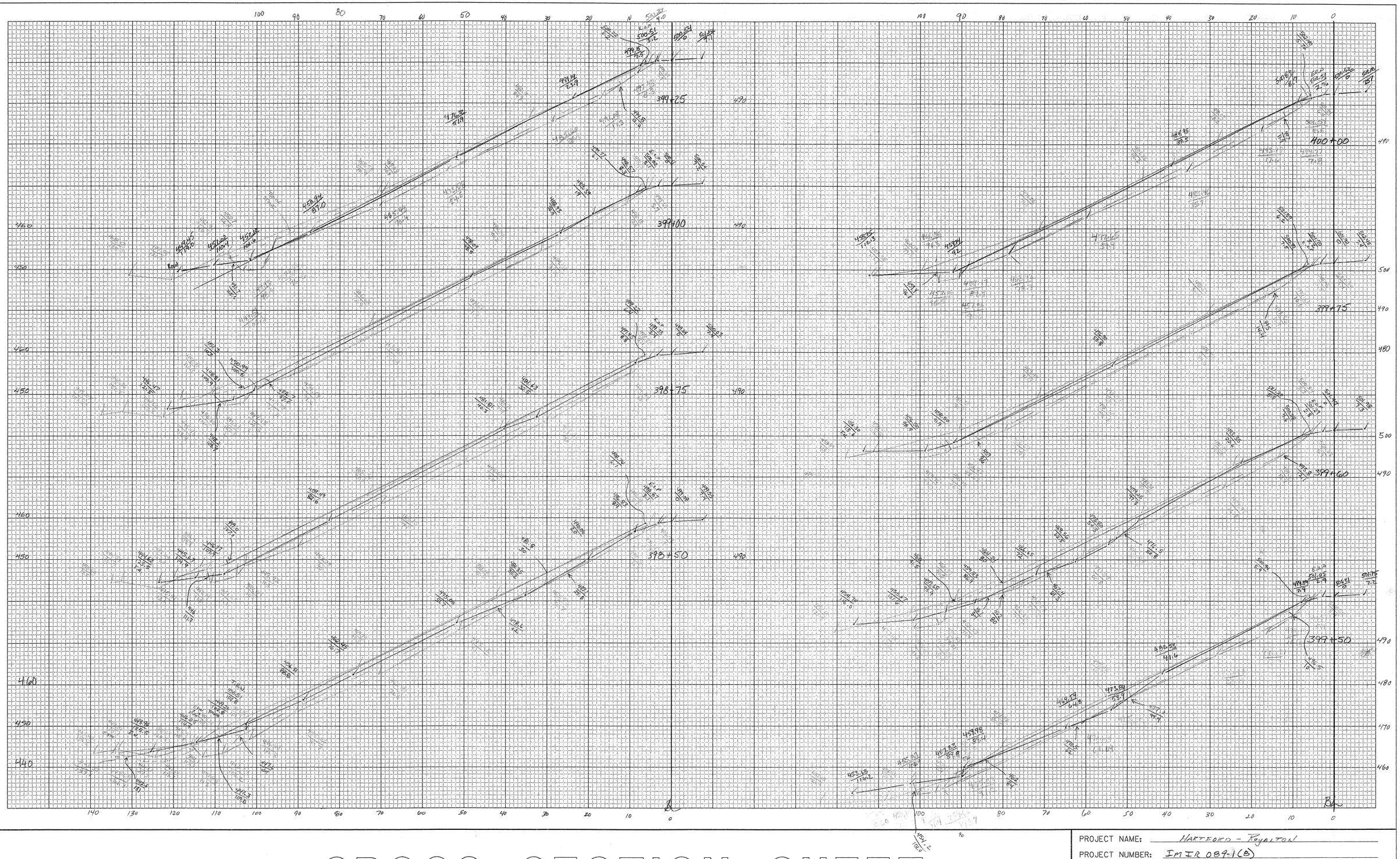
const: g:/common/cadd/e-xsection.dgn

PLOT DATE: 05-JUN-2000 09

DRAWN BY:

CHECKED BY:

SHEET 1 OF



CROSS SECTION SHEET

PROJECT NAME: HARTFORD - ROYALTON

PROJECT NUMBER: IMIR 089-1(8)

FILE NAME: SLIDE AREA 7.28 SB LT

PROJECT LEADER:

DESIGNED BY:

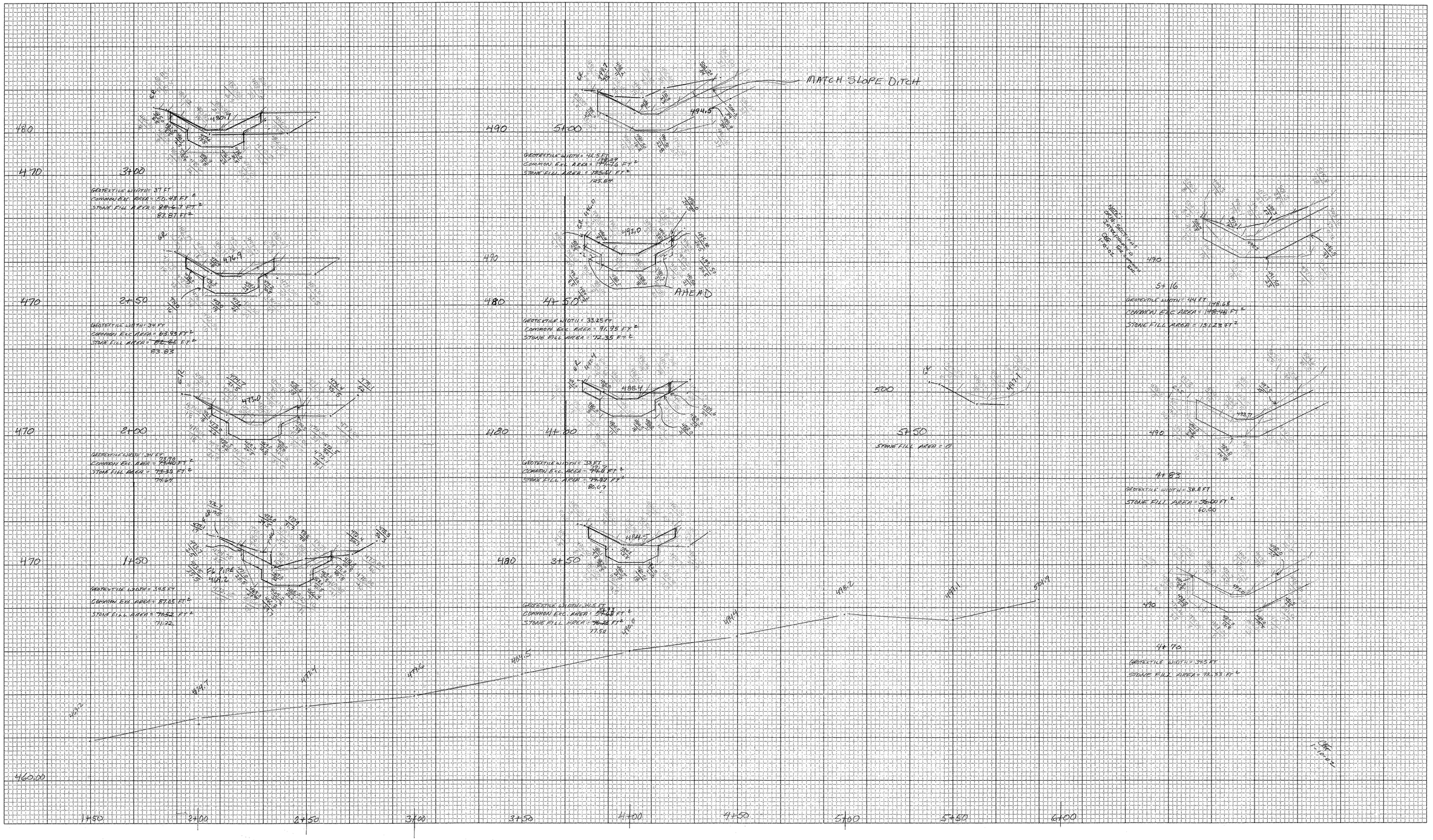
const: g:/common/cadd/e-xsection.dgn

PLOT DATE: 05-JUN-2000 09

DRAWN BY:

CHECKED BY:

SHEET 180E OF



CROSS SECTION SHEET

PROJECT NAME: HARTFORD - SHARON - ROYALTON

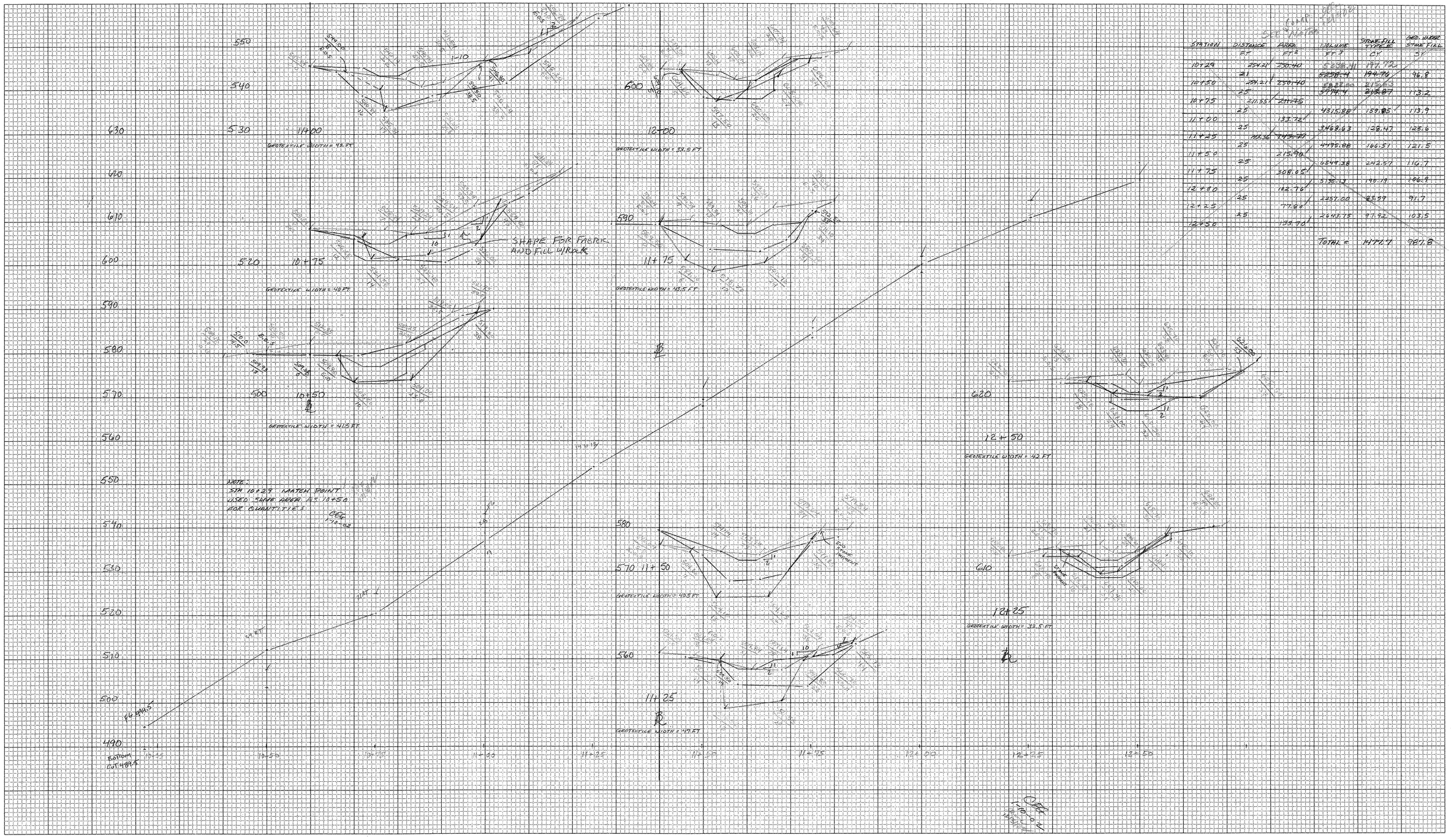
PROJECT NUMBER: IM IR 089-1(8)

FILE NAME: Ditch Along Rte 14 SB LT 11.62 PLOT DATE: 05-JUN-2000 09

PROJECT LEADER: _____ DRAWN BY: _____

DESIGNED BY: _____ CHECKED BY: _____

const: g:/common/cadd/e-xsection.dgn SHEET 18 OF _____



STATION	DISTANCE	AREA	VOLUME	STONE FILL TYPE E	GEO. WRAP STONE FILL
	FT	FT²	FT³	CY	SY
10+29		254.21	250.40	5226.11	187.72
	21			5238.4	194.76 96.8
10+50		254.21	250.40	5251.4	215.87
	25			5774.4	113.2
10+75		211.55	211.75		
	25			4315.88	159.85 113.9
11+00		133.72			
	25			3468.63	128.47 125.6
11+25		120.36	119.40		
	25			4495.88	166.51 121.5
11+50		215.90			
	25			6544.38	242.57 116.7
11+75		308.65			
	25			5136.13	190.19 106.9
12+00		182.76			
	25			2457.00	83.99 91.7
12+25		77.60			
	25			2643.75	97.92 103.5
12+50		138.70			
			TOTAL =	14772.7	987.8

SUBGRADE TOP ELEVATION

FINAL SECTIONS

CROSS SECTION SHEET

PROJECT NAME: HART FORD-SHARON-ROYALTON

PROJECT NUMBER: IM IR 084-1(8)

FILE NAME: DITCH SHEET 11.62 TO RTE 14

PROJECT LEADER: _____

DESIGNED BY: _____

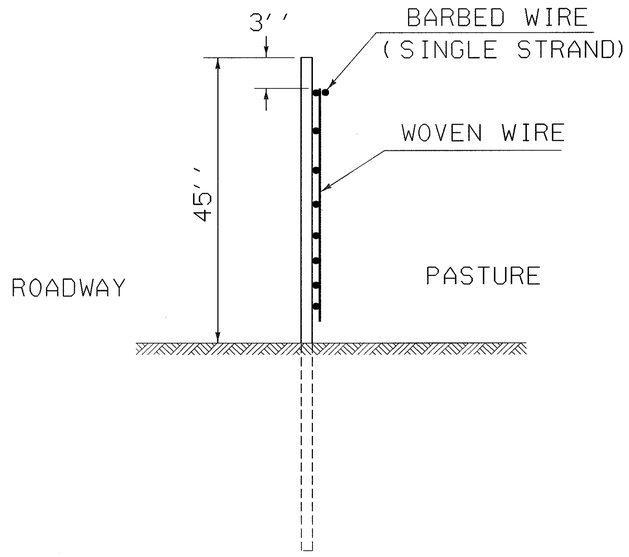
const: g:/common/cadd/e-xsection.dgn

PLOT DATE: 05-JUN-2000 09

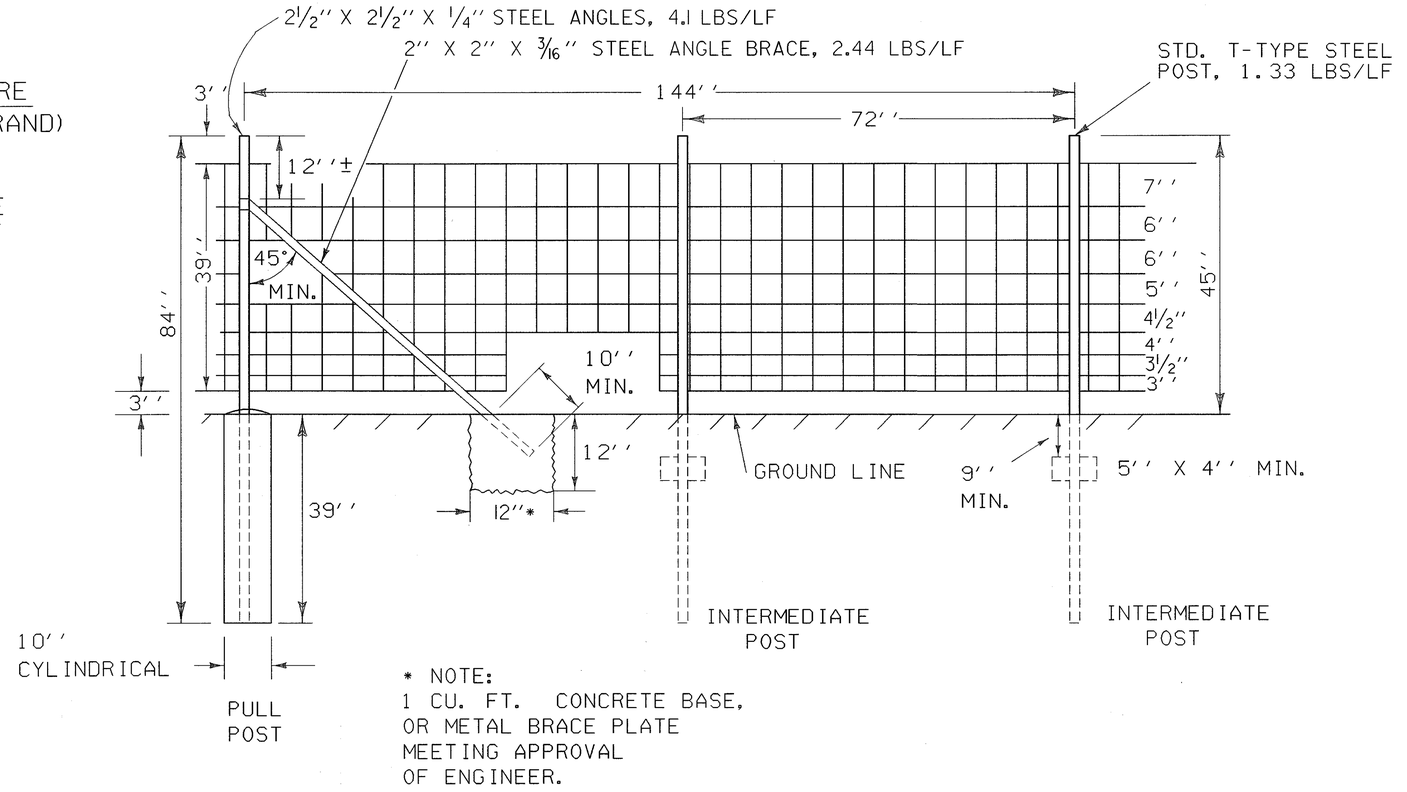
DRAWN BY: CBS

CHECKED BY: _____

SHEET 19D6 OF _____



SIDE VIEW



* NOTE:
1 CU. FT. CONCRETE BASE, OR METAL BRACE PLATE MEETING APPROVAL OF ENGINEER.

ROAD VIEW

WOVEN WIRE FENCE WITH STEEL POSTS (MOD) FOR PASTURES

SEE STD F-1 FOR NOTES

NOT TO SCALE

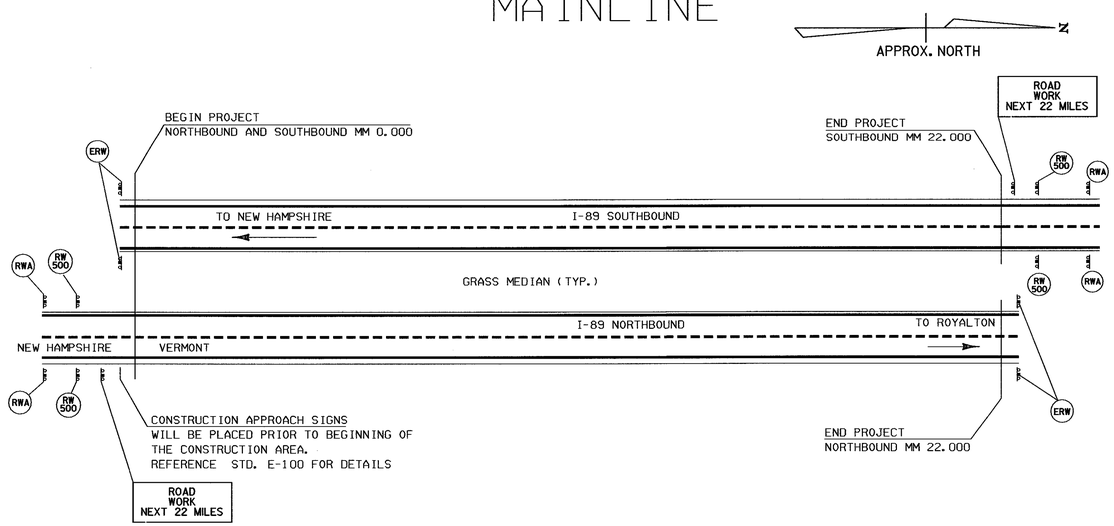
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

PROJECT:	PROJECT NO.:
HARTFORD - ROYALTON	IM IR 089-1(8)

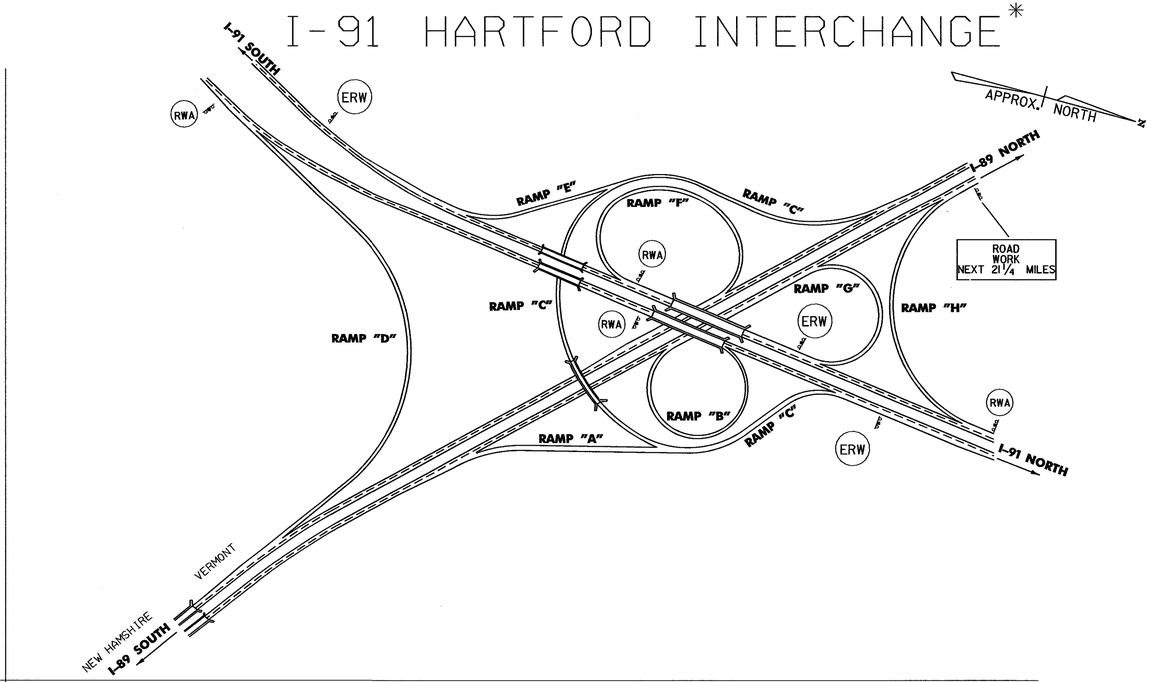
DESIGN FILE NAME:	sqda/87a008/da008det.dgn		
IPARM FILE NAME:	da008wwm	PLOT DATE:	12-MAR-1999
SURVEYED BY:	N/A	SURVEY DATE:	N/A
SQUAD LEADER:	BOMBARDIER	DRAWN BY:	PREIS
		SHEET:	181 OF 260

CONSTRUCTION APPROACH SIGNING

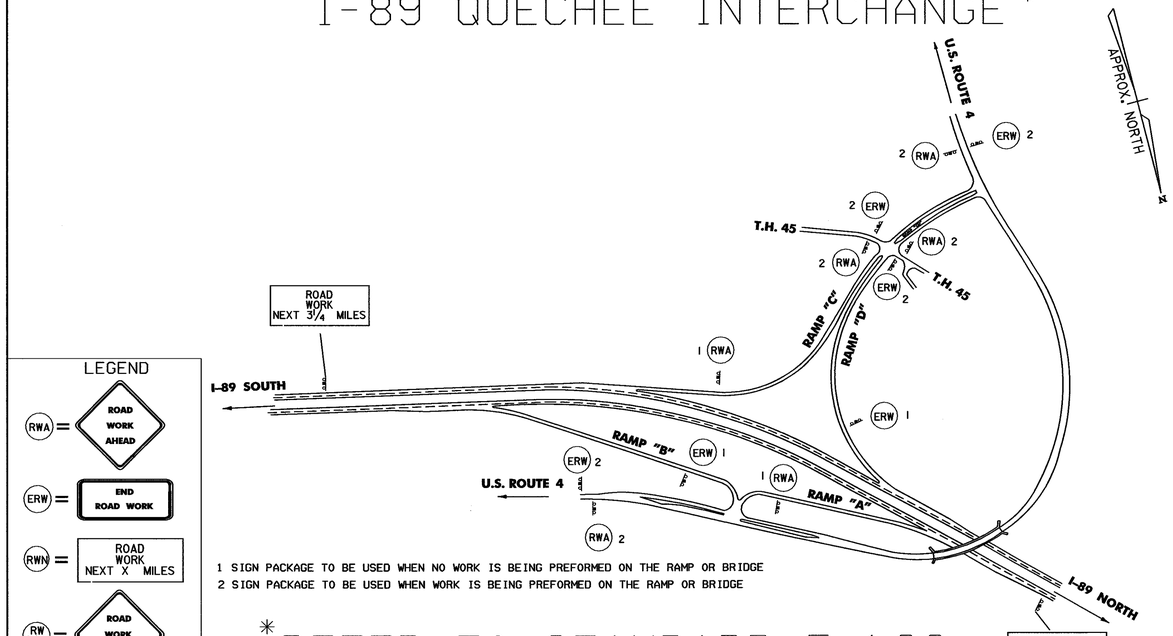
MAINLINE*



I-91 HARTFORD INTERCHANGE*



I-89 QUECHEE INTERCHANGE*



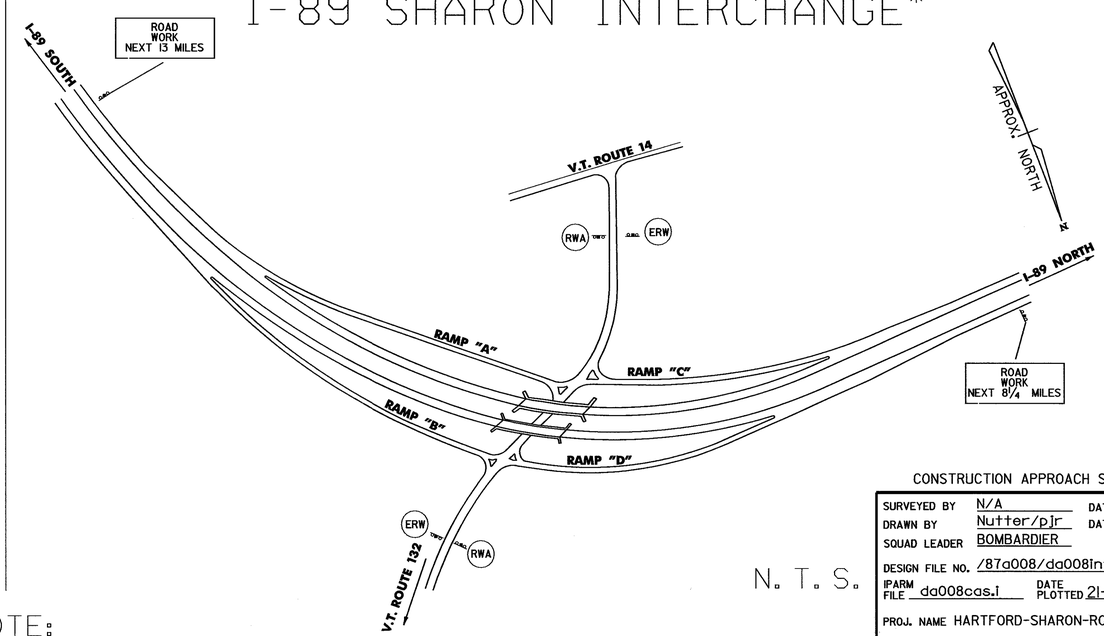
LEGEND

- RWA = ROAD WORK AHEAD
- ERW = END ROAD WORK
- RWN = ROAD WORK NEXT X MILES
- RW 500 = ROAD WORK 500 FT

1 SIGN PACKAGE TO BE USED WHEN NO WORK IS BEING PREFORMED ON THE RAMP OR BRIDGE
2 SIGN PACKAGE TO BE USED WHEN WORK IS BEING PREFORMED ON THE RAMP OR BRIDGE

*REFER TO STANDARD E-100

I-89 SHARON INTERCHANGE*



N. T. S.

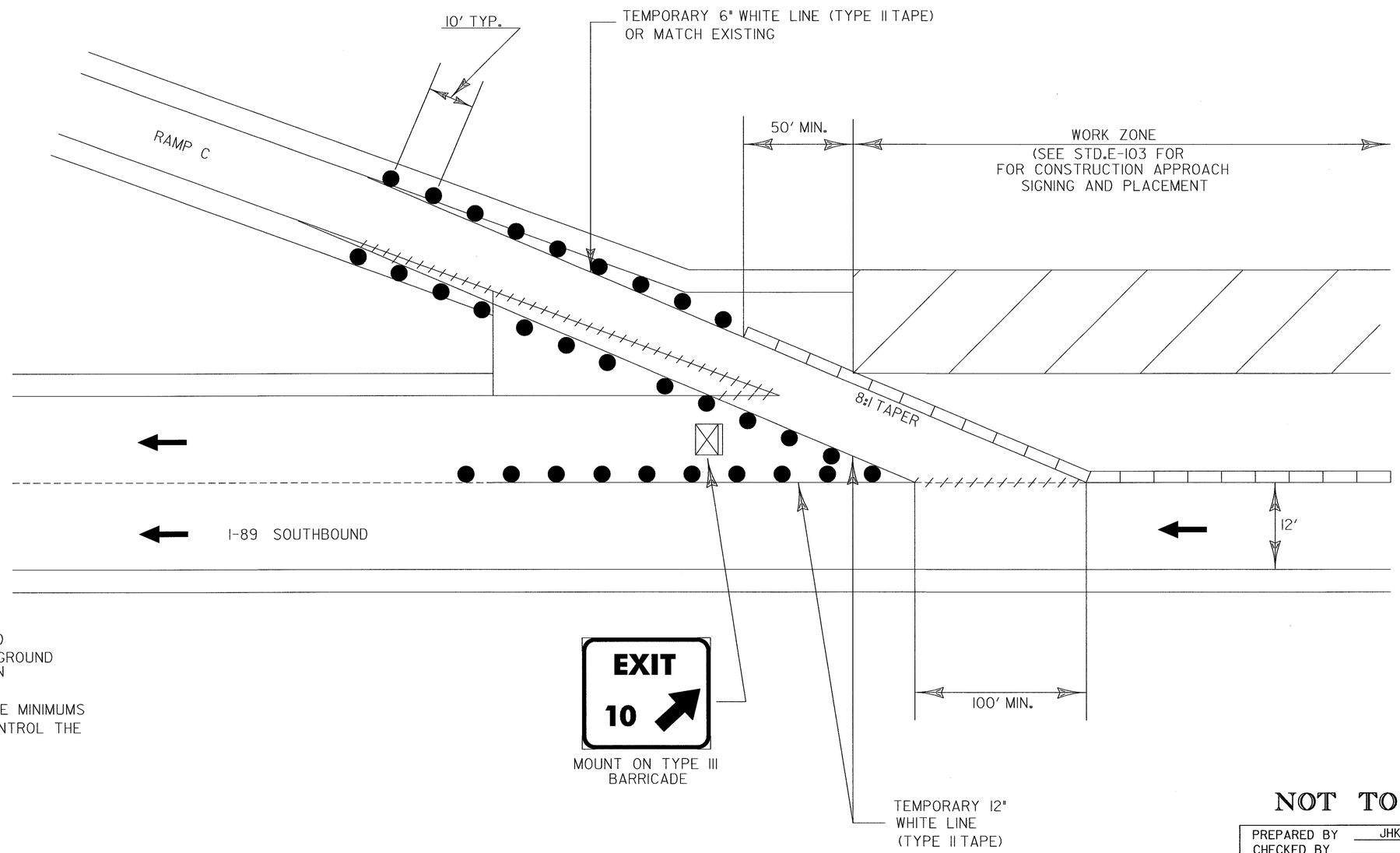
NOTE:
EXACT LOCATIONS TO BE DETERMINED BY ENGINEER

CONSTRUCTION APPROACH SIGNING

SURVEYED BY	N/A	DATE	N/A
DRAWN BY	Nutter/pjr	DATE	7/95
SQUAD LEADER	BOMBARDIER		
DESIGN FILE NO.	/87a008/da008int.dgn		
IPARM FILE	da008cas.i	DATE PLOTTED	21-NOV-2000
PROJ. NAME	HARTFORD-SHARON-ROYALTON		
PROJ. NO.	IM IR 089-1(8)		
SHEET	182 OF 260 SHEETS		

LEGEND:

- REFL. PLASTIC DRUMS
- PAVEMENT MARKING REMOVAL
- TRAFFIC FLOW
- WORK ZONE
- TYPE III BARRICADE (MOD.)



NOTES:

1. EXIT SIGN SHALL BE MOUNTED A MINIMUM OF 3' ABOVE THE GROUND AND HIGH ENOUGH TO BE SEEN ABOVE CHANNELIZING DEVICES.
2. ALL DISTANCES ARE DESIRABLE MINIMUMS FIELD CONDITIONS SHALL CONTROL THE ACTUAL PLACEMENT

NOT TO SCALE

TRAFFIC CONTROL PLAN FOR INTERCHANGE 10 RAMP C

traf/87a008/ta008tc.i
traf/87a008/ta008tc.dgn

PREPARED BY	JHK	DATE	4/99
CHECKED BY		DATE	
DESIGN SUPERVISOR	ABK	DATE	4/99

PROJ. HARTFORD-SHARON-ROYALTON
IM IR 089-1(8)

PLOTTED: 21-NOV-2000
SHEET 183 OF 260 SHEETS

BEGIN PROJECT IR 089 - 1(8)
M.M. 0.00

0.87 SB
R(I)
R

RET(ALL)
MILE 1

RET(ALL)
H
V. A.

RET(ALL)
1.20 SB
89 SOUTH
91 NORTH
91 SOUTH

1.64 SB R&S(I)
91
Brattleboro
White River Jct.
JUNCTION 1 MILE
R(4) POSTS

MILE 2
RET(ALL)

RET(ALL)
3.02 SB
JCT 91 INTERSTATE
2 MILES

RET(ALL)
MILE 3

MATCH LINE

R(I)
R
0.09 NB

R(I)
0.12 SB R

I-89 /I-91 INTERCHANGE
M.M. 0.00 - M.M. 0.98
SEE SHEET 197 OF 260

0.85 NB
R(I)
R

R(I)
R
1.18 NB

R(I)
1.18 SB R

M.M. 3.10

RET(ALL)
NORTH INTERSTATE 89
R(2)
R
1.00 NB

MILE 1

R(I) 1.05 NB
SPEED ENFORCED
WITH UMARKED CARS
R(2)

R(2)
SPEED LIMIT 65
MINIMUM 40
R(2)
1.20 NB

RET(ALL)
WEATHER INFO
TUNE RADIO TO
93.9 FM 95.3 FM
97.1 FM 102.1 FM
1.27 NB

R&S(MOD. TEXT)
WOODSTOCK 13
BARRE 51
MONTPELIER 53
1.85 NB R(2)

MILE 2
RET(ALL)

RET(MOD.)
EXIT 1
4
Woodstock
Rutland
EXIT 1 MILE
NEXT EXIT 11 MILES
2.49 NB

RET(ALL)
Quechee
NEXT RIGHT
2.72 NB

RET(MOD.)
EXIT 1
4
Woodstock
Rutland
NEXT RIGHT
3.10 NB

MILE 3
RET(ALL)

MATCH LINE

3.17 SB
R(2)
SPEED LIMIT 65
MINIMUM 40
R(2)

R(2)
NORTH INTERSTATE 89
R

3.57 SB
ONE WAY
R(I)
R

R&S(I)
3.62 SB
RET(I)
R

RET(ALL)
MILE 4

R(7)
4.03 SB
EXIT 1
4
WOODSTOCK
QUECHEE
R(2)

MATCH LINE

R(I) 3.21 NB
R
R(I) INTERCHANGE 1 - WOODSTOCK, QUECHEE
R(I)
3.21 SB R
M.M. 3.26 - M.M. 4.05
SEE SHEET 198 OF 260
RTE. 4 OVER I-89

4.23 NB
R(I)
R

R(I)
R
4.23 SB

SEE SHEET 96

R&S(I)
R(2)
3.75 NB

MILE 4
RET(ALL)

R(I)
ONE WAY
R(I)
4.07 NB

R(I)
REDUCE SPEED 40 M.P.H. DUE TO ICE AND SNOW
R
4.10 NB

R(2)
NORTH INTERSTATE 89
R
4.15 NB

R(2)
SPEED LIMIT 65
MINIMUM 40
R(2)
4.30 NB

R&S(MOD.TEXT)
Sharon 9
Barre 48
Montpelier 50
RET(2)
4.45 NB

THINNING & TRIMMING, 201.31 FOR SIGNS (M.M. APPROX.)

NB M.M.	2.72	SB M.M.	1.64
M.M.	3.10	M.M.	3.02

REMOVING SIGNS

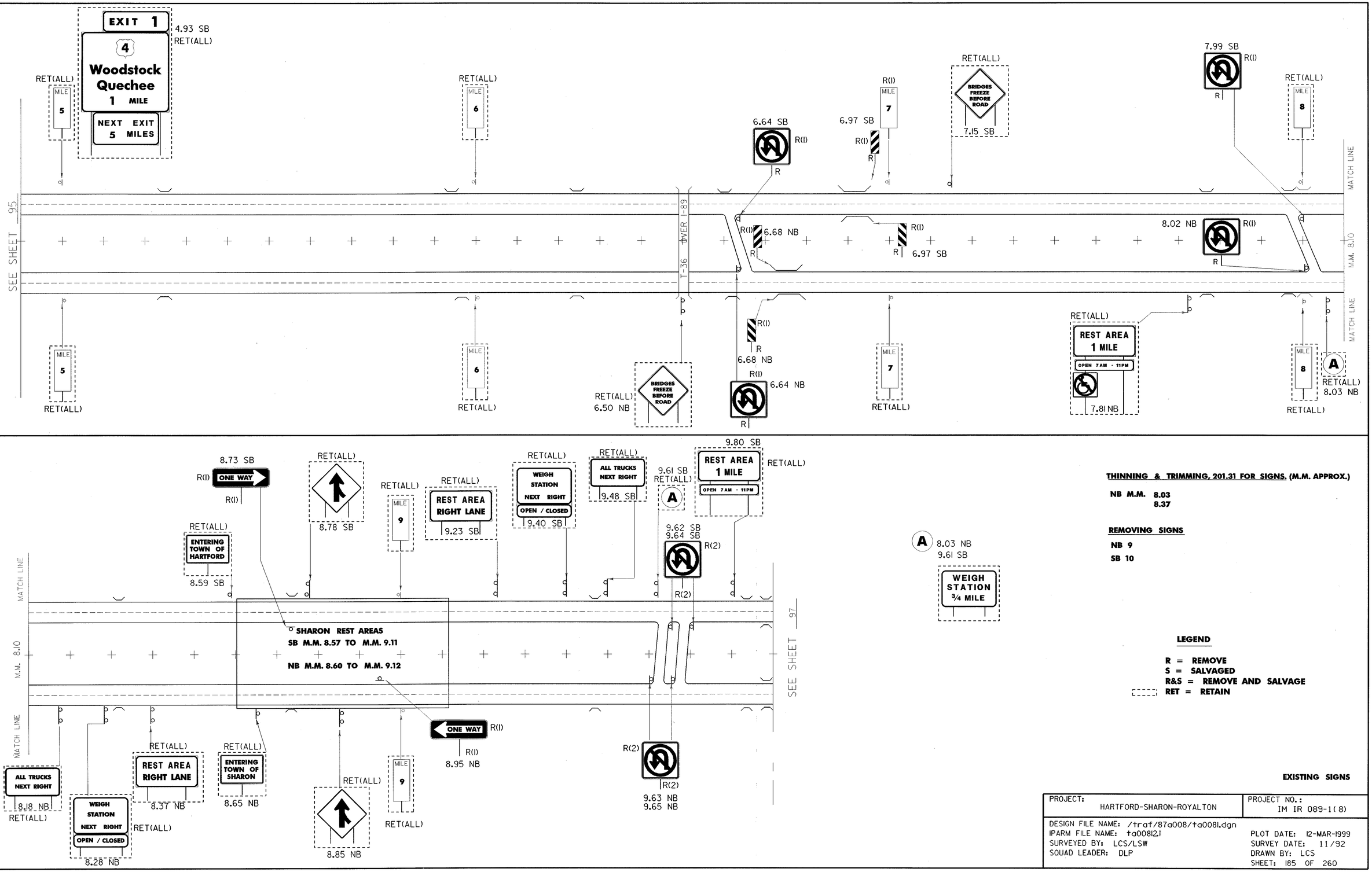
NB 19
SB 13

LEGEND

R = REMOVE
S = SALVAGED
R&S = REMOVE AND SALVAGE
RET = RETAIN

EXISTING SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn IPARM FILE NAME: ta0081i.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 14-NOV-2000 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 184 OF 260



THINNING & TRIMMING, 201.31 FOR SIGNS. (M.M. APPROX.)

NB M.M. 8.03
8.37

REMOVING SIGNS

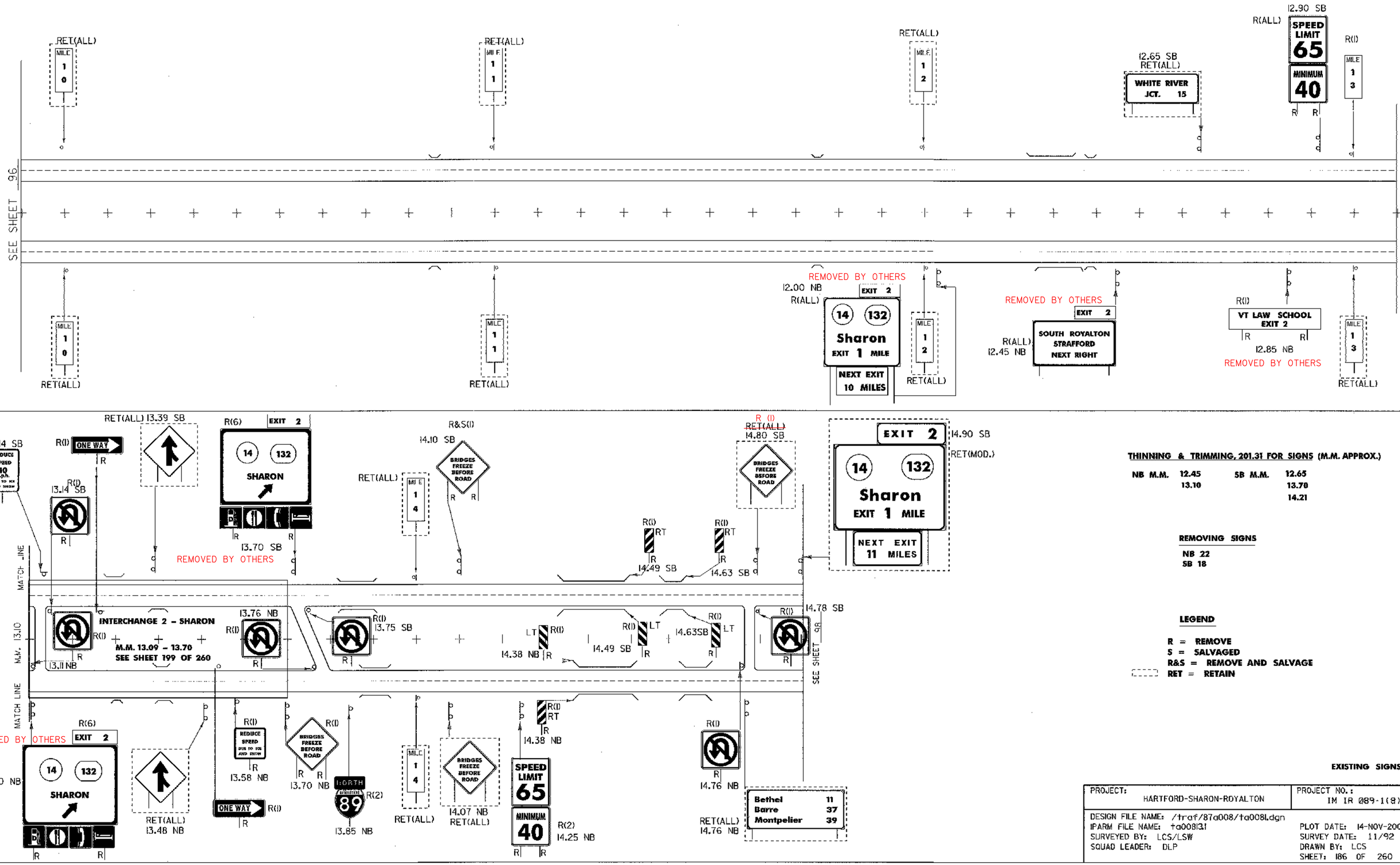
NB 9
SB 10

LEGEND

R = REMOVE
S = SALVAGED
R&S = REMOVE AND SALVAGE
RET = RETAIN

EXISTING SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn IPARM FILE NAME: ta00812.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1999 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 185 OF 260



THINNING & TRIMMING, 201.31 FOR SIGNS (M.M. APPROX.)

NB M.M.		SB M.M.	
	12.45		12.65
	13.10		13.70
			14.21

REMOVING SIGNS

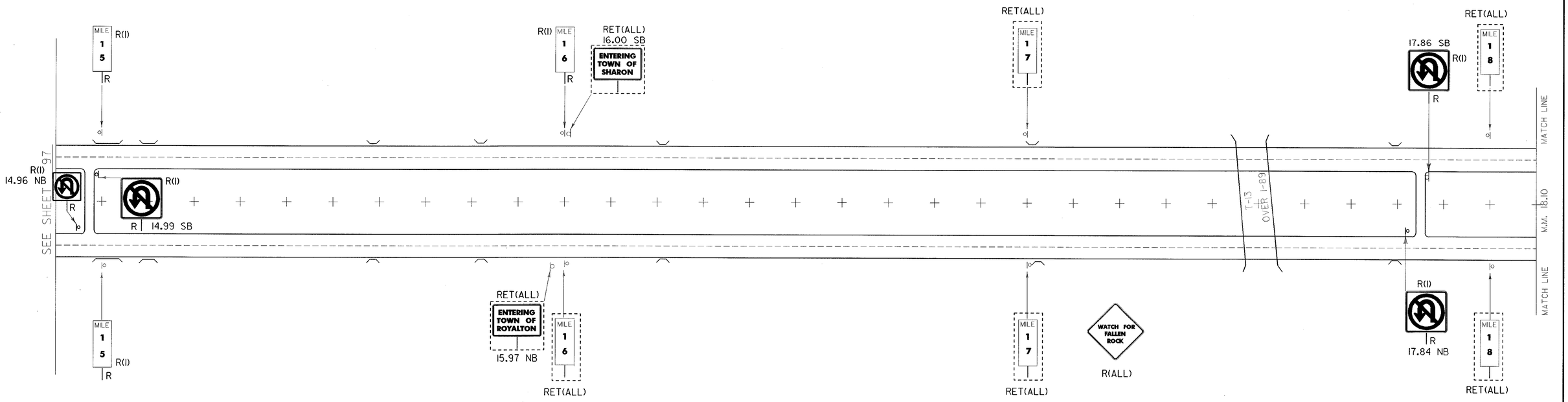
NB 22
SB 18

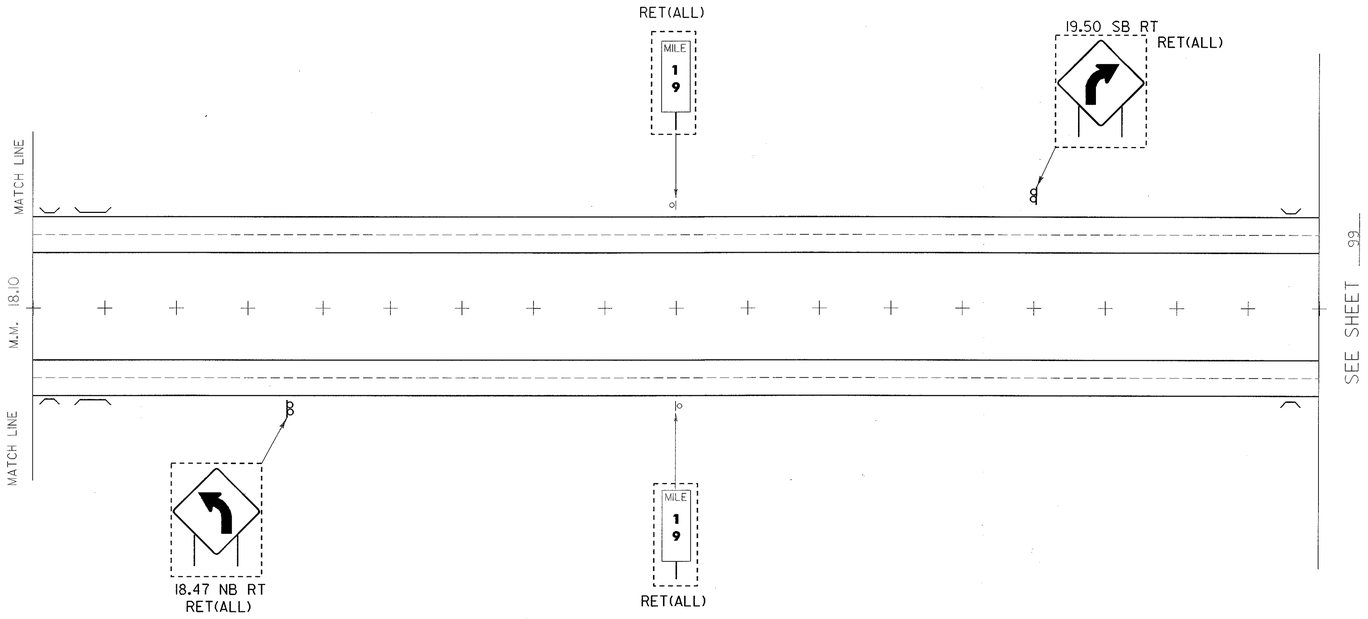
LEGEND

R = REMOVE
S = SALVAGED
R&S = REMOVE AND SALVAGE
RET = RETAIN

EXISTING SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn #PARM FILE NAME: ta00813.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 14-NOV-2000 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 186 OF 260





THINNING & TRIMMING, 201.31 FOR SIGNS (M.M. APPROX.)

REMOVING SIGNS

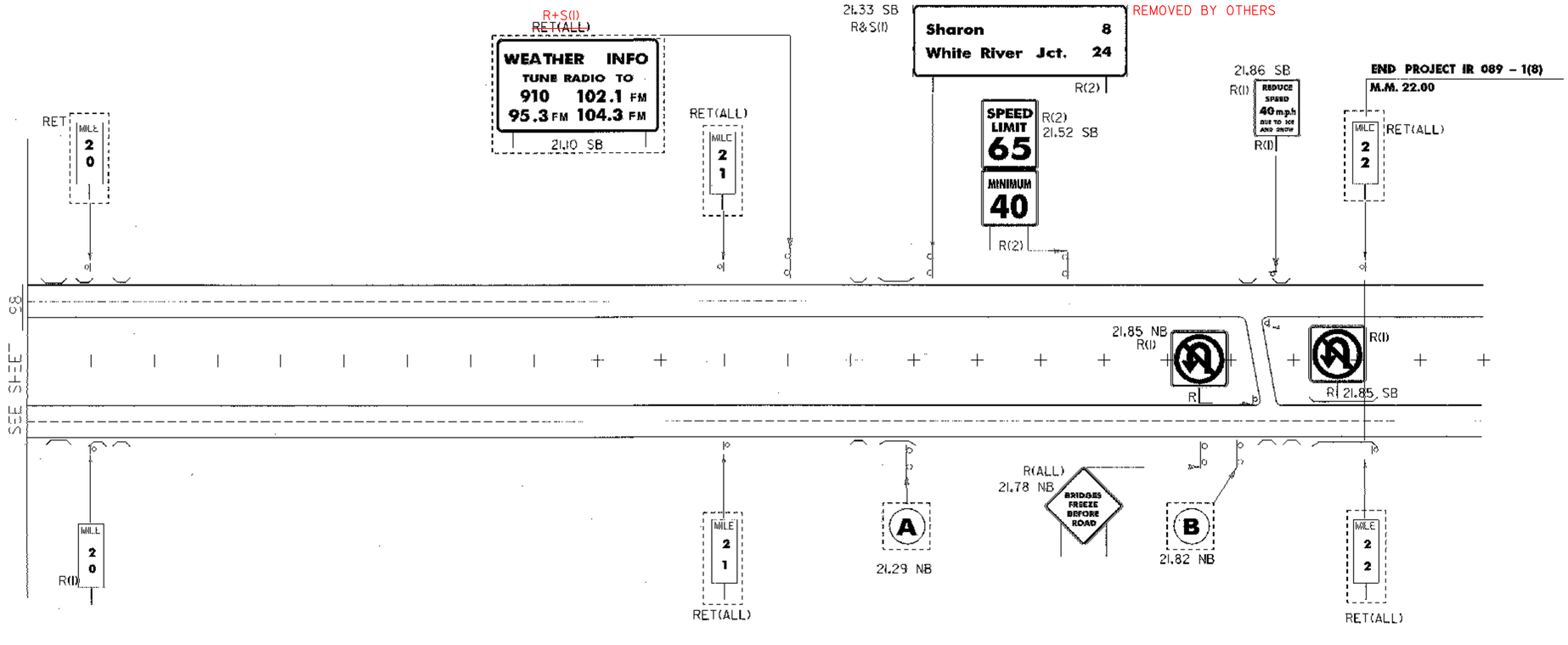
NB 4
SB 4

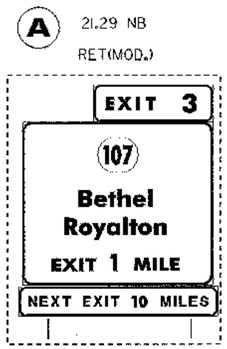
LEGEND

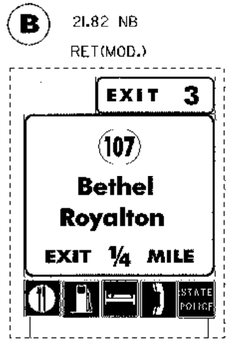
R = REMOVE
S = SALVAGED
R&S = REMOVE AND SALVAGE
RET = RETAIN

EXISTING SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn IPARM FILE NAME: ta00814.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1999 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 187 OF 260







THINNING & TRIMMING 201.31 FOR SIGNS (M.M. APPROX.)

NB M.M. 21.30 SB M.M. 21.35

REMOVING SIGNS

NB 3
SB 6

LEGEND

R = REMOVE
S = SALVAGED
R&S = REMOVE AND SALVAGE
RET = RETAIN

EXISTING SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta008Ldgn IPARM FILE NAME: ta00815.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1999 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 188 OF 260

A 0.33 OVHD NB

RET ALL

NORTH 89 ↓ | SOUTH 91 Brattleboro JCT. ↓ 1/3 MI. | NORTH 91 White River Junction ↗

B 0.55 OVHD SB

RET ALL

THRU TRAFFIC 89 ↓ ↓ | SOUTH 91 ↓

SOUTH 91 Brattleboro ↗

RET ALL 1373' UP RAMP

NORTH 91 White River Junction ↖

422' UP RAMP R(I) R

R(I) 1373' UP RAMP R

RET ALL

NORTH 91 White River Jct. KEEP LEFT

528' UP RAMP

MAG 199

0.76 OVHD SB RET ALL

TO 89 12A Concord N H ↓ ↓

NORTH 91 SOUTH Brattleboro White River Jct. →

I-89 NORTH

R(I) 0.72 SB R

ONE WAY R(I) 0.81 NB R

RET(ALL)

0.53 SB R(I) ONE WAY R

EMERGENCY STOPPING ONLY

0.76 NB RET ALL

R(I) EXIT 30 M.P.H. R(2)

R(I) 0.68 NB R

0.68 NB RET ALL

SOUTH 91 Brattleboro ↗

739' UP RAMP R(I) R

B

RET(ALL)

ONE WAY R(I) R 0.53 NB

R(I) R(I)

R 0.20 SB ~~R&S~~

50 M.P.H.

RET ALL 0.06 SB

Airport Plainfield NH RIGHT LANE

RET ALL 0.01 SB

Vietnam Veterans Memorial Highway | Connecticut River

A

0.26 NB R(I) TURN SIGNAL REQUIRED BEFORE CHANGING LANES R

M.M. 0.35

R(I) R(3) NORTH 91 R 0.35 NB

RET(ALL)

BUCKLE UP IT'S THE LAW

0.37 NB

0.40 NB REDUCE SPEED WHEN FLASHING RET(ALL)

R(I) SLOWER TRAFFIC KEEP RIGHT R 211' UP RAMP "A"

R(I) R(2) 475' UP RAMP "A" REMOVE ASSOC. PVMT MKGS

R(I) YIELD R 845' UP RAMP REMOVE ASSOC. PVMT MKGS

STRICTLY ENFORCED RET ALL 0.42 NB

R(I) R(2) 2693' UP RAMP "C"

EXIT R(I) 30 M.P.H. R 2904' UP RAMP

R(2) FORM SINGLE LINE R(2) 321' UP RAMP "C"

R(I) R 3432' UP RAMP "C"

R(2) SPEED LIMIT 65 MINIMUM 40 R(2)

0.08 NB

WELCOME TO VERMONT GREEN MOUNTAIN STATE

R+S WELCOME CENTER NEXT RIGHT

RET ALL

0.15 NB

NORTH 91 White River Jct. RIGHT LANE

RET ALL

R(I) STATE LINE ENTERING VERMONT R

I-89 SOUTH

REMOVING SIGNS

33

SIGN LEGEND

R	EXISTING ITEM TO BE REMOVED
RET	EXISTING ITEM TO BE RETAINED
R&S	EXISTING ITEM TO BE SALVAGED

EXISTING SIGNS

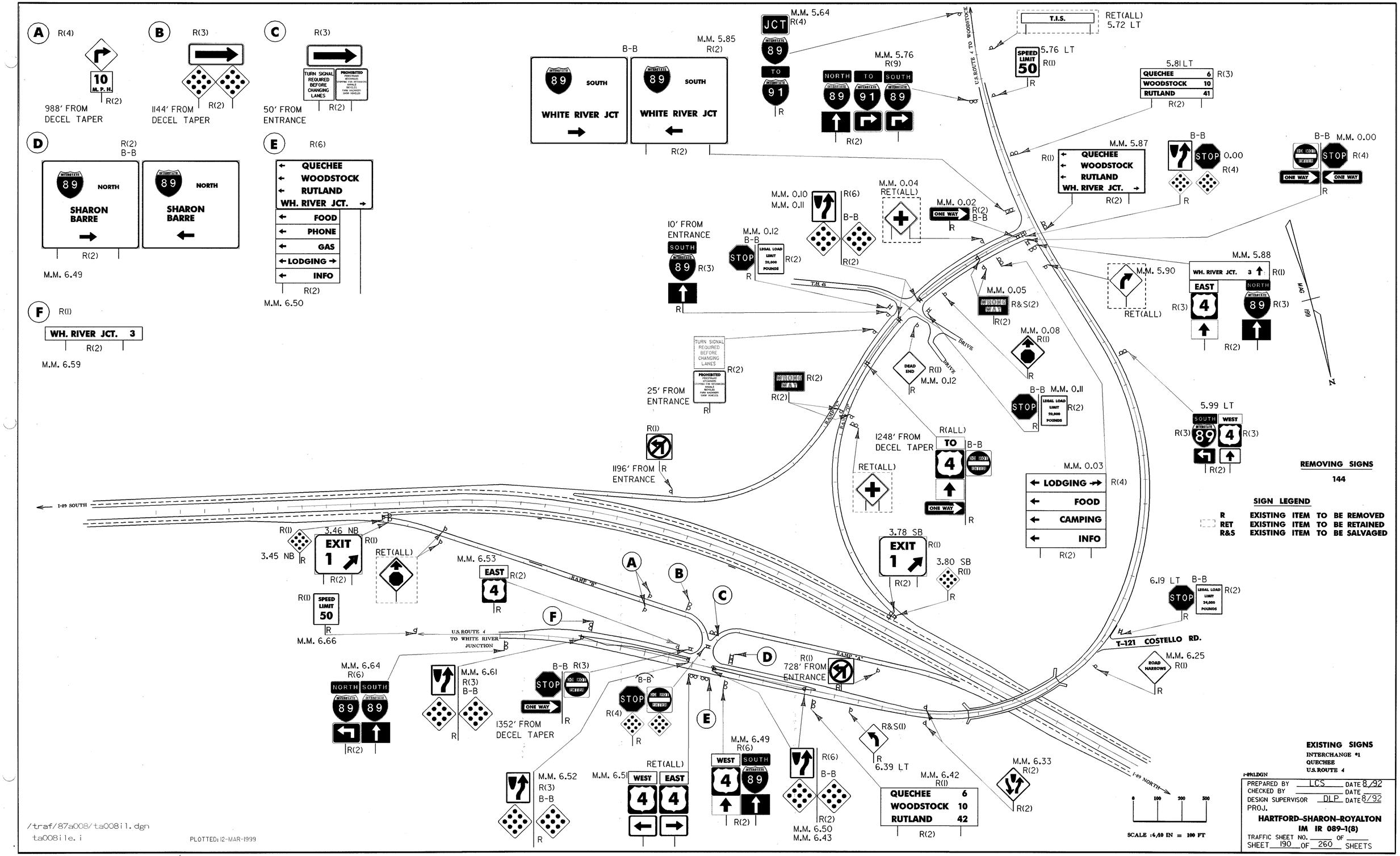
INTERCHANGE #10
HARTFORD
I-89 & I-91 INTERCHANGE

PREPARED BY LCS DATE 11/92
CHECKED BY DATE
DESIGN SUPERVISOR DLP DATE 11/92
PROJ.
HARTFORD-SHARON-ROYALTON
IM IR 089-1(8)
TRAFFIC SHEET NO. OF
SHEET 189 OF 260 SHEETS

0 150 300
SCALE 1/8 IN = 100 FT

ta00891e.i
/traf/87a008/ta00891.dgn

PLOTTED: 12-MAR-1999


A R(4)
10 M.P.H.
R(2)
988' FROM DECEL TAPER
B R(3)
R(2)
1144' FROM DECEL TAPER
C R(3)
TURN SIGNAL REQUIRED BEFORE CHANGING LANES
PROHIBITED
R(2)
50' FROM ENTRANCE
D R(2) B-B
INTERSTATE 89 NORTH
SHARON BARRE
INTERSTATE 89 NORTH
SHARON BARRE
R(2)
M.M. 6.49
E R(6)
QUECHEE
WOODSTOCK
RUTLAND
WH. RIVER JCT.
FOOD
PHONE
GAS
LODGING
INFO
R(2)
M.M. 6.50
F R(1)
WH. RIVER JCT. 3
R(2)
M.M. 6.59
B-B
INTERSTATE 89 SOUTH
WHITE RIVER JCT
INTERSTATE 89 SOUTH
WHITE RIVER JCT
R(2)
M.M. 5.85
R(2)
JCT
INTERSTATE 89
TO
INTERSTATE 91
R
M.M. 5.64
R(4)
NORTH TO SOUTH
INTERSTATE 89
INTERSTATE 91
INTERSTATE 89
R(2)
M.M. 5.76
R(9)
T.I.S.
RET(ALL)
5.72 LT
SPEED LIMIT 50
5.76 LT
R(1)
R
5.81 LT
QUECHEE 6
WOODSTOCK 10
RUTLAND 41
R(2)
R(3)
M.M. 5.87
QUECHEE
WOODSTOCK
RUTLAND
WH. RIVER JCT.
R(1)
R(2)
B-B
STOP
0.00
R(4)
R
B-B M.M. 0.00
SIDE ROAD SERVICE
STOP
R(4)
ONE WAY
ONE WAY
R
M.M. 0.10
M.M. 0.11
R(6)
B-B
R(2)
M.M. 0.04
RET(ALL)
M.M. 0.02
ONE WAY
R(2)
B-B
R
10' FROM ENTRANCE
SOUTH
INTERSTATE 89
R(3)
R
M.M. 0.12
B-B
STOP
LEGAL LOAD LIMIT 20,000 POUNDS
R(2)
R
T.H. 46
M.M. 5.88
WH. RIVER JCT. 3
R(1)
EAST
4
NORTH
INTERSTATE 89
R(3)
R(2)
M.M. 5.90
RET(ALL)
R(3)
M.M. 0.05
WRONG WAY
R&S(2)
R(2)
M.M. 0.08
R(1)
R
DRIVE
DEAD END
R(1)
M.M. 0.12
R
TURN SIGNAL REQUIRED BEFORE CHANGING LANES
PROHIBITED
R(2)
25' FROM ENTRANCE
R
WRONG WAY
R(2)
R(2)
RAMP 'C'
RAMP 'E'
B-B M.M. 0.11
STOP
LEGAL LOAD LIMIT 20,000 POUNDS
R(2)
R
5.99 LT
SOUTH
INTERSTATE 89
WEST
4
R(3)
R(3)
R(2)
R(1)
1196' FROM ENTRANCE
R
R(ALL)
1248' FROM DECEL TAPER
TO
4
B-B
SIDE ROAD SERVICE
ONE WAY
R
RET(ALL)
M.M. 0.03
LODGING
FOOD
CAMPING
INFO
R(4)
R(2)
3.78 SB
EXIT 1
R(1)
R(2)
3.80 SB
R(1)
R
REMOVING SIGNS
144
SIGN LEGEND
R EXISTING ITEM TO BE REMOVED
RET EXISTING ITEM TO BE RETAINED
R&S EXISTING ITEM TO BE SALVAGED
I-89 SOUTH
R(1)
3.46 NB
EXIT 1
R(1)
3.45 NB
R
R(2)
RET(ALL)
M.M. 6.53
EAST
4
R(2)
R
RAMP 'A'
R(1)
SPEED LIMIT 50
R
M.M. 6.66
U.S. ROUTE 4 TO WHITE RIVER JUNCTION
A
B
C
D
E
F
M.M. 6.64
R(6)
NORTH SOUTH
INTERSTATE 89 INTERSTATE 89
R(2)
M.M. 6.61
R(3)
B-B
R
1352' FROM DECEL TAPER
B-B R(3)
STOP
SIDE ROAD SERVICE
ONE WAY
R
B-B
STOP
SIDE ROAD SERVICE
R(4)
R
M.M. 6.52
R(3)
B-B
R
M.M. 6.51
RET(ALL)
WEST
4
EAST
4
M.M. 6.49
R(6)
WEST
4
SOUTH
INTERSTATE 89
R(2)
R(1)
728' FROM ENTRANCE
R
R(6)
B-B
R(2)
M.M. 6.50
M.M. 6.43
R&S(1)
R
6.39 LT
M.M. 6.42
R(1)
QUECHEE 6
WOODSTOCK 10
RUTLAND 42
R(2)
M.M. 6.33
R(2)
R(2)
6.19 LT
B-B
STOP
LEGAL LOAD LIMIT 24,000 POUNDS
R(2)
R
T-121 COSTELLO RD.
ROAD NARROWS
M.M. 6.25
R(1)
R
I-89 NORTH
0 100 200 300
SCALE :6/10 IN = 100 FT
EXISTING SIGNS
INTERCHANGE #1
QUECHEE
U.S. ROUTE 4
i-89ILDGN
PREPARED BY LCS DATE 8/92
CHECKED BY DATE
DESIGN SUPERVISOR DLP DATE 8/92
PROJ.
HARTFORD-SHARON-ROYALTON
IM IR 089-1(8)
TRAFFIC SHEET NO. OF
SHEET 190 OF 260 SHEETS
/traf/87a008/ta008il.dgn
ta008ile.i
PLOTTED: 12-MAR-1999

(A) STOP SIGN ASSEMBLY LOCATED RIGHT SIDE OF RAMP "C"

(B) LOCATED IN ISLAND END OF RAMP "C"

(C) MULTIPLE SIGNS LOCATED IN ISLAND END OF RAMP "C"

(D) 0.12 RT

(E) STOP SIGN ASSEMBLY LOCATED BOTH SIDES OF RAMP "B"

(F) MULTIPLE SIGNS LOCATED IN ISLAND END OF RAMP "B"

(9) ADDITIONAL SIGNS REMOVED FROM THIS LOCATION

REMOVING SIGNS

142

SIGN LEGEND

R	EXISTING ITEM TO BE REMOVED
RET	EXISTING ITEM TO BE RETAINED
R&S	EXISTING ITEM TO BE SALVAGED

EXISTING SIGNS

INTERCHANGE #2
WEATHERSFIELD
VT. ROUTE 131

PREPARED BY LCS DATE 8/92
CHECKED BY DATE
DESIGN SUPERVISOR DLP DATE 8/92
PROJ.

HARTFORD-SHARON-ROYALTON
IM IR 089-1(8)

TRAFFIC SHEET NO. ____ OF ____
SHEET 191 OF 260 SHEETS

SCALE 1 IN = 100FT

/traf/8/a008/1/a00812.dgn
ta00812c.i

PLOTTED: 12-MAR-1999

BEGIN PROJECT IR 089 - 1(8)
M.M. 0.00

0.09 SB BRIDGE 2 I-89
0.16 SB BRIDGE 2-1 I-89
0.39 SB BRIDGE 2-2 I-89
0.54 SB BRIDGE 3 I-89
0.64 SB BRIDGE 4 I-89
0.69 SB BRIDGE 5 I-89
0.87 SB
0.89 SB BRIDGE 5-1 I-89

RET(ALL) MILE 1
RET(ALL) H V.A.
1.15 SB BRIDGE 6-S I-89
1.18 SB BRIDGE 6-1 I-89
1.47 SB BRIDGE 6-2S I-89

89 SOUTH
91 NORTH
91 SOUTH

RET(ALL) 1.20 SB CLEAN & PAINT POSTS

1.64 SB 5(1)
91 Brattleboro White River Jct. JUNCTION 1 MILE
RETAIN BASES INSTALL SAME POST TYPE
THIS CORNER TOO LOW
MILE 2 RET(ALL)

2.32 SB BRIDGE 6-3 I-89
2.59 SB BRIDGE 6-4 I-89
2.70 SB BRIDGE 6-5 I-89

RET(ALL) 3.02 SB
JCT 91 2 MILES
RET(ALL) MILE 3
3.05 SB BRIDGE 6-6 I-89
WATCH LINE

I-89 /I-91 INTERCHANGE
M.M. 0.00 - M.M. 0.98
SEE SHEET OF

0.09 NB
0.12 SB
0.85 NB
1.18 NB
1.18 SB
BRIDGE 6-2N I-89
1.47 NB
2.32 NB BRIDGE 6-3 I-89
2.59 NB BRIDGE 6-4 I-89
2.70 NB BRIDGE 6-5 I-89
3.05 NB BRIDGE 6-6 I-89

0.04 NB BRIDGE 2 I-89
0.16 NB BRIDGE 2-1 I-89
0.39 NB BRIDGE 2-2 I-89
0.45 NB BRIDGE 3 I-89
0.58 NB BRIDGE 5 I-89
0.56 NB BRIDGE 4 I-89
0.89 NB BRIDGE 5-1 I-89

NORTH 89 EISENHOWER INTERSTATE SYSTEM
RET(ALL) MILE 1
1.00 NB
BRIDGE 6-N I-89
1.05 NB
BRIDGE 6-1 I-89
1.18 NB
1.20 NB

SPEED LIMIT 65 MINIMUM 40

SALVAGE SIGN PLACED ON NEW FOUNDATIONS
RET(ALL)
WEATHER INFO
TUNE RADIO TO
93.9 FM 95.3 FM
97.1 FM 102.1 FM
1.27 NB

NEW SIGN INSTALLED
Woodstock 13
Barre 51
Montpelier 53
1.85 NB
~~CHANGE TEXT SIZE TO 10.67" E(m). SIGN LEGEND REMAINS UNCHANGED. USE PAY ITEM 675.21MOD.~~
MILE 2 RET(ALL)

RET(MOD.) EXIT 1
4
Woodstock Rutland
1 MILE
NEXT EXIT 11 MILES
2.49 NB

RET(ALL)
Quechee NEXT RIGHT
2.72 NB
REMOVE "EXIT" CENTER "1MILE"
USE PAY ITEM 675.21MOD.

RET(MOD.) EXIT 1
4
Woodstock Rutland
NEXT RIGHT
3.10 NB
REMOVE "RIGHT LANE" ADD "NEXT RIGHT" USE PAY ITEM 675.21MOD.

3.17 SB SPEED LIMIT 65 MINIMUM 40
3.30 SB SOUTH 89 EISENHOWER INTERSTATE SYSTEM
3.27 SB BRIDGE 7 I-89
3.33 SB BRIDGE 7-1 I-89
3.42 SB BRIDGE 7-2 I-89
3.57 SB ONE WAY
S(1) 3.62 SB REPLACE POSTS ONLY
3.77 SB BRIDGE 7-3 I-89
RET(ALL) MILE 4
4.01 SB BRIDGE 8 I-89
4.03 SB B
4.21 SB BRIDGE 8-1 I-89
4.27 SB BRIDGE 9 I-89
4.84 SB BRIDGE 9-1 I-89

WATCH LINE
3.0
INTERCHANGE 1 - WOODSTOCK, QUECHEE
M.M. 3.26 - M.M. 4.05
RTE. 4 OVER I-89
3.21 NB
3.21 SB
4.23 NB
4.23 SB
SEE SHEET 194

3.22 NB BRIDGE 7 I-89
3.33 NB BRIDGE 7-1 I-89
3.42 NB BRIDGE 7-2 I-89
S(1) 3.75 NB USE ALUM. TUBES
3.77 NB BRIDGE 7-3 I-89
3.99 NB BRIDGE 8 I-89
RET(ALL) MILE 4
ONE WAY 4.07 NB
BRIDGE 8-1 I-89
4.21 NB
NORTH 89 EISENHOWER INTERSTATE SYSTEM
BRIDGE 9 I-89
4.27 NB
4.15 NB
SPEED LIMIT 65 MINIMUM 40
4.30 NB

NEW SIGN INSTALLED
Sharon 9
Barre 48
Montpelier 50
4.45 NB
~~CHANGE TEXT SIZE TO 10.67" E(m). SIGN LEGEND REMAINS UNCHANGED.~~
BRIDGE 9-1 I-89
4.84 NB

B 4.03 SB
EXIT 1
4
Woodstock Quechee

LEGEND
S - SALVAGED
RET - RETAINED

ALL SIGNS AND POSTS ARE NEW UNLESS OTHERWISE NOTED.

NEW SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn
IPARM FILE NAME: ta0081G.i
SURVEYED BY: LCS/LSW
SQUAD LEADER: DLP
PLOT DATE: 12-MAR-1999
SURVEY DATE: 11/92
DRAWN BY: LCS
SHEET: 192 OF 260

EXIT 1
4
Woodstock
Quechee
1 MILE
NEXT EXIT
5 MILES
4.93 SB
RET(ALL)
RET(ALL)
MILE 5
5.25 SB
BRIDGE 9-2 I-89
5.97 SB
BRIDGE 9-3 I-89
RET(ALL)
MILE 6
6.25 SB
BRIDGE 9-4 I-89
6.54 SB
BRIDGE 10 I-89
6.63 SB
BRIDGE 10-1 I-89
6.64 SB
BRIDGE 11-S I-89
6.97 SB
MILE 7
RET(ALL)
BRIDGES FREEZE BEFORE ROAD
7.15 SB
7.99 SB
7.77 SB
BRIDGE 11-1S I-89
7.99 SB
BRIDGE 11-2S I-89
RET(ALL)
MILE 8
8.02 SB
BRIDGE 12-S I-89
SEE SHEET
6.68 NB
6.97 SB
8.02 NB
MATCH LINE
MILE 5
RET(ALL)
BRIDGE 9-2 I-89
5.25 NB
BRIDGE 9-3 I-89
5.97 NB
MILE 6
RET(ALL)
BRIDGE 9-4 I-89
6.25 NB
BRIDGE 10 I-89
6.47 NB
RET(ALL)
6.50 NB
BRIDGES FREEZE BEFORE ROAD
BRIDGE 10-1 I-89
6.63 NB
6.68 NB
6.64 NB
BRIDGE 11-N I-89
6.68 NB
MILE 7
RET(ALL)
RET(ALL)
REST AREA
1 MILE
OPEN 7AM - 11PM
7.81NB
BRIDGE 11-1N I-89
7.77 NB
BRIDGE 11-2N I-89
7.99 NB
BRIDGE 12-N I-89
8.00 NB
MILE 8
RET(ALL)
A
RET(ALL)
8.03 NB

SALVAGE SIGN
RET(ALL)
8.73 SB
ONE WAY
8.78 SB
RET(ALL)
MILE 9
RET(ALL)
REST AREA
RIGHT LANE
9.23 SB
RET(ALL)
WEIGH STATION
NEXT RIGHT
OPEN / CLOSED
9.40 SB
RET(ALL)
ALL TRUCKS
NEXT RIGHT
9.48 SB
9.61 SB
RET(ALL)
A
9.80 SB
REST AREA
1 MILE
OPEN 7AM - 11PM
RET(ALL)
8.31 SB
BRIDGE 12-1S I-89
RET(ALL)
ENTERING TOWN OF HARTFORD
8.59 SB
8.64 SB
BRIDGE 12-2 I-89
9.48 SB
BRIDGE 12-3S I-89
S 9.62 SB
S 9.64 SB
N (2)
9.84 SB
BRIDGE 12-4S I-89
9.89 SB
BRIDGE 13-S I-89
A
8.03 NB
9.61 SB
WEIGH STATION
¾ MILE
MATCH LINE
M.M. 8.10
SHARON REST AREAS
SB M.M. 8.57 TO M.M. 9.11
NB M.M. 8.60 TO M.M. 9.12
SEE SHEET 195
ALL TRUCKS
NEXT RIGHT
8.18 NB
RET(ALL)
BRIDGE 12-1N I-89
8.31 NB
WEIGH STATION
NEXT RIGHT
OPEN / CLOSED
8.28 NB
RET(ALL)
REST AREA
RIGHT LANE
8.37 NB
RET(ALL)
ENTERING TOWN OF SHARON
8.65 NB
RET(ALL)
BRIDGE 12-2 I-89
8.64 NB
SALVAGE SIGN
RET(ALL)
8.78 SB
N N
8.85 NB
RET(ALL)
MILE 9
RET(ALL)
ONE WAY
8.95 NB
BRIDGE 12-3N I-89
9.48 NB
S
N (2)
9.63 NB
9.65 NB
BRIDGE 12-4N I-89
9.84 NB
BRIDGE 13-N I-89
9.88 NB

LEGEND
N - NEW
S - SALVAGED
RET - RETAINED

ALL SIGNS AND POSTS ARE NEW UNLESS OTHERWISE NOTED.

NEW SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn PARM FILE NAME: ta00817.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1998 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 193 OF 260

RET(ALL)
MILL 1 0
10.86 SB
BRIDGE 13-1 I-89
RET(ALL)
MILL 1 1
11.76 SB
BRIDGE 13-2 I-89
RET(ALL)
MILL 1 2
12.38 SB
BRIDGE 14-1 I-89
12.34 SB
BRIDGE 14 I-89
12.65 SB
RET(ALL)
WHITE RIVER JCT. 15
12.90 SB
SPEED LIMIT 65
MINIMUM 40
13.00 SB
MILL 1 3
13.08 SB
SOUTH INTERSTATE 89
BIRDSBOROUGH INTERSTATE SYSTEM
SEE SHEET 104
MATCH LINE M.M. 13.0
MATCH LINE
RET(ALL)
MILL 1 0
10.86 NB
BRIDGE 13-1 I-89
RET(ALL)
MILL 1 1
11.76 NB
BRIDGE 13-2 I-89
EXIT 2
132 TO VERMONT 14
Sharon
S. Royalton
1 MILE
NEXT EXIT 10 MILES
12.02 NB
RET(ALL)
MILL 1 2
12.25 NB
STRAFFORD
NEXT RIGHT
BRIDGE 14 I-89
12.28 NB
BRIDGE 14-1 I-89
12.38 NB
12.45 NB
EXIT 2
132 TO VERMONT 14
Sharon
S. Royalton
1/2 MILE
RET(ALL)
MILL 1 3

PLACE 25' BEYOND GORE
ONE WAY
RET(ALL) 13.39 SB
13.14 SB
13.30 SB
BRIDGE 14-2 I-89
13.41 SB
BRIDGE 15-S I-89
13.70 SB
EXIT 2
132 TO VERMONT 14
Sharon
RET(ALL)
13.90 SB
BRIDGE 16-S I-89
MILL 1 4
S(1)
14.10 SB
BRIDGES FREEZE BEFORE ROAD
14.21 SB
EXIT 2
132 TO VERMONT 14
Sharon
1/2 MILE
14.49 SB
BRIDGE 17-S I-89
RT
14.49 SB
N RET(ALL)
14.80 SB
N
BRIDGES FREEZE BEFORE ROAD
N N
14.63 SB
BRIDGE 18-S I-89
RT
14.63 SB
EXIT 2
132 TO VERMONT 14
Sharon
1 MILE
NEXT EXIT 11 MILES
14.90 SB
RET(MOD.)
CHANGE ROUTE MARKERS
REMOVE "EXIT" CENTER "1 MILE"
USE PAY ITEM 675.21 MOD.
MATCH LINE
M.M. 13.10
MATCH LINE
INTERCHANGE 2 - SHARON
M.M. 13.09 - 13.70
13.11 NB
13.76 NB
13.75 SB
LT
14.38 NB & 13.91 NB
LT
14.49 SB
LT
14.63SB
14.63 NB
14.78 SB
SEE SHEET 103
13.10 NB
EXIT 2
132 TO VERMONT 14
Sharon
S. Royalton
13.30 NB
BRIDGE 14-2 I-89
13.38 NB
BRIDGE 15-N I-89
ONE WAY
PLACE 25' BEYOND GORE
RET(ALL) 13.48 NB
13.70 NB
BRIDGES FREEZE BEFORE ROAD
13.91 NB
BRIDGE 16-N I-89
NORTH INTERSTATE 89
BIRDSBOROUGH INTERSTATE SYSTEM
13.85 NB
MILL 1 4
RET(ALL)
N
BRIDGES FREEZE BEFORE ROAD
N N
14.07 NB
N RET(ALL)
SPEED LIMIT 65
MINIMUM 40
14.25 NB
RT
14.38 NB &13.91 NB
BRIDGE 17-N I-89
14.38 NB
RT
14.63 NB
BRIDGE 18-N I-89
14.63 NB
14.76 NB
RET(ALL) 14.76 NB

Bethel	11
Barre	37
Montpelier	39

LEGEND

S - SALVAGED
RET - RETAINED

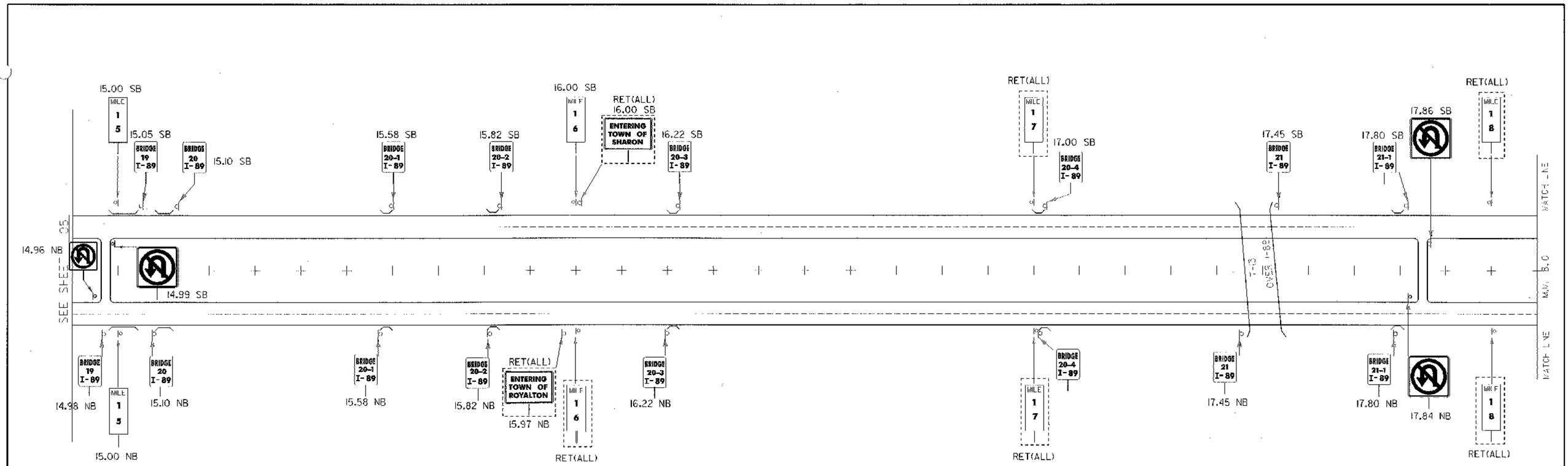
ALL SIGNS AND POSTS ARE NEW UNLESS OTHERWISE NOTED.

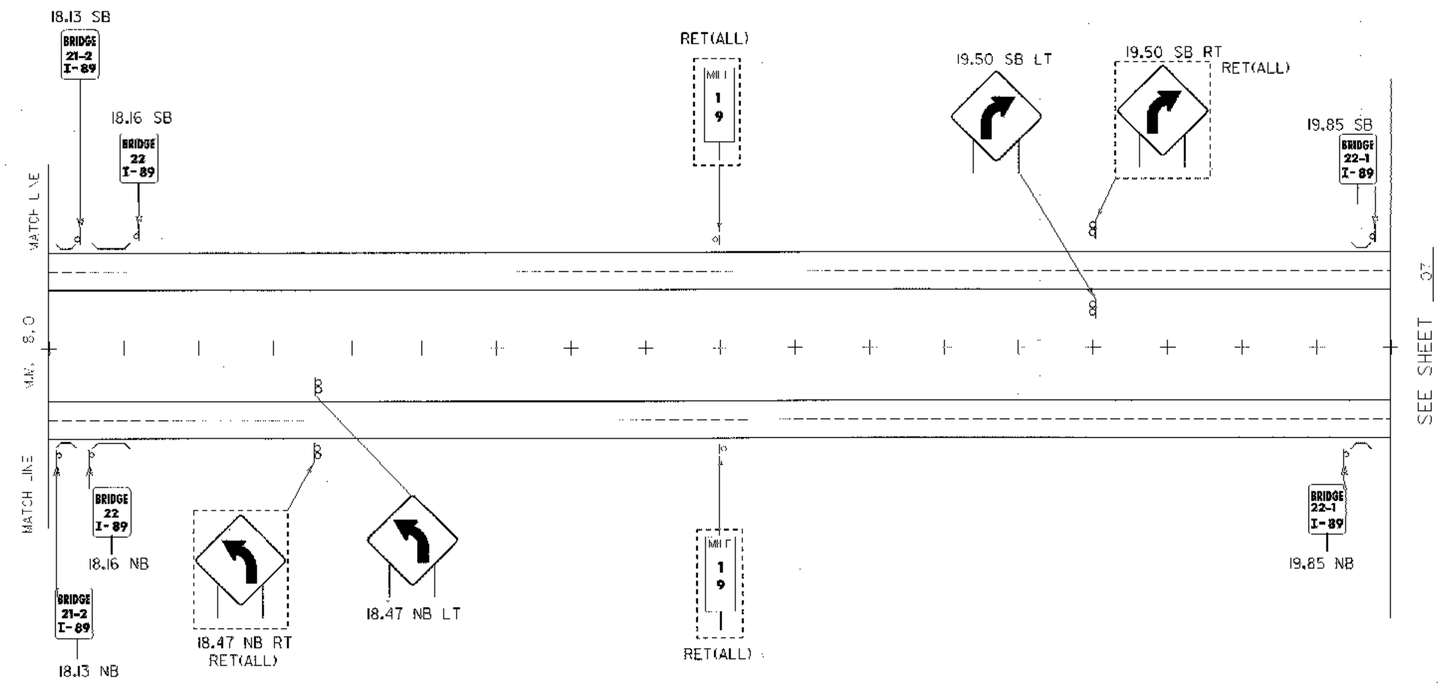
NEW SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /traf/87a008/ta0081.dgn
IPARM FILE NAME: ta0081.i
SURVEYED BY: LCS/LSW
SQUAD LEADER: DLP

PLOT DATE: 12-MAR-1999
SURVEY DATE: 11/92
DRAWN BY: LCS
SHEET: 194 OF 260





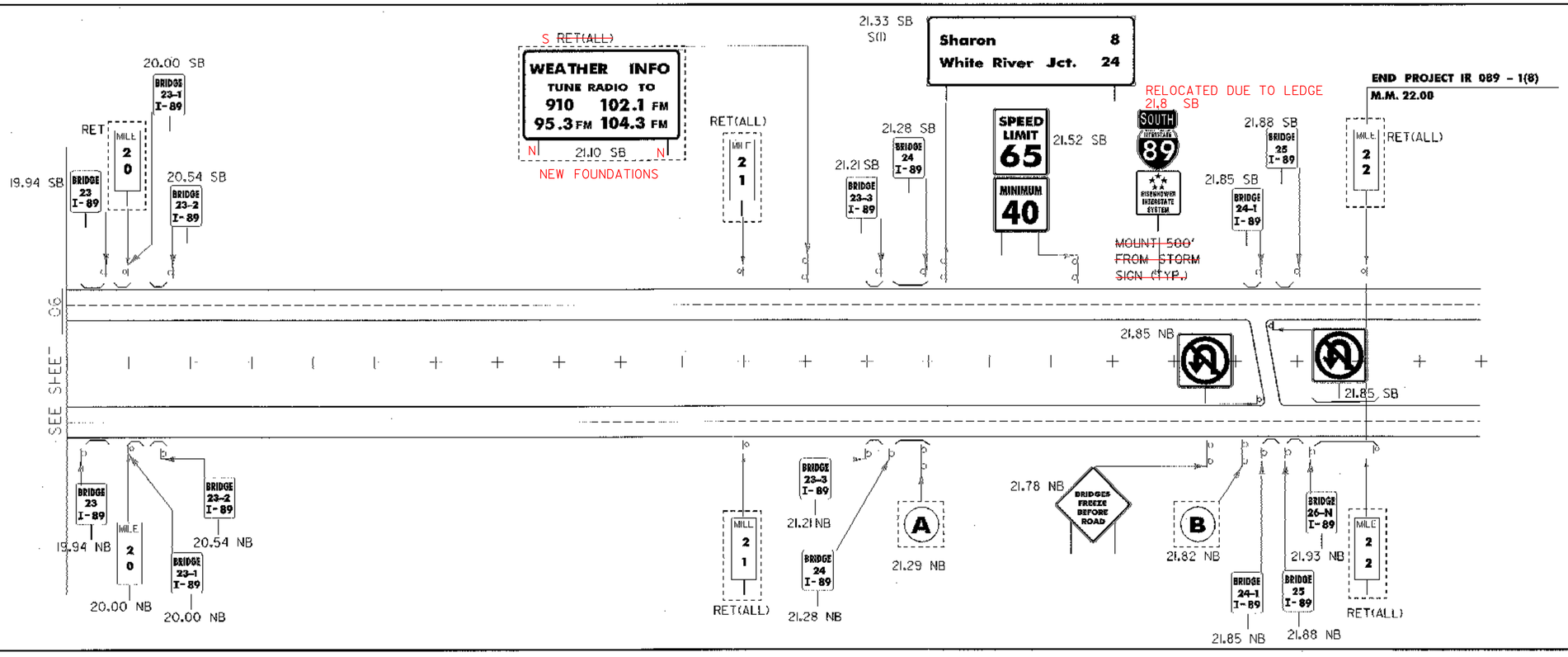
LEGEND

S - SALVAGED
RET - RETAINED

ALL SIGNS AND POSTS ARE NEW UNLESS OTHERWISE NOTED.

NEW SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn IPARM FILE NAME: ta00819.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1999 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 195 OF 260



A 21.29 NB

RET(MOD.)

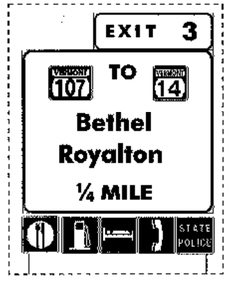
CHANGE ROUTE MARKERS TO NEW DESIGN

REMOVE "EXIT" CENTER "1 MILE"

USE PAY ITEM 675.21 MOD.

B 21.82 NB

RET(MOD.)



CHANGE ROUTE MARKERS TO NEW DESIGN

REMOVE "EXIT" CENTER "¼ MILE"

USE PAY ITEM 675.21 MOD.

LEGEND

S – SALVAGED
RET – RETAINED

ALL SIGNS AND POSTS ARE NEW UNLESS OTHERWISE NOTED.

NEW SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta0081.dgn IPARM FILE NAME: ta0081.01 SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1999 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 196 OF 260

I-91 SOUTH

A 0.33 OVHD NB

RET ALL

NORTH 89 ↓ | SOUTH 91 Brattleboro JCT. ↓ 1/3 MI. | NORTH 91 White River Junction ↗

B 0.55 OVHD SB

RET ALL

THRU TRAFFIC 89 ↓ ↓ | SOUTH 91 ↓

SOUTH 91 Brattleboro ↗

NORTH 91 White River Junction ↖

RET ALL

1373' UP RAMP

ACROSS FROM GORE

1373' UP RAMP

NORTH 91 White River Jct. KEEP LEFT

RET ALL

528' UP RAMP

MAG 139

0.76 OVHD SB

RET ALL

TO 89 12A Concord N H ↓ ↓

NORTH 91 SOUTH Brattleboro White River Jct. →

I-89 NORTH

0.72 SB

ONE WAY 0.81 NB

0.62 SB RET(ALL)

0.53 SB ONE WAY

EMERGENCY STOPPING ONLY

0.76 NB RET ALL

0.64 NB RAMP 30 M.P.H.

0.68 NB

0.68 NB RET ALL

SOUTH 91 Brattleboro ↗

739' UP RAMP

0.45 NB SPEED LIMIT 65 N MINIMUM 40 N N N

B

RET(ALL) ONE WAY 0.53 NB

0.50 NB

SALVAGE TO MM 0.29 SB

50 M.P.H.

RAMP "A"

RAMP "B"

RAMP "C"

A

0.26 NB TURN SIGNAL REQUIRED BEFORE CHANGING LANES

0.35 NB

NORTH 91

0.35 NB

RET(ALL) BUCKLE UP IT'S THE LAW 0.37 NB

0.40 NB REDUCE SPEED DUE TO ICE AND SNOW RET(ALL)

845' UP RAMP REMOVE ASSOC. PVMT MKGS

RAMP 30 M.P.H. 2904' UP RAMP "C"

2693' UP RAMP "C"

FORM SINGLE LINE 322' UP RAMP "C"

3432' UP RAMP "C"

I-91 NORTH

RET ALL 0.06 SB

Airport Plainfield NH RIGHT LANE

RET ALL 0.01 SB

Vietnam Veterans Memorial Highway Connecticut River

SPEED LIMIT 65 R MINIMUM 40 R 0.20 NB R R

211' UP RAMP "A"

SLOWER TRAFFIC KEEP RIGHT

475' UP RAMP "A" REMOVE ASSOC. PVMT MKGS

STRICTLY ENFORCED RET ALL 0.42 NB

0.20 NB Welcome To VERMONT N N

0.08 NB WELCOME CENTER NEXT RIGHT S N N

WELCOME TO VERMONT GREEN MOUNTAIN STATE R

0.08 NB R&S

WELCOME CENTER NEXT RIGHT R R

RET ALL

STATE LINE ENTERING VERMONT

I-89 SOUTH

NORTH 91 White River Jct. RIGHT LANE 0.15 NB

RET ALL

PLOTTED: 14-NOV-2000

SIGN LEGEND

R	EXISTING ITEM TO BE REMOVED
R&S	EXISTING ITEM TO BE REMOVED & SALVAGED
S	SALVAGED SIGN TO BE INSTALLED
RET	EXISTING ITEM TO BE RETAINED
N	NEW ITEM

ALL SIGNS WILL BE NEW UNLESS OTHERWISE NOTED

NEW SIGNS
INTERCHANGE #10
HARTFORD
I-89 & I-91 INTERCHANGE

PREPARED BY LCS DATE 11/92
CHECKED BY ____ DATE ____
DESIGN SUPERVISOR DLP DATE 11/92
PROJ. HARTFORD-SHARON-ROYALTON IM IR 089-1(8)
TRAFFIC SHEET NO. ____ OF ____
SHEET 197 OF 260 SHEETS

ta00891m.i
/trraf/87a008/ta008i91.dgn

0 150 300

SCALE : 2 /3 IN = 100 FT

(A) 1000' UP RAMP "B"
0.09 LT QUECHEE ST. HWY.

(B) 700' UP RAMP

(C) 350' UP RAMP

(D) 25' FROM SHOULDER OF U.S. RTE 4

(E) 6.49 RT

(F) 6.46 RT

(G) 100' UP RAMP

SIGN LEGEND

S EXISTING ITEM TO BE SALVAGED
RET EXISTING ITEM TO BE RETAINED

ALL SIGNS AND POSTS WILL BE NEW UNLESS OTHERWISE NOTED

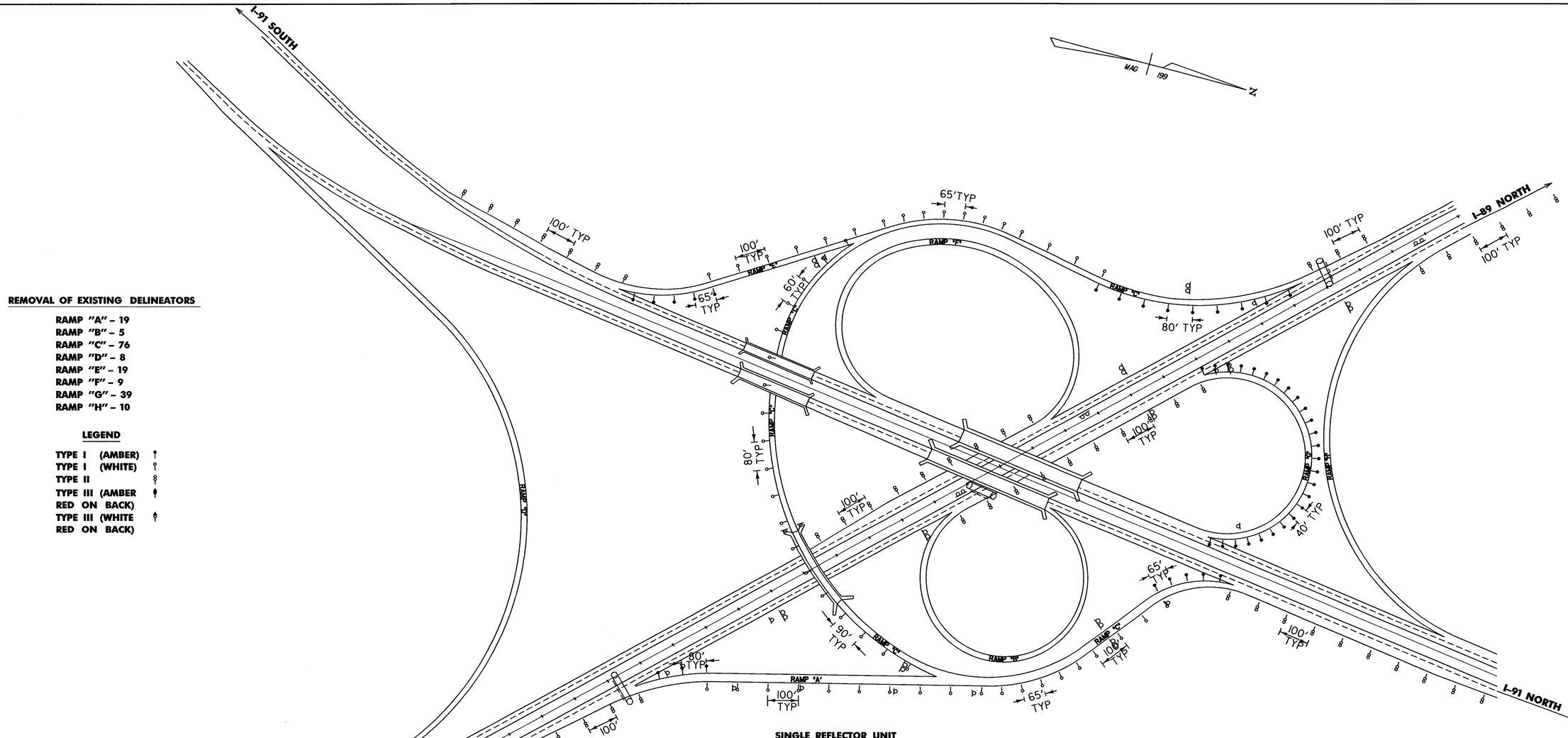
NEW SIGNS
INTERCHANGE #1
QUECHEE
U.S. ROUTE 4

P-SIGNS

PREPARED BY	LCS	DATE 8/92
CHECKED BY		DATE
DESIGN SUPERVISOR	DLP	DATE 8/92
PROJ.	HARTFORD-SHARON-ROYALTON IM IR 089-1(8)	
TRAFFIC SHEET NO.		OF
SHEET 198	OF 260	SHEETS

/trsf/8/a008/ta008il.dgn
ta008iln.i
PLOTTED: 7-MAR-1999

13.22 NB
13.25 NB
EXIT 2
MOUNT ACROSS FROM GORE
1030' UP RAMP W/ NEW PVMNT MARKINGS
700' UP RAMP
WEST TO EAST VERMONT 14 132 132
VT. LAW SCHOOL 4
SHARON 2
S. ROYALTON 5
STRAFFORD 8
FUEL
FOOD
PHONE
LODGING
300' UP RAMP
4.99 RT
NORTH EAST TO VERMONT 14 132
EAST TO SOUTH INTERSTATE VERMONT 89 132 89 14
4.98 LT
SOUTH VERMONT 14
4.94 LT
W. HARTFORD 6
5.01 RT
STOP
5.04 LT
W. HARTFORD 6
STRAFFORD 9
5.14 LT
JCT TO INTERSTATE 132 89
S(3)
5.07 RT
S. ROYALTON 5
Pole 29
177
5.02 RT
NORTH VERMONT 14
4.95 RT
S. ROYALTON 5
STRAFFORD 9
BARRE 3930
4.91 RT
JCT TO INTERSTATE 132 89
SPEED LIMIT 25
THROUGH WAY ENDS HERE
THROUGH WAY BEGINS HERE
0.01 RT
0.05 LT
A
LOCATED ON TOWN CLERK LAWN
JCT VERMONT 14 END 132
0.10 LT
0.07 RT B
TURN SIGNAL REQUIRED BEFORE CHANGING LANES
PROHIBITED
100' UP RAMP
EAST NORTH SOUTH 132 89 89
0.13 RT
SPEED LIMIT 25
0.12 LT
2
C
D
1
NORTH 89
0.19 RT
SOUTH INTERSTATE 89
0.15 LT
S(0)
VERMONT 14
250' UP RAMP
EAST 132
0.23 RT
STATE HIGHWAY ENDS
STATE HIGHWAY BEGINS
THROUGH WAY ENDS HERE
THROUGH WAY BEGINS HERE
0.24 RT
SHOULDER NARROWS
0.27 RT
LEGAL LOAD LIMIT 24,000 POUNDS
SPEED LIMIT 50
0.28 RT
HIDDEN DRIVES RIGHT
STRAFFORD 8
0.29 RT
0.28 LT
SPEED LIMIT 25
0.28 LT
JCT INTERSTATE 89
V.T. ROUTE 132
TO STRAFFORD 5
WEST SOUTH NORTH 132 89 89
0.21 LT
SIGNS ALL INSTALLED TOGETHETHER AT ONE LOCATION
SHARON 2
WH. RIVER JCT. 13
BETHEL 12
BARRE 30
0.24 LT
TURN SIGNAL REQUIRED BEFORE CHANGING LANES
PROHIBITED
100' UP RAMP
MOUNT ACROSS FROM GORE
S(0)
700' UP RAMP W/ NEW PVMNT MARKINGS
13.57 SB
EXIT 2
13.58 SB
A
VT. LAW SCHOOL
W. HARTFORD 6 12
S. ROYALTON 5
SOUTH VERMONT 14
NORTH VERMONT 14
0.04 LT
B
STRAFFORD 9
BARRE 39 30
BETHEL 12
WH. RIVER JCT. 13 S
0.07 RT
C
STRAFFORD 8 S
ROYALTON 7 S
VT. LAW SCHOOL S
SHARON 2
FOOD
PHONE
FUEL
LODGING
250' UP RAMP
D
EAST WEST TO VERMONT 132 132 14
450' UP RAMP
1
25' OFFSET FROM RTE 132
2
25' OFFSET FROM RTE 132
SIGNS NOT USED
SLIP RAMP REMOVED
SIGN LEGEND
RET EXISTING ITEM TO BE RETAINED
S EXISTING ITEM TO BE SALVAGED
ALL SIGNS ARE NEW UNLESS OTHERWISE NOTED
NEW SIGNS
INTERCHANGE #2
SHARON
V.T. ROUTE 132
PREPARED BY LCS DATE 8/92
CHECKED BY DATE
DESIGN SUPERVISOR DLP DATE 8/92
PROJ.
HARTFORD-SHARON-ROYALTON
IM IR 089-1(8)
TRAFFIC SHEET NO. OF
SHEET 199 OF 260 SHEETS
0 100 200
SCALE : 1 IN = 100FT
/traf/8/a008/la00812.dgn
la00812n.i
PLOTTED: 2-MAR-1998

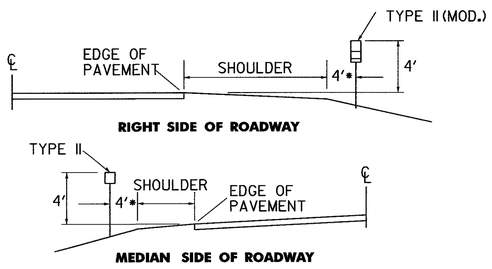


REMOVAL OF EXISTING DELINEATORS

RAMP "A" – 19
RAMP "B" – 5
RAMP "C" – 76
RAMP "D" – 8
RAMP "E" – 19
RAMP "F" – 9
RAMP "G" – 39
RAMP "H" – 10

LEGEND

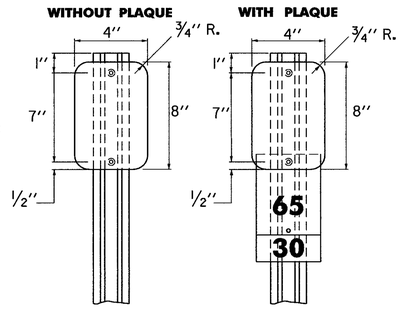
TYPE I (AMBER)
TYPE I (WHITE)
TYPE II
TYPE III (AMBER RED ON BACK)
TYPE III (WHITE RED ON BACK)



RIGHT SIDE OF ROADWAY

MEDIAN SIDE OF ROADWAY

SINGLE REFLECTOR UNIT FOR MAINLINE USE



TYPE II
SEE STANDARD E-198
AMBER

TYPE II (MOD.)
SEE STANDARD E-198
SILVER

NOTES

TYPICAL PLACEMENT OF TYPE II DELINEATORS AND MILEPOSTS ON DIVIDED HIGHWAY

TYPE II AMBER DELINEATORS WITHOUT MILEPOST PLAQUES SHALL BE ERECTED COTINUOUSLY ALONG THE LEFT OR MEDIAN SIDE ON THE DIVIDED HIGHWAYS AND CONTINUED AT THE SAME SPACING WHERE WHERE THERE ARE TYPE II (MOD.) DELINEATORS ON THE RIGHT SIDE THE LATERAL PLACEMENT ON THE RIGHT SHALL BE EVERY 0.05 MILE.

EACH UNIT COMPLETE IN PLACE OF DELINEATOR TYPE II (MOD.) SHALL BE PAID FOR AS "DELINEATOR".

* 3' BEHIND GUARDRAIL

NEW DELINEATOR LAYOUT

INTERCHANGE #10
HARTFORD
I-89 & I-91 INTERCHANGE

0 150 300

SCALE : 2 /3 IN = 100 FT

PREPARED BY LCS DATE 11/92
CHECKED BY _____ DATE _____
DESIGN SUPERVISOR DLP DATE 11/92
PROJ.
HARTFORD-SHARON-ROYALTON
IM IR 089-1(8)
TRAFFIC SHEET NO. _____ OF _____
SHEET 200 OF 260 SHEETS

ta0089ld.i
/traf/87a008/ta00819l.dgn

PLOTTED: 09-NOV-2000

REMOVAL OF EXISTING DELINEATORS

RAMP "A" – 24
RAMP "B" – 29
RAMP "C", "CD" – 35
RAMP "D", "CD" – 42

LEGEND

TYPE I (AMBER)
TYPE I (WHITE)
TYPE II
TYPE III (AMBER)
TYPE III (WHITE)

DELINEATOR LAYOUT

INTERCHANGE #1
QUECHEE
U.S. ROUTE 4

i-89ILDGN

PREPARED BY LCS DATE 8/92
CHECKED BY ____ DATE ____
DESIGN SUPERVISOR DLP DATE 8/92
PROJ.
HARTFORD-SHARON-ROYALTON
IM IR 089-1(8)
TRAFFIC SHEET NO. ____ OF ____
SHEET 201 OF 260 SHEETS

/traf/87a008/ta008il.dgn
ta008ild.i

PLOTTED: 12-MAR-1999

REMOVAL OF EXISTING DELINEATORS

RAMP "A" – 17
RAMP "B" – 17
RAMP "C" – 21
RAMP "D" – 19

LEGEND

TYPE I (AMBER)	
TYPE I (WHITE)	
TYPE II	
TYPE III (AMBER)	
TYPE III (WHITE)	

DELINEATOR LAYOUT

INTERCHANGE #2
SHARON
V.T. ROUTE 132

i-89(2.4)n

PREPARED BY LCS DATE 8/92
CHECKED BY _____ DATE _____
DESIGN SUPERVISOR DLP DATE 8/92
PROJ.

HARTFORD–SHARON–ROYALTON
IM IR 089-1(8)

TRAFFIC SHEET NO. _____ OF _____
SHEET 202 OF 260 SHEETS

0 100 200

SCALE : 1 IN = 100FT

/traf/87a008/ta008i2.dgn
ta008i2d.i

PLOTTED: 12-MAR-1999

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FLANGE REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
0.09 SB	BRIDGE 2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.16 SB	BRIDGE 2-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.39 SB	BRIDGE 2-2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.54 SB	BRIDGE 3 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.64 SB	BRIDGE 4 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.69 SB	BRIDGE 5 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.87 SB LT.	(no-left-turn)	1	36"	36"	9						1			X																			R3-4		E-143
0.89 SB	BRIDGE 5-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
1.15 SB	BRIDGE 6-S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
1.18 SB	BRIDGE 6-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
1.47 SB	BRIDGE 6-2S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
2.32 SB	BRIDGE 6-3 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
2.59 SB	BRIDGE 6-4 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
2.70 SB	BRIDGE 6-5 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
3.05 SB	BRIDGE 6-6 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
3.17 SB	SPEED LIMIT 65	1	48"	60"		20																											R2-1		E-142
												FT 196	FT	FT 14	FT	FT	FT	EA		LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 13.62	SF 20	EA.	SF				FT 210			FT					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: tq008sum.dgn IPARM FILE NAME: tq008s01.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 203 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 / 1.88	2.0 / 2.16	2.5 / 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 / 1.3	4.0 / 1.7	4.0 MOD / 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
																							OPTION ITEMS													
	MINIMUM 40	1	48"	48"	16						2												2	X									VR-141		E-142
3.27 SB	BRIDGE 7 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
3.30 SB	SOUTH	1	30"	15"	3.13																												M3-3		E-135
	INTERSTATE 89	1	36"	36"	9																												MI-1		E-135
	EISENHOWER INTERSTATE SYSTEM	1	36"	36"	9						1												1	X											E-135
3.33 SB	BRIDGE 7-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
3.42 SB	BRIDGE 7-2 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
3.57 SB LT.	ONE WAY	1	36"	12"	3						2			X																			R6-1R		E-142
3.62 SB		1	48"	48"	16						2			X																			W4-1		E-150
3.77 SB	BRIDGE 7-3 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
4.01 SB	BRIDGE 8 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
4.03 SB	EXIT 1	1	96"	24.5"		20																													E-131
	4 Woodstock Quechee	1	204"	120"		170					2																						SEE DETAIL	237	
		6	30"	30"	37.5						3																			3		X	W8X18		BOLT TENSION 18.44 KIPS		E-132
4.21 SB	BRIDGE 8-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
4.27 SB	BRIDGE 9 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
												FT 98	FT	FT 56	FT	FT	FT		EA	LB	LB	LB		LB 320	LB	LB	LB								
TOTALS			SF 95.94	SF 190	EA.	SF						FT 154			FT					LB			EA. 3	LB 320				EA. 3	EA.	LB 768.6					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: ta008sum.dgn IPARM FILE NAME: ta008s02.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 204 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75	2.0	2.5	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0	4.0	4.0 MOD	TUBULAR STEEL Ø (In) FOUND-ATION	3.0	3.5	4.0	5.0	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												lb/ft			lb/ft					lb/ft				lb/ft												
												1.12	2.0	3.0	1.88	2.16	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
												OPTION ITEMS																								
4.84 SB	BRIDGE 9-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
5.25 SB	BRIDGE 9-2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
5.97 SB	BRIDGE 9-3 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.25 SB	BRIDGE 9-4 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.54 SB	BRIDGE 10 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.63 SB	BRIDGE 10-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.64 SB LT.		1	36"	36"	9						1			X																			R3-4		E-143
6.97 SB	BRIDGE 11-5 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.97 SB		1	12"	36"	3						1			X																			OM-3		E-120
6.97 SB LT.		1	12"	36"	3						1			X																			OM-3		E-120
7.00 SB	MILE 7 0	1	12"	36"	3						1			X																			DIO-2		E-139
7.77 SB	BRIDGE 11-1S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
7.99 SB	BRIDGE 11-2S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
8.02 SB	BRIDGE 12-S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
8.31 SB	BRIDGE 12-1S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
8.64 SB	BRIDGE 12-2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
												FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
												168		56																						
TOTALS		SF 21.96	SF	EA.	SF							FT 224			FT					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: t:a008sum.dgn IPARM FILE NAME: t:a008s03.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 205 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																						SIGN DETAIL	
		EA	WIDTH (In)	HEIGHT (In)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (In) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft			FOUNDATION	TUBULAR STEEL Ø (In) lb/ft				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN REMAINED	REMARKS	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.12	2.0	3.0	1.88	2.16	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6	24"	30"						
												OPTION ITEMS																							
8.73 SB LT.	ONE WAY	1	12"	36"	3						2			X																			R6-1R		E-142
9.48 SB	BRIDGE 12-3S I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
9.62 SB LT.		1	36"	36"	9						1			X																			R3-4		E-143
9.64 SB LT.		1	36"	36"	9						1			X																			R3-4		E-143
9.84 SB	BRIDGE 12-4S I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
9.89 SB	BRIDGE 13-S I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
10.86 SB	BRIDGE 13-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
11.76 SB	BRIDGE 13-2 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
12.34 SB	BRIDGE 14 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
12.38 SB	BRIDGE 14-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
12.90 SB	SPEED LIMIT 65	1	48"	60"		20																											R2-1		E-142
	MINIMUM 40	1	48"	48"	16						2												2	X									VR-141		E-142
13.00 SB	MILE 1 3	1	12"	36"	3						1			X																			DI0-2		E-139
13.08 SB	SOUTH	1	30"	15"	3.13																												M3-3		E-135
	INTERSTATE 89	1	36"	36"	9																												MI-1		E-135
	EISENHOWER INTERSTATE SYSTEM	1	36"	36"	9						1												1	X											E-135
												FT 98	FT	FT 70	FT	FT	FT		EA	LB	LB	LB		LB 155	LB	LB	LB							
TOTALS			SF 63.44	SF 20	EA.	SF						FT 168			FT					LB			EA. 3	LB 155				EA.	EA.	LB				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: t-a008sum.dgn IPARM FILE NAME: t-a008s04.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 206 OF 208

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
13.14 SB LT.		1	36"	36"	9						1			X																			R3-4		E-143
13.22 SB LT.	ONE WAY	1	36"	12"	3						2			X																			R6-1R PLACE 25' BEYOND GORE		E-142
13.30 SB	BRIDGE 14-2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
13.41 SB	BRIDGE 15-S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
13.70 SB	EXIT 2	1	96"	30"		20																													E-131
	132 TO 14 Sharon	1	180"	108"		135																											SEE DETAIL	238	
		4	30"	30"	25						2																		2		X	W8X18		BOLT TENSION 22.43 KIPS		E-132
13.90 SB	BRIDGE 16-S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
14.10 SB	BRIDGES FREEZE BEFORE ROAD	1	48"	48"	16						2			X																			VD-701		E-134
14.21 SB	EXIT 2	1	96"	30"		20																											VD-701		E-134
	132 TO 14 Sharon ½ MILE	1	156"	120"		130					2																		2		X	W8X18		BOLT TENSION 24.5 KIPS SEE DETAIL	238	
14.49 SB	BRIDGE 17-S I-89	1	6"	8"	.33						1	X																					VD-701		E-134
14.49 SB RT.		1	12"	36"	3						1			X																			OM-3		E-120
14.49 SB LT.		1	12"	36"	3						1			X																			OM-3		E-120
14.63 SB	BRIDGE 18-2 I-89	1	6"	8"							1	X																					VD-701		E-134
15.00 SB		1	12"	36"							1			X																			OM-3		E-120
												FT 70	FT	FT 112	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS			SF 60.32	SF 305	EA.	SF						FT 182			FT					LB			EA.	LB				EA. 4	EA.	LB 1330.38					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: †a008sum.dgn	PLOT DATE: 09-NOV-2000
IPARM FILE NAME: †a008s05.1	SURVEY DATE:
SURVEYED BY:	DRAWN BY: JHK
SQUAD LEADER: ABK	SHEET: 207 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
14.63 SB LT.		1	12"	36"	3						1			X																				OM-3		E-120
14.78 SB LT.		1	36"	36"	9						1			X																				R3-4		E-143
15.00 SB		1	12"	36"	3						1			X																				D10-2		E-139
15.05 SB		1	6"	8"	.33						1	X																						VD-701		E-134
15.10 SB		1	6"	8"	.33						1	X																						VD-701		E-134
15.58 SB		1	6"	8"	.33						1	X																						VD-701		E-134
15.82 SB		1	6"	8"	.33						1	X																						VD-701		E-134
16.00 SB		1	12"	36"	3						1			X																				D10-2		E-139
16.22 SB		1	6"	8"	.33						1	X																						VD-701		E-134
17.00 SB		1	6"	8"	.33						1	X																						VD-701		E-134
17.45 SB		1	6"	8"	.33						1	X																						VD-701		E-134
17.80 SB		1	6"	8"	.33						1	X																						VD-701		E-134
17.86 SB		1	36"	36"	9						1			X																				R3-4		E-143
18.13 SB		1	6"	8"	.33						1	X																						VD-701		E-134
18.16 SB		1	6"	8"	.33						1	X																						VD-701		E-134
19.50 SB LT.		1	48"	48"	16						2			X																				WI-2R		E-151
												FT 140	FT	FT 98	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS		SF 46.3	SF	EA.	SF							FT 238			FT					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: †a008sum.dgn IPARM FILE NAME: †a008s06.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 208 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
19.85 SB	BRIDGE 22-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
19.94 SB	BRIDGE 23 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
20.00 SB	BRIDGE 23-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
20.54 SB	BRIDGE 23-2 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
21.21 SB	BRIDGE 23-3 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
21.28 SB	BRIDGE 24 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
21.33 SB	Sharon 8 White River Jct. 24	1					X				2												2				X					NEW POSTS ONLY		
21.52 SB	SPEED LIMIT 65	1	48"	60"		20																											R2-1		E-142
	MINIMUM 40	1	48"	48"	16						2												2	X									VR-141		E-142
21.80 SB	SOUTH	1	30"	15"	3.125																												M3-1		E-135
	INTERSTATE 89	1	36"	36"	9																												M1-1		E-135
	EISENHOWER INTERSTATE SYSTEM	1	36"	36"	9						1												1	X											E-135
21.85 SB	BRIDGE 24-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
21.88 SB	BRIDGE 25 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
												FT 112	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB 115	LB	LB	LB 350								
	TOTALS	SF 39.77	SF 20	EA. 1	SF							FT 112			FT					LB			EA. 5	LB 465				EA. 7	EA.	LB					
	SOUTHBOUND TOTALS	SF 341.35	SF 20	EA. 1	SF							FT 1288			FT					LB			EA. 11	LB 940						2098.98				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: †a008sum.dgn	PLOT DATE: 09-NOV-2000
IPARM FILE NAME: †a008s07.i	SURVEY DATE:
SURVEYED BY:	DRAWN BY: JHK
SQUAD LEADER: ABK	SHEET: 209 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (In) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
0.04 NB	BRIDGE 2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.09 NB		1	36"	36"	9						1			X																			R3-4		E-143
0.12 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
0.16 NB	BRIDGE 2-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.39 NB	BRIDGE 2-2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.45 NB	BRIDGE 3 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.56 NB	BRIDGE 4 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.58 NB	BRIDGE 5 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
0.85 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
0.89 NB	BRIDGE 5-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
1.00 NB	NORTH	1	30"	15"	3.13																												M3-3		E-135
	INTERSTATE 89	1	36"	36"	9																												MI-1		E-135
	EISENHOWER INTERSTATE SYSTEM	1	36"	36"	9						1													1	X										E-135
1.05 NB	BRIDGE 6-N I-89	1	6"	8"	.33						1	X																					VD-701		E-134
1.18 NB	BRIDGE 6-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
1.18 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
												FT 126	FT	FT 56	FT	FT	FT		EA	LB	LB	LB		LB 106	LB	LB	LB								
TOTALS			SF 60.1	SF	EA.	SF						FT 182			FT					LB			EA. 1	LB 106				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: ta008sum.dgn IPARM FILE NAME: ta008s08.I SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 210 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	FLANGED CHANNEL lb/ft 2.0	FLANGED CHANNEL lb/ft 3.0	SQUARE STEEL (In) 1.75 lb/ft 1.88	SQUARE STEEL (In) 2.0 lb/ft 2.16	SQUARE STEEL (In) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0 lb/ft 1.3	TUBULAR ALUMINUM Ø (In) 4.0 lb/ft 1.7	TUBULAR ALUMINUM Ø (In) 4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (In) FOUNDATION	TUBULAR STEEL Ø (In) 3.0 lb/ft 7.6	TUBULAR STEEL Ø (In) 3.5 lb/ft 9.0	TUBULAR STEEL Ø (In) 4.0 lb/ft 10.8	TUBULAR STEEL Ø (In) 5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
												OPTION ITEMS																									
I.20 NB	SPEED LIMIT 65	I	48"	60"		20																												R2-I		E-142
	MINIMUM 40	I	48"	48"	I6						2													2	X								VR-I4I		E-142
I.47 NB	BRIDGE 6-2N I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
I.85 NB	Woodstock 13 Barre 51 Montpelier 53	I	I44"	66"		66					2													2				X						SEE DETAIL	237	
2.32 NB	BRIDGE 6-3 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
2.59 NB	BRIDGE 6-4 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
2.70 NB	BRIDGE 6-5 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
3.05 NB	BRIDGE 6-6 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
3.2I NB LT.		I	36"	36"	9						I			X																				R3-4		E-143
3.22 NB	BRIDGE 7 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
3.33 NB	BRIDGE 7-1 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
3.42 NB	BRIDGE 7-2 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
3.75 NB		I					X				2			X																				VW4-I		E-150
3.77 NB	BRIDGE 7-3 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
3.99 NB	BRIDGE 8 I - 89	I	6"	8"	.33						I	X																						VD-70I		E-134
4.07 NB LT.	ONE WAY	I	36"	I2"	3						2			X																				R6-IR		E-142
												FT 140	FT	FT 70	FT	FT	FT	EA		LB	LB		LB 185	LB	LB	LB 340								
TOTALS		SF 3I.3	SF 86	EA. I	SF							FT 210			FT					LB			EA. 4	LB 525			EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S 'SIGN POST DESIGN GUIDELINE.'

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: td008sum.dgn IPARM FILE NAME: td008s09.I SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 2II OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (In) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
4.15 NB	NORTH	1	30"	15"	3.13																													MS-3		E-135
	INTERSTATE 89	1	36"	36"	9																													MI-1		E-135
	ESTABLISHED INTERSTATE SYSTEM	1	36"	36"	9						1												1	X											E-135
4.21 NB	BRIDGE 8-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
4.23 NB LT.		1	36"	36"	9						1			X																			R3-4		F-143
4.27 NB	BRIDGE 9 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
4.30 NB	SPEED LIMIT 65	1	48"	60"		20																											R2-1		E-142
	MINIMUM 40	1	48"	48"	16						2												2	X									VR-141		E-142
4.45 NB	Sharon 9 Barre 48 Montpelier 50	1	144"	66"		66					2												2	REUSE EXISTING POSTS X									SEE DETAIL	237	
4.84 NB	BRIDGE 9-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
5.25 NB	BRIDGE 9-2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
5.97 NB	BRIDGE 9-3 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.25 NB	BRIDGE 9-4 I-89	1	6"	8"	.33						1	X																					VD 701		E-134
6.47 NB	BRIDGE 10 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.63 NB	BRIDGE 10-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
6.64 NB		1	36"	36"	9						1			X																			R3-4		E-143
												FT 112	FT	FT 28	FT	FT	FT		EA	LB	LB	LB		LB 275	LB	LB	LB 340								
TOTALS			SF 57.77	SF 86	EA.	SF						FT 140			FT					LB			EA. 5	LB 615				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: tq008sum.dgn IPARM FILE NAME: tq008sl0.1 SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 212 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
6.68 NB LT.		1	12"	36"	3						1			X																			OM-3		E-120
6.68 NB RT.		1	12"	36"	3						1			X																			OM-3		E-120
6.68 NB	BRIDGE 11-N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
7.77 NB	BRIDGE 11-1N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
7.99 NB	BRIDGE 11-2N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
8.00 NB	BRIDGE 12-N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
8.02 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
8.31 NB	BRIDGE 12-1N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
8.64 NB	BRIDGE 12-2 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
8.95 NB LT.	ONE WAY	1	36"	12"	3						2			X																			R6-1R		E-142
9.48 NB	BRIDGE 12-3N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
9.63 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
9.65 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
9.84 NB	BRIDGE 12-4N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
9.88 NB	BRIDGE 13-N I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
10.86 NB	BRIDGE 13-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
												FT 140	FT	FT 98	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
	TOTALS				SF 39.3	SF	EA.	SF				FT 238			FT					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: t\a008sum.dgn IPARM FILE NAME: t\a008sll.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 213 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (In) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FABRICATION REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																										
11.76 NB	BRIDGE 13-2 I – 89	1	6"	8"	.33						1	X																						VD-701		E-134
12.02 NB	EXIT 2	1	96"	24.5"		20																														E-131
	132 TO 14 Sharon S. Royalton 1 MILE	1	168.5"	144.5"		181.25																												SEE DETAIL	240	
	NEXT EXIT 10 MILES	1	162"	24"		27					2																							BOLT TENSION 36 KIPS		E-131
12.25 NB	Strafford NEXT RIGHT	1	180"	84"		105					2																							SEE DETAIL BOLT TENSION 12 KIPS	240	
12.28 NB	BRIDGE 14 I – 89	1	6"	8"	.33						1	X																						VD-701		E-134
12.38 NB	BRIDGE 14-1 I – 89	1	6"	8"	.33						1	X																						VD-701		E-134
12.45 NB	EXIT 2	1	96"	24.5"		20																														E-131
	132 TO 14 Sharon S. Royalton ½ MILE	1	174"	150"		181.25					2																							SEE DETAIL BOLT TENSION 36 KIPS	239	
13.10 NB	EXIT 2	1	96"	24.5"		20																														E-131
	132 TO 14 Sharon S. Royalton	1	216"	120"		180																												SEE DETAIL	239	
	D	4	30"	30"	25						2																							BOLT TENSION 17.2 KIPS		E-132
13.11 NB		1	36"	36"	9						1			X																				R3-4		E-143
13.30 NB	BRIDGE 14-2 I – 89	1	6"	8"	.33						1	X																						VD-701		E-134
13.38 NB	BRIDGE 15-N I – 89	1	6"	8"	.33						1	X																						VD-701		E-134
13.58 NB LT.	ONE WAY	1	36"	12"	3						2			X																				R6-1R		E-142
												FT 70	FT	FT 42	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS			SF 38.65	SF 734.5	EA.	SF						FT 112			FT					LB			EA.	LB				EA. 4	EA. 4	LB 2453					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: †a0008sum.dgn	PLOT DATE: 09-NOV-2000
IPARM FILE NAME: †a0008si2.1	SURVEY DATE:
SURVEYED BY:	DRAWN BY: JHK
SQUAD LEADER: ABK	SHEET: 214 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
13.70 NB	BRIDGES FREEZE BEFORE ROAD	1	48"	48"	16						2			X																			VW-005		E-150
13.76 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
13.85 NB	NORTH	1	30"	15"	3.13																												M3-1		E-135
	INTERSTATE 89		36"	36"	9																												M1-1		E-135
	EISENHOWER INTERSTATE SYSTEM		36"	36"	9						1												1	X										E-135
13.91 NB	BRIDGE 16-N I - 89	1	6"	8"	.33						1	X																				VD-701		E-134
14.25 NB	SPEED LIMIT 65	1	48"	60"		20																										R2-1		E-142
	MINIMUM 40	1	48"	48"	16						2												2	X								VR-141		E-142
14.38 NB LT.		1	12"	36"	3						1			X																		OM-3		E-120
14.38 NB RT.		1	12"	36"	3						1			X																		OM-3		E-120
14.38 NB	BRIDGE 17-N I - 89	1	6"	8"	.33						1	X																				VD-701		E-134
14.63 NB	BRIDGE 18-N I - 89	1	6"	8"	.33						1	X																				VD-701		E-134
14.76 NB LT.		1	36"	36"	9						1			X																		R3-4		E-143
14.96 NB LT.		1	36"	36"	9						1			X																		R3-4		E-143
14.98 NB	BRIDGE 19 I - 89	1	6"	8"	.33						1	X																				VD-701		E-134
15.00 NB	MILE 15	1	12"	36"	3						1			X																		DI0-2		E-139
												FT 56	FT	FT 112	FT	FT	FT		EA	LB	LB	LB		LB 303.8	LB	LB	LB								
TOTALS			SF 90.45		SF 20		EA.	SF				FT 168			FT					LB			EA. 3		LB 303.8			EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: t:a008sum.dgn
IPARM FILE NAME: t:a008si3.i
SURVEYED BY:
SQUAD LEADER: ABK
PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 215 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
15.10 NB	BRIDGE 20 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
15.58 NB	BRIDGE 20-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
15.82 NB	BRIDGE 20-2 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
16.22 NB	BRIDGE 20-3 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
17.00 NB	BRIDGE 20-4 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
17.45 NB	BRIDGE 21 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
17.80 NB	BRIDGE 21-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
17.84 NB LT.		1	36"	36"	9						1			X																			R3-4		E-143
18.13 NB	BRIDGE 21-2 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
18.16 NB	BRIDGE 22 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
18.47 NB LT.		1	48"	48"	16						2			X																			WI-2L		E-151
19.85 NB	BRIDGE 22-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
19.94 NB	BRIDGE 23 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
20.00 NB	MILE 2 0	1	12"	36"	3						1			X																			DI0-2		E-139
20.00 NB	BRIDGE 23-1 I – 89	1	6"	8"	.33						1	X																					VD-701		E-134
												FT 168	FT	FT 84	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 31.96	SF	EA.	SF				FT 252			FT					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: †a008sum.dgn IPARM FILE NAME: †a008sl4.I SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 216 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 (1.88)	2.0 (2.16)	2.5 (3.35)	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 (1.3)	4.0 (1.7)	4.0 MOD (1.7)	TUBULAR STEEL Ø (In) FOUNDATION	3.0 (7.6)	3.5 (9.0)	4.0 (10.8)	5.0 (14.6)	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																									
20.54 NB	BRIDGE 23-2 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
21.21 NB	BRIDGE 23-3 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
21.28 NB	BRIDGE 24 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
21.29 NB	VERMONT 107	1	48"	36"	12																												MI-5		E-136B
	VERMONT 14	1	36"	36"	9																												MI-5		E-136B
21.78 NB	BRIDGES FREEZE BEFORE ROAD	1	48"	48"	16						2			X																			VW-005		E-150
21.82 NB	VERMONT 107	1	48"	36"	12																												MI-5		E-136B
	VERMONT 14	1	36"	36"	9																												MI-5		E-136B
21.85 NB	BRIDGE 24-1 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
21.88 NB	BRIDGE 25 I-89	1	6"	8"	.33						1	X																					VD-701		E-134
21.93 NB	BRIDGE 26-N I-89	1	6"	8"	.33						1	X																					VD-701		E-134
												FT 84	FT	FT 28	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS		SF 59.98	SF	EA.	SF							FT 112			FT					LB			EA.	LB				EA.	EA.	LB					
N. B. TOTALS		409.51	926.5	1								1414											13	1549.8				4	4	2453					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S 'SIGN POST DESIGN GUIDELINE.'

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: ta008sum.dgn	PLOT DATE: 09-NOV-2000
IPARM FILE NAME: ta008sl5.1	SURVEY DATE:
SURVEYED BY:	DRAWN BY: JHK
SQUAD LEADER: ABK	SHEET: 217 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL FOUNDATION	Ø (In) 3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL: DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
INT. #10 RAMP A LT 0.35 NB		1	18"	18"	2.25						1	X																					OM-1		F-150
INT. #10 RAMP A LT 0.35 NB	NORTH	1	30"	15"	3.13																												M3-1		F-135
	INTERSTATE 91	1	36"	36"	9																												M1-1		E-135
		1	21"	15"	2.19						1									X													M6-2		E-135
INT. #10 RAMP A RT	SLOWER TRAFFIC KEEP RIGHT	~~1~~	~~48"~~	~~60"~~		~~20~~					~~2~~			~~X~~																		R4-3		E-141
	THIS SIGN NOT INSTALLED																																		
INT. #10 RAMP A RT		1	36"	36"	9						1			X																			W3-2A PLACE 475' UP RAMP A		E-150
INT. #10 RAMP A RT	YIELD 36" X36" X36"	1			4.5						1			X																			RI-2 MATCH W/PAVEMENT MARKINGS		E-143
INT. #10 RAMP C LT		1	18"	18"	2.25						1	X																					OM-1		E-150
INT. #10 RAMP C RT		1	12"	36"	3						1			X																			OM-3		E-120
INT. #10 RAMP C LT		1	12"	36"	3						1			X																			OM-3		E-120
INT. #10 RAMP C RT		1	36"	36"	9						1			X																			W4-1		F-150
INT. #10 RAMP C RT	RAMP 30 M.P.H.	1	48"	60"		20					2			~~X~~						X													WI3-3		E-150
INT. #10 RAMP C RT	FORM SINGLE LANE	1	36"	36"	9						1			X																			VW-298	240	
INT. #10 RAMP C LT	FORM SINGLE LANE	1	36"	36"	9						1			X																			VW-298	240	
INT. #10 RAMP C RT		1	24"	24"	4						1			X																			R3-2		E-143
INT. #10 RAMP D LT		1	18"	18"	2.25						1	X																					OM-1		E-150
												FT 42	FT	FT 168	FT	FT	FT		EA	LB 23.4	LB	LB		LB	LB	LB	LB								
TOTALS			SF 71.57	SF 40	EA.	SF						FT 210			FT					LB 23.4			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE # 10 HARTFORD

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: tc008sum.dgn
IPARM FILE NAME: tc008sl6.i
SURVEYED BY:
SQUAD LEADER: ABK

PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 218 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL lb/ft 1.12	2.0	3.0 (OPTION ITEMS)	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL: DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
INT. #10 RAMP D RT		1	24"	24"	4						1			X																				R3-2 MOUNT ACROSS FROM GORE		E-143
INT. #10 0.01 NB	STATE LINE / ENTERING VERMONT	1	40"	24"	6.66						1			X																					237	
0.08 NB	WELCOME CENTER NEXT RIGHT	1	162"	36"	40.5		X				2												2	X									NEW POSTS ONLY		
0.20 NB	Welcome To	1	60"	48"		20					2			~~X~~						X													SEE DETAIL VD-421D	237	
INT. #10 0.26 NB	TURN SIGNAL REQUIRED BEFORE CHANGING LANES	1	36"	36"	9						1			X																			VR-002		E-142
INT. #10 0.37 NB	BUCKLE UP — IT'S THE LAW	1	60"	96"			X				2																						VR-601		
INT. #10 0.45 NB	SPEED LIMIT 65	1	48"	60"	20																												R2-1		
	MINIMUM 40	1	48"	48"	16						2												2	X									VR-141		
INT. #10 0.53 NB LT.	ONE WAY	1	36"	12"	3						2			X																			R6-1		E-142
INT. #10 0.64 NB	RAMP 30 M.P.H.	1	48"	60"	20						2			X																			W13-3		E-150
INT. #10 0.81 NB LT.	ONE WAY	1	36"	12"	3						2			X																			R6-1R		E-142
INT. #10 0.53 SB LT.	ONE WAY	1	36"	12"	3						2			X																			R6-1R		E-142

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

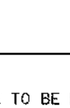
	SF	SF	EA.	SF	FT	FT	FT	EA	LB	LB	LB	LB	LB	LB	EA.	EA.	LB
					244								501.6				
TOTALS	84.66	20	1		244							4	501.6				

INTERCHANGE
* 10 HARTFORD

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: t:a008sum.dgn	PLOT DATE: 14-NOV-2000
IPARM FILE NAME: t:a008sl7.i	SURVEY DATE:
SURVEYED BY:	DRAWN BY: JHK
SQUAD LEADER: ABK	SHEET: 219 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75	2.0	2.5 lb/ft 1.88	2.16	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0	4.0	4.0 MOD lb/ft 1.3	1.7	1.7	TUBULAR STEEL Ø (In) FOUNDATION	3.0	3.5	4.0	5.0 lb/ft 7.6	9.0	10.8	14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL: DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																																
INT. #1 RAMP A LT		3	24"	30"	15						3			X																									W1-8		E-150
INT. #1 RAMP A RT		1	36"	36"	9						~~2~~			~~X~~																									VR-002		E-142
		1	36"	36"	9						~~2~~			~~X~~											2	X													VR-046		E-142
INT. #1 RAMP A RT		1	24"	24"	4						1			X																									R3-2		E-143
INT. #1 RAMP B LT.		1	18"	18"	2.25						1	X																											OM-1		E 150
INT. #1 RAMP B LT.		1	72"	60"		30					2														2	X															E-131
INT. #1 RAMP B RT		1 1	24" 24"	12" 12"	2 2						2			X																									M3-4 M3-2		E-136
		1 1	24" 24"	24" 24"	4 4																																	M1-4 E-123 FOR MOUNTING		E-142
		1 1	21" 21"	15" 15"	2.19 2.19						2			X																								X	M5-1 M5-1		E-136
INT. #1 RAMP B RT.		1	36"	36"	9						2			X																									W1-1 GATE POSTED		E-151
		1	18"	18"	2.25						1			X																									W13-1		E-152
INT. #1 RAMP B LT.		1	36"	24"	6																																		R5-1A		E-143
		1	24"	24"	4						1			X																									R9-4A		E-143
TOTALS		SF 76.88	SF 30	EA.	SF		FT 238				FT									EA	LB			EA. 2	LB 197.6				EA.	EA.	LB									

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

FT: 14 | FT | FT: 224 — FT | FT | FT — EA — LB | LB | LB — LB: 197.6 | LB | LB | LB

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: tq008sum.dgn
IPARM FILE NAME: tq008si8.t
SURVEYED BY:
SQUAD LEADER: ABK
PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 220 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75	2.0	2.5 lb/ft 1.88	2.16	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0	4.0	4.0 MOD lb/ft 1.3	1.7	1.7	TUBULAR STEEL Ø (In) FOUNDATION	3.0	3.5	4.0	5.0 lb/ft 7.6	9.0	10.8	14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																																
INT. #1 RAMP B RT	QUECHEE 6 WRONG WAY	1 1	72" 36"	10' 24'	5 6																																		D1-1 R5-1A MOUNT BACK TO BACK		E-123 E-143
	WOODSTOCK 10	1	72"	10'	5																																		D1-1		E-123
	RUTLAND 42	1	72"	10'	5																																		D1-1		E-123
	3 FOOD	1	54"	7.5'	2.81																																					E-133
	PHONE	1	54"	7.5'	2.81																																					E-133
	FUEL	1	54"	7.5'	2.81																																					E-133
	3 LODGING 2	1	54"	7.5'	2.81																																					E-133
	CAMPING	1	54"	7.5'	2.81																																					E-133
	INFORMATION	1	54"	7.5'	2.81						2																2	X													E-133
INT. #1 RAMP B LT.		1	48"	24"	8						2			X																									W1-6		E-152
INT. #1 RAMP B RT.	STOP DO NOT ENTER	2	30" 30"	30" 30"	6.25 6.25						2			X																									R1-1 R5-1		E-143 E-143
	ONE WAY ONE WAY	2	36" 36"	12" 12"	3 3						1			X																									R6-1L R6-1R SEE STD E-160 FOR MOUNTING DETAIL		E-152
INT. #1 RAMP B LT.	STOP DO NOT ENTER	2	30" 30"	30" 30"	6.25 6.25																																	R1-1 R5-1 MOUNT BACK TO BACK		E-143 E-143
		2	18" 18"	18" 18"	2.25 2.25						1			X																									0M-1 MOUNT BACK TO BACK		E-143
												FT	FT	FT 84	FT	FT	FT		EA	LB	LB	LB				LB 273.6	LB	LB	LB										
TOTALS		SF 81.36	SF	EA.	SF							FT 84			FT					LB			EA. 2			LB 273.6				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: ta008sum.dgn IPARM FILE NAME: ta008sl9.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 221 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (In) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
INT. #1 RAMP C RT	SOUTH		30"	15"	3.13																												M3-3		E-135
	INTERSTATE 89		36"	36"	9																												M1-1		E-135
	↑		21"	15"	2.19						1									X												M6-3		E-135
	TURN SIGNAL REQUIRED BEFORE CHANGING LANES		36"	36"	9																												VR-002		E-142
	PROHIBITED PEDESTRIANS HITCHHIKERS ANIMALS BICYCLES FARM MACHINERY SNOW VEHICLES		36"	36"	9						2												2	X									VR-046		E-142
INT. #1 RAMP C LT.			24"	24"	4						1									X												R3-2 MOUNT ACROSS FROM GORE		E-143
INT. #1 RAMP D LT			18"	18"	2.25						1	X																					OM-1		E-150
INT. #1 RAMP D LT	EXIT 1		72"	60"		30					2												2	X											E-131
INT. #1 RAMP D RT	WRONG WAY		36"	24"	6																												R5-1A		E-143
			24"	24"	4						1			X																		R9-4A MOUNT FACING OPPOSITE TRAFFIC		E-143
INT. #1 RAMP D LT	WRONG WAY		36"	24"	6						1			X																		R5-1A MOUNT FACING OPPOSITE TRAFFIC		E-143
INT. #1 QUECHEE ST. HWY (MED)	↰ STOP		24" 30"	30" 30"	5 6.25																												R4-7 R1-1		E-142 E-143
			18" 18"	18" 18"	2.25 2.25						1			X																		OM-1 OM-1 MOUNT BACK TO BACK		E-150 E-150
												FT 14	FT	FT 42	FT	FT	FT		EA	LB 33.8	LB	LB		LB 532	LB	LB	LB								
TOTALS			SF 70.32		SF 30		EA.	SF				FT 56			FT					LB 33.8			EA. 4	LB 532				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S 'SIGN POST DESIGN GUIDELINE.'

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: t:a008sum.dgn IPARM FILE NAME: t:a008s20.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 222 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) 1.75	2.0	2.5 lb/ft 1.88	2.16	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0	4.0	4.0 MOD lb/ft 1.3	1.7	1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0	3.5	4.0	5.0 lb/ft 7.6	9.0	10.8	14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																																
INT. #1 QUECHEE ST. HWY LT	STOP / DO NOT ENTER		30"	30"	6.25																																			R1-1 R5-1		E-143
			30"	30"	6.25																																					E-143
	ONE WAY / ONE WAY		36"	12"	3						1			X																								R6-1L R6-1R SEE STD E-160 FOR MOUNTING DETAIL		E-142
			36"	12"	3																																					E-142
INT. #1 QUECHEE ST. HWY (MED)	WRONG WAY		36"	24"	6						1			X																								R5-1A MOUNT FACING OPPOSITE TRAFFIC		E-143
INT. #1 QUECHEE ST. HWY LT	WRONG WAY / QUECHEE 6		36"	24"	6																																		R5-1A D1-1 MOUNT BACK TO BACK		E-143
			72"	10"	5																																					E-123
	WOODSTOCK 10		72"	10"	5																																			D1-1		E-123
	2 FOOD		54"	7.5"	2.81																																					E-133
	PHONE		54"	7.5"	2.81																																					E-133
	FUEL		54"	7.5"	2.81																																					E-133
	2 LODGING 3		54"	7.5"	2.81																																					E-133
	CAMPING		54"	7.5"	2.81																																					E-133
	INFORMATION		54"	7.5"	2.81						2																2	X														E-133
INT. #1 QUECHEE ST. HWY LT	WEST / EAST		24"	12"	2																																			M3-4 M3-2		E-136
			24"	12"	2																																					E-136
	4 / 4		24"	24"	4																																			M1-4 M1-4		
			24"	24"	4																																					
			21"	15"	2.19						2			X																								M5-1 M5-1		E-136
			21"	15"	2.19																																					
INT. #1 QUECHEE ST. HWY. (MED)			24"	30"	5																																		R4-7		E-142
			18"	18"	2.25						1			X																								OM-1 OM-1 MOUNT BACK TO BACK		E-150
			18"	18"	2.25																																					
												FT	FT	FT 70	FT	FT	FT		EA	LB	LB	LB						LB 258.4	LB	LB	LB								
TOTALS			SF 83.25	SF	EA.	SF						FT 70			FT					LB			EA. 2				LB 258.4				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: ta008sum.dgn	PLOT DATE: 09-NOV-2000
IPARM FILE NAME: ta008s21.I	SURVEY DATE:
SURVEYED BY:	DRAWN BY: JHK
SQUAD LEADER: ABK	SHEET: 223 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUND-ATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
INT #1 TH 45 LT	LEGAL LOAD LIMIT 20,000 POUNDS		24"	30"	5						1			X																				VR-017		E-141
INT #1 TH 45 RT	STOP		30"	30"	6.25						1			X																				R1-1		E-143
INT #1 TH 45 LT	NO OUTLET		30"	30"	6.25						1			X																				W14-1 SEE DETAIL	240	
INT #1 TH 45 RT	LEGAL LOAD LIMIT 20,000 POUNDS		24"	30"	5						1			X																				VR-017		E-141
INT #1 TH 45 LT	STOP		30"	30"	6.25						1			X																				R1-1		E-143
INT #1 US 4 5.64 RT	JCT		21"	15"	2.19																													M2-1		E-135
	INTERSTATE 89		36"	36"	9						1									X														M1-1		E-135
INT #1 US 4 5.76 LT	SPEED LIMIT 50		24"	30"	5						1			X																				R2-1		E-142
INT #1 US 4 5.76 RT	SHARON 10		72"	10"	5																													D1-1		E-123
	BARRE 40		72"	10"	5																													D1-1		E-123
	WH. RIVER JCT. 3		72"	10"	5						2			X																				D1-1		E-123
INT #1 US 4 5.79 LT	SHOULDER NARROWS		36"	36"	9						1			X																				VW-619		E-151
INT #1 US 4 5.80 RT	SOUTH		24"	12"	2																													M3-3		E-135
	TO INTERSTATE 89		24" 24"	12" 24"	2 4																													M4-5 M1-1		E-135 E-135
	EAST NORTH TO		24" 24" 24"	12" 12" 12"	2 2 2																													M3-2 M3-1 M4-5		E-136A E-135 E-135
												FT	FT	FT 126	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 82.94	SF	EA.	SF				FT 126			FT					LB 24.7			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: †a008sum.dgn
IPARM FILE NAME: †a008s22.i
SURVEYED BY:
SQUAD LEADER: ABK
PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 224 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75	2.0	2.5 lb/ft 1.88	2.16	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0	4.0	4.0 MOD lb/ft 1.3	1.7	1.7	FOUNDATION	TUBULAR STEEL Ø (In) 3.0	3.5	4.0	5.0 lb/ft 7.6	9.0	10.8	14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAMED REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																																
INT #1 US 4 5.80 RT	4 · 89 · 91		24"	24"	1																																		M1-1 M1-1 M1-1		E-136A E-135 E-135
			24"	24"	4																																				
			24"	24"	4																																					
			21"	15"	2.19						2																2	X									X	M6-3 M6-3 M5-1		E-136 E-135 E-135
			21"	15"	2.19																																			
			21"	15"	2.19																																					
INT #1 US 4 5.81 LT	QUFCHFF 6		72"	10"	5																																		D1-1		E-123
	WOODSTOCK 10		72"	10"	5																																		D1-1		E-123
	RUTLAND 41		72"	10"	5						2			X																								D1 1		E-123
INT #1 US 4 5.84 RT	ONLY		30"	30"	6.25						1			X																								VR-921		E-145A
INT #1 US 4 5.85 RT	SOUTH · SOUTH		21"	12"	2																																		M3-3 M3-3		E-135
			24"	12"	2																																				
	89 · 89		24"	24"	4																																		M1-1 M1-1		E-135
			24"	24"	4																																				
	← · →		21"	15"	2.19						2			X												2	X										M6-1 M6-1 MOUNT BACK TO BACK		E-135
			21"	15"	2.19																																			
INT #1 US 4 5.85 LT	WEST		24"	12"	2																																		M3-4		E-136
	4		24"	24"	1						1														X												M1-1		E-136
INT #1 US 4 5.88 LT	TO		24"	12"	2																																		M1-5		E-135
	EAST · NORTH		24"	12"	2																																		M3 2 M3 1		E-136 E 135
			21"	12"	2																																			
	4 · 89		24"	24"	4						2			X												2	X										M1-1 M1-1		E-136 E-135
			24"	24"	4																																				
INT #1 US 4 5.94 LT	WOODSTOCK 10		72"	10"	5																																		D1-1		E 123
	RUTLAND 42		72"	10"	5																																		D1-1		E-123
												FT	FT	FT 42	FT	FT	FT		EA	LB 24.7	LB	LB		LB 273.6	LB	LB	LB												
TOTALS			SF 86.20	SF	EA.	SF						FT 42			FT					LB 24.7			EA. 6	LB 273.6				EA.	EA.	LB									

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: ta008sum.dgn
IPARM FILE NAME: ta008s23.1
SURVEYED BY:
SQUAD LEADER: ABK
PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 225 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																									
	← WH. RIVER JCT. 3		72"	10"	5						2			X																				D1-1		E-123
INT #1 US 4 5.99 LT	SOUTH / WEST		24" / 24"	12" / 12"	2 / 2																												M3-3 M3-4		F-135 F-136
	INTERSTATE 89 / 4		24" / 24"	24" / 24"	4 / 4																												M1-1 M1-4		E-135 E-136
			21" / 21"	15" / 15"	2.19 / 2.19						2			X									X	X								M5-1 M6-3		E-135 E-136
INT #1 TH 121 RT	STOP		30"	30"	6.26						1			X																				R1-1		E-143
INT #1 TH 121 LT	LEGAL LOAD LIMIT 24,000 POUNDS		24"	30"	5						1			X																				VR 017		E-141
INT #1 US 4 6.23 RT			12"	36"	3						1			X																				OM-3		E-120
INT #1 US 4 6.23 LT			12"	36"	3						1			X																				OM-3		E-120
INT #1 US 4 6.31 RT			12"	36"	3						1			X																				OM-3		E-120
INT #1 US 4 6.31 LT			12"	36"	3						1			X																				OM-3		E-120
INT #1 US 4 6.39 RT	NORTH		24"	12"	2																												M3-1		E-135
	INTERSTATE 89		24"	24"	4																												M1-1		E-135
			21"	15"	2.19						1												X										M5-1		E-135
INT #1 US 4 6.39 LT							X				1			X																				W1-2		
												FT 126	FT	FT	FT	FT	FT	EA	LB 24.7	LB	LB	EA 2	LB 258.4	LB	LB	LB	EA.	EA.	LB						
	TOTALS		SF 52.82	SF	EA.	SF						FT 126			FT				LB 24.7			EA. 2	LB 258.4				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #2 SHARON

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: ta008sum.dgn
IPARM FILE NAME: ta008s24.1
SURVEYED BY:
SQUAD LEADER: ABK

PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 226 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75	2.0	2.5	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																									
INT #1 US 4 6.42 I T	QUECHEE 6		72"	10"	5									X																				D1-1		F-123
	WOODSTOCK 10		72"	10"	5																												D1-1		E-123
	RUTLAND 42		72"	10"	5						2			X																				D1-1		F-123
INT #1 US 4 6.43 MED			24"	30"	5																												R4-7		F-142
			18" 18"	18" 18"	2.25 2.25						1			X																				OM-1 OM-1 MOUNT BACK TO BACK		E-150 E-150
INT #1 US 4 6.46 RT	WH. RIVER JCT. 3		72"	10"	5																												D1-1		E-123
	SHARON 13		72"	10"	5																												D1-1		E-123
	BARRE 40		72"	10"	5						2			X																				D1 1		E-123
INT #1 US 4 6.49 RT	NORTH NORTH		24" 24"	12" 12"	2 2						1			X																				M3-1 M3-1 MOUNT BACK TO BACK		E-135 F-135
	89 89		24" 24"	12" 12"	4 4																												M1-1 M1-1 MOUNT BACK TO BACK		E-135 E-135
			21" 21"	15" 15"	2.19 2.19						2			X									2	X									M6-1 M6-1 MOUNT BACK TO BACK		E-135 E-135
INT #1 US 4 6.49 I T	TO		24"	12"	2																												M4-5		F-135
	WEST SOUTH		24" 24"	12" 12"	2 2																												M3-4 M3-3		E-136 E-135
	4 89		24" 24"	24" 24"	4 4						2			X									2	X									M1-4 M1-1		E-136 E-135
INT #1 US 4 6.50 MED			24"	30"	5																												R4-7 MOUNT FACING OPPOSITE TRAFFIC		E-142
			18" 18"	18" 18"	2.25 2.25						1			X		X																	OM-1 OM-1 MOUNT BACK TO BACK		E-150 E-150
												FT	FT	FT 98	FT	FT	FT		EA	LB	LB	LB		LB 516.8	LB	LB	LB							
	TOTALS		SF 79.38	SF	EA.	SF						FT 98			FT					LB			EA. 4	LB 516.8				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: tq008sum.dgn
IPARM FILE NAME: tq008s25.i
SURVEYED BY:
SQUAD LEADER: ABK

PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 227 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) lb/ft FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																									
INT #1 US 4 6.51 LT	WEST EAST		24"	12"	2																												M3-4 M3-2		E-136
			24"	12"	2																														F-136
	4 4		24"	24"	4																												M1-4 M1-4		E-136
			24"	24"	4																														F-136
			21"	15"	2.19						2			X									2	X								M6-1 M6-1		E-136
			21"	15"	2.19																														E-136
INT #1 US 4 6.52 MED	LEFT LANE MUST TURN LEFT		24"	30"	5																												R4-7 R3-7L MOUNT BACK TO BACK		E-142
			30"	30"	6.25																														E-140
			18"	18"	2.25						1			X																			OM-1 OM-1 MOUNT BACK TO BACK		E-150
			18"	18"	2.25																														E-150
INT #1 US 4 6.53 RT	EAST		24"	12"	2																												M3 2		E-136
	4		24"	24"	4						1									X													M1 4		E-136
INT #1 US 4 6.55 LT	ONLY		30"	30"	6.25						1			X																			VR-921		E-145A
INT #1 US 4 6.59 RT	WH. RIVER JCT. 6		72"	10"	5						2			X																			D1-1		F-123
INT #1 US 4 6.61 LT	TO		24"	12"	2																												M4-5		F-135
	NORTH WEST SOUTH		24"	12"	2																												M3-1 M3-4 M3-3		F-135
			24"	12"	2																														E-136
			24"	12"	2																														E-135
	INTERSTATE 89 4 INTERSTATE 89		24"	24"	4																												M1-1 M1 4 M1-1		E-135
			24"	24"	4																														E-136
			24"	24"	4																														E-135
			21"	15"	2.19						2			THESE SIGNES REPLACED NEW IN 1999									2	X							X	M5-1 M6-3 M6-3		E-135
			21"	15"	2.19																														E-136
			21"	15"	2.19																														E-135
INT #1 US 4 6.61 MED			24"	30"	5																												R4-7		E-142
			18"	18"	2.25						1			X																			OM-1 OM 1 MOUNT BACK TO BACK		E-150
			18"	18"	2.25																														E-150
INT #1 US 4 6.64 LT	QUECHEE 6		72"	10"	5																												D1-1		E-123
												FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB							
														70								24.7				198									
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		**TOTALS**	SF 90.15	SF	EA.	SF			FT 70		FT		LB 24.7		EA. 4		LB 198			EA.	EA.	LB												

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: tq008sum.dgn IPARM FILE NAME: tq008s26.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 09-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 228 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75	2.0	2.5	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL: DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																								
	RUTLAND 42		72"	10"	5																													D1-1		E-123
	SHARON 13		72"	10"	5																													D1-1		E-123
	BARRE 38		72"	10"	5						~~2~~			~~X~~																			D1-1		E-123
INT #1 US 1 6.66 RT	SPEED LIMIT 50		24"	30"	5						1			X																			R2-1		E-142 E-140
INT #2 RAMP A LT	TURN SIGNAL REQUIRED BEFORE CHANGING LANES		36"	36"	9																												VR-002		E-142
	PROHIBITED		36"	36"	9						~~1~~			~~X~~																			VR-046		E-142
INT #2 RAMP A RT			24"	24"	4						1			X																			R3-2 MOUNT ACROSS FROM GORE		E-143
INT #2 RAMP B LT			18"	18"	2.25						1	X			X																			OM-1		E-150
INT #2 RAMP B LT	EXIT 2		72"	60"		30					2												2	X											F-131
INT #2 RAMP B RT			36"	36"	9						1			X																			W3-1A MATCH WITH PAVEMENT MARKINGS		E-150
INT #2 RAMP B RT	WEST TO EAST		24" 24" 24"	12" 12" 12"	2 2 2																												M3-4 M4-5 M3-2		E-136C E-136B E-136C
	132 VERMONT 14 132		30" 24" 30"	24" 24" 24"	5 4 5																												M1-6 M1-5 M1-6		E-136C E-136B E-136C
			21" 21" 21"	15" 15" 15"	2.188 2.188 2.188						2												2	X									X	M5-1 M5-1 M5-1		E-136C E-136B E-136C
INT #2 RAMP B LT	WRONG WAY		36"	24"	6																													R5-1A		E-143
			24"	21"	4						1			X																			R9-1A MOUNT FACING OPPOSITE TRAFFIC		E-143
												FT 14		FT 98	FT 14				EA	LB				LB 501.6										
TOTALS			SF 89.82	SF 30	EA.	SF						FT 112			FT					LB			EA. 4	LB 501.6				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #1 QUECHEE

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: tq008sum.dgn
IPARM FILE NAME: tq008s27.i
SURVEYED BY:
SQUAD LEADER: ABK
PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 229 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (In) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
INT #2 RAMP B RT	WRONG WAY ← SHARON 2		36"	24"	6																													R5-1A D1-1 MOUNT BACK TO BACK		E-143
			72"	10"	5																															E-123
	← S. ROYALTON 5		72"	10"	5																													D1-1		E-123
	STRAFFORD 8 →		72"	10"	5																													D1-1		E-123
	← FUEL		54"	7.5"	2.81																															E-133
	← FOOD		54"	7.5"	2.81																															E-133
	← PHONE		54"	7.5"	2.81																															E-133
	← LODGING →		54"	7.5"	2.81						2												2	X											E-133
INT #2 RAMP B LT	STOP DO NOT ENTER		30"	30"	6.25																													R1-1 R5-1		E-143
			30"	30"	6.25																															E-143
	ONE WAY ONE WAY		36"	12"	3						1			X																				R6-1L R6-1R SEE STD E-160 FOR MOUNTING DETAIL		E-142
			36"	12"	3																															E-142
INT #2 RAMP B MED	STOP DO NOT ENTER		30"	30"	6.25																													R1-1 R5-1		E-143
			30"	30"	6.25																															E-143
	ONE WAY ONE WAY		36"	12"	3						1			X																				R6-1L R6-1R SEE STD E-160 FOR MOUNTING DETAIL		E-142
			36"	12"	3																															E-142
INT #2 RAMP B RT	STOP DO NOT ENTER		30"	30"	6.25						1			X																				R1-1 R5-1 MOUNT BACK TO BACK		E-143
			30"	30"	6.25																															E-143
INT #2 RAMP C LT			18"	18"	2.25						1			X																				OM-1		E-150
INT #2 RAMP C LT	EXIT 2 ↗		72"	60"		30					2												2	X											E-131
INT #2 RAMP C RT			36"	36"			X				1			X																				W3-1A MATCH WITH ASSOCIATED PAVEMENT MARKINGS		E-150
												FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
														70											532											
TOTALS			SF 84	SF 30	EA. 1	SF						FT 70			FT					LB			EA. 4	LB 532				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #2 SHARON

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: †a008sum.dgn	PLOT DATE: 09-NOV-2000
IPARM FILE NAME: †a008s28.i	SURVEY DATE:
SURVEYED BY:	DRAWN BY: JHK
SQUAD LEADER: ABK	SHEET: 230 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
INT #2 RAMP C RT	EAST WEST TO		24"	12"	2																												M3-2 M3-4 M4-5		E-136C
			24"	12"	2																														E-136C
			24"	12"	2																														E-136B
	132 132 VERMONT 14		30"	24"	5																												M1-6 M1-6 M1-5		E-136C
			30"	24"	5																														E-136C
			24"	24"	4																														E-136B
			21"	15"	2.19						2												2	X							X	M5-1 M5-1 M5-1		E-136C
			21"	15"	2.19																														E-136C
			21"	15"	2.19																														E-136B
INT #2 RAMP C LT	WRONG WAY						X																										R5-1A		E-143
			24"	24"	4						1			X																			R9-4A MOUNT FACING OPPOSITE TRAFFIC		E-143
INT #2 RAMP C RT	WRONG WAY SHARON 2		36"	24"	6																												R5-1A D1-1 MOUNT BACK TO BACK		E-143
			72"	10"	5																														E-123
	FOOD		54"	7.5"	2.81																														E-133
	PHONE		54"	7.5"	2.81																														E-133
	FUEL		54"	7.5"	2.81																														E-133
	LODGING		54"	7.5"	2.81						2			X																					E-133
INT #2 RAMP C RT	STOP DO NOT ENTER		30"	30"	6.25																												R1-1 R5-1		E-143
			30"	30"	6.25																														E-143
	ONE WAY ONE WAY		36"	12"	3						1			X																			R6-1L R6-1R SEE STD E-160 FOR MOUNTING DETAIL		E-142
			36"	12"	3																														E-142
INT #2 RAMP C MED	STOP DO NOT ENTER		30"	30"	6.25																												R1-1 R5-1		E-143
			30"	30"	6.25																														E-143
INT #2 RAMP C LT	ONE WAY ONE WAY		36"	12"	3						1			X																			R6-1L R6-1R SEE STD E-160 FOR MOUNTING DETAIL		E-142
			36"	12"	3																														E-142
INT #2 RAMP C RT	STOP DO NOT ENTER		30"	30"	6.25						1			X																			R1-1 R5-1 MOUNT BACK TO BACK		E-143
			30"	30"	6.25																														E-143
												FT 84	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB 114	LB	LB	LB							
TOTALS			SF 102.31		SF	EA. 1	SF					FT 84			FT					LB			EA. 2	LB 114				EA.	EA.	LB				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S 'SIGN POST DESIGN GUIDELINE.'

INTERCHANGE #2 SHARON

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: †a008sum.dgn
IPARM FILE NAME: †a008s29.i
SURVEYED BY:
SQUAD LEADER: ABK

PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 231 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) 1.75	2.0	2.5 lb/ft 1.88	2.16	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0	4.0	4.0 MOD lb/ft 1.3	1.7	1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0	3.5	4.0	5.0 lb/ft 7.6	9.0	10.8	14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL: DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																																
INT #2 RAMP D RT	TURN SIGNAL REQUIRED BEFORE CHANGING LANES		36"	36"	9																																			VR 002		E-142
	PROHIBITED		36"	36"	9						1			~~X~~																										VR-046		E-142
INT #2 RAMP D RT			24"	24"	4						1			X																										R3-2 MOUNT ACROSS FROM GORE		E-143
INT #2 VT RT 14 4.91 RT	JCT TO		21" 24"	15" 12"	2.19 2																																		M2-1 M4-5		E-136C E-135
	132 INTERSTATE 89		30" 24"	24" 24"	5 4																																		M1-6 M1-1		E-136C E-135
			21"	15"	2.19						2			X																								X	M5-1 SEE STD E-123 FOR MOUNTING DETAIL		E-135
INT #2 VT RT 14 4.94 LT	W. HARTFORD 6		72"	10"	5						2			X																										D1-1		E-123
INT #2 VT RT 14 4.95 RT	S. ROYALTON 5		72"	10"	5																																		D1-1		E-123
	S. STRAFFORD 6		72"	10"	5																																		D1-1		E-123
	BARRE 30		72"	10"	5						2			X																										D1-1		E-123
INT #2 VT RT 14 4.98 LT	SOUTH		24"	12"	2																																		M3-3		E-136B
	VERMONT 14		24"	24"	4						1			X																										M1-5		E-136B
INT #2 VT RT 14 4.99 RT	NORTH EAST TO		24" 24" 24"	12" 12" 12"	2 2 2																																		M3-1 M3-2 M4-5		E-136B E-136C E-135
	VERMONT 14 132 INTERSTATE 89		24" 24" 30"	24" 24" 24"	4 4 5																																		M1 5 M1 6 M1 1		E-136B E-136C E-135
			21" 21" 21"	15" 15" 15"	2.19 2.19 2.19						2																		2	X								X	M6-3 M6-1 SEE STD E-123 FOR MOUNTING DETAIL M6-1		E-136B E-136C E-135
INT #2 VT RT 14 4.99 RT	EAST TO SOUTH		24" 24" 24"	12" 12" 12"	2 2 2																																		M3 2 M4 5 M3 3		E-136B E-136C E-135
												FT	FT	FT 126	FT	FT	FT		EA	LB	LB	LB		LB 198	LB	LB	LB													
TOTALS			SF 94.95	SF	EA.	SF						FT 126			FT					LB				EA. 2	LB 198				EA.	EA.	LB									

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #2 SHARON

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: †a008sum.dgn
IPARM FILE NAME: †a008s30.i
SURVEYED BY:
SQUAD LEADER: ABK
PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 232 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
	132 INTERSTATE 89 VERMONT 14		30"	24"	5																													M1-6 M1-1 M1-5		E-136C E-135 E-136B
			24"	24"	4																															
			24"	24"	4																															
			21"	15"	2.19																													M6-1 MOUNT BACK TO BACK WITH ABOVE M6-1 ASSEMBLY M6-3 SEE STD E-123 FOR MOUNTING DETAIL		E-136C E-135 E-136B
			21"	15"	2.19																											X			
			21"	15"	2.19																															
INT #2 VT RT 14 5.02 RT	NORTH		24"	12"	2																													M3-1		E-136B
	VERMONT 14		24"	24"	4						1			X																				M1-5		E-136B
INT #2 VT RT 14 5.04 LT	W. HARTFORD 6		72"	10"	5																													D1-1		E-123
	STRAFFORD 9		72"	10"	5						2			X																				D1-1		E-123
INT #2 VT RT 14 5.07 RT	S. ROYALTON 5		72"	10"	5						2			X																				D1-1		E-123
INT #2 VT RT 14	JCT TO						X																											M2-1 M4-5		E-136C E-135
	132 INTERSTATE 89						X																											M1-6 M1-1		E-136C E-135
							X				1										X												X	M5-1 SEE STD E-123 FOR MOUNTING DETAIL		E-135
INT #2 RTE. 132 0.01 RT	SPEED LIMIT 30 THROUGH WAY ENDS HERE		24"	30"	5																													R2-1 VR-040 MOUNT BACK TO BACK		E-142
			24"	24"	4																															E-141
	THROUGH WAY BEGINS HERE		24"	24"	4						1			X																				VR-041		E-141
INT #2 RTE. 132 0.04 LT	WOODSTOCK 10		72"	10"	5																													D1-1		E-123
	WH. RIVER JCT. 3		72"	10"	5																													D1-1		E-123
	SOUTH NORTH		24"	12"	2																													M3-3 M3-1		E-136B E-136C E-135
			24"	12"	2																															
	VERMONT 14 VERMONT 14		24"	24"	4																													M1-5 M1-5		E-136B
			24"	24"	4																															E-136B
												FT	FT	FT 84	FT	FT	FT		EA	LB	LB	LB 24.7		LB	LB	LB	LB								
TOTALS			SF 75.57		SF		EA. 5		SF			FT 84			FT					LB 24.7			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #2 SHARON

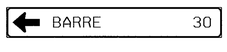
PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: ta008sum.dgn
IPARM FILE NAME: ta008s3l.i
SURVEYED BY:
SQUAD LEADER: ABK

PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 233 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUND-ATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
			21"	15"	2.19						2												2	X								X	M6-1 M6-1 SEE STD E-123 FOR MOUNTING DETAIL		E-136B
			21"	15"	2.19																														E-136B
INT #2 RTE. 132 0.07 RT			72"	10"	5																												D1-1		E-123
			72"	10"	5																												D1-1		E-123
			72"	10"	5																												D1-1		E-123
			72"	10"	5						2			X																			D1-1		E-123
INT #2 RTE. 132 0.10 LT			24"	30"	5						1			X																			R2-1		E-142
INT #2 RTE. 132 0.10 LT			21"	15"	2.19																												M2-1 MOUNT OUTBOARD OF SL 30 SIGN		E-136B
			24"	24"	4																												M1-5		E-136B
			21"	15"	2.19																												M4-6		E-140
			30"	24"	5						1									X													M1-6		E-136C
INT #2 RTE. 132 0.13 RT			24" 24" 24"	12" 12" 12"	2 2 2																												M3-2 M3-1 M3-3		E-135
			30" 24" 24"	24" 24" 24"	5 4 4																												M1-6 M1-1 M1-1		E-135
			21" 21" 21"	15" 15" 15"	2.19 2.19 2.19						2												2	X								X	M6-3 M6-3 SEE STD E-123 FOR MOUNTING DETAIL M6-1		E-135
INT #2 RTE. 132 0.15 LT			24"	12"	2																												M3-3		E-135
			24"	24"	4																												M1-1		E-135
			21"	15"	2.19						1									X													M6-1		E-135
												FT 42	FT	FT	FT	FT	FT		EA 4	LB 49.4	LB	LB		LB 547.2	LB	LB	LB								
TOTALS		SF 76.52	SF	EA.	SF							FT 42			FT					LB 49.4			EA. 4	LB 547.2				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #2 SHARON

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: ta008sum.dgn
IPARM FILE NAME: ta008s32.i
SURVEYED BY:
SQUAD LEADER: ABK

PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 234 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
INT #2 RTE. 132 0.19 RT	NORTH		24"	12"	2																												M3-1		E-135
	INTERSTATE 89		24"	24"	4																												M1-1		E-135
	←		21"	15"	2.19						1									X															E-135
INT #2 RTE. 132 0.21 LT	WEST SOUTH NORTH		24" 24" 24"	12" 12" 12"	2 2 2																												M3-4 M3-3 M3-1		E-136C E-135 E-135
	132 INTERSTATE 89 INTERSTATE 89		30" 24" 24"	24" 24" 24"	5 4 4																												M1-6 M1-1 M1-1		E-136C E-135 E-135
	↑ ↑ →		21" 21" 21"	15" 15" 15"	2.19 2.19 2.19						2												2	X							X	M6-3 M6-3 SEE STD E-123 FOR MOUNTING DETAIL M6-1		E-136C E-135 E-135
INT #2 RTE. 132 0.23 RT	EAST		24"	12"	2																												M3-2		E-136C
	132		30"	24"	5						1			X																			M1-6		E-136C
INT #2 RTE. 132 0.23 RT	STATE HIGHWAY ENDS STATE HIGHWAY BEGINS		24" 24"	18" 18"	3 3																												VR-038 VR-039		E-141 E-141
	THROUGH WAY ENDS HERE THROUGH WAY BEGINS HERE		24" 24"	24" 24"	4 4						1			X																			VR-041 VR-040 MOUNT BACK TO BACK		E-141 E-141
INT #2 RTE. 132 0.24 RT	SHOULDER NARROWS		36"	36"	9						1			X																			D1-1		E-151
INT #2 RTE. 132 0.24 LT	↑ SHARON 2		72"	10"	5																												D1-1		E-123
	← WH. RIVER JCT. 13		72"	10"	5																												D1-1		E-123
	BETHEL 12 →		72"	10"	5																												D1-1		E-123
	BARRE 30 →		72"	10"	5						2			X																			D1-1		E-123
												FT 70	FT	FT	FT	FT	FT		EA	LB 24.7	LB	LB		LB 258.4	LB	LB	LB								
	TOTALS				SF 83.76	SF	EA.	SF				FT 70			FT					LB 24.7			EA. 2	LB 258.4				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #2 SHARON

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: td008sum.dgn
IPARM FILE NAME: td008s33.i
SURVEYED BY:
SQUAD LEADER: ABK

PLOT DATE: 09-NOV-2000
SURVEY DATE:
DRAWN BY: JHK
SHEET: 235 OF 260

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

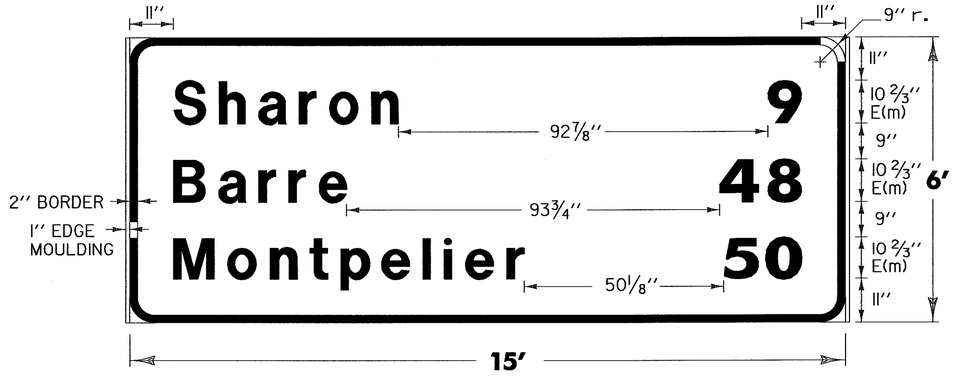
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) 1.75	2.0	2.5	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) 3.0	4.0	4.0 MOD	TUBULAR STEEL Ø (In) FOUNDATION	3.0	3.5	4.0	5.0	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												lb/ft 1.88	2.16	3.35						lb/ft 1.3	1.7	1.7		lb/ft 7.6	9.0	10.8	14.6								
												OPTION ITEMS																									
INT #2 RTE. 132 0.27 RT	LEGAL LOAD LIMIT 24,000 POUNDS		24"	30"	5																												VR-017		E-141
	SPEED LIMIT 50		24"	30"	5						1			X																		R2-1		E-142
INT #2 RTE. 132 0.28 LT	SPEED LIMIT 30		24"	30"	5						1			X																		R2-1		E-142
INT #2 RTE. 132 0.28 LT	JCT		21"	15"	2.19																											M2-1		E-135
	INTERSTATE 89		24"	24"	4						1									X												M1-1 MOUNT OUTBOARD OF SL 30 SIGN		E-135
INT #2 RTE. 132 0.29 LT	STRAFFORD 8		72"	10"	5						2			X																		D1-1		E-123
												FT	FT	FT 56	FT	FT	FT		EA	LB	LB	LB 24.7		LB	LB	LB	LB								

	SF	SF	EA.	SF		FT	FT	LB	EA.	LB	EA.	EA.	LB	
SHEET TOTALS	26.19					56		24.7						
EST 'A' SIGNS	245					3000								
RAMP TOTALS	1493	150	8			2008		280	48	5161				
S. B. TOTALS	341	555	1			1288			11	940	7		2099	
N. B. TOTALS	426	927	1			1414			13	1550	4	4	2453	
GRAND TOTALS	2489	1612	10			7710		280	72	7651	11	4	4552	

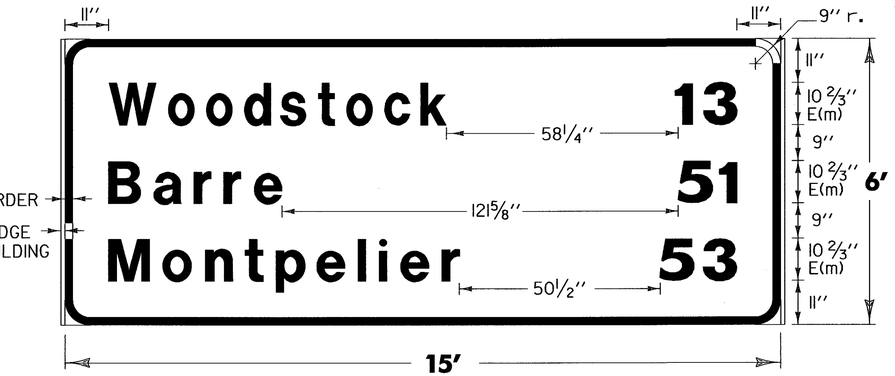
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

INTERCHANGE #2 SHARON

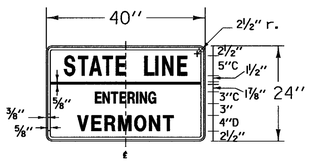
PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: ta008sum.dgn IPARM FILE NAME: ta008s34.i SURVEYED BY: SQUAD LEADER: ABK	PLOT DATE: 14-NOV-2000 SURVEY DATE: DRAWN BY: JHK SHEET: 236 OF 260



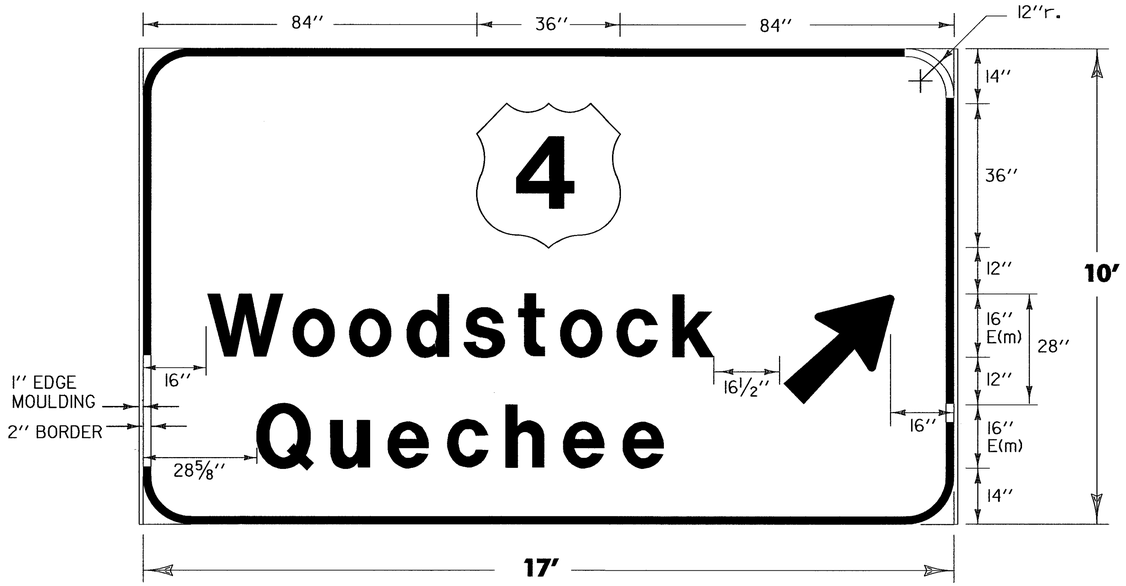
M.M. 4.45 NB



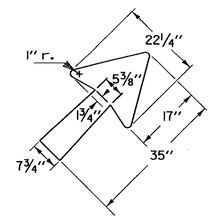
M.M. 1.85 NB



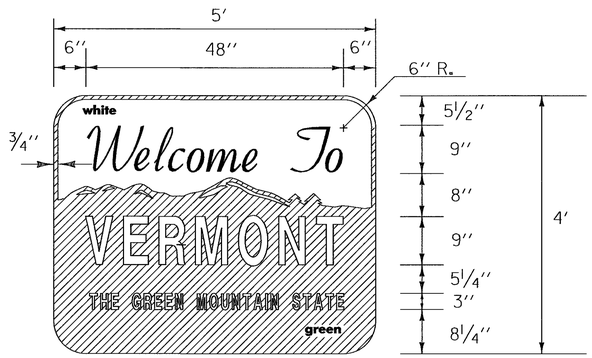
M.M. 0.01 NB



M.M. 13.10 NB



STANDARD ARROW AT 45° DETAIL



M.M. 0.44 NB

NOTE:
FOR THE WORDS " WELCOME TO" USE GERBER FONT MURRAY HILL BOLD OR EQUIVALENT. TEXT COLOR IS GREEN.
ALL OTHER TEXT USE GERBER FONT SOUVENIR DEMI BOLD OR EQUIVALENT. TEXT COLOR IS WHITE.
REFER TO STD. E-131 FOR COLORS.
MATERIALS:
THE SIGN BASE MATERIALS USED FOR THIS SIGN MAY BE ANY OF THE FOLLOWING OF THE MINIMUM THICKNESS NOTED.
FLAT SHEET ALUMINUM 0.100''
HIGH DENSITY OVERLAID PLYWOOD *''

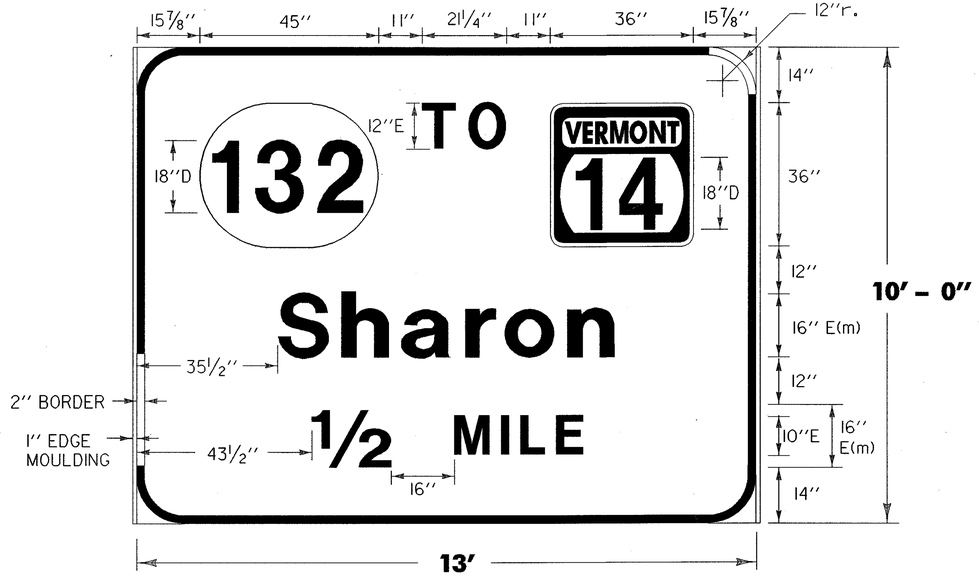
COLORS
THE SIGNS SHALL HAVE A REFLECTORIZED WHITE TEXT ON A REFLECTORIZED GREEN BACKGROUND.

GENERAL
FOR SIGN MATERIALS SEE STD E-131.
FOR US ROUTE MARKER SEE STD E-136a.

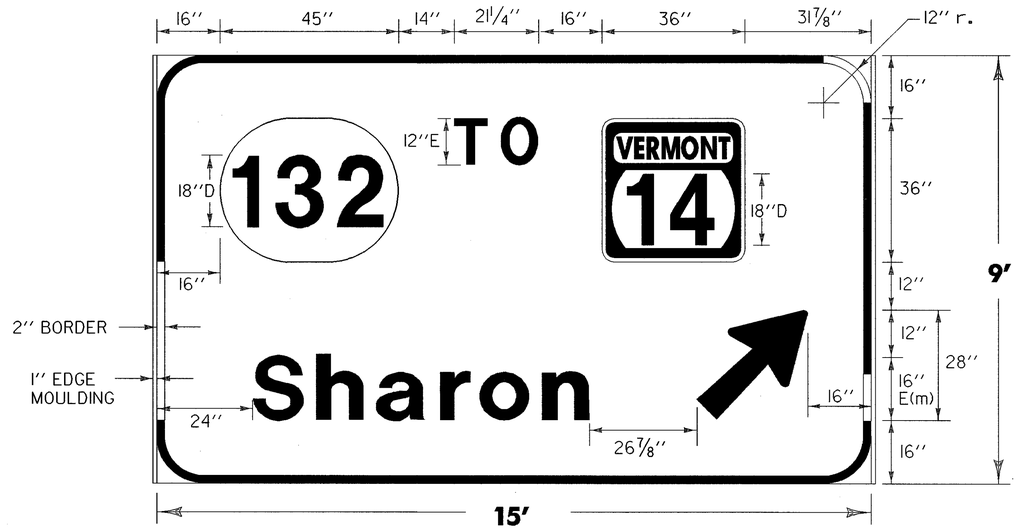
TEXT LAYOUT DIMENSIONS ARE BASED ON THE "LETTER & NUMERAL WIDTHS AND SPACE" TABLES FOUND IN THE "STANDARD HIGHWAY SIGNS" BOOKLET. MINOR VARIATIONS IN TEXT DIMENSIONS ARE ACCEPTABLE BASED ON INDIVIDUAL MANUFACTURER'S LETTER FABRICATION. SIGNIFICANT CHANGES WHICH AFFECT SIGN APPEARANCE SHALL BE BROUGHT TO THE ATTENTION OF THE VAOT'S TRAFFIC AND SAFETY DIVISION BEFORE FABRICATION.

NEW SIGNS

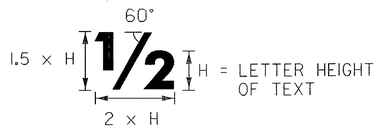
PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta008sd.dgn	
IPARM FILE NAME: ta008sdl.i	PLOT DATE: 14-NOV-2000
SURVEYED BY: LCS/LSW	SURVEY DATE: 11/92
SQUAD LEADER: DLP	DRAWN BY: LCS
	SHEET: 237 OF 260



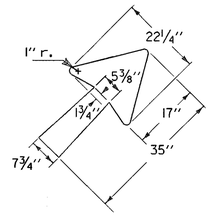
M.M. 14.21 SB



M.M. 13.70 SB



FRACTION DETAIL



STANDARD ARROW AT 45° DETAIL

COLORS

THE SIGNS SHALL HAVE A REFLECTORIZED WHITE TEXT ON A REFLECTORIZED GREEN BACKGROUND.

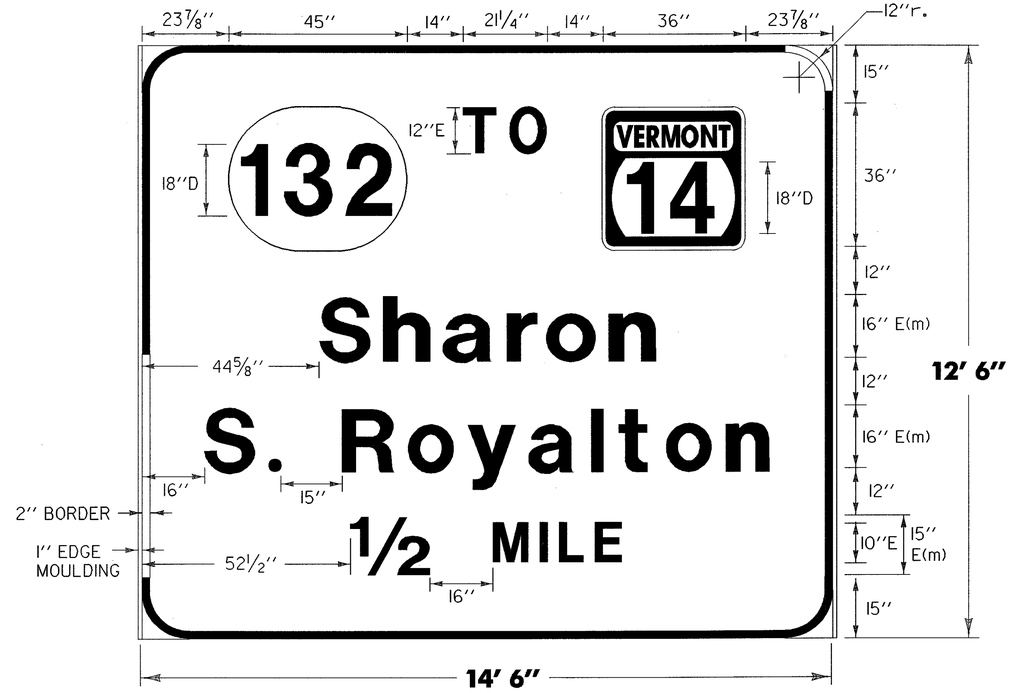
GENERAL

FOR SIGN MATERIALS SEE STD E-131.
FOR STATE ROUTE MARKER SEE STD E-136.

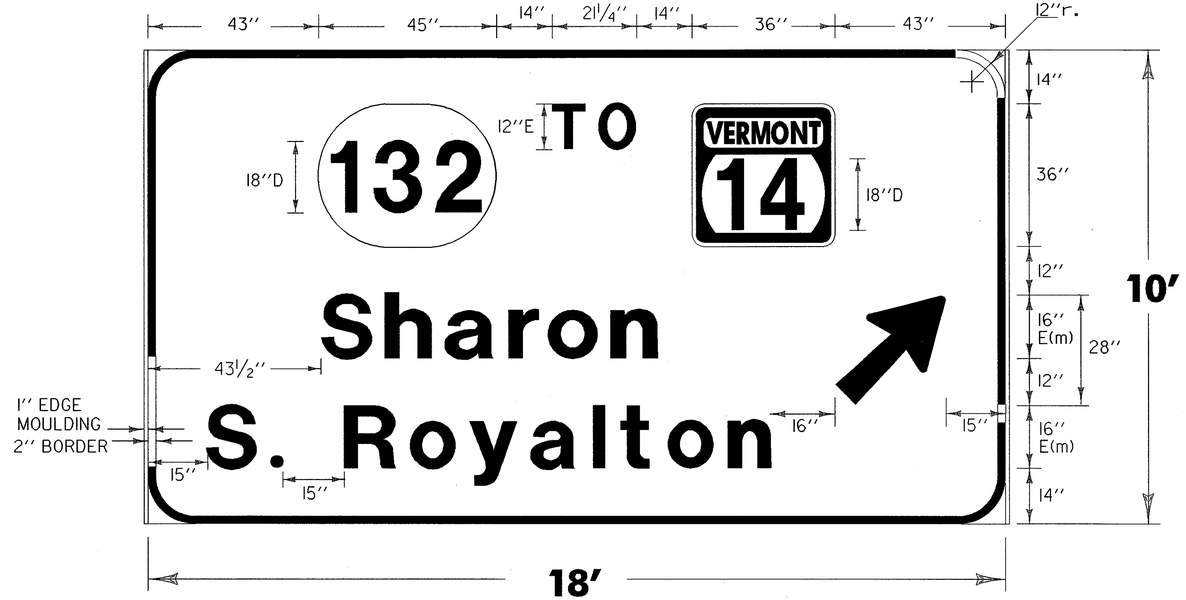
TEXT LAYOUT DIMENSIONS ARE BASED ON THE "LETTER & NUMERAL WIDTHS AND SPACE" TABLES FOUND IN THE "STANDARD HIGHWAY SIGNS" BOOKLET. MINOR VARIATIONS IN TEXT DIMENSIONS ARE ACCEPTABLE BASED ON INDIVIDUAL MANUFACTURER'S LETTER FABRICATION. SIGNIFICANT CHANGES WHICH AFFECT SIGN APPEARANCE SHALL BE BROUGHT TO THE ATTENTION OF THE VAOT'S TRAFFIC AND SAFETY DIVISION BEFORE FABRICATION.

NEW SIGNS

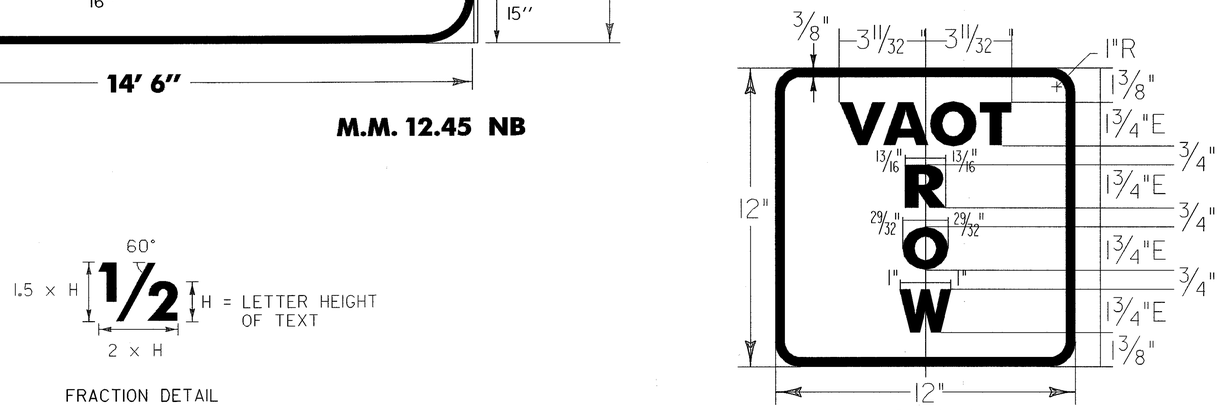
PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta008sd.dgn IPARM FILE NAME: ta008sd2.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1999 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 238 OF 260



M.M. 12.45 NB

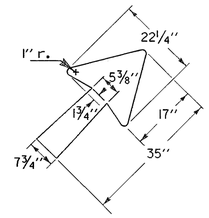


M.M. 13.10 NB



VD 340
WHITE TEXT & BORDER
WITH GREEN BACKGROUND

FRACTION DETAIL



STANDARD ARROW AT 45°
DETAIL

COLORS

THE SIGNS SHALL HAVE A REFLECTORIZED WHITE TEXT ON A REFLECTORIZED GREEN BACKGROUND.

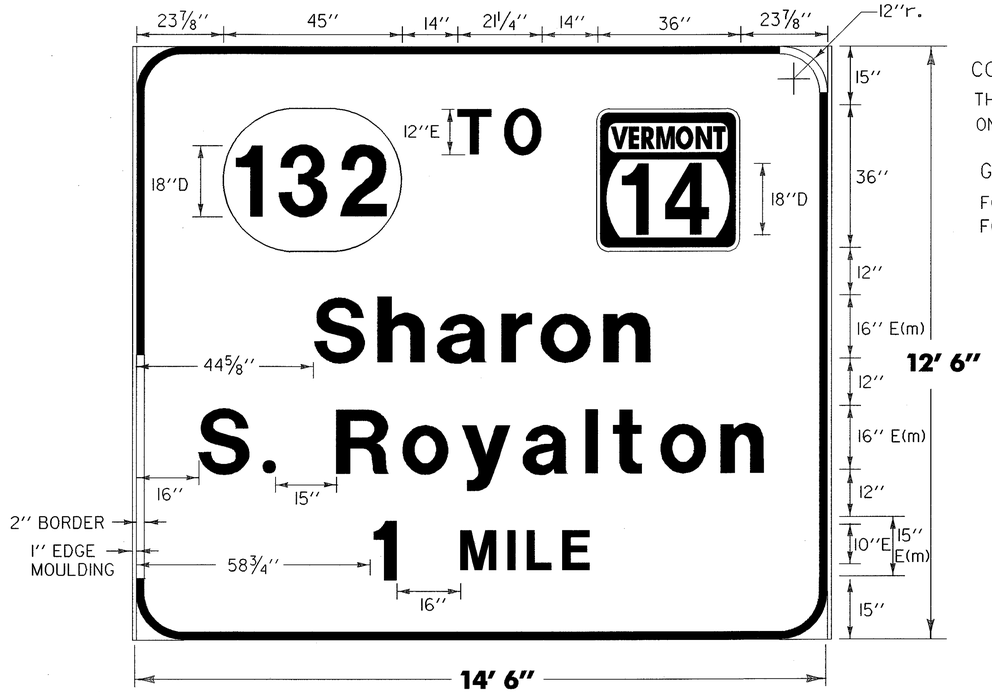
GENERAL

FOR SIGN MATERIALS SEE STD E-131.
FOR STATE ROUTE MARKER SEE STD E-136.

TEXT LAYOUT DIMENSIONS ARE BASED ON THE "LETTER & NUMERAL WIDTHS AND SPACE" TABLES FOUND IN THE "STANDARD HIGHWAY SIGNS" BOOKLET. MINOR VARIATIONS IN TEXT DIMENSIONS ARE ACCEPTABLE BASED ON INDIVIDUAL MANUFACTURER'S LETTER FABRICATION. SIGNIFICANT CHANGES WHICH AFFECT SIGN APPEARANCE SHALL BE BROUGHT TO THE ATTENTION OF THE VAOT'S TRAFFIC AND SAFETY DIVISION BEFORE FABRICATION.

NEW SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /traf/87a008/ta008sd.dgn IPARM FILE NAME: ta008sd3.i SURVEYED BY: LCS/LSW SQUAD LEADER: DLP	PLOT DATE: 12-MAR-1999 SURVEY DATE: 11/92 DRAWN BY: LCS SHEET: 239 OF 260



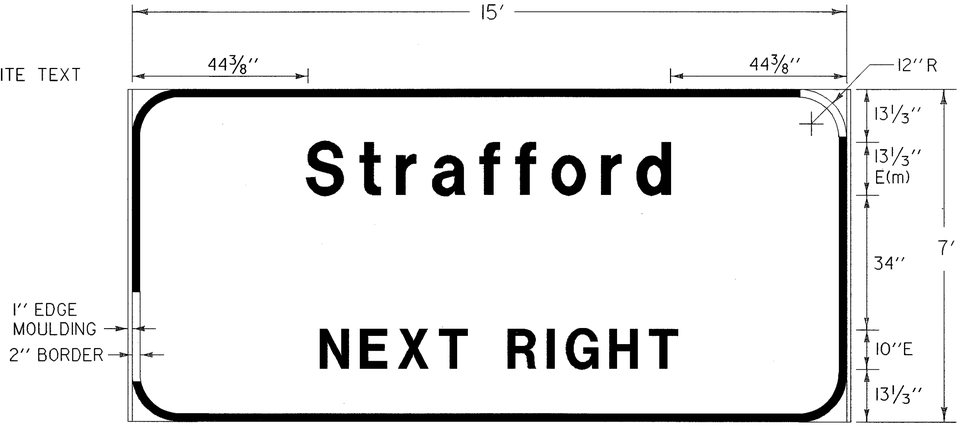
M.M. 12.02 NB

COLORS

THE SIGNS SHALL HAVE A REFLECTORIZED WHITE TEXT ON A REFLECTORIZED GREEN BACKGROUND.

GENERAL

FOR SIGN MATERIALS SEE STD E-131.
FOR STATE ROUTE MARKER SEE STD E-136.



M.M. 12.25 NB

REFER TO STANDARD E-150
FOR MATERIALS AND COLORS

W14-2

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K	L
MIN.	24	3/8	5/8	5D	3	3/4	4 1/8	4 1/2	11 5/8	12 1/16	1 1/2
STD.	30	1/2	3/4	6D	4	15/16	5	5 3/8	13 15/16	14 1/2	1 7/8
SPEC.	36	5/8	7/8	7D	5	1 1/8	5 7/8	6 1/4	16 1/4	16 15/16	2 1/4

COLORS
LEGEND - BLACK (NON-REFL)
BACKROUND - YELLOW (REFL)

TEXT LAYOUT DIMENSIONS ARE BASED ON THE "LETTER & NUMERAL WIDTHS AND SPACE" TABLES FOUND IN THE "STANDARD HIGHWAY SIGNS" BOOKLET. MINOR VARIATIONS IN TEXT DIMENSIONS ARE ACCEPTABLE BASED ON INDIVIDUAL MANUFACTURER'S LETTER FABRICATION. SIGNIFICANT CHANGES WHICH AFFECT SIGN APPEARANCE SHALL BE BROUGHT TO THE ATTENTION OF THE VAOT'S TRAFFIC AND SAFETY DIVISION BEFORE FABRICATION.

NEW SIGNS

PROJECT: HARTFORD-SHARON-ROYALTON
PROJECT NO.: IM IR 089-1(8)

DESIGN FILE NAME: /traf/87a008/ta008sd.dgn
IPARM FILE NAME: ta008sd4.i
SURVEYED BY: LCS/LSW
SQUAD LEADER: DLP
PLOT DATE: 12-MAR-1999
SURVEY DATE: 11/92
DRAWN BY: LCS
SHEET: 240 OF 260

M.M. 14.21 SB
LT.POST=17.2'
RT.POST=20.3'

M.M. 12.02 NB
LT.POST=19.59'
RT.POST=16.49'

M.M. 1.85 NB
LT.POST=11.73'
RT.POST=11.50'

M.M. 13.70 SB
LT.POST=17.76'
RT.POST=18.65'

M.M. 12.25 NB
LT.POST=14.22'
RT.POST=10.02'

M.M. 4.45 NB
LT.POST=11.73'
RT.POST=11.50'

M.M. 4.03 SB
LT.POST=14.5'
MID.POST=15.3'
RT.POST=12.9'

M.M. 12.45 NB
LT.POST=16.75'
RT.POST=13.06'

M.M. 1.65 SB
1ST.POST=18.65'
2ND.POST=16.34'
3RD.POST=14.58'
4TH.POST=13.23'

M.M. 13.10 NB
LT.POST=16.91'
MID.POST=14.55'
RT.POST=11.85'

ta008xs.i
/traf/87a008/ta008xs.dgn

SCALE 1" = 10'

10
0
10 0

PREPARED BY JHK DATE
CHECKED BY DATE
DESIGN SUPERVISOR ABK DATE
PROJ. HARTFORD-SHARON-ROYALTON
PROJ. NUMBER: IM IR 089-1(8)

TRAFFIC SHEET NO. OF
SHEET 241 OF 260 SHEETS

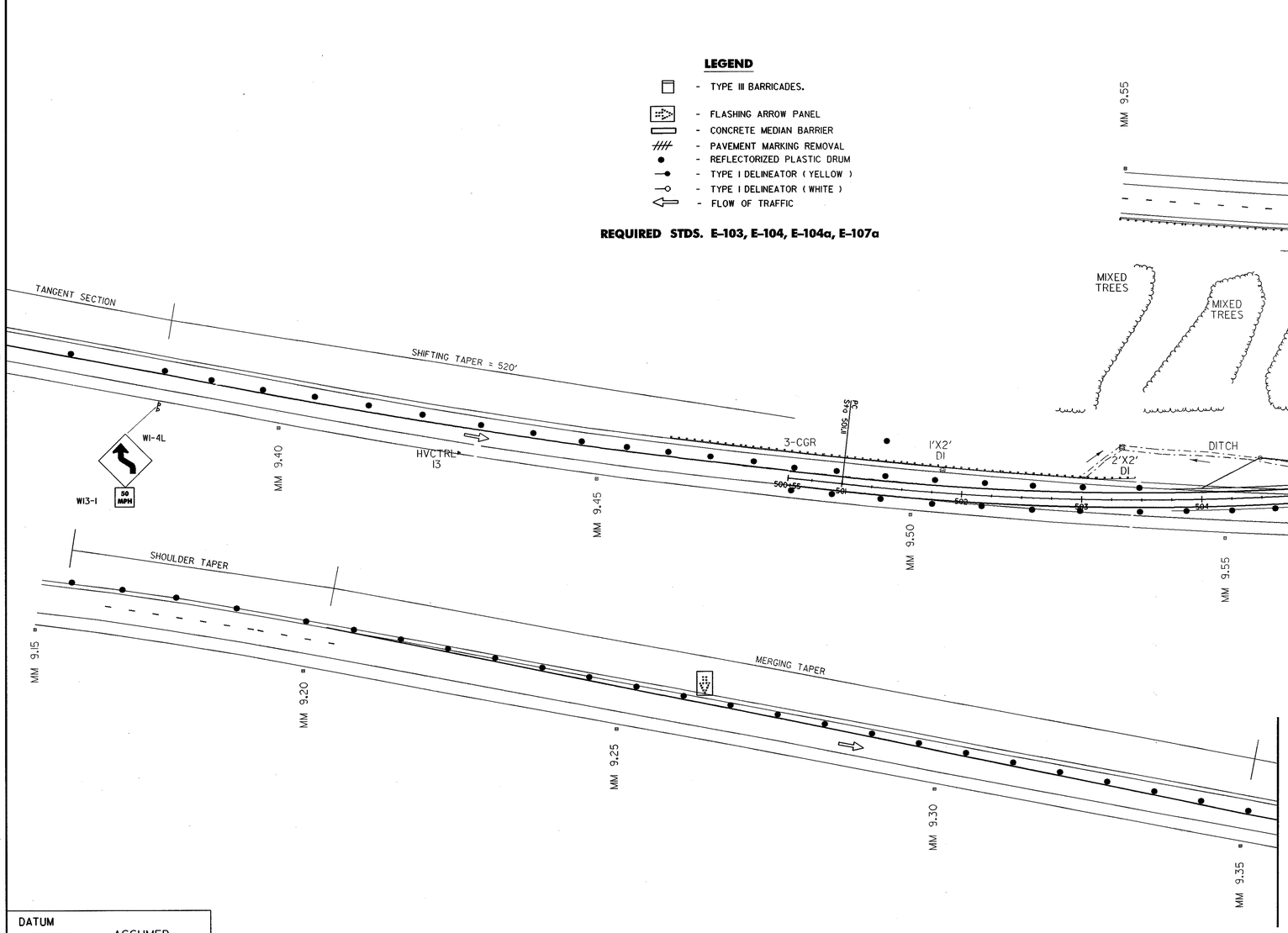
N

STATE PLANE GRID

LEGEND

- TYPE III BARRICADES.
- FLASHING ARROW PANEL
- CONCRETE MEDIAN BARRIER
- PAVEMENT MARKING REMOVAL
- REFLECTORIZED PLASTIC DRUM
- TYPE I DELINEATOR (YELLOW)
- TYPE I DELINEATOR (WHITE)
- FLOW OF TRAFFIC

REQUIRED STDS. E-103, E-104, E-104a, E-107a



CROSSOVER AT MM 9.70

OTHER REQUIRED STANDARDS:
E-103 E-104a E-107a

0 50 100
SCALE

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD83(1992)

PROJECT: Hartford-Royalton	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08g101.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jfg
	SHEET: 242 OF 260

LEGEND

- TYPE III BARRICADES.
- FLASHING ARROW PANEL
- CONCRETE MEDIAN BARRIER
- PAVEMENT MARKING REMOVAL
- REFLECTORIZED PLASTIC DRUM
- TYPE I DELINEATOR (YELLOW)
- TYPE I DELINEATOR (WHITE)
- FLOW OF TRAFFIC

0 50 100
SCALE

REQUIRED STDS. E-103, E-104, E-104a, E-107a

CROSSOVER AT MM 9.70

OTHER REQUIRED STANDARDS:
E-103 E-104a E-107a

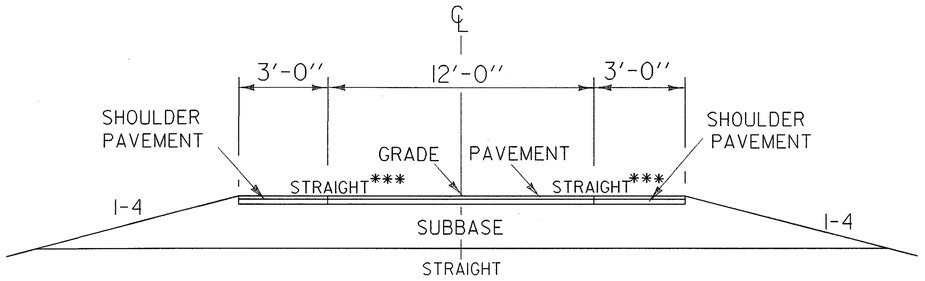
DATUM
VERTICAL ASSUMED
HORIZONTAL NAD83(1992)

DS:

PROJECT: Hartford-Royalton		PROJECT NO.: IM IR 089-1(8)	
DESIGN FILE NAME:	/sqda/87a008g/da08nul.dgn		
IPARM FILE NAME:	da08gl02.i	PLOT DATE:	12-MAR-1999
SURVEYED BY:	gilman	SURVEY DATE:	7-98
SQUAD LEADER:	bombardier	DRAWN BY:	jfg
		SHEET:	243 OF 260

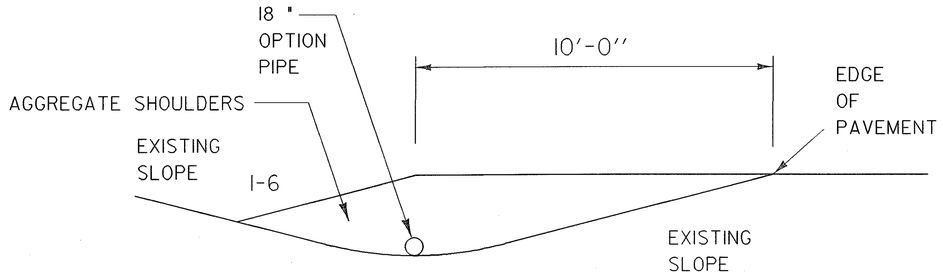
CROSSOVER TYPICAL SECTION

3 1/2'' BITUMINOUS CONCRETE PAVEMENT (1 1/2'' TYPE III OVER 2'' TYPE II) (PG 70-28)
15'' SUBBASE OF DENSE GRADED CRUSHED STONE
SHOULDERS: 3 1/2'' BITUMINOUS CONCRETE PAVEMENT (1 1/2'' TYPE III OVER 2'' TYPE II) (PG 70-28)

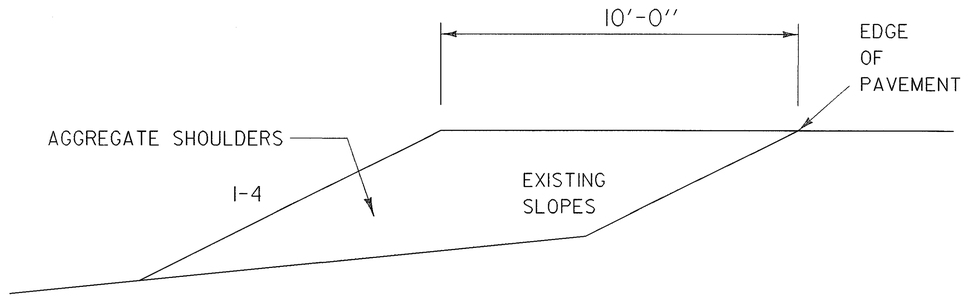


***CROSS SLOPE VARIES ACCORDING TO BANKING.

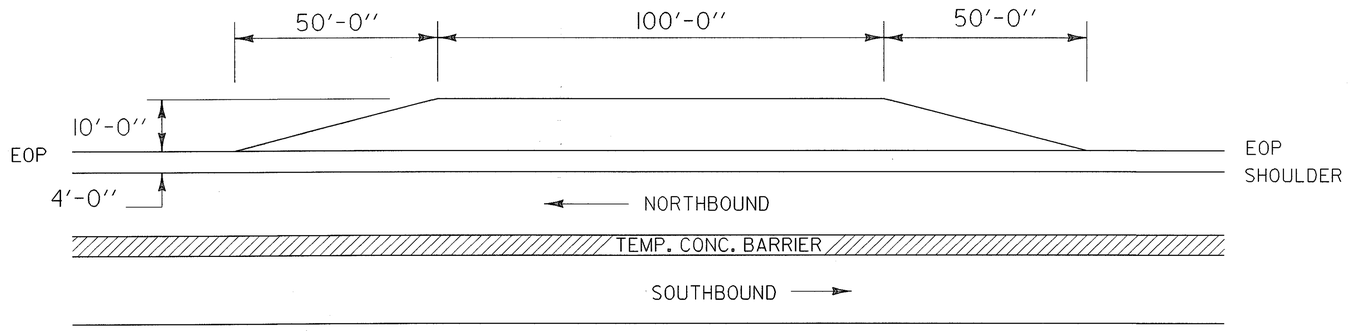
EMERGENCY TURNOUT TYPICAL SECTIONS



APPROXIMATE MM'S 12.35, 11.85, 11.40, & 11.00



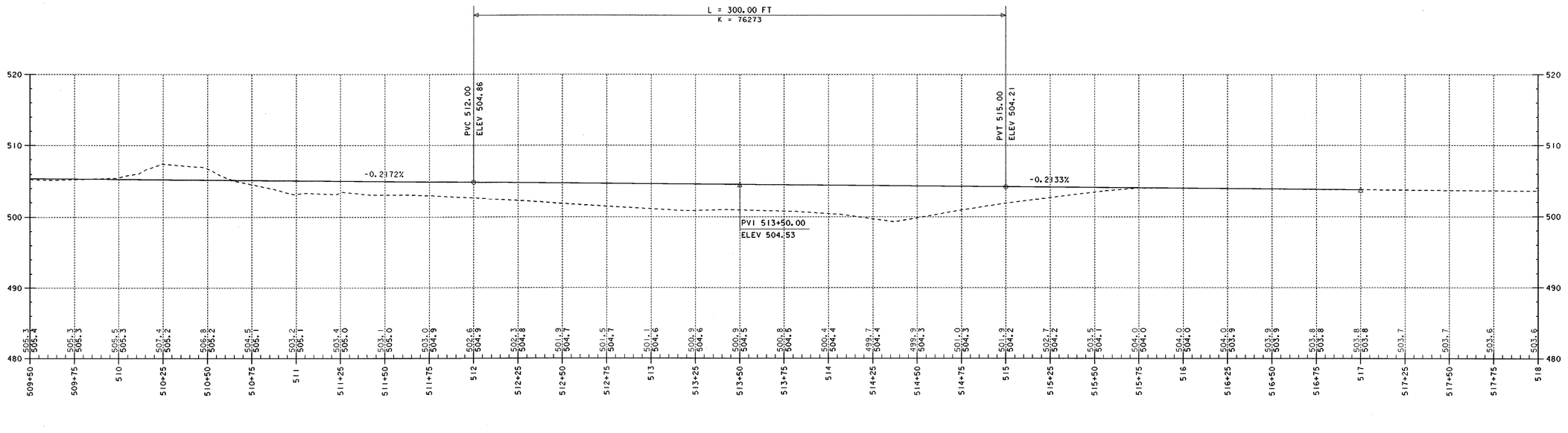
APPROXIMATE MM'S 10.65 & 10.27

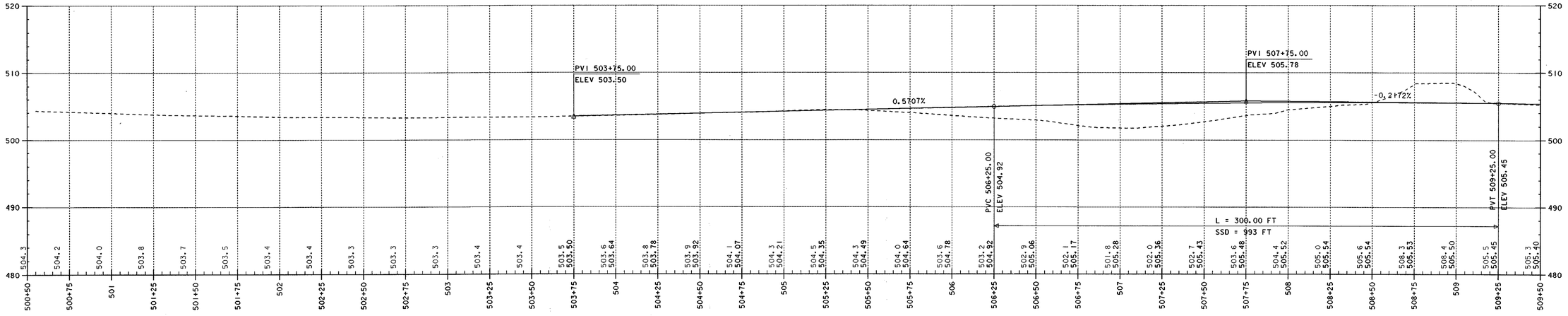


DETOUR DETAILS

NOT TO SCALE

PROJECT: HARTFORD - ROYALTON	PROJECT NO.: IM IR 089 - 1(8)
DESIGN FILE NAME: /sqda/87a008/da008int.dgn	
IPARM FILE NAME: da08gtyp.i	PLOT DATE: 12-MAR-1999
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: BOMBARIER	DRAWN BY: SQDA
	SHEET: 244 OF 260





DATUM
VERTICAL _____
HORIZONTAL _____

crossover profile at mm 9.65

0 30 60
SCALE

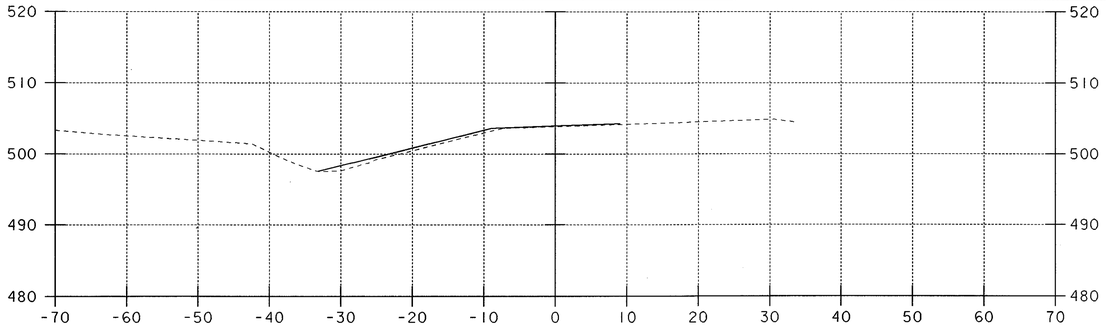
PROJECT: Hartford-Shar-Royalton	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da008gwr.dgn	
IPARM FILE NAME: da08gp09.1	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jfg
	SHEET: 245 OF 260

CROSSOVER AT MM 9.70

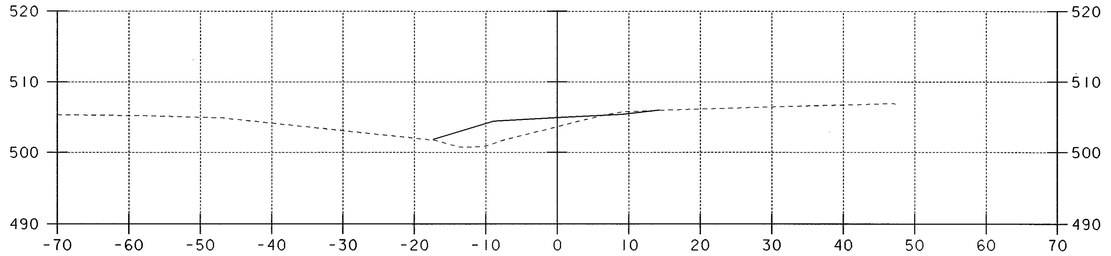
DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

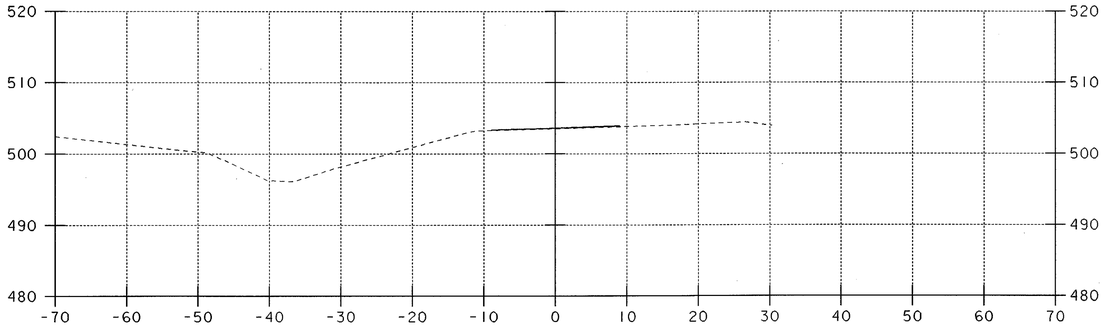
PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx01	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 246 OF 260



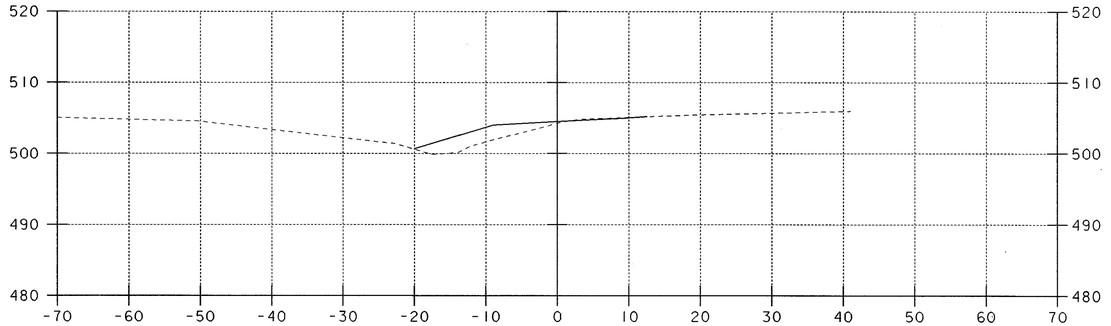
504+50



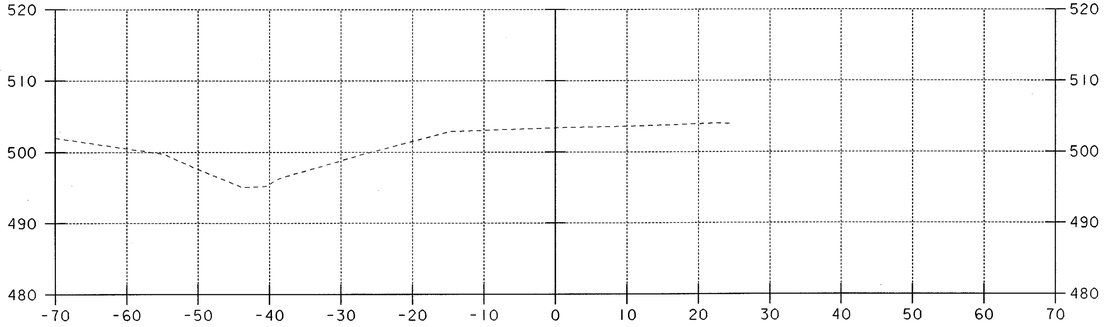
506



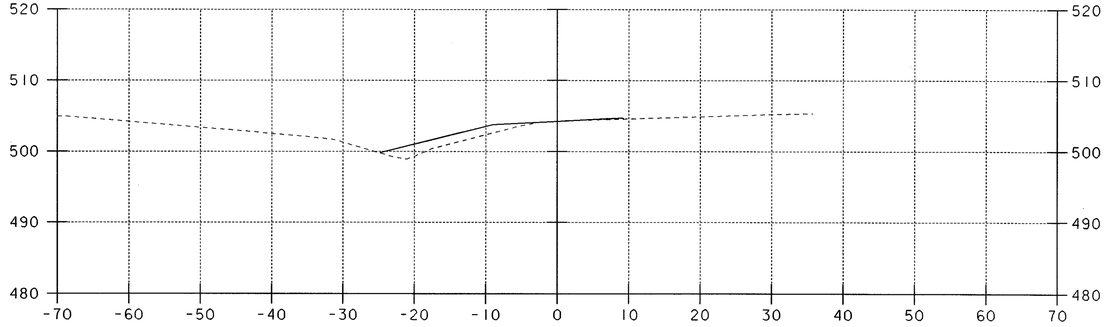
504



505+50



503+50



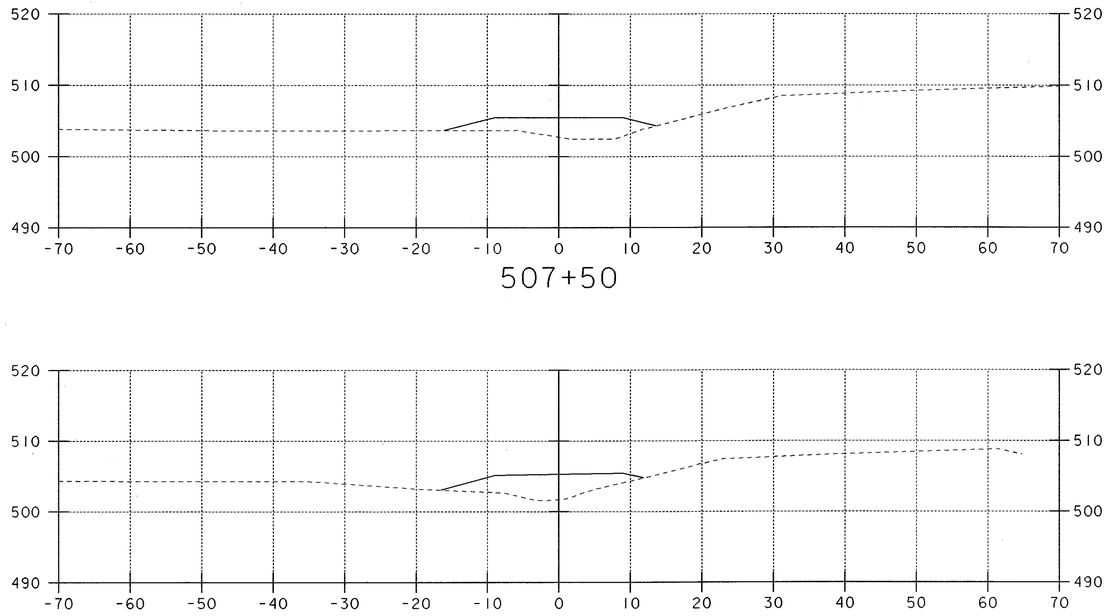
505

CROSSOVER AT MM 9.70

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

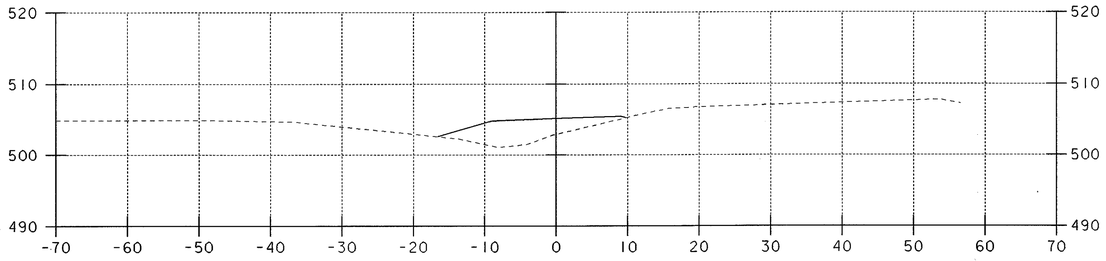
0 10 20
SCALE

PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx02	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 247 OF 260

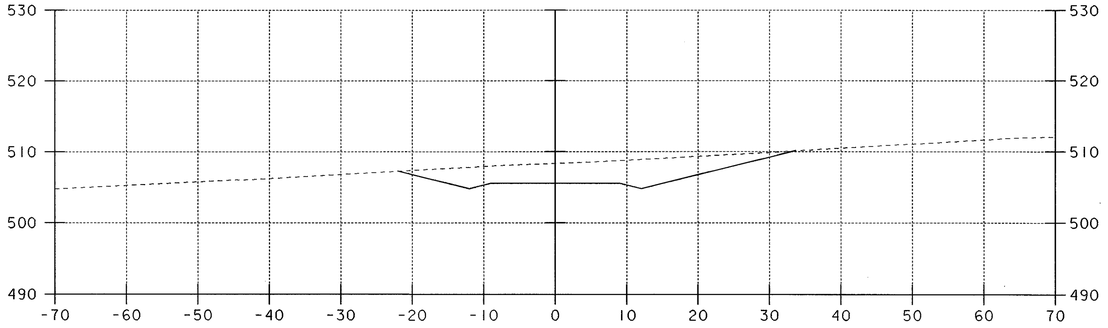


507+50

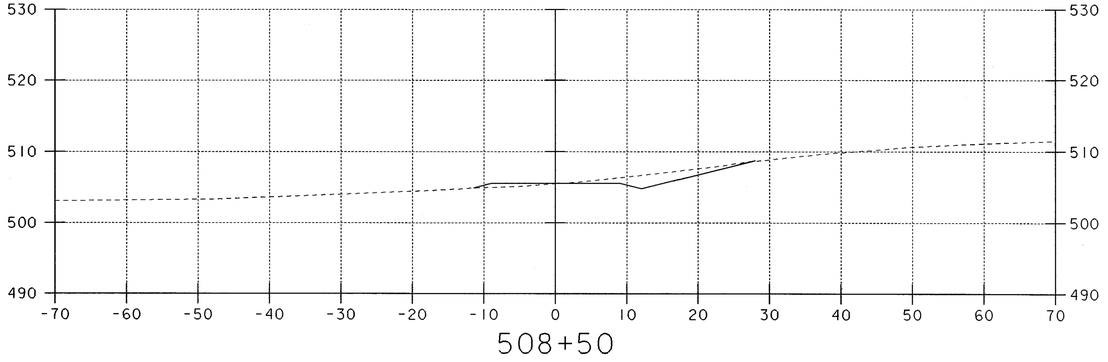
507



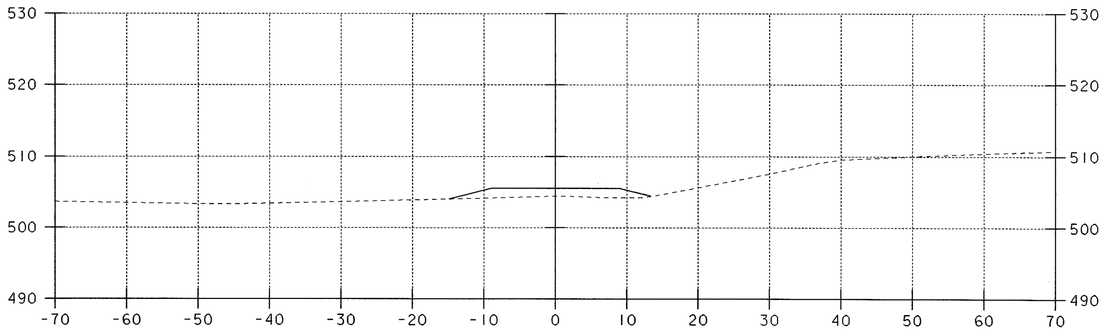
506+50



509



508+50



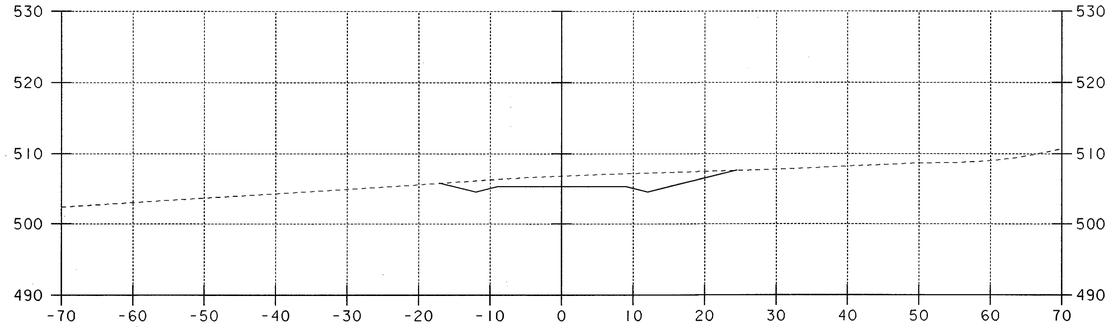
508

CROSSOVER AT MM 9.70

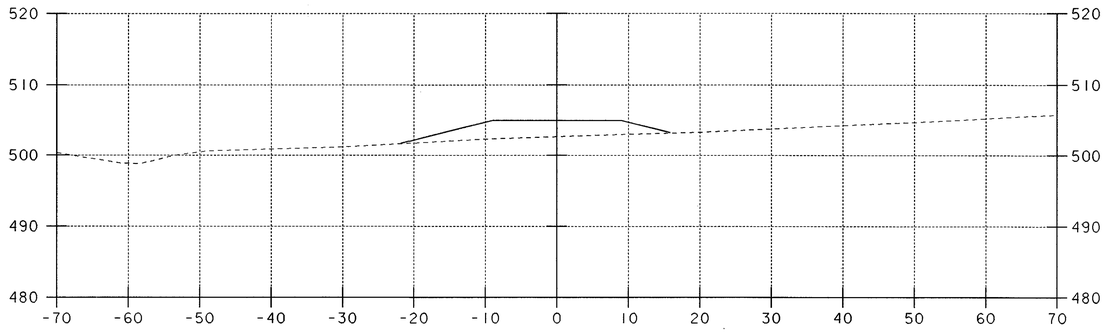
DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

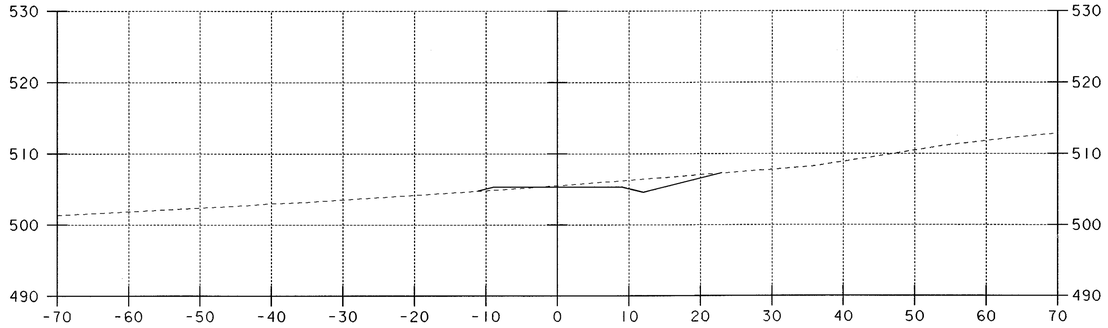
PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx03	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 248 OF 260



510+50



512



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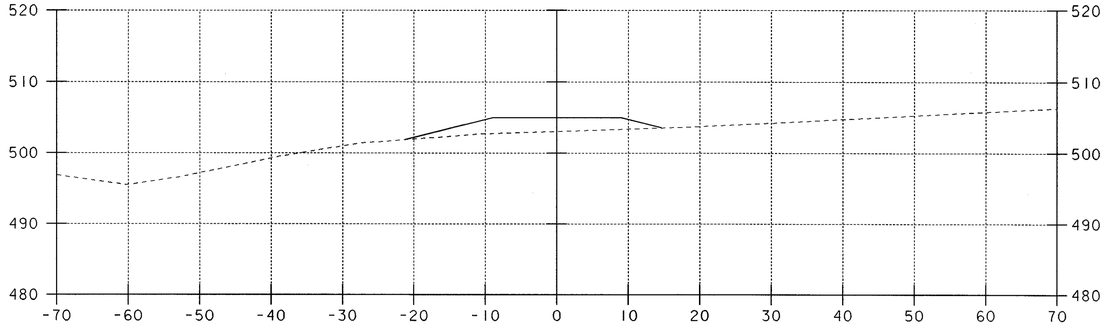
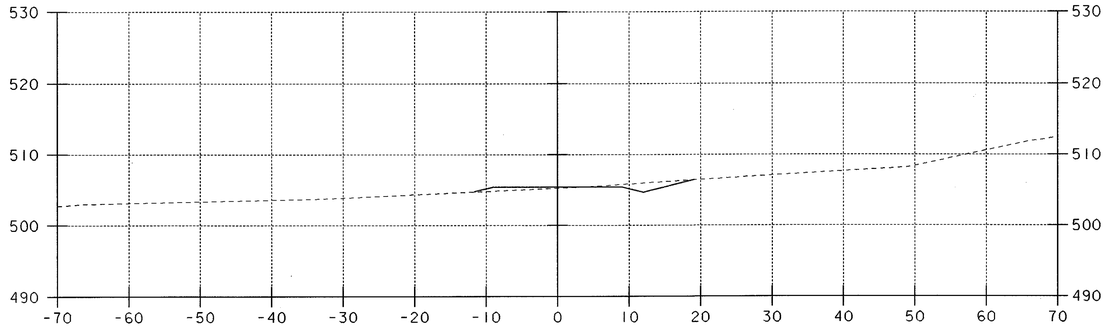
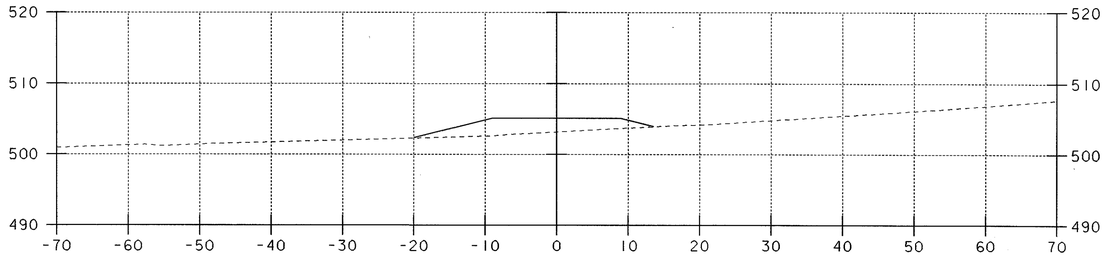


511+50



509+50



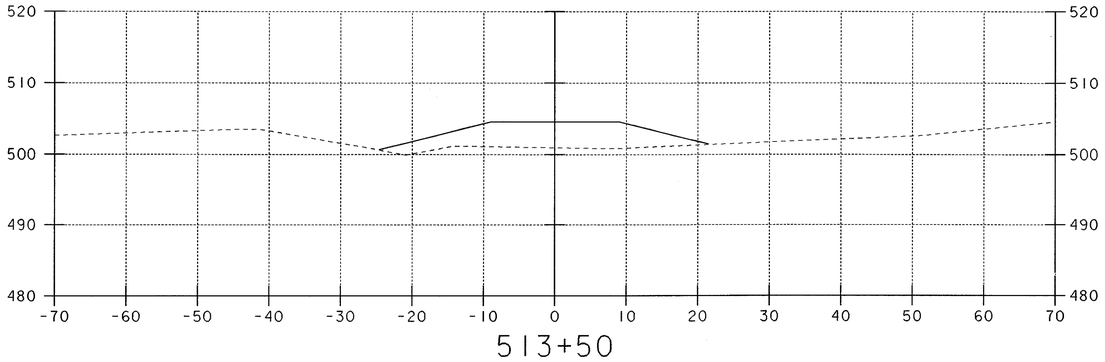
511

CROSSOVER AT MM 9.70

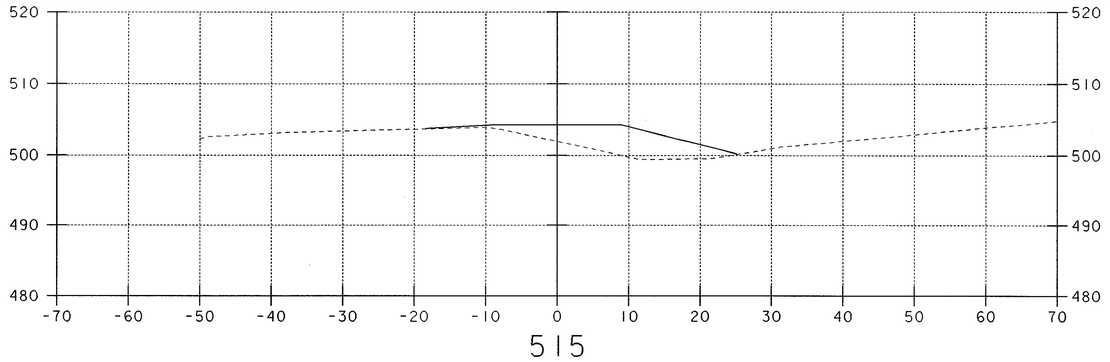
DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

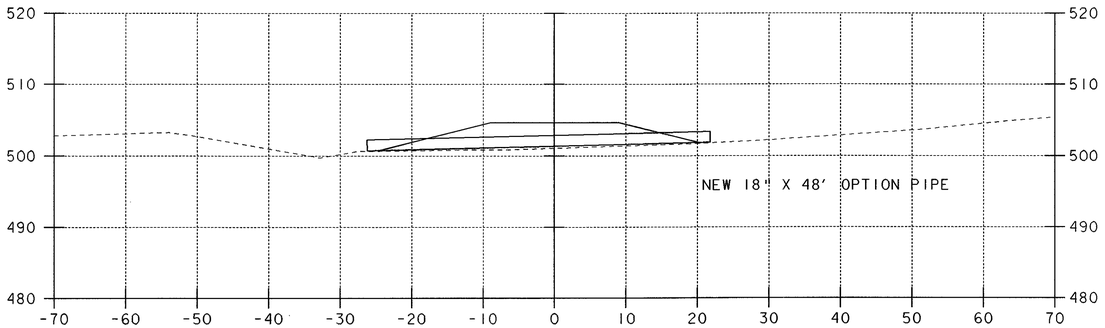
PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx04	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 249 OF 260



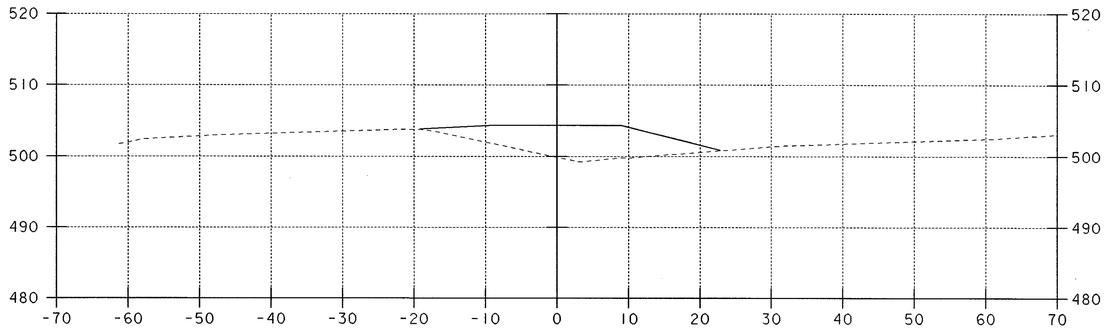
513+50



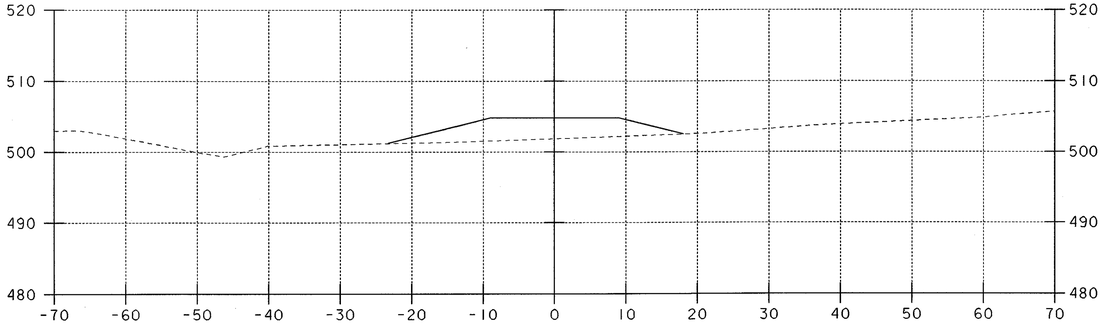
515



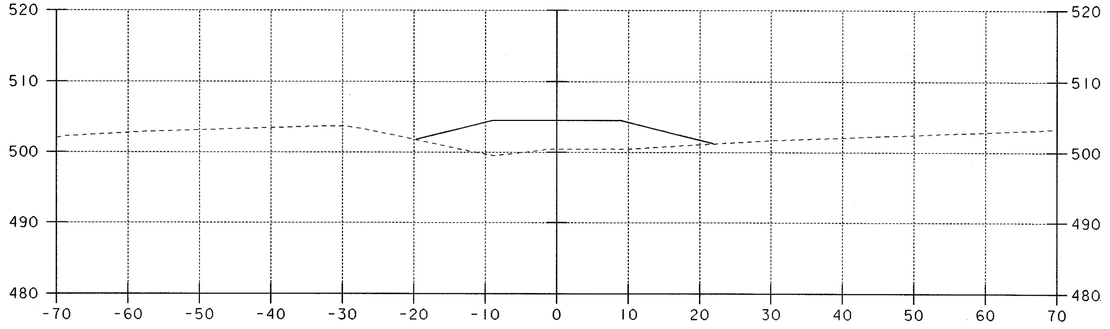
513



514+50



512+50



514

CROSSOVER AT MM 9.70

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx05	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 250 OF 260

LEGEND

- TYPE III BARRICADES.
- FLASHING ARROW PANEL
- CONCRETE MEDIAN BARRIER
- PAVEMENT MARKING REMOVAL
- REFLECTORIZED PLASTIC DRUM
- TYPE I DELINEATOR (YELLOW)
- TYPE I DELINEATOR (WHITE)
- FLOW OF TRAFFIC

REQUIRED STDS. E-103, E-104, E-104a, E-107a

0 50 100
SCALE

CROSSOVER AT MM 13.00

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD83(1992)

PROJECT: Hartford-Royalton	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08g103.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jfg
	SHEET: 251 OF 260

LEGEND

- TYPE III BARRICADES.
- FLASHING ARROW PANEL
- CONCRETE MEDIAN BARRIER
- PAVEMENT MARKING REMOVAL
- REFLECTORIZED PLASTIC DRUM
- TYPE I DELINEATOR (YELLOW)
- TYPE I DELINEATOR (WHITE)
- FLOW OF TRAFFIC

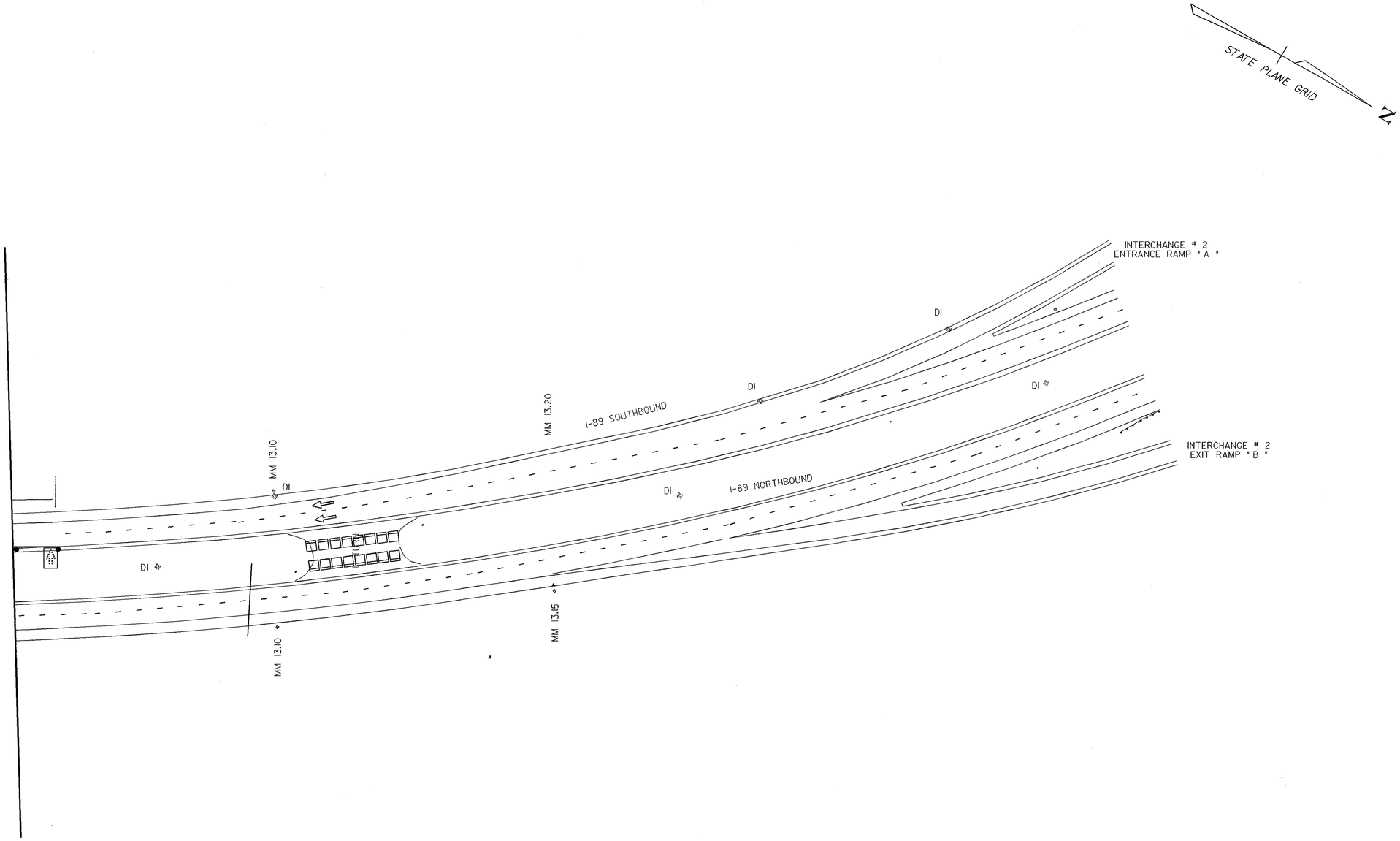
REQUIRED STDS. E-103, E-104, E-104a, E-107a

0 50 100
SCALE

CROSSOVER AT MM 13.00

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD83(1992)

PROJECT: Hartford-Royalton	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gl04.1	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jfg
	SHEET: 252 OF 260



LEGEND

- TYPE III BARRICADES.
- FLASHING ARROW PANEL
- CONCRETE MEDIAN BARRIER
- PAVEMENT MARKING REMOVAL
- REFLECTORIZED PLASTIC DRUM
- TYPE I DELINEATOR (YELLOW)
- TYPE I DELINEATOR (WHITE)
- FLOW OF TRAFFIC

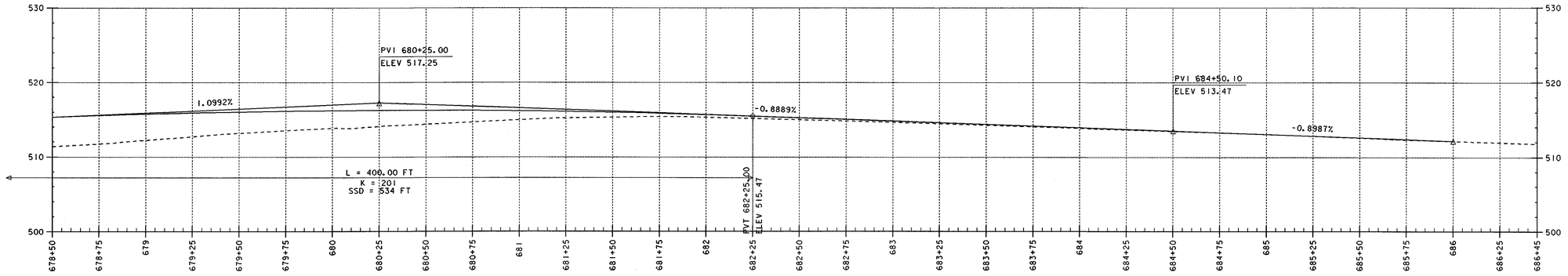
0 50 100
SCALE

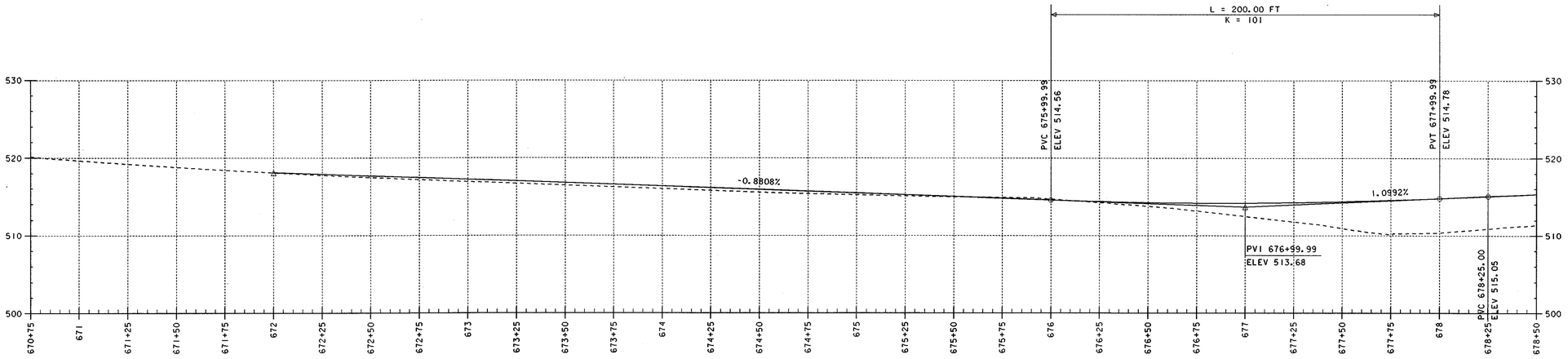
REQUIRED STDS. E-103, E-104, E-104a, E-107a

CROSSOVER AT MM 13.00

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD83(1992)

PROJECT: Hartford-Royalton	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gl05.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jfg
	SHEET: 253 OF 260



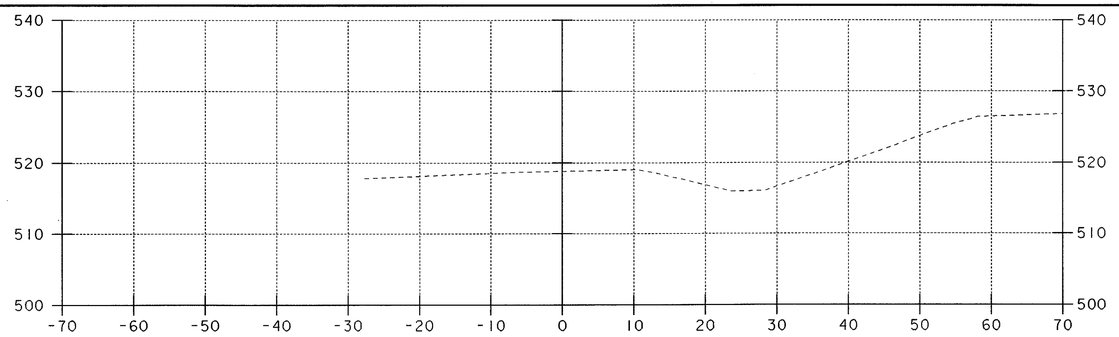


DATUM
VERTICAL _____
HORIZONTAL _____

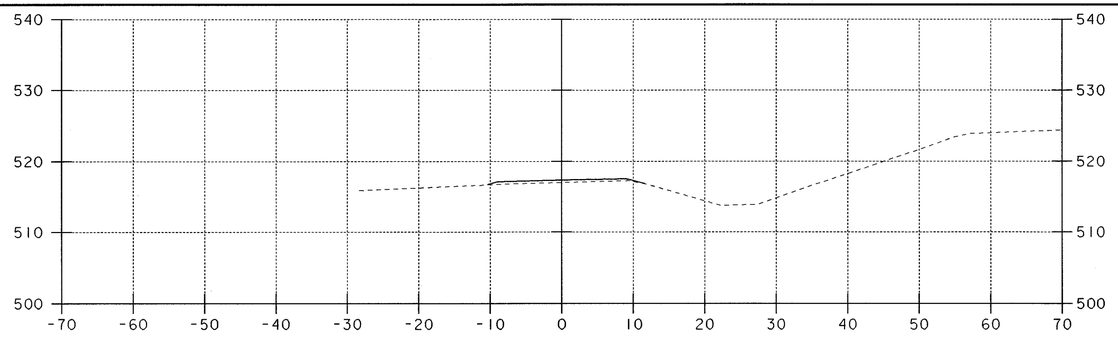
crossover profile at mm 12.85

0 30 60
SCALE

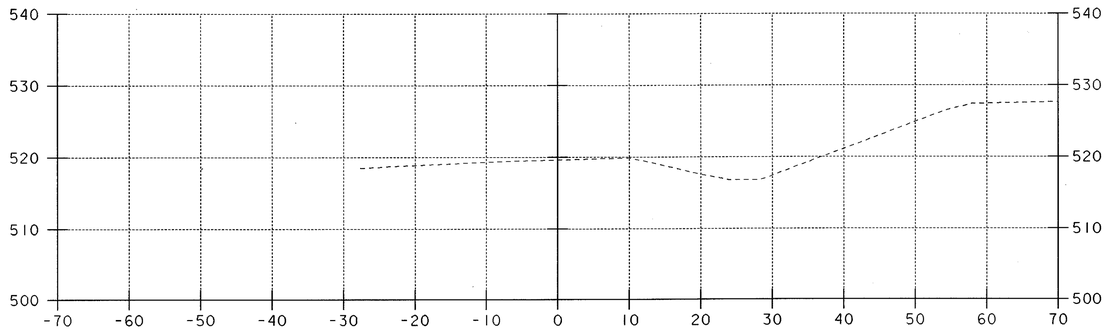
PROJECT: Hartford-Shar-Royalton	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da008gwr.dgn	
IPARM FILE NAME: da08gpl3.i	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jfg
	SHEET: 254 OF 260



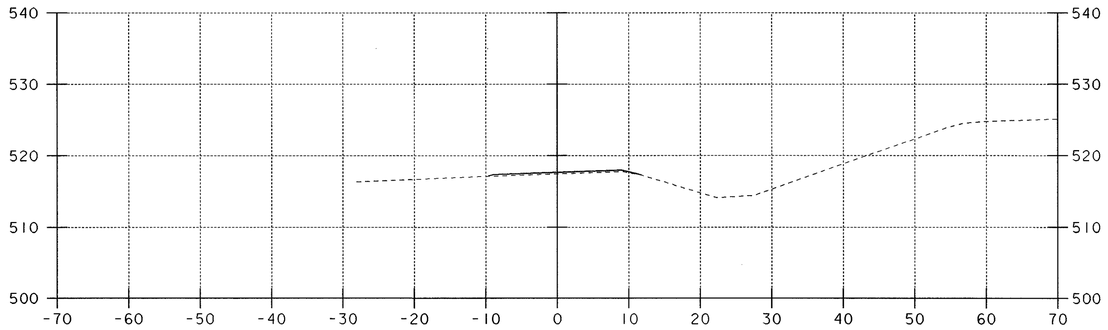
671+50



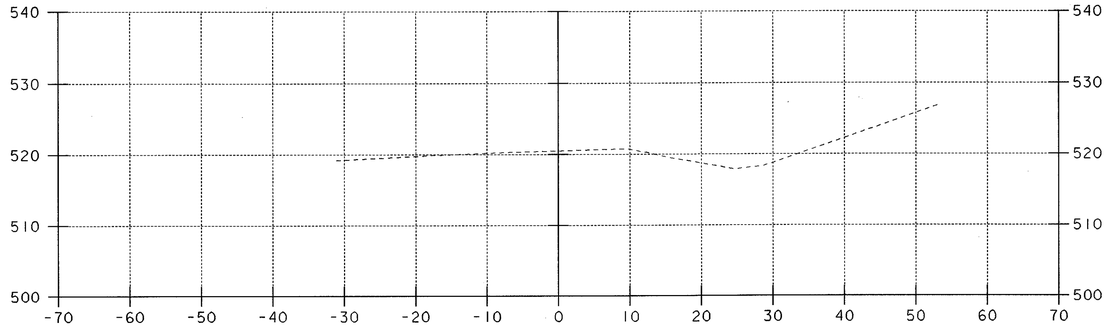
673



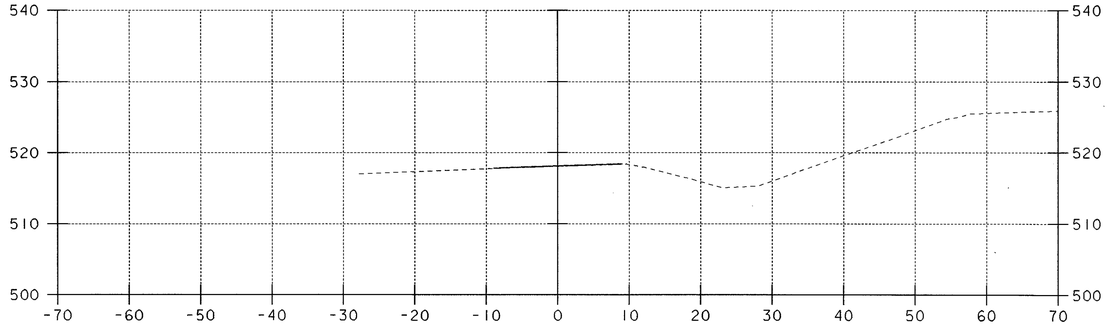
671



672+50



670+56



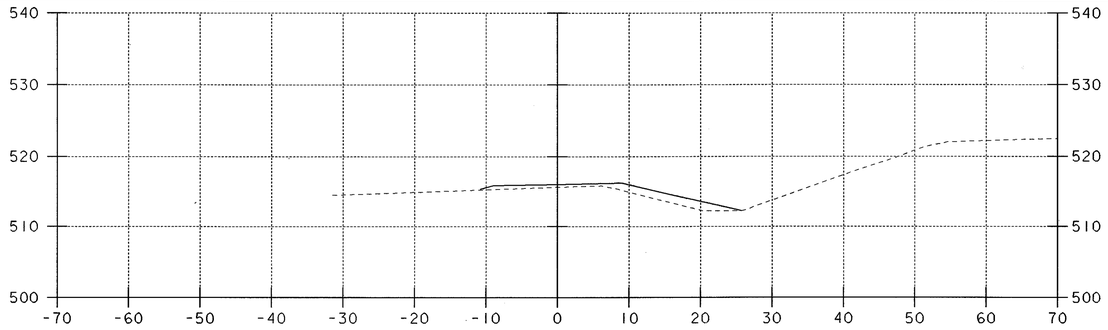
672

CROSSOVER AT MM 13.00

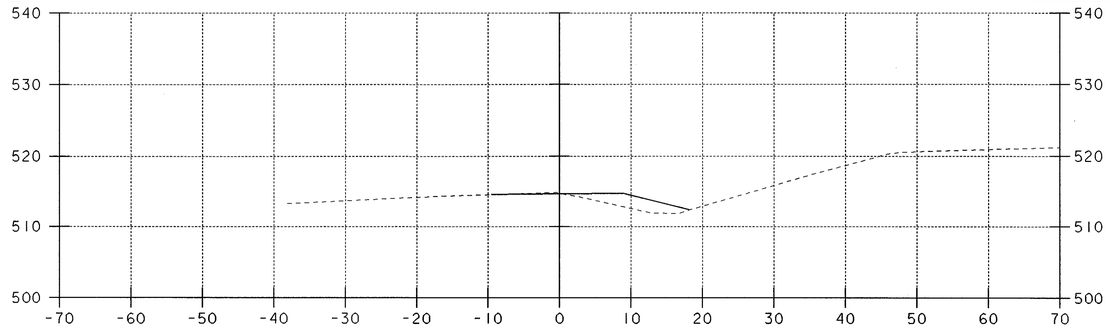
DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

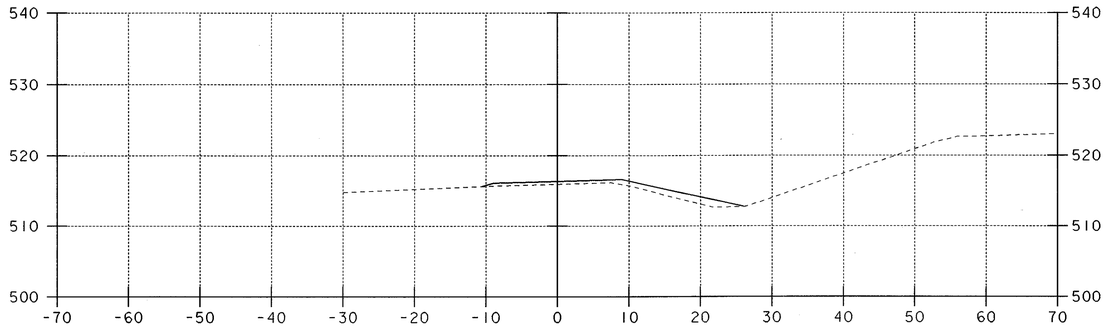
PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx07	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 255 OF 260



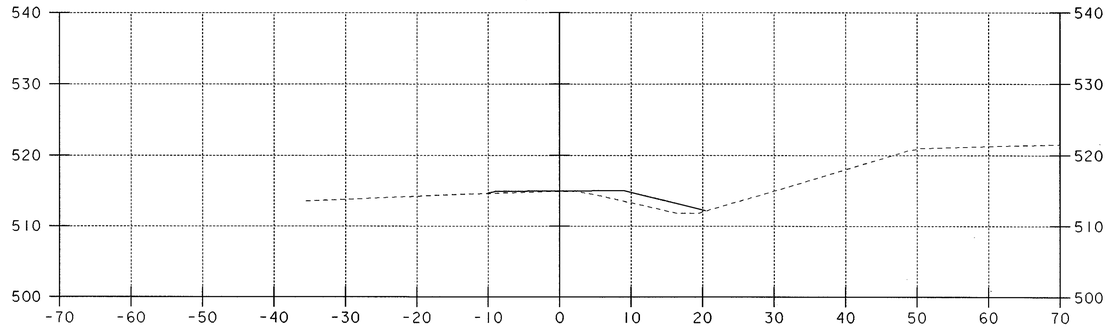
674+50



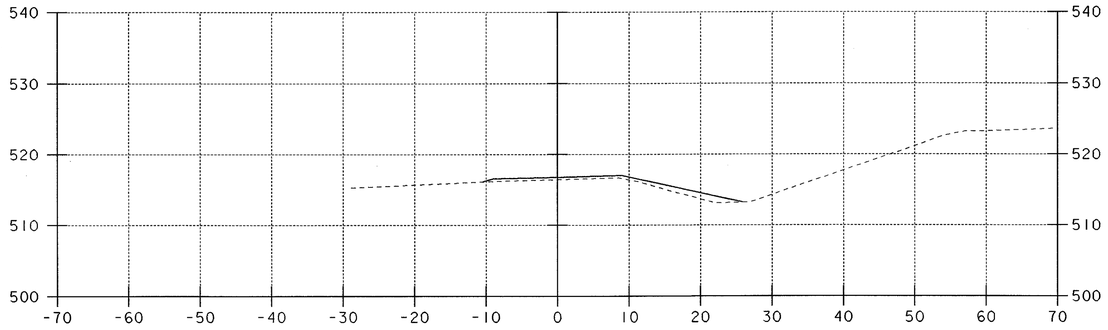
676



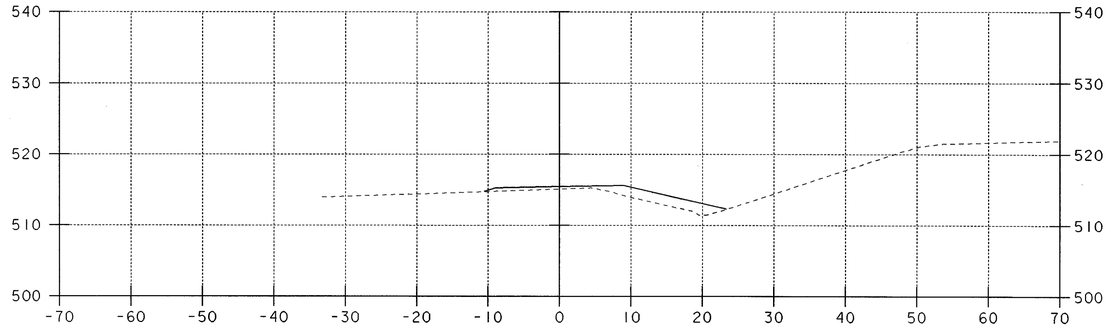
674



675+50



673+50



675

CROSSOVER AT MM 13.00

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

PROJECT: HARTFORD-SHAR-ROYALTON
PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn
IPARM FILE NAME: da08gx08
SURVEYED BY: gilman
SQUAD LEADER: bombardier
PLOT DATE: 12-MAR-1999
SURVEY DATE: 7-98
DRAWN BY: jf gruchacz
SHEET: 256 OF 260

677+50

679

677

678+50

676+50

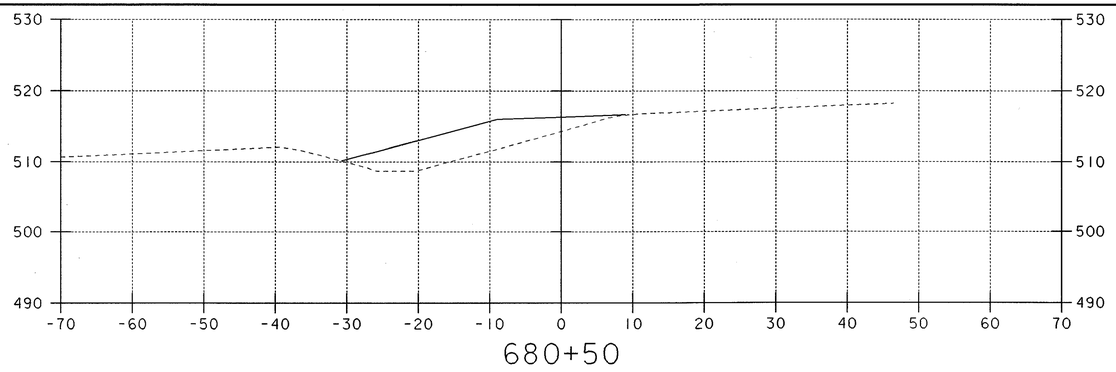
678

CROSSOVER AT MM 13.00

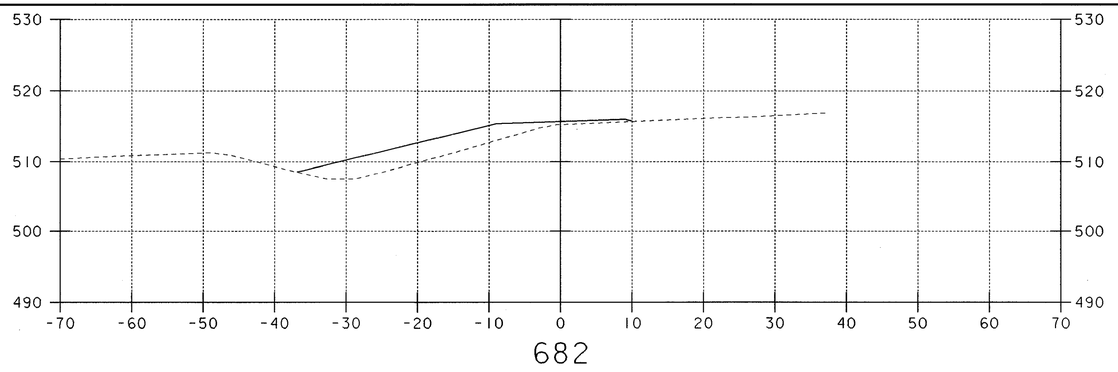
DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

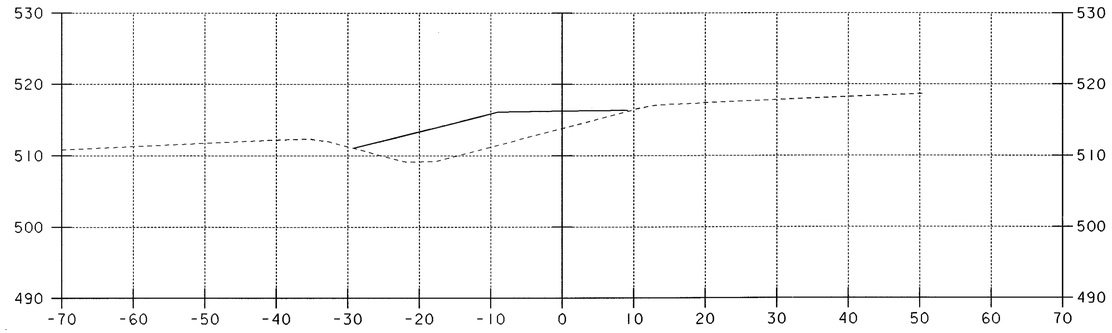
PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx09	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 257 OF 260



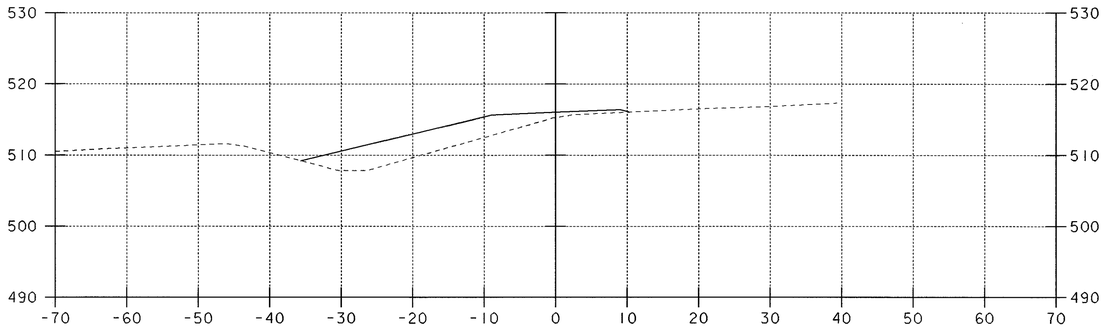
680+50



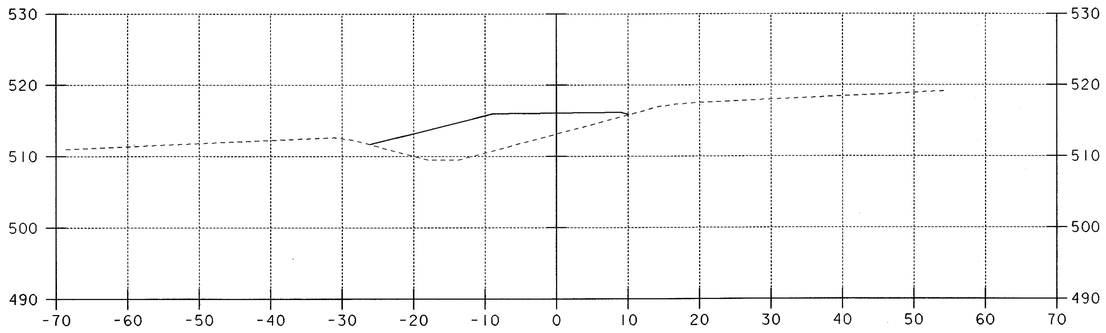
682



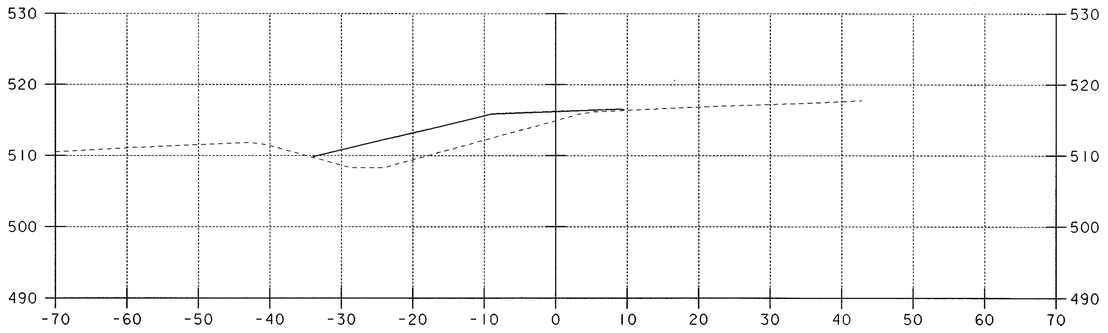
680



681+50



679+50



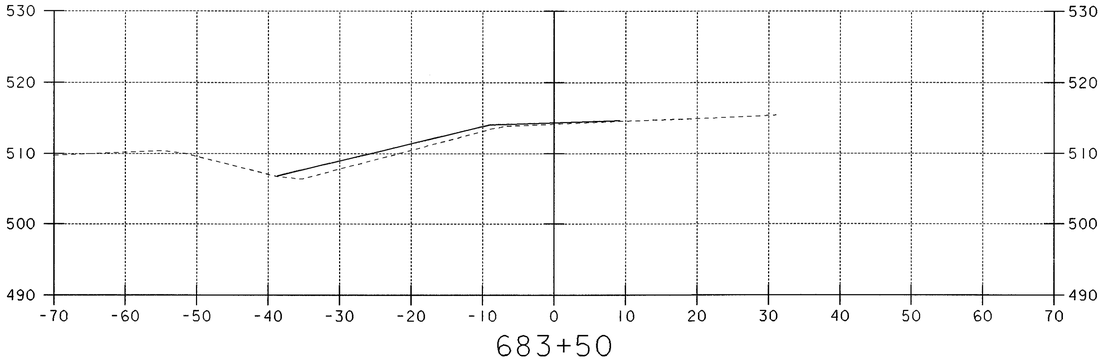
681

CROSSOVER AT MM 13.00

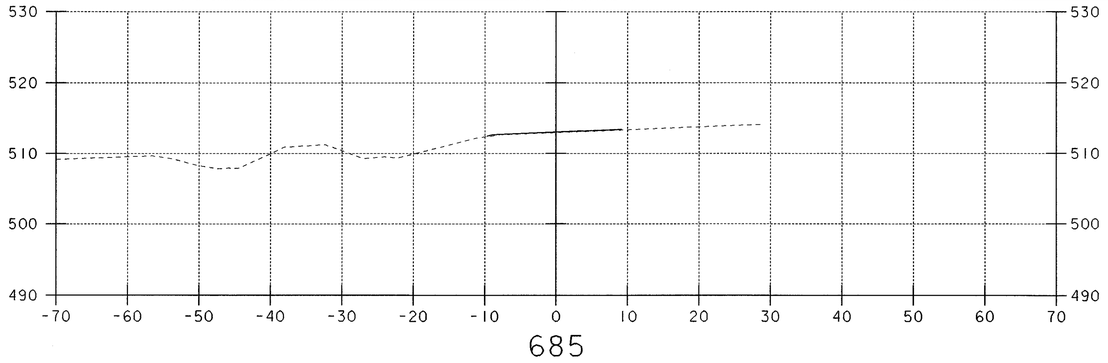
DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gx10	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 258 OF 260



683+50



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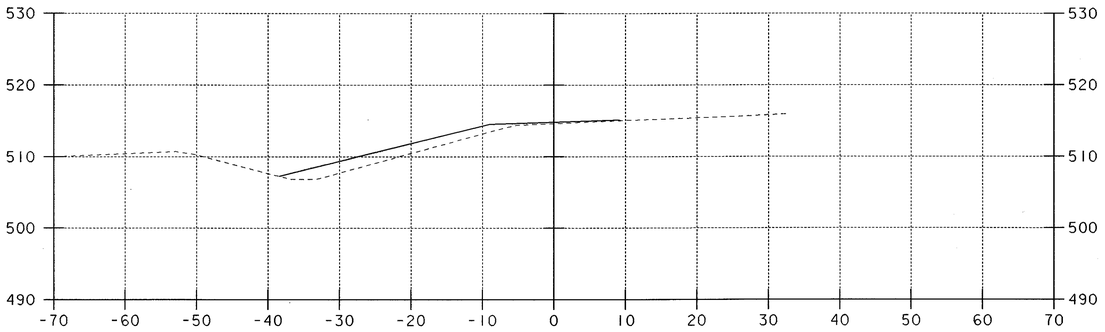

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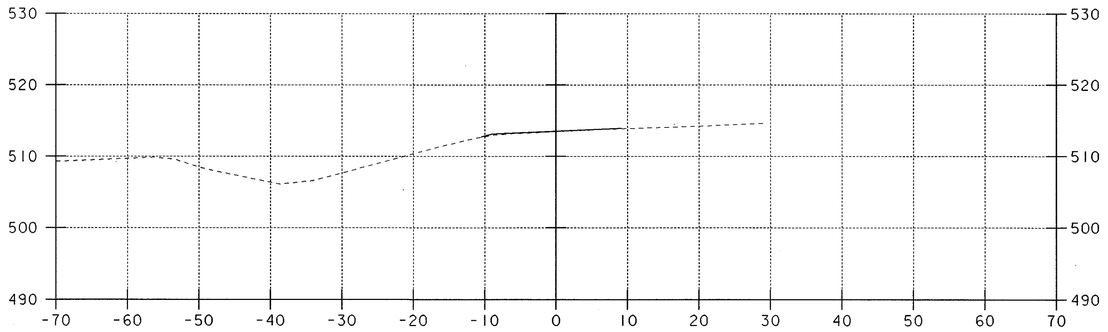

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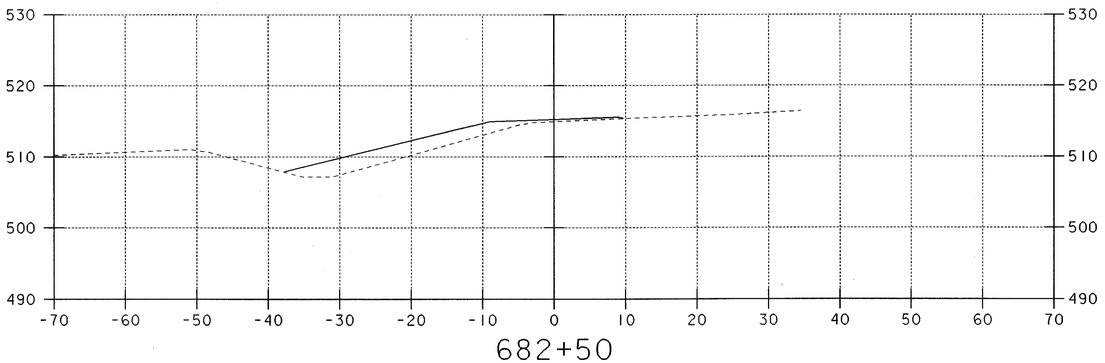
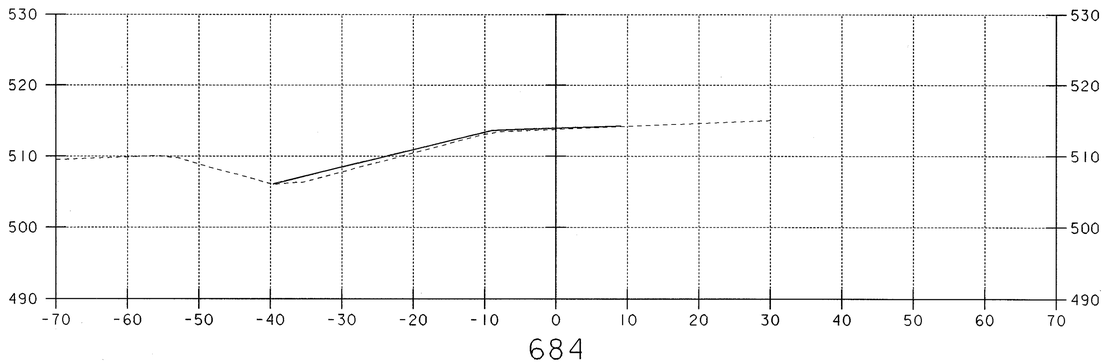


682+50



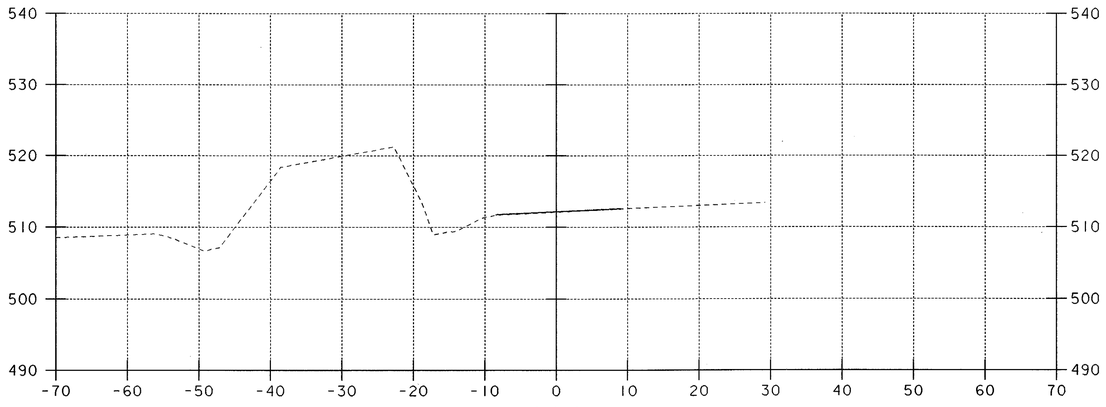
684

CROSSOVER AT MM 13.00

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gxll	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 259 OF 260



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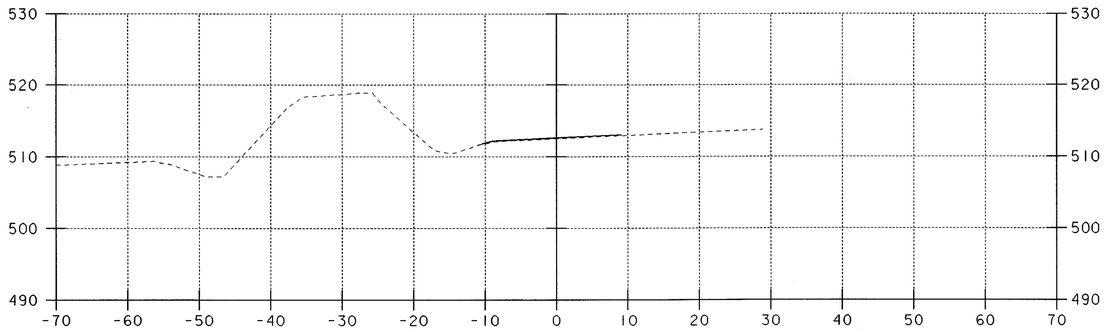
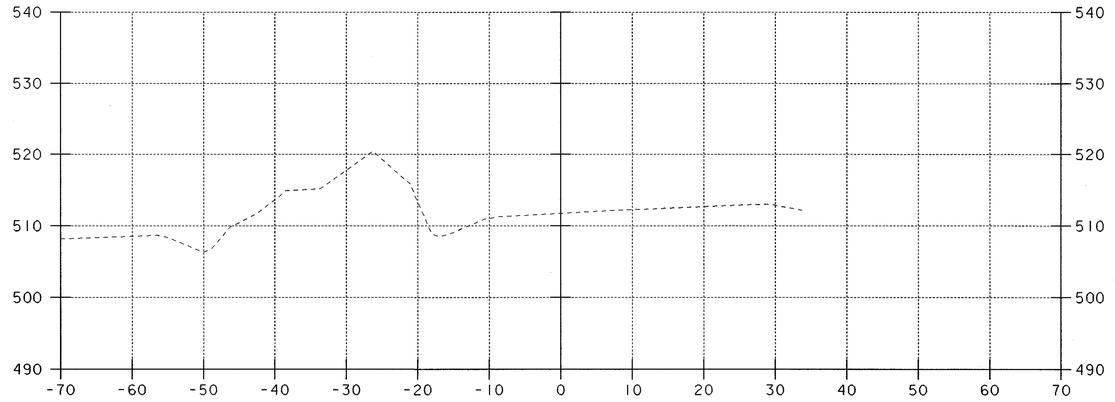


685+50



686+45

CROSSOVER AT MM 13.00

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD 83(1992)

0 10 20
SCALE

PROJECT: HARTFORD-SHAR-ROYALTON	PROJECT NO.: IM IR 089-1(8)
DESIGN FILE NAME: /sqda/87a008g/da08nul.dgn	
IPARM FILE NAME: da08gxl2	PLOT DATE: 12-MAR-1999
SURVEYED BY: gilman	SURVEY DATE: 7-98
SQUAD LEADER: bombardier	DRAWN BY: jf gruchacz
	SHEET: 260 OF 260

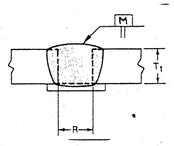
Highway Safety Corporation

Welding Procecure Specification

Material specification: ASTM A500 Gr B
Welding process: SHIELDED METAL ARC WELDING (SMAW)
Manual, semi-automatic, or automatic: MANUAL
Position of welding: FLAT (1G)
Filler metal specification: AWS A5.1
Filler metal classification: E7018
Electrode and manufacturer: LINCOLN ELECTRIC JET LH 78 MR
Flux and manufacturer: N/A
Shielding gas: N/A Flow rate: N/A
Single or multiple pass: MULTIPLE
Single or multiple arc: SINGLE
Welding current: AC
Polarity: N/A
Welding progression: STRINGERS
Root treatment: NONE
Preheat and interpass temperature: 50°F min.
Postheat treatment: NONE
Electrode extension: N/A

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters Amperes	Welding parameters Volts	Travel speed	Joint detail
	ALL	5/32"	150A to 220A	—	VARIES	B-L1a



R = T1
T1 = 1/4" max.

V.A.o.T.
RECEIVED
CK'D BY ____ CK'D BY JWK
FEB 13 2001
RESUBMIT ____ APPROVED ✓
BY GSK DATE 02-16-01

This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of AWS D1.5-95.

AWS QC 1 PAUL A. RADICE 96070221 CWI

WPS no. W-1246A
Revision no. Ø
Supporting PQR no. PRE-QUALIFIED
Project Name HARTFORD, SHARON

Fabricator: Highway Safety Corporation
Authorized by: PAUL RADICE
Date: 2/1/01
Project Number I M IR 089-1(8)

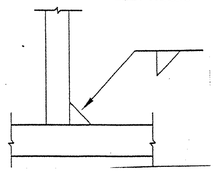
260 A

Highway Safety Corporation

Welding Procecure Specification

Material specification ASTM A709 Gr 36, ASTM A709 Gr 50
Welding process GAS METAL ARC WELDING (GMAW)
Manual, semi-automatic, or automatic SEMI - AUTOMATIC
Position of welding HORIZONTAL (2F)
Filler metal specification AWS A5.18
Filler metal classification ER70S-3
Electrode and manufacturer LINCOLN ELECTRIC LINCOLNWELD L-50
Flux and manufacturer N/A
Shielding gas 85% ARGON 15% CO_2 Flow rate 19-27 L/mw
Single or multiple pass SINGLE
Single or multiple arc SINGLE
Welding current DC
Polarity REVERSE
Welding progression STRINGERS
Root treatment NONE
Preheat and interpass temperature BASE METAL: UP TO 3/4" (50°F); OVER 3/4-1 1/2" (70°F)
Postheat treatment NONE
Electrode extension 3/4" ± 1/4"

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters Amperes	Welding parameters Volts	Travel speed	Joint detail
1/8"	1	0.045"	300 A ±30	29 V ±2	28 ipm ±2	TYPICAL ALL FILLET WELDS 
3/16"	1	0.045"	300 A ±30	29 V ±2	25 ipm ±2	

V.A.O.T.
RECEIVED
FEB 13 2001

CK'D BY _____ OK'D BY JWC
RESUBMIT _____ APPROVED ✓
By _____ Date 02-12-01

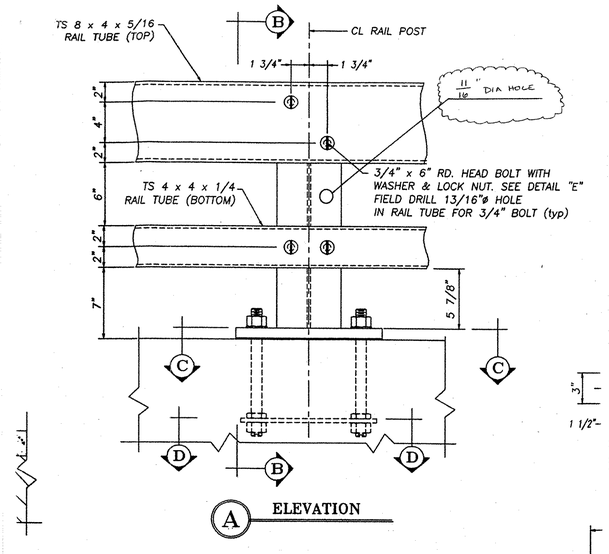
This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of AWS D1.5-95.

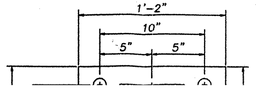
AWS QC 1 PAUL A. RADICE 98070221 CWI

WPS no. W-1246 B
Revision no. Ø
Supporting PQR no. MJC # 609180D2
Project Name HARTFORD, SHARON

Fabricator Highway Safety Corporation
Authorized by PAUL RADICE
Date 2/1/01
Project Number IM IR 089-1(8)

7/m B


TS 8 x 4 x 5/16
RAIL TUBE (TOP)
B
CL RAIL POST
1 3/4"
1 3/4"
11/16" DIA HOLE
2"
4"
2"
6"
2"
2"
7"
3/4" x 6" RD. HEAD BOLT WITH
WASHER & LOCK NUT. SEE DETAIL "E"
FIELD DRILL 13/16"ø HOLE
IN RAIL TUBE FOR 3/4" BOLT (typ)
TS 4 x 4 x 1/4
RAIL TUBE (BOTTOM)
5 7/8"
C
C
D
D
B
3"
1 1/2"
2"
A
ELEVATION
TACKWELD 5/8" HEX NUT
(2) LOCATIONS (typ) ON
INSIDE OF SPLICE TUBE


1'-2"
10"
5"
5"

2602

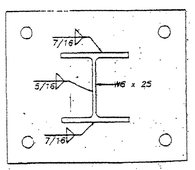
Highway Safety Corporation

Welding Procecure Specification

Material specification: ASTM A709 GR 50, A709 Gr36, A572 Gr50, A36
Welding process: GAS METAL ARC WELDING (GMAW)
Manual, semi-automatic, or automatic: SEMI - AUTOMATIC
Position of welding: HORIZONTAL (2F)
Filler metal specification: AWS A5.18
Filler metal classification: ER70S-3
Electrode and manufacturer: LINCOLN ELECTRIC LINCOLNWELD L-50
Flux and manufacturer: N/A
Shielding gas: 85% ARGON 15% CO_2 Flow rate: 40 CFH TO 56 CFH
Single or multiple pass: MULTIPLE
Single or multiple arc: SINGLE
Welding current: DC
Polarity: REVERSE
Welding progression: STRINGERS
Root treatment: NONE
Preheat and interpass temperature: 50°F min (UP TO 3/4") 70°F min (3/4" TO 1 1/2")
Postheat treatment: NONE
Electrode extension: 3/4 INCH

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters Amperes	Welding parameters Volts	Travel speed	Joint detail
5/16"	1	1/16"	275A ± 25	25A ± 2	9-15 IPM	
7/16"	1 & 2	1/16"	275A ± 2	25A ± 2	9-15 IPM	



V.A.O.T.
RECEIVED
JAN 30 2001
CK'D BY _____ OK'D BY JWG
RESUBMIT _____ APPROVED V
BY GSR DATE 02-01-01

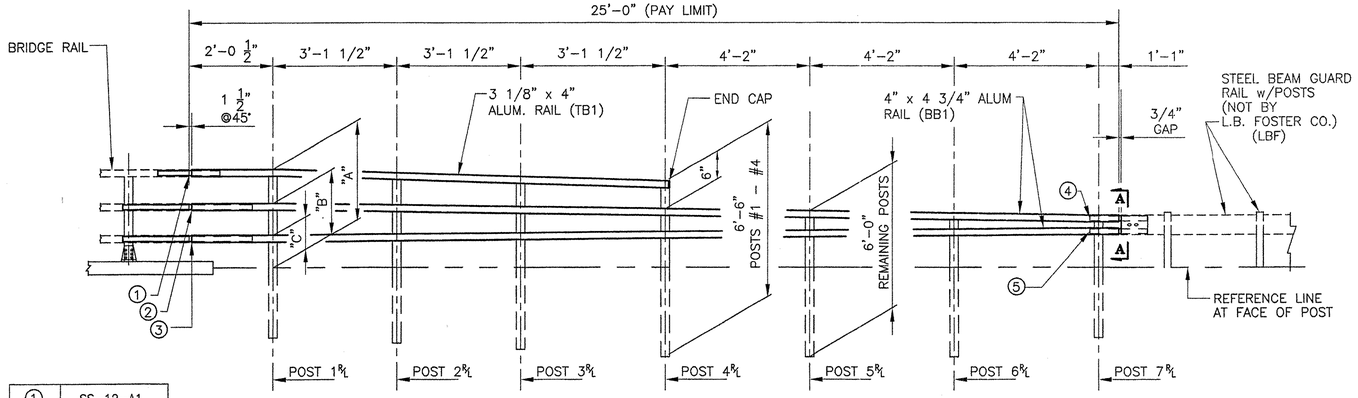
This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of AWS D1.5-95.

AWS QC 1 PAUL A. RADICE 96070221 CWI

WPS no. W-VTG151
Revision no. NEW
Supporting PQR no. MJC #60918002
Project Name HARTFORD, SHAMROCK, ROYALTON

Fabricator Highway Safety Corporation
Authorized by PAUL RADICE
Date 1/23/01
Project Number 1M 1R 0089.1(8)

260 D

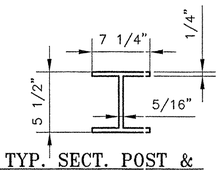


①	SS-12-A1
②	SS-03-G1
③	SS-03-G2

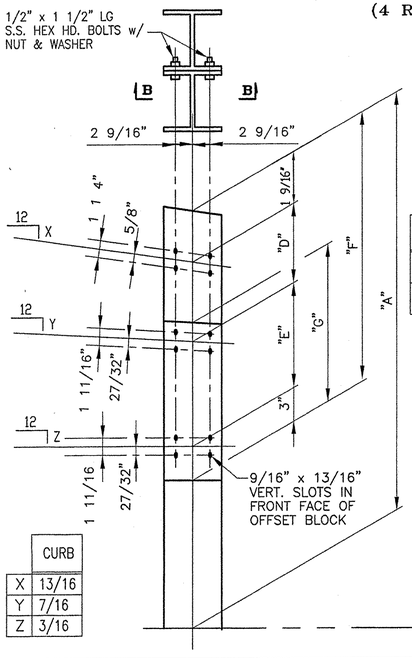
TYPICAL INSIDE ELEVATION

(4 REQ'D. ~ AS SHOWN)
(4 REQ'D. ~ OPP. HAND)

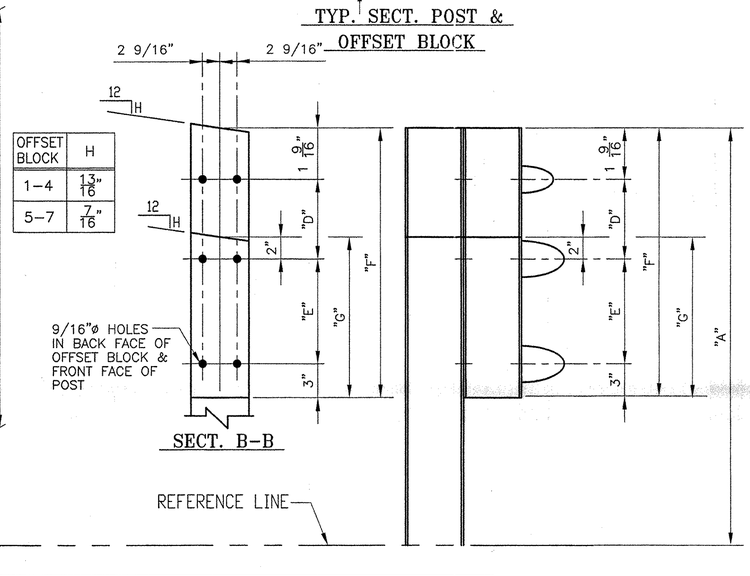
④	SS-03-H1
⑤	SS-03-H2



TYP. SECT. POST & OFFSET BLOCK

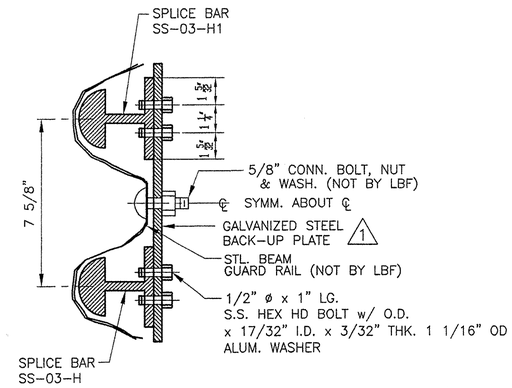


CURB	
X	13/16
Y	7/16
Z	3/16



CURB CONDITION

POST No.	QTY.	RAIL HEIGHT DIMENSIONS A	B	C	OFFSET BLOCK DIMENSIONS D	E	F	G
1	4R / 4L	3'-9 7/8"	3'-0 3/16"	1'-11 5/8"	10 3/16"	1'-0 9/16"	2'-3 5/16"	----
2	4R / 4L	3'-7 3/8"	2'-10 7/8"	1'-11"	8 15/16"	11 7/8"	2'-1 3/8"	----
3	4R / 4L	3'-4 13/16"	2'-9 9/16"	1'-10 3/8"	7 11/16"	11 3/16"	1'-11 7/16"	----
4	4R / 4L	3'-2 5/16"	2'-8 5/16"	1'-9 3/4"	6 7/16"	10 9/16"	1'-9 9/16"	----
5	4R / 4L	---	2'-6 9/16"	1'-8 15/16"	---	9 5/8"	---	1'-2 5/8"
6	4R / 4L	---	2'-4 7/8"	1'-8 1/8"	---	8 3/4"	---	1'-2 5/8"
7	4R / 4L	---	2'-3 1/8"	1'-7 1/4"	---	7 7/8"	---	1'-0 7/8"



SECTION A-A

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 1990.

DESCRIPTION	ASTM	ALLOY/GR.	REMARKS
RAILS, POSTS, SPLICES, PINS, CLAMP BARS & OFFSET BLOCKS	B221	6061-T6 OR 6351-T5	MIN. YIELD STRENGTH Fy = 35,000 psi.
HEX HEAD BOLTS	A193	GR. B8	
ALUMINUM WASHERS	B209	2024-T4	ALCLAD
STN. STL. NUTS	A276	TYPE 304	
END CAPS (SAND CAST)	B26	356-F	DRIVE TYPE
BACK-UP PLATES	A36		GALV. A123
ELECTRODES FOR WELDING	AWS A5.10	ER5356	

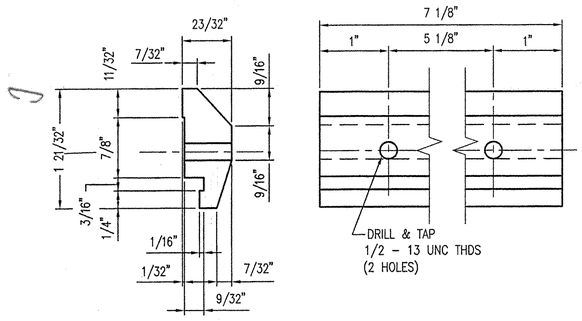
ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED AND GRIND ALL CUT EDGES SMOOTH.

THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS:

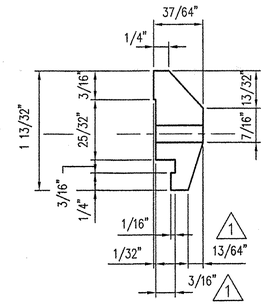
THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE PARTIALLY THREADED BOLTS, WITH EITHER THE EXTRUDED WASHER OR THE WELDED WASHER, TIGHTENED SECURELY TO THE END OF THREADS, AND LEAVING A 1/8" GAP, THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT.

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

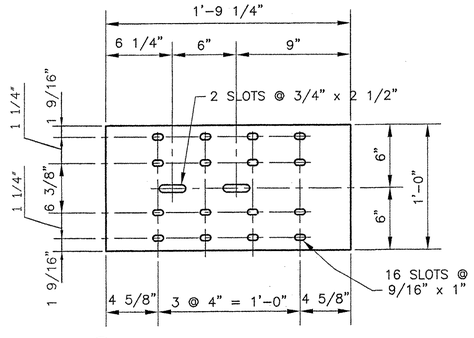
ALL EXTRUSION TOLERANCES NOT SHOWN SHALL BE IN ACCORDANCE WITH ASTM B221.



224 ~ REQ'D CLAMP BARS CB-03-A
(BARRIER RAIL)



64 ~ REQ'D CLAMP BARS CB-01-H
(HANDRAIL)



8 REQ'D. ~ BACK-UP PLATE
(1/4" THK. PLATE ~ A36 - GALV.)

NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 200 LF PAY LENGTH.
- SEE LB2 FOR BILL OF MATERIAL.

BRIDGE Nos: 10 (MM 6.5) & 21 (MM 17.5)
PROJ. No: IM IR 089-1(8) ITEM No: 621.74

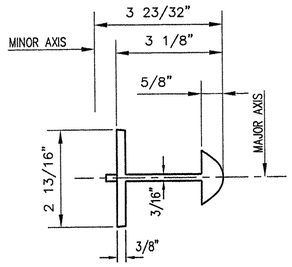
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

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

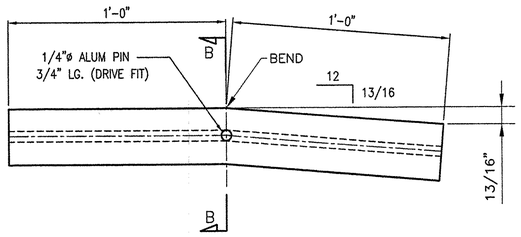
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HARTFORD-SHARON-ROYALTON, WINDSOR COUNTY
HIGHWAY No. 189 ~ 3-LINE ALUMINUM APPROACH RAIL
GENERAL NOTES AND TYPICAL DETAILS

REV.	DESCRIPTION	BY	DATE
1	REVISIONS PER APPROVAL	Dd	03 28 01

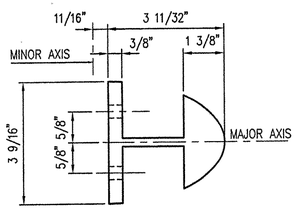
MADE Dd DATE 02/01/01 JOB No. A03701 CUST. No.
CHECK ____ DATE ____ DRAWING LB1 REV. No. ONE



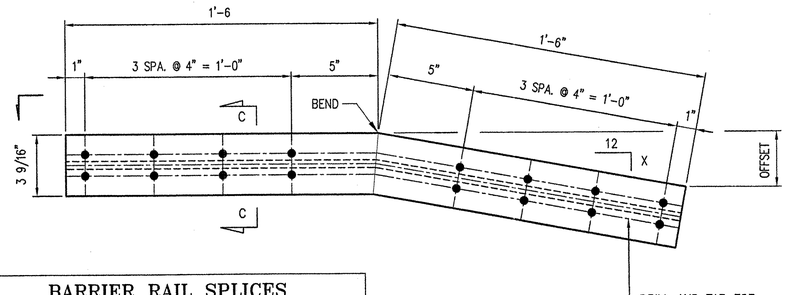
SECTION B-B
SS-12-A*



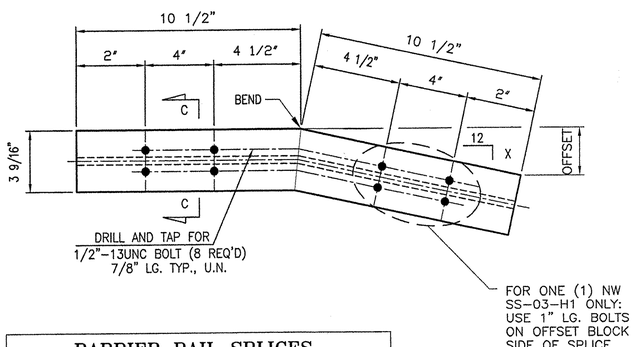
8 REQ'D. ~ SS-12-A1



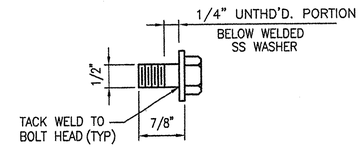
SECTION C-C



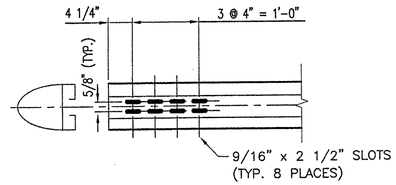
BARRIER RAIL SPLICES				
MK.		QTY.	X	OFFSET
SS-03-G1		8	7/16	5/8"
SS-03-G2		8	3/16	1/4"



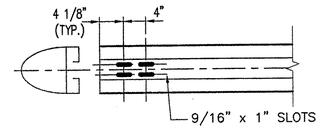
BARRIER RAIL SPLICES				
MK.		QTY.	X	OFFSET
SS-03-H1		8	7/16	3/8"
SS-03-H2		8	3/16	3/16"



SPLICE BOLT DETAILS



SLOT DETAIL C



SLOT DETAIL D

BILL OF MATERIAL

PIECE MARK	NO. REQ'D.	DESCRIPTION	LENGTH FT.	LENGTH IN.	REMARKS
	32	ALUMINUM POSTS #1$^{R}_{L}$ THRU #4$^{R}_{L}$	6	6	ON ℄
	24	~do~ #5$^{R}_{L}$ THRU #7$^{R}_{L}$	6	0	
	8	ALUMINUM OFFSET BLOCKS	2	3 5/16	
	8		2	1 3/8	
	8		1	11 7/16	
	8		1	9 9/16	
	16		1	2 5/8	
	8	ALUMINUM OFFSET BLOCKS	1	0 7/8	ON ℄
	288	1/2"ø S.S. HEX HD BOLT w/NUT & WASHER	0	1 1/2	FOR OFFSET BLOCKS
CB-01-H	64	ALUMINUM CLAMP BARS (HANDRAIL)	0	7 1/8	SEE DETAIL
CB-03-A	224	~do~ (BARRIER RAIL)	0	7 1/8	
	576	1/2"ø STNL. STL. HEX HD. BOLTS	0	1	
	576	1 1/16" O.D. x 17/32" I.D. x 3/32" ALUM WASHER			
SS-03-G1	8	ALUMINUM SPLICE SLEEVE BEND	3	0	
SS-03-G2	8		3	0	
SS-12-A1	8		2	0	
1 SS-03-H1	8		1	9	
SS-03-H2	8	ALUMINUM SPLICE SLEEVE BEND	1	9	
	320	1/2"ø STNL. STL. HEX HD. BOLTS	0	0 7/8	PARTIALLY THD'D
	320	1/2"ø STNL. STL. WASHER			TACK WELD TO PARTIALLY THD'D BOLT
	8	1/4"ø ALUMINUM PINS	0	0 3/4	
	8	BACK-UP PLATE 1/4" x 1'-0"	1	9 1/4	
	64	1/2"ø STNL. STL. HEX HD. BOLTS	0	1	
	64	1 1/16" O.D. x 17/32" I.D. x 3/32" ALUM WASHER			
	8	ALUMINUM END CAP – DRIVE TYPE			HANDRAIL
TB1	8	3 1/8" x 4" SEMI-ELLIP. ALUMINUM RAIL	11	7 1/4	
BB1	16	4" x 4 3/4" SEMI-ELLIP. ALUMINUM RAIL	24	10 1/2	DET. C 1-E, DET. D 1-E

BRIDGE Nos: 10 (MM 6.5) & 21 (MM 17.5)
PROJ. No: IM IR 089-1(8) ITEM No. 621.74

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

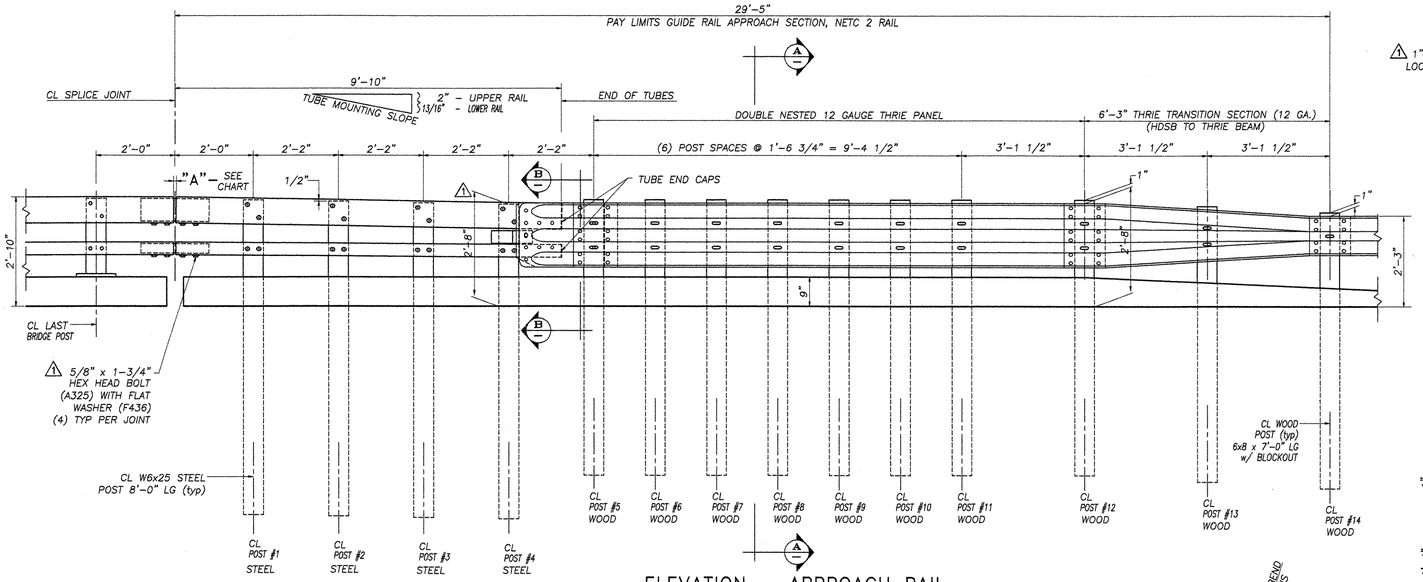
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HARTFORD-SHARON-ROYALTON, WINDSOR COUNTY
HIGHWAY No. 189 ~ 3-LINE ALUMINUM APPROACH RAIL
MISCELLANEOUS DETAILS & BILL OF MATERIAL

MADE Dd DATE 02/01/01 JOB No. A03701 CUST. No.
CHECK _____ DATE _____ DRAWING LB2(LAST) REV. No. ONE

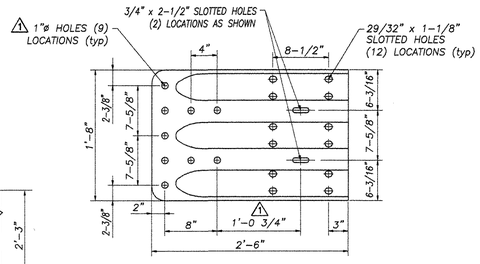
REV.	DESCRIPTION	BY	DATE
1	REVISED SPLICE MK. No. (NSO)	Dd	07 09 01

262



ELEVATION – APPROACH RAIL

TYPICAL (44) LOCATIONS



TERMINAL CONNECTOR

10 GAUGE (AASHTO M180 B2)

BILL OF MATERIAL

Mk.	Qty.	Description	Material
	176	STEEL POST W6x25 x 8'-8" OAL	A709 gr 50
	440	WOOD POST 6x8 x 7'-0" OAL	
TU-1	18	RAIL (UPPER) TS 8x4x5/16 x 9'-9 5/8" (FIXED END)	A500 gr B
TU-2	14	RAIL (UPPER) TS 8x4x5/16 x 9'-8 3/4" (2-1/2" EXP END)	A500 gr B
TU-3	12	RAIL (UPPER) TS 8x4x5/16 x 9'-8" (4" EXP END)	A500 gr B
TU-1	18	RAIL (LOWER) TS 4x4x1/4 x 9'-9 5/8" (FIXED END)	A500 gr B
TU-2	14	RAIL (LOWER) TS 4x4x1/4 x 9'-8 3/4" (2-1/2" EXP END)	A500 gr B
TU-3	12	RAIL (LOWER) TS 4x4x1/4 x 9'-8" (4" EXP END)	A500 gr B
	44	THRIE TRANSITION PANEL – 12 GA	M180 A2
	88	THRIE PANEL 12'-6" / 1'-6 3/4" (12 GA)	M180 A2
	44	THRIE FLAT LIP TERMINAL CONNECTOR (10 GA)	M180 B2
	44	END CAP FOR 8 x 4 TUBE RAIL	A709 gr 36
	44	END CAP FOR 4 x 4 TUBE RAIL	A709 gr 36
	44	DEFLECTOR PLATE	A709 gr 36
	44	CONNECTION PLATE 3/8" x 1'-8" x 2'-3"	A709 gr 36
	440	WOOD OFFSET BLOCK 6x8 x 1'-6" LONG	
	836	5/8" x 1'-8" LONG POST BOLT w/ PLATE WASHER, DBL RECESSED NUT & ROUND WASHER	A307
	1056	3/4" x 6" LONG ROUND-SLOTTED HEAD BOLT WITH ROUND WASHER & LOCK NUT	A325
	44	3/4" x 2" LONG ROUND HEAD BOLT WITH HEX NUT	A307
	1408	5/8" x 1-1/4" SPLICE BOLT w/ DOUBLE RECESSED NUT	A307
SP1 / SP2	32	UPPER RAIL SPLICE TUBE (ANGLED) – TS 7x3x3/8 1'-8" OAL	A500 gr B
SP3	12	UPPER RAIL SPLICE TUBE (ANGLED) – TS 7x3x3/8 1'-11 3/4" OAL	A500 gr B
	32	LOWER RAIL SPLICE TUBE (STRAIGHT) – TS 3x3x51/6 1'-8" OAL	A500 gr B
	12	LOWER RAIL SPLICE TUBE (STRAIGHT) – TS 3x3x5/16 1'-11 3/4" OAL	A500 gr B
	352	3/4" x 1-3/4" HEX HEAD BOLT w/ ROUND WASHER	A325
	208	SPACER PIPE 3/4-in SCH 40 x 1/2" LONG	A53

GENERAL ERECTION NOTES

1) ALL BRIDGE RAIL APPROACH RAIL MATERIALS, DIMENSION SIZES, AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGERAIL UNLESS OTHERWISE NOTED.

2) CARRIAGE BOLTS SHALL BE ASTM A307 AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED)

3) CUT & WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD B-L1A WITH BACKING BAR.

4) REFLECTORIZED ALUMINUM DELINEATION IS TO BE ERECTED EVERY 30 ft. (OR CLOSEST POST) WITH 2 NO. 8 x 3/4" SELF TAPPING SCREWS. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.

5) 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 DRIVERS LEFT AND SILVER ON THE RIGHT.

6. All work and materials shall conform to the provisions of Section 525 – Railings of the Vermont Standard Specifications for Construction.

7. Tubing & posts shall meet the requirements of Section 732 – Railing materials of the Standard Specifications for Construction.

8. All exposed cut or sheared edges shall be ground to a 1/16" radius & be free of burrs.

9. Rail posts shall be set normal to grade.

10. Sections of rail bar shall be attached to a minimum of two (2) posts and preferably to at least four (4) posts.

11. Rail bar expansion joints shall be provided in any rail bay spanning a superstructure expansion joint. Expansion joint width shall be "X" at 45° F and will be adjusted in the field by the engineer.

12. All parts shall be galvanized after fabrication in accordance with AASHTO M111, except that hardware shall meet the requirements of AASHTO M232.

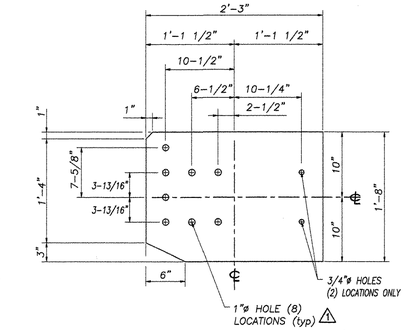
13. Rail bars shall be attached to steel posts using 3/4"ø full diameter body head bolts AASHTO M164 (Type-I) inserted through the face of the bar. Holes in post shall be 1/16" larger than the bolt size.

14. Holes in rails for attachment to posts will be field-drilled. Holes shall be coated with an approved zinc-rich paint prior to erection.

15. Radiused rails (if required) will be shop-curved. No field-bending of rail tubes.

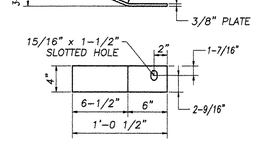
16. The drop-weight tear test in section 732 shall not apply to the structure tubing on this standard.

17. The rail posts & base plates shall be tested for impact properties in accordance with ASTM A370 Charpy Impact Testing, using a type A specimen.



CONNECTION PLATE

3/8" x 1'-8" x 2'-3" (A709 gr 36)

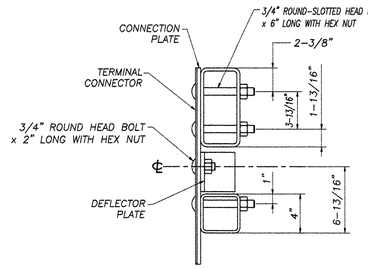


END CAP (8x4)

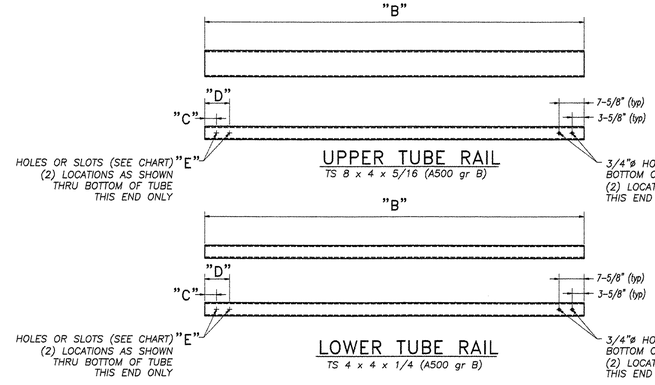
3/16" x 8" x 4" (A709 gr 36)

DEFLECTOR PLATE

3/8" x 4" PLATE (A709 gr 36)



SECTION B–B

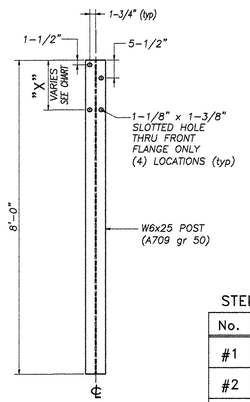


UPPER TUBE RAIL

TS 8 x 4 x 5/16 (A500 gr B)

LOWER TUBE RAIL

TS 4 x 4 x 1/4 (A500 gr B)



STEEL POST

STEEL POST CHART

No.	" X "
#1	1'-3 1/4"
#2	1'-3"
#3	1'-2 3/4"
#4	1'-2 1/2"

ANGLED SPLICE TUBE DETAIL

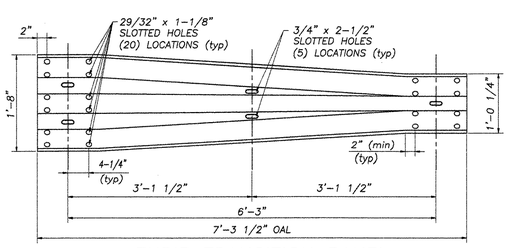
UPPER RAIL SPLICE SHOWN

SEE BRIDGE RAIL DETAILS (SHOP DRAWING #1239) FOR ADDITIONAL SPLICE TUBE FABRICATION & ASSEMBLY DETAILS

LOWER RAIL DOES NOT REQUIRE BENT SPLICE TUBE TO MATCH TUBE ANGLE – USE STRAIGHT SPLICE TUBE

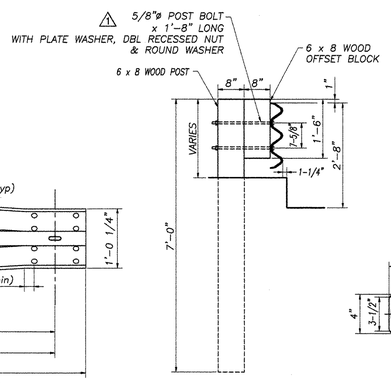
SPLICE TUBE DIMENSIONS

No.	JOINT "A"	"F"	"G"
SP-1	3/4" SPLICE	10"	2"
SP-2	2-1/2" EXPANSION	10"	2"
SP-3	4" EXPANSION	11-7/8"	2-3/8"

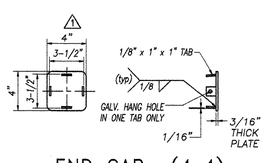


THRIE TRANSITION PANEL

12 GAUGE (AASHTO M180 A2)



SECTION A–A



END CAP (4x4)

3/16" x 4" x 4" (A709 gr 36)

STEEL TUBE DIMENSIONS

No.	JOINT "A"	OAL "B"	"C"	"D"	"E"
TU-1	3/4" SPLICE	9'-9 5/8"	3-5/8"	7-5/8"	3/4" DIA HOLES
TU-2	2-1/2" EXPANSION	9'-8 3/4"	2-3/4"	6-3/4"	3/4" x 2-1/2" SLOTTED HOLES
TU-3	4" EXPANSION	9'-8"	3-1/2"	7-1/2"	3/4" x 3-1/2" SLOTTED HOLES

SEE BRIDGE PLANS (SHOP DRAWING #1239) FOR LOCATIONS OF FIXED & EXPANSION JOINTS

MATERIALS

Rail bars.....ASTM A500 GR B or ASTM A501
Rail posts.....ASTM A709 GR 50
All other shapes & plates.....ASTM A709 GR 36
Round-slotted head bolts for Rail-Post connections ..... M164 (type I)
Hex head bolts for tube splice joints ..... M164 (type 1)
All other bolts [unless noted].....ASTM A307

Nuts for ASTM A307 bolts & AASHTO M164 bolts shall comply with AASHTO M291. Nuts for anchor studs shall comply with ASTM A563.

washers shall comply with ASTM F436

1/8" pad shall comply with standard specification subsection 731.01 or 731.02 of Vermont Standard Specifications.

REVISIONS

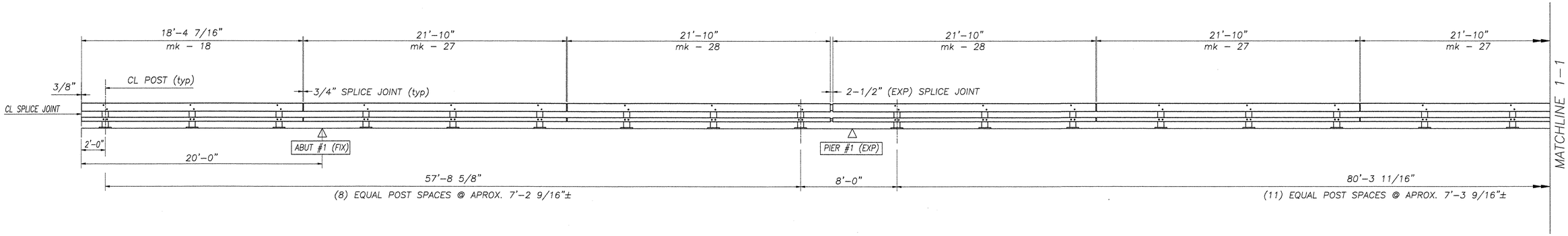
No.	Remarks	Date
0	Initial submittal	
1	FINAL "AS-BUILT"	11/08/01

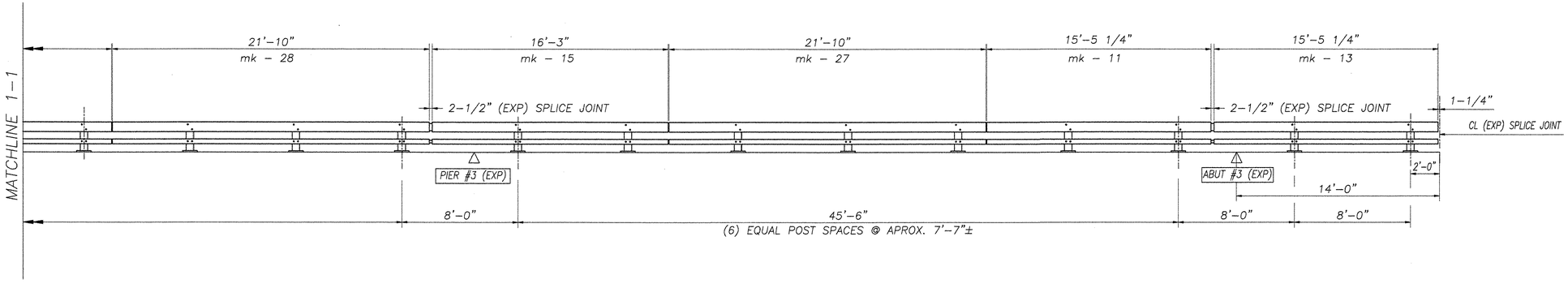
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 621.72 – GUARDRAIL APPROACH SECTION – NETC 2 RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON, ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/31/01
SCALE: NONE
NSC REFERENCE NO.: 1246
SIZE: D
REVISION: 1
SHEET NO.: 1 of 1





BRIDGE #6S (EASTBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE
APROXIMATE RADIUS = 1,659 ft.

⚠ PAY LENGTH = 219'-6 5/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

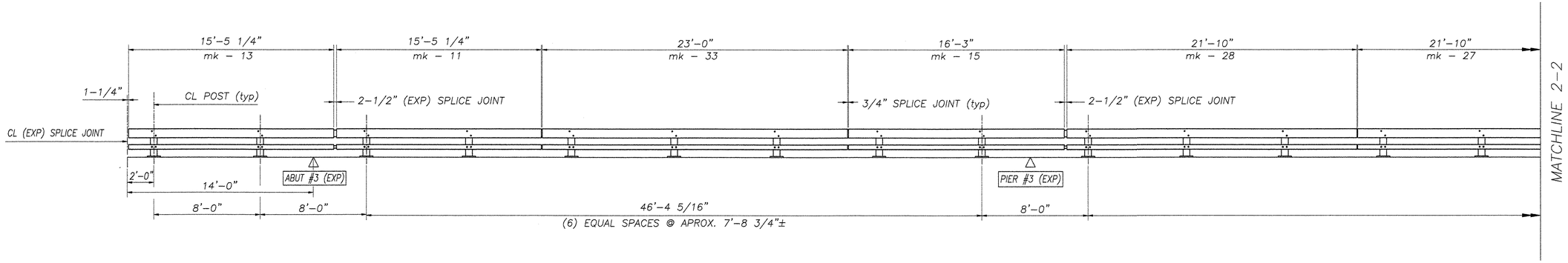
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS BUILT"	11/8/01

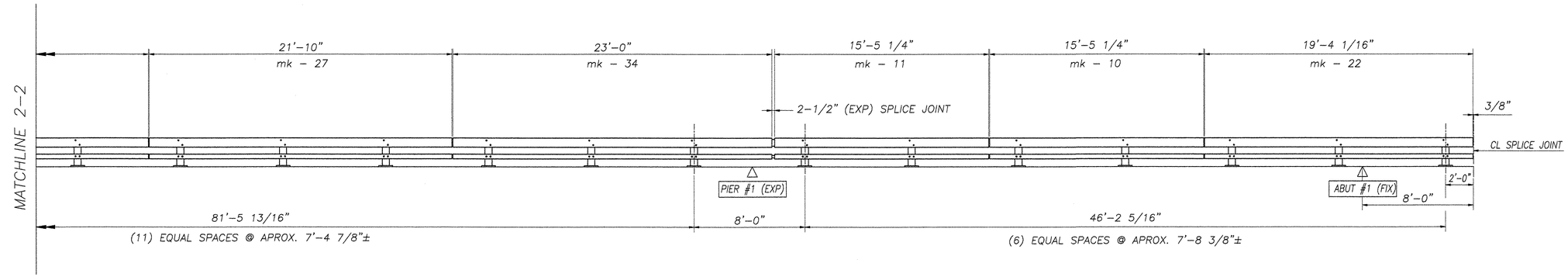
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 1 of 24





BRIDGE #6S (EASTBOUND)

RIGHT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 1,621 ft.

PAY LENGTH = 210'-0 7/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

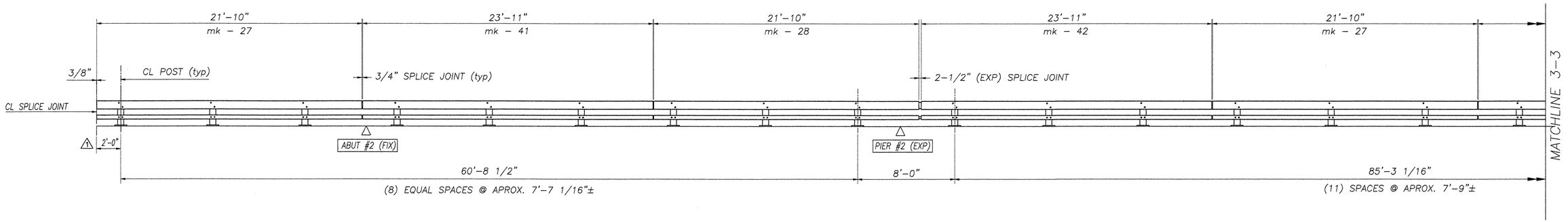
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

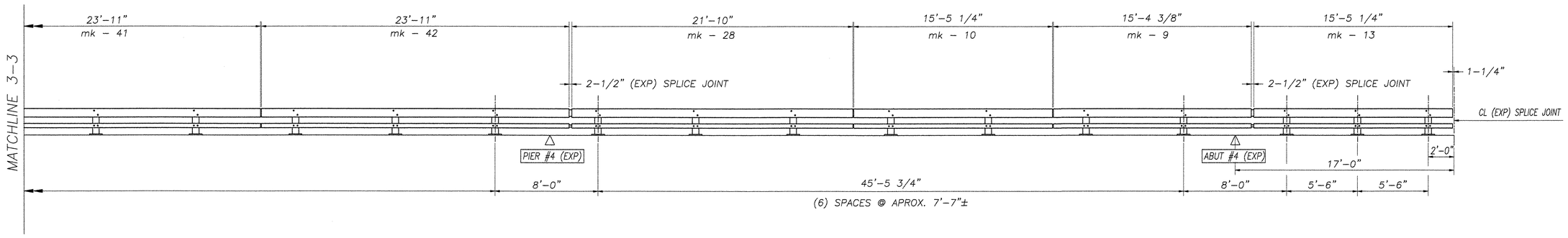
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 0
SHEET NO.: 2 of 24





BRIDGE #6N (WESTBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 1,654 ft.

PAY LENGTH = 230'-5 5/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

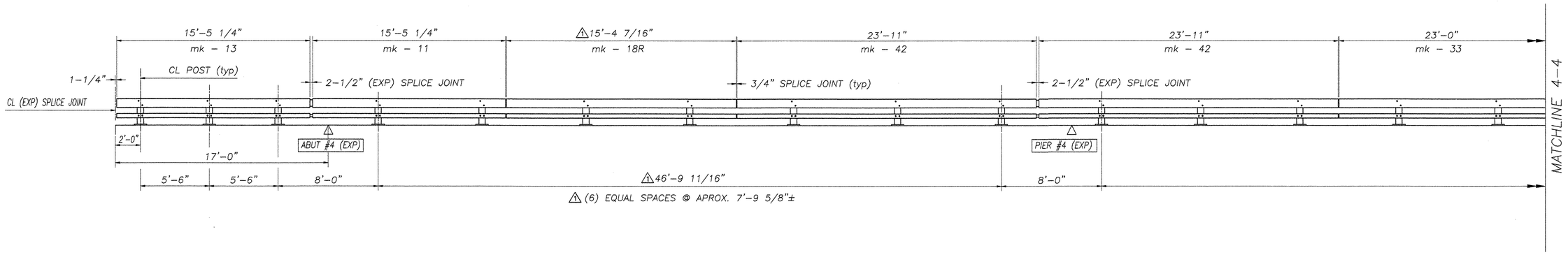
REVISIONS		
No.	Remarks	Date
0	Initial submittal	01/26/01
1	FINAL "AS-BUILT"	11/8/01

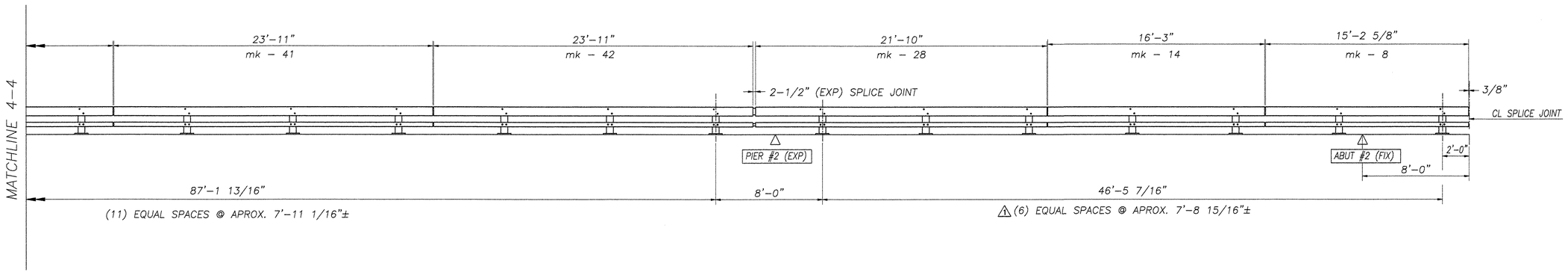
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED: [signature]
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 3 of 24





BRIDGE #6N (WESTBOUND)

RIGHT ELEVATION - FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 1,615 ft.

PAY LENGTH = 219'-4 15/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

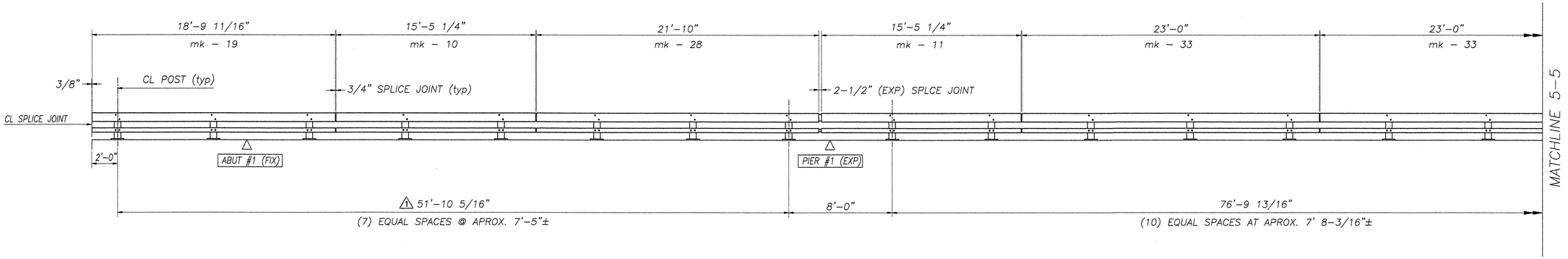
REVISIONS		
No.	Remarks	Date
0	Initial submittal	01.26.01
1	FINAL "AS-BUILT"	11.08.01

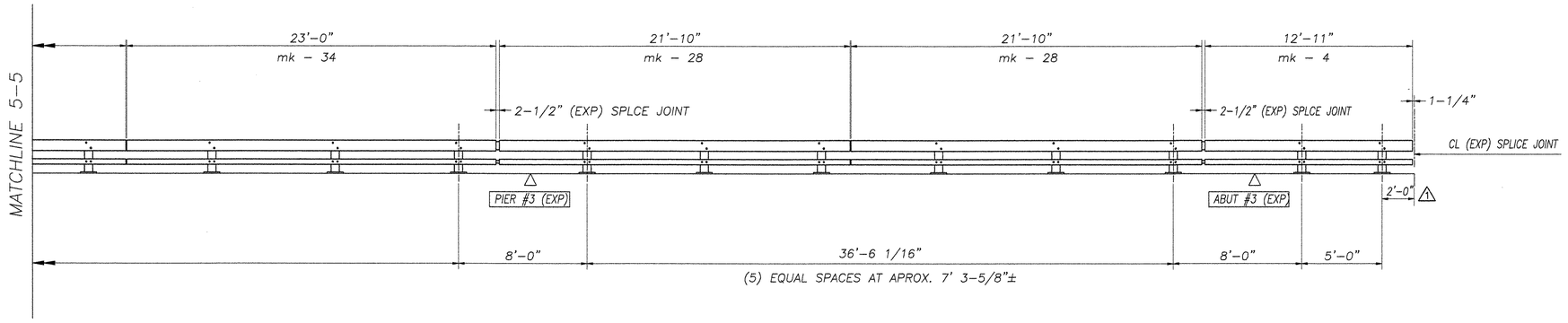
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 4 of 24





BRIDGE #15S (SOUTHBOUND)

LEFT ELEVATION - FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,434 ft.

PAY LENGTH = 198'-2 3/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

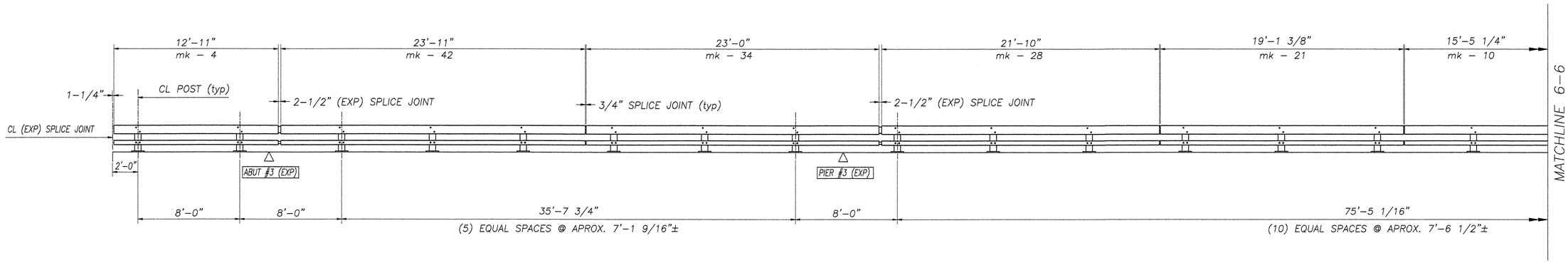
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

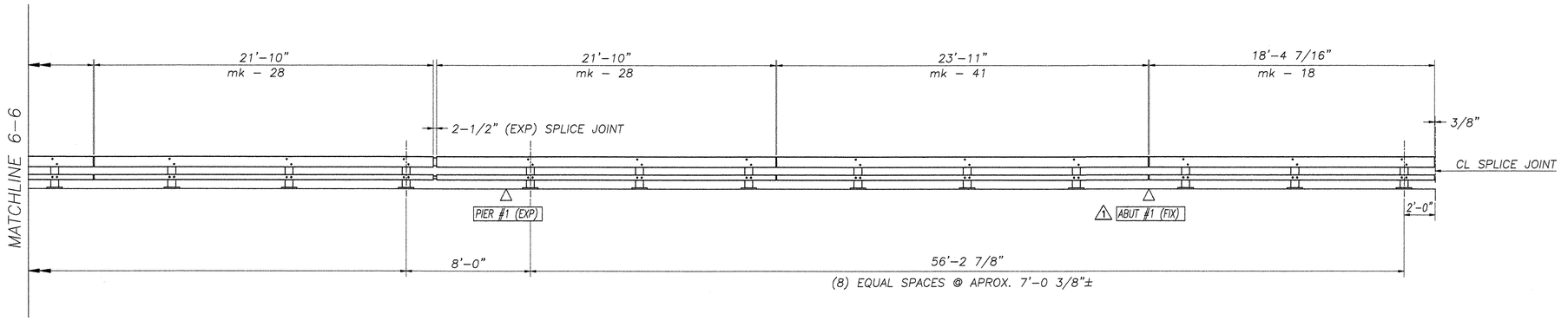
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

DRAWN P. Radice
CHECKED
DATE 1/23/01
SCALE NONE
HSC REFERENCE NO. 1239
GENERAL CONTRACTOR MORRILL CONSTRUCTION INC.
SIZE D REVISION 1
SUB CONTRACTOR F.R. LAFAYETTE INC.
SHEET NO. 5 of 24

268





BRIDGE #15S (SOUTHBOUND)

RIGHT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,472 ft.

PAY LENGTH = 203'-3 11/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

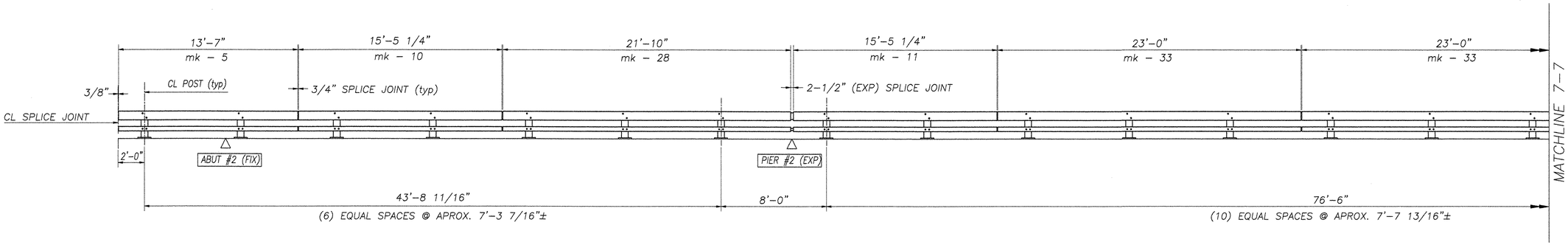
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

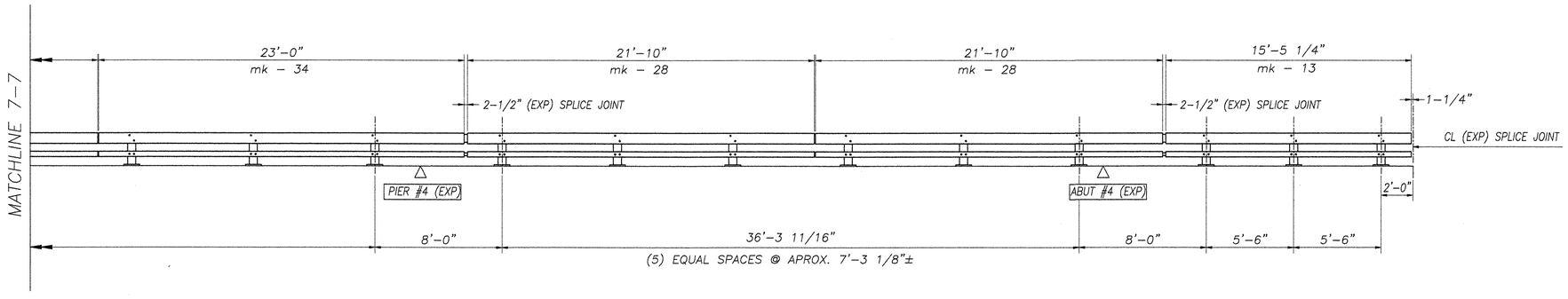
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 6 of 24





BRIDGE #15N (NORTHBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,439 ft.

PAY LENGTH = 195'-6 3/8" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

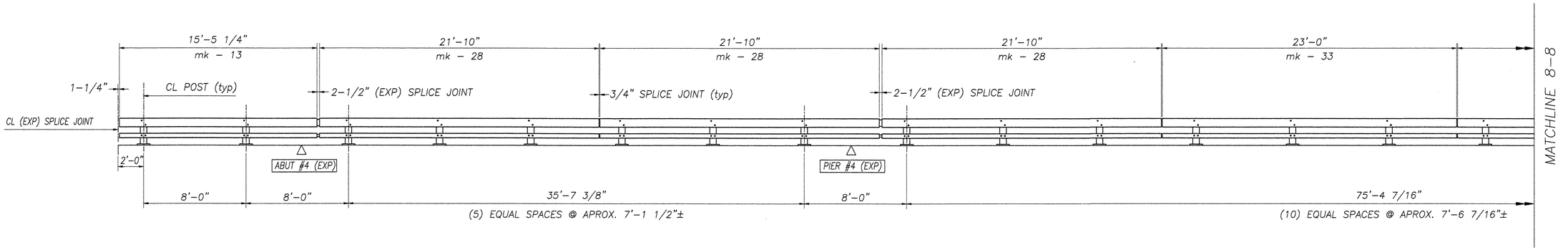
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

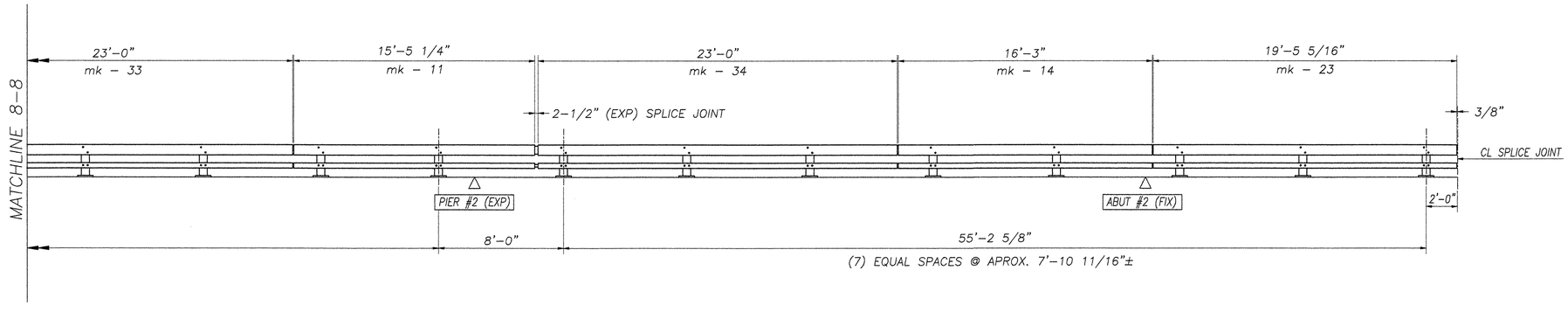
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 7 of 24





BRIDGE #15N (NORTHBOUND)

RIGHT ELEVATION - FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,477 ft.

PAY LENGTH = 202'-2 7/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 8 of 24

BRIDGE #16S (SOUTHBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

PAY LENGTH = 439'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

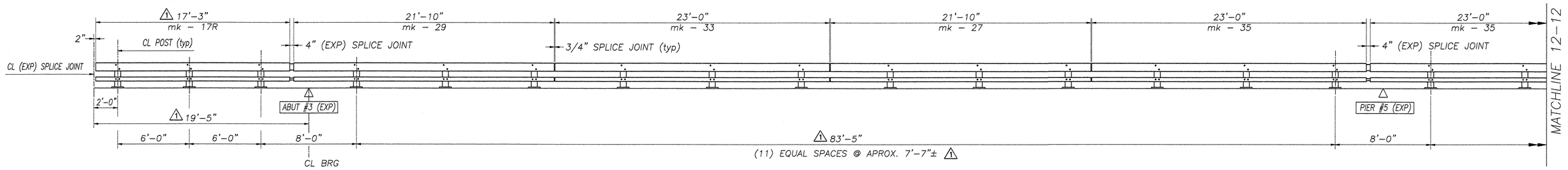
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

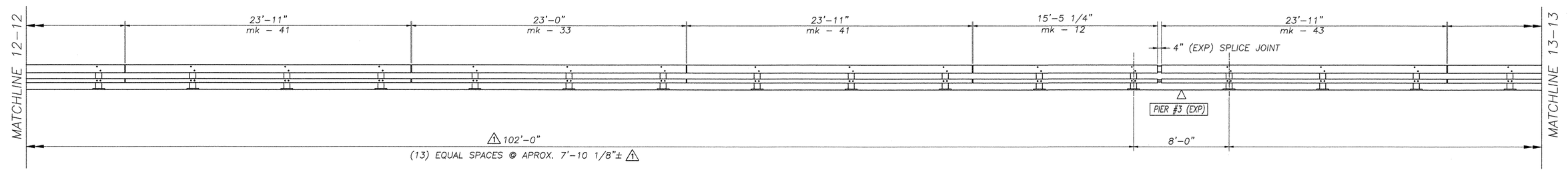
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

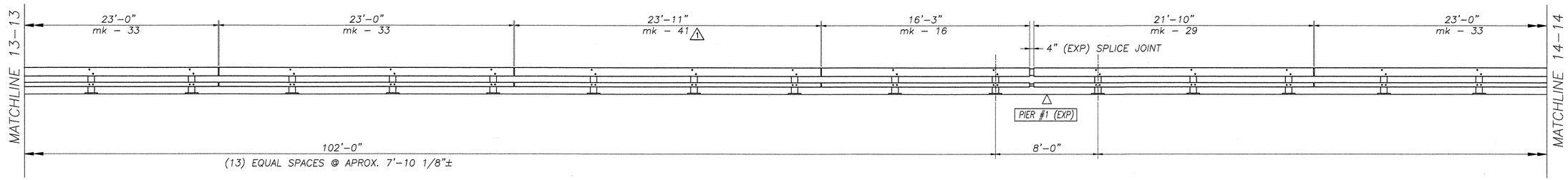
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

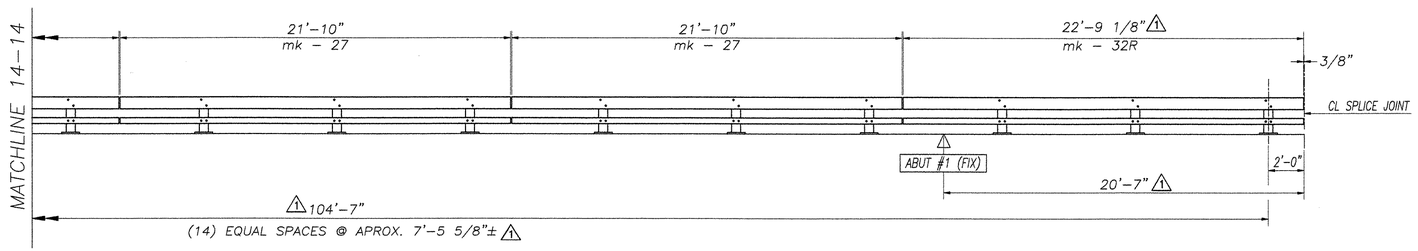
GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 9 of 24









BRIDGE #16S (SOUTHBOUND)

RIGHT ELEVATION – FACING FROM CENTER OF ROADWAY

PAY LENGTH = 440'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

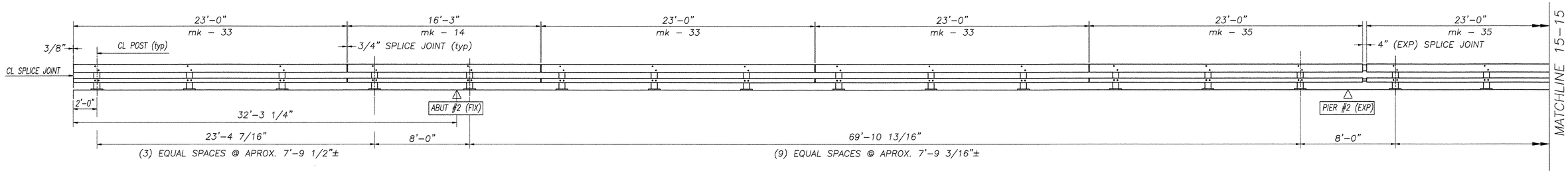
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

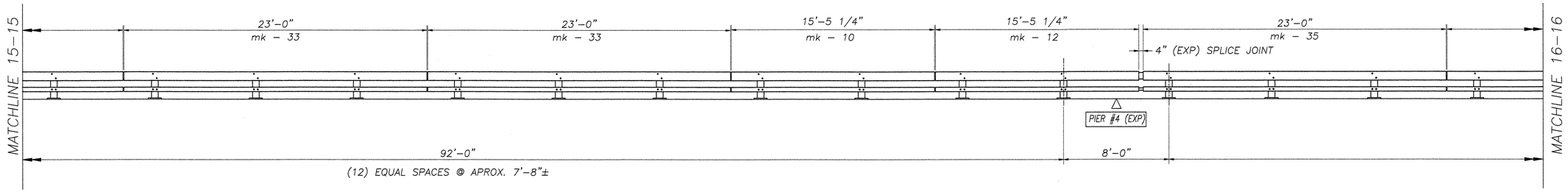
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

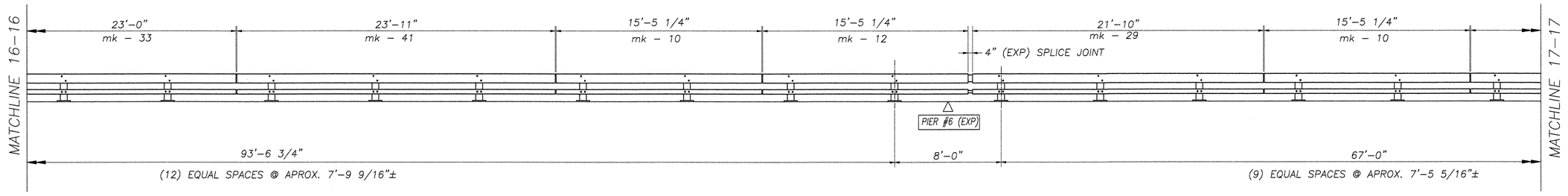
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

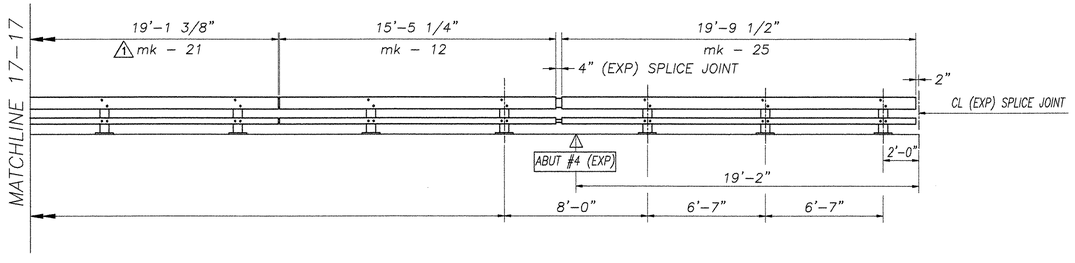
GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 10 of 24









BRIDGE #16N (NORTHBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

PAY LENGTH = 403'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

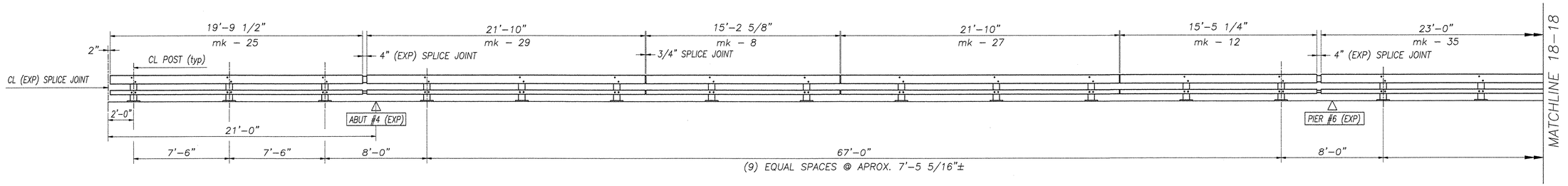
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

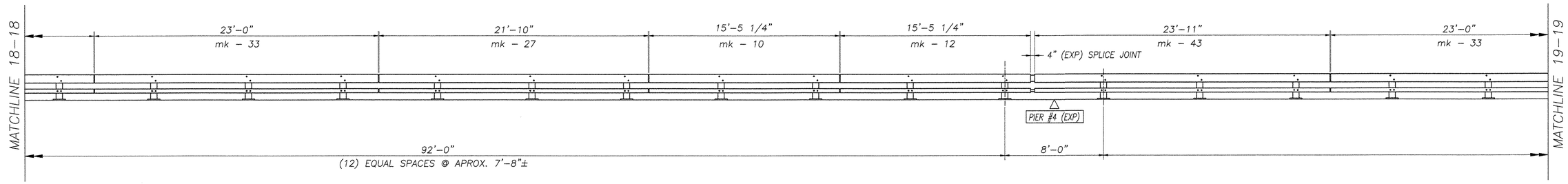
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

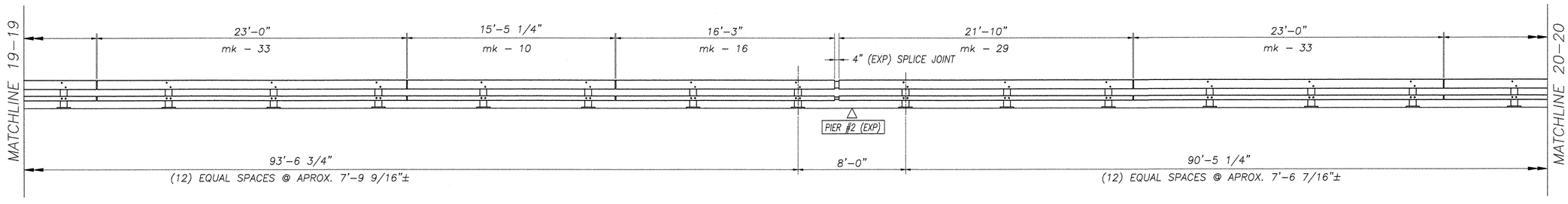
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

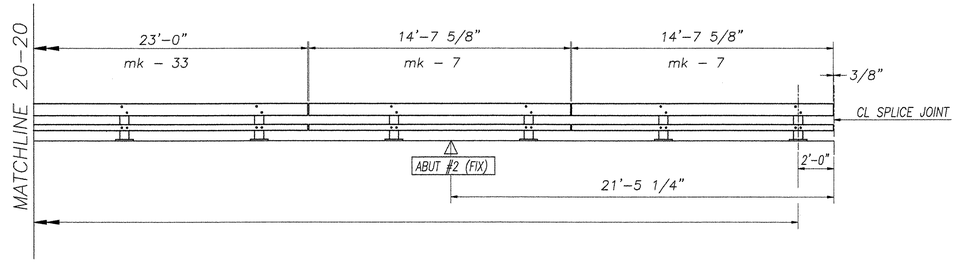
GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
NSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 11 of 24









BRIDGE #16N (NORTHBOUND)

RIGHT ELEVATION – FACING FROM CENTER OF ROADWAY

PAY LENGTH = 394'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

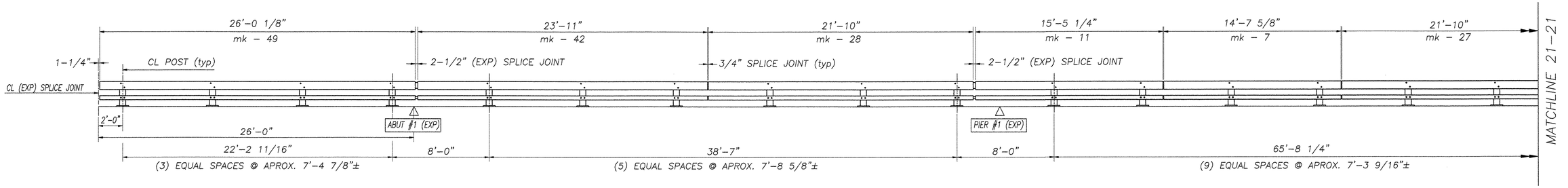
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

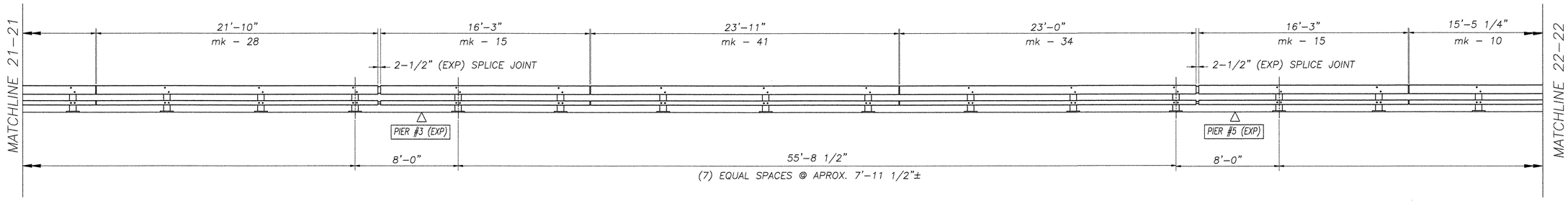
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

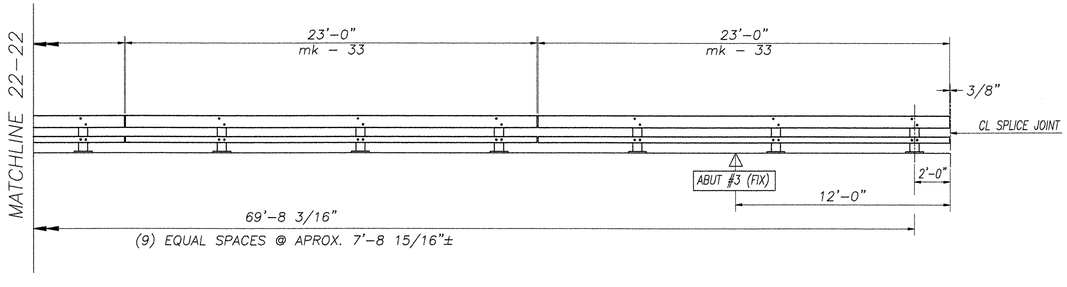
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 12 of 24







BRIDGE #18S (SOUTHBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,880 ft.

PAY LENGTH = 287'-10 5/8" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

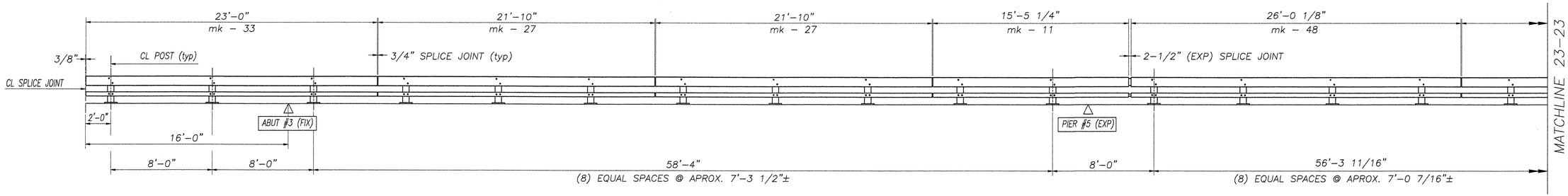
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

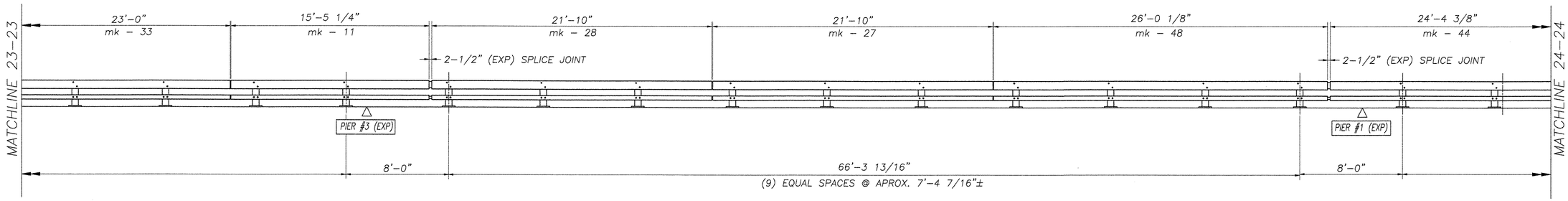
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

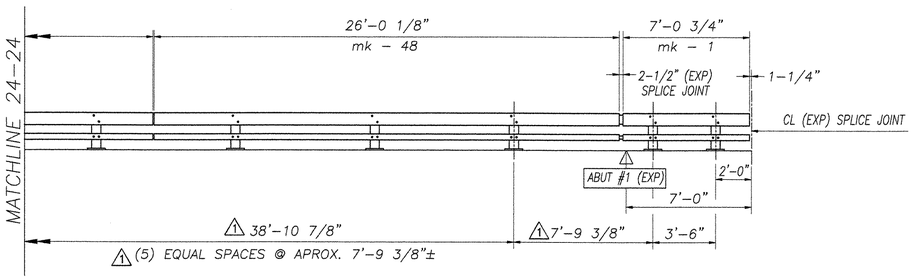
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 13 of 24







BRIDGE #18S (SOUTHBOUND)

RIGHT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,849 ft.

PAY LENGTH = 275'-1 3/4" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

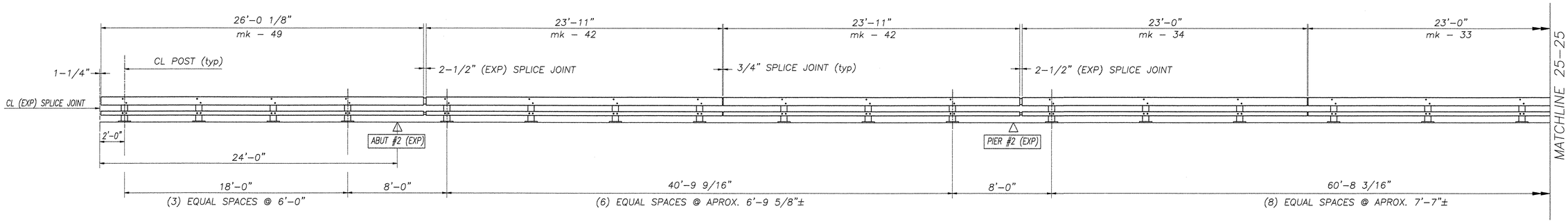
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

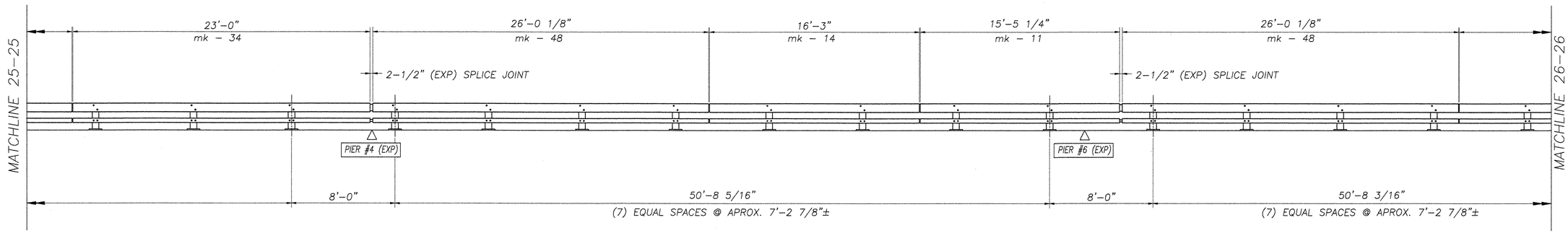
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

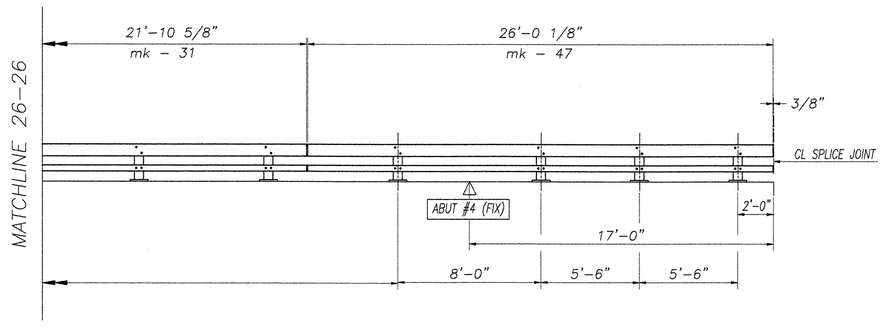
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 14 of 24







BRIDGE #18N (NORTHBOUND)

LEFT ELEVATION - FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,880 ft.

PAY LENGTH = 275'-10 1/4" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

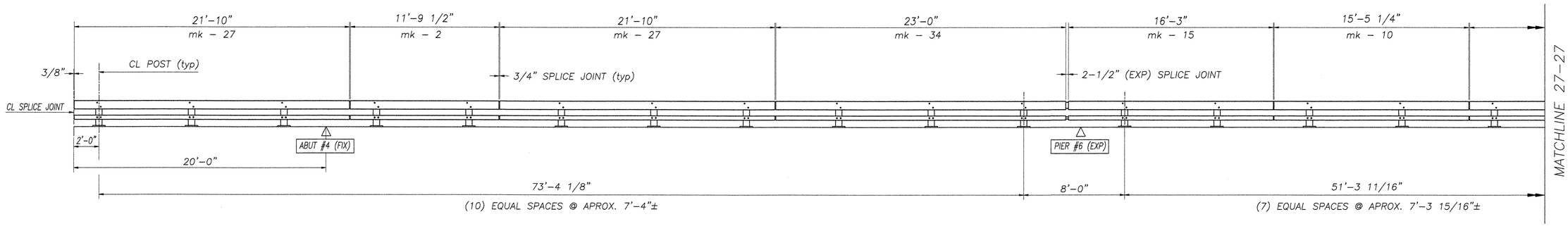
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

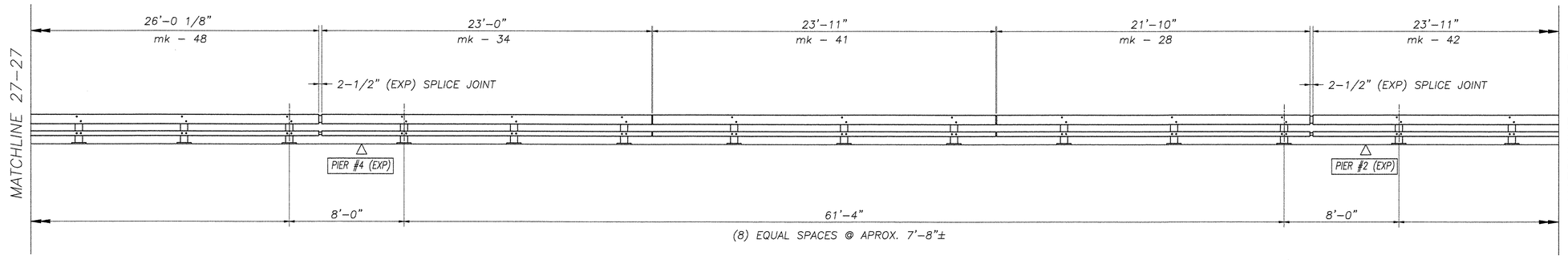
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

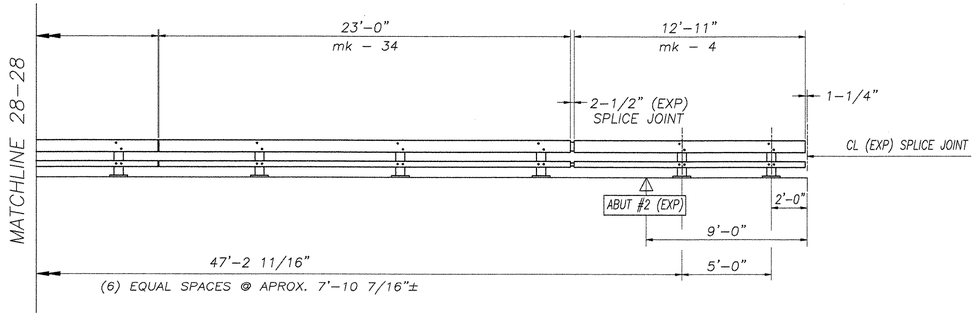
ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 15 of 24







BRIDGE #18N (NORTHBOUND)

RIGHT ELEVATION - FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 2,849 ft.

PAY LENGTH = 266'-2 1/2" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING IS STRAIGHT, NO SHOP CURVING NECESSARY TO FIT BRIDGERAIL TUBES ALONG REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

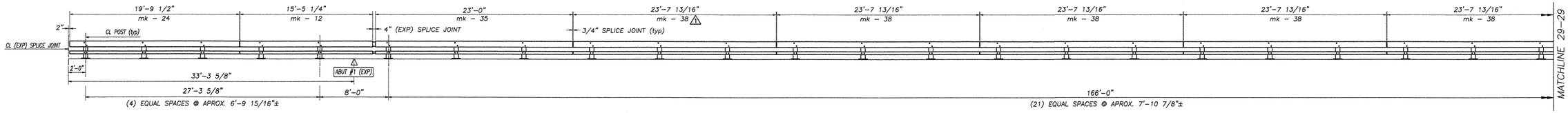
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

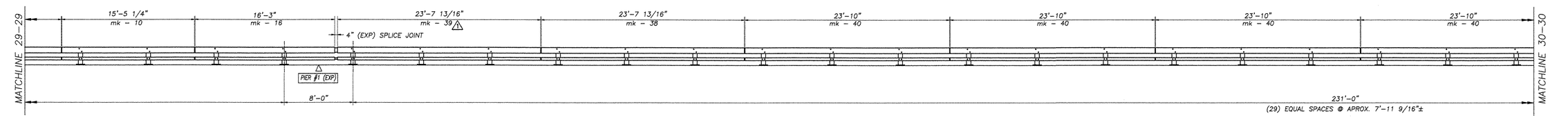
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

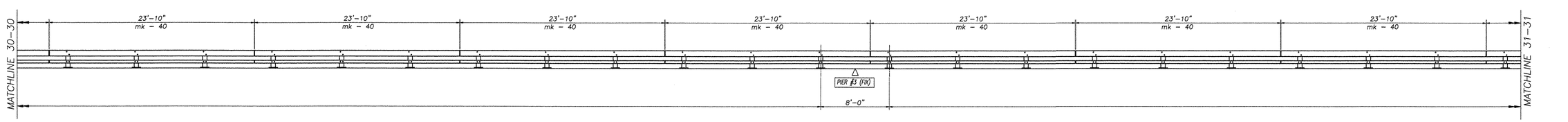
ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

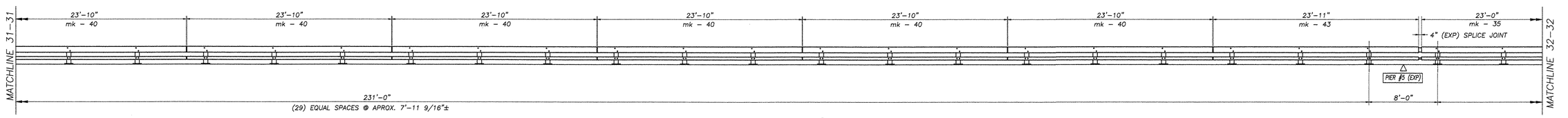
GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

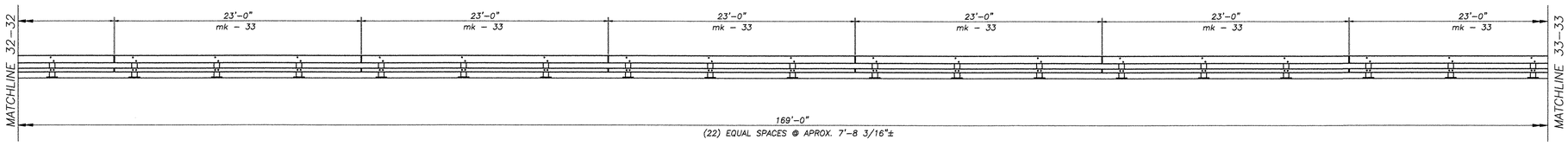
DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 16 of 24

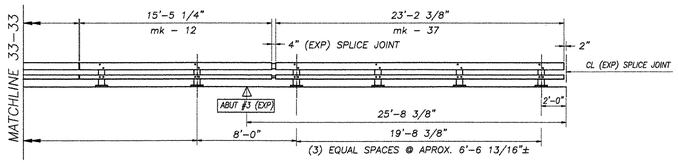












BRIDGE #17S (SOUTHBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

PAY LENGTH = 888'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

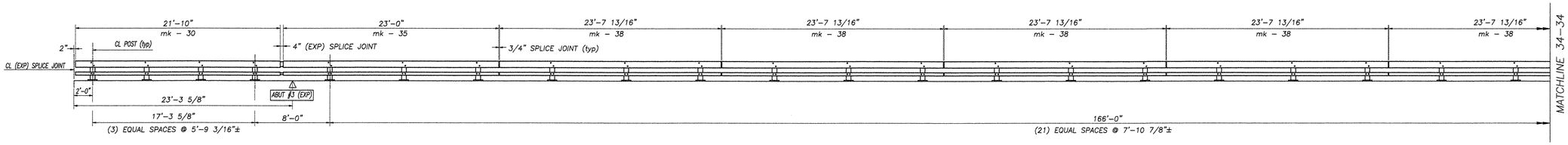
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

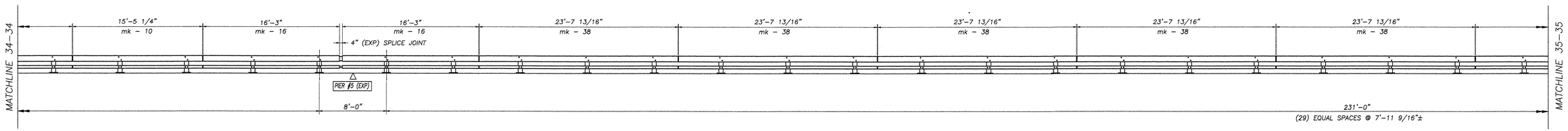
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

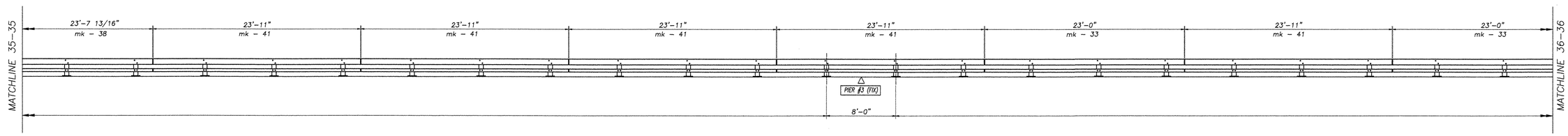
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

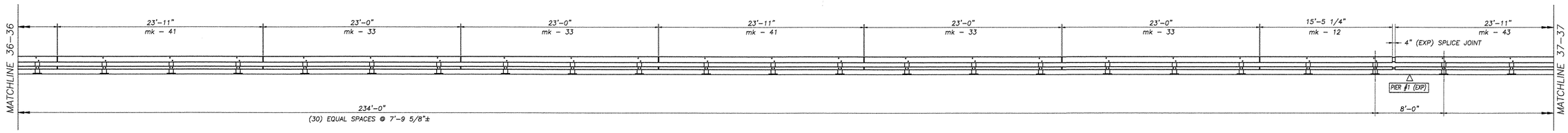
GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

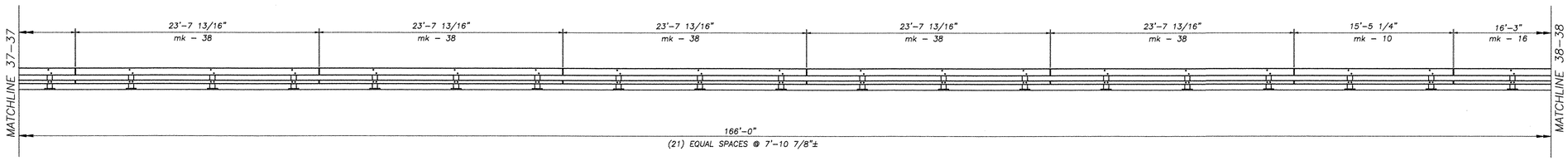
DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 17 of 24

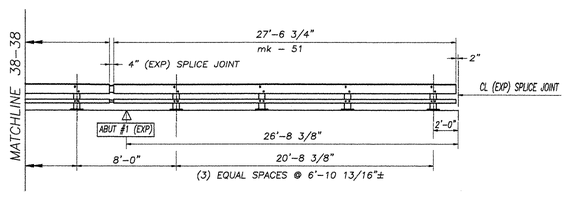












BRIDGE #17S (SOUTHBOUND)

RIGHT ELEVATION - FACING FROM CENTER OF ROADWAY

PAY LENGTH = 879'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

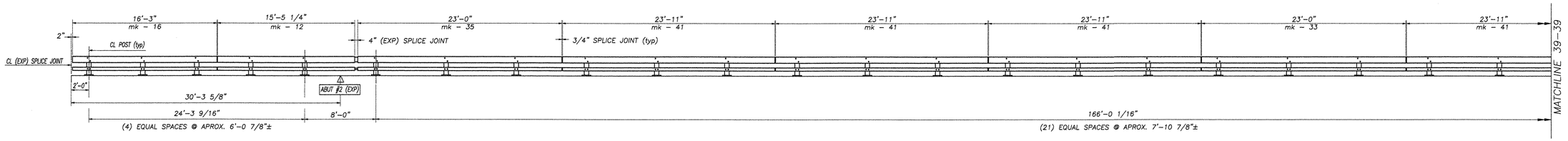
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

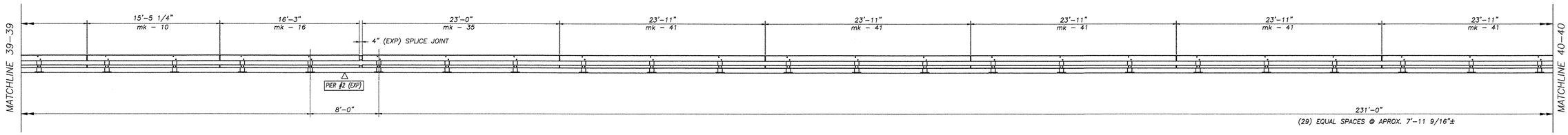
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

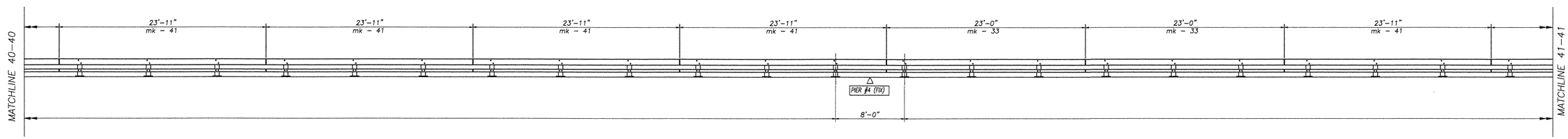
ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

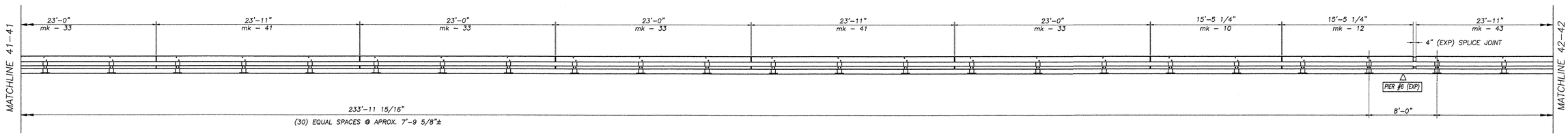
GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

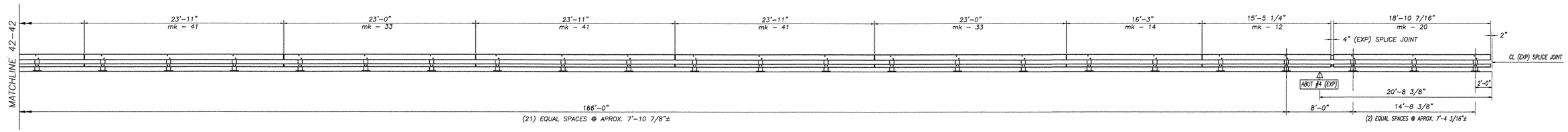
DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 18 of 24











BRIDGE #17N (NORTHBOUND)

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

PAY LENGTH = 880'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

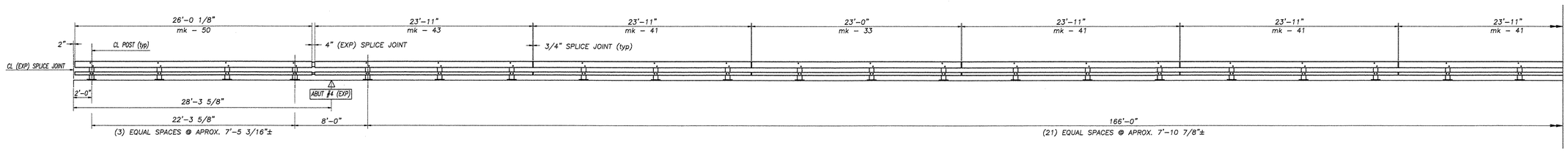
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

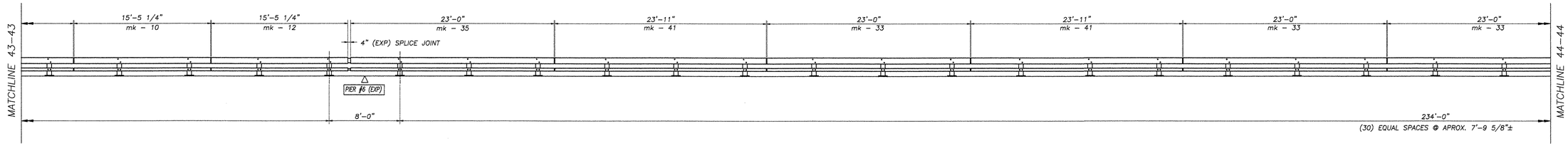
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

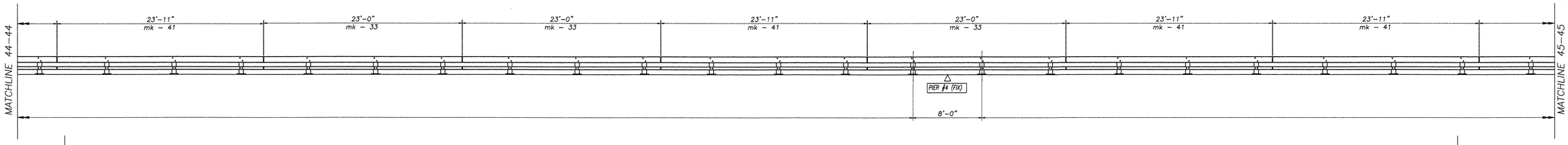
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

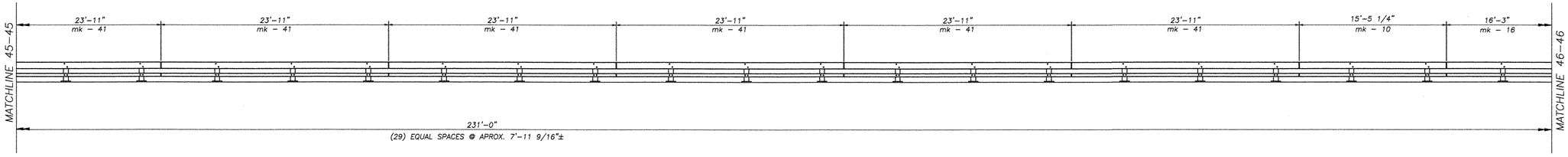
GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

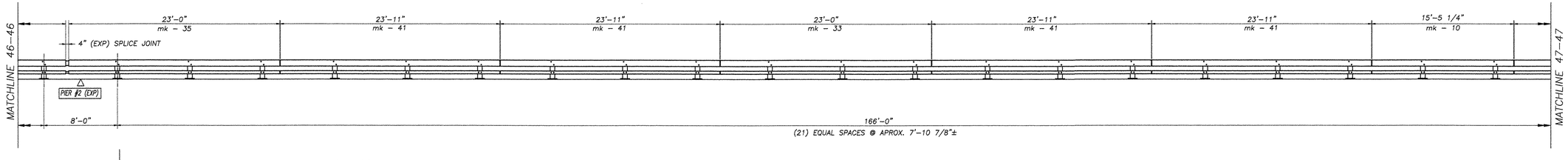
DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 19 of 24

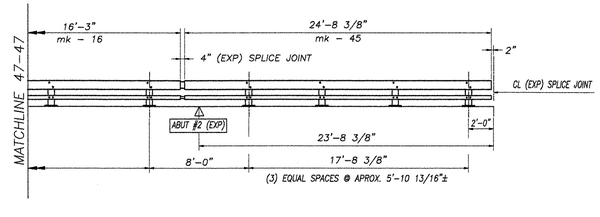












BRIDGE #17N (NORTHBOUND)

RIGHT ELEVATION - FACING FROM CENTER OF ROADWAY

PAY LENGTH = 881'-0" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
2. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

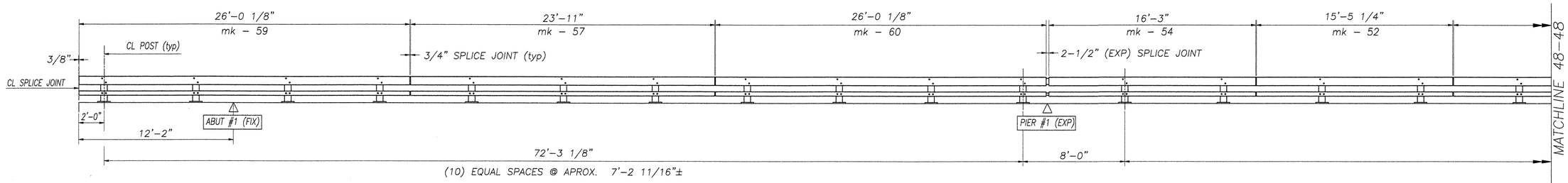
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

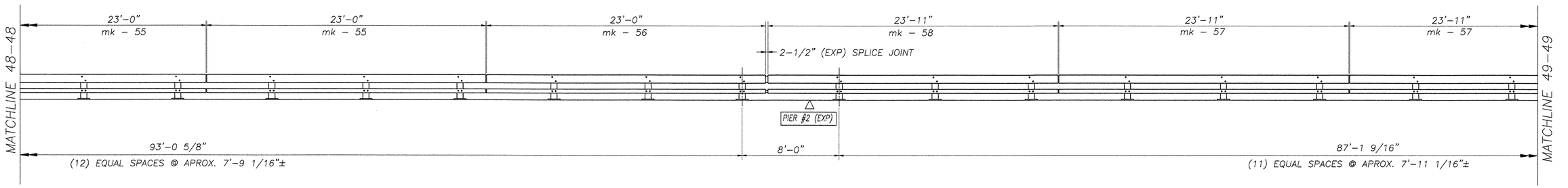
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

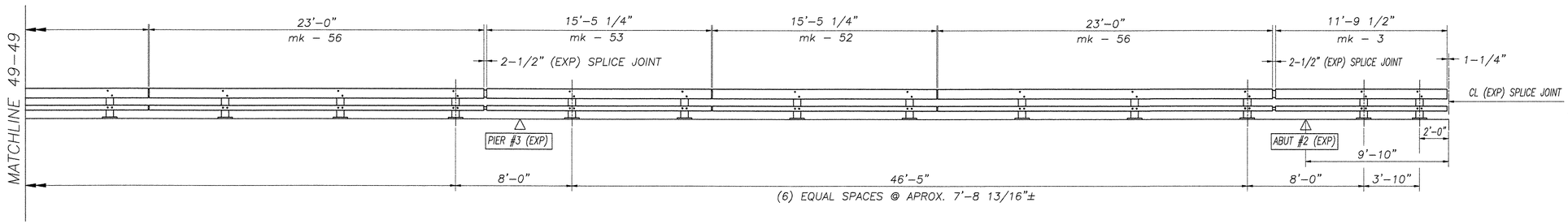
ITEM 525.33 - BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 20 of 24







BRIDGE #8

LEFT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 724 ft.

PAY LENGTH = 338'-8 5/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING SHALL BE SHOP CURVED TO REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

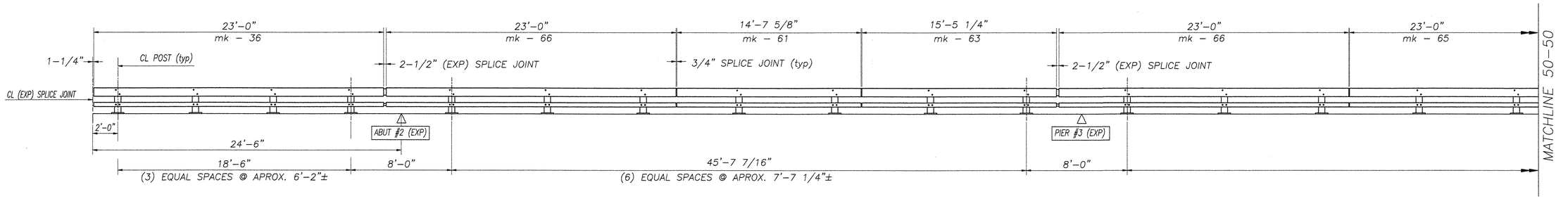
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

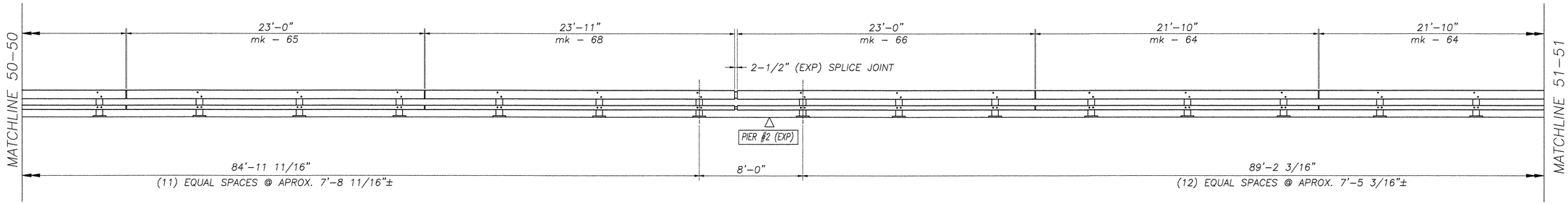
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

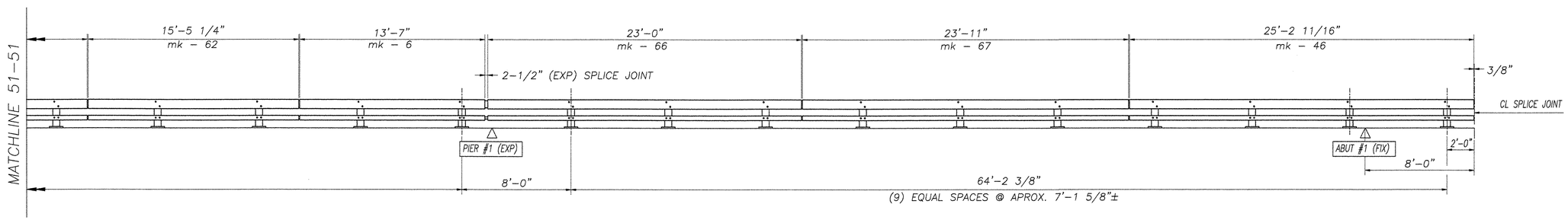
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 21 of 24







BRIDGE #8

RIGHT ELEVATION – FACING FROM CENTER OF ROADWAY

ALL DIMENSIONS SHOWN ARE ALONG CURVE

APROXIMATE RADIUS = 755 ft.

PAY LENGTH = 338'-5 11/16" (THIS SHEET)

TOTAL PAY LIMT ITEM 525.33 (STEEL BRIDGE RAIL, NETC 2-RAIL) = 8665 LF

NOTES:

1. ALL TUBING SHALL BE SHOP CURVED TO REQUIRED RADIUS.
2. ALL DIMENSIONS HAVE BEEN DEVELOPED FROM CONTRACT PLANS ONLY.
3. CONTRACTOR MUST FIELD-VERIFY DIMENSIONS PRIOR TO APPROVAL.

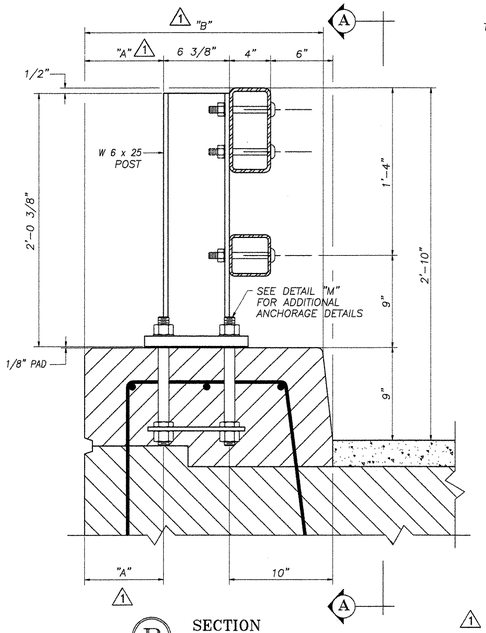
REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

HIGHWAY SAFETY CORP.
GLASTONBURY, CT

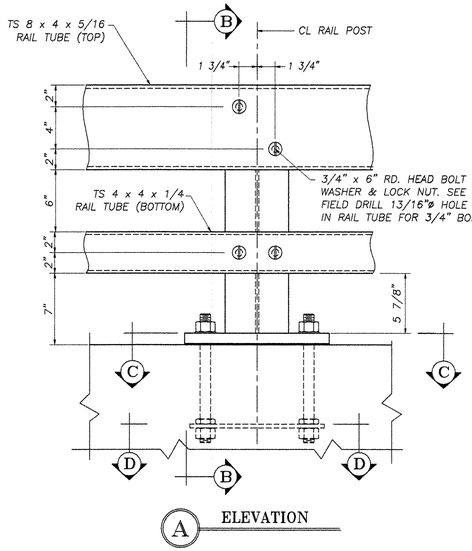
ITEM 525.33 – BRIDGE RAILING NETC 2-RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON & ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE INC.

DRAWN: P. Radice
CHECKED:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 22 of 24

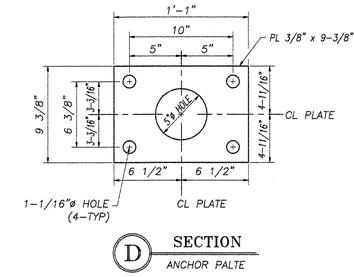


B SECTION
POST & CURB

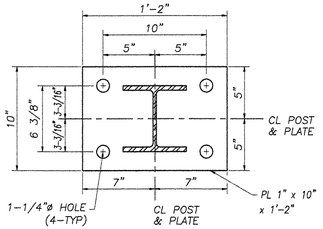


A ELEVATION

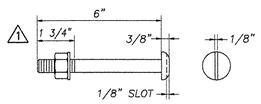
DIMENSION INDEX		
CURB WIDTH	"A"	"B"
1'-11"	6 5/8"	1'-10"
2'-8"	1'-3 5/8"	2'-7"



D SECTION
ANCHOR PALTE

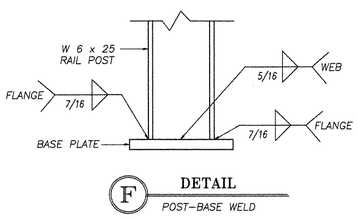


C SECTION
RAIL POST BASE PLATE
SEE DETAIL "F" FOR POST-BASE WELD

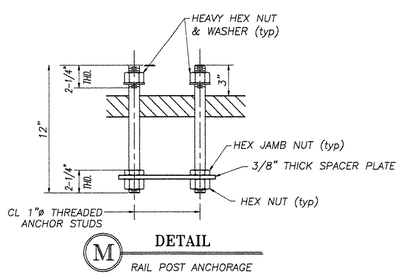


E DETAIL
POST BOLT

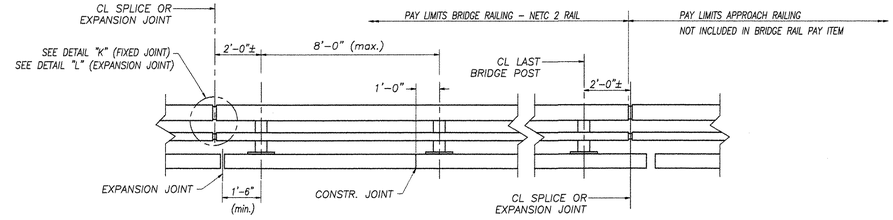
3/4"ø M164 (TYPE I) ROUND HEAD BOLT WITH WASHER & LOCKNUT (typ) FOR ALL RAIL TO POST CONNECTIONS, THRU "FIELD-DRILLED" 13/16"ø HOLES IN RAIL TUBE



F DETAIL
POST-BASE WELD

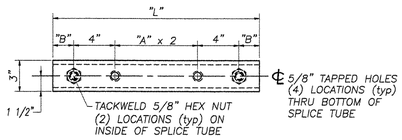


M DETAIL
RAIL POST ANCHORAGE

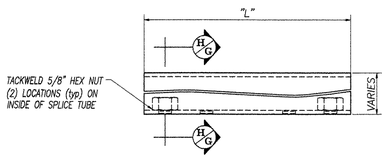


TYPICAL BRIDGE RAILING & TRANSITION ELEVATION

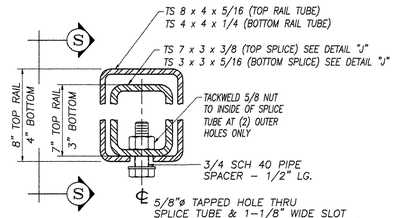
NOTE: SPLICE TUBES & HARDWARE FOR CONNECTION BETWEEN BRIDGE RAIL & BRIDGE APPROACH RAIL ARE INCLUDED IN APPROACH RAIL PAY ITEM. NOT INCLUDED UNDER BRIDGE RAIL ITEM 525.33



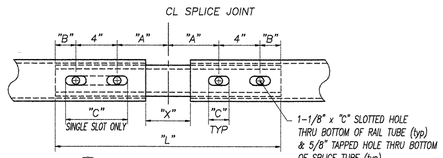
J DETAIL
SPLICE TUBE - BOTTOM VIEW
(SEE CHART FOR DIMENSIONS)



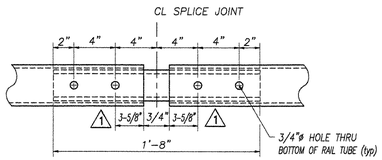
S SECTION
SPLICE TUBE ELEVATION



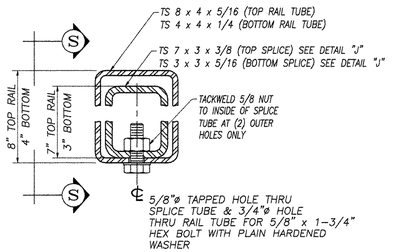
H SECTION
THRU EXPANSION SPLICE JOINT



L DETAIL
EXPANSION JOINT - BOTTOM VIEW
HARDWARE NOT SHOWN FOR CLARITY



K DETAIL
SPLICE JOINT - BOTTOM VIEW
HARDWARE NOT SHOWN FOR CLARITY



G SECTION
THRU FIXED SPLICE JOINT

SPLICE & EXPANSION JOINT TABLE					
"T"	"A"	"B"	"C"	"L"	"X"
SPLICE	4"	2"	--	20"	3/4"
≤4"	4"	2"	2-1/2"	20"	2-1/2"
>4" ≤ 6-1/2"	5-1/2"	2-3/8"	3-1/2"	23-3/4"	4"
~~>6-1/2" ≤ 9"~~	~~6-1/2"~~	~~3-3/8"~~	~~9" *~~	~~27-3/4"~~	~~5"~~
~~>9" ≤ 13"~~	~~8-1/2"~~	~~4-3/8"~~	~~11" *~~	~~33-3/4"~~	~~7"~~

"T" = TOTAL REQUIRED MOVEMENT * = SINGLE SLOT

⚠ GENERAL ERECTION NOTES

1. All work and materials shall conform to the provisions of Section 525 - Railings of the Vermont Standard Specifications for Construction.
2. Tubing & posts shall meet the requirements of Section 732 - Railing materials of the Standard Specifications for Construction.
3. All exposed cut or sheared edges shall be rounded to a 1/16" radius & be free of burrs.
4. Rail posts shall be set normal to grade.
5. Sections of rail bar shall be attached to a minimum of two (2) posts and preferebly to at least four (4) posts.
6. Rail bar expansion joints shall be provided in any rail bay spanning a superstructure expansion joint. Expansion joint width shall be "X" at 45° F and will be adjusted in the field by the engineer.
7. All parts shall be galvanized after fabrication in accordance with AASHTO M111, except that hardware shall meet the requirements of AASHTO M232.
8. Rail posts anchoring nuts shall be tightened to a snug-tight fit and given an additional 1/8 turn.
9. Rail bars shall be attached using 3/4"ø full diameter body head bolts AASHTO M164 (Type-I) inserted through the face of the bar. Holes in post shall be 1/16" larger than the bolt size.
10. Holes in rails for attachment to posts will be field-drilled. Holes shall be coated with an approved zinc-rich paint prior to erection.
11. Radiused rails (if required) will be shop-curved. No field-bending of rail tubes.
12. The drop-weight tear test in section 732 shall not apply to the structure tubing on this standard.
13. The rail posts & base plates shall be tested for impact properties in accordance with ASTM A370 Charpy Impact Testing, using a type A specimen.
14. All welds are to be cleaned prior to galvanizing to insure proper bonding of zinc to welded areas.

MATERIALS

Rail bars.....ASTM A500 GR B or ASTM A501
Rail posts.....ASTM A709 GR 50
All other shapes & plates.....ASTM A709 GR 36
Anchor studs.....ASTM A449
All other bolts [unless noted].....AASHTO M164, TYPE I

Nuts for ASTM A307 bolts & AASHTO M164 bolts shall comply with AASHTO M291. Nuts for anchor studs shall comply with ASTM A563.

washers shall comply with ASTM F436

1/8" pad shall comply with standard specification subsection 731.01 or 731.02 of Vermont Standard Specifications.

REVISIONS		
No.	Remarks	Date
0	Initial submittal	1/26/01
1	FINAL "AS-BUILT"	11/8/01

HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING - NETC 2 RAIL
IM IR 089-1(8)
WINDSOR COUNTY
TOWNS OF HARTFORD, SHARON, ROYALTON
INTERSTATE ROUTE 89

GENERAL CONTRACTOR: MORRILL CONSTRUCTION INC.
SUB CONTRACTOR: F.R. LAFAYETTE. INC.

DRAWN: P. Radice
CHECKER:
DATE: 1/23/01
SCALE: NONE
HSC REFERENCE NO.: 1239
SIZE: D
REVISION: 1
SHEET NO.: 23 of 24

BR #6S (EASTBOUND) LEFT — SHEET 1 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	30	RAIL POST W6x25 WITH BASE PLATE
	30	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	10	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	10	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	30	1/8" THICK BEARING PAD
	120	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	80	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-11	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL (SLOTTED ONE END)
-13	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL (SLOTTED BOTH ENDS)
-15	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" OAL (SLOTTED ONE END)
-18	1	RAIL TUBE (UPPER) 8x4x5/16 18'-4 7/16" OAL
-27	4	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL
-28	3	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL (SLOTTED ONE END)
-11	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL (SLOTTED ONE END)
-13	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL (SLOTTED BOTH ENDS)
-15	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" OAL (SLOTTED ONE END)
-18	1	RAIL TUBE (LOWER) 4x4x1/4 18'-4 7/16" OAL
-27	4	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL
-28	3	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL (SLOTTED ONE END)

BR #6S (EASTBOUND) RIGHT — SHEET 2 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	28	RAIL POST W6x25 WITH BASE PLATE
	28	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	10	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	10	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	28	1/8" THICK BEARING PAD
	112	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	80	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-10	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL
-11	2	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL (SLOTTED ONE END)
-13	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL (SLOTTED BOTH ENDS)
-15	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" OAL (SLOTTED ONE END)
-22	1	RAIL TUBE (UPPER) 8x4x5/16 19'-4 1/16" OAL
-27	2	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL
-28	1	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL (SLOTTED ONE END)
-33	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-34	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL (SLOTTED ONE END)
-10	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL
-11	2	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL (SLOTTED ONE END)
-13	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL (SLOTTED BOTH ENDS)
-15	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" OAL (SLOTTED ONE END)
-22	1	RAIL TUBE (LOWER) 4x4x1/4 19'-4 1/16" OAL
-27	2	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL
-28	1	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL (SLOTTED ONE END)
-33	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-34	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL (SLOTTED ONE END)

BR #6N (WESTBOUND) LEFT — SHEET 3 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	31	RAIL POST W6x25 WITH BASE PLATE
	31	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	10	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	10	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	31	1/8" THICK BEARING PAD
	124	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	80	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-9	1	RAIL TUBE (UPPER) 8x4x5/16 15'-4 3/8" (SLOTTED ONE END)
-10	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL
-13	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED BOTH ENDS)
-27	2	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL
-28	2	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-41	2	RAIL TUBE (UPPER) 8x4x5/16 23'-11" OAL
-42	2	RAIL TUBE (UPPER) 8x4x5/16 23'-11" (SLOTTED ONE END)
-9	1	RAIL TUBE (LOWER) 4x4x1/4 15'-4 3/8" (SLOTTED ONE END)
-10	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL
-13	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED BOTH ENDS)
-27	2	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL
-28	2	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-41	2	RAIL TUBE (LOWER) 4x4x1/4 23'-11" OAL
-42	2	RAIL TUBE (LOWER) 4x4x1/4 23'-11" (SLOTTED ONE END)

BR #6N (WESTBOUND) RIGHT — SHEET 4 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	29	RAIL POST W6x25 WITH BASE PLATE
	29	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	10	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	10	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	29	1/8" THICK BEARING PAD
	116	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	80	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-8	1	RAIL TUBE (UPPER) 8x4x5/16 15'-2 5/8" OAL
-11	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-13	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED BOTH ENDS)
-14	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" OAL
⚠ -18R	1	RAIL TUBE (UPPER) 8x4x5/16 18'-4 7/16" OAL
-28	1	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-33	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-41	1	RAIL TUBE (UPPER) 8x4x5/16 23'-11" OAL
-42	3	RAIL TUBE (UPPER) 8x4x5/16 23'-11" OAL (SLOTTED ONE END)
-8	1	RAIL TUBE (LOWER) 4x4x1/4 15'-2 5/8" OAL
-11	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED ONE END)
-13	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED BOTH ENDS)
-14	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" OAL
⚠ -18R	1	RAIL TUBE (LOWER) 4x4x1/4 15'-4 7/16" OAL
-28	1	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-33	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-41	1	RAIL TUBE (LOWER) 4x4x1/4 23'-11" OAL
-42	5	RAIL TUBE (LOWER) 4x4x1/4 23'-11" OAL (SLOTTED ONE END)

BR #15S (SOUTHBOUND) LEFT — SHEET 5 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	27	RAIL POST W6x25 WITH BASE PLATE
	27	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	9	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	9	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	27	1/8" THICK BEARING PAD
	108	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	72	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-4	1	RAIL TUBE (UPPER) 8x4x5/16 12'-11" (SLOTTED BOTH ENDS)
-10	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL
-11	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-19	1	RAIL TUBE (UPPER) 8x4x5/16 18'-9 11/16" OAL
-28	3	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-33	2	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-34	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
-4	1	RAIL TUBE (LOWER) 4x4x1/4 12'-11" (SLOTTED BOTH ENDS)
-10	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL
-11	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED ONE END)
-19	1	RAIL TUBE (LOWER) 4x4x1/4 18'-9 11/16" OAL
-28	3	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-33	2	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-34	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)

BR #15S (SOUTHBOUND) RIGHT — SHEET 6 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	28	RAIL POST W6x25 WITH BASE PLATE
	28	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	9	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	9	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	28	1/8" THICK BEARING PAD
	112	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	72	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-4	1	RAIL TUBE (UPPER) 8x4x5/16 12'-11" (SLOTTED BOTH ENDS)
-10	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL
-18	1	RAIL TUBE (UPPER) 8x4x5/16 18'-4 7/16" OAL
-21	1	RAIL TUBE (UPPER) 8x4x5/16 19'-1 3/8" OAL
-28	3	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-34	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
41	1	RAIL TUBE (UPPER) 8x4x5/16 23'-11" OAL
-42	1	RAIL TUBE (UPPER) 8x4x5/16 23'-11" (SLOTTED ONE END)
-4	1	RAIL TUBE (LOWER) 4x4x1/4 12'-11" (SLOTTED BOTH ENDS)
-10	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL
-18	1	RAIL TUBE (LOWER) 4x4x1/4 18'-4 7/16" OAL
-21	1	RAIL TUBE (LOWER) 4x4x1/4 19'-1 3/8" OAL
-28	3	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-34	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)
41	1	RAIL TUBE (LOWER) 4x4x1/4 23'-11" OAL
-42	1	RAIL TUBE (LOWER) 4x4x1/4 23'-11" (SLOTTED ONE END)

BR #15N (NORTHBOUND) LEFT — SHEET 7 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	27	RAIL POST W6x25 WITH BASE PLATE
	27	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	9	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	9	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	27	1/8" THICK BEARING PAD
	108	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	72	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-4	1	RAIL TUBE (UPPER) 8x4x5/16 12'-11" (SLOTTED BOTH ENDS)
-10	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL
-11	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-13	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED BOTH ENDS)
-28	3	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-33	2	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-34	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
-4	1	RAIL TUBE (LOWER) 4x4x1/4 12'-11" (SLOTTED BOTH ENDS)
-10	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL
-11	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED ONE END)
-13	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED BOTH ENDS)
-28	3	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-33	2	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-34	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)

BR #15N (NORTHBOUND) RIGHT — SHEET 8 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	27	RAIL POST W6x25 WITH BASE PLATE
	27	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	9	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	9	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	27	1/8" THICK BEARING PAD
	108	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	72	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	24	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-11	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-13	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED BOTH ENDS)
-14	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" OAL
-23	1	RAIL TUBE (UPPER) 8x4x5/16 19'-5 5/16" OAL
-28	3	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-33	2	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-34	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
-11	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED ONE END)
-13	1	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED BOTH ENDS)
-14	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" OAL
-23	1	RAIL TUBE (LOWER) 4x4x1/4 19'-5 5/16" OAL
-28	3	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-33	2	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-34	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)

BR #16S (SOUTHBOUND) LEFT — SHEET 9 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	58	RAIL POST W6x25 WITH BASE PLATE
	58	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	15	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	15	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	4	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	4	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	58	1/8" THICK BEARING PAD
	232	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	152	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	32	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-12	2	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-17	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" (SLOTTED BOTH ENDS)
-26	1	RAIL TUBE (UPPER) 8x4x5/16 19'-11 3/8" OAL
-27	2	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL
-29	1	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-33	6	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-35	2	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
-41	3	RAIL TUBE (UPPER) 8x4x5/16 23'-11" OAL
-43	2	RAIL TUBE (UPPER) 8x4x5/16 23'-11" (SLOTTED ONE END)
-12	2	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED ONE END)
-17	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" (SLOTTED BOTH ENDS)
-26	1	RAIL TUBE (LOWER) 4x4x1/4 19'-11 3/8" OAL
-27	2	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL
-29	1	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-33	6	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-35	2	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)
-41	3	RAIL TUBE (LOWER) 4x4x1/4 23'-11" OAL
-43	2	RAIL TUBE (LOWER) 4x4x1/4 23'-11" (SLOTTED ONE END)

BR #16S (SOUTHBOUND) RIGHT — SHEET 10 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	56	RAIL POST W6x25 WITH BASE PLATE
	58	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	15	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	15	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	4	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	4	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	58	1/8" THICK BEARING PAD
	232	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	152	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	32	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-12	1	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-16	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" (SLOTTED ONE END)
⚠ -17R	1	RAIL TUBE (UPPER) 8x4x5/16 17'-3" (SLOTTED BOTH ENDS)
-27	3	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL
-29	2	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
⚠ -32R	1	RAIL TUBE (UPPER) 8x4x5/16 22'-9 1/8" OAL
-33	5	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-35	2	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
-41	3	RAIL TUBE (UPPER) 8x4x5/16 23'-11" OAL
-43	1	RAIL TUBE (UPPER) 8x4x5/16 23'-11" (SLOTTED ONE END)
-16	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" OAL
⚠ -17R	1	RAIL TUBE (LOWER) 4x4x1/4 17'-3" (SLOTTED BOTH ENDS)
-27	3	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL
-29	2	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
⚠ -32R	1	RAIL TUBE (LOWER) 4x4x1/4 22'-9 1/8" OAL
-33	5	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-35	2	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)
-41	3	RAIL TUBE (LOWER) 4x4x1/4 23'-11" OAL
-43	1	RAIL TUBE (LOWER) 4x4x1/4 23'-11" (SLOTTED ONE END)

BR #16N (NORTHBOUND) LEFT — SHEET 11 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	53	RAIL POST W6x25 WITH BASE PLATE
	53	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	15	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	15	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	4	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	4	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	53	1/8" THICK BEARING PAD
	212	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	152	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	32	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-10	3	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL
-12	3	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-14	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" OAL
-21	1	RAIL TUBE (UPPER) 8x4x5/16 19'-1 3/8" OAL
-25	1	RAIL TUBE (UPPER) 8x4x5/16 19'-9 1/2" (SLOTTED BOTH ENDS)
-29	1	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-33	6	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-35	3	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
-41	1	RAIL TUBE (UPPER) 8x4x5/16 23'-11" OAL
-10	3	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL
-12	3	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED ONE END)
-14	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" OAL
-21	1	RAIL TUBE (LOWER) 4x4x1/4 19'-1 3/8" OAL
-25	1	RAIL TUBE (LOWER) 4x4x1/4 19'-9 1/2" (SLOTTED BOTH ENDS)
-29	1	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-33	6	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-35	3	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)
-41	1	RAIL TUBE (LOWER) 4x4x1/4 23'-11" OAL

BR #16N (NORTHBOUND) RIGHT — SHEET 12 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	52	RAIL POST W6x25 WITH BASE PLATE
	52	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	15	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	15	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	4	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	4	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-11 3/4" OAL)
	52	1/8" THICK BEARING PAD
	208	3/4" DIA x 6" LG. ROUND-SLOTTED HEAD BOLT WITH WASHER & LOCKNUT
	152	5/8" DIA x 1-3/4" HEX HEAD BOLT WITH HARDENED WASHER
	32	3/4" SCH 40 SPACER PIPE x 1/2" LONG
-7	2	RAIL TUBE (UPPER) 8x4x5/16 14'-7 3/8" OAL
-8	1	RAIL TUBE (UPPER) 8x4x5/16 15'-2 5/8" OAL
-10	2	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" OAL
-12	2	RAIL TUBE (UPPER) 8x4x5/16 15'-5 1/4" (SLOTTED ONE END)
-16	1	RAIL TUBE (UPPER) 8x4x5/16 16'-3" (SLOTTED ONE END)
-25	1	RAIL TUBE (UPPER) 8x4x5/16 19'-9 1/2" (SLOTTED BOTH ENDS)
-27	2	RAIL TUBE (UPPER) 8x4x5/16 21'-10" OAL
-29	2	RAIL TUBE (UPPER) 8x4x5/16 21'-10" (SLOTTED ONE END)
-33	5	RAIL TUBE (UPPER) 8x4x5/16 23'-0" OAL
-35	1	RAIL TUBE (UPPER) 8x4x5/16 23'-0" (SLOTTED ONE END)
-43	1	RAIL TUBE (UPPER) 8x4x5/16 23'-11" (SLOTTED ONE END)
-7	2	RAIL TUBE (LOWER) 4x4x1/4 14'-7 3/8" OAL
-8	1	RAIL TUBE (LOWER) 4x4x1/4 15'-2 5/8" OAL
-10	2	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" OAL
-12	2	RAIL TUBE (LOWER) 4x4x1/4 15'-5 1/4" (SLOTTED ONE END)
-16	1	RAIL TUBE (LOWER) 4x4x1/4 16'-3" (SLOTTED ONE END)
-25	1	RAIL TUBE (LOWER) 4x4x1/4 19'-9 1/2" (SLOTTED BOTH ENDS)
-27	2	RAIL TUBE (LOWER) 4x4x1/4 21'-10" OAL
-29	2	RAIL TUBE (LOWER) 4x4x1/4 21'-10" (SLOTTED ONE END)
-33	5	RAIL TUBE (LOWER) 4x4x1/4 23'-0" OAL
-35	1	RAIL TUBE (LOWER) 4x4x1/4 23'-0" (SLOTTED ONE END)
-43	1	RAIL TUBE (LOWER) 4x4x1/4 23'-11" (SLOTTED ONE END)

BR #18S (SOUTHBOUND) LEFT — SHEET 13 of 24

BILL OF MATERIAL

Mk.	Qty.	Description
	38	RAIL POST W6x25 WITH BASE PLATE
	38	ANCHORAGE ASSEMBLY WITH PLATE (4) ANCHOR STUDS & HARDWARE *
	13	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-8" OAL)
	13	LOWER RAIL SPLICE TUBE 3x3x3/8 (1'-8" OAL)
	0	UPPER RAIL SPLICE TUBE 7x3x3/8 (1'-11 3/4" OAL)
	0	LOWER RAIL SPLICE TU