1 TITLE SHEET
2-3 TYPICAL SECTIONS (INTERSTATE ROADWAY) BITUMINOUS CONCRETE PAVEMENT, ITEM 361.MOD
4 TYPICAL SECTIONS (US-5 RELOCATION)
5 TYPICAL SECTIONS (FRONTAGE ROAD)
6-7 QUANTITY SHEETS
8-10 DRAINAGE SHEETS
11-15 GRADE AND EARTHWORK SHEETS
16 ALIGNMENT DATA SHEET
16A-16B ROW DETAIL SHEETS
17-31 PLAN AND PROFILE SHEETS
32 A-6 SOLID ROCK EXCAVATION
33 B-1 BANKING TABLES
34 B-5 TYPICAL SLOPE GRADING
35 B-6 MUCK EXCAVATION
36 B-10 EMBANKMENT ON A SLOPE
37 B-11 UNDERDRAIN WITH SHATTERED ROCK SUBGRADE
38 B-12 SIDE ROAD INTERSECTIONS
39 B-13 DRIVE INTERSECTIONS
40 BLANK
41 B-15 ENTRANCE AND EXIT TERMINALS

42 D-1 PRECAST RCP DROP INLET WITH COVER
43 D-2 UNDERDRAIN AND HEADWALLS
44 D-3 JUTE MATTING, TREATED GUTTERS
45 D-4 ELBOWS, FLUSHING BASINS, METAL END SECTIONS
46 D-8 DROP INLETS
47 D-10 DROP INLET TOPS
48 D-11 DETAILS OF GRATES AND COVERS
49 D-16 PRECAST REINFORCED CONCRETE CURB DROP INLET, CAST IRON GRATES
50 D-17 ACCGMP VERTICAL RISER

51 E-1 BARRICADES, SIGNS AND LIGHTS
52 E-31 FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS
53 F-1 PROPERTY LINE FENCE
54 G-29 TWO CABLE GUARD RAIL
55 G-4 PLANK GUARD RAIL, GUIDE POSTS, MARKER POSTS
56 J-1 BOUNDARY MARKERS

57 SCB-37.25-65 SUPERSTRUCTURE DETAILS OF WF BEAM BRIDGES, 37.25' ROADWAY
58 SCB-D2-65 BEAM HAUNCH DETAILS
59 SCB-D4-65 PLAN AND REINFORCEMENT LAYOUT AT ABUTMENT
60 SCB-D6-65 CURB DETAILS
61-64 SCWPG-30-62 DETAILS OF COMPOSITE WELDED PLATE GIRDER BRIDGES
65-66 SB-R1-64 ALUMINUM BRIDGE RAILING DETAILS
67 SB-R2-65 GALVANIZED STEEL BRIDGE RAILING DETAILS
68 SB-PP #2 HEADWALL DETAILS
68-A SC-P1-66 CAST IN PLACE CONCRETE PILING INTERSTATE BRIDGE OVER RELOCATED US-5, STA 4028+43

69 PLAN AND ELEVATION
70 BRIDGE QUANTITY SHEET
71 PRELIMINARY INFORMATION SHEET
72 BORING LOG
73 SUPERSTRUCTURE DETAILS
74 JOINT DETAILS
75-79 DETAILS OF ABUTMENT AND WING WALLS
80 CLOSURE WALL DETAILS
81-82 ABUTMENT FOOTING PLANS
83-86 APPROACH SLAB DETAILS
87-89 REINFORCING STEEL SCHEDULE
} BRIDGE SERIES 100

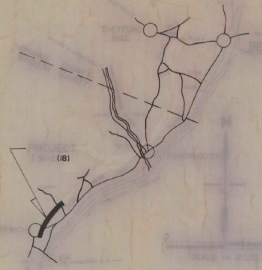
90-134 MAINLINE SECTIONS
135-146 US-5 RELOCATION SECTIONS
115-121 FRONTAGE ROAD SECTIONS (MAINLINE SHEETS)
147-156 FRONTAGE ROAD SECTIONS
157-159 DRAINAGE SECTIONS
FOR RIGHT-OF-WAY DETAILS, SEE RIGHT-OF-WAY PLANS.
159-A-159-F TEMPORARY APPROACH AND TEMPORARY APPROACH RAMP(DETOUR) SECTIONS

TOWN OF NORWICH
COUNTY OF WINDSOR
INTERSTATE ROUTE 91
WHITE RIVER JCT - BRADFORD ROAD

BEGINNING AT A POINT APPROXIMATELY 6.298 MILES SOUTHERLY OF THE WINDSOR-ORANGE COUNTY LINE AND PROCEEDING NORTHERLY 1.284 MILES

LENGTH OF ROADWAY	6643.57 FEET	= 1.258 MILES
LENGTH OF BRIDGE	138.02 FEET	= 0.026 MILES
LENGTH OF PROJECT	6781.59 FEET	= 1.284 MILES

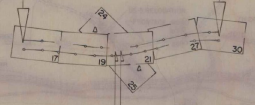
Res Eng F Gamsby



SB 3996+00
NB
END PROJECT I 91-2(40) BEGIN PROJECT I 91-2(18)

4063+75
END PROJECT I 91-2(18) BEGIN PROJECT I 91-2(7)
BEGIN CONTRACT NO 1

INTERSTATE CONSTRUCTION AREA



4027+73.78 STOP ROADWAY BEGIN BRIDGE

4029+11.80 END BRIDGE RESUME ROADWAY

HILL

△ REQUIRED NUMBER OF FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS 2 EACH

FOR R O W DETAILS, SEE R O W PLANS FOR THIS PROJECT

WEBSTER - MARTIN, INC.
STATE OF VERMONT ROBERT A. SLAYTON No. 814 REGISTERED PROFESSIONAL ENGINEER
Robert A. Slayton
SUBMITTED SEPT. 7, 1965
DATE

STAGE I CONSTRUCTION
DEPARTMENT OF TRANSPORTATION

R.N. Arnold	C.V. Dickey	L.M. Byam
8/9/65	8/9/65	8/9/65
F.S. Chase	G.M. Lane	A.D. Reichert
8/4/65	7/3/65	6/4/65

I 91-2(18)
159

XXXX

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STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

INTERSTATE PROJECT

TOWN OF NORWICH
COUNTY OF WINDSOR
INTERSTATE ROUTE 91
WHITE RIVER JCT - BRADFORD ROAD

FED. AID REGION NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	VT	I 91-2(18)	1	159

INDEX OF SHEETS

1 TITLE SHEET
2-3 TYPICAL SECTIONS (INTERSTATE ROADWAY) BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD.
4 TYPICAL SECTIONS (US-5 RELOCATION)
5 TYPICAL SECTIONS (FRONTAGE ROAD)
6-7 QUANTITY SHEETS
8-10 DRAINAGE SHEETS
11-15 GRADE AND EARTHWORK SHEETS
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147-156 FRONTAGE ROAD SECTIONS
157-159 DRAINAGE SECTIONS FOR RIGHT-OF-WAY DETAILS, SEE RIGHT-OF-WAY PLANS.
159-A-159-F TEMPORARY APPROACH AND TEMPORARY APPROACH RAMP(DETOUR) SECTIONS

THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY TO APPROXIMATELY ½ SCALE

BEGINNING AT A POINT APPROXIMATELY 6.298 MILES SOUTHERLY OF THE WINDSOR-ORANGE COUNTY LINE AND PROCEEDING NORTHERLY 1.284 MILES

LENGTH OF ROADWAY	6643.57 FEET = 1.258 MILES
LENGTH OF BRIDGE	138.02 FEET = 0.026 MILES
LENGTH OF PROJECT	6781.59 FEET = 1.284 MILES

Dated 30 Dec 66

PERINI CORPORATION

Louis L. Capone

Louis L. Capone, Vice President

Contractor

By Order of Commissioner of Highways

Commissioner of Highways

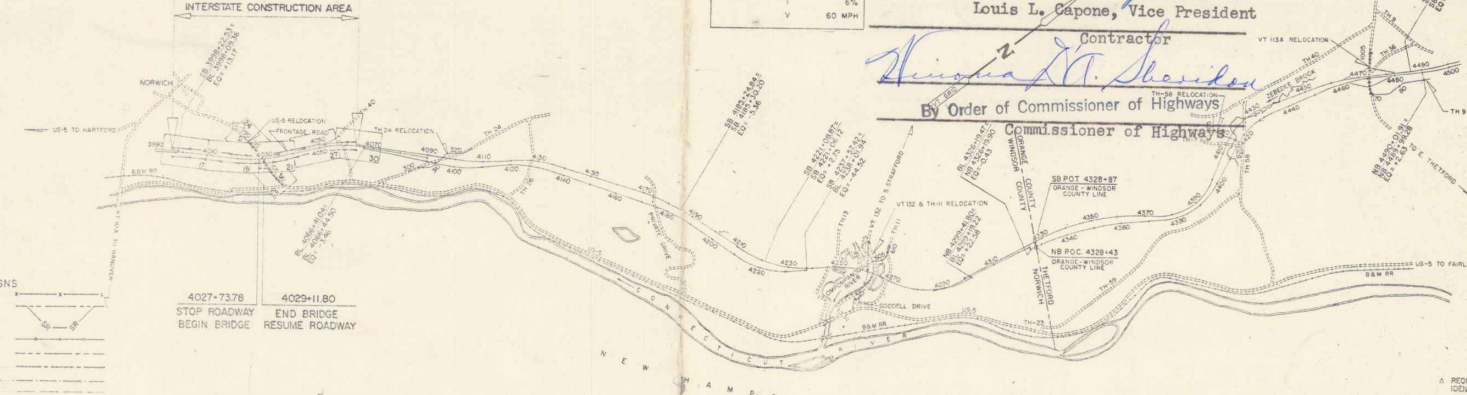
SB 3996+00
NB
END PROJECT I 91-2(40) BEGIN PROJECT I 91-2 (18)

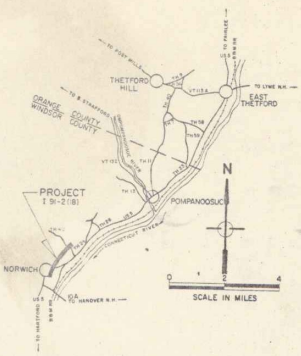
4063+75
END PROJECT I 91-2(18) BEGIN PROJECT I 91-2(7)
BEGIN CONTRACT NO 1

INTERSTATE CONSTRUCTION AREA

TRAFFIC DATA

1962	ADT	2440
1987	ADT	6650
1987	DHV	945
	D	54%
	T	6%
	V	60 MPH





CONVENTIONAL SIGNS

ROW FENCE
SLOPE RIGHTS
CONTROL OF ACCESS
ROW
COUNTY LINE
TOWN LINE
FENCE LINE
STONE WALL
UNFENCED PROPERTY
GUARD RAIL
TRAVELED WAY
RAILROAD
RETAINING WALL
CENTER LINE
SURVEY LINE
CULVERT
DROP INLET
TROLLEY POLE
POWER POLE
TELEPHONE POLE
TREES
HEDGE
ACCESS POINT

GROUND ELEVATION ..... DATUM ..... LINE
GRADE ELEVATION ..... DATUM ..... LINE

DATUM - MEAN SEA LEVEL
ALL ELEVATIONS ARE US ELEVATIONS

CURVE DATA

DEFLECTION OF ANGLE ..... Δ
DEGREE OF CURVE ..... D
RADIUS OF CURVE ..... R
TANGENT DISTANCE ..... T
LENGTH OF CURVE L
EXTERNAL DISTANCE ..... E
POINT OF INTERSECT ..... P.I.
POINT OF CURVE ..... P.C.
POINT OF TANGENT ..... P.T.
POINT ON TANGENT ..... P.O.T.
POINT ON SUB-TANGE ..... P.O.S.T.

SCALE IN FEET

WEBSTER - MARTIN, INC.
Robert H. Slayton
SUBMITTED SEPT. 7, 1965
DATE

A REQUIRED NUMBER OF FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS 2 EACH

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, APRIL, 1954, AS APPROVED BY THE BUREAU OF PUBLIC ROADS ON OCTOBER 12, 1954, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

STAGE I CONSTRUCTION

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED
DIVISION ENGINEER

PROJECT I NO. 91-2(18)

SHEET 1 OF 159 SHEETS

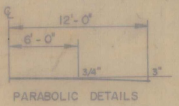
APPROVED R.H. Cruse ASST. DIST. ENGINEER	DATE 8/4/65	APPROVED C.W. Dickey DISTRICT ENGINEER	DATE 8/9/65	APPROVED Lyndon Lyndon DISTRICT ENGINEER	DATE 8/9/65	APPROVED H.S. Gard DISTRICT ENGINEER	DATE 8/11/65
APPROVED G.W. Law HIGHWAY ENGINEER	DATE 7/3/52	APPROVED A.D. Rudloff DIVISION ENGINEER	DATE 8/11/65				

SHEET 1 OF 159 IN JACKET OF THE STATE HIGHWAY BOOKS

HIGHWAYS VERMONT CONTRACT PLANS DEC 30 1966 SIGNED DEPARTMENT

184

INTERSTATE TYPICAL SECTIONS



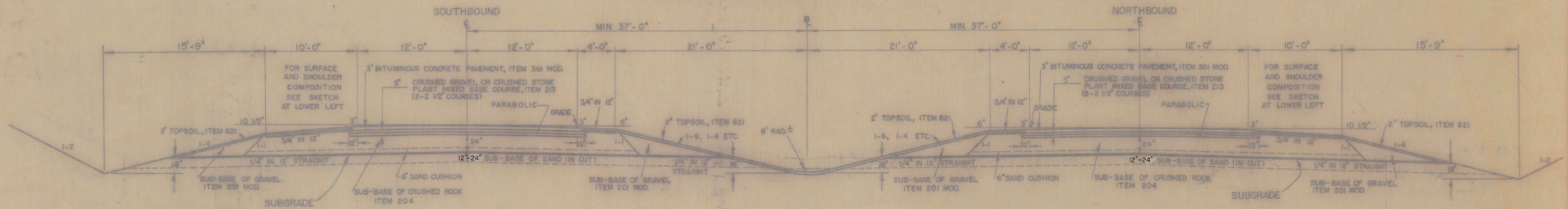
PARABOLIC DETAILS

THESE ITEMS ARE NOT PART OF STAGE I CONSTRUCTION

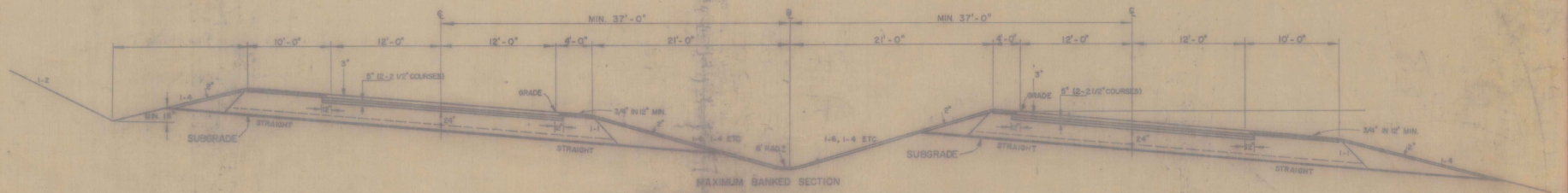
3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361, MOD. (± 1/4" FOR TOTAL THICKNESS) 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDER COURSE, TYPE II
5" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2" FOR TOTAL THICKNESS) 2 - 2 1/2" COURSES
24" SUB-BASE OF CRUSHED ROCK, ITEM 204 (± 1")
SUB-BASE OF GRAVEL, ITEM 201 MOD.
SHOULDERS: 1 1/4" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD. (WEARING COURSE, TYPE III, WITH ITEM 315 MOD)
3 3/4" CRUSHED STONE SHOULDERS, ITEM 303

PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY

12"-24" GRANULAR BORROW, ITEM 105 (± 1") IN FILL
12"-24" SUB-BASE OF SAND, ITEM 202 (± 1") IN CUT
TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER

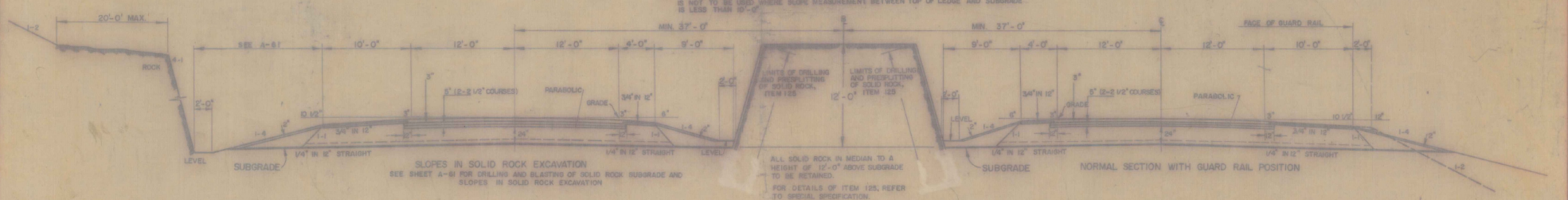


ITEMS ABOVE SUBGRADE ARE NOT PART OF STAGE I CONTRACT.



MAXIMUM BANKED SECTION

NOTE: DRILLING AND PRESPLITTING OF SOLID ROCK, ITEM 125, IS NOT TO BE USED WHERE SLOPE MEASUREMENT BETWEEN TOP OF LEDGE AND SUBGRADE IS LESS THAN 10'-0"



SLOPES IN SOLID ROCK EXCAVATION
SEE SHEET A-61 FOR DRILLING AND BLASTING OF SOLID ROCK SUBGRADE AND SLOPES IN SOLID ROCK EXCAVATION

ALL SOLID ROCK IN MEDIAN TO A HEIGHT OF 12'-0" ABOVE SUBGRADE TO BE RETAINED.
FOR DETAILS OF ITEM 125 REFER TO SPECIAL SPECIFICATION.

NORMAL SECTION WITH GUARD RAIL POSITION

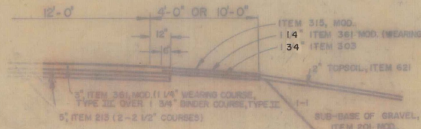
SEEDING, ITEM 611 %	LBS/ACRE	NAME	PURITY %	GERM %
33.33	20	CREEPING RED FESCUE	97	82
10.00	6	TALL FESCUE	95	80
16.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	92	90
16.67	10	DOMESTIC RYE GRASS	98	90
8.33	5	BIRDSFOOT TREFOIL (EMPIRE)	98	80
0.42	1/4	WEED SEED		
6.25	3 3/4	INERT MATERIAL		
100.00	60 LBS PER ACRE			

50 LBS OF WINTER RYE PER ACRE TO BE ADDED TO THE ABOVE SEEDING FORMULA IF DIRECTED BY THE ENGINEER.

GENERAL NOTES:
FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-8
STEEL MARKER POSTS, ITEM 647-0, TO BE PLACED AS DIRECTED BY THE ENGINEER.
MULCH, ITEM 622, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE.
FERTILIZER, ITEM 610, SHALL BE MIXED AS FOLLOWS

NITROGEN	10 %
PHOSPHORUS	20 %
POTASH	10 %

FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT TO EXCEED 100 LBS EACH AND IS TO BE APPLIED AT THE RATE OF 500 LBS PER ACRE.



DETAILS OF SURFACE AND SHOULDER COMPOSITION

4 LANE CONSTRUCTION
STD. MEDIAN

NORWICH

DRAWN AND TRACED: AJA, MAR 1963
STAGE I CONSTRUCTION II
PROJECT I NO. 91-2 (23) (18)
SHEET 5 OF 48 SHEETS
48 189

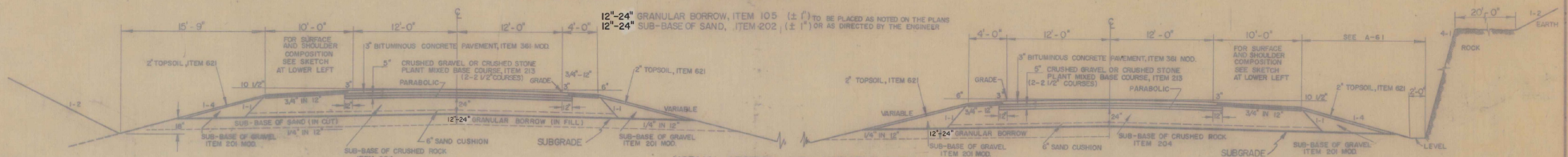
INTERSTATE TYPICAL SECTIONS

THESE ITEMS ARE NOT PART OF STAGE I CONSTRUCTION

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD. (± 1/4" FOR TOTAL THICKNESS) 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDING COURSE TYPE II
5" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2" FOR TOTAL THICKNESS) 2-2 1/2" COURSES
24" SUB-BASE OF CRUSHED ROCK, ITEM 204 (± 1")
SUB-BASE OF GRAVEL, ITEM 201 MOD.
SHOULDERS: (1 1/4" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD. (WEARING COURSE, TYPE III WITH ITEM 315 MOD.)
3 1/4" CRUSHED STONE SHOULDERS, ITEM 303

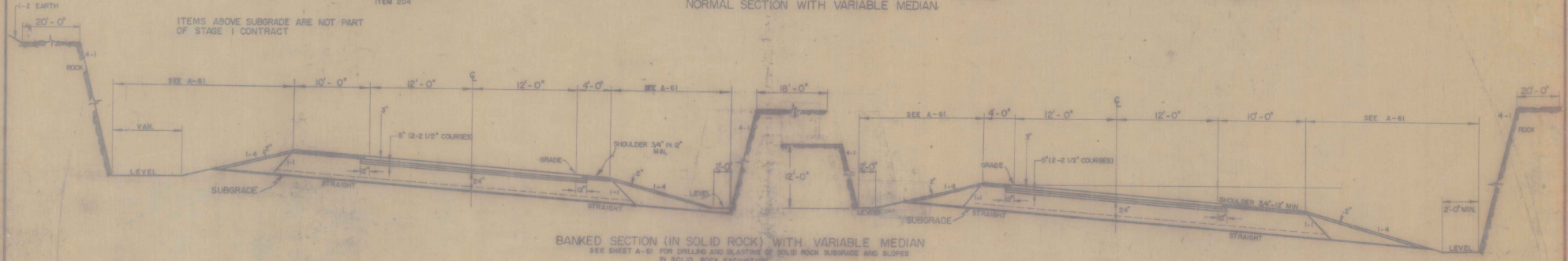
PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY

12"-24" GRANULAR BORROW, ITEM 105 (± 1") TO BE PLACED AS NOTED ON THE PLANS
12"-24" SUB-BASE OF SAND, ITEM 202 (± 1") OR AS DIRECTED BY THE ENGINEER

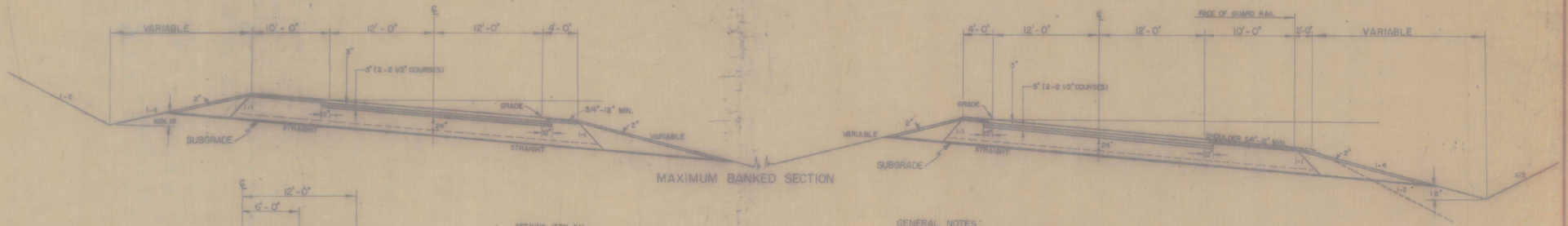


NORMAL SECTION WITH VARIABLE MEDIAN

ITEMS ABOVE SUBGRADE ARE NOT PART OF STAGE I CONTRACT

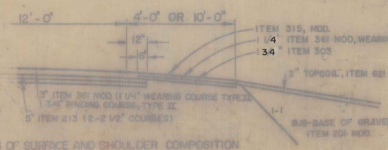


BANKED SECTION (IN SOLID ROCK) WITH VARIABLE MEDIAN
SEE SHEET A-61 FOR DRILLING AND BLASTING OF SOLID ROCK SUBGRADE AND SLOPES IN SOLID ROCK EXCAVATION



MAXIMUM BANKED SECTION

PARABOLIC DETAILS



DETAILS OF SURFACE AND SHOULDER COMPOSITION

SEEDING, ITEM 611

%	LBS/ACRE	NAME	PURITY %	GERM %
33.33	20	CREEPING RED FESCUE	97	82
10.00	6	TALL FESCUE	95	80
26.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	92	90
16.67	10	DOMESTIC RYE GRASS	98	90
6.33	5	BIRDSFOOT TREFOIL (EMPIRE)	99	80
0.40	1/4	WEED SEED		
6.25	3 3/4	INERT MATERIAL		
100.00	60 LBS PER ACRE			

50 LBS OF WINTER RYE PER ACRE TO BE ADDED TO THE ABOVE SEEDING FORMULA IF DIRECTED BY THE ENGINEER.

GENERAL NOTES:
FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-5
STEEL MARKER POSTS, ITEM 547-0, TO BE PLACED AS DIRECTED BY THE ENGINEER.
MULCH, ITEM 622, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE

FERTILIZER, ITEM 615, SHALL BE MIXED AS FOLLOWS:

NITROGEN	10%
PHOSPHORUS	20%
POTASH	10%

FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT TO EXCEED 100 LBS EACH AND IS TO BE APPLIED AT THE RATE OF 500 LBS PER ACRE

4 LANE CONSTRUCTION
VARIABLE MEDIAN

NORWICH

DRAWN & TRACED: AJA FEB. 1963
STAGE 2 CONSTRUCTION
PROJECT I NO. 91-2 (23)
SHEET A1 OF 169 SHEETS

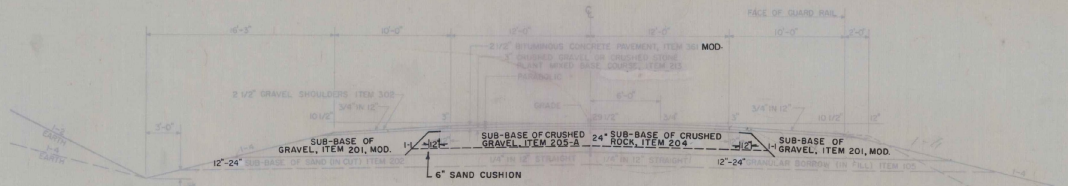
48 169

TYPICAL SECTIONS

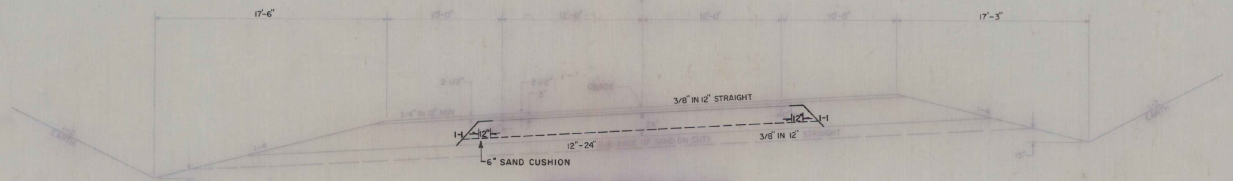
US-5 RELOCATION

PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY

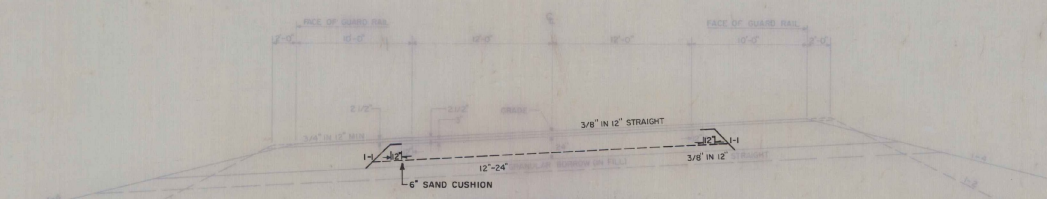
2 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD. (± 1/4") 1 1/4" WEARING COURSE, TYPE III OVER 1 1/4" BINDING COURSE, TYPE II
3" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2" FOR TOTAL THICKNESS)
24" SUB-BASE OF CRUSHED ROCK, ITEM 204 (± 1") W/SUB-BASE OF GRAVEL, ITEM 201, MOD. ALTERNATE E
24" SUB-BASE OF CRUSHED GRAVEL-COURSE GRADED, ITEM 205-A (± 1") W/SUB-BASE OF GRAVEL, ITEM 201, MOD. ALTERNATE F
SHOULDERS { 2 1/2" GRAVEL SHOULDERS, ITEM 302, TACK COAT TYPE III, ITEM 315
12"-24" GRANULAR BORROW, ITEM 105 (±1") IN FILL
12"-24" SUB-BASE OF SAND, ITEM 202 (±1") IN CUT } TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER



NORMAL SECTION



MAXIMUM BANKED SECTION
3/8" PER FOOT



MAXIMUM BANKED SECTION
3/8" PER FOOT

STAGE I CONSTRUCTION

US-5 RELOCATION IS TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION.

FOR GENERAL NOTES SEE SHEET 2 OF 159

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
NORWICH

TYPICAL SECTIONS US-5 RELOCATION

SCALE
0 5 10
10 FEET

WEBSTER - MARTIN INC.
CONSULTING ENGINEERS
S.U. BURLINGTON, VT.

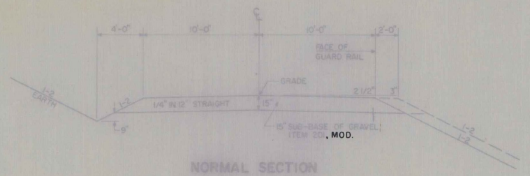
DESIGNED BY W.H.M. AUG. 1966 | CHECKED BY R.J.G. | SCALE AS SHOWN

PROJECT NO. I 91-2 18 | SHEET 4 OF 159

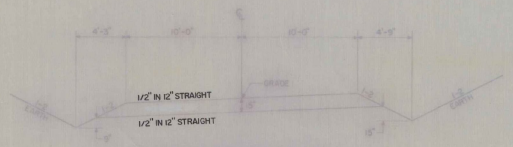
TYPICAL SECTIONS
FRONTAGE ROAD

15" SUB-BASE OF GRAVEL, ITEM 204, MOD. (± 1")

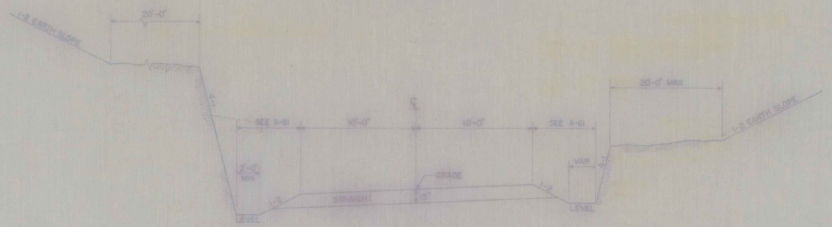
PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY.



NORMAL SECTION



MAXIMUM BANKED SECTION
1/2" PER FOOT



BANKED SECTION
(IN ROCK)

SLOPES IN SOLID ROCK EXCAVATION
SEE SHEET S-10 FOR DRILLING AND BLASTING OF SOLID ROCK EXCAVATION AND SLOPES IN SOLID ROCK EXCAVATION

GENERAL NOTES

FOR ROUNDING OF SLOPES SEE STANDARD SHEET B-5.

WOOD MARKER POSTS, ITEM 547-C, TO BE PLACED AS DIRECTED BY THE ENGINEER.

THE COMMERCIAL FERTILIZER, ITEM 621, SHALL BE MIXED AS FOLLOWS: - NITROGEN — 10%
PHOSPHORUS — 20%
POTASH — 10%

THE COMMERCIAL FERTILIZER SHALL BE DELIVERED IN BAGS NOT TO EXCEED 100 LBS. EACH, AND IS TO BE APPLIED AT THE RATE OF 500 LBS PER ACRE.

GROUND LIMESTONE, ITEM 618, IS TO BE APPLIED AT THE RATE OF 2 TONS PER ACRE, OR AS DIRECTED BY THE ENGINEER.

GROUND ITEM 621
FOR MIXING FORMULA AND APPLICATION RATES SEE SHEET 2-01 159

50 LBS. OF WINTER RYE PER ACRE TO BE USED IN ADDITION TO THE SECOND FORMULA IF DIRECTED BY THE ENGINEER.

STAGE I CONSTRUCTION

FRONTAGE ROAD IS TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT I-91-1(18) 159
NORWICH
TYPICAL SECTIONS - FRONTAGE ROAD

SCALE
0 5 10 FEET

DESIGNED BY [illegible] DRAWN BY [illegible] CHECKED BY [illegible]
PROJECT NO. I-91-1(18) SHEET 5 OF 159

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

NORWICH PROJECT NO. I 91-2 (18)

STAGE I CONSTRUCTION

SUMMARY SHEET NO. 1 OF 2 19 65

APPROXIMATE SUMMARY OF QUANTITIES

LANDS-CAPING	EROSION CONT.		ROW	I 91 over U.S. Route 5 BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.
					1	1	L.S.	Clearing and Grubbing (plus individual trees)	101
					421,000	421,000	C.Y.	Common Excavation, Class I	103-A
					25,000	25,000	C.Y.	Solid Rock Excavation, Modified	103-B
					500	500	C.Y.	Borrow, Est.	104
					21,000	21,000	C.Y.	Granular Borrow (incl. 109 cy rounding)	105
			10		13,150	13,160	C.Y.	Trench Excavation of Earth (Up to 5')	106-A
					130	130	C.Y.	Trench Excavation of Rock (Up to 5')	106-B
					1,650	1,650	C.Y.	Trench Excavation of Earth (Over 5')	106-A
					25,200	25,200	S.Y.	Fine Grading - Subgrade	107
					200	200	C.Y.	Unclassified Channel Excavation (incl. 35 cy rounding)	108-C
				1,185	1,140	2,325	C.Y.	Structure Excavation (incl. 2[illegible] cy rounding)	109
					150	150	HR.	Roadway Patrol Maintenance, Estimated	110
					650	650	M/GAL	Dust Control with Water, Estimated	112
					15	15	C.Y.	Trench Excav. of Rock (Over 5')	106-B
					5	5	TON	Dust and Ice Control with Calcium Chloride, Est.	113
					100	100	L.F.	Drilling and Blasting of Solid Rock, Estimated	114
					4,100	4,100	S.Y.	Drilling and Blasting of Solid Rock Subgrade,	115
					x 30	30	HR.	Bulldozer Rental, Estimated	120
					30	30	HR.	All Purpose Excavator Rental, Estimated	124
					x 5,000	5,000	C.Y.	Muck Excavation, Estimated	117
			40		7,700	7,740	C.Y.	Sub-base of Gravel, Modified	201
					17,400	17,400	C.Y.	Sub-base of Sand	202
				196		196	C.Y.	Sub-base of Crushed Rock (Under Structure	204
	24,750		220	9630	139,970	174,570	CY/MI	Overhaul (5.5 Miles)	221
	4,500					4,500	C.Y.	Gravel Backfill for Slope Stabilization (incl. 566 cy estimated), Modified	222-A
				1,751	99	1,850	C.Y.	Gravel Backfill for Structures (incl. 89 cy Est.)	222-B, Modified
			8		5,020	5,028	C.Y.	Stripping of Gravel Pits, Estimated	223
					3,700	3,700	C.Y.	Sub-base of Crushed Rock(Alt.E)Inc.33 round	204
					250	250	C.Y.	Gravel Shoulders	302
					3,100	3,100	GAL	Tack Coat - Type III	315
					750	750	TON	Bituminous Concrete Pavement (Modified)	361
				93		93	L.F.	Joint Sealer-Preformed-Type A,	372-C
				28		28	L.F.	Joint Sealer-Preformed-Type B,	372-C
				305		305	C.Y.	Concrete, Class AA	401-AA
				1,580	100	1,680	C.Y.	Concrete, Class B (incl 0.52 cy rounding)	401-B
				246,786	8,876	255,662	LB.	Reinforcing Steel	402
				1		1	L.S.	Shear Connectors (7,460 lbs.)	403
					3,700	3,700	C.Y.	Sub-base of Crushed Grav-Course Graded(Alt.F)	205-A
				609,000		609,000	LB.	Structural Steel	404-A
				56		56	S.Y.	Asphaltic-Asbestos Coating	407
				124		124	S.Y.	Paint Waterproofing	410
					101	101	C.Y.	Cement Rubble Masonry (incl 0.08 cy rounding)	411
					844	844	L.F.	18" Reinf.Conc.Pipe, Class III	421-H
					280	280	L.F.	18" Reinf.Conc.Pipe, Class IV	421-H
					1,140	1,140	L.F.	24" Reinf.Conc.Pipe, Class III	421-K
					192	192	L.F.	24" Reinf.Conc.Pipe, Class IV	421-K
					104	104	L.F.	30" Reinf.Conc.Pipe, Class III	421-L
					348	348	L.F.	36" Reinf.Conc.Pipe, Class III	421-M
					172	172	L.F.	36" Reinf.Conc.Pipe, Class IV	421-M
					80	80	L.F.	42" Reinf.Conc.Pipe, Class III	421-N
					132	132	L.F.	48" Reinf.Conc.Pipe, Class III	421-O
					24	24	L.F.	12" Asph.Ctd.Corr.Galv.Met.Pipe Elbow, Ga.16	422-D
					60	60	L.F.	18" Asph.Ctd.Corr.Galv.Met.Pipe Elbow, Ga.16	422-F
					36	36	L.F.	24" Asph.Ctd.Corr.Galv.Met.Pipe Elbow, Ga.16	422-K
					16	16	L.F.	8" Asph.Ctd.Corr.Galv.Met.Pipe, 16 Gage	424-B
					100	100	L.F.	12" Asph.Ctd.Corr.Galv.Met.Pipe, 16 Gage	424-D
					752	752	L.F.	18" Asph.Ctd.Corr.Galv.Met.Pipe, 16 Gage	424-H
					360	360	L.F.	24" Asph.Ctd.Corr.Galv.Met.Pipe, 16 Gage	424-K
					96	96	L.F.	24" Asph.Ctd.Corr.Galv.Met.Pipe, 14 Gage	424-K
					96	96	L.F.	30" Asph.Ctd.Corr.Galv.Met.Pipe, 14 Gage	424-L
					266	266	L.F.	36" Asph.Ctd.Corr.Galv.Met.Pipe, 10 Gage	424-M
					572	572	L.F.	72" Asph.Ctd.Corr.Galv.Met.Pipe, 8 Gage	424-S
					270	270	L.F	48" Asph.Ctd.Corr.Galv.Met.Pipe, 8 Gage, Modified W/16' Riser	424-O
					260	260	L.F.	48" Asph.Ctd.Corr.Galv.Met.Pipe, 8 Gage, Modified W/19' Riser	424-O
					312	312	L.F.	54" Asph.Ctd.Corr.Galv.Met.Pipe, 10 Gage Strutted, Modified W/ 20' Riser	424-P
					450	450	L.F.	Relaying Pipe Culverts, Estimated	428
				99		99	GAL.	Water Repellent	440
				1		1	L.S.	Furnishing Equipment for Driving Piling	501
				14,485		14,485	L.F.	Cast-in-Place Concrete Piling	503-C
				4		4	EA.	Pile Loading Tests	505
					40	40	C.Y.	Stone Fill for Slope Protection (Heavy Type) (incl. 6 cy rounding)	511
					1,280	1,280	C.Y.	Stone Fill for Slope Protection (Light Type) (incl. 5 cy rounding)	512
					155	155	C.Y.	Riprap (Heavy Type)(incl. 5 cy rounding)	513-A
					430	430	C.Y.	Riprap (Light Type)(incl. 4 cy rounding)	513-B
					6,400	6,400	L.F.	6" Perf.Asph.Ctd.Corr.Galv.Met.Underdrain (incl. 46 lf rounding)	581-I-A
					1,300	1,300	L.F.	8" Perf.Asph.Ctd.Corr.Galv.Met.Underdrain (incl. 86 lf rounding)	581-I-B
					1,100	1,100	L.F.	6" Perf.Asph.Ctd.Corr.Galv.Met.Pipe (incl. 76 lf rounding)	581-III
					300	300	L.F.	8" Perf.Asph.Ctd.Corr.Galv.Met.Pipe (incl. 34 lf rounding)	581-III

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
5,275	C.Y.	Removal of Temporary Detour Fill & Gravel
254,015	C.Y.	Mainline
111,387	C.Y.	US-5 Relocation
15,131	C.Y.	Frontage Road
32,802	C.Y.	Temporary Approach
1,905	C.Y.	Temporary Detour
487	C.Y.	Rounding
421,000	C.Y.	Total
		SOLID ROCK EXCAVATION
21,537	C.Y.	Mainline
467	C.Y.	Frontage Road
2,220	C.Y.	10% Unavoidable Overbreakage
200	C.Y.	Boulders, Estimated
376	C.Y.	Rounding
25,000	C.Y.	Total
		TRENCH EXCAVATION OF EARTH (Up to 5')
7,449	C.Y.	Pipes, Ditches and Gutters
3,753	C.Y.	Underdrain, Designed
1,876	C.Y.	Underdrain, Estimated
50	C.Y.	Test Trenches for Drilling and Blasting, Estimated
22	C.Y.	Rounding
13,150	C.Y.	Total
		TRENCH EXCAVATION OF ROCK (Up to 5')
66	C.Y.	Pipes, Ditches and Gutters
8	C.Y.	Underdrain, Designed
50	C.Y.	Underdrain, Estimated
6	C.Y.	Rounding
130	C.Y.	Total
		FINE GRADING - SUBGRADE
10,577	S.Y.	US-5 Relocation
9,064	S.Y.	Frontage Road
466	S.Y.	Drives
5,000	S.Y.	Temporary Detour
93	S.Y.	Rounding
25,200	S.Y.	Total
		DRILLING AND BLASTING OF SOLID ROCK SUBGRADE
2,921	S.Y.	Mainline
1,093	S.Y.	Frontage Road
86	S.Y.	Rounding
4,100	S.Y.	Total
		SUB-BASE OF GRAVEL MODIFIED
2,352	C.Y.	US-5 Relocation
3,505	C.Y.	Frontage Road
216	C.Y.	Drives, Designed
200	C.Y.	Drives, Estimated
165	C.Y.	Backfill Material with Underdrain
170	C.Y.	Backfill Material with Pipes
1,082	C.Y.	Temporary Detour
4	C.Y.	Rounding
7,700	C.Y.	Total

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SUB-BASE OF SAND
14,289	C.Y.	Mainline Sand Blanket, Designed
3,000	C.Y.	Sand Blanket, Estimated
13	C.Y.	Pipes
98	C.Y.	Rounding
17,400	C.Y.	Total
		GRAVEL SHOULDERS
210	C.Y.	US-5 Relocation
5	C.Y.	Approach to Frontage Road
35	C.Y.	Rounding
250	C.Y.	Total
		TACK COAT - TYPE III
2,950	GAL	US-5 Relocation
63	GAL	Approach to Frontage Road
87	GAL	Rounding
3,100	GAL	Total
		BITUMINOUS CONCRETE PAVEMENT
610	TON	US-5 Relocation
35	TON	Approach to Frontage Road
99	TON	Temporary Approach
6	TON	Rounding
750	TON	Total
		SEEDING
1,224	LB.	Seeding (formula as per typical sections)
510	LB.	Winter Rye, Estimated
66	LB.	Rounding
1,800	LB.	Total
		TRENCH EXCAVATION OF EARTH (Over 5')
904	C.Y.	Pipes, Ditches and Gutters
733	C.Y.	Underdrain, Designed
13	C.Y.	Rounding
1,650	C.Y.	TOTAL
		TRENCH EXCAVATION OF ROCK (Over 5')
12	C.Y.	Pipes, Ditches and Gutters
1	C.Y.	Underdrain, Designed
2	C.Y.	Rounding
15	C.Y.	TOTAL

TYPE OF CONSTRUCTION

3" Bituminous Concrete Pavement Item 361-B

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS ROADWAY 24	ROADWAY 37.25	BRIDGE 37.25	EQUATIONS +	EQUATIONS −	REMARKS
			NORTHBOUND LANE				
3996+00.00	4027+69.18	3,169.18					Including Transitions
4027+69.18	4028+00.53		31.35				Approach Slab
4028+00.53	4029+37.21			136.68			Bridge
4029+37.21	4029+71.31		34.10				Approach Slab
4029+71.31	4063+75.00	3,403.69					Including Transitions
NORTHBOUND	TOTALS						
ROADWAY		6,572.87	65.45				
BRIDGE				136.68			
			SOUTHBOUND LANE				
3996+00.00	3998+22.53	222.53					
					13.17		
3998+09.36	4027+11.13	2,901.77					Including Transitions
4027+11.13	4027+47.03		35.90				Approach Slab
4027+47.03	4028+86.38			139.35			Bridge
4028+86.38	4029+17.58		31.20				Approach Slab
4029+17.58	4063+75.00	3,457.42					Including Transitions
SOUTHBOUND	TOTALS						
ROADWAY		6,581.72	67.10		13.17		
BRIDGE				139.35			
TOTALS		13,154.59	132.55	276.03	13.17		

LENGTH OF PROJECT

STATIONS		FEET	MILES	REMARKS
3996+00.00	4027+73.78	3,180.37	0.602	Total Equation +6.59
4027+73.78	4029+11.80	138.02	0.026	Bridge
4029+11.80	4063+75.00	3,463.20	0.656	
TOTAL ROADWAY		6,643.57	1.258	
TOTAL BRIDGE		138.0[illegible]	0.026	
TOTAL		[illegible]	1.284	

NORWICH

STAGE I CONSTRUCTION

No. I 91-2 (18) Files

Sheet 6 of 159 Sheets

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS
NORWICH PROJECT NO. I91-2 (18)
STAGE I CONSTRUCTION
SUMMARY SHEET NO. 2 OF 2 19 65

APPROXIMATE SUMMARY OF QUANTITIES

LANDS-CAPING	EROSION CONT.	R.O.W.	1 sp. over 20' BRIDGE	ROADWAY	QUANTITIES (over 100's)	UNIT	ITEMS	ITEM NO.
				5	5	Ea.	Cast Iron Cover for Manhole,Catch Bas.Inl.Ret.Pipe, Flushing Valve (Incl. 1 ea rounding)	525
				1	1	Ea.	Drop Inlet - Type I-D	530-B
				4	4	Ea.	Drop Inlet - Type II	531
				10	10	Ea.	Cast Iron Grate, Type A	534-A
				4	4	Ea.	Cast Iron Grate, Type B	534-A
				3	3	Ea.	Cast Iron Grate, Type C	534-A
				24	24	L.F.	Plank Guard Rail, Estimated	540
				1,184	1,184	L.F.	Two Cable Guard Rail	541
				6	6	Ea.	Anchors for Two Cable Guard Rail	543
				90	90	Ea.	Wood Marker Posts (Incl. 1 ea rounding)	547-C
				25	25	Ea.	Steel Marker Posts (Incl. 3 ea rounding)	547-D
				790	790	L.F.	Removal and Disposal of Present Guard Rail (Incl. 4 lf rounding)	549
				2	2	TON	Bituminous Concrete Surface for Gutters and Traffic Islands (Incl. 0.1 ton rounding) Mod.	554
			505		505	L.F.	Granite Bridge Curb	560-G
				40	40	Ea.	Boundary Markers, Estimated	567
				10	10	Ea.	Removing and Resetting Property Marker, Est.	568
			553		553	L.F.	Bridge Railing, Std.	570
				13,700	13,700	L.F.	Property Line Fence with Steel Posts, Modified (Incl. 2 LF rounding)	583-21
				80	80	Ea.	Steel Brace for Property Line Fence, Estimated	83-29
				1	1	L.S.	Demolition and Disposal of Building, Bldg. No.6, Sta. 98+60 Rt.	586
				200	200	MAN/HR	Uniformed Traffic Officers, Estimated	595
				1	1	L.S.	Field Office - Engineers	597-A
				1	1	L.S.	Field Office - Cells and Materials	597-C
4				4	4	ACRE	Selective Thinning and Trimming, Estimated	601
	1,800				1,800	LB.	Seeding	613
	10,300				10,300	LB.	Fertilizer (Incl. 100 lb rounding)	615
	41				41	YDS	Ground Limestone	618
	700				700	C.Y.	Top Soil, Estimated	621
	45				45	TON	Mulch (Incl. 4 ton rounding)	622
	800		15		815	S.Y.	Jute Matting (Incl. 5 sy rounding)	632
				650	650	TON	Crushed Gravel or Crushed Stone Plant-Mixed Base Course, Alternate A (Incl. 5 ton rounding)	703
				400	400	C.Y.	Penetration Macadam Crushed Stone Base Course, Alternate B (Incl. 4 cy rounding)	704
				8,400	8,400	GAL	---- Asphalt Cement (Incl. 75 gal rounding)	705
				24	24	L.F.	12" Elbows (optional) Corr.Galv.Bot.Pipe Elbow, Ga. 16 Corr.Aluminum Alloy Pipe Elbow, Ga. 16	472-10 475-10
				12	12	L.F.	18" Elbows (optional) Corr.Galv.Bot.Pipe Elbow, Ga. 16 Corr.Aluminum Alloy Pipe Elbow, Ga. 16	472-30 475-30
				134	134	L.F.	12" Pipe (optional) Corr.Galv.Bot.Pipe, 16 Gage Corr.Aluminum Alloy Culvert Pipe, 16 Gage	432-0 435-0
				120	120	L.F.	15" Pipe (optional) Corr.Galv.Bot.Pipe, 16 Gage Corr.Aluminum Alloy Culvert Pipe, 16 Gage Reinf. Conc. Pipe, Class III	432-0 435-0 437-0
				44	56	L.F.	18" Pipe (optional) Corr.Galv.Bot.Pipe, 16 Gage Corr.Aluminum Alloy Culvert Pipe, 16 Gage	432-0 435-0
			36	128	164	L.F.	24" Pipe (optional) Corr.Galv.Bot.Pipe, 16 Gage Corr.Aluminum Alloy Culvert Pipe, 16 Gage Reinf. Conc. Pipe, Class III	432-0 435-0 437-0
				40	40	L.F.	24" Pipe (optional) Corr.Galv.Bot.Pipe, 14 Gage Corr.Aluminum Alloy Culvert Pipe, 14 Gage	432-0 435-0
				56	56	L.F.	30" Pipe (optional) Corr.Galv.Bot.Pipe, 14 Gage Corr.Aluminum Alloy Culvert Pipe, 14 Gage Reinf. Conc. Pipe, Class III	432-0 435-0 437-0

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

TYPE OF CONSTRUCTION

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS	EQUATIONS +	EQUATIONS −
TOTALS				

LENGTH OF PROJECT

STATIONS	FEET	MILES	REMARKS
TOTALS			

NORWICH
STAGE I CONSTRUCTION
I91-2(18)

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

MAINLINE

STA	STA	POSITION	SLOPE PAVEMENT	TYPE INLET	TYPE OUT	R.C.P. O	R.C.P. C	A.C.C.M.P. O	A.C.C.M.P. C	SPECIAL ELBOWS O	SPECIAL ELBOWS L	SPECIAL ELBOWS SKEW FROM PERP	TRENCH Over 5' E	TRENCH R	R.C. BOX S	R.C. BOX R	COMP CAACP RCP	PRECAST REINF. CONC. BOX SECTIONS	CONC. Φ	REINF. STEEL	C.M.P.	S.I.	DEPTH D.I.	TRENCH Up to 5' E	TRENCH R	ADJUSTABLE CONC. COLLAR	ADJUSTABLE CONC. COLLAR HEIGHT	GRADE RING	RIP RAP CLASS	CONC. PAD SQ. YDS.	CONC. PAD No.	RIP RAP MAT. SQ. YDS.	RIP RAP MAT. TONS	SKEW 1 (SKEW=30°) LT	SKEW 1 (SKEW=30°) RT	SKEW 2 (SKEW=30°) LT	SKEW 2 (SKEW=30°) RT	SAND BAG	SAND BAG No.	SKEW LT	SKEW RT	18 INCH	18 INCH	REMARKS
3997+00	4000+50	LT		HDWL DITCH																				433																			
3998+50	4000+50	LT		STONE FILL																																							
	3998+90	RT		REF. CONC. DITCH																																							
	3999+00	G/L		DI A G		18	84																																			
	3999+00	RT		DI A G		18	92						3						3.00	198			3'-9"	59																			
	4003+00	RT		DI A G				18	94				13						3.59	220		9	3'-0"	65																			
4004+50	4005+65	LT		RIPRAP									1						3.19	196		4	3'-0"	93																			
4004+60	4005+00	RT-LT		SD				36	366				35								4.9			83																			
4005+00	4010+00	RT-LT		GN	GN			72	372												14.8																					
4005+10	4007+50	RT		STONE FILL																																						
	4007+04	RT		DI A H				24	90	24	12	25	25						2.58	226		4	5'-0"																			
4009+00	4009+85	LT		STONE FILL																																						
	4011+00	G/L		DI A G		18	96	18	12	25	25								3.35	208		5	4'-6"																			
	4011+00	RT		DI A G		18	94												3.50	215			4'-6"	33																			
	4014+30	RT		DI A G				18	72										2.80	225			4'-6"	99																			
	4014+90	G/L		DI A G				18	104				9						3.36	203		8	4'-6"	108																			
	4015+00	LT		MTL. CONC. DITCH																																							
4016+00	4016+50	LT		RIPRAP																																						
4016+50	4018+50	LT-RT		CH	CH			54	322												29.4	0				127	154		50													
4018+48	4019+25	LT		STONE FILL																																						
4017+00	4019+28	RT		STONE FILL																																						
4018+50	4018+90	RT		RIPRAP																																						
4030+43	4031+75	RT		STONE FILL																																						
4020+20	4023+00	RT-LT		CH	CH			48	270				2								3.4	0		263																	
4020+75	4021+55	LT		STONE FILL																																						
	4021+05	LT		PRCDH						12	6	15																													
	4024+00	LT		RT. CONC. DITCH																																						
4024+25	4025+66	LT		SPECIAL DITCH									113											548																		
	4025+05	G/L		DI A G		18	84						7						3.34	186		9	4'-0"	53																		
	4026+50	LT		PRCDH						12	12	10	15											4																	
4027+00	4029+11	RT		STONE FILL																																						
4027+30	4027+84	RT		PIT. CONC. DITCH																																						
4028+05	4029+20	LT-RT		SD	GN			48	260																																
	4029+20	LT		PRCDH						12	12	10	20								3.4	0		228																	
4030+05	4043+74	RT		SPECIAL DITCH									227											1965																		
4030+05	4030+20	RT		STONE FILL																																						
	4030+30	G/L		DI A G		18	84												3.50	225			4'-6"																			
	4031+05	RT		DI A G		24	90	24	12	25	25								3.69	230		4	5'-0"	34																			
	4032+20	RT		RIPRAP																																						
	4032+30	G/L		DI		24	90														3.2			3																	
	4032+00	RT		DI A G		24	98	24	12	25	25								3.59	226		4	5'-0"	8																		
	4032+50	G/L		DI		24	92														3.2			4																	
	4033+50	RT		DI A G		30	96												3.13	199		4	5'-0"	9																	
4043+74	4043+49	RT		DI A G	SP	43	80						38						3.01	207	3.4		5'-0"	99																		
	4042+30	G/L		DI A G		24	94												2.60	227			4'-0"	39																	
	4043+50	RT		DI A G		24	92						4						3.28	186		4	5'-0"	60																		
4043+51	4045+91	RT		DI A G		36	345						42						3.85	234			5'-0"	345																		
	4045+20	G/L		DI A G		24	96						4						3.30	217			4'-6"	65																		
4047+01	4050+49	RT		DI A G		24	348						7						3.58	235		4	5'-0"	61																		
													39						3.90	252			5'-48"	292																		
	4050+50	G/L		DI A G		24	96						9						3.70	244			5'-0"	66																		
	4050+50	RT		DI A G		24	98						8						3.63	234		4	5'-0"	62																		
	4054+30	G/L		DI A G		24	96												3.59	235			4'-6"	59																		
4054+00	4054+00	RT		DI A G	SP	24	108												2.98	228	3.4	4	5'-0"	69																		
										18	12	45DEG																															
										18	12	45DEG																															
										18	12	CONC. CAGE	675								32.1	24		5253		125	1104		350	1140	34	71	8.6									
				CLASS 111		18	154															18																				
				CLASS 1Y		18	280	18	344	18 DIA												24																				
				CLASS 111		24	184	24	84	24 DIA												30																				
				CLASS 1Y		24	284	24	84	24 DIA												36																				
				CLASS 111		30	184			30 DIA												42																				
				CLASS 1Y		30	284			30 DIA												48																				
				CLASS 111		48	90	48	370	8 GAGE MOD w/24" RISER																																
								48	180	8 GAGE MOD w/36" RISER																																
								54	212	10 GAGE STRUTTED MOD w/30" RISER																																
								72	372	8 GAGE																																

COLUMN TOTALS

NOTE DI DEPTH MEASURED FROM COVER SEAT OR TOP OF GRATE TO FLOOR OF DI

* INDICATES STAGE 2 CONSTRUCTION

TYPE OF FLOW LINE IN DITCH WITH TYPE OF FLOW LINE IN EACH DITCH

HE STANDARD

* THREE CABLE GUARD RAIL W/ LIGHT STEEL POSTS Item 538

STA	STA	LT.	RT.	MEDIAN	TYPES A	TYPES B
		NORTHBOUND				
3997+50	3999+38		232'		2	
4003+50	4007+50		424		2	
4017+50	4021+50		424		2	
4031+64	4035+93		833		1	1
4054+48	4058+00		352		2	
		SOUTHBOUND				
4004+36	4005+84	132			2	
4006+50	4012+50	424			2	
4014+93	4017+65	296			2	
4020+98	4025+15	417			1	1
4028+98	4029+63	89			2	
TOTALS		1378 2265 3643			18	2

UNDERDRAIN

STA	STA	POS	O	L	TRENCH E	TRENCH R	%	PERF. PIPE

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

STA	STA	POSITION	OLD CULVERT	TYPE INLET	TYPE OUT	RCP D	RCP L	ACCUMP D	ACCUMP L	SPECIAL ELBOWS D	SPECIAL ELBOWS L	SPECIAL ELBOWS *TOP *BOT	OVER 5' TRENCH E	OVER 5' TRENCH R	R.C. BOX S	R.C. BOX B	R.C. BOX L	CGMP CAACP RCP	PIPE ARCH	PIPE ARCH	CONC R	BENCH STEEL	C & M	I	UP TO 5' DEPTH DI	UP TO 5' TRENCH E	UP TO 5' TRENCH R	PALISADE FENCE	GRAVEL BACKFILL	MAS 1:2:4	FINISH GR.	TOPSOIL	RIP RAP	CURB GUTTER	ASPH. CONC.	ASKEW LT	ASKEW AT	SLOPE LT	SLOPE RT	GUARD RAIL	I.D.	REMARKS
	4054+05	RT		PRCDI						12	6	20	0					12	54																					X		16 GAGE CGMP, 16 GAGE CAACP, 54" COUPLINGS @ ALL JOINTS
	4064+53	RT	5'x5' CONC. SPRING BOX																									10	10													REMOVE GRAVEL BACKFILL
	4056+50	G/L		DI		26	170						28										4.9		186																		
	4057+07	RT		DIT. CONC. DITCH																																							CLASS IV
	4061+65	G/L		DI & D		18	60						1	12							5.00	195			5'-6"	13	47																CLASS III
4061+55	4061+00	RT		DI & D		18	84						1								2.06	903		A	4'-6"	47																CLASS III
DESTROY CONCRETE DITCH								6	*48																																	
								8	*16														1.8																				

MAINLINE TOTALS

				CLASS III		18	320					18	12	ACCUMP	705	12											5499	47	165	1113	10	150	1368	54	71	31.4		10		*25		4		
				CLASS IV		18	280					24	36	ACCUMP																													
				CLASS III		24	864					12	96	CGMP, CAACP																													
				CLASS IV		24	108																																			
				CLASS III		36	348	6	*84			18	0.060																													
				CLASS IV		36	172	18	168			24	0.060																													
				CLASS III		42	80	24	300			18	0.052																													
								24	96			24	0.060																													
								24	240			30	0.060																													
								48	180			36	0.060	MOD w/18" RISER																													
								48	280			8	0.060	MOD w/18" RISER																													
								54	112			10	0.060	STOTTED MOD w/30" RISER																													
								72	372			8	0.060																													
1+35 Temp. Detour		Rt				24"	96'	14 Gage																																		To be laid in Rt. Span. Ditch

US-5 RELOCATION

93+33	93+97	LT	12" ACCMP																																						SEE 139
	91+66	G/L	24" RCP	SH		SH		24	84				48										5.6		75																	CLASS IV
93+06	92+34	RT		SH		SH																	5.6		16																	16 GAGE CGMP, 16 GAGE CAACP, RCP CLASS III INSIDE SHOE
92+64	90+81	LT	1'X 1.5' CONC. BOX																						3	3																SEE 172
98+00	96+71	RT+LT		DH		DK		48	132				49										4.95		106																	CLASS III
	98+03	G/L	18" ACCMP																																							REMOVE
	99+71.5	G/L	24" RCP																						33																	REMOVE
	100+80	G/L		DI & C		18	76						1								1.0	198			3'-6"	43																CLASS III
	100+60	RT		SH				12	32	12	12	30	25								2.0				RP																16 GAGE CGMP, 54" COUPLINGS @ ALL JOINTS
100+51	103+51	RT		DI & C		18	300														2.6	925			4'-0"	135																CLASS III
103+35	103+46	LT		SH		SP																				3																
	103+50	RH		DI & C				18"	28'				2								2.5	225			4'-6"	21																16 GAGE CGMP, 16 GAGE CAACP, RCP CLASS III INSIDE SHOE / 16 Gage
	103+90	G/L		DI & C									1								3.0	837			5'-0"	57																CLASS III
	100+25	RH																																								
103+50	106+28	RT		DI & C		24	276						42								3.5	525			4'-6"	231																CLASS III
	106+90	G/L		DI & C		18	96														3.0	198			5'-6"	87																CLASS III
	106+30	RT		DI & C		30	104						23								3.6	294			4'-6"	105																CLASS III
	106+90	LT		FNDTDI				12	48	12	12	25	25																												16 GAGE, 54" COUPLINGS @ ALL JOINTS
	106+96.5	G/L	18" RCP																																						REMOVE
DESTROY CONCRETE DITCH								6	12														0.5																		
								8	4																																	

US-5 RELOCATION TOTALS

				CLASS III		18	536								165						17.4	1584				943	4																
				CLASS III		18	176	6	16			12	24	ACCUMP																													
				CLASS IV		24	84	12	200			18	0.060																													
				CLASS III		30	108	18'	28'	16 Gage																																	
				CLASS III		48	540																																				

18' 36' 16 Ga. CGMP, 16 Ga. CAACP, RCP CIII

NOTE DI DEPTH MEASURED FROM COVER SEAT OR TOP OF GRATE TO FLOOR OF DI

*INDICATES STAGE 2 CONSTRUCTION

†TYPE OF ELBOW TO AGREE WITH TYPE OF PIPE USED AT EACH LOCATION.

* STANDARD STEEL BEAM GUARD RAIL WITH STEEL POSTS (6'3" Spacing)

STA	STA	LT	RT	MEDIAN	ANCHORS Item 544
		MAINLINE			
4057+72.75				48	2
4059+11.25				48	2
TOTALS				96	4

PROPERTY LINE FENCE WITH STEEL POSTS, MOD.

		MAINLINE		
3959+00	4007+05	3392		
4014+00	4028+28		3272	
4016+83	4060+75	3875		
4019+92	4062+95		3409	
		7268	6681	
		13,949		

REMOVAL & DISPOSAL OF PRESENT GUARD RAIL

US-5 RELOCATION			
93+50	92+10		60
93+85	92+07	62	
97+25	100+52		102
99+00	100+98	198	
104+00	104+61		61
TOTALS		260	461
		721	

UNDERDRAIN

STA	STA	SIDE	D	TRENCH E	TRENCH R	B	MATERIAL TYPE	L
TOTALS								

2 NOVEMBER
STAGE 1 CONSTRUCTION
PROJECT I NO. 91-2
(23)
SHEET 52 OF 124

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

FRONTAGE ROAD

STA	STA	POSITION	OLD CLASS/ST	TYPE INLET	TYPE OUT	R.C.P. D	R.C.P. L	A.C.C.M.P. D	A.C.C.M.P. L	S.P.C.P. D	S.P.C.P. L	SPECIAL DITCHES TYPE	SPECIAL DITCHES PROT	Over 5' TRENCH E	Over 5' TRENCH R	CGMP CAACP RCP	Up to 5' TRENCH E	Up to 5' TRENCH R	REMARKS
4028+35	4028+40	LT-MT		SH	SH									1				43	
4028+34	4028+86	LT		SH	SH												12	52	
4030+35	4030+50	MT		RIPRAP															
4030+50	4031+00	MT-LT		DI A-C										1			16	70	
	4033+09	O/L		DI A-C				18	44	18	12	25	25						
	4036+03	O/L		DI A-C						18	12	15	15				10	56	
	4039+90	O/L		SH	SH												24	60	
4040+09	4042+00	LT		SPECIAL DITCH															
4043+50	4046+00	LT		STONE FILL															
4043+50	4044+00	MT-LT		SH				18	100										
	4047+00	O/L		DI A-C				18	70	18	12	20	20						
	4050+50	O/L		DI A-C				18	72	18	12	25	50	8				98	
	4054+11	O/L		SH				18	90	18	12	50	50	5				52	
4056+45	4059+00	RT		SPECIAL DITCH										8				296	
4056+45	4059+00	RT		RIPRAP													12	52	
4058+98	4059+28	LT		SH	SH														
4059+30	4059+50	RT-LT		SH	SH									11		56		148	
	4059+50	LT		STONE FILL															
	4059+12	LT	15"CMP																
FRONTAGE ROAD TOTALS														34				1,007	
																56			
PROJECT TOTALS				RCP CLASS III		18	044							904	12			7649	66
				RCP CLASS IV		18	080												
				RCP CLASS III		24	1340												
				RCP CLASS IV		24	1360												
				RCP CLASS III		30	104	8	845										
				RCP CLASS III		36	348	8	16							164			
				RCP CLASS IV		36	372	18	752										
				RCP CLASS III		42	80	18	760							56			
				RCP CLASS III		48	132	24	190										

UNDERDRAIN

STA	STA	POSITION	TYPE I D	TYPE I L	TYPE II D	TYPE II L	6"F.B. RISER L	8"F.B. L	F.B. COVER	CRM	Up to 5' TRENCH E	Up to 5' TRENCH R	Over 5' TRENCH E	Over 5' TRENCH R	STEEL MARKER POSTS LT	STEEL MARKER POSTS RT	SUB BASE
MAINLINE																	
3996+50	4003+00	LT	6	614	6	34			#1	0.0	387		3				
3999+03	4002+39	RT	6	318	6	114			#1	0.0	228						
4018+01	4018+25	RT	6	194	6	40			#1	0.0	126		12				
4038+03	4038+50	LT	6	870	6	50			#1	0.0	140		19				
4038+03	4038+50	RT	6	350	6	80			#1	0.0	200		1				
4042+74	4042+93	RT			6	112			#1	0.0	52		21				
4043+51	4048+50	RT	6	500			6		#1	0.0	365		194				
4043+51	4046+50	RT-LT	6	300	6	134	4		#1	0.0	209		60				
4046+50	4053+00	LT	6	600			4		#1	0.0	425		139				
4049+50	4054+75	RT	6	925			5		#1	0.0	393		176				
4052+93	4054+50	RT	6	350			2		#1	0.0	378		99				
	4054+53	RT			6	26											
4054+50	4061+50	RT	6	705	6	110	3		#1	0.0	134						
			6	134	6	30	2		#1	0.0	84	8	2	1			
M/L TOTALS			6	5908	6	540	42		#1	0.0	3121	8	676	1			
US-5 RELOCATION																	
			6	894	6	54	6		#1	0.0	304		8				
			6	495	6	96	4		#1	0.0			1				
US-5 RELOC. TOTALS			6	1389	6	150	10		#1	0.0	298		48				
			6	6903	6	690	52		#1	0.0	632		57				
PROJECT TOTALS			6	8297	6	840	62		#1	0.0	3753	8	733	1			
											5629	56					

NOTE DI DEPTH MEASURED FROM COVER SEAT OR TOP OF GRATE TO FLOOR OF DI

TWO CABLE GUARD RAIL

STA	STA	LT	RT	MEDIAN	ANCHOR
FRONTAGE ROAD					
4040+40	4052+25		1184		8
Totals			1184		8

BRIDGE RAILING Item 512 (For bridge approaches)

Sta.	Sta.	Lt.	Rt	Med
Northbound				
4025+61	4027+86	225.0		
4028+91	4027+16		225.0	
4029+26	4030+38.5	112.5		
4029+50	4031+87.5		237.5	
Southbound				
4025+71.5	4027+29	237.5		
4028+46.5	4027+59		112.5	
4028+71	4030+96	225		
4028+98	4031+23		225	
		Add	Sup	
		800	800	
		1600		

UNDERDRAIN

STA	STA	POS	D	L	TYPE I D	TYPE I L	TYPE II D	TYPE II L	6"F.B. RISER L	8"F.B. L	F.B. COVER	CRM	Up to 5' TRENCH E	Up to 5' TRENCH R	Over 5' TRENCH E	Over 5' TRENCH R	STEEL MARKER POSTS LT	STEEL MARKER POSTS RT	SUB BASE
TOTALS																			

2 NORWICH
STAGE I CONSTRUCTION
I NO 91-2 (23)

SHEET 53 OF 129

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

NORTHBOUND

PROJECT NORWICH
NORTHBOUND
STAGE 2 CONSTRUCTION

54 129 (23)

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

SOUTHBOUND

PROJECT NORWICH
NORTHBOUND & SOUTHBOUND STAGE I CONSTRUCTION

2

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NORWICH
SOUTHBOUND & US-5 RELOCATION

STAGE 2 CONSTRUCTION

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. AID PROJECT NO.	STATE PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	VT 093-H(13)S		14	159

FRONTAGE ROAD IS TO BE BUILT
IN IT'S ENTIRETY DURING
STAGE 1 CONSTRUCTION

GRADES					TOTAL EXCAVATION EARTH AND ROCK		ROCK		EMBANKMENT		BASE	
VC / % GRADE	STATION	ELEVATIONS ON TANGENT	ELEVATIONS ON V. CURVES	CORR V.C.	DIST	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS
150'VC -1.78%	4029+31.16	456.09											
	479	455.04		0		SUFF				4028+30 BEGIN FRONTAGE ROAD			
	4030	450.45	452.65	+0.30	21	240							
	+50	450.45	451.33	+1.48	29		3,452						
	+90	434.00	437.00	+1.72	40	996						0	0
							3,478					Rock	1,379
	4029	440.09	440.89	+0.30	10	1,679						Ex. C	2,759
	+25	443.88		0	15		3,318						
	+50	447.09	446.86	+0.08	10	1,805							
							2,944						
	4028	472.40	472.30	+0.90	28.60	3,274							
	434+30	475.00	474.53	+1.09	46.90	5,171	4,000					Rock	3,681
	+50	479.99	479.81	+1.98		704						Ex. C	4,867
							1,050						
	4027	486.33	487.53	+3.08	50	830							
	+50	492.30	486.16	-4.36	50	897	694	53	0				
	4026	493.29	488.28	+3.86	50	19	53*	66	62	69	57		
							320		102		202		
	+50	493.99	492.20	+3.96	50	85	62	65	130	0	4,080		
	4025	494.69	490.59	-0.70	50	21	21	304	304	0	3,851		
										Rock	3,276		
	+50	495.42	495.36	+0.26	50	19	37	37	340	Ex. C	574		
	475	496.98		0	50		18		182				
	4024	496.15			50	0	2	0	593				
								8					
	+50	496.97			50	0	2	2	330				
	4023	497.80			50	13	41	41	400				
							332		154		70		
	+50	500.33			50	319		126		3			
							301		1.05		4		
	4022	499.09			50	306		10		1			
							307		28		68		
	+50	499.99			50	74		7		67			
							97		9		206		
	4021	500.58			50	0		0		290			
											402	0	1,041
	+50	501.25			50	0				327		0	303
							3				370	Rock	2,203
	4020	502.48			50	6				10		Ex. C	1,228
							279				61	Rock	2,402
	+50	503.23			50	106				0		Ex. C	2,402
							176				134		
	4019	503.85			50	0				390			
											633		
	+50	504.38			50					502			
											530		
	4018	504.59			50					453			
											587		
	+50	505.69			50					341			
											641		
	4017	506.38			50					199			
											388		
	+50	507.03			50	0				254			
							10				344		
	4016	507.83		0	50	12				79	0	0	
							28				78	Rock	3,322
	+50	508.54	508.74	+0.70	50	35				90		Ex. C	1,119
							53				100	Rock	4,401
	4015	509.29	510.06	+0.70	50	8				90			
							5				110		
	+50	510.00	511.37	+1.27	50	0				10			
											607		
	4014	510.68	513.27	+0.29	50					370			
											502		
	+50	511.27	514.27	+0.31	50					135			
											338		
	4013	511.15		0	50					335			
											472		
	+50	510.93	508.16	-0.23	50	0				514			
							5				303		
	4012	509.49	514.35	+0.50	50	5	6			102			
											233		
	+50	509.50	507.14	-1.36	50	6	26			36			
											327		
	4011	509.99	509.17	-0.60	50	12	32			60			
											93		
	+50	510.04	510.08	-0.15	50	12	28			85			
											78	0	334
	4010	510.31	0		50	14	28			18	0	Rock	1,859
												Ex. C	1,485
	+50	510.61			50	32	58			16	0	Rock	1,751
												Ex. C	1,751
	4009	510.91			50	33	60			18			
											62		
	+50	511.21			50	18	32			0			
											32		

CARRIED FORWARD 1,450 0 1,450

GRADES					TOTAL EXCAVATION EARTH AND ROCK		ROCK		EMBANKMENT		BASE	
VC / % GRADE	STATION	ELEVATIONS ON TANGENT	ELEVATIONS ON V. CURVES	CORR V.C.	DIST	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS
	4008+50	510.33			50	17	21			78			
	4050	507.38			50	8	14			55	14		
	+50	506.65			50	14	13			42	90		
	4051	505.50			50	14				134	340		
	+51.284	504.73			51.28					58	495		
	+50	503.59			50					97	615		
	4052	502.46			50					95	710	0	0
												Rock	1,281
	+50	500.79	500.80	+0.07	50					260	969	Ex. C	4,867
	4053	499.13	499.07	+0.27	50					203	1,172		
	+50	496.83	496.88	+0.09	50					138	1,310		
	4054	495.60		0	50					130	1,440		
	+50	494.83			50					340	1,780		
	4055	501.24			50					343	2,123		
	+51	554.05			50					382	2,505		
	+95.92	554.28			45.92					281	2,786		
	4056	555.30		0	50					321	3,107		
	+51	557.69	555.06	+0.39	50	48	41			384	3,491		
	4057	559.40	561.05	+1.37	50	86	115			297	3,788		
	+50	561.29	564.53	+1.88	50	80	154			338	4,126		
	4058	563.30	565.09	+1.39	50	23	30			50	4,176	0	185
												Rock	1,778
	+50	571.30	574.94	+2.54	50	3	3			53	4,229	Ex. C	1,963
	4059	579.30	580.87	+1.37	50	43	38			8	4,237		
	+13	581.58	585.46	+1.17	63	49	80			3	4,240		
	+50	587.60	587.99	+0.28	50	25	54			0	4,240		
	4060	590.00		0	50	0	0						

ADDED ON END APPROACH CONSTRUCTION

CARRIED FORWARD 0 0 1,450

GRADES					TOTAL EXCAVATION EARTH AND ROCK		ROCK		EMBANKMENT		BASE	
VC / % GRADE	STATION	ELEVATIONS ON TANGENT	ELEVATIONS ON V. CURVES	CORR V.C.	DIST	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS

CARRIED FORWARD
COLUMN FOOTINGS

PROJECT NORWICH
FRONTAGE ROAD

PROJECT T 40
SHEET 14 OF 159 SHEETS
STAGE 1 CONSTRUCTION

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	VT		POST WAR		

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS			EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		TEMPORARY APPROACH P.I 4007+60	419.71											
		4016	440.33											
		+50	441.84											
		4017	443.34											
		+50	444.85											
		4018	446.36											
		+50	447.86											
		+50.5	447.88											
		4019	449.37											
		+00.5	449.39											
		+50	450.88											
		+50.5	450.89											
		4020	452.39											
		+01	452.42											
		+50	453.89											
		+51.5	453.94											
		4021	455.40											
		+02	455.46											
		+50	456.91											
		+52.5	456.98											
		4022	458.41											
		+02.5	458.49											
		+50	459.92											
		+53	460.01											
		4023	461.43											
		+04	461.55				0							
		+50	462.93			51		14						
		+55	463.08				15							
		4024	464.44			50.5		75						
		+05.5	464.61				65							
		+14	464.86		0	50.5		196						
		+50	465.95	465.84	- 0.11									
		+56	466.13	465.99	- 0.14		195							
		4025	467.46	466.85	- 0.61	51		411						
		+07	467.67	466.96	- 0.71		290							
		+50	468.96	467.44	- 1.52	51		770						
		+58	469.20	467.50	- 1.70	42	525	898						
		4026	470.47	467.63	- 2.84		630							
		+09.5	470.76	467.52	- 3.14									
		+14	470.89	467.50	- 3.29	50		1443						
		+50	469.61	467.40	- 2.21		928							
		+62	469.18	467.28	- 1.90	50		2496						
		4027	467.83	466.76	- 1.07		1714				C	32802		
		+15	467.29	466.48	- 0.81	50		3128			F	0		
		+50	466.05	465.71	- 0.34		1664				Fac	1.25		
		+70.5	465.32	465.17	- 0.15	50		3043			ExC	32802		
		4028	464.27	464.25	- 0.02		1623							
		+14	463.77		0	50		3308						
		+23	463.45											
		+50	462.48				1950							
		+77	461.52			50		4102						
		4029	460.70				2480							
		+30	459.64			50		4361						
		+50	458.92				2230							
		+82.5	457.77			50		3537						
		4030	457.14				1590							
		+35	455.90			35	1160	1782						
		+50	455.36			51		1861						
		+86	454.08				810							
		4031	453.58			51		897						
		+37	452.26				140							
		+60	451.80											
		+75	450.91			51.5		334						
		+88.5	450.42				210							
		4032	449.98			50.5		196						
		+39	448.44				0							
		+50	447.97											
		+89	446.24											
		4033	445.73											
		+39.5	443.80											
		+41.77=	443.69											
		106+01.80												
		+50	441.12											
		107	438.24											
		+50	435.14											
		108	431.80											
		CARRIED FORWARD COLUMN FOOTINGS						32802						

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS			EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		NORTHBOUND TO SOUTHBOUND CROSS OVER												
			P.I 4007+50	416.53										
	+2.980%	4016	441.69	441.69	0									
300' VC		+50	443.17	443.15	- 0.02									
		4017	444.65	444.58	- 0.07									
		+50	446.13	445.96	- 0.17									
		4018	447.39	447.32	- 0.07									
		+50	448.64	448.62	- 0.02									
	+2.513%	4019	449.90	449.90	0									
		+00.5	449.91	449.91	+ 0.00									
		+50	451.16	451.18	+ 0.02									
		+51	451.18	451.20	+ 0.02									
		4020	452.41	452.49	+ 0.08									
		+03	452.49	452.58	+ 0.09									
300' VC		+50	453.67	453.86	+ 0.19									
		+55	453.82	454.00	+ 0.18									
		4021	455.18	455.26	+ 0.08									
		+07	455.39	455.46	+ 0.07									
		+50	456.69	456.71	+ 0.02									
		+59	456.96	456.97	+ 0.01									
		4022	458.19	458.19	0									
		+10	458.49											
		+50	459.70											
	+2.014%	+61	460.03											
		+64.05=	460.13											
		+56.81												
		CARRIED FORWARD COLUMN FOOTINGS												

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS			EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		TEMPORARY APPROACH RAMP												
		- 2+45					345							
						45		446						
		- 2+00				22	190	77						
		- 1+78					690 AND							
	0.000%	- 1+68	467.52	467.52	0	28		399						
		+50	467.52	467.49	- 0.03		90							
		+19	467.52	467.30	- 0.22	50		176						
		- 1+00	467.52	467.10	- 0.42		100				0			
		+68	467.52	466.61	- 0.91	50		134				5		
200' VC		+57	467.12	466.40	- 0.72									
		+50	466.87	466.26	- 0.61		45				5			
		+36	466.36	465.84	- 0.52	50		125				5		
		0+00	465.06	464.97	- 0.09		90				0			
	-3.620%	+32	463.90	463.90	0	50		84				51		
		+50	463.25	463.28	+ 0.03		1				55			
		+92	461.73	462.04	+ 0.31	50		1				532		
		1+00	461.44	461.84	+ 0.40		0				520			
		+32	460.28	461.13	+ 0.85	50						1259	C	1905
		+46	460.25	460.88	+ 0.63								F	4193
		+50	460.24	460.81	+ 0.57						840		Fac	1.25
		+98	460.15	460.29	+ 0.14	50						1278	ExF	3336
200' VC		2+00	460.14	460.23	+ 0.09						540			
		+32	460.08		0	50						634		
		+40	460.04											
		+50	460.04								145			
						50						226		
	-0.2029%	3+00	459.94								99			
		+01	459.94			50						147		
		+50	459.84				0				60			
		+61	459.82			50		93				56		
		4+00	459.74				100				0			
		+22	459.69			50		231						
		+50	459.64				150							
		+77	459.58			50		139						
		5+00	459.53				0							
		+30	459.47											
		+50	459.43											
		+82	457.37											
		6+00	459.33											
		+32	459.27											
		+50	459.23											
		CARRIED FORWARD COLUMN FOOTINGS						1905				4193		

COMPUTED

PROJECT NORWICH-THETFORD

PROJECT 1 NO. 91-2(18)

SHEET 14-A OF 159 SHEETS.

STAGE I CONSTRUCTION

EARTHWORK SUMMARY

SUMMARY OF BALANCES

STATION TO STATION		EXCAVATION (CUT)	EMBANKMENT (FILL)	EXCESS CUT	EXCESS FILL	ACCUMULATIVE EXCESS CUT	ACCUMULATIVE EXCESS FILL
384+00	400+00	30,457	3,457	26,284		26,284	
384+00	384+33.33	32,130	33	26,315		52,599	
400+00	402+00	43,134	56,634	12,283		64,882	
402+00	403+00	3,252	97,495		115,947		64,065
403+00	403+00	31,699	96,396		32,197		96,262
403+00	404+00	35,281	65,809		30,528		80,790
404+00	404+00	34,982	34,702		2,838		80,952
404+00	405+00	3,418	38,539		35,385		116,306
51+00	55+00	3,210	227	2,983			113,323
55+00	60+00	41,464		31,288			82,035
60+00	65+00	44,083		44,083			37,952
65+00	70+00	30,854	58	30,796			7,156
405+00	405+00		46,742		38,586		45,730
405+00	406+00	808	40,938		40,130		135,861
406+00	406+00	1,260	37,850		8,694		144,037
406+00	407+00	30,799		30,799			113,238
407+00	408+00	28,190	2,940	25,250			88,988
408+00	409+00	29,504	6,264	17,240			53,240
409+00	409+43	14,554	5,430	14,554			38,686
409+43	409+00	5,766		5,766			32,920
409+00	410+00	6,852	1,401		32		34,321
410+00	411+00	3,041	4,224		1,183		37,506
411+00	412+00	51	3,274		3,223		36,506
412+00	413+00	253	1,484		1,231		36,028
413+00	414+00	37	3,240		3,197		36,031
414+00	414+00	205	3,259		3,054		36,814
S8-N8 CROSSOVER AND TEMP.APPROACH		32,802		32,802		1,586	
TEMP. DETOUR		1,905	4,193		3,336		1,750
REM.OF DETOUR FILL&GRAV.		5,275		5,275		3,525	
		442,713	364,673				
COLUMN FOOTINGS							
CARRIED FORWARD		442,719	364,673				

SUMMARY OF BALANCES

STATION TO STATION		EXCAVATION (CUT)	EMBANKMENT (FILL)	EXCESS CUT	EXCESS FILL	ACCUMULATIVE EXCESS CUT	ACCUMULATIVE EXCESS FILL

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION (CUT)	EMBANKMENT (FILL)
11	1	27,140	364,673
11	2	28,451	364,673
11	3	34,093	64,004
12	1	33,304	53,507
12	2	33,334	53
13	3	333,487	53
14	1	29,027	53,507
14	2	547	53,453
PROJECT TOTALS		453,727	53,453
SUB-TOTALS		442,719	53,453
14-A	1	32,802	
14-A	3	1,905	4,193
REM.OF TEMP. DETOUR		5,275	
TOTALS		442,719	22,204 364,676

FOR UTILIZATION OF WASTE MATERIALS
SEE SPECIAL PROVISIONS

REMARKS

EARTH AND ROCK EXCAVATION	442,719
UNCLASSIFIED EXCAVATION	420,513
UNCLASSIFIED FILL	364,673
333,567	
416,984	
MATERIALS AVAILABLE FOR FILL:	
EARTH EXCAVATION	420,513
CHANNEL EXCAVATION OUTSIDE OF LINE	724
CHANNEL EXCAVATION IN EXCESS OF 6371	4,778
EXCAVATION FOUNDATION IN EXCESS OF PLANS	1,123
EXCAVATION FOUNDATION OUTSIDE OF LINES	1,690
TOTAL MATERIAL AVAILABLE FOR FILL	430,823
TOTAL FILL INCLUDING FACTOR	416,984
MATERIAL FOR FILL	430,823
Waste	13,839
Waste	18,492
WASTE	35,383

STAGE I CONSTRUCTION

PROJECT NORWICH NO. 191-2(18) SHEET 15 OF 159

FINAL EARTHWORK SHEET

NORTHBOUND & SOUTH BOUND

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
				NORTHBOUND											
3996		98													
+50	50	838	863												
3997		260	1016		C = 29223										
+50		162	381		R = 0										
3998		42	180		E = 0										
+50		3119	2927		E.C. = 29223										
3999		4761	7696												
+50		4358	8438												
4000		4420	8122												
+50		4680	8333												
4001		4780	8667												
+50		4280	8676												
4002		3993	7840		C = 46529										
+50		2875	5396		R = 0										
4003		1288	3251		E = 0										
+50		860	1710		E.C. = 43529										
4004		384	920												
+50		0	356												
4005		734	680												
+50		238	897												
4006		70	227												
+50		482	460												
4007		272	735		C = 3093										
+50		152	683		R = 0										
4008		71	245		E = 0										
+30		0	6		E.C. = 3093										
4009															
+50															
4010															
+50															
4011		0	302												
+50		326	1104		C = 10925										
4012		866	1571		R = 0										
+50		830	848		E = 0										
4013		86	117		E.C. = 10926										
+50		40	464												
4014		677	2324												
+50		1881	3995												
4015		2481	3927												
+50		1776	2611												
4016		926	878												
+50		71	6												
4017		0													
+50	50														
CARRIED FORWARD			7331												
COLUMN TOTAL			76101												

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
4017+50					C = 15,127										
4018	50	0	316		R = 0										
+50		341	1990		E = 0										
4019		1808	3387		E.C. = 15,127										
+50		1856	2109												
4020		421	560												
+50		184	170												
4021		0	0												
+50		0	48		C = 14879										
4022		52	879		R = 0										
+50		897	1863		E = 0										
4023		1115	2341		E.C. = 14879										
+50		1618	2911												
4024		1730	3250												
+50		1780	2857												
4025		1805	1741												
+50		578	589												
4026		61	56												
+50		0													
4027	50				C = 3386										
+77.78	27.78				R = 0										
4028	22.22				F = 0		BUTT								
+50	50				E.C. = 3386										
4029	50						BUTT								
+11.80	11.80														
+50	38.20														
4030	50														
+50															
4031															
+50															
4032															
+50															
4033															
+50															
4034															
+50															
4035															
+50															
4036															
+50															
4037															
+50		0	27												
4038	50	29	261												
+50		253													
CARRIED FORWARD			288												
COLUMN TOTAL			25349												

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK to Neat Line AREA	ROCK to Neat Line CU. YDS.	OB AREA	OB CU. YDS.	1030 AREA	1030 CU. YDS.	ROCK BORROW AREA	ROCK BORROW CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
4038+50		253											C = 522		
4039	50	0	234										R = 0		
+50													E = 0		
4040													Ex. = 522		
+50															
4041															
+50		0											C = 4201		
4042		19	18										R = 0		
+50		0	18										E = 0		
4043		0											Ex = 4201		
+50		416	384												
4044		632	969												
+50		701	1234												
4045		1003	1578												
+50		1160	2003												
4046		1677	2645												
+50		2050	3469										C = 10,618		
4047		2490	4206										R = 0		
+50		2670	4687										E = 0		
4048		2605	4792										Ex C = 10618		
+50		2625	4843												
4049		2684	4975												
+50		2440	4745												
4050		2218	4313												
+50		1570	3507												
4051		1931	3242												
+50		1830	3483										C = 21,316		
4052		1875	2968										R = 0		
+50		735	1954										E = 0		
4053		1165	1778										Ex C = 21,316		
+50		1280	2283												
4054		825	1394												
+50		90	292												
4055		858	415												
+50		582	824												
4056		260	733												
+50		184	379	0	0	0									
4057		970	1032	70	65	35	32		7		25		R = 12433		
+50		966	1998	176	228	120	144		23		121		E = 0		
4058		1895	2186	660	706	70	170		77		97		Ex = 12433	23177	
+50	50	1898	2864	1153	1651	110	167		185		2		OB = 786		
4059	38	1725	1306	1306	1126	65	65		65		0		10% = 539		
4059.89	25	2357	1961	1715	1418	25	26		26		0		Borrow 247		
CARRIED FORWARD			18574		5357		610		368		247				
COLUMN TOTAL			47983		5357		610		368		247				

PROJECT NORWICH I-91-2(8)

PROJECT NORWICH NO. I-91-2(8)
SHEET 1 OF

FINAL EARTHWORK SUMMARY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

NOTES	STATIONS		TOTAL EXCAVATION EARTH & Rock DESIGN	FINAL	DIFFERENCE	ROCK DESIGN	FINAL	DIFFERENCE	EMBANKMENT EARTH DESIGN	FINAL	DIFFERENCE	UNAUTHORIZED WASTE DESIGN	FINAL	DIFFERENCE	BASE DESIGN	FINAL	DIFFERENCE	10% Overbreakage DESIGN	FINAL	DIFFERENCE	Rock Borrow DESIGN	FINAL	DIFFERENCE
NORTHBOUND R	3996+00	4000+00	30817	29 228	-1589																			
SB	3996+00	3998+50	23,153	25155	+1780																			
	4000+00	4005+00	48,319	45,534	-2985																			
	4005+00	4010+00	3,952	3694	- 257																			
	4010+00	4015+00	10,953	10,925	- 28																			
	4015+00	4020+00	15,085	15,127	+ 42																			
	4020+00	4025+00	14,965	14,879	- 86																			
	4025+00	4030+00	2,408	2,386	- 22																			
	4020+00	4025+00	—	—																				
	4025+00	4040+00	407	522	+ 115																			
	4040+00	4045+00	6,380	4201	- 2179																			
	4045+00	4050+00	59,797	49,618	- 10179																			
	4050+00	4055+00	28,690	21,819	- 7871																			
	4055+00	4060+00	25,309	23,109	- 2200	18,431	16,433	+ 2002										539			297			
	4060+00	4063+25	19,524	19870	+ 346	14,107	16,423	+ 316										331			72			
Total Mainline			288,769	259241	-29528	81,538	83,956	+2418	259011	232065	-26946							2220	1089	-1131		319		
US-5	91+80	95+00	9,709	9,712	+ 3																			
US-5	95+00	100+00	31,633	29,974	- 1659																			
US-5	100+00	105+00	54,085	53,135	- 950																			
US-5	105+00	108+00	16,884	15,564	- 320																			
Total US-5			111,311	108,885	-2501				111,386	108,885	-2501													
FR	4028+00	4030+00	9,789	9,469	- 320				9789															
FR	4030+00	4035+00	4020	4,213	+ 193	365	0	-365	3655															
FR	4035+00	4040+00	1091	874	- 167	302	0	-302	739															
FR	4040+00	4045+00	65	54	- 11				65															
FR	4045+00	4050+00	159	0	-159				159															
FR	4050+00	4055+00	37	0	-37				37															
FR	4055+00	4060+00	685	398	- 287				685															
Total FR			15796	15008	- 788	667	0	-667	15129	15008	-121													
SB-NB Crossover and Temp Approach			32,802	34,482	+1680				32,802	34,482	+1680													
Temp Detour (Construction)			1,905	1,918	+ 13				1205	1918	+713													
Rem of Detour Fill and Gravel			5275	1,538	-3737				5275	1,538	-3,737													
Computer Rounding			6		-6	-1	Comp Rounding	+ 1	7		- 7													
Grand Totals			442,714	411,314	-28867	82,204	85,956	+1752	429,315	388,896	-31419							2225	1089	-1131		319		

TOTALS

NOTES

South Bound
Temp. Approach Ramp (Detour)
Reloc. US-5
Frontage Road
Temporary Approach

Grand Totals →

COLUMN SUMMARY

SHEET	COLUMN	Total EXCAVATION	ROCK	EARTH	UNAUTHORIZED WASTE	BASE	10% Overbreakage	Rock Borrow
#1	1	96101	0					
	2	22349	0				363	297
	3	79883	5257				726	72
#2	1	24555	18689				0	0
	2	25133	0					
	3	1918		1538				
	1	108,885	0					
#3	2	5398						
	3	34482						
Grand Totals →		411314	23256	1538	388896		1089	319

TOTALS

REMARKS

PROJECT NORWICH I-91-2(12)

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

NORTHBOUND & SOUTHBOUND & US#5 RELOCATION & DETOUR

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK in Neat Line AREA	ROCK in Neat Line CU. YDS.	O B AREA	O B CU. YDS.	10% AREA	10% CU. YDS.	ROCK BORROW AREA	ROCK BORROW CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
4059		2857	2264	1742	1689	25	17		11		0				
	25														
+25		2693	2264	1705	1716	0	28		28						
+50		2868	2478	1800	1799	60	55		55						
+75		2736	2474	2086	1972	57	82		82						
406		2608	2606	2178	1926	120	106		106						
+25		2603	2354	2093	1928	110	95		95						
+50		2480	2221	2072	1860	95	76		76						
+75		2315	2062	1945	1824	65	50		50						
4061		2132	1871	1995	1650	49	49		49				C = 14870		
+25		1900	1711	1580	1082	59	76		76				R = 14523		
+50		1148	890	758	589	105	53		53				F =		
+75		774	573	574	366	10	26		26		0		Ex = 14670		
4062		465	401	275	171	45	58		17		41		OB = 632		
+25		421	248	96	37	95	37		6		31		10% = 550		
+50		129	129	29	14	0			0		0		Borrow 82		
+75		257	189	0											
4063		152	70												
+25		0													
+50															
+75	25														
CARRIED FORWARD															
COLUMN TOTAL			24,555		18,694		798		728		72				

SOUTH BOUND

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
3996		116													
+50	50	1463	1464												
3997	50	3486	4586					C =	25,133						
+50	50	4560	7451					R =	0						
3998	50	3180	7167					F =	0						
+25.53	2553	2666	2487					EX =	25,133						
=+0378	46A		2028												
+50		95													
			TEMPORARY APPROACH RAMP (DETOUR)												
			PAY QUANTITIES FOR BUILDING		PAY QUANTITIES FOR REMOVAL										
-2+45	45	345	446												
-2+0		190	155												
-1+78 Bk	32	140													
-1+78 Ahd		680	399												
-1+50	28	90	176												
-1+0	50	130	136												
-0+50		45	165												
0+0		40	84												
0+50		1	1												
1+0		0						0	769						
+50								830	769						
2+0								0							
+50															
3+0															
+50		0	69												
4+0		75	199												
+50	50	140	130												
5+0		0													
TOTALS			1918						1538						
CARRIED FORWARD															
COLUMN TOTAL															

U.S.#5 RELOCATION

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
91		0													
+50	50	0	0												
	50		79		C = 9,712										
92		95	417		R = 0										
+50	50	365	523		F = 0										
+75	25	764	789		Ex.C. = 9,712										
93		960	749												
+20.5	20.5	1038	1025												
+50	29.5	935	390												
+58.5	08.5	910	1419												
94	41.5	930	1885												
+50	50	1108	2489												
95		1580	3611												
+50		2320	4590												
96		2638	4590												
+50		2320	4117		C = 20,974										
97		2126	3374		R = 0										
+50		1518	2373		F = 0										
98		1045	1807		Ex.C. = 29,974										
+50		906	1812												
99		1050	1883												
+50		985	1817												
100		979	1962												
+50		1140	2199												
101		1235	2866		C = 57,635										
+50		1860	4405		R = 0										
102		2898	6350		F = 0										
+50		3760	7918		Ex.C. = 63,635										
103		4591	8367												
+50		4845	7270												
104		3406	6310												
+50		3408	5988												
105		3058	5273												
+50	50	2686	4506												
106		2230	2074												
+30	30	1502	996		C = 15,564										
+50	20	1186	1642		R = 0										
107	50	590	781		F = 0										
+50	50	253	290		Ex.C. = 15,564										
108 BUTT	50	60													
CARRIED FORWARD															
COLUMN TOTAL			108,805												

PROJECT NORWICH I 91-2(8)

PROJECT NORWICH NO. I 91-2(8)
SHEET 2 OF

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FRONTAGE ROAD & TEMPORARY APPROACH

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.
				FRONTAGE ROAD	
4028	DUTY	178		C = 9469	
+50	50	823	927	E = 0	
4029		1660	2299	F = 0	
+50		1900	3333	Exc. 9469	
4030		1243	2910		
+50		703	1862		
4031		375	998		
+50		287	613	C = 4263	
4032		89	348	R = 0	
+50		55	133	F = 0	
4033		66	112	Exc = 4213	
+50		46	103		
4034		6	49		
+50		0	7		
4035		58	48		
+50		166	282		
4036		177	318		
+50		32	199	C = 874	
4037		0	35	R = 0	
+50		0		F = 0	
4038		0	37	Exc = 874	
+50		40	52		
4039		16	23		
+50		9	8		
4040		0			
+50					
4041					
+50				C = 54	
4042		0	11	R = 0	
+50		12	27	E = 0	
4043		17	16	Exc = 54	
+50		0			
4044					
+50					
4045					
+50					
4046					
+50					
4047					
+50					
4048					
+50					
4049					
+50	50				
CARRIED FORWARD					
COLUMN TOTAL			14610		

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.
4049+50					
4050	50				
+50					
4051					
+50					
4052					
+50					
4053					
+50					
4054					
+50					
4055					
+50					
4056		0	28		
+50		30	97		
4057		75			
+50		72	136	C = 398	
4058		23	88	R = 0	
+50		0	21	F = 0	
4059		0	0	Exc = 398	
+50		15	14		
4060	50	0	14		
CARRIED FORWARD					
COLUMN TOTAL			398		

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.
				TEMPORARY APPROACH	
4022+10		0	15		
+50	50	16	31		
4023		18	47		
+04	54				
+55		28	131		
4024+05	505	112	315		
+56	505	285	606		
4024+27	51	417	975		
+58	51	615	917		
4026	50	564	1371		
+50		862	2384		
4027		1712	3223		
+50		1768	3218		
4028		1705	3358		
+50		1920	4122		
4029		2532	4562		
+50	60	2398	3929		
4030		1870	1850		
+38	75	984	1736		
+86	51	854	1128		
4031+37	515	320	441		
+88.8	505	132	134		
4031+89	505	21	19		
4032+89	50	0			
CARRIED FORWARD					
COLUMN TOTAL			34482		

PROJECT NORWICH F 91-2(18)

PROJECT NORWICH NO. F 91-2(18)
SHEET 2 OF

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FRONTAGE ROAD & TEMPORARY APPROACH

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.
				FRONTAGE ROAD	
4028	OUT	178		C = 9469	
+50	50 ^	823	427	E = 0	
4029		1660	2299	F = 0	
+50		1700	3333	Ex.C = 9469	
4030		1243	2910		
+50		703	1862		
4031		375	998		
+50		287	613	C = 4213	
4032		89	348	E = 0	
+50		55	133	F = 0	
4033		66	112	Ex.C = 4213	
+50		45	103		
4034		8	49		
+50		0	7		
4035		58	48		
+50		166	202		
4036		177	318		
+50		38	199	C = 874	
4037		0	35	R = 0	
+50		0		E = 0	
4038		0	37	Ex.C = 874	
+50		40	52		
4039		16	23		
+50		9	8		
4040		0			
+50					
4041					
+50				C = 54	
4042		0	11	R = 0	
+50		17	27	E = 0	
4043		17	16	Ex.C = 54	
+50		0			
4044					
+50					
4045					
+50					
4046					
+50					
4047					
+50					
4048					
+50					
4049	^ 50				
+50					
CARRIED FORWARD					
COLUMN TOTAL		14610			

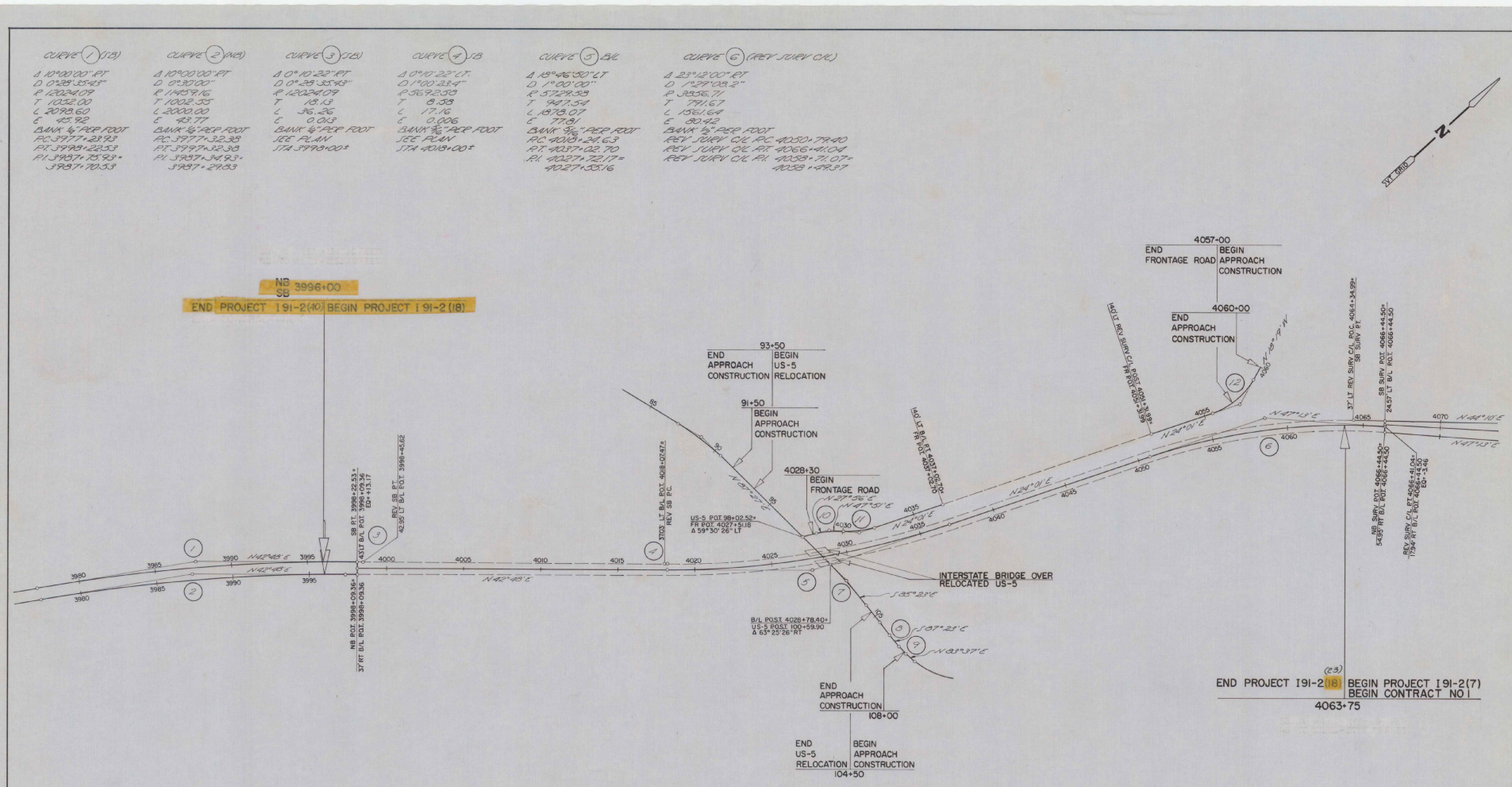
STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.
4047+50					
4048	50 ^				
+50					
4049					
+50					
4050					
+50					
4051					
+50					
4052					
+50					
4053					
+50					
4054		0	28		
+50		30	97		
4055		75	136	C = 398	
+50		72	88	R = 0	
4056		29	21	E = 0	
+50		0	0	Ex.C = 398	
4057		0	10		
+50	^	15	14		
4060	50	0			
CARRIED FORWARD					
COLUMN TOTAL		398			

TEMPORARY APPROACH

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.
4023+10		0			
+50	50	16	15		
4023	50	12	31		
+00	55		47		
+55		28			
4024+065	505	112	131		
+56	505	285	315		
4024+27	51	417	606		
+52	51	615	975		
4026	52	564	917		
+50	50 ^	862	1321		
4027		1716	2384		
+50		1769	3223		
4028		1706	3218		
+50		1920	3358		
4029		2532	4122		
+50	^	2393	4562		
4030	50	1870	3929		
+38	38	984	1850		
+86	51	854	1736		
4031+37	51	340	1178		
+88.8	515	170	471		
4032+89	506	21	132		
4032+89	50	0	19		
CARRIED FORWARD					
COLUMN TOTAL		34482			

PROJECT NORWICH F 91-2 (08)

PROJECT NORWICH NO. F 91-2(08)
SHEET 2 OF


CURVE (1) (S.B.)
Δ 10°00'00" RT.
D 0°25'33"43"
R 1203.09
T 1053.00
L 2098.60
E 45.92
BANK ½" REP. FOOT
P.C. 3977+23.93
P.T. 3999+22.53
P.I. 3987+37.93 =
3987+70.53
CURVE (2) (N.B.)
Δ 10°00'00" RT.
D 0°25'33"43"
R 1145.916
T 1003.55
L 2000.00
E 43.77
BANK ½" REP. FOOT
P.C. 3977+32.38
P.T. 3997+32.38
P.I. 3987+34.93 =
3987+21.93
CURVE (3) (S.B.)
Δ 0°10'22" RT.
D 0°25'33"43"
R 1203.09
T 10.9
L 36.26
E 0.013
BANK ½" REP. FOOT
SEE PLAN
STA 3998+00±
CURVE (4) I-B
Δ 0°10'22" LT.
D 1°00'23.4"
R 5697.558
T 8.59
L 17.16
E 0.006
BANK ⅜" REP. FOOT
SEE PLAN
STA 4018+00±
CURVE (5) B/L
Δ 18°46'50" LT
D 1°00'00"
R 5729.58
T 947.64
L 1878.07
E 77.81
BANK ⅜" REP. FOOT
P.C. 4013+24.63
P.T. 4037+02.70
P.I. 4027+22.17 =
4027+53.16
CURVE (6) (REV. SURV. C/L)
Δ 23°12'00" RT
D 1°27'09.2"
R 3956.71
T 791.67
L 1601.64
E 80.42
BANK ½" REP. FOOT
REV. SURV. C/L P.C. 4030+79.40
REV. SURV. C/L P.T. 4046+41.04
REV. SURV. C/L P.I. 4039+17.07 =
4039+49.57
NB 3996+00
SB
END PROJECT I 91-2 (10) BEGIN PROJECT I 91-2 (18)
93+50
END APPROACH CONSTRUCTION
BEGIN US-5 RELOCATION
91+50
BEGIN APPROACH CONSTRUCTION
4028+30
BEGIN FRONTAGE ROAD
N 27°56' E
N 47°51' E
4057+00
END FRONTAGE ROAD
BEGIN APPROACH CONSTRUCTION
4060+00
END APPROACH CONSTRUCTION
N 15°19' W
140' LT REV. SURV C/L POST 4060+34.99 =
FR POST 4060+34.99
37' LT REV SURV C/L P.C. 4064+34.99 =
SB SURV P.T.
SB SURV POT 4066+44.50 =
2457' LT B/L POT 4066+44.50
N 47°13' E
N 44°10' E
N 24°01' E
REV SB P.T.
42.95' LT B/L POT 3998+45.62
SB P.T. 3998+22.53 =
43.17' RT B/L POT 3998+09.36
E0+13.17
NB POST 3998+09.36 =
37.91' RT B/L POT 3998+09.36
4203' LT B/L POT 4018+07.47 =
REV SB P.C.
US-5 POT 98+02.52 =
FR POT 4027+51.18
Δ 59°30' 26" LT
INTERSTATE BRIDGE OVER RELOCATED US-5
B/L POST 4028+78.40 =
US-5 POST 100+59.90
Δ 63° 25' 26" RT
S 05° 23' E
S 07° 23' E
N 83° 37' E
END APPROACH CONSTRUCTION
108+00
END US-5 RELOCATION
BEGIN APPROACH CONSTRUCTION
104+50
NB SURV POST 4066+44.50 =
5435' RT B/L POT 4066+44.50
REV SURV C/L PT. 4066+41.04 =
1734' RT B/L POT 4066+44.50
E0-3.46
(23)
END PROJECT I 91-2 (18) BEGIN PROJECT I 91-2 (7)
BEGIN CONTRACT NO I
4063+75
CURVE (7) (U.S.-5)
Δ 7°10'00" RT.
D 1°45'00"
R 3274.05
T 205.03
L 409.52
E 6.41
BANK ⅜" REP. FOOT
P.C. 100+04.79
P.T. 104+14.31
P.I. 102+09.82 =
102+09.28
CURVE (8) (U.S.-5)
Δ 2°00'00" LT
D 1°00'00"
R 5729.58
T 100.01
L 200.00
E 0.87
BANK VARIABLE
P.C. 105+30.00
P.C.C. 107+30.00
P.I. 106+30.01 =
106+49.99
CURVE (9) (U.S.-5)
Δ 9°00'00" LT
D 6°00'
R 954.93
T 75.13
L 150.00
E 2.95
BANK 1' REP. FOOT
P.C.C. 107+30.00
P.C.C. 109+00.00
P.I. 108+25.15 =
108+24.85
CURVE (10) (F.R.)
Δ 19°35'00" RT.
D 11°30'00"
R 498.22
T 87.48
L 170.29
E 7.62
BANK ½" REP. FOOT
P.C. 4028+43.96
P.T. 4030+17.15
P.I. 4029+31.44 =
4029+29.67
CURVE (11) (F.R.)
Δ 23°30'00" LT
D 11°30'00"
R 498.22
T 105.14
L 204.35
E 10.97
BANK ½" REP. FOOT
P.C. 4030+17.45
P.T. 4032+21.80
P.I. 4031+22.57 =
4031+19.36
CURVE (12) (F.R.)
Δ 42°20'00" LT.
D 12°00'00"
R 477.47
T 184.93
L 353.75
E 19.47
BANK ½" REP. FOOT
P.C. 4055+35.90
P.T. 4059+08.68
P.I. 4057+40.79 =
4057+23.50
0 500 1000
SCALE IN FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of NORWICH
ALIGNMENT DATA SHEET
STAGE 2 CONSTRUCTION
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.
SURVEYED BY W-M INC. DRAWN BY HJM
CHECKED BY RAS IN CHARGE RAS
SCALE AS SHOWN DATE 4/65
PROJECT NO I 91-2 (23) SHEET 1 OF 158
47 129

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
10C	ARCHIBALD W. & JOSEPHINE J. FRASER	8	[illegible]	[illegible]	0.04 ±	[illegible]							[illegible]
	SEE DETAIL SHEET #17 FOR PARCEL A&B												
K	[illegible]	8	[illegible]	[illegible]	[illegible]								
		12	[illegible]	[illegible]	[illegible]								
74L			3991+16 NB	3996+00 NB	0.44 ±								
	SEE DETAIL SHEET #17 FOR PARCEL A												
C	TOWN OF NORTON	22	[illegible]	[illegible]			ALL RIGHT, TITLE & INTEREST						TOWN HIGHWAY GARAGE
74	ALDEN A. FRASER	[illegible]	[illegible]	[illegible]	0.5 ±	0.5	[illegible]						
A B C	RUSSELL SPENCER	[illegible]	[illegible]	[illegible]	0.1 1.0 1.0 ±	[illegible]							
73	VIOLET TOTH	[illegible]	[illegible]	[illegible]	0.3	1.3	ALONG 735.40 PT (E)						
72	KATHARINE E. LINDSAY	[illegible]	[illegible]	[illegible]	0.2	0.8	ALONG 30.40 PT (E) ALONG 300.84 PT (E) ALONG (E)						
80	LEE CLARK CLARK HEIRS	[illegible]	[illegible]	[illegible]	0.2	2.4	ALONG 245.46 PT (E) FIVE RAINBOW & OTHER A DISCHARGE (P)						
81	VIOLA TOTH	14,16	[illegible]	[illegible]	1.4	1.8							[illegible]

TABLE OF REVISIONS

REVISION DATE	SHEET NO.	DESCRIPTION OF REVISION	INITIAL	PROJECT NO.	APPROVED DATE

LEGEND

MADE BY [illegible] DATE 6/65

CHECKED BY [illegible] DATE 6/65

- [illegible] TAKING WITHOUT ACCESS
- [illegible] TAKING WITHOUT ACCESS ALONG PROPERTY LINES
- [illegible] TAKING WITH ACCESS
- [illegible] TEMPORARY EASEMENT
- [illegible] PERMANENT EASEMENT
- [illegible] SLOPE RIGHTS
- [illegible] PROPERTY LINE
- [illegible] LIMIT OF CUT
- [illegible] LIMIT OF SLOPE

T. C. Brunetto 6-29-65
G. W. Lane 6-29-65
H. P. Rodrigue 6-29-65

I-91-2(8) SHEET 64 OF 159

(8) XXVX

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
82A 82B	GARDNER L. JR. & CECILIA B. LEVIS	12,17,22 12,18,22 19 22 22 22	4038+50 4038+47 4054+50 RT 4058+50 RT 4058+50 RT FR 4057+90	4059+25 FR 4057+90 FR 4060+00	11.6 2.9	185.8	DRAINAGE (P) DITCH & DRAINAGE (P) DITCH & DRAINAGE (P) ALL RIGHT, TITLE & INTEREST IN WATER PIPE						AREA COMPUTED
83	ELLIS T. & FRANCES K. HARRINGTON	19	4054+52 RT				WATER (P)						AREA COMPUTED
84	ROBERT J. & CYNTHIA H. [illegible]	20 21 21	FR 4056+38 FR 4058+40 FR 4059+50 LT	FR 4060+00 FR 4058+38	0.2	1.6	SLOPE 1200 SQ FT (T) DITCH (P)						
85A 85B	MARGARET ELDER WILLIKEN	22,24 21 22,24 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21 21	4057+25 4057+25 4058+38 4061+75 RT 4064+97 RT RB 4066+50 RT RB 4067+97 RT RB 4070+97 LT RB 4071+50 RT RB 4071+50 RT RB 4072+50 RT RB 4073+50 RT RB 4074+50 RT RB 4075+50 RT RB 4076+50 RT RB 4077+50 RT FR 4080+00 LT	RB 4060+50 FR 4060+00 4057+10 RB 4071+72 LT RB 4071+42 RT 4058+25 RT	80.1 0.3	80.7	LOSS OF ACCESS (51.5 A) DITCH & DRAINAGE (P) DRAINAGE (P) DRAINAGE (P) DRAINAGE (P) CHANNEL (P) CHANNEL & DRAINAGE (P) DRAINAGE (P) DRAINAGE (P) DRAINAGE (P) DRAINAGE (P) ALL RIGHT, TITLE & INTEREST IN WATER PIPE						AREA COMPUTED
86	JOHN W. & CLEONIA J. LAMPERTI	22	4060+[illegible]	4060+[illegible]	0.3	46.2							AREA COMPUTED
87	JAMES P JR. & MARGARET L. SOUTHWORTH		3969+40	3971+62	0.2A±	2.1A±							
88	GLEN G. PARKER ESTATE - LAURA B. PARKER (ADMR.)		BL 4032+73	BL 4035+71	1.1 A±	23.6A±							

TABLE OF REVISIONS

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

LEGEND

MADE BY ___ DATE ___

CHECKED BY ___ DATE ___

TAKING WITHOUT ACCESS

TAKING WITHOUT ACCESS ALONG PROPERTY LINES

TAKING WITH ACCESS

(T) TEMPORARY EASEMENT

(P) PERMANENT EASEMENT

SLOPE RIGHTS

PROPERTY LINE

TOP OF CUT

TOE OF SLOPE

APPROVED T. C. Bernatchy DATE 6-29-65

APPROVED G. M. Lane DATE 6/29/65

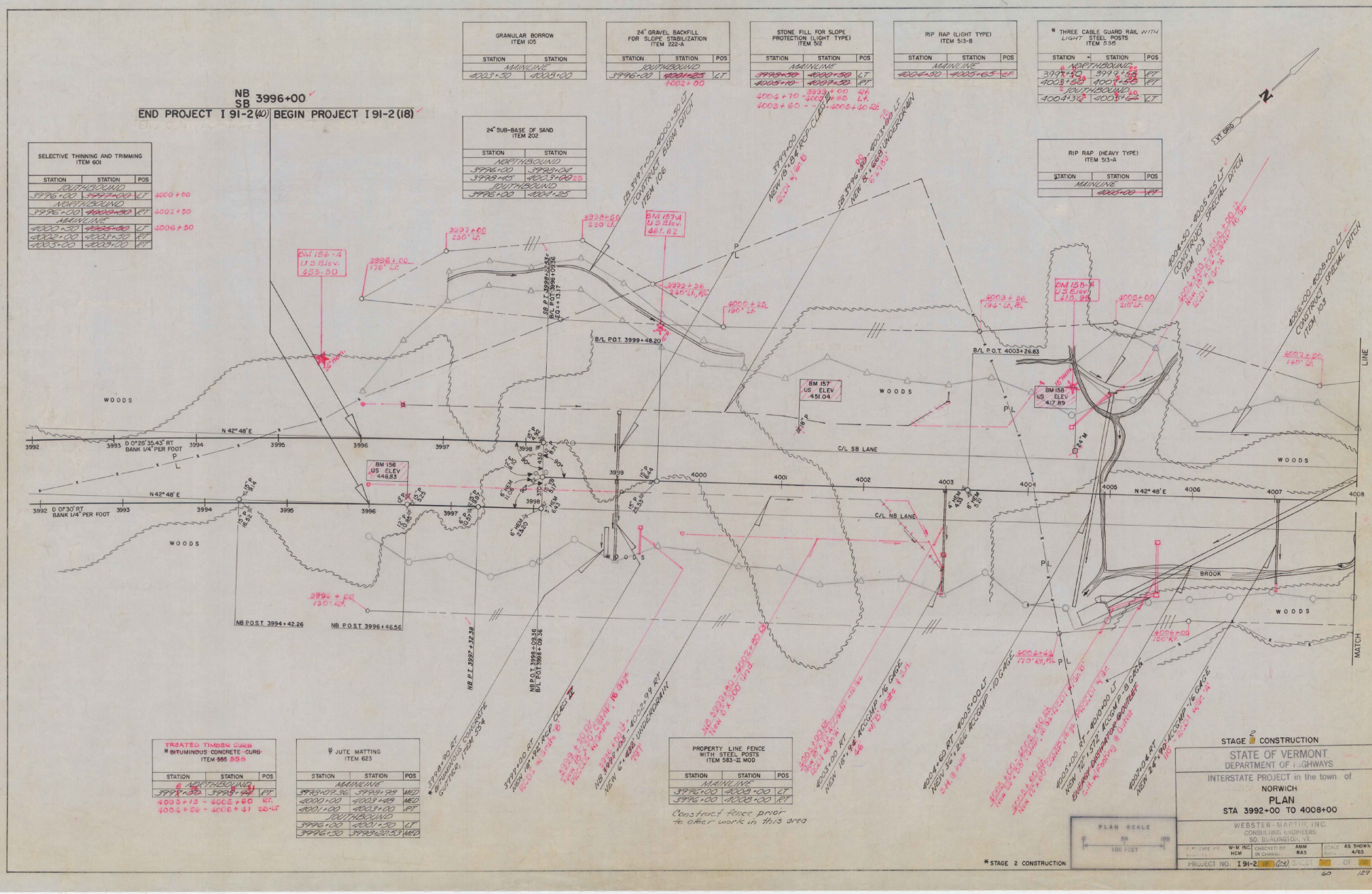
APPROVED H P Radegan DATE 6-29-65

HARTFORD - NORWICH

SHEET 9 OF 86 SHEETS

I 91-2(18) SHEET 168 OF 159

9



GRANULAR BORROW ITEM 105	
STATION	STATION
MAINLINE	
4003+50	4008+00

24" GRAVEL BACKFILL FOR SLOPE STABILIZATION ITEM 222-A		
STATION	STATION	POS
SOUTHBOUND		
3996+00	~~4001+25~~ 4002+00	LT

STONE FILL FOR SLOPE PROTECTION (LIGHT TYPE) ITEM 512		
STATION	STATION	POS
MAINLINE		
~~3998+50~~	~~4000+50~~	LT
~~4005+10~~	~~4007+50~~	RT

4004+70 - 3999+00 Rt.
4003+60 - 4005+40 Rt.

RIP RAP (LIGHT TYPE) ITEM 513-B		
STATION	STATION	POS
MAINLINE		
~~4004+50~~	~~4005+65~~	~~LT~~

* THREE CABLE GUARD RAIL WITH LIGHT STEEL POSTS ITEM 538		
STATION	STATION	POS
NORTHBOUND		
3997+50	3999+55	RT
4003+50	4007+50	RT
SOUTHBOUND		
4004+36	4005+64	LT

24" SUB-BASE OF SAND ITEM 202	
STATION	STATION
NORTHBOUND	
3996+00	3998+04
3998+45	4003+00 25
SOUTHBOUND	
3996+00	4004+25

RIP RAP (HEAVY TYPE) ITEM 513-A		
STATION	STATION	POS
MAINLINE		
	~~4005+00~~	~~RT~~

SELECTIVE THINNING AND TRIMMING ITEM 601		
STATION	STATION	POS
SOUTHBOUND		
3996+00	~~3997+00~~	LT
NORTHBOUND		
3996+00	~~4000+50~~	RT
MAINLINE		
4000+50	~~4005+50~~	LT
4002+00	4003+50	RT
4005+00	4008+00	RT

4000+00
4002+50
4006+50

TREATED TIMBER CURB * BITUMINOUS CONCRETE CURB ITEM 555 558		
STATION	STATION	POS
NORTHBOUND		
3997+50	3998+94	RT

4003+13 - 4005+60 Rt.
4004+56 - 4006+41 SB-LT

* JUTE MATTING ITEM 623		
STATION	STATION	POS
MAINLINE		
3998+09.36	3998+98	MED
4000+00	4003+48	MED
4001+00	4003+00	RT
SOUTHBOUND		
3996+00	4001+50	LT
3996+50	3998+22.53	MED

PROPERTY LINE FENCE WITH STEEL POSTS ITEM 583-II MOD		
STATION	STATION	POS
MAINLINE		
3996+00	4008+00	LT
3996+00	4008+00	RT

Construct fence prior to other work in this area

* STAGE 2 CONSTRUCTION

STAGE 2 CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the town of NORWICH

PLAN
STA 3992+00 TO 4008+00

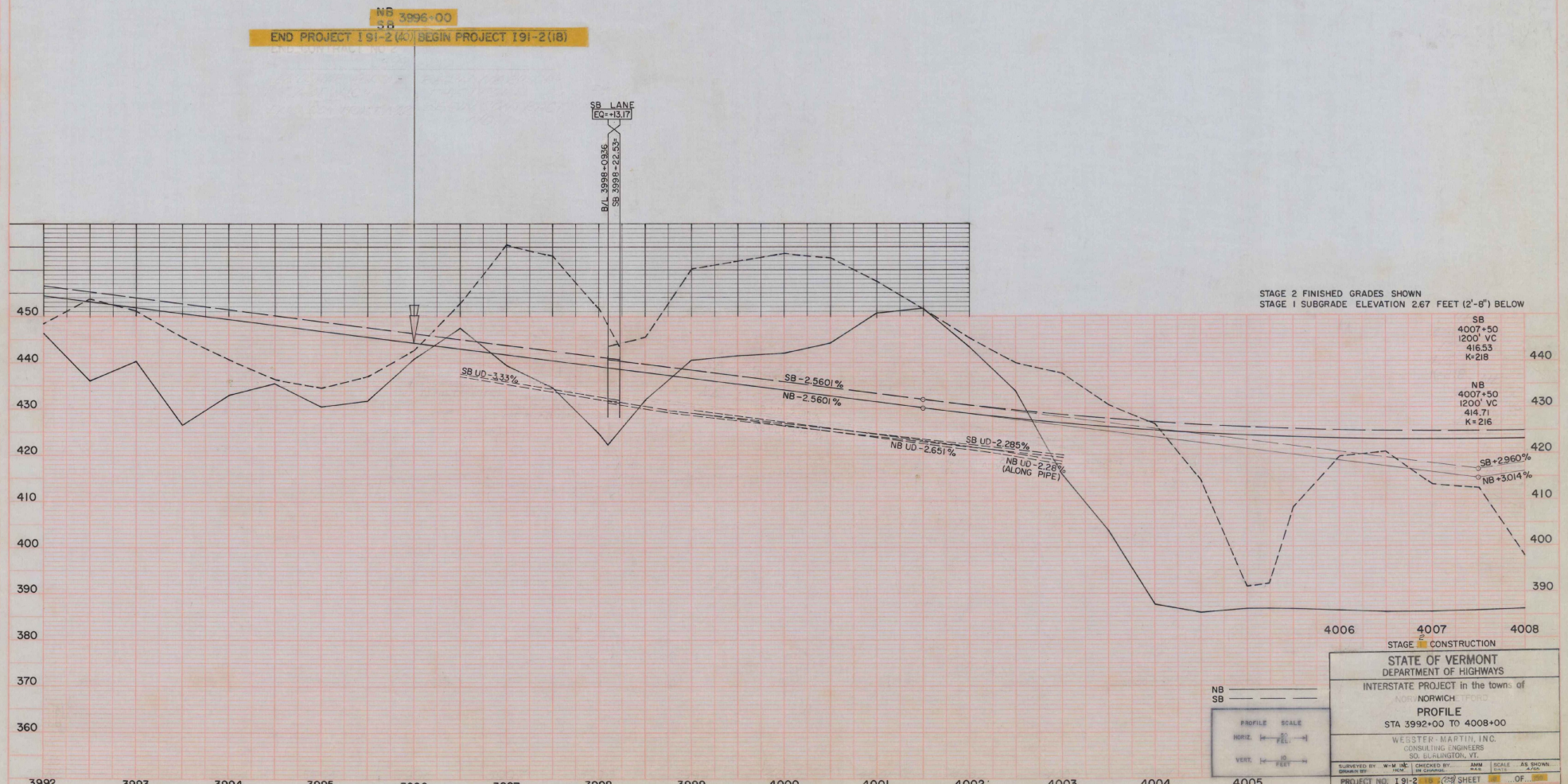
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

SURVEYED BY	W-M INC. HCM	CHECKED BY IN CHARGE	AMM RAS	SCALE	AS SHOWN
DATE				DATE	4/65

PROJECT NO. I 91-2 18 (23) SHEET 17 OF 252

PLAN SCALE 0 50 100 100 FEET

60 129



STAGE 2 CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the towns of NORWICH

PROFILE
STA 3992+00 TO 4008+00

WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

SURVEYED BY W-M INC.	CHECKED BY AMM	SCALE AS SHOWN
DRAWN BY HCM	IN CHARGE RAS	DATE 4/65

PROJECT NO. I 91-2 (18) (203) SHEET 61 OF 129

SOD REMOVAL ITEM 103	
STATION	STATION
NORTHBOUND	
4012+75	4013+75
SOUTHBOUND	
4013+00	4013+83

GRANULAR BORROW ITEM 105	
STATION	STATION
4011+25 MAINLINE	
4008+00	4012+00

12" SUB-BASE OF SAND ITEM 202	
STATION	STATION
4011+25 NORTHBOUND	
4013+54	4016+36 25
4022+04 00	4024+00 4024+00
SOUTHBOUND	
4018+39 25	4020+26 75
4022+39	4024+00

4011+75 - 4013+00
4013+75 - 4016+25

STONE FILL FOR SLOPE PROTECTION (LIGHT TYPE) ITEM 512		
STATION	STATION	POS
MAINLINE		
4008+00	4009+85	LT
4016+68 50	4018+25 00	LT
4017+00	4018+32 50	RT
4020+75	4022+25	LT
4020+45	4021+75	RT

4010+00 - 4010+75 Lt.
4014+00 Lt.
4021+00 - 4022+00 Lt.
4019+20 - 4021+80 Rt.
4009+40 Rt.
4011+00 - 4011+20 Rt.

RIP RAP (LIGHT TYPE) ITEM 513-B		
STATION	STATION	POS
MAINLINE		
4016+00	4016+50	LT
4018+50	4018+70	RT

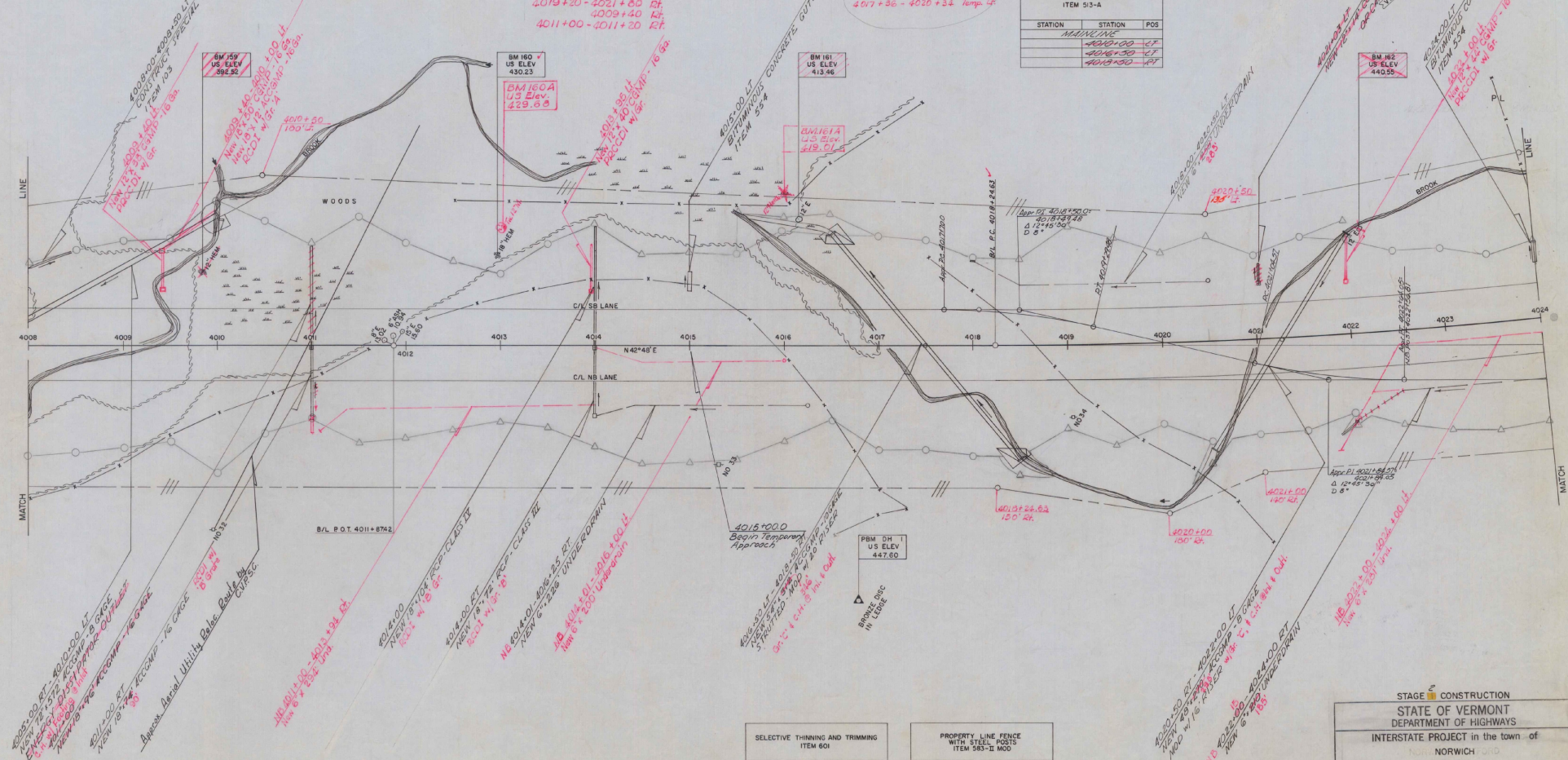
* THREE CABLE GUARD RAIL WITH LIGHT STEEL POSTS ITEM 558		
STATION	STATION	POS
NORTHBOUND		
4017+80 5	4022+50	RT
SOUTHBOUND		
4008+50	4012+50	LT
4014+93	4017+65	LT
4020+98	4024+00	LT

STANDARD STEEL BEAM G.R. w/ STEEL POSTS, MOD. 4017+36 - 4020+34 Temp. Lt.

TREATED TIMBER CURB * BITUMINOUS CONCRETE CURB ITEM ~~555~~ 658		
STATION	STATION	POS
SOUTHBOUND		
4015+02 30	4017+66	LT
4021+02 33	4024+00	LT

RIP RAP (HEAVY TYPE) ITEM 513-A		
STATION	STATION	POS
MAINLINE		
	4010+00	LT
	4016+50	LT
	4018+50	RT

* JUTE MATTING ITEM 623		
STATION	STATION	POS
MAINLINE		
4011+02	4013+00	MED
4011+02	4013+00	RT
4014+02	4016+50	MED
4014+02	4015+50	RT
4017+54	4020+00	MED
4021+03	4024+00	MED
4022+25	4024+00	RT



SELECTIVE THINNING AND TRIMMING ITEM 601		
STATION	STATION	POS
MAINLINE		
4008+00	4009+00	RT
4008+50	4016+10	LT

PROPERTY LINE FENCE WITH STEEL POSTS ITEM 583-II MOD		
STATION	STATION	POS
MAINLINE		
4008+00	4024+00	LT
4008+00	4024+00	RT

Construct fence prior to other work in this area

* STAGE 2 CONSTRUCTION

PLAN SCALE 0 50 100 100 FEET

STAGE 2 CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the town of NORWICH

PLAN
STA 4008+00 TO 4024+00

WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

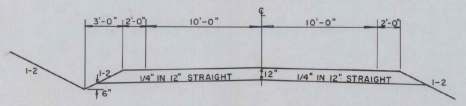
SURVEYED BY W-M INC.	CHECKED BY AMM	SCALE AS SHOWN
DRAWN BY HCM	IN CHARGE R.A.S.	DATE 4/65

PROJECT NO. I 91-2 18 (29) SHEET 19 OF 129

62 129

U.S. 5 DETOUR TYPICAL

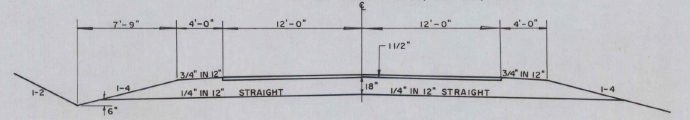
12" SUB-BASE OF GRAVEL, ITEM 201, MOD.



TEMPORARY APPROACH TYPICAL

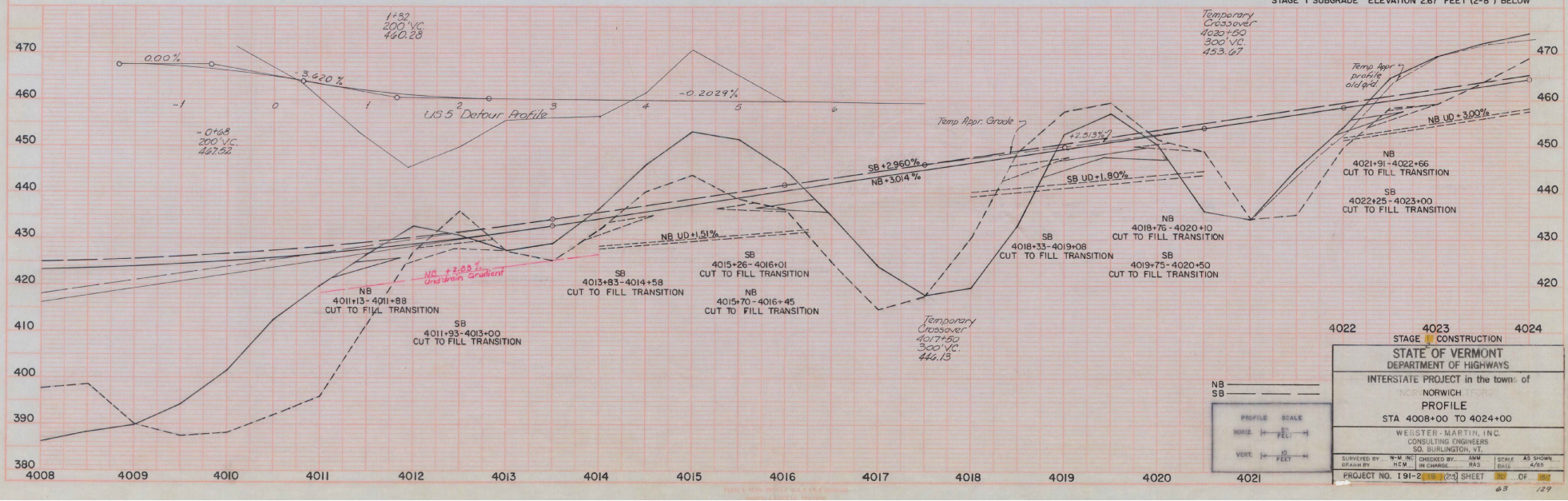
1 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361, MOD. WEARING COURSE, TYPE III

18" SUB-BASE OF GRAVEL, ITEM 201, MOD.



STAGE 2 FINISHED GRADES SHOWN

STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2'-8") BELOW



STAGE 1 CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the town of NORWICH

PROFILE

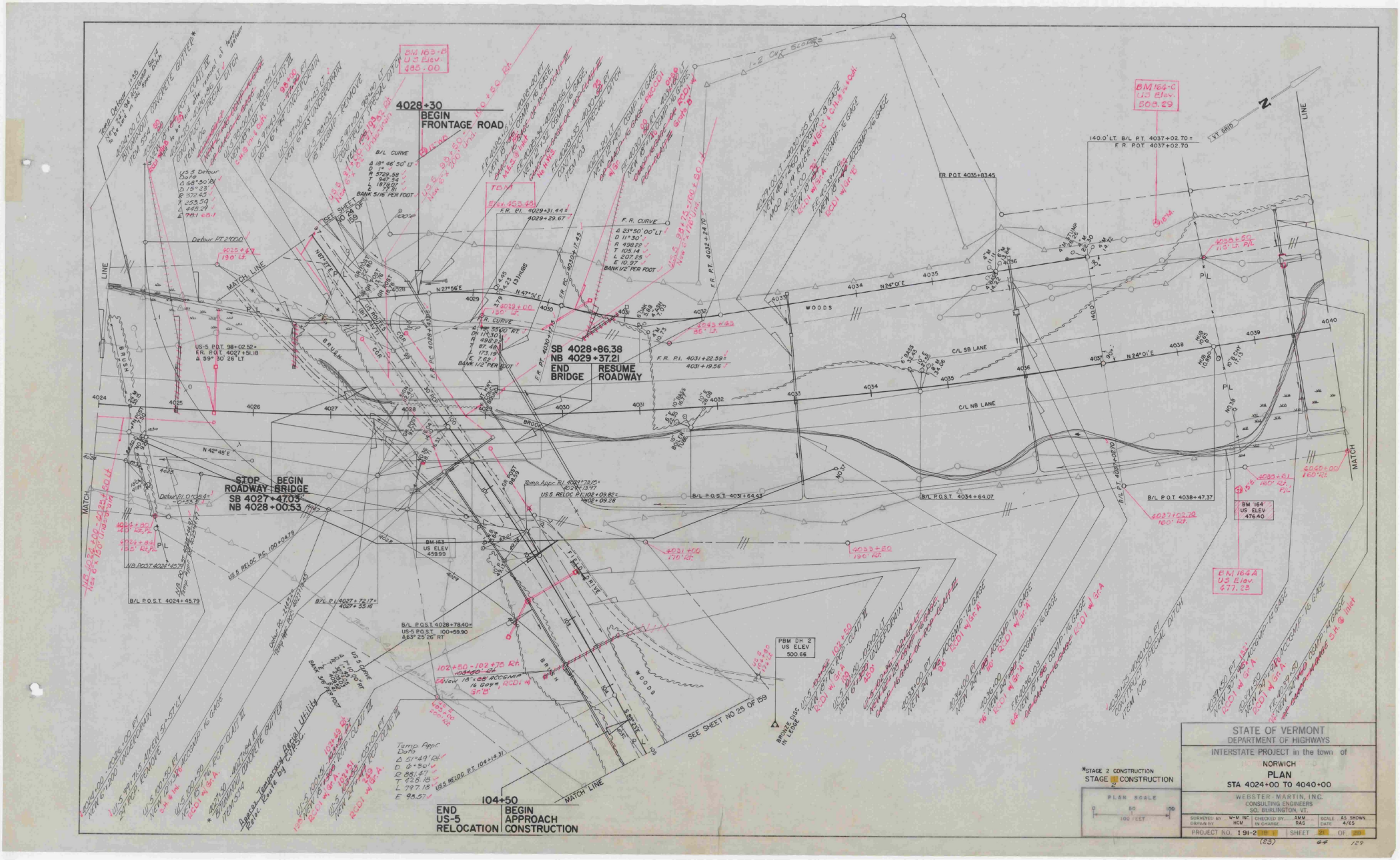
STA 4008+00 TO 4024+00

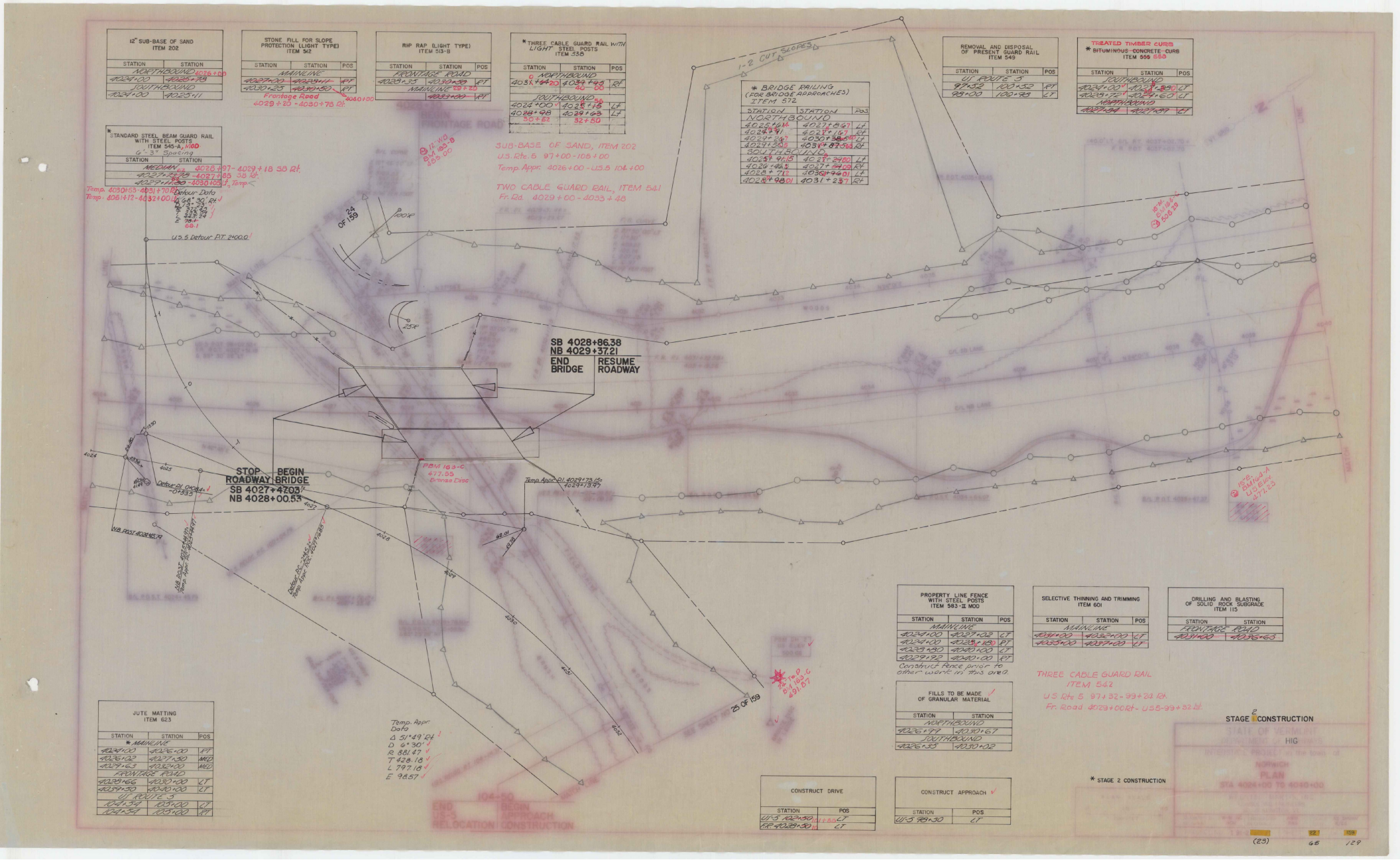
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

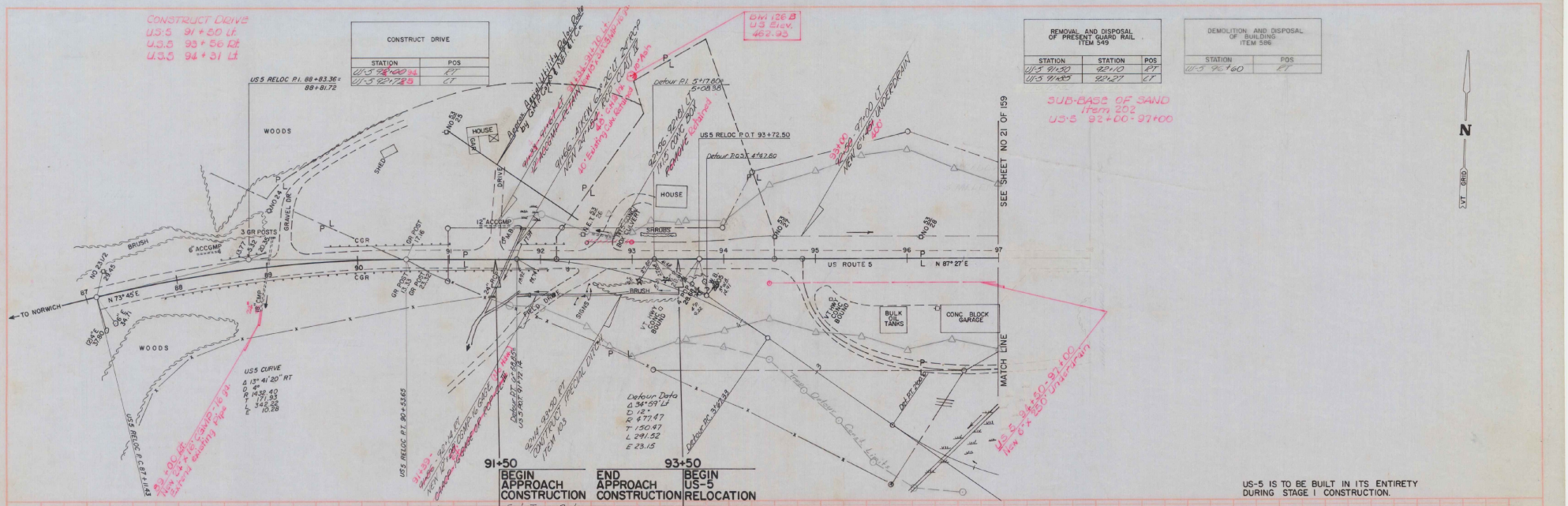
SURVEYED BY	W-M INC.	CHECKED BY	AMM	SCALE	AS SHOWN
DRAWN BY	HCM	IN CHARGE	RAS	DATE	4/65

PROJECT NO. I 91-2(18)(23) SHEET 20 OF 152

63 129


4028+30
BEGIN
FRONTAGE ROAD
SB 4028+86.38
NB 4029+37.21
END
BRIDGE
RESUME
ROADWAY
STOP
ROADWAY
BRIDGE
SB 4027+47.03
NB 4028+00.53
BEGIN
104+50
END
US-5
RELOCATION
BEGIN
APPROACH
CONSTRUCTION
SEE SHEET NO 25 OF 159
MATCH LINE
BM 163-B
U.S Elev.
488.00
BM 164-C
U.S Elev.
509.29
BM 164
US ELEV
476.40
BM 164A
U.S Elev.
471.29
BM 163
US ELEV
459.99
PBM DH 2
US ELEV
500.66
BENCH MARK
BRONZE DISC
IN EDGE
OF CONCRETE
WOODS
C/L SB LANE
C/L NB LANE
FIELD DRIVE
BROOK
BRUSH
TEMP
BM 163-B
U.S Elev.
488.00
TEMP
BM 163-A
U.S Elev.
459.43
140.0' LT. B/L P.T. 4037+02.70 =
F.R. P.O.T. 4037+02.70
F.R. P.O.T. 4035+83.45
B/L P.O.S.T. 4024+45.79
B/L P.O.S.T. 4027+72.17 =
4027+35.16
B/L P.O.S.T. 4028+78.40 =
US-5 P.O.S.T. 100+59.90
4.63° 25' 26" RT
B/L P.O.S.T. 4031+64.43
B/L P.O.S.T. 4034+64.07
B/L P.O.S.T. 4038+47.37
B/L P.O.T. 4037+02.70
US-5 P.O.T. 98+02.52 =
F.R. P.O.T. 4027+51.18
Δ 59° 30' 26" LT
US-5 RELOC P.C. 102+09.80 =
102+09.28
US-5 RELOC P.T. 104+14.31
F.R. P.I. 4029+31.44 =
4029+29.67
F.R. P.I. 4031+22.59 =
4031+19.56
F.R. P.I. 4030+71.45
F.R. P.C. 4030+71.45
F.R. P.T. 4032+24.70
F.R. CURVE
Δ 23°50' 00" LT
D 11°30'
R 498.23
T 105.14
L 207.25
E 10.97
BANK 1/2" PER FOOT
F.R. CURVE
Δ 11°30' 00" RT
D 11°30'
R 498.23
T 97.49
L 193.19
E 7.62
BANK 1/2" PER FOOT
B/L CURVE
Δ 18° 46' 50" LT
D 1°
R 5729.58
T 947.14
L 1878.01
BANK 5/16" PER FOOT
Temp Detour
16'6" x 6.4" x 32' RCB
4024+00 LT
Detour Pt 4025+94.7
Detour Pt 4027+94.7
Detour FT 2700'
Temp Appr Pl 4024+78.15 =
4024+77.67
Temp Appr Dats
Δ 51°49' 04"
D 6°30'
R 881.47
T 426.18
L 797.18
E 95.57
Temp Appr Dats
Δ 68°30' 00"
D 15°23'
R 372.45
T 258.50
Δ 445.24
Δ 79.1 60.1
Temporary Aerial Utility
Relocation Route by Owner
Temporary Concrete Gutter
Bituminous Concrete Gutter
Bituminous Concrete Curb
Type III
Item 609
Item 610
Item 611
Item 612
Item 613
Item 614
Item 615
Item 616
Item 618
Item 619
Item 620
Item 621
Item 622
Item 623
Item 624
Item 625
Item 626
Item 627
Item 628
Item 629
Item 630
Item 631
Item 632
Item 633
Item 634
Item 635
Item 636
Item 637
Item


12" SUB-BASE OF SAND ITEM 202
STONE FILL FOR SLOPE PROTECTION (LIGHT TYPE) ITEM 542
RIP RAP (LIGHT TYPE) ITEM 513-B
THREE CABLE GUARD RAIL WITH LIGHT STEEL POSTS ITEM 535
REMOVAL AND DISPOSAL OF PRESENT GUARD RAIL ITEM 549
TREATED TIMBER CURB
BITUMINOUS CONCRETE CURB ITEM 555
STANDARD STEEL BEAM GUARD RAIL WITH STEEL POSTS ITEM 545-A, MOD
BRIDGE RAILING (FOR BRIDGE APPROACHES) ITEM 572
1-2 CUT SLOPES
SUB-BASE OF SAND, ITEM 202
U.S. Rte. 5 97+00 - 105+00
Temp. Appr. 4026+00 - U.S. 104+00
TWO CABLE GUARD RAIL, ITEM 541
Fr. Rd. 4029+00 - 4033+48
U.S. 5 Detour P.T. 2400.0
SB 4028+86.38
NB 4029+37.21
END BRIDGE
RESUME ROADWAY
STOP ROADWAY
BEGIN BRIDGE
SB 4027+42.03
NB 4028+00.53
PBM 183-C
417.55
Bronze Disc
Temp. Appr. P.I. 4029+73.47
Elev. 491.07
Temp. Appr. Data
Δ 51°49' Rt.
D 6°30'
R 881.47
T 428.18
L 797.18
E 98.57
25 OF 159
JUTE MATTING ITEM 623
PROPERTY LINE FENCE WITH STEEL POSTS ITEM 583-II MOD
Construct fence prior to other work in this area.
SELECTIVE THINNING AND TRIMMING ITEM 601
DRILLING AND BLASTING OF SOLID ROCK SUBGRADE ITEM 115
FILLS TO BE MADE OF GRANULAR MATERIAL
THREE CABLE GUARD RAIL ITEM 542
U.S. Rte. 5 97+32 - 99+24 Rt.
Fr. Road 4029+00 Rt. - U.S. 99+32 Lt.
CONSTRUCT DRIVE
CONSTRUCT APPROACH
STAGE 2 CONSTRUCTION
* STAGE 2 CONSTRUCTION
STATE OF VERMONT
AGENCY OF TRANSPORTATION
HIGHWAY DIVISION
PROJECT NO. BRF 019-2(23)
NORWICH
PLAN
STA 4024+00 TO 4040+00
(23)
92
129



STAGE I CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the town of NORWICH
US-5 RELOCATION

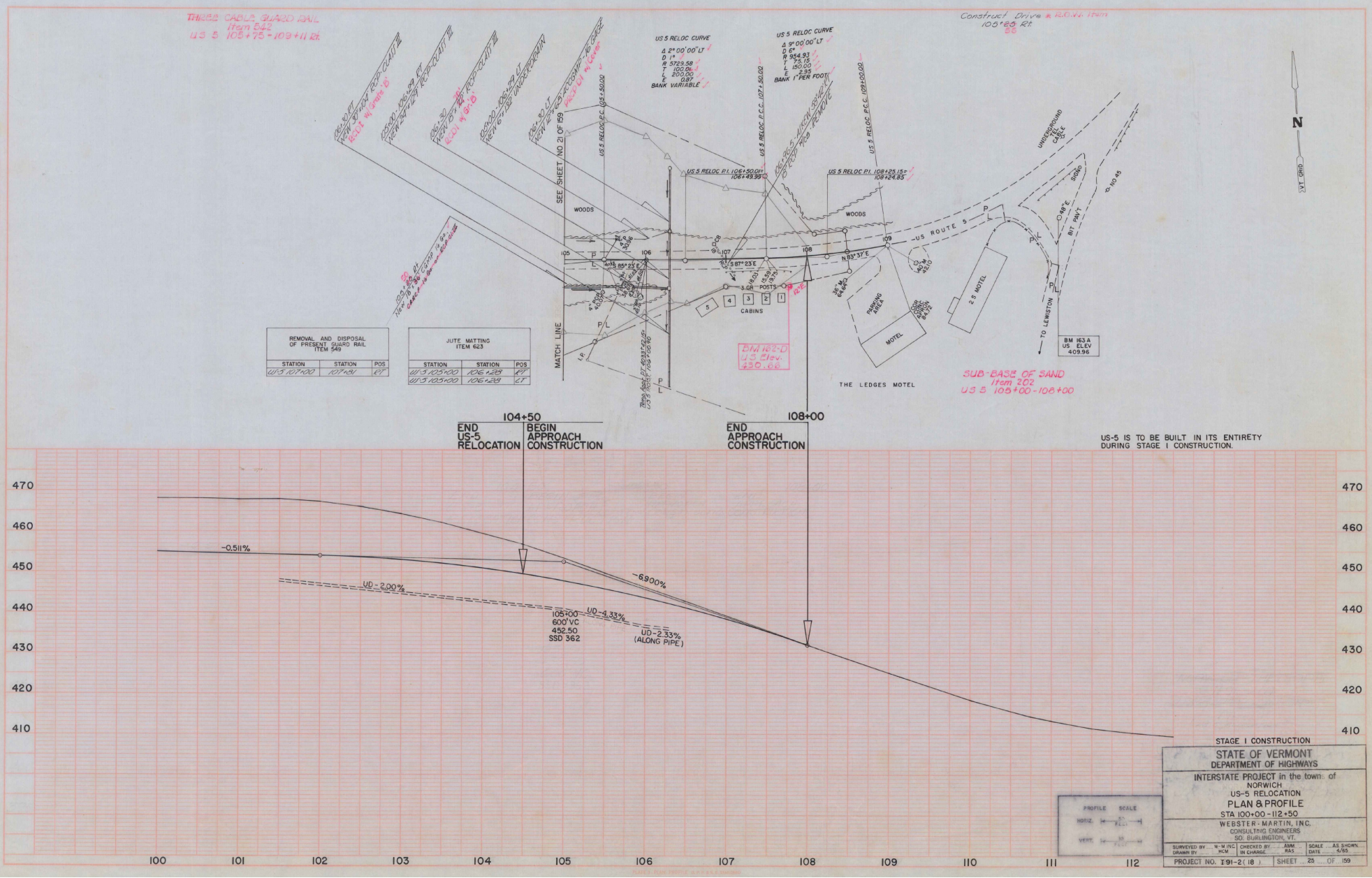
PLAN & PROFILE

STA 87+00 - 100+00

WEBSTER - MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

SURVEYED BY	W-M INC	CHECKED BY	AMM	SCALE	AS SHOWN
DRAWN BY	HCM	IN CHARGE	RAS	DATE	4/65

PROJECT NO. I 91-2(18) | SHEET 24 OF 159



REMOVAL AND DISPOSAL OF PRESENT GUARD RAIL ITEM 549		
STATION	STATION	POS
US-5 107+00	107+81	RT

JUTE MATTING ITEM 623		
STATION	STATION	POS
US-5 105+00	106+28	RT
US-5 105+00	106+28	LT

STAGE I CONSTRUCTION

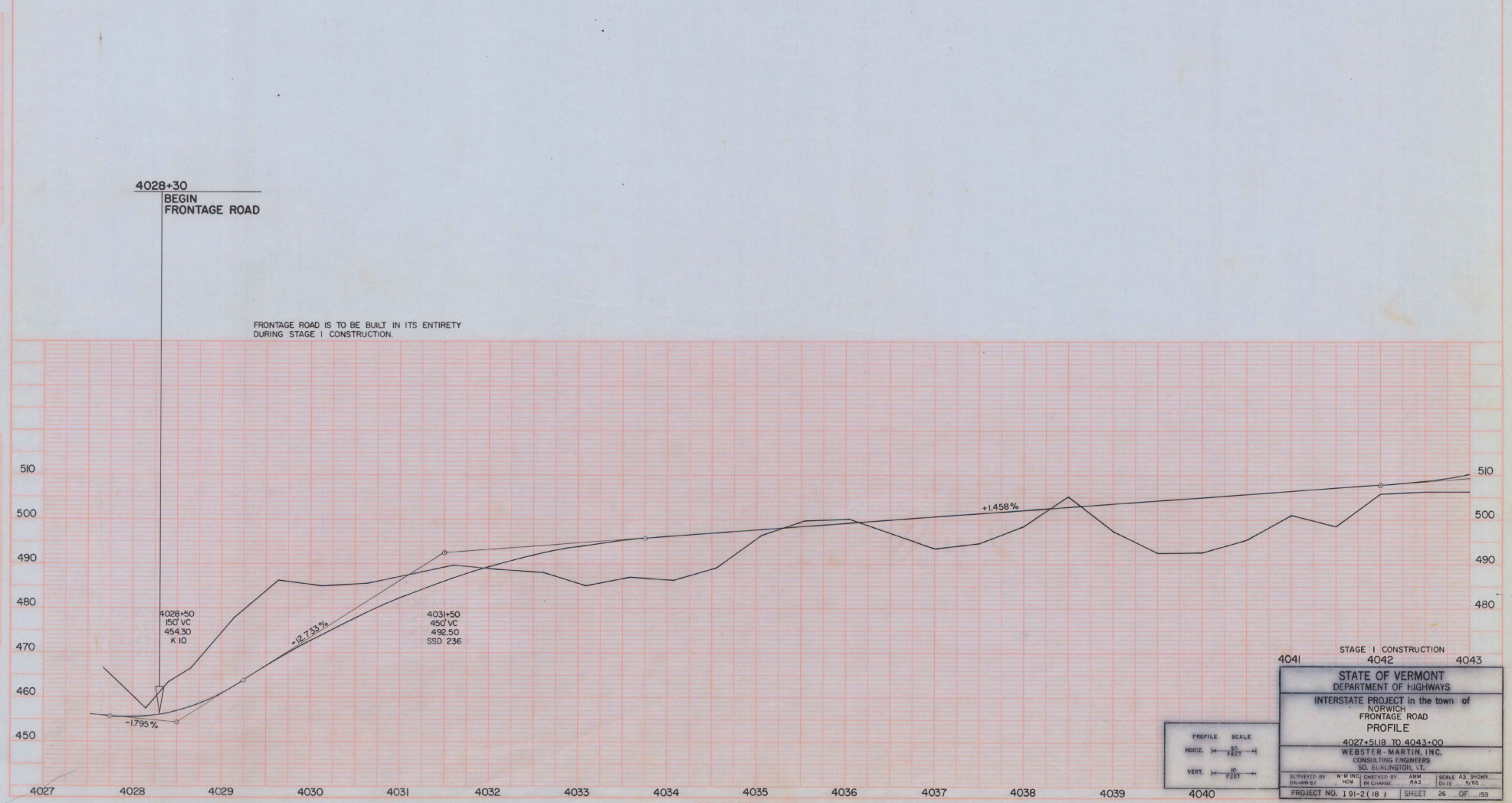
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the town of NORWICH
US-5 RELOCATION
PLAN & PROFILE
STA 100+00 - 112+50

WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

SURVEYED BY W-M INC.	CHECKED BY AMM	SCALE AS SHOWN
DRAWN BY HCM	IN CHARGE RAS	DATE 4/65

PROJECT NO. I91-2(18) SHEET 25 OF 159


4028+30
BEGIN
FRONTAGE ROAD
FRONTAGE ROAD IS TO BE BUILT IN ITS ENTIRETY
DURING STAGE I CONSTRUCTION.
4028+50
150' VC
454.30
K 10
4031+50
450' VC
492.50
SSD 236
-1.795%
+12.733%
+1.458%
510
500
490
480
470
460
450
4027
4028
4029
4030
4031
4032
4033
4034
4035
4036
4037
4038
4039
4040
4041
4042
4043
STAGE I CONSTRUCTION
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
NORWICH
FRONTAGE ROAD
PROFILE
4027+51.18 TO 4043+00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.
SURVEYED BY W-M INC.
DRAWN BY HCM
CHECKED BY AMM
IN CHARGE RAS
SCALE AS SHOWN
DATE 5/65
PROJECT NO. I 91-2(18)
SHEET 26 OF 159

SOD REMOVAL ITEM 103	
STATION	STATION
NORTHBOUND	
4042+70	4043+40
SOUTHBOUND	
~~4043+75~~	~~4044+37~~
4053+75	4054+70
FRONTAGE ROAD	
~~4041+75~~	~~4043+25~~
4046+00	~~4051+75~~ 4048+50

12" SUB-BASE OF SAND ITEM 202	
STATION	STATION
NORTHBOUND	
4043+~~13~~ 00	4053+~~86~~ 00
SOUTHBOUND	
4044+37	4056+00

STONE FILL FOR SLOPE PROTECTION (LIGHT TYPE) ITEM 512		
STATION	STATION	POS
~~FRONTAGE ROAD~~		
~~4043+50~~	~~4046+00~~	~~LT~~
MAINLINE 4040+00 - 4042+74 Rt. 4054+00 - 4054+50 Rt.		

TWO CABLE GUARD RAIL ITEM 541		
STATION	STATION	POS
FRONTAGE ROAD		
4045+40	4056+00	RT

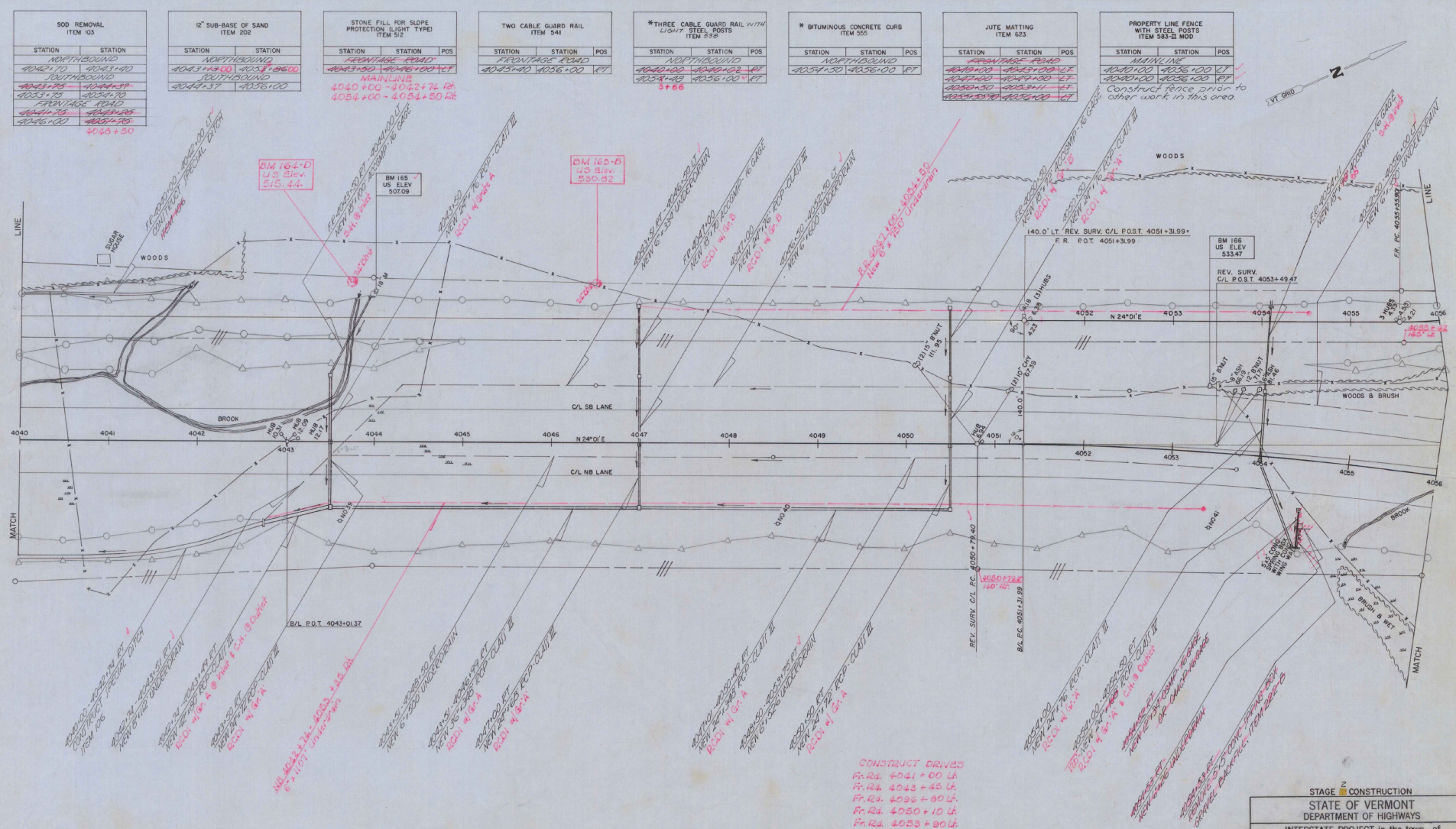
*THREE CABLE GUARD RAIL WITH LIGHT STEEL POSTS ITEM 538		
STATION	STATION	POS
NORTHBOUND		
~~4040+00~~	~~4040+02~~	~~RT~~
~~4054+48~~ 3+66	4056+00	RT

* BITUMINOUS CONCRETE CURB ITEM 555		
STATION	STATION	POS
NORTHBOUND		
4054+50	4056+00	RT

JUTE MATTING ITEM 623		
STATION	STATION	POS
~~FRONTAGE ROAD~~		
~~4040+00~~	~~4043+00~~	~~LT~~
~~4047+00~~	~~4049+50~~	~~LT~~
~~4050+50~~	~~4053+11~~	~~LT~~
~~4055+55.90~~	~~4056+00~~	~~LT~~

PROPERTY LINE FENCE WITH STEEL POSTS ITEM 583-II MOD		
STATION	STATION	POS
MAINLINE		
4040+00	4056+00	LT
4040+00	4056+00	RT

Construct fence prior to other work in this area.



*STAGE 2 CONSTRUCTION

PLAN SCALE 0 50 100 100 FEET

STAGE 2 CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

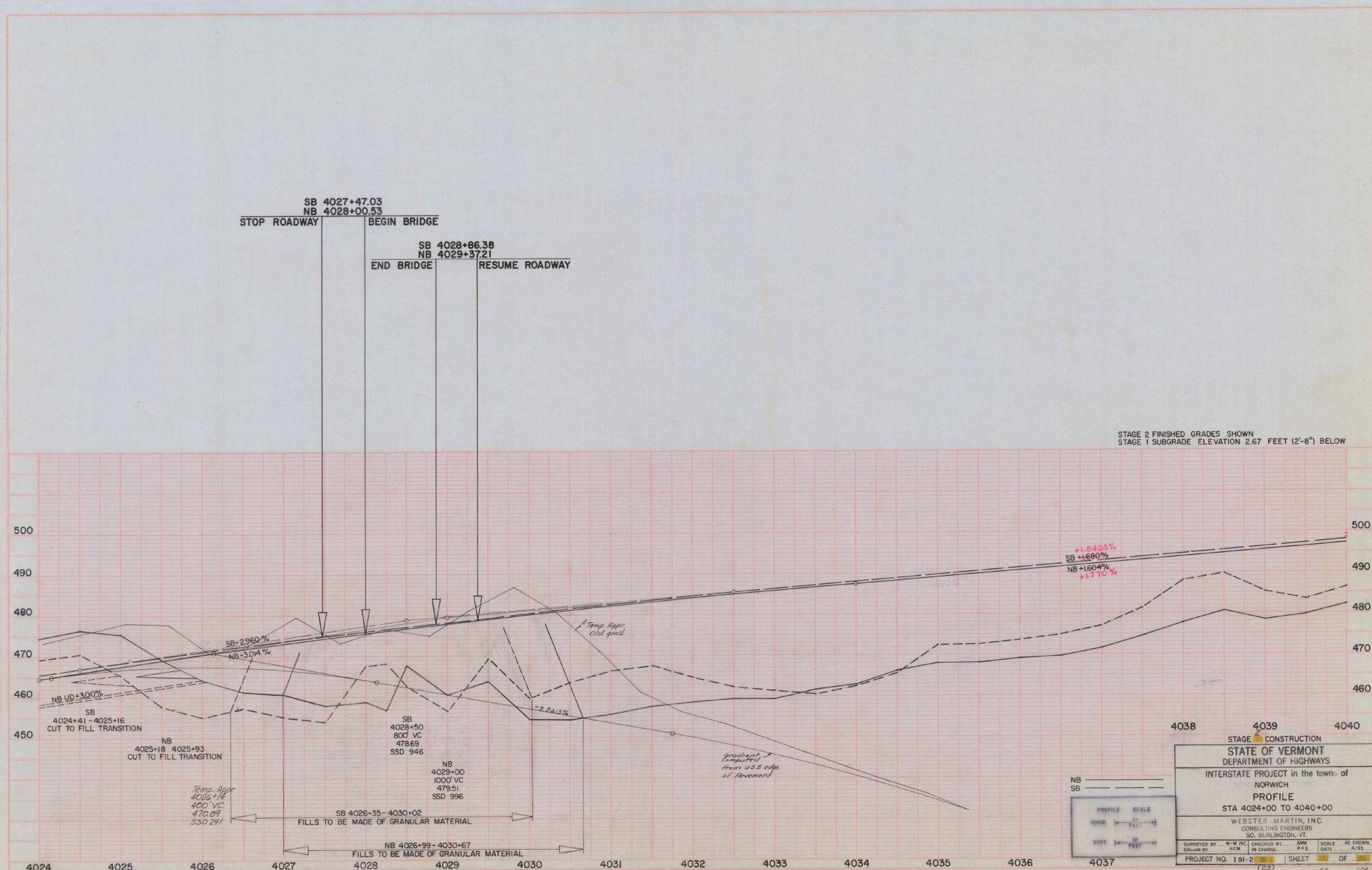
INTERSTATE PROJECT in the town of NORWICH

PLAN
STA 4040+00 TO 4056+00

WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

SURVEYED BY W-M INC. DRAWN BY HCM	CHECKED BY AMM IN CHARGE RAS	SCALE AS SHOWN DATE 4/65
PROJECT NO. I 91-2 (23)	SHEET 27 OF 153	

67 129



STAGE 2 CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

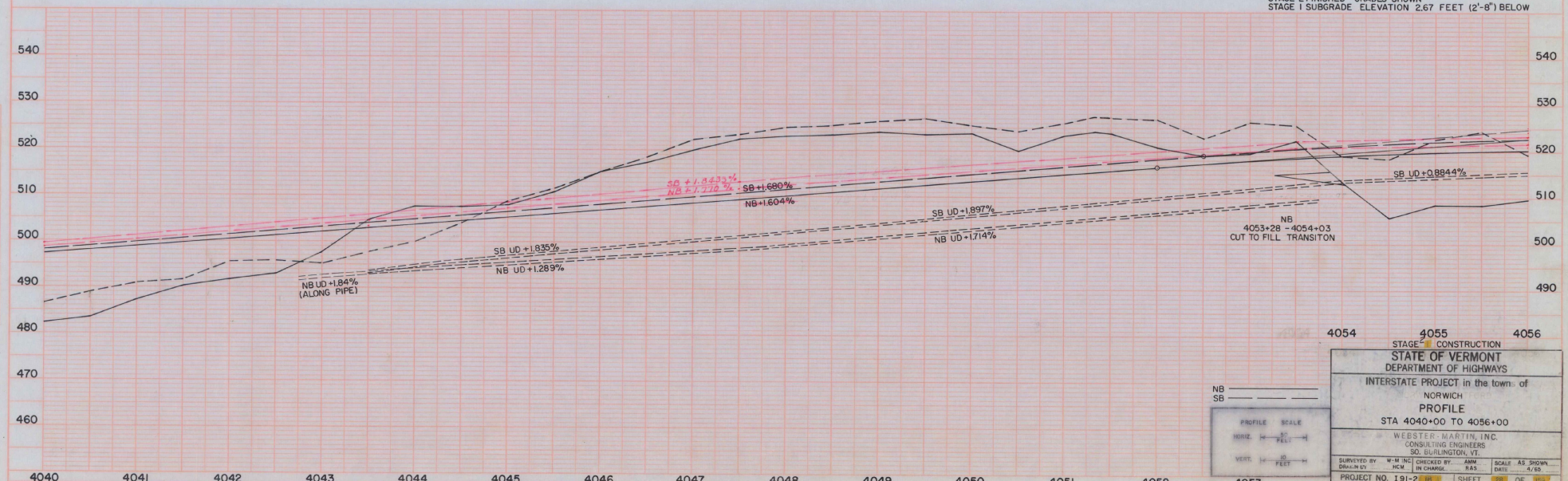
INTERSTATE PROJECT in the towns of NORWICH

PROFILE
STA 4024+00 TO 4040+00

WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

SURVEYED BY W-M INC.	CHECKED BY AMM	SCALE AS SHOWN	
DRAWN BY HCM	IN CHARGE RAS	DATE 4/65	
PROJECT NO. I 91-2 (23)	SHEET 23	OF 29	

66 129



STAGE 2 CONSTRUCTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the town of
NORWICH

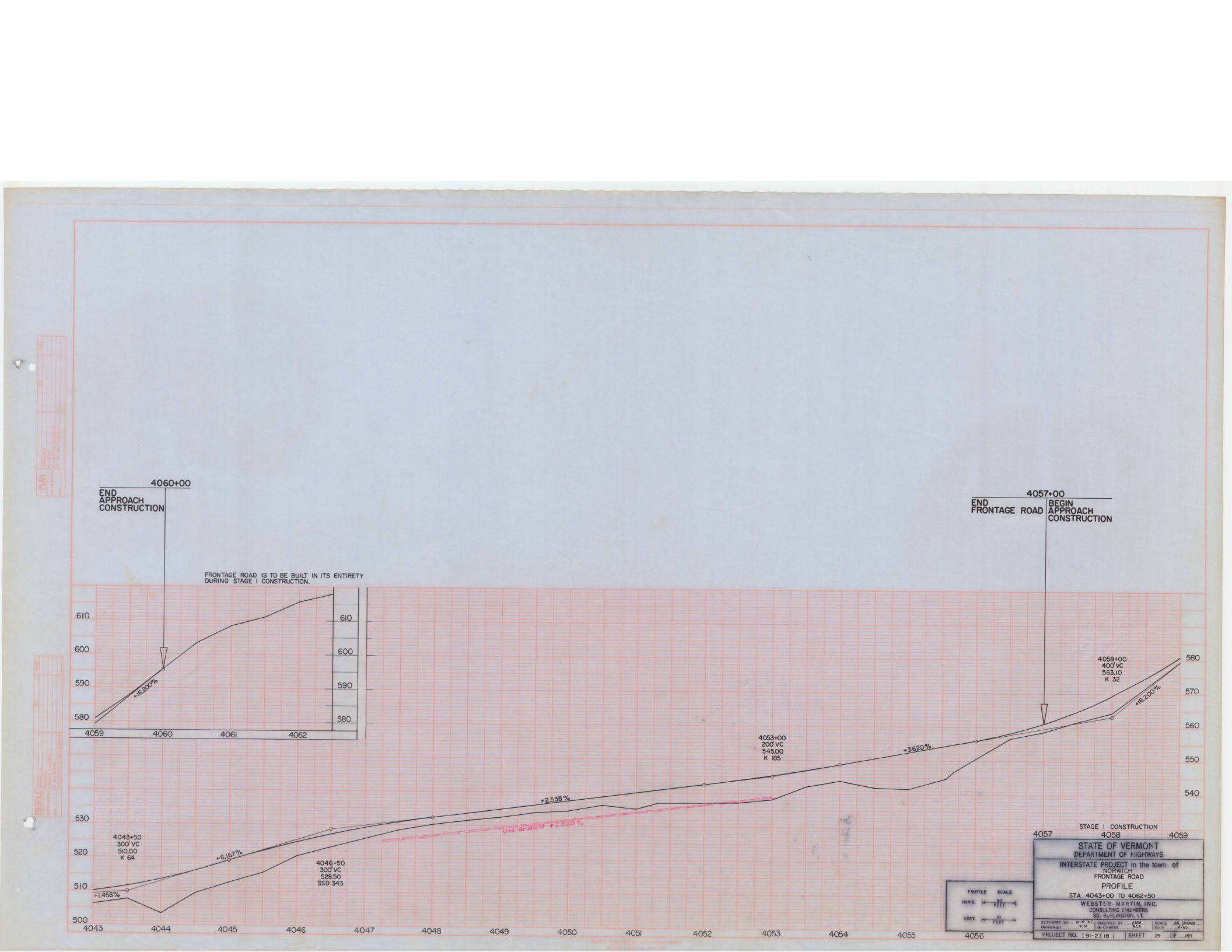
PROFILE
STA 4040+00 TO 4056+00

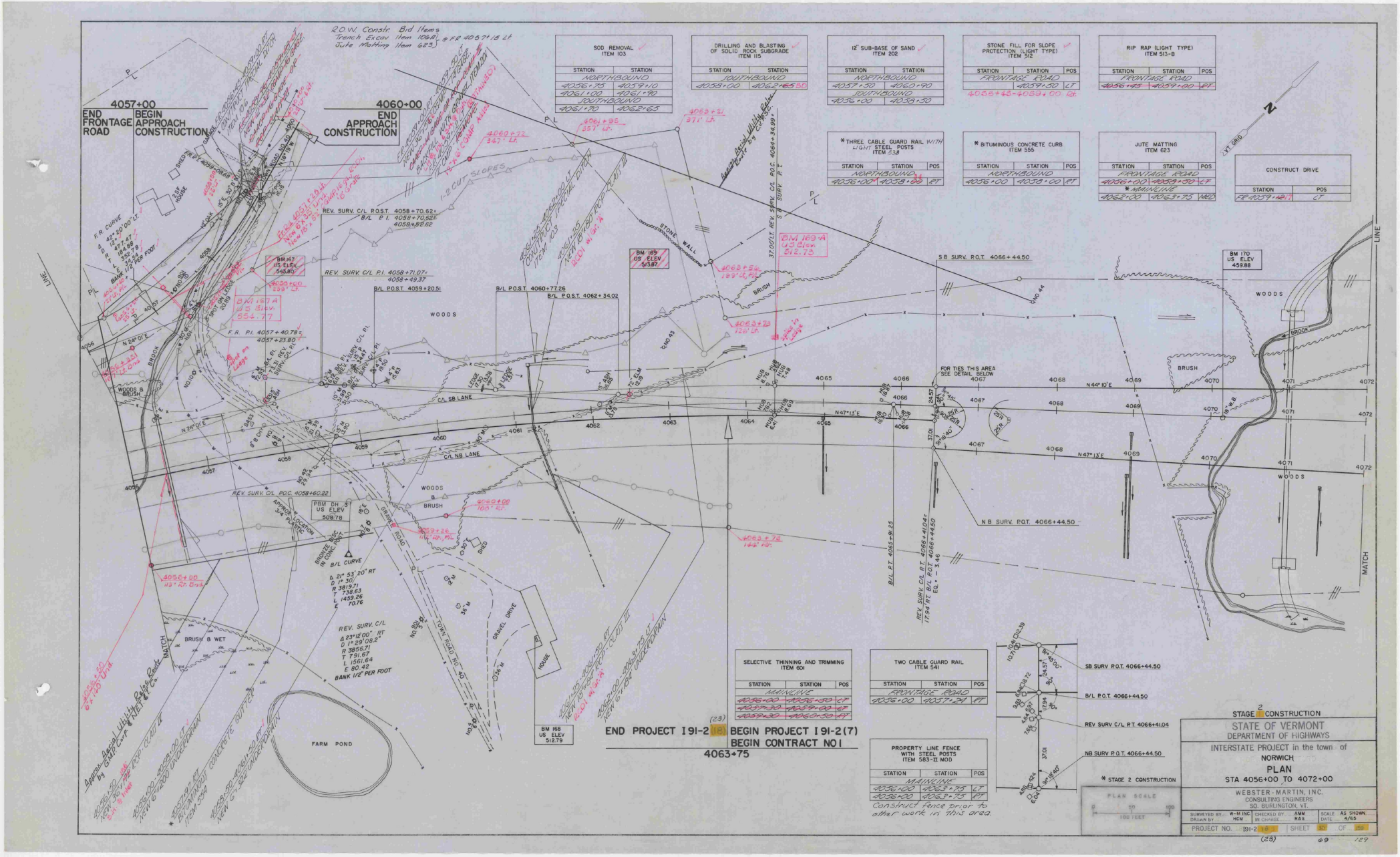
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.

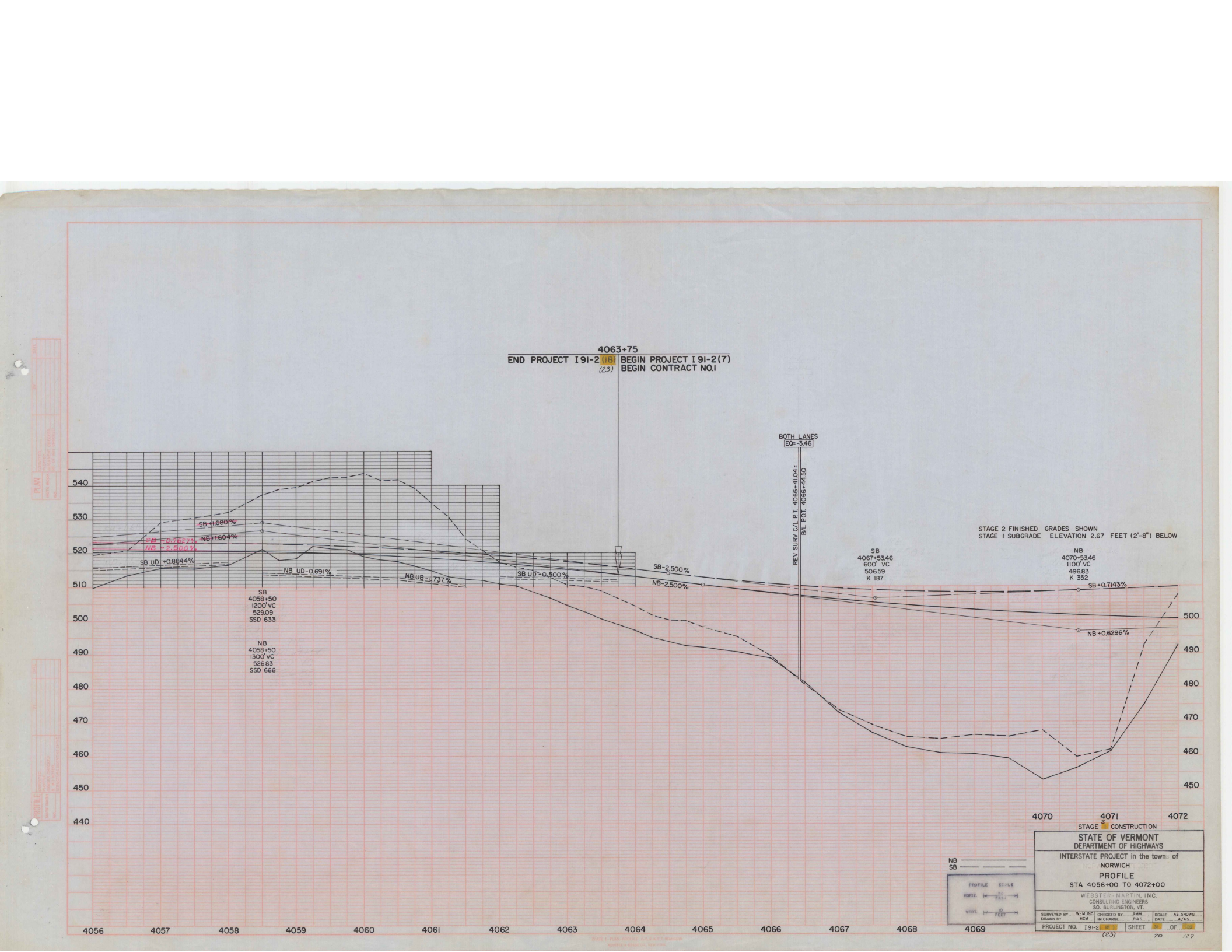
SURVEYED BY	W-M INC	CHECKED BY	AMM	SCALE	AS SHOWN
DRAWN BY	HCM	IN CHARGE	RAS	DATE	4/65

PROJECT NO. I 91-2 (23) 18 SHEET 28 OF 159

68 129


4060+00
END
APPROACH
CONSTRUCTION
FRONTAGE ROAD IS TO BE BUILT IN ITS ENTIRETY
DURING STAGE I CONSTRUCTION.
+16.200%
4057+00
END
FRONTAGE ROAD
BEGIN
APPROACH
CONSTRUCTION
4058+00
400' VC
563.10
K 32
+16.200%
4053+00
200' VC
545.00
K 185
+3.620%
+2.538%
Uni. Gradient +2.550%
4043+50
300' VC
510.00
K 64
+1.458%
+6.167%
4046+50
300' VC
528.50
SSD 343
610
600
590
580
570
560
550
540
530
520
510
500
4043
4044
4045
4046
4047
4048
4049
4050
4051
4052
4053
4054
4055
4056
4057
4058
4059
4060
4061
4062
STAGE I CONSTRUCTION
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
NORWICH
FRONTAGE ROAD
PROFILE
STA 4043+00 TO 4062+50
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.
SURVEYED BY W-M INC.
DRAWN BY HCM
CHECKED BY AMM
IN CHARGE RAS
SCALE AS SHOWN
DATE 8/65
PROJECT NO. I 91-2 (18)
SHEET 29 OF 159


4057+00
END FRONTAGE ROAD
BEGIN APPROACH CONSTRUCTION
4060+00
END APPROACH CONSTRUCTION
R.O.W. Constr Bid Items
Trench Excav Item 109.01
Jute Matting Item 623
SOD REMOVAL ITEM 103
STATION | STATION
NORTHBOUND
4056+75 | 4059+10
4061+00 | 4061+90
SOUTHBOUND
4061+70 | 4062+65
DRILLING AND BLASTING OF SOLID ROCK SUBGRADE ITEM 115
STATION | STATION
SOUTHBOUND
4058+00 | 4062+65 RT
12" SUB-BASE OF SAND ITEM 202
STATION | STATION
NORTHBOUND
4057+50 | 4060+90
SOUTHBOUND
4056+00 | 4058+50
STONE FILL FOR SLOPE PROTECTION (LIGHT TYPE) ITEM 312
STATION | STATION | POS
FRONTAGE ROAD
4056+45 | 4059+00 | LT
RIP RAP (LIGHT TYPE) ITEM 913-B
STATION | STATION | POS
FRONTAGE ROAD
4056+75 | 4059+90 | RT
*THREE CABLE GUARD RAIL WITH LIGHT STEEL POSTS ITEM 238
STATION | STATION | POS
NORTHBOUND
4056+00 | 4058+90 | RT
* BITUMINOUS CONCRETE CURB ITEM 555
STATION | STATION | POS
NORTHBOUND
4056+00 | 4058+00 | RT
JUTE MATTING ITEM 623
STATION | STATION | POS
FRONTAGE ROAD
4056+00 | 4059+50 | LT
* MAINLINE
4062+00 | 4063+75 | RT
CONSTRUCT DRIVE
STATION | POS
FR 4059+42 | LT
N
LT. GRID
BM 167 US ELEV. 545.80
BM 167A US Elev. 554.17
BM 169 US ELEV 513.87
BM 169A US Elev. 512.73
BM 170 US ELEV 459.88
BM 168 US ELEV 512.79
PBM DH US ELEV 508.78
F.R. CURVE
42°20'00" Lt.
D 1°30'
R 3819.71
T 738.63
L 1459.26
E 70.76
BANK 1/2" PER FOOT
REV. SURV. C/L P.O.T. 4058+70.62
B/L P.I. 4058+70.52
4058+82.62
REV. SURV. C/L P.I. 4058+71.07
4058+49.37
B/L P.O.T. 4059+20.51
B/L P.O.T. 4060+77.26
B/L P.O.T. 4062+34.02
F.R. P.I. 4057+40.78
4057+23.80
REV. SURV. C/L P.O.C. 4058+60.22
REV. SURV. C/L
Δ 23°12'00" RT
D 1°29'08.2"
R 3856.71
T 791.67
L 1561.64
E 80.42
BANK 1/2" PER FOOT
REV. SURV. C/L P.O.T. 4063+37.75 Lt.
REV. SURV. C/L P.O.C. 4063+37.75 Lt.
REV. SURV. C/L P.O.T. 4066+41.04
17.94' Rt. B/L P.O.T. 4066+44.50
EQ. = 1.46'
B/L P.O.T. 4065+81.25
S.B. SURV. P.O.T. 4066+44.50
N.B. SURV. P.O.T. 4066+44.50
FOR TIES THIS AREA SEE DETAIL BELOW
C/L SB LANE
C/L NB LANE
N 24° 01' E
N 44° 10' E
N 47° 13' E
WOODS
WOODS & BRUSH
BRUSH
BROOK
STONE WALL
GRAVEL ROAD
GRAVEL DRIVE
TOWN ROAD NO. 40
HOUSE
FARM POND
BARN
SHED
DRIED
MATCH LINE
4056+50 113' Rt. Brk
4056+00 113' Rt. Brk
4060+00 109' Rt.
4063+21 87' Lt.
4063+56 129' Lt. Pvt.
4063+73 126' Lt.
4063+78 142' Rt.
4060+72 34.7' Lt.
4061+95 35.7' Lt.
4059+26 112' Rt. Pvt.
SELECTIVE THINNING AND TRIMMING ITEM 601
STATION | STATION | POS
MAINLINE
4056+00 | 4056+50 | LT
4057+30 | 4059+00 | LT
4059+30 | 4060+50 | RT
TWO CABLE GUARD RAIL ITEM 541
STATION | STATION | POS
FRONTAGE ROAD
4056+00 | 4057+21 | RT
PROPERTY LINE FENCE WITH STEEL POSTS ITEM 583-II MOD
STATION | STATION | POS
MAINLINE
4056+00 | 4063+75 | LT
4056+00 | 4063+75 | RT
Construct fence prior to other work in this area.
SB SURV P.O.T. 4066+44.50
B/L P.O.T. 4066+44.50
REV SURV C/L P.T. 4066+41.04
NB SURV P.O.T. 4066+44.50
* STAGE 2 CONSTRUCTION
PLAN SCALE
0 50 100 FEET
END PROJECT I91-2(23) BEGIN PROJECT I91-2(7)
BEGIN CONTRACT NO I
4063+75
STAGE 2 CONSTRUCTION
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
NORWICH
PLAN
STA 4056+00 TO 4072+00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.
SURVEYED BY... W-M INC.
DRAWN BY... HCM
CHECKED BY... ANM
IN CHARGE... RAS
SCALE AS SHOWN
DATE 4/65
PROJECT NO. I91-2(23)
SHEET 50 OF 150
(23)
69
129


4063+75
END PROJECT I91-2(18)
(23)
BEGIN PROJECT I91-2(7)
BEGIN CONTRACT NO.1
BOTH LANES
EQ=-3.46
REV. SURV. C/L P.T. 4066+41.04 =
B/L P.O.T. 4065+44.50
STAGE 2 FINISHED GRADES SHOWN
STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2'-8") BELOW
SB
4067+53.46
600' VC
506.59
K 187
NB
4070+53.46
1100' VC
496.83
K 352
SB
4058+50
1200' VC
529.09
SSD 633
NB
4058+50
1300' VC
526.83
SSD 666
SB +1.680%
NB +1.604%
SB -0.768(?)%
NB -2.800%
SB UD +0.8844%
NB UD -0.691%
NB UB -1.737%
SB UD -0.500%
SB -2.500%
NB -2.500%
SB +0.7143%
NB +0.6296%
540
530
520
510
500
490
480
470
460
450
440
4056
4057
4058
4059
4060
4061
4062
4063
4064
4065
4066
4067
4068
4069
4070
4071
4072
STAGE 2 CONSTRUCTION
NB
SB
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
NORWICH
PROFILE
STA 4056+00 TO 4072+00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VT.
SURVEYED BY W-M INC.
DRAWN BY HCM
CHECKED BY AMM
IN CHARGE R.A.S.
SCALE AS SHOWN
DATE 6/65
PROJECT NO. I91-2(18)(23)
SHEET 30 OF 129

EARTHWORK

V.C.	% GRD.	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. -V.C.	DIST.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

NO.	ITEM	UNIT	QUANTITY BREAKDOWN (TWO BRIDGES) ABUT. #1	ABUT. #2	ABUT. #3	ABUT. #4	CLOSURE WALL #1	CLOSURE WALL #2	N.B. SUPERSTR.	S.B. SUPERSTR.	APPROACH SLABS (4)	STAGE ONE TOTAL	STAGE TWO TOTAL	TOTAL	FINAL
109	Structure Excavation	C.Y.	142	244	344	204	156	95	-	-	-	1,185	-	~~1,185~~	1323
204	Sub-base of Crushed Rock	C.Y.	34	34	34	34	30	30	-	-	-	196	-	~~196~~	210
221	Overhaul	C/mile	1232	1200	1204	1520	888	960	-	-	-	7004	-	~~7004~~	0
222-B	Gravel Backfill for Structures	C.Y.	308	300	301	380	222	240	-	-	-	1751	-	~~1751~~	0
318	Tar Emulsion for Bridge Floors	Gal.	-	-	-	-	-	-	226*	226*	221*	-	673	673*	
361	Bituminous Concrete Pavement (Modified)	Ton	-	-	-	-	-	-	64*	66*	78*	-	207	207*	
372-A	Joint Sealer - Hot Poured	L.F.	-	-	-	-	-	-	-	-	93*	-	93	93*	
372-C	Joint Sealer - Preformed - Type A	L.F.	-	-	-	-	-	-	-	-	93	93	-	93	
372-C	Joint Sealer-Preformed-TypeB	L.F.	-	-	-	-	-	-	14	14	-	28	-	~~28~~	24
401-AA	Concrete Class AA	C.Y.	-	-	-	-	-	-	151	154	-	305	-	~~305~~	336
401-B	Concrete Class B	C.Y.	258	246	245	305	164	170	-	-	192	1580	-	~~1580~~	1561
402	Reinforcing Steel	LBS.	26,026	25,425	25,562	28,612	13,528	13,564	41,714	41,995	30,360	246,786	-	~~246,786~~	247035
403	Shear Connectors (7460)	L.S.	-	-	-	-	-	-	1/2	1/2	-	1	-	1	1
404-A	Structural Steel	LBS.	-	-	-	-	-	-	303,500	305,500	-	609,000	-	~~609,000~~	626,852
407	Asphaltic - Asbestos Coating	S.Y.	13	15	13	15	-	-	-	-	-	56	-	~~56~~	52
410	Paint Waterproofing	S.Y.	31	31	31	31	-	-	-	-	-	124	-	~~124~~	127
440	Water Repellent	GAL.	9	11	10	14	12	13	15	15	-	99	-	~~99~~	92
501	Furnishing Equipment for Driving Piling	L.S.	Req'd.	Req'd.	Req'd.	Req'd.	Req'd.	Req'd.	-	-	-	1	-	1	1
503-D	Cast-in-place Concrete Piling	L.F.	2,466	2,530	2,820	3,672	1,431	1566	-	-	-	14,485	-	~~14,485~~	13,964
505	Pile Loading Test	EA.	1	1	1	1	-	-	-	-	-	4	-	~~4~~	1
556-C	Granite Bridge Curb	L.F.	4	2	4	2	-	-	274	279	-	565	-	~~565~~	560
572	Bridge Railing	L.F.	-	-	-	-	-	-	274	279	-	553	-	~~553~~	569

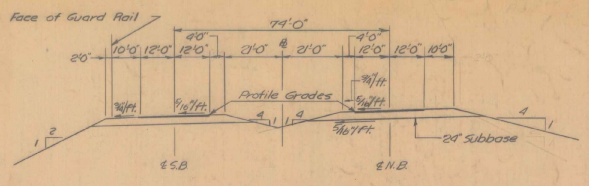
* Indicates Stage II Quantity

BRIDGE(S) AT STATION(S) N.B. Begin Bridge Sta. 4028+00.53 End Bridge Sta. 4029+37.21
S.B. 4027+47.03 4028+86.38
LOCATION(S) I-91 over U.S.5 N.B. & S.B.

NORWICH

PROJECT NO I 91-2(18)
SHEET NO 78 OF 129

B.R.102



NEW HIGHWAY SECT. STA. 4022+00 TO STA. 4027+00

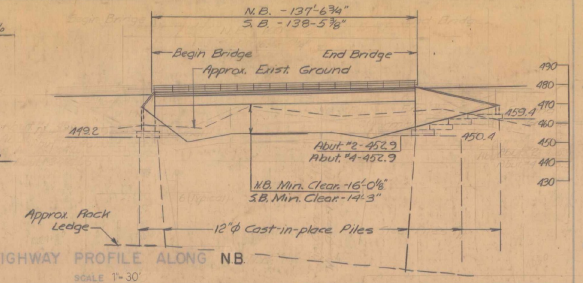
SCALE 1"-20'

+3.014% +1.604%

P.V.I. N.B. 4029+00
1000' V.C.
M.C. -1.41%
El. 479.51

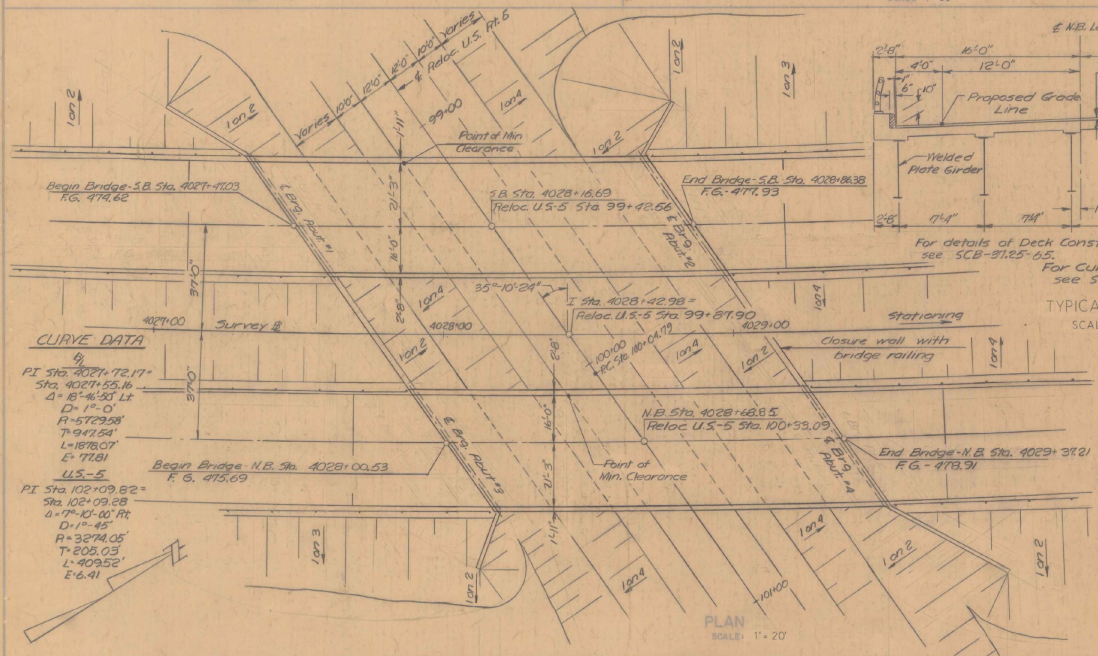
+2.960% +1.680%

P.V.I. S.B. 4028+50
600' V.C.
M.C. -1.28
El. 478.69



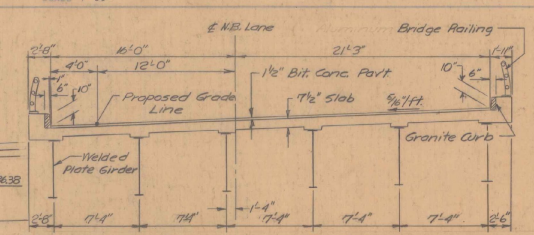
NEW HIGHWAY PROFILE ALONG N.B.

SCALE 1"-30'



PLAN

SCALE 1" = 20'



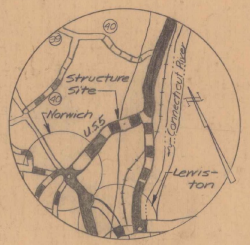
For details of Deck Const. see SCB-37.25-65.

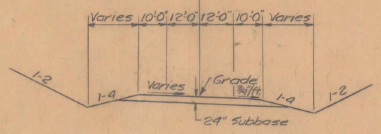
For Railing Details, see SB-A1-64, sheets 1 & 2.

For Curb Details see SCB-D6-65.

TYPICAL SECTION

SCALE 1"-5'

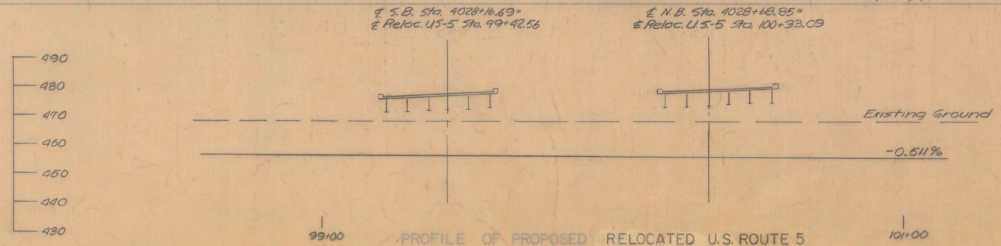




TYPICAL APPROACH SECTION

U.S. ROUTE 5

SCALE 1"=20'



PROFILE OF PROPOSED RELOCATED U.S. ROUTE 5

SCALE 1"=20'

-0.511% -6.90%

P.V.I. U.S.-5 105+00
El. 452.50
600' V.C.
M.C. - 4.79'

REVISIONS

Footing Elevations 7-19-65 BK

HIGHWAY NO. I 91 NAME OF HIGHWAY INTERSTATE-91

STRUCTURE NO. 1 COUNTY WINDSOR TOWN NORWICH

PROJECT NO. I 91 2(18) LOCATION I 91 OVER U.S. 5

EXISTING STRUCTURE

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

NEW STRUCTURE

1. RECOMMENDED TYPE OF STRUCTURE Composite Single Span-Welded Girder
2. RECOMMENDED CLEAR SPAN OR SPANS N.B.-137'-6 3/4" S.B.-138'-5 7/8"
MEASURED PARALLEL TO ℄ NEW HIGHWAY " "
MEASURED AT RIGHT ANGLES TO ℄ STREAM N.A.
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM? ANSWER YES OR NO N.A.
4. ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE N.A.
5. EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE N.A. SOURCE OF INFORMATION N.A.
6. IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? N.A.
7. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? N.A. IS ORDINARY RISE RAPID? N.A.
8. LOW WATER ELEVATION AT NEW STRUCTURE N.A.
9. DRAINAGE AREA IN ACRES ABOVE STRUCTURE N.A. CHARACTER OF TERRAIN N.A.
10. IS STREAM EVER DRY N.A.
11. VELOCITY OF STREAM AT HIGH WATER STAGE N.A. ESTIMATED BACKWATER N.A.
12. AREA FULL OPENING N.A. AREA BELOW ORDINARY H.W. N.A.
13. CHARACTER OF SCOUR N.A. DRIFT N.A. ICE N.A.
14. ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE N.A.
15. VERTICAL CLEARANCE ABOVE FLOOD ELEVATION
16. ARE SIDEWALKS REQUIRED? IF SO ON WHAT SIDE? No BOTH SIDES
17. RECOMMENDED TYPE OF PAVEMENT 1 1/2" Bituminous Concrete, 7 1/2" Concrete
18. TRAFFIC TO BE MAINTAINED UNDER ITEM NO. N.A. ONE OR TWO WAYS N.A. PROBABLE COST N.A.
19. PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE N.A.
20. SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
21. ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 35 T/Pile SHOULD PILES BE USED? Yes EST. LGTH. *
12"℄ Cast-in-Place Piles * See sheet 10A.

FOUNDATION INFORMATION

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

RECOMMENDED FOR APPROVAL	CONSTRUCTION ENGINEER	DATE
RECOMMENDED FOR APPROVAL	BRIDGE ENGINEER	3/1/65 DATE
RECOMMENDED FOR APPROVAL	ASST. CHIEF ENGINEER	3/1/65 DATE
APPROVED BY	CHIEF ENGINEER	3/1/65 DATE

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

I 91 IN THE TOWNS OF NORWICH

ROUTE NO. I 91 LOG STA. SB 4028+16.70 NB 4028+68.79

INTERSTATE OVER RELOC. U.S. 5

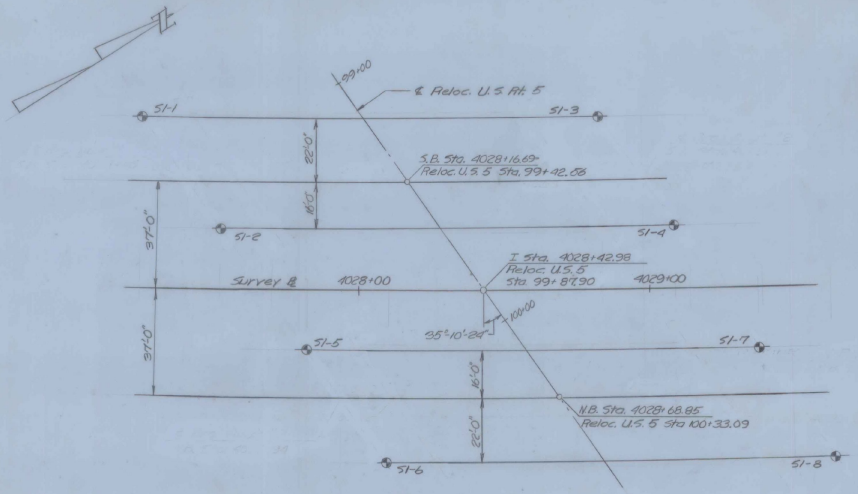
McFARLAND - JOHNSON
CONSULTING ENGINEERS

DESIGNED BY K.V.E. DRAWN BY G.A.M. CHECKED BY RCT M.G.C. SCALE As Shown DATE August 6, 1965

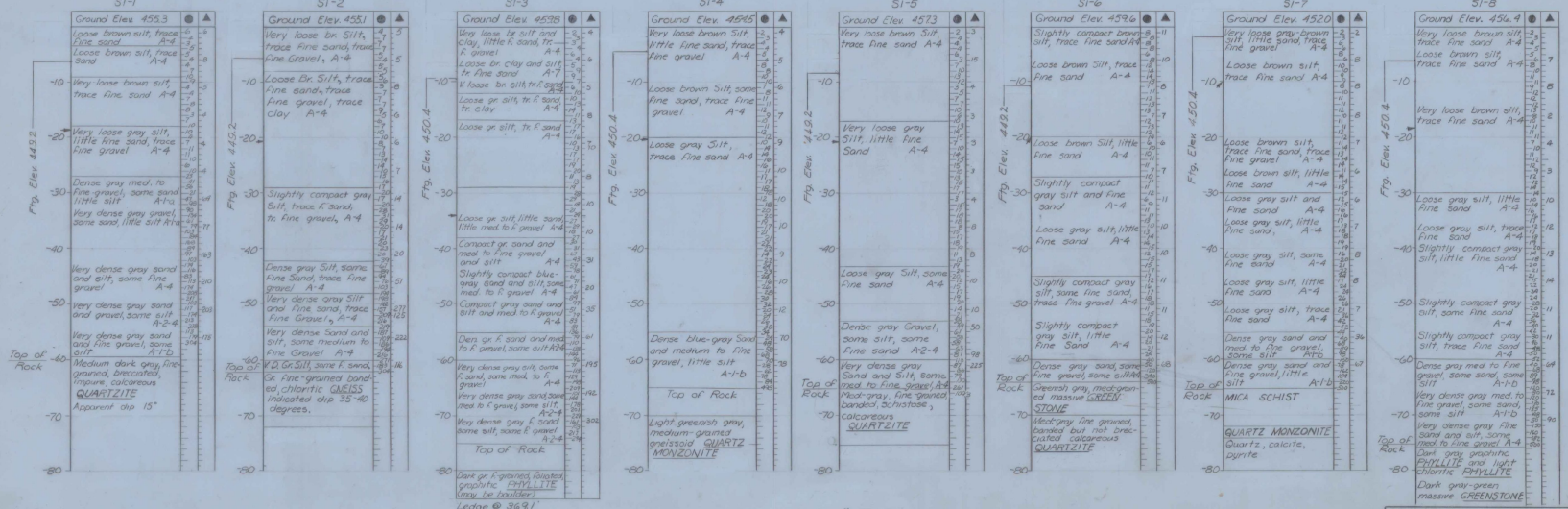
PROJECT NO. I 91 2(18) SHEET NO. 71 OF 159

BR 103

BORING NO.	STATION	OFFSET	GROUND ELEVATION	LEDGE ELEVATION
S1-1	℄ 4027+24	59' Lt.	455.3	397.3'
S1-2	℄ 4027+52	21' Lt.	455.1	393.1
S1-3	℄ 4028+83	59' Lt.	459.8	384.8
S1-4	℄ 4029+09	21' Lt.	454.5	389.6
S1-5	℄ 4027+82	21' Rt.	457.3	392.0
S1-6	℄ 4028+11	59' Rt.	459.6	390.6
S1-7	℄ 4029+39	21' Rt.	452.0	Boulders 387.0
S1-8	℄ 4029+62	59' Rt.	456.4	381.4



PLAN
Scale: 1"=20'



Scale 1" = 10'

NOTES:

Blows per Foot

	● Casing	▲ Sampler
O.D.	2 1/2"	2"
I.D.	2 1/2"	1 3/8"
Hammer	300#	140#
Hammer Fall	24"	30"

← Ground Water Elev.

Soils Distribution
0-10% — Trace of
10-20% — Little
20-35% — Some
35-50% — And

LENGTH OF PILES (estimated)
Abut #1 - 45'
Abut #2 - 55'
Abut. #3 - 60'
Abut #4 - 60'

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91
INTERSTATE BRIDGE OVER RELOC. U.S. 5

BORING LOG

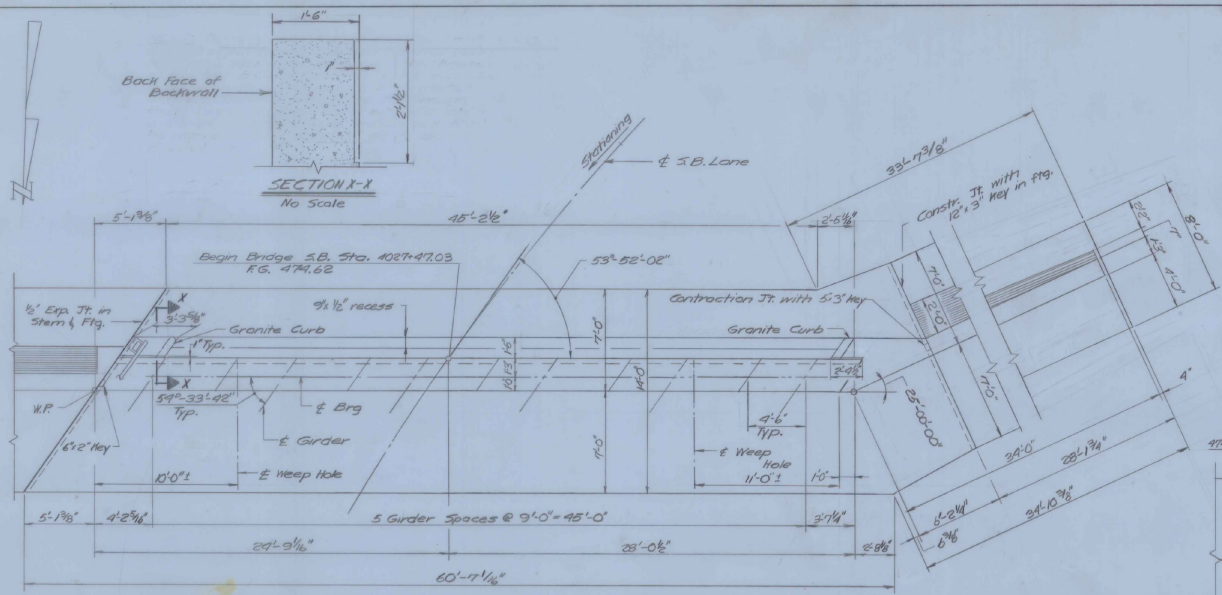
McFARLAND JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

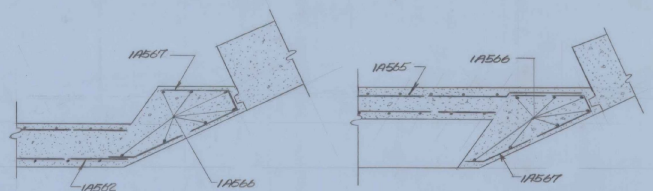
REVISIONS
Footing Elevations 7-14-65 BRK

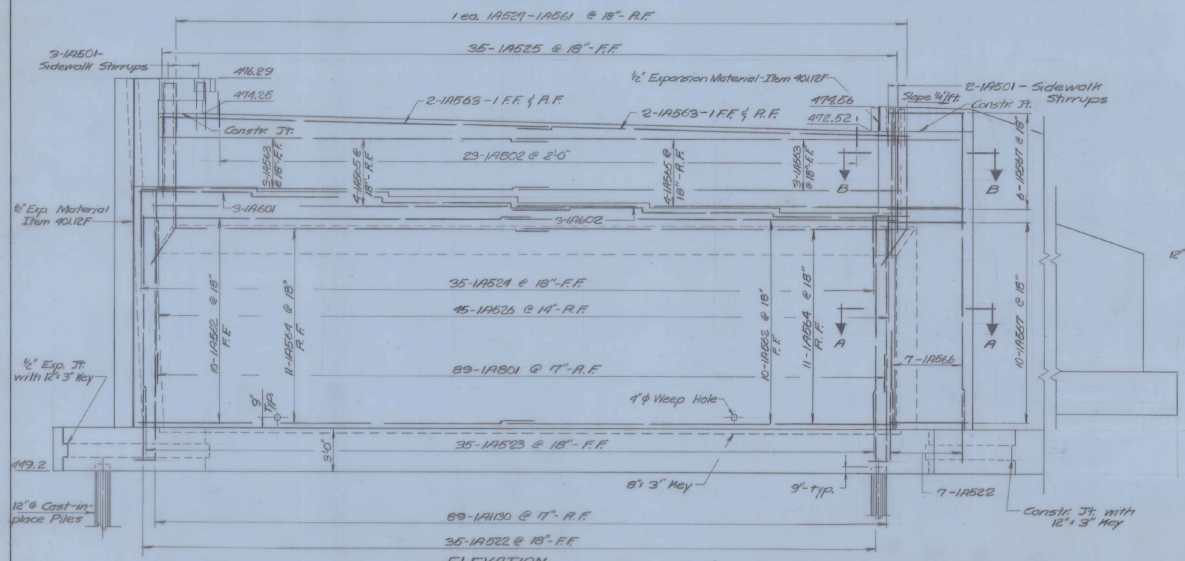
DESIGNED: H.G.C. | CHECKED: B.R.K. | DATE: August 5, 1965
DRAWN: G.R.M. | IN CHARGE: H.G.C. | SCALE: As shown

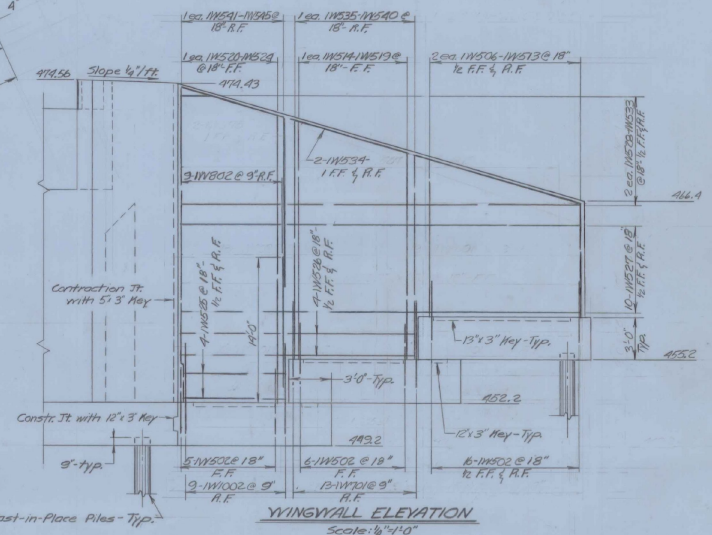
PROJECT NO. I91-2(18) SH. 72 OF 159

BR 104









Note:
F.F.- Front Face - Near side of view.
R.F.- Rear Face - Far side of view.

NOTES:
1. For General Notes, see BR101.
2. For Typical Sections, see BR111.
3. For reinforcing details, see BR119-BR121.
4. For Key Plan, see BR110.
5. For curb and joint details, see BR106.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

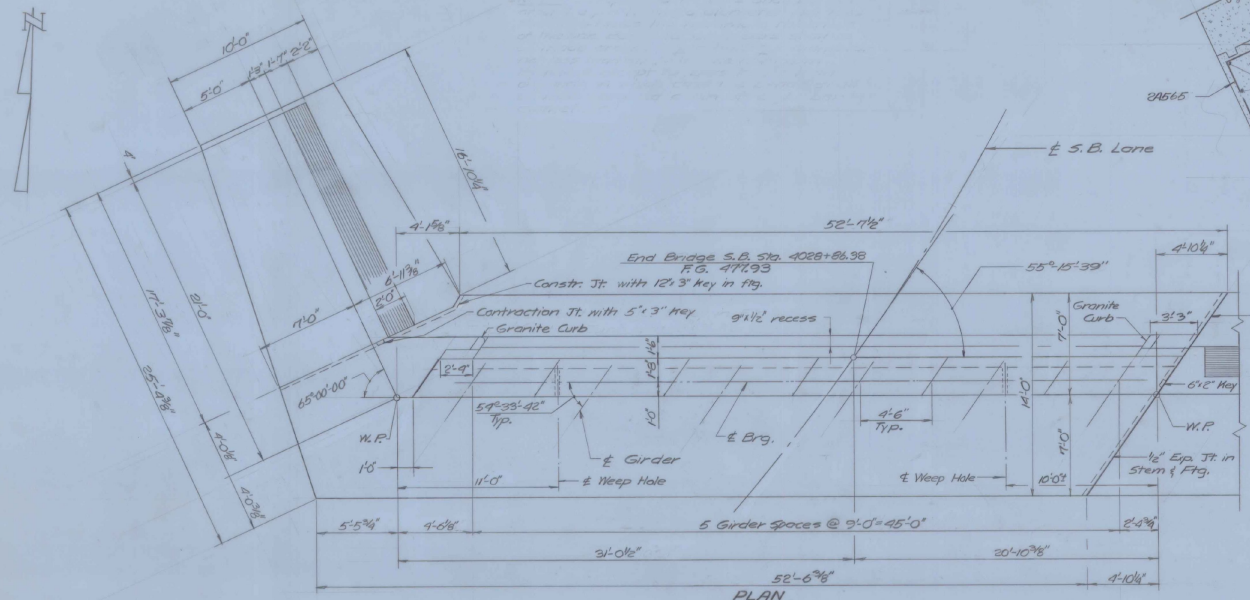
INTERSTATE 91 OVER
RELOCATED U.S. 5
ABUTMENT NO. 1 AND
WINGWALL NO. 1 DETAILS

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

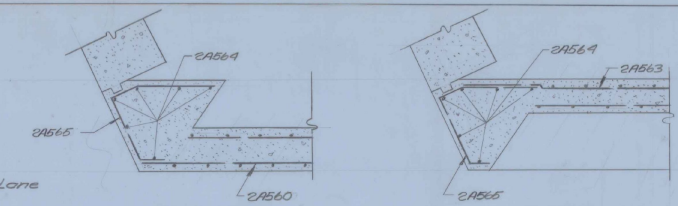
DESIGNED: B.A.H. | CHECKED: B.A.H. | DATE: August 5, 1965
DRAWN: G.A.M. | IN CHARGE: W.G.C. | SCALE: As Shown

PROJECT NO I 91-2(18) SH. 75 OF 159

BR107

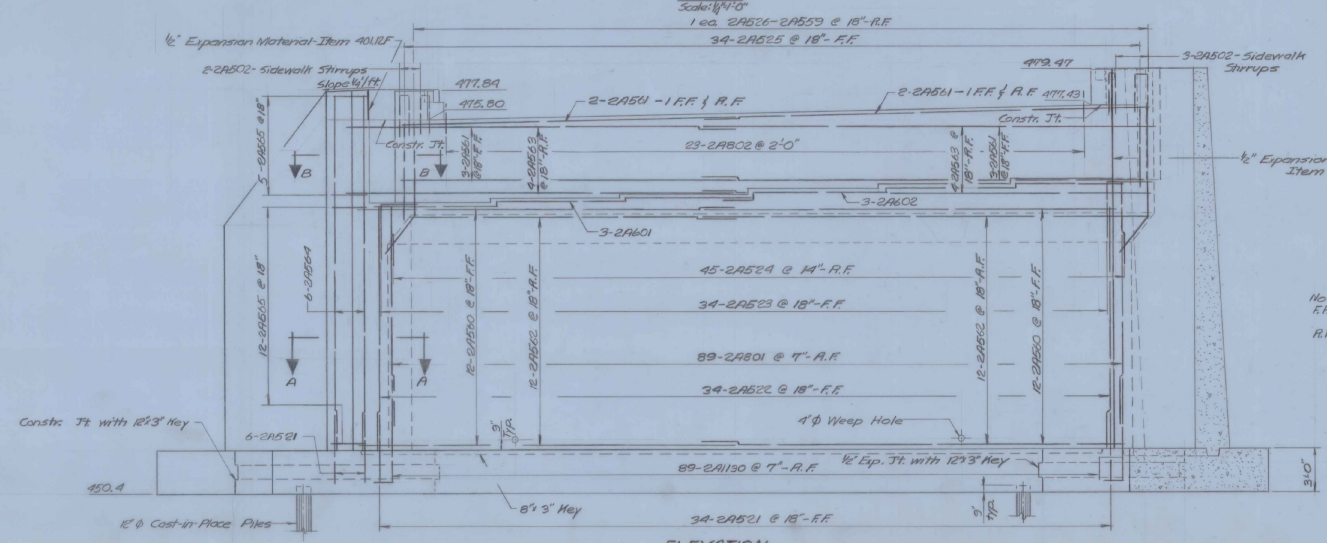


PLAN
Scale: 1/8"=1'-0"

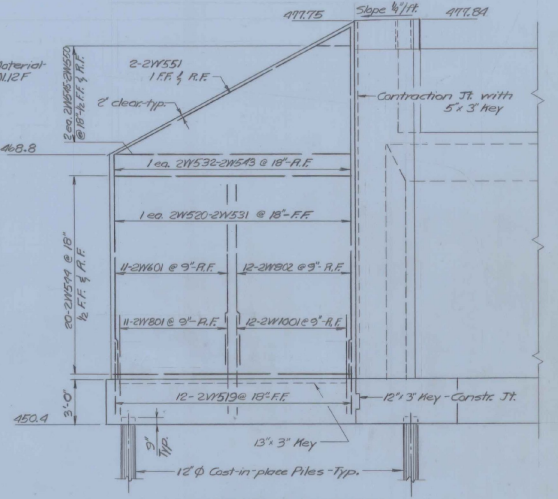


SECTION A-A
Scale: 3/8"=1'-0"

SECTION B-B
Scale: 3/8"=1'-0"



ELEVATION
Scale: ½"=1'-0"



WINGWALL ELEVATION
Scale: ½"=1'-0"

NOTES:
1. For General Notes, see BR101.
2. For Typical Sections, see BR111.
3. For reinforcing details, see BR119-BR121.
4. For Key Plan, see BR110.
5. For curb and joint details, see BR106.

Note:
F.F.-Front Face-Near side of view.
R.F.-Rear Face-Far side of view.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

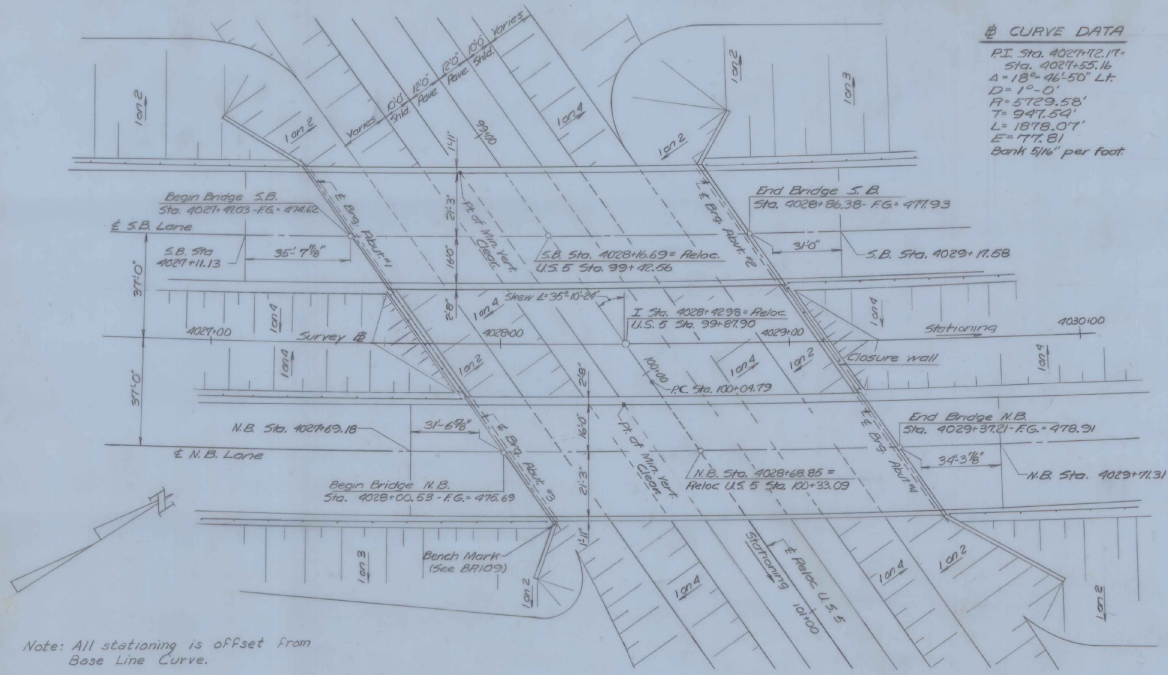
INTERSTATE 91 OVER
RELOCATED U. S. 5
ABUTMENT NO. 2 AND
WINGWALL NO. 2 DETAILS

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON, NEW YORK

DESIGNED: B.F.M. | CHECKED: B.F.M. | DATE: August 5, 1965
DRAWN: G.E.M. | IN CHARGE: H.G.C. | SCALE: As Shown

PROJECT NO I91-2(18) SH 76 OF 159

BR108



Note: All stationing is offset from Base Line Curve.

℄ CURVE DATA

P.I. Sta. 4027+12.17
Sta. 4027+55.16
Δ = 18°-46'-50" Lt.
D = 1°-0'
R = 5729.58'
T = 947.54'
L = 1878.07'
E = 77.81
Bank 5/16" per foot

RELOC. U.S.-5 CURVE DATA

P.I. Sta. 102+09.82
Sta. 102+09.28
Δ = 7°-10'-00" Rt.
D = 1°-45'
R = 3274.05'
T = 205.03'
L = 409.52'
E = 6.41
Bank 3/8" Per foot

GENERAL NOTES

Specifications:
All materials and construction shall conform to the State of Vermont Department of Highways, Standard Specifications for Highway and Bridge Construction, dated April 1964 and the AASHO Standard Specifications dated 1961, as modified by Interim Specifications dated 1962 and 1963.

Live Load:
Structure designed for H520-44 loading modified for National System of Interstate Highways applied in accordance with the provisions of the AASHO Standard Specifications Article 12.8.

Concrete:
All exposed edges of concrete shall be chamfered 1"x1" unless otherwise noted. All construction joints to be made as shown on SCB-D6-65, details B and C unless otherwise noted.

Reinforcement:
All reinforcement to have a clear cover of 3" unless otherwise noted.

Dimensions:
All dimensions given are measured horizontally or vertically unless otherwise noted. Dimensions given are for 68°F, unless otherwise noted. Elevation datum sea level based on nearest U.S. Government vertical control.

Structural Steel:
Item 401-A shall include all structural steel, copper, wrought iron, and any other materials indicated or required in the completed structure which are not otherwise classified.

All structural steel shall be structural carbon steel conforming to the requirements of the specifications for steel bridges and buildings A.S.T.M. Designation A-36-62T, except as otherwise noted.

The Contractor shall submit complete details of the structural steel to the State of Vermont, Department of Highways, and receive their written approval prior to the start of fabrication. The steel details shall include provisions for cambering of beams for dead load deflection plus vertical curve as well as erection diagrams and falsework details.

The final coat of field paint shall be green.

Pile Loading Tests:
Pile Loading Tests, Item 505, shall be used and paid for only when directed by the Engineer.

Water Repellent:
The top surface of safety walks, fascia, and back to the drip bead under the slab, and all exposed areas of the abutment, which are not otherwise treated, shall be covered with Water Repellent (Item 440).

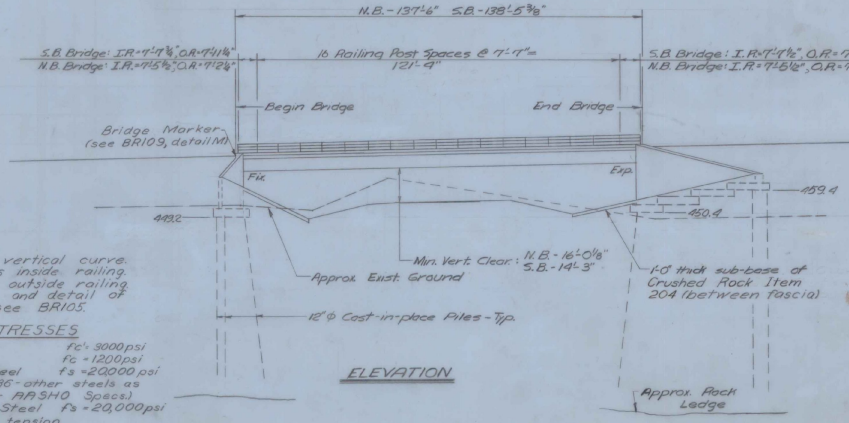
Field Bolting:
Field bolted connections shall be made with A325 High Strength Bolts. A490 bolts are not allowed.

Abutments:
The top surfaces of all abutments shall be sloped ¼" per foot from the front edge of abutment curtainwalls, except for bearing pads projecting 1" or more above the general area, which surfaces shall be level. Elevations of bridge seats given are for centerline of bearings. The entire exposed top surface of abutments shall be coated with Asphaltic-Asbestos Coating ⅛" thick as per Item 407 of the specifications. The application of this item shall be after all painting and incidental items are completed. Abutments, wings, and closure walls shall not be placed with less than three (3) days time lapse between adjacent segments.

General:
Cross slope of approach slabs to conform to the cross slope of the bridge. All expansion material shall be premoulded cork containing no bitumen or asphalt.

Piling:
For additional details of Piling see Standard Sheet SB-P1-66.

PLAN



ELEVATION

NOTE:
Bridge on vertical curve.
I.R. denotes inside railing.
O.R. denotes outside railing.
For location and detail of end post, see BR105.

DESIGN STRESSES

Concrete	f'_c = 3000 psi	
	f_c = 1200 psi	
Structural Steel	f_s = 20000 psi	
	(A36 - other steels as per AASHO Specs.)	
Reinforcing Steel	f_s = 20,000 psi	tension
	f_s = 16,000 psi	compression

INDEX OF DRAWINGS

BR101	Plan & Elevation
BR102	Bridge Quantity Sheets
BR103	Preliminary Information
BR104	Boring Log
BR105	Superstructure Details
BR106	Joint Details
BR107	Abutment #1 & Wingwall #1 Details
BR108	Abutment #2 & Wingwall #2 Details
BR109	Abutment #3 & Wingwall #3 Details
BR110	Abutment #4 Details
BR111	Typical Sections & Wingwall #4 Details
BR112	South & North Closure wall Details
BR113	South Abutment Footing Plan
BR114	North Abutment Footing Plan
BR115	Approach Slab Details
BR116	Approach Slab Details
BR117	Approach Slab Details
BR118	Approach Slab Details
BR119	Reinforcing Steel Details
BR120	Reinforcing Steel Details
BR121	Reinforcing Steel Details

STANDARD SHEETS

SCB-37.25-65 Deck & Curb Reinforcing.
SCB-D4-65 Deck Reinforcing Layout at Abutment.
SCB-D6-65 Curb Details.
SCB-D2-65 Beam Haunch.
SCWPG-30-62 (sheets 1-4) Cross Frame details, bearing device details, spiral welding details, metal expansion joint, drain.
SB-R2-65 Steel Railing Details.
SB-R1-64 (sheets 1 & 2) Aluminum Railing Details.
SB-P1-66 Cast-in-Place Concrete Piling

STATE OF VERMONT — WILLIAM H. MCFARLAND — No. 472 — PROFESSIONAL ENGINEER

August 6, 1965

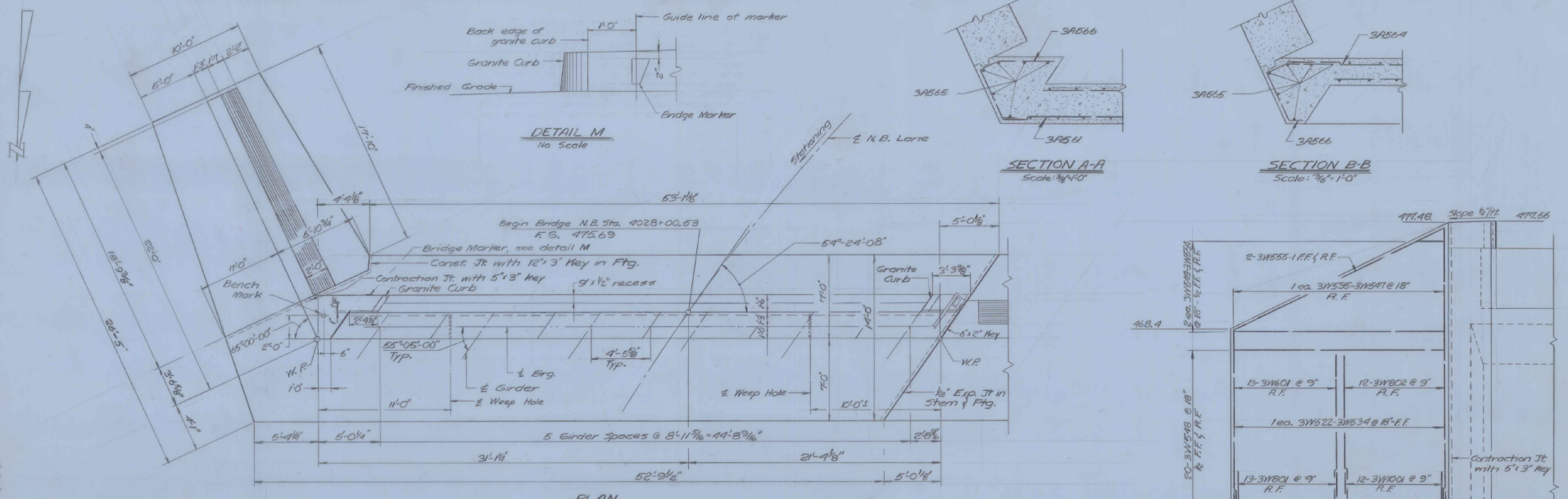
VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91
INTERSTATE 91 OVER RELOCATED U.S. 5
PLAN & ELEVATION

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.R.H. | CHECKED: B.R.H. | DATE: August 5, 1965
DRAWN: G.R.M. | IN CHARGE: H.S.C. | SCALE: 1" = 20'

PROJECT NO I91-2(18) SHEET 77 OF 129

BR101



NOTES:
1. For General Notes, see BR101.
2. For Typical Sections, see BR111.
3. For reinforcing details, see BR119-BR121.
4. For curb and joint details, see BR106.
5. For Key Plan, see BR110.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

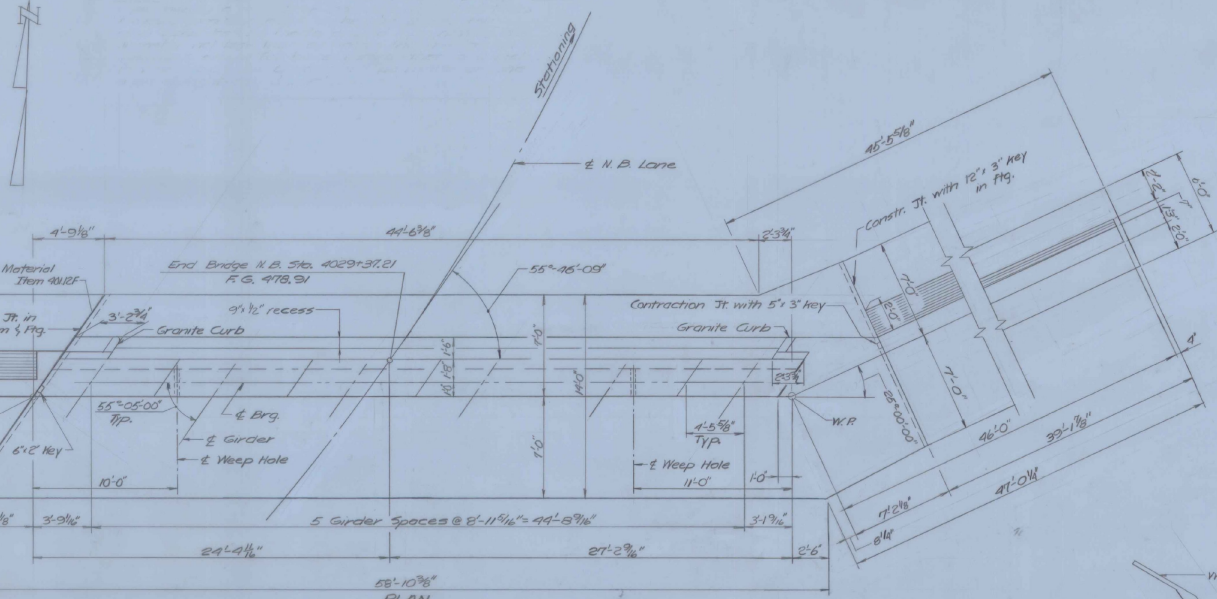
INTERSTATE 91 OVER
RELOCATED U.S. 5
ABUTMENT NO. 3 AND
WINGWALL NO. 3 DETAILS

McFARLAND-JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.A.K.	CHECKED: B.A.K.	DATE: August 5, 1965	
DRAWN: G.A.M.	IN CHARGE: M.G.C.	SCALE: As Shown	

PROJECT NO I91-2(18) SH 77 OF 159

BR109



Note:
R.F. - Rear Face - Far side of view.
F.F. - Front Face - Near side of view.

NOTES:
1. For General Notes, see BR101.
2. For Typical Sections, see BR111.
3. For reinforcing details, see BR119 - BR121.
4. For curb and joint details, see BR106.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

INTERSTATE 91 OVER RELOCATED U. S. 5

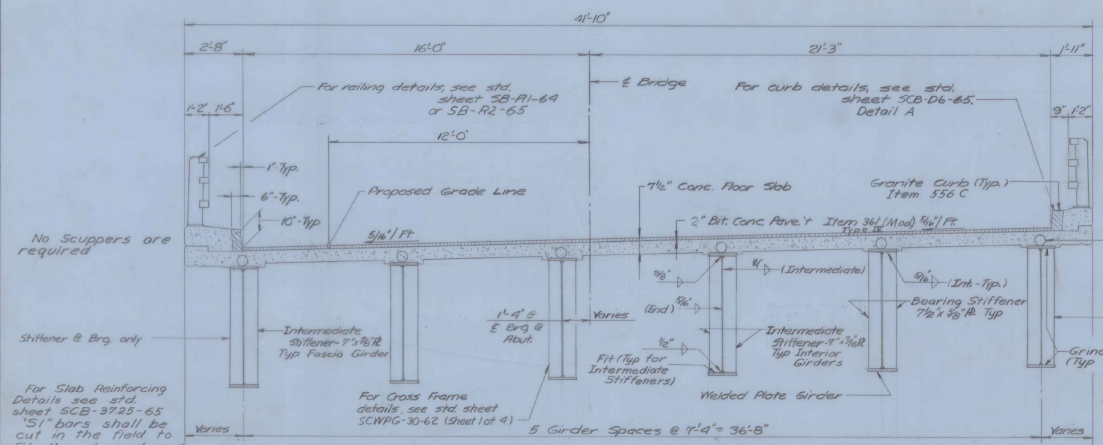
ABUTMENT NO. 4 DETAILS

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.P.H. | CHECKED: B.P.H. | DATE: August 5, 1965
DRAWN: G.P.M. | IN CHARGE: H.G.C. | SCALE: As Shown

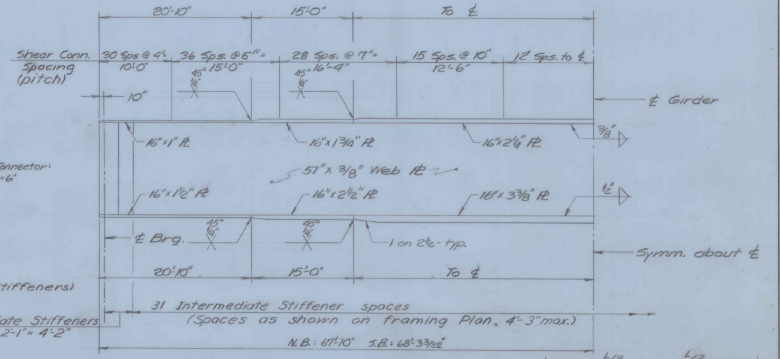
PROJECT NO I91-2(18) SH 78 OF 159

BR110

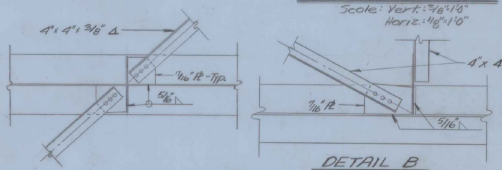


TYPICAL SECTION
Scale: ⅜" = 1'-0"

NOTE: N. B. Bridge shown.

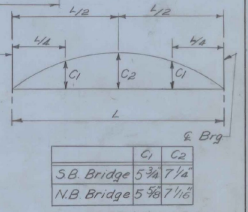


GIRDER DETAILS
Scale: Vert.: 3/16"=1'-0" Horiz.: 1 1/16"=1'-0"



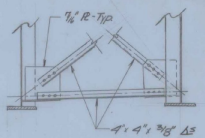
DETAIL A
No Scale

DETAIL B
No Scale



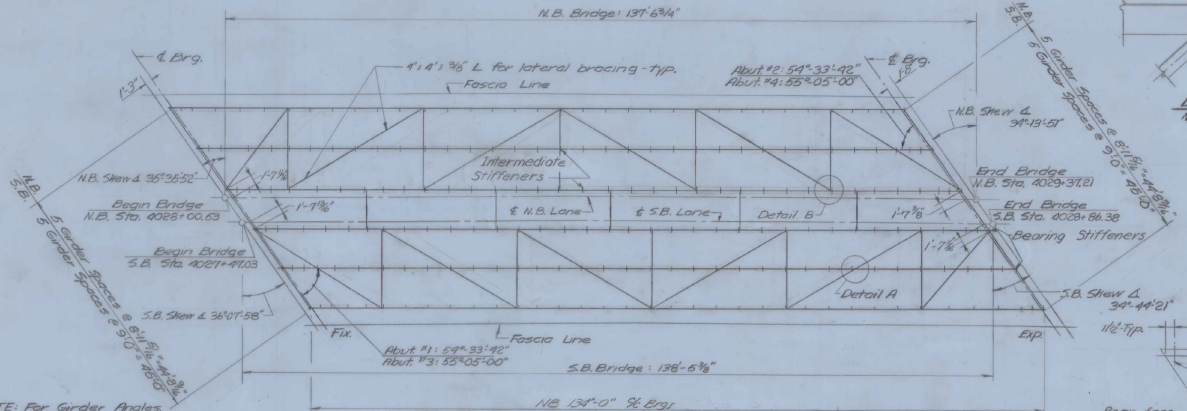
	C1	C2
S.B. Bridge	5 3/4	7 1/4
N.B. Bridge	5 5/8	7 1/16

CAMBER DIAGRAM
No Scale



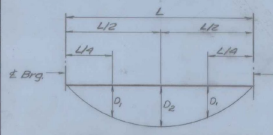
BRACING DETAIL
No Scale

NOTES:
1. For General Notes, see BA101.
2. For Structural Steel and Welding Notes, and Cross Frame Details, see Standard Structure Sheet SCWPG-30-62 (1 of 4).
3. For joint details at abutments, and bearing device details, see Standard Structures Sheet SCWPG-30-62 (2 of 4).
4. For general welding details, see Standard Structures Sheet SCWPG-30-62 (3 of 4).



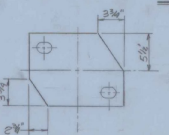
NOTE: For Girder Angles, see Abutment Details.

FRAMING PLAN
Scale: 3/32" = 1'-0"

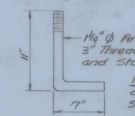


	D1	D2
S.B. Bridge	3 7/16	4 9/16
N.B. Bridge	3 7/16	4 9/16

DEAD LOAD DEFLECTION DIAGRAM
No Scale

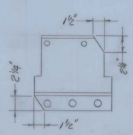


STEEL



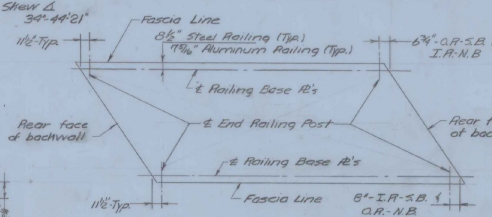
ANCHOR BOLT

NOTE: Dimensions and details not shown are standard. See Std Sheet SB-A1-64, Sheets 1 & 2 for Aluminum Railing, or Std. Sheet SB-A2-65 for Steel Railing.



ALUMINUM

EXPANSION END RAILING BASE PLATE DETAILS
Scale: 1½" = 1'-0"



RAILING LAYOUT DETAIL
No Scale

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

INTERSTATE 91 OVER
RELOCATED U.S. 5

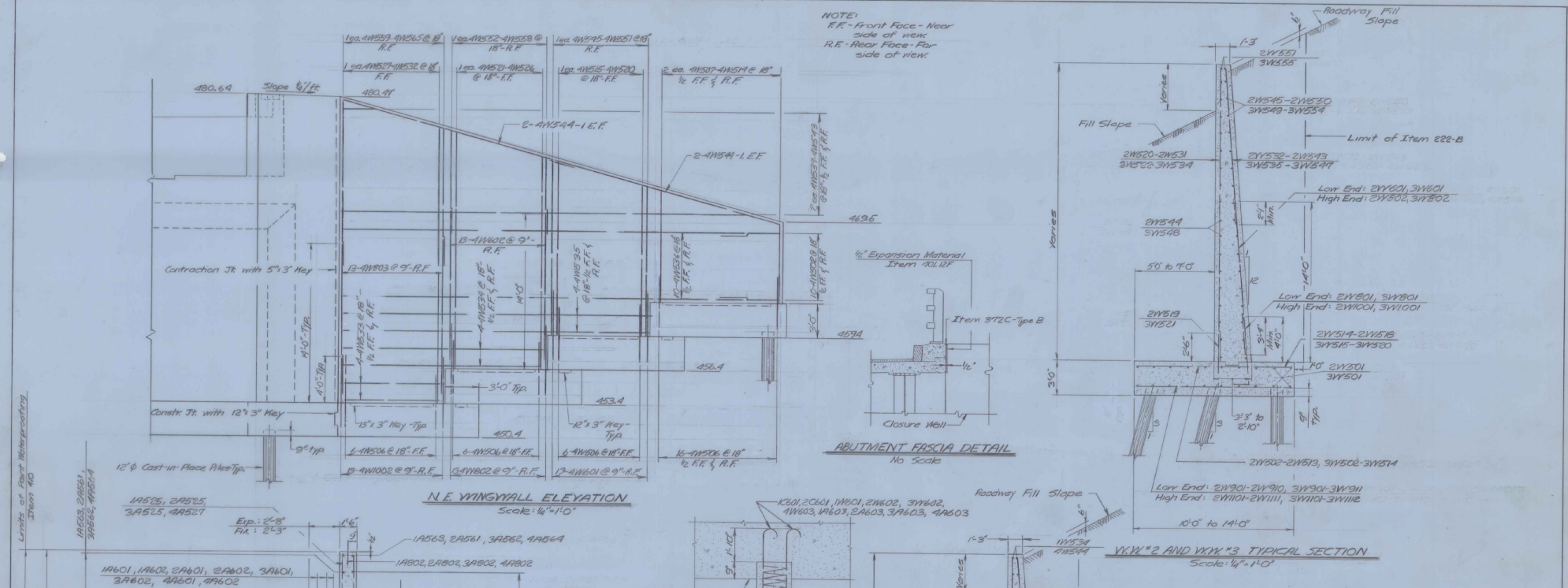
SUPERSTRUCTURE DETAILS

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.R.M.	CHECKED: R.W.H.	DATE: August 5, 1965
DRAWN: G.R.M.	IN CHARGE: H.G.C.	SCALE: As Noted

PROJECT NO I91-2(118), SH. 79 OF 169

BR105



VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

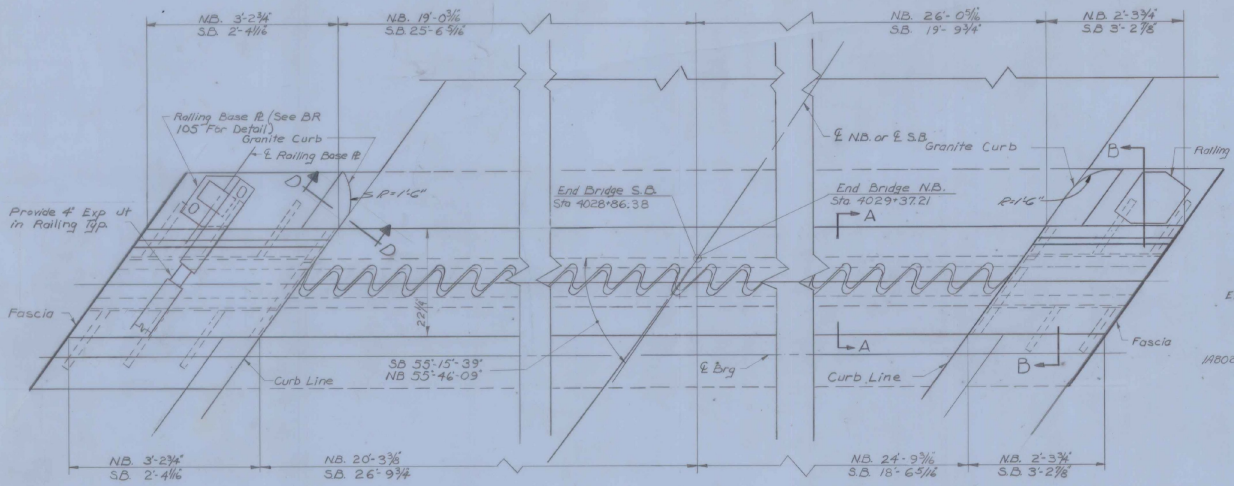
INTERSTATE 91 OVER
RELOCATED U.S. 5
TYPICAL SECTIONS AND
WINGWALL NO. 4 DETAILS

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.R.M.	CHECKED: B.R.M.	DATE: August 5, 1969	
DRAWN: G.R.M.	IN CHARGE: H.G.C.	SCALE: As Shown	

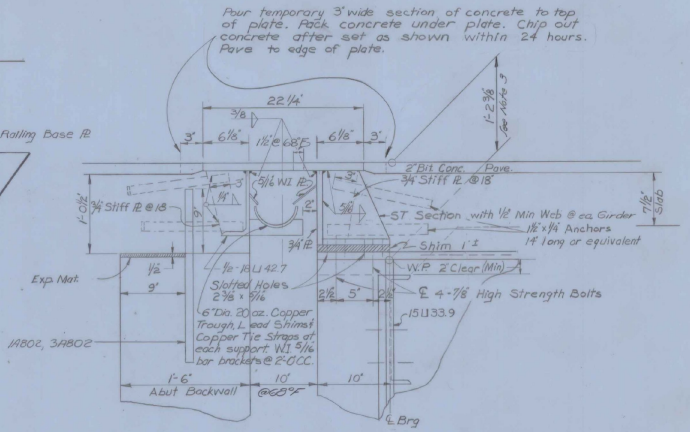
PROJECT NO I91-2(18) SH. 79 OF 159

BR111

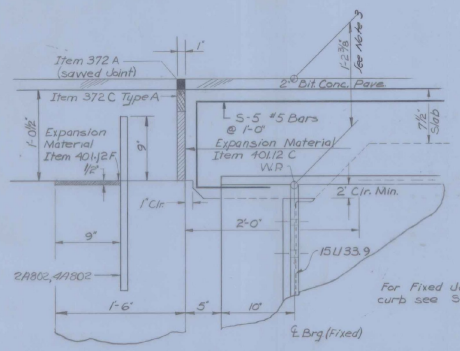


EXPANSION HINGE JOINT
Scale: 1"=1'-0"

For Details not shown see Std. Sheet SCWPG 30-62 Sheet 4 of 4

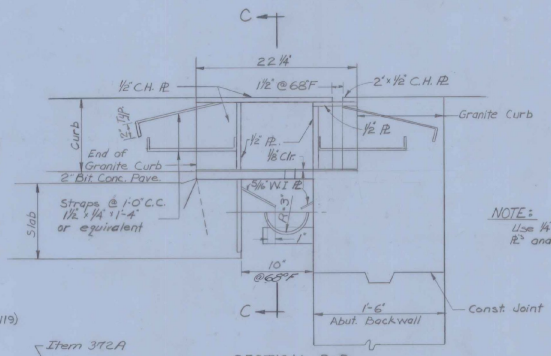


SECTION A-A
Scale: 1½"=1'-0"



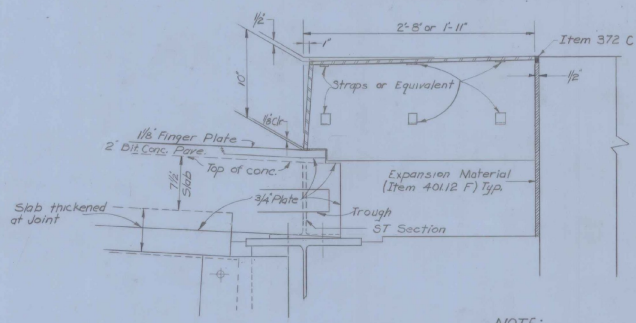
FIXED END JOINT DETAIL
Scale: 1½"=1'-0"

For Fixed Joint Detail thru curb see SB-AS-65 (BR115-BR119)



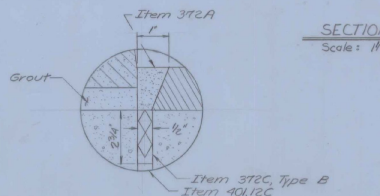
SECTION B-B
Scale: 1½"=1'-0"

NOTE:
Use ¼" Weld For connection ℞ and Brackets For Trough.

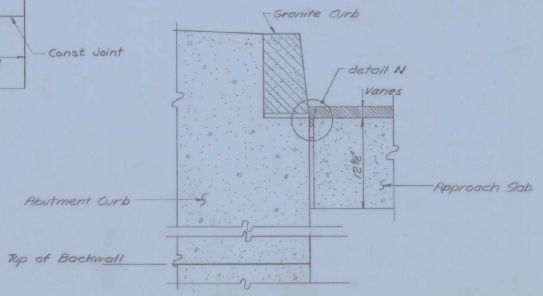


SECTION C-C
Scale: 1½"=1'-0"

NOTE:
1. For General Notes, see BR101
2. For additional trough and drain details, see SCWPG 30-62, sheet 1 of 4.
3. Dimension may vary as haunch is adjusted, shim as required



DETAIL N
No Scale



SECTION D-D
No Scale

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

INTERSTATE 91 OVER
RELOCATED U.S. 5

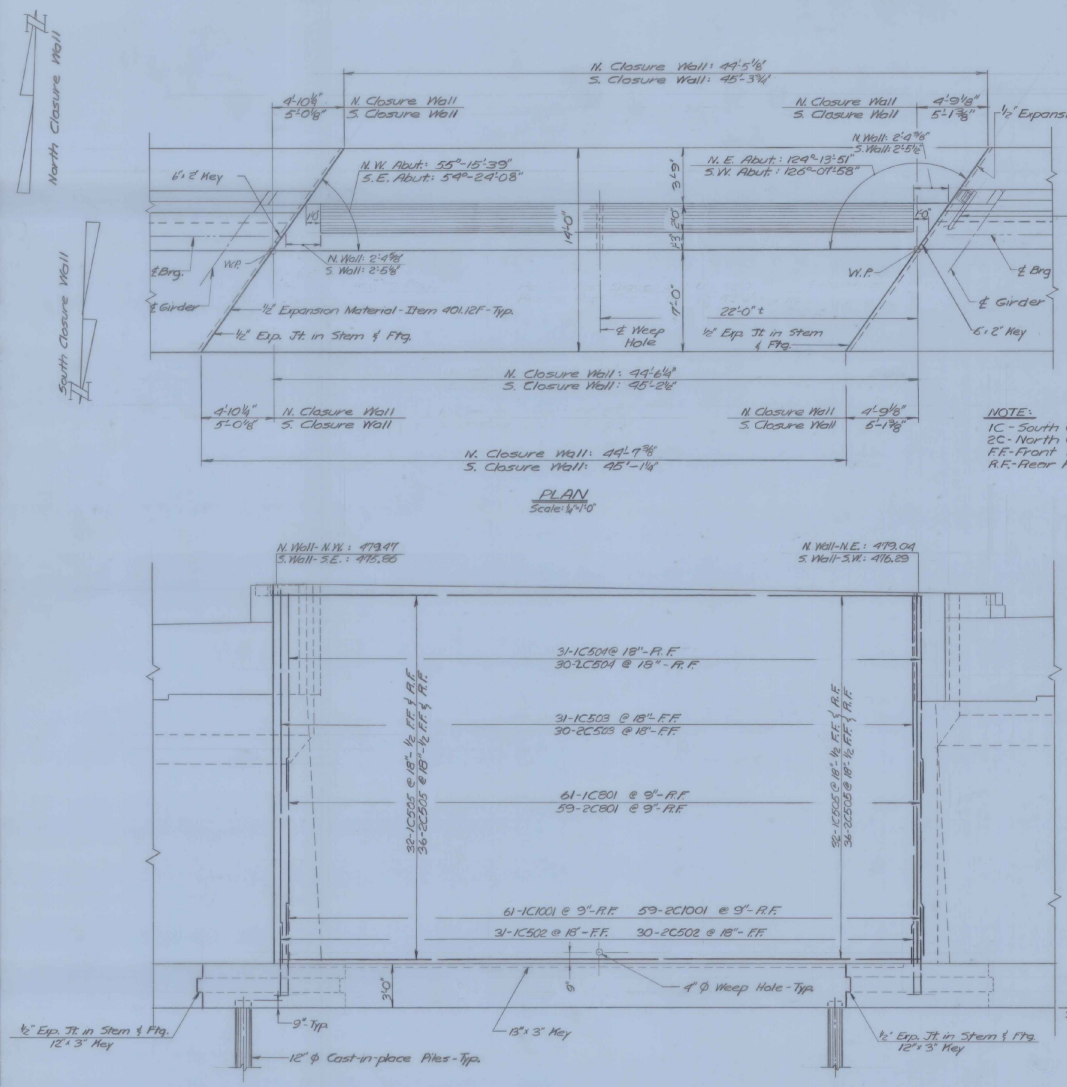
JOINT DETAILS

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: BRK	CHECKED: BRK	DATE: August 1965
DRAWN: J.H.T.	IN CHARGE: H.G.C.	SCALE: AS SHOWN

PROJECT NO 191-2(18) SH 80 OF 182

BR106



NOTES:
1. For General Notes, see BR101.
2. For reinforcing details, see BR119-BR121.
3. For curb and joint details, see BR106.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

INTERSTATE 91 OVER
RELOCATED U. S. 5

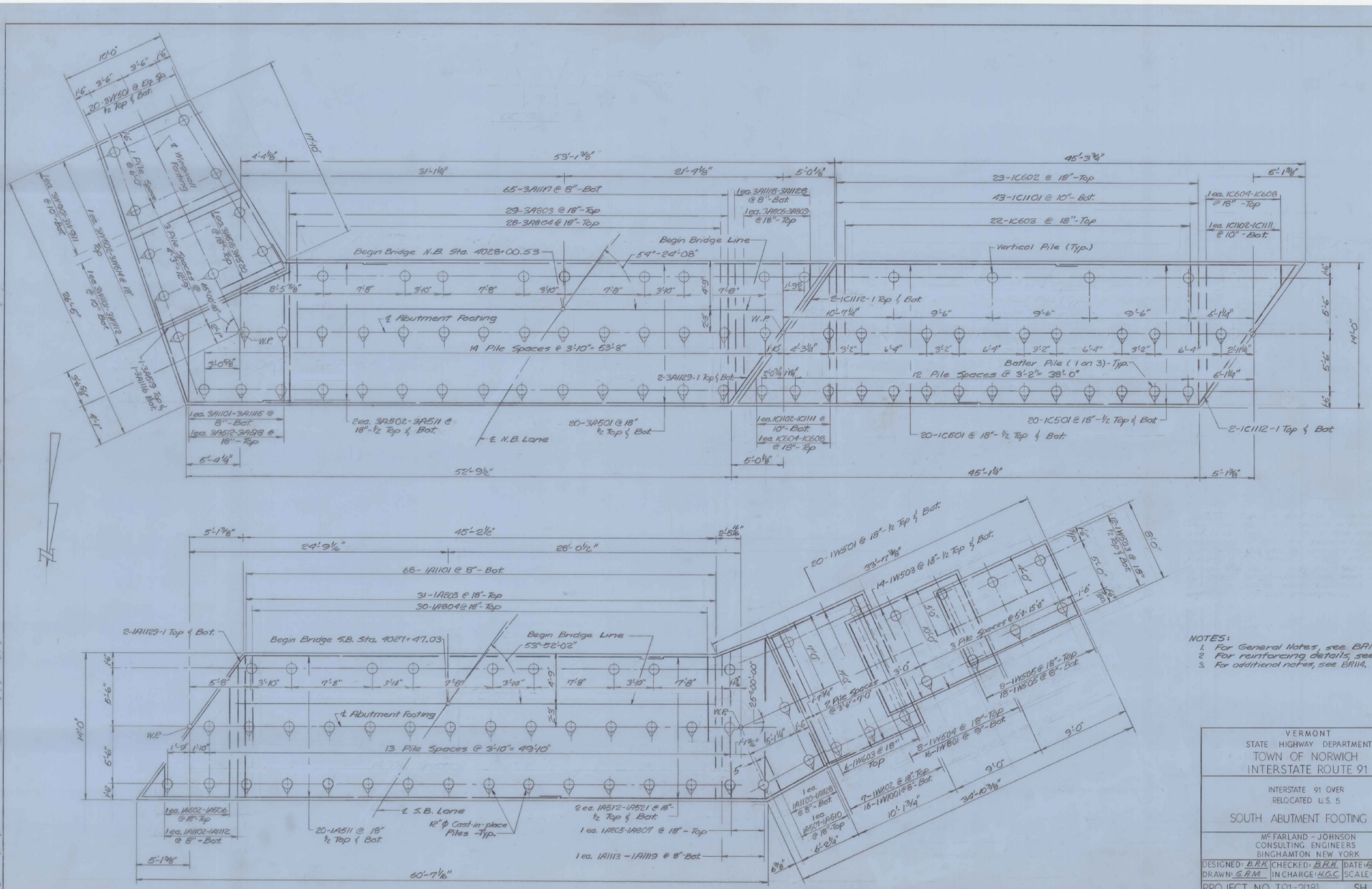
NORTH & SOUTH CLOSURE WALL DETAILS

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.P.K.	CHECKED: B.P.K.	DATE: August 5, 1965
DRAWN: G.P.M.	IN CHARGE: H.G.C.	SCALE: As Shown

PROJECT NO I91-2(18) SH. 80 OF 159

BR112



NOTES:
1. For General Notes, see BR101.
2. For reinforcing details, see BR113-BR120.
3. For additional notes, see BR114.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

INTERSTATE 91 OVER
RELOCATED U.S. 5

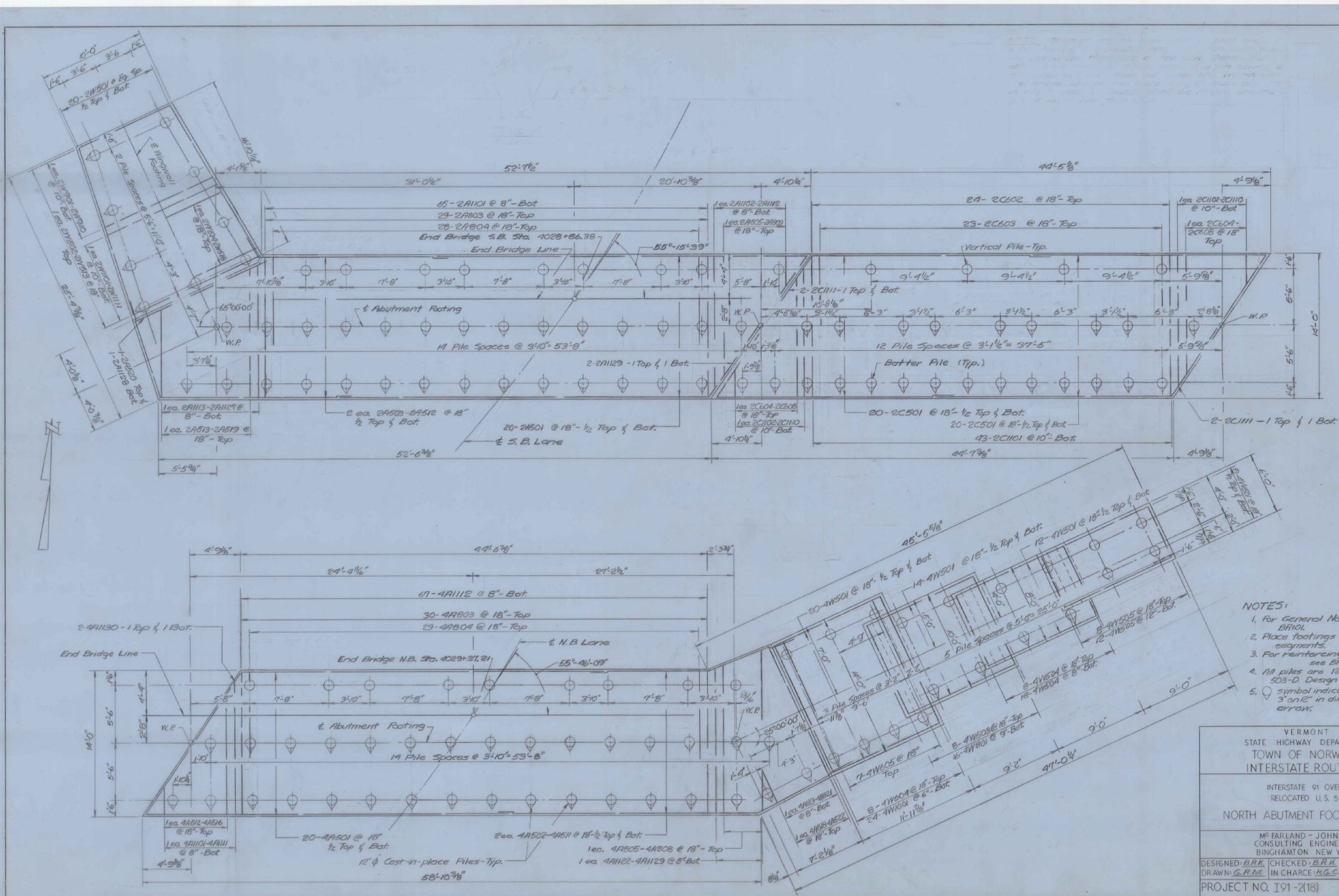
SOUTH ABUTMENT FOOTING PLAN

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.R.K. | CHECKED: B.H.H. | DATE: August 5, 1965
DRAWN: G.A.M. | IN CHARGE: H.G.C. | SCALE: 4" = 1'-0"

PROJECT NO I91-2(18) SH 81 OF 159

BR113



NOTES:

1. For General Notes, see BR101.
2. Place footings in alternate segments.
3. For reinforcing details, see BR118-BR121.
4. All piles are 12" ϕ C.I.P., Item 503-D Design load - 35 tons.
5. ○ symbol indicates pile battered 3" on 12" in direction of arrow.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWN OF NORWICH
INTERSTATE ROUTE 91

INTERSTATE 91 OVER
RELOCATED U.S. 5

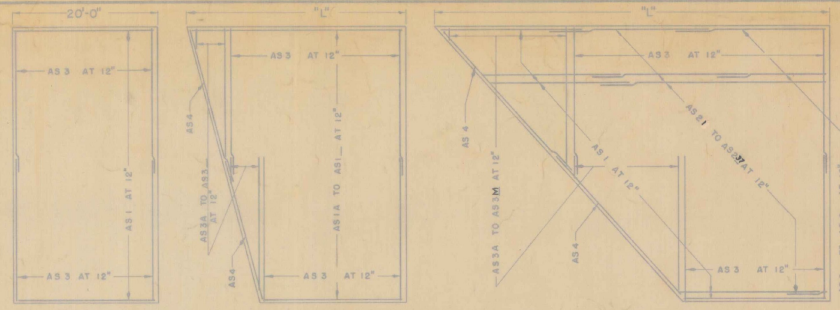
NORTH ABUTMENT FOOTING PLAN

McFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: B.R.K. | CHECKED: B.R.K. | DATE: August 5, 1965
DRAWN: G.R.M. | IN CHARGE: M.G.C. | SCALE: 1/4" - 1'-0"

PROJECT NO. I91-2(18) SH. 82 OF 159

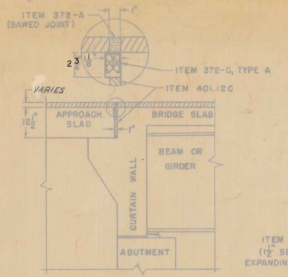
BR114



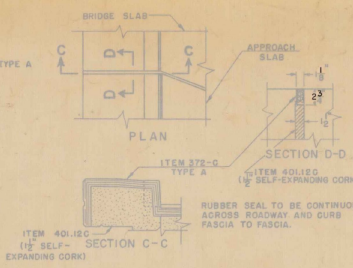
DETAIL "A" - SQUARE

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

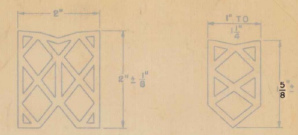
DETAIL "C" - "L" GREATER THAN 35'



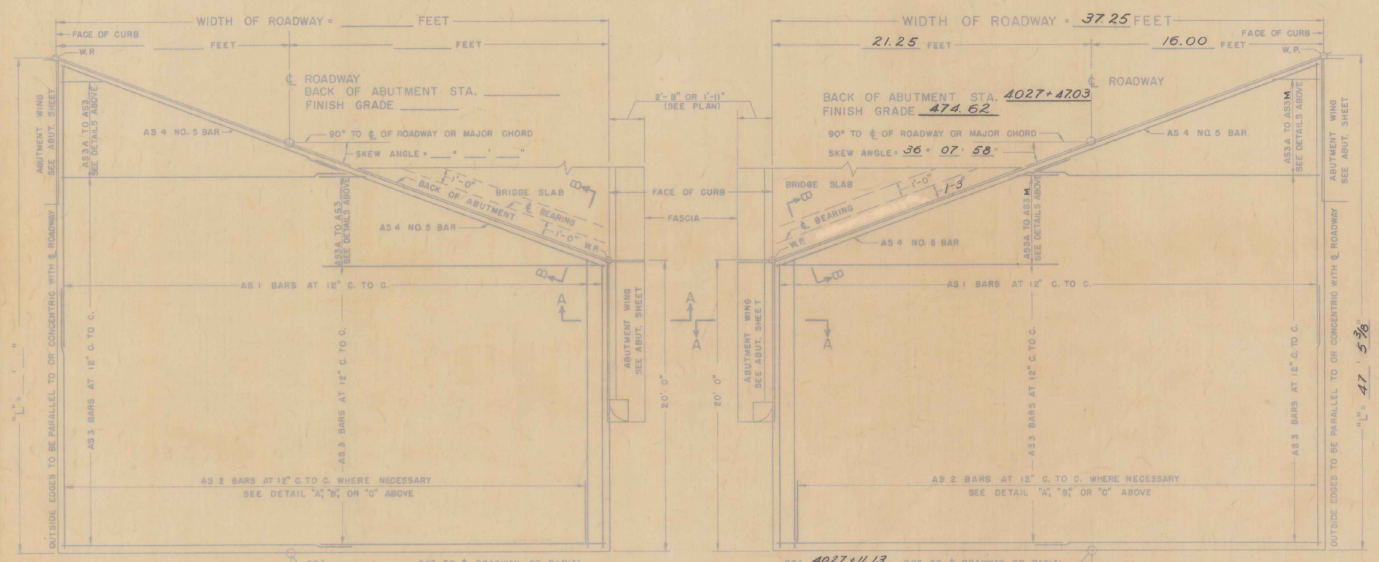
SECTION B-B
(Not applicable to this bridge)



CURB JOINT DETAIL

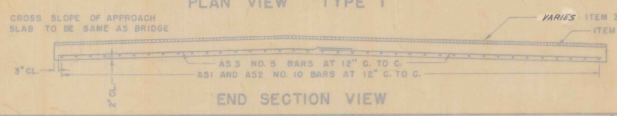


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER
(OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)

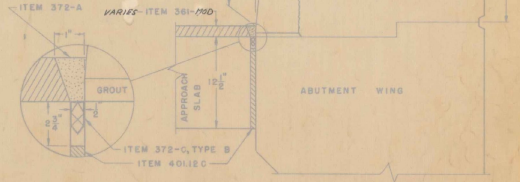


PLAN VIEW TYPE 1

PLAN VIEW TYPE 2



END SECTION VIEW



SECTION A-A
(Not applicable to this bridge)

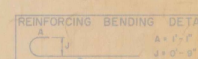
GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961, DESIGNED FOR H S 20-44 LOADING.
2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.
3. ITEM 361 (MOD) TYPE II MIX APPLIED IN TWO (2) COURSES. TOTAL DEPTH VARIES FROM 2 INCHES AT ABUTMENT END TO 3 INCHES AT ROADWAY END.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	56	
361	BITUMINOUS CONCRETE PAVEMENT, MOD.	TONS	20	
372-A	JOINT SEALER - HOT POURED	L.F.	47	
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.	47	
372-C	JOINT SEALER - PREFORMED, TYPE B	L.F.	———	
401-B	CONCRETE CLASS B	CY.	49	
402	REINFORCING STEEL	LB.	7,687	

REINFORCING BENDING DETAILS



DETAIL SHOWN IS FOR AS1 BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	A LENGTH	B LENGTH	C	WEIGHT PER FT.	A x B x C WEIGHT IN LBS.
AS 1	38				4.303	3,365.66
AS 2	37				4.303	2,905.60
AS 3	79				1.043	1,366.07
AS 4	2				1.043	50.06

SEE REINFORCING SCHEDULE

TOTAL WEIGHT = 7,687.39

REVISIONS AND CORRECTIONS

DRAWN BY: W.B.T. Jan 1965
TRACED BY: W.B.T. Jan 1965
CHECKED BY: W.M.S. Feb 1965
RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER DATE 2/4/65
APPROVED BY: _____ CHIEF ENGINEER DATE 2/8/65

DETAILS OF APPROACH SLAB FOR 37'-3" (WIDTH) FOOT BRIDGE

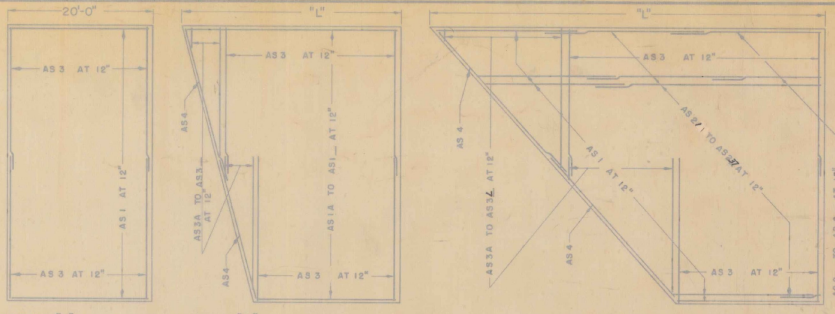
TO BE USED FOR BRIDGE AT STATION 4027+47.03 (S.B.)

LOCATION I91 over U.S. 5 (Approach Slab #1)

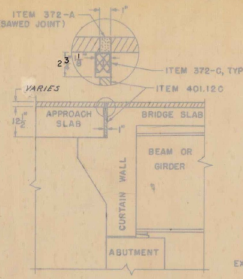
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65

TOWN OF NORWICH
ROUTE NO. I91
LOG STA. _____
DESIGNED BY G.C. Hinman CHECKED BY B.R.K.
PROJECT NO. I91-2(18)
BR 1 OF 1 SHEET 81 OF 129

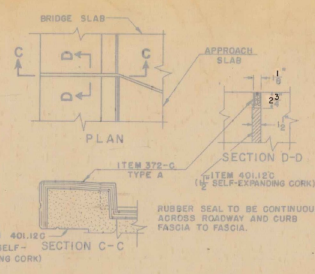
BR 115



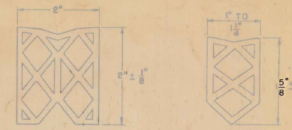
DETAIL "A" - SQUARE DETAIL "B" - "L" LESS THAN 35' DETAIL "C" - "L" GREATER THAN 35'



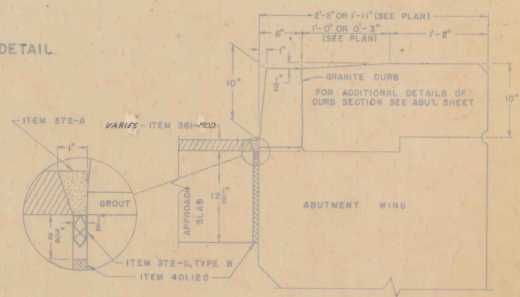
SECTION B-B
(Not applicable to this bridge)



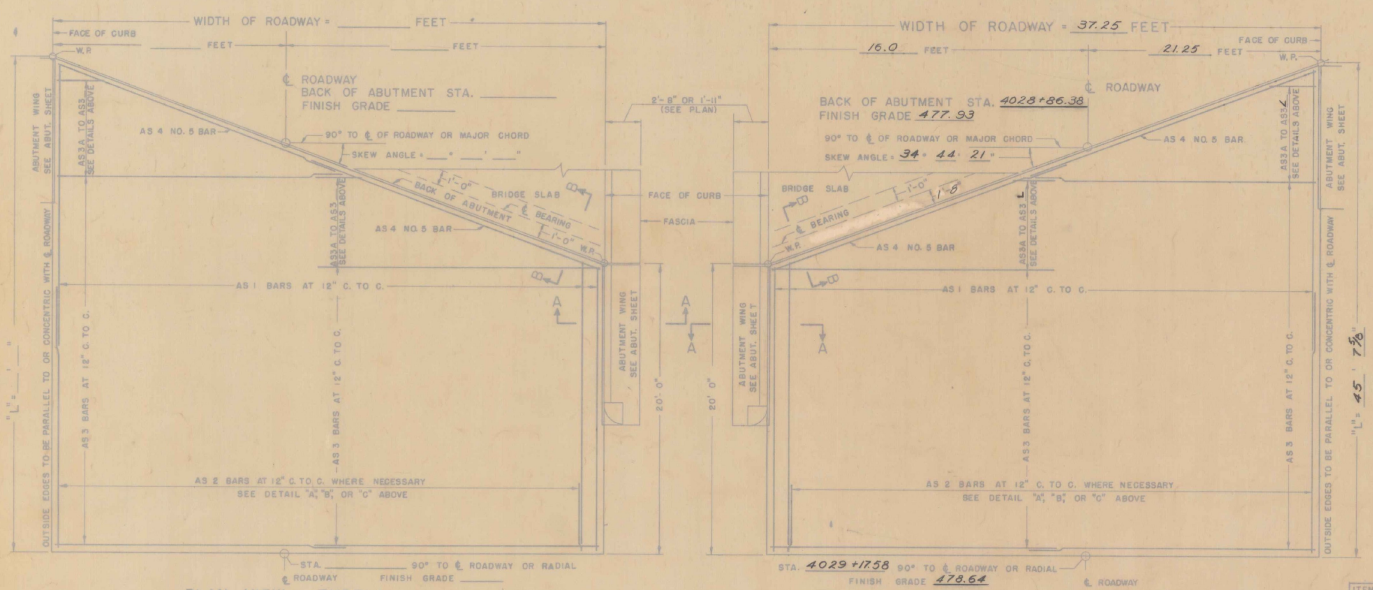
CURB JOINT DETAIL



DETAILS - ITEM 372-C JOINT SEALER - PREFORMED
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER
(OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)

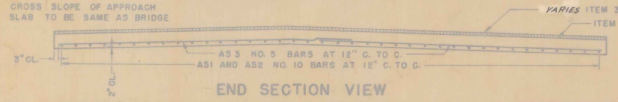


SECTION A-A
(Not applicable to this bridge)



PLAN VIEW TYPE 1

PLAN VIEW TYPE 2



END SECTION VIEW

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.

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

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
316	TAR EMULSION FOR BRIDGE FLOORS	GAL.	55	
361	BITUMINOUS CONCRETE PAVEMENT, M.O.D.	TONS	19	
372-A	JOINT SEALER - HOT POURED	L.F.	—	
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.	—	
372-C	JOINT SEALER - PREFORMED, TYPE B	L.F.	—	
401-B	CONCRETE CLASS B	CY.	48	
402	REINFORCING STEEL	LB.	7529	

REINFORCING BENDING DETAILS

A = 1'-1"
J = 0'-9"
B = 19'-6" OR VARIES
DETAIL SHOWN IS FOR AS1 BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	LENGTH	WEIGHT PER FT.	A × B × C WEIGHT IN LBS.
REINFORCING STEEL SUMMARY AS1	38		4.303	3,365.66
AS2	37		4.303	2,786.19
AS3	76		1.043	4,326.69
AS4	2		1.043	50.06
		TOTAL WEIGHT =		7,528.60

REVISIONS AND CORRECTIONS

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

RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER — DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER — DATE 2/4/65
APPROVED BY: _____ CHIEF ENGINEER — DATE 2/8/65

DETAILS OF APPROACH SLAB FOR 37'-3" (WIDTH) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 4028+86.38 (S.B.)
LOCATION I91 over U.S. 5 (Approach Slab #2)

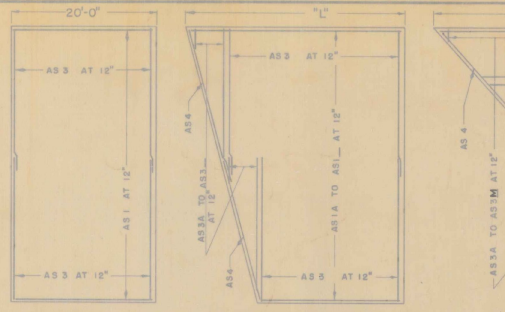
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-65

TOWN OF NORWICH
ROUTE NO. I91
LOG STA. _____

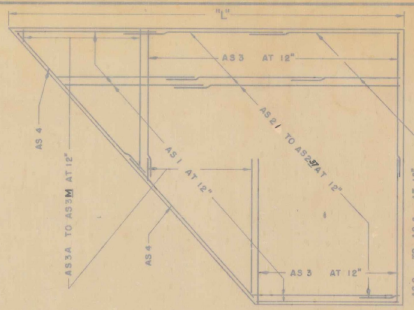
DESIGNED BY E.C. Hinman CHECKED BY B.R.K.
PROJECT NO. I91-2(18)
BR 1 OF 1 SHEET 82 OF 129

BR 116

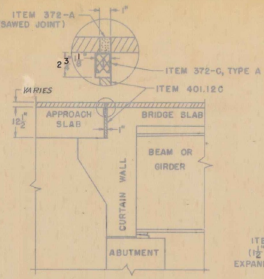


DETAIL "A" - SQUARE

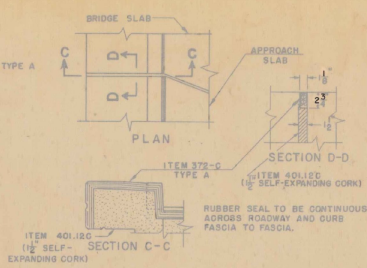
DETAIL "B" - "L" LESS THAN 35'



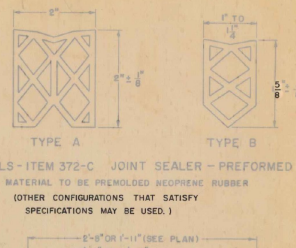
DETAIL "C" - "L" GREATER THAN 35'



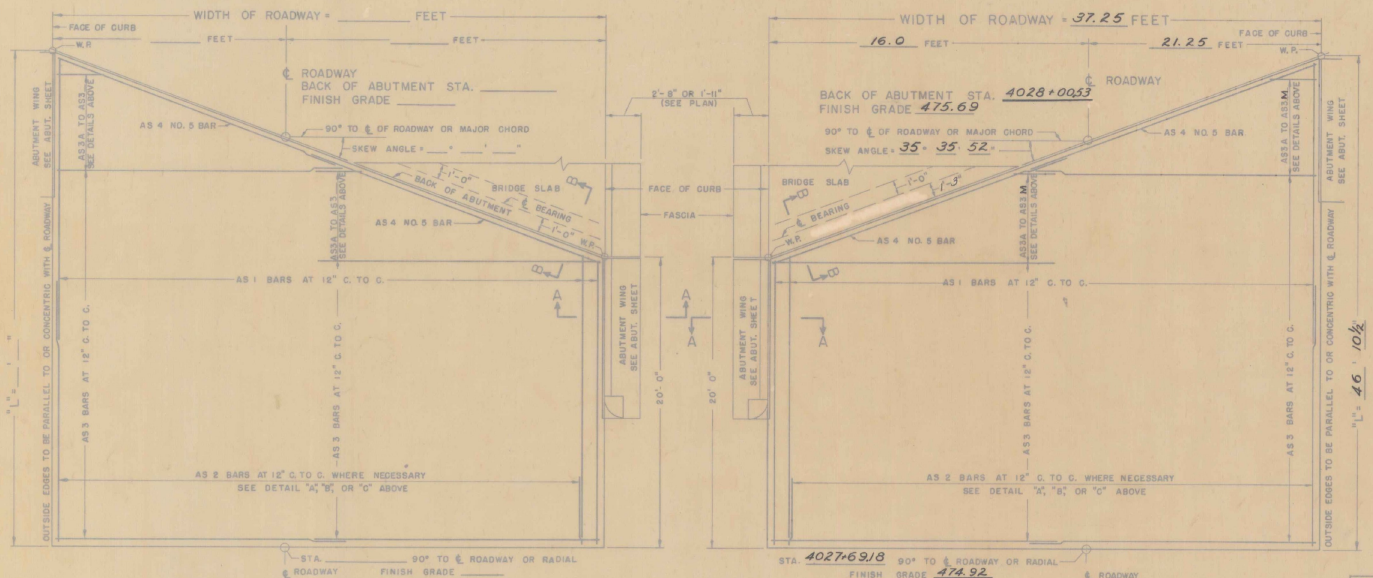
SECTION B-B
(Not applicable to this bridge)



CURB JOINT DETAIL

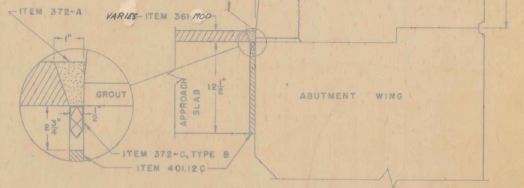


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER
(OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)

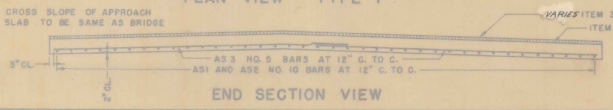


PLAN VIEW TYPE 1

PLAN VIEW TYPE 2



SECTION A-A
(Not applicable to this bridge)



END SECTION VIEW

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.
2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	56	
361-	BITUMINOUS CONCRETE PAVEMENT, MOD.	TONS	20	
372-A	JOINT SEALER - HOT POURED	L.F.	46	
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.	46	
372-C	JOINT SEALER - PREFORMED, TYPE B	L.F.	—	
401-B	CONCRETE CLASS B	CY.	48	
402	REINFORCING STEEL	LB.	7661	

REINFORCING BENDING DETAILS



DETAIL SHOWN IS FOR AS1 BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	A LENGTH	B LENGTH	C	WEIGHT PER FT.	A × B × C WEIGHT IN LBS.
AS 1	38				4.303	3,365.66
AS 2	37				4.303	2,885.70
AS 3	79				1.043	4,359.29
AS 4	2				1.043	50.06
					TOTAL WEIGHT =	7,660.71

REVISIONS AND CORRECTIONS

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

RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER — DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER — DATE 2/4/65
APPROVED BY: _____ CHIEF ENGINEER — DATE 2/4/65

DETAILS OF APPROACH SLAB FOR 37'-3" (WIDTH) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 4028+00.53 (N.B.)

LOCATION 191 over U.S. 5 (Approach Slab #3)

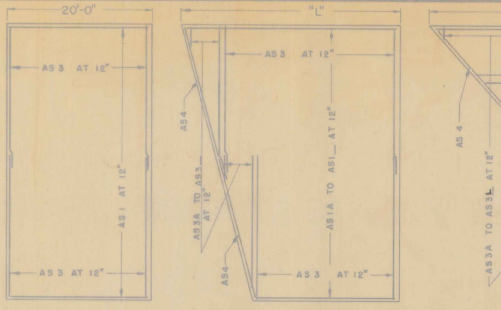
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-65

TOWN OF NORWICH
ROUTE NO. 191
LOG STA. _____

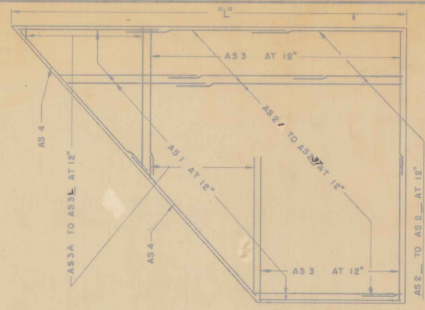
DESIGNED BY S.C. Hinman CHECKED BY B.R.K.
PROJECT NO. 191-2(18)
BR 1 OF 1 SHEET 35 OF 159
83 182

BR 117

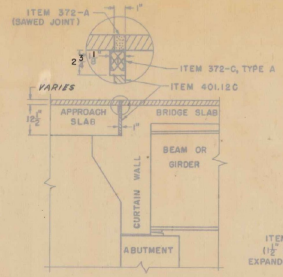


DETAIL "A" - SQUARE

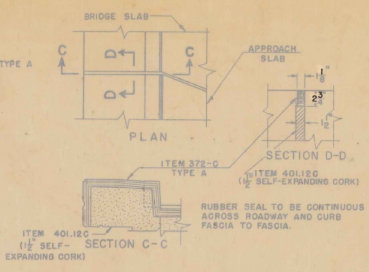
DETAIL "B" - "L" LESS THAN 35'



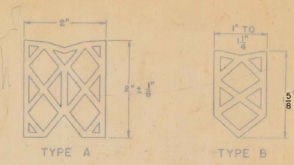
DETAIL "C" - "L" GREATER THAN 35'



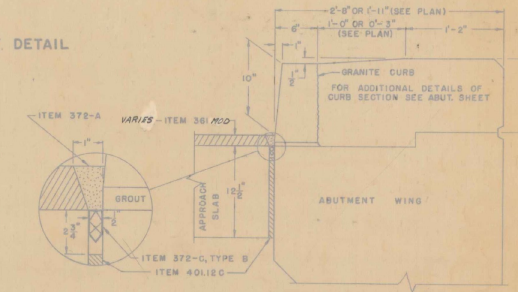
SECTION B-B
(Not applicable to this bridge)



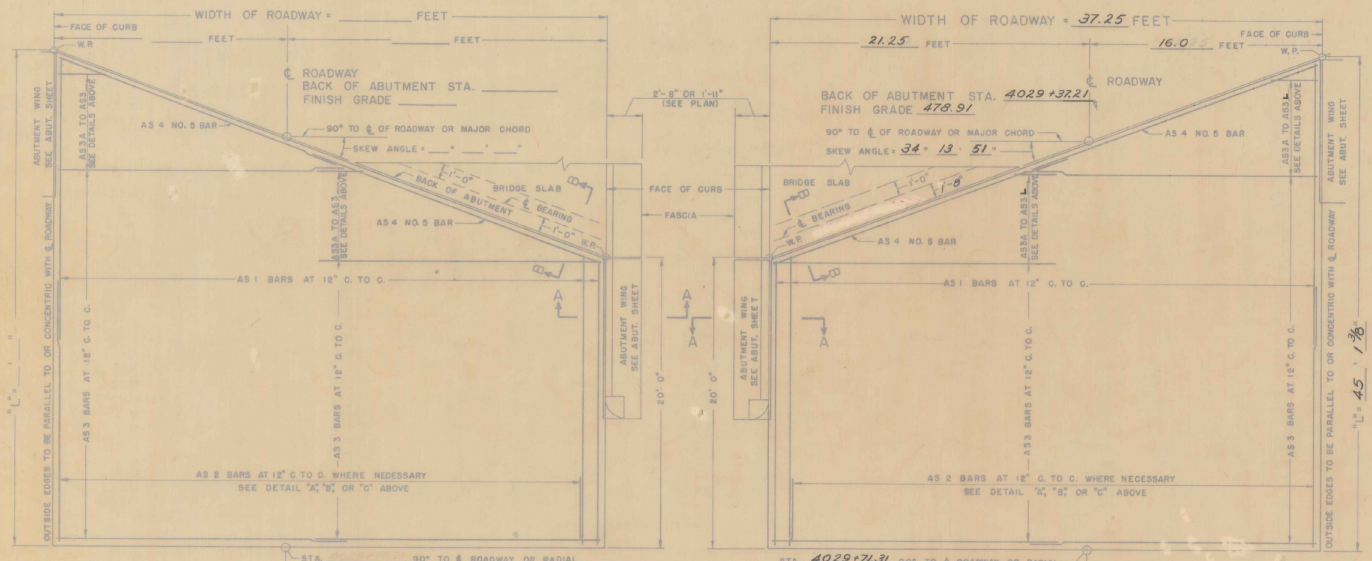
CURB JOINT DETAIL



DETAILS - ITEM 372-C JOINT SEALER - PREFORMED
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER
(OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)

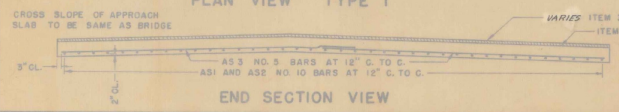


SECTION A-A
(Not applicable to this bridge)



PLAN VIEW TYPE 1

PLAN VIEW TYPE 2



END SECTION VIEW

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS 20-44 LOADING.
2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	54	
361	BITUMINOUS CONCRETE PAVEMENT, M&D.	TONS	19	
372-A	JOINT SEALER - HOT POURED	L.F.	—	
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.	—	
372-C	JOINT SEALER - PREFORMED, TYPE B	L.F.	—	
401-B	CONCRETE CLASS B	CY.	47	
402	REINFORCING STEEL	LB.	7483	

REINFORCING BENDING DETAILS

A = 1'-1"
J = 0'-8"
B = 19'-8" OR VARIES

DETAIL SHOWN IS FOR AS1 BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	LENGTH	WEIGHT PER FT.	WEIGHT IN LBS.
AS 1	38	SEE REINFORCING SCHEDULE	4.303	3,965.66
AS 2	37		4.303	2,746.39
AS 3	76		1.043	1,320.44
AS 4	2		1.043	50.06
			TOTAL WEIGHT =	7,482.55

REVISIONS AND CORRECTIONS

DRAWN BY: W.R.T. Jan 1965
TRACED BY: W.R.T. Jan 1965
CHECKED BY: W.M.S. Feb. 1965
RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER DATE 2/11/65
APPROVED BY: _____ CHIEF ENGINEER DATE 2/11/65

DETAILS OF APPROACH SLAB FOR 37'-3" (WIDTH) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 4029+37.21 (N.B.)

LOCATION I91 over U.S. 5 (Approach Slab #4)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-65

TOWN OF NORWICH
ROUTE NO. I91
LOG STA. _____

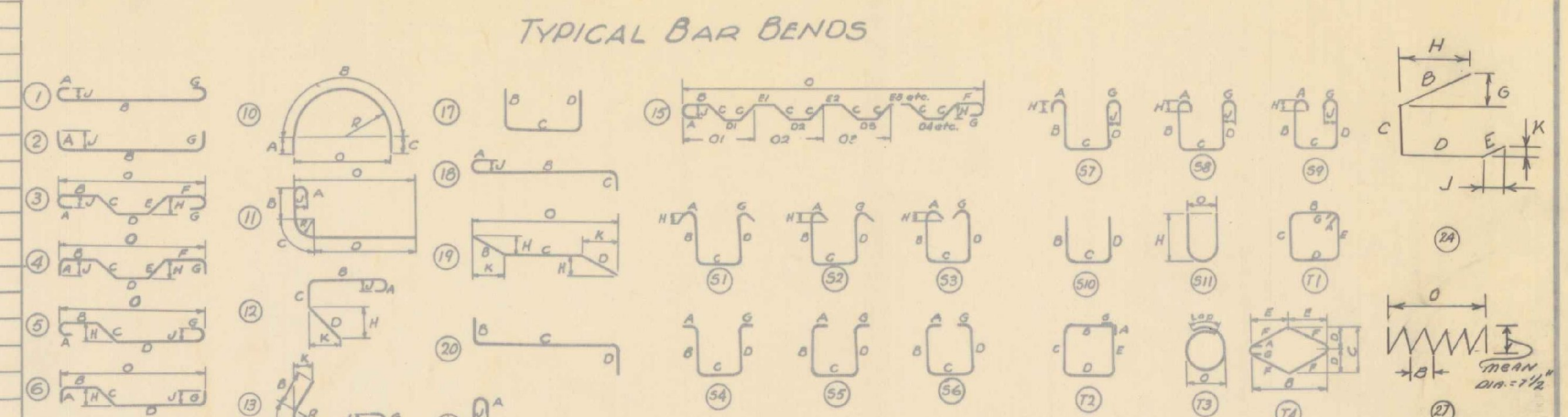
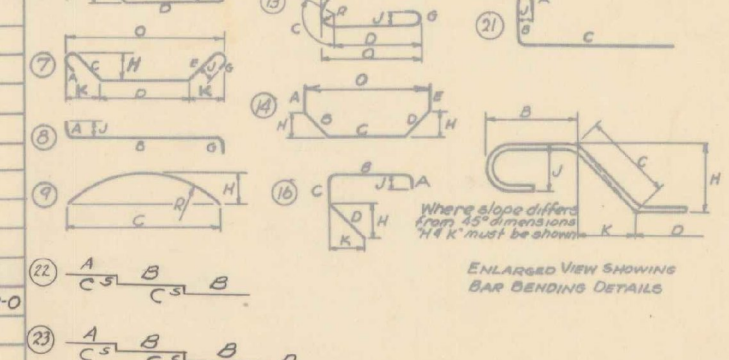
DESIGNED BY G.C. Hinman CHECKED BY B.R.W.
PROJECT NO. I91-2(18)
BR 1 OF 1 SHEET 84 OF 129

BR 118

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
1						Superstructure											
2																	
3						N.B. Bridge											
4																	
5	275	#5	17-6	S1-A5	Str.												
6	275	↑	26-0	S1-B5	↑												
7	275		13-10	S1-C5													
8	275		29-8	S1-D5													
9	344	↓	35-0	S2-501	↓												
10	86	#5	5-6	S2-502	Str.												
11																	
12	48	#6	35-0	S3-601	Str.												
13	12	#6	7-3	S3-602	Str.												
14																	
15	94*	#4	5-4	S4-4	II	0-5	1-4½	1-9	1-4½			0-5	0-3				
16	94*	#4	4-7	S4-4A	II	0-5	1-4½	1-0	1-4½			0-5	0-3				
17	92	#5	4-6	S-5	17		2-6	1-0	1-0								
18																	
19						S.B. Bridge											
20																	
21	277	#5	17-6	S1-A5	Str.												
22	277	↑	26-0	S1-B5	↑												
23	277		13-10	S1-C5													
24	277		29-8	S1-D5													
25	344	↓	35-0	S2-501	↓												
26	86	#5	6-6	S2-502	Str.												
27																	
28	48	#6	35-0	S3-601	Str.												
29	12	#6	8-0	S3-602	Str.												
30																	
31	94*	#4	5-4	S4-4	II	0-5	1-4½	1-9	1-4½			0-5	0-3				
32	93	#4	4-7	S4-4A	II	0-5	1-4½	1-0	1-4½			0-5	0-3				
33																	
34	92	#5	4-6	S-5	17		2-6	1-0	1-0								
35																	
36						Abutment #1											
37																	
38																	
39	1ea.	#5	3-0 to 11-6	1A502-1A506	Str.												
40	1ea.	↑	4-3 to 13-6	1A507-1A510	↑												
41	20		35-0	1A511													
42	42		4-9	1A522													
43	35		14-6	1A523													
44	35		5-3	1A525													
45	46		4-9	1A526													
46	20		27-6	1A562													
47	10		27-0	1A563													
48	22		27-0	1A564													
49	8	↓	29-3	1A565	↓												
50	7	#5	22-0	1A566	Str.												
51																	
52																	
53	89	#8	12-6	1A801	Str.												
54	23	#8	2-0	1A802	Str.												
55	31	#8	13-6	1A803	Str.												
56	30	#8	8-3	1A804	Str.												
57	1ea.	#8	14-0 15-3	1A805 1A807	Str.												
58																	
59	68	#11	13-6	1A1101	Str.												
60	1ea	↑	3-0 TO 12-6	1A1102-1A1112	↑												
61	1ea		13-9 TO 15-3	1A1113 1A1119													
62	1ea	↓	3-9 TO 13-6	1A1120-1A1128	↓												
63	2	#11	16-9	1A1129	Str.												
64																	
65	41⊕	#4	81-0	1A-401	27		0-6										20-0
66	5	#5	9-6	1A-501	17		4-2	1-3	4-2								
67	2ea	#5	20-4 36-9	1A512 1A521	19		7-11 9-0	12-5 27-4					2-7 4-6		7-6 7-11		19-11 35-8
68	35	#5	7-4	1A524	20		3-8	3-9									
69	1ea.	#5	10-5 12-2	1A527 1A561	19		4-5	6-0 7-9					3-1		3-1		9-1 20-10
70	16	#5	10-11	1A567	24		3-3	1-0	6-0	0-9		1-5	3-0	0-8	0-4		
71																	
72																	
73	3	#6	27-9	1A601	23	7-0	9-0	0-4	2-2								
74	3	#6	25-5	1A602	22	7-0	9-0	0-4									
75	246⊕	#6	22-6	1A603	1	0-8	21-10										
76																	
77	89	#11	9-7	1A1130	20		2-6	7-2									
78																	
79																	
80																	
81																	

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
82																	
83							WINGWALL #1										
84																	
85	20	#5	9-9	1W501	Str.												
86	28	↑	4-9	1W502	↑												
87	26		11-6	1W503													
88	8		9-6	1W504													
89	26		7-6	1W505													
90	2ea		8-0 TO 11-0	1W506-1W513													
91	1ea.		14-3 TO 16-6	1W514 1W519													
92	1ea.		20-0 TO 21-9	1W520 1W524													
93	4		6-9	1W525													
94	4		15-9	1W526													
95	10		27-6	1W527													
96	2ea.		3-0 TO 27-6	1W528 1W533													
97	2		28-9	1W534													
98	1ea.	↓	13-0 TO 15-6	1W535 1W540	↓												
99	1ea.	#5	8-9 TO 10-9	1W541 1W545	Str.												
100																	
101	7	#6	13-6	1W602	Str.												
102	6	#6	6-3	1W603	Str.												
103																	
104	16	#8	9-6	1W801	Str.												
105	9	#8	13-6	1W802	Str.												
106																	
107																	
108	16	#10	13-6	1W1001	Str.												
109																	
110	13⊕	#4	81-0	1W401	27		0-6										20-0
111																	
112	78⊕	#6	22-6	1W601	1	0-8	21-10										
113																	
114	14	#7	6-10	1W701	20		0-8	6-3									
115																	
116	9	#10	8-4	1W1002	20		2-3	6-2									
117																	
118																	
119																	
120																	
121																	
122																	
123								Abutment #2									
124																	
125	20	#5	35-0	2A501	Str.												
126	1ea	↑	8-6 TO 12-9	2A513 2A519	↑												
127	1		14-0	2A520													
128	40		4-9	2A521													
129	34		16-6	2A522													
130	45		6-9	2A524													
131	34		7-3	2A525													
132	24		27-0	2A560													
133	10		26-3	2A561													
134	24		26-6	2A562													
135	8	↓	27-9	2A563	↓												
136	6	#5	24-0	2A564	Str.												
137																	
138	89	#8	12-6	2A801	Str.												
139	23	#8	2-0	2A802	Str.												
140	29	#8	13-6	2A803	Str.												
141	28	#8	8-3	2A804	Str.												
142	1ea	#8	3-0 TO 11-9	2A805 2A809	Str.												
143																	
144	65	#11	13-6	2A1101	Str.												
145	1ea.	↑	3-0 TO 12-9	2A1102-2A1112	↑												
146	1ea.	↓	8-6 TO 13-0	2A1113-2A1127	↓												
147	2*	#11	14-0	2A1128	Str.												
148	2	#11	16-6	2A1124	Str.												
149	37⊕	#4	81-0	2A401	27		0-6										20-0
150																	
151	5	#5	9-0	2A502	17		4-2	0-9	4-2								
152	2ea.	#5	22-0 29-10	2A503-2A512	19		2-6 10-4	19-6 19-6					2-2 9-10		1-4 3-4		20-10 22-10
153	34	#5	8-0	2A523	20		3-7	4-6									
154	1ea.	#5	11-0 TO 12-3	2A526 2A559	19		5-0	6-0 7-3					3-7		3-7		9-7 10-10
155	17	#5	9-5	2A565	24		4-0	1-0	3-9	0-9		3-7	1-9	0-4	0-8		
156																	
157	3	#6	25-9	2A601	22	7-6	9-0	0-3									
158	3	#6	28-4	2A602	23	7-6	9-0	0-3	2-6								
159	222⊕	#6	22-6	2A603	1	0-8	21-10										
160																	
161	89	#11	9-6	2A1130	20		7-2	2-6									
162																	

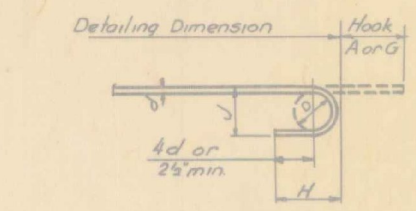
TYPICAL BAR BENDS

NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163								WINGWALL #2									
164																	
165	20	#5	17-0	2W501	Str.												
166	1ea.	↑	9-6 TO 13-0	2W502 2W513	↑												
167	1ea.		5-9 TO 6-9	2W514 2W518													
168	13*		4-9	2W519													
169	1ea		15-3 TO 24-3	2W520 2W531													
170	1ea		3-6 TO 12-6	2W532 2W543													
171	20		16-6	2W544													
172	2ea.	↓	3-0 TO 16-6	2W545 2W550	↓												
173	2	#5	18-4	2W551	Str.												
174																	
175	12*	#6	12-6	2W601	Str.												
176																	
177	12	#8	13-6	2W802	Str.												
178																	
179	1ea*	#9	9-6 TO 11-6	2W901 2W910	STR.		(2-2W901- 1ea. for all others)										
180																	
181	1ea	#11	11-6 TO 13-6	2W1101 2W1111	Str.												
182																	
183	9⊕	#4	81-0	2W401	27		0-6										20-0
184																	
185	54⊕	#6	22-6	2W602	1	0-8	21-10										
186																	
187	11	#8	7-4	2W801	20		1-3	6-2									
188																	
189	13*	#10	8-4	2W1001	20		2-3	6-2									
190																	



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft.
¼"φ	2	.167
⅜"φ	3	.376
½"φ	4	.668
⅝"φ	5	1.043
¾"φ	6	1.502
⅞"φ	7	2.044
1"φ	8	2.670
1"φ	9	3.400
1⅛"φ	10	4.303
1¼"φ	11	5.313
1½"φ	14S	7.650
2"φ	18S	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum

(4) (continued) thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

(5) ⊕Indicates piling reinforcing and quantity is not included in Item 402.

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
Superstructure - N.B.	41,714.	
Superstructure - S.B.	41,995.	
Abutment #1	21,570.	
Wingwall #1	4,456.	
Abutment #2	21,518.	
Wingwall #2	3,907.	
Sheet Total	135,160.	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORWICH
I-91 OVER RELOC. U.S. 5

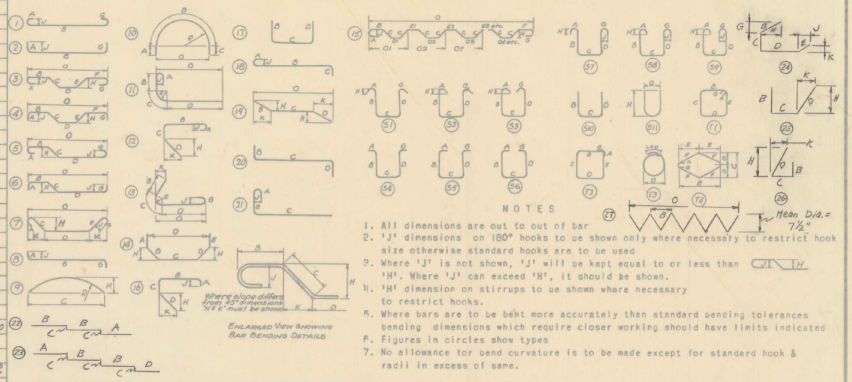
DRAWN BY J.R.C. CHECKED BY R.F.C.
PROJECT NO. I-91-2(18)
SHEET 87 OF 159

BR. 119

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
							Abutment #3										
4	20	5	35-0	3A501	Str.												
5	1 eq.		8-3 to 12-6	3A503 to 3A508													
6	1		14-0	3A519													
7	42*		4-9	3A521													
8	35		15-9	3A522													
9	45		5-9	3A524													
10	35		6-9	3A525													
11	22		27-3	3A561													
12	10		26-9	3A562													
13	24		26-9	3A563													
14	8		27-3	3A564													
15	6	5	24-9	3A565	Str.												
16																	
17	89	8	12-6	3AB01	Str.												
18	23		2-0	3AB02													
19	29		13-6	3AB03													
20	28		8-3	3AB04													
21	1 eq.	8	3-8 to 11-3	3AB05 to 3AB09	Str.												
22																	
23	1 eq.	11	8-3 to 12-6	3A1101 to 3A1115	Str.												
24	2 *		14-0	3A1116													
25	65		12-6	3A117													
26	1 eq.		3-4 to 12-8	3A118 to 3A1128													
27	2	11	16-6	3A1129	Str.												
28																	
29	38⊕	4	81-0	3A401	27		0-6										20-0
30																	
31	2 eq.	5	25-6 to 29-11	3A502 to 3A511	19		4-3 to 10-8	10-3 to 18-7				1-11 to 9-3		4-3 to 5-3			21-5 to 23-8
32	5		9-6	3A520	17		4-2	1-3	4-2								
33	35		7-4	3A523	20		3-8	3-9									
34	1 eq.		11-2 to 12-1	3A526 to 3A580	19		4-5	6-10 to 7-6				3-1		3-1			9-11 to 10-8
35	18	5	8-9	3A566	24		3-9	1-0	3-3	0-10		3-4	1-7	0-4	0-9		
36																	
37																	
38	3	6	27-10	3A601	23	7-6	8-9	0-4	2-2								
39	3	6	23-5	3A602	22	7-6	8-9	0-4									
40	228⊕	6	22-6	3A603	1	0-8	21-10										
41																	
42																	
43	89	11	9-7	3A1130	20		2-6	7-2									
44																	
45																	
46							Wingwall #3										
47																	
48																	
49	20	5	18-3	3W501	Str.												
50	1 eq.		8-6 to 13-5	3W503 to 3W514													
51	1 eq.		5-8 to 6-8	3W515 to 3W520													
52	13		4-9	3W521													
53	1 eq.		15-8 to 23-0	3W522 to 3W536													
54	1 eq.		4-0 to 13-3	3W537 to 3W547													
55	20		18-6	3W548													
56	2 eq.		7-0 to 18-5	3W549 to 3W554													
57	2	5	20-0	3W555	Str.												
58																	
59																	
60	14*	6	12-6	3W601	Str.												
61																	
62	12	8	13-6	3W802	Str.												
63																	
64	1 ** eq.	9	3-6 11-6	3W801 3W811	Str.		(2 eq. 3W901 | 3W902, 1 eq. for all others)										
65																	
66	1 eq.	11	9-6 13-3	3W1101 3W1112	Str.												
67																	
68	9⊕	4	81-0	3W401	27		0-6										20-0
69																	
70	54⊕	6	22-6	3W602	1	0-8	21-10										
71																	
72	13	8	7-4	3W801	20		1-3	6-2									
73																	
74	12	10	8-4	3W1001	20		2-3	6-2									
75																	
76																	
77							Abutment #4										
78																	
79																	
80	20	5	35-0	4A501	Str.												
81	1 eq.	5	3-8 to 12-0	4A502 to 4A574	Str.												

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	P	O
82							Abutment #4 (continued)										
83																	
84																	
85																	
86	1 eq.	5	3-0 to 13-6	4A522 to 4A523	Str.												
87	34		4-9	4A523													
88	34		17-9	4A524													
89	44		7-9	4A526													
90	34		6-9	4A527													
91	26		26-6	4A562													
92	24		26-0	4A563													
93	10		26-0	4A564													
94	8		28-3	4A565													
95	9	5	26-9	4A566	Str.												
96																	
97	87	8	12-6	4AB01	Str.												
98	23		2-0	4AB02													
99	30		13-6	4AB03													
100	29		8-3	4AB04													
101	1 eq.	8	4-3 to 15-6	4AB05 to 4AB08	Str.												
102																	
103	1 eq	11	3-8 to 12-9	4A1101 to 4A1111	Str.												
104	67		13-6	4A1112													
105	1 eq.		7-5 to 12-6	4A1113 to 4A1121													
106	1 eq.		14-0 to 15-6	4A1122 to 4A1129													
107	3 *	11	16-3	4A1130	Str.												
108																	
109	45⊕	4	81-0	4A401	27		0-6										20-0
110																	
111																	
112	2 eq.	5	20-6 to 36-3	4A502 to 4A517	19		8-7 to 11-8	11-5 to 12-9							3-3 to 5-0	8-9 to 9-4	28-8 to 32-7
113	5		9-0	4A517	17		4-2	0-9	4-2								
114	34		7-9	4A525	20		3-7	4-3									
115	1 eq.		11-0 to 12-7	4A528 to 4A561	19		5-0	6-6 to 7-7						3-7		3-7	9-7 to 11-2
116	18	5	12-5	4A567	24		4-0	1-0	6-9	0-9				1-9	3-7	0-8	0-4
117																	
118																	
119	3	6	27-6	4A601	23	7-3	8-9	0-6	2-2								
120	3	6	25-2	4A602	22	7-3	8-9	0-4									
121	246⊕	6	22-6	4A603	1	0-8	21-10										
122																	
123	87	11	9-6	4A1131	20		7-2	2-6									
124																	
125																	
126							Wingwall #4										
127																	
128																	
129	54	5	11-6	4W501	Str.												
130	10		5-3	4W502													
131	8		9-6	4W503													
132	26		7-6	4W504													
133	20		5-6	4W505													
134	34		4-9	4W506													
135	2 eq		3-3 to 21-0	4W507 to 4W514													
136	1 eq.		15-2 to 21-0	4W515 to 4W530													
137	1 eq.		14-9 to 21-0	4W531 to 4W536													
138	1 eq.		24-3 to 26-9	4W537 to 4W542													
139	4		8-6	4W543													
140	4		17-6	4W544													
141	4		26-6	4W545													
142	10		35-0	4W546													
143	2 eq		8-0 to 32-6	4W547 to 4W563													
144	4		20-9	4W564													
145	1 eq.		13-3 to 17-3	4W565 to 4W577													
146	1 eq.		7-0 to 9-8	4W578 to 4W579													
147	1 eq.	5	13-6 to 13-0	4W580 to 4W585	Str.												
148																	
149	13	6	12-6	4W602	Str.												
150	8	6	13-6	4W604	Str.												
151	7	6	6-3	4W605	Str.												
152																	
153	16	8	9-6	4W801	Str.												
154	13	8	13-6	4W803	Str.												
155																	
156	24	10	13-6	4W1001	Str.												
157																	
158	19⊕	4	81-0	4W401	27		0-6										20-0
159																	
160	14	6	5-0	4W601	20		0-7	4-6									
161	114⊕	6	22-6	4W603	1	0-8	21-10										
162																	

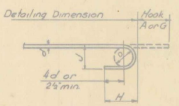
Typical Bar Bends



NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated.
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163																	
164							Wingwall #4 (continued)										
165																	
166																	
167	14	8	7-4	4W802	20		1-3	6-2									
168																	
169	14	10	8-4	4W1002	20		2-3	6-2									
170																	
171							South Closure Wall 1C										
172																	
173	40	5	23-6	1C501	Str.												
174	31		4-9	1C502													
175	31		23-6	1C503													
176	31		12-0	1C504													
177	64		23-6	1C505													
178	9	5	7-3	1C506	Str.												
179																	
180	23	6	13-6	1C602	Str.												
181	22	6	6-9	1C603	Str.												
182	2 eq	6	7-6 to 12-6	1C604 to 1C608	Str.												
183																	
184	62*	8	13-6	1C801	Str.												
185																	
186	43	11	13-6	1C1101	Str.												
187	2 eq.	11	3-6 to 12-8	1C1102 to 1C1111	Str.												
188	4	11	16-6	1C1112	Str.												
189																	
190																	



Standard Hook Detail

Bar Sizes

Equivalent Size	Present Number	Weight per ft
¼"	2	.167
⅜"	3	.376
½"	4	.668
⅝"	5	1.043
¾"	6	1.502
⅞"	7	2.044
1"	8	2.670
1"	9	3.400
1⅛"	10	4.303
1¼"	11	5.313
1⅜"	14 S	7.650
2"	18S	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

(5) ⊕ Indicates piling reinforcing and quantity is not included in Item 402

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
Abutment #3	21,403	
Wingwall #3	4,195	
Abutment #4	21,378	
Wingwall #4	6,634	
South Closure Wall		
See BR 121 for Total Quantity		
Sheet Total	54,210	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORWICH
I-91 OVER RELOC. U.S. 5

DRAWN BY R.F.C. CHECKED BY B.R.K.
PROJECT NO. I-91-2(18)
SHEET 88 OF 159

BR 120

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
							South Closure Wall 1C (continued)										
3	27⊕	4	81-0	1C401	27		0-6									20-0	
5	8	5	7-1	1C507	25		3-0	0-8	3-6				2-1		2-9		
6	8	5	7-8	1C508	26		2-3	2-0	3-6				2-1		2-9		
8	162⊕	6	22-6	1C601	1	0-8	21-10					/					
10	61	10	8-4	1C1001	26		2-3	6-2	/								
							North Closure Wall										
15	40	5	23-3	2C501	Str.												
16	30	↕	4-9	2C502	↕												
17	30		25-6	2C503													
18	30		13-6	2C504													
19	72		23-0	2C505													
20	9	5	7-3	2C506	Str.												
22	24	6	13-6	2C602	Str.												
23	23	6	6-3	2C603	Str.												
24	2 ea	6	3'-6 to 12'-6	2C604 to 2C608	Str.												
25																	
26	60*	8	13-6	2C801	Str.												
28	43	11	13-6	2C1101	Str.												
29	2 ea	11	3'-0 to 12'-6	2C1102 to 2C1112	Str.												
30	4	11	16-9	2C1111	Str.												
32	27⊕	4	81-0	2C401	27		0-6									20-0	
34	8	5	7-1	2C507	25		3-0	0-8	3-6				2-1		2-9		
35	8	5	7-8	2C508	26		2-3	2-0	3-6				2-1		2-9		
37	162⊕	6	22-6	2C601	1	0-8	21-10					/					
38	60*	10	8-4	2C1001	17		2-3	6-2	/								
							Approach Slab #1										
44	53	5	19-6	1AS3	Str.												
45	2 ea	5	2'-8 to 18'-6	1AS3-A to 1AS3-N	Str.												
46	2	5	24-0	1AS4	Str.												
48	1 ea	10	5'-0 to 31'-6	1AS2-1 to 1AS2-37	Str.												
50	38	10	20-7	1AS1	1	1-1	19-6							0-9			
							Approach Slab #2										
55	52	5	19-6	2AS3	Str.												
56	2 ea.	5	2'-8 to 18'-9	2AS3-A to 2AS3-Z	Str.												
57	2	5	24-0	2AS4	Str.												
59	1 ea	10	5'-0 to 32'-6	2AS2-1 to 2AS2-37	Str.												
61	38	10	20-7	2AS1	1	1-1	19-6							0-9			
							Approach Slab #3										
66	53	5	19-6	3AS3	Str.												
67	2 ea.	5	2'-3 to 18'-9	3AS3-A to 3AS3-N	Str.												
68	2	5	24-0	3AS4	Str.												
70	1 ea	10	5'-0 to 31'-3	3AS2-1 to 3AS2-37	Str.												
72	38	10	20-7	3AS1	1	1-1	19-6							0-9			
							Approach Slab #4										
76	52	5	19-6	4AS3	Str.												
77	2 ea	5	2'-3 to 18'-3	4AS3-A to 4AS3-N	Str.												
78	2	5	24-0	4AS4	Str.												
80	1 ea.	10	5'-0 to 29'-6	4AS2-1 to 4AS2-37	Str.												

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
							Approach Slab #4 (continued)										
84	38	10	20-7	4AS1	1	1-1	19-6							0-9			
85																	
86																	
87																	
88																	
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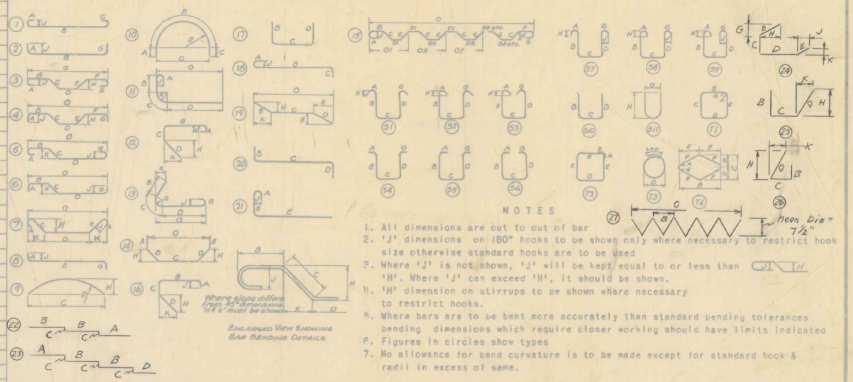
Typical Bar Bends



Notes

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than ½"H". Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163																	
164																	
165																	
166																	
167																	
168																	
169																	
170																	
171																	
172																	
173																	
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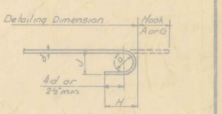


Standard Hook Detail

Bar Sizes

Equivalent Size	Present Number	Weight per ft
4⁄8"	2	.167
5⁄8"	3	.376
6⁄8"	4	.668
7⁄8"	5	1.043
8⁄8"	6	1.502
9⁄8"	7	2.044
1"	8	2.670
1"	9	3.400
1 6⁄8"	10	4.303
1 4⁄8"	11	5.313
1 5⁄8"	14.5	7.650
2"	18S	13.600

General Notes

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum

(N) (continued) thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

(5) Indicates piling reinforcing and quantity is not included in Item 402

Estimated Quantities

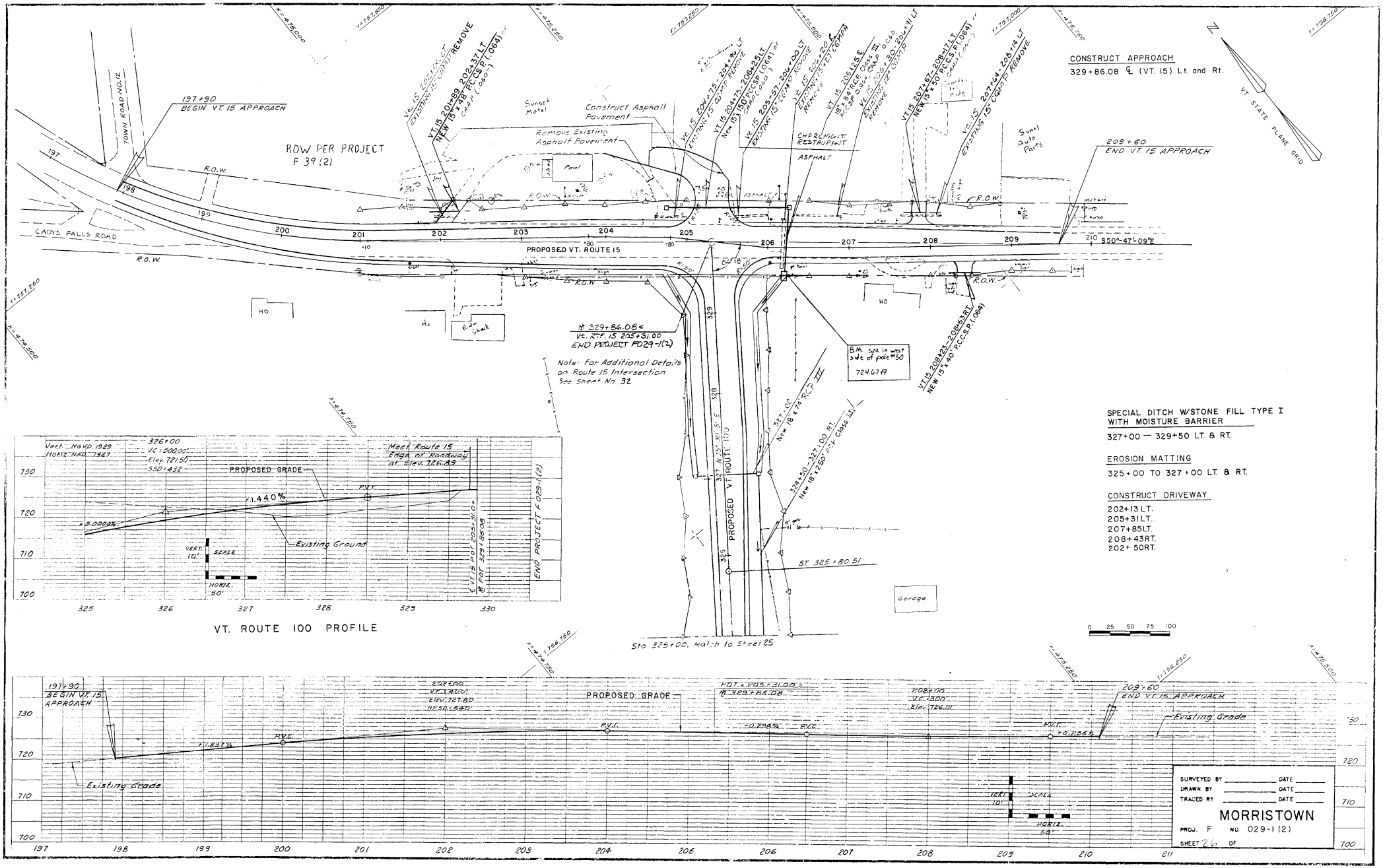
Location	Plan (Lbs)	Final (Lbs)
South Closure Wall	13528	
North Closure Wall	13564	
Approach Slab #1	7687	
Approach Slab #2	7529	
Approach Slab #3	7661	
Approach Slab #4	7483	
Sheet Total	57452	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

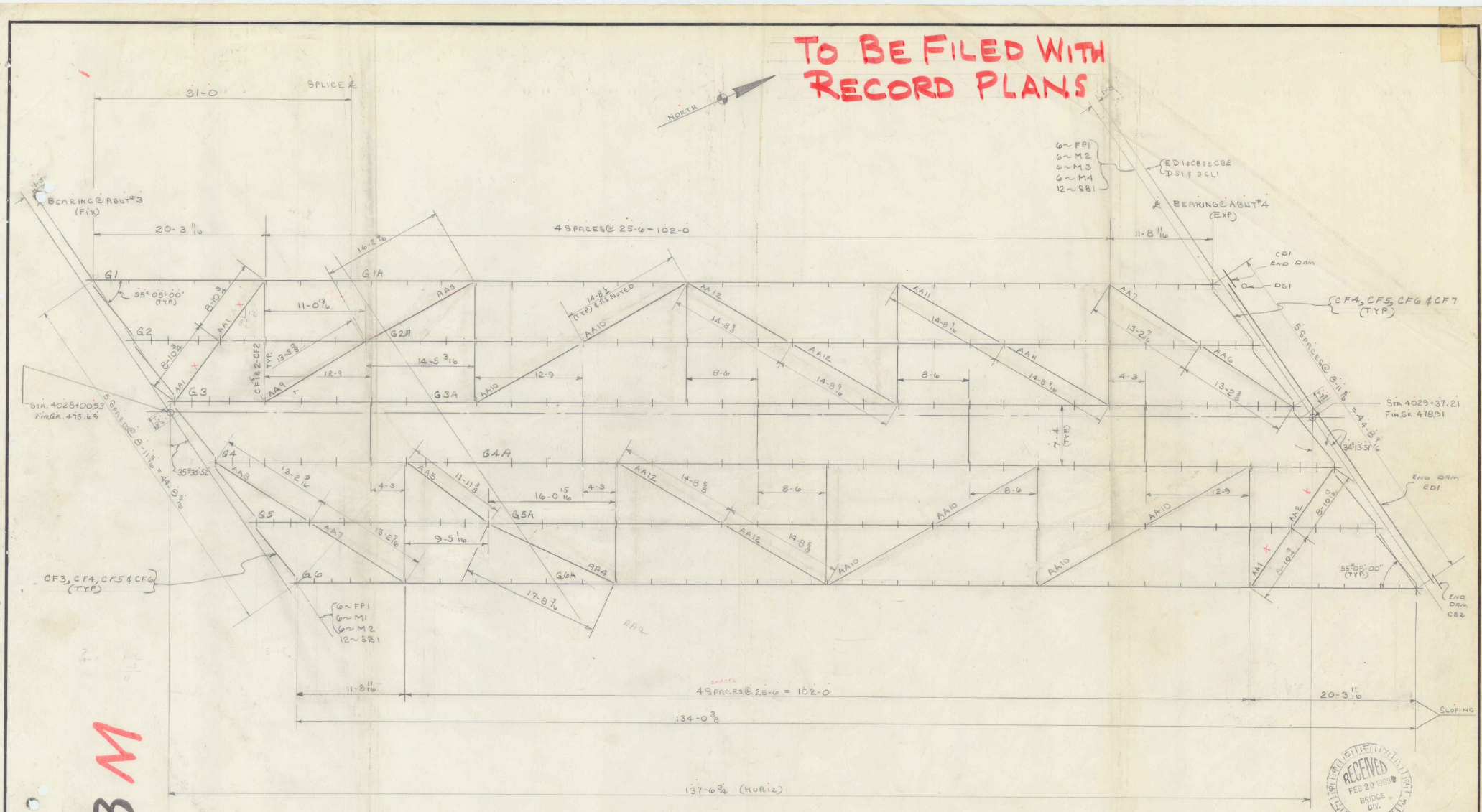
TOWN OF NORWICH
I-91 OVER RELOC. U.S. 5

DRAWN BY R.F.C. CHECKED BY B.R.K.
PROJECT NO. I-91-2(18)
SHEET 89 OF 159

BR 121


CONSTRUCT APPROACH
329+86.08 ℄ (VT. 15) Lt. and Rt.
197+90
BEGIN VT. 15 APPROACH
209+60
END VT. 15 APPROACH
ROW PER PROJECT
F 39(2)
TOWN ROAD NO. 12
CADYS FALLS ROAD
R.O.W.
PROPOSED VT. ROUTE 15
Construct Asphalt Pavement
Remove Existing Asphalt Pavement
Sunset Motel
Pool
Sand Auto Parts
ASPHALT
H0
Ridge Stake
VT. 15 201+89 202+37 LT. REMOVE EXISTING 15" CMP
VT. 15 201+89 202+37 LT. NEW 15"x48" PC.CS.P. (1.064) CMP (0.060")
VT. 15 204+75 - 204+94 RT. REMOVE EXISTING 15" CMP
VT. 15 204+75 - 208+25 LT. NEW 15" 150 PC.CS.P. (0.064) or CMP (0.060")
VT. 15 208+25 LT. REMOVE EXISTING 15" CMP
VT. 15 208+57 - 208+00 LT. REMOVE EXISTING 15" CMP
CHEZ MART RESTRUPTWIT
VT. 15 208+25 - 220 REMOVE EXISTING 15" CMP
VT. 15 208+25 LT. 18"x84" RCP CLASS III or 85"x58" CMP 0.064" NEW
VT. 15 208+30 - 208+79 LT. EXISTING 12" CMP TO REMOVE
VT. 15 207+67 - 208+17 LT. NEW 15"x50" PC.CS.P. (0.064) or CMP (0.060")
VT. 15 207+64 - 208+14 LT. EXISTING 15" CMP TO REMOVE
N 329+86.08 E
Vt. Rte. 15 205+31.00
END PROJECT F029-1(2)
Note: For Additional Details on Route 15 Intersection See Sheet No. 32
B.M. spk in west side of pole #50
724.67 ft
VT. 15 208+23 - 208+63 RT. NEW 15"x40' PC.CS.P. (0.064)
VT. ROUTE 100
New 18"x74' RCP III
New 18"x250' RCP CLASS III
ST 325+80.51
Garage
Sta 325+00, Match to Sheet 25
SPECIAL DITCH W/STONE FILL TYPE I WITH MOISTURE BARRIER
327+00 — 329+50 LT. & RT.
EROSION MATTING
325+00 TO 327+00 LT. & RT.
CONSTRUCT DRIVEWAY
202+13 LT.
205+31 LT.
207+85 LT.
208+43 RT.
202+50 RT.
VT. STATE PLANE GRID
Vert. NGVD 1929
Horiz. NAD 1927
326+00
VC = 500.00'
Elev. 721.50
S50°-43'-E
PROPOSED GRADE
+1.440%
+5.0000%
P.V.T.
Existing Ground
Meet Route 15 Edge of Roadway at Elev. 726.89
END PROJECT F 029-1(2)
VERT. SCALE 10'
HORIZ. 50'
VT. ROUTE 100 PROFILE
197+90
BEGIN VT. 15 APPROACH
202+00
VC = 300'
Elev. 727.80
N52°-54'E
PROPOSED GRADE
+1.837%
P.V.C.
P.V.T.
Existing Grade
205+31.00 =
N 329°-86.08
-0.298%
208+00
VC = 300'
Elev. 726.51
-0.726%
209+60
END V.T. 15 APPROACH
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY _____ DATE _____
MORRISTOWN
PROJ. F NO. 029-1(2)
SHEET 26 OF

TO BE FILED WITH RECORD PLANS



1988 M

NORTH BOUND FRAMING PLAN

~ ERECTOR NOTE ~
ALL CROSS FRAME PIECE MARKS ARE PREFIX WITH CF

RECEIVED FEB 20 1968 BRIDGE DIV.

NORTH BOUND

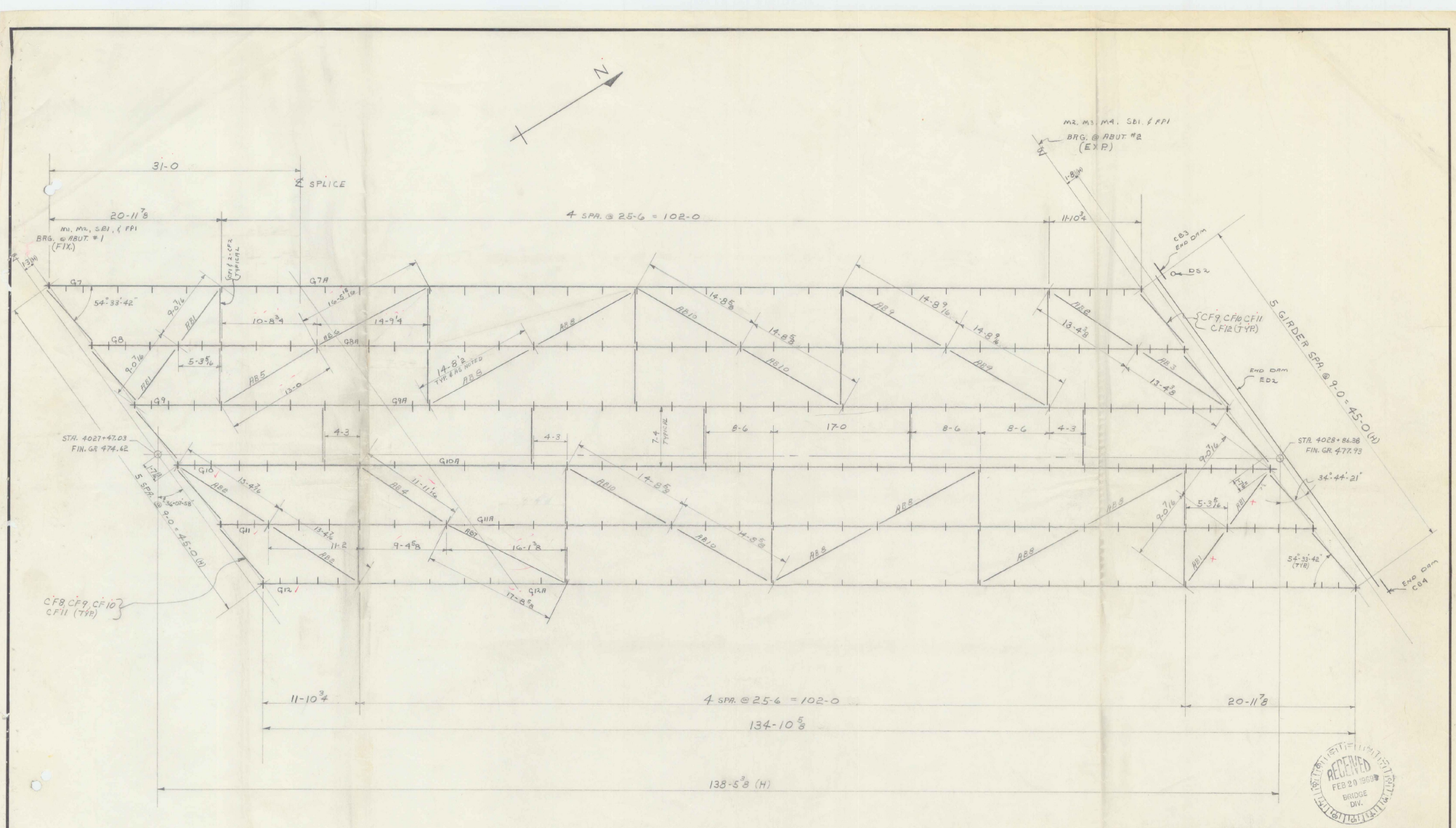
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	RLM	1-20-67
CK'D BY	HP	3-31-67
HOLES		
BOLTS		
PAINT	RL (VT STEEL)	

PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & CONST CO. INC
ARCHITECT STATE OF VT DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. E1

PROJ. NO. I 91-2(13)

PRINT RECORD		
NO.	FOR	DATE
3	APP.	3-31
4	SHOP DWGS	4-25
5	FIELD STEEL	5-24
1	CUST	7-25
2	STOCK	1-7



RECEIVED
FEB 20 1969
BRIDGE
DIV.

SOUTH BOUND FRAMING PLAN

1- ALL DIMENSIONS ARE ON SLOPE UNLESS NOTED (H)
2- ALL BOLTS BOLTED FOR SHIPPING SHALL BE TORQUED ON JOB SITE BY ERECTOR

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

REV. PER. APP. 4-17-67 HP

SOUTH BOUND

		DATE
DRAWN BY	AFL	2/6/67
CK'D BY	HP	2-24-67

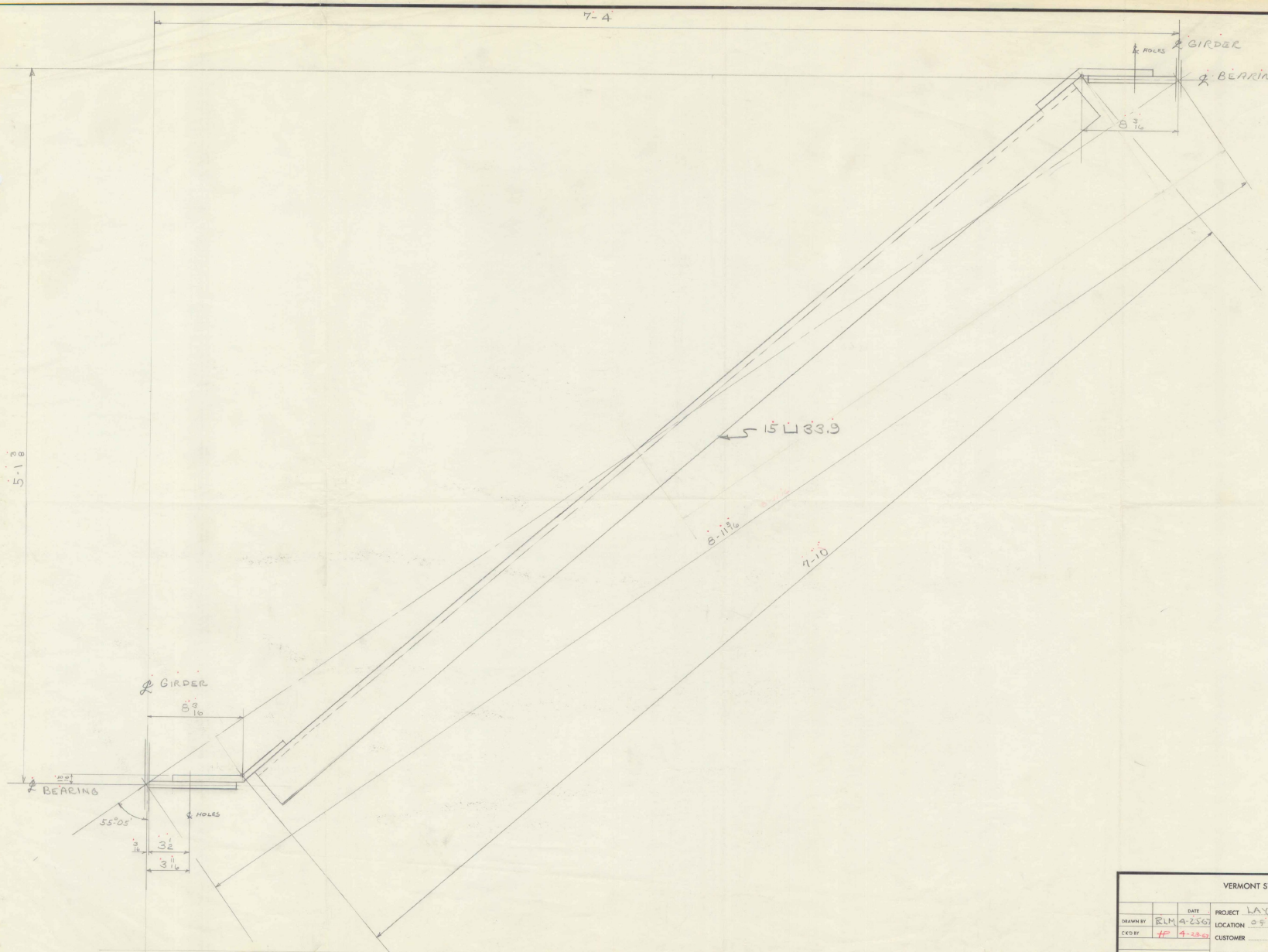
HOLES
BOLTS
PAINT RL (VT. SPEC.)

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH VERMONT
CUSTOMER E. T. O'NEILL & SONS CONST. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. E 2

PRINT RECORD

NO.	FOR	DATE
3	APP	3-9
8	[illegible]	4-24
5	FIELD SAFE	5-24
1	Cust	7/28
2	State	1-2

FM T-65 GCP



RECEIVED
FEB 20 1969
BRIDGE
DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

PROJ F 91-2(18)

		DATE
DRAWN BY	RLM	9-25-67
CK'D BY	HP	4-23-68

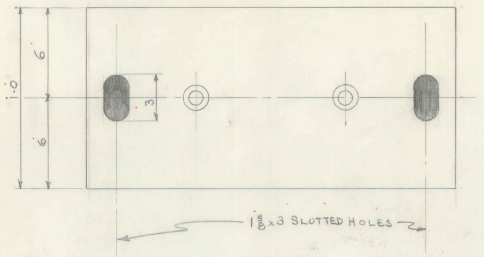
PROJECT LAYOUT OF CROSSFRAME
LOCATION OF SHEET #2 & 3
CUSTOMER
ARCHITECT
JOB NO. 67-1286
SHEET NO. 2&3-E

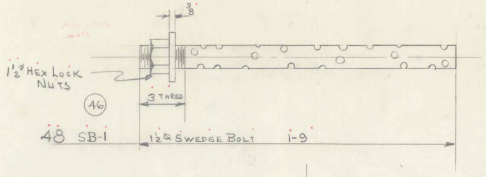
HOLES
BOLTS
PAINT

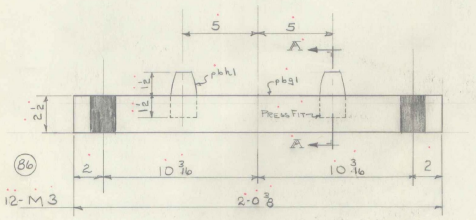
PRINT RECORD

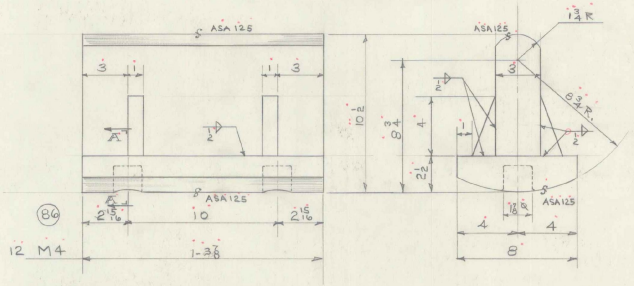
NO.	FOR	DATE
3	FAP	5-3
2	STATE	1-2

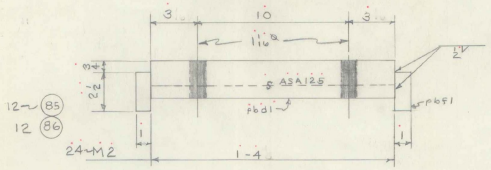
SM 7-65 GCP

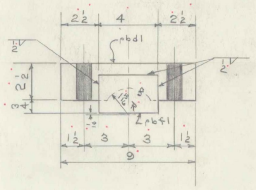


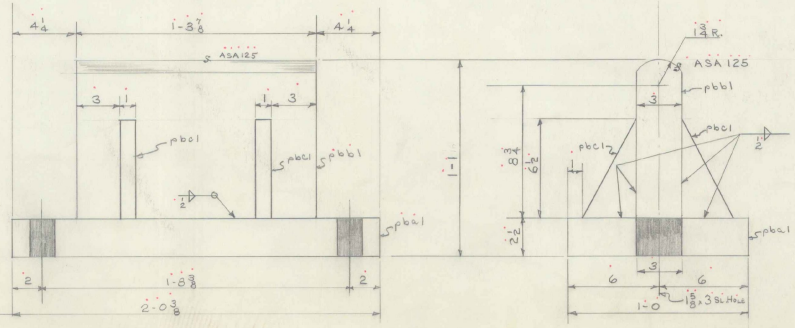


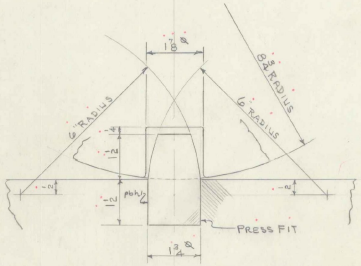












ALL RADIUS 6" UNLESS OTHER NOTED

SECTION AA

SHOP NOTE
CONTACT SURFACES OF ROCKERS TO BE GIVEN SHOP COAT OF WHITE LEAD & TALLOW. PINTEL HOLES ARE TO BE FILLED WITH GRAPHITE & GREASE AT TIME OF PLACEMENT. REMAINDER TO BE GIVEN 3 COATS OF PAINT IN ACCORDANCE WITH VT SPEC. 409.03

RECEIVED FEB 20 1968 BRIDGE DIV.

SHOP INSPECTION
BY_____

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	

JOB NO. _____ SHEET NO. _____

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ROCKER PEDISTAL					
		12-M1					
12	pbd1	PL 12 x 2½	2	0⅜	PES 60x2½x10'-0	2486 ✓	
12	pbd1	PL 10½ x 3	1	3⅜	PES 36x3x10'-0 (85)	1700 ✓	
48	pbc1	BAR 3½ x 1	0	6½	PES 60x3½x10'-0	309 ✓	
							4495 ✓
		24-M2					
24	pbd1	PL 9 x 2½	1	4	PES 60x2½x10 (85)	2448 ✓	
48	pbf1	BAR 2½ x 1	0	4	PES @ 20 ✓ (86)	136 ✓	
							2584 ✓
		12-M3					
12	pbg1	PL 12 x 2½	2	0⅜	PES 60x2½x10 (84)	2486 ✓	
24	pbk1	1¾ R ROD	0	3	OLD AM. SEE ALSO PO 89561	49 ✓	
							2535 ✓
		12-M4					
12	pbk1	BAR 8 x 2½	1	3⅜	PES 60x2½x10'-0	1079 ✓	
12	pbm1	BAR 8 x 3	1	3⅜	PES 36x3x10 (84)	1295 ✓	
48	pbj1	BAR 1½ x 1	0	4	PES 60x1½x10'-0	82 ✓	
							2456 ✓
		48-SB1					
48	SB1	1½ ROD	1	9	PES @ 80 ✓	505 ✓	
48		1½ WASHER	0	0⅜	STK (46)	28 ✓	
48		1½ HEX LOCK NUTS			ORD	45 ✓	
							578 ✓
							12618 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

NORTH BOUND
PROJ. I 91-2(18)

		DATE
DRAWN BY	RLM	1-25-67
CKD BY	[illegible]	2-13-67

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH VERMONT
CUSTOMER E.J. O'NEIL & SONS CONST. CO.
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. BP1

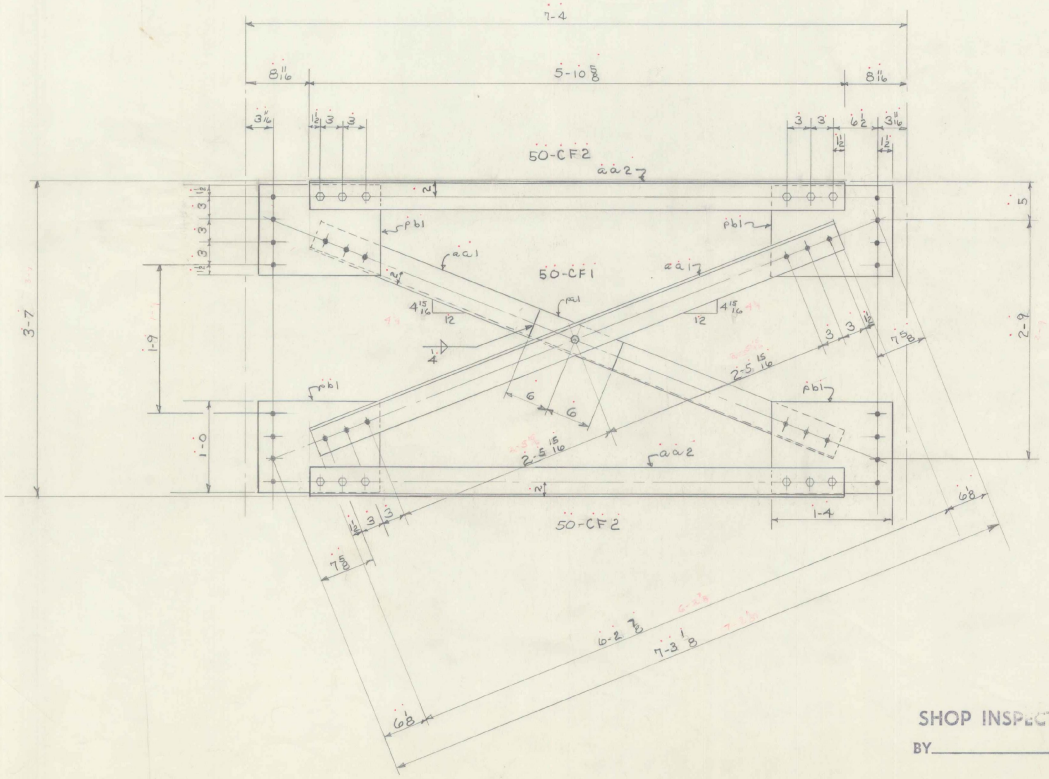
HOLES NOTED
BOLTS
PAINT RL (VT SPEC)

PRINT RECORD

NO.	FOR	DATE
3	APP.	2-15
4	SHOP	3-3
2	STATE	5/24
1	CUST	7/28
2	STATE	1-2

✓ X

SM 10-63 GCP



SHOP INSPECTION

BY_____

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	

JOB NO. ..... SHEET NO. .....

ASTM - A36

BILL OF MATERIAL

(52)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
			50 CROSS FRAME CF1					
	100	aa1	L 4 x 4 x 3/8	6	2 1/2	ORDE40 B89351	6115 ✓	
	50	pb1	BAR 4 x 7/16	1	0	STK	298 ✓	
	50		7/8" HITEN BOLT	0	2 1/2	STK	48 ✓	
	50		7/8" HARD WASHERS				5 ✓	6466
			100 - TOP & BOTTOM CF2					
	100	aa2	L 4 x 4 x 3/8	5	10 1/2	ORDE40 B89351	5768 ✓	
	200	pb1	PL 12 x 7/16	1	4	ORD45x10-B29345	4973 ✓	
	600		7/8" HITEN BOLT	0	2 1/2	STK	578 ✓	
	600		7/8" HARD WASHERS				60 ✓	
			1/2" WELD	33	4		5 ✓	11184 ✓
								17650 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

SD - Bourne
Proj. I91-2-(16)

		DATE
DRAWN BY	RLM	1-30-67
OK'D BY	HP	2-7-67

HOLES 15/16
BOLTS 7/8
PAINT RLC (VT SPEC)

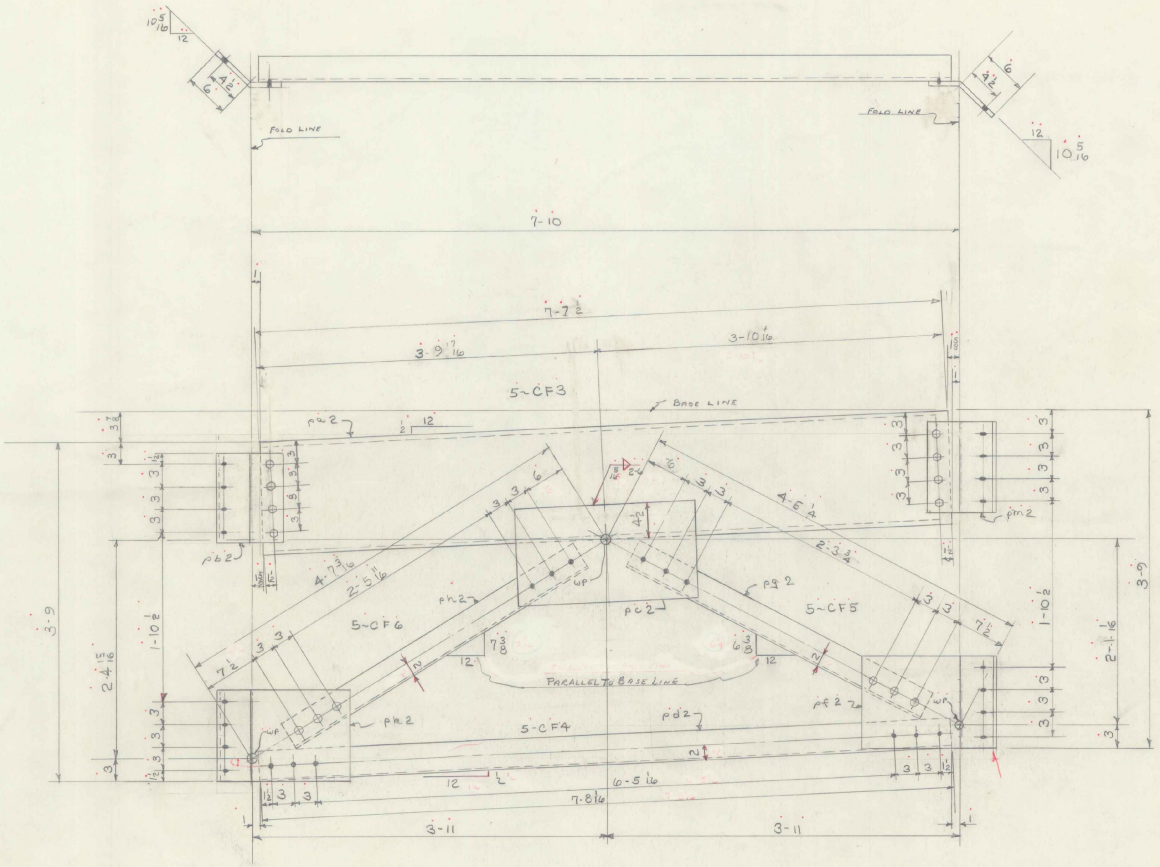
PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEILL & SONS CONST.
ARCHITECT STATE OF VERMONT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 1

PRINT RECORD

NO.	FOR	DATE
3	APP	3-8
4	SHOP	4-25
2	STATE	5-24
1	COST	7-21
2	STATE	12

RECEIVED FEB 20 1968 BRIDGE DIV.

SM 10-63 QCP



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		5-CF3					
5	PL2	15 L 33.9	7	7 1/2	@ 38-0 ORD A572-50 GR 50 & SC-99	1292 ✓	
5	PD2	PL 10 1/2 x 5/8	1	0	BB9949	112 ✓	
5	PD2	PL 13 x 7/16	2	0	BB9343	142 ✓	
5	PH2	PL 10 1/2 x 5/8	1	0	A572 GR 50 & SC-99 BB9949 @ 36-0	112 ✓	
40		5/8" HITEN BOLTS	0	2 1/4		37 ✓	
40		5/8" HARD WASHER				4 ✓	
		5-CF4					1750 ✓
5	PD2	L 4 x 4 x 3/8	7	8 1/16	ORD @ 40 BB9951	376 ✓	
							376 ✓
		5-CF5					
5	PG2	L 4 x 4 x 3/8	3	6 3/4	ORD @ 40 BB9951	175 ✓	
5	PF2	PL 13 1/2 x 7/16	1	0	ORD @ 40 BB9949	145 ✓	
15		5/8" HITEN	0	2	STK	13 ✓	
15		5/8" HARD WASHER				2 ✓	
		5-CF6					335 ✓
5	PH2	L 4 x 4 x 3/8	3	8 1/16	ORD @ 40 BB9951	183 ✓	
5	PR2	PL 13 x 7/16	1	0	ORD @ 40 BB9343	142 ✓	
15		5/8" HITEN BOLTS	0	2	STK	13 ✓	
15		5/8" HRRD WASHERS				2 ✓	
							340 ✓
							2801 ✓

JOB NO. ..... SHEET NO. .....

ASTM-A36

BILL OF MATERIAL

(50)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		5-CF3					
5	PL2	15 L 33.9	7	7 1/2	@ 38-0 ORD A572-50 GR 50 & SC-99	1292 ✓	
5	PD2	PL 10 1/2 x 5/8	1	0	BB9949	112 ✓	
5	PG2	PL 13 x 7/16	2	0	BB9343	142 ✓	
5	PH2	PL 10 1/2 x 5/8	1	0	A572 GR 50 & SC-99 BB9949 @ 36-0	112 ✓	
40		5/8" HITEN BOLTS	0	2 1/4		37 ✓	
40		5/8" HARD WASHER				4 ✓	
		5-CF4					1750 ✓
5	PD2	L 4 x 4 x 3/8	7	8 1/16	ORD @ 40 BB9951	376 ✓	
							376 ✓
		5-CF5					
5	PG2	L 4 x 4 x 3/8	3	6 3/4	ORD @ 40 BB9951	175 ✓	
5	PF2	PL 13 1/2 x 7/16	1	0	ORD @ 40 BB9949	145 ✓	
15		5/8" HITEN	0	2	STK	13 ✓	
15		5/8" HARD WASHER				2 ✓	
		5-CF6					335 ✓
5	PH2	L 4 x 4 x 3/8	3	8 1/16	ORD @ 40 BB9951	183 ✓	
5	PR2	PL 13 x 7/16	1	0	ORD @ 40 BB9343	142 ✓	
15		5/8" HITEN BOLTS	0	2	STK	13 ✓	
15		5/8" HRRD WASHERS				2 ✓	
							340 ✓
							2801 ✓

RECEIVED FEB 20 1968 BRIDGE DIV. VTRR

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

NO. REQUIRED

Proj. # I91-2(18)

		DATE
DRAWN BY	R.L.M.	1-31-67
CK'D BY	HP	3-31-67

HOLES 15/16
BOLTS 7/8 HITEN
PAINT P.S.L. (VT SPEC)
AS NOTED

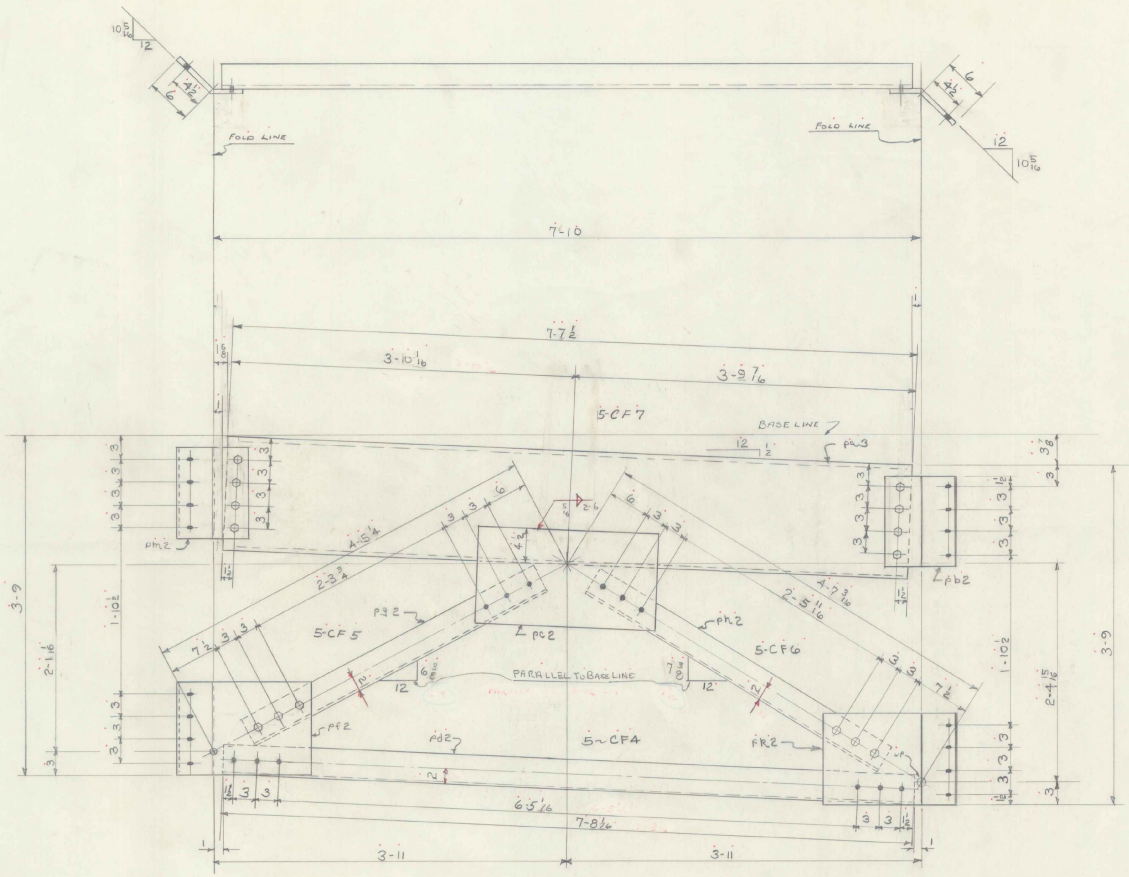
PROJECT I91 OVER RELOCATED US 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SONS CONST. Co
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 2

PRINT RECORD

NO.	FOR	DATE
3	APP.	2-21
7 (2)	SHOP	4-25
2	STATE	5-24
1	CUST	9/28
2	STATE	1-2

X

SM 1043 QCP



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	

JOB NO. ..... SHEET NO. .....

ASTM - A 36

BILL OF MATERIAL

(50)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		5~CF7					
5	PM3	15W 33.9	7	7 1/8	ORD @ 40 B89951 R16x10x30-94 B89949	1292	
5	PB2	PL 10 1/2 x 5/8	1	0	ORD @ 40 B89949	112	
5	PL2	PL 13 x 7/16	2	0	ORD @ 40 B89949	193	
5	PM2	PL 10 1/2 x 5/8	1	0	ORD @ 40 B89949	112	
40		7/8" HITEN BOLTS	0	2 1/4	STK	37	
40		7/8" HARD WASHERS				4	
							1750
		5~CF4					
5	PB2	L 4 x 4 x 3/8	7	8 1/16	ORD @ 40 B89951	376	
							376
		5~CF5					
5	PB2	L 4 x 4 x 3/8	3	6 3/8	ORD @ 40 B89951	175	
5	PL2	PL 19 1/2 x 7/16	1	0	ORD 40x7x210-0 B89949	145	
15		7/8" HITEN BOLTS	0	2 1/4		14	
15		7/8" HARD WASHERS				2	
							336
		5~CF6					
5	PM2	L 4 x 4 x 3/8	3	8 1/16	ORD @ 40 B89951	183	
5	PR2	PL 19 1/2 x 7/16	1	0	ORD 40x7x210-0 B89949	145	
15		7/8" HITEN BOLTS	0	2 1/4	STK	14	
15		7/8" HARD WASHERS				2	
							344
							2806

VERMONT AGENCY OF TRANSPORTATION
RECEIVED
FEB 20 1969
BRIDGE
ENGINEER

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT. PROJ. I91-2(18)

		DATE
DRAWN BY	RLM	1-31-67
OK'D BY	HF	2-21-67

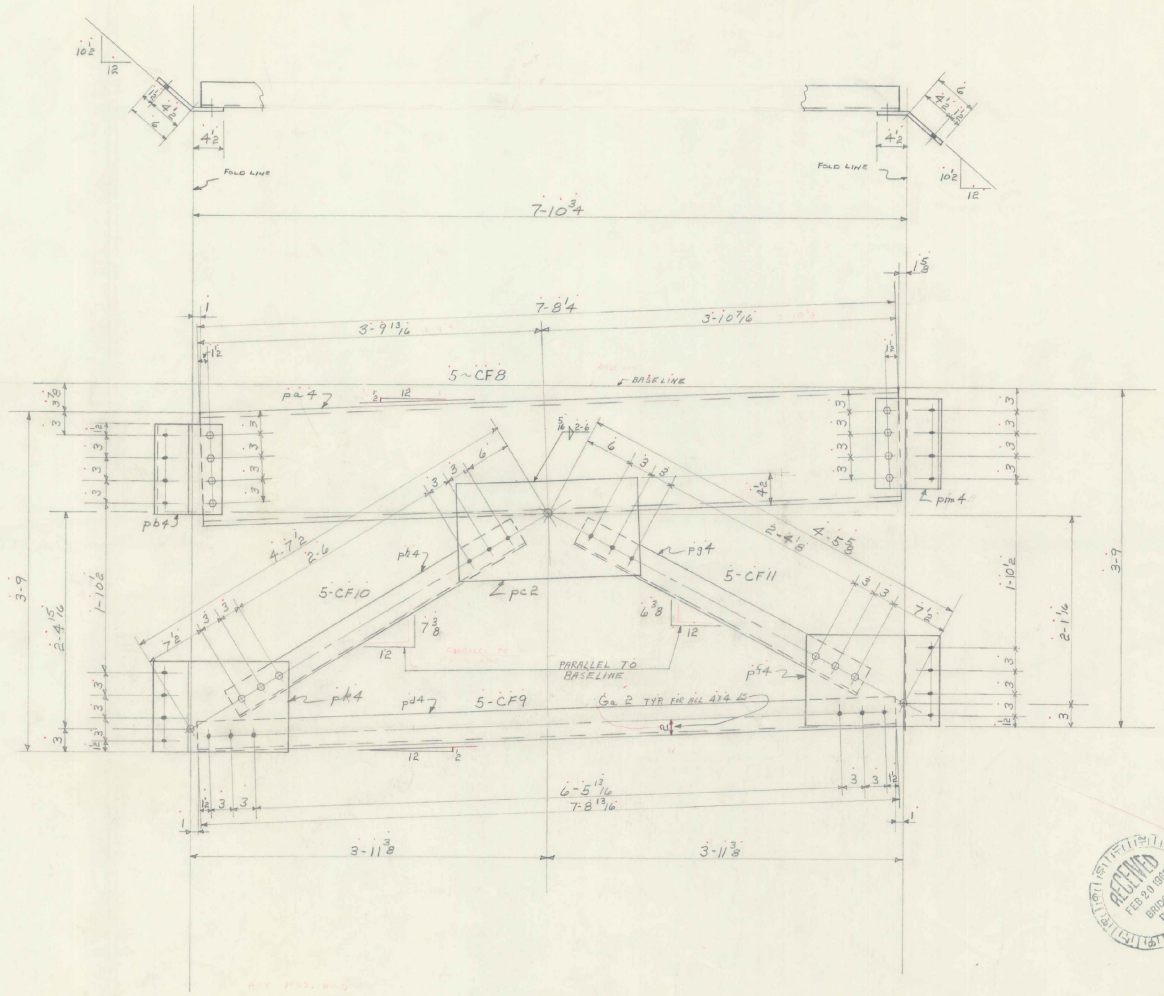
HOLES 1.5" ø
BOLTS 7/8" HITEN
PAINT RL (VTSPEC)
& AS NOTED

PROJECT I91 OVER RELOCATED U.S 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SONS CONST CO
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 3

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
10	SHOP	4-25
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2

SM 10-63 QCP



RECEIVED FEB 20 1969 BRIDGE DIV.

SHOP INSPECTION

BY_____

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	

JOB NO. _____ SHEET NO. _____

BILL OF MATERIAL

ASTM-A36 (52)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		5-CF8					
5	pa4	15[33.9	7	8 1/4	ORD @ 90.0 PO 889951	1303 ✓	
5	pb4	PL 12 x 5/8	0	10 1/2	STK	112 ✓	
5	pm4	PL 12 x 5/8	0	10 1/2	STK	112 ✓	
5	pc2	PL 13 x 7/16	2	0	ORD 48 x 7/16 x 10-0 B 89949	193 ✓	
40		7/8 ϕ HITEN BOLTS	0	2	STK	35 ✓	
40		7/8 ϕ HARD WASHERS				4 ✓	
		5-CF9					1759 ✓
5	pd4	∠ 4 x 4 x 3/8	7	8 13/16	ORD @ 40-0 B 89951	379 ✓	
							379 ✓
		5-CF10					
5	pk4	∠ 4 x 4 x 3/8	3	9	ORD @ 40-0 B 89951	184 ✓	
5	pk4	PL 12 x 7/16	1	7 1/2	ORD 48 x 7/16 x 10-0 B 89949	145 ✓	
15		7/8 ϕ HITEN BOLTS	0	2	STK	13 ✓	
15		7/8 ϕ HARD WASHERS				2 ✓	
		5-CF11					344 ✓
5	pg4	∠ 4 x 4 x 3/8	3	7 1/8	ORD @ 40-0 B 89951	176 ✓	
5	pf4	PL 12 x 7/16	1	7 1/2	ORD 48 x 7/16 x 10-0 B 89949	145 ✓	
15		7/8 ϕ HITEN BOLTS	0	2	STK	13 ✓	
15		7/8 ϕ HARD WASHERS				2 ✓	
							336 ✓
							2818 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

SO. BOUND
PROJ I 91-2 (18)

		DATE
DRAWN BY	AFL	2/14/67
CK'D BY	HP	3-8-67

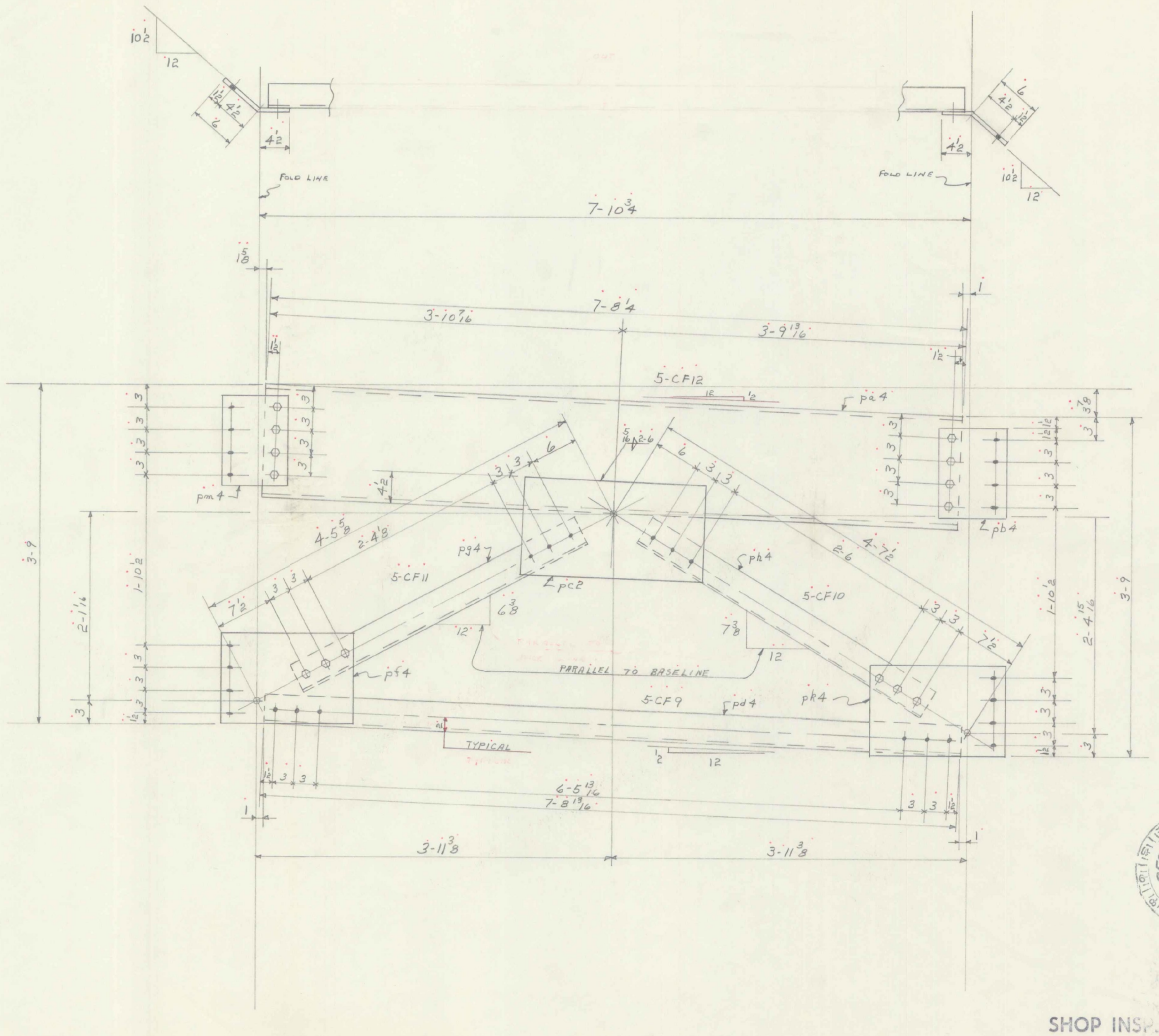
HOLES 15/16 ϕ
BOLTS 7/8 ϕ HITEN
PAINT RL (VT. SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEILL & SONS CONST. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 4

PRINT RECORD

NO.	FOR	DATE
3	APP	3-8
4 (1)	SHOP	4-25
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2

SM 10-63 QCP



SHOP INSPECTION

BY_____

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

RECEIVED FEB 20 1968 BRIDGE DIV.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	

JOB NO. _____ SHEET NO. _____

ASTM-A36

BILL OF MATERIAL

(52)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		5-CF9					
5	pd4	L 4X4X3/8	7	8 13/16	ORD @ 40-0 B 899351	379 ✓	
							379 ✓
		5-CF10					
5	pk4	L 4X4X3/8	3	9	ORD @ 40-0 B 899351	184 ✓	
5	pk4	PL 12X7/16	1	7 1/2	ORD @ 45°x7/16x37-0 B 899347	145 ✓	
15		7/8 ϕ HI-TEN BOLTS	0	2	STK	13 ✓	
15		7/8 ϕ HARD WASHERS				2 ✓	
							344 ✓
		5-CF11					
5	pg4	L 4X4X3/8	3	7 1/2	ORD @ 40-0 B 899351	176 ✓	
5	pf4	PL 12X7/16	1	7 1/2	ORD @ 45°x7/16x37-0 B 899347	145 ✓	
15		7/8 ϕ HI-TEN BOLTS	0	2	STK	13 ✓	
15		7/8 ϕ HARD WASHERS				2 ✓	
							336 ✓
		5-CF12					
5	pd4	15 WF 33.9	7	8 1/4	ORD 39-0 B 899351	1303 ✓	
5	pk4	PL 12X5/8	0	10 1/2	STK	112 ✓	
5	pm4	PL 12X5/8	0	10 1/2	STK	112 ✓	
5	pc2	PL 13X7/16	2	0	ORD 45°x7/16x37-0 B 899347	193 ✓	
40		7/8 ϕ HI-TEN BOLTS	0	2	STK	35 ✓	
40		7/8 ϕ HARD WASHERS				4 ✓	1759 ✓
							2879 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

S.O. 80010

PROJ I 91-2 (18)

		DATE
DRAWN BY	AFL	2/16/67
CK'D BY	AP	3-8-67

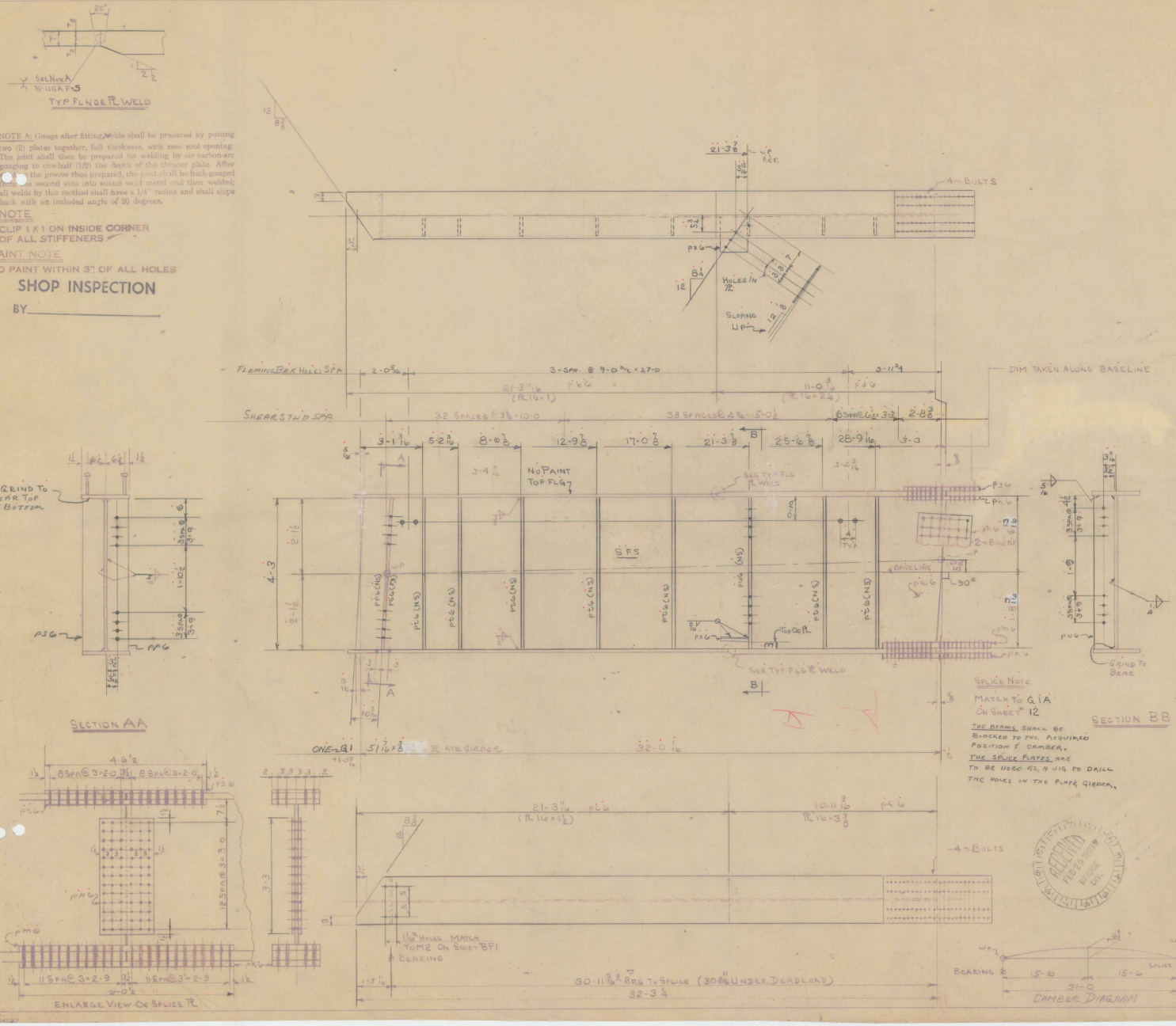
PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEILL & SONS CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 5

HOLES 15/16 ϕ
BOLTS 7/8 ϕ HI TEN
PAINT R.L. (VT. SPEC) & AS NOTED

PRINT RECORD

NO.	FOR	DATE
3	MFR	3-8
4D	SHOP	4-25
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2

SM 10-63 GCP



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT
		ONE ℄ PLATE GIRDER G1 (CONT)			
		1/4" S WELD	68	0	11 ✓
		5/16" S WELD	28	10	7 ✓
		3/8" S WELD	64	0	23 ✓
		5/8" S WELD	69	0	41
					82 ✓
		SHEAR STUDS (CONT G7-1286-26)			
154		3/4" SHEAR STUDS	0	7 STK	155 ✓
					155 ✓
		℄ NOTE ON WEIGHT ℄			
		# BILL A5			
1	PL6	℄ 16 x 1 3/8	11	0 3/16	1049 ✓
		## BILL A5			
1	PL6	℄ 16 x 2 1/2	10	11 3/16	1492 ✓
					2541 ✓

JOB NO. 67-1286 SHEET NO. 6 3/16

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		ONE-℄ PLATE GIRDER G1				
1	PL6	℄ 51 1/16 x 3/8	32	1	ORD 54-5 B89345	2107 ✓
1	PL6	℄ 16 x 1	21	3 1/16	ORDE 21-6 B89345	1159 ✓
1	PL6	℄ 16 x 1 1/2	21	3 1/16	ORDE 21-6 B89345	1739 ✓
1	PL6	℄ 16 x 2 1/4 *	11	0 1/16	ORDE 34-6 B89345	see chart
1	PL6	℄ 16 x 3 3/8 **	10	11 3/16	ORDE 34-6 B89345	1492 ✓
1	PL6	℄ 16 x 1 1/8	4	6 1/2	ORD B89345	278 ✓
2	PL6	℄ 7 x 1 3/8	4	6 1/2	ORDER 17-1 B89345	297 ✓
1	PL6	℄ 16 x 1 3/4	6	0 1/2	ORD B89345	575 ✓
2	PL6	℄ 7 x 2 1/16	6	0 1/2	ORD B89345	593 ✓
2	PL6	℄ 18 1/2 x 3/8	3	3	ORD	153 ✓
1	PF6	℄ 7 1/2 x 5/8	4	3	ORDER 17-1 B89345	
1	PS6	do	4	3		135 ✓
7	PL6	℄ 7 x 3/8	4	3		
1	PW6	do	4	3		707 ✓
1	PX6	℄ 9 x 7/16	1	0	ORD X 46 x 7/16 x 10-0 B89345	13 ✓
						7756 ✓
4		7/8" H.TEN W/ HARD WASHERS	0	8 1/2		9 ✓
4		do	0	6	STK	7 ✓
2		do	0	2 1/2		3
		SEE SHEET 5/6 FOR BILLING WEIGHTS				19 ✓
						7775 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT. PROJ. NO. SOLUTION I91-2 (15)

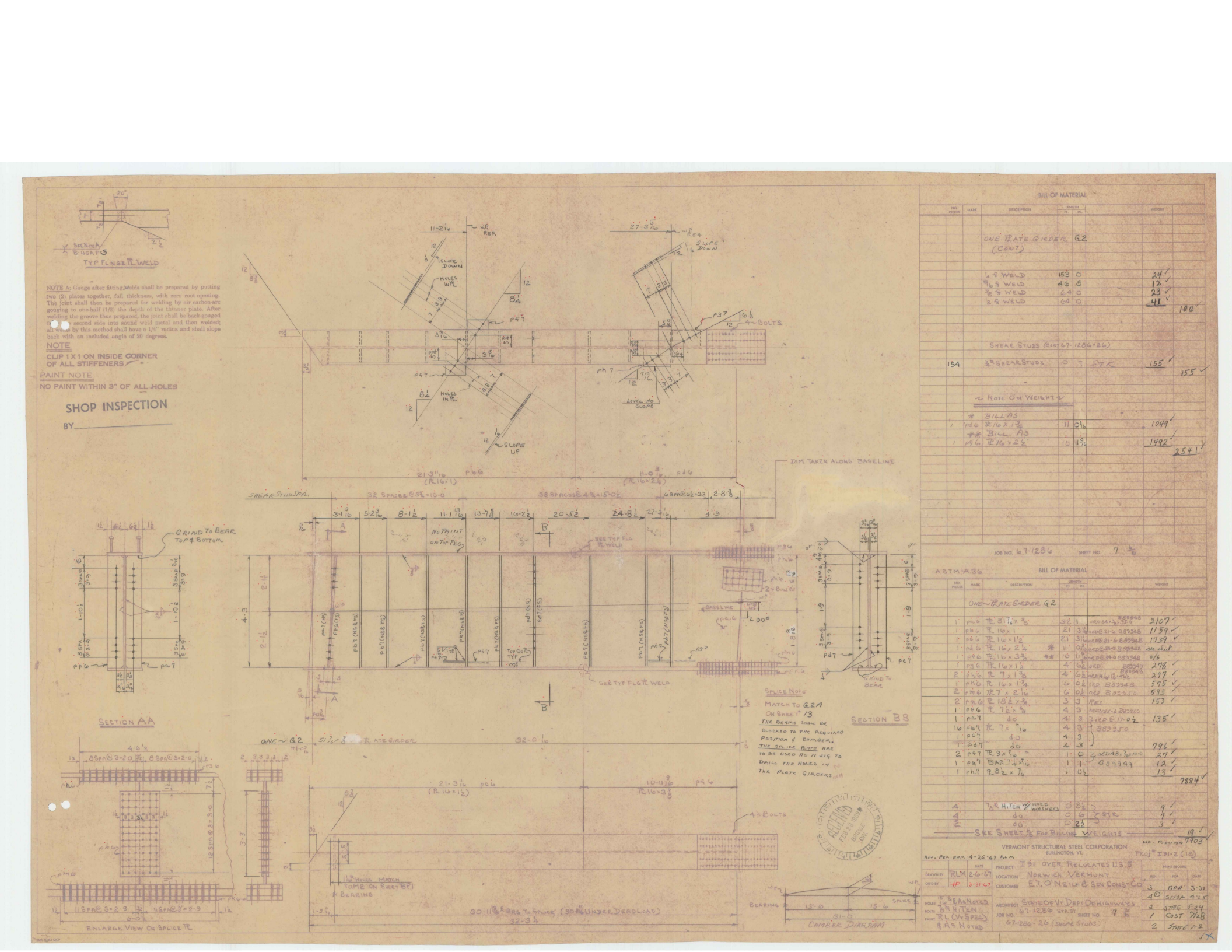
DRAWN BY	RLM	DATE 2-6-67
CK'D BY	HP	3-31-67

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEILL & SON CONST CO
ARCHITECT STATE OF VT. DEPT OF HIGHWAYS
JOB NO. 67-1286 STR. ST. SHEET NO. 6 16
67-1286-26 (SHEAR STUDS)

HOLES 13/16" ø AS NOTED
BOLTS 7/8" ø HITEN
PAINT RL (VT SPEC)
& AS NOTED

PRINT RECORD

NO.	FOR	DATE
3	PRP	3-31
4	SHOP	4-25
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		ONE FR PLATE GIRDER G2 (CONT)				
		1/4 S WELD	153	0		24 ✓
		5/16 S WELD	46	8		12 ✓
		3/8 S WELD	64	0		23 ✓
		1/2 S WELD	64	0		41 ✓
						100 ✓
		SHEAR STUDS (CONT 67-1286-26)				
154		3/4 SHEAR STUDS	0	7	STK	155 ✓
						155 ✓
		NOTE ON WEIGHTS				
	#	BILL AS				
1	PG6	FR 16 x 1 3/8	11	3 3/16		1049 ✓
	##	BILL AS				
1	PG6	FR 16 x 2 1/2	10	11 9/16		1492 ✓
						2541 ✓

JOB NO. 67-1286 SHEET NO. 7 A

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		ONE - FR PLATE GIRDER G2				
1	PG6	FR 51 1/16 x 3/8	32	1		2107 ✓
1	PG6	FR 16 x 1	21	3 1/2		1154 ✓
1	PG6	FR 16 x 1 1/2	21	3 1/2		1739 ✓
1	PG6	FR 16 x 2 1/4 *	11	0 1/2		see sheet
1	PG6	FR 16 x 3 3/8 **	10	11 1/16		616
1	PG6	FR 16 x 1 1/8	4	6 1/2		278 ✓
2	PG6	FR 7 x 1 3/8	4	6 1/2		277 ✓
1	PG6	FR 16 x 1 3/4	6	0 1/2		595 ✓
2	PG6	FR 7 x 2 1/16	6	0 1/2		593 ✓
2	PG6	FR 15 1/2 x 3/4	3	3		153 ✓
1	PP6	FR 7 1/2 x 3/8	4	3		
1	PG7	do	4	3		135 ✓
16	PG7	FR 7 x 7/16	4	3		
1	PG7	do	4	3		
1	PG7	do	4	3		796 ✓
2	PG7	FR 3 x 7/16	1	0		27 ✓
1	PG7	BAR 7 1/4 x 1/16	1	1		12 ✓
1	PH7	FR 8 1/2 x 7/16	1	0 1/2		13 ✓
						7884 ✓
4		7/8 H.TEN W/ HARD WASHERS	0	3 1/2		9 ✓
4		do	0	6	STK	7 ✓
2		do	0	2 1/2		3 ✓
		SEE SHEET 3/8 FOR BILLING WEIGHTS				19 ✓
						7903

NO. REQ'D 10

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.
PROJ. # I91-2(18)

Rev. Per. BOR. 4-25-67 RLM

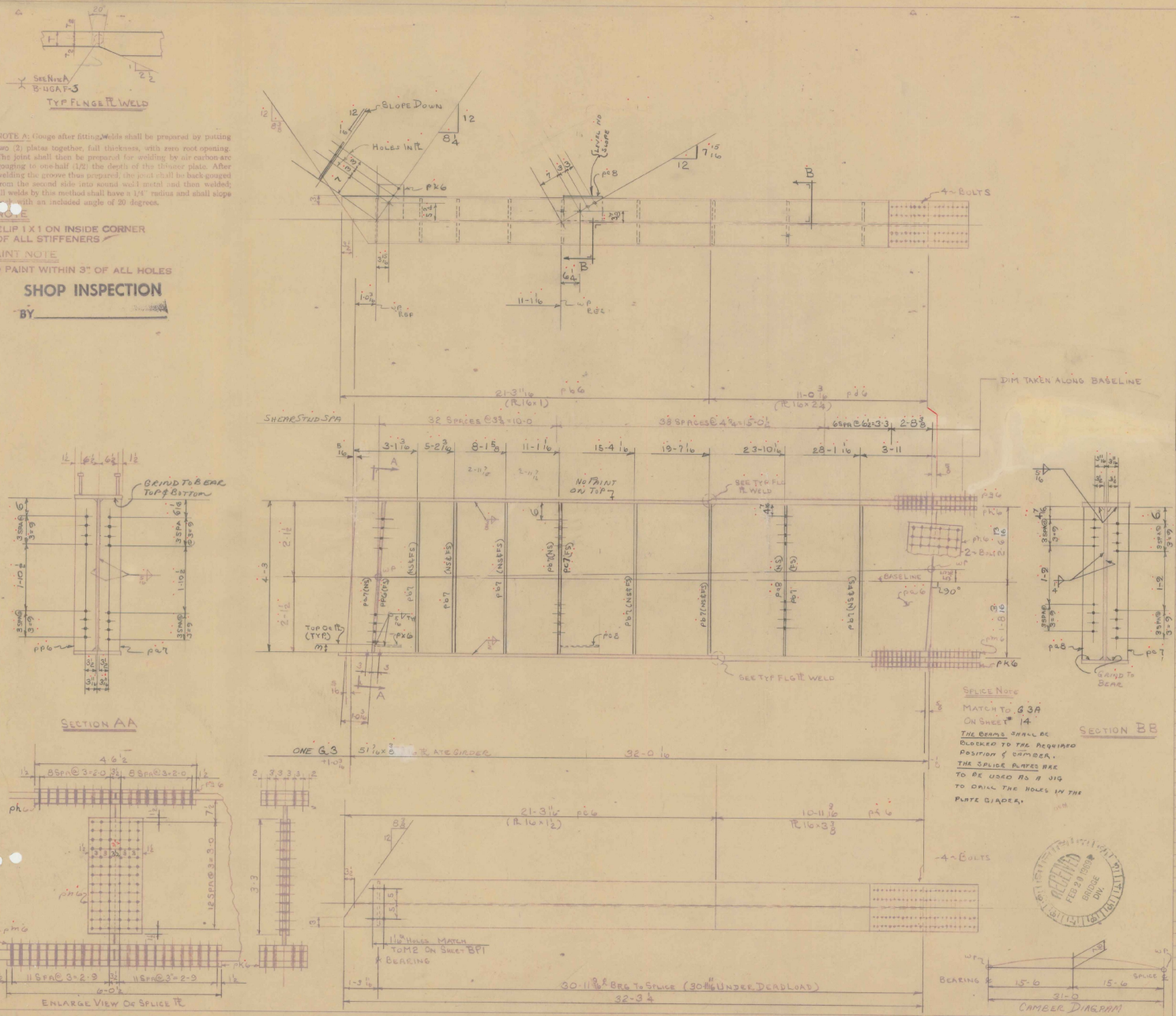
	DATE
DRAWN BY	RLM 2-6-67
CKD BY	HP 3-21-67

PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SON CONST. CO.

HOLES 13/16" Ø AS NOTED
BOLTS 7/8" Ø HITEN
PAINT RL (VT SPEC)
& AS NOTED

ARCHITECT STATE OF VT. DEPT OF HIGHWAYS
JOB NO. 67-1286 STR. ST. SHEET NO. 7 B
67-1286-26 (SHEAR STUDS)

PRINT RECORD NO.	FOR	DATE
3	REV	3-31
40	SHOP	4-25
2	STRUC	5-24
1	CUST	7-28
2	STRUC	1-2



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		ONE PLATE GIRDER G 3 (CONT)				
		1/4 ℄ WELD	136	0		22 ✓
		5/16 ℄ WELD	41	6		10 ✓
		3/8 ℄ WELD	64	0		23 ✓
		2 ℄ WELD	64	0		41 ✓
						96 ✓
		SHEAR STUDS (CONT 67-1286-26)				
154		3/4 ℄ SHEAR STUDS	0	7	STK	155 ✓
						155 ✓
		← NOTE ON WEIGHTS →				
	*	BILL AS				
1	PL 6	PL 16 x 1 3/4	11	0 3/16		1049 ✓
	**	BILL AS				
1	PL 6	PL 16 x 2 1/2	10	11 9/16		1492 ✓
						2541 ✓

JOB NO. 67-1286 SHEET NO. 8 3/16

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		ONE PLATE GIRDER G 3				
1	PL 6	PL 51 7/16 x 3/8	32	1	ORD 34 x 3/8 = 37-0 889348	2107 ✓
1	PL 6	PL 16 x 1	21	3 1/16	ORD @ 21-6 889348	1157 ✓
1	PL 6	PL 16 x 1 1/2	21	3 1/16	ORD @ 21-6 889348	1739 ✓
1	PL 6	PL 16 x 2 1/4 *	11	0 3/16	ORD @ 34-0 889348	see sheet
1	PL 6	PL 16 x 3 3/8 **	10	11 9/16	ORD @ 34-0 889348	6/6
1	PL 6	PL 16 x 1 3/4	4	6 1/2	ORD 889349 889345	298 ✓
2	PL 6	PL 7 x 1 3/8	4	6 1/2	ORD 889349 889345	297 ✓
1	PL 6	PL 16 x 1 1/4	6	6 1/2	ORD 889345 A	595 ✓
2	PL 6	PL 7 x 2 1/16	6	6 1/2	ORD 889345	593 ✓
2	PL 6	PL 15 1/2 x 3/8	3	3	PL 6	153 ✓
1	PL 6	PL 7 1/2 x 3/8	4	3	ORD 285-6 889345	
1	PL 7	do	4	3	ORD @ 17-0 1/2 889345	135 ✓
14	PL 7	PL 7 x 7/16	4	3		
1	PL 7	do	4	3		
1	PL 8	do	4	3		707 ✓
1	PX 6	PL 9 x 7/16	1	0 7	ORD 48 x 7/16 = 1-0 889345	13 ✓
1	PC 8	PL 8 1/2 x 7/16	1	0 1/2		13 ✓
						4769
4		7/8 ℄ HI-TEN W/ HARD WASHERS	0	8 1/2		4 ✓
4		do	0	6	STK	7 ✓
2		do	0	2 1/2		3 ✓
		SEE SHEET 3/16 FOR BILLING WEIGHTS				19 ✓
						4788 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.
MD. ROOMING
PROJ. I91-2 (18)

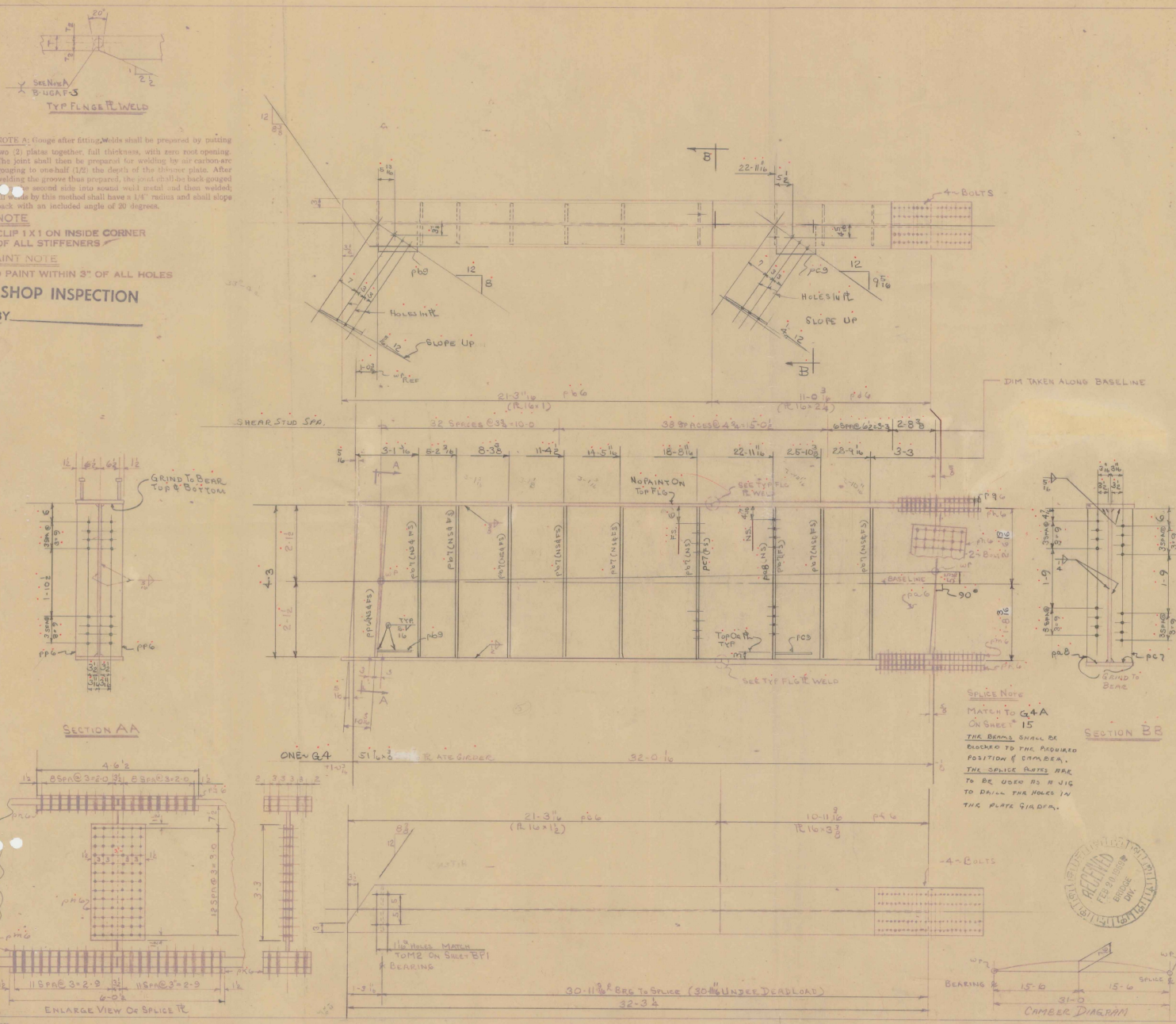
DRAWN BY	RLM	DATE 2-6-67
CKD BY	HP	3-31-67

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SON CONST. CO.
ARCHITECT STATE OF VT. DEPT OF HIGHWAYS
JOB NO. 67-1286 STR. ST. SHEET NO. 8 3/16
67-1286-26 (SHEAR STUDS)

HOLES 1/16 ℄ AS NOTED
BOLTS 7/8 HITEN
PAINT RL (VT SPEC) & AS NOTED

PRINT RECORD

NO.	FOR	DATE
3	APP.	3-31
4D	SHOP	9-12
2	STATE	5-24
1	CUST	7-18
2	STATE	1-2



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G4 (CONT)					
		1/4 S WELD	153	0		24	✓
		9/16 S WELD	44	6		11	✓
		5/8 S WELD	64	0		23	✓
		2 S WELD	64	0		41	✓
							99 ✓
		SHEAR STUDS (CONT 67-1286-26)					
154		3/4 SHEAR STUDS	0	7	STK	155	✓
							155 ✓
		NOTE ON WEIGHTS					
	*	BILL AS					
1	PL6	PL 16 x 1 3/8	11	0 7/16		1049	✓
	**	BILL AS					
1	PL6	PL 16 x 2 1/2	10	11 9/16		1492	✓
							2541 ✓

JOB NO. 67-1286 SHEET NO. 9 of 15

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G4					
1	PL6	PL 51 1/16 x 3/8	32	1	RD 34+3/8=33'-0 B89345	2107	✓
1	PL6	PL 16 x 1	21	3 1/16	ORD @ 21-6 B89345	1159	✓
1	PL6	PL 16 x 1 1/2	21	3 1/16	ORD @ 21-6 B89345	1739	✓
1	PL6	PL 16 x 2 1/4 *	11	0 1/2	ORD @ 34-9 B89345	as above	
1	PL6	PL 16 x 3 3/8 **	10	11 1/16	ORD @ 34-9 B89348	6/6	
1	PL6	PL 16 x 1 3/8	4	6 1/2	ORD B89349	278	✓
2	PL6	PL 7 x 1 3/8	4	6 1/2	ORD B89345	297	✓
1	PL6	PL 16 x 1 3/4	6	0 1/2	ORD B89334 @	575	✓
2	PL6	PL 7 x 2 1/16	6	0 1/2	ORD B89350	593	✓
2	PL6	PL 15 1/2 x 3/8	3	3	REC	153	✓
2	PP6	PL 7 1/2 x 3/8	4	3	ORD B89340 @	135	✓
16	PL7	PL 7 x 7/16	4	3	ORD @ 17-0 1/2		
1	PL7	do	4	3	B89350	1796	✓
1	PL8	do	4	3			
1	PL9	PL 9 x 7/16	1	0 1/2	ORD 45 x 7/16 x 100	14	✓
1	PL9	PL 94 x 3/16	1	0	B89349	14	✓
							7860 ✓
4		3/4 HITEN W/ HARD WASHERS	0	8 1/2		9	✓
4		do	0	6	STK	7	✓
2		do	0	2 1/2		3	✓
		SEE SHEET 2 FOR BILLING WEIGHTS					19 ✓
							7879 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.
NO. 1 BOUND
PROJ # I91-2 (10)

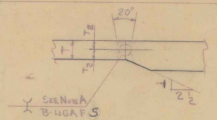
REV. PER RPR 9-29-67 RLM

	NAME	DATE
DRAWN BY	RLM	2-6-67
CKD BY	MP	3-31-67

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEIL & SON CONST. CO.
ARCHITECT STATE OF VT. DEPT OF HIGHWAYS
JOB NO. 67-1286 STR. ST SHEET NO. 9 of 15
67-1286-26 (SHEAR STUDS)

HOLES 1 1/16 REAMED AS NOTED
BOLTS 3/4 HITEN
PAINT RL (VT SPEC) & AS NOTED

PRINT RECORD NO.	FOR	DATE
3	BRD	3-31
4	SHOP	4-23
2	STATE	5-24
1	CUST	7/28
2	STATE	12



NOTE A: Gouge after fitting. Welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged to the second side into sound weld metal and then welded; all welding by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE

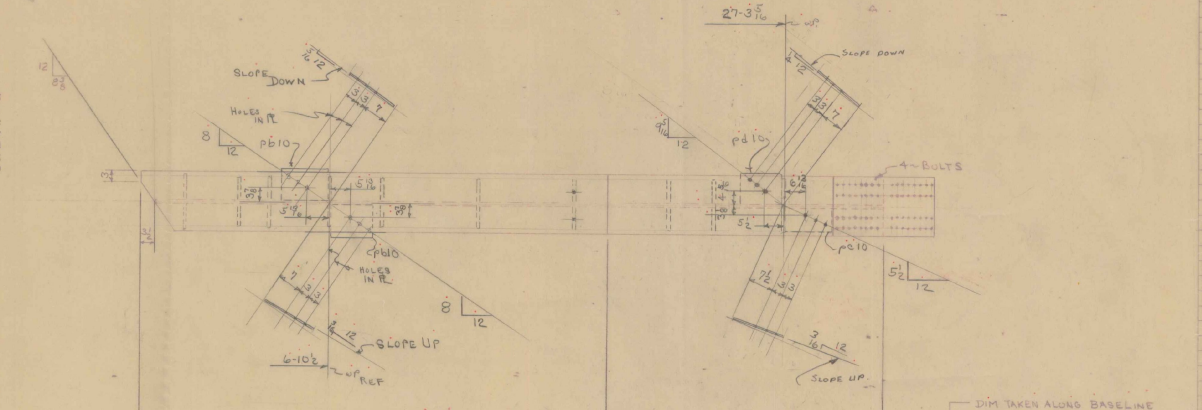
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

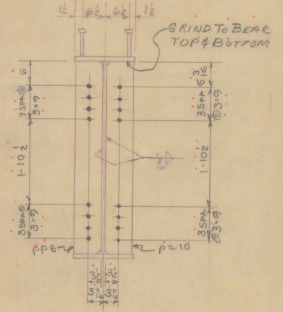
PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

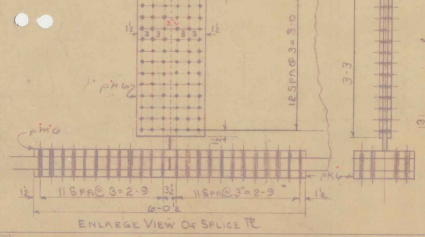
SHOP INSPECTION

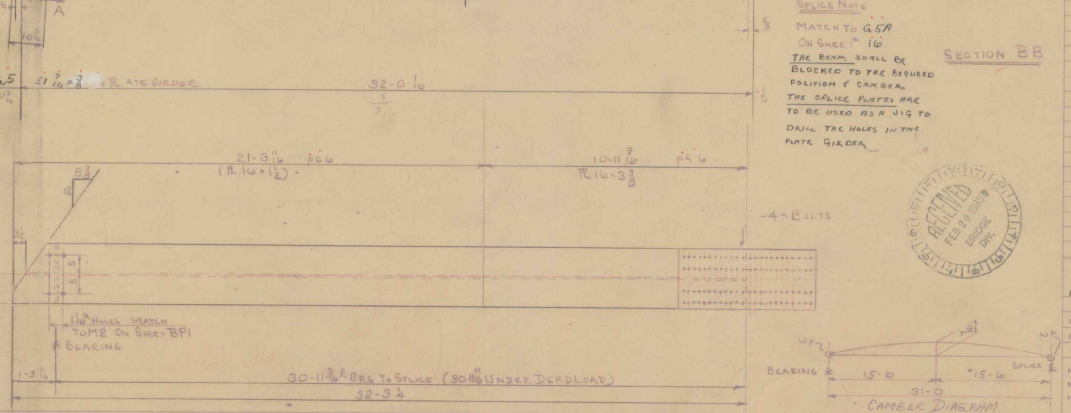
BY _____





SECTION AA



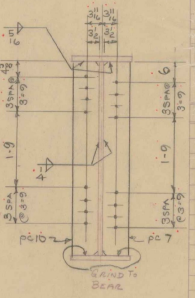


SECTION BB

SPLICE NOTE

MATCH TO G5A ON SHEET # 16

THE BEAM SHALL BE BLOCKED TO THE REQUIRED POSITION & CAMBER. THE SPLICE PLATES ARE TO BE USED AS A JIG TO DRILL THE HOLES IN THE PLATE GIRDER.



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G5 (CONT)					
		¼ S WELD	153	0		24 ✓	
		11/16 S WELD	47	6		12 ✓	
		3/8 S WELD	64	0		23 ✓	
		⅜ S WELD	64	0		41 ✓	
							100 ✓
		SHEAR STUDS (CONT 67-1286-26)					
154		¾" SHEAR STUDS	0	7	STK	155 ✓	
							155 ✓
		NOTE ON WEIGHTS					
		* BILL AS					
1	PL6	PL 16 x 1 3/4	11	0 9/16		1049 ✓	
		** BILL AS					
1	PL6	PL 16 x 2½	10	11 9/16		1492 ✓	
							2541 ✓

JOB NO. 67-1286 SHEET NO. 10 5/16

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G5					
1	PL6	PL 51 7/16 x 3/8	32	1	ORD 34-0 889348 889345 31-0	2107 ✓	
1	PL6	PL 16 x 1	21	3 11/16	ORD @ 21-6 889348	1159 ✓	
1	PL6	PL 16 x 1½	21	3 11/16	ORD 21-6 889345	1739 ✓	
1	PL6	PL 16 x 2¼ *	11	0 9/16	ORD 34-0 889345	as ord	
1	PL6	PL 16 x 3⅜ **	10	11 9/16	ORD 34-0 889348	b/o	
1	PL6	PL 16 x 1/8	4	6½	ORD 889345	278 ✓	
2	PL6	PL 7 x 1 5/8	4	6½	ORD W/ 1/8 889345	297 ✓	
1	PL6	PL 16 x 1¾	6	6½	ORD 889348	575 ✓	
2	PL6	PL 7 x 2 1/16	6	6½	ORD 889345	593 ✓	
2	PL6	PL 18½ x 3/8	3	3	PRT	153 ✓	
1	PL6	PL 7½ x 3/8	4	3	ORD 889345-6 889340		
1	PL10	do	4	3	ORD 8 17- 889345	135 ✓	
16	PL7	PL 7 x 7/16	4	3	889345		
1	PL7	do	4	3			
1	PL10	do	4	3		796 ✓	
2	PL10	PL 9 x 7/16	1	0½	2 ORD 45 x 7/16 x 10	28 ✓	
1	PL10	BAR 7 x 7/16	1	2	889343	12 ✓	
1	PL10	PL 9¼ x 7/16	1	0		14 ✓	
							7886 ✓
4		7/8 HITEN W/ HARD WASHER	0	8½		9 ✓	
4		do	0	6	STR	7 ✓	
2		do	0	2½		3 ✓	
		SEE SHEET 5/16 FOR BILLING WEIGHTS				19 ✓	
							7905

NO. REQUIRED

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

PROJ # I91-2 (18)

REVISED RPP 9-29-67 ALM

		DATE
DRAWN BY	RLM	2-6-67
CKD BY	HP	3-31-67

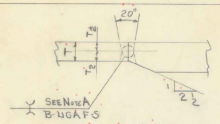
PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SON CONST CO

HOLES 1/16 OVER AS NOTED
BOLTS 7/8 HITEN
PAINT RL CVT SPEC & AS NOTED

ARCHITECT STATE OF VT. DEPT OF HIGHWAYS
JOB NO. 67-1286 STR. ST. SHEET NO. 10 5/16
67-1286-26 (SHEAR STUDS)

PRINT RECORD NO.	FOR	DATE
3	APP	3-31
4	SHOP	9-25
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2

✓ X



TYP FLANGE ℄ WELD

NOTE A: Gouge after fitting. Welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE

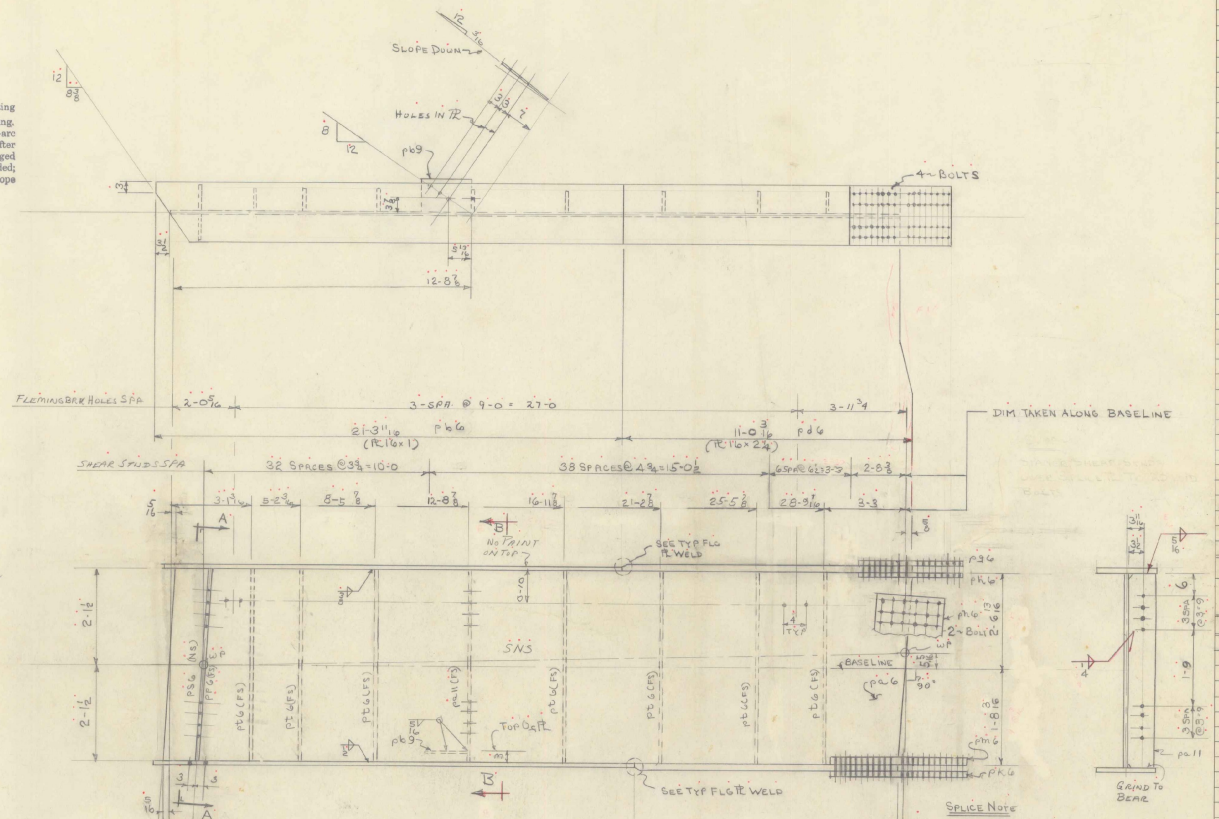
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

PAINT NOTE

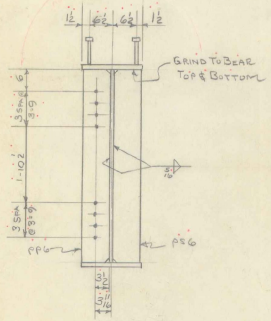
NO PAINT WITHIN 3" OF ALL HOLES

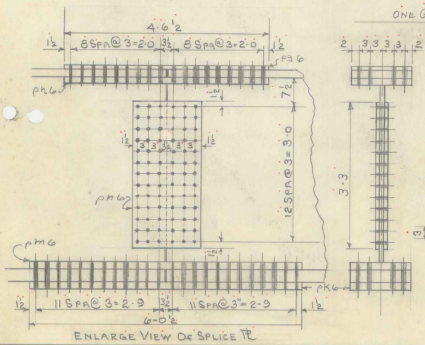
SHOP INSPECTION

BY_____



SECTION AA





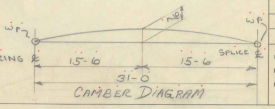
ENLARGE VIEW OF SPLICE ℄

SECTION BB

SPLICE NOTE

MATCH TO G.G.A ON SHEET 17

THE BEAMS SHALL BE CLOSED TO THE REQUIRED POSITION & CAMBER. THE SPLICE PLATES ARE TO BE USED AS A JIG TO DRILL THE HOLES IN THE PLATE GIRDER.



CAMBER DIAGRAM

RECEIVED FEB 20 1968 BRIDGE DIV. VERMONT STATE HIGHWAY DEPARTMENT

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE ℄ PLATE GIRDER G6 (CONT)					
		1/4 S WELD	68	0		11	
		5/16 S WELD	29	6		9	
		3/8 S WELD	64	0		23	
		1/2 S WELD	64	0		11	
							82
		SHEAR STUDS (CONT 67-1286 (6-26)					
154		3/4 ℄ SHEAR STUDS	0	7	STK	155	
							155
		~ NOTE ON WEIGHT ~					
		* BILL AS					
1	PL6	℄ 16 x 1 3/4	11	0 3/16		1049	
		** BILL AS					
1	PS6	℄ 16 x 2 1/2	10	11 5/16		1492	
							2541

JOB NO. 67-1286 SHEET NO. 11 5/10

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE ℄ PLATE GIRDER G6					
1	PL6	℄ 51 7/16 x 3/8	32	1	ORD 54 x 3/8 x 32-0 B89348	210	
1	PL6	℄ 16 x 1	21	3 1/16	ORD @ 21-6 B89348	115	
1	PL6	℄ 16 x 1 1/2	21	3 1/16	ORD @ 21-6 B89348	173	
1	PL6	℄ 16 x 2 1/4 *	11	0 5/16	ORD @ 34-9 B89348	see sheet	
1	PL6	℄ 16 x 3 3/8 **	10	11 5/16	ORD @ 34-9 B89348	6/6	
1	PL6	℄ 16 x 1 1/8	4	6 1/2	ORD B89349	27	
2	PL6	℄ 7 x 1 3/8	4	6 1/2	ORD B89349	24	
1	PM6	℄ 16 x 1 3/4	6	6 1/2	ORD B89348	59	
2	PM6	℄ 7 x 2 1/16	6	6 1/2	ORD B89350	59	
2	PL6	℄ 18 1/2 x 3/8	3	3	REL	15	
1	PP6	℄ 7 1/2 x 3/8	4	3	ORD 125-6 B89350		
1	PS6	do	4	3	ORD @ 17-1 B89350	13	
7	PL6	℄ 7 x 3/8	4	3	B89350		
1	PL11	do	4	3		70	
1	PL9	℄ 9 x 7/16	1	6 1/2	ORD 48 x 7/16 x 10-0 B89349	14	
							775
4		7/8 ℄ HI-TEN W/ HARD WASHER	0	8 1/2		9	
4		do	0	6	STK	7	
2		do	0	2 1/2		3	
		SEE SHEET 5/6 FOR BILLING WEIGHTS				19	
							7776

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

NO. 13 ON JOB PROJ# I91-2(18)

		DATE
DRAWN BY	RLM	2-6-67
CK'D BY	HP	3-31-67

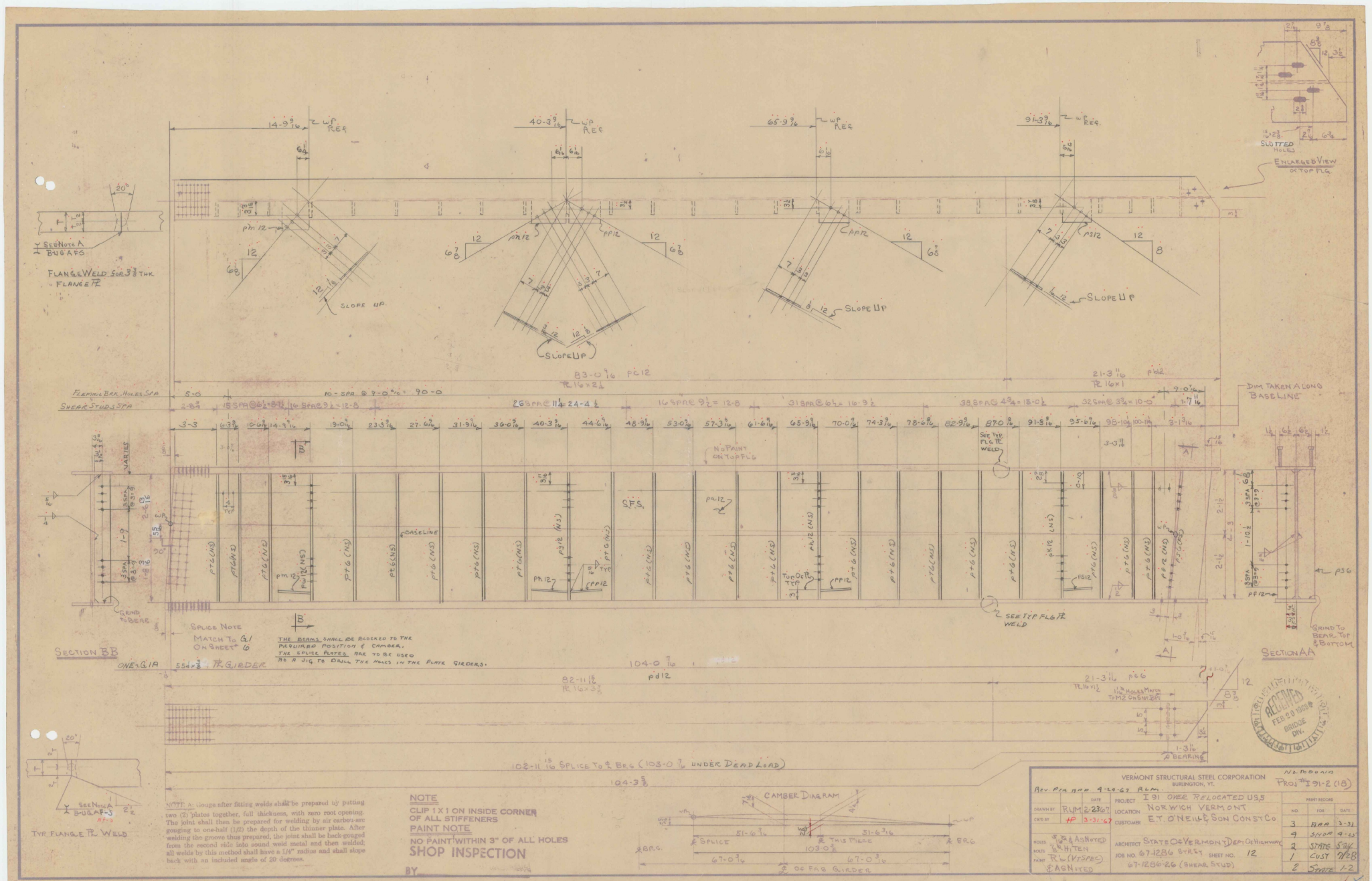
PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SON CONST. CO

HOLES 1/16 & AS NOTED
BOLTS 7/8 HI TEN
PAINT RL (VT SPEC) & AS NOTED

ARCHITECT STATE OF VT. DEPT OF HIGHWAYS
JOB NO. 67-1286 STR. ST SHEET NO. 11 5/10
67-1286-26 (SHEAR STUDS)

PRINT RECORD NO.	FOR	DATE
3	PRINT	3-31
4	SHOP	4-27
2	STATE	5-24
1	CUST	7/28
2	STATE	7-2

SM 10-63 QCP



NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES

SHOP INSPECTION

BY

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

NO. PODUNA
PROJ # I91-2 (18)

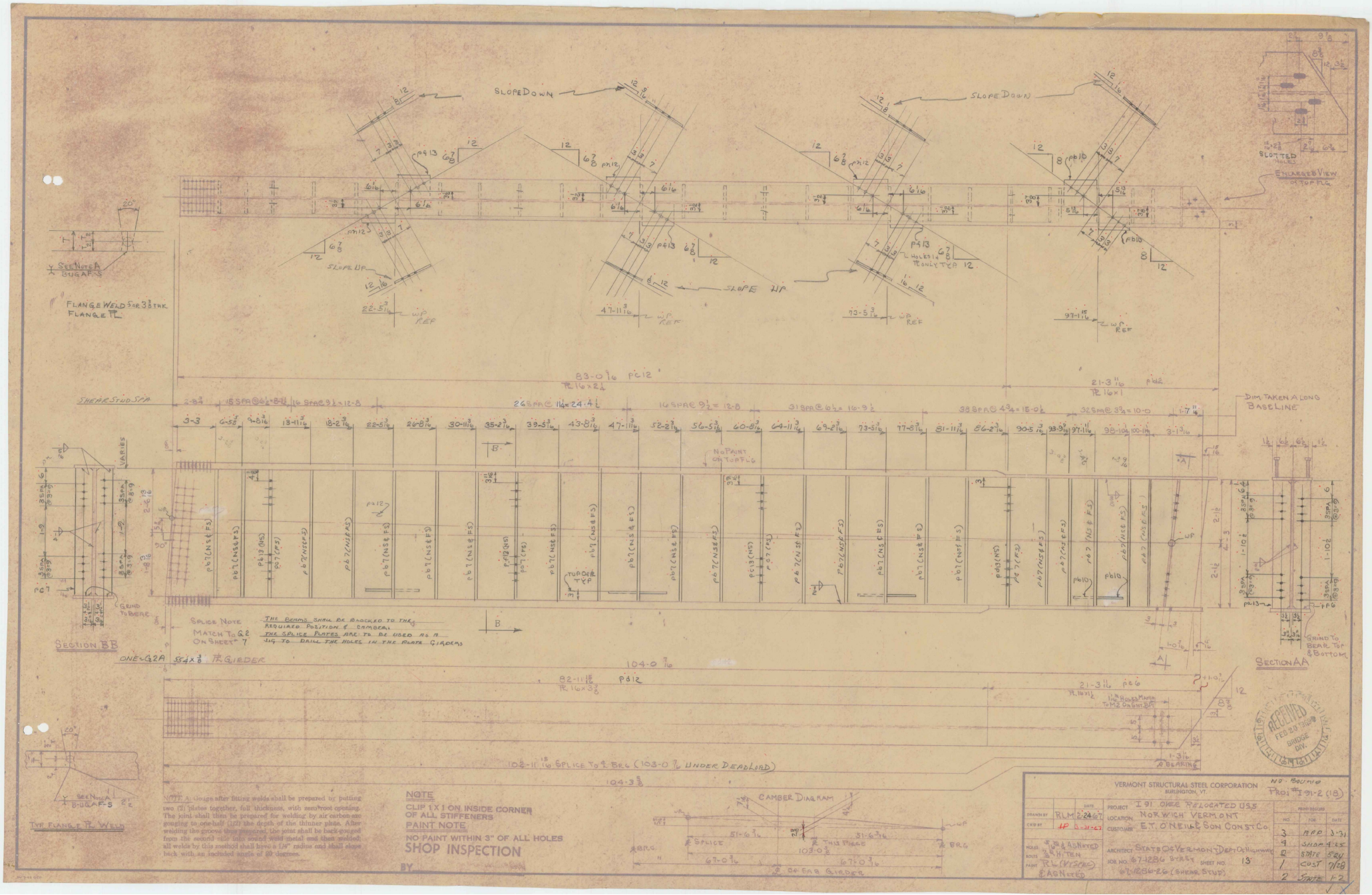
REV. PER APP 4-24-67 RLM.

		DATE
DRAWN BY	RLM	2-23-67
CK'D BY	HP	3-31-67

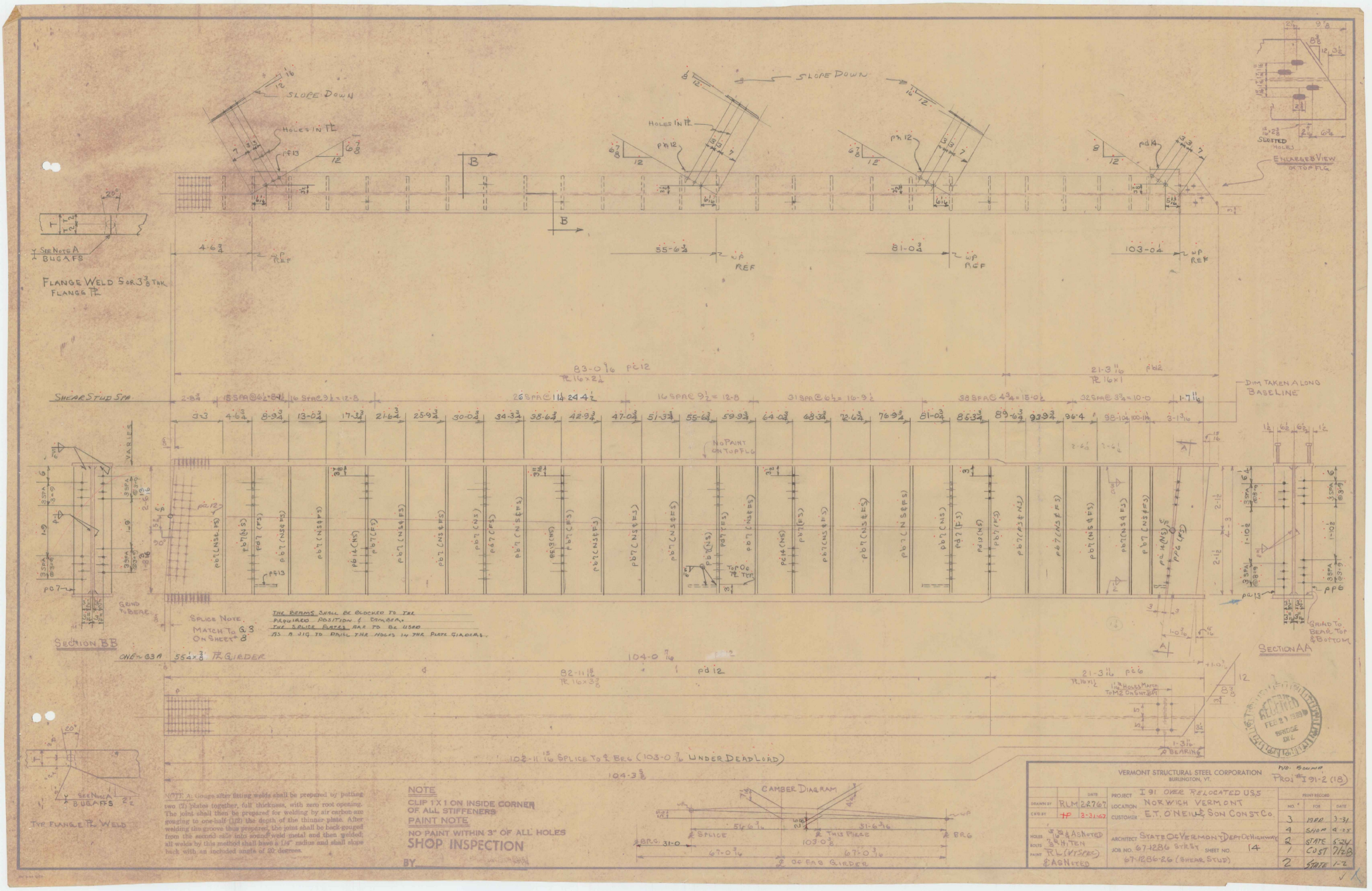
PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEILL & SON CONST CO.
ARCHITECT STATE OF VERMONT DEPT OF HIGHWAY
JOB NO. 67-1286 STR 5 SHEET NO. 12
67-1286-26 (SHEAR STUD)

HOLES 5/16 & AS NOTED
BOLTS 7/8 & HI TEN
PAINT RL (VT SPEC) & AS NOTED

PRINT RECORD		
NO.	FOR	DATE
3	APP	3-31
4	SHOP	4-25
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2

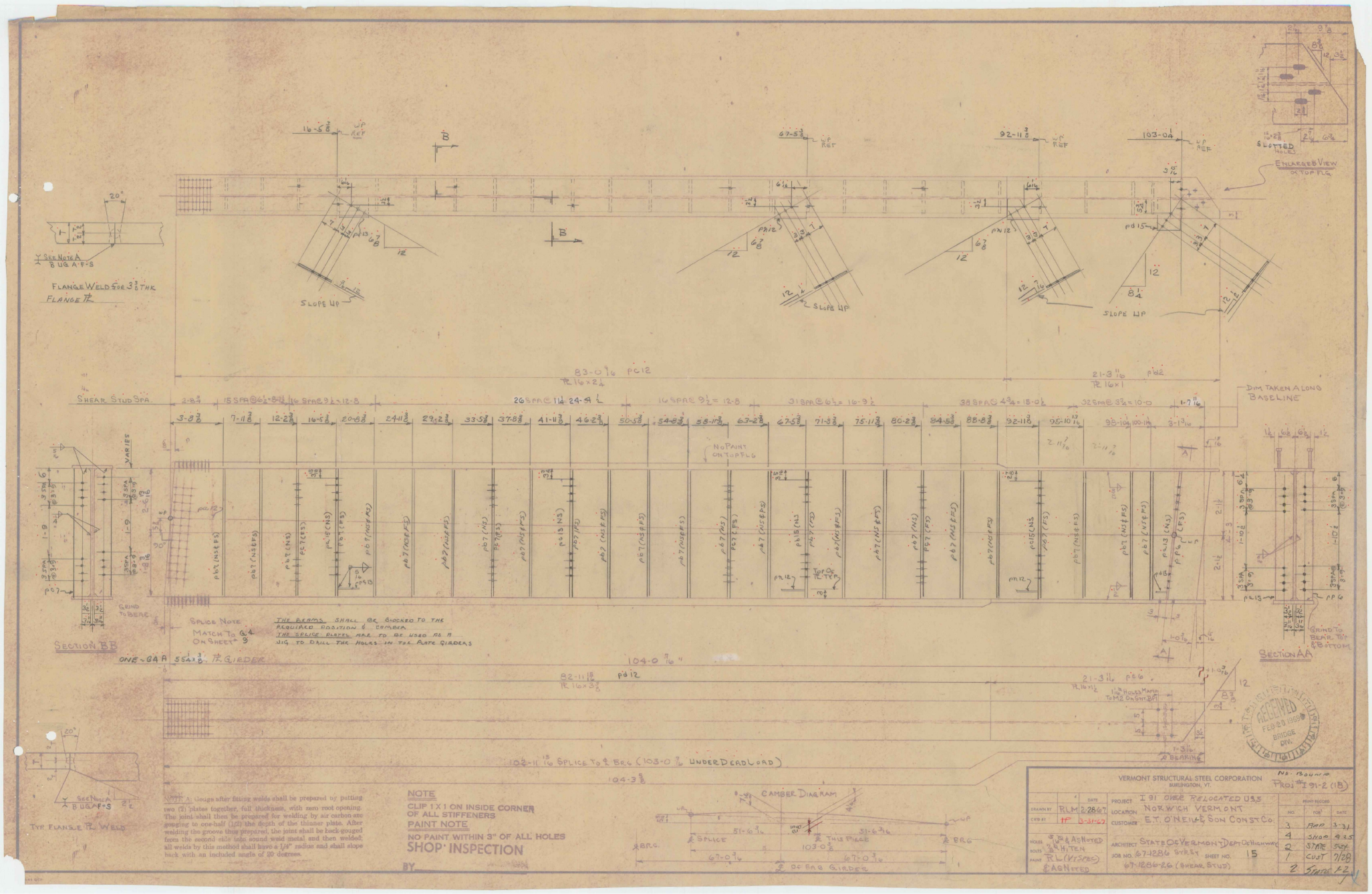


VERMONT STRUCTURAL STEEL CORPORATION BURLINGTON, VT.		NO. BOUND PROJ # I91-2 (18)	
DRAWN BY RLM 2/24/67	PROJECT I 91 ORDE RELOCATED U.S.5	PRINTS REQUIRED	
CKD BY HP 6-21-67	LOCATION NORWICH VERMONT	NO.	FOR DATE
HOLES AS NOTED	CUSTOMER E.T. O'NEIL & SON CONST CO.	3	APP 3-31
BOLTS SHTEN	ARCHITECT STATE OF VERMONT DEPT OF HIGHWAYS	9	SHOP 4-25
PAINT RL (VTSPEC)	JOB NO. 67-1286 STRUCT SHEET NO. 13	2	STATE 5-24
AS NOTED	67-1286-26 (SHEAR STUD)	1	CUST 7/28
		2	STATE 12



NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS
PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES
SHOP INSPECTION
BY



NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE

CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

SHOP INSPECTION

BY

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

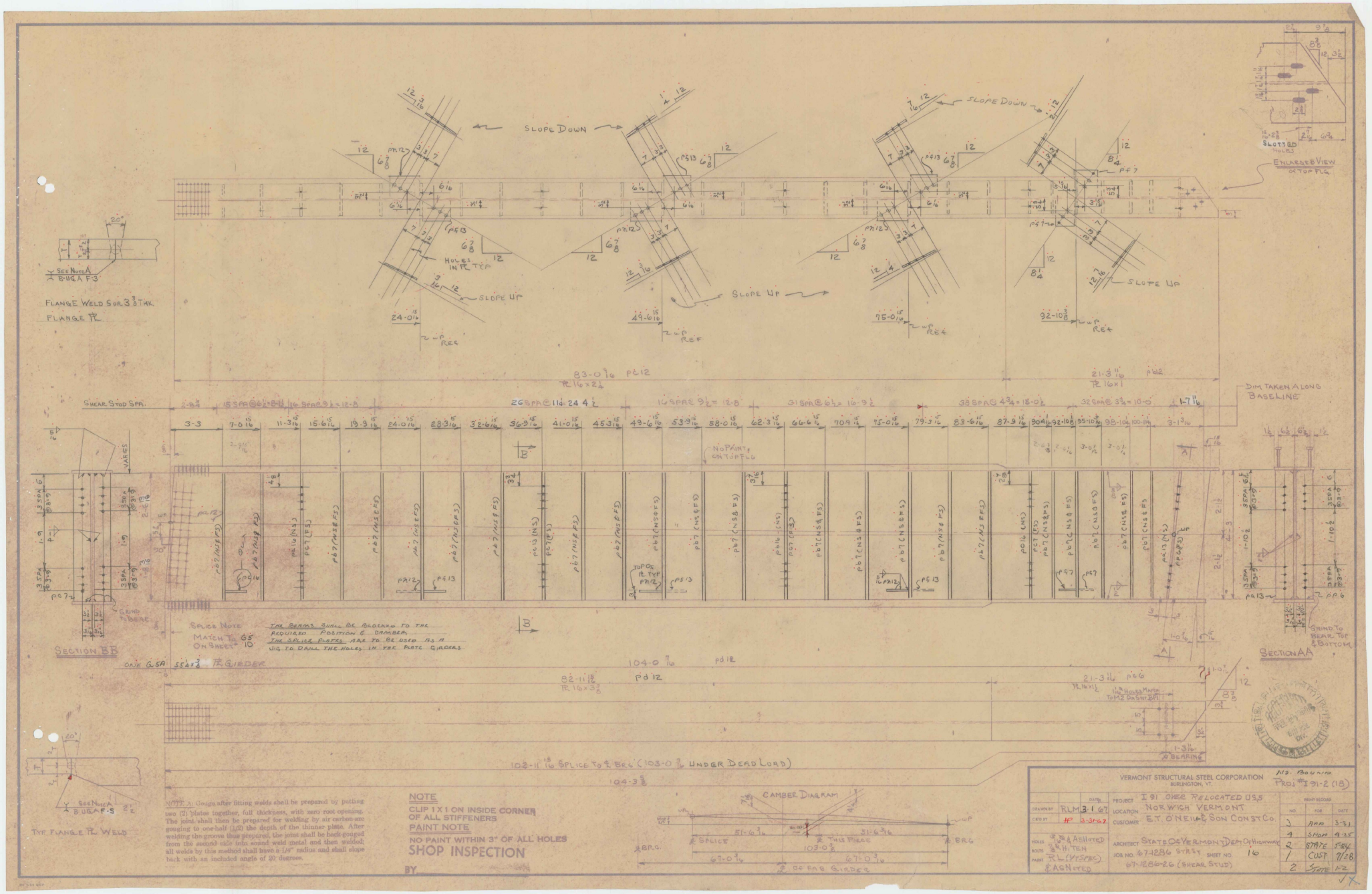
NO. BOUND
PROJ # I 91-2 (18)

		DATE
DRAWN BY	RLM	2-28-67
CK'D BY	HP	3-31-67

PROJECT: I 91 OVER RELOCATED U.S.5
LOCATION: NORWICH VERMONT
CUSTOMER: E.T. O'NEILL & SON CONST CO.
ARCHITECT: STATE OF VERMONT DEPT OF HIGHWAY
JOB NO. 67-1286 STRST SHEET NO. 15
67-1286-26 (SHEAR STUD)

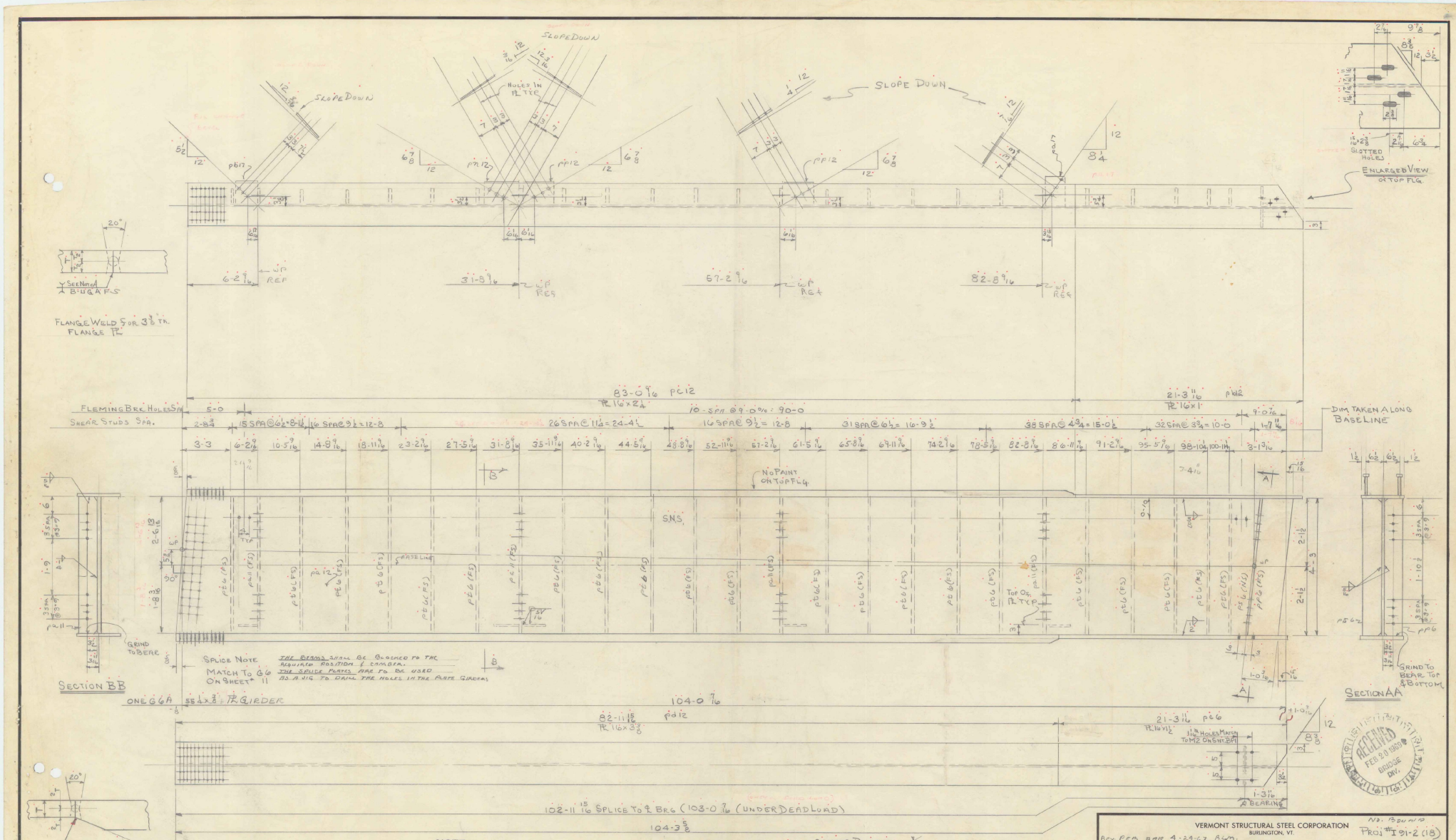
HOLES: 5/16 & AS NOTED
BOLTS: 7/8 HITEN
PAINT: RL (VT SPEC) & AS NOTED

PRINT RECORD		
NO.	FOR	DATE
3	RAD	3-31
4	SHOP	4-25
2	STATE	5-27
1	CUST	7/28
2	STATE	1-2



NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS
PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES
SHOP INSPECTION
BY



NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE

CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

SHOP INSPECTION

BY

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

NO. BOUND
PROJ # I 91-2 (18)

REV. PER APP 4-24-67 RLM.

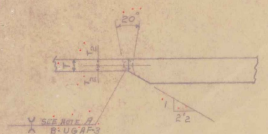
		DATE
DRAWN BY	RLM	2-2-67
CK'D BY	HP	3-31-67

PROJECT I 91 OVER RELOCATED U.S.5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEILL & SON CONST CO.

HOLES 15/16 & AS NOTED
BOLTS 7/8 HITEN
PAINT RL (V+SPEC) & AS NOTED

ARCHITECT STATE OF VERMONT DEPT OF HIGHWAY
JOB NO. 67-1286 STRST SHEET NO. 17
67-1286-26 (SHEAR STUD)

PRINT RECORD		
NO.	FOR	DATE
3	APP	3-31
4	SHOP	4-27
2	JAT &	5-24
1	CUST.	7/28
2	STATE	1-2



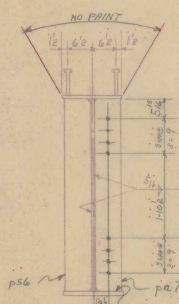
TYP FLANGE ℄ WELD

NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

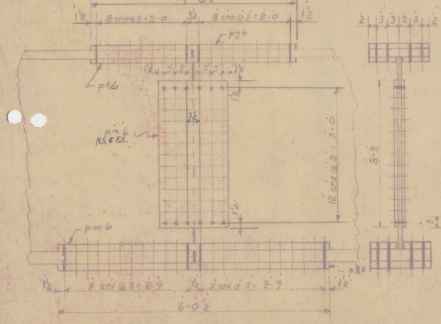
NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

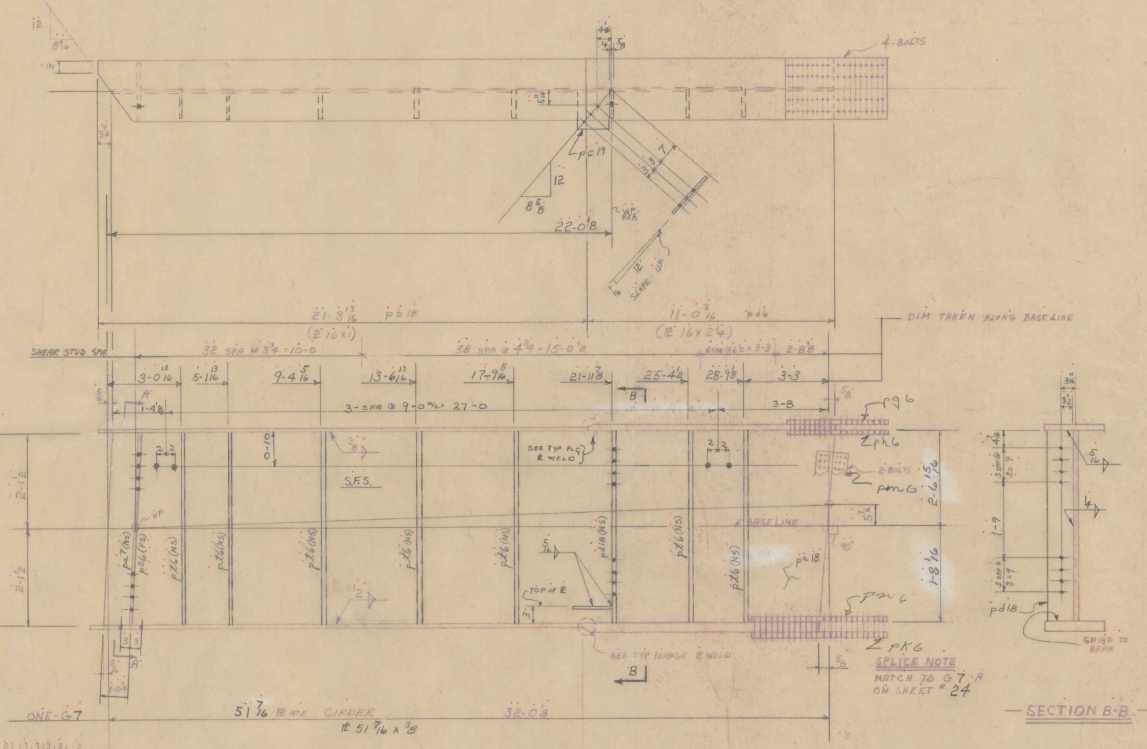
PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES

SHOP INSPECTION
BY _____

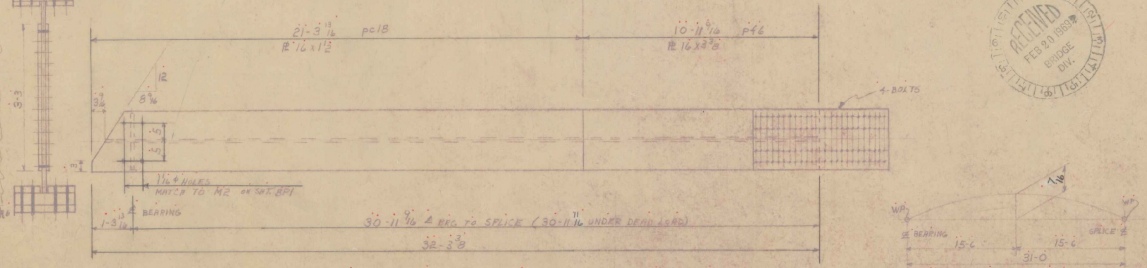


SECTION A-A





SECTION B-B



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT	
		ONE ℄ GIRDER G7 (CONT.)				
		1/4 ⌀ WELD	68	0	11 ✓	
		5/16 ⌀ WELD	29	0	7 ✓	
		3/8 ⌀ WELD	64	0	23 ✓	
		1/2 ⌀ WELD	64	0	41	
						82 ✓
		NOTE ON WEIGHT				
		* BILL AS				
1	pd6	℄ 16 X 1 3/4	11	0 7/16	1049 ✓	
		** BILL AS				
1	ps6	℄ 16 X 2 1/2	10	11 7/16	1492 ✓	
						3541 ✓
						2623 ✓

JOB NO. 67-1286 SHEET NO. 18 6/6

ASTM-A36 BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE-℄ GIRDER G7					
1	pa16	℄ 51 7/16 X 3/8	32	1 4	22.95 x 32.0 = 734.40	2107 ✓	
1	pb18	℄ 16 X 1	21	3 9	16.0 x 21.25 = 340.00	1160 ✓	
1	pc18	℄ 16 X 1/2	21	3 9	5.44 x 21.25 = 115.60	1740 ✓	
1	pd6	℄ 16 X 3/4 *	11	0 7/16	16.0 x 11.0 = 176.00	See sheet	
1	ps6	℄ 16 X 2 1/2 **	10	11 7/16	24.0 x 10.9 = 261.60	4/6	
1	pg6	℄ 16 X 1/8	4	6 2	16.0 x 0.375 = 6.00	278 ✓	
2	ph6	BAR 7 X 1 3/8	4	6 2	9.56 x 14.50 = 138.62	297 ✓	
1	pk6	℄ 16 X 1 3/4	6	2 5	16.0 x 34.5 = 552.00	575 ✓	
2	pm6	BAR 7 X 2 1/2	6	0 2	9.56 x 59.50 = 568.82	593 ✓	
2	pn6	℄ 18 1/2 x 3/8	3	9	PCS	153 ✓	
1	pa7	BAR 7 X 3/8	4	3 2	9.56 x 15.6 = 149.14		
1	ps6	do	4	3 2	8.89 x 15.6 = 138.68	135 ✓	
7	pt6	BAR 7 X 3/8	4	2 2	9.56 x 10.42 = 99.63		
1	pd18	do	4	3 2	8.89 x 33.50 = 297.82	707 ✓	
1	pc19	℄ 9 X 7/16	1	0	STK	13 ✓	
							7758 ✓
		SHEAR STUDS CONTR. # 67-1286-2G					
154		3/4 ⌀ SHEAR STUDS	0	7	STK	155 ✓	155 ✓
4		7/8 ⌀ HTRN BOLTS W/HARD WASHERS	0	8 1/2	STK	9 ✓	
4		do	0	6	STK	7 ✓	
2		do	0	2 1/2	STK	3 ✓	
		SEE SHEET 6/6 FOR BILLING WEIGHTS					19 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

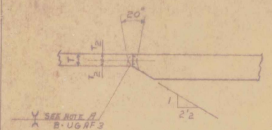
DRAWN BY	HFC	DATE	8/17/67
CHD BY	HF	DATE	8-8-67
HOLES	15/16" ⌀ AS NOTED		
BOLTS	7/8" ⌀ HTRN		
PAINT	RL (VT SPEC.) EXCEPT AS NOTED		

PROJECT F.A.I. 089 REINFORCED CONC. DECK ON STEEL BEAMS
LOCATION NORWICH - VERMONT
CUSTOMER ET O'NEIL CO. INC.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286-2G STR. ℄ SHEET NO. 18 6/6
67-1286-2G (EXTRA STUDS)

PROJ # F.A.I.-089(6)

PRINT RECORD

NO.	FOR	DATE
3	Non Shrink Mortar	3-8
2	STATE	5-24
1	CUST.	11/27
2	STATE	1-2



TYP FLANGE ℞ WELD

NOTE A: Gouge after fitting welds shall be prepared by putting the plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE

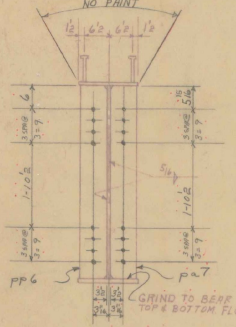
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

PAINT NOTE

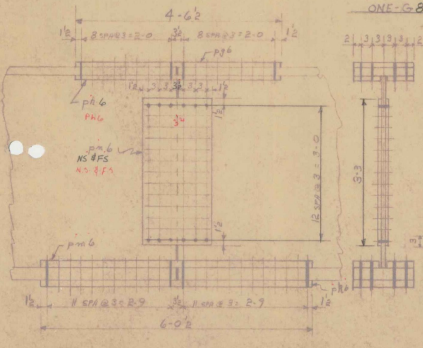
NO PAINT WITHIN 3" OF ALL HOLES

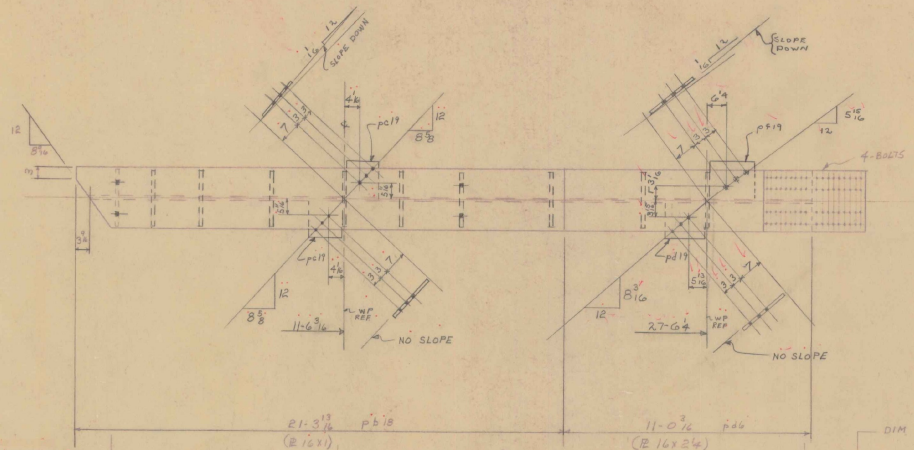
SHOP INSPECTION

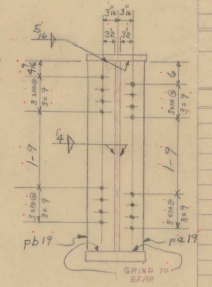
BY _____



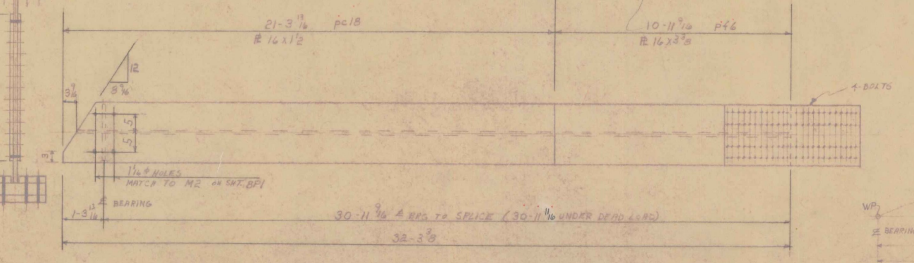
SECTION A-A



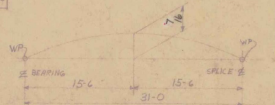




SECTION B-B



ALL DIMENSIONS ALONG BASE LINE UNLESS NOTED



FINAL CAMBER DIAGRAM

RECEIVED FEB 20 1968 BRIDGE DIV.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH Ft.	LENGTH In.		WEIGHT
		ONE ℞ GIRDER G8 (CONT.)				
		1/4" WELD	153	0'		24 ✓
		5/16" WELD	47	6'		12 ✓
		3/8" WELD	64	0'		23 ✓
		2" WELD	64	0'		41 ✓
						100 ✓
		NOTE ON WEIGHT				
		* BILL AS				
1	pd6	℞ 16 x 1¾	11	0⅜		1049 ✓
		** BILL AS				
1	pf6	℞ 16 x 2'2	10	11⅛		1492 ✓
						2541 ✓
						2641 ✓

JOB NO. 67-1286 SHEET NO. 19 6/6

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH Ft.	LENGTH In.		WEIGHT
		ONE-℞ GIRDER G8				
1	pa15	℞ 51 7/16 x 3/8	32	1⅛	REQ'D 24.5 x 15.4 B 889748	2107 ✓
1	pb18	℞ 16 x 1	21	3⅛	REQ'D @ 21-6 B 889748	1160 ✓
1	pc18	℞ 16X1½	21	3⅛	REQ'D @ 21-6 B 889748	1740 ✓
1	pd6	℞ 16 x 2'4 *	11	0⅜	REQ'D @ 19-0 B 889745	See sheet
1	pf6	℞ 16 x 3'8 **	10	11⅛	REQ'D @ 24-0 B 889749	6/6
1	pg6	℞ 16 x 1'8	4	6½	REQ'D B 889748	298 ✓
2	ph6	BAR 7 x 1⅜	4	6	REQ'D ℞ 16X1¾ B 889748	297 ✓
1	pk6	℞ 16 x 1'4	6	0⅜	REQ'D B 889748	575 ✓
2	pm6	BAR 7 x 2½	6	0⅜	REQ'D B 889750	593 ✓
2	pn6	℞ 18 x 3'8	3	3	REQ'D	153 ✓
1	pp6	BAR 7½ x ⅝	4	3½	REQ'D @ 25-6	
1	pa7	BAR 7½ x ⅝	4	3½	REQ'D B 889750	135 ✓
16	pb7	BAR 7 x 7/16	4	3½	REQ'D @ 11-5½	
1	pa19	do	4	3½	B 889750	
1	pb19	BAR 7 x 7/16	4	3½		796 ✓
2	pc19	℞ 9 x 7/16	1	0	REQ'D 48 X 9 X 7/16 B 889749	27 ✓
1	pd19	℞ 13 x 7/16	0	8 5/8		14 ✓
1	pe19	℞ 7½ x 7/16	1	1		12 ✓
		SHEAR STUDS CONT: # 67-1286-26				7887 ✓
154		¾ ϕ SHEAR STUDS	0	7	STK	158 ✓
						155 ✓
4		⅞ H.TRN BOLTS	0	8½		9 ✓
4		do W/HARD WASHER	0	6	STK	7 ✓
2		do	0	2½		3 ✓
		SEE SHEET 6/6 FOR BILLING WEIGHTS				19 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

REV FOR APP 9-21-67 HF

DRAWN BY	AFE	8/17/67
CKD BY	HF	3-8-67

PROJ # I 91-2(16)

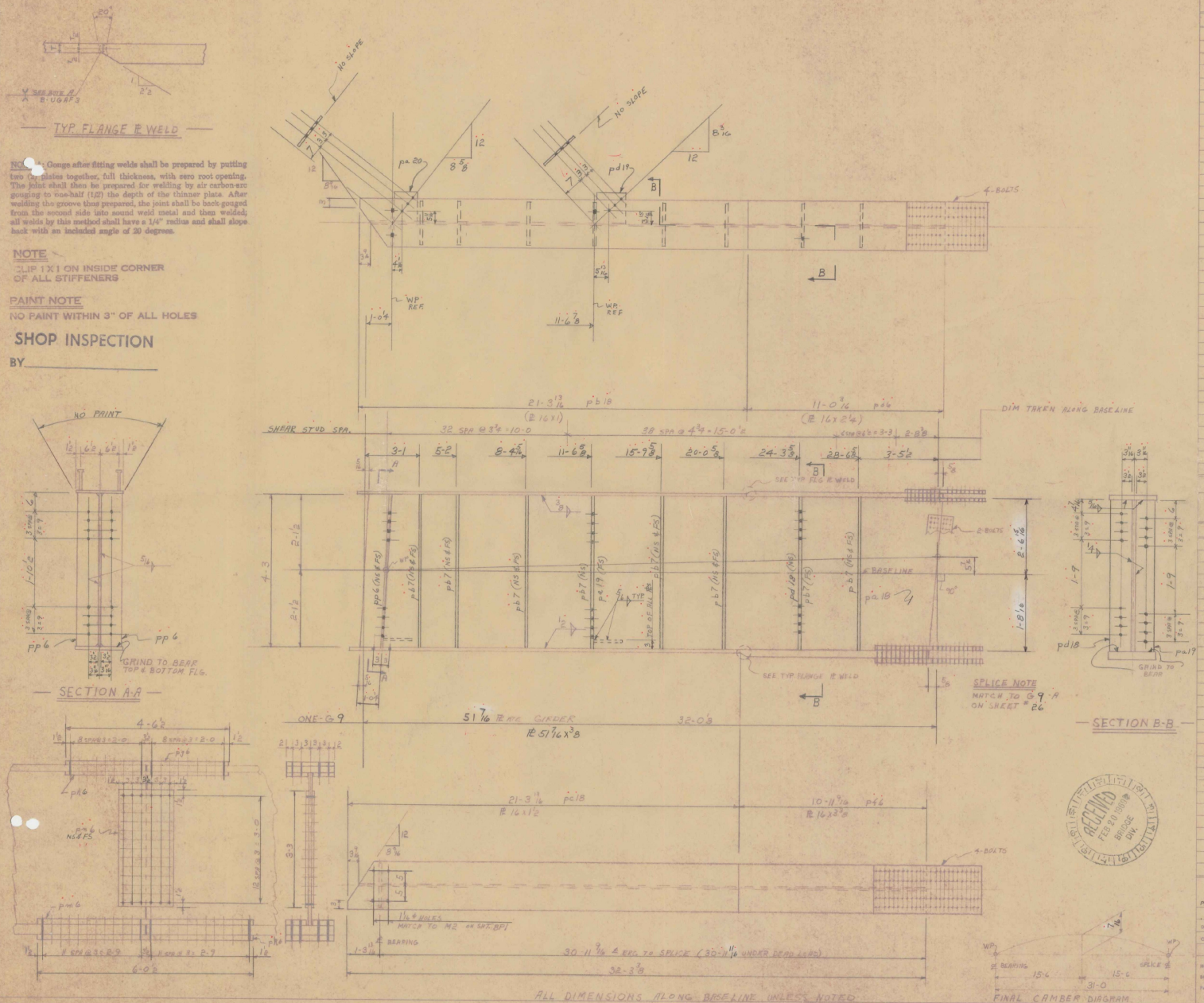
PROJECT I 91 WEB REDIRECTED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET ONEILL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 STEEL SHEET NO. 19 6/6
67-1286-26 (CENTER STAIR)

HOLES ⅞ & ¾ AS NOTED
BOLTS ⅞ H.TRN
PAINT RAL (VT SPEC) # AS NOTED

PRINT RECORD

NO.	FOR	DATE
3	APP.	3-8
1	SHOP APP.	9-24
2	STATE	5-84
1	CUST	7/28
2	SHOP	1-2

SM-10-63 OCF



NOTE: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES

SHOP INSPECTION
BY_____

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PL GIRDER (CONT.)			G9		
		1/4 f WELD	136	0		22	
		5/16 f WELD	42	0		10	
		3/8 f WELD	64	0		23	
		1/2 f WELD	64	0		41	
							96
		NOTE ON WEIGHT					
		* BILL AS					
1	pd6	PL 16 x 1 3/4	11	0 3/16		1049	
		** BILL AS					
1	pf6	PL 16 x 2 1/2	10	11 9/16		1492	
							2541
							2637

JOB NO. 67-1286 SHEET NO. 20 b/b

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE-PL GIRDER			G9		
1	pa18	PL 51 7/16 x 3/8	32	1 1/16	ORD 48x3/8 x 35-6 B89948	2107	
1	pb18	PL 16 x 1	21	3 13/16	ORD @ 21-6 B89948	1160	
1	pc18	PL 16 x 1 1/2	21	3 13/16	ORD @ 21-6 B89948	1740	
1	pd6	PL 16 x 2 1/4 *	11	0 3/16	ORD @ 34-0 B89948	see sheet	
1	pf6	PL 16 x 3 3/8 **	10	11 9/16	ORD @ 34-0 B89948	b/b	
1	pg6	PL 16 x 1 1/8	4	6 1/2	ORD B89949	278	
2	ph6	BAR 7 x 1 3/8	4	6 1/2	ORD PL 14 1/16 x 1/4 x 4-6 1/2 B89949	297	
1	pk6	PL 16 x 1 3/4	6	0 1/2	ORD B89949	575	
2	pm6	BAR 7 x 2 1/16	6	0 1/2	ORD B89950	593	
2	pn6	PL 18 1/2 x 3/8	3	3	RES	153	
2	pp6	BAR 7 1/2 x 5/8	4	3 1/2	ORD @ 25-6 B89950	135	
14	pb7	BAR 7 x 7/16	4	3 1/2			
1	pd19	BAR 7 x 7/16	4	3 1/2			
1	pd18	BAR 7 x 7/16	4	3 1/2	ORD @ 17-0 1/2 B89950	707	
1	pd19	PL 13 x 7/16	0	8 11/16	ORD 48x7/16x10-0 B89949	14	
1	pa20	PL 9 x 7/16	1	0		13	
							7772
		SHEAR STUDS CONTR. #67-1286-26					
154		3/4 ϕ SHEAR STUDS	0	7	STK	155	
							155
4		7/8 ϕ HITEN BOLTS	0	8 1/2	STK	9	
4		do W/HARD WASHERS	0	6		7	
2		do	0	2 1/2		3	
		SEE SHEET b/b FOR BILLING WEIGHTS					19

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

30 BOUND

REV REF APP 4-21-67 HP

PROJ # I 91-2(12)

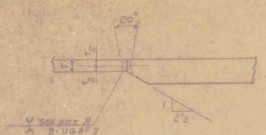
		DATE
DRAWN BY	AFL	2/17/67
CKD BY	HP	3-8-67

PROJECT I 91 OPER. RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEILL & SON CONSTR. CO.

HOLES 15/16 ϕ & AS NOTED
BOLTS 7/8 ϕ HITEN
PAINT RL (VT. SPEC) & AS NOTED

ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 STA. ST. SHEET NO. 20 a/b
67-1286-26 (CHEAR STUDS)

PRINT RECORD NO.	FOR	DATE
3	APP	3-8
7	SHOP APP	4-29
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2



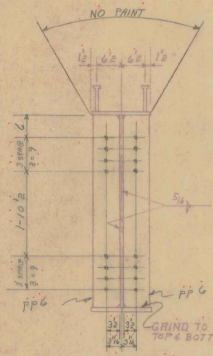
TYP FLANGE ℄ WELD

NOTE A: Gouge after fitting welds shall be prepared by putting two plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to 'one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

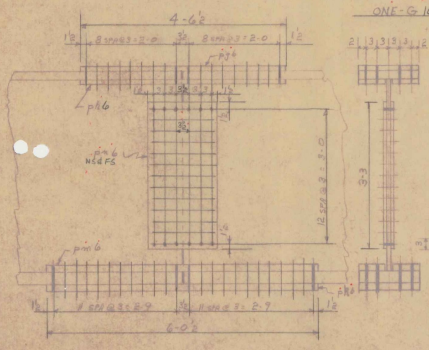
NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

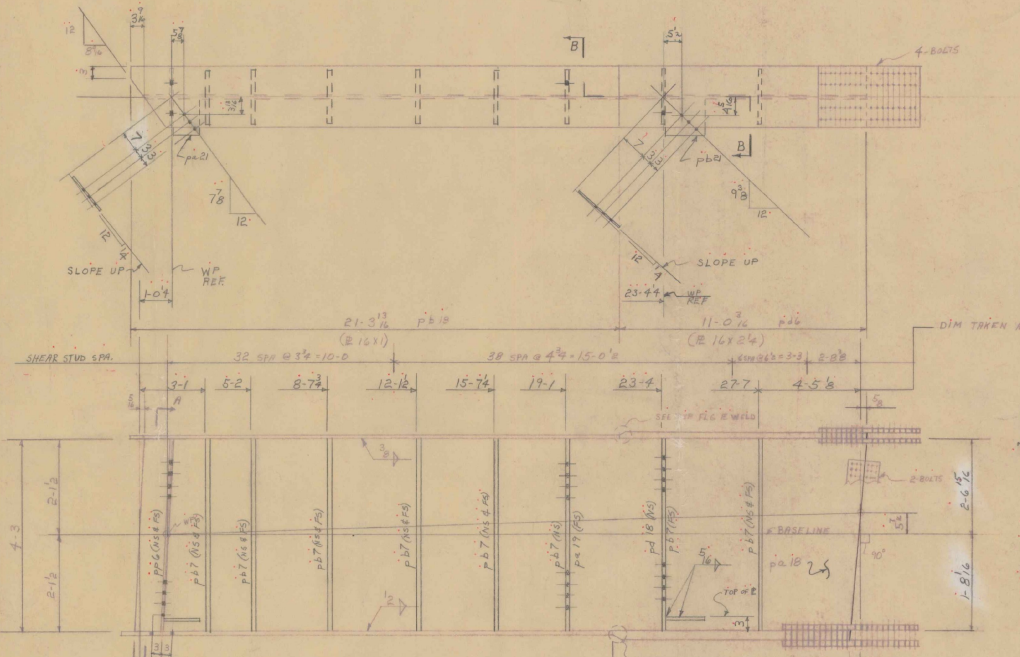
PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES

SHOP INSPECTION
BY_____



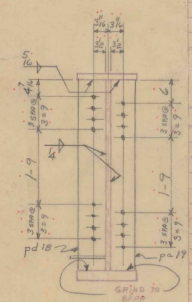
SECTION A-A

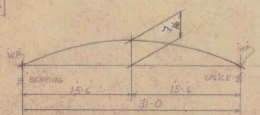




ALL DIMENSIONS ALONG BASELINE UNLESS NOTED

SECTION B-B





FINAL CAMBER DIAGRAM

RECEIVED FEB 20 1968 BRIDGE DIV.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE ℄ GIRDER G10 (CONT.)					
		1/4" ø WELD	136	0		22 ✓	
		5/16" ø WELD	42	0		10 ✓	
		3/8" ø WELD	64	0		23 ✓	
		1/2" ø WELD	64	0		41 ✓	
							96 ✓
		NOTE ON WEIGHT					
1	pd6	* BILL AS ℄ 16 X 1 3/4	11	6 7/16		1049 ✓	
1	pb6	** BILL AS ℄ 16 X 2'2	10	11 7/16		1492 ✓	
							2541 ✓
							2637 ✓

JOB NO. 67-1286 SHEET NO. 21 6/6

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE-℄ GIRDER G10					
1	pa16	℄ 51 7/16 X 3/8	32	1 1/4		2109 ✓	
1	pb18	℄ 16 X 1	21	3 13/16		1160 ✓	
1	pb18	℄ 16 X 1'2	21	3 13/16		1740 ✓	
1	pd6	℄ 16 X 2'4 *	11	6 7/16		all shop	
1	pb6	℄ 16 X 3'8 **	10	11 7/16		b/b	
1	pg4	℄ 16 X 1'8	4	6 1/2		278 ✓	
2	ph6	BAR 7 X 1'2	4	6 1/2		297 ✓	
1	pk6	℄ 16 X 1'4	6	0 3/4		595 ✓	
2	pm6	BAR 7 X 2'6	6	0 1/2		593 ✓	
2	pn6	℄ 18 X 3'9	3	3		153 ✓	
2	pp6	BAR 7 X 1'5	4	3 1/2		135 ✓	
14	pb7	BAR 7 X 7/16	4	3 1/2			
1	pd18	do	4	3 1/2			
1	pa19	BAR 7 X 3/16	4	3 1/2		709 ✓	
1	pa21	℄ 13 X 7/16	0	8 3/4		14 ✓	
1	pb21	℄ 7 X 7/16	1	0 1/2		14 ✓	
							7793 ✓
		SHEAR STUDS CONT'D 67-1286-26					
154		3/4 ø SHEAR STUDS	0	7	STK	155 ✓	
							155 ✓
4		7/8 ø HEX'N BOLTS WITH NUTS & WASHERS	0	8 1/2	SET	9 ✓	
4		do WITH NUTS & WASHERS	0	6	SET	7 ✓	
2		do	0	2 1/2	SET	3 ✓	
		SEE SHEET 5/6 FOR BILLING WEIGHTS					19 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

S.O. 10,000
PROJ I 71-200

REV PER APP 4-21-67 HP

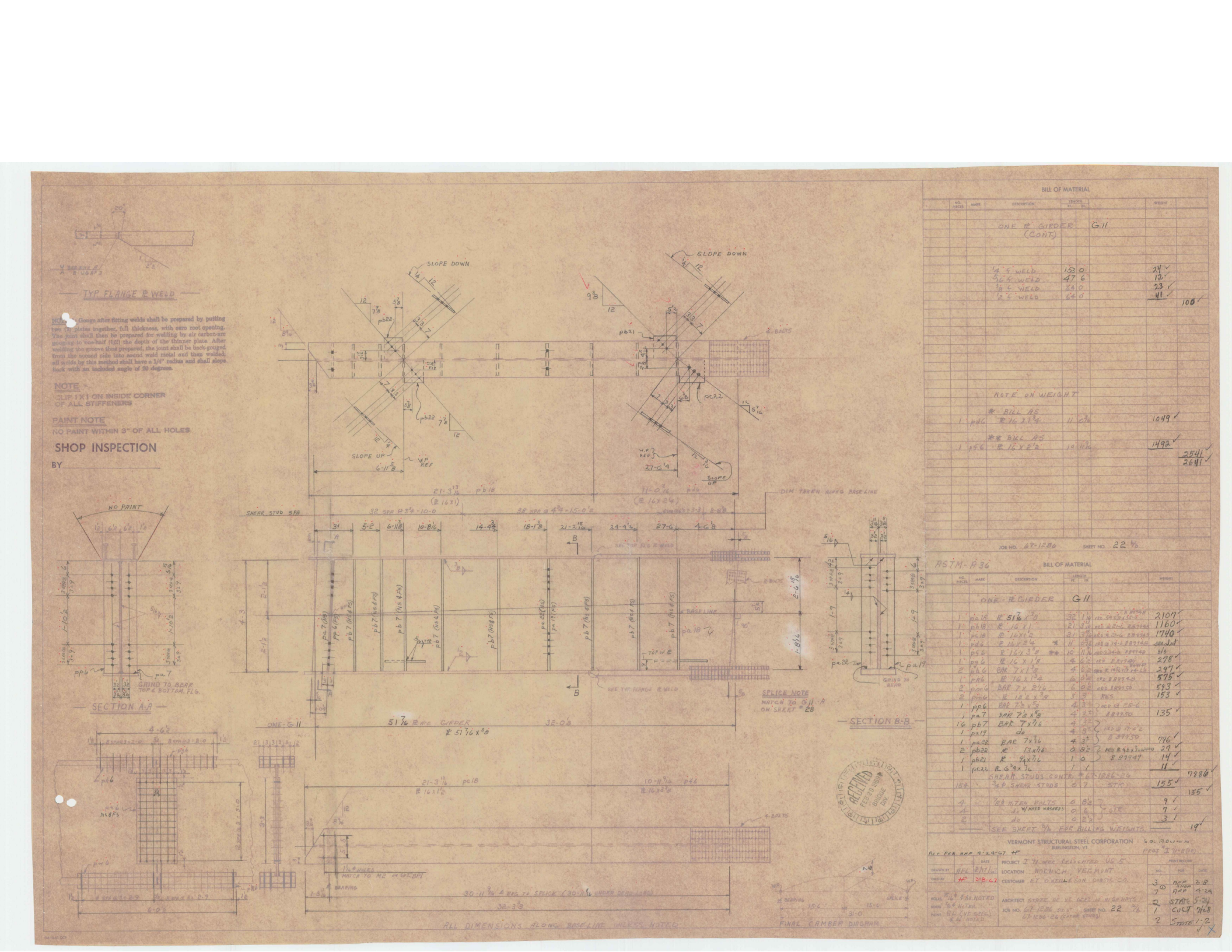
		DATE
DRAWN BY	RFL	8/17/67
TRACED BY	HP	3-8-67

PROJECT I 91 over RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON, DANSTK. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (U.S. 5) SHEET NO. 21 6/6
67-1286-26 (LATER STATES)

HOLES 15/16 ø AS NOTED
BOLTS 7/8 ø H.T.B.R.
PAINT ℄ (EXT. STEEL) AS NOTED

PRINT RECORD NO.	FOR	DATE
3	PRINTS	3-8
10	& MYLAR	
1	BP#1	4-24
2	STATE	5/24
1	COST	7/28
2	STATE	1-2

✓ X



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE ℄ GIRDER G11 (CONT.)					
		1/4 " FLG WELD	153	0		24 ✓	
		5/16" WELD	47	6		12 ✓	
		3/8 " WELD	84	0		23 ✓	
		1/2 " WELD	64	0		41 ✓	
							100 ✓
		NOTE ON WEIGHT					
		* BILL AS					
1	pl6	℄ 16 X 1 3/4	11	0 7/8		1649 ✓	
		** BILL AS					
1	pl6	℄ 16 X 2 1/2	10	11 5/8		1492 ✓	
							2841 ✓
							2641

JOB NO. 67-1286 SHEET NO. 22 1/2

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE-℄ GIRDER G11					
1	pa18	℄ 51 7/16 x 3/8	32	1 1/16	1 PIECE	2107 ✓	
1	pb18	℄ 16 X 1	21	3 13/16	REQ'D @ 2'-6" & 32 SPACES	1160 ✓	
1	pc18	℄ 16 X 1 1/2	21	3 13/16	REQ'D @ 2'-6" & 32 SPACES	1740 ✓	
1	pd6	℄ 16 x 2 1/4 *	11	0 7/8	REQ'D @ 34-5 SPACES	see sht	
1	pe6	℄ 16 x 3 1/8 **	10	11 5/8	REQ'D @ 30-11 SPACES	1/2	
1	pg6	℄ 16 x 1/8	4	2 1/2	REQ'D @ 1 SPACES	278 ✓	
2	ph6	BAR 7 x 1 3/8	4	6 3/8	REQ'D @ 1 SPACES	297 ✓	
1	pi6	℄ 16 x 1 3/4	6	3 1/2	REQ'D @ 1 SPACES	575 ✓	
2	pm6	BAR 7 x 2 1/16	6	0 2	REQ'D @ 1 SPACES	543 ✓	
2	pn6	℄ 18 x 3/8	3	3	PES	153 ✓	
1	pp6	BAR 7 x 3/8	4	3 1/2	REQ'D @ 56-6		
1	pa7	BAR 7 x 3/8	4	3 1/2	B 89950	135 ✓	
16	pb7	BAR 7 x 7/16	4	3 1/2	REQ'D @ 17-0 2 B 89950		
1	pa19	do	4	3 1/2			
1	pa22	BAR 7 x 1/16	4	3 1/2		796 ✓	
2	pb22	℄ 13 x 7/16	0	8 1/2	REQ'D @ 48 x 7/16	29 ✓	
1	pb21	℄ 7 1/2 x 7/16	1	0	B 89949	14 ✓	
1	pc22	℄ 6 3/4 x 7/16	1	1		11 ✓	
		SHEAR STUDS CONTR. #67-1286-26					7880 ✓
154		3/4 ℄ SHEAR STUDS	0	7	STK	155 ✓	
							155 ✓
A		5/8 H.TRY BOLTS W/ HARD WASHERS	0	8 1/2	STK	9 ✓	
A		do	0	6		7 ✓	
E		do	0	2 1/2		3 ✓	
		SEE SHEET 5/8 FOR BILLING WEIGHTS					19 ✓

VERMONT STRUCTURAL STEEL CORPORATION S.O. 13 0 1 5 6
BURLINGTON, VT. PROJ. # 67-1286

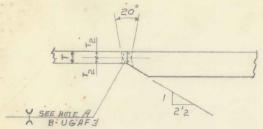
Rev. per mee 9-29-67 ℄

		DATE
DRAWN BY	AFL	2/21/68
CHKD BY	℄	3/8-68

PROJECT T. H. SPEC. REINFORCED CONC. DECK
LOCATION NORWICH, VERMONT
CUSTOMER ET. O'NEILL & SON, DANBURY, CT.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 22 1/2
67-1286-26 (STEEL STATS)

NO.	FOR	DATE
3	REVISION	3-8
7	BAP	4-29
2	STATE	5-24
1	CUST	7-28
2	STATE	1-2

ROLL ℄ PAS NOTED
SIZE ℄ MATERIAL
FINISH ℄ UNT. SPEC. NOTED



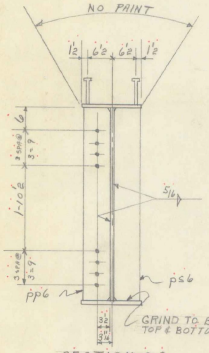
TYP. FLANGE ℄ WELD

NOTE Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

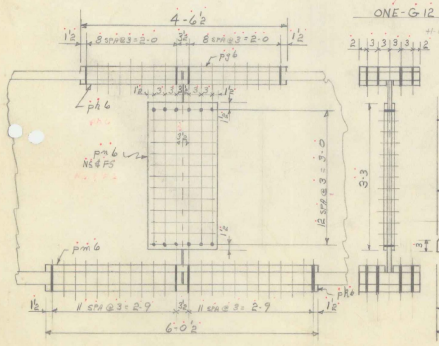
NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

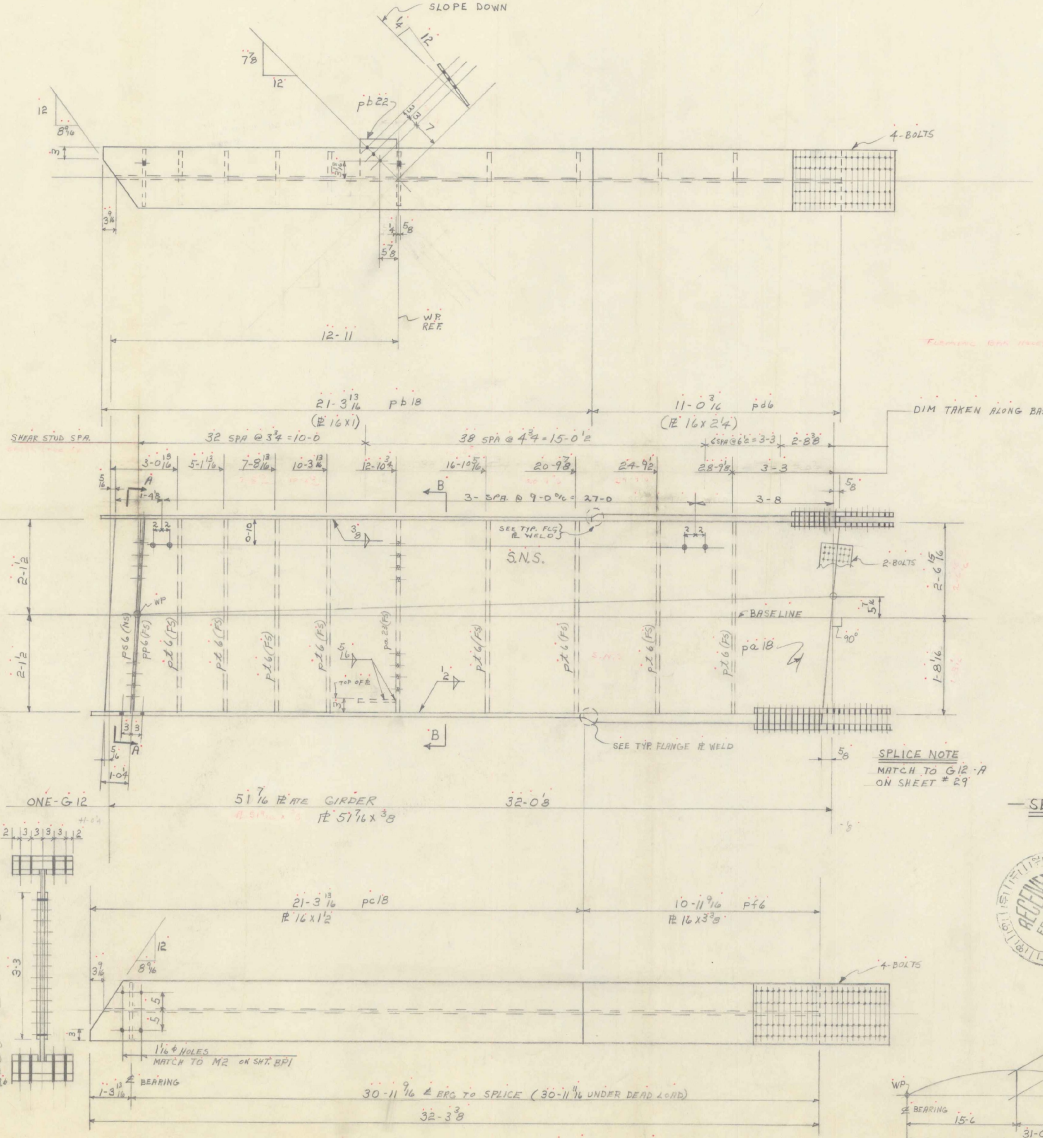
PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES

SHOP INSPECTION
BY_____



SECTION A-A





ALL DIMENSIONS ALONG BASELINE UNLESS NOTED

FINAL CAMBER DIAGRAM



SECTION B-B

RECEIVED FEB 20 1968 BRIDGE DIV.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE-℄ GIRDER (CONT)			G12		
		¼ ℄ WELD	76	6		12 ✓	
		5/16 ℄ WELD	30	8		8 ✓	
		⅜ ℄ WELD	64	0		23 ✓	
		½ ℄ WELD	64	0		41 ✓	
							94 ✓
		NOTE ON WEIGHT					
		* BILL AS					
1	pd6	℄ 16 X 1¾	11	0 3/16		1049 ✓	
		** BILL AS					
1	ps6	℄ 16 X 2⅛	10	11 9/16		1492 ✓	
							2541 ✓
							2625 ✓

JOB NO. 67-1286 SHEET NO. 23 ½6

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE-℄ GIRDER			G12		
1	pa.15	℄ 51 7/16 X 3/8	32	1/16	RD 54X5/8 X32-0 B 847448	2107 ✓	
1	pb18	℄ 16 X 1	21	3 13/16	ORD ℄ 21-6 B 847448	1160 ✓	
1	ps18	℄ 16X1⅛	21	3 13/16	ORD ℄ 21-6 B 847448	1740 ✓	
1	pd6	℄ 16 x 2¼ *	11	0 3/16	ORD @ 34-0 B 847448	ALL ONE	
1	ps6	℄ 16 x 3 3/8 **	10	11 9/16	ORD @ 34-0 B 847448	PIECE	
1	pp6	℄ 16 x 1⅛	4	6½	ORD B 847448	298 ✓	
2	pl6	BAR 7 x 1 3/8	4	6½	ORD ℄ 14-6 & 17-6 B 847448	297 ✓	
1	pl6	℄ 16 X 1¾	6	0½	ORD B 847448	595 ✓	
2	pm6	BAR 7 x 2 1/16	6	0 2	ORD B 847350	593 ✓	
2	pn6	℄ 18 2 x 3/8	3	3	RES	153 ✓	
1	pp6	BAR 7½ x 3/8	4	3½	ORD @ 25-6		
1	pz6	BAR 7½ x 5/8	4	3½	B 847350	135 ✓	
8	pt6	BAR 7 x 7/8	4	3½	ORD @ 17-6 ℄		
1	ps23	BAR 7 X ⅝	4	3½	B 847350 — ORD B 847448 X11-0 B 847747	996 ✓	
1	pb22	℄ 13 x 7/16	0	8½		14 ✓	
							7848 ✓
		SHEAR STUDS CONTR. #67-1286-36					
154		¾ ℄ SHEAR STUDS	0	7	STK	155 ✓	
							155 ✓
4		⅞ HITEN. BOLTS	0	8½	STK	9 ✓	
4		do W/HARD WASHERS	0	6		7 ✓	
2		do	0	2½		3 ✓	
———		SEE SHEET ½6 FOR BILLING WEIGHTS				———	19 ✓

VERMONT STRUCTURAL STEEL CORPORATION S.D. Rounds
BURLINGTON, VT. PROJ # I 91-2(18)

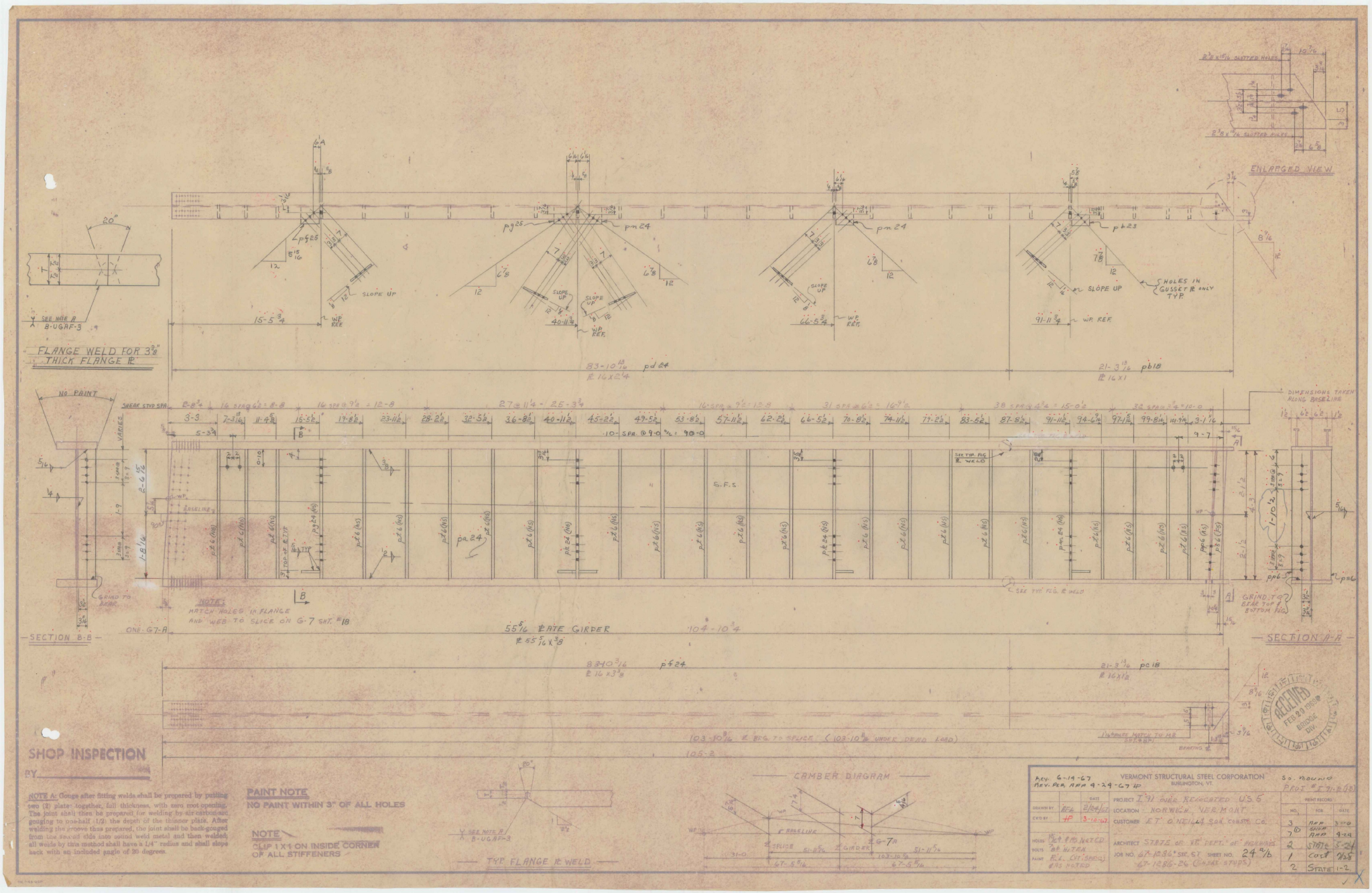
		DATE
DRAWN BY	AFI	2/17/67
OK'D BY	HP	3-8-67

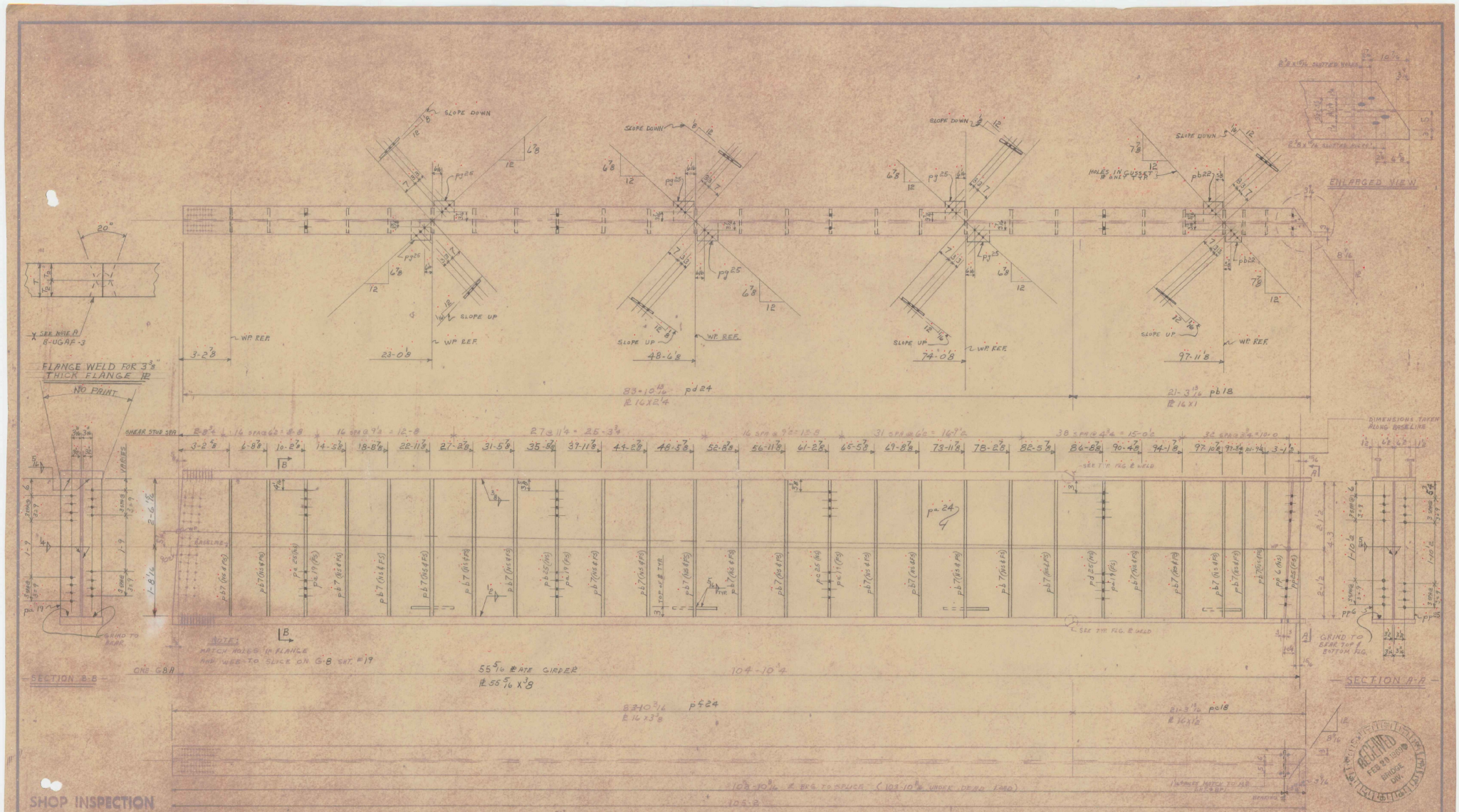
PROJECT I 91 over Relocated US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEILL SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 23 ½6
67-1286-26 (CHANN STUDS)

HOLES 15/16" ℄ AS NOTED
BOLTS ⅞ HI-TEN.
PAINT RL (VT. SPEC.) ℄ AS NOTED

PRINT RECORD		
NO.	FOR	DATE
3	FINAL SHOP DWG	3-8
2	STATE	5-24
1	CUST	7/28
2	STATE	1-22

SM 1043 QCP


ENLARGED VIEW
FLANGE WELD FOR 3 3/8" THICK FLANGE PL
SEE NOTE A B-UGAF-3
SLOPE UP
HOLES IN GUSSET PL ONLY TYP.
83-10 13/16 pd 24
PL 16x2 1/4
21-3 13/16 pb 18
PL 16x1
NO PAINT
SHEAR STUD SPA.
DIMENSIONS TAKEN ALONG BASELINE
S.F.S.
NOTE: MATCH HOLES IN FLANGE AND WEB TO SLICE ON G-7 SHT. #18
ONE G7-A
55 5/16 PLATE GIRDER
PL 55 5/16 x 3/8
104-10 3/4
SECTION B-B
SECTION A-A
GRIND TO BEAR
GRIND TO BEAR TOP & BOTTOM FLG.
83-10 3/16 pf 24
PL 16x3 3/8
21-3 13/16 pc 18
PL 16x1 1/2
103-10 3/16 PL BRG. TO SPLICE (103-10 11/16 UNDER DEAD LOAD)
105-2
CAMBER DIAGRAM
TYP. FLANGE PL WELD
SEE NOTE A B-UGAF-3
RECEIVED FEB 23 1968 BRIDGE DIV.
SHOP INSPECTION
BY
NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.
PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES
NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS
REV. 6-19-67
REV. PER APP 9-29-67 HP
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.
SO. BOUND
PROJ. # I 91-2 (13)
DRAWN BY RFL 2/24/67
CK'D BY HP 3-10-67
PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH, VERMONT
CUSTOMER ET ONEILL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SIR. ST. SHEET NO. 24 a/b
67-1286-26 (SHEAR STUDS)
HOLES 15/16 & AS NOTED
BOLTS 7/8 & HITEN
PAINT R.L. (VT. SPEC.) & AS NOTED
PRINT RECORD
NO. FOR DATE
3 APP 3-10
7 SHOP APP 9-29
2 STATE 5-24
1 COST 7/25
2 STATE 1-2



SHOP INSPECTION

BY

NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into solid weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

NOTE

CLIP 1X1 ON INSIDE CORNER OF ALL STIFFENERS

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

REV. PER APP 4-24-67 HP

		DATE
DRAWN BY	RFL	2/24/67
CK'D BY	HP	3-10-67

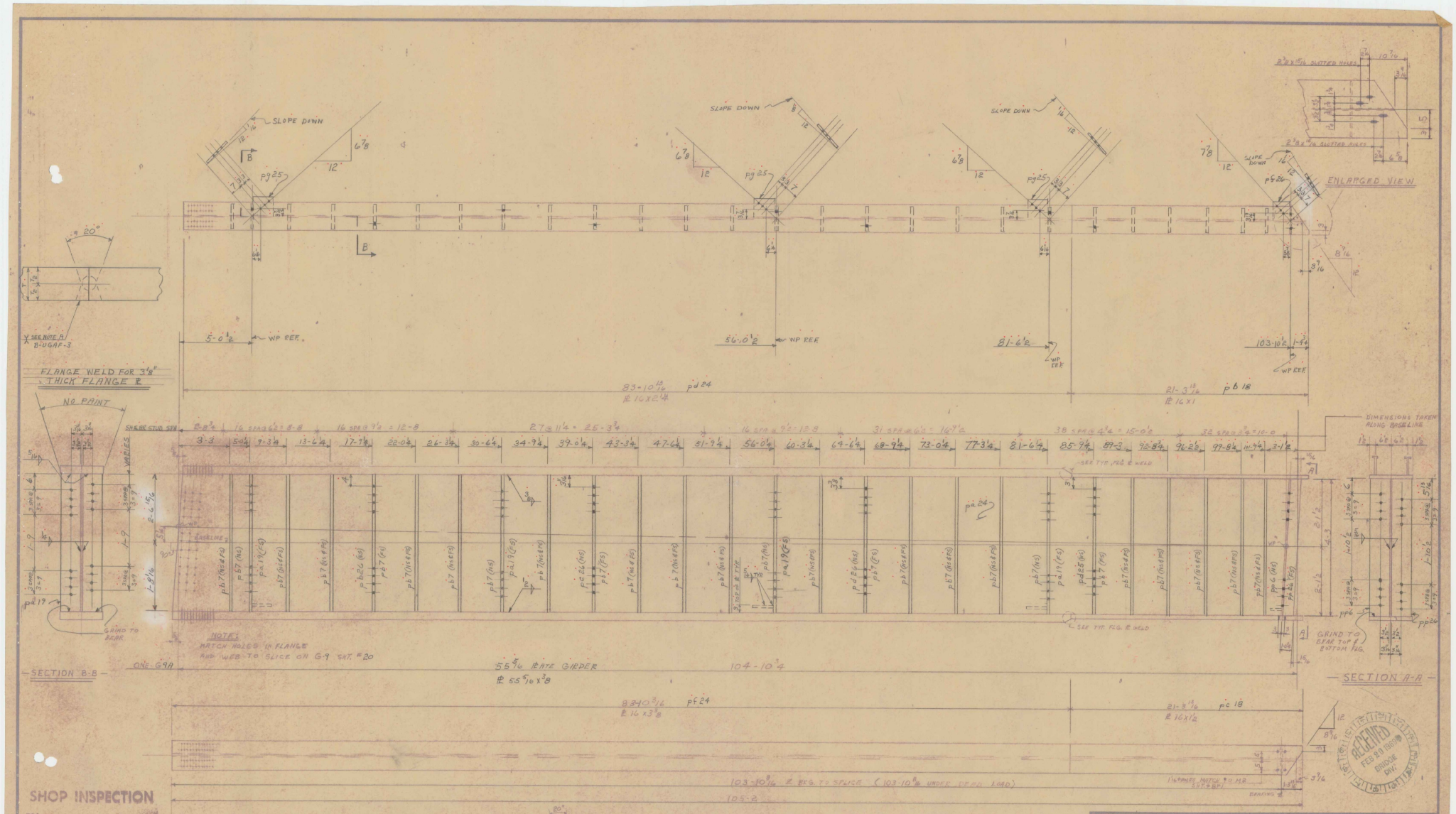
HOLES 15/16" & PRS NOTED
BOLTS 7/8" HIGH
PAINT R.L. (VT SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEILL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 STR. ST. SHEET NO. 25 a/b
67-1286-26 (LATER STUDS)

SO. POLLUTO
PROJ. # I 71-2 (18)

NO.	PRINT RECORD	DATE
3	APP	3-10
7	SHOP APP	4-24
2	STATE	5-24
1	CUST	7/29
2	STATE	1-2

RECEIVED FEB 20 1969 BRIDGE DIV.



SHOP INSPECTION

BY

NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

NOTE

CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

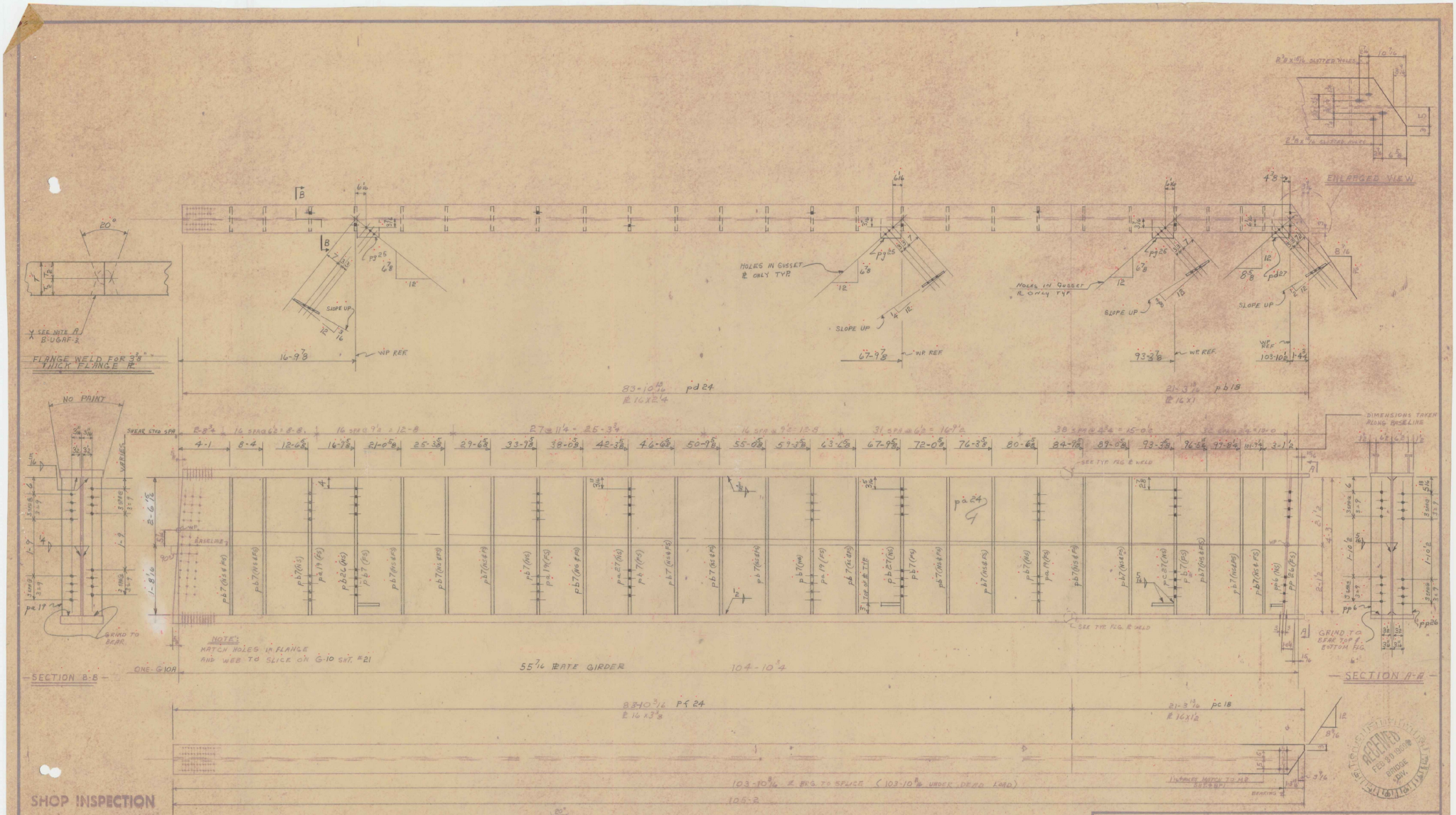
		DATE
DRAWN BY	AEL	2/24/67
CK'D BY	+P	3-10-67

PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH, VERMONT
CUSTOMER E. T. O'NEILL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 STR. ST SHEET NO. 26 a/b
67-1286-26 (SHEAR STUDS)

HOLES 15/16" & AS NOTED
BOLTS 7/8" HI TEN
PAINT R.L. (VT SPEC) & AS NOTED

S.O. [illegible]
PROJ. # I 91-2 (18)

FRONT RECORD		
NO.	FOR	DATE
3	ARR	3-10
7	ARR	4-24
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2



SHOP INSPECTION

BY _____

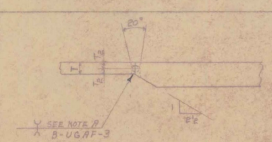
NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

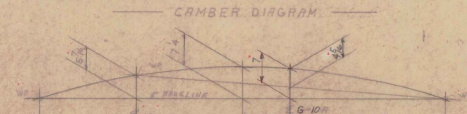
NOTE

CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS



TYP. FLANGE PL WELD

CAMBER DIAGRAM



VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	RFL	2/24/67
CK'D BY	HP	3-10-67

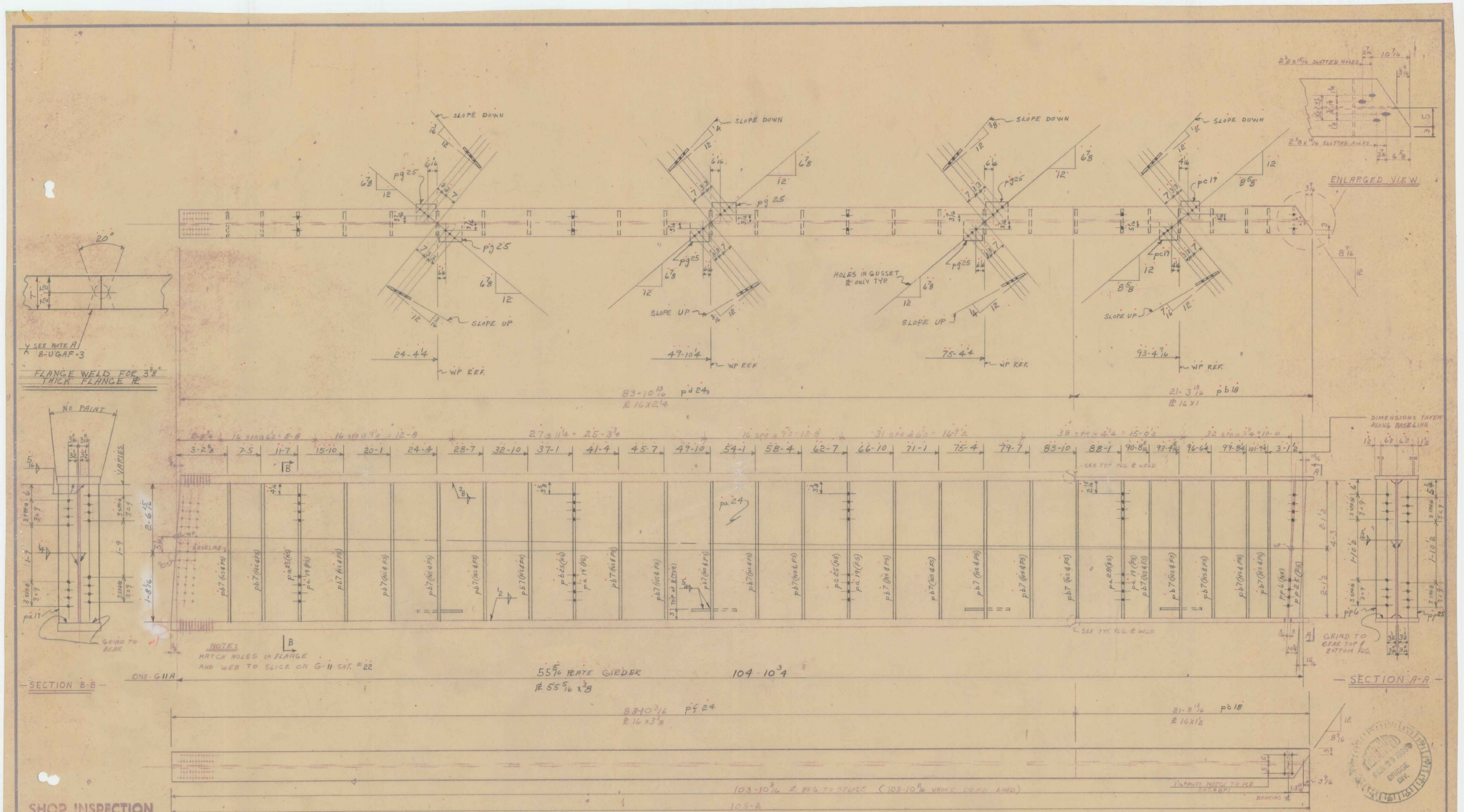
PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEILL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 STR. ST SHEET NO. 27 a/b
67-1286-26 (SHEAR STUDS)

HOLES 15/16 & AS NOTED
BOLTS 7/8 & AS NOTED
PAINT R.L. (VT SPEC) & AS NOTED

SO. BOUND
PROJ #I 91-2 (13)

PRINT RECORD		
NO.	FOR	DATE
3	APPR. & NOTE	3-10
7	APP.	4-24
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2

RECEIVED FEB 20 1969 BRIDGE DIV.



SHOP INSPECTION

BY

NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

PAINT NOTE

NO PAINT WITHIN 3" OF ALL HOLES

NOTE

CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

REV. PER. APP 4-24-67 HP

SO. BOUNIE
PROJ #I 91-2 (18)

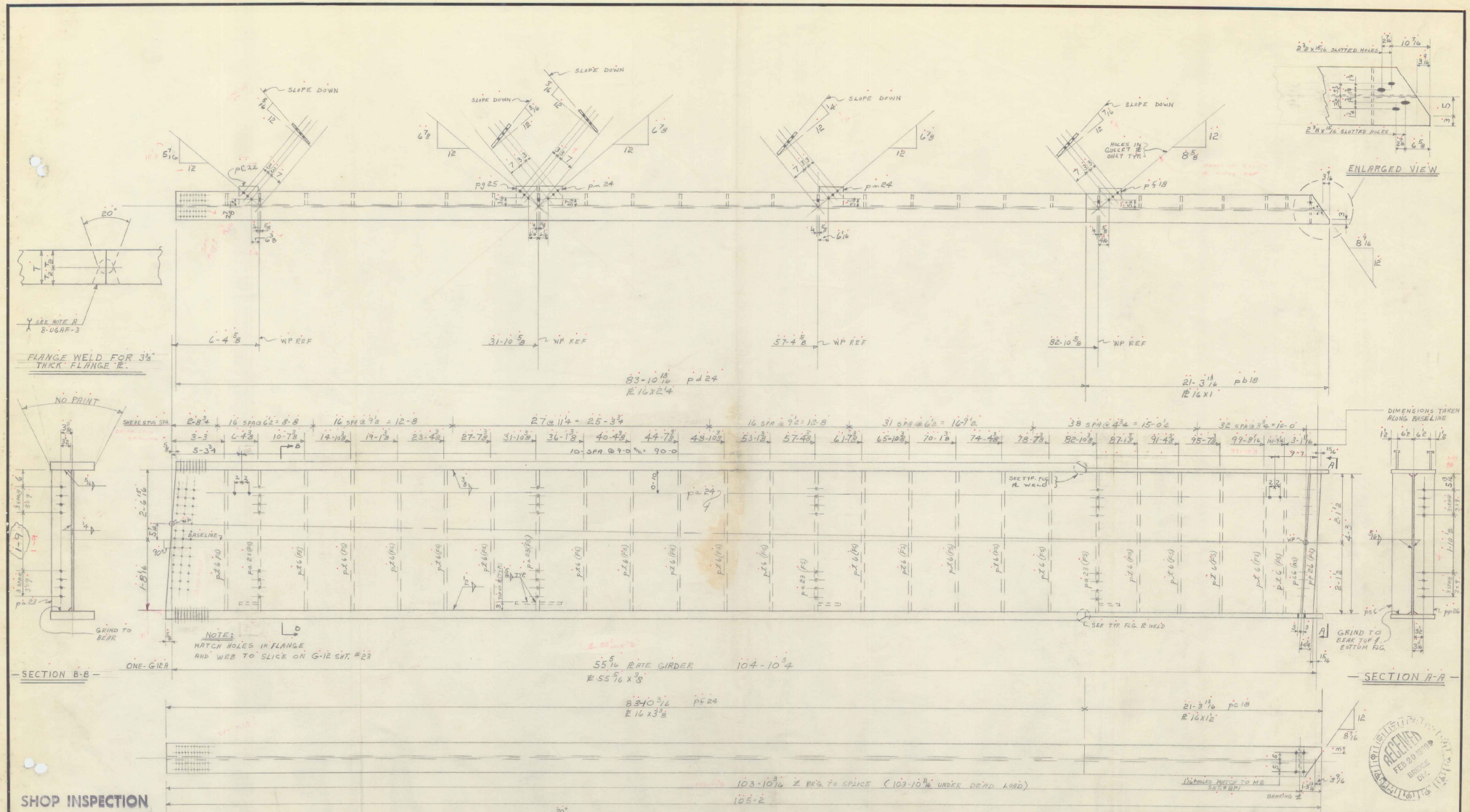
		DATE
DRAWN BY	AFL	2/24/67
CK'D BY	HP	3-10-67

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEILL & SON CONSTR. CO.

HOLES 15/16 & AS NOTED
BOLTS 7/8 & HITEN
PAINT R.L. (1 SPEC) & AS NOTED

ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 STR. ST SHEET NO. 28 a/b
67-1286-26 (SHEAR STUDS)

PRINT RECORD		
NO.	FOR	DATE
3	APP	3-10
7	SHOP APP	9-29
2	STATE	5-24
1	COLT	7/28
2	STATE	1-2



SHOP INSPECTION

BY _____

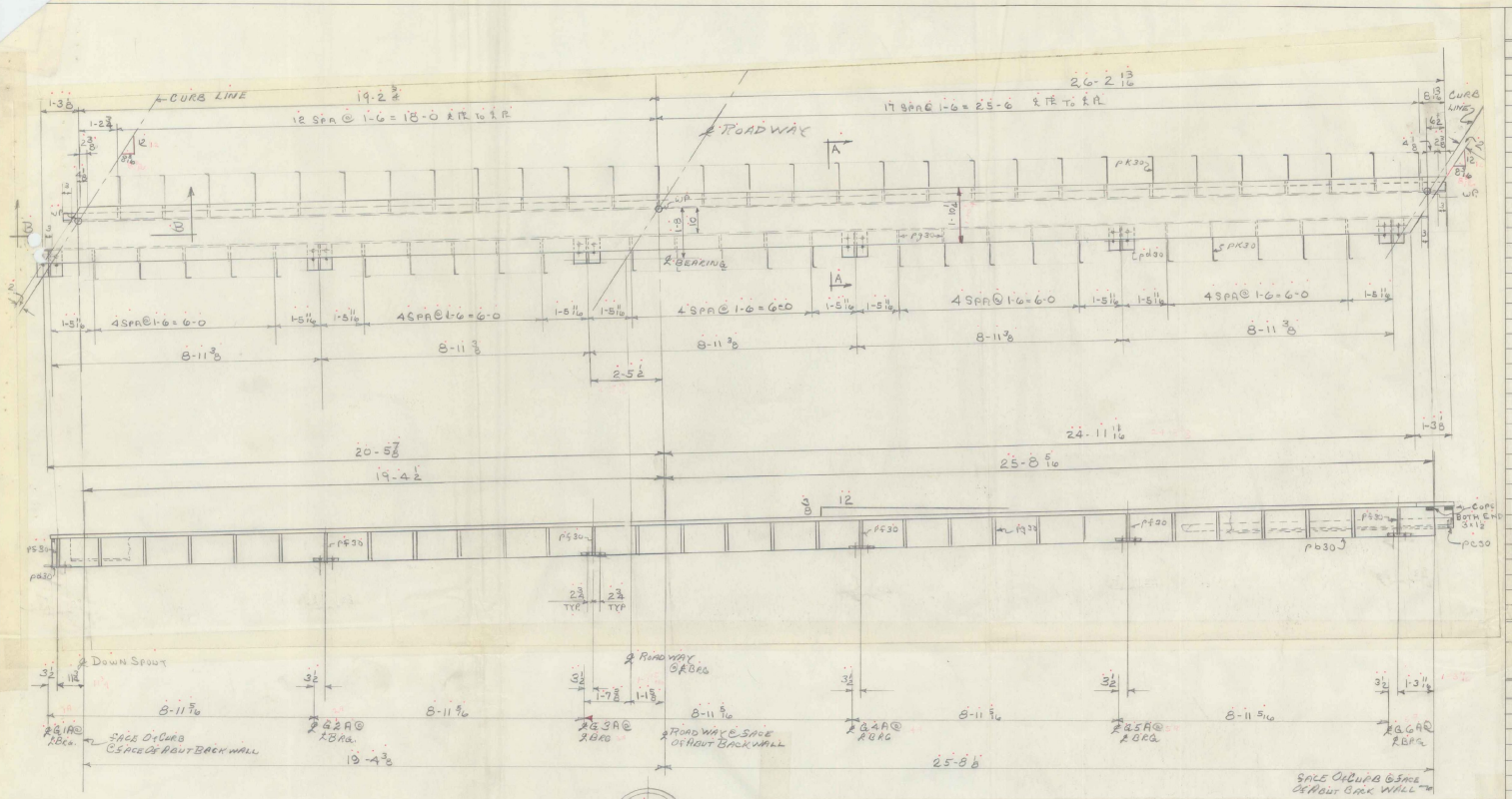
NOTE A: Gouge after fitting welds shall be prepared by putting two (2) plates together, full thickness, with zero root opening. The joint shall then be prepared for welding by air carbon-arc gouging to one-half (1/2) the depth of the thinner plate. After welding the groove thus prepared, the joint shall be back-gouged from the second side into sound weld metal and then welded; all welds by this method shall have a 1/4" radius and shall slope back with an included angle of 20 degrees.

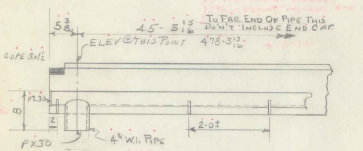
PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES

NOTE
CLIP 1 X 1 ON INSIDE CORNER OF ALL STIFFENERS

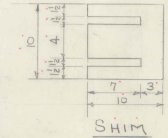
REV. 6-19-67 HP REV. PER. APP 4-24-67 HP	VERMONT STRUCTURAL STEEL CORPORATION BURLINGTON, VT.		SO. POOLING PROJ #I 91-2(18)
DRAWN BY HFL 2/24/67 CK'D BY HP 3-10-67	PROJECT I 91 OVER RELOCATED US 5 LOCATION NORWICH, VERMONT CUSTOMER ET O'NEILL & SON CONSTR. CO.		PRINT RECORD NO. / FOR / DATE 3 / APP / 5-10 7 / SHOP APP / 4-24 2 / STAGE / 5-24 1 / CUST / 7/28 2 / STAGE / 1-2
HOLES 15/16" & AS NOTED BOLTS 7/8" HITEN PAINT R.L. (VT. SPEC.) & AS NOTED	ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS JOB NO. 67-1286 STR. ST SHEET NO. 29 a/b 67-1286-26 (SHEAR STUDS)		

SM 3-65 QCP



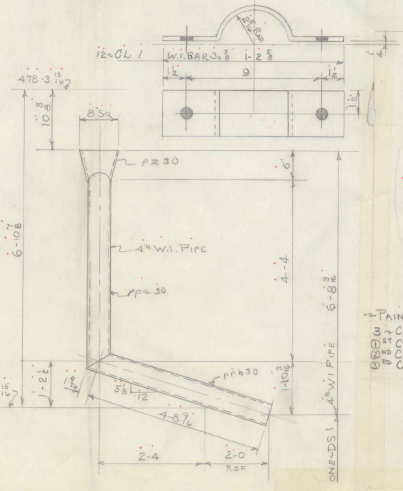


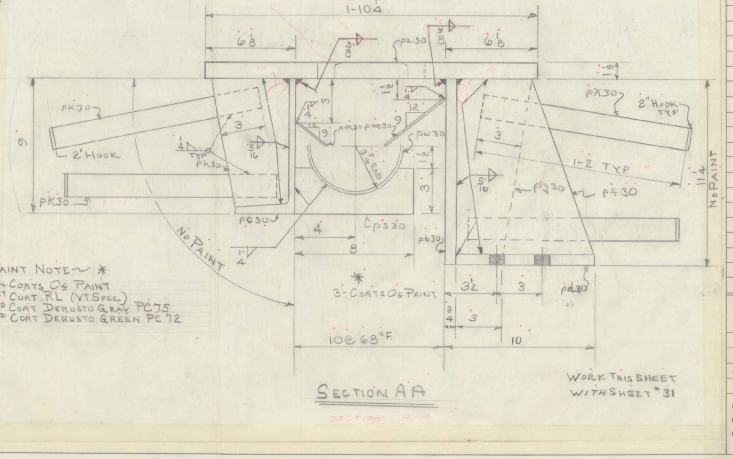
SECTION B-B



SHIM

No		MATERIAL
6	S1	PL 10 x 1 x D-10
6	S2	PL 10 x 3/8 x 0-10
6	S3	PL 10 x 1/2 x 0-10
6	S4	PL 10 x 3/8 x 0-10
6	S5	PL 10 x 1/4 x 0-10
12	S6	PL 10 x 1/8 x 0-10
12	S7	PL 10 x 1/16 x 0-10





PAINT NOTE ~ *
3 COATS OS PAINT
1ST COAT RL (VTSPEC)
2ND COAT DERUSTO GRAY PC75
3RD COAT DERUSTO GREEN PC72

SECTION A-A

WORK THIS SHEET WITH SHEET #31

ASTM A36 & AS NOTED BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		CONT.					
12	CL1	W.I. BAR 3 x 3/8	1	2 3/8	STK	56	
12		3/4" GALV BOLT	1	2	FORD STD NUT 90316	23	
36		3/4" GALV WASH				4	
12		3/4" GALV HEX NUTS				HW Asm	83
		SHIMS					
6	S1	PL 10 x 1	0	10		190	
6	S2	PL 10 x 3/8	0	10		127	
6	S3	PL 10 x 1/2	0	10	7 STK	85	
6	S4	PL 10 x 3/8	0	10		64	
6	S5	PL 10 x 1/4	0	10		42	
12	S6	PL 10 x 1/8	0	10		43	
12	S7	PL 10 x 1/16	0	10		21	552
							635

RECEIVED FEB 29 1968 BRIDGE DIV.

JOB NO. 67-1286 SHEET NO. 30 of 36

ASTM-A36 & AS NOTED BILL OF MATERIAL (21)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
	ONE	END DAM ~ ED1					
1	PA30	PL 21 x 1/2	46	8 7/16	ORD REQ'D 46'-8 7/16"	3752	
1	PA30	PL 11 3/4 x 3/4	45	11 7/8	ORD REQ'D 45'-11 7/8"	1319	
1	PC30	1/2 L 8 x 4 x 42.7	45	11 7/8	REQ @ 55-0	981	
6	PA30	PL 9 1/4 x 3/8	0	10			
6	PA30	1 do	0	10 1/2	STK	242	
25	PA30	BAR 5 1/2 x 3/8	0	11 3/4		300	
30	PA30	BAR 5 1/2 x 3/8	0	8 1/2		293	
110	PA30	BAR 1 1/2 x 1/4	1	4	ORD AS A36 @ 30 PCS	188	
1	PM30	W I BAR 5 x 5/16	45	11 5/8	ORD	244	
1	PM30	W I BAR 2 x 5/16	45	11 5/8	ORD	98	
22	PF30	L 3 x 3 x 3/8	1	8	STK	264	
24	PS30	W.I. BAR 3 x 5/16 □	0	6	2 ORD	51	
2	PT30	W.I. BAR 3 1/2 x 5/16 □	0	6 3/8	2 ORD	11	
1	PW30	6" W.I. PIPE	45	10 1/16	ORD	436	
1	PX30	4" W.I. PIPE	0	5 11/16	ORD	5	8177
		ONE-DOWNSPOUT ~ DS1					
4	PZ30	W BAR 8 x 5/16	0	6 3/8	ORD	18	
1	PP30	4" W.I. PIPE	4	6	2 ORD	49	
1	PP30	4" W.I. PIPE	4	10 1/2		52	119
44		3/4" BOLTS	0	2 1/2		23	23
		3/8" FILLET WELD	184	0		66	
		1/4 S WELD	171	0		27	
		5/16" FILLET WELD	144	0		36	129
							8448

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.
NO. IBM NO. TRW I 91-2 (18)

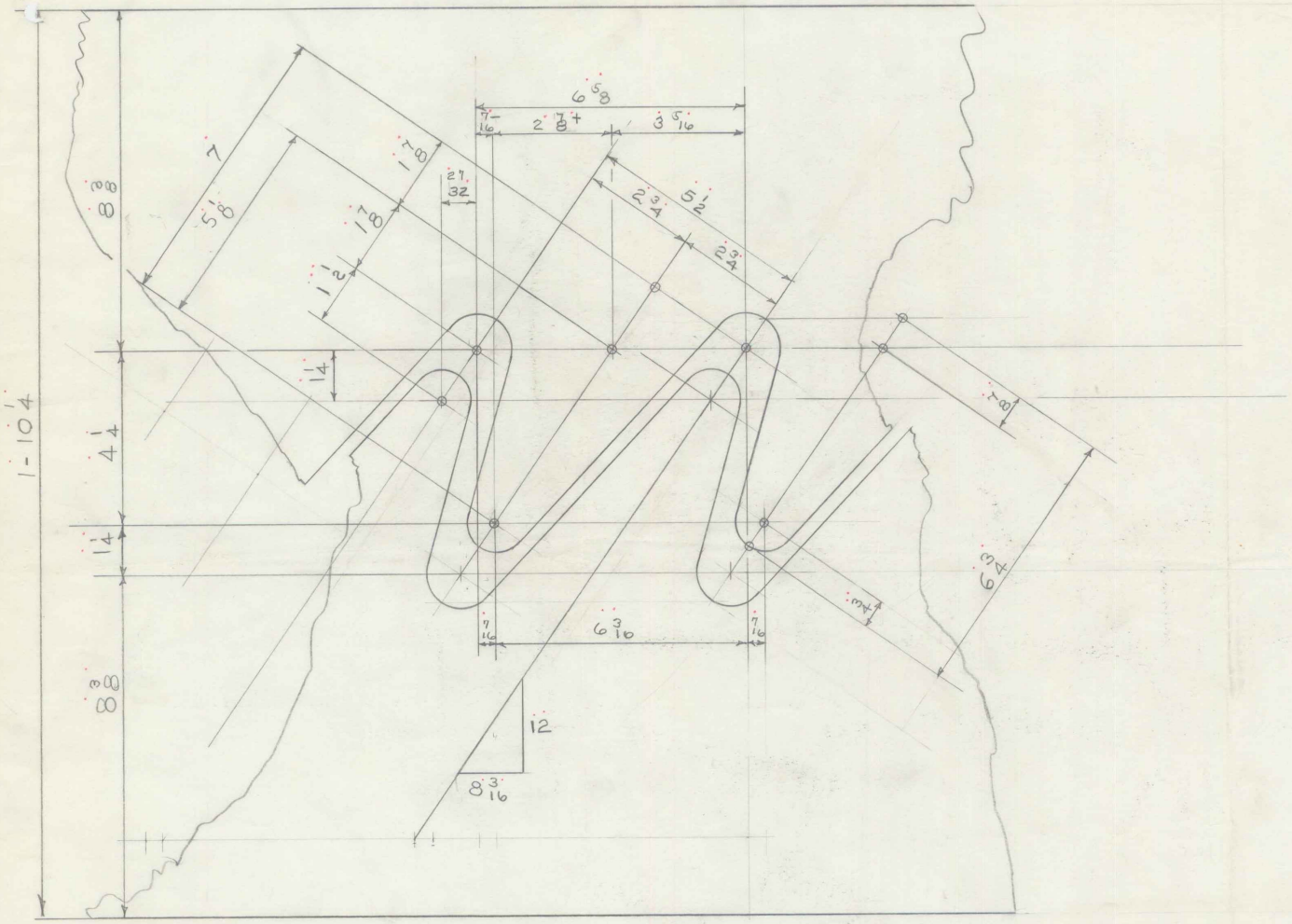
		DATE
DRAWN BY	RLM	3-7-67
CK'D BY	PP	3-31-67

HOLES 13/16 & AS NOTED
BOLTS 3/4" A325 H.T.EN
PAINT RL (VTSPEC) & AS NOTED

PROJECT I91 OVER RELOCATED U.S.5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEILL & SON CONST CO.
ARCHITECT STATE OF VT. DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 30

PRINT RECORD		
NO.	FOR	DATE
3	ADD	6-31
4D	SHOP	6-23
2	STRUC	5-24
1	CUST	7/28
2	STRUC	11-2

SM 16-63 QC7



SCALE 6" = 1-0

RECEIVED
FEB 20 1968
BRIDGE
DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

NO. REQUIRED

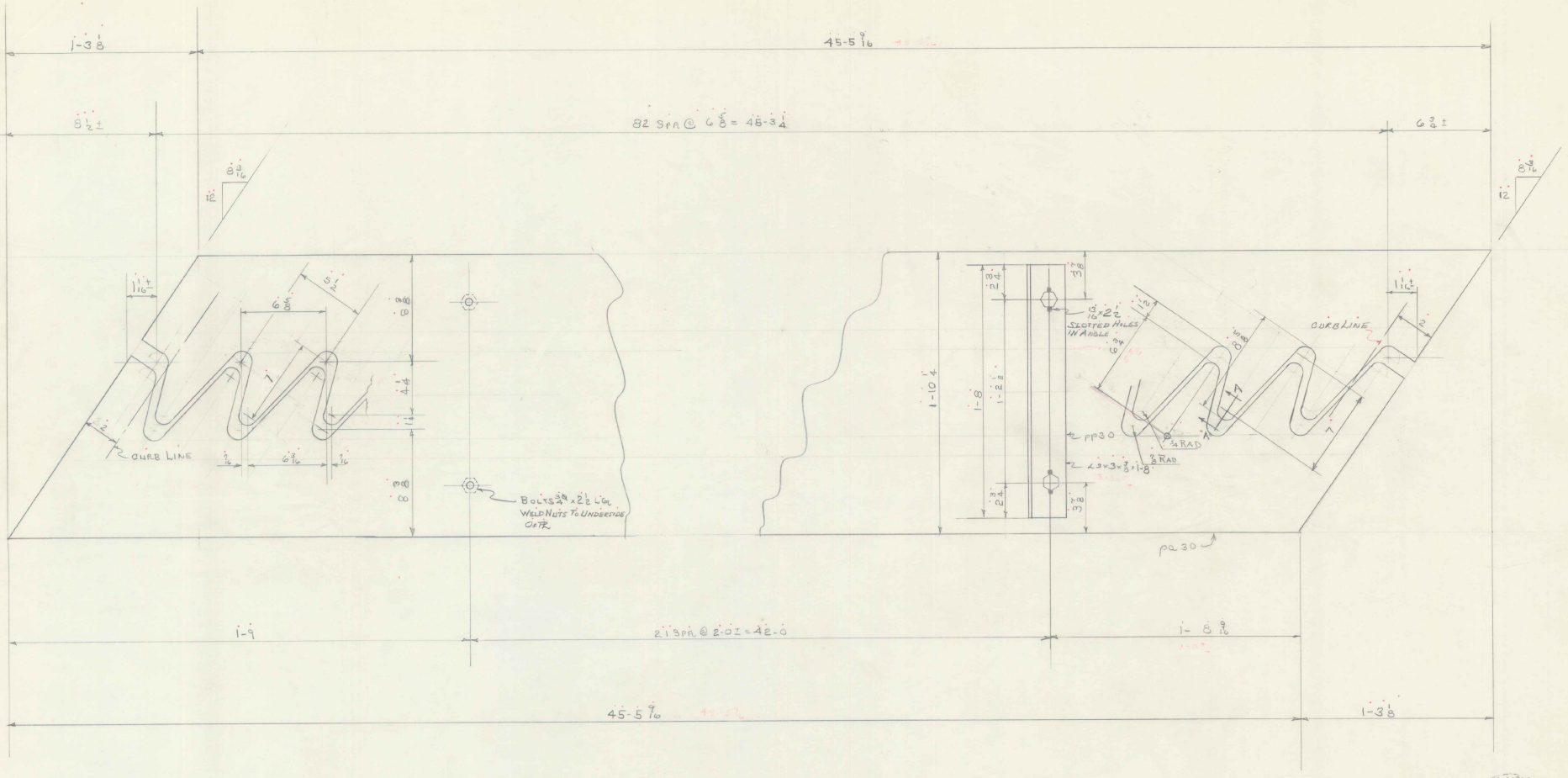
PROJ I 91-2 (18)

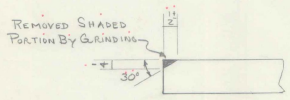
		DATE
DRAWN BY	RLM	4-21-67
C'K'D BY	HP	4-28-67
HOLES		
RIVETS		
PAINT		

PROJECT LAYOUT OF FINGER PR
LOCATION ON SHEET #2 31
CUSTOMER
ARCHITECT
JOB NO. 67-1286
SHEET NO. 31-E

PRINT RECORD		
NO.	FOR	DATE
3	ARR	5-3

X





DETAIL OF FINGER PR. FOR EXP. DAM. ON SHEET # 30

RECEIVED
FEB 20 1989
BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

NO. BOLTS
PROJ # I91-2(18)

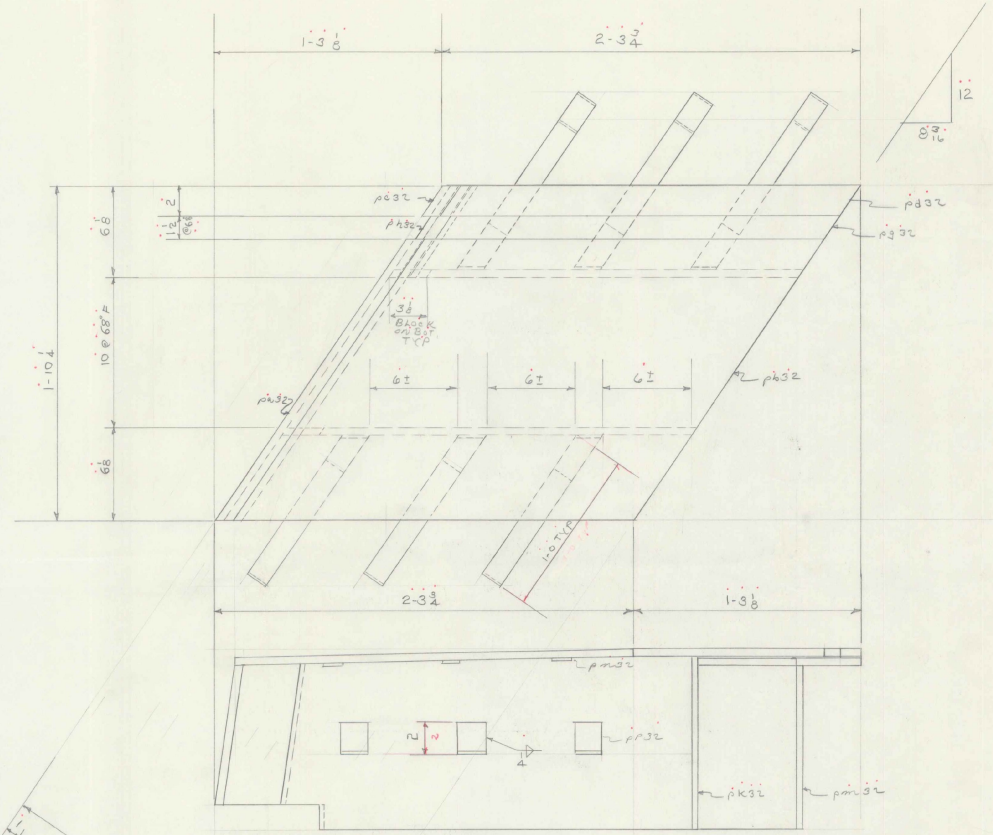
		DATE
DRAWN BY	RLM	3-6-87
CK'D BY		

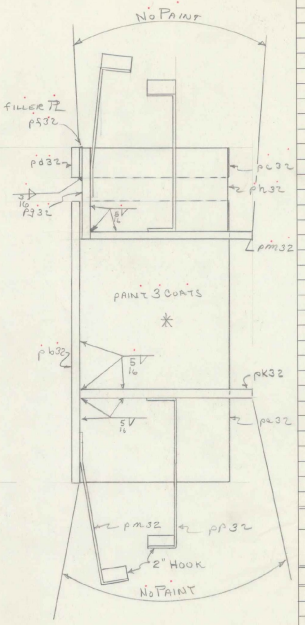
HOLES 13/16 & AS NOTED
BOLTS
PAINT

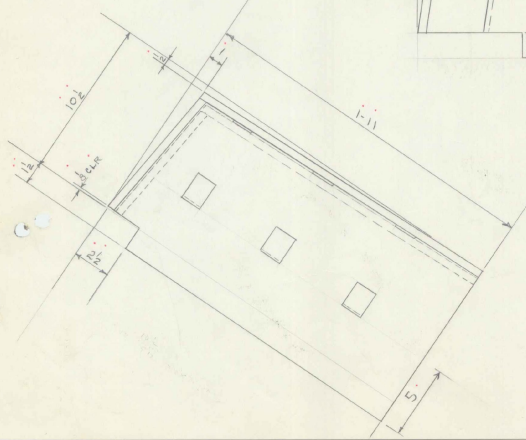
PROJECT I91 OVER RELOCATED US 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEILL & SON CONST. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 31

PRINT RECORD		
NO.	FOR	DATE
3	FINAL	3-31
3	APP	6-3
4	SHOP	8-24
2	STATE	8-24
1	CUST	7/28

2 STATE 1-2







~PAINT NOTE~ *
3 ~COATS OF PAINT
① 1ST COAT RL (VT SPEC)
② 2ND COAT DEVOE TO GRAY PG 25
③ 3RD COAT DEVOE TO GREEN PG 72

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL

(21)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT
		ONE CURB PL CB1			
1	PG32	PL 9 3/8 x 1/2	1'	11 1/2	33 ✓
1	PG32	PL 18 3/4 x 1/2	3'	3 1/16	111 ✓
1	PG32	BAR 2 1/2 x 1/2	0'	7 1/8	4 ✓
1	PG32	BAR 2 x 1/2	2'	4 1/8	8 ✓
1	PG32	BAR 2 1/2 x 5/8	2'	4 1/8	2 ✓
1	PG32	BAR 6 5/8 x 1/2	2'	6 1/8	27 ✓
1	PH32	BAR 8 3/8 x 1/2	0'	8 3/4	10 ✓
1	PK32	PL 11 1/2 x 1/2	2'	8 1/2	45 ✓
1	PM32	PL 10 3/4 x 1/2	2'	8 3/4	41 ✓
6	PM32	BAR 1 1/2 x 3/4	1'	4	
6	PP32	do	1'	4	80 ✓
					301 ✓
		5/16 S WELD	5'	0	1 ✓
		1/4 S WELD	2'	0	1 ✓
		5/16 S WELD	12'	0	3 ✓
					5 ✓
					306 ✓

RECEIVED FEB 9 0 1968 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT. NO BOUND PROJ. NO. I91-2(18)

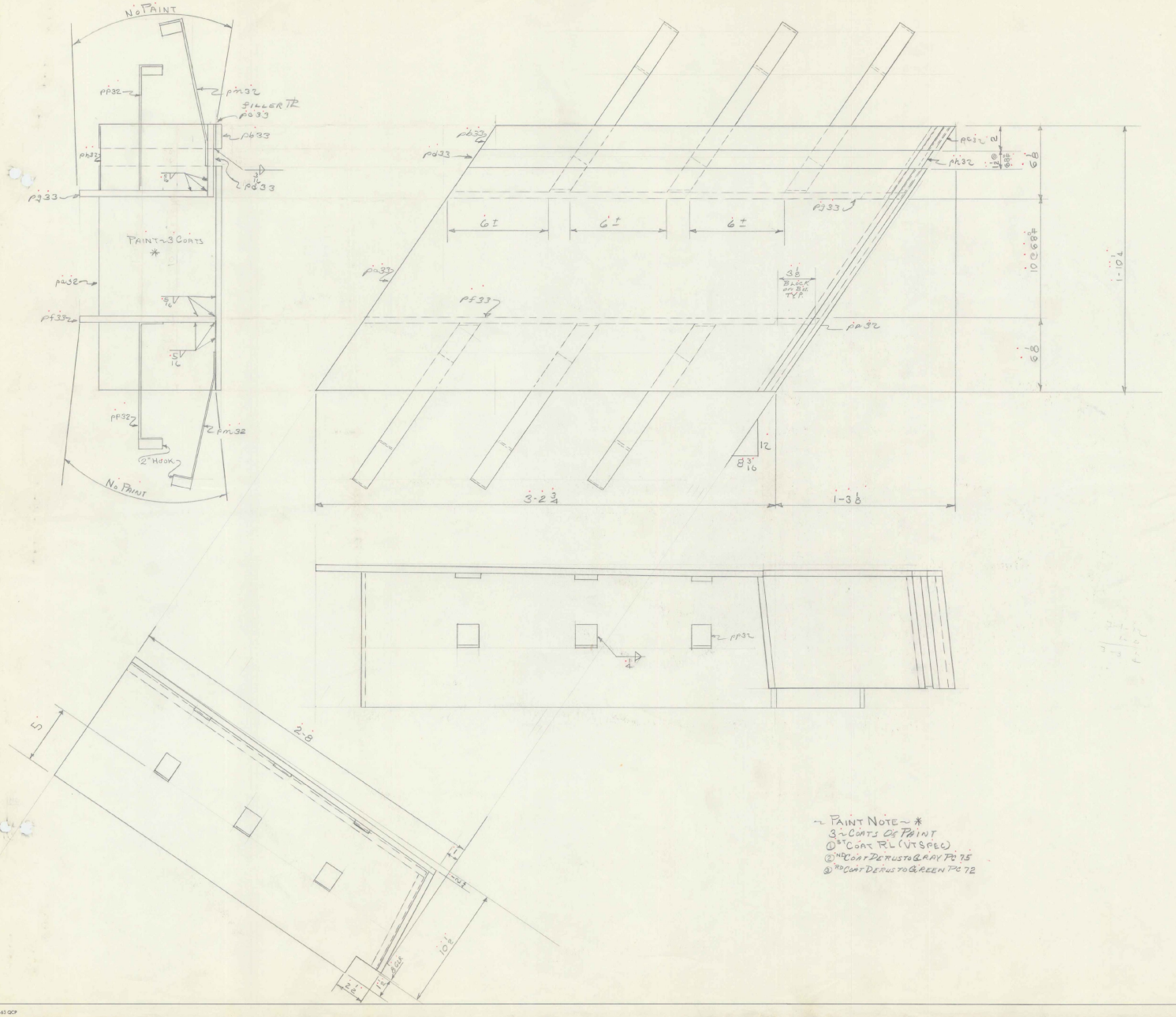
		DATE
DRAWN BY	RLM	3-8-67
OK'D BY	HP	5-1-67

HOLES NONE
BOLTS
PAINT RL (VT SPEC)
& AS NOTED

PROJECT I91 OVER PELOTATED BR. 5
LOCATION NORWICH VERMONT
CUSTOMER ETONIELL & SON CONST CO.
ARCHITECT STATE OF VT DEPT OF HIGHWAY
JOB NO. 67-1286 SHEET NO. 32

PRINT RECORD NO.	FOR	DATE
3	MAP	3-31
4D	SHOP	5-23
2	STATE	5-24
1	CUST	7-28
2	STATE	1-2

SM 10-63 GCP



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	

JOB NO. ..... SHEET NO. ..... (21)

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE QUARTER - OUT					
1	PA32	◇ PL 9 3/8 x 1/2	1	11 1/2	±	33	✓
1	PB33	◇ PL 16 5/8 x 1/2	4	2 1/16	± PLUS 8 PL GUSS 1/2 x 16	141	✓
1	PC32	◇ BAR 2 1/8 x 1/2	0	9 3/4	±	4	✓
1	PD33	◇ BAR 2 x 1/2	3	5 5/16	±	11	✓
1	PG33	BAR 2 x 1/2	3	2 3/4	± STK	3	✓
1	PH33	BAR 6 1/2 x 1/2	5	5 5/16	±	36	✓
1	PK32	BAR 8 x 1/2	0	8 3/4	± PLUS 1/2 PL	10	✓
1	PP33	PL 11 1/2 x 1/2	3	2 1/2	±	62	✓
1	PQ33	PL 10 3/8 x 1/2	3	1 1/8	±	68	✓
6	PM32	BAR 1 1/2 x 1/2	1	4	± PORTAL STAL GEO 89761	20	✓
6	PP32	do	1	4	±		378 ✓
		3/16 S WELD	6	10		1	✓
		1/4 S WELD	2	0		11	
		5/16 S WELD	15	8		41	
							6 ✓
							384 ✓

RECEIVED FEB 20 1968 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT. No BOUND BROOK

		DATE
DRAWN BY	RLM	3-8-67
CK'D BY	HP	3-3-67

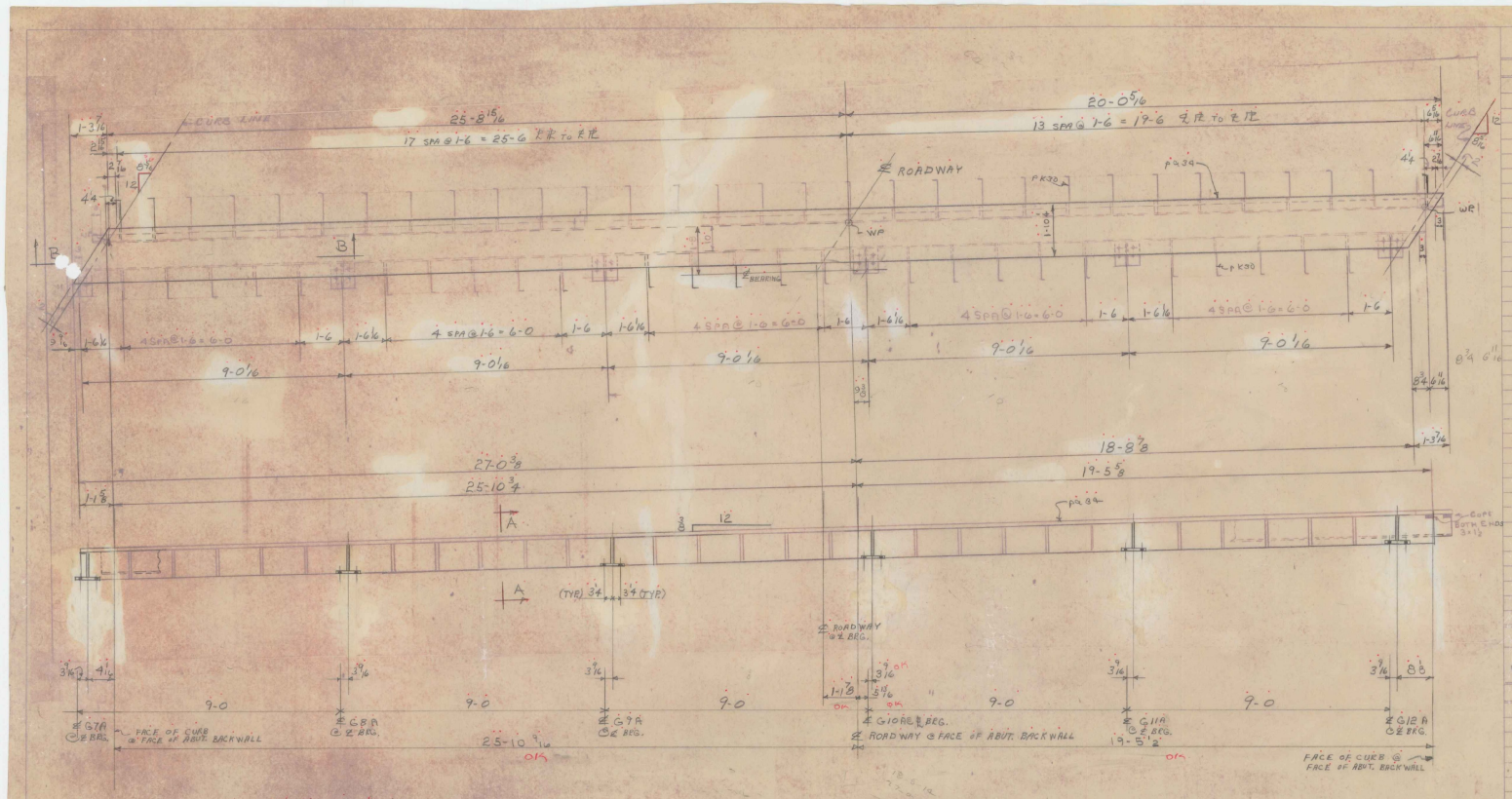
PROJ "I91-2(18)

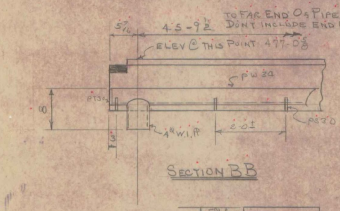
PROJECT I91 OVER PRELOADED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E. T. O'NEILL & SON CONST Co
ARCHITECT STATE OF VT. DEPT OF HIGHWAY
JOB NO. 67-1286 SHEET NO. 33

HOLES NONE
BOLTS
PAINT RL (VT SPEC)
$ AS NOTED

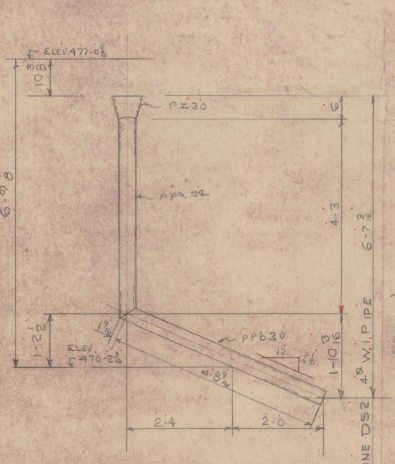
PRINT RECORD NO.	FOR	DATE
3	APP	3-31
40	ADDN	6-23
2	STATIC	5-24
1	CUST.	7/28
2	STATE	1-72

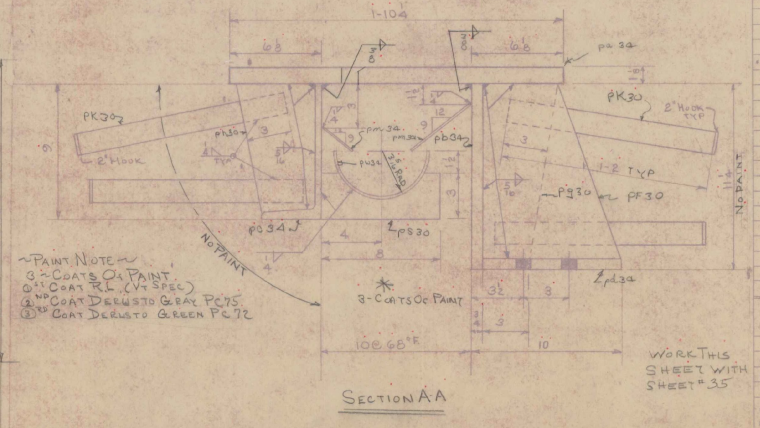
SM 10-63 QCP





NO.	MARK	MATERIAL
6	S8	PL 10 x 1/2 x 0'-11
6	S9	PL 10 x 3/8 x 0'-11
6	S10	PL 10 x 1/2 x 0'-11
6	S11	PL 10 x 3/8 x 0'-11
6	S12	PL 10 x 1/4 x 0'-11
12	S13	PL 10 x 1/8 x 0'-11
12	S14	PL 10 x 1/16 x 0'-11





NOTE: NOT TO SCALE

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		CONT.					
6	S8	PL 10 x 1	0	11		187	✓
6	S9	PL 10 x 3/8	0	11		140	✓
6	S10	PL 10 x 1/2	0	11		93	✓
6	S11	PL 10 x 3/8	0	11	STK	70	✓
6	S12	PL 10 x 1/4	0	11		47	✓
12	S13	PL 10 x 1/8	0	11		47	✓
12	S14	PL 10 x 1/16	0	11		23	✓
							607 ✓
		3/8 S WELD	186	0		67	✓
		5/16 S WELD	146	0		36	✓
		1/4 S WELD	173	0		28	✓
							131 ✓
							738

JOB NO. 67-1286 SHEET NO. 34b

ASTM-A36 & AS NOTED

BILL OF MATERIAL (21)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE-END DAM-ED2					
1	PA 34	PL 21 x 1/2	47	10 1/4	ORD BEVEL ENDS	3847	✓
1	PB 34	PL 11 1/4 x 3/4	46	3 1/4	ORD A571 GR 50	1329	✓
1	PD 34	L 18 x 12 x 12.7	46	3 1/4	RES @ 65'-0	988	
6	FD 34	PL 9 1/4 x 3/4	0	10		300	✓
6	PF 30	"	0	10 3/8	STK	242	✓
85	PJ 30	BAR 5 x 3/4	0	11 1/2		300	✓
32	PH 30	BAR 5 1/2 x 3/4	0	8 3/8		313	✓
114	PK 30	BAR 11 1/2 x 1/2	1	4	ORD AASHTO M 270 GR 36	195	✓
1	PM 34	W.I. BAR 5 x 1/16	46	3 1/4	ORD BEVEL ENDS	246	✓
1	PN 34	W.I. BAR 2 x 5/16	46	3 1/4	ORD 2 PLACES	99	✓
22	PP 30	∠ 3 x 3 x 3/8	1	8	STK	264	✓
24	PS 30	W.I. BAR 3 1/2 x 5/16	0	8	ORD BEVEL ENDS	51	✓
2	PT 30	W.I. BAR 3 1/2 x 5/16	0	6 3/8		4	✓
1	PW 34	6" W.I. PIPE	46	2 5/8	SEE DETAIL SHEET	439	✓
1	PX 30	4" W.I. PIPE	0	5 1/16	SEE DETAIL SHEET	5	✓
							8320 ✓
		ONE DOWN SPAN-DS2					
4	PZ 30	W.I. BAR 8 x 3/16	0	6 3/8	STEEL TEMPLATE	18	✓
1	PP 34	4" W.I. PIPE	4	5 1/2	2 REQ'D EACH MEMBER	48	✓
1	PPB 30	4" W.I. PIPE	4	10 1/8	SEE DETAIL SHEET @ 44'-0	52	✓
							118 ✓
44		3/4" BOLTS	0	2 1/2	STK	23	✓
							23 ✓
							8461 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Proj. No. FI 1-2(18)
So. Bound

		DATE
DRAWN BY	RLM	4-21-67
CKED BY	HP	5-3-67

PROJECT I 91 OVER RELOCATED US5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEILL SON CONST CO

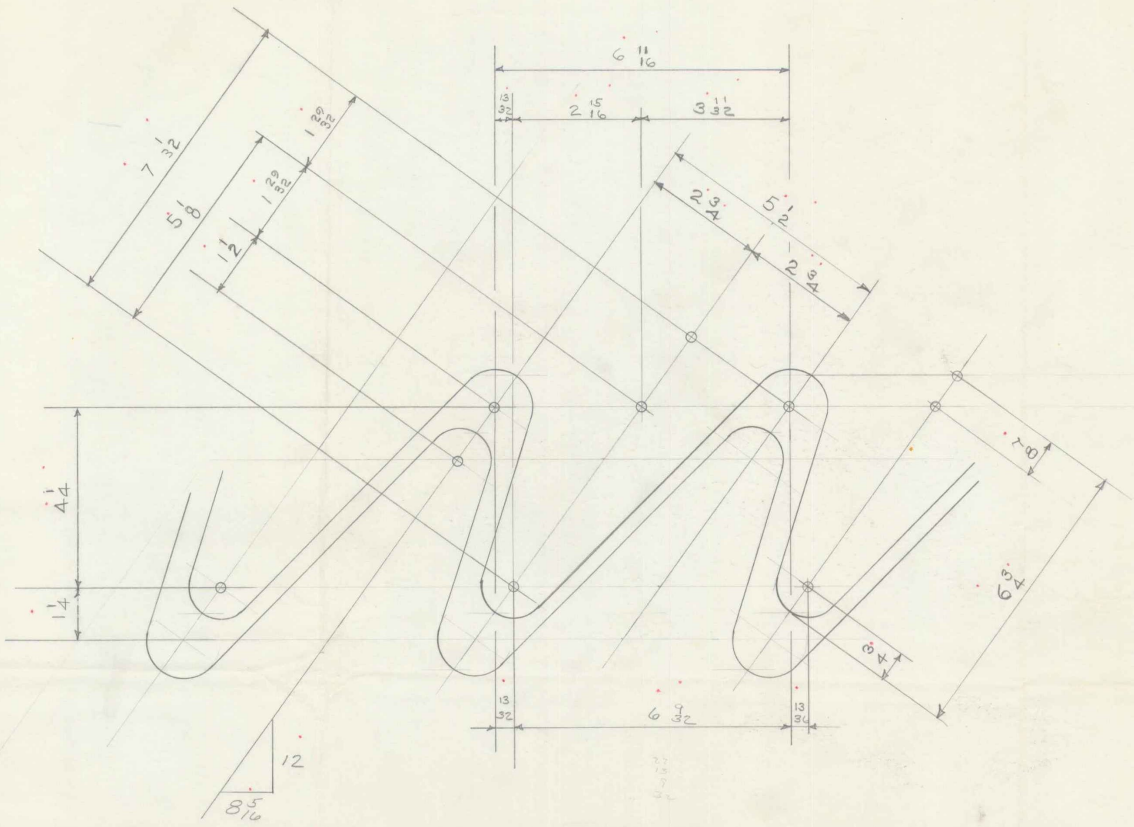
HOLES 13/16" & AS NOTED
BOLTS 3/4" & HITEN
PAINT RL (VT SPEC)
FAS NOTED

ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 34-a

PRINT RECORD

NO.	FOR	DATE
3	ADD	5-3
4th	SHOP	5-23
2	SHOP	5-24
1	CUST	7/28
2	STATE	8-2

RECEIVED FEB 29 1968 BRIDGE DIV. MONTPELIER, VERMONT



VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

So. Bound.
PROJ I 91 - 2 (18)

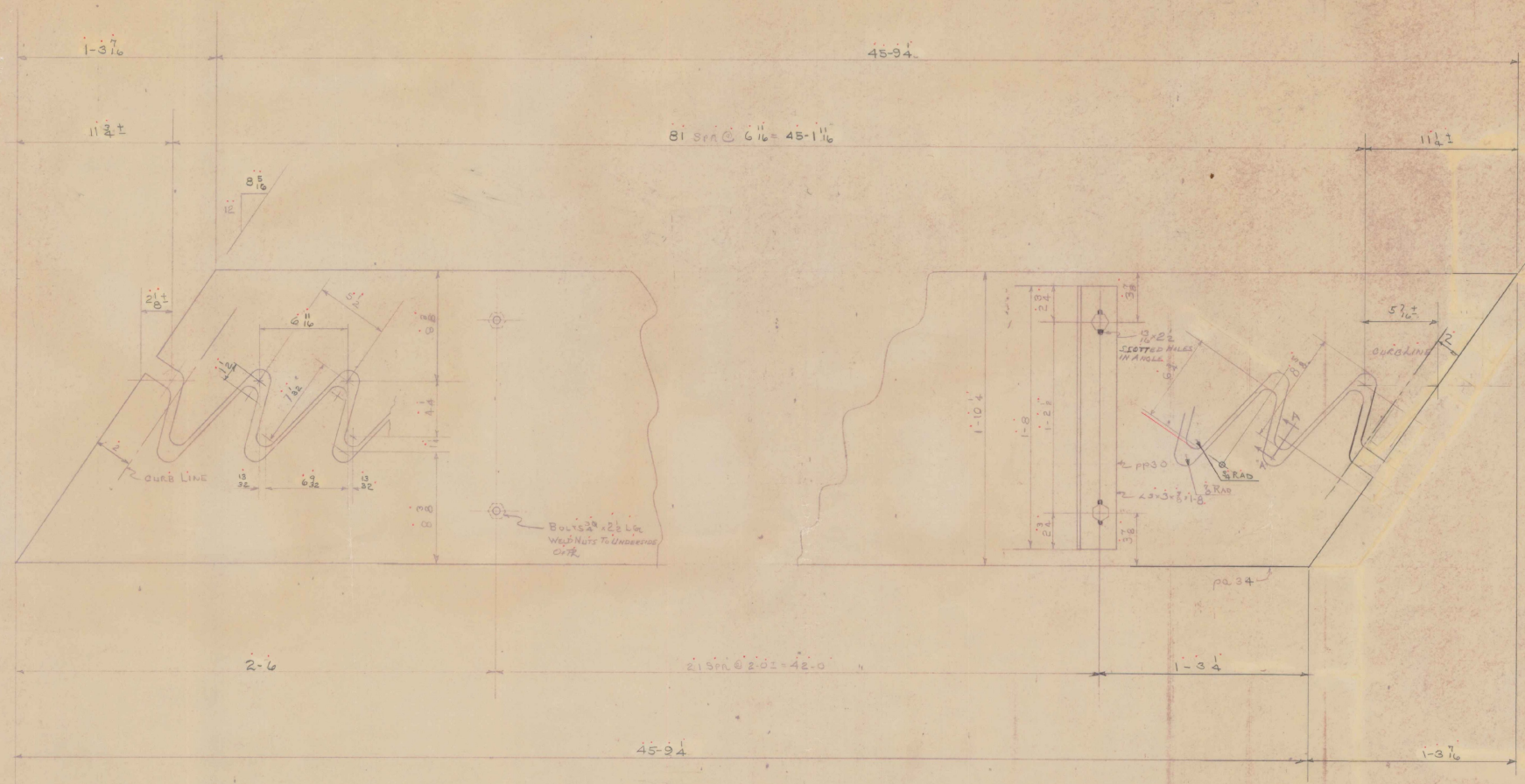
		DATE
DRAWN BY	RLM	4-24-67
C'K'D BY	HP	4-28-67

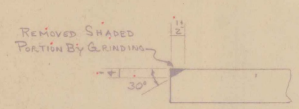
HOLES
RIVETS
PAINT
1M 12-57 GCP

PROJECT LAYOUT OF FINGER PL
LOCATION ON SHEET #35
CUSTOMER
ARCHITECT
JOB NO. 67-1286
SHEET NO. 35-E

PRINT RECORD		
NO.	FOR	DATE
3	APP	5-3

X





DETAIL OF FINGER PL FOR EXP. DAM. ON SHEET # 34

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

So. Bound
PROJ # I91-2 (18)

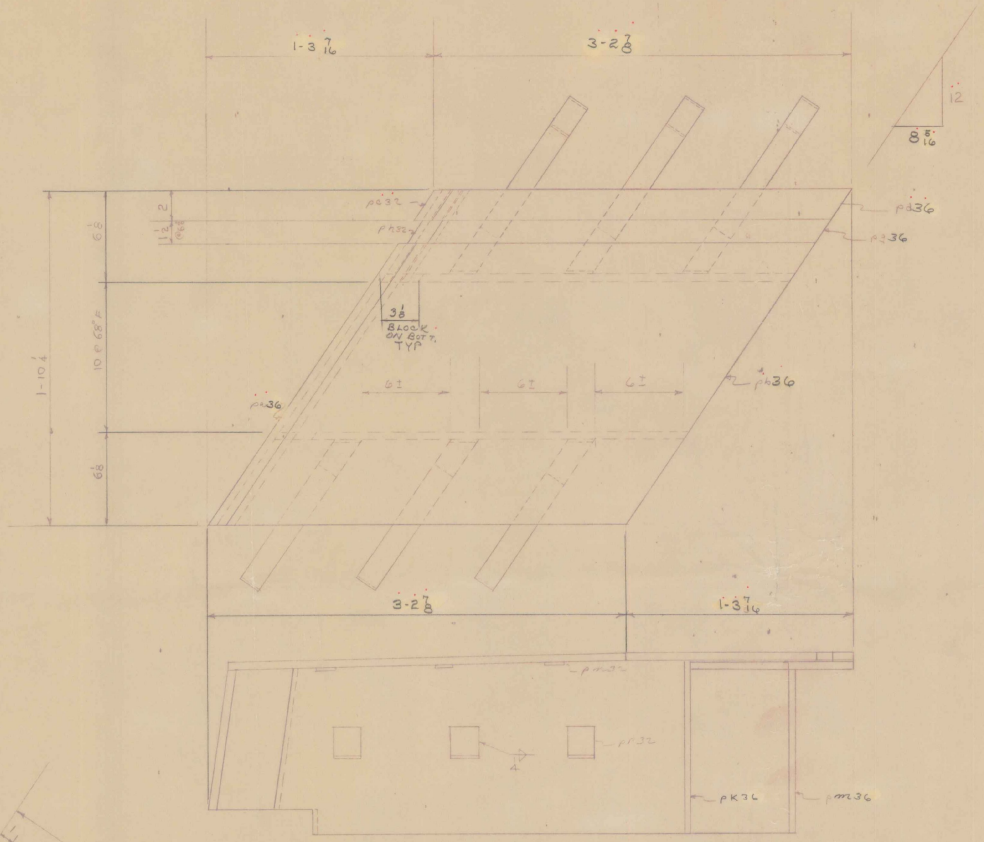
		DATE
DRAWN BY	RLM	3-6-67
CK'D BY	HP	5-3-67

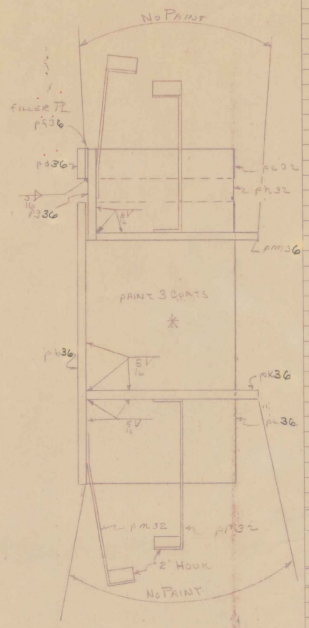
PROJECT I91 OVER RELOCATED US 5
LOCATION NORWICH VERMONT
CUSTOMER E T O'NEILL & SON CONST CO
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 35

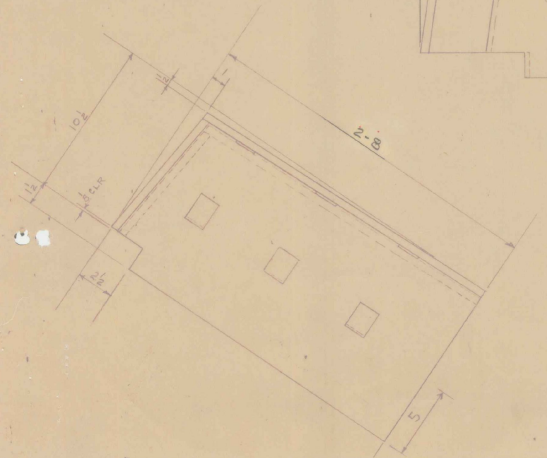
HOLES 13/16 & AS NOTED
BOLTS
PAINT

PRINT RECORD

NO.	FOR	DATE
3	APP	5-3
4	SHOP	5-23
2	STATE	5-24
1	CUST	7/28
2	STATE	1/3







~ PAINT NOTE ~ *
3 ~ COATS OF PAINT
① 1ST COAT RL (VT SPEC)
② 2ND COAT DERUSTO GRAY PC 75
③ 3RD COAT DERUSTO GREEN PC 72

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	

JOB NO. SHEET NO.

BILL OF MATERIAL

(21)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE CURB PL CB3					
1	pd36	◇ PL 9 3/8 x 1/2	1	11 5/8		33	✓
1	pd36	◇ PL 18 3/4 x 1/2	4	2 7/8	± RES ◇	142	✓
1	pc32	◇ BAR 2 7/8 x 1/2	0	4 3/8	± PL 60 x 1/2 x 18-0	4	✓
1	pd36	◇ BAR 2 x 1/2	3	3 1/4		11	✓
1	pf36	BAR 2 x 1/8	4	0 7/8	STK	4	✓
1	pg36	BAR 6 1/8 x 1/2	3	5 3/8	±	36	✓
1	ph32	BAR 8 x 1/2	0	8 3/4	± RES 1/2" PL	10	✓
1	pk36	PL 11 1/2 x 1/2	3	2 3/8	±	63	✓
1	pm32	PL 10 7/8 x 1/2	3	1 7/8	±	58	✓
6	pm32	BAR 1 1/2 x 1/4	1	4	2 ORD AM. S. AL		
6	pp32	do	1	4	E 2000 99561	20	✓
							381 ✓
		3/16 f WELD	6	10		1	✓
		1/4 f WELD	2	0		1	✓
		5/16 f WELD	15	8		4	✓
							6 ✓
							387 ✓

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT. SO. BOUND

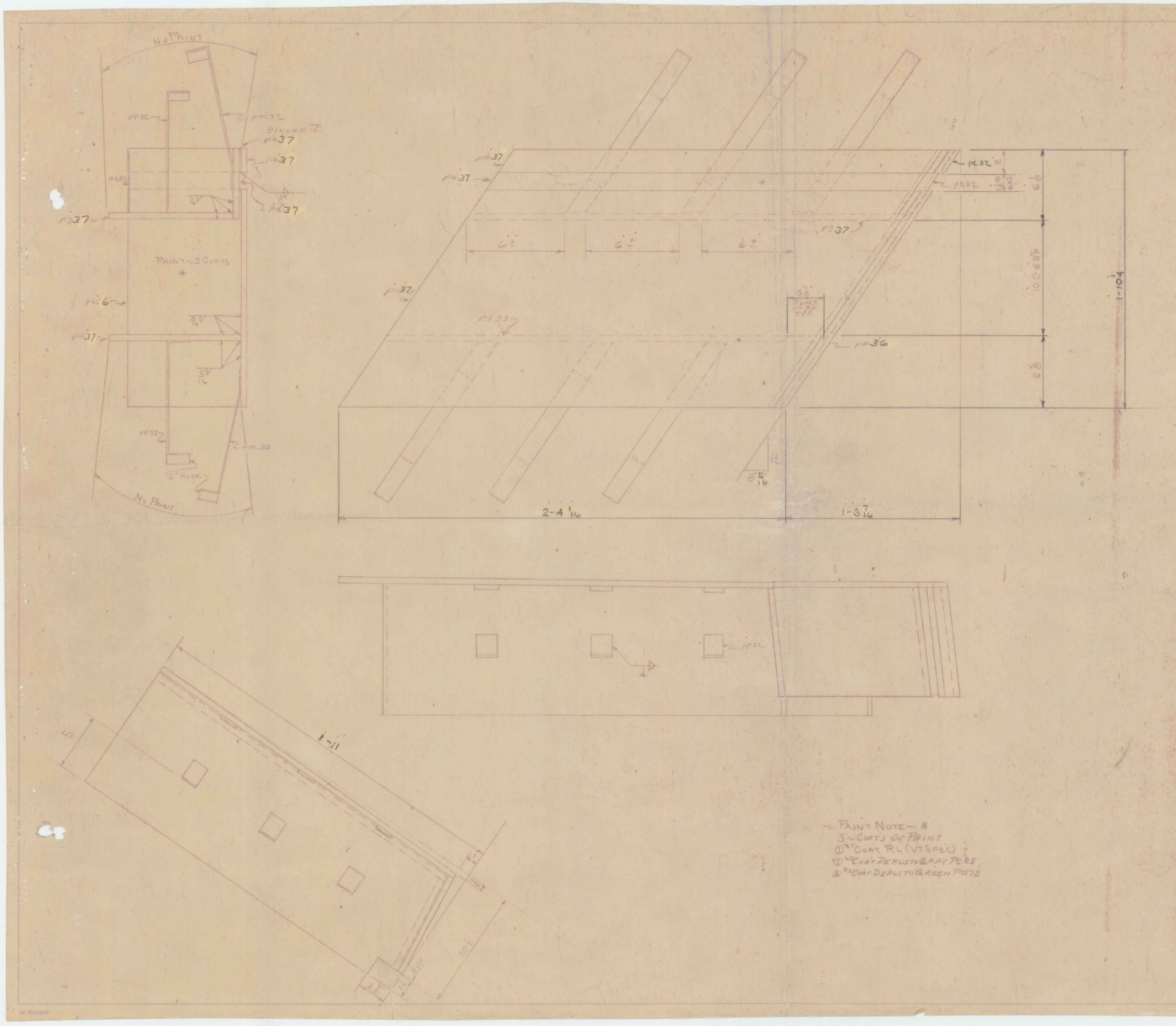
PROJ. # I91-2 (18)

		DATE
DRAWN BY	RLM	3-8-67
CK'D BY	TP	5-4-67

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER ETONIELL & SON CONST CO.
ARCHITECT STATE OF VT DEPT OF HIGHWAY
JOB NO. 67-1286 SHEET NO. 36

HOLES NONE
BOLTS
PAINT RL (VT SPEC)
& AS NOTED

PRINT RECORD		
NO.	FOR	DATE
3	APP	5-31
4D	SHOP	5-23
2	STATE	5-24
1	CUST	7/28
2	STATE	1-2



~ Paint Note ~ *
3 ~ Coats Of Paint
1st Coat RL (VT Spec)
2nd Coat Dehusto Gray PC 45
3rd Coat Dehusto Green PC 72

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

JOB NO. SHEET NO.

(21)

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT
		ONE CURB PL - CB 4			
1	pc36	◇ PL 9 7/8 x 1/2	1	11 1/8 ±	33 ✓
1	pc37	◇ PL 18 3/4 x 1/2	3	4 ±	RES ◇ 112 ✓
1	pc32	◇ BAR 2 3/8 x 1/2	0	9 7/8 ±	PL Gonstrom 4 ✓
1	pc37	◇ BAR 2 x 1/2	2	4 7/16 ±	8 ✓
1	pc37	BAR 2 x 1/8	3	1 ±	TK 3 ✓
1	pc37	BAR 6 1/8 x 1/2	2	7 5/16 ±	27 ✓
1	pc32	BAR 8 x 1/2	0	8 3/4	RES 1/2 PL 10 ✓
1	pc37	PL 11 1/2 x 1/2	2	3 9/16 ±	45 ✓
1	pc37	PL 10 1/8 x 1/2	2	3 ±	42 ✓
6	pm32	BAR 1 1/2 x 1/4	1	4	ORDAM & AL
6	pp32	do	1	4	GRD-B 9 25 61 20 ✓
					304 ✓
		3/16 S WELD	5	0	1 ✓
		1/4 S WELD	2	0	1 ✓
		5/16 S WELD	12	0	3 ✓
					5 ✓
					309 ✓

RECEIVED FEB 20 1968 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

SO BOUND Proj. # I91-2(18

		DATE
DRAWN BY	RLM	3-8-67
CK'D BY	HP	5-4-67

HOLES NONE
BOLTS
PAINT R1 (VT SPEC)
& AS NOTED

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E. T. O'NIELL & SON CONST. Co. O'NEILL
ARCHITECT STATE OF VT. DEPT OF HIGHWAY
JOB NO. 67-9286 SHEET NO. 37

PRINT RECORD NO.	FOR	DATE
3	HPP	5-31
4 (1)	SHOP	5-23
2	STATE	5-24
1	CBSF	7/28
2	STATE	1-2

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G1A					
1	pd12	PL 554 x 3/8	104	2	ORD 57-3 & 1079 B89748	7338 ✓	
1	pb12	PL 16 x 1	21	3 11/16	ORD 21-6 B89348	11.59 ✓	
1	pc6	PL 16 x 1 1/2	21	3 11/16	ORD 21-6 B89348	1739 ✓	
1	pd12	PL 16 x 2 1/4 *	83	0 9/16	ORD C83-4 B89348		
1	pd12	PL 16 x 3 3/8 * *	82	11 15/16	ORD C60 & 23-8 B89348		
1	ps12	BAR 7 1/2 x 5/8	4	3	ORD C25-6 B89350		
1	ps6	do	4	3		135 ✓	
21	pt6	BAR 7 x 3/8	4	3	ORD C17-1 B89350		
1	pw12	do	4	3			
1	pg12	do	4	3			
1	ph12	do	4	3			
1	pk12	do	4	3		2210 ✓	
							12,581 ✓
		SHEAR STUDS (CONT 67-1286-26)					
352		3/4 ø SHEAR STUDS	0	7	STK	354 ✓	354 ✓
	-2	NOTE ON WEIGHT -2		—	BILL AS —		
1	*	PL 16 x 1 3/4	18	11 9/16		1806 ✓	
1	*	PL 16 x 2 1/4	64	1		7844 ✓	
1	**	PL 16 x 2 1/2	19	0 3/16		2587 ✓	
1	**	PL 16 x 3 3/8	63	11 3/4		11746 ✓	
							23983 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND
PROJ # 191-2 (18)

		DATE
DRAWN BY	RLM	2-23-67
C'K'D BY	HP	3-31-67
HOLES	15/16 ø AS NOTED	
BOLTS		
PAINT	RL (VT SPEC) & AS NOTED	

PROJECT: I91 OVER RELOCATED U.S. 5
LOCATION: NORWICH VERMONT
CUSTOMER: E.T. O'NEIL & SON CONST CO
STATE OF VT DEPT. OF HIGHWAYS
ARCHITECT: 67-1286-26 SHEAR STUDS
JOB NO. 67-1286 STR ST
SHEET NO. 12 a/b

PRINT RECORD

NO.	FOR	DATE
3	ARM	3-31
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

FEB 20 1968 ENGINEERING DIV. VERMONT STATE HIGHWAY DEPARTMENT

10M 7-66 OCP

✓ X

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G1A					
		-CONT-					
1	pm12	PL 7/16 x 7'-10"	1	1	ORD A8 7/16x10 B89949	12	
1	pm12	BAR 8 x 7/16	1	1			
2	pp12	do	1	0		37	
1	ps12	PL 9 x 7/16	1	0		13	
		1/4 S WELD	212	6		34	
		5/16 S WELD	62	0		15	
		3/8 S WELD	208	0		75	
		1/2 S WELD	208	0		133	
							319

RECEIVED FEB 27 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND

		DATE
DRAWN BY	RLM	2-23-67
C'K'D BY	HP	3-31-67
HOLES	15/16 & 7/8 AS NOTED	
BOLTS		
PAINT	RL (VT SPEC) & AS NOTED	

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SON CONST CO
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 12 b

PRINT RECORD

NO.	FOR	DATE
3	FAB	3-31
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 QCP

V X

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G2A					
1	pa12	PL 55 1/4 x 3/8	104	2	ORD 57 x 3/8 x 107.9 BB748	7338	
1	pb12	PL 16 x 1	21	3 11/16	ORD 21.6 BB9348	1159	
1	pc6	PL 16 x 1 1/2	21	3 11/16	ORD 21.6 BB9348	1739	
1	pc12	PL 16 x 2 1/4 *	83	0 9/16	ORD 83.2 BB9348		
1	pd12	PL 16 x 3 3/8 **	82	11 15/16	ORD 60.8 23.8 BB9348		
1	pp6	BAR 7 1/2 x 5/8	4	3	3 ORD 25.6 BB9350		
1	pa13	do	4	3		135	
4	pc7	BAR 7 x 7/16	4	3	ORD 17.0 1/2 BB9950		
1	pf13	do	4	3			
1	pb13	do	4	3			
1	pc13	do	4	3			
1	pd13	do	4	3		"	
44	pb7	do	4	3		2298	
							12,669
		SHEAR STUDS (CONT 67-1286-2G)					
352		3/4 @ SHEAR STUDS	0	7	STK	354	354
	2	NOTE ON WEIGHT 2			— BILL AS —		
1	*	PL 16 x 1 3/4	18	11 9/16		1806	
1	*	PL 16 x 2 1/4	64	1		7844	
1	**	PL 16 x 2 1/2	19	0 3/16		2587	
1	**	PL 16 x 3 3/8	63	11 3/4		11746	
							23,983

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND TO PROJ # 191-2 (18)

RECEIVED FEB 20 1969 BRIDGE DIV.

		DATE
DRAWN BY	RLM	2-24-67
CK'D BY	HP	3-31-67
HOLES	15/16 ø & AS NOTED	
BOLTS	7	
PAINT	R L (VT SPEC) ¢ AS NOTED)	

PROJECT: I91 OVER RELOCATED U.S. 5
LOCATION: NORWICH VERMONT
CUSTOMER: E.T. O'NEIL & SON CONST CO
ARCHITECT: STATE OF VT DEPT. OF HIGHWAYS
67-1286-2G SHEAR STUDS
JOB NO. 67-1286 STR ST SHEET NO. 13 a/b

PRINT RECORD

NO.	FOR	DATE
3	FABR	3-31
4	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

ASTM-A36

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
			ONE PLATE GIRDER G2A					
			~CONT~					
OUT								
1	3	PL13	BAR 8 x 7/16 x	1	1	ORD 48x7/16x10-0 B89749	39	
	2	PL10	PL 9 x 7/16 x	1	0 1/2		28	
2	3	PL12	BAR 8 x 7/16	1	1		39	
			1/4 S WELD	442	0		70	
			5/16 S WELD	105	6		26	
			3/8 S WELD	208	0		75	
			1/2 S WELD	208	0		133	
								410

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND

		DATE
DRAWN BY	RLM	2-23-67
C'K'D BY	HP	3-31-67

HOLES 15/16 ø & AS NOTED
BOLTS
PAINT RL (VT SPEC) & AS NOTED

PROJECT I 91 OVER RELOCTED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E T O'NEIL & SON CONST CO
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO 67-1286. SHEET NO 13 b b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
4	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 QCP

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G3A					
1	pa12	PL 55 1/4 x 3/8	104	2	ORD 57-3 B89748 x 107-9	7338	
1	pb12	PL 16 x 1	21	3 11/16	ORD 21-6 B89348	1159	
1	pc6	PL 16 x 1 1/2	21	3 11/16	ORD 21-6 B89348	1739	
1	pd12	PL 16 x 2 1/4 *	83	0 9/16	ORD C83-4 B89348		
1	pd12	PL 16 x 3 3/8 * *	82	11 15/16	ORD C 60-0 23-8 B89348		
1	pp6	BAR 7 1/2 x 5/8	4	3	ORD C 25-6 B89250		
1	pa13	do	4	3		135	
1	pb14	BAR 7 x 7/16	4	3	ORD C 17-0 1/2 B89950		
1	pc14	do	4	3			
1	ps13	do	4	3			
44	pb7	do	4	3			
4	pd7	do	4	3			
1	pd13	do	4	3		2298	
							12669
		SHEAR STUDS (CONT 67-1286-20)					
352		3/4 Ø SHEAR STUDS	0	7	STK	354	354
	~	NOTE ON WEIGHT ~		—	BILL AS —		
1	*	PL 16 x 1 3/4	18	11 9/16		1806	
1	*	PL 16 x 2 1/4	64	1		7844	
1	**	PL 16 x 2 1/2	19	0 3/16		2587	
1	**	PL 16 x 3 3/8	63	11 3/4		11746	
							23,983

RECEIVED FEB 20 1969 ERNCE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. ROUND
PROJ # 191-2 (18)

		DATE
DRAWN BY	RLM	2-28 67
C'K'D BY	HP	3-31-67
HOLES	15/16 Ø AS NOTED	
BOLTS		
PAINT	P.L (VT SPEC) Ø AS NOTED	

PROJECT: I91 OVER RELOCATED U.S. 5
LOCATION: NORWICH VERMONT
CUSTOMER: E.T. O'NEIL & SON CONST CO
ARCHITECT: STATE OF VT DEPT. OF HIGHWAYS
67-1286-20 SHEAR STUDS
JOB NO. 67-1286 STR. ST
SHEET NO. 14 a b

PRINT RECORD

NO.	FOR	DATE
3	FINAL	3-31
4	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

IBM 7-69 GCP

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G3A					
		~CONT~					
1	pf13	BAR 8 x 7/16	1	1	ORD. 48 x 7/16 x 10-0	39	
2	pn12	do	1	1			
1	pd11	PL 9 x 7/16	0	11 1/2	B89949	13	
	pb9	PL 9 x 7/16					52
		1/4 f WELD	442	0		70	
		5/16 f WELD	87	2		22	
		3/8 f WELD	208	0		75	
		1/2 f WELD	208	0		133	300
							352

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND
PROJ # I91-2(18

		DATE
DRAWN BY	RLM	2-28-67
C'K'D BY	HP	3-31-67

HOLES 15/16 & AS NOTED
BOLTS
PAINT RL (VT SPEC) & AS NOTED

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SON CONST. CO
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 14-6

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
4	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 QCP

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G4A					
1	pa12	PL 55 1/4 x 3/8	104	2	ORD 57-3 x 107-9 B89348	7338	
1	pb12	PL 16 x 1	21	3 11/16	ORD 21-6 B89348	1159	
1	pc6	PL 16 x 1 1/2	21	3 11/16	ORD 21-6 B89348	1739	
1	pd12	PL 16 x 2 1/4 *	83	0 9/16	ORD 83-4 B89348		
1	pd12	PL 16 x 3 3/8 **	82	11 15/16	ORD @ 60° 23-8 B89348		
1	pa6	BAR 7 1/2 x 5/8	4	3	ORD 25-6 B89350		
1	pa13	do	4	3		135	
4	pc7	BAR 7 x 7/16	4	3	ORD 17-0 1/2 B89950		
1	pa15	do	4	3			
1	pb15	do	4	3			
1	pc15	do	4	3			
1	pc13	do	4	3			
42	pb7	do	4	3		2210	
							12,581
		SHEAR STUDS (CONT 67-1286-2G)					
352	352	3/4 SHEAR STUDS	0	7	STK	354	354
		NOTE ON WEIGHT —		—	BILL AS —		
1	*	PL 16 x 1 3/4	18	11 9/16		1806	
1	*	PL 16 x 2 1/4	64	1		7844	
1	**	PL 16 x 2 1/2	19	0 3/16		2587	
1	**	PL 16 x 3 3/8	63	11 3/4		11746	
							23,983

RECEIVED FEB 20 1968 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND
PROJ # 191-2 (18)

		DATE
DRAWN BY	RLM	2-28 67
C'K'D BY	HP	3-31-67
HOLES 15/16 & ϕ	AS NOTED	
BOLTS 7		
PAINT	R L (VT SPEC)	
	ϕ AS NOTED)	

PROJECT: I 91 OVER RELOCATED U.S. 5
LOCATION: NORWICH VERMONT
CUSTOMER: E.T. O'NEIL & SON CONST CO
ARCHITECT: STATE OF VT DEPT. OF HIGHWAYS
67-1286-2G SHEAR STUDS
JOB NO. 67-1286 STRST SHEET NO. 15 a/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
4	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

OM 7-65 QCF

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PL ATE GIRDER G4A					
		~CONT~					
1	PL13	BAR 8 x 7/16	1	1	} ORD 48 x 7/16 x 10		
2	PL12	BAR 8 x 7/16	1	1		39	
1	PL15	PL 9 x 7/16	0	11	B89949	12	
							51
		1/4 S WELD	425	0		68	
		5/16 S WELD	88	0		22	
		3/8 S WELD	208	0		75	
		1/2 S WELD	208	0		133	298
							349

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND

PROJ # I91-2 (18)

		DATE
DRAWN BY	RLM	2-28-67
C'K'D BY	HP	3-31-67
HOLES	15/16 Ø & AS NOTED	
BOLTS		
PAINT	RL (VT SPEC) & AS NOTED	

PROJECT I 91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E.T. O'NEIL & SON CONST CO.
ARCHITECT STATE OF VT DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 15 b b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
4	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 QCP

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G5A					
1	pa12	PL 55 1/4 x 3/8	104	2	ORD 57-3 x 107-9 BB 748	7338	
1	pb12	PL 16 x 1	21	3 11/16	ORD 21-6 BB 948	1159	
1	pc6	PL 16 x 1 1/2	21	3 11/16	ORD 21-6 BB 948	1739	
1	pd12	PL 16 x 2 1/4 *	83	0 9/16	ORD 83-4 BB 948		
1	pd12	PL 16 x 3 3/8 **	82	11 15/16	ORD 600 23-8 BB 948		
1	pp6	BAR 7 1/2 x 5/8	4	3	ORD 25-6 BB 950		
1	pa13	do	4	3		135	
4	pc7	BAR 7 x 7/16	4	3	ORD 17-0 1/2 BB 950		
1	pa16	do	4	3			
1	pc13	do	4	3			
1	pb16	do	4	3			
44	pb7	do	4	3			
1	pc16	do	4	3		2298	
							12,669
		SHEAR STUDS (CONT 67-1286-26)					
352		3/4 ø SHEAR STUDS	0	7	STK	354	354
	2	NOTE ON WEIGHT 2			— BILL AS —		
1	*	PL 16 x 1 3/4	18	11 9/16		1806	
1	*	PL 16 x 2 1/4	64	1		7844	
1	**	PL 16 x 2 1/2	19	0 3/16		2587	
1	**	PL 16 x 3 3/8	63	11 3/4		11,746	
							23,983

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND PROJ # 191-2 (18)

		DATE
DRAWN BY	RLM	3-1 67
C'K'D BY	HP	3-31-67
HOLES	15/16 ø & ø AS NOTED	
BOLTS	7/8	
PAINT	PL (VT SPEC) ø AS NOTED	

PROJECT: I91 OVER RELOCATED U.S. 5
LOCATION: NORWICH VERMONT
CUSTOMER: E.T. O'NEIL & SON CONST CO
ARCHITECT: STATE OF VT DEPT. OF HIGHWAYS
67-1286-26 SHEAR STUDS
JOB NO. 67-1286 STR ST SHEET NO. 16 a/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

RECEIVED FEB 20 1969 BRIDGE DIV.

IGM 7-68 GCP

✓ X

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G5A					
		~ CONT ~					
3	PM12	BAR 8 x 7/16	1	1	} ORD A8x3/8x100 B-89949	77	
3	PS13	do	1	1			
2	PS7	PL 9 x 7/16	1	0		27	
		1/4 S WELD	442	0		70	
		5/16 S WELD	106	2		26	
		3/8 S WELD	208	0		75	
		1/2 S WELD	208	0		133	
							408

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND

Proj # I 91-2 (18)

		DATE
DRAWN BY	RLM	3-1-67
C'K'D BY	HP	3-31-67

HOLES 15/16 Ø & AS NOTED

BOLTS

PAINT RL (VT SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED U.S. 5

LOCATION NORWICH VERMONT

CUSTOMER E.T. O'NEIL & SON CONST CO

ARCHITECT STATE OF VT DEPT OF HIGHWAYS

JOB NO. 67-1286 SHEET NO. 16 b b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
4	SHOP	4-25
2	STATE	3-24
2	STATE	1-2

10M 7-65 QCP

✓X

ASTM A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PLATE GIRDER G 6A					
1	pa12	PL 55 1/4 x 3/8	104	2	ORD 59-3/8 x 107-9 B89748	7338	
1	pb12	PL 16 x 1	21	3 11/16	ORD 21-6 B89948	1159	
1	pc6	PL 16 x 1 1/2	21	3 11/16	ORD 21-6 B89948	1739	
1	pd12	PL 16 x 2 1/4 *	83	0 9/16	ORD @ 83-4 B89948		
1	pd12	PL 16 x 3 3/8 **	82	11 15/16	ORD @ 60° 23-8 B89948		
1	pp6	BAR 7 1/2 x 5/8	4	3	ORD @ 25-6 B89750		
1	ps6	do	4	3		135	
21	pt6	BAR 7 x 7/8	4	3	ORD @ 17-1		
4	pa11	do	4	3	B89950	2210	
							12,581
		SHEAR STUDS (CONT 67-1286-26)					
352		3/4 ø SHEAR STUDS	0	7	STK	354	354
	~	NOTE ON WEIGHT ~		—	BILL AS —		
1	*	PL 16 x 1 3/4	18	11 9/16		1806	
1	*	PL 16 x 2 1/4	64	1		7844	
1	**	PL 16 x 2 1/2	19	0 3/16		2587	
1	**	PL 16 x 3 3/8	63	11 3/4		14,746	
							23,983

RECEIVED FEB 20 1967 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND
PROJ # 191-2 (18)

		DATE
DRAWN BY	RLM	3-2-67
C'K'D BY	HP	3-31-67
HOLES	15/16 ø & ø AS NOTED	
BOLTS		
PAINT	R L (VT SPEC) ¢ AS NOTED)	

PROJECT: I91 OVER RELOCATED U.S. 5
LOCATION: NORWICH VERMONT
CUSTOMER: E.T. O'NEIL & SON CONST CO
ARCHITECT: STATE OF VT DEPT. OF HIGHWAYS
67-1286-26 SHEAR STUDS
JOB NO. 67-1286 STR'S'T SHEET NO. 17 of 6

PRINT RECORD

NO.	FOR	DATE
3	ARR	3-31
4	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 QCP

ASTM-A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE RATE GIRDER	G	6A			
		— CONT —					
1	PM12	BAR 8 x 7/16	1	1	} ORD 48x7/16x10-0 B 89949	37	
2	PP12	do	1	0			
1	Pb17	BAR 7 x 7/16	1	2		12	
1	Pa17	BAR 8 x 7/16	1	0		12	
		1/4 S WELD	212	6		34	
		5/16 S WELD	62	0		15	
		3/8 S WELD	208	0		75	
		1/2 S WELD	208	0		133	
							318

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

NO. BOUND

PROJ # I 91-2(18)

		DATE
DRAWN BY	RLM	3-2-67
C'K'D BY	HP	3-31-67

HOLES 15/16 ø AS NOTED

BOLTS

PAINT RL (VT SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED U.S. 5

LOCATION NORWICH VERMONT

CUSTOMER E.T. O'NEIL & SON CONST CO

ARCHITECT STATE OF VT DEPT OF HIGHWAYS

JOB NO. 67-1286

SHEET NO 17 b p

PRINT RECORD

NO.	FOR	DATE
3	ARR	3-31
4	SHOP	4-25
2	STATE	5-21
2	STATE	1-2

10M 7-65 QCP

✓ X

BILL OF MATERIAL

ASTM - A36

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE ℄ GIRDER		G - 7A			
1	pa24	℄ 55 5/16 x 3/8	105	0 5/16	ARD 59x3/8xDT-1 B89948	7415 ✓	
1	pb18	℄ 16 x 1	21	3 13/16	ORD @ 21-6 B89948	1160 ✓	
1	pc18	℄ 16 x 1 1/2	21	3 13/16	ORD @ 21-6 B89948	1740 ✓	
1	pd24	℄ 16 x 2 1/4 *	83	10 13/16	ORD @ 84-3 B89948	See Sheet b/b	
1	pf24	℄ 16 x 3 3/8 **	83	10 3/16	ORD @ 60-0 & 24-7 B89948		
1	pp6	BAR 7 1/2 x 5/8	4	3 ±	ORD @ 25-6 B89950	68 ✓	
1	ps6	BAR 7 1/2 x 5/8	4	3 ±		68 ✓	
22	pt6	BAR 7 x 7/8	4	3 ±	ORD @ 17-0 1/2 B89950		
1	pg24	do	4	3 ±			
1	ph24	do	4	3 ±			
1	pk24	do	4	3 ±			
1	pm24	BAR 7 x 7/8	4	3 ±		2298 ✓	
2	pn24	℄ 8 x 7/16	1	1	(40) ℄ 49 x 7/16 x 10 B89949	26 ✓	
1	pb23	℄ 13 x 7/16	0	8 1/2		14 ✓	
1	pf25	℄ 7/16 x 7/16	1	1		12 ✓	
1	pg25	℄ 8 x 7/16	1	1		13 ✓	
		SHEAR STUDS CONTR. # 67-1286-26					12814 ✓
354		3/4 ϕ SHEAR STUDS	0	7	STK	356 ✓	
							356 ✓

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT	
		ONE ℄ GIRDER G-7A (CONT.)				
		1/4 ℄ WELD	221	0	35 ✓	
		5/16 ℄ WELD	63	0	16 ✓	
		3/8 ℄ WELD	209	9	75 ✓	
		1/2 ℄ WELD	209	9	134 ✓	
						260 ✓
		NOTE ON WEIGHT				
		* BILL AS				
1	pd24	PL 16 x 1 3/4	18	11 9/16	1806 ✓	
1		PL 16 x 2 1/4	64	11 1/4	7948 ✓	
						9754 ✓
		** BILL AS				
1	pf24	PL 16 x 2 1/2	19	0 3/16	2587 ✓	
1		PL 16 x 3 3/8	64	10	11903 ✓	
						14490 ✓
						24504 ✓

RECEIVED FEB 21 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

SO. Bound
PROJ. # I 91-2 (18)

		DATE
DRAWN BY	AFL	3/3/67
C'K'D BY	HP	3-10-67

HOLES 15/16 ℄ AS NOTED
BOLTS 7/8 ℄ H. TEN
PAINT R-L (VT. SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST.) SHEET NO. 24 b/b
67-1286-26 (SHEAR STUDS)

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

OM 2-65 QCP

✓ X

ASTM - A36

BILL OF MATERIAL

RECEIVED FEB 20 1969 BRIDGE DIV.

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PL GIRDER		G - 8A			
1	pa24	PL 55 5/16 x 3/8	105	0 5/16	ORD 59x3/8x107-9 B89948	7415 ✓	
1	pb18	PL 16 x 1	21	3 13/16	ORD @ 21-6 B89948	1160 ✓	
1	pc18	PL 16 x 1 1/2	21	3 13/16	ORD @ 21-6 B89948	1740 ✓	
1	pd24	PL 16 x 2 1/4 *	83	10 13/16	ORD @ 84-3 B89948	see sheet	
1	pf24	PL 16 x 3 3/8 **	83	10 3/16	ORD @ 60-0 & 24-7 B89948	b/b	
1	pp6	BAR 7 1/2 x 5/8	4	3±	ORD @ 25-6	68 ✓	
1	pp25	BAR 7 1/2 x 5/8	4	3±	B89950	68 ✓	
44	pb7	BAR 7 x 7/16	4	3±	ORD @ 17-0 1/2		
4	pa19	do	4	3±	B89950		
1	pa25	do	4	3±			
1	pb25	do	4	3±			
1	pc25	do	4	3±			
1	pd25	BAR 7 x 7/16	4	3±		2298 ✓	
6	pg25	PL 8 x 7/16	1	1	PL 48 x 7/16 x 10-0 ORD B89949	77 ✓	
2	pb22	PL 13 x 7/16	0	8 1/2		27 ✓	
		SHEAR STUDS CONTR. #67-1286-26					12853 ✓
354		3/4 ϕ SHEAR STUDS	0	7	STK	356 ✓	
							356 ✓

— SEE SHEET b/b FOR BILLING WEIGHTS —

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

S.O. Bound
PROJ. # I 91-2(18)

REV. PER APP 4-24-67 HP

		DATE
DRAWN BY	AFL	3/2/67
CK'D BY	HP	3-10-67

HOLES 15/16 ϕ & AS NOTED
BOLTS 7/8 ϕ H. TEN
PAINT R.L. (VT. SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST.) 67-1286-26 (SHEAR STUDS)
SHEET NO. 25 a/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 QCP

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PL GIRDER (CONT.)			G-8A		
		1/4 f WELD	442	0		70	
		5/16 f WELD	106	0		26	
		3/8 f WELD	209	9		75	
		1/2 f WELD	209	9		134	
							305
		NOTE ON WEIGHT					
		* BILL AS					
1	pd24	PL 16 x 1 3/4	18	11 9/16		1806	
1		PL 16 x 2 1/4	64	11 1/4		7948	
							9754
		** BILL AS					
1	pf24	PL 16 x 2 1/2	19	0 3/16		2587	
1		PL 16 x 3 3/8	64	10		11903	
							14490
							24549

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

SO. BOUNIR
PROJ. # I91-2 (18)

		DATE
DRAWN BY	AFL	3/3/67
C'K'D BY	HP	3-10-67

HOLES 15/16 ϕ & AS NOTED
BOLTS 7/8 ϕ H. TEN
PAINT R.L. (VT. SPEC)
" & AS NOTED

PROJECT I 91 OVER RELOCATED US5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST.) 67-1286-26 (SHEAR STUDS) SHEET NO. 25 b/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 OCP

BILL OF MATERIAL

ASTM - A36

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE ℄ GIRDER		G - 9A			
1	pa24	℄ 55 5/16 x 3/8	105	0 5/16	ORD 59 x 3/8 x 107-9 B89948	7415 ✓	
1	pb18	℄ 16 x 1	21	3 13/16	ORD @ 21-6 B89948	1160 ✓	
1	pc18	℄ 16 x 1'2	21	3 13/16	ORD @ 21-6 B89948	1740 ✓	
1	pd24	℄ 16 x 2'4 *	83	10 13/16	ORD @ 84-3 B89948	See sheet	
1	pf24	℄ 16 x 3 3/8 **	83	10 3/16	ORD @ 60-0 & 24-7 B89948	b/b	
1	pp26	BAR 7'2 x 5/8 "	4	3±	ORD @ 25-6 B89950	68 ✓	
1	pp6	BAR 7'2 x 5/8	4	3±	B89950	68 ✓	
44	pb7	BAR 7 x 7/16	4	3±	ORD @ 17-0½ B89950		
4	pa19	do	4	3±			
1	pb26	do	4	3±			
1	pc26	do	4	3±			
1	pd26	do	4	3±			
1	pd25	BAR 7 x 7/16	4	3±		2298 ✓	
3	pg25	℄ 8 x 7/16	1	1	℄ 48 x 7/16 x 10-0	39 ✓	
1	pg26	℄ 12 x 7/16	0	8½	ORD B89949	13 ✓	
							12801 ✓
		SHEAR STUDS CONTR. #67-1286-26					
354		3/4 ϕ SHEAR STUDS	0	7	STK	356 ✓	
							356 ✓

SEE SHEET 1 b/b FOR DRILLING WEIGHTS

STATE OF VERMONT RECEIVED FEB 20 1969 BRIDGE DIV. AGENCY OF TRANSPORTATION

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

So. Bound
PROJ. # I 91-2(18)

		DATE
DRAWN BY	AFL	3/2/67
C'K'D BY	HP	3-10-67

HOLES 15/16 ϕ & AS NOTED
BOLTS 7/8 ϕ H. TEN
PAINT R.L. (VT. SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST.) 67-1286-26 (SHEAR STUDS) SHEET NO. 26 a/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 2-66 QCR

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT	
		ONE # GIRDER G-9A (CONT.)				
		1 4 f WELD	442	0	70 ✓	
		5/16 f WELD	90	0	22 ✓	
		3/8 f WELD	209	9	75 ✓	
		1/2 f WELD	209	9	134 ✓	
						301 ✓
		NOTE ON WEIGHT				
		* BILL AS				
1	pd24	PL 16 X 1 3/4	18	11 9/16	1806 ✓	
1		PL 16 x 2 1/4	64	11 1/4	7948 ✓	
						9754 ✓
		** BILL AS				
1	pf24	PL 16 X 2 1/2	19	0 3/16	2587 ✓	
1		PL 16 x 3 3/8	64	10	11903 ✓	
						14490 ✓
						24545 ✓

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

SO. BOUND
PROJ. # I 91-2 (18)

		DATE
DRAWN BY	HFL	3/3/67
CK'D BY	HP	3-10-67
HOLES	15/16 ϕ AS NOTED	
BOLTS	7/8 ϕ H. TEN	
PAINT	R.L. (VT. SPEC) & AS NOTED	

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1296 (STR. ST.) SHEET NO. 26 b/b
67-1296-26 (SHEAR STUDS)

PRINT RECORD

NO.	FOR	DATE
3	ADD	3-10
5	SHOP	5-25
2	STATE	5-24
2	STATE	1-2

10M 7-65 OCP

ASTM - A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PL GIRDER		G -	10A		
1	pa24	PL 55 5/16 x 3/8	105	0 5/16	ORD 59 x 3/8 x 107-9 B89948	7415 ✓	
1	pb18	PL 16 x 1	21	3 13/16	ORD @ 21-6 B89948	1160 ✓	
1	pc18	PL 16 x 1 1/2	21	3 13/16	ORD @ 21-6 B89948	1740 ✓	
1	pd24	PL 16 x 2 1/4 *	83	10 13/16	ORD @ 84-3 B89948	see sheet	
1	pf24	PL 16 x 3 3/8 **	83	10 3/16	ORD @ 60-0 & 24-7 B89948	b/b	
1	pp6	BAR 7 1/2 x 5/8	4	3±	ORD @ 25-6	68 ✓	
1	pp26	BAR 7 1/2 x 5/8	4	3±	B89950	68 ✓	
42	pb7	BAR 7 x 7/16	4	3±	ORD @ 17-0 1/2		
4	pa19	do	4	3±	B89950		
1	pb26	do	4	3±			
1	pa27	do	4	3±			
1	pb27	do	4	3±			
1	pc27	BAR 7 x 7/16	4	3±		2210 ✓	
3	pg25	PL 8 x 7/16	1	1	PL 48 x 7/16 x 10-0	39 ✓	
1	pd27	PL 13 x 7/16	0	8 1/2	ORD B89949	14 ✓	
							12714 ✓
		SHEAR STUDS CONTR. #67-1286-26					
354		3/4 φ SHEAR STUDS	0	7	STK	356 ✓	
							356 ✓

— SEE SHEET b/b FOR BILLING WEIGHTS —

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

SO. BOUND
PROJ. # I 91-2(18)

		DATE
DRAWN BY	AFL	3/2/67
C'K'D BY	HP	3-10-67

HOLES 15/16 φ & AS NOTED
BOLTS 7/8 φ HI TEN
PAINT R.L. (VT. SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST) 67-1286-26 (SHEAR STUDS)
SHEET NO. 27 a/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	4-25
2	STATE	5-24
2	STATE	1-2

10M 7-66 QCP

✓ X

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT	
		ONE ℄ GIRDER G-10A (CONT)				
		1 4 ϕ WELD	212	6	34 ✓	
		5/16 ϕ WELD	88	0	22 ✓	
		3/8 ϕ WELD	209	9	75 ✓	
		1/2 ϕ WELD	209	9	134 ✓	
						265 ✓
		NOTE ON WEIGHT				
		* BILL AS				
1	pd24	℄ 16 x 1 3/4	18	11 9/16	1806 ✓	
1		℄ 16 x 2 1/4	64	11 1/2	7948 ✓	
						9754 ✓
		** BILL AS				
1	pf24	℄ 16 x 2 1/2	19	0 3/16	2587 ✓	
1		℄ 16 x 3 3/8	64	10	11903 ✓	
						14490 ✓
						24509 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

SO. BOUND
PROJ. # I 91-2 (18)

RECEIVED FEB 20 1968 BRIDGE DIV.

		DATE
DRAWN BY	AFL	3/3/67
CK'D BY	HP	3-10-67
HOLES	15/16 ϕ AS NOTED	
BOLTS	7/8 ϕ H. TEN.	
PAINT	R-2 (VT. SPEC) & AS NOTED	

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER E T O'NEIL & SON CONSTR. Co.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1296 (STR. ST.) SHEET NO. 27 b/b
67-1286-26 (SHEAR STUDS)

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	5-25
2	STATE	5-24
2	STATE	1-2

ION 7-65 QCP

✓ X

ASTM - A36

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PL GIRDER		G - 11A			
1	pa24	PL 55 5/16 x 3/8	105	0 5/16	ORD 59 x 3/8 x 107-9 B89948	7415 ✓	
1	pb18	PL 16 x 1	21	3 13/16	ORD @ 21-6 B89948	1160 ✓	
1	pc18	PL 16 x 1 1/2	21	3 13/16	ORD @ 21-6 B89948	1740 ✓	
1	pd24	PL 16 x 2 1/4 *	83	10 13/16	ORD @ 84-3 B89948	See sheet	
1	pf24	PL 16 x 3 3/8 **	83	10 3/16	ORD @ 60-0 & 24-7 B89948	b/b	
1	pp6	BAR 7 1/2 x 5/8	4	3±	ORD @ 25-6	68 ✓	
1	pp25	BAR 7 1/2 x 5/8	4	3±	B89950	68 ✓	
44	pb7	BAR 7 x 7/16	4	3±	ORD @ 17-0 1/2		
4	pa19	do	4	3±	B89950		
1	pa25	do	4	3±			
1	pb25	do	4	3±			
1	pc25	do	4	3±			
1	pa28	BAR 7 x 7/16	4	3±		2298 ✓	
6	pg25	PL 8 x 7/16	1	1	ORD PL 48 x 7/16 x 10-0	77 ✓	
2	pc19	PL 9 x 7/16	1	0	B89949	27 ✓	
		SHEAR STUDS CONTR. #67-1286-26					12853 ✓
354		3/4 φ SHEAR STUDS	0	7	STK	356 ✓	
							356 ✓

— SEE SHEET b/b FOR BILLING WEIGHTS —

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

SO. BOUND
PROJ. # I 91-2(18)

REV. PER APP 4-24-67 HP

		DATE
DRAWN BY	AFL	3/2/67
C'K'D BY	HP	3-10-67

HOLES 15/16 φ & AS NOTED
BOLTS 7/8 φ HI TEN
PAINT R.L. (VT. SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST) 67-1286-26 (SHEAR STUDS) SHEET NO. 28 a/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	5-25
2	STATE	5-24
2	STATE	1-2

✓ X

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE ℄ GIRDER (CONT.)			G-11A		
		45° WELD	442	0		70 ✓	
		5/16 F WELD	106	0		26 ✓	
		3/8 F WELD	209	9		75 ✓	
		1/2 F WELD	209	9		134 ✓	
							305 ✓
		NOTE ON WEIGHT					
		* BILL AS					
1	pd 24	PL 16 x 1 3/4	18	11 9/16		1806 ✓	
1		PL 16 x 2 1/4	64	11 1/4		7948 ✓	
							9754 ✓
		** BILL AS					
1	ps 24	PL 16 x 2 1/2	19	0 3/16		2587 ✓	
1		PL 16 x 3 3/8	64	10		11903 ✓	
							14490 ✓
							24549 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

30. BOUND
PROJ. # I 91-2 (18)

		DATE
DRAWN BY	AEL	3/3/67
CHECKED BY	HP	3-10-67

HOLES 15/16 ϕ AS NOTED
BOLTS 7/8 ϕ H. TEN
PAINT R.I. (VT. SPEC.) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEIL & SON CONSTR. Co.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST.) 67-1286-26 (SHEAR STUDS) SHEET NO. 28 b/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	5-25
2	STATE	5-24
2	STATE	1-2

RECEIVED FEB 20 1968 BRIDGE DIV.

✓ X

BILL OF MATERIAL

ASTM - A36

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
			ONE ℄ GIRDER			G - 12 A		
	1	pa24	℄ 55 5/16 x 3/8	105	0 5/16	ORD 59x3/8x107-9 B89948	7415 ✓	
	1	pb18	℄ 16 x 1	21	3 13/16	ORD @ 21-6 B89948	1160 ✓	
	1	pc18	℄ 16 x 1 1/2	21	3 13/16	ORD @ 21-6 B89948	1740 ✓	
	1	pd24	℄ 16 x 2 1/4 *	83	10 13/16	ORD @ 84-3 B89948	See shut	
	1	pf24	℄ 16 x 3 3/8 **	83	10 3/16	ORD @ 60-0 & 24-7 B89948	b/b	
	1	ps6	BAR 7 1/2 x 5/8	4	3 ±	ORD @ 25-6 B89950	68 ✓	
	1	pp26	BAR 7 1/2 x 5/8	4	3 ±		68 ✓	
	4	pa23	BAR 7 x 7/8	4	3 ±	ORD @ 17-0 1/2 B89950		
	21	pt6	BAR 7 x 7/8	4	3 ±		2210 ✓	
	2	pa24	℄ 8 x 7/16	1	1		26 ✓	
	1	ps18	℄ 9 x 7/16	1	0	ORD 48x7/16x10-0 B89949	13 ✓	
REV.	1	pc22	℄ 6 3/4 x 7/16	1	1		11 ✓	
	1	pg25	℄ 8 x 7/16	1	1		13 ✓	
								12724 ✓
			SHEAR STUDS CONTR. # 67-1286-26					
	354		3/4 ϕ SHEAR STUDS	0	7	STK	356 ✓	
								356 ✓
	——		SEE SHEET b/b FOR BALANCE WEIGHTS ——					

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

80. ROUND
PROJ # I 91-2(18)

		DATE
DRAWN BY	AFL	3/2/67
C'K'D BY	HP	3-10-67
HOLES	15/16 ϕ & AS NOTED	
BOLTS	7/8 ϕ H. TEN	
PAINT	R.L. (VT. SPEC) & AS NOTED	

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST) 67-1286-26 (SHEAR STUDS) SHEET NO. 29 a/b

PRINT RECORD

NO.	FOR	DATE
3	ARR	3-10
5	SHOP	5-25
2	STATE	5-21
2	STATE	1-2

10M 7-65 QCP

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		ONE PL GIRDER (CONT.)			G-12		
		1/4 f WELD	212	6		34 ✓	
		5/16 f WELD	62	0		15 ✓	
		3/8 f WELD	209	9		75 ✓	
		1/2 f WELD	209	9		134 ✓	
							258 ✓
		NOTE ON WEIGHT					
		* BILL AS					
1	pd24	PL 16 x 1 3/4	18	11 9/16		1806 ✓	
1		PL 16 x 2 1/4	64	11 1/4		7948 ✓	
							9754 ✓
		** BILL AS					
1	pf24	PL 16 x 2 1/2	19	0 3/16		2587 ✓	
1		PL 16 x 3 3/8	64	10		11903 ✓	
							14490 ✓
							24502 ✓

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

SO. BOUND
PROJ. # I91-2 (18)

		DATE
DRAWN BY	AFL	3/3/67
C'K'D BY	HP	3-10-67

HOLES 15/16 ϕ & AS NOTED
BOLTS 7/8 ϕ Hi TEN
PAINT R.L. (VT. SPEC) & AS NOTED

PROJECT I 91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SON CONSTR. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 (STR. ST.) 67-1286-26 (SHEAR STUDS) SHEET NO. 29 b/b

PRINT RECORD

NO.	FOR	DATE
3	APP	3-10
5	SHOP	5-15
2	STATE	1-2

10M 7-65 QCP

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		FIELD MATERIAL					
2200		7/8" HI TEN BOLTS	0	2½		2031	
1300		do	0	2½	ORD SCREW & BOLT 90604	1253	
1000		do	0	6		1536	
1200		do	0	8½		2335	
100		1" MACH BOLT	0	5½		174	
							7329
5700		7/8" HARD WASHERS				400	
200		1" CUT WASHERS				38	
							438
							7767

RECEIVED FEB 20 1969 BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

PROJ. I 91 - 2 (18)

		DATE
DRAWN BY	RLM	4-25-67
C'K'D BY		

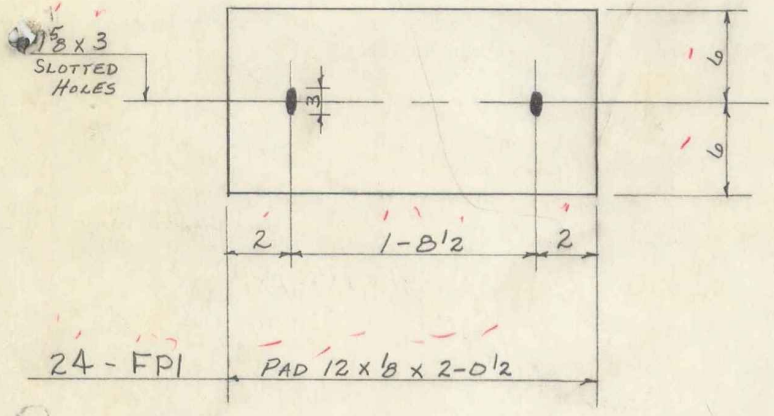
HOLES
BOLTS
PAINT

PROJECT I91 OVER RELOCATED U.S 5
LOCATION NORWICH VERMONT
CUSTOMER ET O'NIEL & SON CONST CO.
ARCHITECT STATE OF V-DEPT OF HIGHWAY
JOB NO. 67-1286 SHEET NO. 38

PRINT RECORD

NO.	FOR	DATE
3	APP	5-3
4(1)	SHOP	5-23
2	STATE	5-24
2	STATE	1-2

10M 7-65 QCP



RECEIVED
FEB 20 1969
BRIDGE DIV.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
—		FABREEKA PADS	—			
24	FP1	PAD 12 x 1'8	2	0 1/2	ORD. FABREEKA 44 89888	
					SHIP TO SHOP BY 3-24-67	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

		DATE
DRAWN BY	J.B.	1-10-67
C'K'D BY	RLM	1-11-67

HOLES 1 5/8 x 3
BOLTS
PAINT NONE

PROJECT I91-2(18) I91 OVER RELOCATED U.S. 5
LOCATION NORWICH, VERMONT
CUSTOMER E.T. O'NEIL & SONS CONST. CO.
ARCHITECT STATE OF VERMONT
JOB NO. 67-1286 SHEET NO. FP1

PRINT RECORD

NO.	FOR	DATE
3	WFB	1-13-67
3①	SHOP	1-17
2	STATE	1-2

10M 7-65 QCP

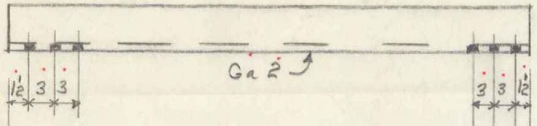
X

ASTM-A36

BILL OF MATERIAL

(22)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		LATERAL BRACING ANGLES				
4	AB1	∠ 4x4x3/8	8	1 7/16		
3	AB2	do	12	5 7/16		
1	AB3	do	12	4 15/16	ORD @ 40-0	
1	AB4	do	11	0 1/16	B 89951	
1	AB5	do	12	1		
1	AB6	do	15	6 15/16		
1	AB7	do	16	9 5/8		
6	AB8	do	13	9 1/2		
2	AB9	do	13	9 9/16		
4	AB10	∠ 4x4x3/8	13	9 5/8		2973 ✓



4 -AB1	∠4x4x3/8	8-1 7/16
3 -AB2	do	12-5 7/16
ONE -AB3	do	12-4 15/16
ONE -AB4	do	11-0 1/16
ONE -AB5	do	12-1
ONE -AB6	do	15-6 15/16
ONE -AB7	do	16-9 5/8
6 -AB8	do	13-9 1/2
2 -AB9	do	13-9 9/16
4 -AB10	∠4x4x3/8	13-9 5/8

PAINT NOTE
NO PAINT WITHIN 3" OF ALL HOLES

RECEIVED
FEB 20 1969
BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

So Bound
PROJ I-91-2(18)

REV PER. APP 4-24-67 HP

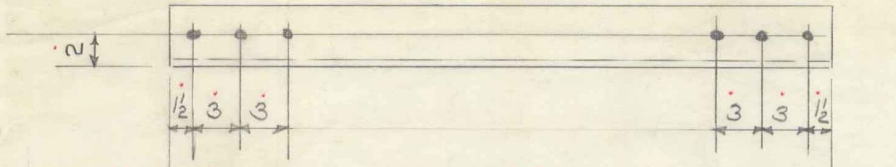
		DATE
DRAWN BY	AFL	3/10/67
C'K'D BY		

HOLES 15/16 ϕ
BOLTS
PAINT RL (VT. SPEC) & AS NOTED

PROJECT I-91 OVER RELOCATED US 5
LOCATION NORWICH, VERMONT
CUSTOMER ET O'NEIL & SONS CONSTR CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 30

PRINT RECORD

NO.	FOR	DATE
3	APP.	3-10
7 (1)	APP	4-24
2	STATE	5-24
1	CUST	7/28



3 - AA1	∠4x4x3/8	7-11 3/4	
ONE - AA2	do	7-11 13/16	
ONE - AA3	do	15-3 5/16	
ONE - AA4	do	16-8 3/16	
ONE - AA5	do	11-0 3/8	
ONE - AA6	do	12-3 3/8	
2 - AA7	do	12-3 7/16	
ONE - AA8	do	12-3 9/16	
ONE - AA9	do	12-4 3/8	
6 - AA10	do	13-9 1/2	
2 - AA11	do	13-9 9/16	
4 - AA12	do	13-9 5/8	

BILL OF MATERIAL

(22)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
3	AA1	∠4x4x3/8	7	11 3/4		
1	AA2	do	7	11 13/16		
1	AA3	do	15	3 5/16		
1	AA4	do	16	8 3/16		
1	AA5	do	11	0 3/8		
1	AA6	do	12	3 3/8	ORD @ 40	
2	AA7	do	12	3 7/16	B89951	
1	AA8	do	12	3 9/16		
1	AA9	do	12	4 3/8		
6	AA10	do	13	9 1/2		
2	AA11	do	13	9 9/16		
4	AA12	do	13	9 5/8		2960 ✓

RECEIVED
FEB 20 1969
BRIDGE DIV.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

PROJ # I91-2(18)

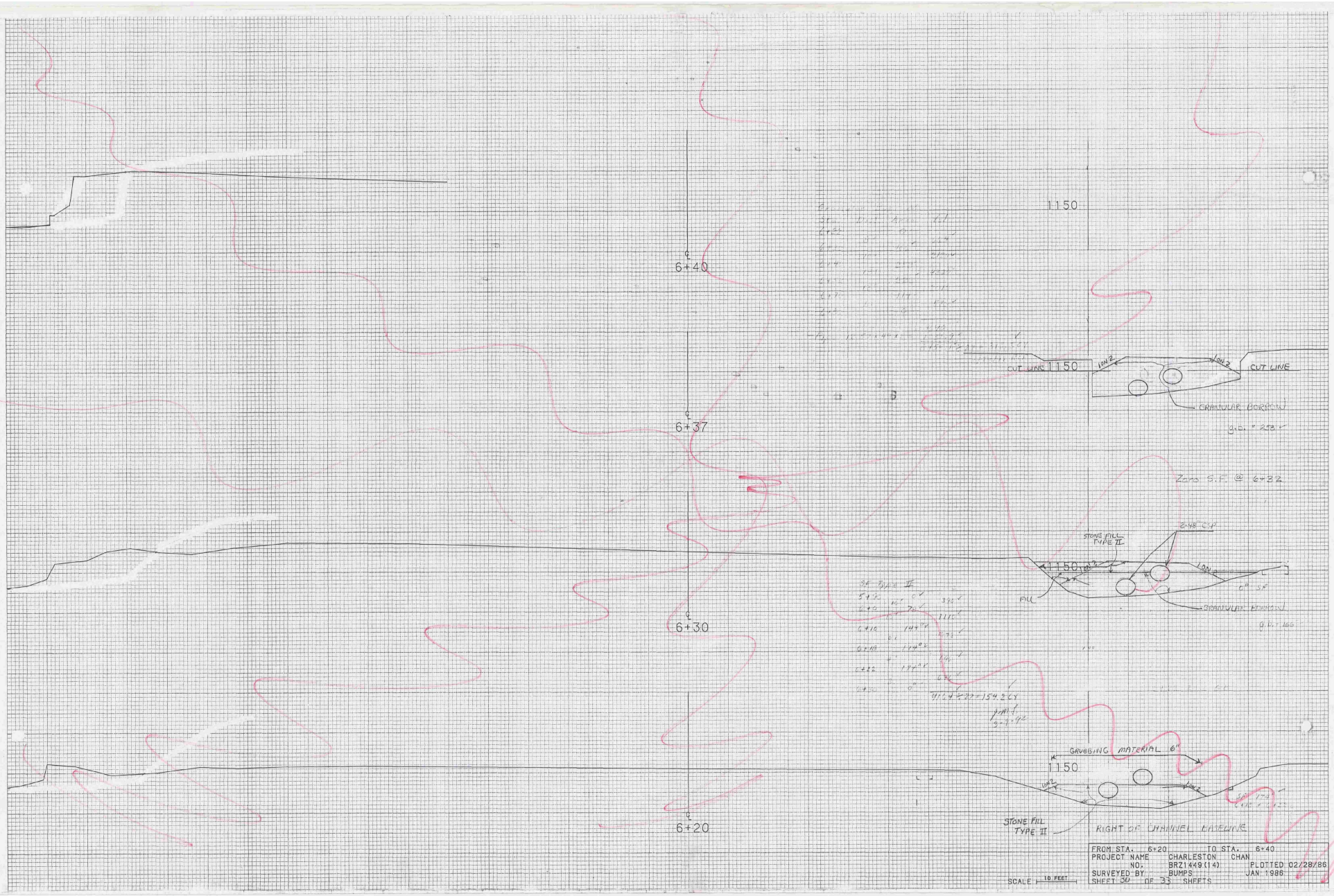
		DATE
DRAWN BY	RLM	3-9-67
C'K'D BY		

HOLES 15/16 ⊗
BOLTS
PAINT RL (VT SPEC)

PROJECT I91 OVER RELOCATED U.S. 5
LOCATION NORWICH VERMONT
CUSTOMER E T O'NEIL CONST CO INC.
ARCHITECT STATE OF VT DEPT OF HIGHWAYS
JOB NO. 67-1286 SHEET NO. 34

PRINT RECORD

NO.	FOR	DATE
3	APP	3-31
4D	SHOP	4-25
2	STATE	5-24
1	CUST	7/22
2	STATE	1-2



FROM STA. 6+20 TO STA. 6+40
PROJECT NAME CHARLESTON CHAN
NO: BRZ1449(14) PLOTTED 02/28/86
SURVEYED BY BUMPS JAN 1986
SHEET 30 OF 33 SHEETS

SCALE 10 FEET

Norwich

1967/68 I-91-2 (18) Stage I 1967/68

1967

Norwich

I-91-2 (18)

stage 1

1967