

INDEX OF SHEETS	
SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS

RECORD PLANS AND MATERIAL SUPPLIERS
 CONTRACT DATED: NOV. 12, 1985. CONTRACTOR: EARTH CONST. GROTON, VT.
 CONSTRUCTION BEGAN: APR. 2, 1986
 CONSTRUCTION SUSPENDED: JAN. 23, 1987
 CONSTRUCTION RESUMED: APR. 3, 1987
 CONSTRUCTION COMPLETED: SEPT. 21, 1987
 RECORD PLANS: ROBERT E. SMITH

BITUMINOUS CONCRETE PAVEMENT: F.W. WHITCOMB CONST. CORP.,
 REINFORCING STEEL: K. ROSS BLDG. SUPPLY, CHARLESTON, N.H.
 CO. INC. LEBANON, N.H.

SEED, FERTILIZER, LIME: OLD FOX CHEMICAL, INC. LYNDONVILLE, VT.

EARTH BORROW: TRI-STATE PIT HARTLAND VT.

CONC. (CLASS AA, A, B): MILLER READY MIX, W. LEBANON, N.H.

CRUSHED STONE SHOULDERS: F.W. WHITCOMB WALPOLE, N.H.

WATER REPELLENT & JOINT SEALER: SONNEBORN BLDG. PRODUCTS
 MESPETH, N.Y.

ACCOMP, 8" CARRIER PIPE: LANE METAL PRODUCTS BALLSTON
 SPA, N.Y.

EPOXY MORTAR COMPOUND: DURAL INTERNATIONAL CORP.
 DEER PARK, N.Y.

BRIDGE RAILING (3 RAIL ALUM.): BRIDGE RAILING (GALVANIZED BOX BEAM)

APR RAIL (2 RAIL ALUM.): L.B. FOSTER PITTSBURG, PA.

GUARD RAIL (3 CABLE): ASSEMBLY SPECIALTY PRODUCTS, INC. CLEVELAND, OHIO

GUARD RAIL (ST. BEAM W/ST. POST TYPE II): GUARD RAIL (ST. BEAM W/WOOD
 POST, TYPE II), ANCHORS FOR ST. BEAM: HIGHWAY SAFETY DESIGN

& FABRICATIONS CORP., GLASTENBURY, CONN.

TRAFFIC SIGNS & POSTS: FRANKLIN STEEL, FRANKLIN PENN.

STREET LIGHTING: ENGINEER ASSOC., BURLINGTON, VT.

TREATED TIMBER CURB: PORTEC, NO. BILLERICA MASS.

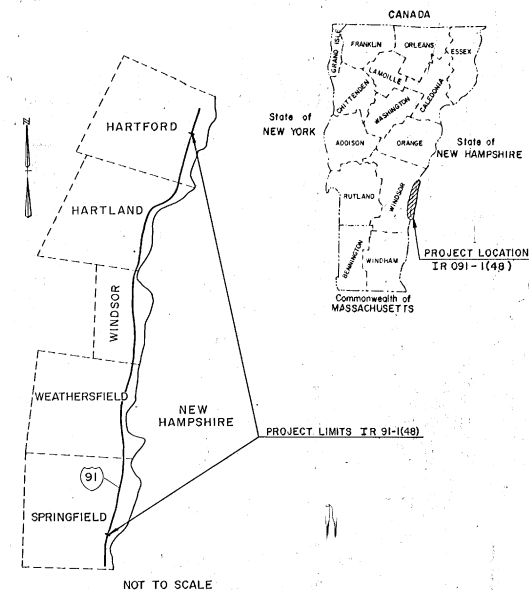
STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT SPRINGFIELD-HARTFORD WINDSOR COUNTY

BEGINNING AT A POINT ON INTERSTATE 91 AT THE EXISTING MILE MARK 41.90+
 AND PROCEEDING NORTHERLY ALONG INTERSTATE 91 FOR 28.10+ MILES
 TO EXISTING MILE MARK 70.00+ TERMINATING AT THE SOUTHERN
 END OF BRIDGE NO. 435 & 43N (I-91 OVER U.S. ROUTE 5)

WORK ON THIS PROJECT WILL INCLUDE GUARD RAIL REPLACEMENT, DRAINAGE UPGRADING,
 REMOVAL AND/OR REPLACEMENT OF TRAFFIC CONTROL DEVICES, SLOPE FLATTENING, TRAFFIC
 BARRIER REMOVAL, BRIDGE PYLON REMOVAL AND BRIDGE RAILING REPLACEMENT
 LENGTH OF PROJECT = 28.10+ MILES



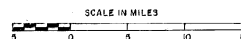
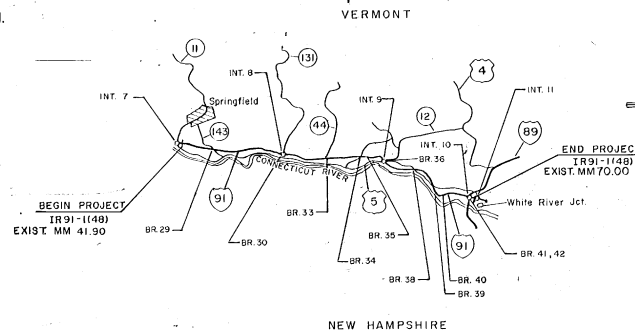
NOT TO SCALE

ABBREVIATIONS

S.B.G.R.	STEEL BEAM GUARDRAIL
C.G.R.	CABLE GUARDRAIL
B.C.T.	BREAKAWAY CABLE TERMINAL
S.B.	SOUTHBOUND
N.B.	NORTHBOUND
G.R.	GUARDRAIL
P.C.	POINT OF CURVATURE
P.T.	POINT OF TANGENCY
L.F.	LINEAR FEET
D.I.	DROP INLET
P.O.T.	POINT ON TANGENT
P.O.C.	POINT ON CURVE
L.S.P.	LIGHT STEEL POSTS
W.P.	WOOD POSTS
B.B.G.R.	BOX BEAM GUARDRAIL

CONVENTIONAL SIGNS

COUNTY LINE	---	STEEL BEAM GUARDRAIL w/ STEEL POSTS	=====
TOWN LINE	---	STEEL BEAM GUARDRAIL w/ WOOD POSTS	=====
LIMITS OF ACCESS	---	BOX BEAM w/ STEEL POSTS	=====
POINT OF ACCESS	X	3 CABLE GUARDRAIL	=====
FENCE LINE	---		
STONE WALL	=====		
TRAVELED RD.	=====		
RAILROAD	=====		
SURVEY LINE	---		
CULVERT	---		
POWER POLE	---		
TELEPHONE POLE	---		
TREES	---		
CONTROL OF ACCESS	---		
PROPERTY LINE	---		
ROW TAKING LINE	---		
SLOPE RIGHTS	---		
TOP OF CUT	---		
TOE OF SLOPE	---		



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 Highway and Bridge Construction dated March, 1978, as approved by the Federal Highway Administration on October 27, 1978 for use on this project, including all subsequent revisions and such revised specifications and special provisions as are incorporated in these plans.

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD	
APPROVED: <i>Robert E. Smith</i>	DATE: 8-5-85
CHIEF ENGINEER	
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED: _____	DATE: _____
DIVISION ADMINISTRATOR	
SAFETY PROJECT	
SPRINGFIELD-HARTFORD NR 91-1(48)	
SHEET 1 OF SHEETS	

6.

SHEET NO.	DESCRIPTION	DATE	SHEET NO.	DESCRIPTION	DATE	SHEET NO.	DESCRIPTION	DATE
1	TITLE SHEET		103-108	STRUCTURE PLANS		167	E-25 TYPE 'C' TUBULAR SUPPORT	6-17-81R
2	INDEX OF SHEETS		119	BLANK		168	E-26 TYPE 'F' SLIP BASE	7-28-81
3,3A	SUMMARY OF QUANTITIES		120-121	MINNESOTA BULLNOSE GUARDRAIL TREATMENT @ TWIN BRIDGES		169	E-27 SIGN PLACEMENT - INTERSTATE	1-24-83R
4	DRAINAGE TABLE		122	CROSS SECTIONS - SIGN POSTS		170	E-29 SIGN PLACEMENT - OTHER	8-25-81R
5	BLANK		123-132	CROSS SECTIONS @SLOPE FLATTENING, U-TURNS & BRIDGE PIERS		171	BLANK	
6-10	GUARDRAIL TABLES		133-138	BLANK		172	E-30 DELINEATORS & MILEPOSTS	2-23-84R
11	GRANITE SLOPE REMOVAL @ RAMP GORES					173	E-31 MILE MARKERS	8-12-81R
12	U-TURN/SLOPE FLATTENING TABLES					174	E-32 DELINEATORS ON BRIDGE RAIL	1-10-74
13	TRAFFIC ITEM SUMMARY SHEET		139	B-5 EMBANKMENT BENCHING	12-6-71	175	E-39 STREET LIGHTING	6-17-85R
14-16	GUARDRAIL DETAILS		140	B-17 U-TURN GRADING	12-16-80R	176	E-50 PAVEMENT MARKING	3-16-82R
17	BLANK							
18	MISCELLANEOUS DETAILS		141	C-1 TREATED TIMBER CURB	12-16-80R	177	G-1 GUARD RAIL - STEEL BEAM W/ STEEL POST	12-21-84R
19	BLANK		142	D-3 TREATED GUTTERS	4-27-73R	178	G-1B GUARD RAIL - BOX BEAM W/ STEEL POST	12-21-84R
20-22	MAINTENANCE OF TRAFFIC		143	D-4 METAL END SECTIONS WATERFALL TREATMENT	7-24-73R	179	G-1D GUARD RAIL - STEEL BEAM	12-21-84R
	TRAFFIC ITEM SHEETS		144	D-6 REINFORCED CONC. DROP INLET WITH GRATE	4-4-73R	180	G-6 GUARD RAIL - 3 CABLE W/LT STEEL POSTS	6-11-84R
23,24,24A	A) GENERAL NOTES & DETAILS		145	D-10 CONCRETE END SECTIONS TYPE 'B' GRATE IFRAME	11-14-72R	181	G-8A GUARD RAIL - 2 RAIL ALUMINUM / STEEL BEAM	7-1-78R
25-30	B) SIGN PANEL DETAILS							
31-32	BLANK		146	E-2 CONSTRUCTION SIGNS	3-4-81R	182	G-9 ALUMINUM APPROACH RAIL	12-19-80R
33-60	MAINLINE PLAN SHEETS		147	E-6 CONSTRUCTION SIGNS	4-1-80R	183	BLANK	
61	BLANK		148	E-7A BREAKAWAY BARRIER	1-3-85R	184	G-14 B.C.T. FOR WOOD POSTS	12-21-84R
62-71	MAINLINE SIGN TABLES		149	E-8 CONSTRUCTION SIGN LAYOUT	6-15-83R	185	G-15 B.C.T. FOR STEEL POSTS	12-21-84R
72	BLANK		150	BLANK		186	G-16 TERMINAL CONNECTOR - STEEL BEAM	11-25-80R
73-80	INTERCHANGE 8 PLAN SHEETS & SIGN TABLES		151	E-11 INTERSTATE ROUTE MARKERS	5-9-74R	187	BLANK	
			152	E-12 US ROUTE MARKERS	12-3-82R	188	T-1 TEMPORARY EROSION CONTROL DETAILS	12-7-78R
81-88	INTERCHANGE 9 PLAN SHEETS & SIGN TABLES		153	E-13 STATE ROUTE MARKERS	12-2-82R	189	T-2 TEMPORARY EROSION CONTROL DETAILS	7-5-72
89	BLANK		154	E-14 GUIDE SIGNS	3-3-83	190	SCB-DI-75 DETAILS OF W BEAM BRIDGES	9-14-81R
90-96	INTERCHANGE 10 PLAN SHEETS & SIGN TABLES		155	E-18B GENERAL SERVICE SIGNS	3-3-83R	191,192	SB-DI-71(112) ALUMINUM BRIDGE RAILING DETAILS	7-1-77R
			156	E-15 REGULATORY SIGNS	7-2-84R			
			157	E-18A REGULATORY SIGNS	7-18-84			
			158	E-15B REGULATORY SIGNS	12-27-84R	193	SB-D4A-B2 GALVANIZED BOX BEAM BRIDGE RAILING	12-13-84R
			159	E-15C REGULATORY SIGNS	7-10-84			
97	BLANK		160	E-19 WARNING SIGNS	4-10-85R			
98-99	LIGHTING PLANS		161	E-19A WARNING SIGNS	10-3-84			
100	BLANK		162	E-19B WARNING SIGNS	2-19-85R			
101	MILE MARKER LOCATION TABLE							
102	BLANK							
			163	E-23 GUIDE SIGN ASSEMBLIES	2-10-83R			
			164	E-24 TYPE 'B' BREAKAWAY	5-29-79R			
			165	E-24A TYPE 'A' FLANGED CHANNEL	1-8-81R			
			166	E-24B TEE BAR MOUNTING	4-28-78			

IN CHARGE OF :
DESIGNED BY :
CHECKED BY :

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD — HARTFORD
IR 91 — 1 (48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE DATE SHEET
2 OF



APPROXIMATE SUMMARY OF QUANTITIES

EROSION CONTROL		R. O. W.	# BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.
				20	20	EA	REMOVING SMALL TREES (EST.)	201P1
				100	100	S.F.	REMOVAL OF EXIST'G PAVT MARKING	201P2
				20	20	EA	PARTIAL REMOVAL OF STRUCTURE	201P3
				124,438	124,438	EA	REMOVAL LONGEND OF EXISTING QUADRAIL	201P4
				6,143	6,143	L.F.	REMOVAL OF EXIST'G BRIDGE RAILING	201P5
				880	880	L.F.	REMOVAL OF EXIST'G GRANITE CURB	201P6
				5,048	5,048	CY	COMMON EXCAVATION	201P7
				74,710	74,710	CY	EARTH BORROW	201P8
				151	151	CY	TRENCH EXCAVATION OF EARTH	201P9
				32	32	CY	TRENCH EXCAVATION OF ROCK	201P10
				20	20	CY	GRANULAR BACKFILL FOR STRUCTURES	201P11
				1,154	1,154	CY	SUBBASE OF CRUSHED GRAVEL	201P12
				10	10	CY	SUBBASE OF CRUSHED GRAVEL (EST.)	201P13
				100	100	CY	SOLID ROCK ELONG. (EST.)	201P14
				18,123	18,123	EA	CRUSHED STONE SHOULDER	201P15
				131	131	TON	BITUMINOUS CONC. PAVT. TYPE III	201P16
				10	10	CY	CONCRETE, CLASS AA (EST.)	201P17
				42	42	CY	CONCRETE, CLASS A	201P18
				3	3	CY	CONCRETE, CLASS B	201P19
				3,440	3,441	LB	REINFORCING STEEL	201P20
				20	20	QAL	WATER REPELLENT	201P21
				44	44	L.F.	12" ACCOMP. T. O. 004"	201P22
				204	204	L.F.	18" ACCOMP. T. O. 019"	201P23
				4	4	L.F.	30" ACCOMP. T. O. 074"	201P24
				0	0	L.F.	30" ACCOMP. T. O. 074"	201P25
				0	0	L.F.	18" R.C.P. CLASS III	201P26
				32	32	L.F.	24" R.C.P. CLASS III	201P27
				0	0	L.F.	30" R.C.P. CLASS III	201P28
				8	8	L.F.	30" R.C.P. CLASS III	201P29
				2	2	EA	18" METAL END SECTION, T. O. 004"	201P30
				2	2	EA	18" METAL END SECTION, T. O. 004"	201P31
				1	1	EA	30" METAL END SECTION, T. O. 074"	201P32
				0	0	EA	18" R.C.P. END SECTION, CLASS III	201P33
				2	2	EA	24" R.C.P. END SECTION, CLASS III	201P34
				1	1	EA	30" R.C.P. END SECTION, CLASS III	201P35
				1	1	EA	30" R.C.P. END SECTION, CLASS III	201P36
				50	50	L.F.	RELAYING PIPE CULVERT, EXPOSED	201P37
				4	4	EA	CHANGING ELEV. OF DITCH OR MH'S	201P38
				4	4	EA	REPLACING CATCH BASIN TOPS	201P39
				3	3	EA	UNDRER EXIST'G DRAIN INLETS (EST.)	201P40
				1	1	EA	CAST CONCRETE W/STEAM TYPE A	201P41
				100	100	L.F.	WOODGRAN CARRIER PIPE (EST.)	201P42
				0	0	EA	CAST CONCRETE W/STEAM TYPE A	201P43
				1	1	EA	CAST CONCRETE W/STEAM TYPE A	201P44
				0	0	EA	CAST CONCRETE W/STEAM TYPE A	201P45
				13	13	QAL	JOINT SEALER POLYURETHANE	201P46
				75	75	GAL	EPOXY MORTAR COMPOUND (EST.)	201P47
				100	100	L.F.	TREATED TRENCH CURB (EST.)	201P48
				270	270	EA	BRIDGE RAIL - 3" GAL. ALUMINUM	201P49
				6,439	6,439	L.F.	BRIDGE RAIL - GALVANIZED BOX BEAM	201P50
				432	432	L.F.	APPR. RAILING (2" GAL. ALUMINUM)	201P51
				1,070	1,070	L.F.	3" X 4" CABLE W/ LIGHT STEEL POSTS	201P52
				13,763.6	13,763.6	L.F.	GR. SBGR. W/ STEEL POSTS, TYPE II	201P53
				13,049	13,049	L.F.	GR. SBGR. W/ WOOD POSTS, TYPE II	201P54
				82.5	82.5	L.F.	REMOVAL I - RESETTling QUADRAIL	201P55
				32	32	EA	ANCH FOR 3" SBGR. W/ LIGHT STEEL OR WOOD POSTS	201P56
				756	756	EA	ANCH FOR SBGR. W/ STEEL, LIGHT STEEL OR WOOD POSTS	201P57
				3	3	EA	BCT FOR GR. SBGR. W/ WOOD POSTS, TYPE II	201P58
				139	139	EA	BCT FOR 3" SBGR. W/ STEEL POSTS	201P59
				32	32	EA	GR. APPR. SECTION, TYPE I	201P60
				24	24	EA	GR. APPR. SECTION, TYPE II	201P61
				5000	5000	L.F.	ADJUSTING HEIGHT OF EXIST. GR. (EST.)	201P62
				1500	1500	HO	UNIFORMED TRAFFIC OFFICERS	201P63
				1	1	LS	FLAG PERSONS	201P64
				3000	3000	HO	FIELD OFFICE - ENGINEERS	201P65
				1	1	LS	EMPLOYEE TRAINERSHIP (3 TRAINEES)	201P66
				1	1	LS	MOBILIZATION	201P67
				1	1	LS	TRAFFIC CONTROL	201P68
				100	100	L.F.	4" YELLOW LINES (EST.)	201P69
				570	570	EA	PAINTING CUBES	201P70
				2	2	EA	ARROW MARKINGS (EST.)	201P71
				2	2	EA	HANDICAP PARKING SYMBOL	201P72
				2,730	2,730	L.F.	4" WHITE LINES	201P73
				10,730	10,730	L.F.	4" WHITE LINES (EST.)	201P74
				82.5	82.5	L.F.	RESTORATION OF EXISTING G.R. (Est.)	201P75
				200	200	LB	SEED	201P76
				1,500	1,500	LB	FERTILIZER	201P77
				1	1	TON	AGRICULTURAL LIMESTONE	201P78
				1	1	TON	HAY MULCH	201P79
				900	900	CY	TOPSOIL	201P80
				150	150	S.Y.	EROSION MATTING (EST.)	201P81
				2,371	2,371	S.F.	TRAFFIC SIGNS, TYPE A	201P82
				0,237	0,237	S.F.	TRAFFIC SIGNS, TYPE B	201P83
				10,789	10,789	LB	TRAFFIC SIGN POSTS, TYPE A	201P84
				4,109	4,109	LB	TRAFFIC SIGN POSTS, TYPE B	201P85
				3,384	3,384	LB	TRAFFIC SIGN POSTS, TYPE C	201P86
				4	4	EA	FOUNDATION TYPE B 6" DIA	201P87
				5	5	EA	FOUNDING STOPS	201P88
				4	4	EA	SETTING SALVAGED POSTS	201P89
				180	180	S.F.	ERECTING SALVAGED POSTS, TYPE A	201P90
				1,744	1,744	EA	DELINATORS	201P91
200								
1500								
7								
900								
150								

QUANTITY SHEET

QUANTITIES		UNIT	ITEMS
			REMOVAL / DISPOSAL OF EXISTING GR - ITEM 203.40
186	60	LF	MAINLINE GR QUANTITY SHT
5890		LF	SIDELINE GR QUANTITY SHT
164,498		LF	TOTAL
			COMMON EXCAVATION - ITEM 203.15
448		CY	U-TURN SLOPE FLATTENING QUANTITY SHT
120		CY	GRANITE SLOPE CURB REMOVAL @ CAMP SITES
308		CY	TOTAL
			CRUSHED STONE SHOULDERS - ITEM 402.15
17,823		CY	MAINLINE GR QUANTITY SHT
932		CY	SIDELINE GR QUANTITY SHT
8		CY	GRANITE SLOPE CURB REMOVAL SHT
18,513		CY	TOTAL
			BIT CONC. PAVT T TYPE III - ITEM 406.25
125		TON	U-TURN SLOPE FLATTENING QUANTITY SHT
12		TON	GRANITE SLOPE CURB REMOVAL SHT
121		TON	TOTAL
			REINFORCING STEEL - ITEM 501.15
431		LB	DRAINAGE DETAIL QUANTITY SHT
3540		LB	STRUCTURE QUANTITY SUMMARY SHT
3471		LB	TOTAL
			APPR RAILING (2 RAIL ALUMINUM) ITEM 607.4
432		LF	MAINLINE GR QUANTITY SHT
519		LF	STRUCTURE QUANTITY SUMMARY SHT
451		LF	TOTAL
			GR 303GR W/ LIGHT STEEL POSTS - ITEM 621.21
6040		LF	MAINLINE GR QUANTITY SHT
2,350		LF	SIDELINE GR QUANTITY SHT
8,340		LF	TOTAL
			GR 303GR W/ STEEL POSTS, TYPE II - ITEM 621.20
13,051		LF	MAINLINE GR QUANTITY SHT
3,005		LF	SIDELINE GR QUANTITY SHT
137,956		LF	TOTAL
			GR 303GR W/ WOOD POSTS, TYPE II - ITEM 621.28
744		LF	MAINLINE GR QUANTITY SHT
575		LF	SIDELINE GR QUANTITY SHT
1,304		LF	TOTAL
			ANCHOR FOR 3 CGR W/ LIGHT STEEL OR WOOD POSTS - ITEM 621.6
20		EA	MAINLINE GR QUANTITY SHT
9		EA	SIDELINE GR QUANTITY SHT
32		EA	TOTAL
			ANCHOR FOR 30GR W/ STEEL / LIGHT STEEL OR WOOD POSTS - ITEM 621.7
152		EA	MAINLINE GR QUANTITY SHT
4		EA	SIDELINE GR QUANTITY SHT
156		EA	TOTAL

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		BCT. FOR GR SBGR W/ STEEL POSTS, TYPE II ITEM #621.70
137	EA.	MAINLINE GR QUANTITY SHT.
2	EA.	SIDELINE GR QUANTITY SHT.
139	EA.	TOTAL
		SEED ITEM #51.00
112	LB.	UTURN SLOPE FLATTENING QUANTITY SHT.
8	LB.	GRANITE SLOPE CURB REMOVAL SHT.
40	LB.	GR DETAIL SHT #16
40	LB.	EST FOR TEMPORARY EROSION CONTROL
200	LB.	TOTAL
		FERTILIZER ITEM #51.10
332	LB.	UTURN SLOPE FLATTENING QUANTITY SHT.
70	LB.	GRANITE SLOPE CURB REMOVAL SHT.
387	LB.	GR DETAIL SHT #16
155	LB.	EST FOR TEMPORARY EROSION CONTROL
1500	LB.	TOTAL
		AGRICULTURAL LIMESTONE ITEM #51.20
37	TON	UTURN SLOPE FLATTENING QUANTITY SHT.
0.4	TON	GRANITE SLOPE CURB REMOVAL SHT.
1.4	TON	GR DETAIL SHT #16
1.5	TON	EST FOR TEMPORARY EROSION CONTROL
7.0	TON	TOTAL
		HAY MULCH ITEM #51.20
37	TON	UTURN SLOPE FLATTENING QUANTITY SHT.
0.4	TON	GRANITE SLOPE CURB REMOVAL SHT.
1.4	TON	GR DETAIL SHT #16
1.5	TON	EST FOR TEMPORARY EROSION CONTROL
7.0	TON	TOTAL
		TOPSOIL ITEM #53.10
493	CY.	UTURN SLOPE FLATTENING QUANTITY SHT.
40	CY.	GRANITE SLOPE CURB REMOVAL SHT.
181	CY.	GR DETAIL SHT #16
186	CY.	EST FOR TEMPORARY EROSION CONTROL
900	CY.	TOTAL

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

SPRINGFIELD-HARTFORD PROJECT NO. IR 91-1(48)

SUMMARY SHEET NO. _____ OF _____ 19__

[illegible]

QUANTITY SUMMARY
SHT. PAGE 103

APPROXIMATE SUMMARY OF QUANTITIES

SHT. PAGE 103							
R. O. W.	* BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	
		80	80	E.A.	DELINATORS w/ SALVAGED POSTS (EST)	679A.11	
		2148	2148	E.A.	REMOVAL OF EXISTING DELINATORS (HDS)	679A.12	
		150	150	E.A.	REMOVE & REPLACE DELINATOR UNITS	679A.13	
		1	1	L.B.	STREET LIGHTING	679A.14	

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

SPRINGFIELD - HARTFORD PROJECT NO. IR 91-1(48)

SUMMARY SHEET NO. _____ OF _____ 19____

DETAILED SUMMARY OF QUANTITIES

[illegible]

DETAILED SUMMARY OF QUANTITIES

[illegible]

TYPE OF CONSTRUCTION

[illegible]

IN CHARGE OF: P.H.
DESIGNED BY: RAL
CHECKED BY: CFW

MAINLINE GUARD RAIL SUMMARY

MILE MARKER	STATION	LOCATION	REMOVAL		CURB		INSTALLATION														REMARKS				
			GUARD RAIL		SEE NOTE 1		ITEM 621.21		ITEM 621.26		ITEM 621.28		ITEM 617.45 (L.F.)	ITEM 621.55 (L.F.)	ITEM 402.15 (C.Y.)	ITEM 301.26 (C.Y.)	ITEM 616.35 (L.F.)	ITEM 621.66 (Ea)	ITEM 621.72 (Ea)	ITEM 621.78 (Ea)		ITEM 621.90 (Ea)	ITEM 621.91 (Ea)		
			QUAN	TYPE	QUAN	TYPE	ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)													
	2234+10-2239+20	NB LT	480	CABLE					550	550							30								
	2232+20-2238+20	SB RT	670	CABLE					600	600							42								
	2236+10-2256+100	SB LT	1970	CABLE					2025	2025							140								
	2243+20-2257+25	NB LT	1300	CABLE					1425	1425							127								
	2256+20-2257+30	NB RT	140	CABLE					275	275							85								
	2260+20-2287+00	SB LT	335	STEEL					1850	1850							195								
	2267+10-2284+80	SB RT	135	STEEL					1575	1575							182								
	2269+20-2271+80	NB LT	170	STEEL					250	250							77								
	2269+40-2271+90	NB RT	110	STEEL					250	250							85								
	2276+40-2289+70	NB RT	925	CABLE					1350	1350							103								
	2281+20-2284+70	NB LT	290	CABLE					350	350							79								
	2299+20-2304+10	NB RT	400	CABLE			496	820									31			2					
	2298+75-2307+30	SB LT	1000	CABLE					1075	1075							108								
	2314+20-2326+35	SB LT	1100	CABLE					1075	1075							48								
	2316+25-2331+40	SB RT	1670	CABLE					1875	1875							110								
	2316+95-2337+80	NB LT	2300	CABLE					2325	2325							147								
	2332+20-2341+70	SB LT	720	CABLE					950	950							123								
	2337+40-2340+00	NB RT							625	625							67								
	2353+00-2356+70	SB RT	306	CABLE			368	392									41			2					
	2364+20-2374+70	NB RT	930	CABLE					1000	1000							104								
	2367+10-2381+80	SB LT	1090	CABLE					1475	1475							198								
	2371+50-2388+00	NB LT	913	CABLE					1725	1725							227								
	2385+88-2386+01	SB RT							125	125							12								
	2388+44-2388+26	SB LT	70	CABLE					125	125							10								
	2390+04-2401+25	NB LT	1180	CABLE					1125	1125							52								
	2390+13-2390+25	NB RT	40	CABLE					125	125							10								
	2402+55-2408+16	NB LT	578	CABLE					550	550							78								
	2407+75	SB LT	25	STEEL																					
	2450+80-2456+30	NB RT	500	CABLE					550	550							85								
	2458+170-2470+20	SB RT	1860	CABLE					1850	1850							127								
	2452+90-2468+90	NB LT	1220	CABLE					1600	1600							196								
	2462+70-2470+20	SB LT	496	CABLE					750	750							118								
	2464+00-2471+80	NB RT	650	CABLE					775	775							103								
	2485+80-2492+00	NB RT	840	CABLE			1008	1104									118			4					
	2491+80-2498+30	SB RT	325	CABLE			400	424									83			2					
	2501+00-2511+80	NB RT	1000	CABLE					1075	1075							108								
	2531+10-2548+100	NB RT	1750	STEEL					1650	1650							171								
	2532+10-2548+38	SB LT	1700	STEEL					1625	1625							167								
	2561+20-2565+25	SB RT	230	CABLE					350	350							84								
	2566+15-2568+00	NB LT	100	STEEL					125	125							66								
	2567+00-2568+25	SB RT	100	STEEL					125	125							66								
	2577+50-2588+80	NB LT	850	CABLE					1100	1100							131								
	2577+60-2587+60	SB LT	998	CABLE					1200	1200							134								
	2577+60-2597+85	SB RT	1840	CABLE					2225	2225							140								
	2577+80-2598+10	NB RT	1600	CABLE					2025	2025							188								
	2592+70-2597+70	NB LT	300	CABLE					500	500							102								
	2602+20-2613+20	NB RT	610	CABLE					800	800							113								
	2607+20-2613+38	SB RT	360	CABLE			416	440									44			2					
	2618+30-2633+80	NB LT	1510	CABLE					1725	1725							150								
	2631+60-2637+60	NB RT	440	CABLE					500	500							84								
	2641+00-2647+25	NB RT	480	CABLE					625	625							104								
	2643+80-2648+80	NB LT	280	CABLE					500	500							105								
	2643+70-2672+40	SB RT	2870	CABLE					2875	2875							204								
	2647+80-2648+80	SB LT	180	STEEL					100	100							62								
	2652+80-2656+80	NB RT	630	CABLE					900	900							129								
	SHEET TOTAL		42815						2880	4925							5369			12	47	45			

ITEM	DESCRIPTION	ITEM	DESCRIPTION
202.10	Removal and Disposal of Existing Guard Rail	621.78	Breakaway Cable Term. for Guard Rail Steel
402.15	Crushed Stone Shoulder		Beam w/ Steel Posts, Type II
301.26	Subbase, Crushed Gravel (Fine Graded)	621.90	Guard Rail Approach Section, Type I
616.35	Treated Timber Curb	621.91	Guard Rail Approach Section, Type II
621.21	Guard Rail, 3 Cables w/ Lt. Steel Posts	617.45	Approach Railing (Two Rail Aluminum)
621.26	Guard Rail, 5th St. Beam w/ St. Posts, Type II	621.55	Removal and Resetting Guardrail
621.28	Guard Rail, 5th St. Beam w/ Wood Posts, Type II		
621.66	Anchor for 3 Cable Guard Rail w/ Lt. St. or Wood Posts		
621.72	Anchor for 5th Beam Guard Rail w/ St. Lt. St. or Wood Posts		

NOTES:
1. Removal and disposal of existing asphalt curb shall be incidental to guard rail removal.
2. Treated timber curb shall be installed where existing asphalt curb is removed or as directed by the Resident Engineer.
3. Before shop curving any Guardrail field measurements must be made.
4. See Bridge Plans for bridge approaches.
Item 621.90 and 621.91

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE DATE SHEET
OF

IN CHARGE OF: R.H. DETAILED BY: I.A.L. E.F.H. (MAY)
DESIGNED BY: R.A.L. CHECKED BY: C.F.W.

FORM NO. 1

NOTES:

1. Removal and disposal of existing asphalt curb shall be incidental to guard rail removal.
2. Treated timber curb shall be installed where existing Asphalt Curb is removed as directed by the Resident Engineer.
3. Before stiles curbing and Guardrail field measurements must be made.
4. See Bridge Plans for bridge approaches Item G21.90 and G21.91

NOTES:

1. Removal and disposal of existing asphalt curb shall be incidental to guard rail removal.
2. Treated timber curb shall be installed where existing Asphalt Curb is removed as directed by the Resident Engineer.
3. Before stiles curbing and Guardrail field measurements must be made.
4. See Bridge Plans for bridge approaches Item G21.90 and G21.91

SCALE	DATE	SHEET 7 OF
-------	------	---------------



IN CHARGE OF: R.H.
DESIGNED BY: R.H.
CHECKED BY: C.F.W.

MAINLINE GUARD RAIL SUMMARY

MILE MARKER	STATION	LOCATION	REMOVAL		CURB		INSTALLATION														REMARKS		
			GUARD RAIL		SEE NOTE 1		ITEM 621.21		ITEM 621.26		ITEM 621.28		ITEM 617.45	ITEM 621.55	ITEM 402.15	ITEM 301.26	ITEM 616.35	ITEM 621.66	ITEM 621.72	ITEM 621.78		ITEM 621.90	ITEM 621.91
			QUAN (L.F.)	TYPE	QUAN (L.F.)	TYPE	ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)	(L.F.)	(L.F.)	(C.Y.)	(C.Y.)	(L.F.)	(Ea.)	(Ea.)	(Ea.)		(Ea.)	(Ea.)
	3044+80-3045+08	NB RT	185	CABLE					25	25					11								
	3045+24-3046+58	SB LT	140	STEEL					100	100					62								
	3046+20-3053+60	NB RT	1060	CABLE					1675	1675					200								
	3066+50-3067+00	SB LT	150	STEEL					250	250					81								
	3071+00-3073+28	NB RT	200	STEEL					225	225					64								
	3072+50-3074+78	SB LT	180	CABLE					225	225					73								
	3078+43-3079+43	NBLT	160	STEEL					100	100					82								
	3076+33-3100+10	SB LT	300	STEEL					325	325					73								
	3076+70-3077+40	SB RT	180	STEEL					625	625					60								
	3078+43-3078+70	NBLT						12.5	12.5					10									
	3079+47-3079+60	SB RT	35	CABLE					12.5	12.5					10								
	3078+42-3079+60	NB RT	410	CABLE					500	500					88								
	3123+80-3140+00	NB RT	1540	CABLE					1675	1675					138								
	3123+75-3124+75	SB RT	4270	CABLE					4100	4100					210								
	3136+20-3142+20	SB LT	400	CABLE					550	550					98								
	3143+75-3178+38	NB RT	2650	CABLE					3450	3450					284								
	3169+00-3174+10	SB RT	550	CABLE											77			2					
	3178+15-3187+80	SB LT	270	CABLE					975	975					183								
	3185+80-3187+28	NBLT	160	CABLE					144	168					25			2					
	3212+70-3214+15	NBLT	100	STEEL					125	125					60								
	3213+70-3215+15	SB LT	100	STEEL					125	125					60								
	3231+20-3242+70	NB RT	1090	CABLE					1150	1150					108								
	3232+30-3243+05	SB LT	1025	CABLE					1075	1075					104								
	3271+70-3273+70	NBLT	100	STEEL					200	200					79								
	3272+70-3279+70	NBLT	735	STEEL					700	700					132								
	3273+60-3277+80	SB LT	125	CABLE					425	425					113								
	3273+60-3277+80	SB RT	550	CABLE					625	625					88								
	3277+30-3282+70	NBLT	1175	CABLE					1675	1675					164								
	3285+25-3287+00	SB LT	110	CABLE					175	175					73								
	3287+70-3291+60	SB RT	150	CABLE											70			2					
	3304+00-3312+60	NBLT	810	CABLE					875	875					49								
	3319+70-3323+30	NB RT	250	CABLE					275	275					71								
	3339+35-3346+70	SB RT	735	CABLE																			
	3348+100-3350+00	NB RT	325	CABLE					425	425					87								
	3367+00-3368+70	SB LT	100	STEEL					175	175					75								
	3367+80-3368+80	NBLT	100	STEEL					100	100					62								
	3367+70-3368+70	SB RT	140	STEEL					100	100					62								
	3369+20	NB RT													10								
	3372+70-3376+70	SB LT	340	CABLE					400	400					81								
	3373+60-3381+10	NB RT	540	CABLE					760	760					113								
	3374+00-3384+80	NBLT	400	CABLE					550	550					98								
	3381+10-3388+30	SB RT	575	CABLE											73			2					
	3388+30-3397+70	NBLT	260	CABLE					325	325					74								
	3390+70-3394+65	NB RT	300	CABLE					375	375					82								
	3408+100-3410+25	NB RT	475	CABLE					525	525					84								
	3408+100-3407+70	NBLT	180	CABLE											40			2					
	3407+100-3409+70	SB RT	130	CABLE											87								
	3430+30-3437+80	NBLT	1480	CABLE					1525	1525					121								
	3438+80-3439+20	SB LT	100	CABLE					600	600					145								
	3442+20-3449+20	NB RT	660	CABLE					700	700					89								
	3444+70-3449+20	SB LT	210	CABLE					650	650					134								
	3466+80-3476+00	SB LT	460	CABLE					590	590					157								
	3468+80-3477+90	NBLT	2510	CABLE					3125	3125					254								
	3472+80-3476+20	NBL LT							325	325					112								
	3512+35-3516+38	NB RT	340	STEEL					400	400			27		81								
	3512+40-3517+40	SB LT	430	CABLE					500	500			27		84								
	3516+80	MEDIAN	200	STEEL									112.5	112.5	75								MINNESOTA BULLNOSE GUARDRAIL TREATMENT SEE SHT 121
	SHEET TOTAL		27785					2320	34088			112.5	108		5365			12	43	42			

ITEM	DESCRIPTION	ITEM	DESCRIPTION
202.40	Removal and Disposal of Existing Guard Rail	621.73	Breakaway Cable Term for Guard Rail Steel
402.15	Cushion Storm Shoulder	621.74	Beam w/ Steel Posts, Type II
501.26	Subgrade Crushed Gravel (Fine Graded)	621.90	Guard Rail Approach Section, Type I
616.35	Treated Timber Curb	621.91	Guard Rail Approach Section, Type II
621.21	Guard Rail, 3 Cable w/ U Steel Posts	617.45	Approach Railing (Two Rail Aluminum)
621.26	Guard Rail, 5th St Beam w/ 51 Posts, Type II	621.55	Removal and Resetting Guardrail
621.28	Guard Rail, 5th St Beam w/ Wood Posts, Type II		
621.66	Anchor for 3 Cable Guard Rail w/ 51 St. or Wood Posts		
621.72	Anchor for 5th St Beam Guard Rail w/ 51, 61 St. or Wood Posts		

NOTES:

1. Removal and disposal of existing asphalt curb shall be incidental to guard rail removal.
2. Treated timber curb shall be installed where existing Asphalt Curb is removed or as directed by the Resident Engineer.
3. Before shop curving any Guardrail field measurements must be made.
4. See Bridge Plans for bridge approaches.
- Item 621.90 and 621.91

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - I(48)

MCFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE DATE SHEET
8 OF

MAINLINE GUARD RAIL SUMMARY

MILE MARKER	STATION	LOCATION	REMOVAL			INSTALLATION														REMARKS		
			GUARD RAIL		CURB SEE NOTE 1	ITEM 621.21		ITEM 621.26		ITEM 621.28		ITEM 617.45 (L.F.)	ITEM 621.55 (L.F.)	ITEM 402.15 (C.Y.)	ITEM 301.26 (C.Y.)	ITEM 616.35 (L.F.)	ITEM 621.66 (Ea.)	ITEM 621.72 (Ea.)	ITEM 621.78 (Ea.)		ITEM 621.90 (Ea.)	ITEM 621.91 (Ea.)
			ITEM 202.40	QUAN (L.F.)		TYPE	ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)												
			QUAN								TYPE											
	389+80	MEDIAN	170	STEEL					112.5	112.5	54		75									MINNESOTA BULLNOSE GUARDRAIL TREATMENT SEE SHT. 181
	3923+85-3924+10	SB RT						25	25			27		4								
	3927+85-3928+10	NB LT						25	25			27		4								
	3927+10-3930+10	NB RT	170	STEEL				250	250			27		75								
	3939+10-3939+10	NB RT	2070	CABLE				2425	2425					191								
	3939+10-3939+30	SB LT	40	STEEL				150	150					71								
	3939+10-3939+100	SB LT	390	CABLE				350	350													
	3939+10-3939+190	NB RT	1100	CABLE				1225	1225					120								
	3939+10-3939+180	SB LT	750	CABLE				850	850					103								
	3939+10-3939+160	NB RT	1170	CABLE				1450	1450					181								
	3939+10-3939+150	SB LT	490	CABLE				525	525					82								
	3939+10-3939+140	SB LT	790	CABLE				1125	1125					143								
	3939+10-3939+130	SB RT	1140	CABLE				1200	1200					110								
	3939+10-3939+120	SB LT	1480	CABLE				1850	1850					125								
	3939+10-3939+110	NB LT	460	CABLE				625	625					85								
	3939+10-3939+100	NB RT	420	CABLE				1250	1250					100								
	3939+10-3939+90	NB LT	480	CABLE				1225	1225					110								
	3939+10-3939+80	SB LT	960	CABLE				1025	1025					105								
	3939+10-3939+70	SB RT	900	CABLE				780	780					99								
	3939+10-3939+60	SB RT	200	STEEL				275	275					78								
	3939+10-3939+50	NB RT	180	STEEL				175	175					29								
	3939+10-3939+40	SB RT	180	STEEL				400	400					44								
	3939+10-3939+30	SB LT	40	CABLE				12.5	12.5					10								
	3939+10-3939+20	SB LT	200	CABLE				187.5	187.5					17								
	3939+10-3939+10	NB LT	250	STEEL				250	250					9								
	3939+10-3939+0	NB LT						12.5	12.5					12								
	3939+10-3939+0	SB LT	470	CABLE				590	590					30								MINNESOTA BULLNOSE GUARDRAIL TREATMENT SEE SHT. 17
	3939+10-3939+0	SB LT	625	CABLE				625	625					23								
	3939+10-3939+0	NB LT	100	STEEL				375	375					60								
	3939+10-3939+0	NB RT	10	STEEL				350	350					57								CONNECT TO EXISTING GUARDRAIL
	3939+10-3939+0	SB RT	100	STEEL				375	375					64								
	SHEET TOTAL		16440						19238		112.5	135		2338			24	18				
	MAINLINE TOTALS		118605				6040	134051		794	432	825	17023			26	152	137				

ITEM	DESCRIPTION	ITEM	DESCRIPTION	NOTES
202.40	Removal and Disposal of Existing Guard Rail	621.75	Breakaway Cable Term. for Guard Rail Steel Beam w/ Steel Posts, Type II	1. Removal and disposal of existing asphalt curb shall be incidental to guard rail removal. 2. Treated timber curb shall be installed where existing Asphalt Curb is removed or as directed by the Resident Engineer. 3. Before shop curving any Guardrail field measurements must be made. 4. See Bridge Plans for bridge approaches. Item 621.90 and 621.91
402.15	Crushed Stone Shoulder	621.90	Guard Rail Approach Section, Type I	
501.26	Subbase Crushed Gravel (Fine Graded)	621.91	Guard Rail Approach Section, Type II	
616.35	Treated Timber Curb	617.45	Approach Railing (Two Rail Aluminum)	
621.21	Guard Rail, 3 Cable w/ U. Steel Posts	621.55	Removal and Resetting Guardrail	
621.26	Guard Rail, 5th St. Beam w/ St. Posts, Type II			
621.28	Guard Rail, 5th St. Beam w/ Wood Posts, Type II			
621.66	Anchor for 3 Cable Guard Rail w/ Lt. St. or Wood Posts			
621.72	Anchor for 5th Beam Guard Rail w/ St. Lt. St. or Wood Posts			

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

McFarland-Johnson Engineers, Inc.
 Binghamton New York

SCALE DATE SHEET
 9 OF

IN CHARGE OF: *R.H.*
 DESIGNED BY: *R.H.*
 CHECKED BY: *C.F.W.*

RAMP AND SIDELINE GUARDRAIL SUMMARY

STATION - LOCATION	REMOVAL				INSTALLATION																	REMARKS
	GUARDRAIL		CURB		ITEM 621.21	ITEM 621.26	ITEM 621.28	ITEM 621.38	ITEM 621.45	ITEM 402.15 (C.Y.)	ITEM 301.26 (C.Y.)	ITEM 616.35 (L.F.)	ITEM 621.66 (Eo.)	ITEM 621.70 (Eo.)	ITEM 621.72 (Eo.)	ITEM 621.74 (Eo.)	ITEM 621.77 (Eo.)	ITEM 621.78 (Eo.)	ITEM 621.90 (Eo.)	ITEM 621.91 (Eo.)		
	SEE NOTE 1																					
	QUAN.	TYPE	QUAN.	TYPE																		
INTERCHANGE NO.8					ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)	ACTUAL (L.F.)	FACTORED (L.F.)										
RAMP 'C'																						
4+00 - 7+00, RT	300	CABLE					300	300								1					CONT'D FROM MAINLINE	
RAMP 'D'																						
2+90 - 11+00 RT	760	CABLE					828	828											1		CONT'D ONTO MAINLINE	
ROUTE 131																						
24+30(RT) - 26+80(RT)	200	CABLE						250	250									2				
28+10 (LT) - 27+60 (LT)	200	CABLE						250	250									2				
INTERCHANGE NO.9																						
RAMP 'A'																						
RTB 36+50-A'24+30RT	1570	CABLE			1744	1870								4							USE 12'-0" POST SPACING AROUND CURVE ON RAMP A - 300' LEN.	
11+90 - 16+50	410	CABLE			464	488								2								
ROUTE 5																						
32+15 - 32+90RT								75	75									1				
INTERCHANGE NO.10																						
RAMP 'B'																						
37+11+03(W) - 8+60	878	CABLE					878	878								1						
17+30(LT) - 3+40(LT)	128	CABLE					228	228								1			1			
RAMP 'H'																						
2+80 (RT) - 11+80(RT)	900	CABLE					800	800													TIE TO EXIST. STEEL BEAM CONT'D ON I-89	
2+80(LT) - 8+00 (LT)	530	CABLE					580	580								1					CONT'D ONTO MAINLINE	
RAMP #SIDELINE TOTALS	5890				2358		3605		575		682		6		4		5		2			

ITEM	DESCRIPTION	ITEM	DESCRIPTION
202.40	Removal & Disposal of Exist. Guardrail	621.72	Anchor for St. Beam Guardrail w/ St.
402.15	Crushed Stone Shoulder		Lt. or Wood Posts
301.26	Subbase Crushed Gravel (Fine Graded)	621.74	Terminal Conn. for St. Beam Guardrail
616.35	Treated Timber Curb	621.77	Breakaway Cable Term for Guardrail
621.21	Guardrail, 3 Cable w/ Lt. Steel Posts		Steel Beam w/ Wood Posts, Type II
621.26	Guardrail, Std. St. Beam w/ St. Posts, Type II	621.90	Guardrail Approach Section, Type I
621.28	Guardrail, Std. St. Beam w/ Wood Posts, Type II	621.91	Guardrail Approach Section, Type II
621.38	Guardrail, Hwy. Div. St. Beam w/ Wood Posts, Type II	621.78	Breakaway Cable Term for Guardrail
621.66	Anchor for 3 Cable G.R. w/ Lt. St. or Wood Posts		Steel Beam w/ Steel Posts, Type II
621.70	Anchor for St. Beam Guardrail w/ St. or	621.45	Guardrail, Box Beam w/ Steel Posts
	Wood Posts at openings		

NOTES:

1. Removal and disposal of existing asphalt curb shall be incidental to guardrail removal.
2. Treated Timber Curb shall be installed where existing Asphalt Curb is removed or as Directed by the Resident Engineer.
3. Before shop curving any Guardrail, field measurements must be made.

VERMONT AGENCY OF TRANSPORTATION

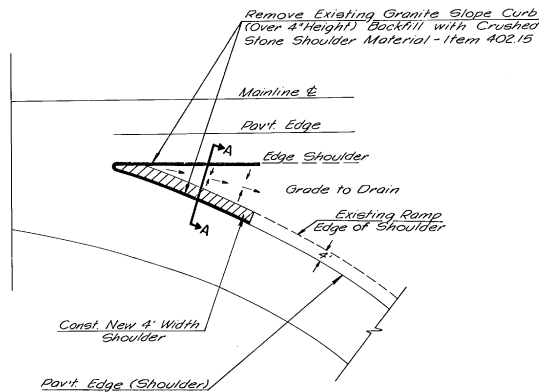
**SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)**

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

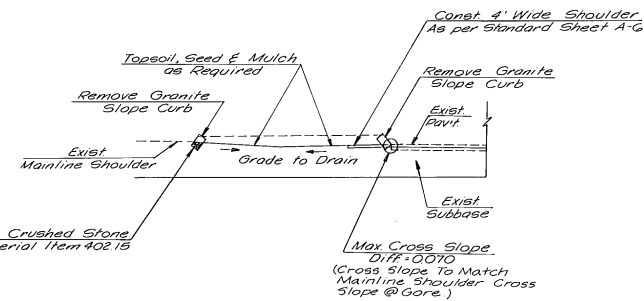
SCALE DATE 10 OF



IN CHARGE OF: B.J.H.
DESIGNED BY: J.E.L.
CHECKED BY: C.F.W.



**GRANITE SLOPE CURB REMOVAL
AT RAMP GORES (PLAN)**



SECTION 'A-A'

LOCATION	ITEM 202.55 (L.F.)	ITEM 203.15 (CY)	ITEM 402.15 (CY)	ITEM 406.25 (TON)	ITEM 651.10 (LB)	ITEM 651.15 (LB)	ITEM 651.20 (T)	ITEM 651.25 (T)	ITEM 653.10 (CY)
Exit Gore Int #8 N.B. ESB	220	30	2	3.5	2	19	0.1	0.1	10
Exit Gore Int #9 N.B. ESB	220	30	2	3.5	2	19	0.1	0.1	10
Exit Gores Int #10 N.B.	220	30	2	3.5	2	19	0.1	0.1	10
Exit Gores Int #10 S.B.	220	30	2	3.5	2	19	0.1	0.1	10
Totals	880	120	8	140	8	76	0.4	0.4	40

ITEM	DESCRIPTION
202.55	Removal of Existing Curb
203.15	Common Excavation
402.15	Crushed Stone Shoulders
406.25	Bituminous Concrete Pavement 1 1/4" Thickness
651.10	Seed
651.15	Fertilizer
651.20	Agricultural Limestone
651.25	Hay Mulch
653.10	Tapeoil

GRANITE SLOPE CURB REMOVAL AT
RAMP GORES

VERMONT AGENCY OF TRANSPORTATION

**SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)**

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE DATE SHEET
11 OF



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :

		SLOPE	FLATTENING	QUANTITY	SHEET

[illegible]

ITEM	DESCRIPTION	ITEM	DESCRIPTION	ITEM	DESCRIPTION
203.15	COMMON EXCAVATION	43.10	SEED		

FORM NO. 1



IN CHARGE OF : _____
DESIGNED BY : _____
DETAILED BY : _____
CHECKED BY : _____
DATE _____ UNIT _____

TRAFFIC ITEM SUMMARY SHEET

ITEM NO.	DESCRIPTION	MAINLINE	INTER. 8	INTER. 9	INTER. 10	UNIT	TOTAL
040.35	4' WHITE LINES	—	—	—	2730	L.F.	2730
040.11	4' REFLECT YELLOW LINES	—	—	—	—	L.F.	—
075.20	TRAFFIC SIGNS, TYPE 'A'	1509	020	013	109	S.F.	2971
075.25	TRAFFIC SIGNS, TYPE 'B'	5797	60	60	120	S.F.	6237
075.35	TRAFFIC SIGN POSTS, TYPE 'A'	7010	1104	1056	923	LBS	10753
075.30	TRAFFIC SIGN POSTS, TYPE 'B'	4408	—	—	—	LBS	4408
075.37	TRAFFIC SIGN POST, TYPE 'C'	1311	808	913	352	LBS	3384
075.41	FOUNDATION TYPE 'B' 24" DIA.	9	—	—	—	EA.	9
075.42	FOUNDATION TYPE 'B' 30" DIA.	—	—	—	—	EA.	—
075.51	REMOVING SIGNS	8300*	750*	970*	425*	S.F.	10445*
075.55	SETTING SALVAGED POSTS	1	2	2	—	EA.	5
075.60	ERECTING SALVAGED SIGNS, TYPE 'A'	180	—	—	—	S.F.	180
040.75	8' WHITE LINES	100	—	—	—	L.F.	100
070.10	DELINEATORS	1585	47	58	104	EA.	1794
070.12	REMOVAL OF DELINEATORS & POSTS	1950	36	59	153	EA.	2198
070.15	REMOVE & REPLACE DELINEATOR UNITS (MOD.)	150	—	—	—	EA.	150
040.21	PAINTING CURBS	—	150	420	—	L.F.	570
040.25	HANDICAP PARKING SYMBOL	2	—	—	—	EA.	2
040.22	ARROW MARKINGS (EST.)	—	—	—	—	EA.	2
070.11	DELINEATORS WITH SALVAGED POSTS (EST.)	—	—	—	—	EA.	50

*FOR CONTRACTOR'S REFERENCE ONLY

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1 (48)

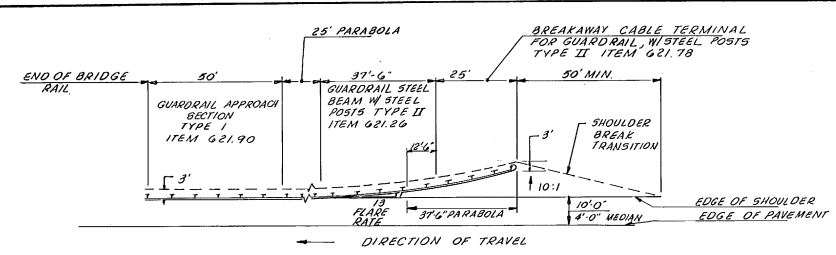
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 13 OF

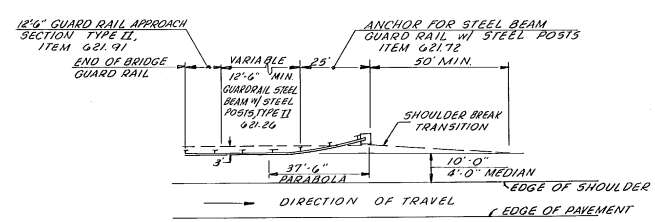


IN CHARGE OF :
DESIGNED BY :
CHECKED BY :
DATE :
DATE :

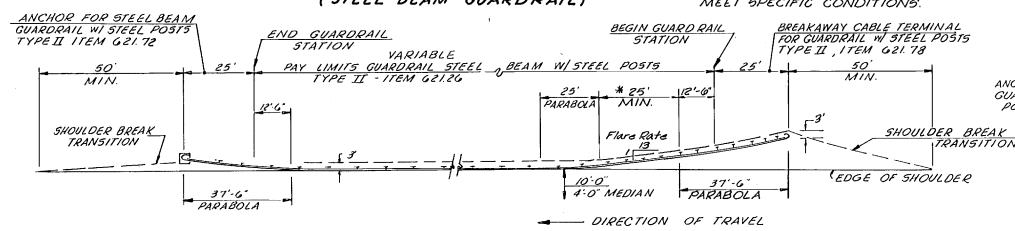
IN CHARGE OF: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 DATE: _____



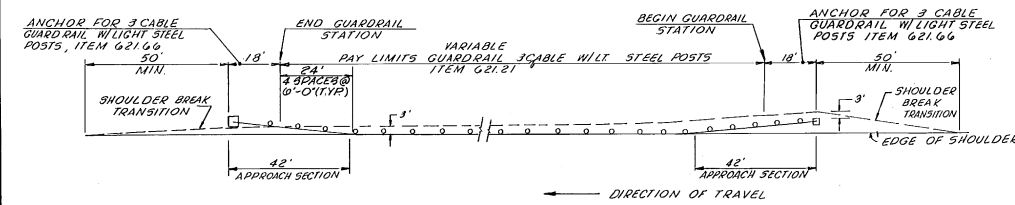
WORK THIS DETAIL WITH STD. SHEETS G-15, G-17, G-1
APPROACH END - BRIDGE W/ SHOULDERS
 (STEEL BEAM GUARDRAIL)



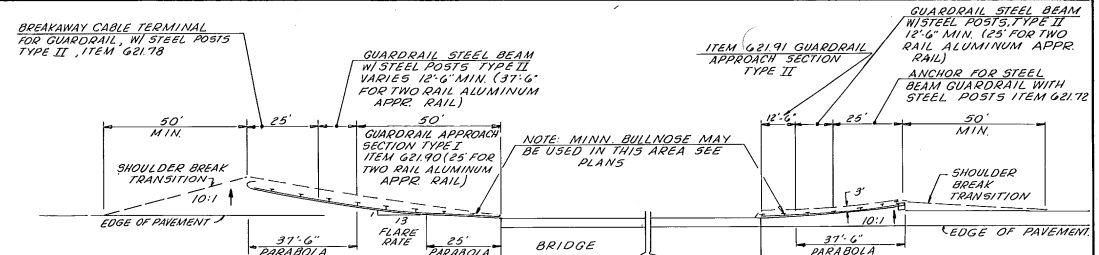
WORK THIS DETAIL WITH STD. SHEETS G-1, G-17
TRAILING END - BRIDGE W/ SHOULDERS
 (STEEL BEAM GUARDRAIL)



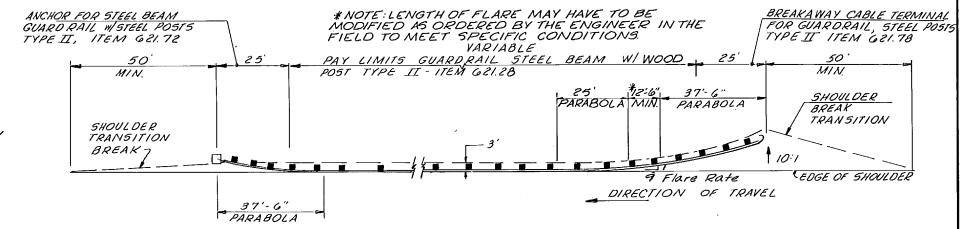
WORK THIS DETAIL WITH STD. SHEETS G-1, G-15
TYPICAL - STEEL BEAM GUARDRAIL



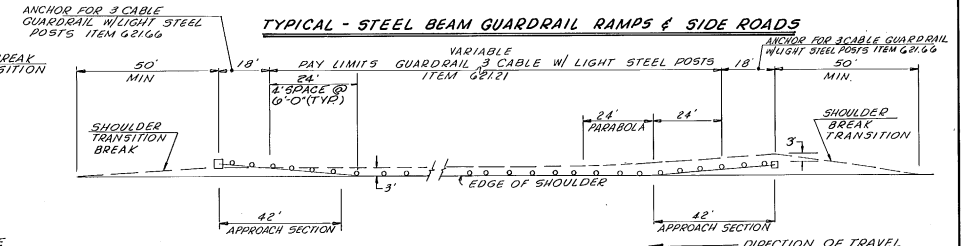
WORK THIS DETAIL WITH STD. SHEETS G-6
TYPICAL - THREE CABLE GUARDRAIL



GUARDRAIL ON BRIDGE WITHOUT SHOULDER
 (STEEL BEAM GUARDRAIL)

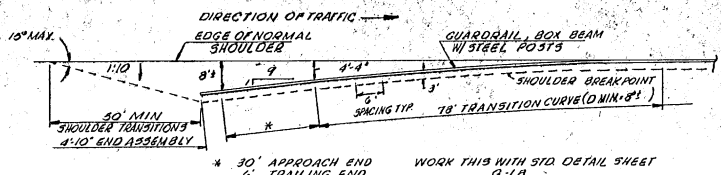


TYPICAL - STEEL BEAM GUARDRAIL RAMPS & SIDE ROADS

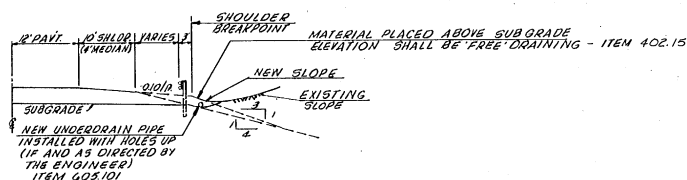


TYPICAL - 3 CABLE GUARDRAIL RAMPS & SIDE ROADS

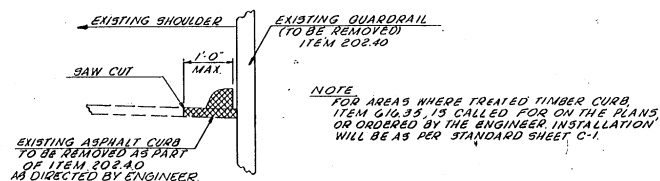
VERMONT AGENCY OF TRANSPORTATION			
SAFETY PROJECT SPRINGFIELD-HARTFORD IR 91 - 11(48)			
McFarland-Johnson Engineers, Inc. BINGHAMTON NEW YORK			
SCALE NO SCALE	DATE	SHEET 14 OF	



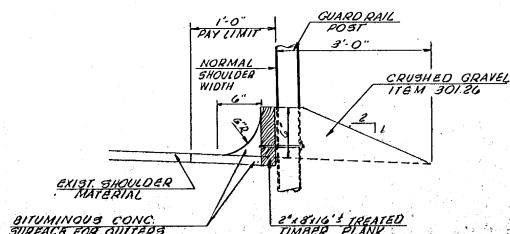
**PLAN OF FLARED APPROACH
FOR BOX BEAM GUARDRAIL
(SIDELINE ONLY)**



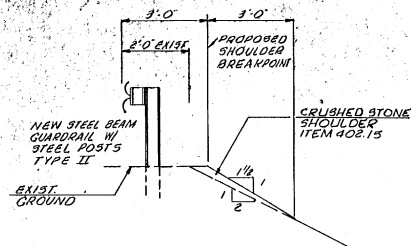
**SECTION A-A
DETAIL OF SHOULDER TREATMENT
AT GUARDRAIL WIDENING AREA.**



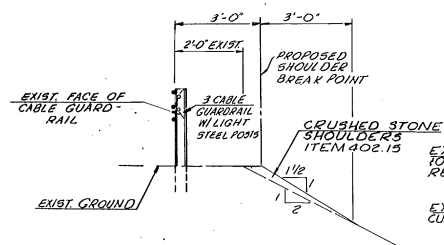
EXISTING CURB REMOVAL



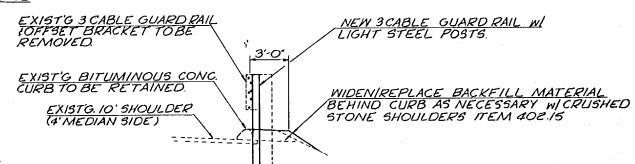
TIMBER CURB INSTALLATION



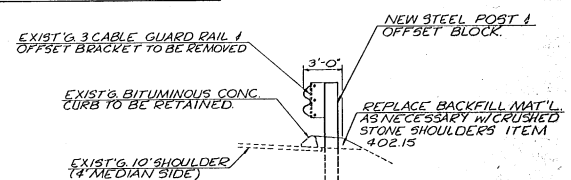
**SLOPE FATTENING DETAIL
FOR STEEL BEAM GUARDRAIL**



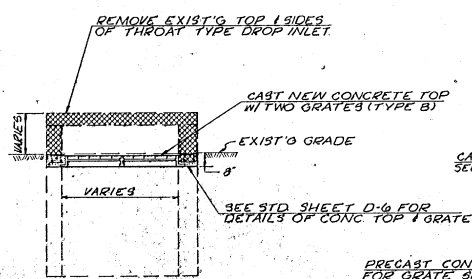
**SLOPE FATTENING DETAIL
FOR 3 CABLE GUARDRAIL**



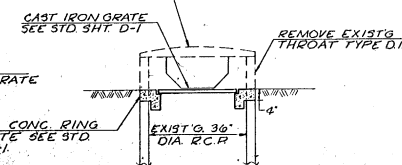
**DETAIL-NEW 3 CABLE GUARD RAIL WITH
BITUMINOUS CURB RETAINED**



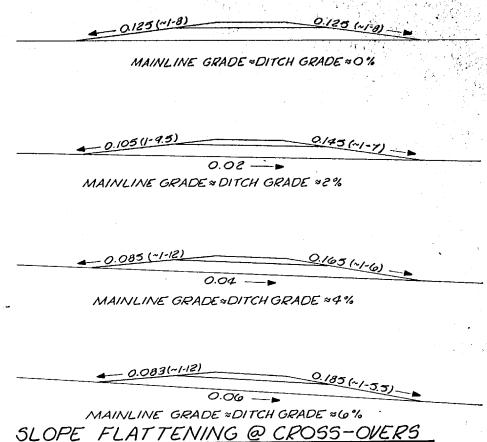
**DETAIL NEW S.B.G.R. GUARD RAIL WITH
BITUMINOUS CURB RETAINED**



**DETAIL OF MODIFICATIONS TO THROAT
TYPE DROP INLET (RECTANGULAR)**

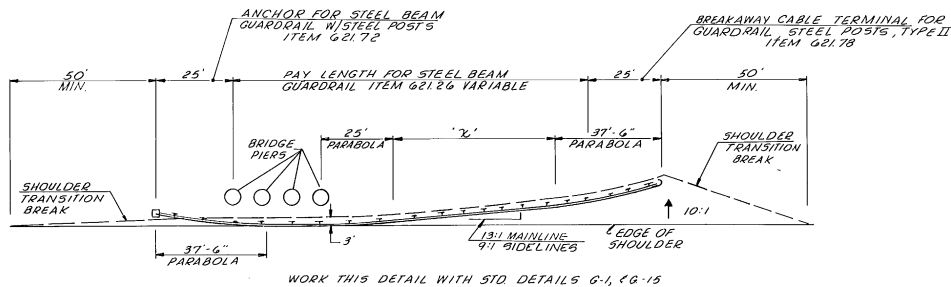


**DETAIL OF MODIFICATIONS TO THROAT
TYPE DROP INLET (CIRCULAR)**



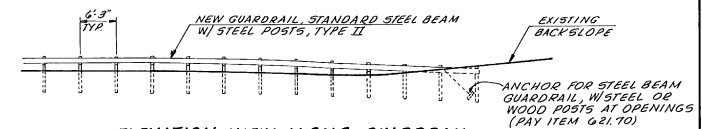
IN CHARGE OF
DESIGNED BY
CHECKED BY

VERMONT AGENCY OF TRANSPORTATION			
SAFETY PROJECT SPRINGFIELD-HARTFORD IR 91-1(48)			
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK		SHEET 15 OF	
SCALE	DATE		

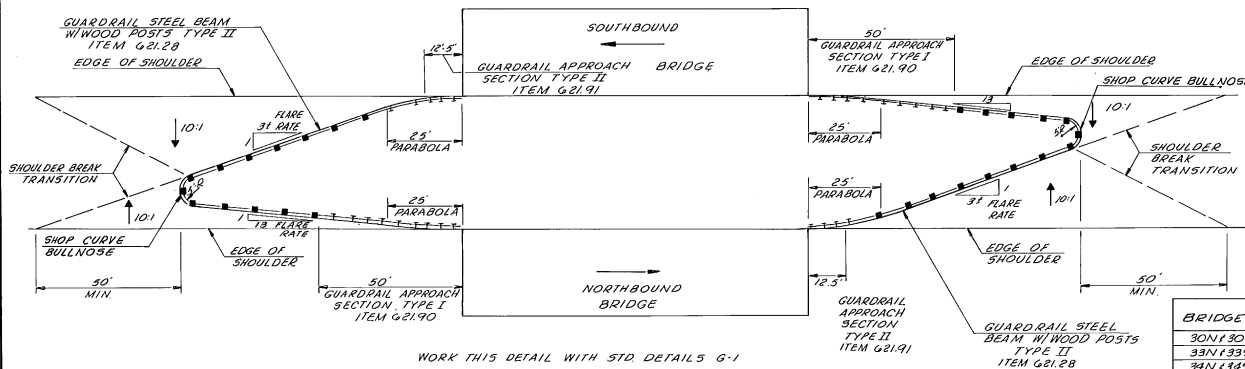


TYPICAL STEEL BEAM GUARDRAIL @ BRIDGE PIERS

STA. OF BRIDGE PIER	'X'-LENGTH
2547+00 N.B. 15 B.	50'-3"
2854+00 N.B. 15 B.	50'-3"
2767+50 N.B.	50'-3"
2767+50 S.B.	112'-0"
3214+00 N.B. 15 B.	50'-3"
3274+00 N.B.	112'-0"
3274+00 S.B.	25'-0"
3368+50 N.B. (11 S.B. R)	25'-0"
3368+50 N.B. (11 S.B. L)	75'-0"
3700+00 N.B. 13722+50 S.B.	0'-0"
22+00 INTERCHANGE No. 8	APPROACH END 18'-0" TRAILING END 0'-0"

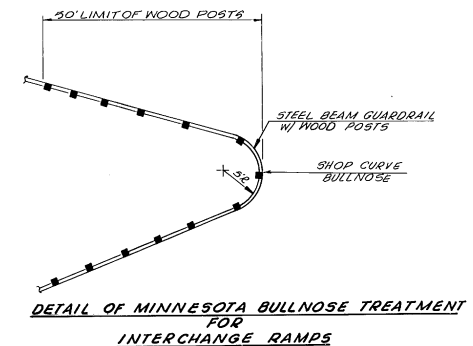


**ELEVATION VIEW ALONG GUARDRAIL
INSTALLATION WITH BURIED END**



TYPICAL MINNESOTA BULLNOSE GUARDRAIL TREATMENT @ TWIN BRIDGES

NOTES: 1) 1:3 FLARE RATE ON TRAILING EDGE OF BRIDGE MAY VARY TO FIT THE BRIDGE CONFIGURATION. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO ANY FABRICATION.
2) THE DETAILS AND DIMENSIONS OF MINNESOTA BULLNOSE GUARDRAIL TREATMENT FOR EACH APPLICATION TO BE ESTABLISHED SHALL BE AS STATED IN SEEDING NOTES ON SHEET 24A.



EARTHWORK / SEEDING QUANTITIES @ TWIN BRIDGES

BRIDGE NO.	ITEM 651.10	ITEM 651.15	ITEM 651.20	ITEM 651.25	ITEM 653.10
30N130S	8	64	0.3	0.3	37
30N133S	8	64	0.3	0.3	37
34N134S	14	114	0.5	0.5	64
34N139S	10	80	0.32	0.32	43
TOTAL	40 ^{lb}	337 ^{lb}	142 ^{ton}	142 ^{ton}	181 ^{c.y.}

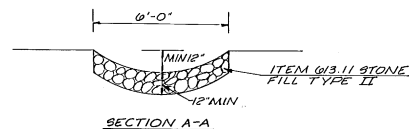
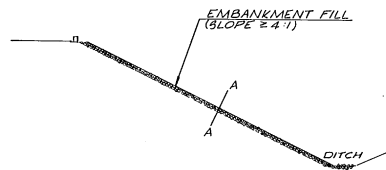
VERMONT AGENCY OF TRANSPORTATION

**SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1 (48)**

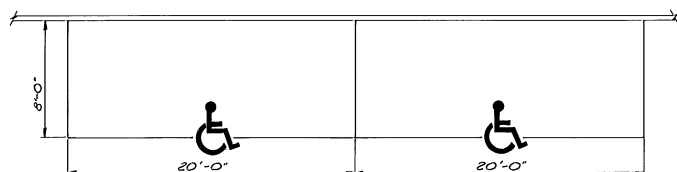
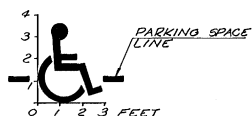
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 16 OF 16

IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



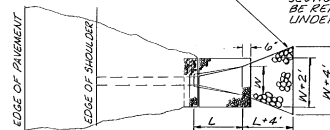
**DETAIL OF EMBANKMENT
TREATED GUTTER**



**DETAIL OF HANDICAPPED SYMBOL
FOR PAVEMENT MARKING**

NOT TO SCALE

STONE FILL TYPE II ITEM
613.11 (FOR 24" LARGER
CULVERTS)



HEADWALL REMOVAL
ITEM 203.15

END SECTION
INSTALLATION
ITEM 601

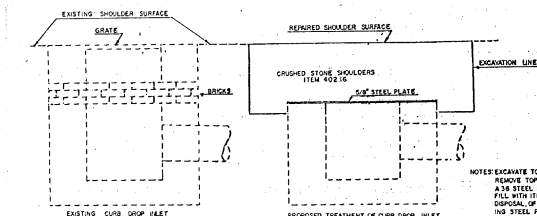
EXISTING PIPE
SEE NOTE

GRANULAR BACKFILL
ITEM 204.30

STONE FILL TYPE II ITEM
613.11 (FOR 24" LARGER
CULVERTS)

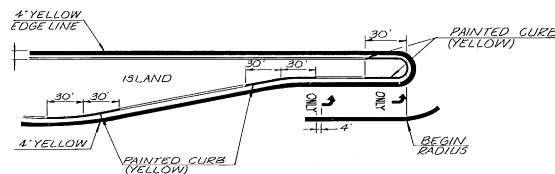
**HEADWALL REMOVAL/END SECTION
INSTALLATION**

NOT TO SCALE



TYPICAL FOR CAPPING DROP INLETS ITEM 604.42

NOTES: EXCAVATE TO DEPTH REQUIRED TO
REMOVE TOP AND BRICKS. PLACE 5/8"
X 16 STEEL PLATE ON TOP AND BACK-
FILL WITH ITEM 402.16. REMOVAL AND
DISPOSAL OF TOP AND BRICKS. FURNISH-
ING STEEL PLATE, EXCAVATION AND
FILLING SHOULDERS SHALL BE SUB-
SIDIARY TO ITEM 604.42 CAPPING OF
DROP INLETS.



TURN LANE & PAINTED CURB DETAIL

NOT TO SCALE

MISCELLANEOUS DETAILS

VERMONT AGENCY OF TRANSPORTATION

**SAFETY PROJECT
SPRINGFIELD — HARTFORD
IR 91 — 1(48)**

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE DATE SHEET
10 OF



IN CHARGE OF: _____
DESIGNED BY: _____
CHECKED BY: _____

SECTION 641 TRAFFIC SIGNS SUMMARY SHEET

MAINLINE

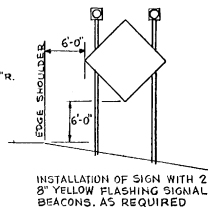
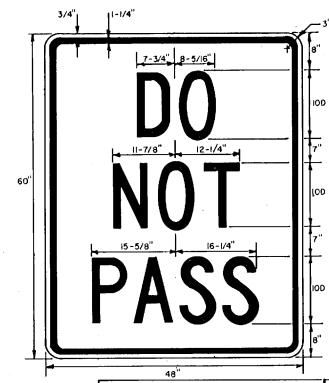
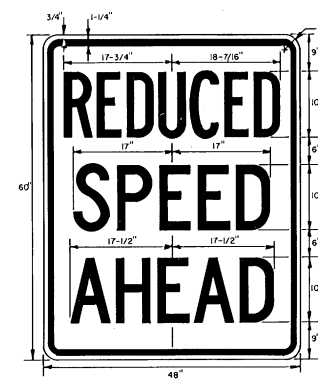
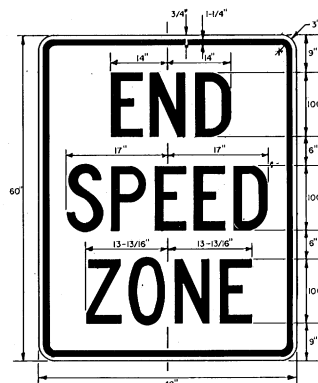
IDENTIFICATION	NUMBER OF SIGNS	SIZE		TEXT	FOR SIGN DETAIL, SEE STANDARD OR SHEET NUMBER
		WIDTH	HEIGHT		
	2	4	4	LEFT LANE CLOSED 1 MILE	E-8
	6 OR AS REQUIRED	18"	8"	RIGHT	E-8
	2	4	4	LEFT LANE CLOSED 1/2 MILE	E-8
	2	4	5	REDUCED SPEED AHEAD	
	2 OR AS REQUIRED	4	4	LEFT LANE CLOSED 1000 FEET	E-8
	2	4	4		E-8
	2	4	4		E-8
	AS REQUIRED	4	5	DO NOT PASS	
	AS REQUIRED	4	5	SPEED LIMIT 40	E-15B
	1	4	5	END SPEED ZONE	
	2	4	4	ROAD CONSTRUCTION AHEAD	E-2
	2	5	3	ROAD CONSTRUCTION NEXT ---- MILES	E-2
	1	4	4		E-6

RAMP

IDENTIFICATION	NUMBER OF SIGNS	SIZE		TEXT	FOR SIGN DETAIL, SEE STANDARD OR SHEET NUMBER
		WIDTH	HEIGHT		
	AS REQUIRED	4	4	LEFT LANE CLOSED AHEAD	E-8
	AS REQUIRED	18"	8"	RIGHT	E-8
	AS REQUIRED	4	4		E-6

SIGN NOTES: TRAFFIC SIGNS SHOWN ON THIS SHEET ARE TO BE SUBSIDIARY TO ITEM 641, TRAFFIC CONTROL. ADDITIONAL SIGNS, IF REQUIRED, THAT ARE NOT DETAILED WILL BE PAID AS ITEM 675.20 OR 675.25 AS DIRECTED BY THE ENGINEER.
PROJECT SIGNS AS PER STANDARD E-2 AND E-6 WILL BE REQUIRED TO ESTABLISH PROJECT LIMITS AND AS RAMP SIGNING.
SIGNS MAY BE ERECTED ON FLANGED CHANNEL STEEL POSTS OR BREAKAWAY WOODEN POSTS.

*SIZE = 3 LBS/FT - MAXIMUM



COLORS: LEGEND - BLACK (NON-REFLECTORIZED)
BACKGROUND - WHITE (REFLECTORIZED)
(SEE STANDARD SHEET E-16 FOR MATERIAL SPECIFICATIONS)

SECTION 641 TRAFFIC SIGN SUMMARY SHEET MAINLINE TRAFFIC CONTROL PLAN		SAFETY PROJECT	
SURVEYED BY	DATE	SURVEYED BY	DATE
DRAWN BY RPR	DATE 2-82	DRAWN BY RPR	DATE 2-82
TRACED BY LCO	DATE 6-82	TRACED BY LCO	DATE 6-82
PROJECT: SPRINGFIELD - HARTFORD		PROJECT: SPRINGFIELD - HARTFORD	
SHEET 20 OF		SHEET 20 OF	

NOTES:

When working at or near the exit or entrance ramps, Uniformed Traffic Officers shall be used to assist in controlling Traffic Lane closure signs shall be installed on entrance ramps.

Exit ramps shall have traffic lanes delineated with 28" cones to indicate desired vehicle path. Taper lengths shall be at least 320 feet. Cone spacing shall be 40 feet. Cones shall be weighted at the base to prevent overturning and kept clean. Signs H-1 and H-3 will be in conformity with Standard E-2. All others will be moveable and will be removed during non-working hours.

* During periods of poor visibility, steady burn yellow lights mounted on Channelizing Devices will be used in place of cones.

All signs will be placed before any work is begun or equipment put on roadway.

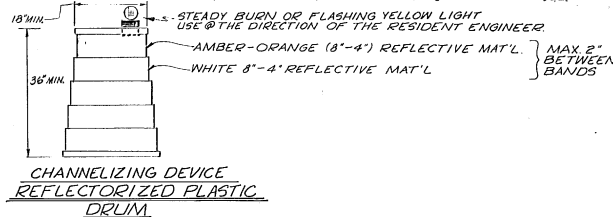
Contractor shall have Channelizing Devices and signs for left side closure and right side closure on project before starting construction.

Work crews' private vehicles will not be parked in or around working area. Contractor will provide parking for work crews' vehicles off project.

Uniformed Traffic Officers will park their vehicles on the shoulder away from traffic.

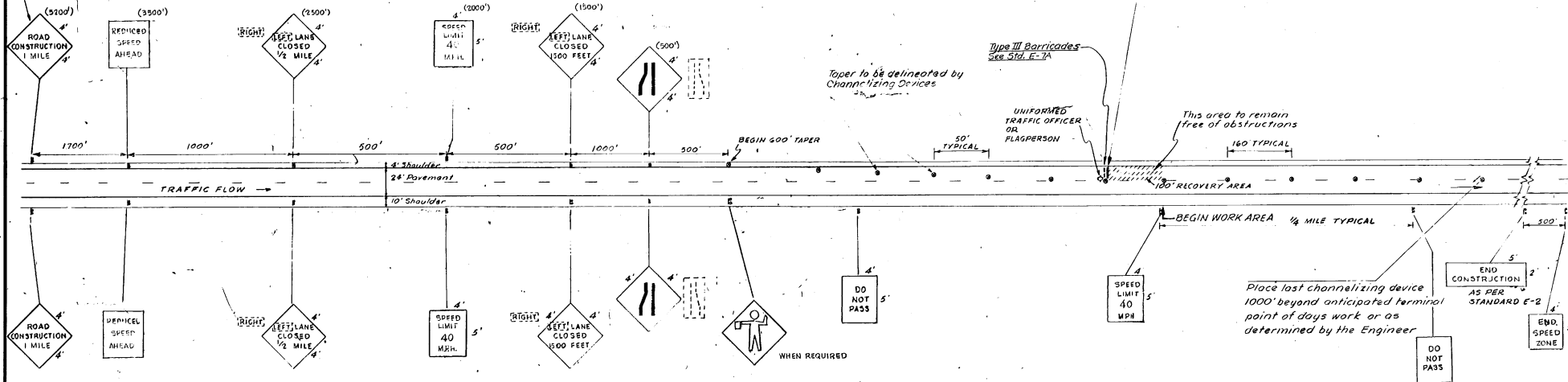
Existing speed limit signs in reduced speed area will be covered during construction.

Channelizing devices other than cones or type III barricades (quad) will be allowed as long as they conform to the MUTCD and are approved for use by the Resident Engineer.



Flashing Arrow Board (48"x96" minimum size) To be placed at end of 600' taper. The flashing arrow shall be mounted on a breakaway or yielding system.

See Special Provisions for additional information on flashing arrow board



"SPEED LIMIT 40" to be installed at 1/2 mile increments for entire work area. "DO NOT PASS" signs will be erected immediately in advance of, and throughout, the length of the work area, halfway between adjacent speed limit signs.

Refer to Project Special Provisions for speed zone enactment. Refer to Uniform Traffic Control Devices Manual for tapers not in the speed zone area.

The "SPEED LIMIT 40", "DO NOT PASS" and "END SPEED ZONE" signs shall be located to the left hand side of the road when work is being done on the right hand lane.

The "SPEED LIMIT 40" and other related signs shall be removed or covered when work is not in progress.

NOT TO SCALE

DATUM	_____
VERTICAL	_____
HORIZONTAL	_____

REV. 12/4/84 CHANGED SIGN SEQUENCE, SPACING, ADDED CHAN. DEVICE.
REV. 3/21/84 NOTES ADDED RE SUBSTITUTION FOR BARRICADES.

SPRINGFIELD - HARTFORD	
MAINLINE TRAFFIC CONTROL PLAN	
SURVEYED BY _____	DATE _____
DRAWN BY SHM	DATE 10/82
TRACED BY _____	DATE _____
PROJ. NO IRO91-I(48)	
SHEET 21 OF	

GENERAL NOTES AND DETAILS SHEET

TRAFFIC ITEMS

Locations of signs etc. shown by mile marker are approximate in all cases.

Sign and/or post sizes found at time of construction may vary from plan information due to maintenance replacement etc. When payment is contingent on existing size or location all measurements should be verified in the field by the Resident Engineer.

Sign post lengths are not indicated on the sign summary sheets. The proper type and size of post for each location is shown by an X in the appropriate column. The Resident Engineer will determine the length of post required for each sign installation site. Refer to Std. Shts. E-23 thru E-29 for sign clearance and installation details.

SALVAGE SIGNS - All existing signs are to be examined by the Resident Engineer and the Contractor prior to commencing work on project. At that time the Resident Engineer may direct the Contractor to use a new sign in place of a salvage sign if, in his opinion, the salvage sign is not in adequate condition to warrant re-use. Payment for such replacement will be at the contract unit bid price for Type "A" or Type "B" signs.

All signs found suitable for salvage and re-use on the project shall be removed from their mounting, transported and stored with sufficient care to insure protection of the sign face. Any sign indicated for salvage which, in the opinion of the Resident Engineer, is rendered unsuitable for re-use thru mishandling shall be replaced at the contractor's expense.

Salvage signs shall be thoroughly cleaned prior to re-erection. Payment for cleaning salvage signs to be subsidiary to other items.

Type "A" signs at interchanges and rest areas will be secured with "Vandalproof" fastenings of a type approved by the Agency of Transportation. "Stop" signs (with or without "A" or "B" assemblies) shall be installed as per Std. Sht. E-29 & Detail Sheet # of "Wrong Way" signs on ramps should be placed 250' from the intersecting roadway.

All signs of entrance gores to be checked for proper clearance per Std. Sht. E-21. Non-conforming signs will be repositioned to obtain proper horizontal clearance. Payment for work will be as for Salvage Sign if no other pay item is indicated. New posts may be required. Where gore slope edging is removed signs will also be checked for vertical clearance and may require vertical repositioning; payment to be subsidiary to Traffic Signs, Section 675.

Signs noted as "drill" are to have the posts drilled as per Std. Sht. E-25 to increase yielding capability under impact. Drilling to be performed as subsidiary to Traffic Signs, Section 675.

TYPE I DELINEATORS should be placed on the outside of ramp curves at the spacing shown on the chart and placed at 100' spacing on tangent on the right side of the ramp.

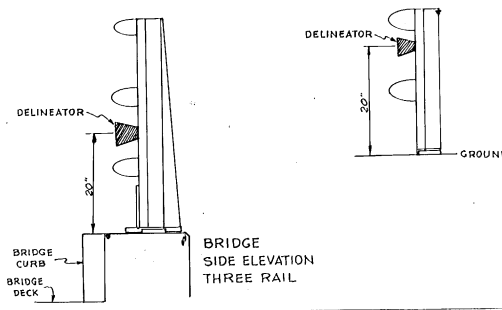
SUGGESTED SPACING FOR HIGHWAY DELINEATORS ON HORIZONTAL CURVES

Radius of Curve (in feet)	Spacing on Outside of Curve (in feet)	Approx. Speed
50	20	
150	30	25 M.P.H.
200	35	
250	40	30 M.P.H.
300	45	
400	50	40 M.P.H.
500	55	
600	60	
700	65	50 M.P.H.
800	70	
900	75	
1000	80	
TANGENT	100	

TYPE III DELINEATORS shall begin at the "Wrong Way" signs located on the off ramp and extend every 50' to a point not less than 25' from the intersecting roadway. The "Wrong Way" signs are usually 250' from the intersecting roadway.

Final placement of delineators to be determined by the Resident Engineer based on Std. Sht. E-30. Spacing shown on the plans is for estimating purposes only.

DELINEATOR FOR EXISTING BRIDGE RAIL: See Std. Sht. G-1 for delineator detail. Delineator units shall be attached to the post with two self tapping screws #8 x 3/4". Payment shall be for each delineator installed. The item for payment shall be 676.15, Remove and Replace Delineator, Units (Modified). The item is modified as there are no existing delineators to remove. Amber delineators are to be mounted on the driver's left side with white delineators on the right side. Delineator spacing should be 30' and is intended to simulate the same delineation found on steel beam guard rail. The quantity of each is estimated.

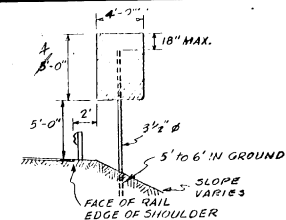


On the sign summary sheets signs shown as $\bigcirc$ or $\square$ indicate shields on rectangular panels, thus, $\square$, $\square$, and are for independent use on route marker assemblies for directional or confirmational guidance. Shields without a rectangular background are only used on Type "B" signs for route indication. Interstate shields do not have a rectangular background for either use.

Blue and green delineators on posts indicating the beginning and end of guard rail shall be removed with the guard rail removal as subsidiary to that item.

Mainline delineator and post removal quantity is based on mathematical calculation, not actual count. Removal of delineators in interchange areas is based on a field count and includes the appropriate accel. and decel. lanes and tapers with quantities shown on the interchange delineator sheet.

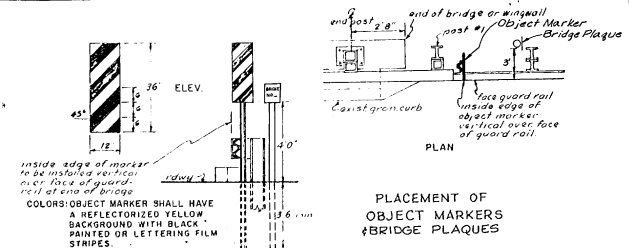
SIGN IDENTIFICATION: All new signs installed as part of this project shall be stamped on the back with Vermont Agency of Transportation initials, month and year of sign fabrication and route where sign is installed. The letters and numbers shall be 1" high and penetrate approximately 1/2 the thickness of sign material or 1/8 maximum. Example: 06/84 U.S.7



TYPICAL PLACEMENT
STORM SIGN

Sign to be mounted on post with rotatable mount. Sign will be located 2'-0" from edge of shoulder and/or face of guard-rail so sign may be rotated by vehicle mounted personnel as conditions require.

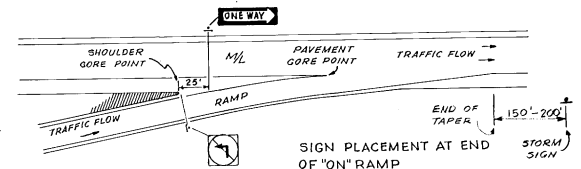
If proper mounting height cannot be obtained using salvage post (see 18" allowance at top of sign) a new post may be placed, payment as a Type "C" post. New fittings, if required, will be paid for as subsidiary to other items.



OBJECT MARKER & BRIDGE PLAQUES

MATERIALS: THE SIGN BASE MATERIAL USED FOR THIS SIGN MAY BE EITHER 5/8" HIGH DENSITY PLYWOOD OR 0.080 PLAT SHEET ALUMINUM WITH A REFLECTORIZED SHEETING BACKGROUND.

SEE SHEET 30 FOR BRIDGE PLAQUE DETAIL. SEE SHEET 24A FOR ADDITIONAL NOTES.



All removed signs, clamps, and posts which are not indicated for salvage and reuse on the project will be carefully stockpiled in one place for retrieval by State Forces.

ALL SIGNS TO BE REINSTALLED IN THEIR EXISTING LOCATION UNLESS OTHERWISE INDICATED.

VISIBILITY REQUIREMENTS: Unobstructed sight lines of 1500' on Interstate Rtes and 500' on U.S. and State Rtes. must be provided for signs. Any necessary removal of obstructing vegetation shall be paid for as subsidiary to other items.

GENERAL NOTES & DETAILS

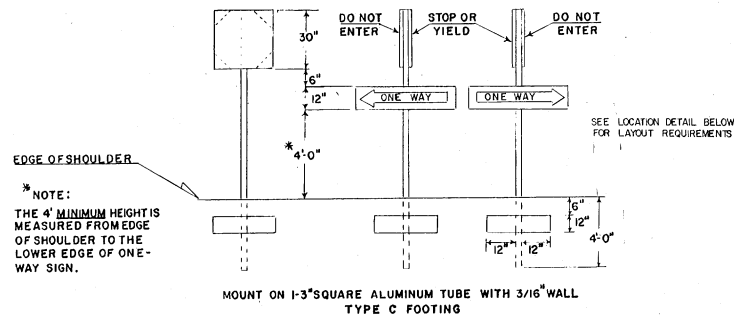
SPRINGFIELD-HARTFORD

SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY _____ DATE _____

PROJ. NO. IR 091-(48)

SHEET 23 OF

"A" ASSEMBLY (STOP SIGN)
"B" ASSEMBLY (YIELD SIGN)



REGULATORY SIGN ASSEMBLY DETAIL

Milepost markers required - 42 $\Rightarrow$ 70 N.B. & S.B. Refer to Std. Sht. E-31 for details. All milepost markers will show one or two digits and measure 12" x 24" or 12" x 36" respectively. Signs shall be paid as Traffic Signs, Type "A", Item 675.20. Posts shall be paid as Traffic Sign Posts, Type "A", Item 675.35 (posts @ 2 lb./ft.)

Type I, II or III delineators with or without milepost plaques or mileposts without reflectors to be paid for complete and in place as Delineators, Item 676.10. The Resident Engineer may indicate existing posts of proper length and sound condition to be salvaged and payment will be for Delineators with Salvaged Posts, Item 676.11 each, complete and in place. Refer to Std. Sht. E-30.

Milepost markers 42 $\Rightarrow$ 70 shall be placed as shown on sheet 101. Delineators w/ mile plaques shall then be placed accordingly.

NOTE 1. ALL PAVEMENT MARKING IS TO PAID FOR AS TEMPORARY PAVEMENT MARKING.

NOTE 2. THE 4" YELLOW LINE IS TO BE ON TANGENT AND IS TO INTERSECT THE ROADWAY EDGE AT THE RESULTING ANGLE. USE OF A RADIUS AT THIS EDGE LINE JUNCTION SHOULD BE AVOIDED, IF POSSIBLE.

NOTE 3. FINAL APPROVAL OF THE RESIDENT ENGINEER WILL BE NECESSARY PRIOR TO APPLYING ANY PAINT.

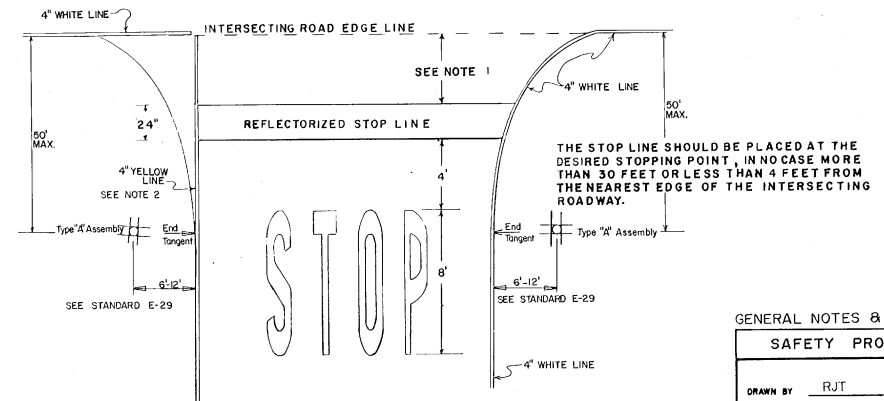
NOTE 4. ALL EXISTING MARKINGS MUST BE REMOVED AS DIRECTED, NOT PAINTED OVER.

AHEAD

NOTE:
SEE STANDARD E-50
FOR LETTERING DETAIL.

STOP

WORD MARKING LAYOUT DETAIL



PAVEMENT MARKING & SIGN LOCATION DETAILS

GENERAL NOTES & DETAILS

SAFETY PROJECT

DRAWN BY RJT DATE 5-83
TRACED BY DATE
SPRINGFIELD - HARTFORD
PROJ. NO. IR 091-1(48)
SHEET 24 OF

NOTES

- GENERAL ALL LOCATIONS OF WORK ARE BY EXISTING MILE MARKER (FOR CENTERLINE STATION). THE NEW MILE MARKER LOCATIONS ARE REFERENCED BY STATION TO THE EXISTING MILE MARKER LOCATIONS IN THE MILE MARKER LOCATION TABLE (SEE INDEX OF PLANS). THESE LOCATIONS ARE SUBJECT TO FINAL APPROVAL BY THE RESIDENT ENGINEER.
- GENERAL ALL WORK SHALL BE LAID OUT IN THE FIELD SUFFICIENTLY IN ADVANCE OF INSTALLATION TO ALLOW FOR APPROVAL BY THE RESIDENT ENGINEER.
- SIGNS ALL EXIST'G MILE MARKERS, MILE POSTS & DELINEATORS SHALL REMAIN IN PLACE UNTIL ALL OTHER WORK INCLUDING NEW DELINEATION & MILE MARK PLACEMENT IS COMPLETE. AFTER ALL OTHER WORK IS COMPLETE, EXIST'G DELINEATORS, MILE POSTS & MILE MARKERS ARE TO BE REMOVED. THE REMOVED UNITS SHALL BE STOCKPILED IN DESIGNATED AREAS FOR PICK UP BY THE STATE FORCES.
- SIGNS GENERALLY, ALL STATE OWNED SIGNS & POSTS THROUGHOUT THE PROJECT ARE TO BE REMOVED & STOCKPILED AT DESIGNATED LOCATIONS FOR PICK UP BY STATE FORCES. EXCEPTIONS WILL BE NOTED ON THE PLANS. IN THE SPECIAL PROVISIONS OR INDICATED BY THE RESIDENT ENGINEER. ANY SIGNS & POSTS EXISTINGLY REMOVED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW UNITS @ THE CONTRACTOR'S EXPENSE.
- SIGNS MILE POST MARKERS WHICH FALL WITHIN THE AREAS OF BRIDGE RAIL, SHALL BE MOUNTED TO THE TOP RAIL MOUNT. SHALL BE SIMILAR TO THAT SHOWN ON STD SHEET E-32. AS APPROVED BY THE RESIDENT ENGINEER. PAYMENT WILL BE AS FOR A STANDARD GROUND MOUNTED MILE POST.
- SIGNS EXIST'G BRIDGE RAILING WHICH IS TO REMAIN WILL REQUIRE NEW OR REPLACEMENT DELINEATORS. INSTALLATION WILL BE @ THE LOCATIONS SHOWN ON STD SHEET SB-R5-70. SCREENS SHALL BE 18" X 34" SELF TAPPING STAINLESS STEEL. PAYMENT WILL BE UNDER ITEM 670.15.
- SIGNS BLUE & GREEN DELINEATORS @ THE ENDS OF GUARD RAIL SHALL NOT BE INSTALLED IN THIS CONTRACT. REMOVAL OF EXIST'G BLUE & GREEN DELINEATORS WILL BE CONSIDERED SUBSIDIARY TO PAY ITEM 202.40, REMOVAL & DISPOSAL OF EXIST'G GUARD RAIL.
- SIGNS ALL STORM SIGN POSTS & MOUNTING HARDWARE ARE TO BE SALVAGED & REUSED @ EXIST'G OR NEW LOCATIONS AS SHOWN ON THE PLANS. IF NEW POSTS & FITTINGS ARE NEEDED, THEY SHALL BE PAID FOR AS A TYPE 'C' POST.
- SIGNS IT IS INTENDED TO ADD OR IMPROVE PAVEMENT MARKINGS GENERALLY FROM THE EXIT/ENTRANCE RAMP GORE TO THE SIDE ROAD INTERSECTIONS. PAYMENT WILL BE MADE UNDER ITEM 640.00. TEMPORARY PAVEMENT MARKINGS LAYOUT WILL BE AS SHOWN ON THE PLANS, STD SHEET E-50 & MISC. DETAIL SHEET.
- SIGNS ALL LOCALLY OWNED SIGNS MOUNTED ON STATE OWNED SIGN ASSEMBLIES SHALL BE CAREFULLY REMOVED & STORED FOR RETURN TO THE OWNER BY THE STATE.
- SIGNS IN REST AREAS SIGNS MAY BE MOUNTED ON LIGHT POLES WHERE POSSIBLE. MAXIMUM SIGN SIZE SHALL BE 3' MAXIMUM DIMENSION IN HORIZONTAL OR VERTICAL DIRECTION. PAYMENT SHALL BE FOR A TYPE 'A' SIGN PLUS ONE SQUARE FOOT FOR MOUNTING HARDWARE.
- GUARD RAIL GUARD RAIL LOCATIONS ARE TO BE VERIFIED IN THE FIELD.
- BRIDGES THE EXIST'G BRIDGE RAILING ON BRIDGES 33, 39 & 40 IS TO REMAIN ONLY THE APPROACH RAILING IS TO BE WORKED ON AS SHOWN ON THE PLANS.
- BRIDGE PLAQUES SHALL BE MOUNTED ON A 20 LB FT TYPE 'A' POST. MOUNTING HEIGHT SHALL BE THE SAME AS A TYPE 'I' DELINEATOR. MOUNTING LOCATION SHALL BE @ THE RIGHT ROADSIDE EDGE @ OR NEAR THE BEGINNING OF THE BRIDGE IN THE DIRECTION OF TRAVEL (SEE SHEET 23). PAYMENT SHALL BE UNDER TRAFFIC SIGNS, TYPE A, ITEM 675.20.

SEEDING

TURF ESTABLISHMENT SHALL CONTAIN THE FOLLOWING:

ITEM 651.10 SEED (lbs.)

WEIGHT (%)	lbs./Ac.	NAME	PURITY (%)	GERM. (%)
3.33	2	CROWN VETCH	97	75
20.00	30	CREeping RED FESCUE	98	85
2.33	3	TIMOTHY	99	85
10.67	10	PERENNIAL RYE GRASS (VAR PENNINE)	95	85
8.33	5	ALPACA (VAR SAGANAC)	99	85
8.33	3	BIRDFOOT TREFOIL (VAR EMPIRE)	98	85
5.00	3	HIGHLAND BENTGRASS	92	85
100.00	60			

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

ITEM 651.15 FERTILIZER (lbs.)

NITROGEN 10%, PHOSPHOROUS 20%, POTASH 10%; APPLICATION SHALL BE @ THE RATE OF 200 lbs./Ac.

ITEM 651.20 AGRICULTURAL LIMESTONE (TON)

APPLICATION SHALL BE @ THE RATE OF 2 TONS PER ACRE OVER THE AREAS TO BE SEED.

ITEM 651.25 HAY MULCH (TON)

HAY MULCH SHALL BE APPLIED @ THE RATE OF 2 TONS PER ACRE, OR AS MODIFIED BY THE RESIDENT ENGINEER. EMULSIFIED ASPHALT SHALL BE USED TO ANCHOR THE HAY. APPLICATIONS SHALL BE @ THE RATE OF 200 GALLONS PER ACRE OR AS MODIFIED BY THE ENGINEER.

GENERAL NOTES

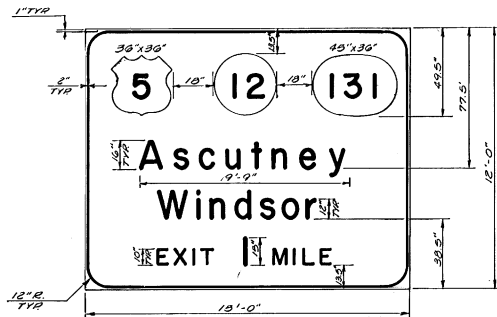
VERMONT AGENCY OF TRANSPORTATION

**SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1 (48)**

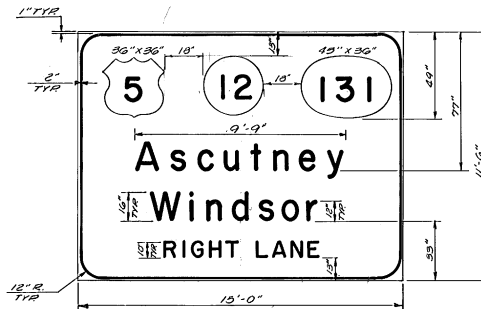
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 24A OF

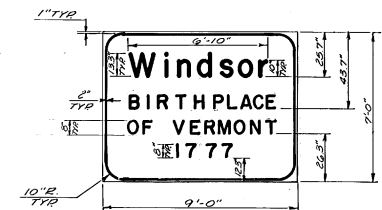




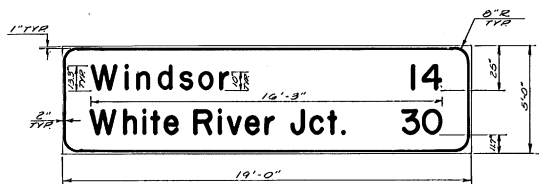
TEXT NO. 8 N.B.
TEXT NO. 34 S.B.



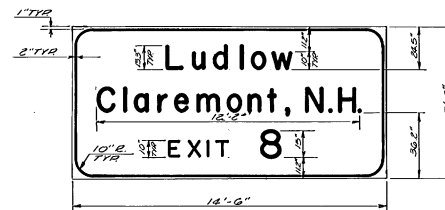
TEXT NO. 25 S.B.



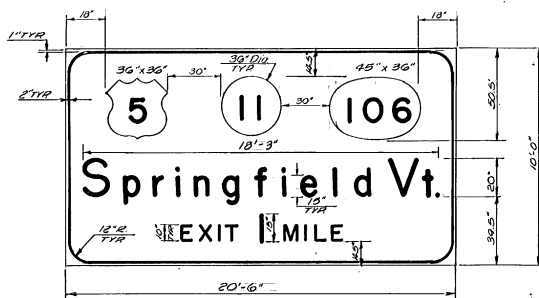
TEXT NO. 6 N.B.



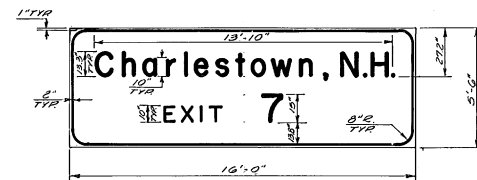
TEXT NO. 1 N.B.



TEXT NO. 10 N.B.
TEXT NO. 32 S.B.



TEXT NO. 6 S.B.



TEXT NO. 4 S.B.

NOTES

MATERIALS FOR GUIDE AND REST AREA SIGNS.
SIGN BASE MATERIAL: Sign base material shall be compatible with existing mounting hardware and may be any of the following:
A. Acrylic Overlay Plywood, 3/4" minimum thickness
B. Extruded Aluminum Panels
C. Formed Galvanized Steel Panels
TEXT, BORDER, SYMBOLS AND BACKGROUND shall be high intensity reflective sheeting.

COLORS
Signs shall have a white text on green background unless otherwise noted. The green shall conform with the Standard Color Tolerance Charts as approved by the U.S. Department of Transportation, FHWA. Route symbols shall be their standard color. Rest Area signs shall have a blue background.

LETTERING - See Standard Sheet No. E-14

DESIGN - See Standard Sheet No. E-14

SPECIFICATIONS - See Standard Sheet No. E-14 (except see above note Re: text, border, etc.)

SIGN PANEL DETAILS

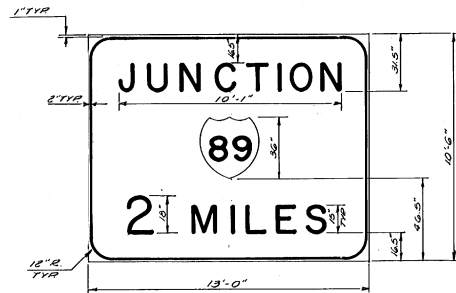
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD — HARTFORD
IR 91 — I (48)

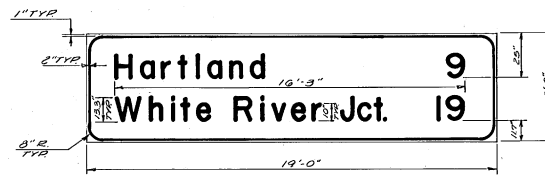
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 25 OF

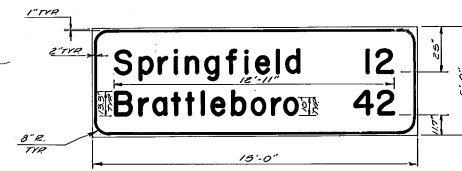




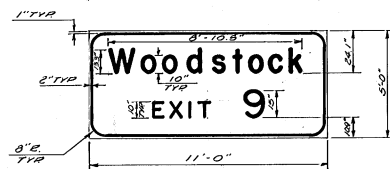
TEXT NO. 75 N.B.



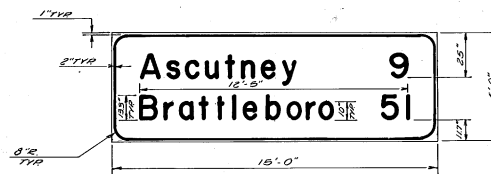
TEXT NO. 29 N.B.



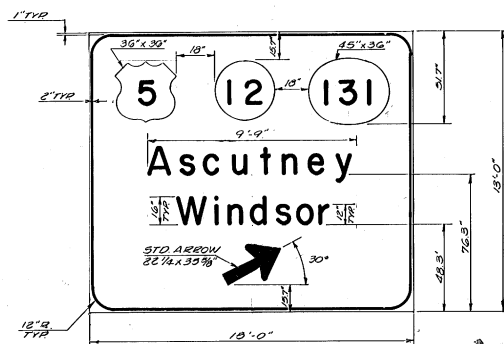
TEXT NO. 13 S.B.



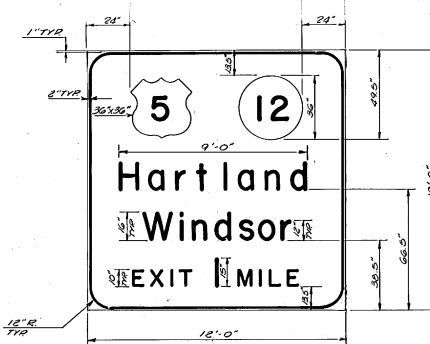
TEXT NO. 49 N.B.
TEXT NO. 66 S.B.



TEXT NO. 49 S.B.



TEXT NO. 17 N.B.



TEXT NO. 46 N.B.
TEXT NO. 68 S.B.

NOTES

MATERIALS FOR GUIDE AND REST AREA SIGNS.
SIGN BASE MATERIAL: Sign base material shall be compatible with existing mounting hardware and may be any of the following:
A. Acrylic Overlay Plywood, 3/4" minimum thickness
B. Extruded Aluminum Panels
C. Formed Galvanized Steel Panels

TEXT, BORDER, SYMBOLS AND BACKGROUND shall be high intensity reflective sheeting.

COLORS

Signs shall have a white text on green background unless otherwise noted. The green shall conform with the Standard Color Tolerance Charts as approved by the U.S. Department of Transportation, FHWA. Route symbols shall be their standard color. Rest Area signs shall have a blue background.

LETTERING - See Standard Sheet No. E-14

DESIGN - See Standard Sheet No. E-14

SPECIFICATIONS - See Standard Sheet No. E-14 (except see above note Re: text, border, etc.)

SIGN PANEL DETAILS

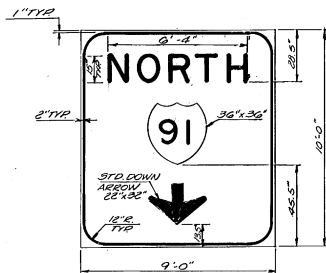
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD — HARTFORD
IR 91 — 1(48)

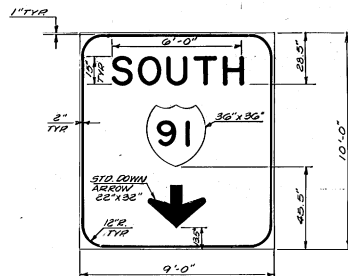
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 26 OF

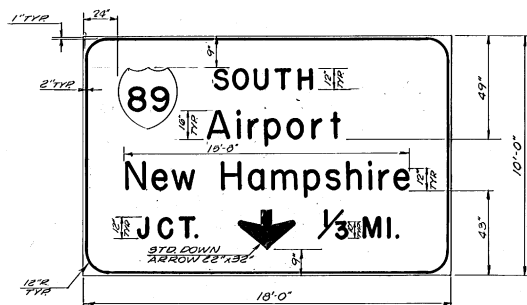




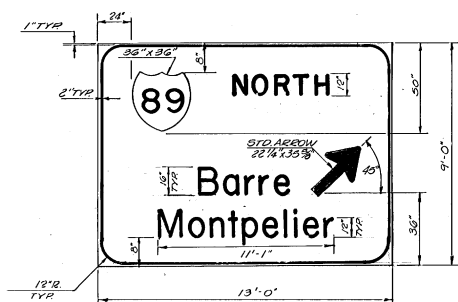
TEXT NO. 88 N.B.
95 N.B.



TEXT NO. 106 S.B.



TEXT NO. 107 S.B.



TEXT NO. 108 S.B.

NOTES

MATERIALS FOR GUIDE AND REST AREA SIGNS.
SIGN BASE MATERIAL: Sign base material shall be compatible with existing mounting hardware and may be any of the following:

- A. Acrylic Overlay Plywood, 3/4" minimum thickness
- B. Extruded Aluminum Panels
- C. Formed Galvanized Steel Panels

TEXT, BORDER, SYMBOLS AND BACKGROUND shall be high intensity reflective sheeting.

COLORS
Signs shall have a white text on green background unless otherwise noted. The green shall conform with the Standard Color Tolerance Charts as approved by the U.S. Department of Transportation, FHWA. Route symbols shall be their standard color. Rest Area signs shall have a blue background.

LETTERING - See Standard Sheet No. E-14

DESIGN - See Standard Sheet No. E-14

SPECIFICATIONS - See Standard Sheet No. E-14 (except see above note No. text, border, etc.)

SIGN PANEL DETAILS

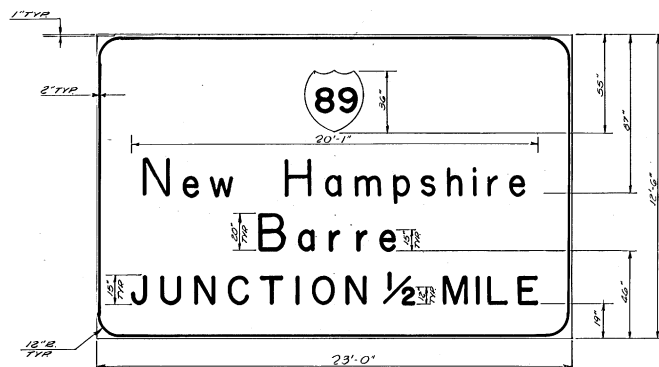
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD — HARTFORD
IR 91 — 1(48)

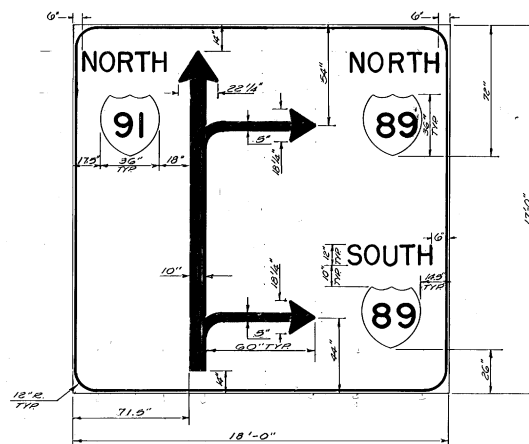
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 27 OF

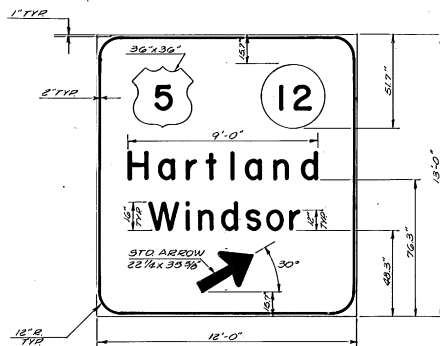




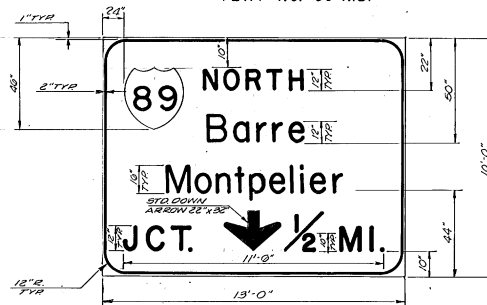
TEXT NO. 83 N.B.



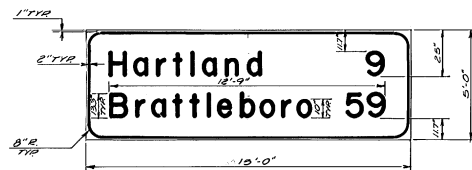
TEXT NO. 86 N.B.



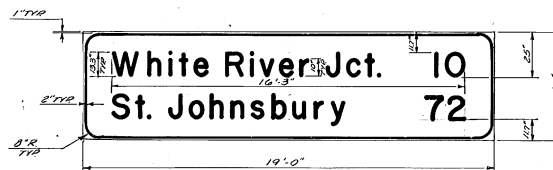
TEXT NO. 53 N.B.
TEXT NO. 64 S.B.



TEXT NO. 89 N.B.



TEXT NO. 77 S.B.



TEXT NO. 63 N.B.

NOTES

MATERIALS FOR GUIDE AND REST AREA SIGNS.
SIGN BASE MATERIAL: Sign base material shall be compatible with existing mounting hardware and may be any of the following:
A. Acrylic Overlay Plywood, 3/4" minimum thickness
B. Extruded Aluminum Panels
C. Formed Galvanized Steel Panels
TEXT, BORDER, SYMBOLS AND BACKGROUND shall be high intensity reflective sheeting.

COLORS
Signs shall have a white text on green background unless otherwise noted. The green shall conform with the Standard Color Tolerance Charts as approved by the U.S. Department of Transportation, FHWA. Route symbols shall be their standard color. Rest Area signs shall have a blue background.

LETTERING - See Standard Sheet No. E-14

DESIGN - See Standard Sheet No. E-14

SPECIFICATIONS - See Standard Sheet No. E-14 (except see above note Re: text, border, etc.)

SIGN PANEL DETAILS

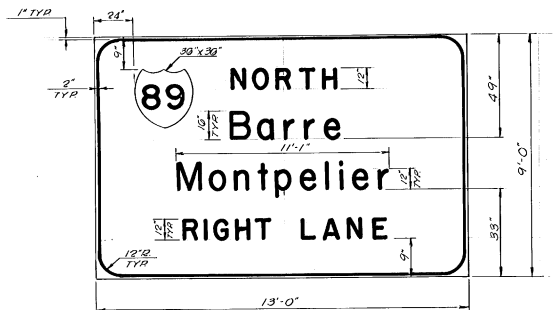
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD — HARTFORD
IR 91 - 1(48)

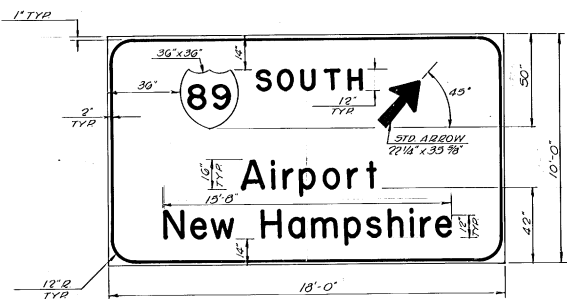
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 28 OF

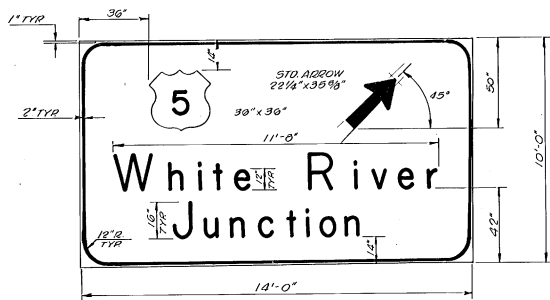




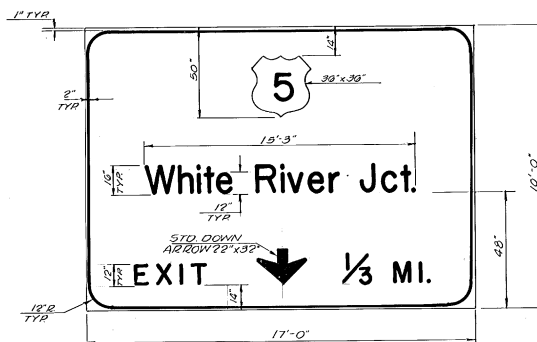
TEXT NO. 97 N.B.



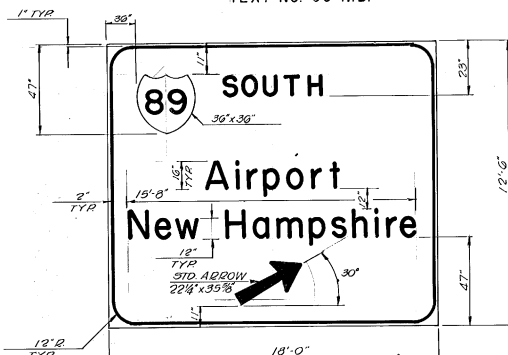
TEXT NO. 90 N.B.



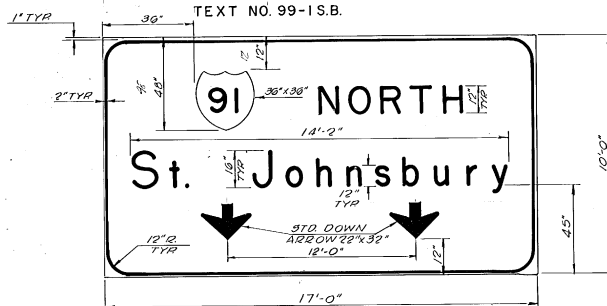
TEXT NO. 104 N.B.



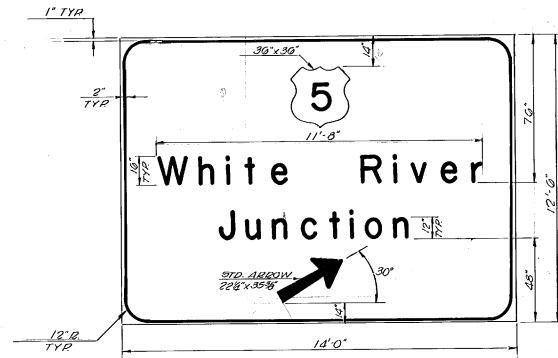
TEXT NO. 96 N.B.



TEXT NO. 99-1 S.B.



TEXT NO. 103 N.B.



TEXT NO. 108-2 N.B.

NOTES

MATERIALS FOR GUIDE AND REST AREA SIGNS.
SIGN BASE MATERIAL: Sign base material shall be compatible with existing mounting hardware and may be any of the following:
A. Acrylic Overlay Plywood, 3/4" minimum thickness
B. Extruded Aluminum Panels
C. Formed Galvanized Steel Panels

TEXT, BORDER, SYMBOLS AND BACKGROUND shall be high intensity reflective sheeting.

COLORS

Signs shall have a white text on green background unless otherwise noted. The green shall conform with the Standard Color Tolerance Charts as approved by the U.S. Department of Transportation, FHWA. Route symbols shall be their standard color. Rest Area signs shall have a blue background.

LETTERING - See Standard Sheet No. E-14

DESIGN - See Standard Sheet No. E-14

SPECIFICATIONS - See Standard Sheet No. E-14 (except see above note Re: text, border, etc.)

SIGN PANEL DETAILS

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

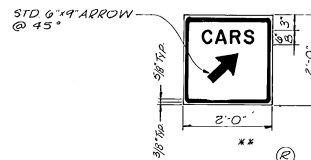
SCALE NONE DATE SHEET 29 OF



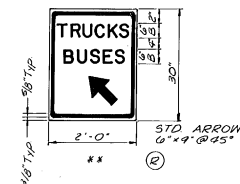
IN CHARGE OF: _____
DESIGNED BY: _____
CHECKED BY: _____

IN CHARGE OF: _____
 DESIGNED BY: _____
 CHECKED BY: _____

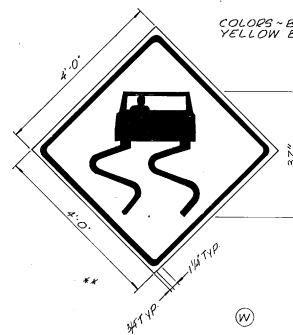
COLORS-WHITE ON BLUE (REFLECT)



COLORS-WHITE ON BLUE (REFLECT)



COLORS-BLACK ON YELLOW BACKGROUND



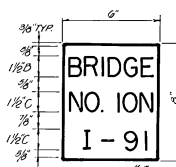
COLORS-LEGEND 1
 BORDER GREEN WHITE
 SYMBOL ON BLUE BACK
 GROUND BACKGROUND WHITE



*W-8-5



COLORS-BLACK ON YELLOW BACKGROUND



TYPICAL BRIDGE PLAQUE
 DETAIL
 COLORS-WHITE ON GREEN
 BACKGROUND (REFLECT)

LEGEND

- (G) GUIDE SIGN - SEE STANDARD SHEET E-14
- (E) REGULATORY SIGN - SEE STANDARD SHEETS E-15, E-15A, B, & C
- (W) WARNING SIGN - SEE STANDARD SHEETS E-19, E-19A & B
- (S) SERVICE SIGN - SEE STANDARD SHEET E-23

*NUMBER AND LETTER IDENTIFICATION
 CORRESPONDS TO STANDARD HIGHWAY
 SIGNS AS SPECIFIED IN THE MUTCD
 SEE SAS FOR FURTHER DETAIL.

** SIGNS @ MULTIPLE LOCATIONS

NOTE: ALL TEXT, BORDERS & BACKGROUNDS WILL
 BE REFLECTORIZED IN THE EXCEPTION OF BLACK.

SIGN PANEL DETAILS

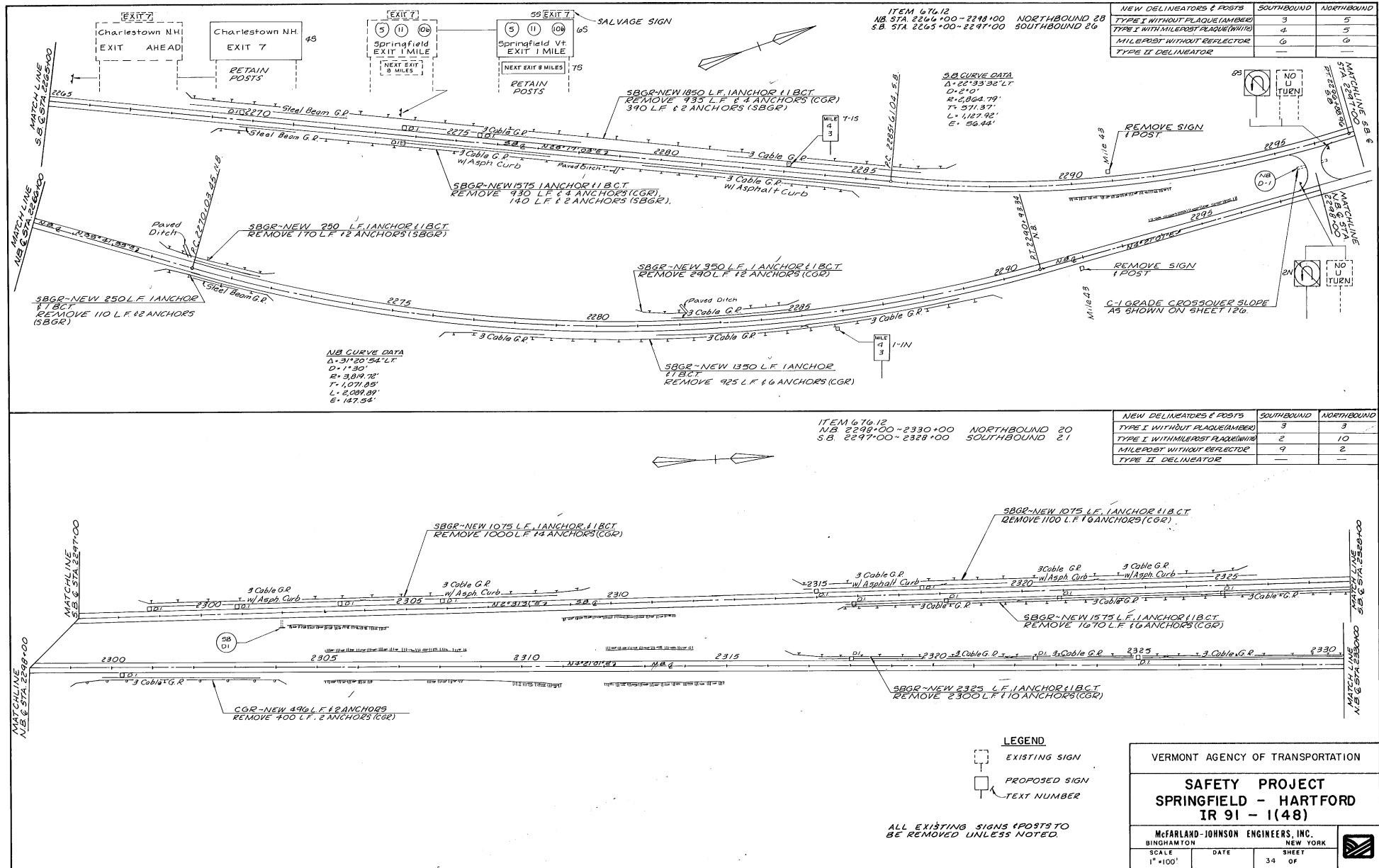
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
 SPRINGFIELD - HARTFORD
 IR 91 - I(48)

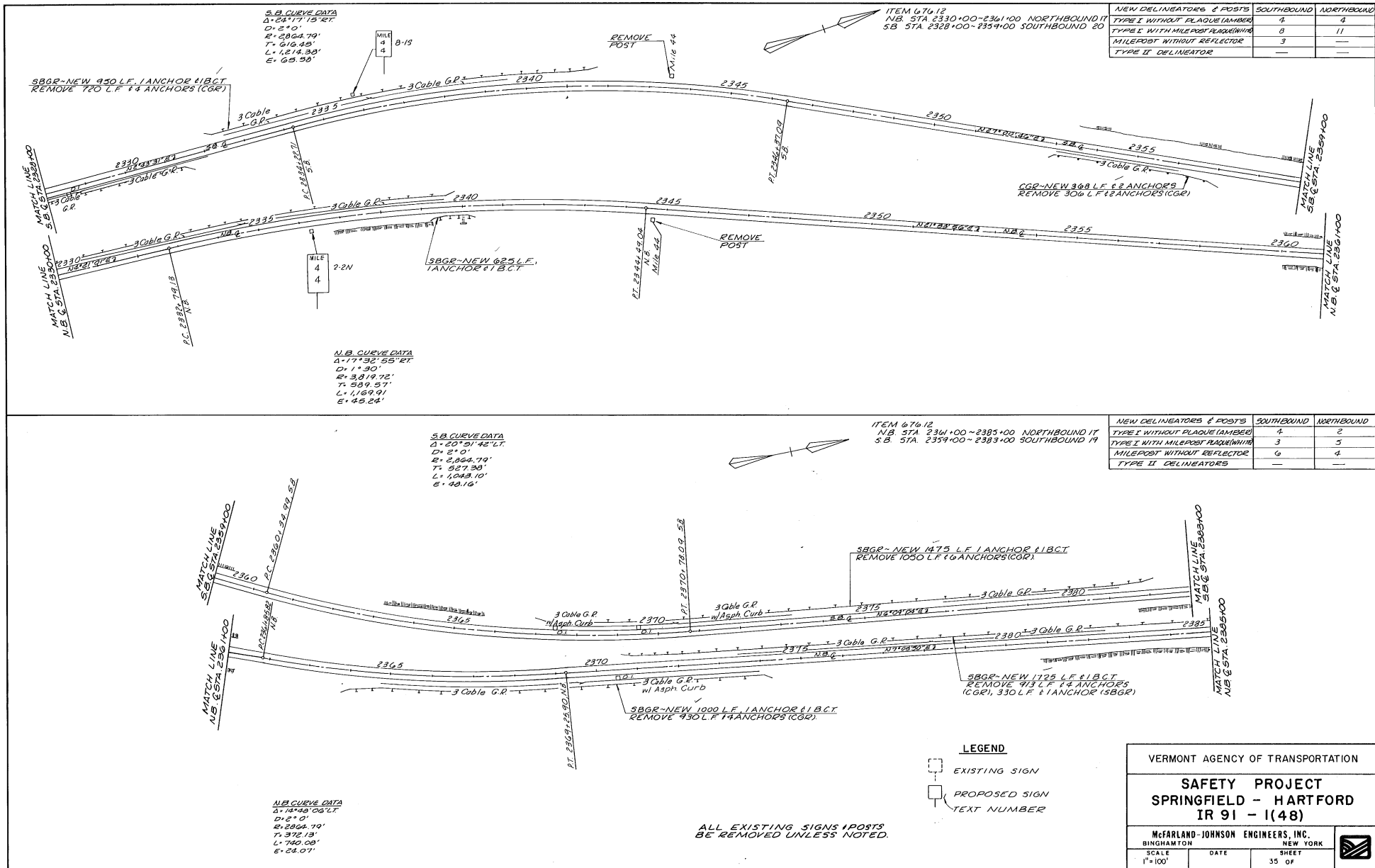
McFARLAND JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK
 SCALE: NONE DATE: JULY, 1984 SHEET: 30 OF 30



IN CHARGE OF: R.J.H.
DESIGNED BY: _____
CHECKED BY: _____



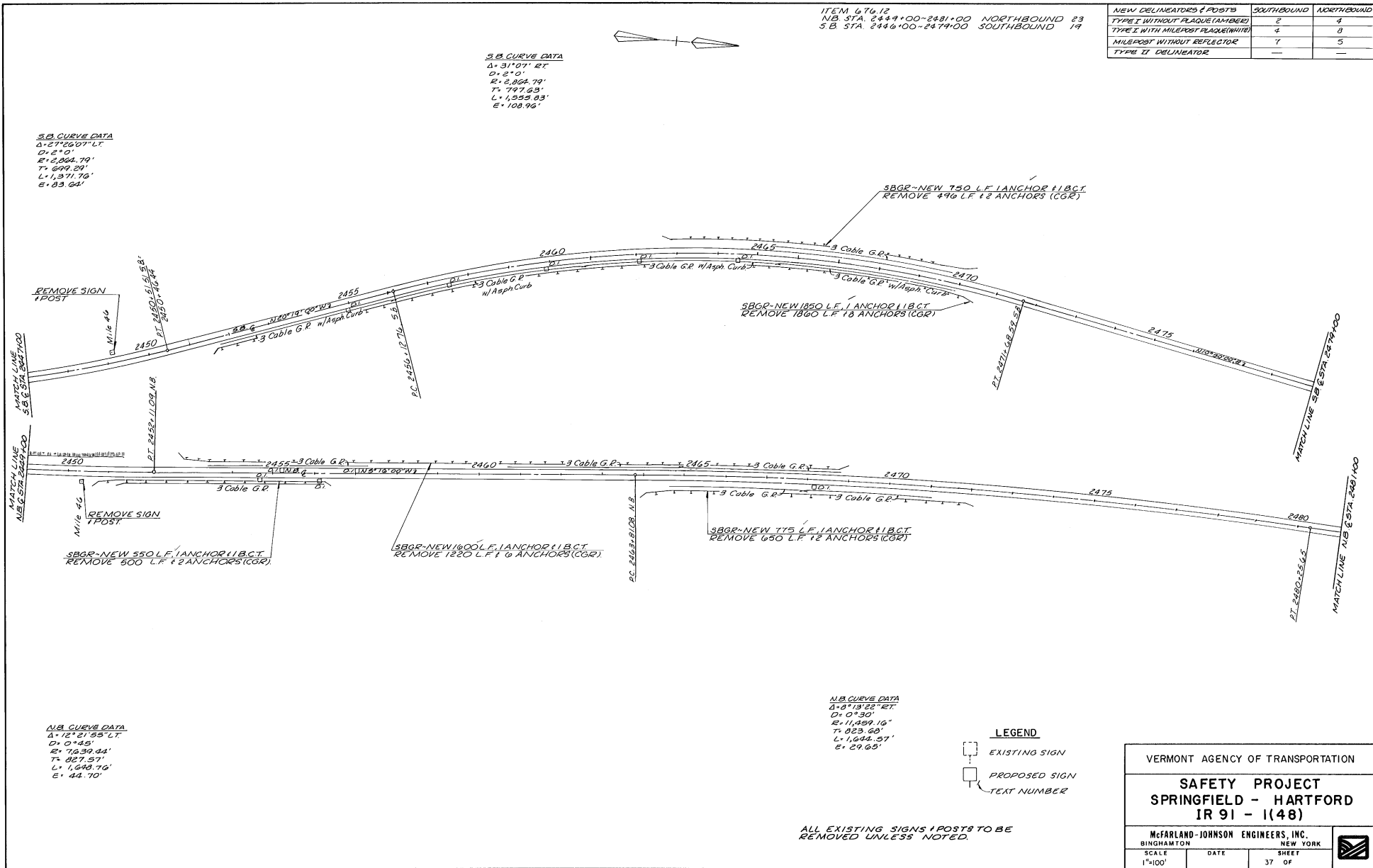
IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	4	4
TYPE I WITH MILEPOST PLaque (NH)	8	11
MILEPOST WITHOUT REFLECTOR	3	—
TYPE II DELINEATOR	—	—

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	4	2
TYPE I WITH MILEPOST PLaque (NH)	3	5
MILEPOST WITHOUT REFLECTOR	6	4
TYPE II DELINEATORS	—	—

IN CHARGE OF :
DESIGNED BY :
CHECKED BY :
DATE :



ALL EXISTING SIGNS POSTS TO BE
REMOVED UNLESS NOTED.

VERMONT AGENCY OF TRANSPORTATION

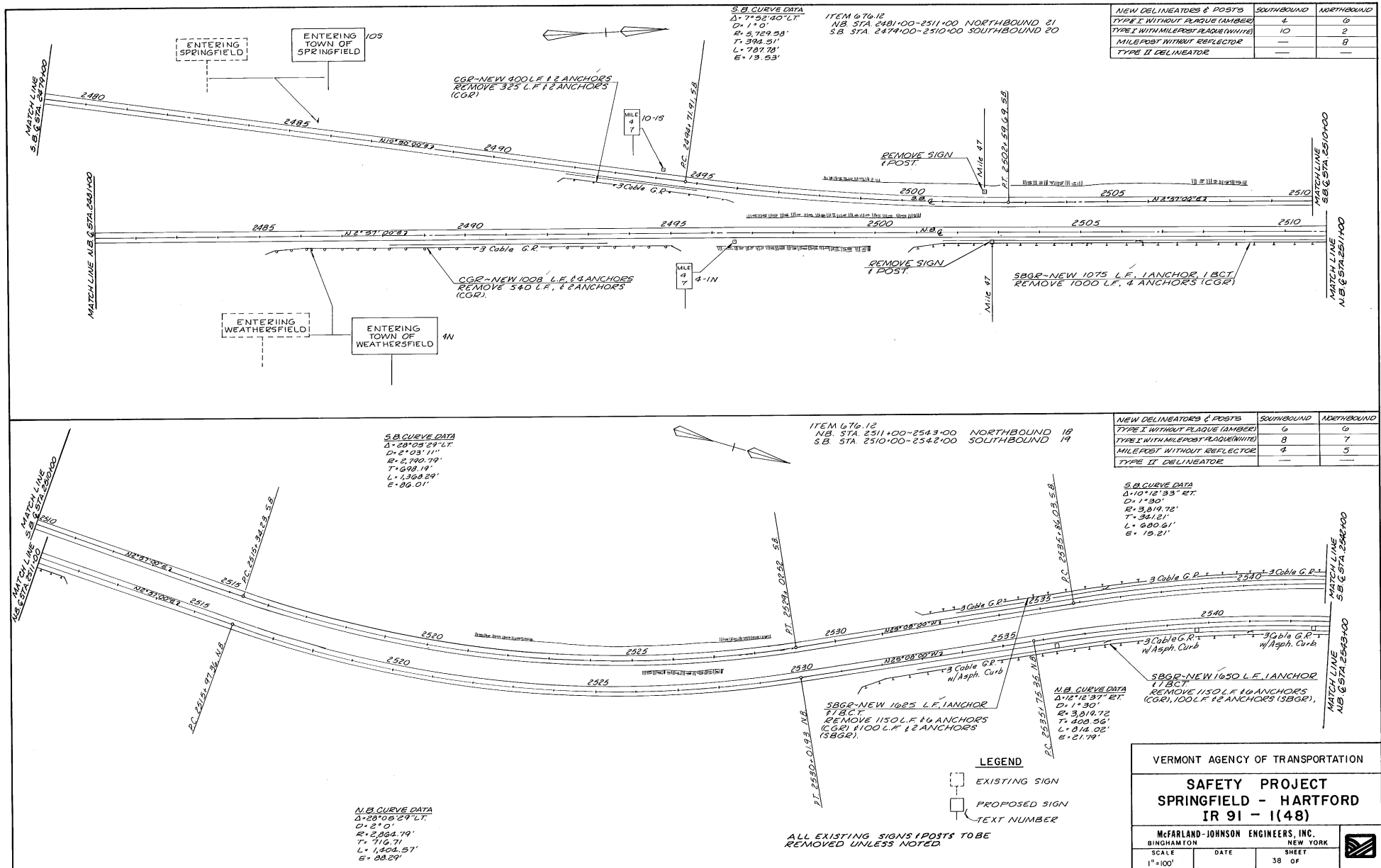
SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - I(48)

McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK

SCALE 1"=100' DATE SHEET 37 OF



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



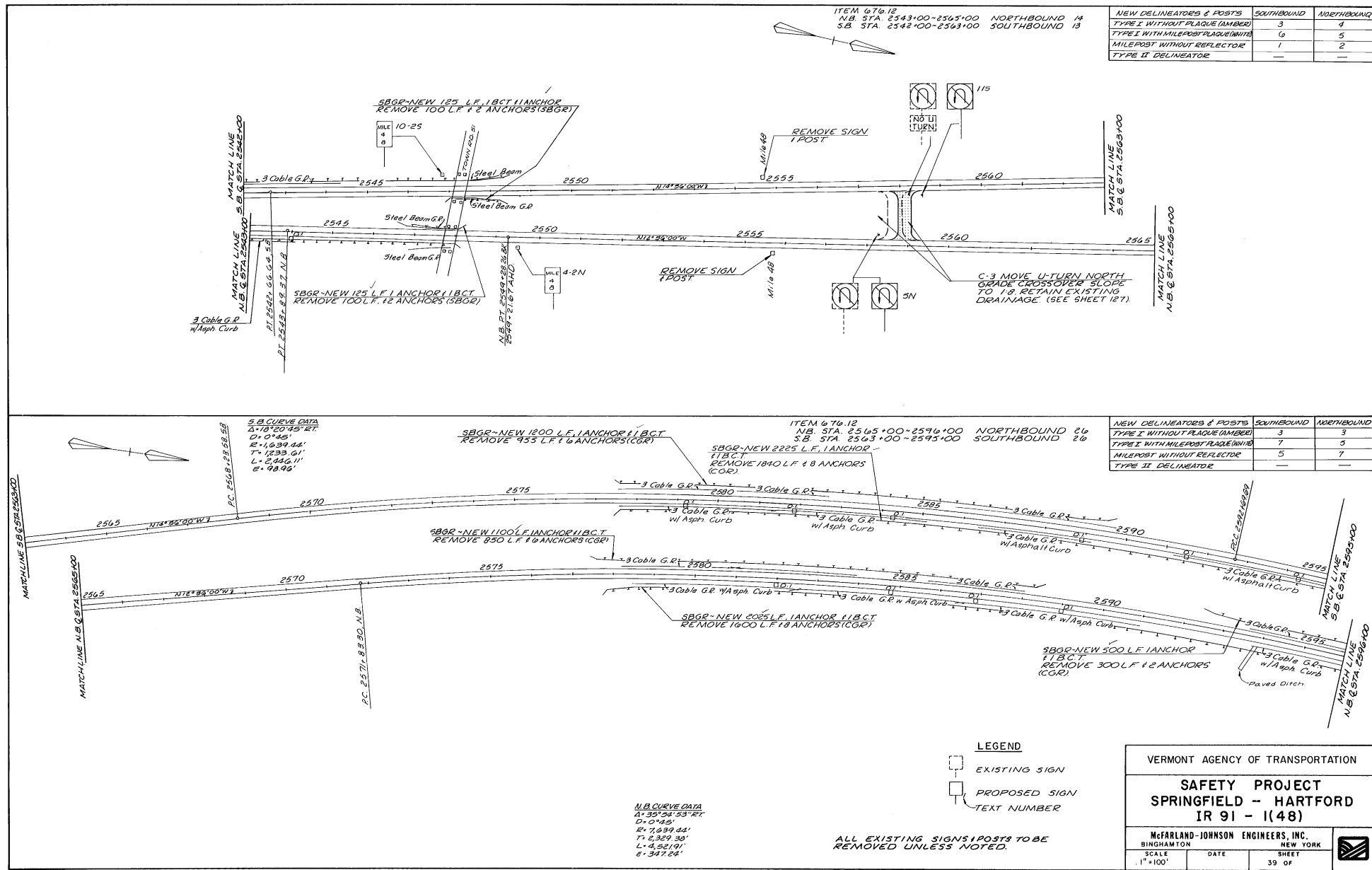
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

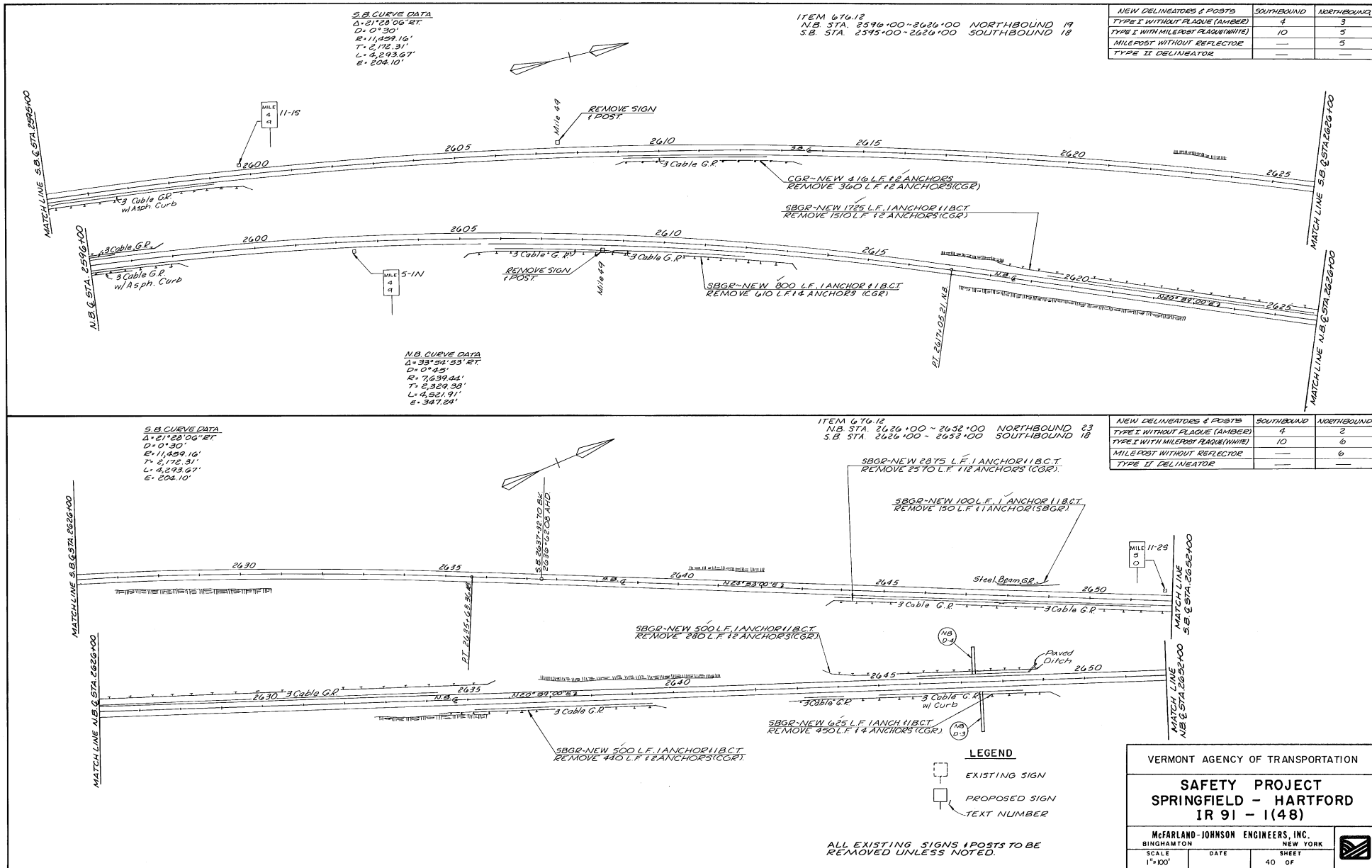
McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK
 SCALE 1"=100' DATE SHEET 38 OF



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :

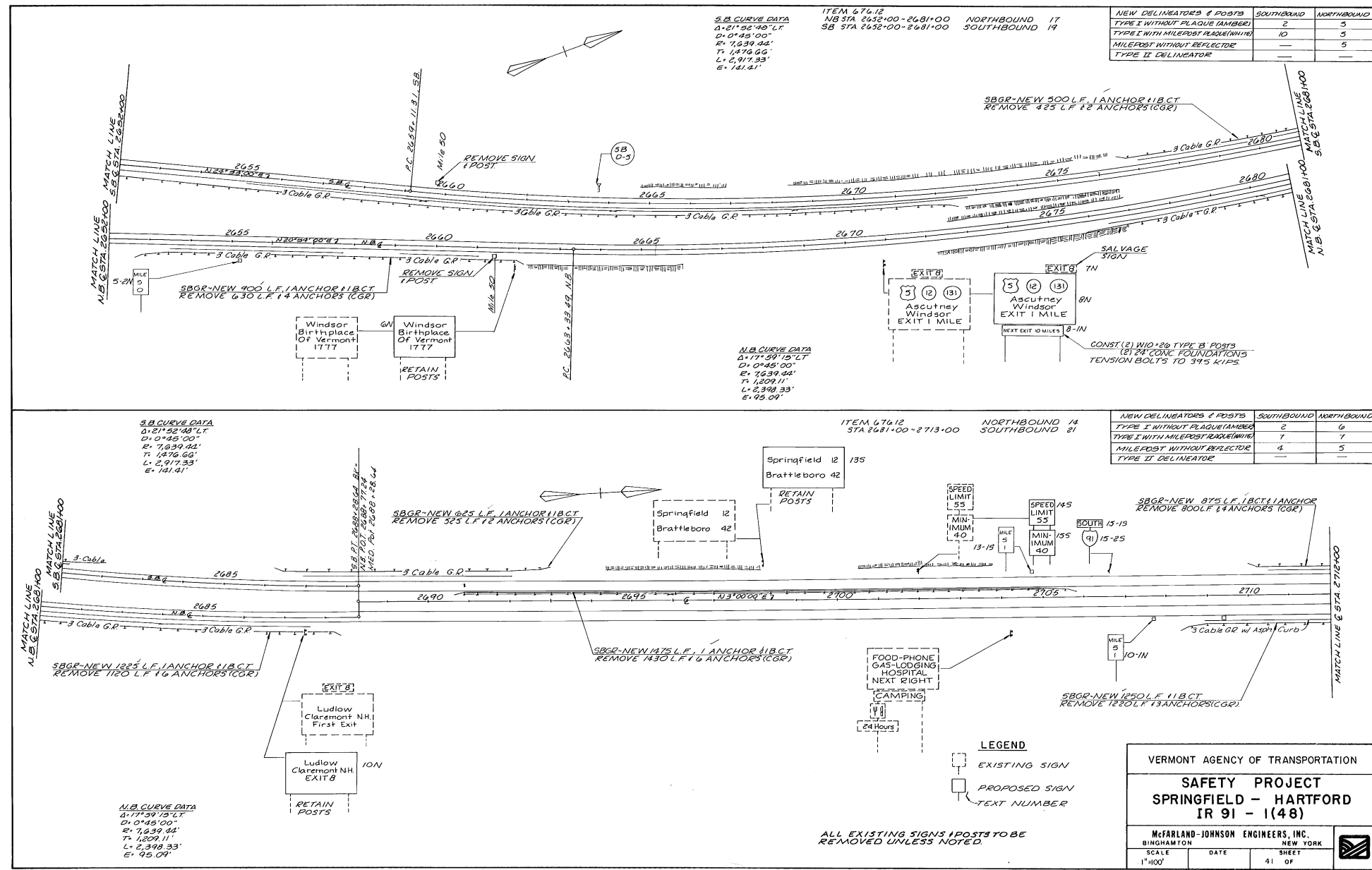


VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK
 SCALE 1"=100' DATE SHEET 40 OF

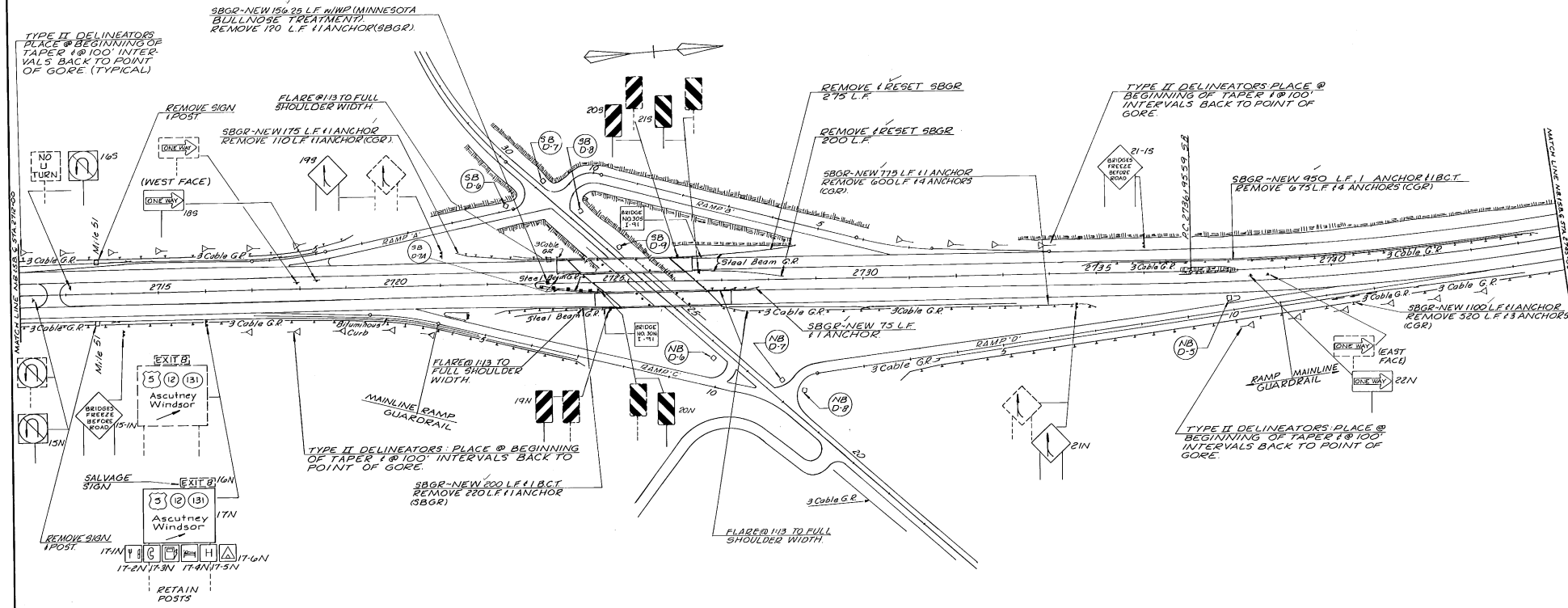
IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



ITEM 6.74.12
STA. 2712+00-2745+00

NORTHBOUND 23
SOUTHBOUND 28

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	3	5
TYPE I WITH MILEPOST PLAQUE (WHITE)	5	1
MILEPOST WITHOUT REFLECTOR	4	8
TYPE II DELINEATOR	11	11



FOR INTERCHANGE SIGNING, DELINEATORS, DRAINAGE & GUARDRAIL SEE SHEETS 73-75.

- LEGEND**
- EXISTING SIGN
 - PROPOSED SIGN
 - TEXT NUMBER

ALL EXISTING SIGNS & POSTS TO BE REMOVED UNLESS NOTED.

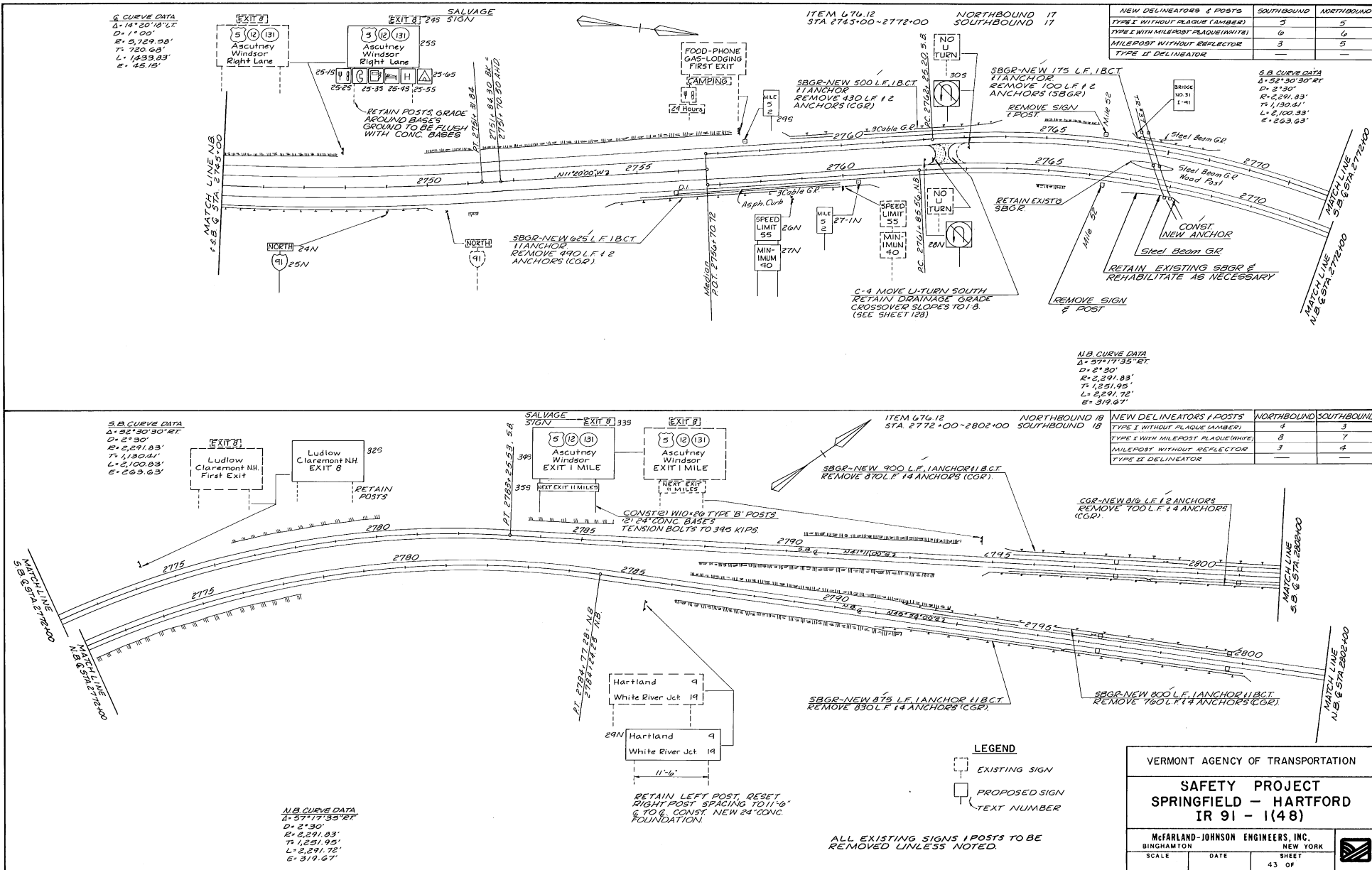
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

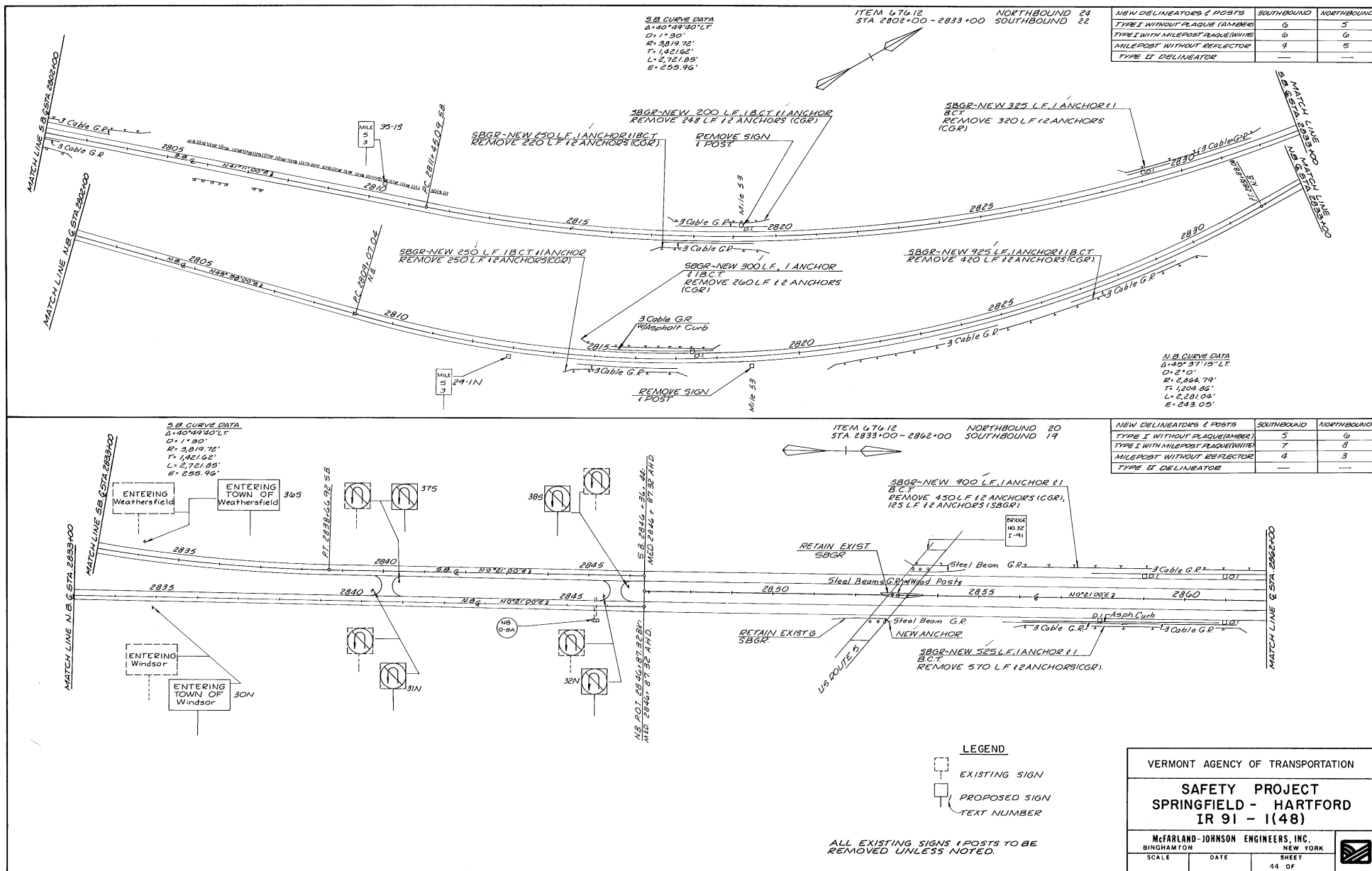
McFARLAND-JOHNSON ENGINEERS, INC.		
BINGHAMTON NEW YORK		
SCALE	DATE	
AS SHOWN	JULY, 1984	42 OF

IN CHARGE OF: _____
DESIGNED BY: _____
CHECKED BY: _____

IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



VERMONT AGENCY OF TRANSPORTATION

**SAFETY PROJECT
 SPRINGFIELD - HARTFORD
 IR 91 - 1(48)**

McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK

SCALE DATE SHEET
 44 OF



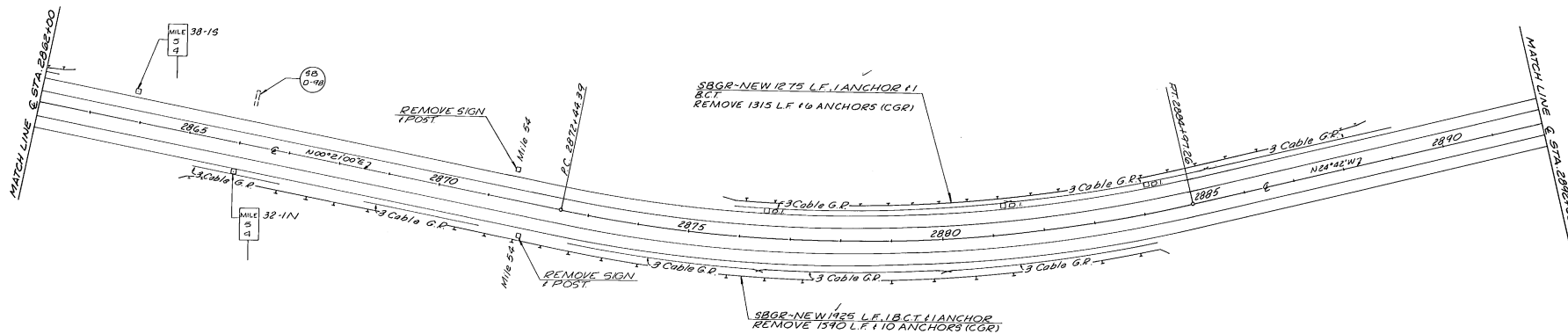
IN CHARGE OF: _____
 DESIGNED BY: _____
 DETAILED BY: _____
 CHECKED BY: _____

6 CURVE DATA
 $\Delta = 25^{\circ}03'27''$
 $D = 2^{\circ}00'$
 $R = 2,864.79'$
 $T = 636.63'$
 $L = 1,252.87'$
 $E = 69.882'$

ITEM 67412
 STA. 2862+00 - 2892+00

NORTHBOUND 21
 SOUTHBOUND 18

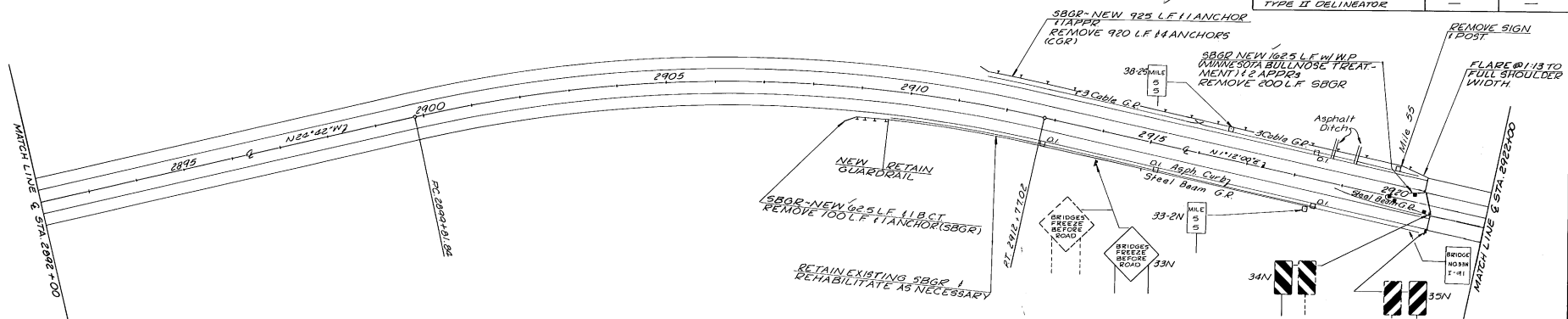
NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	0	5
TYPE I WITH MILEPOST PLAQUE (WHITE)	5	3
MILEPOST WITHOUT REFLECTOR	5	7
TYPE II DELINEATOR	—	—



ITEM 67412
 STA. 2892+00 - 2922+00

NORTHBOUND 17
 SOUTHBOUND 18

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	5	5
TYPE I WITH MILEPOST PLAQUE (WHITE)	7	6
MILEPOST WITHOUT REFLECTOR	4	5
TYPE II DELINEATOR	—	—



6 CURVE DATA
 $\Delta = 25^{\circ}04'13''$
 $D = 2^{\circ}00'$
 $R = 2,864.79'$
 $T = 636.63'$
 $L = 1,252.87'$
 $E = 69.882'$

ALL EXISTING SIGNS & POSTS
 TO BE REMOVED UNLESS NOTED

LEGEND
 [] EXISTING SIGN
 [] PROPOSED SIGN
 [] TEXT NUMBER

VERMONT AGENCY OF TRANSPORTATION

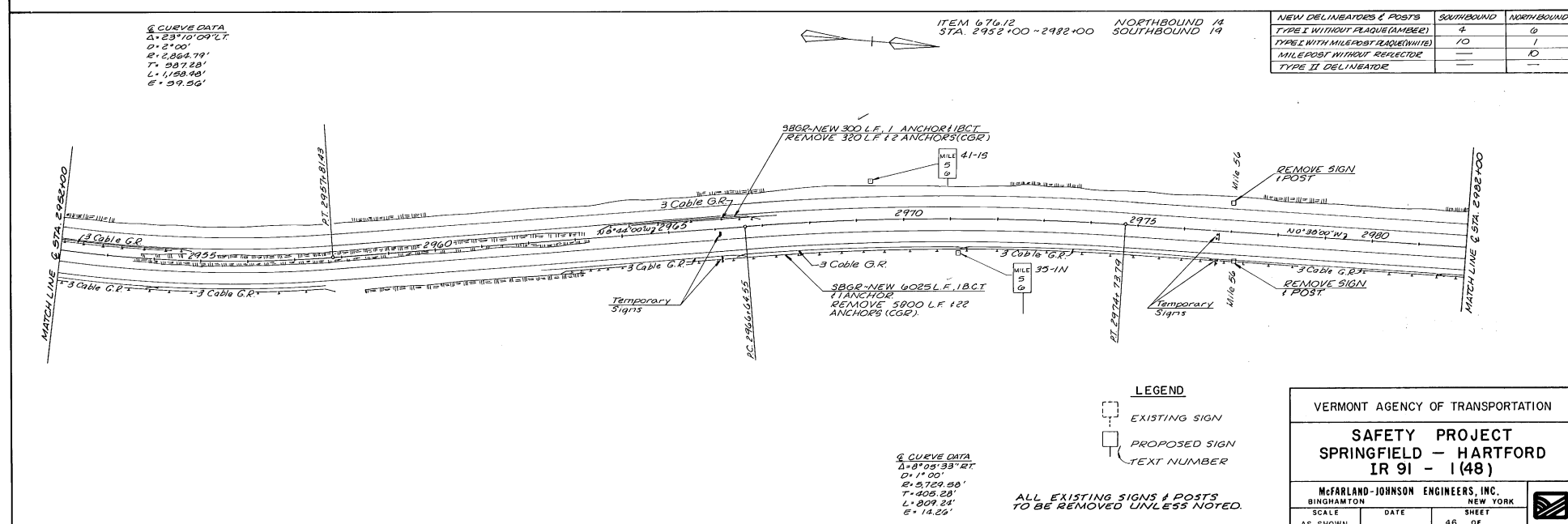
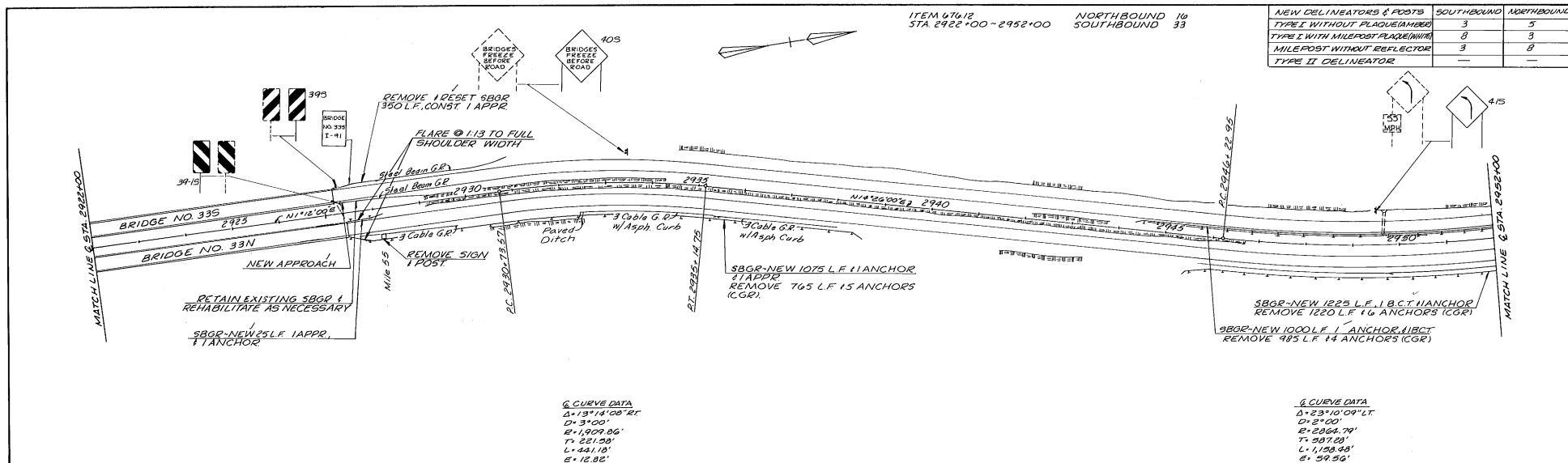
SAFETY PROJECT
 SPRINGFIELD - HARTFORD
 IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK

SCALE DATE SHEET
 45 OF



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



LEGEND
EXISTING SIGN
PROPOSED SIGN
TEXT NUMBER

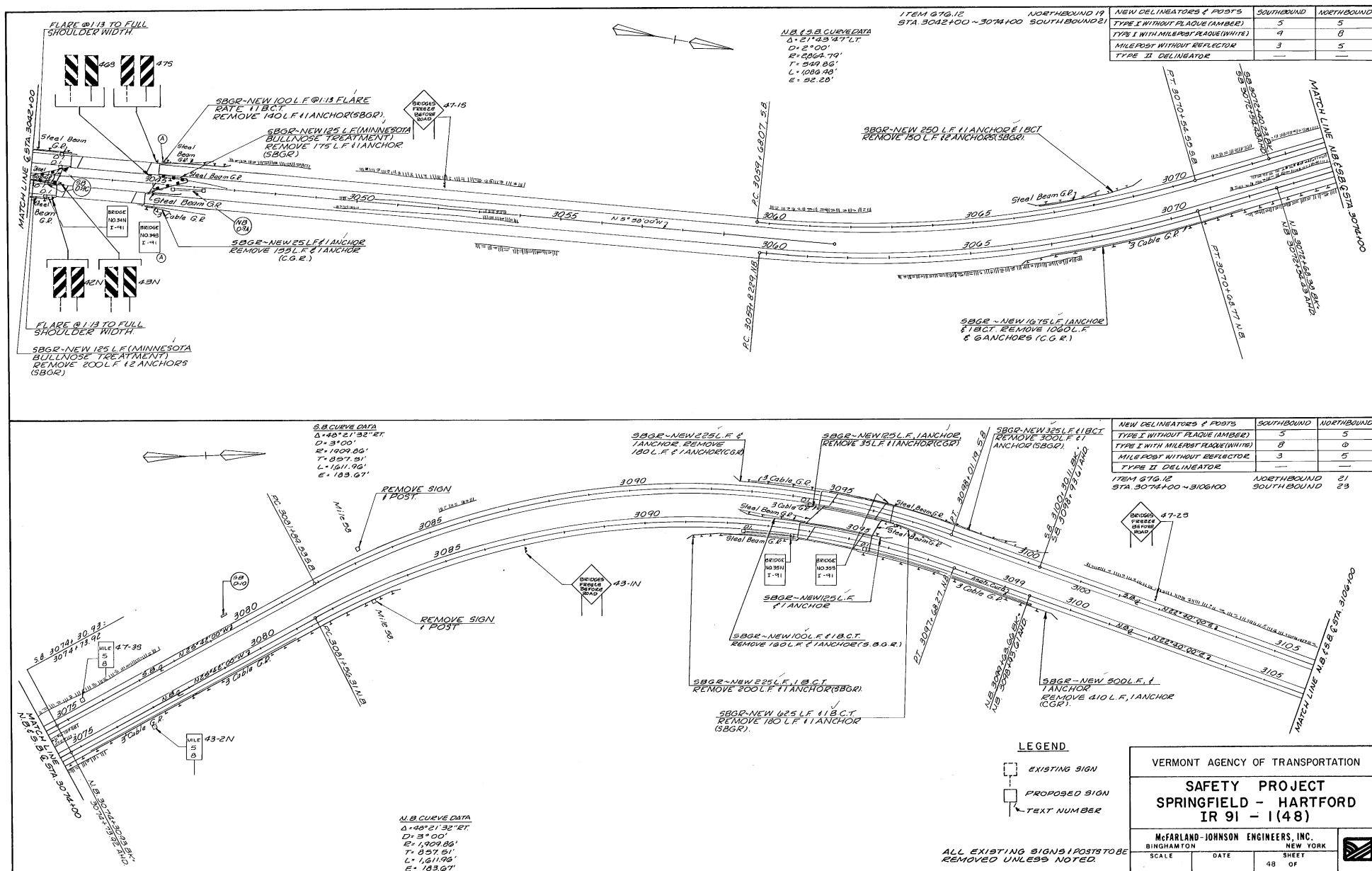
ALL EXISTING SIGNS & POSTS TO BE REMOVED UNLESS NOTED.

VERMONT AGENCY OF TRANSPORTATION

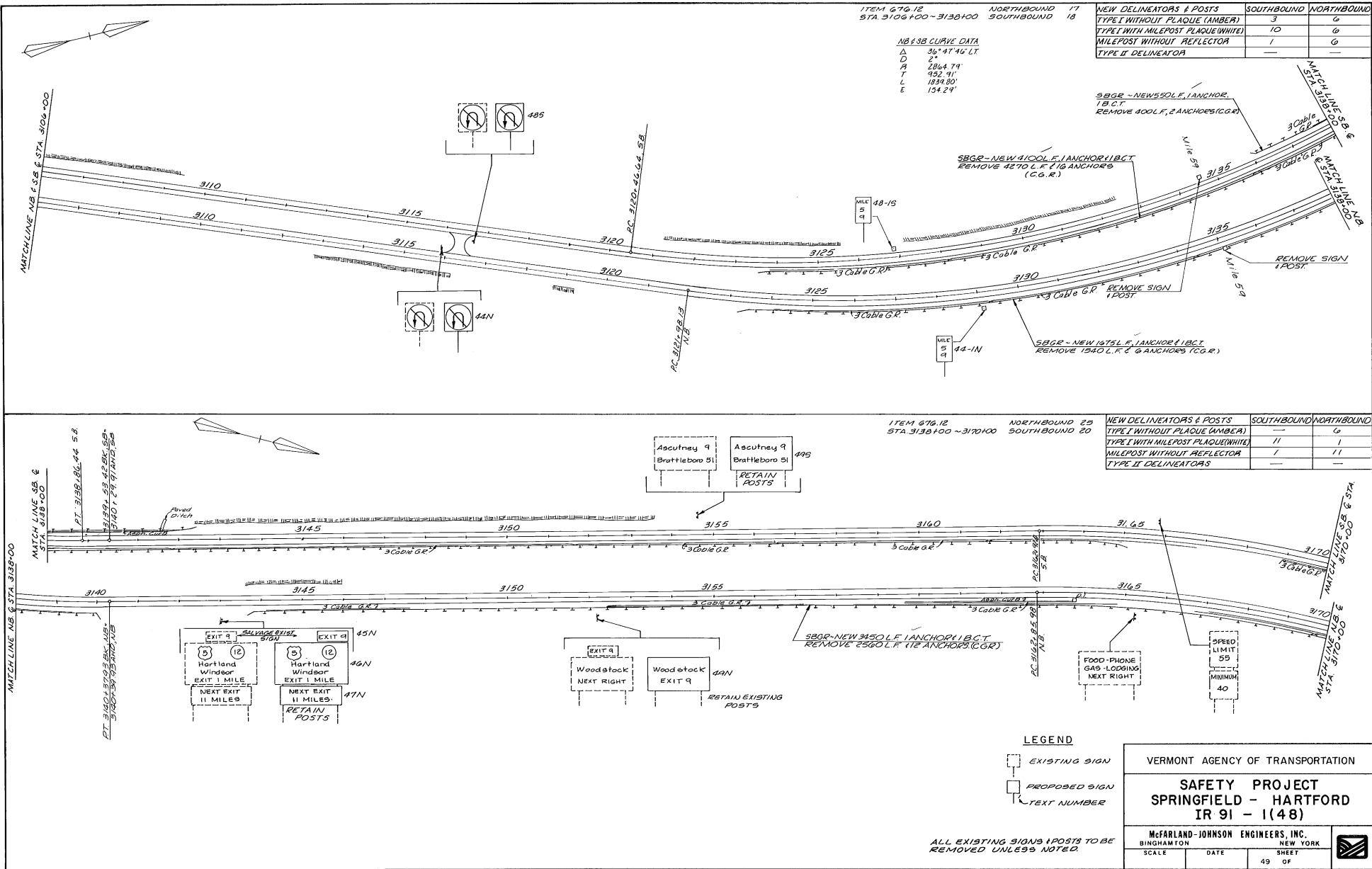
SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE AS SHOWN DATE SHEET 46 OF

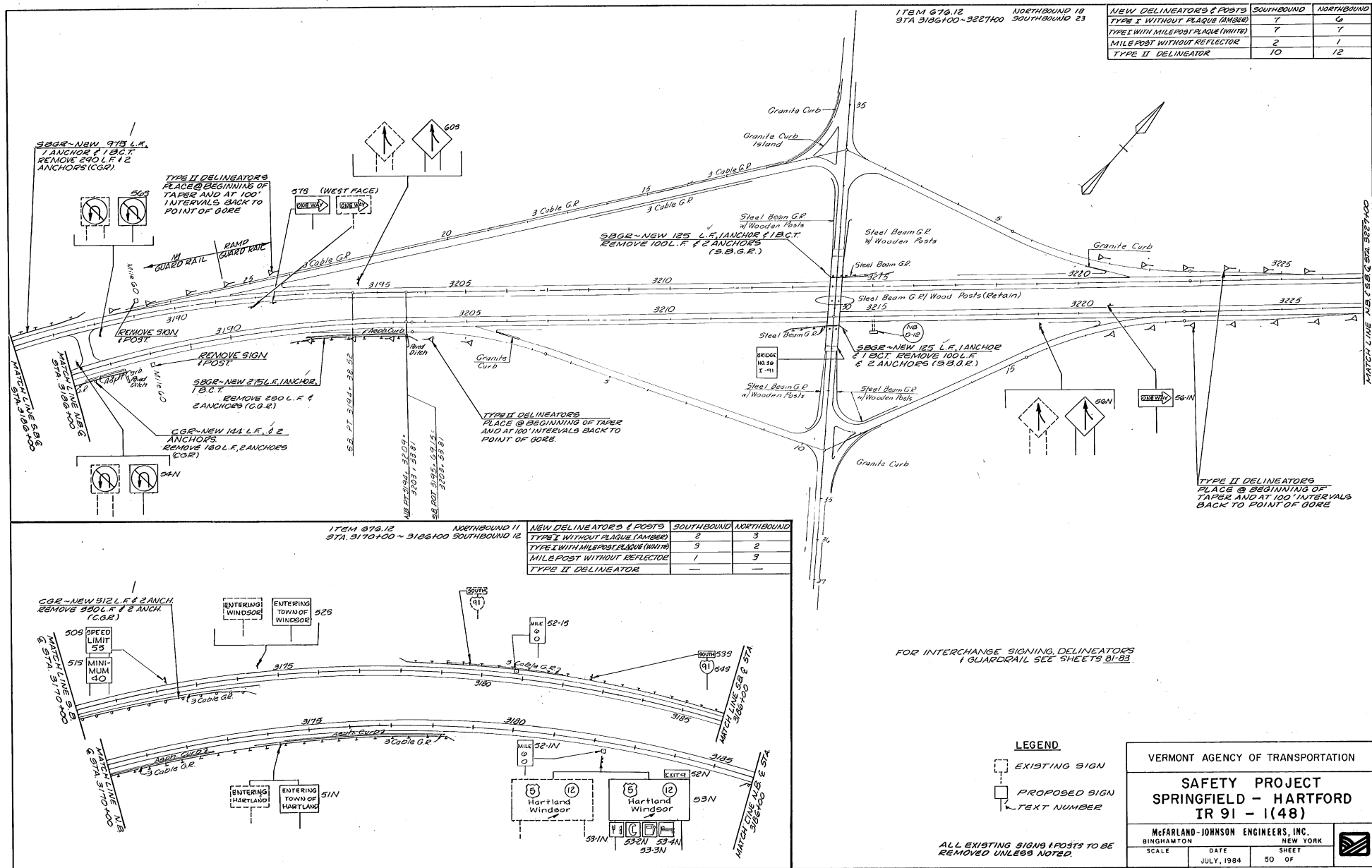


IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



FORM 1001

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	7	6
TYPE I WITH MILEPOST PLAQUE (WHITE)	7	7
MILEPOST WITHOUT REFLECTOR	2	1
TYPE II DELINEATOR	10	12



IN CHARGE OF: _____
DESIGNED BY: _____
CHECKED BY: _____

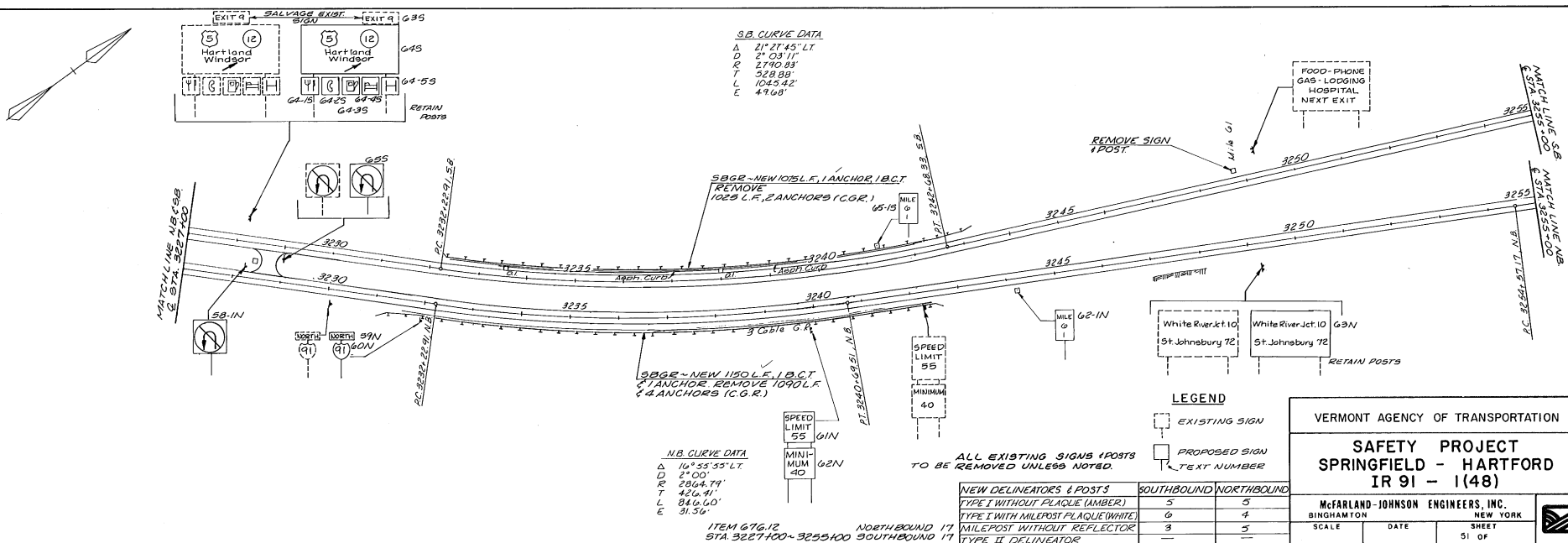
VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

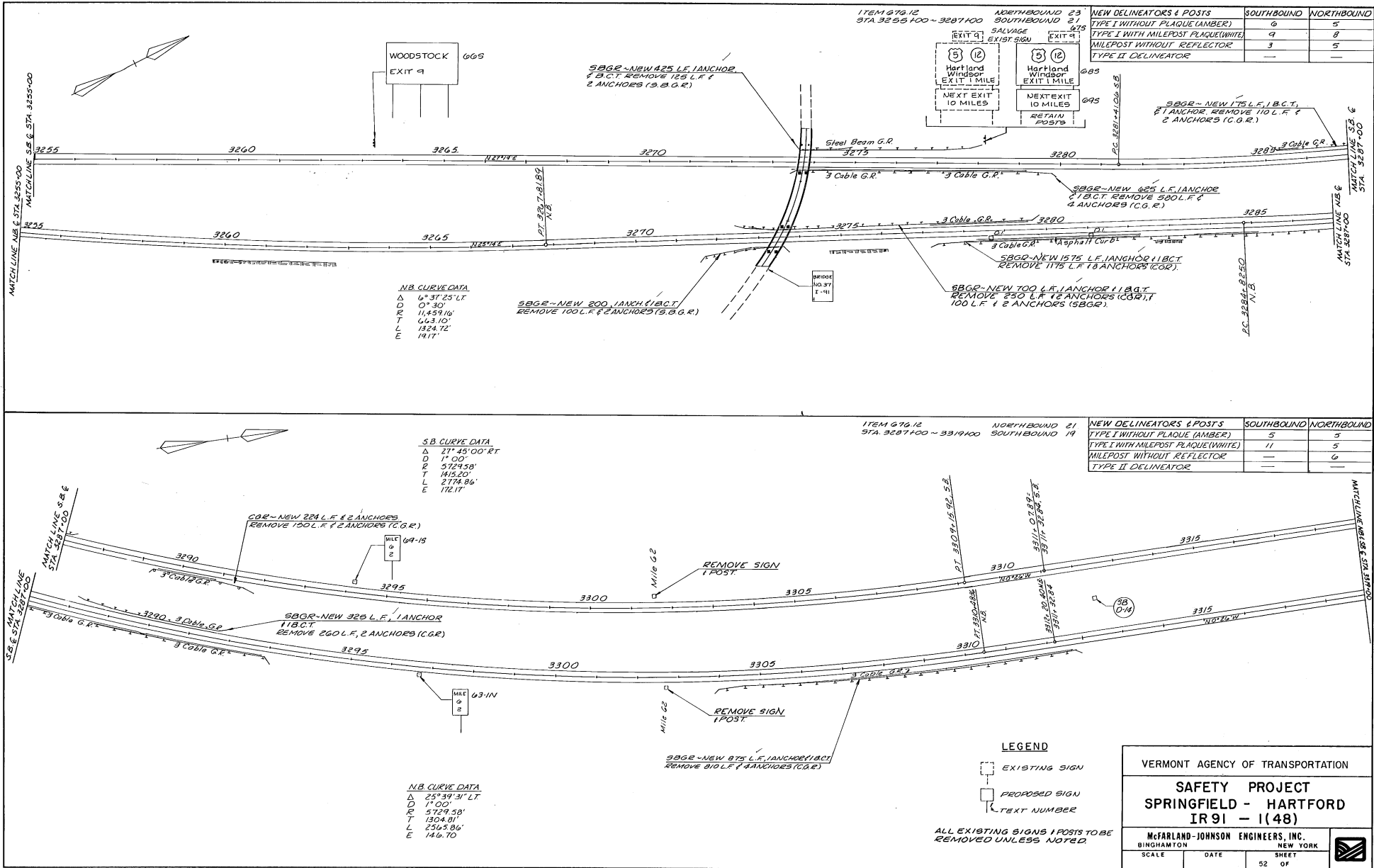
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE	DATE	SHEET
	JULY, 1984	50 OF

IN CHARGE OF: _____
 DESIGNED BY: _____
 CHECKED BY: _____



IN CHARGE OF: _____
 DESIGNED BY: _____
 CHECKED BY: _____



ITEM 676-12 NORTHBOUND 19
STA 3319+00 ~ 3351+00

NEW DELINEATORS & POSTS

	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	6	6
TYPE I WITH MILEPOST PLAQUE (WHITE)	12	10
MILEPOST WITHOUT REFLECTOR	—	2
TYPE II DELINEATOR	—	—

MATCHLINE N&S 1/2 & STA 3319+00

3320 3325 3330 3335 3340 3345 3350

REMOVE 135 L.F. & 4 ANCHORS (C.G.R.)

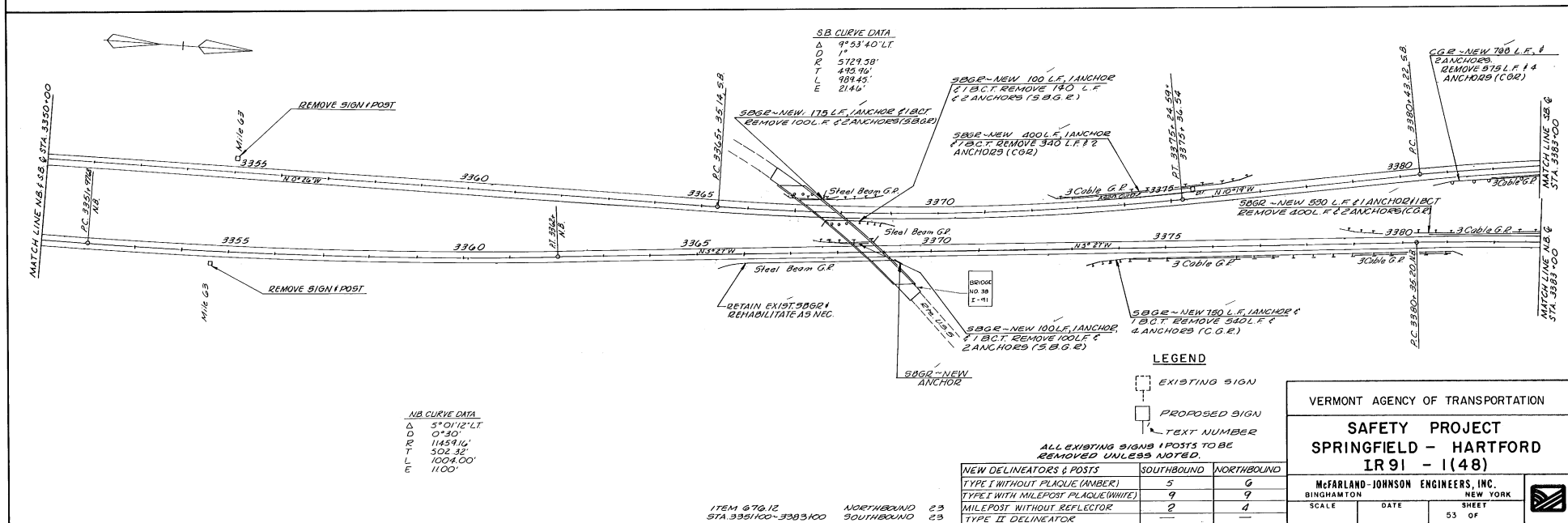
3 Cables G.R. 3 Cables G.R.

FLATTEN SLOPE TO 1:4, TOP SOIL, SEED & MULCH

3320 3325 3330 3335 3340 3345 3350

300' ~ NEW 439 L.F., 1 ANCHOR & 12 C.T. REMOVE 325 L.F. & 2 ANCHORS (C.G.R.)

MATCHLINE N&S 1/2 & STA 3351+00

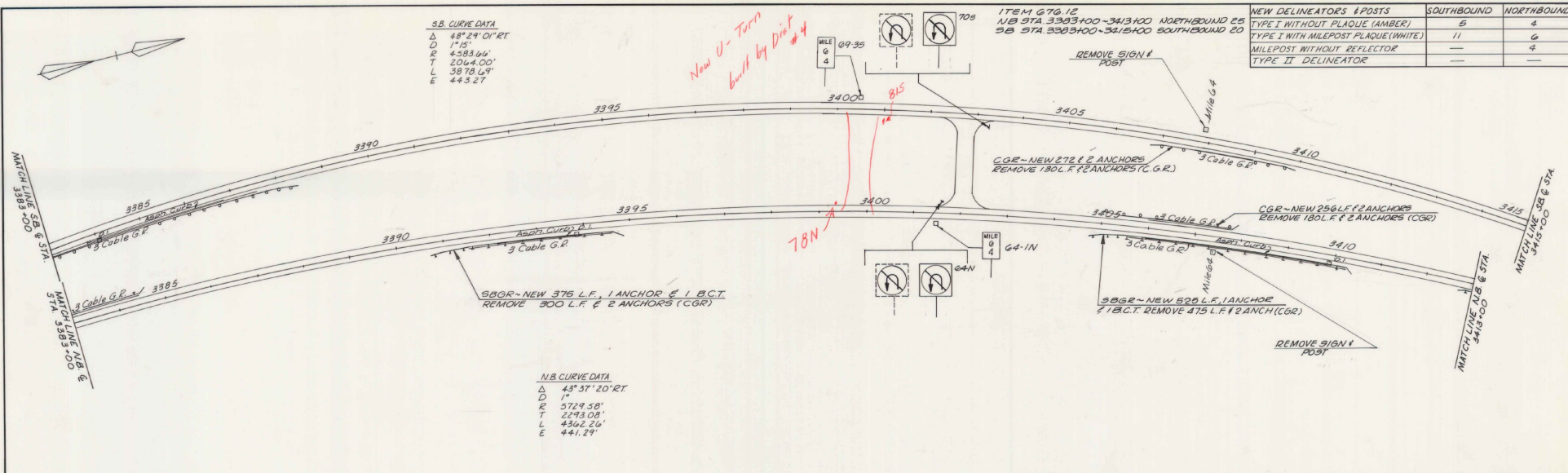


S.B. CURVE DATA
 Δ 48°29'01" RT
 D 1" 15'
 R 4383.66'
 T 2064.00'
 L 3878.69'
 E 443.27'

N.B. CURVE DATA
 Δ 43°37'20" RT
 D 1" 15'
 R 5729.58'
 T 2293.08'
 L 4302.26'
 E 441.24'

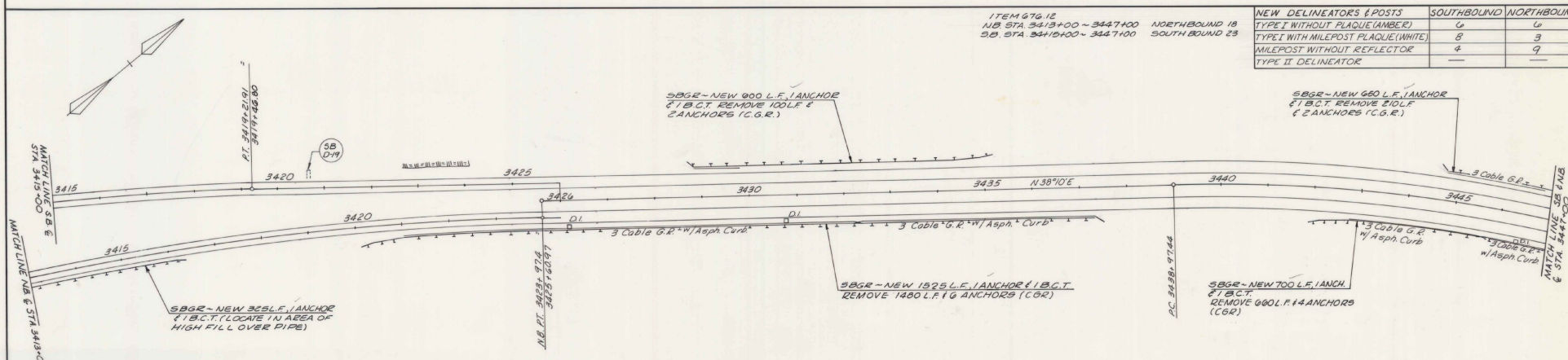
ITEM 676.12
 N.B. STA. 3383+00 - 3413+00 NORTHBOUND 25
 S.B. STA. 3383+00 - 3415+00 SOUTHBOUND 20

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	5	4
TYPE I WITH MILEPOST PLAQUE (WHITE)	11	6
MILEPOST WITHOUT REFLECTOR	—	4
TYPE II DELINEATOR	—	—



ITEM 676.12
 N.B. STA. 3413+00 - 3447+00 NORTHBOUND 18
 S.B. STA. 3415+00 - 3447+00 SOUTHBOUND 23

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	6	4
TYPE I WITH MILEPOST PLAQUE (WHITE)	8	3
MILEPOST WITHOUT REFLECTOR	4	9
TYPE II DELINEATOR	—	—



LEGEND

- EXISTING SIGN
- PROPOSED SIGN
- TEXT NUMBER

ALL EXISTING SIGNS & POSTS TO BE REMOVED UNLESS NOTED

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

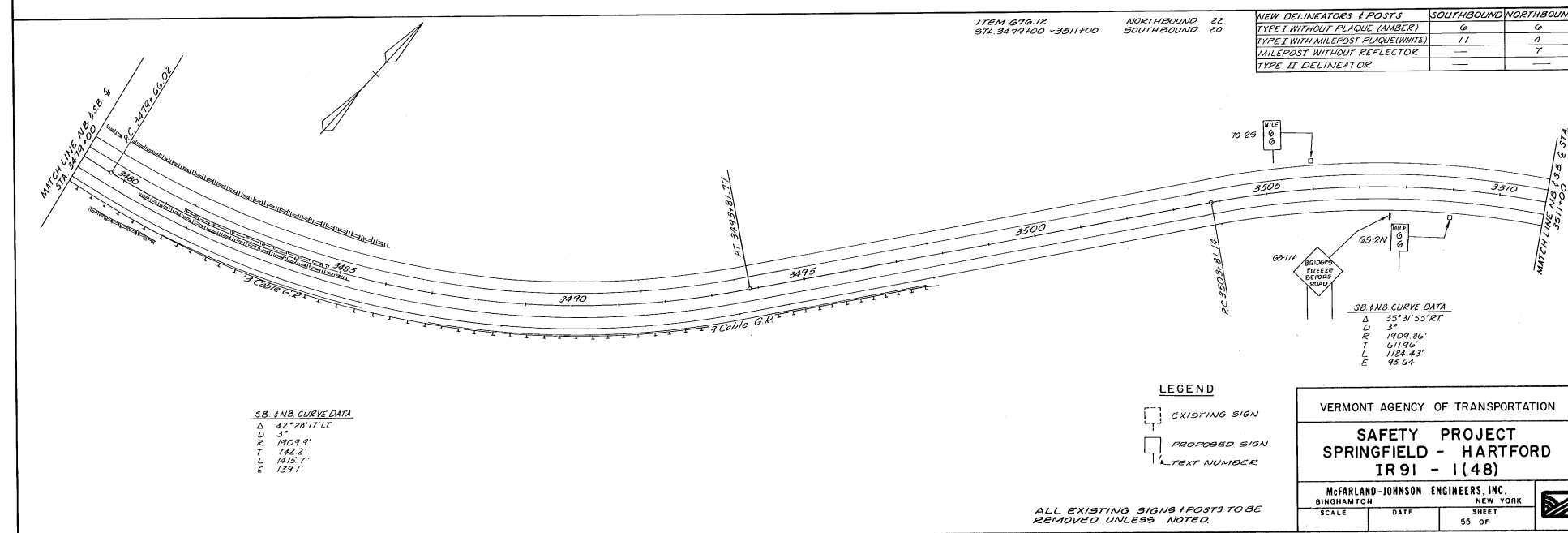
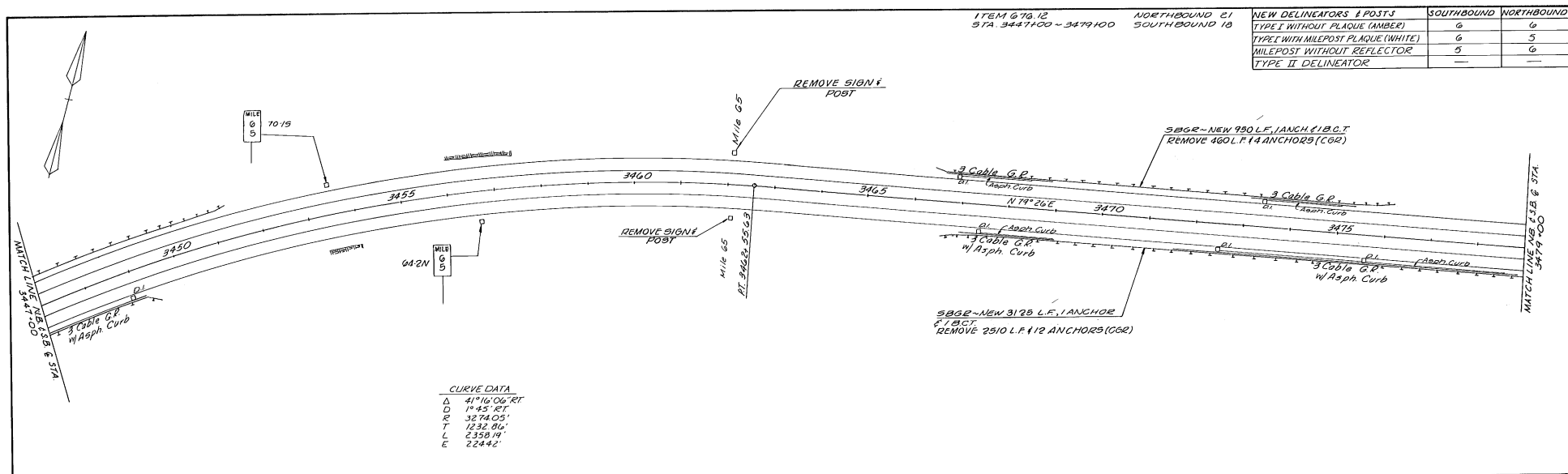
McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK

SCALE DATE SHEET 54 OF

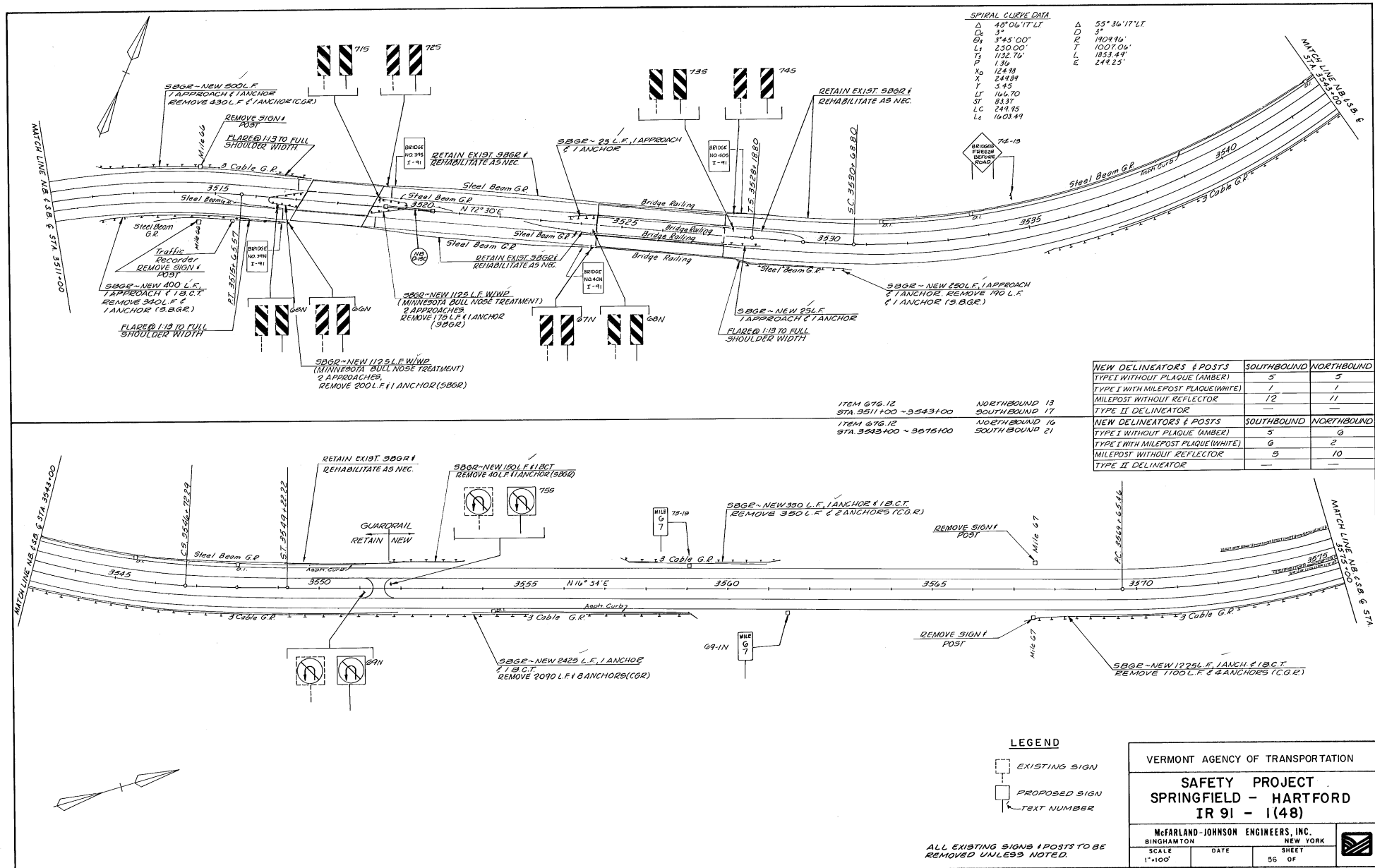


IN CHARGE OF: TALED BY: CHECKED BY:

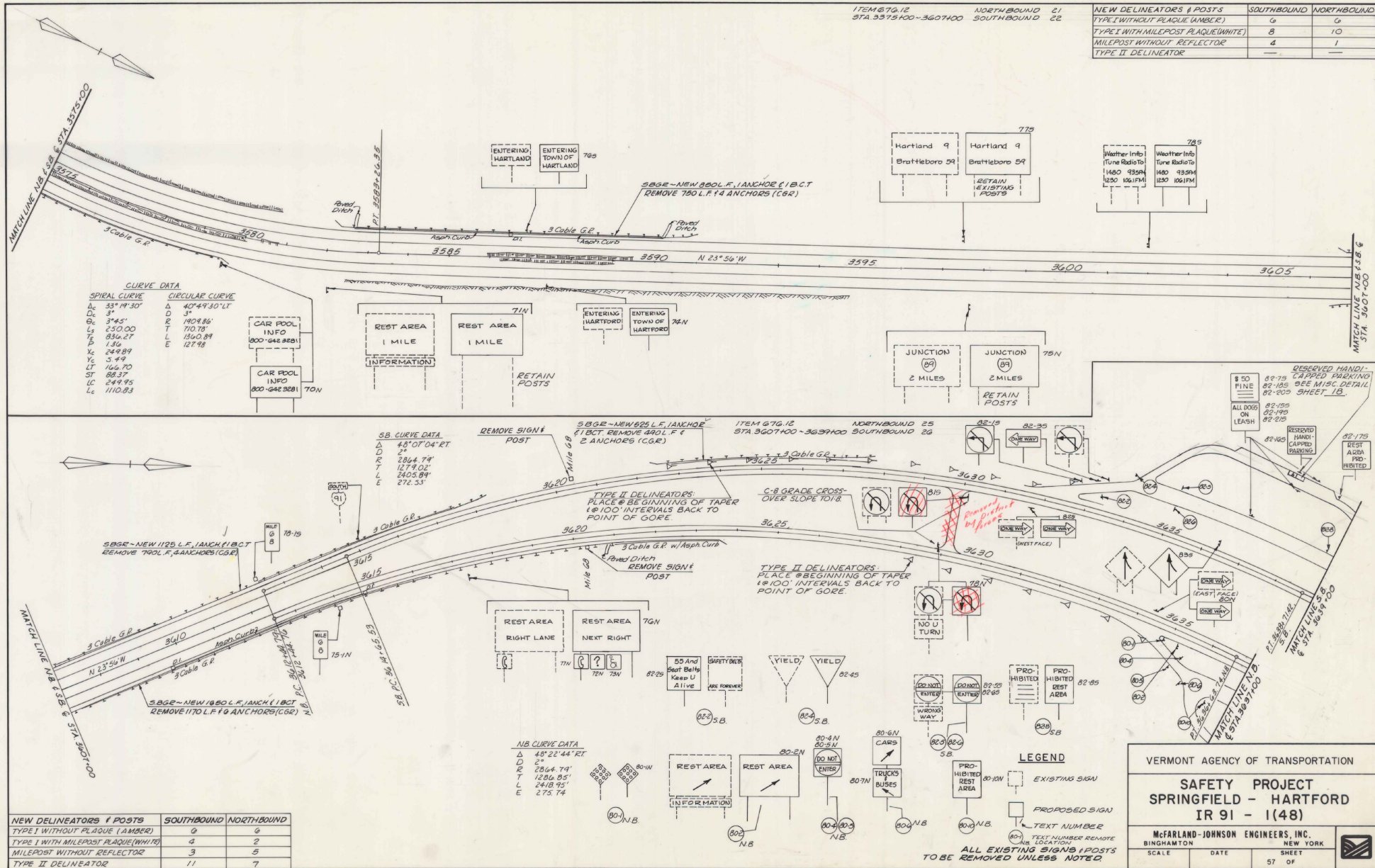
IN CHARGE OF: _____
 DESIGNED BY: _____
 CHECKED BY: _____



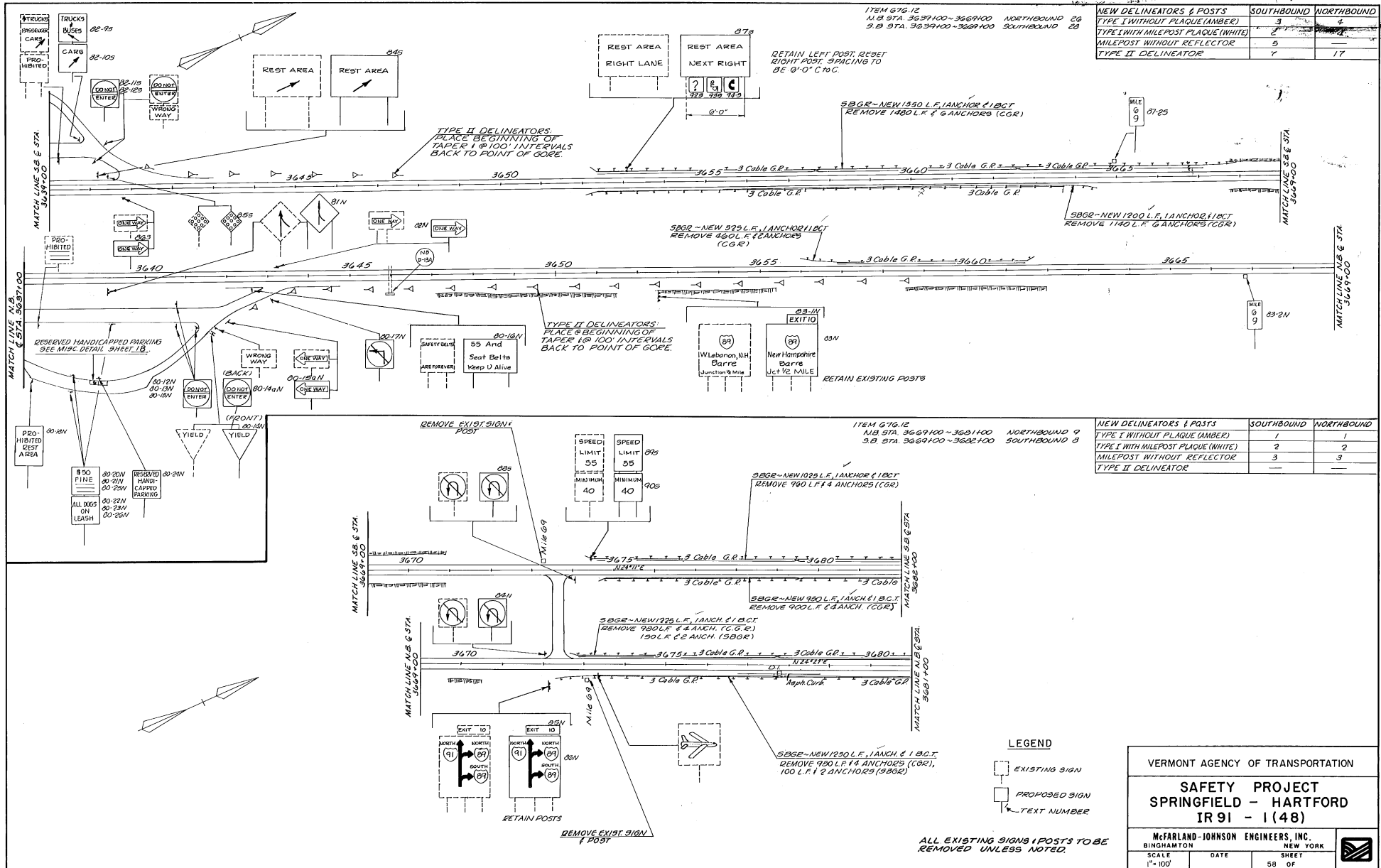
IN CHARGE OF: _____
DESIGNED BY: _____
CHECKED BY: _____



NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	6	6
TYPE I WITH MILEPOST PLAQUE (WHITE)	8	10
MILEPOST WITHOUT REFLECTOR	4	1
TYPE II DELINEATOR	—	—



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :



NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	3	4
TYPE I WITH MILEPOST PLAQUE (WHITE)	2	2
MILEPOST WITHOUT REFLECTOR	5	—
TYPE II DELINEATOR	7	17

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	1	1
TYPE I WITH MILEPOST PLAQUE (WHITE)	2	2
MILEPOST WITHOUT REFLECTOR	3	3
TYPE II DELINEATOR	—	—

LEGEND

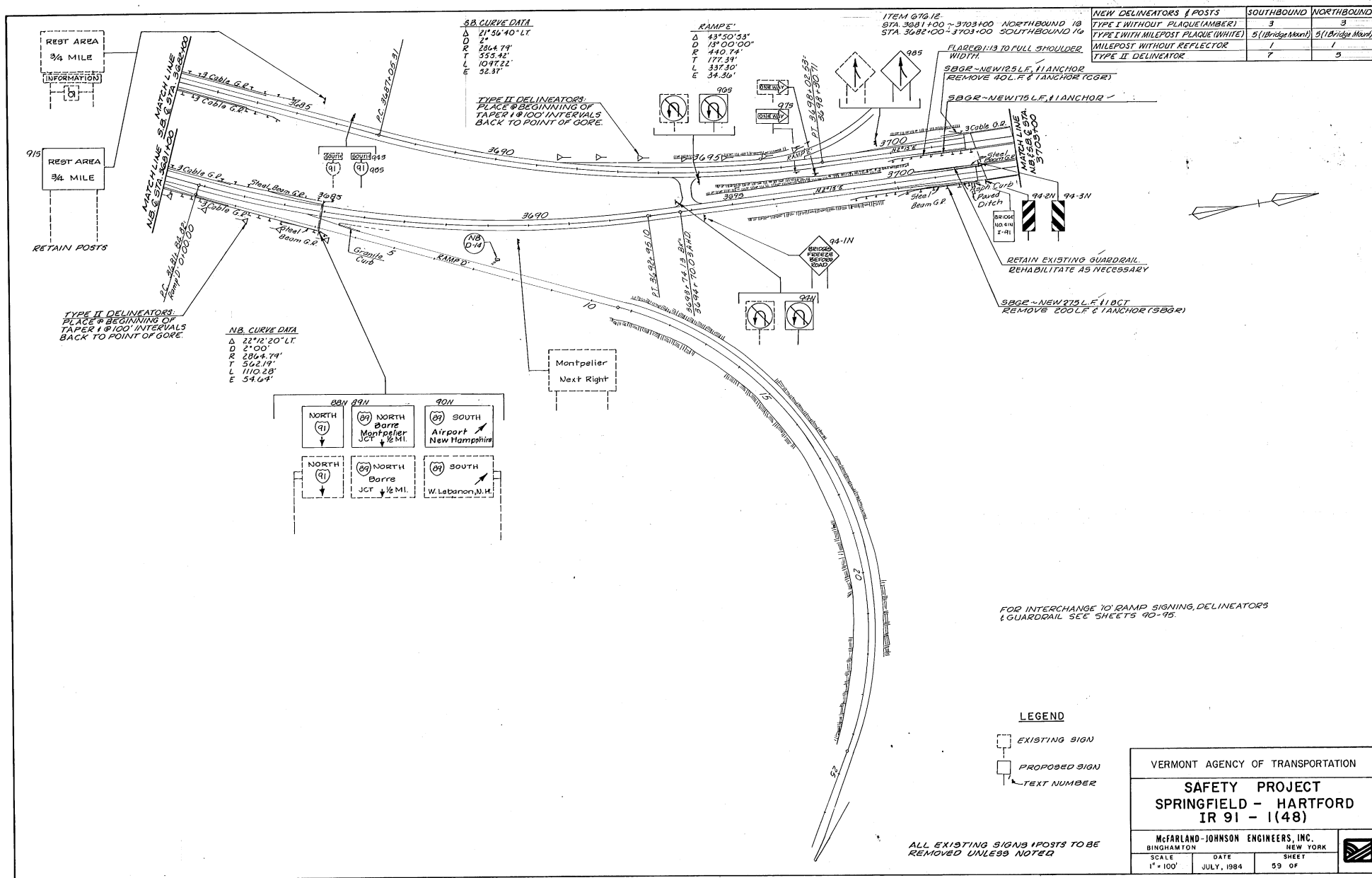
- EXISTING SIGN
- PROPOSED SIGN
- TEXT NUMBER

ALL EXISTING SIGNS & POSTS TO BE REMOVED UNLESS NOTED.

VERMONT AGENCY OF TRANSPORTATION
SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1 (48)

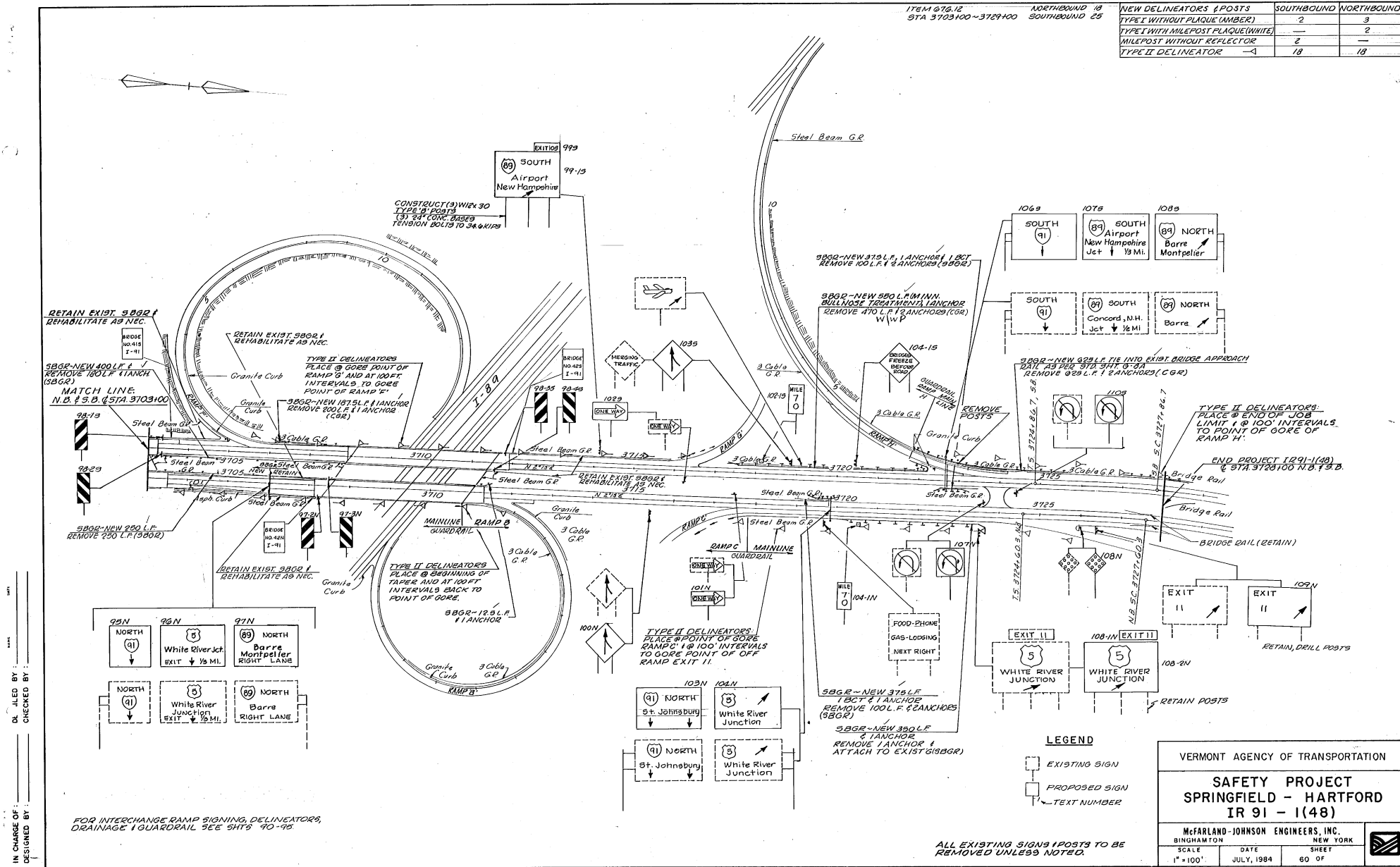
McFarland-Johnson Engineers, Inc.
BINGHAMTON NEW YORK
SCALE 1"=100' DATE 58 OF

IN CHARGE OF: _____
 DESIGNED BY: _____
 CHECKED BY: _____



ITEM 618.12 NORTHBOUND 18
STA 3703+00 ~ 3729+00 SOUTHBOUND 25

NEW DELINEATORS & POSTS	SOUTHBOUND	NORTHBOUND
TYPE I WITHOUT PLAQUE (AMBER)	2	3
TYPE I WITH MILEPOST PLAQUE (WHITE)	—	2
MILEPOST WITHOUT REFLECTOR	2	—
TYPE II DELINEATOR	18	18



IN CHARGE OF: _____
DESIGNED BY: _____
CHECKED BY: _____

FOR INTERCHANGE RAMP SIGNING, DELINEATORS,
DRAINAGE & GUARDRAIL SEE SHEETS 70-75

ALL EXISTING SIGNS & POSTS TO BE
REMOVED UNLESS NOTED.

VERMONT AGENCY OF TRANSPORTATION

**SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - I(48)**

McFarland-Johnson Engineers, Inc.
BINGHAMTON NEW YORK

SCALE: 1" = 100' DATE: JULY, 1984 SHEET: 60 OF 60

134

i

1

1

2

3

2

1

0

3

5

11

*Location Referenced from Individual Travel
Lanes in the direction of Stationing

STATION AND/OR MILE MARKER	LOCATION NUMBER *	TEXT NUMBER	TEXT	MUTCD AND/OR VERMONT STD. SHEET	W O L T	EXISTING SIGNS					INSTALLED SIGNS				EXISTING POSTS					NEW AND SALVAGED POSTS					NOTES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
						SIZES	AREA (SF)	RE- MOVE	SAL- VAGE	RE- TAIN	SIZES	AREA (SF)	NEW	SAL- VAGE	NUMBER OF POSTS	TYPE	RE- MOVE	SAL- VAGE	RE- TAIN	DRILL	TYPE 'A' (FLNGD CHANN)			TYPE 'C' (ALUM TUBE)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
																					2.0 IN/FT	2.5 IN/FT	3.0 IN/FT	3" Dia.		4" Dia.	3" SQ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
2718+35	S.B.Rt.	185		Vt.E-15B	A						3'X1'	3	/									/																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</

*Location Referenced from Individual Travel Lanes in the direction of Stationing

SHEET TOTALS	A	40	22600	40.65
B			576	
RUNNING TOTALS	A		18200	100.33
B			1033	

SIGNING TABLE

MAINLINE N.B. AND S.B.

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 63 OF



DATE

4

1

95

511

• **C**

7

Q

5

1

3

* Location Referenced from Individual Travel Lanes in the direction of Stationing

McFARLAND-JOHNSON ENGINEERS, INC.		
BINGHAMTON		NEW YORK
SCALE NONE	DATE	SHEET 64 OF



IN CHARGE OF: R.J.H.
DESIGNED BY: G.R.H.
CHECKED BY: C.F.W., G.R.H.

STATION AND/OR MILE MARKER	LOCATION NUMBER *	TEXT NUMBER	TEXT	MUTCD AND/OR VERMONT STD. SHEET	TYPE	EXISTING SIGNS					INSTALLED SIGNS					EXISTING POSTS					NEW AND SALVAGED POSTS							NOTES						
						SIZES	AREA (SF)	RE- MOVE	SAL- VAGE	RE- TAIN	SIZES	AREA (SF)	NEW	SAL- VAGE	NUMBER OF POSTS	TYPE	RE- MOVE	SAL- VAGE	RE- TAIN	DRILL	TYPE 'A' (FLNGD. CHANN.)			TYPE 'C' (ALUM. TUBE)										
																					2.0 1b/ft	2.5 1b/ft	3.0 1b/ft	3" Dia.	4" Dia.	3" SQ								
3192+40	S.B.Rt	57S	ONE WAY	V.E-15B	A						3'X1'	3	1										1											
3194+50	S.B.Lt	60S		V.E-19	A						4'X4'	16	1												2									
3219+00	N.B.Rt	56N		V.E-19	A						4'X4'	16	1												2									
3220+75	N.B.Lt	56-IN	ONE WAY	V.E-15B	A						3'X1'	3	1										1											
3228+30	S.B.Lt	63S		V.E-14	A	8'X25'	20	-	+		8'X25'	20	1	+															Retain Existing Posts					
		64S	See Sign Detail 8ht 28	B																														
		64-1S	V.E-14B	A																														
		64-2S	V.E-14B	A																														
		64-3S	V.E-14B	A																														
		64-4S	V.E-14B	A																														
64-5S	V.E-14B	A																																
3228+30	N.B.Lt	58-IN		V.E-15C	A						3'X3'	9	1											1										
3278+15	S.B.Lt	67S		V.E-14	A	8'X25'	20	-	+		8'X25'	20	1	+															Retain Existing Posts					
		68S	See Sign Detail 8ht 28	B																														
		69S	V.E-14	B																														
3401+60	N.B.Lt	64N		V.E-15C	A						3'X3'	9	1											1										
3403+20	S.B.Rt	70S		V.E-15C	A						3'X3'	9	1												1									
3507+60	N.B.Rt	65-IN		V.E-19	A						4'X4'	16	1												2									
3516+50	N.B.Lt	65N	Object Marker	See Sheet 23 for Details	A						1'X3'	3	1										1											
3516+80	N.B.Rt	66N			A						1'X3'	3	1										1											
3519+05	S.B.Rt	71S			A						1'X3'	3	1										1											
3519+20	S.B.Lt	72S			A						1'X3'	3	1										1											
3524+25	N.B.Rt	67N			A						1'X3'	3	1										1											
3524+25	N.B.Lt	68N	Object Marker		A						1'X3'	3	1										1											
3525+30	S.B.Lt	66S		See Sign Detail 8ht 28	B						11'X5'	55	1													3 (Mod.)								
3527+70	S.B.Lt	73S	Object Marker	See Sheet 23 for Details	A						1'X3'	3	1										1											
3527+70	S.B.Rt	74S	Object Marker	See Sheet 23 for Details	A						1'X3'	3	1										1											
3533+00	S.B.Lt	74-1S		V.E-19	A						4'X4'	16	1												2									
3551+15	N.B.Lt	69N		V.E-15C	A						3'X3'	9	1												1									
3551+80	S.B.Rt	75S		V.E-15C	A						3'X3'	9	1												1									
3579+65	N.B.Rt	70N		V.E-14	B						6'X45'	27	1												2									
3582+15	N.B.Rt	71N		V.E-14	B						10'X5'	50	1																Retain Existing Posts					
3586+90	S.B.Lt	76S		V.E-14	A						3'X2'	6	1										1											
3587+45	N.B.Rt	74N		V.E-14	A						3'X2'	6	1										1											
3231+90	N.B.Rt	59N		V.E-11	A						30'X15'	31	1													1								
		60N		V.E-11	A						3'X3'	9	1																					
3229+00	S.B.Rt	65S		V.E-15C	A						3'X3'	9	1												1									
3240+00	N.B.Rt	61N		V.E-15B	A						4'X5'	20	1														2							
		62N		V.E-15B	A						4'X5'	20	1																					
3249+20	N.B.Rt	63N		See Sign Detail 8ht 28	B						19'X5'	95	1																Retain Existing Posts					
* Location Referenced from Individual Travel Lanes in the direction of Stationing						SHEET TOTALS	A			40														12		14	3	5						
							B																											
						RUNNING TOTALS	A																						32		50	0	11	
							B																											

SIGNING TABLE
MAINLINE N.B. AND S.B.
VERMONT AGENCY OF TRANSPORTATION
SAFETY PROJECT

SIGNING TABLE

MAINLINE N.B. AND S.B.

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 65 OF



STATION AND/OR MILE MARKER	LOCATION NUMBER *	TEXT NUMBER	TEXT	MUTCD AND/OR VERMONT STD. SHEET	TYPE	EXISTING SIGNS					INSTALLED SIGNS					EXISTING POSTS					NEW AND SALVAGED POSTS					NOTES						
						SIZES	AREA (SF)	RE- MOVE	SAL- VAGE	RE- TAIN	SIZES	AREA (SF)	NEW	SAL- VAGE	NUMBER OF POSTS	TYPE	RE- MOVE	SAL- VAGE	RE- TAIN	DRILL	TYPE 'A' (FLNGD. CHANN)			TYPE 'C' (ALUM. TUBE)								
																					2.0 lb/ft	2.5 lb/ft	30 lb/ft	3" Dia.	4" Dia.		3" SQ					
3597+65	N.B. Rt.																															Retain Existing Posts
		75N		See Sign Detail Sht. 26	B						13'x10.5'	26.6	1																			
3597+50	S.B. Lt.	77S		See Sign Detail Sht. 28	B						18'x8'	72	1																			Retain Existing Posts
3602+00	S.B. Lt.	78S		V.E-14	B						9'x5.5'	49.5	1																			
3617+25 (CONT'D BELOW)	N.B. Rt.	76N		V.E-14	B						10'x5'	50	1																			
		72N		V.E-14B	A						2'x2'	4	1																			
3628+90	N.B. Lt.	78N		V.E-15C	A						3'x3'	9	1																			
3630+10	S.B. Rt.	81S		V.E-15C	A						3'x3'	9	1																			
3631+70	S.B. Rt.	82S	ONE WAY	V.E-15B	A						3'x1'	3	1																			
3632+75	S.B. Lt.	82-1S		V.E-15C	A						2'x2'	4	1																			
3633+20	S.B. Lt.	82-3S	ONE WAY	V.E-15B	A						3'x1'	3	1																			
3617+25 (CONT'D)	N.B. Rt.	73N		V.E-14B	A						2'x2'	4	1																			
3633+35	S.B. Lt.	82-2S		V.E-14	A						4'x3'	12	1																			
3634+00	S.B. Lt.	82-4S	Yield Sign	V.E-15C	A						3'x3'	4	1																			
3635+10	S.B. Lt.	82-5S		V.E-15C	A						25'x25'	625	1																			
3635+10	S.B. Lt.	82-6S		V.E-15C	A						25'x25'	625	1																			
3636+85	S.B. Lt.	82-7S		V.E-15B	A						25'x25'	625	1																			
		82-18S		V.E-15B	A						2'x2'	4	1																			
3636+30	S.B. Lt.	83S		V.E-19	A						4'x4'	16	1																			
3637+50	S.B. Lt.	82-16S		See Sign Detail Sht. 30	A						1'x1.5'	1.5	1																			
3638+55	S.B. Lt.	82-17S		V.E-15B	A						25'x25'	625	1																			
3637+60	S.B. Lt.	82-18S		V.E-15B	A						25'x25'	625	1																			
		82-19S		V.E-15B	A						2'x2'	4	1																			
3637+95	S.B. Lt.	82-20S		V.E-15B	A						25'x25'	625	1																			
		82-21S		V.E-15B	A						2'x2'	4	1																			
3617+25 (CONT'D)	N.B. Rt.	77N		V.E-14B	A						2'x2'	4	1																			
3638+80	S.B. Lt.	82-8S		V.E-15B	A						25'x25'	625	1																			
3634+35	N.B. Lt.	80N	ONE WAY	V.E-15B	A						3'x1'	3	1																			
3636+85	N.B. Rt.	80-1N		V.E-19B	A						15'x1.5'	22.5	1																			
3639+30	N.B. Rt.	80-2N		V.E-14	B						65'x6.5'	422.5	1																			
3635+20	N.B. Rt.	80-5N		V.E-15C	A						25'x25'	625	1																			
3635+40	N.B. Rt.	80-4N		V.E-15C	A						25'x25'	625	1																			
3635+65	N.B. Rt.	80-6N		See Sign Detail Sht. 30	A						2'x2'	4	1																			
		80-7N		See Sign Detail Sht. 30	A						2'x2.5'	5	1																			
3636+40	N.B. Rt.	80-10N		V.E-15B	A						25'x25'	625	1																			
3637+25	N.B. Rt.	80-18N		V.E-15B	A						25'x25'	625	1																			
3639+30	S.B. Lt.	82-9S		See Sign Detail Sht. 30	A						2'x2.5'	5	1																			
		82-10S		See Sign Detail Sht. 30	A						2'x2'	4	1																			
* Location Referenced from Individual Travel Lanes in the direction of Stationing						SHEET TOTALS	A																									
							B																									
						RUNNING TOTALS	A																									
							B																									
								</																								

* Location Referenced from Individual Travel Lanes in the direction of Stationing

SHEET TOTALS	A																															
B																																
RUNNING TOTALS	A																															
B																																

SIGNING TABLE									
MAINLINE N.B. AND S.B.									
VERMONT AGENCY OF TRANSPORTATION									
SAFETY PROJECT SPRINGFIELD-HARTFORD IR 91 - 1(48)									
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK									
SCALE NONE	DATE	SHEET 66	OF						

STATION AND/OR MILE MARKER	LOCATION NUMBER *	TEXT NUMBER	TEXT	MUTCD AND/OR VERMONT STD. SHEET	TYPE	EXISTING SIGNS					INSTALLED SIGNS					EXISTING POSTS					NEW AND SALVAGED POSTS						NOTES	
						SIZES	AREA (SF)	RE- MOVE	SAL- VAGE	RE- TAIN	SIZES	AREA (SF)	NEW	SAL- VAGE	NUMBER OF POSTS	TYPE	RE- MOVE	SAL- VAGE	RE- TAIN	DRILL	TYPE 'A' (FLNGD. CHANN)			TYPE 'C' (ALUM. TUBE)				
																					2.0 lb/ft	2.5 lb/ft	3.0 lb/ft	3" Dia.	4" Dia.	3" SQ		
3640+10	S.B.Lt.	82-12S			Vt.E-15C	A					25'X25'	625	1								/						Rest Area Southbound	
3640+40	S.B.Lt.	82-11S			Vt.E-15C	A					25'X25'	625	1								/						Rest Area Southbound	
3640+20	S.B.Lt.	84S			Vt.E-14	B					65'X65'	4225	1											2 (Mod)			Rest Area Southbound	
3640+50	S.B.Lt.	85S			Vt.E-19B	A					15'X15'	225	1								/						Rest Area Southbound	
3640+80	S.B.Rt.	86S	ONE WAY		Vt.E-15B	A					3'X1'	3	1								/						Rest Area Southbound	
3639+10	N.B.Rt.	81N			Vt.E-19	A					4'X4'	16	1										2				Rest Area Southbound	
3640+70	N.B.Rt.	80-12N			Vt.E-15C	A					25'X25'	625	1								/						Rest Area Northbound	
3640+70	N.B.Rt.	80-13N			Vt.E-15C	A					25'X25'	625	1								/						Rest Area Northbound	
3641+70	N.B.Rt.	80-14N	Yield Sign Triangle		Vt.E-15C	A					3'X3'	4	1									1					Rest Area Northbound	
		80-14a			Vt.E-15C	A					25'X25'	625	1														Rest Area Northbound	
3643+20	N.B.Lt.	82N			Vt.E-15B	A					3'X1'	3	1								/							
3641+30	N.B.Rt.	80-15N			Vt.E-15C	A					25'X25'	625	1								/						Rest Area Northbound	
3642+00	N.B.Rt.	80-15a	ONE WAY		Vt.E-15B	A					3'X1'	3	1								/						Rest Area Northbound	
3642+60	N.B.Rt.	80-16N			Vt.E-14	A					4'X3'	12	1									2					Rest Area Northbound	
3643+10	N.B.Rt.	80-17N			Vt.E-15C	A					2'X2'	4	1								/						Rest Area Northbound	
3653+10	S.B.Lt.	87S	(CONT'D. AT BOTTOM OF SHEET)		Vt.E-14	B					10'X5'	50	1														Reset Right Post Spacing to 6'-0" on Center. Const. new 24" Conc. Base	
3652+50	N.B.Rt.	83-1N			Vt.E-14	B					10'X25'	25	1														Retain Existing Posts	
		83N			See Sign Detail Bht. 28	B					23'X125'	2875	1															
3672+10	N.B.Lt.	84N			Vt.E-15C	A					3'X3'	9	1									1						
3672+15	N.B.Rt.	85N			Vt.E-14	B					10'X25'	25	1														Retain Existing Posts	
		86N			See Sign Detail Bht. 28	B					18'X17'	306	1															
3674+10	S.B.Rt.	88S			Vt.E-15C	A					3'X3'	9	1									1						
3674+50	S.B.Lt.	89S			Vt.E-15B	A					4'X6'	20	1										2					
		90S			Vt.E-15B	A					4'X4'	16	1															
3685+60	S.B.Lt.	91S			Vt.E-14	B					10'X5'	50	1														Retain Existing Posts	
3686+40	S.B.Lt.	94S			Vt.E-11	A					30'X15"	31	1										1					
		96S			Vt.E-11	A					3'X3'	9	1															
3684+90	N.B. Over-head	88N			See Sign Detail Bht. 27	B					9'X10'	90	1														Overhead Signs	
		89N			See Sign Detail Bht. 28	B					15'X10'	150	1														Mount Signs to maintain existing Vertical Clearance	
		90N			See Sign Detail Bht. 29	B					15'X10'	150	1															
3693+60	N.B.Lt.	94N			Vt.E-15C	A					3'X3'	9	1									1						
3694+90	S.B.Rt.	96S			Vt.E-15C	A					3'X3'	9	1									1						
3694+25	N.B.Rt.	94-1N			Vt.E-19	A					4'X4'	16	1									2						
3653+10 (CONT'D.)	S.B.Lt.	92S			Vt.E-14B	A					2'X2'	4	1															
		93S			Vt.E-14B	A					2'X2'	4	1															
		94S			Vt.E-14B	A					2'X2'	4	1															
						SHEET TOTALS	A					197										10	3	8	1	4	—	
						RUNNING TOTALS	A					1236											57	5	73	7	21	
							B					12450																
							B					4243																

* Location Referenced from Individual Travel Lanes in the direction of Stationing

SIGNING TABLE

MAINLINE N.B. AND S.B.

VERMONT AGENCY OF TRANSPORTATION

* Location Referenced from Individual Travel Lanes in the direction of Stationing

SIGNING TABLE

MAINLINE N.B. AND S.B.

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 67 OF



STATION AND/OR MILE MARKER	LOCATION NUMBER *	TEXT NUMBER	TEXT	MUTCD AND/OR VERMONT STD. SHEET	E.T.L.	EXISTING SIGNS					INSTALLED SIGNS				EXISTING POSTS					NEW AND SALVAGED POSTS					NOTES			
						SIZES	AREA (SF)	RE-MOVE	SAL-VAGE	RE-TAIN	SIZES	AREA (SF)	NEW	SAL-VAGE	NUMBER OF POSTS	TYPE	RE-MOVE	SAL-VAGE	RE-TAIN	DRILL	TYPE 'A' (FLNGD. CHANN)		TYPE 'C' (ALUM. TUBE)					
																					2.0 lb/ft	2.5 lb/ft	3.0 lb/ft	3" Dia.		4" Dia.	3" SQ	
3697+35	S.B.Rt.	97S		Vt.E-15B	A						3'X1'	3	/								/							
3799+70	S.B.Lt.	98S		Vt.E-19	A						4'X4'	16	/										2'	2'				
3702+05	N.B.Rt.	94-2N	Object Marker	See Sheet 23 for Details	A						1'X3'	3	/								/							
3702+05	N.B.Lt.	94-3N			A						1'X3'	3	/								/							
3703+30	S.B.Lt.	98-1S			A						1'X3'	3	/								/							
3703+30	S.B.Rt.	98-2S	Object Marker		A						1'X3'	3	/								/							
3706+00	N.B. Over-head	95N		See Sign Detail Sht. 27	B						9'X10'	90	/														Overhead Signs Mount Signs; Maintain existing vertical clearance	
		96N		See Sign Detail Sht. 29	B						17'X10'	170	/															
		97N		See Sign Detail Sht. 29	B							13'X9'	117	/														
3707+20	N.B.Rt.	97-2N	Object Marker	See Sheet 23 for Details	A						1'X3'	3	/								/							
3707+40	N.B.Lt.	97-3N			A						1'X3'	3	/								/							
3711+55	S.B.Rt.	98-3S			A						1'X3'	3	/								/							
3711+80	S.B.Lt.	98-4S	Object Marker		A						1'X3'	3	/								/							
3715+35	N.B.Rt.	100N		Vt.E-19	A						4'X4'	16	/										2'	2'				
3716+20	S.B.Rt.	102S	ONE WAY	Vt.E-15B	A						3'X1'	3	/								/							
3717+45	N.B.Lt.	101N	ONE WAY	Vt.E-15B	A						3'X1'	3	/								/							
3718+80	S.B.Lt.	103S		Vt.E-19	A						4'X4'	16	/										2'	2'				
3714+15	S.B.Lt.	99S		Vt.E-14	B						10'X25'	25	/														Const. (3) W12X30 Type 'B' Posts (75' Total Length) (3) 24" Conc. Bases Tension Bolts to 34.6 KIPS	
		99-1S		See Sign Detail Sht. 29	B						18'X125'	225	/															
3719+80	N.B. Over-head	103N		See Sign Detail Sht. 29	B						17'X10'	170	/														Overhead Supports; Contractor to maintain existing vertical clearance when mounting New Signs	
		104N		See Sign Detail Sht. 29	B						14'X10'	140	/															
3720+50	S.B.Lt.	104-1S		Vt.E-19	A						4'X4'	16	/										2					
3722+65	S.B. Over-head	106S		See Sign Detail Sht. 27	B						9'X10'	90	/														Overhead supports; Contractor to maintain existing vertical clearance when mounting New Signs	
		107S		See Sign Detail Sht. 27	B						18'X10'	180	/															
		108S		See Sign Detail Sht. 27	B						13'X9'	117	/															
3723+60	N.B.Lt.	107N		Vt.E-15C	A						3'X3'	9	/															
3724+30	S.B.Rt.	110S		Vt.E-15C	A						3'X3'	9	/															
3724+00	N.B.Rt.	108N		Vt.E-19B	A						15'X15'	225	/								/							
3726+40	N.B.Rt.	107N		Vt.E-14	B						6'X5'	30	/		2	4"φ			2	2								
3723+50	N.B.Rt.	108-1N		Vt.E-14	B						10'X25'	25	/														Retain Exist. Posts	
		108-2N		See Sign Detail Sht. 29	B						14'X125'	175	/															
		69-1N			A						4'X5'	20	/															
* Location Referenced from Individual Travel Lanes in the direction of Stationing						SHEET TOTALS	A				117									12	—	10	—	—	—		SIGNING TABLE MAINLINE N.B. AND S.B. VERMONT AGENCY OF TRANSPORTATION	
						RUNNING TOTALS	A				1554									69	5	83	7	21				
						B					1554																	

SIGNING TABLE

MAINLINE N.B. AND S.B.

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE DATE SHEET 68 OF



STATION AND/OR MILE MARKER	LOCATION NUMBER *	TEXT NUMBER	TEXT	MUTCD AND/OR VERMONT STD. SHEET	TYPE	EXISTING SIGNS					INSTALLED SIGNS					EXISTING POSTS					NEW AND SALVAGED POSTS					NOTES	
						SIZES	AREA (SF)	RE-MOVE	SAL-VAGE	RE-TAIN	SIZES	AREA (SF)	NEW	SAL-VAGE	NUMBER OF POSTS	TYPE	RE-MOVE	SAL-VAGE	RE-TAIN	DRILL	TYPE 'A' (FLNSD. CHANN.)		TYPE 'C' (ALUM. TUBE)				
																					2.0 lb/H	3.0 lb/H	3" Dia.	4" Dia.	3" SQ		
2285+81	N.B.Rt.	1-1N		VI E-31	A						1'x3'	3	1							1	12						See Page 101 For Mile Marker Descriptions
2283+08	S.B.Lt.	7-1S																			12						
2336+28	N.B.Rt.	2-1N																			10						
2335+82	S.B.Lt.	8-1S																			12						
2386+75	N.B.Rt.	2-2N																			12						
2388+60	S.B.Lt.	8-2S																			10						
2443+90	N.B.Rt.	3-1N																			12						
2441+26	S.B.Lt.	9-1S																			12						
2496+56	N.B.Rt.	4-1N																			10						
2494+19	S.B.Lt.	10-1S																			10						
2549+51	N.B.Rt.	4-2N																			12						
2546+87	S.B.Lt.	10-2S																			12						
2602+41	N.B.Rt.	5-1N																			12						
2699+71	S.B.Lt.	11-1S																			12						
2665+20	N.B.Rt.	5-2N																			12						
2651+82	S.B.Lt.	11-2S																			12						
2707+69	N.B.Rt.	10-1N																			12						
2704+73	S.B.Lt.	13-1S																			12						
2760+36	N.B.Rt.	27-1N																			12						
2757+64	S.B.Lt.	29S																			12						
2812+90	N.B.Rt.	29-1N																			10						
2810+32	S.B.Lt.	35-1S																			10						
2866+02	N.B.Rt.	32-1N																			10						
2863+83	S.B.Lt.	38-1S																			10						
2918+39	N.B.Rt.	33-2N																			12						
2916+55	S.B.Lt.	38-2S																			12						
2971+19	N.B.Rt.	35-1N																			10						
2969+30	S.B.Lt.	41-1S																			10						
3023+60	N.B.Rt.	40-1N																			10						
3022+00	S.B.Lt.	43-1S																			12						
3076+79	N.B.Rt.	43-2N																			10						
3075+53	S.B.Lt.	47-3S																			12						
3129+12	N.B.Rt.	44-1N																			12						
3126+85	S.B.Lt.	48-1S																			10						
3182+23	N.B.Rt.	52-1N																			12						
3180+79	S.B.Lt.	52-1S																			12						
3244+15	N.B.Rt.	62-1N																			10						
3241+25	S.B.Lt.	68-1S		VI E-31	A						1'x3'	3	1								1	10					

DATE _____

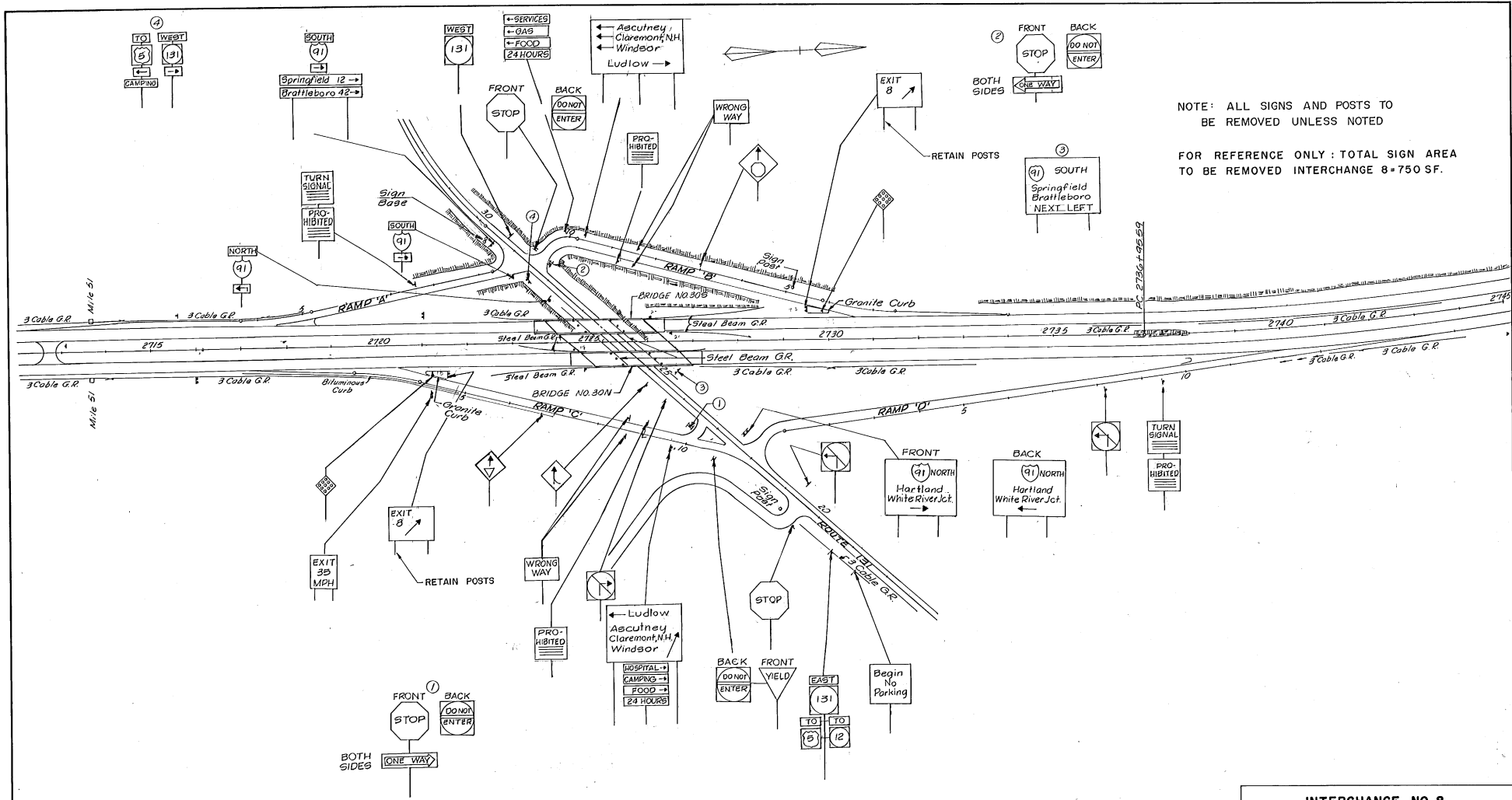
NAME _____

DETAILED BY : I.A.L.

CHECKED BY : C.F.W., G.R.H.

[illegible]

IN CHARGE OF: R.J.H.
 DESIGNED BY: C.F.W. GRH.
 DETAILED BY: J.A.T.
 CHECKED BY: M.W.F. RAL.



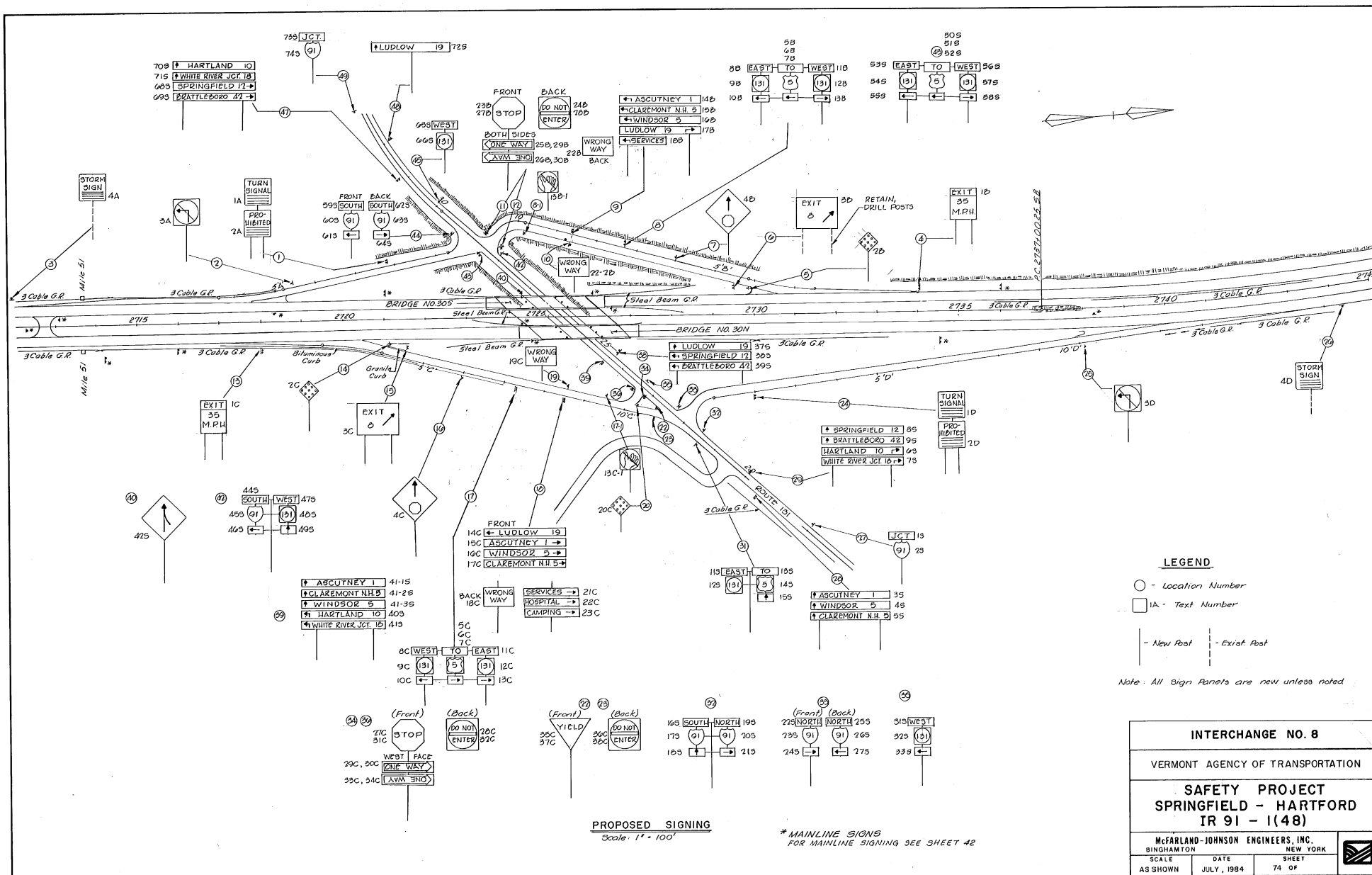
NOTE: ALL SIGNS AND POSTS TO
 BE REMOVED UNLESS NOTED
 FOR REFERENCE ONLY: TOTAL SIGN AREA
 TO BE REMOVED INTERCHANGE 8 = 750 SF.

EXISTING SIGNS
 Plan Scale 1"=100'

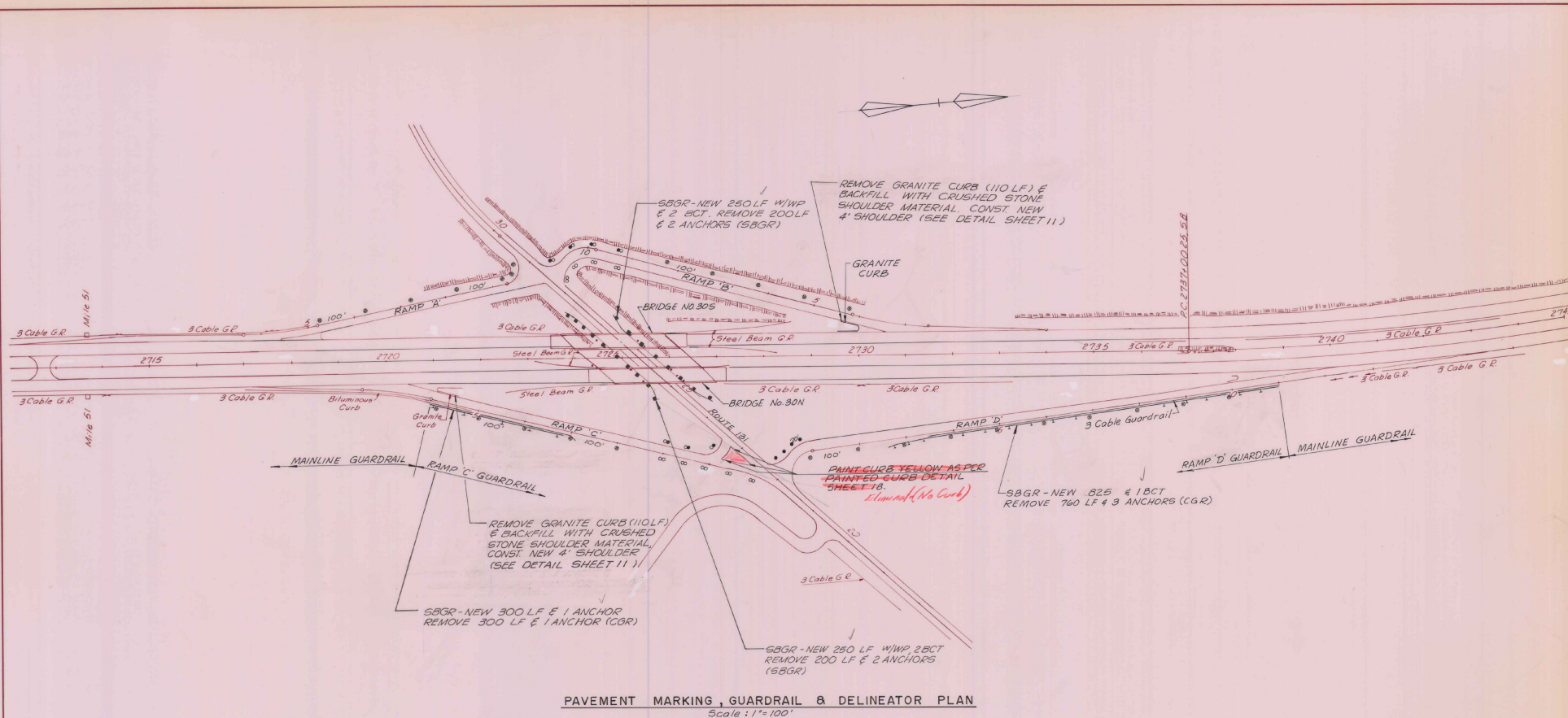
FOR MAINLINE SIGNING
 SEE SHEET 42

INTERCHANGE NO. 8		
VERMONT AGENCY OF TRANSPORTATION		
SAFETY PROJECT SPRINGFIELD - HARTFORD IR 91 - 1(48)		
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK		
SCALE AS SHOWN	DATE JULY, 1984	SHEET 73 OF

IN CHARGE OF :
DESIGNED BY :
CHECKED BY :
DATE :



IN CHARGE OF : _____
 DESIGNED BY : _____
 CHECKED BY : _____



- DELINEATOR REMOVAL (ITEM 676.12) 36 EA.
 DELINEATORS (Item 676.10)
 • White Type I 27 EA.
 • Yellow Type I 4 EA.
 • Type III Yellow & Red 7 EA.
 • Type III White & Red 9 EA.

FOR MAINLINE GUARDRAIL
 SEE SHEET 42

INTERCHANGE NO. 8	
VERMONT AGENCY OF TRANSPORTATION	
SAFETY PROJECT SPRINGFIELD - HARTFORD IR 91 - 1(48)	
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK	
SCALE AS SHOWN	DATE JULY, 1984
SHEET 75 OF	

DATE _____

DETAILED BY: I.A.L.

CHECKED BY: C.F.W., G.R.H.

[illegible]

598

IN CHARGE OF: R.J.H.
DESIGNED BY: G.R.H.

ROUTE 131

SIGNING TABLE

INTERCHANGE NO. 8

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.

SCALE	DATE	SHEET
NONE	OCTOBER, 1984	78 OF



STATION AND/OR MILE MARKER	LOCATION NUMBER	TEXT NUMBER	TEXT	M.U.T.C.D. AND/OR VERMONT STD. SHEET	TYPE	EXISTING SIGNS					INSTALLED SIGNS				EXISTING POSTS					NEW AND SALVAGED POSTS						NOTES	
						SIZES	AREA (SF)	RE- MOVE	SAL- VAGE	RE- TAIN	SIZES	AREA (SF)	NEW	SAL- VAGE	NUMBER OF POSTS	TYPE	RE- MOVE	SAL- VAGE	RE- TAIN	DRILL	TYPE 'A' (FLNGD. CHANN.)			TYPE 'C' (ALUM. TUBE)			
																					2.0 lb/ft	2.5 lb/ft	3.0 lb/ft	3" Dia.	4" Dia.		3" Sq.
23+50	36	31C		V.E.-15C	A						25'X25'	625	1													1	
		32C		V.E.-15C	A							25'X25'	625	1													
		33C	←	V.E.-15B	A							3'X1'	3	1													
		30C	→	V.E.-15B	A							3'X1'	3	1													
23+30	35																					1					
		31S		V.E.-13	A							2'X1'	2	1													
		32S		V.E.-13	A							25'X2'	5	1													
		33S	←	V.E.-13	A							21'X15"	22	1													
24+35	38	37S		V.E.-23	A						6'-0'X10'	5	1									2					
		38S		V.E.-23	A							6'-0'X10'	5	1													
		39S		V.E.-23	A							6'-0'X10'	5	1													
24+50 (Cont'd below)	39	40S		V.E.-23	A						6'-0'X10'	5	1									2					
		41S		V.E.-23	A							6'-0'X10'	5	1													
27+00	40	42S		V.E.-19	A						25'X25'	625	1								1						
28+05	42	44S		V.E.-11	A						2'X1'	2	1											1			
		45S		V.E.-11	A							2'X2'	4	1													
		46S	←	V.E.-11	A							21'X15"	22	1													
		47S		V.E.-13	A							2'X1'	2	1													
		48S		V.E.-13	A							25'X2'	5	1													
		49S	↑	V.E.-13	A							21'X15"	22	1													
28+45	43	50S		V.E.-12	A						2'X1'	2	1										2				
		51S		V.E.-12	A							2'X2'	4	1													
		52S	←	V.E.-12	A							21'X15"	22	1													
		53S		V.E.-13	A							2'X1'	2	1													
		54S		V.E.-13	A							25'X2'	5	1													
		55S	←	V.E.-13	A							21'X15"	22	1													
		56S		V.E.-13	A							2'X1'	2	1													
		57S		V.E.-13	A							25'X2'	5	1													
		58S	→	V.E.-13	A							21'X15"	22	1													
		24+50 (Cont'd)	39	41-1S		V.E.-23	A						6'-0'X10'	5	1												
41-2S				V.E.-23	A							6'-0'X10'	5	1													
41-3S				V.E.-23	A							6'-0'X10'	5	1													

SIGNING TABLE		
INTERCHANGE NO. 8		
VERMONT AGENCY OF TRANSPORTATION		
SAFETY PROJECT SPRINGFIELD-HARTFORD IR 91 - 1(48)		
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK		
SCALE NONE	DATE OCTOBER, 1984	SHEET 79 OF

DATE

5000

11

SIGNING TABLE

INTERCHANGE NO. 8

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

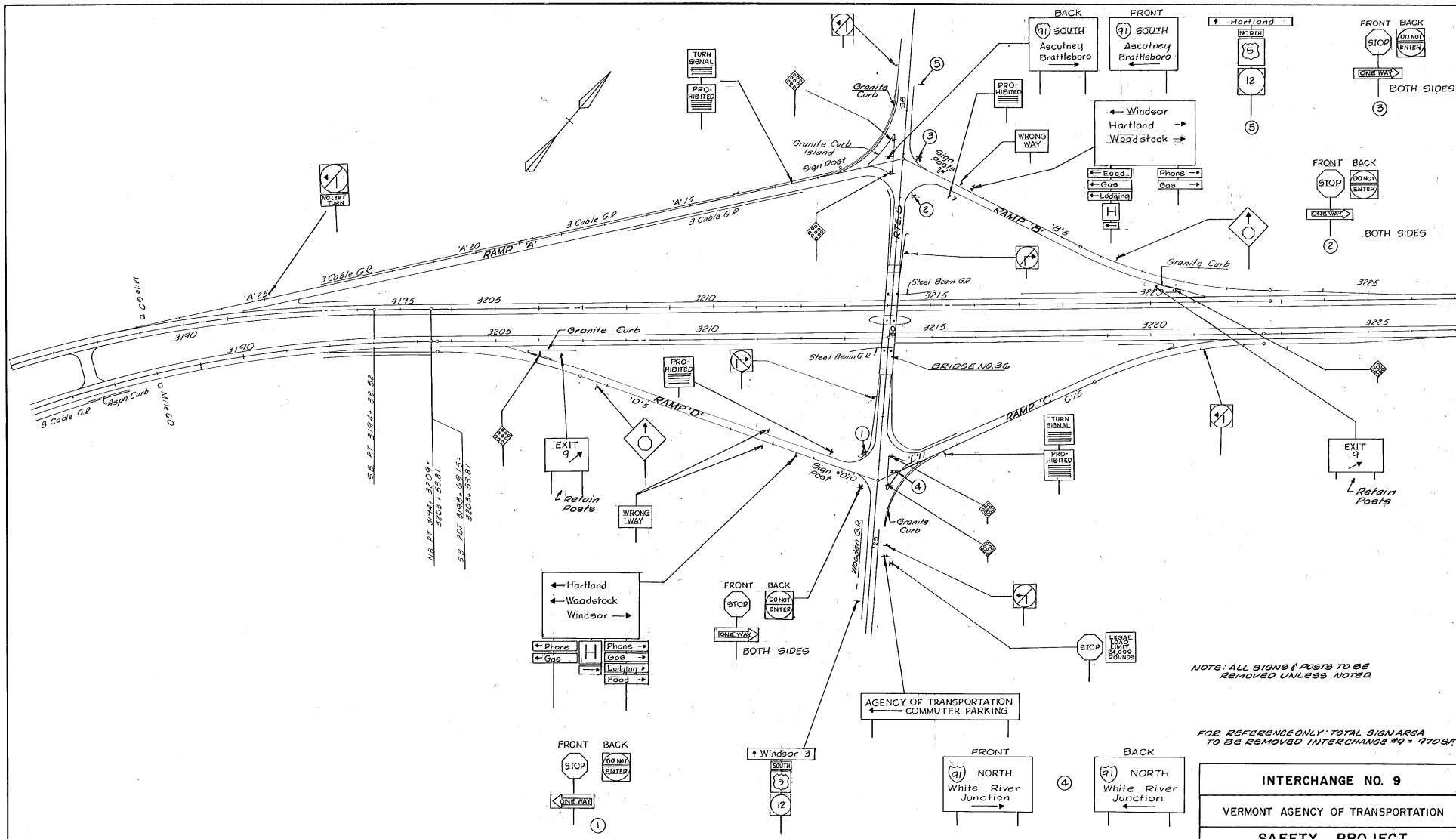
McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE	DATE OCTOBER, 1984
---------------	-----------------------

NEW
SHEE
80 OF



IN CHARGE OF: RJH DESIGNED BY: CMW, GRH
 CHECKED BY: MWF, RAL



EXISTING SIGNS
 Plan Scale: 1"=100'

FOR MAINLINE EXISTING
 SIGNS, SEE SHEET 90

FOR REFERENCE ONLY: TOTAL SIGN AREA
 TO BE REMOVED INTERCHANGE #9 = 970 SQ. FT.

INTERCHANGE NO. 9			
VERMONT AGENCY OF TRANSPORTATION			
SAFETY PROJECT			
SPRINGFIELD - HARTFORD			
IR 91 - 1(48)			
McFARLAND-JOHNSON ENGINEERS, INC.			
SCALE	DATE	SHEET	
AS SHOWN	JULY, 1984	81 OF	

448 J. A. Roberts



SCALE : 1"=100'

FOR MAINLINE GUARDRAIL & TYPE II DELINEATORS
SEE SHEET 50.

DELINEATOR REMOVAL (ITEM 676.12) 59 EA.

DELINEATORS (ITEM 676.10)

- * WHITE TYPE I 27 EA.
- YELLOW TYPE I 15 EA.
- ⊗ TYPE III YELLOW & RED 8 EA.
- ⊗ TYPE III WHITE & RED 8 EA.

INTERCHANGE NO. 9

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.		
BINGHAMTON		NEW YORK
SCALE	DATE	SHEET
AS SHOWN	JULY, 1984	- 83 OF



0.000

3

11

1

CAMP 'B'

INTERCHANGE NO. 9

SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

SCALE NONE	DATE	SHEET 84 OF
---------------	------	----------------



IN CHARGE OF: R.J.H.
DESIGNED BY: G.R.H.

RAMP 'D'

SIGNING TABLE			
INTERCHANGE NO. 9			
VERMONT AGENCY OF TRANSPORTATION			
SAFETY PROJECT			
SPRINGFIELD-HARTFORD			
IR 91 - 1 (48)			
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK			
SCALE	DATE	SHEET	
NONE		85 OF	

DATE

IN CHARGE OF: R.J.H.
DESIGNED BY: G.R.H.

FORM NO. 1

STATION AND/OR MILE MARKER	LOCATION NUMBER	TEXT NUMBER	TEXT	MUTCD AND/OR VERMONT STD. SHEET	W Q L	EXISTING SIGNS					INSTALLED SIGNS				EXISTING POSTS					NEW AND SALVAGED POSTS					NOTES			
						SIZES	AREA (SF)	RE- MOVE	BAL- VAGE	RE- TAIN	SIZES	AREA (SF)	NEW	BAL- VAGE	NUMBER OF POSTS	TYPE	RE- MOVE	BAL- VAGE	RE- TAIN	DRILL	TYPE "A" (FLNGD. CHANN.)			TYPE "C" (ALUM TUBE)				
																					20 lb/H	25 lb/H	30 lb/H	3" Dia.		4" Dia.	5" Sq.	
22+30	23	19		VLE-11	A						21"X15"	2.2	/						1									
		29		VLE-11	A						2'X2'	4	/															
23+40	24	39		VLE-23	A						6'-0"X10'	5	/						2									
24+35		49		VLE-23	A						6'-0"X10'	5	/						2									
		56		VLE-23	A						6'-0"X10'	5	/															
		66		VLE-23	A						6'-0"X10'	5	/															
26+50	27	89		VLE-12	A						2'X1'	2	/															
		99		VLE-12	A						2'X2'	4	/															
		109		VLE-13	A						2'X2'	4	/															
		119	↑	VLE-13	A						21"X16"	2.2	/															
28+70	28	129		VLE-11	A						2'X1'	2	/															
		139		VLE-11	A						2'X2'	4	/															
		149	↑	VLE-11	A						21"X15"	2.2	/															
		159		VLE-11	A						2'X1'	2	/															
		169	→	VLE-11	A						2'X2'	4	/															
26+45	29	189		VLE-11B	A						21"X15"	2.2	/						1									
26+75	30	199		VLE-12	A						2'X1'	2	/															
		209		VLE-12	A						2'X2'	4	/															
		219		VLE-13	A						2'X2'	4	/															
		229	←	VLE-13	A						21"X15"	2.2	/															
		239		VLE-12	A						2'X1'	2	/															
		249		VLE-12	A						2'X2'	4	/															
		259		VLE-13	A						2'X2'	4	/															
		269	→	VLE-13	A						21"X15"	2.2	/															
26+80	31	279		VLE-11	A						2'X1'	2	/															
		289		VLE-11	A						2'X2'	4	/															
		299	→	VLE-11	A						21"X15"	2.2	/															
		309		VLE-11	A						2'X1'	2	/															
		319		VLE-11	A						2'X2'	4	/															
		329	←	VLE-11	A						21"X15"	2.2	/															
27+10	32	339		VLE-11B	A						15'X16'	225	/						1									
			CONT'D NEXT SHEET																									
																					</							

SIGNING TABLE		
INTERCHANGE NO.9		
VERMONT AGENCY OF TRANSPORTATION		
SAFETY PROJECT		
SPRINGFIELD-HARTFORD		
IR 91 - 1(48)		
McFARLAND-JOHNSON ENGINEERS, INC.		
BINGHAMTON	NEW YORK	
SCALE	DATE	SHEET

DATE

IN CHARGE OF: R.L.H.
DESIGNED BY: G.R.H.



DATE _____

DETAILED BY : I.A.L.
CHECKED BY : C.F.W., G.R.H.

IN CHARGE OF: R.J.H.
DESIGNED BY: G.R.H.

SIGNING TABLE

INTERCHANGE NO.9

VERMONT AGENCY OF TRANSPORTATION

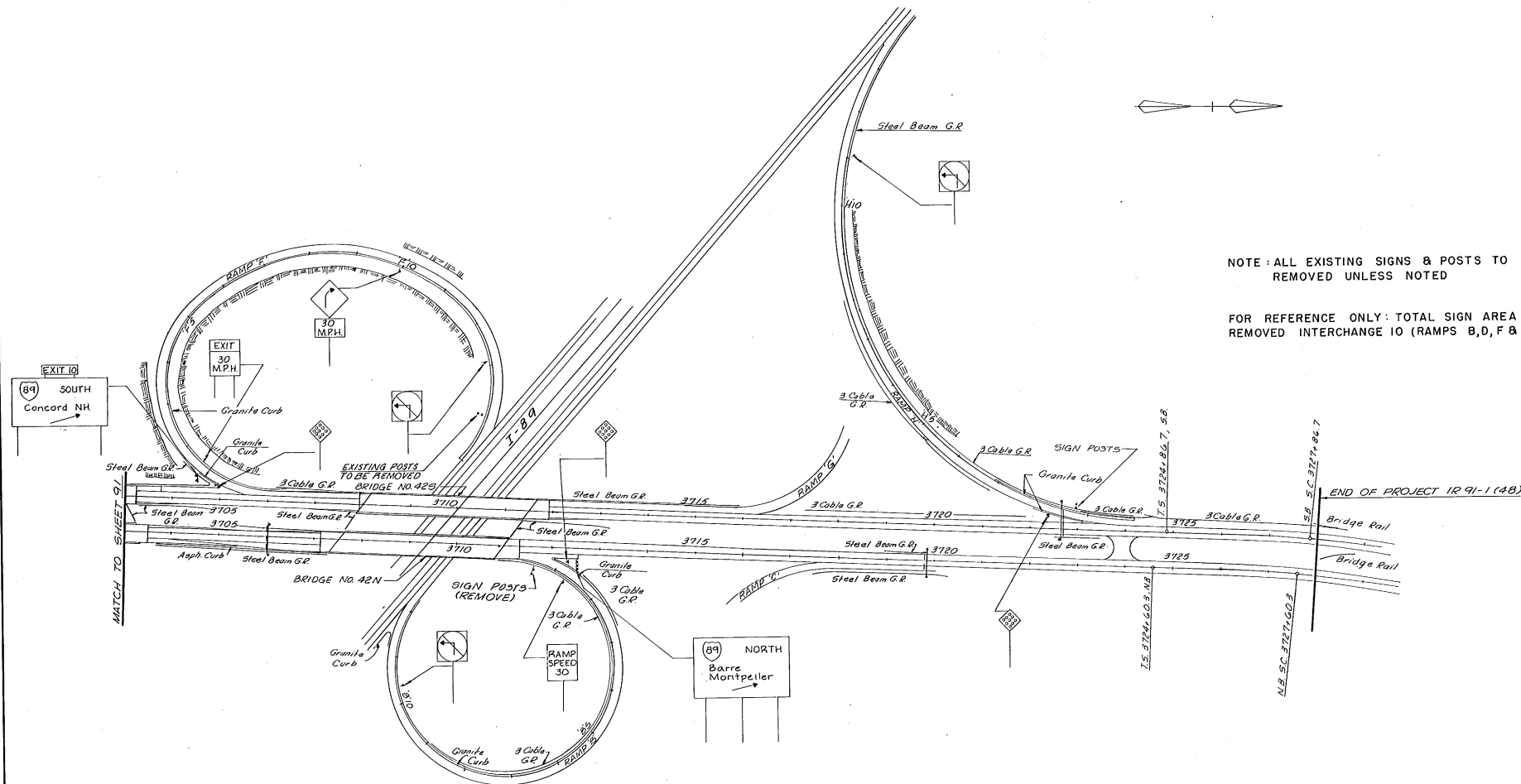
SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE NONE	DATE	SHEET 88 OF
---------------	------	----------------



IN CHARGE OF
DESIGNED BY
CHECKED BY
DATE



NOTE: ALL EXISTING SIGNS & POSTS TO BE REMOVED UNLESS NOTED

FOR REFERENCE ONLY: TOTAL SIGN AREA TO BE REMOVED INTERCHANGE 10 (RAMPS B, D, F & H) = 425 S.F.

EXISTING SIGNS

Scale: 1"=100'

FOR MAINLINE SIGNING
SEE SHEETS 59 & 60.

INTERCHANGE NO. 10

VERMONT AGENCY OF TRANSPORTATION

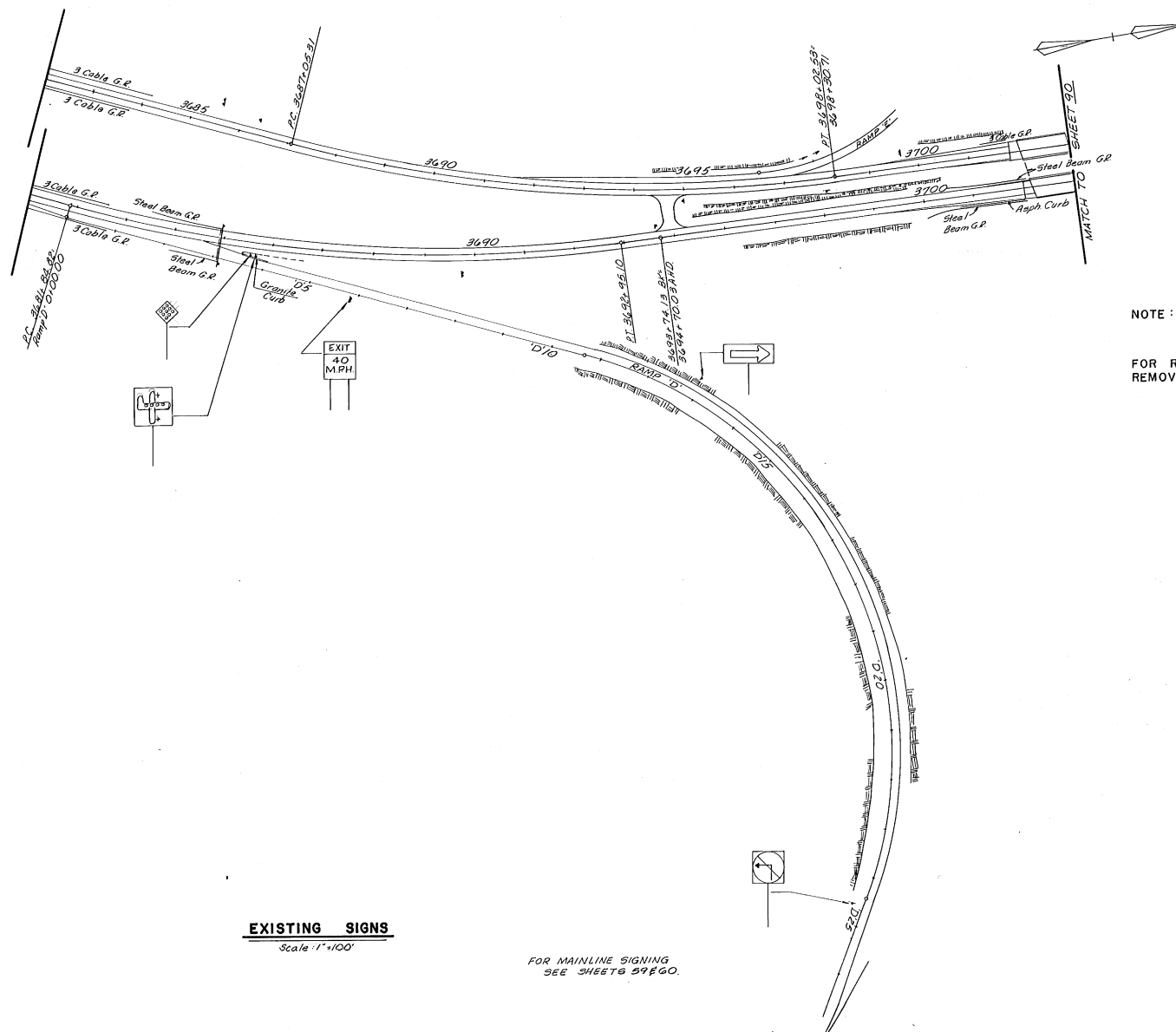
**SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)**

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE	DATE	SHEET
AS SHOWN	JULY, 1984	90 OF



IN CHARGE OF: _____
 DESIGNED BY: _____
 DETAILED BY: _____
 CHECKED BY: _____



NOTE: ALL EXISTING SIGNS AND POSTS TO BE REMOVED UNLESS NOTED

FOR REFERENCE ONLY: TOTAL SIGN AREA TO BE REMOVED INTERCHANGE 10 (RAMPS B,D,F & H) = 425 S.F.

EXISTING SIGNS

Scale: 1" = 100'

FOR MAINLINE SIGNING
 SEE SHEETS 97 & 98.

INTERCHANGE NO. 10

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK

SCALE AS SHOWN	DATE JULY, 1984	SHEET 91 OF
-------------------	--------------------	----------------



IN CHARGE OF :
DESIGNED BY :
CHECKED BY :

* MAINLINE SIGNS
FOR MAINLINE SIGNING SEE SHEETS 59 & 60.

PROPOSED SIGNING
Plan Scale: 1" = 100'

LEGEND

- - Location Number
- 1A - Text Number
- New Post - - - - - Exst. Post

Note: All Sign Panels are new unless noted

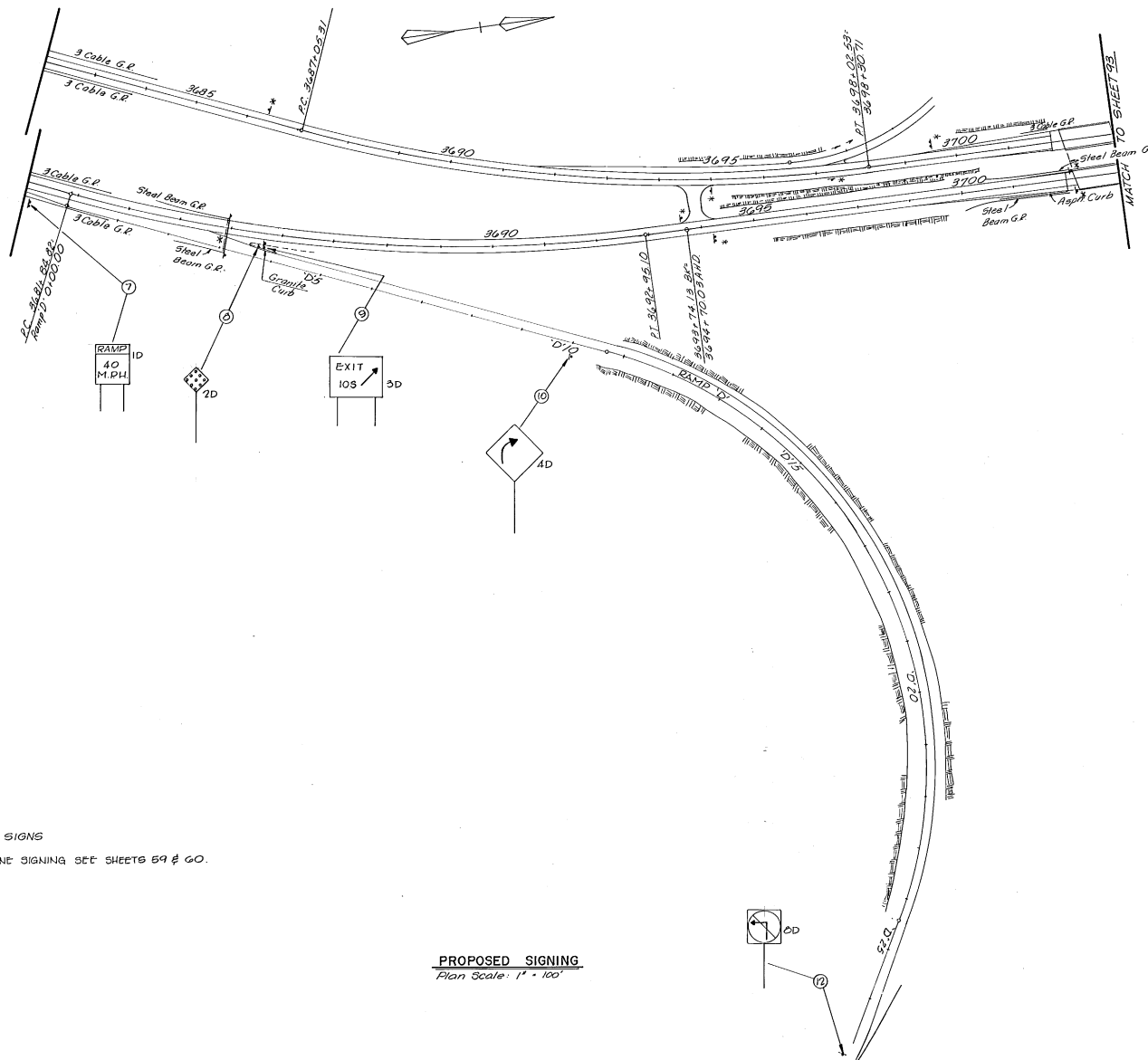
INTERCHANGE NO. 10

VERMONT AGENCY OF TRANSPORTATION

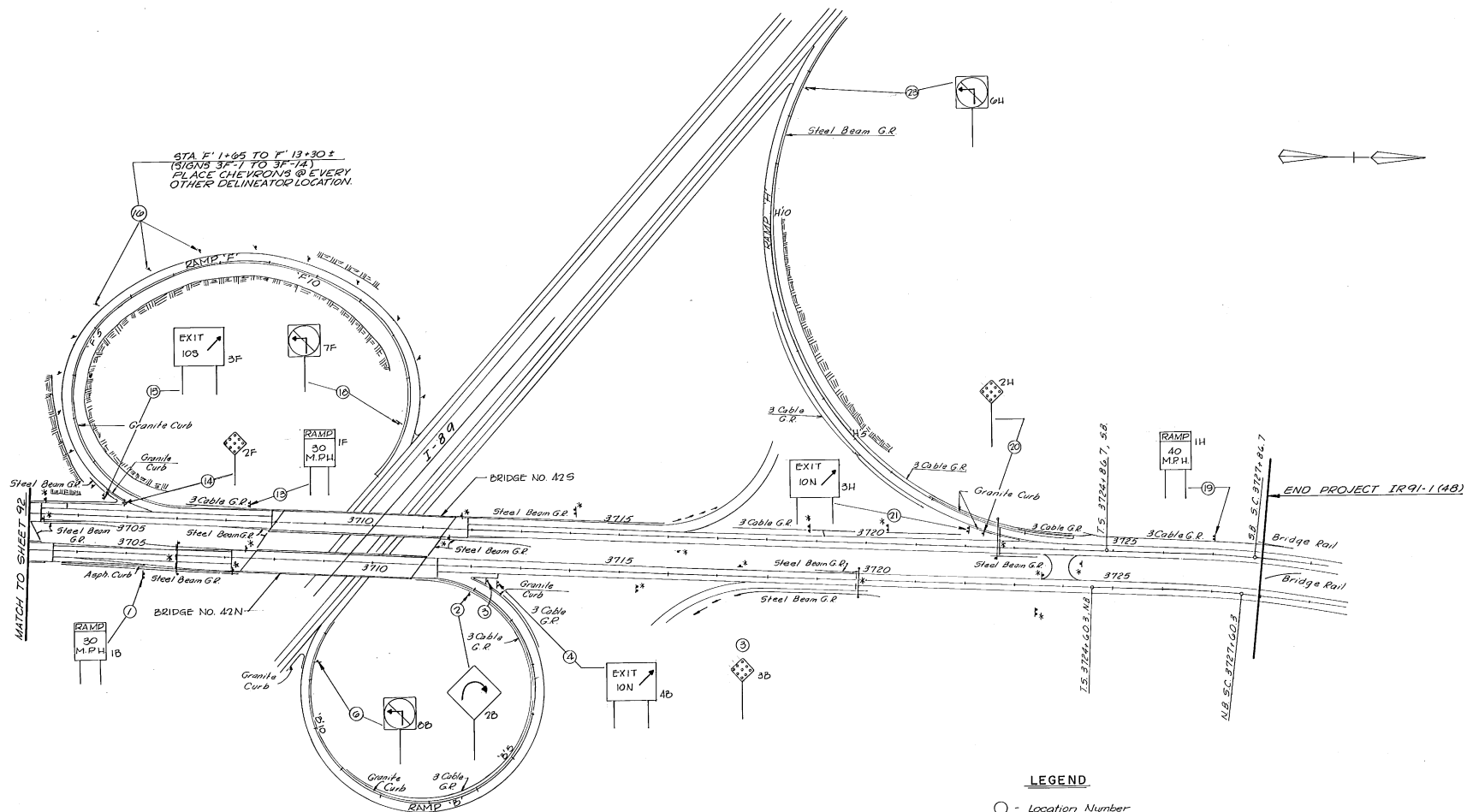
SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE AS SHOWN DATE JULY, 1984 SHEET 92 OF



IN CHARGE OF: _____
 DESIGNED BY: _____
 CHECKED BY: _____



PROPOSED SIGNING
 Plan Scale: 1" = 100'

*MAINLINE SIGNS
 FOR MAINLINE SIGNING
 SEE SHEETS 59 & 60

LEGEND

- - Location Number
- 1A - Text Number
- New Post - - - - - Exist Post

Note: All Sign Panels are new unless noted

INTERCHANGE NO. 10			
VERMONT AGENCY OF TRANSPORTATION			
SAFETY PROJECT			
SPRINGFIELD - HARTFORD			
IR 91 - 1(48)			
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK			
SCALE AS SHOWN	DATE JULY, 1984	SHEET 93 OF	

1



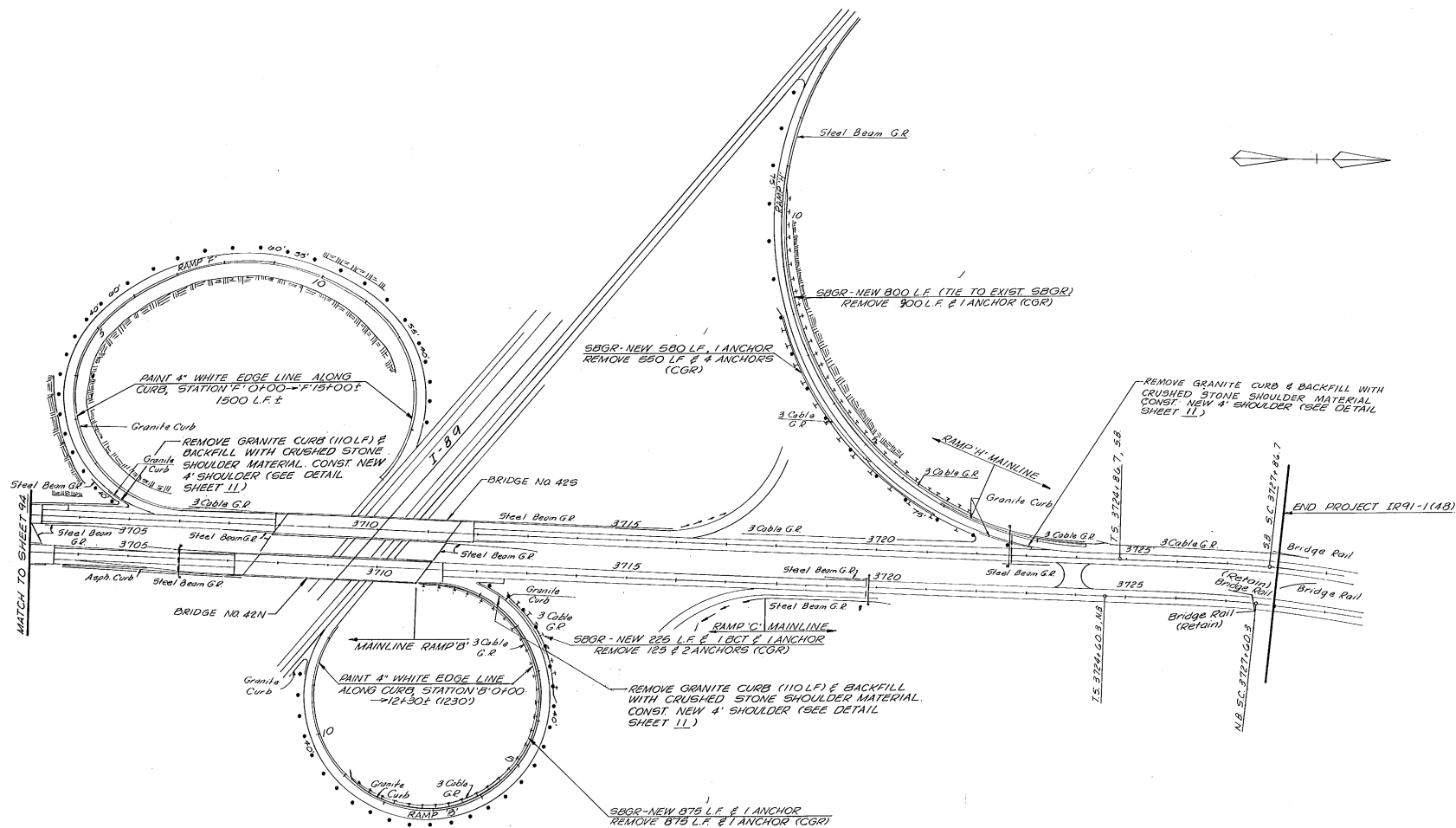
FOR MAINLINE GUARDRAIL & TYPE II
DELINEATORS SEE SHEETS 59 & 60.

- WHITE TYPE I 8 EA.
- YELLOW TYPE I 23 EA.
- TYPE III YELLOW & RED 0
- TYPE III WHITE & RED 0

INTERCHANGE NO. 10		
VERMONT AGENCY OF TRANSPORTATION		
SAFETY PROJECT SPRINGFIELD - HARTFORD IR 91 - 1(48)		
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON, NEW YORK		
SCALE AS SHOWN	DATE JULY, 1984	SHEET 94 OF 94



IN CHARGE OF :
 DESIGNED BY :
 CHECKED BY :



PAVEMENT MARKING, GUARDRAIL & DELINEATOR PLAN
 SCALE 1"=100'

FOR MAINLINE GUARDRAIL & TYPE II DELINEATORS
 SEE SHEETS 69 & 60.

DELINEATOR REMOVAL (ITEM 676.12) 153 EA.
 (TOTAL RAMP'S B, D, F & H)

DELINEATORS (ITEM 676.10) This sheet only

- WHITE TYPE I OEA.
- YELLOW TYPE I 73EA.
- TYPE III YELLOW & RED 0
- TYPE III WHITE & RED 0

INTERCHANGE NO. 10

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - 1(48)

McFARLAND-JOHNSON ENGINEERS, INC.
 BINGHAMTON NEW YORK

SCALE AS SHOWN	DATE JULY, 1984	SHEET 95 OF
-------------------	--------------------	----------------



DATE

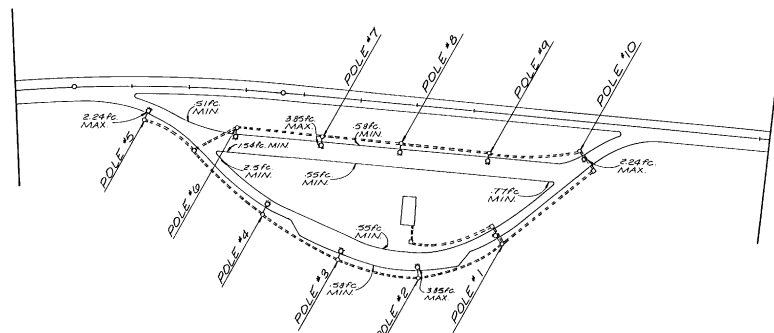
DATE

IN CHARGE OF: R.J.H. DETAILED BY: L.A.L.
DESIGNED BY: G.R.H. CHECKED BY: C.F.W.

IN CHARGE OF: R.J.H. DETAILED BY: L.A.L.
DESIGNED BY: G.R.H. CHECKED BY: C.F.W.

FORM NO. 1

IN CHARGE OF :
DESIGNED BY :
DETAILED BY :
CHECKED BY :



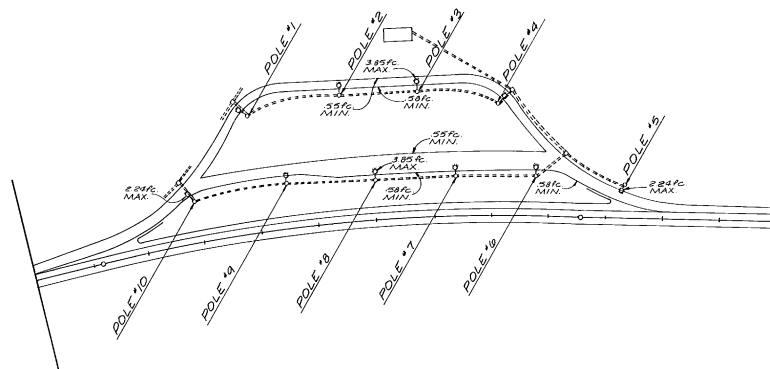
N.B.-REST AREA MILE 68±

N.B.-REST AREA MILE 68±			
POLE NO.	LOCATION	LENGTH OF POLE - ARM	LUMINAIRE WATTS - TYPE
1	EXISTING	EXISTING	250 MC-III
2	"	"	"
3	"	"	"
4	"	"	"
5	"	"	150 MC-II
6	"	"	250 MC-III
7	"	30' 6"	"
8	"	EXISTING	"
9	"	"	"
10	"	"	150 MC-II

* INDICATES POLE REMOVED BECAUSE OF DAMAGE (TO BE REPLACED IN KIND.)
REMOVE DAMAGED CONCRETE BASE & REPLACE WITH NEW BASE. REPAIR OR REPLACE CONDUIT & INSTALL NEW CONDUCTORS TO POLE #6
† POLE #8

WORK TO BE PERFORMED BY CONTRACTOR

THE CONTRACTOR SHALL 1.) REPLACE IN KIND AND ERECT THE MISSING POLE & JUM AS INDICATED BY THE ASTERISK *. 2.) DISCONNECT AND REMOVE EXISTING LUMINAIRES AND INSTALL NEW 1PS LUMINAIRES. 3.) FURNISH AND INSTALL THE WIRING AND RELATED MATERIAL FOR THE NEW POLE AND ELSEWHERE IF REQUIRED. 4.) REPLACE OR LEVEL EXISTING REINFORCED CONCRETE BASES IF REQUIRED. 5.) PLUMB EXISTING POLES IF REQUIRED. 6.) INSTALL METAL TAGS TO THE HANDHOLE OF THE NEW AND EXISTING POLES WITH INFORMATION AS INDICATED IN THE NOTES. 7.) REPAIR OR REPLACE ANY FAULTY MATERIAL WHICH MAY HINDER THE SAFETY OR OPERATION OF THE COMPLETED SYSTEM. 8.) REPLACE IN KIND MISSING BOLT CAPS.



S.B.-REST AREA MILE 68±

S.B.-REST AREA MILE 68±			
POLE NO.	LOCATION	LENGTH OF POLE - ARM	LUMINAIRE WATTS - TYPE
1	EXISTING	EXISTING	250 MC-III
2	"	"	"
3	"	"	"
4	"	"	"
5	"	"	150 MC-II
6	"	"	250 MC-III
7	"	"	"
8	"	"	"
9	"	"	"
10	"	"	150 MC-II

SEE SHEET NO 99 FOR PHOTOMETRICS, GENERAL NOTES, DESIGN PARAMETERS, & MISCELLANEOUS DETAILS.

LIGHTING PLAN

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD — HARTFORD
IR 91 — 1 (48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE DATE SHEET
98 OF



STREET LIGHTING - GENERAL NOTES

THE FOLLOWING NOTES APPLY TO ALL THREE REST AREAS UNLESS OTHERWISE NOTED.

REINFORCED CONCRETE BASES

THE CENTER LINE OF CONCRETE BASES FOR STREET LIGHT POLES SHALL BE APPROXIMATELY 4" OFF THE EDGE OF SHOULDER OR FACE OF CURB UNLESS OTHERWISE NOTED.

THE TOP OF THE BASES SHALL BE SCORED TO SHOW THE LOCATION OF COM-OUT(S). SEE THIS SHEET FOR DETAILS.

CONCRETE BASES SHALL HAVE A MINIMUM OF 6" EARTH EMBEDMENT IN LEVEL GROUND. WHEN INSTALLED IN SLOPING GROUND, THE GREATEST EXPOSED HEIGHT TO KEEP ALL OF THE TOP ABOVE GROUND MUST BE DOUBLED AND THEN ADDED TO THE MINIMUM DEPTH FOR THE TOTAL BASE HEIGHT. THE BASE SIZE SHALL BE 2' X 6' FOR 4'-0" ARMS AND 2'-1/2' X 8' FOR ARMS LONGER THAN 6'. ALSO USE 2'-1/2' DIAMETER CONCRETE BASE FOR POLES HAVING A TRANSFORMER BASE. MAXIMUM PROJECTION OF BASES ABOVE GROUND SHALL BE 4". CARE SHALL BE TAKEN WHERE BASES AND DRIVEWAY STRUCTURES ARE CLOSE TOGETHER.

EACH CONCRETE BASE SHALL INCLUDE THE FOLLOWING:

FOUR ONE INCH DIAMETER ANCHOR BOLTS WITH NUTS AND WASHERS, CONDUIT SWEEPS AS NEEDED FOR INDICATED CIRCUITS, 5/8" X 3'-0" COPPER CLAD GROUND ROD WITH CLAMP AND COPPER GROUND WIRE TO THE ALUMINUM POLE. (NO ALUMINUM GROUND WIRE) ALL EXPOSED METAL HARDWARE EXCEPT WIRE SHALL BE GALVANIZED OR STAINLESS STEEL.

ALL ANCHOR BOLTS FOR STREET LIGHT POLES BESIDE EITHER RAMPS OR MAIN- LINE ROADWAY SHALL BE ON AN 11.5 INCH DIAMETER CIRCLE AND SQUARE TO THE ROADWAY OR AS INDICATED ON THE PLANS. WHERE TRANSFORMER BASES ARE USED, THE BOLTS SHALL BE SET 45° FROM SQUARE AND A 15 INCH DIAMETER CIRCLE FOR THE BASE SHALL BE USED. SEE SKETCH BELOW.

GROUNDING

EACH METAL LIGHT POLE SHALL BE GROUNDED BY BOTH A GROUND ROD AT THE POLE BASE AND A CONTINUOUS GROUNDING CIRCUIT BACK TO A CIRCUIT PROTECTIVE DEVICE. ALUMINUM SHALL NOT BE USED FOR GROUND WIRE. ALL GROUNDING WIRE SHALL BE SHEATHED EXCEPT BETWEEN A BASE AND ITS GROUND ROD. THE COVERING SHALL BE GREEN.

POLES, ANCHOR BASES AND ARMS

NO POLE SHAFT WALL THICKNESS SHALL BE LESS THAN 0.188". ALL POLES SHALL HAVE 8" O.D. BOTTOM DIMENSION.

ALL NEW STREET LIGHT POLES AND LUMINAIRE ARMS SHALL BE ALUMINUM IN ACCORDANCE WITH SUBSECTION 753-10(2). INDICATED MOUNTING HEIGHTS ON THESE PLANS ARE LUMINAIRE HEIGHTS CONSISTING OF ACTUAL POLE HEIGHT PLUS LUMINAIRE ARM RISE ABOVE POLE TOP. (EXAMPLE: 28' POLE PLUS 2' ARM RISE = 30'

LUMINAIRE HEIGHT = MOUNTING HEIGHT ON THESE PLANS). 8" DIA. POLES HAVE BASES WITH SLOTS FOR 4 ONE INCH DIA. ANCHOR BOLTS ON AN 11 TO 12 INCH CIRCLE. ALL LIGHT POLE BASES (EXCEPT ON BRIDGES) SHALL HAVE FRAMING OR BREAKAWAY DESIGN. THEY SHALL YIELD OR BREAKAWAY WITH A CHANGE IN VEHICLE MOMENTUM OF LESS THAN 1,100 POUND-SECONDS WHEN STRUCK BY 2,250 POUNDS AT 20 MPH TO 50 MPH.

ONE INCH DIA. GALVANIZED OR STAINLESS STEEL BOLTS SHALL BE USED TO ATTACH POLES TO TRANSFORMER BASES. WHEN IMPACT SAFETY COUPLINGS OR LEVELLING WITS ARE USED UNDER A POLE BASE, THE SPACE SHALL BE ENCLOSED BY A METAL SKIRT. NO POLE SHALL BE INSTALLED WITHOUT A LUMINAIRE.

ALL 6" OR LONGER POLE ARMS SHALL BE OF THE THRU TYPE. THE TOP MEMBER SHALL BE GALVANIZED AND TAPERED 3" DIAMETER BUREN WITH A 0.125" WALL. THE BOTTOM MEMBER SHALL BE 2" SCHEDULE 40 PIPE.

ARMS MOUNTED ON POLES WITH TRANSFORMER BASES SHALL BE ATTACHED 45° FROM SQUARE SO AS TO BE SQUARE TO THE ROAD. SEE NOTE ABOVE ON ANCHOR BOLT ALIGNMENT.

ALL STREET LIGHTING POLES SHALL HAVE A METAL TAG ATTACHED TO THE HANDLE WITH THE POLE NUMBER, VATTAGE AND TYPE OF LAMP. EXAMPLE: #2-150W-HPS. (HPS = HIGH PRESSURE SODIUM) MINIMUM LETTER SIZE 1/2 INCH HIGH. PAYMENT FOR TAGS SHALL BE SUBORDINATE TO ITEM 679-15, STREET LIGHTING.

WIRING

USE #10 AWG STRANDED COPPER WIRE ON EACH POLE BETWEEN THE POLE BASE AND THE LUMINAIRE. THESE POLE WIRES SHALL BE EARLY DISCONNECTED AT THE HANDLE BY THE USE OF WATER TIGHT WIRE PLUGS. THE POWER INPUT PLUG SHALL BE FUSED ON THE LOAD SIDE. THE FUSE SHALL BE RATED AT 1 TIMES THE MAXIMUM LOAD. COPPER WIRE SHALL HAVE TYPE SHOW INSULATION OR EQUIVALENT.

LUMINAIRES

LUMINAIRES SHALL BE DESIGNED FOR STREET LIGHTING AND THE INDICATED LIGHT DISTRIBUTION. THEY SHALL INCLUDE AN ALUMINUM HOUSING WITH POWER DOOR AND ASTRODOME PHOTO-ELECTRIC CONTROL. A CARBONAL FILTER OPTICAL ASSEMBLY, 90° CUTOFF AND 240 VOLT REGULATOR BALLAST. THE BALLAST SHALL BE MOUNTED TO ITS STARTING CIRCUIT. THE BALLAST ASSEMBLY SHALL BE MOUNTED ON A QUICK DISCONNECT TRAY ON THE POWER DOOR FOR EASY ACCESS AND REMOVAL. WIRING SHALL BE HEAT, BURNED AND KEPT AWAY FROM EXCESS HEAT.

LIGHT DISTRIBUTIONS ARE BASED ON GENERAL ELECTRIC PHOTOMETRIC DATA DRAWINGS (#35-17553 DATED 12-79, #35-17720 DATED 8-83) AND #35-17721 DATED 8-83).

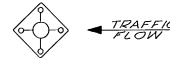
THE INSTALLED LUMINAIRE LIGHT UTILIZATION AND MINIMUM FOOT CANDLES ON THE ROADWAY AND SHOULDER SHALL BE AT LEAST AS GREAT AS INDICATED BY THE ABOVE PHOTOMETRICS.

50% OF THE SODIUM STREET LIGHT LAMPS SHALL CONTINUE TO OPERATE AFTER 24,000 NIGHT TIME HOURS OF USE. LAMP DEPRECIATION IS BASED ON 24,000 HOURS WITH 10 HOURS PER DAY.

GENERAL

ALL ELECTRICAL MATERIAL AND ELECTRICAL WORK SHALL MEET THE REQUIRE- MENTS OF THE NATIONAL ELECTRIC CODE, STATE AND LOCAL CODES AND BE APPROVED BY THE AREA ELECTRICAL INSPECTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE NEW LUMINAIRES THRU THE CONSTRUCTION PERIOD UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE BID PRICE SHALL INCLUDE ALL MAINTENANCE COSTS.

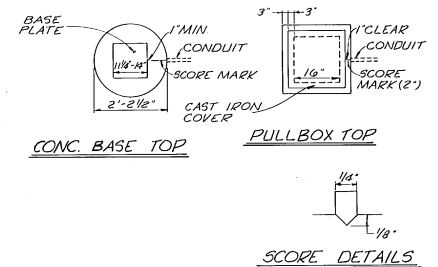
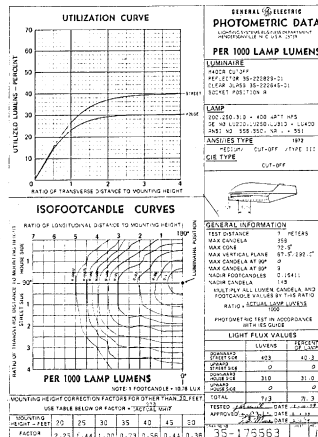
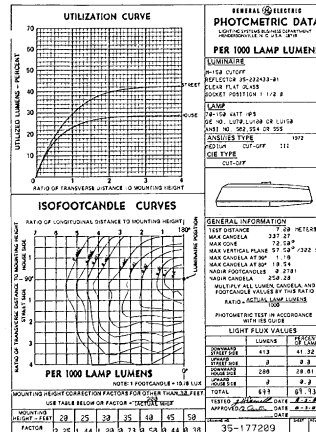
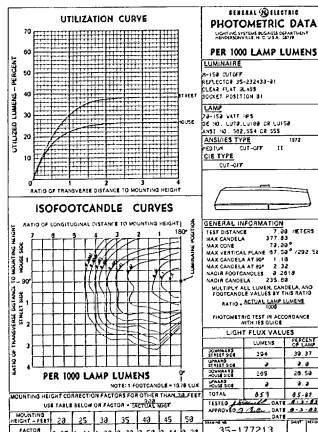


TRANSFORMER BASE MOUNTING DETAIL

STREET LIGHTING DESIGN PARAMETERS

AVERAGE MAINTAINED ILLUMINATION:
ENTRANCE - 0.6 FC. MIN.
PARKING AREA - 1.0 FC. MIN.
FILTERED LUMINAIRE: 0.95
LAMP DEPRECIATION: 0.75 @ 24,000 HRS
COMBINED LAMP FACTOR: 0.7
MOUNTING HEIGHT FACTOR: (30/MT)²
UNIFORMITY RATIO: 4:1 MAX.
MINIMUM FOOTCANDLES ON ACCESS AND PARKING AREA: 0.20 MIN.

PHOTOMETRICS ARE FOR DESIGN PURPOSES ONLY. THE INSTALLED LUMINAIRE LIGHT UTILIZATION & MINIMUM FOOTCANDLES ON THE ROADWAY/PARKING AREA SHALL BE AT LEAST AS GREAT AS INDICATED ON THE PHOTOMETRIC.



MISC. LIGHTING

VERMONT AGENCY OF TRANSPORTATION

SAFETY PROJECT
SPRINGFIELD - HARTFORD
IR 91 - I (48)

McFARLAND-JOHNSON ENGINEERS, INC.
BINGHAMTON NEW YORK

SCALE DATE SHEET
99 OF

IN CHARGE OF
DESIGNED BY
CHECKED BY

EXISTING MILE POST	NORTHBOUND MAINLINE			SOUTHBOUND MAINLINE		
	EXIST. MILE POST STATION	NEW MILE POST STATION	NEW MILE POST STATION REMARKS	EXIST. MILE POST STATION	NEW MILE POST STATION	NEW MILE POST STATION REMARKS
			Station established from Post Mile Markers			Station established from Post Mile Markers
43	2291+95	2293+81	2294+01	2290+85	2283+08	2283+38
44	2344+65	2336+28	2337+23	2343+55	2335+82	2336+54
45	2397+50	2386+75	on bridge	2396+45	2388+80	2389+41
46	2450+30	2443+90	2443+09	2449+15	2441+26	2442+33
47	2502+85	2496+56	2496+85	2502+00	2494+19	2495+08
48	2555+70	2549+51	2549+71	2554+70	2546+87	2546+56
49	2608+50	2602+41	2601+73	2607+55	2599+71	2600+72
50	2661+40	2655+20	2654+49	2659+80	2651+82	2652+73
51	2713+70	2707+69	2706+89	2713+70	2704+73	2705+63
52	2766+30	2760+36	2759+44	2766+30	2757+64	2758+51
53	2818+85	2812+90	2811+56	2819+20	2810+32	2811+88
54	2871+85	2866+02	2864+98	2871+50	2863+83	2863+65
55	2928+16	2918+39	2917+22	2920+08	2916+55	2917+45
56	Sign Missing	2971+19	2970+41	2977+40	2969+30	2970+91
57	Sign Missing	3023+80	3023+49	3029+65	3022+00	3024+27
58	3083+00	3076+79	3076+44	3083+25	3075+53	3077+72
59	3135+05	3129+12	3128+76	3134+60	3126+85	3129+21
60	3188+00	3182+23	3181+65	3189+15	3180+79	3182+72
61	Sign Missing	3244+15	3243+88	3248+70	3241+25	3243+56
62	Sign Missing	3299+09	3296+64	3301+55	3294+17	3296+46
63	3354+60	3348+52	3348+58	3355+05	3347+43	3349+62
64	3407+40	3401+48	3401+91	3407+85	3400+49	3402+64
65	3462+10	3456+68	3456+40	3462+10	3453+50	3455+40
66	3514+60	3508+98	3509+33	3514+60	3506+00	3508+23
67	3567+50	3561+45	3561+67	3567+50	3559+03	3561+65
68	3620+30	3614+06	3614+89	3620+35	3612+38	3614+85
69	Sign Missing	3666+83	3669+92	Sign Missing	3664+96	3667+44
70	Sign Missing	3720+53		Sign Missing	3718+16	

MILE MARKER LOCATION TABLE			
VERMONT AGENCY OF TRANSPORTATION			
SAFETY PROJECT SPRINGFIELD — HARTFORD IR 91 — I(48)			
McFARLAND-JOHNSON ENGINEERS, INC. BINGHAMTON NEW YORK		SHEET	
SCALE	DATE	101 OF	

SUMMARY OF BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	BRIDGE NO. 589																								TOTAL
			29-NB	29-SB	30-NB	30-SB	33-NB	33-SB	34-NB	34-SB	35-NB	35-SB	36	38	39-NB	39-SB	40-NB	40-SB	41-NB	41-SB	42-NB	42-SB					
202.30	PARTIAL REMOVAL OF STRUCTURE	EA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					20
202.45	REMOVAL OF EXISTING RAILING	L.F.	234	234	464	462	49	49	351	343	277	260	473	831	30	30			331	343	737	700	487				6,198
501.19	CONCRETE, CLASS AA *	CY																									10
501.20	CONCRETE, CLASS A	CY	3	3	3	3	3	3	4	3	2	2	2	1	2	2	1	1	1	1	1	1	1				42
507.15	REINFORCING STEEL	LB.	290	310	330	330	240	240	350	310	230	230	180	20	180	180	20	20	20	20	20	20	20				3,540
514.10	WATER REPELLENT	GAL	2	2	2	2	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1				26
614.25	JOINT SEALER, POLYURETHANE	GAL	1	1	1	1	1	1	1	1	1	1	1		1	1											13
615.35	EPOXY MORTAR COMPOUND *	GAL																									75
617.20	BRIDGE RAILING, 3 RAIL ALUMINUM	L.F.					88	88							50	50											276
617.30	BRIDGE RAILING, GALVANIZED BOX BEAM	L.F.	286	291	504	502			391	383	317	301	505	834					335	347	740	703	492				6,439
617.45	APPROACH RAILING, 2 RAIL ALUMINUM	L.F.					109	109							109	109	55	28									519
621.90	GUARD RAIL APPROACH SECTION - TYPE I	EA	2	2	2	2			2	2	2	2	4	4					2	2	2	2	2				32
621.91	GUARD RAIL APPROACH SECTION - TYPE II	EA	2	2	2	2			2	2	2	2							2	2	2	2	2				24

GENERAL NOTES

- FOR ADDITIONAL GENERAL NOTES, SEE STD. SCB-01-75, NOTES 3, 4, 5, 7, 14 AND 16.
- ALL CONCRETE WILL BE "CONCRETE, CLASS A" EXCEPT AS NOTED IN GENERAL NOTE 16.
- PILONS SHALL BE REMOVED TO 1'-0" BELOW EXISTING SUPERSTRUCTURE CURB GRADE. REPLACE TO ELEVATION OF TOP OF EXISTING SUPERSTRUCTURE CURB GRADE.
- REMOVAL OF THE CONCRETE PILONS TO THE LIMITS SHOWN AND REMOVAL OF THE GRANITE END BLOCKS SHALL BE PAID FOR AS THE ITEM "PARTIAL REMOVAL OF STRUCTURE" (TO INCLUDE 4 PILONS AND END BLOCKS PER BRIDGE).
- WHEN REMOVING THE EXISTING PILONS, RETAIN THE EXISTING VERTICAL REINFORCING STEEL AND CUT AS DETAILED.
- THE EXISTING CONCRETE SHALL BE THOROUGHLY COATED WITH NEAT CEMENT GROUT BEFORE PLACING NEW CONCRETE AS PER SUBSECTION 501.12(b).
- CONCRETE AT THE JOINTS SHALL BE CLEANED AND PREPARED AS PER SUBSECTION 615.05(b).
- NEW BRIDGE RAILING POSTS SHALL BE SET NORMAL TO GRADE.
- FOR BRIDGE RAILING DETAILS AND RELATED NOTES NOT SHOWN ON THESE PLANS, SEE STD. SB-44-A-2 AND STD. SB-44-1-1 (SHEETS 1 OF 2, 2 OF 2).
- THE STANDARD BASE PLATE DETAILS SHOWN ON STD. SB-44-A-2 HAVE BEEN MODIFIED TO ACCOMMODATE REVISED ANCHOR BOLT PATTERNS AS DETAILED ON THESE PLANS.
- THE MODIFIED POSTS, BASE PLATES AND RELATED HARDWARE SHALL BE PAID FOR AS THE ITEM "BRIDGE RAILING - GALVANIZED BOX BEAM EXCEPT BRIDGE #33 & #34 WHICH SHALL BE PAID FOR AS THE ITEM "BRIDGE RAILING - 3 RAIL ALUMINUM".
- THE CONTRACTOR SHALL FIELD CHECK POST LAYOUT DIMENSIONS PRIOR TO SUBMISSION OF SHOP DETAILS FOR APPROVAL.

- THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT ALL LANES SHALL BE OPEN TO TRAFFIC DURING NON-WORKING HOURS. THEREFORE, NO GAPS BETWEEN EXISTING RAILING AND NEW RAILING WILL BE PERMITTED. DETAILS FOR TEMPORARY BARRIER RAIL IF REQUIRED TO BRIDGE THESE GAPS SHALL BE SUBMITTED FOR APPROVAL.
- THE EXISTING BRIDGE RAILING POSTS AND HARDWARE SHALL REMAIN THE PROPERTY OF THE STATE OF VERMONT UPON ITS REMOVAL AND SHALL BE STOCKPILED ON THE PROJECT IN LOCATIONS SELECTED BY THE ENGINEER FOR DISPOSAL BY STATE FORCES. THE COST OF REMOVING AND STOCKPIILING THIS MATERIAL SHALL BE PAID FOR AS THE ITEM "REMOVAL OF EXISTING RAILING".
- THE EXISTING STATE OF VERMONT BRIDGE HANGERS SHALL BE CAREFULLY REMOVED FROM PILONS AND RESET IN NEW CONCRETE FASCIA AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO THE ITEM "CONCRETE, CLASS A".
- "EPOXY MORTAR COMPOUND" OR "CONCRETE, CLASS AA" SHALL BE USED TO REPAIR ANY SPALLED OR CRACKED AREAS ON THE EXISTING CURBS. ALL DETERIORATED OR UNSOUND CONCRETE SHALL BE REMOVED TO THE LIMITS DEEMED NECESSARY BY THE ENGINEER. THE REMOVAL SHALL BE SUBSIDIARY TO THE ITEMS "EPOXY MORTAR COMPOUND" OR "CONCRETE, CLASS AA". THE CURBS SHALL BE PATCHED AS FOLLOWS:
 - CRACKS OR SPALLED AREAS IN THE CURBS WITH A DEPTH OF LESS THAN 1" ARE TO BE FILLED WITH "EPOXY MORTAR COMPOUND".
 - CRACKS OR SPALLED AREAS IN THE CURBS WITH A DEPTH OF GREATER THAN 1" ARE TO HAVE THEIR JOINTS CUT SO AS TO PROVIDE A MINIMUM GUTTH OF 1". THEY THEN WILL BE COATED WITH NEAT CEMENT AND PATCHED WITH "CONCRETE, CLASS AA".
- RAILING JOINT SPICES SHALL BE LOCATED AT ALL SUPERSTRUCTURE JOINTS OVER PIERS AND AT THE EXPANSION END OF ALL BRIDGES AT THE JOINT BETWEEN THE SUPERSTRUCTURE AND THE WINGWALLS. THE BRIDGE RAILING JOINT OPENING SHALL BE A MINIMUM OF 1". ALL DIMENSIONS SHOWN ARE AT 55 DEGREES F.
- NEW CORE EXPANSION MATERIAL SHALL BE SUBSIDIARY TO THE ITEM "CONCRETE CLASS A".

LIST OF SHEETS

- BR201 GENERAL NOTES AND BRIDGE QUANTITY SHEET
 BR202 RAILING PLAN - BRIDGE NO. 29
 BR203 RAILING PLAN - BRIDGE NO. 30
 BR204 RAILING PLAN - BRIDGE NO. 33
 BR205 RAILING PLAN - BRIDGE NO. 34
 BR206 RAILING PLAN - BRIDGE NO. 36
 BR207 RAILING PLAN - BRIDGE NO. 38
 BR208 RAILING PLAN - BRIDGE NO. 39
 BR209 RAILING PLAN - BRIDGE NO. 40
 BR210 RAILING PLAN - BRIDGE NO. 41
 BR211 RAILING PLAN - BRIDGE NO. 42
 BR212 RAILING PLAN - BRIDGE NO. 42
 BR213 POST AND CURB DETAILS
 BR214 BRIDGE APPROACH RAIL DETAILS - TYPE I
 BR215 BRIDGE APPROACH RAIL DETAILS - TYPE II
 BR216 REINFORCING STEEL SCHEDULE

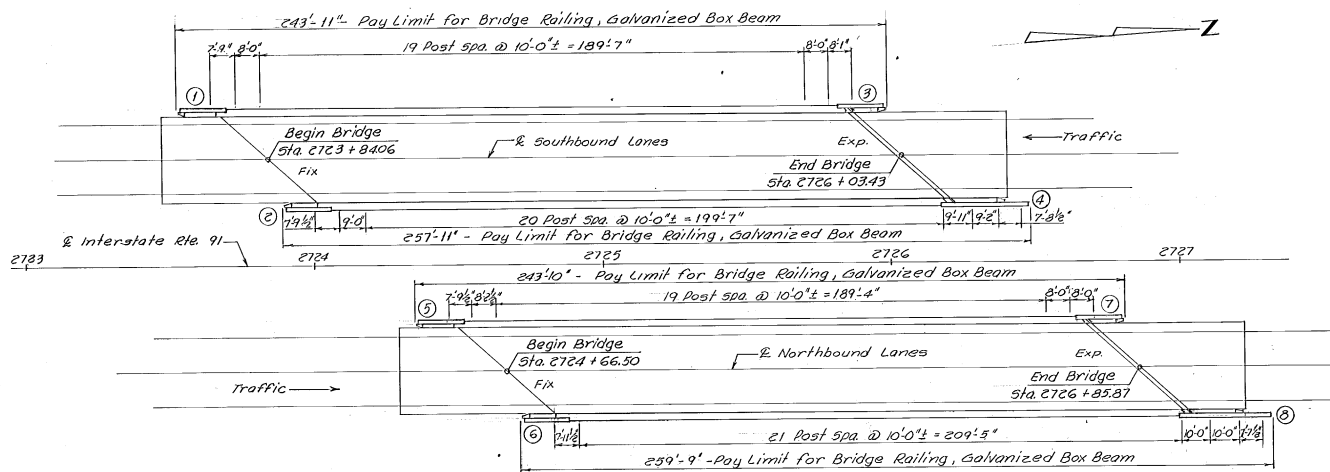
STANDARDS

- STD. DWG. SCB-01-75 9/14/81 R
 STD. DWG. SB-41-71 (SH. 1 OF 2 & 2 OF 2) 7/1/77 R
 STD. DWG. SB-44-A-2 15 DEC 84 R
 STD. DWG. G-1 21 DEC 84 R
 STD. DWG. G-8A 7/1/78 R

BRIDGE	LOCATION	GUARD RAIL APPROACH SECTION		APPROACH RAILING 2 RAIL ALUMINUM
		TYPE I	TYPE II	
I-91 OVER	APPROACH	✓		
I-91 OVER	EXIT		✓	
I-91 OVER 33, 39 & 40	APPROACH			✓
I-91 OVER 33, 39 & 40	EXIT			✓
RT. 5 OVER	APPROACH	✓		
RT. 5 OVER	APPROACH	✓		
Ramp C over I-91	Approach	✓		
Ramp C over I-91	Exit		✓	

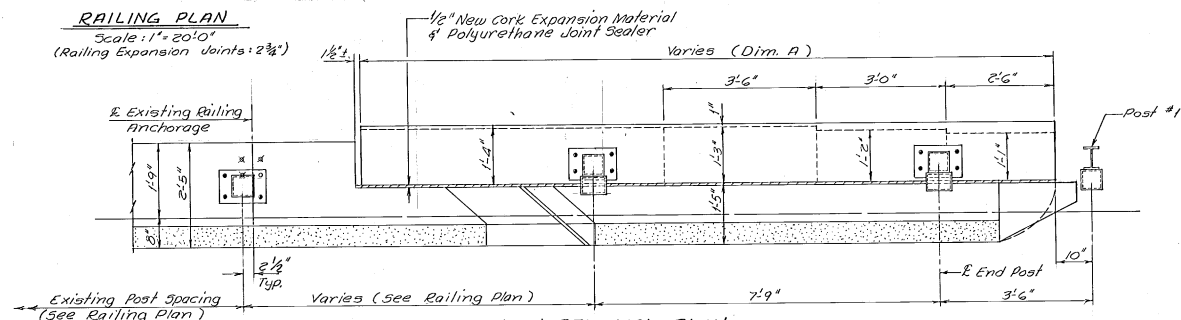
STATE OF VERMONT AGENCY OF TRANSPORTATION

TOWN OF	Bridge No.
HIGHWAY NO. INTERSTATE RTE. 91	Log Sta.
GENERAL NOTES AND BRIDGE QUANTITY SHEET	
Designed by J.E.M.	Drawn by M.L.R.
Checked by J.E.M.	Bridge Design Supervisor
J.E.M. date 8/84	W.T.S. date
PROJECT SPRINGFIELD-HARTFORD	PROJECT NO. IR 91-1(48)
Bridge Sheet No. BR201	Sheet 103 of

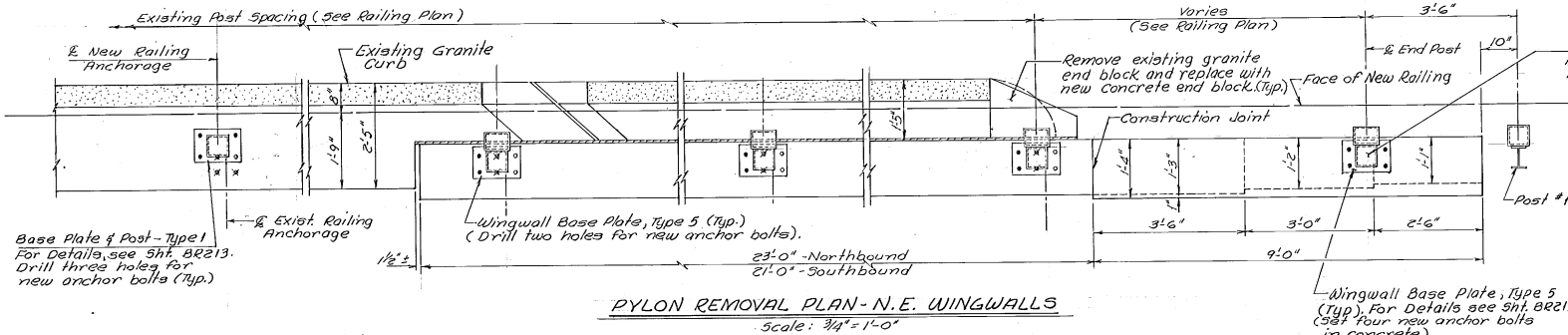


Dim. A

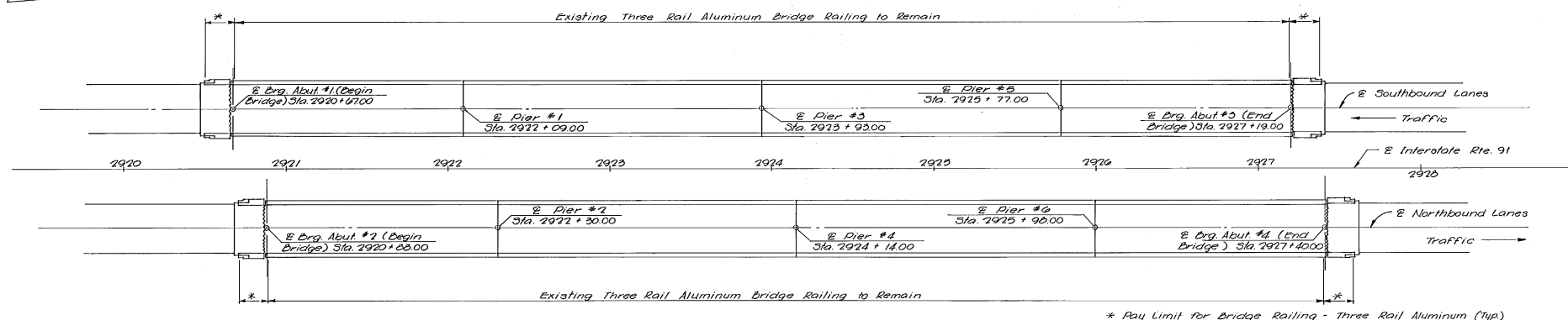
- ① 14'-11"
- ② 14'-11 1/2"
- ③ 16'-0 1/2"
- ④ 30'-0"
- ⑤ 14'-11 1/2"
- ⑥ 15'-0"
- ⑦ 16'-0"
- ⑧ 32'-0"



- Note:
- Denotes exist. anchor bolts reused.
 - ✕ Denotes exist. anchor bolts removed.
 - Denotes new anchor bolts.

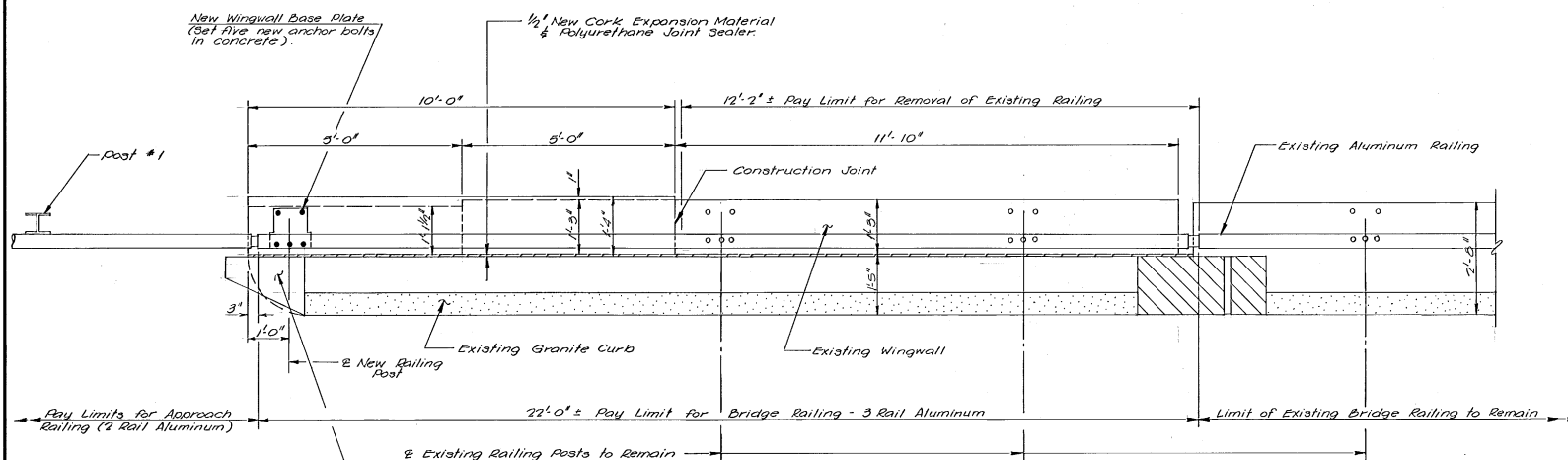


STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
TOWN OF WEATHERSFIELD	Bridge No. 30.5.8.f.H.B.
HIGHWAY NO. INTERSTATE RTE. 91	Log Sta. 2723.00
OVER VT. ROUTE 131	
RAILING PLAN	
Designed by M. J. E.	Drawn by M. J. K.
Checked by J. E. M.	Bridge Design Supervisor W. T. S.
date 7/84	date 7/84
PROJECT SPRINGFIELD-HARTFORD	PROJECT NO. IR 91-1(48)
Bridge Sheet No. BR203	Sheet 105 of 105



RAILING PLAN

Scale: 1" = 30'-0"
(Railing Expansion Joints: 4")



PYLON REMOVAL PLAN

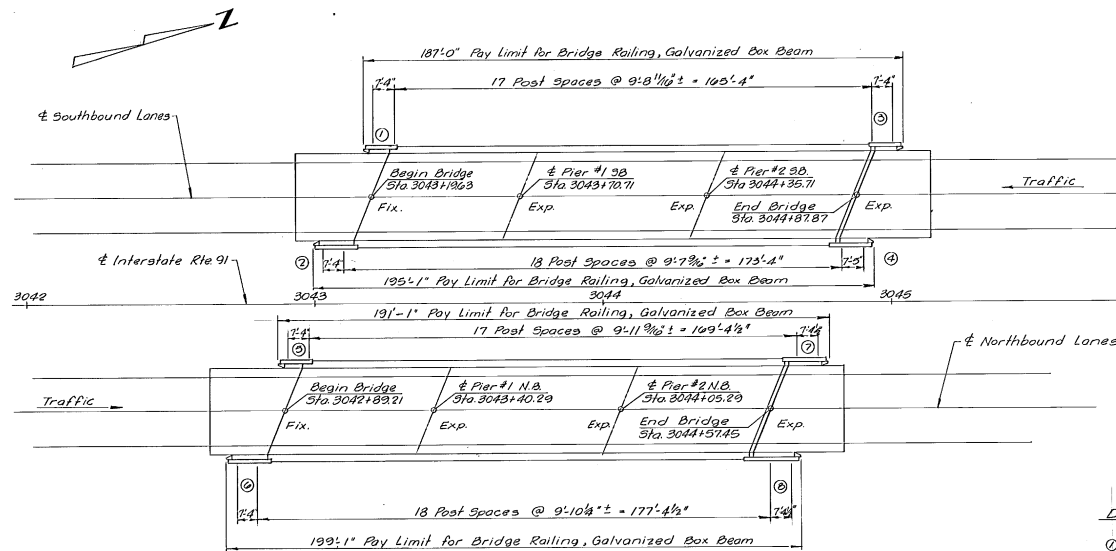
Scale: 3/4" = 1'-0"

Notes

1. For details of Aluminum Railing, see Standard Sheets SB-R1-71 (Sheets 1 & 2 of 2).
2. For details of Aluminum Approach Railing, see Standard Sheet G-6A.
3. ○ Denotes existing anchor bolts.
● Denotes new anchor bolts.

STATE OF VERMONT AGENCY OF TRANSPORTATION

TOWN OF	WINDSOR	Bridge No.	33 NB 132
HIGHWAY NO./INTERSTATE RTE.	91	Log Sta.	
PROJECT	SPRINGFIELD-HARTFORD	Survey Sta./M.M.	55.05
PROJECT NO.	IR 91-1(48)	RAILING PLAN	
Designed by	CMK	Drawn by	CMK
Checked by	JEM date 7/24	Bridge Design Supervisor	WTS date
BRIDGE SHEET NO.	52204	SHEET	100 of



RAILING PLAN
Scale: 1"=20'-0"
(Railing Expansion Joints: 2'±)

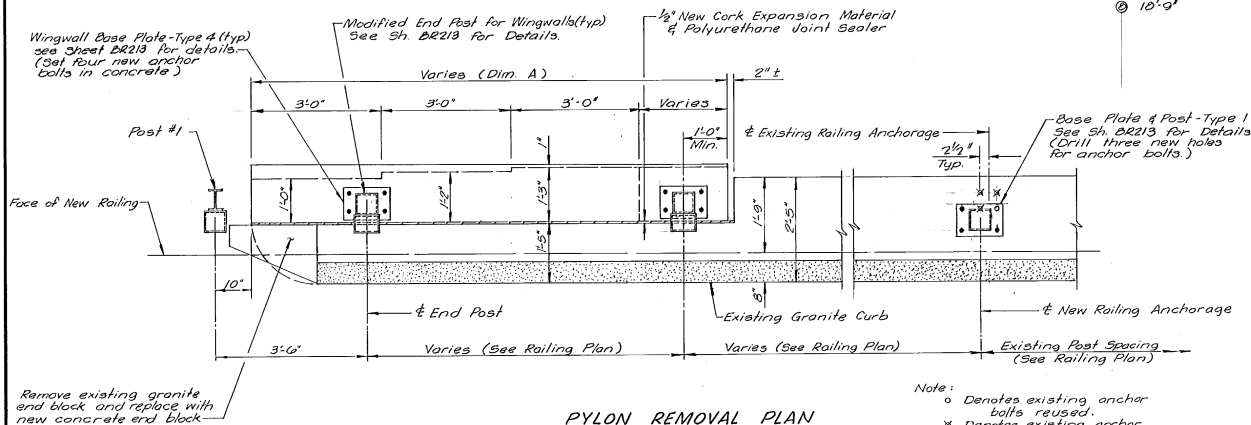
Dim. A

- ① 11'-0"
- ② 15'-0"
- ③ 11'-0"
- ④ 15'-0"
- ⑤ 11'-0"
- ⑥ 15'-0"
- ⑦ 15'-0"
- ⑧ 10'-0"

BRIDGE RAILING - GALVANIZED BOX BEAM

NORTHBOUND STA 3042+69 RT. ~ STA 3044+68 RT.
STA 3042+86 LT. ~ STA 3044+77 LT.

SOUTHBOUND STA 3042+99 RT. ~ STA 3044+94 RT.
STA 3043+77 LT. ~ STA 3045+04 LT.

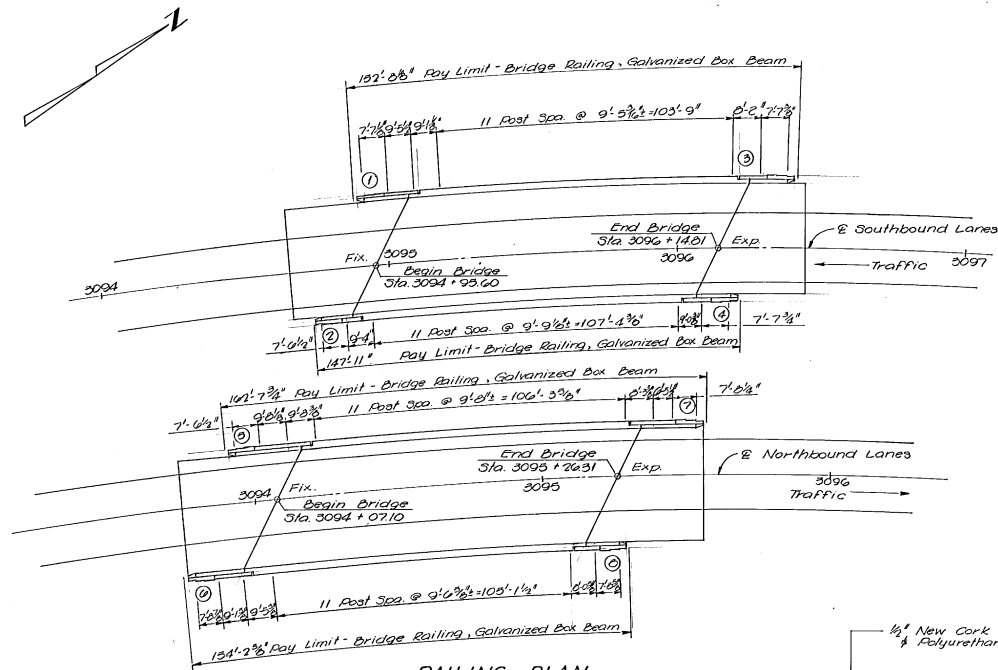


PYLON REMOVAL PLAN
Scale: 1/2"=1'-0"

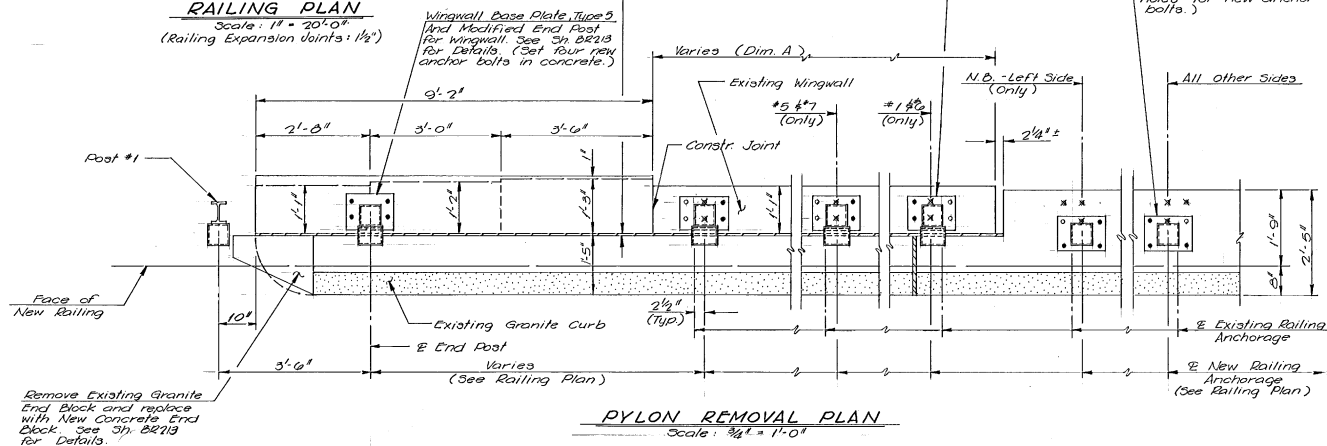
- Note:
- Denotes existing anchor bolts reused.
 - ✕ Denotes existing anchor bolts removed.
 - Denotes new anchor bolts.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF	WINDSOR	Bridge No.	24 NB198
HIGHWAY NO.	INTERSTATE RIE/9	Log Sta.	
	OVER WINDSOR TR. #5	Surveys	MM 5130
RAILING PLAN			
Designed by	J.E.M.	Drawn by	J.E.M.
Checked by	M.J.K. date 7/01	Bridge Design Supervisor	W.T.S. date
PROJECT	SPRINGFIELD - HARTFORD	PROJECT NO.	IR 91-1 (48)
Bridge Sheet No.	BR228	Sheet	107 of



RAILING PLAN
Scale: 1" = 20'-0"
(Railing Expansion Joints: 1 1/2")



PYLON REMOVAL PLAN
Scale: 1/4" = 1'-0"

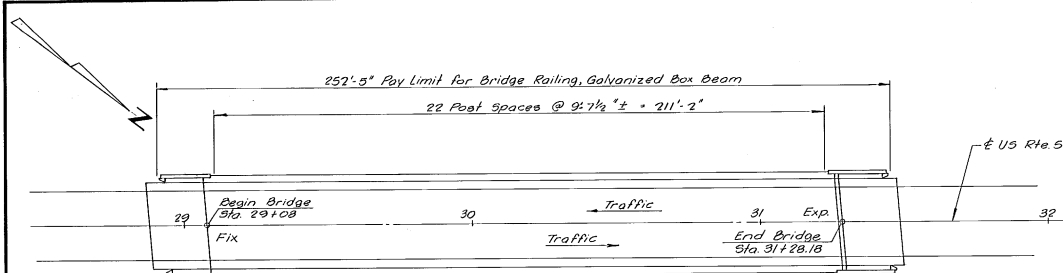
BRIDGE RAILING - GALVANIZED BOX BEAM
NORTHBOUND - STA. 3093 + 75 RT - STA. 3095 + 29 RT.
STA. 3093 + 93 LT - STA. 3095 + 56 LT.
SOUTHBOUND - STA. 3094 + 72 RT - STA. 3096 + 19 RT.
STA. 3094 + 90 LT - STA. 3096 + 43 LT.

Dim. A

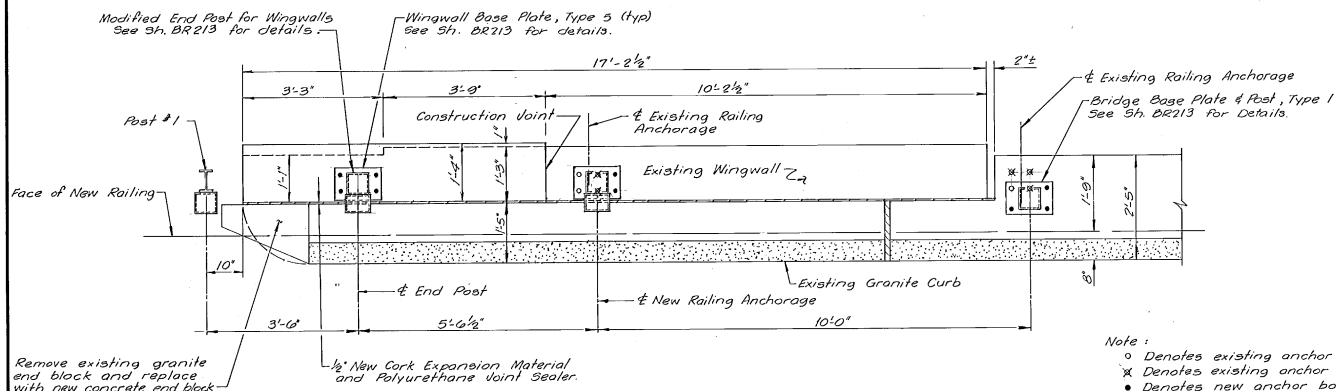
- ① 11'-11 1/2"
- ② 6'-0 3/8"
- ③ 6'-0 3/8"
- ④ 7'-11 1/2"
- ⑤ 14'-9 3/4"
- ⑥ 12'-11 1/2"
- ⑦ 14'-10 1/4"
- ⑧ 7'-10 1/2"

Note:
○ Denotes existing anchor bolts reused.
✕ Denotes existing anchor bolts removed.
● Denotes new anchor bolts.

STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
TOWN OF HARTLAND	Bridge No. 35 NB + 32
Highway No. INTERSTATE RTE 91	Log Sta. See Sta. MM 58.25
OVER WINDSOR COUNTY ROAD	
RAILING PLAN	
Designed by CMK	Drawn by CMK
Checked by MJK	Bridge Design Supervisor WTS
PROJECT SPRINGFIELD - HARTFORD	PROJECT NO. IR 91-1(48)
Bridge Sheet No. BR206	Sheet 108 of 108



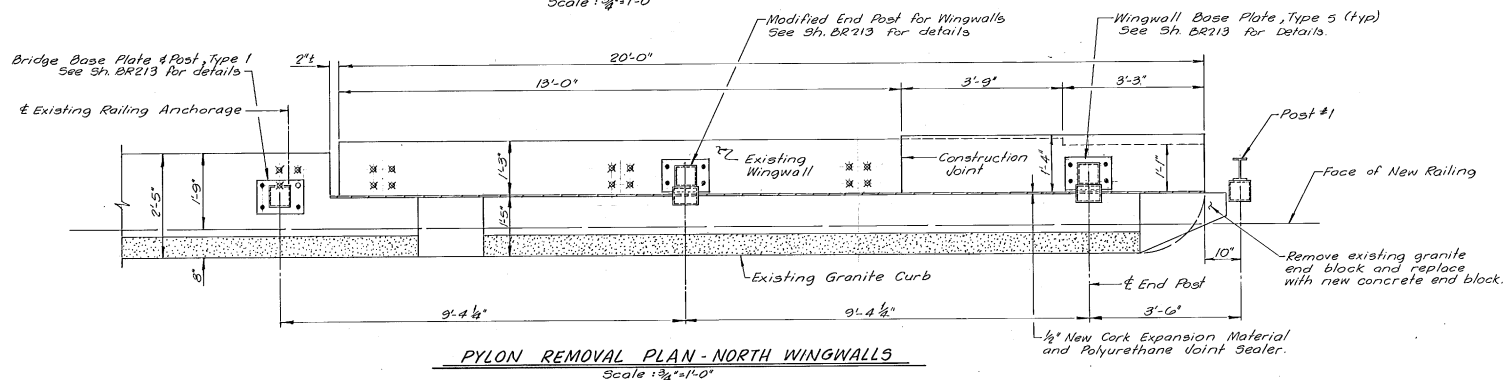
RAILING PLAN
Scale: 1" = 20'-0"
(Railing Expansion Joints: 2'-0")



PYLON REMOVAL PLAN - SOUTH WINGWALLS
Scale: 3/8" = 1'-0"

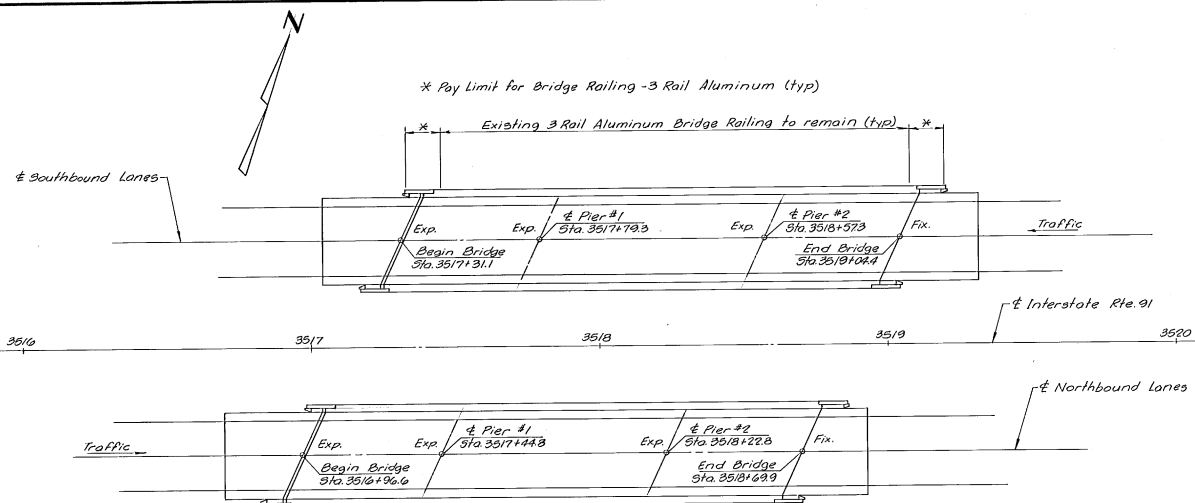
Note:
o Denotes existing anchor bolts reused.
x Denotes existing anchor bolts removed.
• Denotes new anchor bolts.

BRIDGE RAILING GALVANIZED BOX BEAM
STA 28+04 RT. ~ STA 31+48 RT.
STA 28+01 LT. ~ STA 31+45 LT.

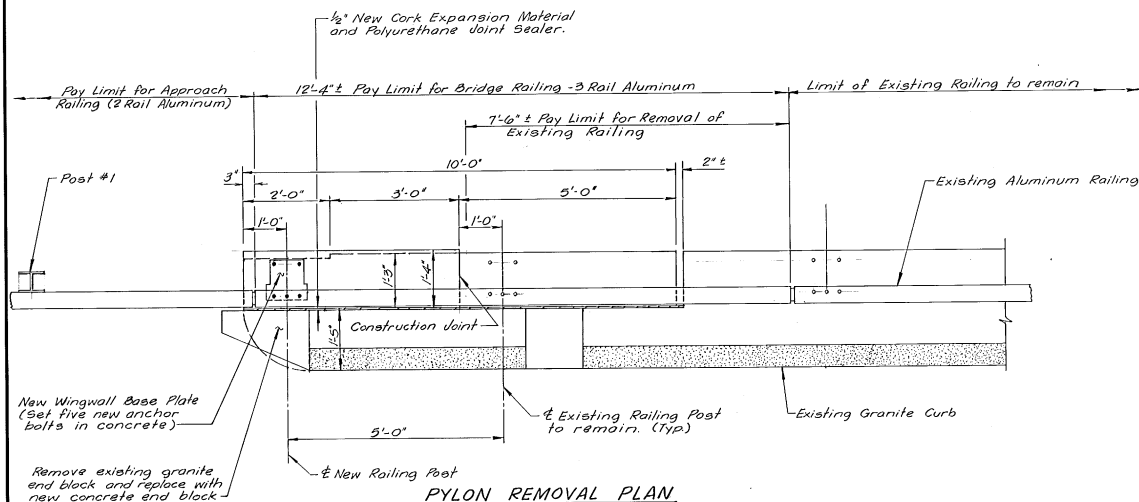


PYLON REMOVAL PLAN - NORTH WINGWALLS
Scale: 3/8" = 1'-0"

STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
TOWN OF HARTLAND	Bridge No. 36
HIGHWAY NO. US ROUTE 5	Log Sta. 28+00
OVER INTERSTATE ROUTE 91	
RAILING PLAN	
Designed by J.E.M.	Drawn by J.E.M.
Checked by C.M.K.	Bridge Design Supervisor W.T.S.
date 7/84	date 7/84
PROJECT SPRINGFIELD-HARTFORD	PROJECT NO. IR 91-1(48)
Bridge Sheet No. BR207	Sheet 109 of 109



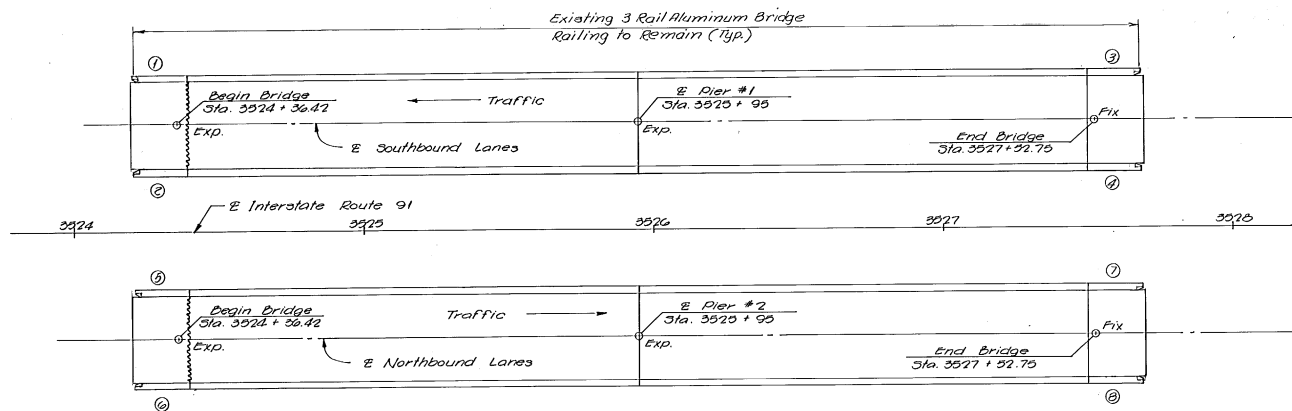
RAILING PLAN
Scale: 1"=20'-0"
(Railing Expansion Joints: 2'±)



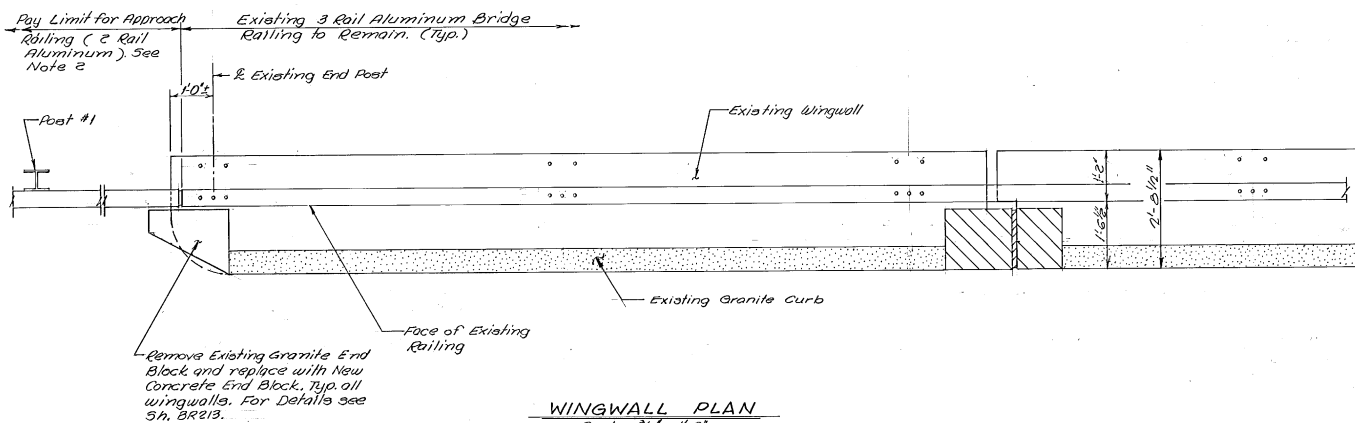
PYLON REMOVAL PLAN
Scale: 1/2"=1'-0"

- Notes:
- For details of Aluminum Railing, see Standard Sheets SB-R1-71 (Sheets 1 & 2 of 2).
 - For details of Aluminum Approach Railing, see Standard Sheet G-8A.
 - Denotes existing anchor bolts
● Denotes new anchor bolts

STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
TOWN OF	HARTLAND	Bridge No.	39 NB 438
HIGHWAY NO.	INTERSTATE RTE 91	Log Sta.	
		Survey Sta.	M.M. 66.05
OVER U.S. ROUTE 5			
RAILING PLAN			
Designed by	J.E.M.	Drawn by	J.E.M.
Checked by	M.J.K. date 7/84	Bridge Design Supervisor	W.T.S. date
PROJECT	SPRINGFIELD - HARTFORD	PROJECT NO.	IR 91-1 (48)
Bridge Sheet No.	BR209	Sheet	111 of



RAILING PLAN
Scale: 1" = 20'-0"

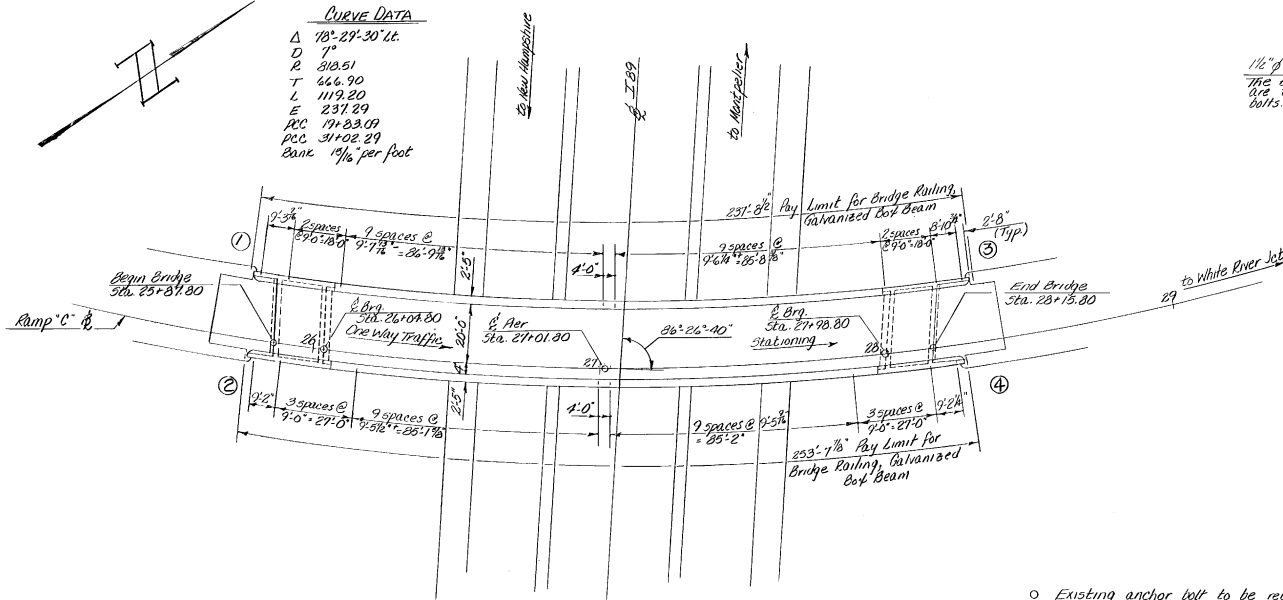


WINGWALL PLAN
Scale: 3/4" = 1'-0"

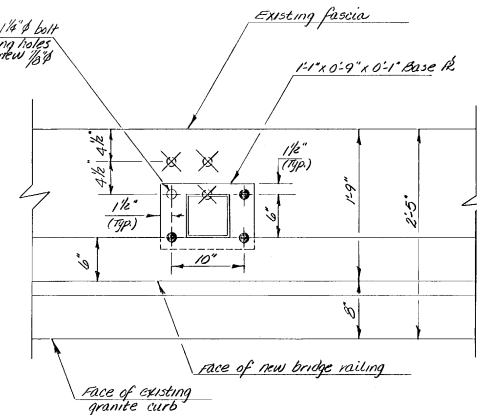
- Notes:
1. For details of Aluminum Approach Railing, see Standard Sheet G-8R.
 2. Wingwall 2, 7 & 8, requires a New Approach Railing (2 rail aluminum). All other existing approach railing (2 rail aluminum) to remain.

STATE OF VERMONT AGENCY OF TRANSPORTATION	
TOWN OF HARTLAND	Bridge No. 40NB+SB
HIGHWAY NO. INTERSTATE RTE 91	Log Sta. MM 66.20
OVER THE OTTAUQUECHEE RIVER	
RAILING PLAN	
Designed by CMK	Drawn by CMK
Checked by MJK date 7/04	Bridge Design Supervisor WTS date
PROJECT SPRINGFIELD-HARTFORD	PROJECT NO. IR 91-1(48)
Bridge Sheet No. BR210	Sheet 112 of

CURVE DATA
 Δ 18°-29'-30" Lc.
 D 1"
 R 810.51
 T 666.90
 L 1119.20
 E 237.29
 PCC 171+83.09
 PCC 311+02.29
 Bank 1 1/2" per foot



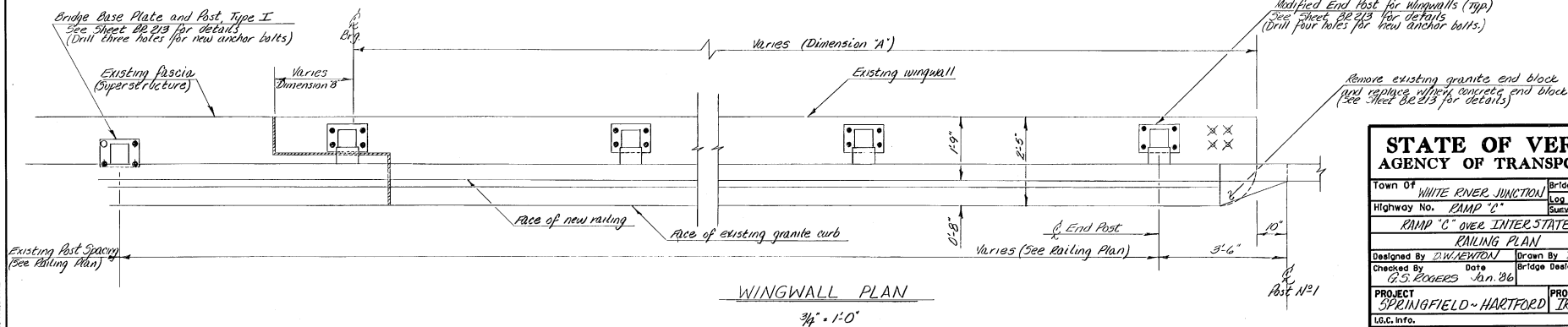
1 1/2" hole for existing 1 1/4" bolt
 the three (3) remaining holes
 are to be 1 1/2" for new 1 1/4" bolts.



- Existing anchor bolt to be reused.
- New anchor bolt
- ✕ Existing anchor bolt to be removed.

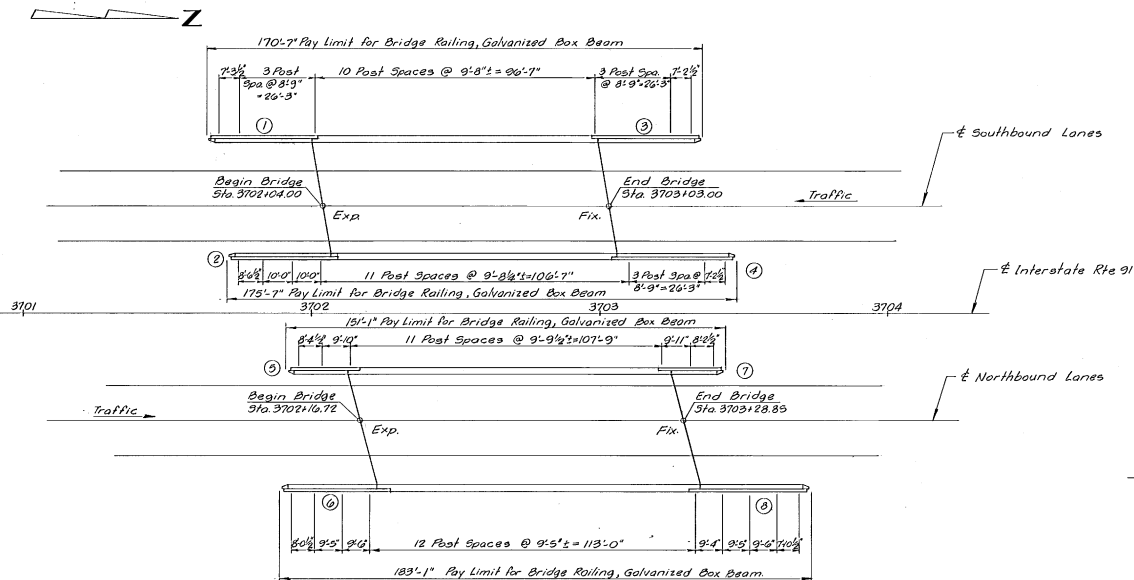
Dimension "A"	
①	21'-0"
②	29'-0"
③	21'-0"
④	29'-0"

Dimension "B"	
①	1'-11 1/8"
②	2'-3 3/4"
③	1'-11 1/8"
④	2'-3 3/4"



**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

Town Of **WHITE RIVER JUNCTION** Bridge No. **3 (I-89)**
 Highway No. **RAMP "C"** Log Sta. **26+08.80**
 Survey Sta. **MM 045**
RAMP "C" OVER INTERSTATE 89 (NB+SB)
RAILING PLAN
 Designed By **D.W. NEWTON** Drawn By **D.W. NEWTON**
 Checked By **G.S. ROGERS** Date **Jan 86** Bridge Design Supervisor
 PROJECT **SPRINGFIELD-HARTFORD** PROJECT NO. **IR 91-1(48)**
 L.G.C. Info.
 Bridge Sheet No. **4** Sheet **4** of **4**



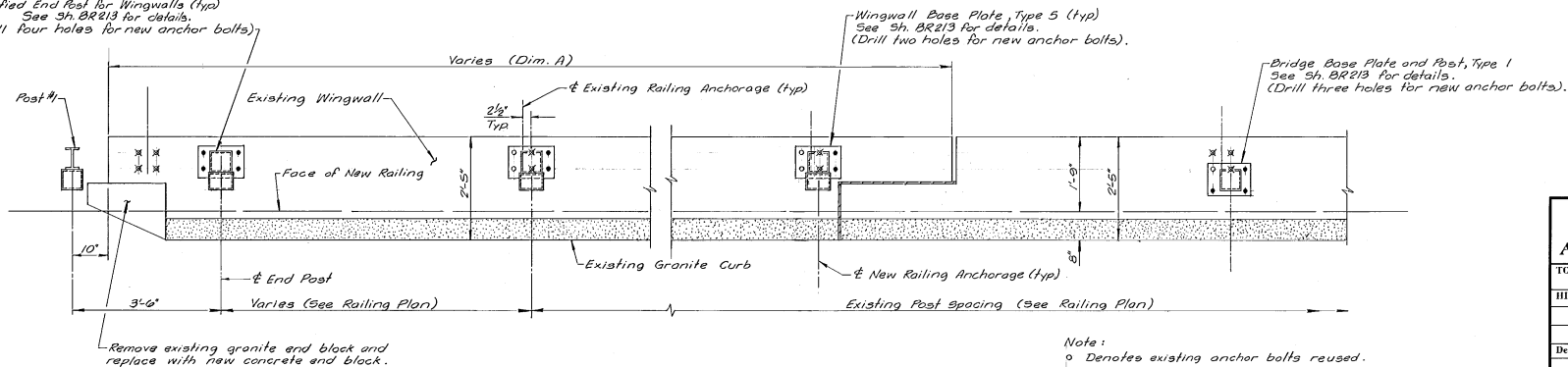
RAILING PLAN
Scale: 1"=20'-0"
(Railing Expansion Joints: 1/8" NB,
1/4" SB.)

DIM. A'
① 37'-0"
② 37'-0"
③ 37'-0"
④ 42'-0"
⑤ 24'-0"
⑥ 37'-0"
⑦ 22'-0"
⑧ 41'-0"

BRIDGE RAILING - GALVANIZED BOX BEAM

NORTHBOUND - STA 3701+90 RT ~ STA 3703+73 RT.
STA 3701+92 LT ~ STA 3703+43 LT.
SOUTHBOUND - STA 3701+71 RT ~ STA 3703+47 RT.
STA 3701+64 LT ~ STA 3703+85 LT.

Modified End Post for Wingwalls (typ)
See Sh. BR213 for details.
(Drill four holes for new anchor bolts)



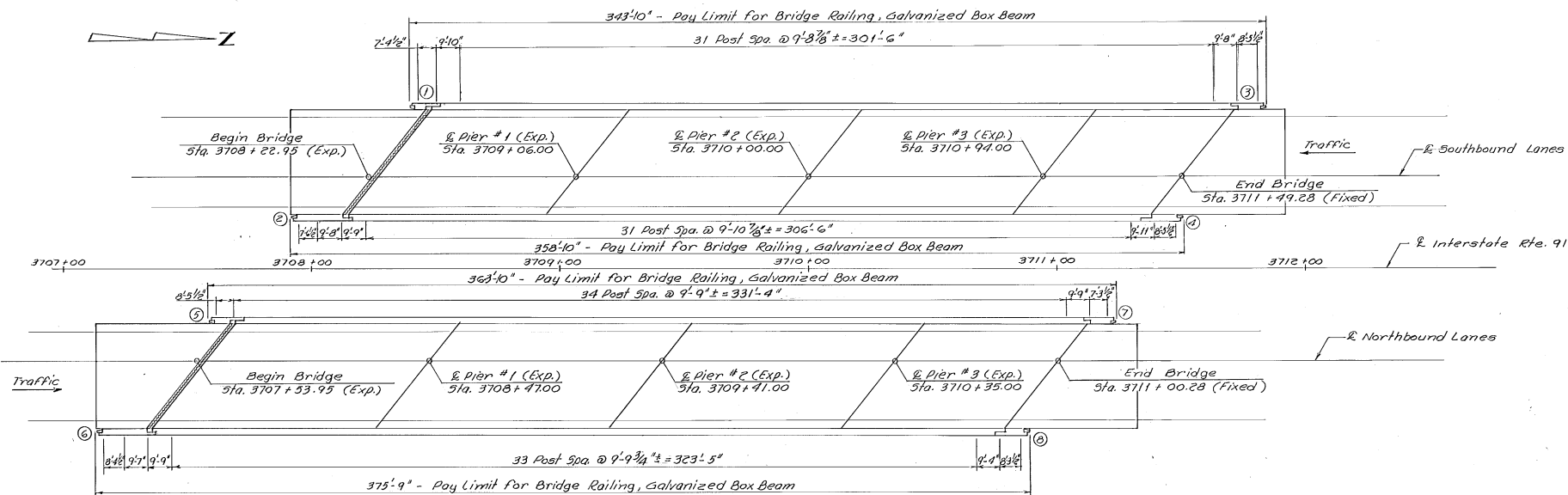
WINGWALL PLAN
Scale: 3/4"=1'-0"

Note:
○ Denotes existing anchor bolts reused.
✕ Denotes existing anchor bolts removed.
● Denotes new anchor bolts.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

TOWN OF	WHITE RIVER JCT.	Bridge No.	41 NB. 298
Highway No.	INTERSTATE RTE 91 OVER RAMP 'C'	Log Sta.	See Sta. M.M. 69.55
PROJECT	SPRINGFIELD-HARTFORD	PROJECT NO.	IR 91-1 (48)
Bridge Sheet No.	BR 211	Sheet	113 of

Designed by J.E.M. Drawn by J.E.M.
Checked by M.J.K. date 7/84 Bridge Design Supervisor WTS. date



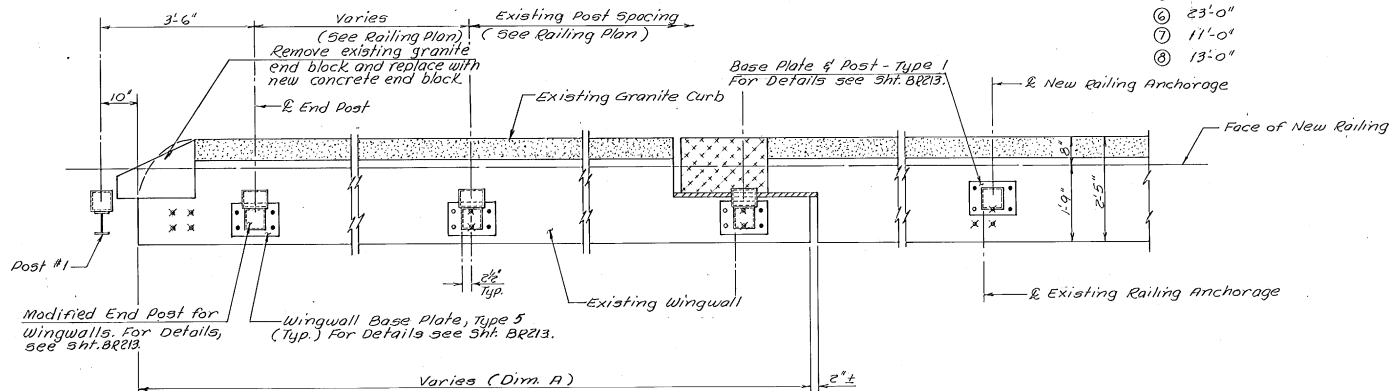
Dim. A

- ① 11'-0"
- ② 23'-0"
- ③ 13'-0"
- ④ 16'-0"
- ⑤ 13'-0"
- ⑥ 23'-0"
- ⑦ 11'-0"
- ⑧ 13'-0"

BRIDGE RAILING - GALVANIZED BOX BEAM

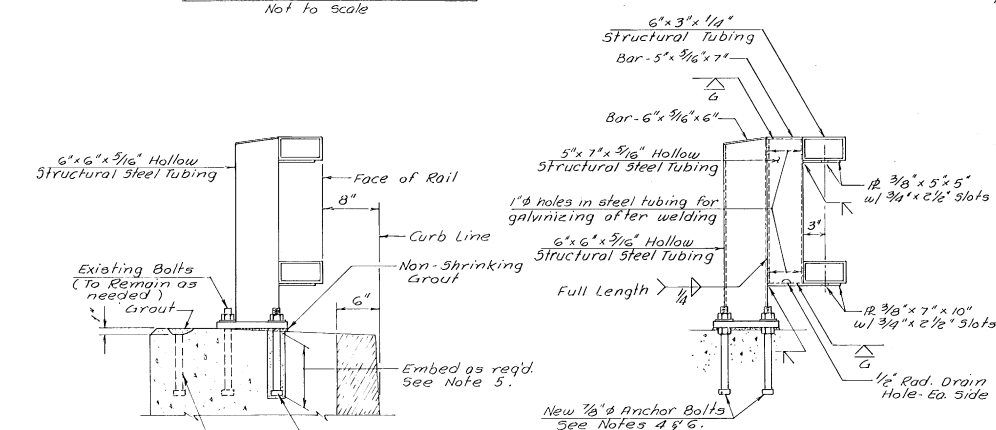
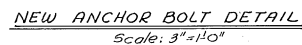
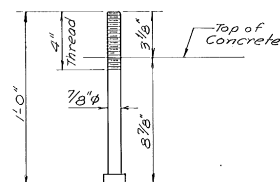
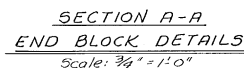
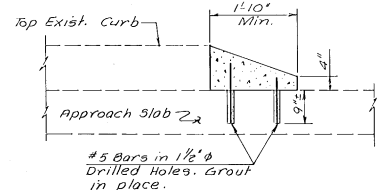
NORTHBOUND - STA. 3707 + 14 RT. - STA. 3710 + 90 RT.
 STA. 3707 + 59 LT. - STA. 3711 + 23 LT.
 SOUTHBOUND - STA. 3707 + 92 RT. - STA. 3711 + 51 RT.
 STA. 3708 + 40 LT. - STA. 3711 + 84 LT.

Note:
 ○ Denotes existing anchor bolts reused.
 ✕ Denotes existing anchor bolts removed.
 ● Denotes new anchor bolt.

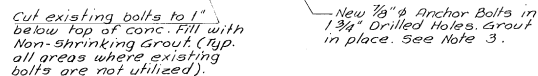


STATE OF VERMONT AGENCY OF TRANSPORTATION

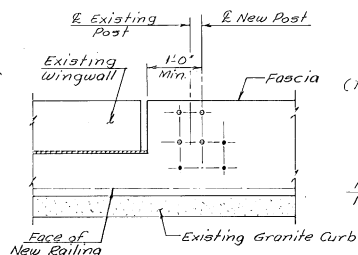
TOWN OF HARTFORD	Bridge No. 42NB#58
HIGHWAY NO. INTERSTATE RTE. 91	Log Sta. Sta. 3707.00
OVER INTERSTATE RTE. 89	RAILING PLAN
Designed by M.J.K.	Drawn by M.J.K.
Checked by C.M.K.	Bridge Design Supervisor W.T.S.
date 7/84	date
PROJECT SPRINGFIELD-HARTFORD	PROJECT NO. 12 91-1 (48)
Bridge Sheet No. BR212	Sheet 114 of



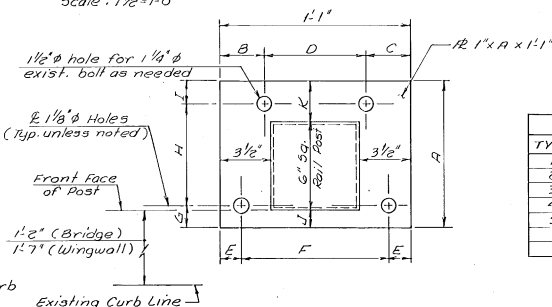
MODIFIED RAIL POST
ON WINGWALLS
Scale: $1\frac{1}{2}" = 1'-0"$



RAIL POST ON BRIDGE
Scale: $1\frac{1}{2}" = 1'-0"$



ANCHOR BOLT LAYOUT
Scale: $\frac{3}{4}" = 1'-0"$



BASE PLATE DETAIL
Scale : 3" = 1'-0"

TYPE	A	B	C	D	E	F	G	H	I	J	K
1	9"	1 1/2"	1 1/2"	10"	1 1/2"	10"	1 1/2"	6"	1 1/2"	1 1/2"	1 1/2"
2	10 1/2"	1 1/2"	10"	1 1/2"	10"	1 1/2"	5"	1 1/2"	1"	1"	1"
3	9"	1 1/2"	10"	10"	1 1/2"	10"	1 1/2"	6"	1 1/2"	1"	2"
4	9"	1 1/2"	10"	10"	1 1/2"	10"	2 1/2"	5"	1 1/2"	1"	2"
5	9"	1 1/2"	1 1/2"	10"	1 1/2"	10"	3 1/2"	4 1/2"	1 1/2"	1 1/2"	1 1/2"

STATE OF VERMONT AGENCY OF TRANSPORTATION

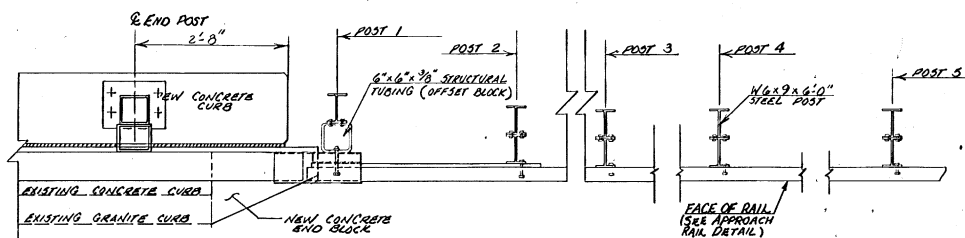
TOWN OF	Bridge No.
	Log Sta.
HIGHWAY NO. <i>INTERSTATE RTE 91</i>	Surv. Sta.
<i>POST AND CURB DETAILS</i>	
Designed by <i>J. E. M.</i>	Drawn by <i>M. J. K.</i>
Checked by <i>J. E. M.</i> date <i>7/84</i>	Bridge Design Supervisor <i>W. T. S.</i> date
PROJECT <i>SPRINGFIELD-HARTFORD</i>	PROJECT NO. <i>19 91-148</i>
Bridge Sheet No. <i>B2213</i>	Sheet <i>115</i>

Note:
Use existing front bolt as rear anchor where applicable. See bolt layout on Railing Plans. Drill and grout 3 new anchor bolts as shown. Cut existing bolts not used to 1" below top of concrete and fill with non-shrinking grout.

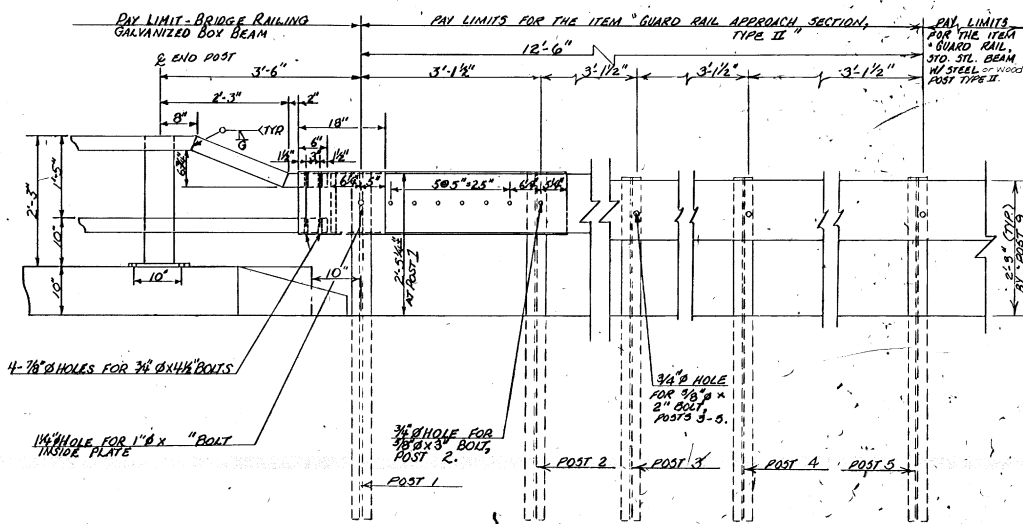
- o - Denotes Existing Bolts
- - Denotes New Anchor Bolts

POST NO.	SPACING
END POST	3'-6"
1	3'-11 1/2"
2	3'-11 1/2"
3	3'-11 1/2"
4	3'-11 1/2"
5	3'-11 1/2"

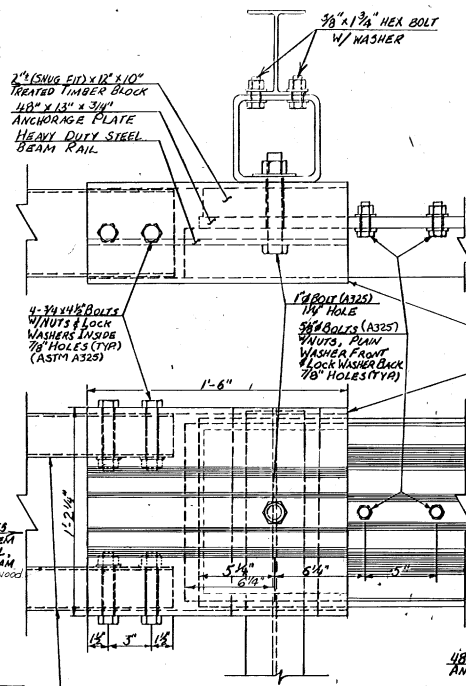
PAY LIMITS FOR THE ITEM "GUARD RAIL APPROACH SECTION, TYPE II."



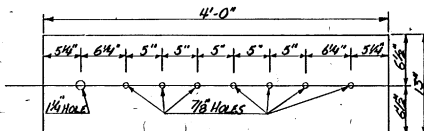
PLAN
SCALE: 1"=1'-0"



ELEVATION
SCALE: 1"=1'-0"



JOINT DETAILS
SCALE: 3"=1'-0"



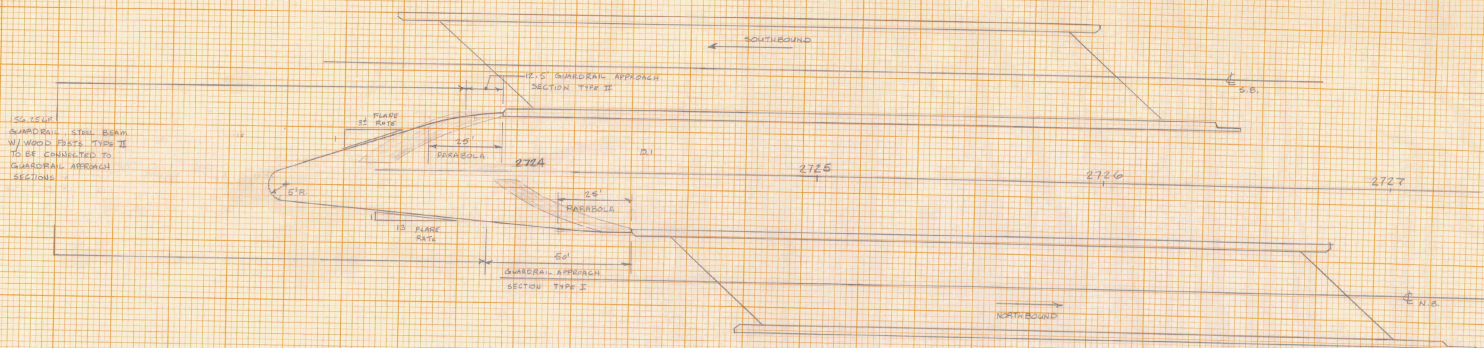
ANCHORAGE PLATE
SCALE: 1/2"=1'-0"

- NOTES**
- 1- SEE STANDARD SB-RHA-B2 FOR ADDITIONAL BRIDGE RAIL DETAILS.
 - 2- NOT USED.
 - 3- THERE SHALL BE A MINIMUM OF 12 FEET OF 12 GAGE STEEL BEAM USED FROM THE END OF THE BRIDGE.
 - 4- SPLICES SHALL LAP IN THE DIRECTION OF TRAFFIC FLOW.
 - 5- ALL BOLTS SHALL BE A325 HEX HEAD WITH WASHER.
 - ALL HARDWARE TO BE GALVANIZED TO ASTM A153.
 - 6- SEE STANDARD G-1 FOR ADDITIONAL GUARD RAIL DETAILS.
 - 7- ANCHORAGE CONNECTOR AND ANCHORAGE PLATE SHALL BE A36 STEEL GALVANIZED TO ASTM A123, AFTER FABRICATION.
 - 8- THE FIRST 5 POSTS, OFFSET BLOCKS, 12.5 STD. STEEL BEAM RAIL, ANCHORAGE CONNECTOR, ANCHORAGE PLATE, TIMBER BLOCK, AND ALL CONNECTOR HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "GUARD RAIL APPROACH SECTION, TYPE II" AS SHOWN ON THE ELEVATION VIEW ON THIS SHEET.

STATE OF VERMONT AGENCY OF TRANSPORTATION	
TOWN OF _____	Bridge No. _____
HIGHWAY NO. _____	Log Sta. _____
BRIDGE APPROACH RAIL DETAILS STEEL BEAM TO BOX BEAM	
Designed by RSK GSR	Drawn by STB GLO
Checked by G.S. ROBERTS	Bridge Design Supervisor
date 11/83	F.W. Boikun date 12/83
PROJECT SPRINGFIELD-HARTFORD	PROJECT NO. 18 91-1 (48)
Bridge Sheet No. BR218	Sheet 117 of 118

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
1																		81																161																			
2																		82																162																			
3	4	5	1'-1"	FB501	3fr													83	4	5	1'-1"	FB501	3fr												163	4	5	1'-1"	FB501	3fr													
4	5	1	1'-5"	FB502	3fr													84	5	1	1'-5"	FB502	3fr												164	5	1	1'-5"	FB502	3fr													
5	12	1	11'-7"	3AN501	3fr													85	12	1	11'-7"	3AN501	3fr												165																		
6	52	5	2'-3"	3AN501	3fr	0'	11'	0"										86	40	5	2'-3"	3AN501	3fr	0'	11'	0"										166																	
7																		87																167																			
8																		88																168																			
9																		89																169	4	5	1'-1"	FB501	3fr														
10																		90																170	5	1	1'-5"	FB502	3fr														
11	4	5	1'-1"	FB501	3fr													91	4	5	1'-1"	FB501	3fr												171	5	1	1'-5"	FB502	3fr													
12	5	1	1'-5"	FB502	3fr													92	5	1	1'-5"	FB502	3fr												172																		
13	3	1	10'-1"	3AN501	3fr													93	12	1	11'-7"	3AN501	3fr												173																		
14	9	1	11'-7"	3AN501	3fr													94	40	5	2'-3"	3AN501	3fr	0'	11'	0"									174																		
15	30	5	2'-3"	3AN501	3fr	0'	11'	0"										95																175																			
16																		96																176																			
17																		97																177																			
18																		98																178																			
19																		99	4	5	1'-1"	FB501	3fr												179																		
20	4	5	1'-1"	FB501	3fr													100	5	1	1'-5"	FB502	3fr												180																		
21	5	1	1'-5"	FB502	3fr													101	12	1	11'-7"	3AN501	3fr																														
22	6	1	14'-6"	3AN501	3fr													102	32	5	2'-3"	3AN501	3fr	0'	11'	0"																											
23	3	1	10'-1"	3AN501	3fr													103																																			
24	3	1	10'-1"	3AN501	3fr													104																																			
25	59	5	2'-3"	3AN501	3fr	0'	11'	0"										105																																			
26																		106																																			
27																		107	4	5	1'-1"	FB501	3fr																														
28																		108	5	1	1'-5"	FB502	3fr																														
29																		109																																			
30	4	5	1'-1"	FB501	3fr													110																																			
31	5	1	1'-5"	FB502	3fr													111																																			
32	6	1	14'-6"	3AN501	3fr													112	4	5	1'-1"	FB501	3fr																														
33	3	1	10'-1"	3AN501	3fr													113	4	5	1'-1"	FB501	3fr																														
34	3	1	10'-1"	3AN501	3fr													114	5	1	1'-5"	FB502	3fr																														
35	59	5	2'-3"	3AN501	3fr	0'	11'	0"										115	12	1	11'-7"	3AN501	3fr																														
36																		116	44	5	2'-3"	3AN501	3fr	0'	11'	0"																											
37																		117																																			
38																		118																																			
39																		119																																			
40	4	5	1'-1"	FB501	3fr													120																																			
41	5	1	1'-5"	FB502	3fr													121	4	5	1'-1"	FB501	3fr																														
42	12	1	11'-7"	3AN501	3fr													122	5	1	1'-5"	FB502	3fr																														
43	44	5	2'-3"	3AN501	3fr	0'	11'	0"										123	12	1	11'-7"	3AN501	3fr																														
44																		124	44	5	2'-3"	3AN501	3fr	0'	11'	0"																											
45																		125																																			
46																		126																																			
47																		127																																			
48	4	5	1'-1"	FB501	3fr													128																																			
49	5	1	1'-5"	FB502	3fr													129	4	5	1'-1"	FB501	3fr																														
50	12	1	11'-7"	3AN501	3fr													130	5	1	1'-5"	FB502	3fr																														
51	44	5	2'-3"	3AN501																																																	

DATE	
BY	
DESIGNED	
PLANNED	
APPROVED	
DATE	



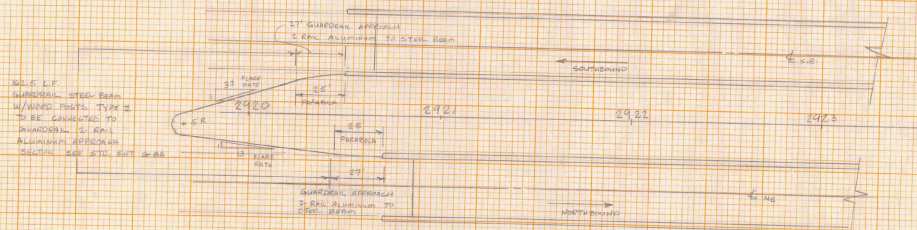
MINNESOTA BULLNOSE GUARDRAIL TREATMENT @ BRIDGES 30N & 30S

STA. 2725 +0.0

SCALE IN FEET
0 30

ITEM	QUANTITY	UNIT	AMOUNT
ITEM 402.15	100.00	Y	100.00
ITEM 402.16	70.00	Y	70.00
ITEM 402.17	10.00	Y	10.00
ITEM 402.18	10.00	Y	10.00
ITEM 402.19	10.00	Y	10.00
ITEM 402.20	10.00	Y	10.00
ITEM 402.21	10.00	Y	10.00
ITEM 402.22	10.00	Y	10.00
ITEM 402.23	10.00	Y	10.00
ITEM 402.24	10.00	Y	10.00
ITEM 402.25	10.00	Y	10.00

DATE	
BY	
DESIGNED	
PLANNED	
APPROVED	
DATE	



MINNESOTA BULLNOSE GUARDRAIL TREATMENT @ BRIDGES 32N & 32S

STA. 2923 +0.0

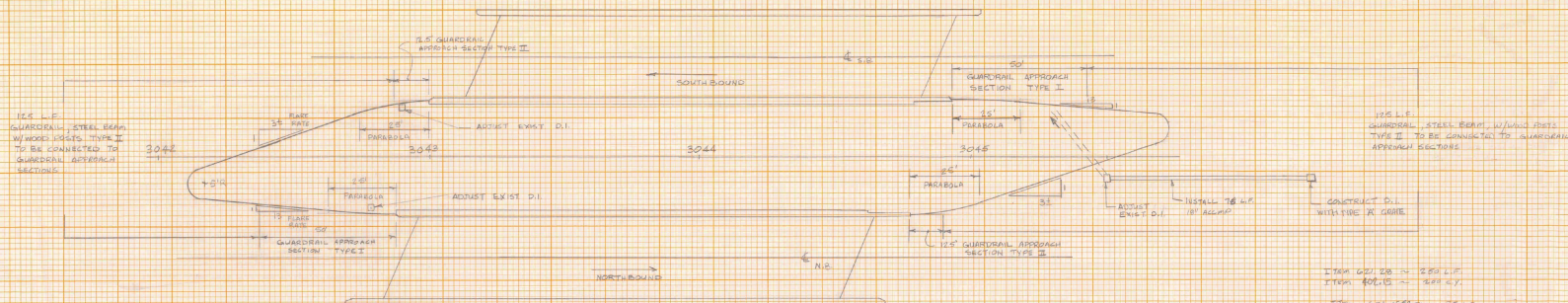
SCALE IN FEET
0 30

ITEM	QUANTITY	UNIT	AMOUNT
ITEM 402.15	100.00	Y	100.00
ITEM 402.16	70.00	Y	70.00
ITEM 402.17	10.00	Y	10.00
ITEM 402.18	10.00	Y	10.00
ITEM 402.19	10.00	Y	10.00
ITEM 402.20	10.00	Y	10.00
ITEM 402.21	10.00	Y	10.00
ITEM 402.22	10.00	Y	10.00
ITEM 402.23	10.00	Y	10.00
ITEM 402.24	10.00	Y	10.00
ITEM 402.25	10.00	Y	10.00

MINNESOTA GUARDRAIL @ BRIDGES
SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR-91-1(48)

DATE	
BY	
REVISION	
1. APPROVED	
2. CHECKED	
3. DESIGNED	
4. DRAWN	
5. IN CHARGE	

DATE	
BY	
REVISION	
1. APPROVED	
2. CHECKED	
3. DESIGNED	
4. DRAWN	
5. IN CHARGE	

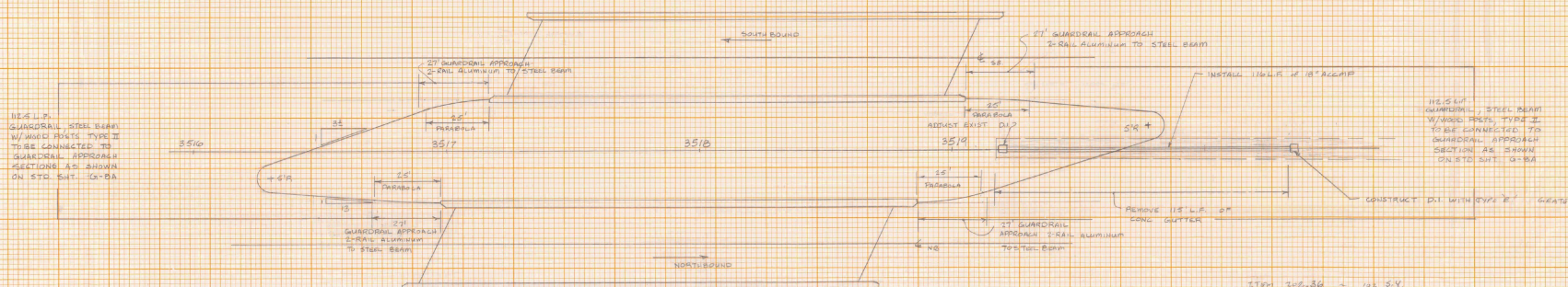


MINNESOTA BULLNOSE GUARDRAIL TREATMENT @ BRIDGES 34N & 34S

STA 3044 TO 3045

SCALE IN FEET
0 30

ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00
ITEM	3044.00	3045.00



MINNESOTA BULLNOSE GUARDRAIL TREATMENT @ BRIDGES 35N & 35S

STA 3510 TO 3511

SCALE IN FEET
0 30

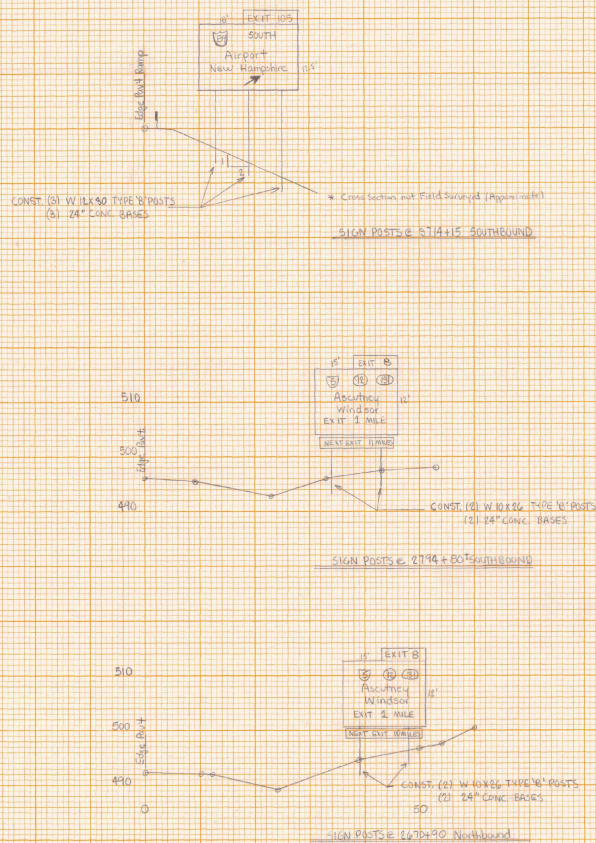
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00
ITEM	3510.00	3511.00

MINNESOTA GUARDRAIL @ BRIDGES
SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR-91-148

DATE SHEET 121

PROJECT SURVEY	DATE
	BY
	REVISION
	DATE

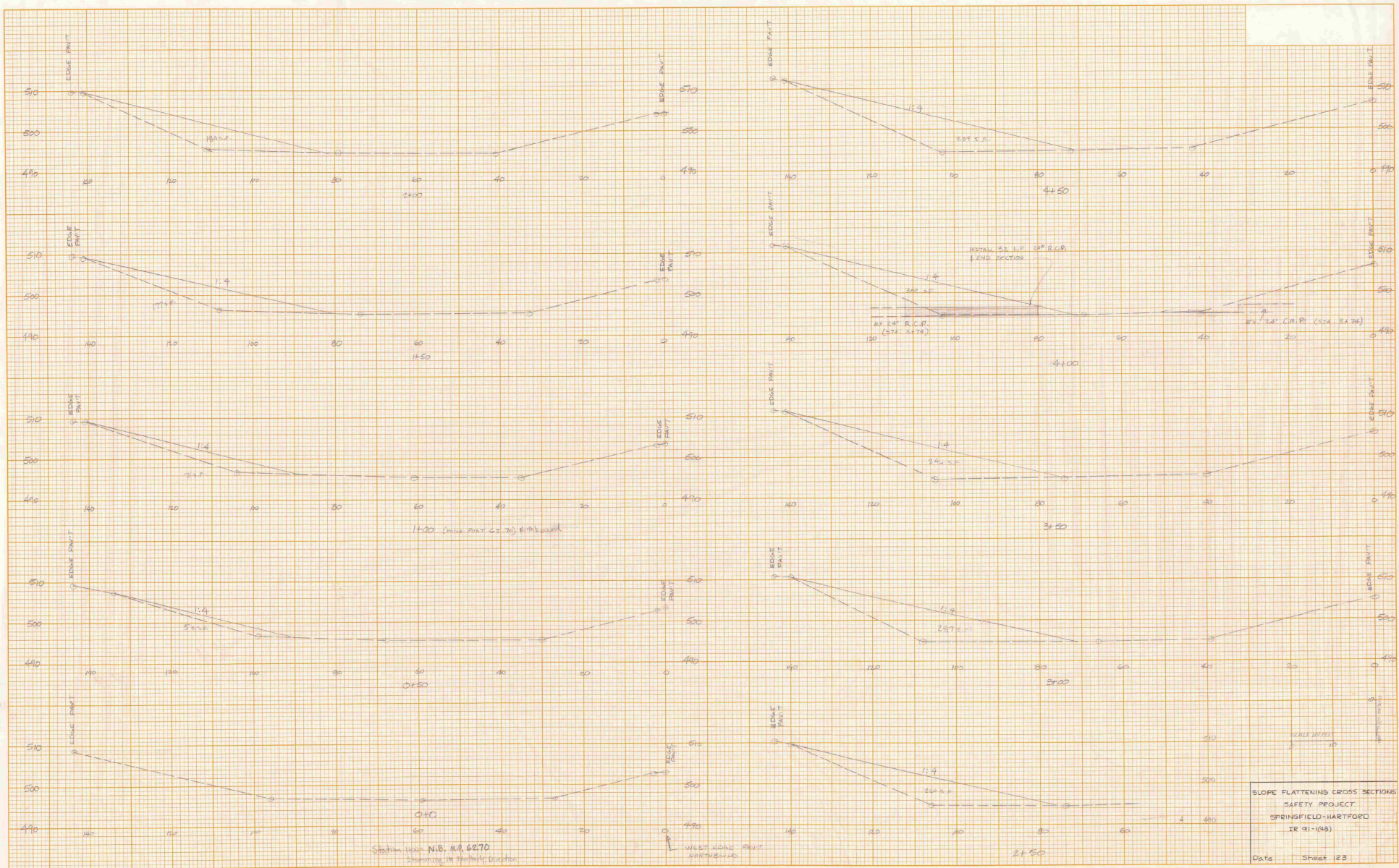
PROJECT SURVEY	DATE
	BY
	REVISION
	DATE



TYPE B SIGN POST SECTIONS
SAFETY PROJECT
SPRINGFIELD HARTFORD
IR 91-1(45)
Date Sheet 122

DATE	BY
PROJECT	NO.
REVISION	DATE
BY	DATE

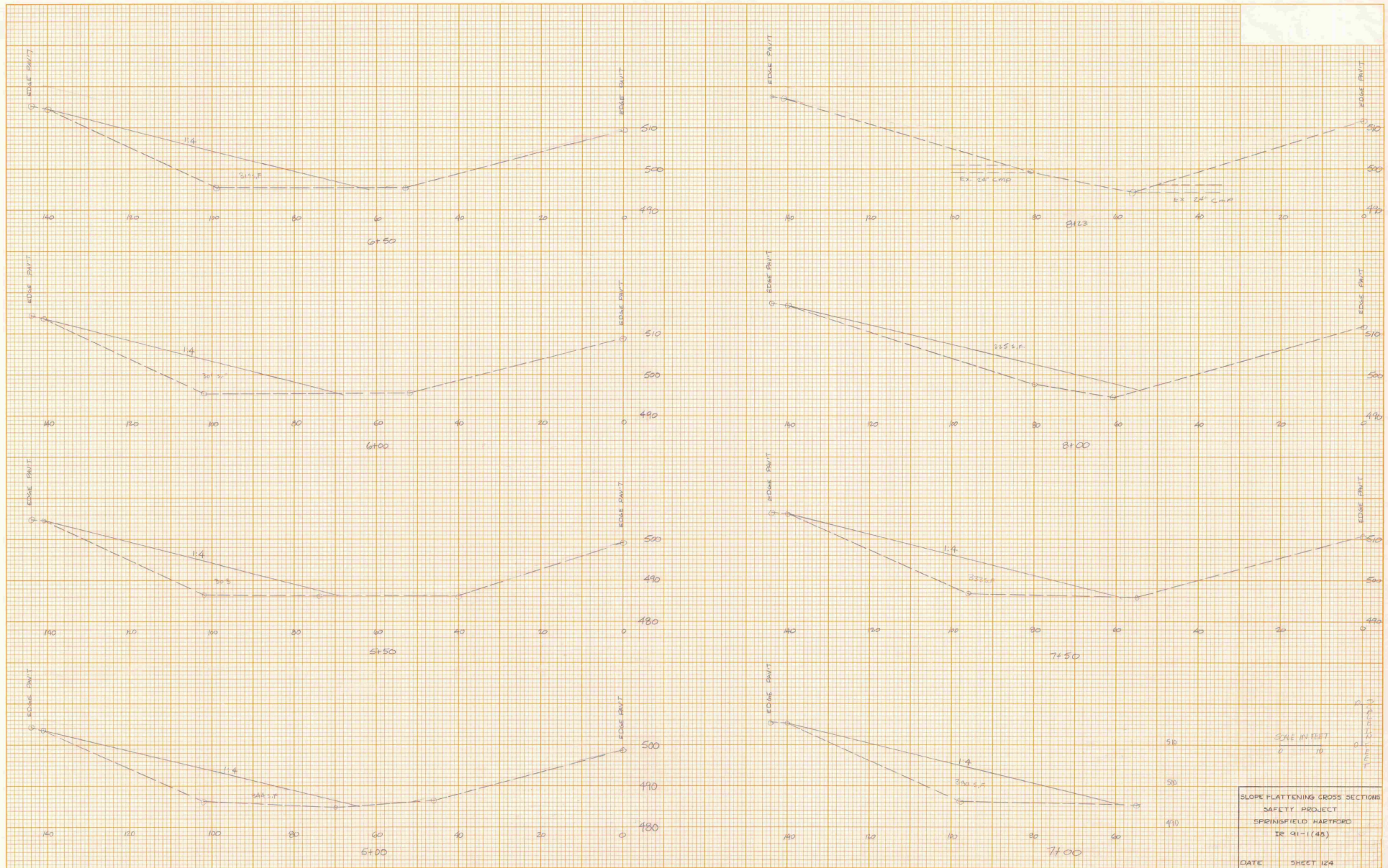
DATE	BY
PROJECT	NO.
REVISION	DATE
BY	DATE



SLOPE FLATTENING CROSS SECTIONS
SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91-08
Date Sheet 23

DATE	BY
PROJECT	DATE
DESIGNER	DATE
CHECKER	DATE

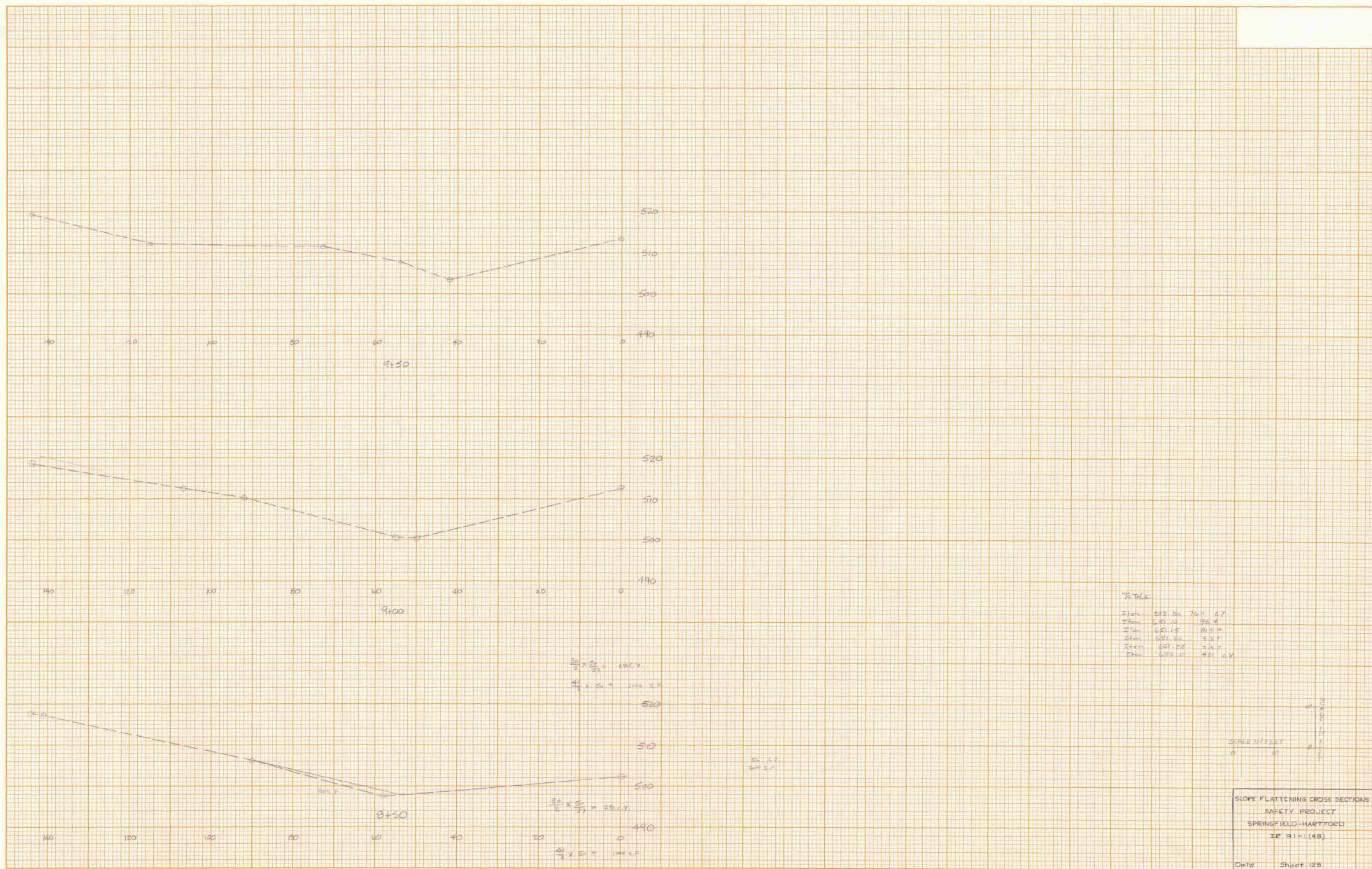
DATE	BY
PROJECT	DATE
DESIGNER	DATE
CHECKER	DATE



SLOPE FLATTENING CROSS SECTIONS
 SAFETY PROJECT
 SPRINGFIELD HARTFORD
 IR 91-1(45)
 DATE SHEET 124

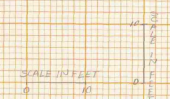
DATE	
BY	
REVISIONS	
NO.	

DATE	
BY	
REVISIONS	
NO.	



TOTALS

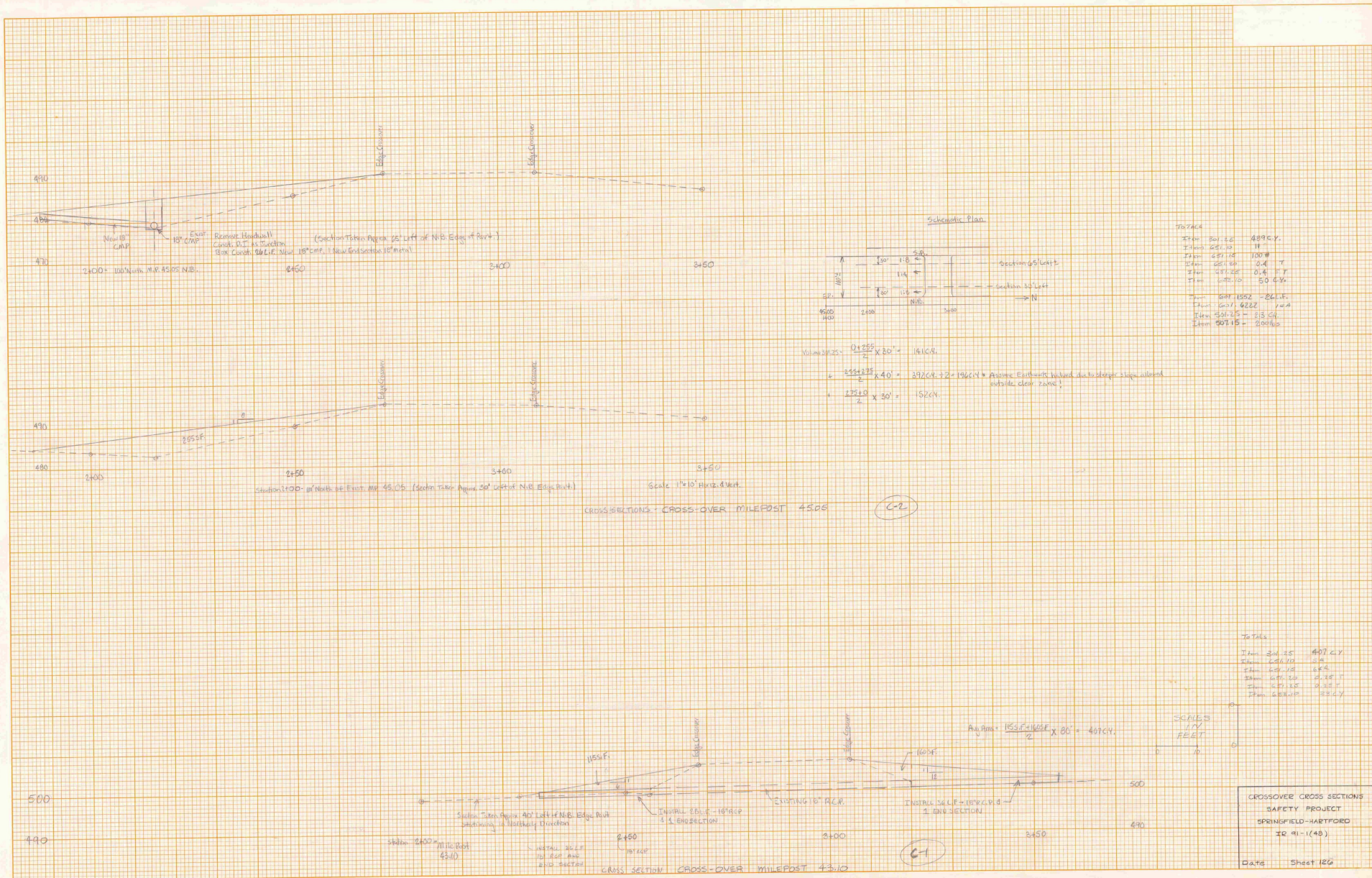
Item	203.30	76.1	67
Item	651.14	86.6	
Item	651.14	86.6	
Item	651.14	86.6	
Item	651.14	86.6	
Item	651.14	86.6	



SLOPE FLATTENING CROSS SECTIONS
SAFETY PROJECT
SPRINGFIELD-HARTFORD
1E 91-1(48)
Date Sheet 125

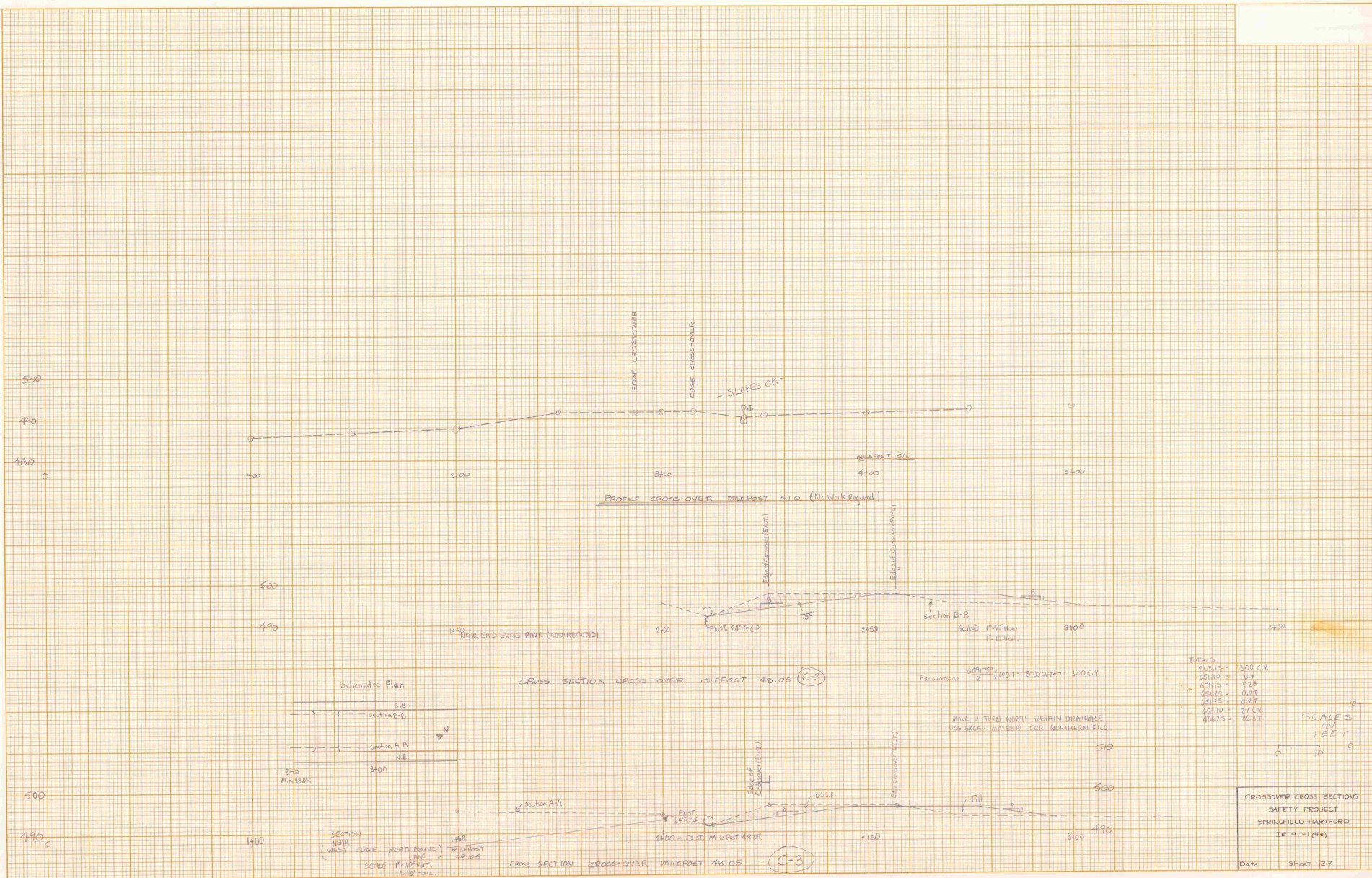
DATE	BY	CHKD
DESIGNED	BY	CHKD
DRAWN	BY	CHKD
CHECKED	BY	CHKD
APPROVED	BY	CHKD

DATE	BY	CHKD
DESIGNED	BY	CHKD
DRAWN	BY	CHKD
CHECKED	BY	CHKD
APPROVED	BY	CHKD



FINAL	DATE	BY
DESIGNED		
CHECKED		
APPROVED		

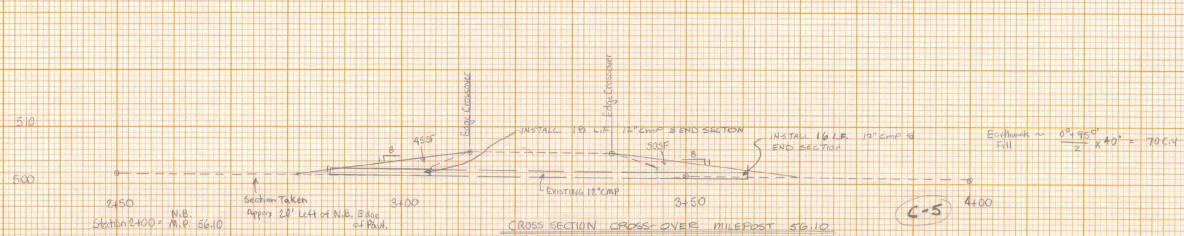
FINAL	DATE	BY
DESIGNED		
CHECKED		
APPROVED		



NORMAL AVEY DATE 8334	SURVIVED	BY	DATE
	PLOTTED		
	TEMP. DATE		
	AREAS		
	AREAS CHECKED		

FINAL DESIGN DATE	BY	DATE
DESIGN DATE	BY	DATE
DESIGN DATE	BY	DATE

FINAL DESIGN DATE	BY	DATE
DESIGN DATE	BY	DATE
DESIGN DATE	BY	DATE



10'
SCALES
1" = 10'
0 10 0

Total		
From	56.10	To
To	56.10	From
From	56.10	To
To	56.10	From
From	56.10	To
To	56.10	From
From	56.10	To
To	56.10	From

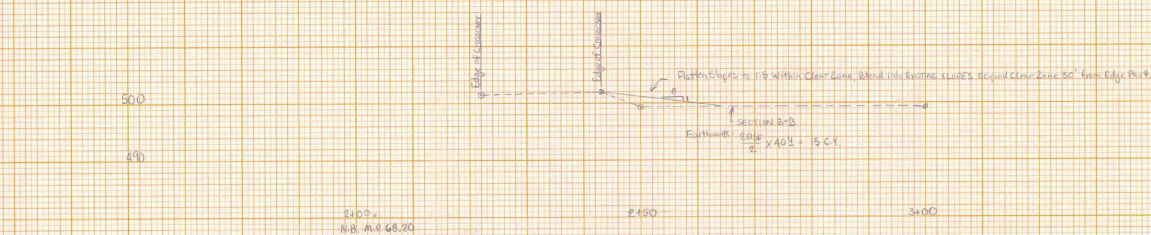
CROSSOVER CROSS SECTIONS
SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR 91-1(18)

Date Sheet 129

ORIGINAL					
UNVEY					
DATE					
BY					
SURVEYED					
PLATTED					
TEMP.					
AREAS					
AREAS CHECKED					

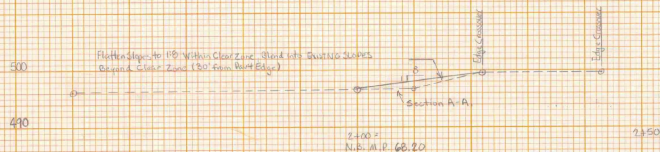
DATE	BY
DESIGNED	CHECKED
PLANNED	APPROVED
NOTED	REVIEWED
REVISIONS	

DATE	BY
DESIGNED	CHECKED
PLANNED	APPROVED
NOTED	REVIEWED
REVISIONS	

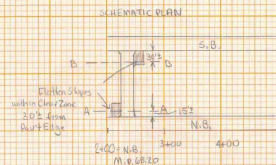


CROSS SECTION CROSS-OVER MILEPOST 66.70 (C-B)

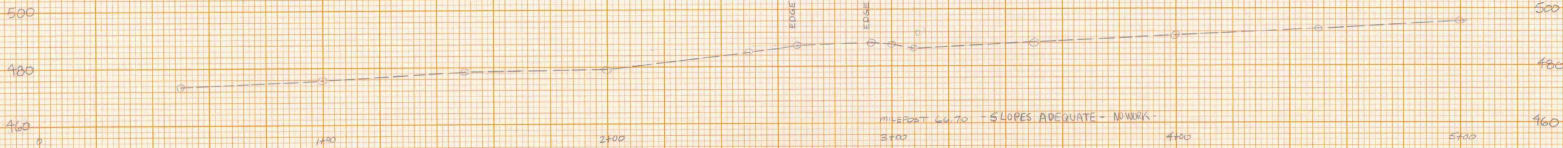
$$17'0" \times 15' = \frac{10'0"}{2} \times 40' = 13'0"$$



CROSS-OVER MILEPOST 66.20 (C-B)



TOTALS	SW. 1/4	SE. 1/4
24'0"	10'0"	14'0"
24'0"	10'0"	14'0"
24'0"	10'0"	14'0"
24'0"	10'0"	14'0"
24'0"	10'0"	14'0"



PROFILE CROSS-OVER MILEPOST 66.70

CROSSOVER CROSS SECTIONS
SAFETY PROJECT
SPRINGFIELD-HARTFORD
IR. 11-1 (48)

DATE: 5/10/11

DATE	BY	
		SORTED
		PLOTTED
		TEMPLATE
		AREAS
		AREAS CHECKED

HANGER 393

INITIALS

☐

#122302-01

PHASE 1-INTERSTATE

Transportation

Vermont Agency of

SPRINGFIELD-HARTFORD
IR 091-1 (42)

1985

Part of 2
1 M
1985

INITIALS ☐
HANGER 399
#122302-01
PHASE 1-INTERSTATE
Transportation
Vermont Agency of

PARC 1985
2 of 2

SPRINGFIELD ~ HARTFORD
IR 091-1(48)

1985