STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FEDERAL AID PROJECT

PROPOSED IMPROVEMENT
TOWN OF NORTHFIELD
COUNTY OF WASHINGTON
MONTPELIER-RANDOLPH ROAD
VT. RTE. 12

BEGINNING AT A POINT APPROXIMATELY 1.324 MILES SOUTHERLY OF THE BERLIN-NORTHFIELD TOWN LINE AND EXTENDING 0.341 MILES NORTHERLY.

LENGTH OF ROADWAY	1629.70 FEET	0.309 MILES
LENGTH OF BRIDGE	170.30 FEET	0.032 MILES
LENGTH OF PROJECT	1800.00 FEET	0.341 MILES

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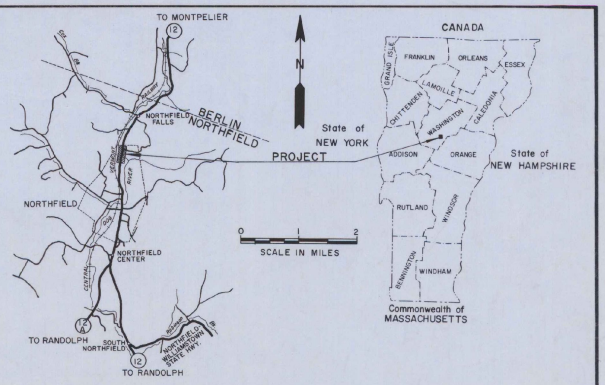
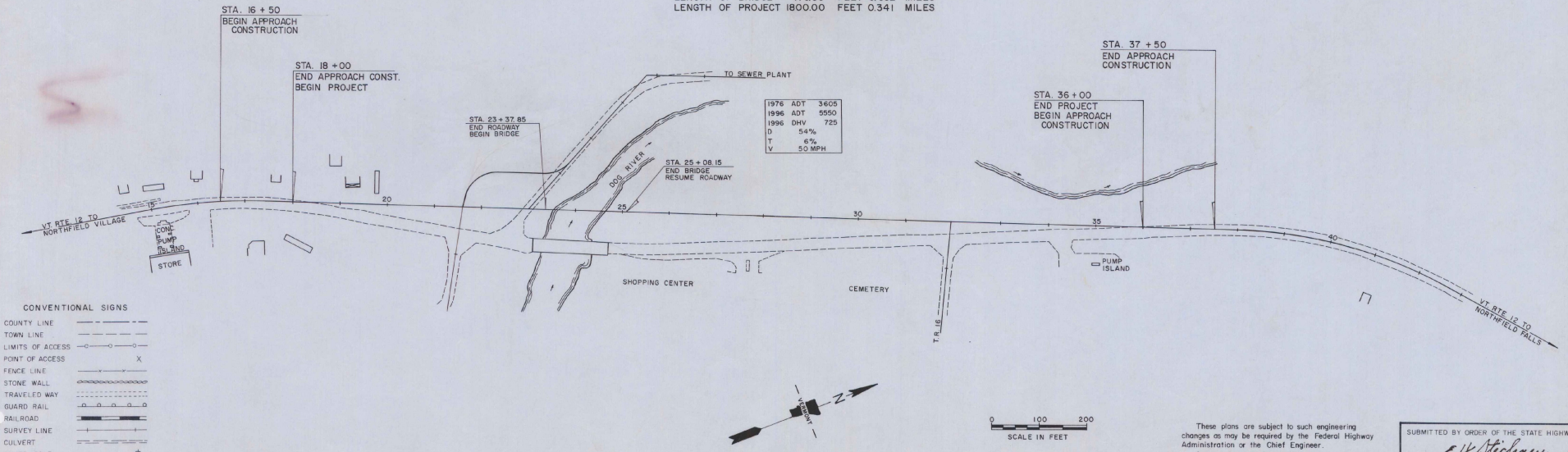
RECORD PLANS-MATERIALS

NORTHFIELD RF-BRF 035-2(3)
CONTRACTOR--LUNDE CONSTRUCTION CO., BARRE, VT.
CONTRACT DATED-10 SEPTEMBER 1976
CONSTRUCTION BEGAN-23 SEPTEMBER 1976
CONSTRUCTION SUSPENDED-25 FEBRUARY 1977
CONSTRUCTION RESUMED-14 APRIL 1977
CONSTRUCTION COMPLETED--10 AUGUST 1977
CONSTRUCTION ACCEPTED--12 AUGUST 1977
RESIDENT ENGINEER--ROBERT W. JENSEN
RECORD PLANS--
EARTH BORROW--GROSS PIT, NORTHFIELD, VT.
GRANULAR BORROW--DUBOIS PIT & GROSS PIT, NORTHFIELD, VT.
SUBBASE OF GRAVEL--GROSS PIT, NORTHFIELD, VT.
PLANT MIX BASE COURSE-COOLEY ASPHALT PAVING, BERLIN, VT.
EMULSIFIED ASPHALT-GORMAN NH BITUMINOUS CO., BOSCAWEN, N.H.
BITUMINOUS CONCRETE PAVEMENT--COOLEY ASPHALT PAVING, BERLIN, VT.
CONCRETE-ANDERSON, BERLIN, VT.
REINFORCING STEEL-BETHLEHEM STEEL CO. BETHLEHEM, PA.
ACCGMP, MES, CGMP, UNDERDRAIN, CARRIER PIPE, FLUSHING BASINS, LANE METAL PRODUCTS CO. INC., BALLISTON, N.Y.
CAST IRON GRATES--E.L.L.eBARRON FOUNDRY CO. BROCKTON, MASS.
BITUMINOUS CONCRETE CURB, BITUMINOUS CONCRETE SIDEWALK--COOLEY PAVING, BERLIN, VT.
APPROACH RAIL, BOUNDRY MARKERS, STEEL MARKER POSTS, GUARD RAIL ANCHORS FOR GUARD RAIL-LAFAYETTE-SHELDON INC., ESSEX JCT., VT.

NOTE: ANY FURTHER INFORMATION CONCERNING FINAL QUANTITIES, AMOUNTS OR OTHER DETAILS RELATIVE TO THIS PROJECT MAY BE FOUND IN EITHER THE FIELD BOOKS OR THE ESTIMATE FILE.





CONVENTIONAL SIGNS

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

SCALE IN FEET

These plans are subject to such engineering changes as may be required by the Federal Highway Administration or the Chief Engineer.
Construction is to be carried on in accordance with these plans and the Standard Specifications for Highway and Bridge Construction dated March, 1976 as approved by the Federal Highway Administration on a project to project basis, including all subsequent revisions and such revised specification and special provisions as are incorporated in these plans.

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD
APPROVED E.W. Stechney DATE 6-24-76
CHIEF ENGINEER

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

PROJECT RF-BRF NO 035-2(3)
SHEET 1 OF 74 SHEETS

D-10 SRS 12/17/70

VT. RTE. 12 TYPICAL SECTIONS

SEEDING FORMULA, ITEM 651.10, RURAL AREAS

% WT.	LBS/ACRE	NAME	PURITY %	GERM. %
3.33	2	CROWN VETCH	97	75
8.33	5	TIMOTHY	99	85
41.67	25	CREEPING RED FESCUE	98	85
16.67	10	ALFALFA (VAR. SARANAC)	99	85
5.00	3	RED TOP	92	85
16.67	10	PERENNIAL RYE GRASS (VAR. PENNFIRE)	95	90
8.33	5	BIRDSFOOT TREFOIL	98	85
100.00	60			

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

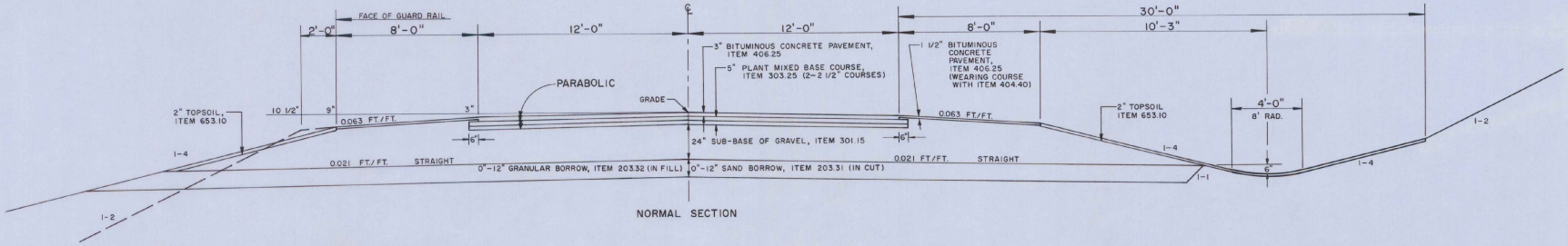
3" BITUMINOUS CONCRETE PAVEMENT, ITEM 406.25 (± 1/4") (1 1/4" BINDING COURSE OVER 1 3/4" WEARING COURSE)
5" PLANT MIXED BASE COURSE, ITEM 303.25 (± 1/2") (2-2 1/2" COURSES)
24" SUB-BASE OF GRAVEL, ITEM 301.15 (± 1")

SHOULDERS: 1 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 406.25 (WEARING COURSE, WITH ITEM 404.40)

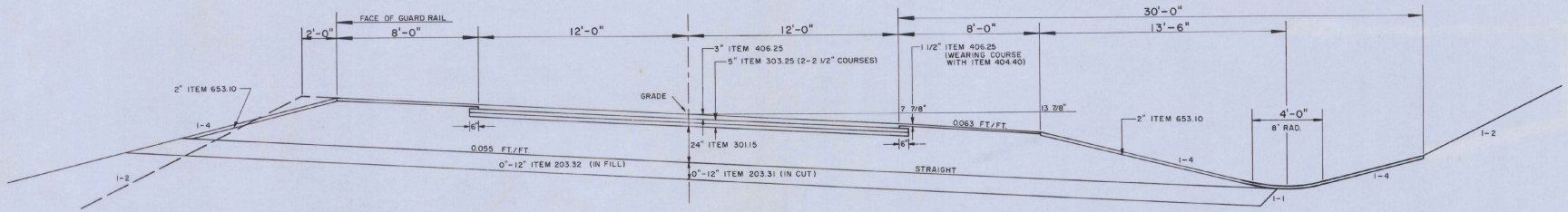
0"-12" GRANULAR BORROW, ITEM 203.32 (IN FILL) (± 1")
0"-12" SAND BORROW, ITEM 203.31 (IN CUT) (± 1")

TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER

PERMISSABLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY.



NORMAL SECTION



MAXIMUM BANKED SECTION
0.055 FT./FT.

GENERAL NOTES:

FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-5.

STEEL MARKER POSTS, ITEM 619.16, TO BE PLACED AS DIRECTED BY THE ENGINEER.

HAY MULCH, ITEM 651.25, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE.

FERTILIZER, ITEM 651.15, SHALL BE MIXED AS FOLLOWS:

NITROGEN	10 %
PHOSPHORUS	20 %
POTASH	10 %

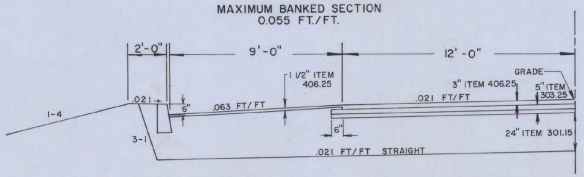
FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT TO EXCEED 100 LBS. EA. AND IS TO BE APPLIED AT THE RATE OF 500 LBS. PER ACRE.

AGRICULTURAL LIMESTONE, ITEM 651.20, TO BE APPLIED TO ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE OR AS DIRECTED BY THE ENGINEER.

FOR RIGHT TURN LANE FOR COMMERCIAL DRIVE, SEE DETAIL F, STANDARD SHEET B-71.

FOR SANDY SOILS, THE FERTILIZER MIX SHOULD BE CHANGED TO:

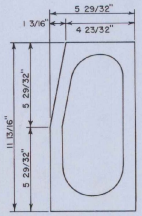
NITROGEN	10 %
PHOSPHORUS	20 %
POTASH	20 %



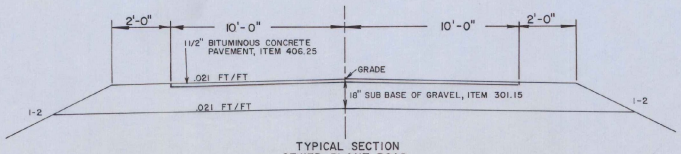
SEE CURB DETAIL AT RIGHT

NORMAL SECTION
W/SYNTHETIC-RESIN CONCRETE CURB, TYPE A
ITEM 616.50 SEE SPECIAL SPECIFICATIONS
18+00 - 20+00 LT.

BUILT AS DESIGNED



CROSS-SECTION
SEE SHEET 59 OF 74 FOR DETAILS



TYPICAL SECTION
SEWER PLANT ROAD

NORTHFIELD

SURVEYED BY _____ DATE _____
DRAWN BY DUFFY DATE 11/75
TRACED BY DUFFY DATE 11/75

PROJ. RF-BFF NO. 035-2 (3)
SHEET 2 OF 74

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROJECT NO. _____

SUMMARY SHEET NO. _____ OF _____ 19 ____

Rd.

APPROXIMATE SUMMARY OF QUANTITIES

LAND SCAPING	EROSION CONTROL	UTILITIES	NON-GOVT.	BRIDGE	ROADWAY	Govt. & Non-Govt. QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	
					1	1	L.S.	Clearing & Grubbing (0.6 Acre plus Indiv Trees	201.10	
					510	510	C.Y.	Excav & Removal of Road Surfaces & Pavements	202.15	(7)
				1		1	EA.	Removal of Structure	202.25	
					517	517	L.F.	Removal & Disposal of Existing Guard Rail	202.40	
					5,600	5,600	C.Y.	Common Excavation	203.15	(52)
					1,030	1,030	C.Y.	Solid Rock Excavation	203.16	(9)
				680		680	C.Y.	Unclassified Channel Excavation	203.27	
					5500	5500	C.Y.	Earth Borrow	203.30	(23)
					6,200	6,200	C.Y.	Granular Borrow	203.32	
					13,500	13,500	S.Y.	Fine Grading - Subgrade	203.40	(40)
	20	1180	110		150	1,460	C.Y.	Trench Excavation of Earth	204.20	(5)
		100	30		10	140	C.Y.	Trench Excavation of Rock	204.21	(4)
				120		120	C.Y.	Structure Excavation	204.25	
		16	4	50		70	C.Y.	Granular Backfill for Structures (Est.)	204.30	
					8,200	8,200	C.Y.	Subbase of Gravel	301.15	
					1,545	1,545	TON	Plant Mixed Base Course	303.25	(39)
		72	18	225	36,900	37,215	CY MI	Overhaul (4.5 Miles)	306.10	
					1,650	1,650	C.Y.	Stripping of Pits	307.10	
					90	90	GAL	Bituminous Surface Treatment, Type VI	404.40	
					3	3	CTN	Emulsified Asphalt	404.65	
					1,420	1,420	TON	Bituminous Concrete Pavement	406.25	
				281		281	C.Y.	Concrete, Class A	501.20	
				435	5	440	C.Y.	Concrete, Class B	501.25	(0.1)
		4				4	C.Y.	Concrete, Class C	501.30	
				1		1	L.S.	Furnishing Equipment for Driving Piling	504.10	
				2,100		2,100	L.F.	Steel Piling (NP 12 x 53)	505.15	
				228,040		228,040	LB.	Structural Steel (Rolled Beam)	506.90	
				110,645	415	111,060	LB	Reinforcing Steel	507.15	
				1		1	L.S.	Shear Connectors (2256 ea 7/8 x 7 studs)	508.15	
				58		58	GAL	Water Repellent	514.10	
				750		750	S.Y.	Sheet Membrane Waterproofing	519.20	
					148	148	L.F.	18" Asph Ctd Corr Galv Metal Pipe (.064")	601.1552	
					84	84	L.F.	24" Asph Ctd Corr.Galv.Metal Pipe (.064")	601.1572	
					2	2	EA.	18" Asph.Ctd.Corr.Galv.Metal Pipe Elbow (.064")	601.5552	
					1	1	EA.	24" Metal End Section for A.C.C.G.M.P. (.064")	601.6232	
					2	2	EA.	Cast Iron Grate with Frame, Type A	604.45	
					500	500	L.F.	6" Underdrain (Estimated)	605.101	
					100	100	L.F.	6" Underdrain Carrier Pipe (Est.)	605.151	
					1	1	EA.	Underdrain Flushing Basin (Est.)	605.95	
					100	100	HRS.	Roadway Patrol Maintenance	607.10	
					50	50	HRS.	Bulldozer Rental	608.10	
	10				40	50	HRS.	All-Purpose Excavator Rental	608.25	
					400	400	M/GAL	Dust Control with Water	609.10	
					3	3	TON	Dust and Ice Control with Calcium Chloride	609.15	
	60			50		100	C.Y.	Stone Fill, Type I	613.10	
				1,110		1,110	C.Y.	Stone Fill, Type III	613.12	
				5		5	GAL.	Joint Sealer, Hot Poured	614.10	
				1		1	GAL	Joint Sealer, Polyurethane	614.25	
					283	283	L.F.	Synthetic-Resin Concrete Curb, Type A	616.50	
				358		358	L.F.	Synthetic-Resin Concrete Bridge Curb	616.51	
					2	2	TON	Bituminous Concrete Curb, Type 4	616.30	
				194		194	L.F.	Bridge Railing, 2 Rail Aluminum	617.15	
				195		195	L.F.	Bridge Railing Aluminum Spindle	617.25	
					637.5	637.5	L.F.	Approach Railing, 2 Rail Aluminum	617.45	
					4	4	TON	Bituminous Concrete Sidewalk	618.15	
					10	10	EA.	Boundary Markers (Estimated)	619.10	
					5	5	EA.	Steel Marker Posts	619.16	
					72	72	L.F.	Guard Rail Plank with Wood Posts	621.10	
					712	712	L.F.	Guard Rail Three Cable with 11 Steel Posts	621.21	
					2	2	EA.	Anchor for Three Cable Guard Rail with Light Steel and Wood Posts	621.66	
					3	3	EA.	Anchor for Three Cable Guard Rail with Light Steel and Wood Posts at Driveways	621.67	
		60				60	L.F.	3/4 Inch Seamless Copper Water Tube	629.23	
		90				90	L.F.	6" Ductile Iron Pipe, Cement Lined, Class 11	629.24	
		1,477	78			1,555	L.F.	8" Ductile Iron Pipe, Cement Lined, Class 11	629.24	
		2				2	EA.	Extension Service Box and Curb Stop(3/4 Inch)	629.25	
		4				4	EA.	6" Gate Valve with Valve Box	629.27	
		2	1			3	EA.	6" Gate Valve with Valve Box	629.27	
		1				1	EA.	Hydrant, Furnish	629.28	
		2				2	EA.	3/4" Corporation Stop	629.40	
		1				1	EA.	6" to 6" Connecting to Existing Main	629.50	
		2				2	EA.	8" to 6" Connecting to Existing Main	629.60	
		1				1	L.S.	River Crossing	629.60	
		52				52	L.F.	15" Reinforced Concrete, Pipe Casing	629.962	
			72			72	L.F.	18" Reinforced Concrete Pipe Casing	629.963	
					25	25	HR.	Uniformed Traffic Officers (Est.)	630.10	
					1	1	L.S.	Field Office Engineers	631.10	
					1,000	1,000	HR.	Employee Traineeship	634.10	
					1	1	L.S.	Mobilization	635.10	
	210					210	LB.	Seed	651.10	(4)
	1,300					1,300	LB.	Fertilizer	651.15	(1)
	1					1	TON	Agricultural Limestone	651.20	
	5					5	TON	Hay Mulch	651.25	
	275					275	C.Y.	Topsoil	653.10	
25						25	EA.	Austrian Pine, Height 4'-5'	656.149	
115						115	EA.	Arrowwood, Height 2'-4'	656.291	
3						3	EA.	Liset Flowering Crab, Height 6'-8'	656.370	
4						4	EA.	Snowdrift Flowering Crab, Height 6'-8'	656.370	
								OPTION ITEMS		
					108	108	L.F.	18" Corr.Galv.Metal Pipe (.064)	601.1802	
					108	108	L.F.	18" Corr.Alum.Alloy Culvert Pipe (.060")	601.2052	
					108	108	L.F.	18" Reinf Concrete Pipe, Class III	601.2623	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		Granular Borrow
960	C.Y.	From Bridge Plans
740	C.Y.	On Fills
3,642	C.Y.	Back of Bridge Abutments
801	C.Y.	Factor (0.15)
57	C.Y.	Rounding
6,200	C.Y.	Total
		Subbase of Gravel
7,157	C.Y.	Mainline
433	C.Y.	Sewer Plant Road
303	C.Y.	Dogwood Glen (Includes Rt Turn Lane)
224	C.Y.	Drives and Approaches
83	C.Y.	Rounding
8,200	C.Y.	Total
		Bituminous Concrete Pavement
1,183	TON	Mainline
67	TON	Sewer Plant Road
31	TON	Dogwood Glen (Includes Right Turn Lane)
42	TON	Drives
83	TON	Bridges
14	TON	Rounding
1,420	TON	Total

QUANTITIES	UNIT	TEMPORARY EROSION CONTROL	ITEM NO.
20	C.Y.	Trench Excavation of Earth	204.20
10	HR.	All Purpose Excavator Rental	608.25
60	C.Y.	Stone Fill, Type I	613.10
50	LB.	Seed	651.10
2	TON	Hay Mulch	651.25

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

TYPE OF CONSTRUCTION

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS ROADWAY	PAVEMENT WIDTHS BRIDGE	EQUATIONS +	EQUATIONS −
18 + 00.0	23 + 37.85	537.85			
23 + 37.85	25 + 08.15		170.30		
25 + 08.15	36 + 00.0	1091.85			
TOTALS		1629.70	170.30		

LENGTH OF PROJECT

STATIONS	FEET	MILES	REMARKS
See Above	1629.70	0.309	Roadway
	170.30	0.032	Bridge
TOTALS	1800.00	0.341	Project

NORTHFIELD

No. RF-ERF Fed. 085-2 (3)

Sheet 3 of 74 Sheets

DRAINAGE AND ITEM QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROJECT NO.

APPROXIMATE SUMMARY OF QUANTITIES

BRIDGE	ROADWAY	GRAND TOTAL	UNIT	ITEM	ITEM NO.

DETAILED SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM

DRAINAGE STRUCTURES

STA.	POS	OLD CULVERT	TYPE IN.	TYPE OUT.	A.C.C.G.M.P. D	A.C.C.G.M.P. L	R.C.P. D	R.C.P. L	CGMP S	CGMP L	C.R.M.	CONC. B	REINF. STEEL	D.I. GRATE	DEPTH D.I.	TRENCH EXCAV. EARTH	TRENCH EXCAV. ROCK	ELBOWS	ASKEW LT.	ASKEW RT.	STEEL MARKER POST Lt.	STEEL MARKER POST Rt.	CAACP (.060")	METAL END SECTION	DITCHES IN.	DITCHES OUT.	REMARKS
20+00 - 20+50	Lt.		RCDI		18"	60	(.064)					3.0	257	"A"	6'-0"	10					1						
30+28	Rt.					(111)	18"	28'	18"	28'													18" 28'				Drive Culvert
31 + 50	Rt.	15" RCP														13	3										Remove Existing Culvert
31+60 - 32+40	Rt.					(111)	18"	80'	18"	80'	(.064)					21						1	18" 80'				Option Pipe
32 + 45	℄	15" RCP	MES		24"	86'	(.064)									48	3				1	1		1-24"			
35 + 00	℄		RCDI		18"	88'	(.064)					1.9	158	"A"	3'-6"	53		2-18"			1						35° & 30° Elbows
					24"	86'	(.064)																				
					18"	148	(.064)																				
					18"	108'	(Three way option)					4.9	415	2-A		145	6	2-18"			3 5 2		18" 108'	1-24"			

PLANIMETERED SUB-BASE OF GRAVEL

STA.	STA.	DEPTH	EQUATIONS +	EQUATIONS −

GUIDE POSTS

STA.	LT.	RT.	STA.	LT.	RT.

APPROACH RAILING

ITEM 617.45

STA -STA	POS.	L.F.
22 + 255 - 23 + 38	Lt.	112.5
21 + 97.5 - 23 + 10	Rt.	112.5
25+32 - 27 + 19.5	Rt.	187.5
25 + 06 - 27 + 31	Lt.	225.0
TOTAL		637.5

THREE CABLE GUARD RAIL W/LIGHT STEEL POSTS

ITEM 621.21

STA.-STA.	POS	LF	FAC	Total	Anchors 621.66	Anchors 621.67
31+45-35+93	Lt.	448	12	460	1	1
35+20-37+60	Lt.	240	12	252	1	2
TOTALS				712	2	3

PLANK GUARD RAIL, ITEM 621.10

STA.	POS.	LF
23 + 00	Rt.	36
24 + 80	Rt.	36
TOTAL		72

TYPE OF CONSTRUCTION:

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS	EQUATIONS +	EQUATIONS −	REMARKS

LENGTH OF PROJECT

STA.	STA.	FEET	MILES	REMARKS

NORTHFIELD

PROJECT RF-3RF NO. 035-2 (3)

SHEET 4 OF 23

D-9

EARTHWORK SHEET

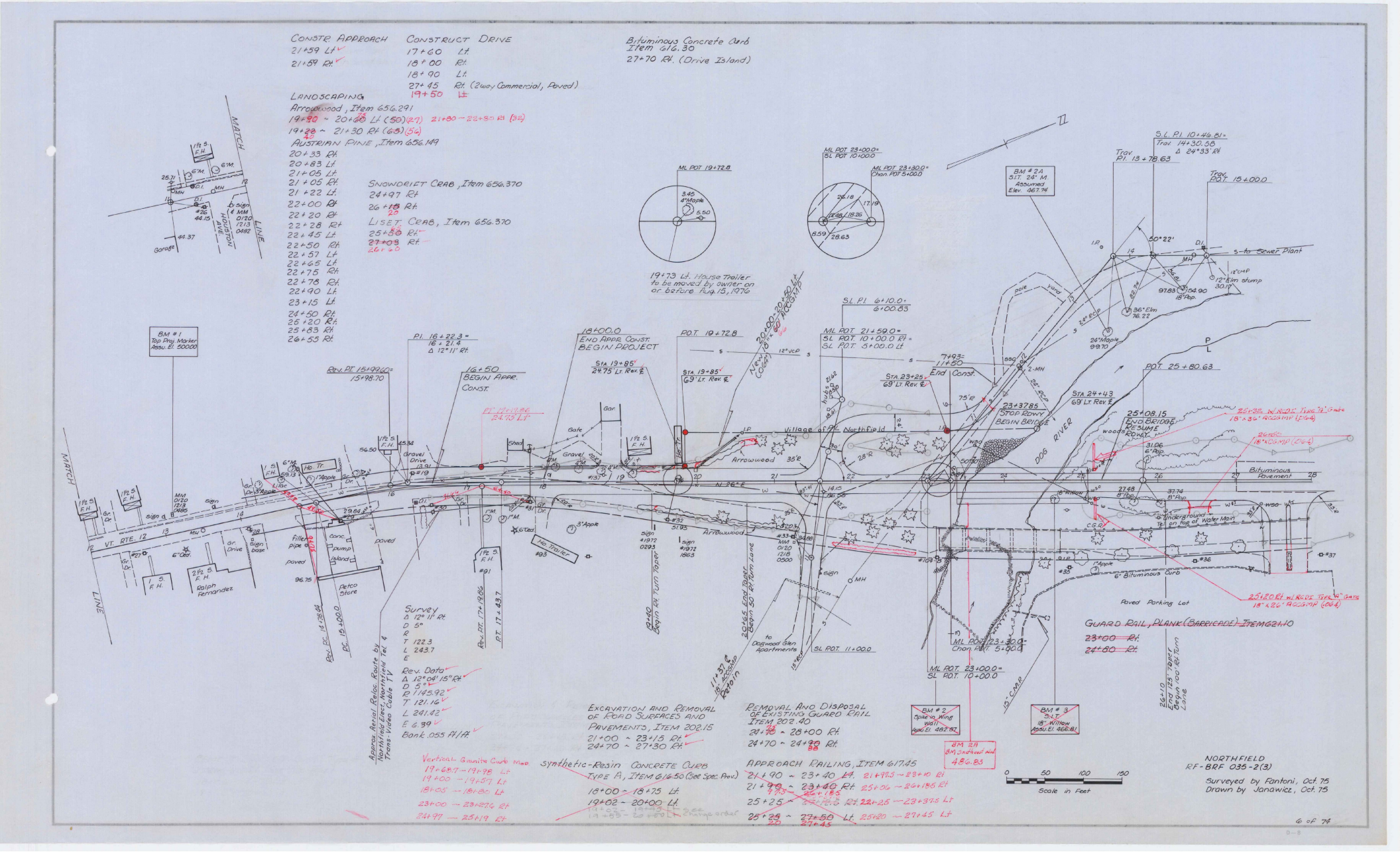
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

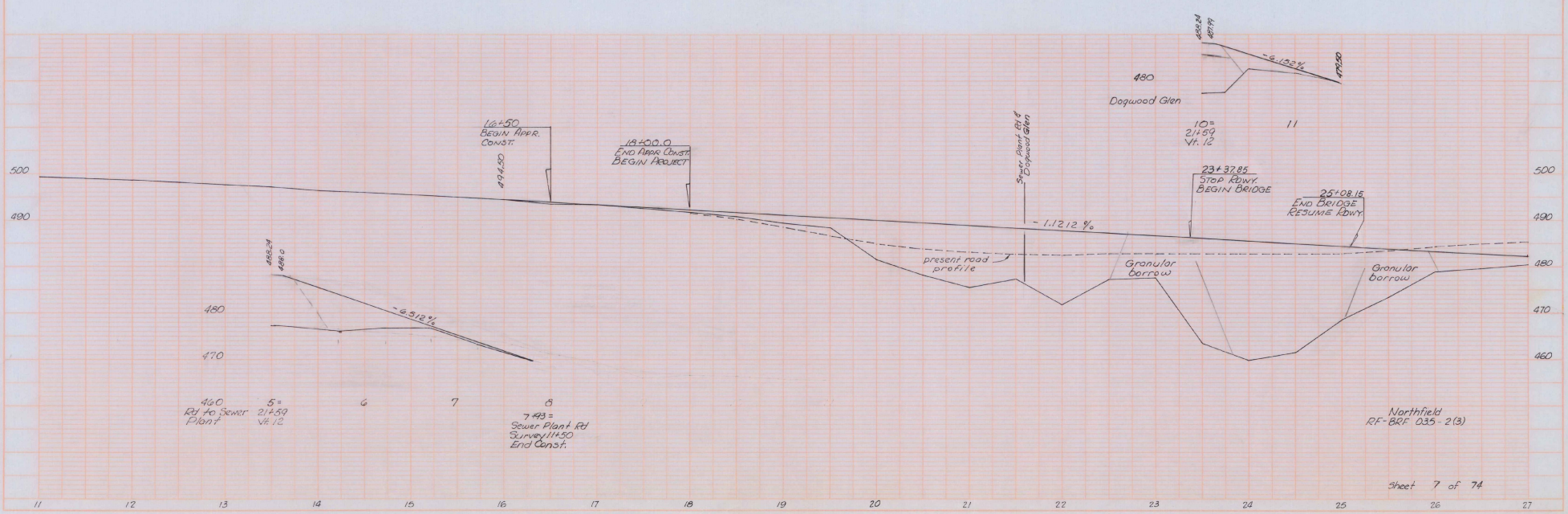
FED. ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR 1978	SHEET NO.	TOTAL SHEETS
1	VT.				

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V CURVES	CORR V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU.YDS.
		15												
		+99.9	494.50											
		16	494.50											
		+27.9	494.19											
		+28	494.19						16 + 50					
		+49.8	493.94						BEGIN APPROACH CONSTRUCTION					
		+50	493.94											
		+89.7	493.49											
		+90	493.49											
		+99.7	493.38											
		17	493.38											
		+14.7	493.21											
		+15	493.21											
		+49.5	492.82				0		0					
		+50	492.82											
		+59.5	492.71											
		+60	492.71			50.0		87		19				
		+99.5	492.26				94		20				C	715
													R	206
		18	492.26	18 + 00		50		197		37			F	1,000
				End Approach									FAC	1.25
		+49.5	491.70	Construction			119		20		0		EX F	381
		+50	491.70	Begin Project		50		177		37		19		
		+99.5	491.14				72		20		21			
		19	491.14			25		60		19		25		
		+24.5	490.86				57		20		32			
		+25	490.86			25		53		19		34		
		+49.5	490.58				57		20		42			
		+50	490.58			25		50		19		53		
		+74.5	490.30				51		20		73			
		+75	490.30			25		37		19		150		
		+99.5	490.02				28		20		250			
		20	490.02			50		54		37		719		
		+49.5	489.46				30		20		526			
		+50	489.45											
								49		37		1,185		
		+99.5	488.90				23		20		754			
		21	488.89					21		19		1,133		
		+49.5	488.34				0		0		475			
		+50	488.33											
		+50	488.23									944		
		+99.5	487.78								545			
		22	487.77									928	C	70
		+49.5	487.22								457		R	56
		+50	487.21										F	5,519
						50						767	FAC	1.25
		+99.5	486.66								371		EX F	6,787
		23	486.65			40.5					371	557		
		+49.5	486.10						23 + 37.85					
		+50	486.09						STOP ROADWAY					
									BEGIN BRIDGE					
		+99.5	485.54											
		24	485.53											
		+49.5	484.98											
		+50	484.97						25 + 08.15					
									END BRIDGE					
		+99.5	484.41						RESUME ROADWAY					
		25	484.41											
		+25	484.25			24.5					1,133	602		
		+49.5	483.85								638			
		+50	483.85											
		+745	483.57			50						809		
		+75	483.57											
		+99.5	483.29								240			
		26	483.29									358		
		+49.5	482.73				0				147			
		+50	482.73											
								35		0		228		
		+99.5	482.17				38		0		99			
		27	482.17					239		19		92		
		+49.5	481.61				220		20		0		C	3,957
		+50	481.61										R	204
		+74.5	481.33					469		37			F	2,489
		+75	481.33										FAC	1.25
													EX C	99
		+99.5	481.05				286		20		0			
		28	481.05					500		37		19		
		+49.5	480.49				254		20		20			
		+50	480.49											
								566		37		38		
		+99.5	479.93				357		20		21			
		29	479.92											
						50		656		37		62		
		+49.5	479.37				351		20		46			
		CARRIED FORWARD						2,465		167		2,408		
		COLUMN FOOTINGS						3 250		4 29		8,927		

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V CURVES	CORR V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU.YDS.
		29 + 49.5	479.37											
		+50	479.36	479.36	0									
						50		592		37		81		
		+99.5	478.81	478.84	+0.03		288		20		41			
		30	478.80	478.83	+0.03									
		+245	478.53	478.59	+0.06			426		37		94		
		+25	478.52	478.58	+0.06									
		+495	478.25	478.35	+0.10		172		20		61			
		+50	478.24	478.34	+0.10									
								238		37		264		
		+99.5	477.69	477.92	+0.23		85		20		246			
		31	477.68	477.92	+0.24			117		37		693		
		+49.5	477.13	477.55	+0.42		41		20		503			
		+50	477.12	477.54	+0.42									
								56		37		829		
		+99.5	476.57	477.22	+0.65		20		20		392		C	1,810
		32	476.56	477.21	+0.65								R	407
		+41.5	476.10	476.99	+0.89			52		37		693	F	3,648
		+42	476.09	476.98	+0.89								FAC	1.25
		+49.5	476.01	476.95	+0.94		36		20		356		EX F	2,445
		+50	476.00	476.94	+0.94									
								74		37		504		
		+99.5	476.07	476.73	+0.66		44		20		188			
		33	476.07	476.72	+0.65			100		37		299		
		+49.5	476.13	476.55	+0.42		64		20		135			
		+50	476.13	476.55	+0.42									
						50		132		37		169		
		+99.5	476.20	476.64	+0.24		79		20		48			
		34	476.20	476.64	+0.24	30		97		22		46		
		+29.5	476.24	476.39	+0.15		95		20		34			
		+30	476.24	476.39	+0.15	20		79		15		18		
		+49.5	476.27	476.38	+0.11		118		20		14			
		+50	476.27	476.37	+0.10									
						50		209		37		13		
		+99.5	476.33	476.36	+0.03		108		20		0			
		35	476.33	476.36	+0.03	50		230		37		6		
		+49.5	476.40	476.40	+0.00		140		20		6			
		+50	476.40	476.40	0									
						50		227		37		33		
		+99.5	476.47				105		20		30			
		36	476.47	36 + 00		33		112		24		78		
		+32.5	476.51	END PROJECT			78		20		97		C	719
		+33	476.51	CONSTRUCT APPROACH		17		48		13		65	R	148
		+49.5	476.53				75		20		110		F	366
		+50	476.53										FAC	1.25
						50		156		37		141	EX C	373
		+99.5	476.60				94		20		42			
		37	476.60			50	176		20		11			
		+49.5	477.20						20		11			
		+50	477.20			0.5	Butt		Butt		Butt			
									37 + 50					
									END APPROACH CONSTRUCTION					
		CARRIED FORWARD					3,121		592		4,095			
		COLUMN FOOTINGS												

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V CURVES	CORR V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.			EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
					ROAD TO SEWER PLANT									
		Vt. 12 Sta. 21 + 59 =												
		5 + 00										Butt		
		+12	488.0									0		
			485.5									340		
		+50	485.5			72								
		+84	483.3									255		
		G	482.3			50						282	C	125
		+34	480.1				0					50	F	668
		+50	479.0			50		30				46	FAC	1.25
		+84	476.8				32					0	EX F	710
		7	475.8			50		46						
		+34	473.5				18							
		+50	472.5			59		49						
		+93	469.7				27							
		8					Butt		7 + 93 =					
									SEWER PLANT ROAD					
									SURVEY 11 + 50					
									END CONSTRUCTION					


CONSTR. APPROACH
21+59 Lt
21+59 Rt.
CONSTRUCT DRIVE
17+60 Lt.
18+00 Rt.
18+90 Lt.
27+45 Rt. (2way Commercial, Paved)
19+50 Lt
Bituminous Concrete Curb
Item 616.30
27+70 Rt. (Drive Island)
LANDSCAPING
Arrowwood, Item 656.291
19+90 ~ 20+60 Lt (50)(27) 21+80 ~ 22+80 Rt (32)
19+22 ~ 21+30 Rt (63)(56)
AUSTRIAN PINE, Item 656.149
20+33 Rt.
20+83 Lt.
21+05 Lt.
21+05 Rt.
21+22 Lt.
22+00 Rt
22+20 Rt
22+28 Rt
22+45 Lt
22+50 Rt.
22+57 Lt
22+65 Lt.
22+75 Rt.
22+78 Rt.
22+90 Lt.
23+15 Lt.
24+50 Rt.
25+20 Rt.
25+83 Rt.
26+55 Rt.
SNOWDRIFT CRAB, Item 656.370
24+97 Rt
26+18 Rt.
LISET CRAB, Item 656.370
25+50 Rt.
27+09 Rt.
26+60
19+73 Lt. House Trailer to be moved by owner on or before Aug. 15, 1976
MATCH LINE
HOUSTON AVE.
Garage
BM #1 Top Proj. Marker Assu. El. 500.00
Rev. PT 15+99.60 = 15+98.70
P.I. 16+22.3 = 16+21.4 Δ 12°11' Rt.
16+50 BEGIN APPR. CONST.
PT 17+19.86 24.75' Lt
18+00.0 END APPR. CONST. BEGIN PROJECT
STA. 19+85 24.75' Lt. Rev. ℄
P.O.T. 19+72.8
STA. 19+85 69' Lt. Rev. ℄
20+00 ~ 20+50 Lt. New 18" x 60' ACCGMP (064)
ML POT 19+72.8
ML POT 23+00.0 = SL POT 10+00.0
ML POT 23+30.0 = Chan. POT 5+00.0
S.L. P.I. 6+10.0 = 6+00.83
ML POT 21+59.0 = SL POT 10+00.0 Rt = SL POT 5+00.0 Lt
7+93 = 11+50 End Const.
STA. 23+25 69' Lt. Rev. ℄
23+37.85 STOP RDWY BEGIN BRIDGE
STA. 24+43 69' Lt. Rev. ℄
P.O.T. 25+80.63
25+08.15 END BRIDGE RESUME RDWY.
BM #2A S.I.T. 24" M. Assumed Elev. 467.74
S.L. P.I. 10+46.81 = Trav. 14+30.58 Δ 24°33' Rt
Trav. P.I. 13+78.63
Trav. P.O.T. 15+00.0
S to Sewer Plant
12" Elm stump
36" Elm 76.22
24" Maple 99.70
DOG RIVER
Village of Northfield
Arrowwood
Bituminous Pavement
Underground Tel. on top of Water Main
6" Bituminous Curb
Paved Parking Lot
25+32 w/ RCDI Type "A" Gate 18" x 36' ACCGMP (064)
26+60 18" x CGMP (064)
25+20 Rt w/ RCDI Type "A" Gate 18" x 26' ACCGMP (064)
VT. RTE. 12
Ralph Fernandez
Petco Store
Ho. Trailer
Rev. PC 14+78.44
PC 15+00.0
Rev. PT 17+19.86
PT 17+43.7
19+40 Begin Rt. Turn Taper
20+65 End Taper Begin 50' Rt. Turn Lane
11+37 ℄ 18" ACCGMP Retain
to Dogwood Glen Apartments
SL POT 11+00.0
ML POT 23+30.0 = Chan. POT 5+00.0
ML POT 23+00.0 = SL POT 10+00.0
BM #2 Spike in Wing Wall Assu. El. 482.87
BM #3 S.I.T. 18" Willow Assu. El. 466.81
BM 2A BM Southeast Wall 486.83
15" CMP
26+10 End 125' Taper Begin 100' Rt. Turn Lane
GUARD RAIL, PLANK (BARRICADE) ITEM 621.10
23+00 Rt.
24+80 Rt.
Approx. Aerial Reloc. Route by Northfield Elect., Northfield Tel. & Trans. Video Cable TV
Survey
Δ 12°11' Rt.
D 5°
R
T 122.3
L 243.7
E
Rev. Data
Δ 12°04'15" Rt.
D 5°
R 1145.92
T 121.16
L 241.42
E 6.39
Bank .055 ft/ft.
Vertical Granite Curb Map
19+68.7 ~ 19+98 Lt
19+00 ~ 19+57 Lt
18+05 ~ 18+80 Lt
23+00 ~ 23+27.6 Rt
24+97 ~ 25+19 Rt
EXCAVATION AND REMOVAL OF ROAD SURFACES AND PAVEMENTS, ITEM 202.15
21+00 ~ 23+15 Rt.
24+70 ~ 27+30 Rt.
synthetic-Resin CONCRETE CURB TYPE A, ITEM 616.50 (See Spec. Prov.)
18+00 ~ 18+75 Lt.
19+02 ~ 20+00 Lt.
19+02 ~ 19+95 Lt. See change order
19+55 ~ 20+50 Lt.
REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL ITEM 202.40
24+70 ~ 28+00 Rt.
24+70 ~ 24+90 Rt.
APPROACH RAILING, ITEM 617.45
21+90 ~ 23+40 Lt. 21+97.5 ~ 23+10 Rt
21+90 ~ 23+40 Rt. 25+06 ~ 26+185 Rt
25+25 ~ 27+12.5 Rt. 22+25 ~ 23+37.5 Lt
25+25 ~ 27+50 Lt. 25+20 ~ 27+45 Lt
0 50 100 150
Scale in Feet
NORTHFIELD
RF-BRF 035-2(3)
Surveyed by Fantoni, Oct. 75
Drawn by Janawicz, Oct. 75
6 of 74



Fantoni Stangrani/Lanowicz 10-75 11-75
PROFILE
PLAN
500
490
480
470
460
16+50
BEGIN APPR. CONST.
494.50
18+00.0
END APPR CONST.
BEGIN PROJECT
Sewer Plant Rd & Dogwood Glen
-1.1212 %
present road profile
Granular borrow
23+37.85
STOP RDWY.
BEGIN BRIDGE
25+08.15
END BRIDGE
RESUME RDWY.
Granular borrow
488.24
487.99
-6.132%
479.50
480
Dogwood Glen
10=
21+59
Vt. 12
11
488.24
488.0
-6.512%
480
470
460
Rd to Sewer Plant
5=
21+59
Vt. 12
6
7
8
7+93=
Sewer Plant Rd
Survey 11+50
End Const.
Northfield
RF-BRF 035-2(3)
Sheet 7 of 74
11
12
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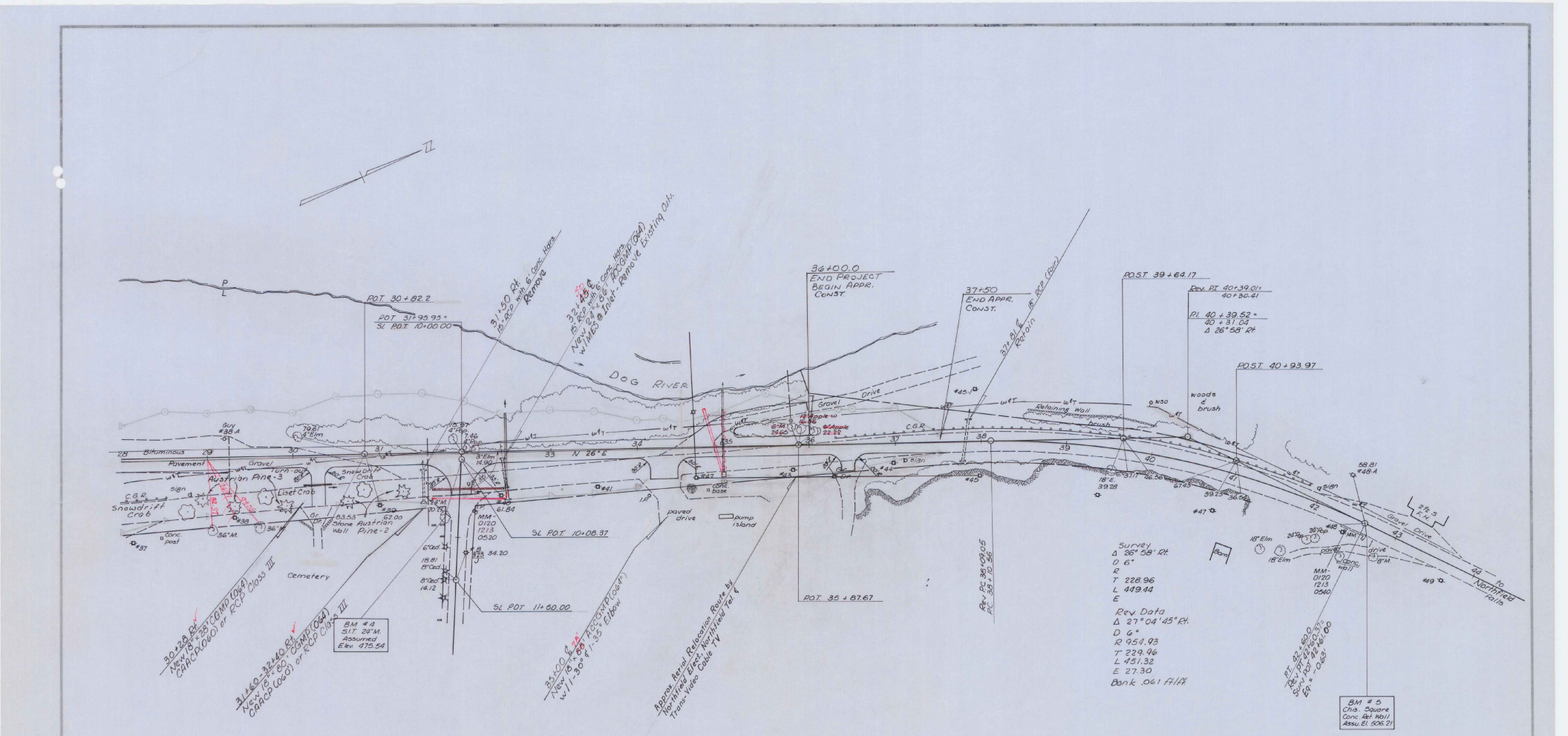


LANDSCAPING

AUSTRIAN PINE, Item 656.149
28+93 Rt.
29+30 Rt.
29+91 Rt.
30+63 Rt.
31+25 Rt.

SNOWDRIFT CRAB, Item 656.370
28+75 Rt. and 30+81 Rt. ✓

LISET CRAB, Item 656.370
29+65 Rt. ✓

REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL, ITEM 202.40

28+00 - ~~28+52~~ 28+85 Rt.
36+~~30~~ 27 - ~~37+50~~ 39+00 Lt.

GUARD RAIL, THREE CABLE WITH LT. STEEL POSTS, ITEM 621.21

31+~~45~~ 42 - ~~35+93~~ 34+81 → 33+00 Lt. (Drive)
35+20 - ~~37+60~~ Lt.

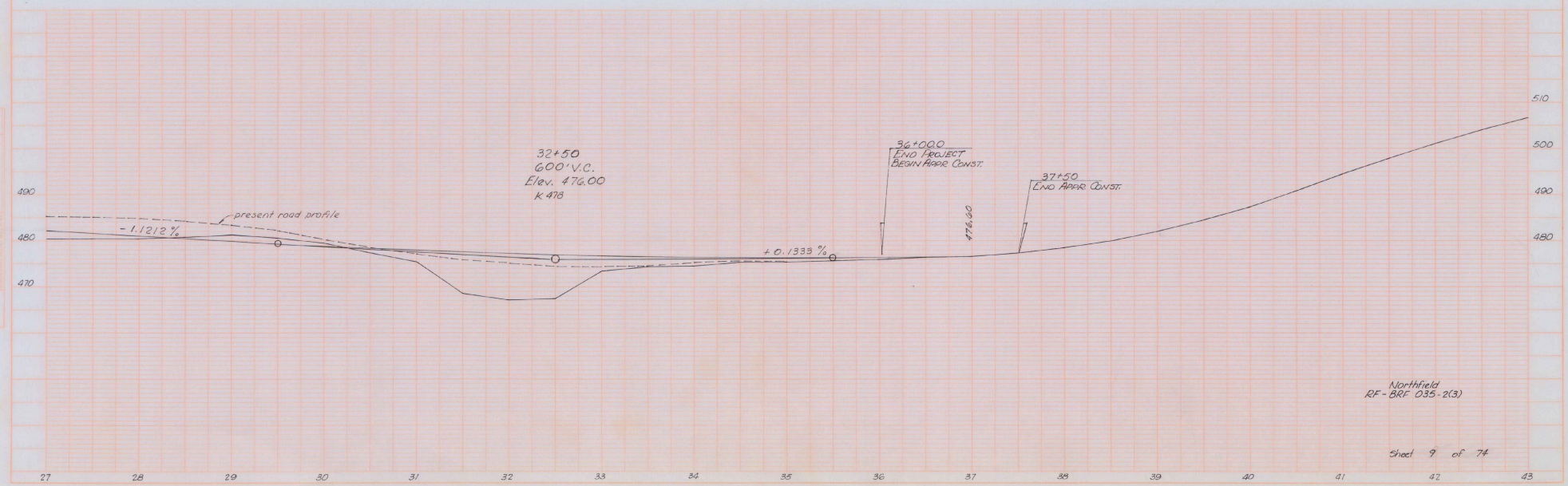
CONSTRUCT APPROACH ✓
32+00 Rt. (Town Rd #16)

CONSTRUCT DRIVE
34+30 Rt. (Commercial, Paved)
34+90 Lt.
36+45 Rt. ✓
30+28 Rt.

0 50 100 150
Scale in Feet

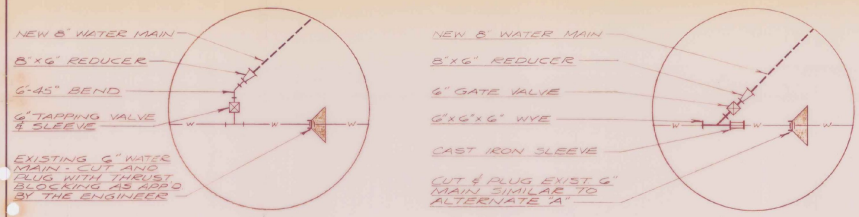
NORTHFIELD
RF-BRF 035-2(3)

Surveyed by Fantani, Oct. 75
Drawn by Janawicz, Oct. 75



Northfield
RF-BRF 035-2(3)

Sheet 9 of 74



ALTERNATE "A" ALTERNATE "B"

WATER MAIN CONNECTION DETAILS

NO SCALE

NOTE: WATER MAIN CONNECTION DETAILS FOR STATION 0+00 ARE SHOWN - DETAILS FOR CONNECTION AT STATION 15+75 TO BE OPPOSITE HAND.

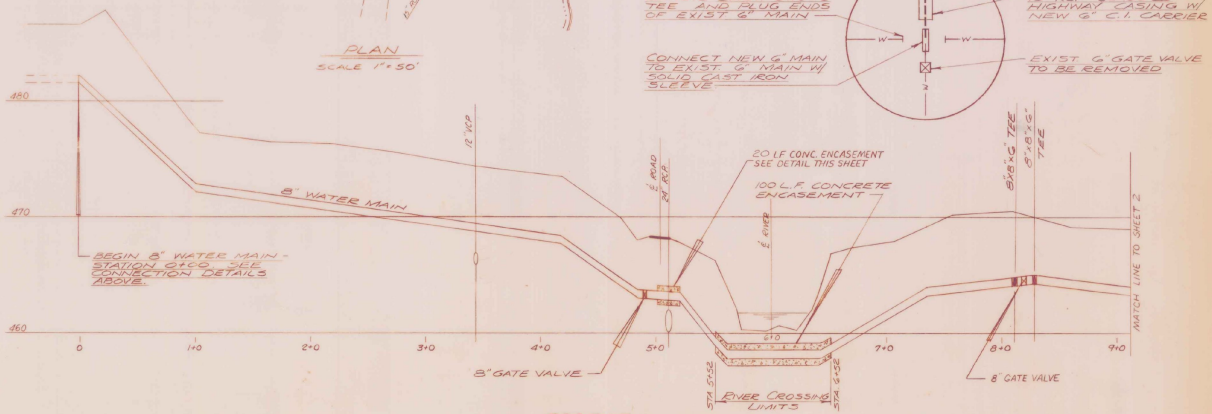
GENERAL NOTES △

1. THRUST RESTRAINTS SHALL CONSIST OF CONCRETE BACKING AND "TIE RODS W/ CLAMPS AS MFG. BY "STAR SUPPLY CORP." AND SUPPLIED BY "PUBLIC WORKS SUPPLY COMPANY, INC.".
2. CONTRACTOR'S SCHEDULE OF CONNECTIONS TO EXIST. WATER MAINS SHALL BE APPROVED BY THE SUPERINTENDENT OF THE VILLAGE OF NORTHFIELD WATER DEPARTMENT
3. ALL ELEVATIONS BASED ON AN ASSUMED DATUM OF 466.81 FEET - STATE HIGHWAY DEPARTMENT BENCH MARK #BM3. SEE PLAN ABOVE FOR LOCATION.
4. HAND PROBE INFORMATION INDICATED BELOW IS FOR INFORMATION ONLY AND NOT GUARANTEED. CONTRACTOR TO SATISFY HIMSELF AS TO SUB-SURFACE CONDITIONS.
5. HYDRANT INDICATED IN PLAN ABOVE TO BE "EDDY" COMPRESSION-TYPE WITH BREAK FLANGE CONSTRUCTION, 5¼" VALVE, 2-2½" NOZZLES AND ONE 4½" PUMPER NOZZLE.
6. ALL WATER MAIN SHALL BE DUCTILE IRON CLASS II, RATED @ 350 psi.

HAND PROBE SCHEDULE

PROBE #	DEPTH	COMMENTS	PROBE #	DEPTH	COMMENTS
HP1	4.5'	CNPF *- MEDIUM COMPACTED MAT'L.	HP8	8.0'	NLTD - 0'-6' EXTR. SOFT MATERIAL
HP2	5.5'	CNPF - MEDIUM COMPACTED MAT'L.	HP9	5.0'	CNPF - PROBABLE LEDGE
HP3	8.0'	NLTD** MEDIUM COMPACTED MAT'L.	HP10	8.0'	NLTD - 0-6' EXTR. SOFT MATERIAL
HP4	8.0'	NLTD - 6' TO 8 EXTR. SOFT MATERIAL	HP11	4.5'	CNPF - PROBABLE LEDGE
HP5	8.0'	NLTD - MEDIUM COMPACTED MAT'L.	HP12	4.6'	CNPF - PROBABLE LEDGE
HP6	8.0'	NLTD - 0'-6' EXTR. SOFT MATERIAL	HP13	7.0'	NLTD - HEAVILY COMPACTED MAT'L
HP7	8.0'	NLTD - 0-8' EXTR. SOFT MATERIAL	HP14	5.0'	CNPF - MEDIUM COMPACTED MAT'L.

* COULD NOT PENETRATE FARTHER ** NO LEDGE TO DEPTH.



NO.	DATE	REVISIONS	BY	CK'D
△	6/8/76	REVISED GENERAL NOTES	JWP	TLF

STATE OF VERMONT — WILLIAM R. BAUMANN — No. 2087 — REGISTERED PROFESSIONAL ENGINEER

D&K

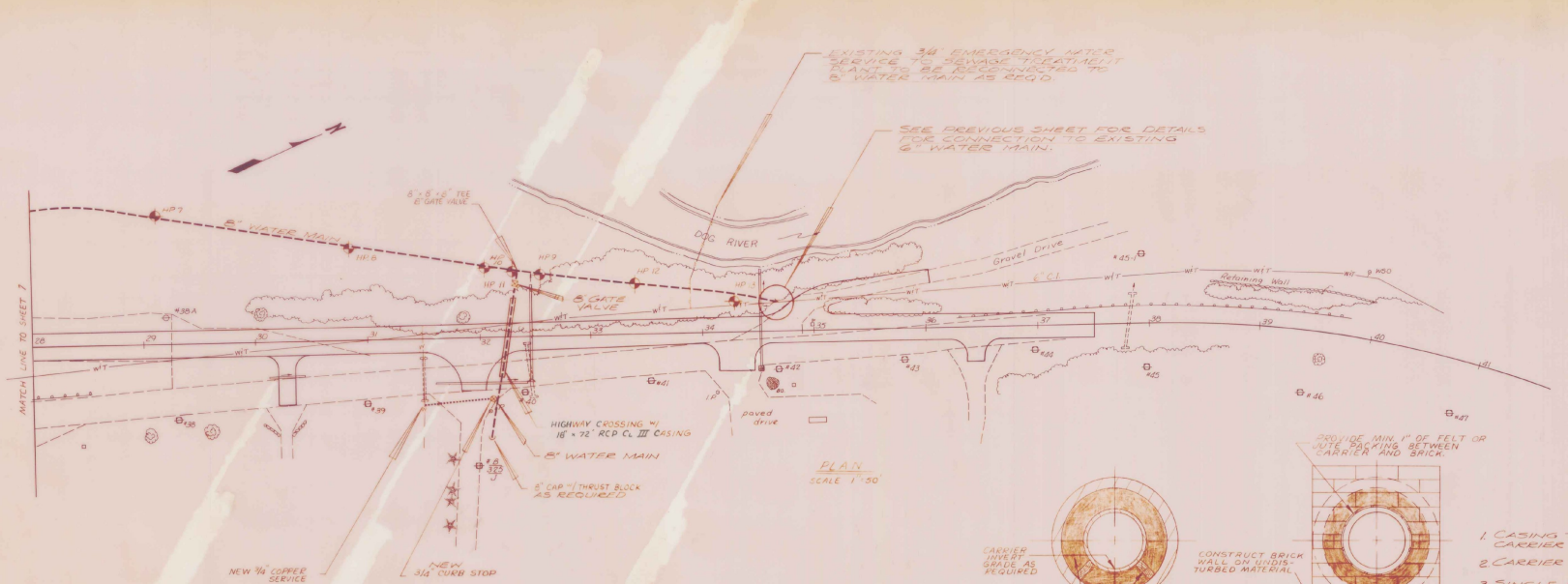
DUBOIS & KING, INC.
ENGINEERING AND ENVIRONMENTAL SERVICES
RANDOLPH, VERMONT

VILLAGE OF NORTHFIELD, VERMONT
WATER LINE RELOCATION

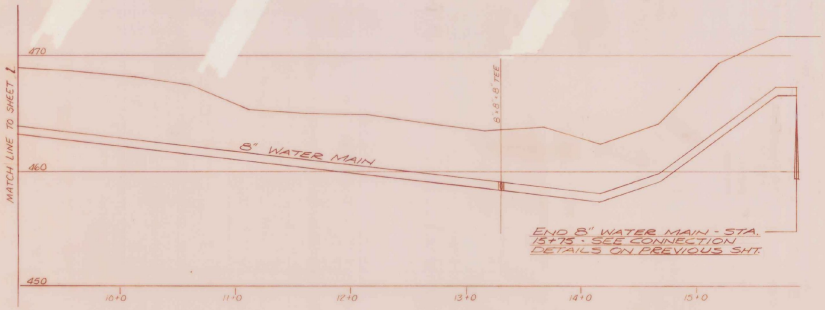
PLAN, PROFILE, & MISC. DETAILS

DRAWN BY	GAS / JWP
DATE	JUNE 76
CHECKED BY	TLF
PROJ. NO.	61260
PROJ. ENG.	LP
DRAW. NO.	3000

SHEET 10 OF 74

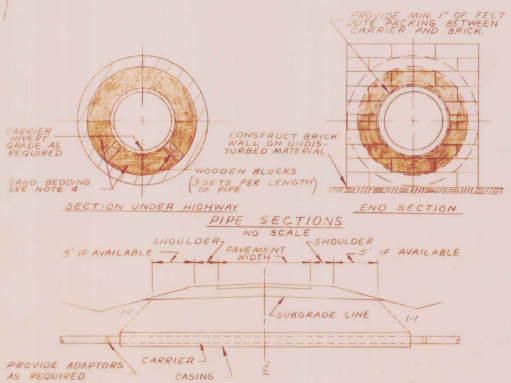


PLAN
SCALE 1" = 50'



END 8" WATER MAIN - STA. 15+75 - SEE CONNECTION DETAILS ON PREVIOUS SHT.

PROFILE
SCALE: HORZ. 1"=50'
VERT. 1"=5'



HIGHWAY CROSSING
TYPICAL SECTION
NO SCALE

NOTES

1. CASING TO BE INSTALLED AT SLOPE OF CARRIER PIPE.
2. CARRIER PIPE TO BE CENTERED IN CASING
3. SINGLE COURSE OF BRICK TO BE USED IN CONSTRUCTION OF EACH WALL. WALL TO BE TIGHT AGAINST CASING TO PREVENT LOSS OF SAND OR INFILTRATION OF OUTSIDE MATERIAL.
4. SAND OR "GRITS" (WITHOUT FINES) SHALL BE HYDRAULICALLY PLACED OR AIR-BLOWN INTO PLACE. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT CARRIER PIPE FROM FLOATING.

LOCATION (HIGHWAY STA.)	CARRIER	CASING			
		MAT'L	METHOD OF INSTAL	LENGTH	APPROX DEPTH
27+35±	6' SUPER BELL-TITE	15" RCP Cl. III	OPEN TRENCH	52'	7'±
32+25±	8' SUPER BELL-TITE	18" RCP Cl. III	"	72'	7'±

NOTE: ELEVATIONS BASED ON ASSUMED DATUM OF 466.81 FT. - STATE HIGHWAY DEPT. BENCH MARK BM#5. SEE SHEET 1 OF 3 FOR LOCATION.

NO.	DATE	REVISIONS	BY	CK'D

STATE OF VERMONT — WILLIAM R. SAUNDERS — No. 2887 — REGISTERED PROFESSIONAL ENGINEER

D&K

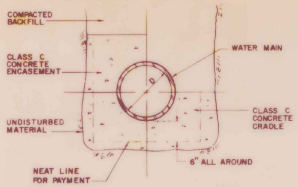
DUBOIS & KING, INC.
ENGINEERING AND ENVIRONMENTAL SERVICES
RANDOLPH, VERMONT

VILLAGE OF NORTHFIELD, VERMONT
WATER LINE RELOCATION

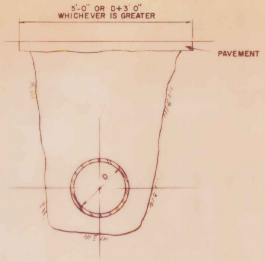
PLAN, PROFILE, & MISC. DETAILS

DRAWN BY	GAS
DATE	JUNE 76
CHECKED BY	TLF
PROJ. NO.	61280
PROJ. ENG.	LP
DRAW. NO.	3001
SHEET 11	OF 74

NOTE: CONCRETE ENCASEMENT AND CONCRETE CRADLE SHALL EXTEND TO LIMITS OF EXCAVATION.



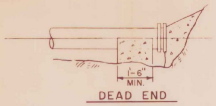
CONCRETE ENCASEMENT & CRADLE



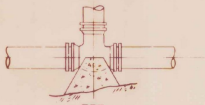
PAVEMENT REPLACEMENT LIMITS

NOTES

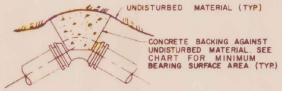
1. FIGURES BASED ON 300 P.S.I.
2. FOR PIPE SIZES NOT LISTED USE NEXT LARGER PIPE SIZE.
3. WHEN MORE THAN ONE SOIL TYPE IS ENCOUNTERED, THE ONE WITH LEAST BEARING CAPACITY SHALL BE USED.
4. RETAINING RODS OR RESTRAINED JOINT PIPE AS APPROVED BY THE ENGINEER SHALL BE USED IN PLACE OF THRUST BLOCKS WHEN MUCK IS ENCOUNTERED.



DEAD END



TEE

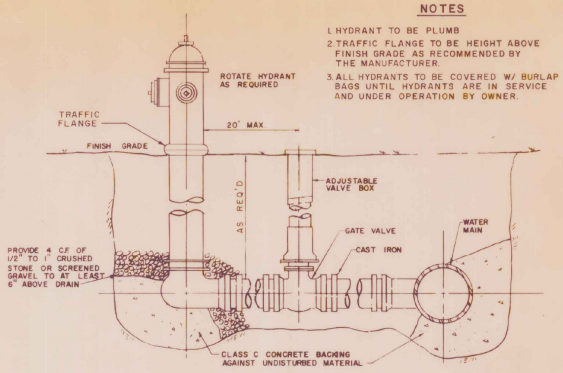


BEND

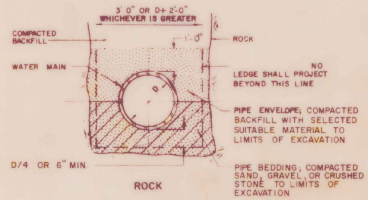
TYPICAL CONCRETE BACKING

NOTES

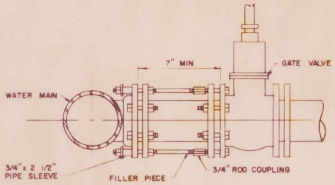
1. HYDRANT TO BE PLUMB
2. TRAFFIC FLANGE TO BE HEIGHT ABOVE FINISH GRADE AS RECOMMENDED BY THE MANUFACTURER.
3. ALL HYDRANTS TO BE COVERED W/ BURLAP BAGS UNTIL HYDRANTS ARE IN SERVICE AND UNDER OPERATION BY OWNER.



TYPICAL HYDRANT AND VALVE DETAIL △



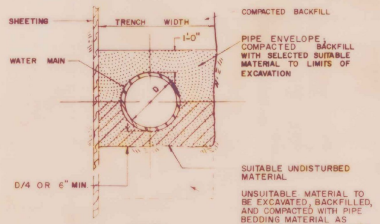
ROCK



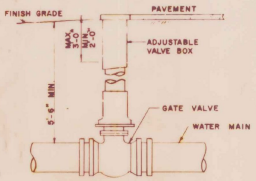
TIE ROD DETAIL

AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET

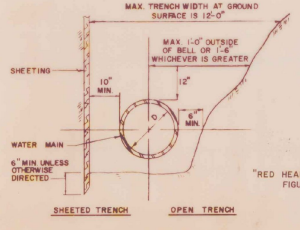
PIPE SIZE (IN)	SOFT WET CLAY SAND OR SILT	DRY SAND	COMPACT COARSE SAND OR GRAVEL HARDPAN
	DEAD END OR TEE		
8 OR LESS	9	5	2
10	14	7	5
12	21	11	7
16	36	18	12
20	55	28	18
24	78	39	26
	1/4 BEND		
8 OR LESS	14	7	5
10	21	11	7
12	29	15	10
16	50	25	17
20	78	39	26
24	111	56	37
	1/8 BEND		
8 OR LESS	8	4	3
10	11	6	4
12	16	8	5
16	27	14	9
20	42	21	14
24	60	30	20
	1/16 BEND		
8 OR LESS	4	2	2
10	6	3	2
12	8	4	3
16	14	7	5
20	21	11	7
24	30	15	10



EARTH



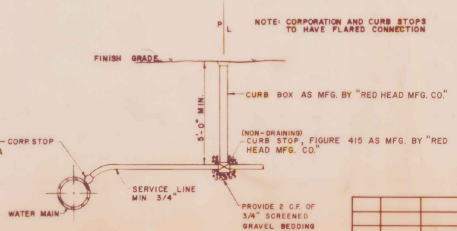
△ GATE VALVE DETAIL



TRENCH WIDTH LIMITS

TYPICAL TRENCH SECTIONS

NOTE: MINIMUM DEPTH OF COVER ABOVE PIPE BARREL TO BE 5'-6"



△ TYPICAL SERVICE CONNECTION DETAIL

NO.	DATE	REVISIONS	BY	CK'D
1	6/16/76	REVISED SERVICE CONN. AND GATE VALVE DETAILS	JWP	TLF

STATE OF VERMONT — WILLIAM A. BAUMANN — No. 2887 — PROFESSIONAL ENGINEER

D&K

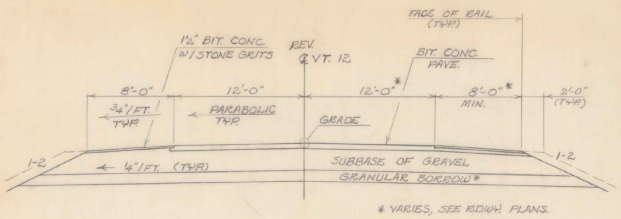
DUBOIS & KING, INC.
ENGINEERING AND ENVIRONMENTAL SERVICES
RANDOLPH, VERMONT

VILLAGE OF NORTHFIELD, VERMONT
WATER LINE RELOCATION

MISCELLANEOUS DETAILS

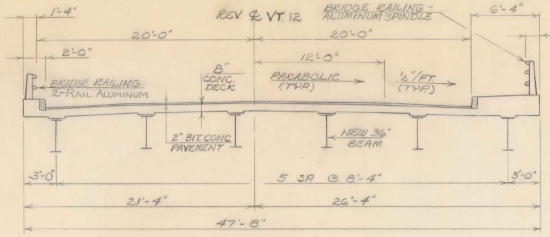
DRAWN BY JWP	DATE JUNE 76
CHECKED BY TLF	PROJ. NO. 61280
PROJ. ENG. LP	DRAW. NO. 3002

SHEET 12 OF 74



NEW HIGHWAY SECTION — BRIDGE APPROACHES

SCALE: 3/16" = 1'-0"



BRIDGE TYPICAL SECTION

SCALE: 3/16" = 1'-0"

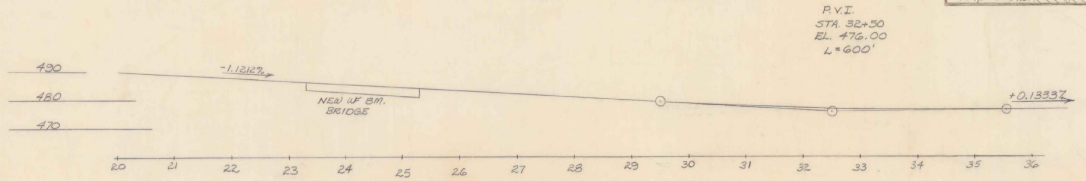
LOAD RATING				
STRESS LEVELS	TRUCK			
	H	HS	3S2	6AXLE
INVENTORY .55 Yp=27 KSI		46 T.		
POSTED .67 Yp=33.5 KSI	54 T.		76 T.	
OPERATING .75 Yp=37.5 KSI			89 T	104 T.

EXISTING STRUCTURE

1. RATED LOADING OF EXISTING STRUCTURE
2. TYPE OF EXISTING STRUCTURE 5 SPAN "T" BEAM
3. UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE 457.0 SPAN(S) OF EXISTING STRUCTURE 29.6,29.8,28.9,29.5,29.9
4. WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE? REMOVAL EST. COST OF REMOVAL $25,000
5. SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE? YES
6. ORDINARY HIGH WATER SURFACE ELEVATION AT EXISTING STRUCTURE 463.6 ± WATERWAY TO ORDINARY H.W. 330 S.F.
7. FLOOD OF RECORD WATER SURFACE ELEVATION AT EXISTING STRUCTURE 473 ± YEAR 1973 EST. DISCHARGE 9600
8. SPAN OF EXISTING STRUCTURE UPSTREAM 111' WATERWAY AREA (FULL OPENING) 1200 S.F.
   SPAN OF EXISTING STRUCTURE DOWNSTREAM 55.5' WATERWAY AREA (FULL OPENING) 640 S.F.
9. TYPE OF FOUNDATION UNDER EXISTING SUBSTRUCTURE PIERS ON LEDGE, ABUTMENT FOUNDATION UNKNOWN
10. DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE? YES RELIEF ELEVATION 474.5
11. ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF N.A.

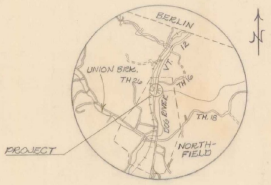
NEW STRUCTURE

1. RECOMMENDED TYPE OF STRUCTURE CONTINUOUS 2 SPAN WF BEAM BRIDGE
2. RECOMMENDED OVERALL STRUCTURE LENGTH 170.3'
   CLEAR SPAN LENGTH(S) NORMAL TO STREAM 70.0' EACH
   SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 84.0' EACH
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM? YES NO X
4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NO IS ORDINARY RISE RAPID? NO
5. NATURE OF NATURAL STREAMBED: GRAVEL W/SOME BOULDERS, LEDGE UPSTREAM
6. EST. SCOUR DEPTH 6-10 FT. COMMENT ON: DRIFT SLIGHT ICE SLIGHT
7. DRAINAGE AREA IN ACRES 40,128 CHARACTER OF TERRAIN HILLY TO MOUNTAINOUS
8. VELOCITY OF STREAM AT DESIGN STAGE 8 F.P.S. DESIGN DISCHARGE Q 50 = 9200 C.F.S.
9. IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? YES AREA FULL OPENING 2300 S.F.
10. ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE 463.6'
11. DESIGN HIGH WATER ELEVATION AT NEW STRUCTURE 471.4' (SOURCE OF INFORMATION) COMPUTED
12. VERTICAL CLEARANCE ABOVE DESIGN STAGE 4.6'
13. CHECK DISCHARGE = 9200 C.F.S. CHECK DISCHARGE WATER SURFACE ELEV. 472.0
14. ALLOWABLE WATER SURFACE ELEVATION 472 ± LIMITED BY DOGWOOD GLEN APARTMENTS
15. IS DESIGN STAGE AFFECTED BY DOWNSTREAM CONDITIONS? NO IF YES - DESCRIBE
16. ARE SIDEWALKS REQUIRED? YES IF SO ON WHAT SIDE? RT CLEAR WIDTH 5'-0"
17. TRAFFIC TO BE MAINTAINED UNDER ITEM NO. ONE OR TWO WAYS ESTIMATED COST
18. PROVISIONS TO BE MADE FOR PUBLIC UTILITIES NO
19. ESTIMATED ALLOWABLE LOAD FOR SPREAD FOOTINGS N.A. DESIGN MAX. FOOTING PRESSURE N.A.
20. PILING DESIGN LOAD 116 ᵏ ESTIMATED LENGTH TYPE HP 12 x 53
21. DESIGN SPECIFICATIONS:
    DESIGN LOAD: A.A.S.H.T.O HS20-44
    ALLOWABLE STRESSES
    STRUCTURAL STEEL: TENSION 27 K.S.I. COMPRESSION 27 K.S.I.
    REINFORCING STEEL: TENSION 24 K.S.I. COMPRESSION
    CONCRETE: f'c = 3500 P.S.I. f'c = 1400 P.S.I.



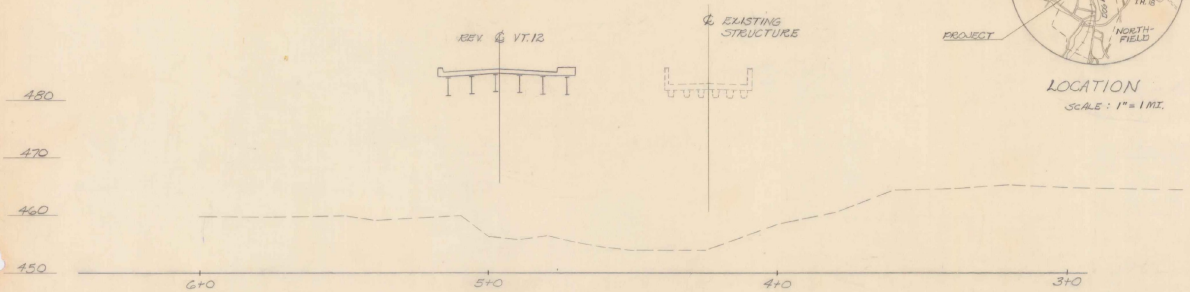
PROFILE ℄ REV. ℄ VT. 12

SCALE: VERT.: 1"=20'
HORIZ.: 1"=100'



LOCATION

SCALE: 1" = 1 MI.

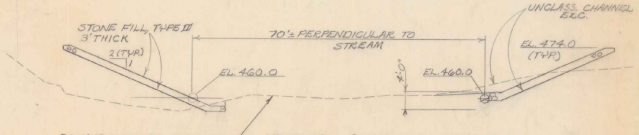


PROFILE EXISTING CHANNEL LOW POINTS

SCALE: VERT. 1"=10'
HORIZ. 1"=20'

ADDITIONAL DESIGN CONSIDERATIONS

LIST OF SHEETS		STANDARD SHEETS	
BR 100	PRELIMINARY INFORMATION		
101	QUANTITY SHEET	SCB-D1-75	APR. 26, 1976 (R)
102	PLAN & ELEVATION		
103	BORING LOG	SCB-D4-76 DET Ⓐ&Ⓑ	JAN 8, 1976
104	TYPICAL SECTION	SCB-D6-73 DET Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	DEC 29, 1975 (R)
105	FRAMING PLAN & CAMBER DIAGRAM	SCB-D7-71 DET Ⓓ	JAN 22, 1973 (R)
106	BEARING & SPLICE DETAILS	SCB-D8-71 DET Ⓑ	SEPT 27, 1972 (R)
107	ABUTMENT #1	SCB-D9-71 DET Ⓐ&Ⓑ	JAN 27, 1975 (R)
108	ABUTMENT #2	SB-R1-71 SHT 1 OF 2	DEC 29, 1975 (R)
109	PIER	SB-R1-71 SHT 2 OF 2	DEC. 19, 1975 (R)
110	APPROACH SLABS & MISC. DETAILS		
111	REINFORCING STEEL		
BR 112-115	CHANNEL X-SECTIONS		



DO NOT DISTURB EXISTING STREAMBED BETWEEN LIMITS OF CHANNEL OR STRUCTURE EXCAVATION

TYPICAL CHANNEL SECTION

N.T.S.

RECOMMENDED FOR APPROVAL: W. M. Smith, BRIDGE ENGINEER, 1-14-76
RECOMMENDED FOR APPROVAL: R O Munn, ASSISTANT CHIEF ENGINEER, 1-19-76
APPROVED BY: E. H. Stickney, CHIEF ENGINEER, 1-19-76

REVISIONS		
NO.	DESCRIPTION	BY & DATE

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORTHFIELD	Bridge No. 61
HIGHWAY NO. VT. 12	Log Sta. 266+70
	Surv. Sta. 24+03

VT. 12 OVER DOG RIVER

PRELIMINARY INFORMATION

Designed by W. TRIPP	Drawn by J. WEAVER
Checked by R. HOSKING date 1/76	Bridge Design Supervisor W. TRIPP date 5/76
PROJECT NORTHFIELD	PROJECT NO. RF-BRF-035-2(3)
Bridge Sheet No. BR 100	Sheet 13 of 74

EARTHWORK

V.C.	% GRD	CHANNEL STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	203.27 AREA	203.27 CU. YDS.	203.32 AREA	203.32 CU. YDS.	204.25 AREA	204.25 CU. YDS.	613.10 AREA	613.10 CU. YDS.	613.12 AREA	613.12 CU. YDS.
							ABUTMENT #1							
		9+38			0		0						0	
		+50			28	6	152	34					200	49
		+60			90	13	123	51					176	70
		+70			28	13	292	77			14		161	62
		+80			30	11	320	113			13	5	152	58
		+90			25	10	370	128			13	5	155	57
		5+00			20	8	318	127			13	5	139	54
		+10			25	8	220	100			13	5	128	49
		+18				11		64			13	4		48
		+20			37		127						130	
		+30			0	7	70	36					50	33
		+90					0	13					0	9
			ROUNDING			87		743				29		189
			TOTAL			1 88		0 743				1 25		6 490
							ABUTMENT #2							
		4+38			0		0						0	
		+50			128	28	43	10					109	24
		+60			160	53	98	26					135	45
		+70			170	61	81	33			7		130	49
		+80			75	45	82	30			8	3	118	46
		+90			90	31	74	29			8	3	115	43
		5+00			110	37	81	29			8	3	112	42
		+10			82	36	70	28			8	3		42
		+18				33		20			8	2		45
		+20			95		40						125	
		+30			101	36	9	9					125	46
		+90			87	35	0	2					96	41
		+50			0	16							0	17
						411		216				14		490
			ROUNDING			4		1				1		0
			TOTAL			415		217				15		440
							PIER							
		9+62			62								78	
		+68				18			48	4				23
		+70			62	22			48	19			78	27
		+80			59	24			55	20			69	26
		+90			71	28			55	22			71	26
		5+00			81	32			69	24			72	28
		+10			90	33			68	24			80	31
		+20			88	16			60				88	16
		+25			88	174				113			88	177
			ROUNDING			3				7				3
			TOTAL			177				120				180

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

	NO.	ITEM	UNIT	QUANTITY BREAKDOWN: Superstructure	Abutment No1	Abutment No2	Pier	Roadway	Approach Slabs			TOTAL	FINAL
	202.25	Removal Of STRUCTURE	Ea.	1								1	1
	203.27	Unclassified Channel Excavation	C.Y.		88	415	177					680	1140
*	203.32	Granular Borrow	C.Y.		743	217						960 *	
	204.25	Structure Excavation	C.Y.				120					120	107
	204.30	GRANULAR BACKFILL FOR STR. (EST.)	C.Y.		25	25						50	0
*	404.65	Emulsified Asphalt	CWT.	3								3 *	
*	406.25	Bituminous Concrete Pavement	Ton	83								83 *	
	501.20	Concrete, Class A	C.Y.	281								281	279.04
	501.25	Concrete, Class B	C.Y.		65	65	223		82			435	430.24
	504.10	Furnishing Equipment for Driving Piling	L.S.		Req'd	Req'd	Req'd					1	1
	505.15	Steel Piling (HP 12 x 53)	L.F.		340	680	1080					2100	1643.3
	506.90	Structural Steel (Rolled Beam)	Lb.	227,578			463					228,040	224,969
	507.15	Reinforcing Steel	Lb.	69,515	9060	9060	23,760		9,250			110,695	110,638
	508.15	Shear Connectors (2256 ea. 7/8 x 7 WELDED STUDS)	L.S.	1								1	1.03
	514.10	Water Repellent	Gal.	29	4	4	21					58	55
	519.20	Sheet Membrane Waterproofing	S.Y.	730								730	744
	613.10	Stone Fill, Type I	C.Y.		25	15						40	31
	613.12	Stone Fill, Type III	C.Y.		490	440	180					1110	1110
	614.10	Joint Sealer, Hot Poured	Gal.	5								5	5
	614.25	Joint Sealer, Polyurethane	Gal.	1								1	1
*	616.50	SYNTHETIC RESIN CONCRETE CURB	L.F.					87				87 *	
	616.51	SYNTHETIC RESIN CONCRETE BRIDGE CURB	L.F.	341	8	9						358	0
	617.15	Bridge Railing - 2 Rail Aluminum	L.F.	194								194	194
	619.25	Bridge Railing - Aluminum Spindle	L.F.	195								195	195
*	618.13	Bituminous Concrete Sidewalk	Ton					4				4 *	
		* DENOTES QUANTITY TO BE INCLUDED IN ROADWAY ESTIMATE	L.F.	616.17 GRANITE BRIDGE CURB (MOD) SEE C.O. 4 AND S.A. DATED 17 MAY 1977								0	358.1

BRIDGE (S) AT STATION (S) 24+00 ±
LOCATION (S) VT. 12 OVER DOG RIVER

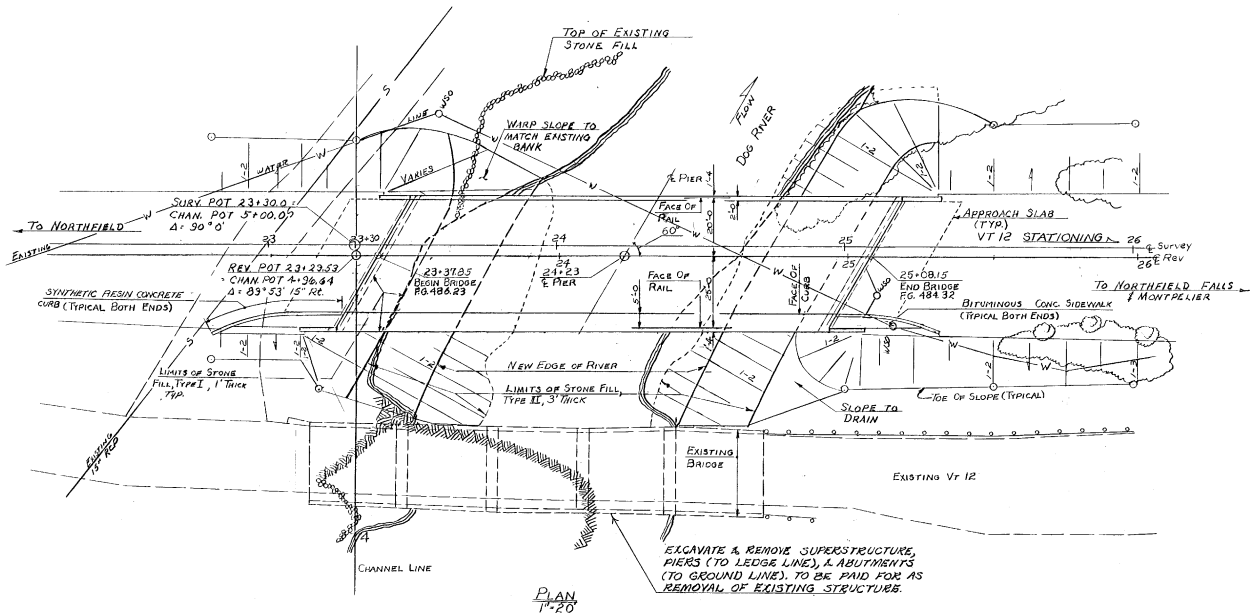
Prepared by HOSKINS Checked by A.E. Lathrop
SUPERVISOR: W. Tripp

NORTHFIELD
BR 101 OF 115

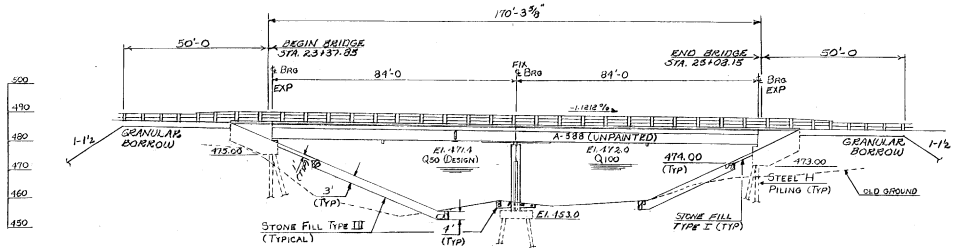
PROJECT NO. RF-BRF-035-2(3)
SHEET NO. 14 OF 74

General Notes

1) See STD SCB-01-75 for additional General Notes except as noted.
2) All Structural Steel shall be A-588 except as noted.
3) The 6" fiber ducts in the sidewalk shall be capped at each end as directed by the Engineer; payment for the fiber ducts shall be considered subsidiary to Concrete Class A.
4) F.F. = far face N.F. = near face E.F. = each face
5) Water Repellent shall be applied to all exposed surfaces on abutments & pier; to the curtain walls from outside edge to fascia beam; and to the curb, sidewalk, fascia, and bottom of deck from the fascia to exterior beam. Care shall be taken to avoid water repellent from coming in contact with the structural steel.
6) All piles shall have reinforced tips as per Section 505.04, par F, and approved by the Engineer.



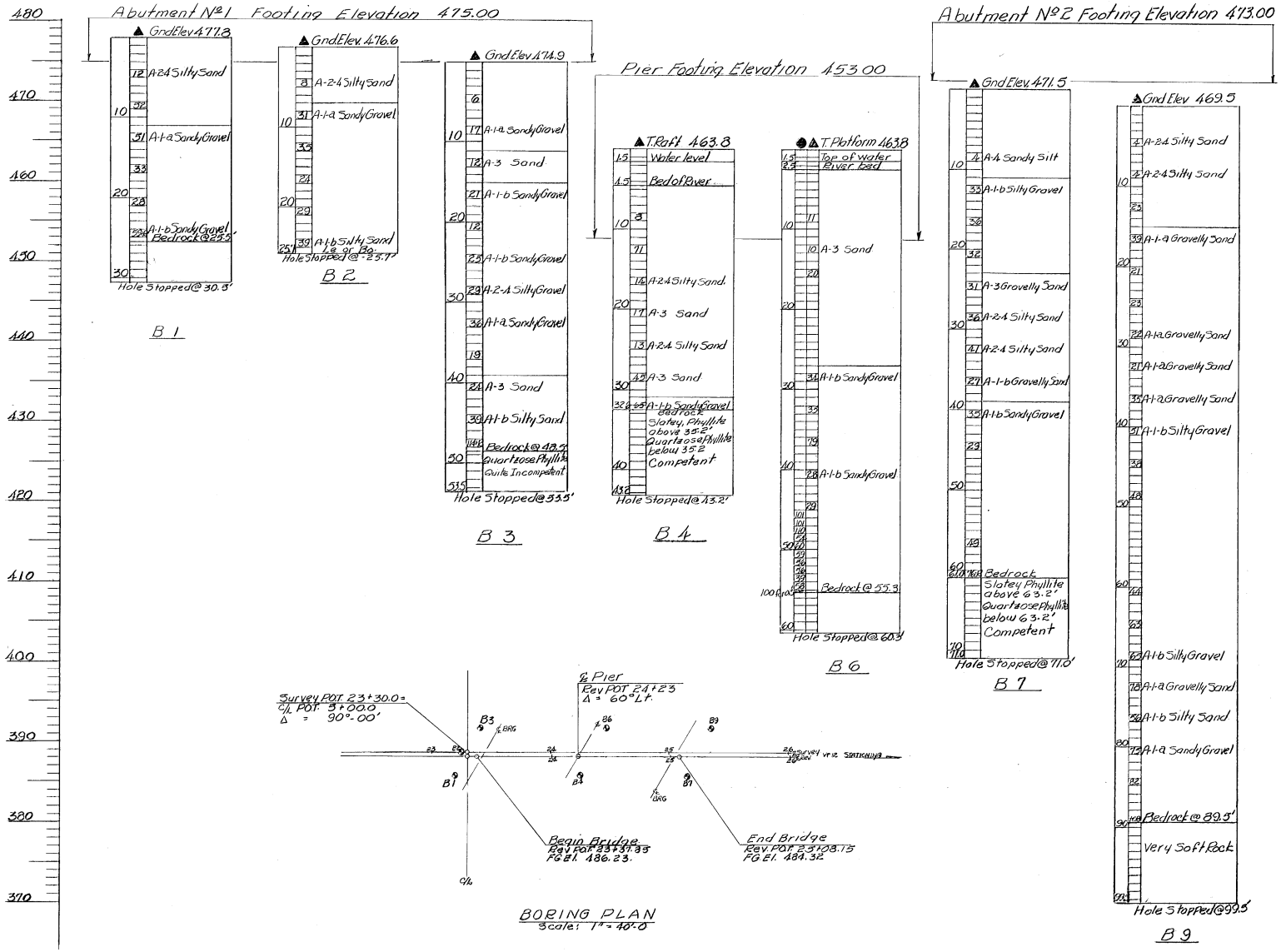
PLAN
1"=20



ELEVATION
1"=20

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Northfield	Bridge No. 61
	Log Sta. 266+10
HIGHWAY NO. VT 12	Surv. Sta. 24+50±
VT 12 Over Dog River	
Plan & Elevation	
Designed by R. Hosking	Drawn by R. Hosking
Checked by Perkins date 11/76	Bridge Design Supervisor W. Tripp date 5/76
PROJECT Northfield	PROJECT NO. RF-BRF-035-2(3)
Bridge Sheet No. BR102	Sheet 15 of 74



Boring Nº	Station	Offset
B1	23+18	20' Rt
B2	23+25	℄
B3	23+40	20' Lt
B4	24+25	20' Rt
B6	24+45	20' Lt
B7	25+15	20' Rt
B9	25+35	20' Lt

● Standard Penetration Borings

	O.D	I.D	Hammer Weight	Hammer Fall
Casing	3"	2½"	350#	24"
Sampler	2"	1⅜"	140#	30"

● Blows On Casing
▲ Blows On Sampler

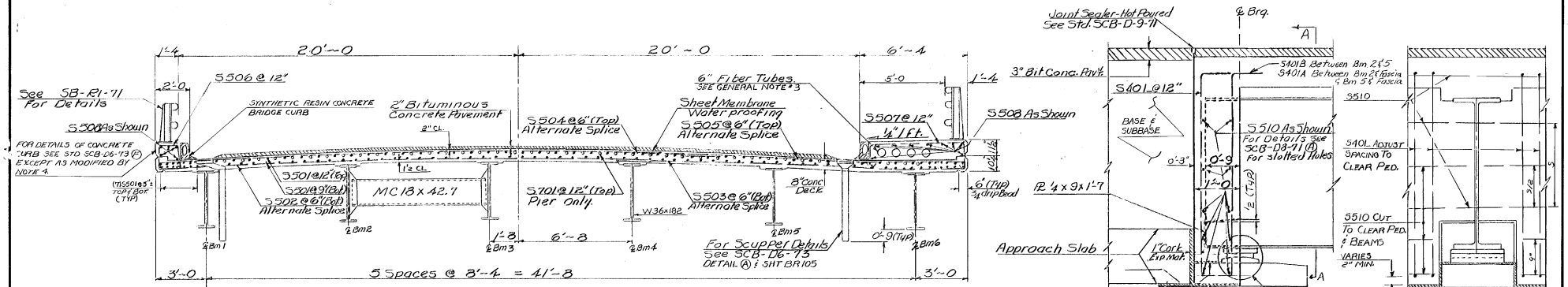
NOTES
1) Estimated Pile Penetration is to Ledge Surface.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORTHFIELD	Bridge No. 61
HIGHWAY NO. VT. 12	Log Sta. 266+70
	Surv. Sta. 24+00E

VT Nº12 OVER DOG RIVER
BORING LOGS

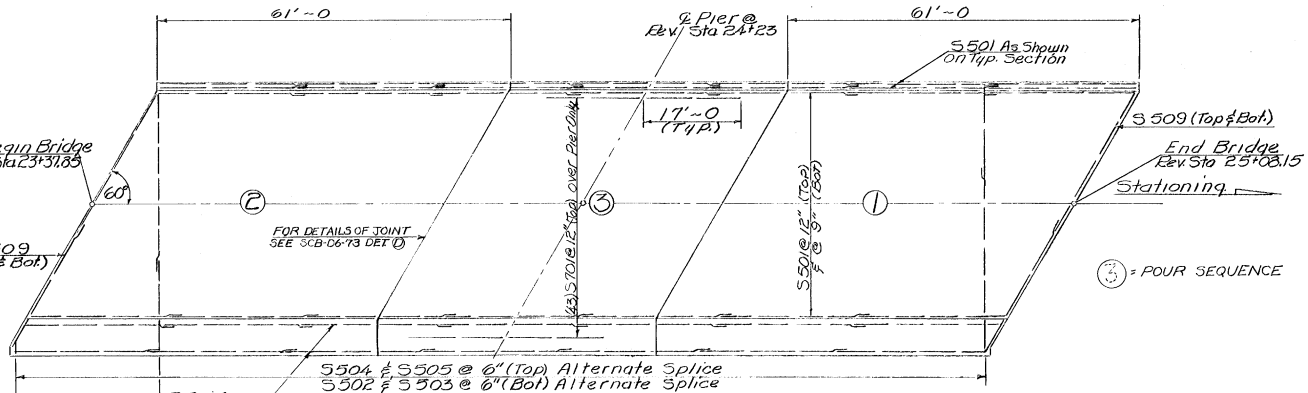
Designed by G. Hopkins	Drawn by G. Hopkins
Checked by R. Hosking date 4/76	Bridge Design Supervisor W. Tripp date 5/76
PROJECT NORTHFIELD	PROJECT NO. BF-BRF-035-2(3)
Bridge Sheet No. BR103	Sheet 16 of 74



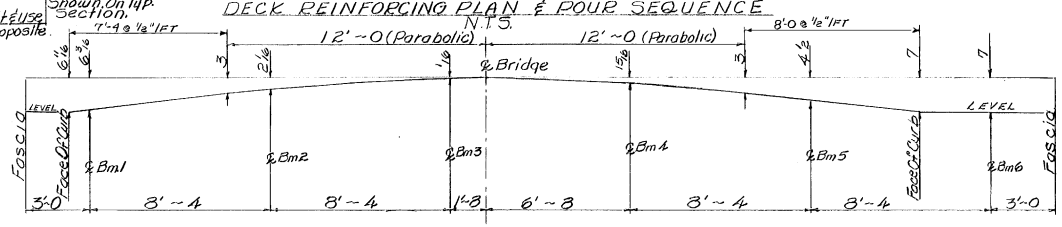
TYPICAL BRIDGE SECTION
3/8" = 1'-0

SECTION "AA"

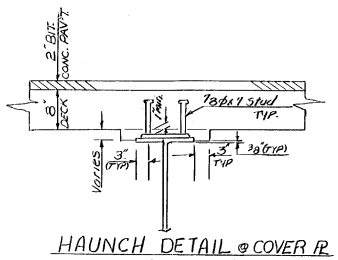
CURTAIN WALL DETAIL
Scale NTS



DECK REINFORCING PLAN & POUR SEQUENCE
N.T.S.



PARABOLIC DETAIL
Scale: 3/8" = 1'-0 Horizontal
1" = 1'-0 Vertical



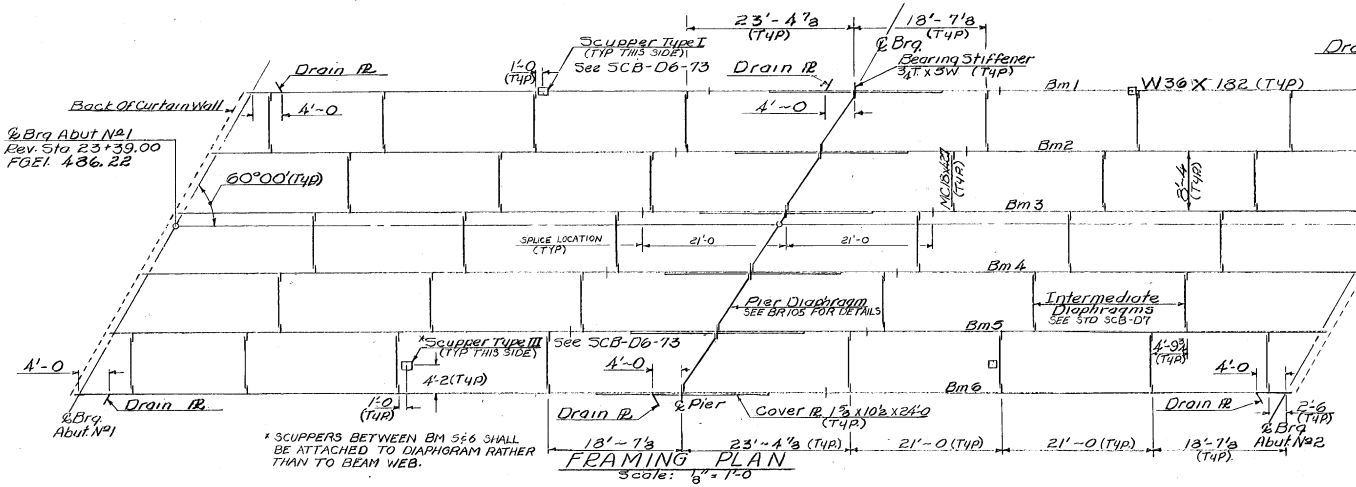
HAUNCH DETAIL @ COVER PL
Scale 1" = 1'-0

NOTES

1) SEE SHEET BR 102 FOR GENERAL NOTES.
2) FOR ADDITIONAL CURTAIN WALL DETAILS SEE SCB-D9-71
3) SEE SHEET BR110 FOR CURB & RAILING LAYOUT
4) ALL REFERENCES TO GRANITE CURB ON STD. SCB-D6-73 SHALL BE MODIFIED TO READ SYNTHETIC RESIN CONCRETE BRIDGE CURB.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

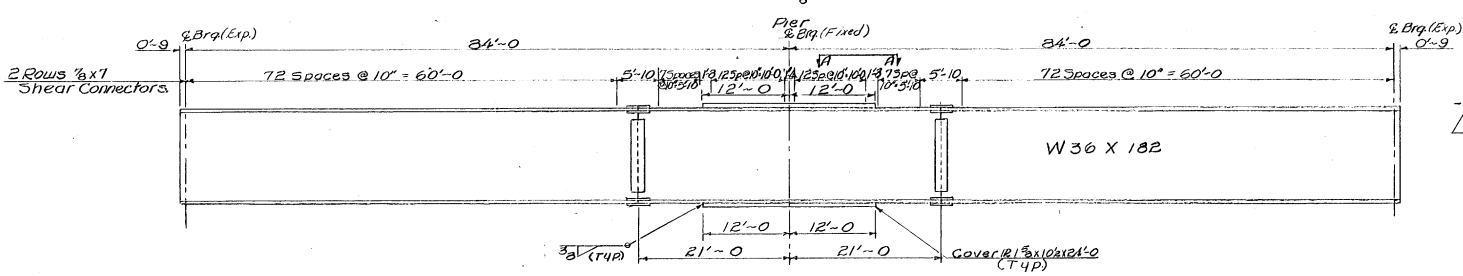
TOWN OF NORTHFIELD	Bridge No. 61
HIGHWAY NO. VT 12	Log Sta. 266+90
	Surv. Sta. 24+00±
VT 12 OVER DOG RIVER	
TYPICAL SECTION & DETAILS	
Designed by R. Hosking	Drawn by G. Hopkins
Checked by D.E. Lathrop date 4/29/76	Bridge Design Supervisor W. Tripp date 5/76
PROJECT NORTHFIELD	PROJECT NO. RF-BRF-035-2(3)
Bridge Sheet No. BR 104	Sheet 17 of 74



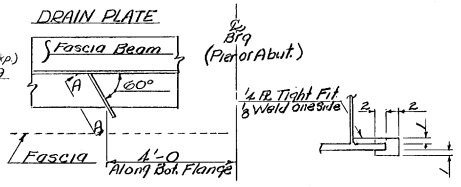
* SCUPPERS BETWEEN BM 5 & 6 SHALL BE ATTACHED TO DIAPHRAGM RATHER THAN TO BEAM WEB.

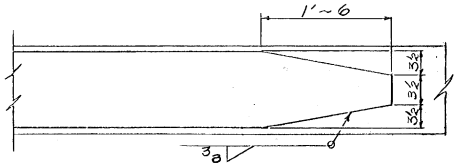
FRAMING PLAN
Scale: 1/8" = 1'-0

NOTES
1) SCUPPERS SHALL BE GALVANIZED.
2) ONE (1) SPLICE MAY BE OMITTED UPON APPROVAL BY THE ENGINEER. SPLICE PLATES WILL BE PAID FOR ONLY IF USED.
3) MAX L.L. DEFLECTION = 3/4 IN.

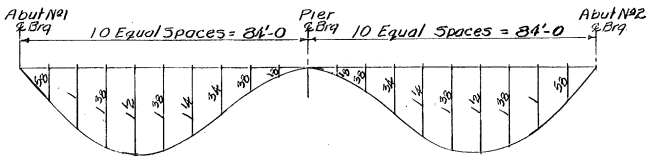


TYPICAL BEAM ELEVATION
N.T.S.

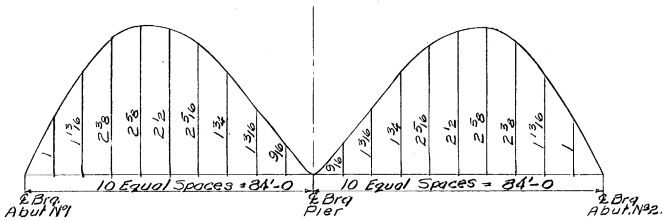




SECTION "A A"
Scale: 1 1/2" = 1'-0
COVER PL TYP BOTH ENDS.



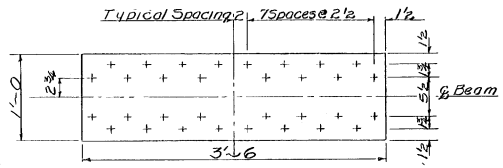
DEAD LOAD DEFLECTION
N.T.S.



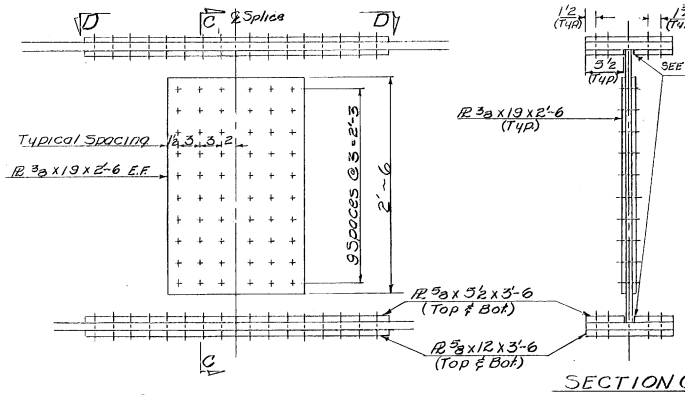
CAMBER DIAGRAM
N.T.S.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORTHFIELD	Bridge No. 61
HIGHWAY NO. VT 12	Log Sta. 266+70
	Surv. Sta. 24+00±
VT. No 12 OVER DOG RIVER	
FRAMING PLAN & CAMBER DIAGRAM	
Designed by R. Hosking	Drawn by G. Hopkins
Checked by D.E. Lathrop date 4/76	Bridge Design Supervisor W. Tripp date 5/76
PROJECT NORTHFIELD	PROJECT NO. BF-BRF-035-2(3)
Bridge Sheet No. BR105	Sheet 18 of 74



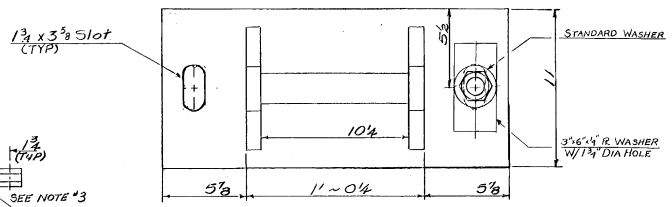
SECTION "DD"



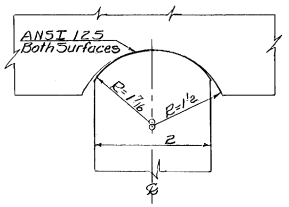
SPLICE ELEVATION

SECTION CC

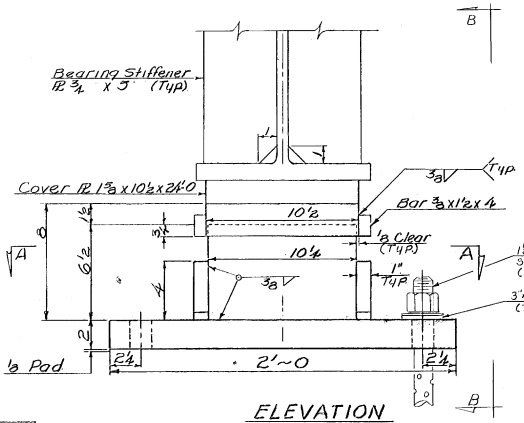
SPLICE DETAIL
Scale: 1 1/2" = 1'-0



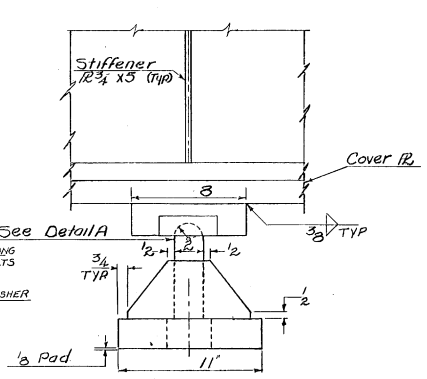
SECTION "AA"



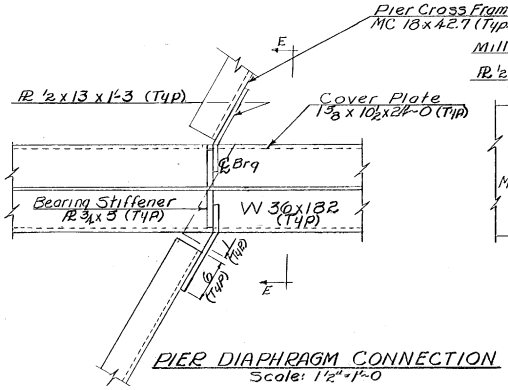
DETAIL A
Scale: Full Size



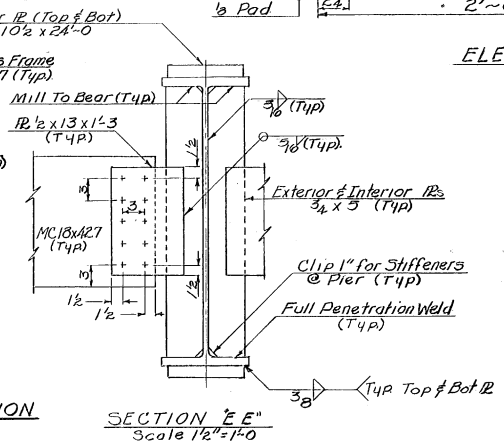
ELEVATION



SECTION BB



PIER DIAPHRAGM CONNECTION
Scale: 1 1/2" = 1'-0



SECTION "E E"
Scale 1 1/2" = 1'-0

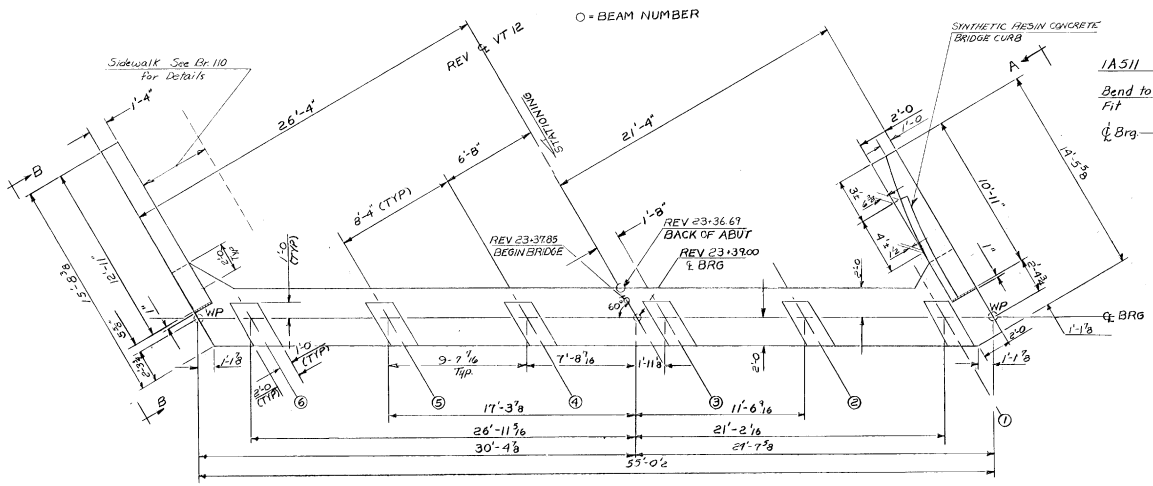
FIXED BEARING DEVICE
Scale: 3" = 1'-0

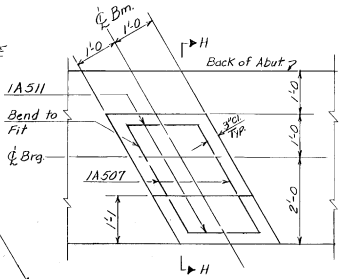
NOTES:

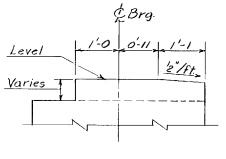
1. See sheet BR 102 for General Notes.
2. See Std SCB-D7-71 DETAIL Ⓑ FOR INTERIOR DIAPHGRAM DETAILS.
3. GRIND INSIDE EDGE OF FLANGE SPLICE PLATES TO CLEAR WEB FILLET.
4. ANCHOR BOLTS SHALL BE 1 1/2 ϕ x 1'-8 LONG SWEDGE BOLTS W/ HEX NUT & STANDARD WASHER. THE SWEDGE BOLTS SHALL BE THREADED 4" AND HAVE A PROJECTION OF 5" ABOVE BRIDGE SEAT ELEVATION. NUTS, BOLTS, & WASHERS SHALL BE GALVANIZED. COST SHALL BE INCLUDED IN PRICE BID FOR STRUCTURAL STEEL.

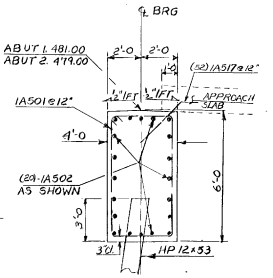
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

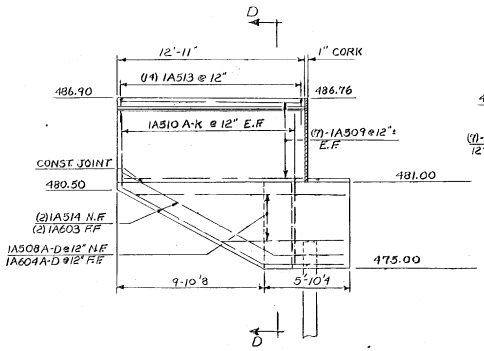
TOWN OF NORTHFIELD	Bridge No. 61
HIGHWAY NO. VT. 12	Log Sta. 266+70 / Surv. Sta. 24+002
VT No 12 OVER DOG RIVER	
BEARING AND SPLICE DETAILS	
Designed by R. Hosking	Drawn by G. Hopkins
Checked by D.E. Lathrop date 4/29/76	Bridge Design Supervisor W. Tripp date 5/76
PROJECT NORTHFIELD	PROJECT NO. CF-BRF-033-2(3)
Bridge Sheet No. BR106	Sheet 19 of 74

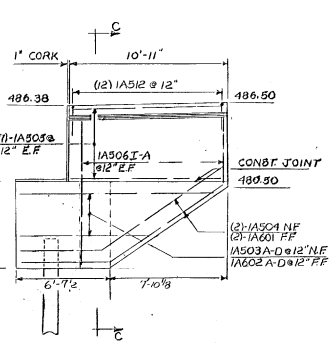


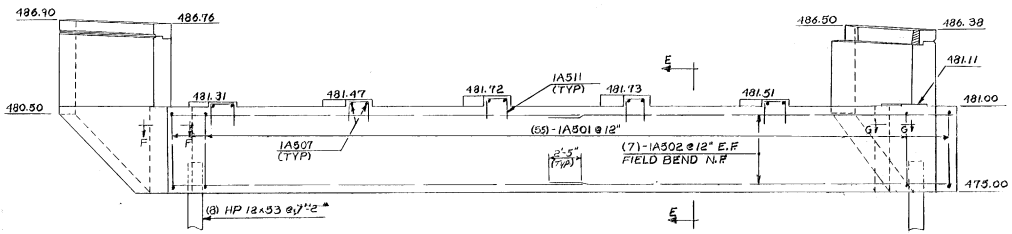


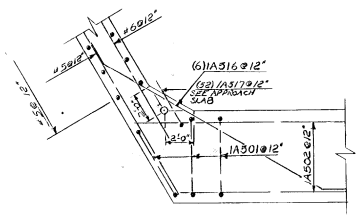


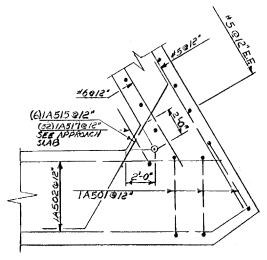


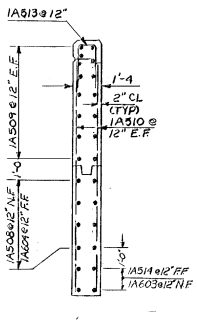


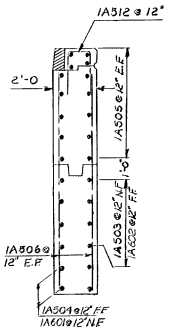










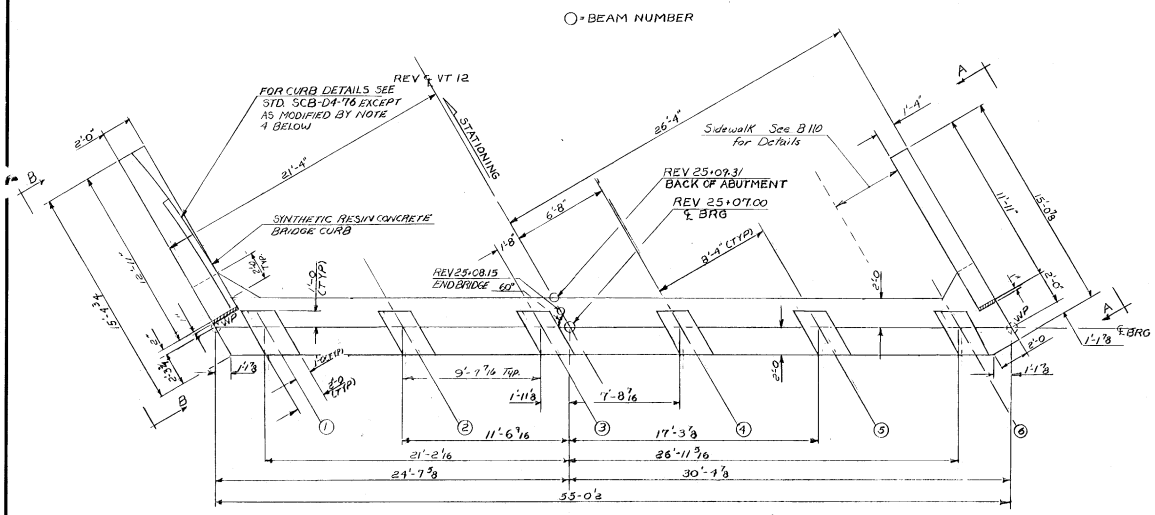


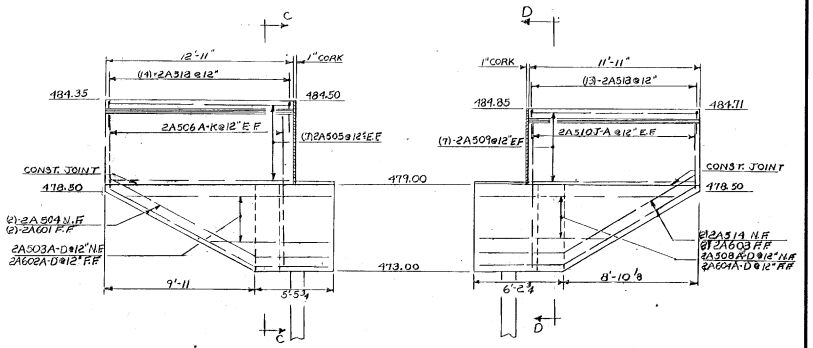
NOTES

1) SEE SHEET BR 102 FOR GENERAL NOTES.
2) SEE SHEET BR 108 FOR PILING LAYOUT.
3) PILES ARE DESIGNED FOR 116 KIPS MAXIMUM POINT BEARING ON LEDGE.
4) COVER FOR REINFORCMENT SHALL BE 2" UNLESS OTHERWISE NOTED.
5) FOR CONSTRUCTION JOINT AND SCORE MARK DETAILS SEE SCB-D6-73 DETAIL (2).
6) ALL CONCRETE IN THE ABUTMENTS SHALL BE CONCRETE CLASS B.
7) PEDESTALS SHALL BE POURED INTEGRALLY WITH THE ABUTMENTS.
8) SEE NOTE 4, SHEET BR104, REFERENCE STD. SCB-D6-73.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORTHFIELD	Bridge No. 61
HIGHWAY NO. VT 12	Log Sta. 266+70
	Surv. Sta. 24+0 ±
VT 12 OVER DOG RIVER	
ABUTMENT 1 DETAILS	
Designed by R. HOSKING	Drawn by R. HOSKING
Checked by D.E. Lathrop date 4/76	Bridge Design Supervisor W. TRIPP date 5-76
PROJECT NORTHFIELD	PROJECT NO. RF-BRF-035-2(3)
Bridge Sheet No. BR107	Sheet 20 of 74

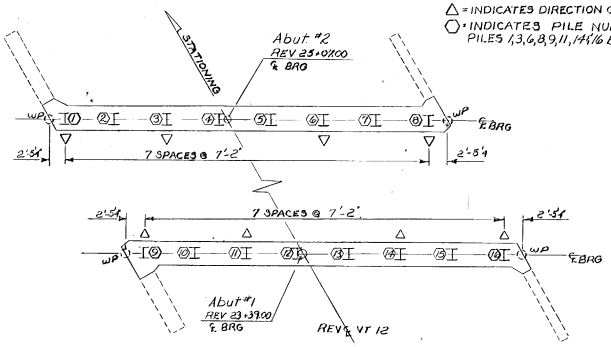




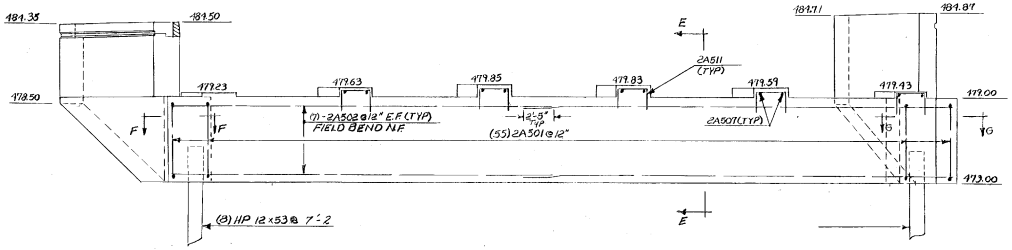
VIEW B-B
1/4"=1'-0"

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

△ = INDICATES DIRECTION OF 1-6 BATTER
○ = INDICATES PILE NUMBER
PILES 1,3,6,8,9,11,14 1/16 BATTERED



ABUTMENT PILE LAYOUT
1/8"=1'-0"



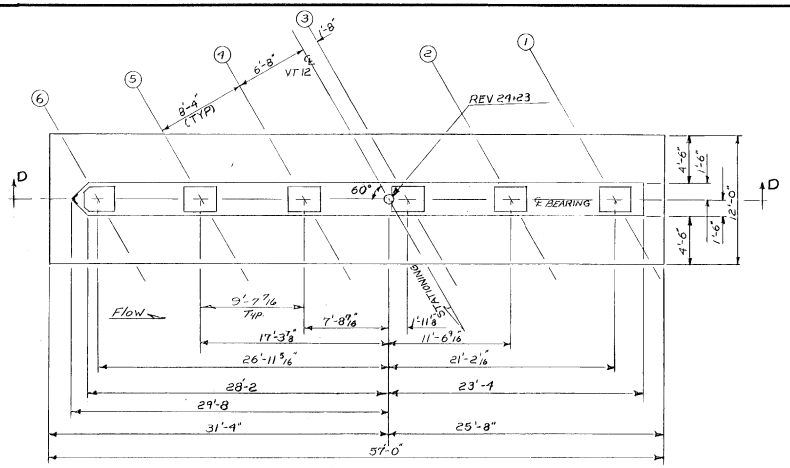
ELEVATION
1/4"=1'-0"

NOTES

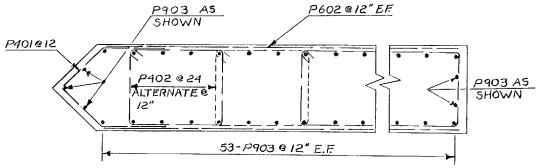
1) SEE SHEET BR 107 FOR ADDITIONAL ABUTMENT NOTES.
2) SEE SHEET BR 107 FOR SECTIONS C-C, D-D, E-E, F-F, G-G, AND PEDESTAL DETAIL, EXCEPT BARS FOR ABUTMENT #2 SHALL BE MARKED 2A IN LIEU OF 1A.
3) SEE SHEET BR 110 FOR PILING TABLE.
4) SEE NOTE 2 SHEET BR 110 IN REFERENCE TO STD SCB-D4-76

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

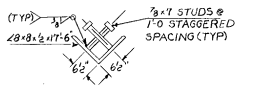
TOWN OF NORTHFIELD	Bridge No. 61
	Log Sta. 266+70
HIGHWAY NO. VT 12	Surv. Sta. 24+50
VT 12 OVER DOG RIVER	
ABUTMENT #2 DETAILS	
Designed by R. HOSKING	Drawn by R. HOSKING
Checked by D.E. Lathrop date 4/76	Bridge Design Supervisor W. TRIPP date 5-76
PROJECT NORTHFIELD	PROJECT NO. RF-BRF-0352(3)
Bridge Sheet No. BR108	Sheet 21 of 74



PLAN
3/16" = 1'-0"

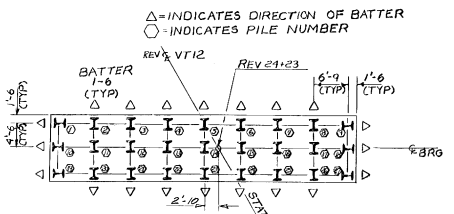


SECTION C-C
1/2" = 1'-0"

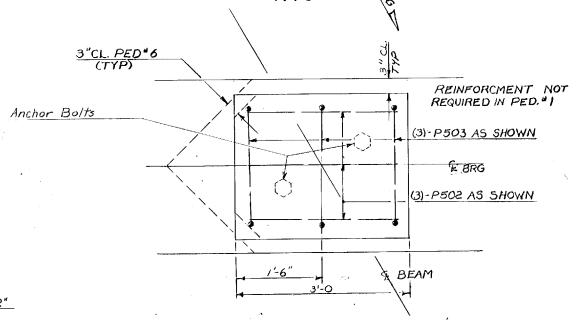


NOSE PLATE
NTS

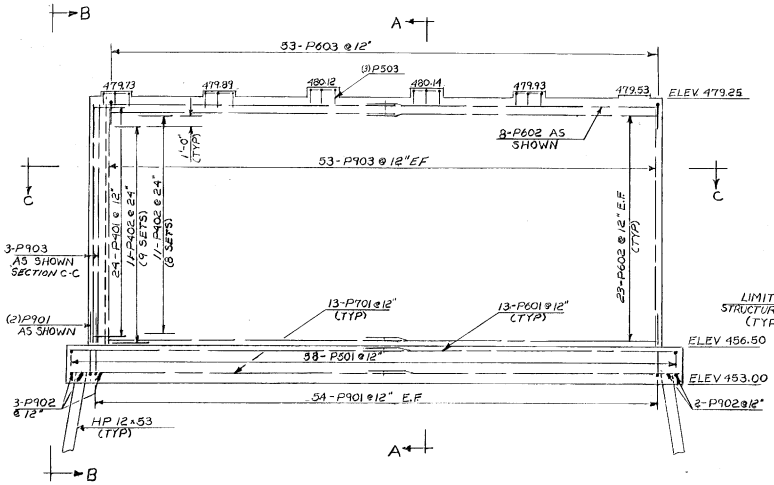
△=INDICATES DIRECTION OF BATTER
⬡=INDICATES PILE NUMBER



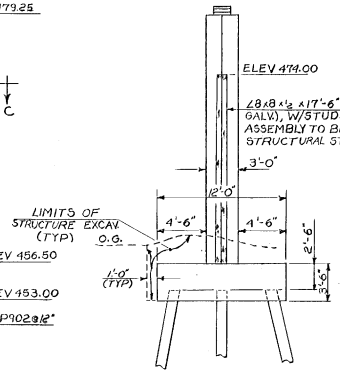
PILE LAYOUT
NTS



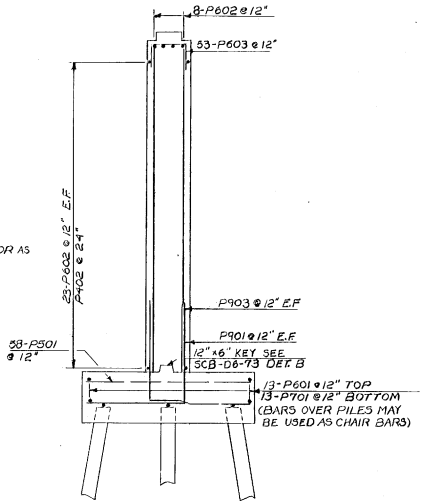
PEDESTAL DETAIL
1" = 1'-0"



SECTION D-D
3/16" = 1'-0"



VIEW B-B
3/16" = 1'-0"



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

NOTES

1) SEE SHEET BR 102 FOR GENERAL NOTES.
2) PEDESTALS SHALL BE POURED INTERGRALLY WITH THE PIER STEM.
3) TOP OF PIER SHALL BE SLOPED ½"/FT FROM ℄ BRG EXCEPT FOR TOPS OF PEDESTALS.
4) COVER FOR REINFORCMENT SHALL BE 3" UNLESS OTHERWISE NOTED.
5) PILES ARE DESIGNED FOR 116 KIPS MAXIMUM POINT BEARING ON LEDGE.
6) SEE SHEET BR 110 FOR PILING TABLE.

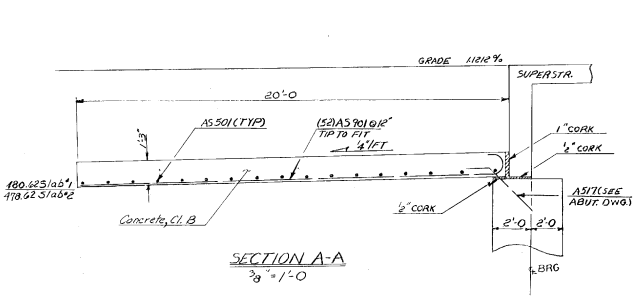
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORTHFIELD	Bridge No. 61
HIGHWAY NO. VT 12	Log Sta. 266+10
	Surv. Sta. 241+02

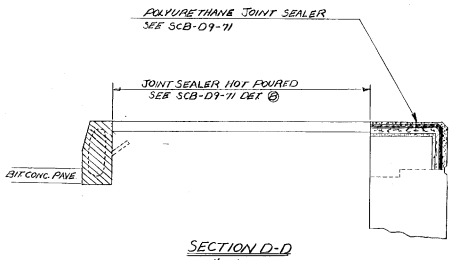
VT 12 OVER DOG RIVER

PIER DETAILS

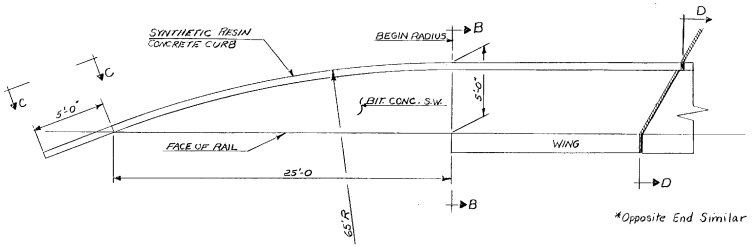
Designed by R. HOSKING	Drawn by R. HOSKING
Checked by S. ACHILLES date MAR 76	Bridge Design Supervisor W. TRIPP date 5-76
PROJECT NORTHFIELD	PROJECT NO. RF-BRF-035-2(3)
Bridge Sheet No. BR109	Sheet 22 of 74



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

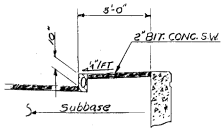


SECTION D-D
1" = 1'-0"

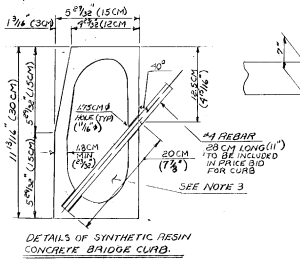


*Opposite End Similar

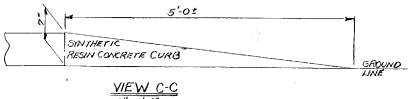
BITUMINOUS CONCRETE SIDEWALK & GRANITE CURB
PLAN *
1/4" = 1'-0"



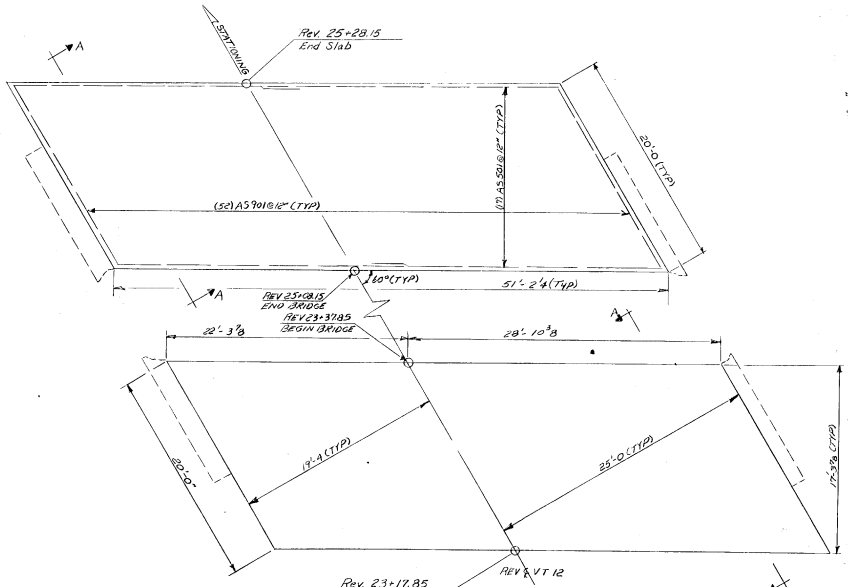
SECTION B-B
1/4" = 1'-0



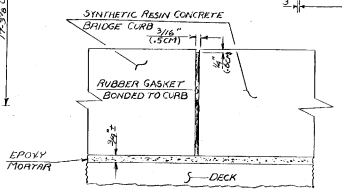
DETAILS OF SYNTHETIC RESIN CONCRETE BRIDGE CURB.
NTS



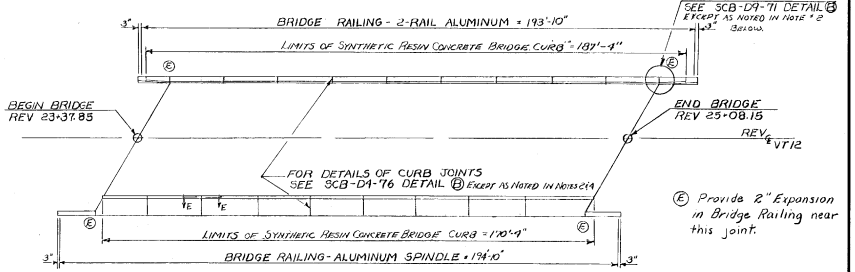
VIEW C-C
1" = 1'-0"



APPROACH SLABS
3/16" = 1'-0"



SECTION E-E (TYP)
1" = 6"



CURB & RAILING PLAN
1" = 20'

Ⓔ Provide 2" Expansion in Bridge Railing near this joint.

PILING TABLE		
LOCATION	NO. OF PILES	LENGTH
ABUTMENT 1	8	VARIES 30'-55'±
PIER	27	VARIES 30'-50'±
ABUTMENT 2	8	VARIES 70'-100'±

Note:
1) Attention is Drawn to Sections 505.08 & 505.09 of the Specifications Relative to Pile Payment and Splices.
2) All References to Granite Curb on ISTD3 SCB-04-16 & SCB-09-11 Shall be Modified to Read Synthetic Resin Concrete Bridge Curb.
3) Terminal Ends and Ends at Bridge Joints, of Synthetic Resin Concrete Bridge Curb, Shall be Solid.
4) See Special Provisions for Detail of Joint Between Ends of Curbing

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORTHFIELD	Bridge No. 61
	Log Sta. 266+10
HIGHWAY NO. VT 12	Surv. Sta. 24+50±

VT 12 OVER DOG RIVER
APPROACH SLAB & MISC. DETAILS

Designed by R. HOSKING	Drawn by R. HOSKING
Checked by D. E. Lathrop date 4/76	Bridge Design Supervisor W. TRIPP date 5/76
PROJECT NORTHFIELD	PROJECT NO. RF-BRF-035-2(3)
Bridge Sheet No. BR 110	Sheet 23 of 74

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				ABUTMENT NO. 1													
1																	
2	10	5	28-7	1A502	Str.												
3	1	↑	9-4	1A503A	↑												
4	↓		↓	↑	Vary in 3 equal increments												
5	1		13-8	1A503D													
6	14		10-7	1A505													
7	2		4-9	1A506A													
8	↓		↓	↓	Vary in 7 equal increments												
9	2		9-5	1A506H													
10	6		10-1	1A506I													
11	10		2-11	1A507													
12	1		9-4	1A508A													
13	↓		↓	↓	Vary in 3 equal increments												
14	1		14-8	1A508D													
15	14		12-7	1A509													
16	2		5-2	1A510A													
17	↓		↓	↓	Vary in 9 equal increments												
18	2	↓	9-11	1A510J	↓												
19	8	5	10-6	1A510K	Str.												
20																	
21																	
22	55	5	19-5	1A501	T1	5½	3-8	5-7	3-8	5-7		5½					
23	2	↓	15-9	1A504	16	/	/	6-5	9-4				7-8		5-4		
24	10		5-0	1A511	S10		1-7	1-10	1-7								
25	12		5-2	1A512	S10		2-0	1-2	2-0								
26	14		5-0	1A513	S10		2-0	1-0	2-0								
27	2		16-8	1A514	16	/	/	3-8	11-0				7-8		5-4		
28	7		10-8	1A515	14	/	1-3	8-2	1-3	/			1-1				9-5
29	7	↓	14-11	1A516	14	/	1-3	12-5	1-3	/			7½				14-7
30	52	5	3-8	1A517	16	/	/	1-0	2-8				1-10		1-10		
31																	
32																	
33	1	6	4-8	1A602A	Str.												
34	↓		↓	↓	Vary in 3 equal increments												
35	1		9-1	1A602D	Str.												
36	1		5-6	1A602A	Str.												
37	↑	↓	↓	↓	Vary in 3 equal increments												
38	1	6	11-0	1A604D	Str.												
39																	
40																	
41	3*	6	15-9	1A601	16	/	/	6-5	9-4				7-8		5-4		
42	2	6	16-8	1A603	16	/	/	5-8	11-0				7-8		5-4		
43																	
44																	
45																	
46				ABUTMENT NO. 2													
47																	
48	40	5	28-7	2A502	Str.												
49	1	↓	9-0	2A503A	↑												
50	↓		↓	↑	Vary in 3 equal increments												
51	1		14-5	2A503D													
52	14		12-7	2A505													
53	2		5-0	2A506A													
54	↓		↓	↓	Vary in 9 equal increments												
55	2		10-0	2A506J													
56	6		10-6	2A506K													
57	10		2-11	2A507													
58	1		9-6	2A508A													
59	↓		↓	↓	Vary in 3 equal increments												
60	1		14-5	2A508D													
61	14		11-7	2A509													
62	2		5-4	2A510A													
63	↓		↓	↓	Vary in 8 equal increments												
64	2	↓	9-2	2A501I	↓												
65	6	5	10-9	2A501J	Str.												
66	55	5	19-5	2A501	T1	5½	3-8	5-7	3-8	5-7		5½					
67	2	5	16-9	2A504	16	/	/	5-3	11-1				9-9		5-4		
68	10	5	5-0	2A511	S10		1-7	1-10	1-7								
69	14	↓	5-2	2A512	S10		2-0	1-2	2-0								
70	13		5-0	2A513	S10		2-0	1-0	2-0								
71	2		16-2	2A514	16	/	/	6-0	10-2				8-8		5-4		
72	7		9-10	2A515	14	/	1-3	7-4	1-3	/			1-1				8-7
73	7	↓	16-3	2A516	14	/	1-3	13-9	1-3	/			7½				15-11
74	52	5	3-8	2A517	16	/	/	1-0	2-8				1-10		1-10		
75																	
76																	
77																	
78																	
79																	
80																	

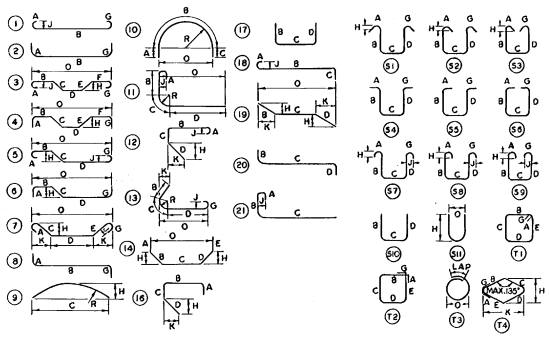
ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
81																	
82	1	6	5-7	2A602A	Str.												
83	↓		↓	↓	Vary in 3 equal increments												
84	1		11-2	2A602D	Str.												
85	1		5-2	2A604A	Str.												
86	↓	↓	↓	↓	Vary in 3 equal increments												
87	1	6	10-2	2A604D	Str.												
88																	
89																	
90	2	6	16-9	2A501	16	/	/	5-3	11-1				9-9		5-4		
91	2	6	16-2	2A603	16	/	/	6-0	10-2				8-8		5-4		
92																	
93																	
94				SUPERSTRUCTURE													
95																	
96	44	4	9-10	S401A	55	0-8	3-11	0-8	3-11			0-8					
97	55*	4	10-6	SA01B	55	0-8	4-3	0-8	4-3			0-8					
98																	
99	896	5	26-1	S501	Str.												
100	337	↓	28-9	S502	↑												
101	339		20-9	S503													
102	339		33-1	S504													
103	339		16-5	S505													
104	98		26-1	S508													
105	8	↓	28-5	S509	↓												
106	40	5	28-5	S510	Str.												
107																	
108																	
109	169	5	4-9	S506	S3	0-5½	1-4	1-2	1-4			0-5½	0-3½				
110	169	5	9-2	S507	S3	0-5½	1-4	5-6	1-5			0-5½	0-3½				
111																	
112	42	7	34-0	S701	Str.												
113																	
114																	
115				APPROACH SLABS (½ in each)													
116																	
117	68	5	26-7	AS501	STR												
118																	
119																	
120	104	9	20-10	AS901	18	1-3	19-7	/						0-11½			
121																	
122																	
123																	
124																	
125				PIER													
126																	
127	29	4	6-0	P401	14	1-3	1-9	/	1-9	1-3			1-3				2-6
128	187	4	12-1	P402	T1	4'2	3-2	2-6	3-2	2-6		4'2					
129																	
130																	
131	99*	5	11-6	P501	STR												
132	15	5	2-6	P502	STR												
133																	
134																	
135	15	5	5-10	P503	S10		1-11	2-0	1-11								
136																	
137																	
138	26	6	29-8	P601	STR												
139	100	6	26-11	P602	STR												
140																	
141																	
142	53	6	5-4	P603	S10		1-6	2-4	1-6								
143																	
144																	
145	27*	7	30-2	P701	STR												
146																	
147																	
148	110	9	14-2	P901	17		7-2	7-0	/								
149																	
150																	
151	6*	9	11-6	P902	STR												
152	111	9	22-6	P903	STR												
153																	
154																	
155																	
156																	
157																	
158																	
159																	
160																	

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
161																	
162																	
163																	
164																	
165																	
166																	
167																	
168																	
169																	
170																	
171																	
172																	
173																	
174																	
175																	
176																	
177																	
178																	
179																	
180																	

ASTM STANDARD REINFORCING BARS

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

TYPICAL BAR BENDS



NOTES

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

* DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.

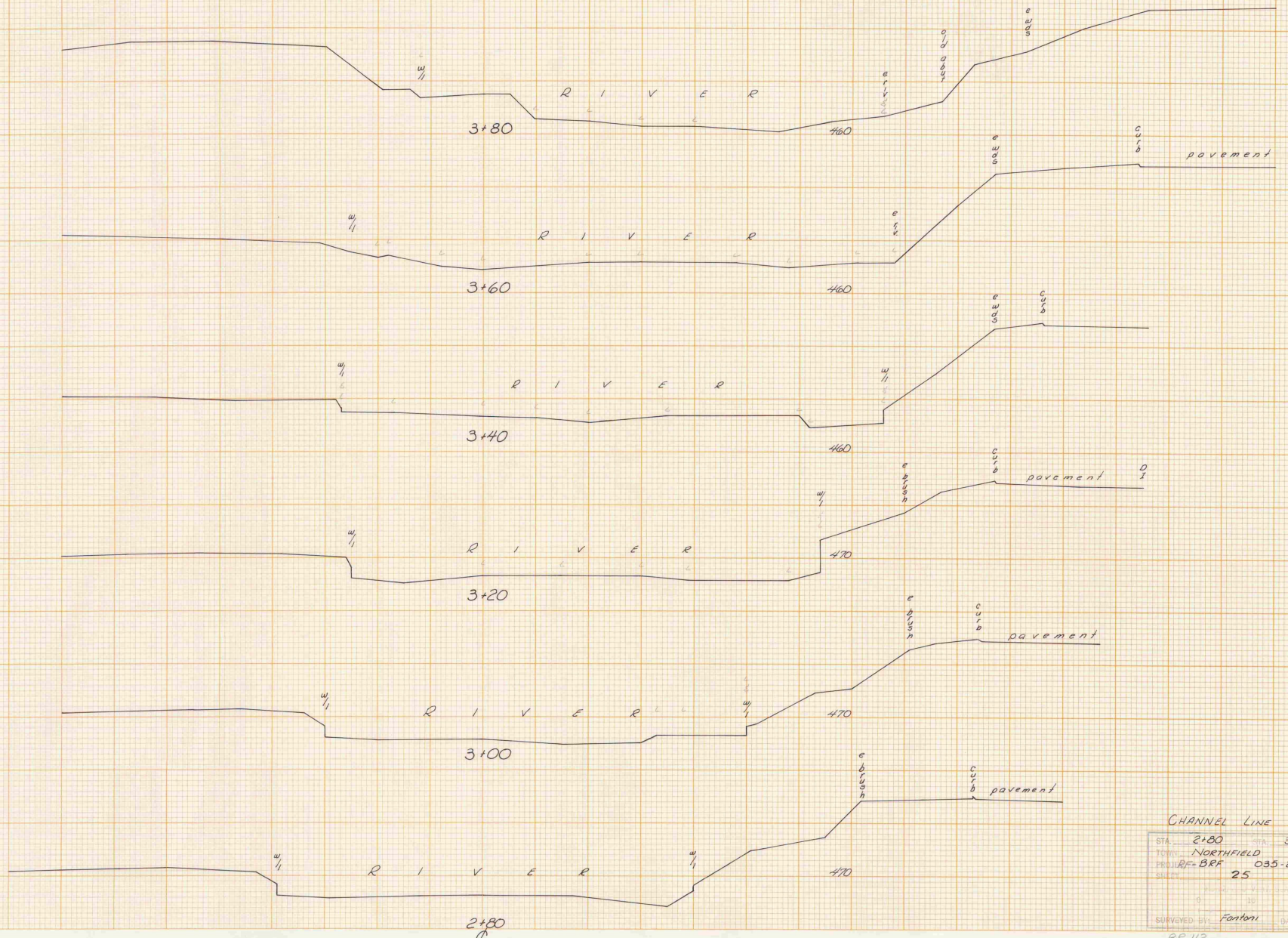
REV. NO.	MADE BY	DATE	DESCRIPTION
1	J. WOOD	8/11/75	AASHO CHANGED TO AASHTO. AND GRADE 40 CHANGED TO GRADE 60.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF NORTHFIELD — BRIDGE NO. 61
HIGHWAY NO. VT 12 — LOG STA. 266+70, SURV. STA. 24+50
VT 12 OVER DOG RIVER

REINFORCING STEEL SCHEDULE

DESIGNED BY HOSKING — DRAWN BY D.E. LATHROP
CHECKED BY HOSKING DATE 4/76 — BRIDGE DESIGN SUPERVISOR W. TRIPP DATE 5/76
PROJECT NORTHFIELD — PROJECT NO. RF-BRF-0352(3)
BRIDGE SHEET NO. BR 111 — SHEET 24 OF 74



CHANNEL LINE

STA. 2+80 STA. 3+80

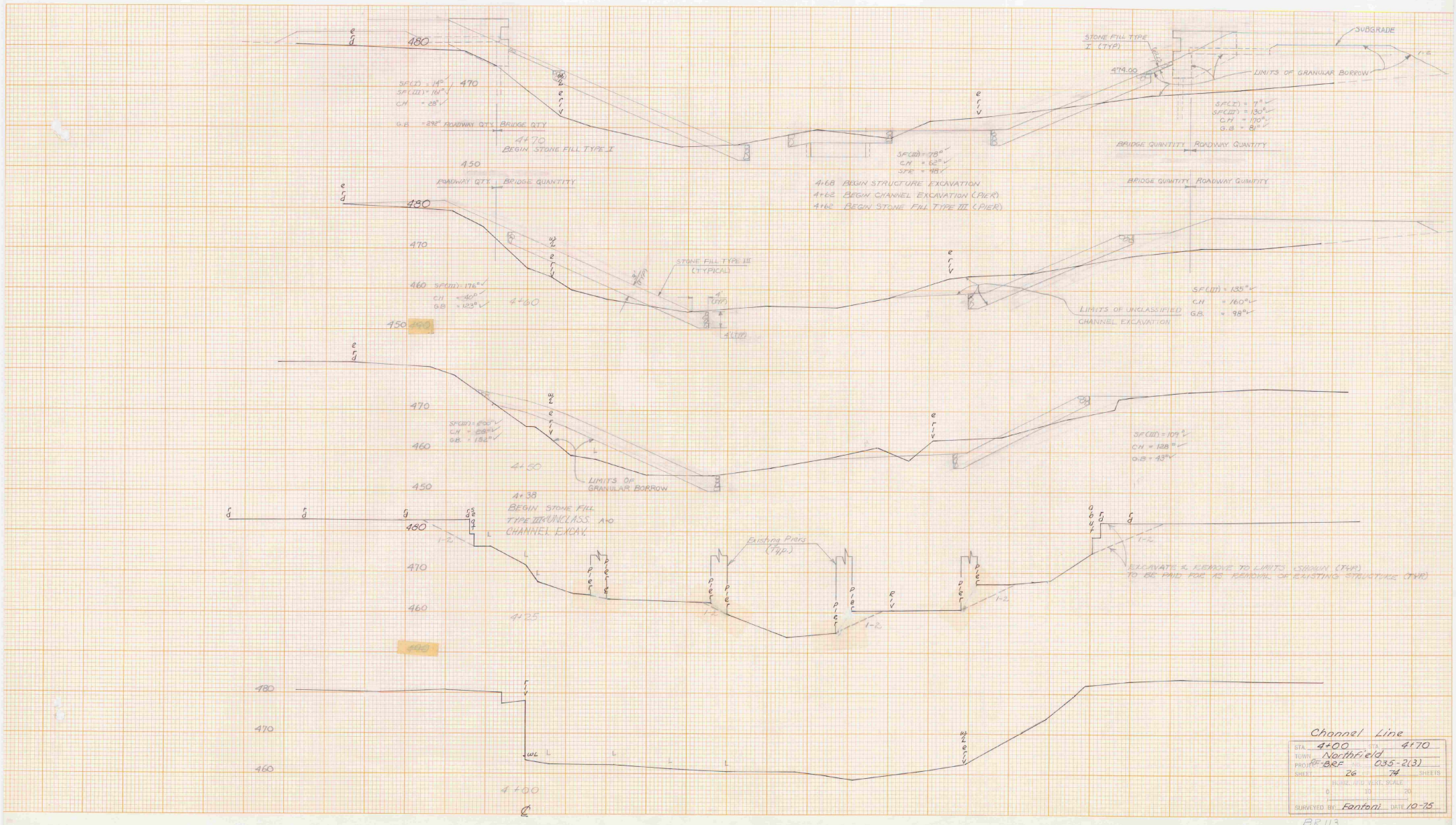
TOWN NORTHFIELD

PROJ. RF-BRF 035-2(3)

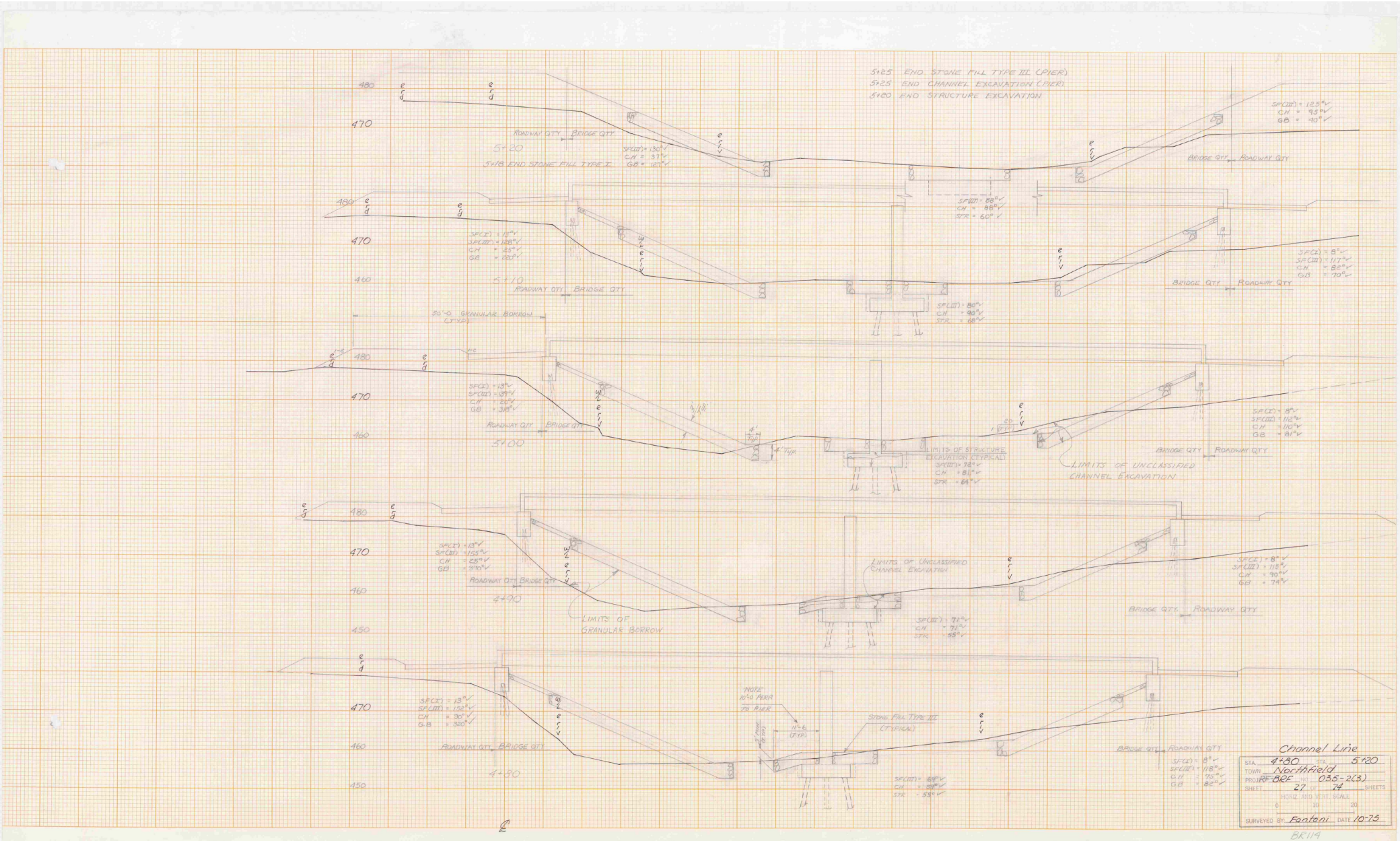
SHEET 25 74

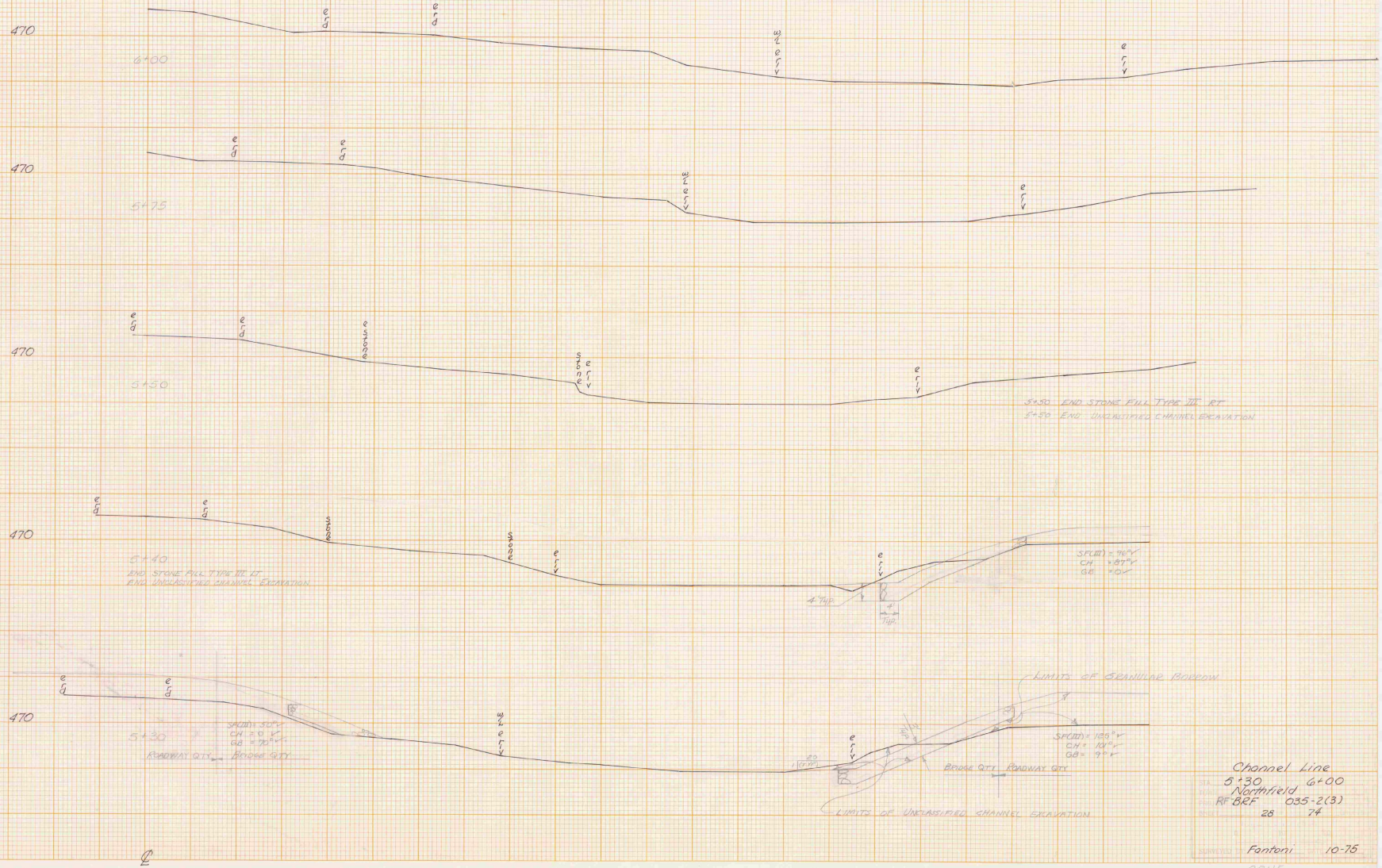
SURVEYED BY Fantoni DATE Nov. 75

BR 112



SUBGRADE
STONE FILL TYPE I (TYP)
474.00
LIMITS OF GRANULAR BORROW
SF(I) = 14°
SF(III) = 161°
CH = 28°
G.B = 292° ROADWAY QTY. BRIDGE QTY
4+70
BEGIN STONE FILL TYPE I
SF(III) = 78°
CH = 62°
SF(I) = 7°
SF(III) = 130°
CH = 170°
G.B = 81°
BRIDGE QUANTITY ROADWAY QUANTITY
ROADWAY QTY. BRIDGE QUANTITY
4+68 BEGIN STRUCTURE EXCAVATION
4+62 BEGIN CHANNEL EXCAVATION (PIER)
4+62 BEGIN STONE FILL TYPE III (PIER)
BRIDGE QUANTITY ROADWAY QUANTITY
STONE FILL TYPE III (TYPICAL)
SF(III) = 176°
CH = 40°
G.B = 123°
4+60
LIMITS OF UNCLASSIFIED CHANNEL EXCAVATION
SF(III) = 135°
CH = 160°
G.B = 98°
SF(III) = 200°
CH = 28°
G.B = 152°
4+50
LIMITS OF GRANULAR BORROW
SF(III) = 109°
CH = 128°
G.B = 43°
4+38
BEGIN STONE FILL TYPE III & UNCLASS. A+O CHANNEL EXCAV.
Existing Piers (Typ.)
EXCAVATE & REMOVE TO LIMITS SHOWN (TYP) TO BE PAID FOR AS REMOVAL OF EXISTING STRUCTURE (TYP)
4+25
4+00
Channel Line
STA. 4+00 STA. 4+70
TOWN Northfield
PROJ. RF-BRF NO. 035-2(3)
SHEET 26 OF 74 SHEETS
HORIZ. AND VERT. SCALE
0 10 20
SURVEYED BY: Fantoni DATE 10-75
BR 113

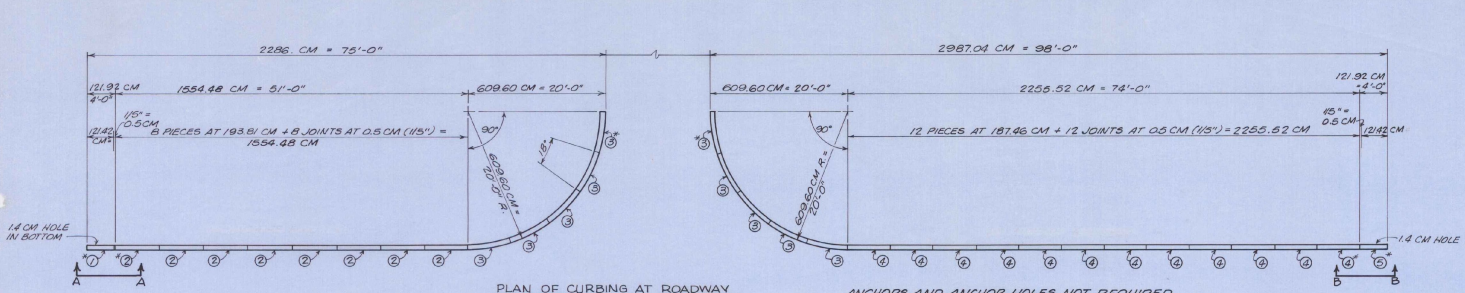

5+25 END STONE FILL TYPE III (PIER)
5+25 END CHANNEL EXCAVATION (PIER)
5+20 END STRUCTURE EXCAVATION
5+18 END STONE FILL TYPE I
5+20
5+10
5+00
4+90
4+80
ROADWAY QTY
BRIDGE QTY
50'-0 GRANULAR BORROW (TYP)
LIMITS OF STRUCTURE EXCAVATION (TYPICAL)
LIMITS OF UNCLASSIFIED CHANNEL EXCAVATION
LIMITS OF GRANULAR BORROW
NOTE 10'-0 PERP TO PIER
STONE FILL TYPE III (TYPICAL)
Channel Line
STA. 4+80 STA. 5+20
TOWN Northfield
PROJ. RF-BRF NO. 035-2(3)
SHEET 27 OF 74 SHEETS
HORIZ. AND VERT. SCALE
SURVEYED BY: Fontani DATE 10-75
BR114

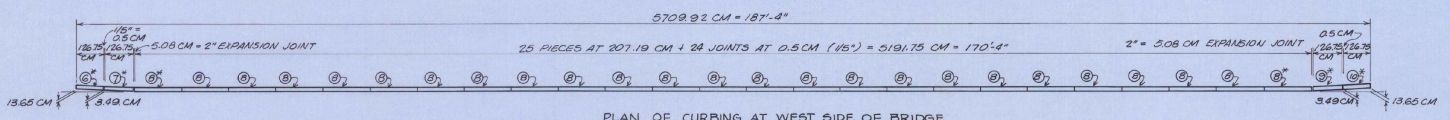


Channel Line
5+30 6+00
Northfield
RF BRF 035-2(3)
28 74

SURVEYED Fontoni 10-75

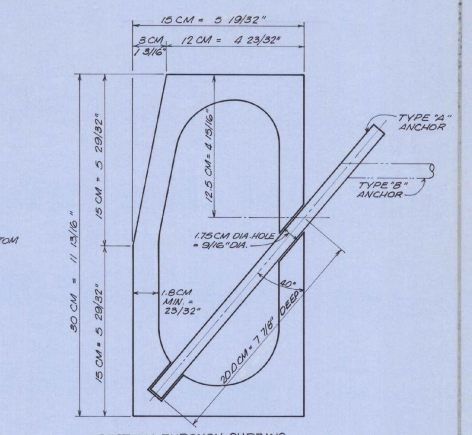
BR115



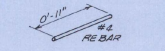


PLAN OF CURBING AT WEST SIDE OF BRIDGE
SCALE 1:100

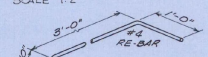
* THESE SECTIONS SHALL HAVE SOLID ENDS.



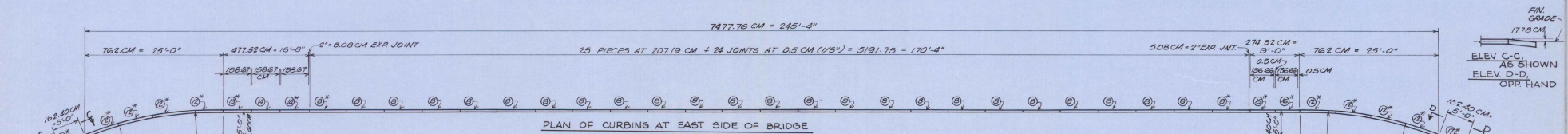
SECTION THROUGH CURBING
SCALE 1:2



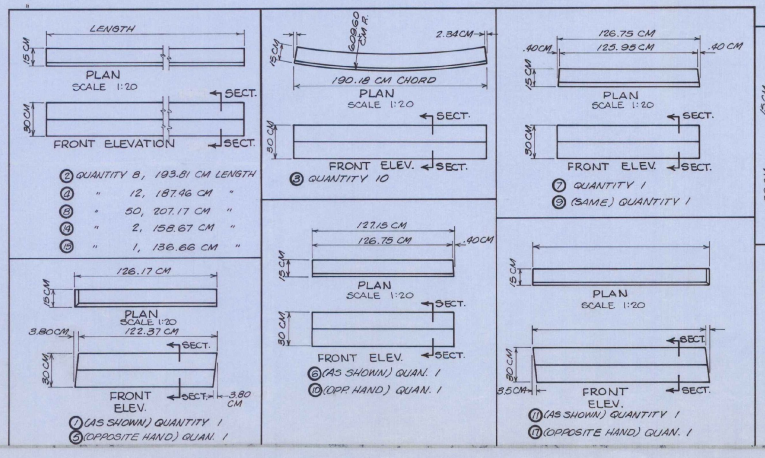
TYPE "A" ANCHOR
N.T.S.

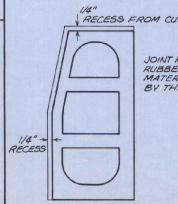


TYPE "B" ANCHOR
N.T.S.



PLAN OF CURBING AT EAST SIDE OF BRIDGE
SCALE 1:100





GASKET DETAIL
N.T.S.

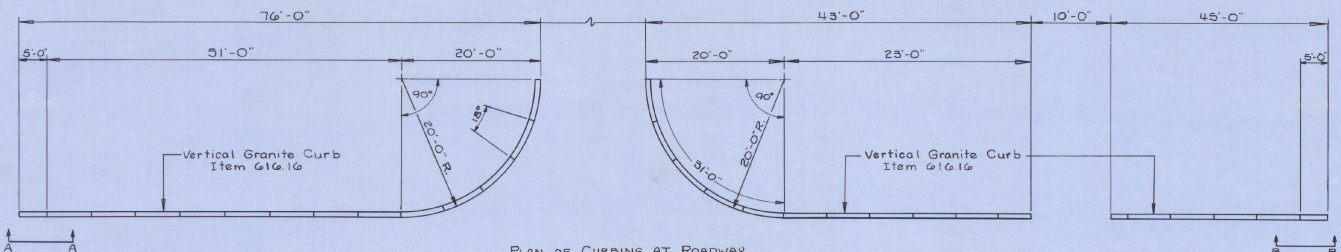
JOINT MATERIAL TO BE RUBBER OR SIMILAR MATERIAL AS RECOMMENDED BY THE SUPPLIER.

NOTES:
1. ALL CURBING TO BE CONCRETE COLOR.
2. USE TYPE "A" ANCHORS IN CONCRETE, AND TYPE "B" ANCHORS IN ASPHALT AND GRAVEL.

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

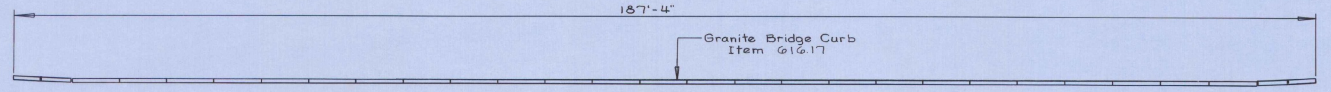
NORTHFIELD
PROJ. RF-BRF NO. 035-2(3)
SHEET 59 OF 74

D-7

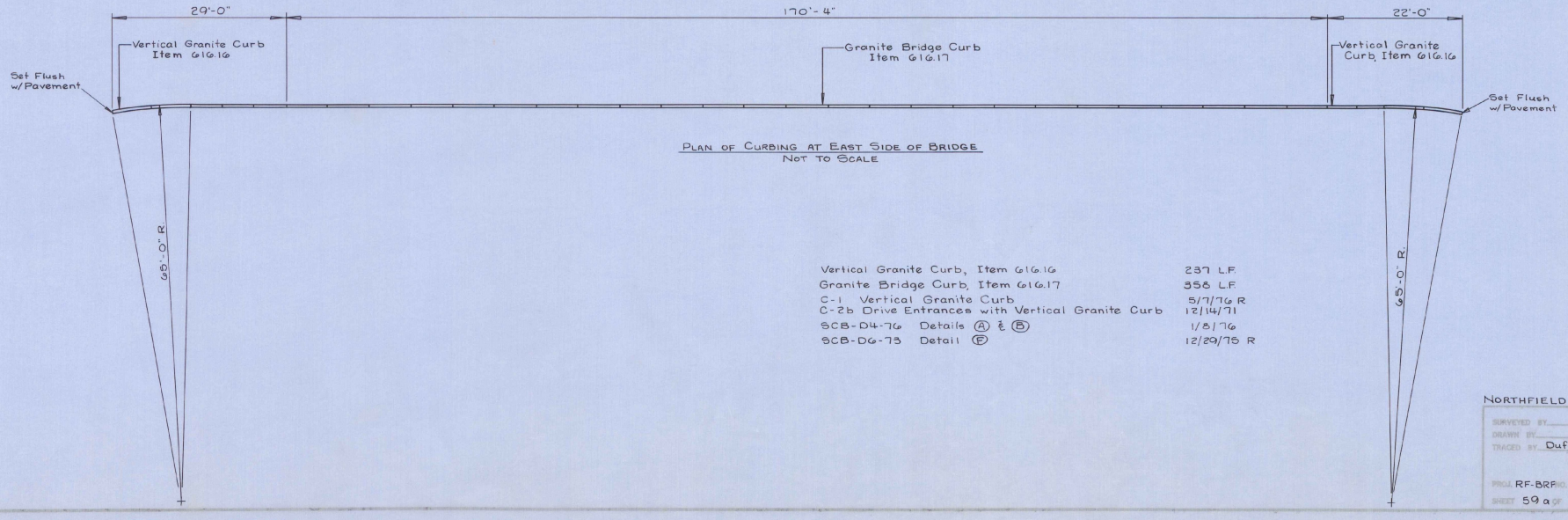


ELEV. A-A
ELEV. B-B (OPP. HAND)

PLAN OF CURBING AT ROADWAY
NOT TO SCALE



PLAN OF CURBING AT WEST SIDE OF BRIDGE
NOT TO SCALE



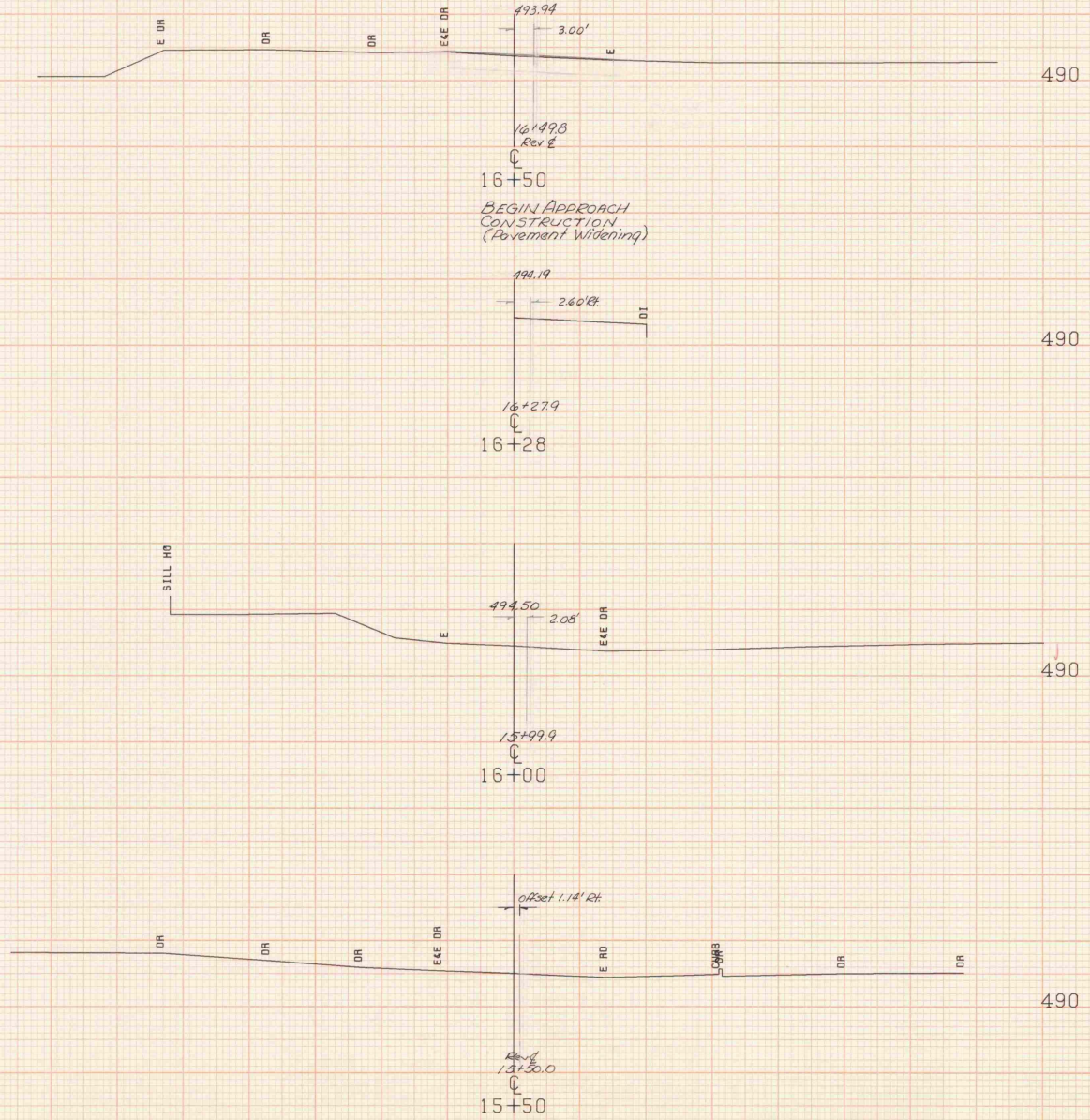
PLAN OF CURBING AT EAST SIDE OF BRIDGE
NOT TO SCALE

Vertical Granite Curb, Item 616.16	237 L.F.
Granite Bridge Curb, Item 616.17	358 L.F.
C-1 Vertical Granite Curb	5/7/76 R
C-2b Drive Entrances with Vertical Granite Curb	12/14/71
SCB-D4-76 Details (A) & (B)	1/8/76
SCB-D6-75 Detail (F)	12/29/75 R

NORTHFIELD

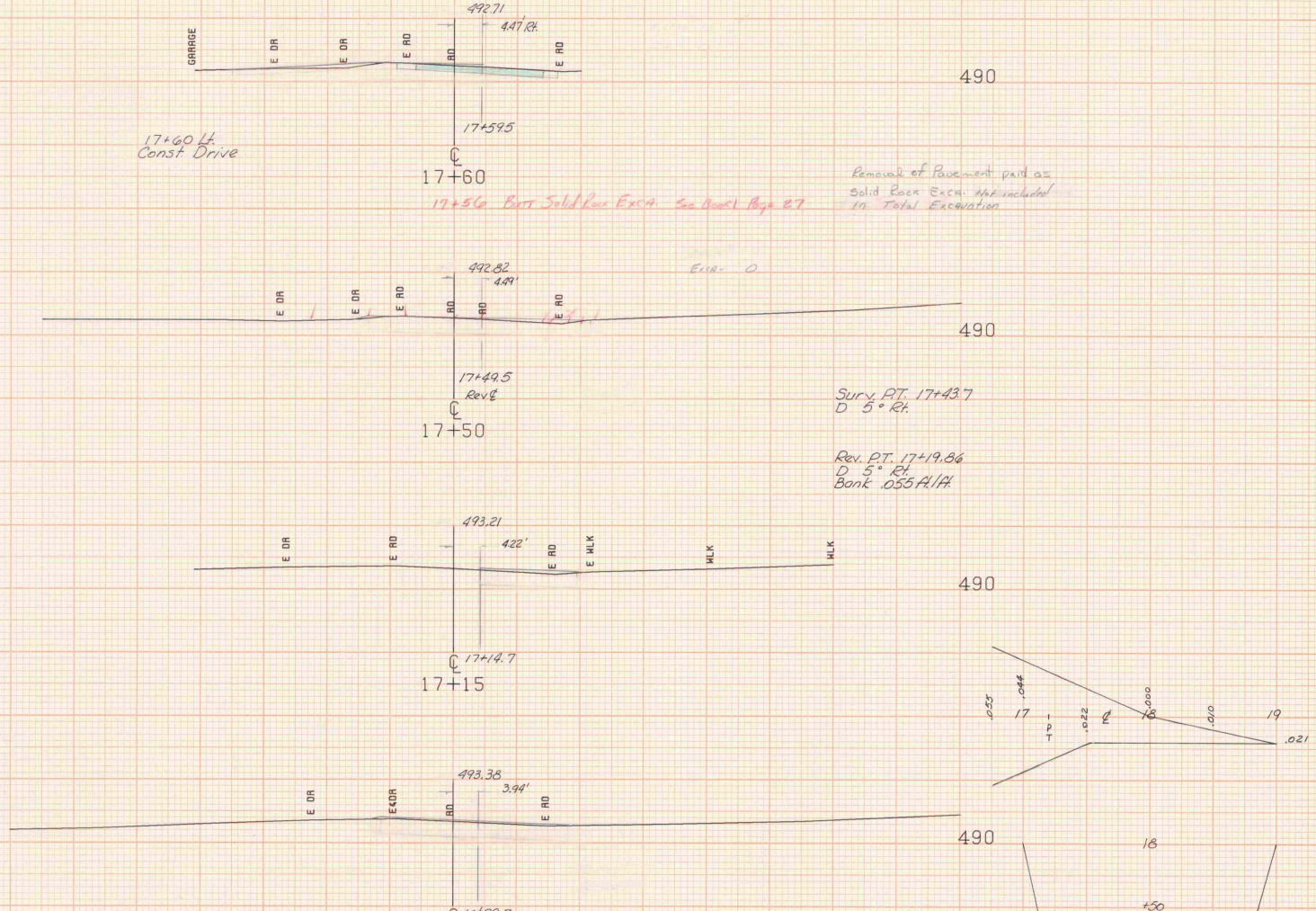
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY Duffy DATE 4/77

PROJ. RF-BRF(0) 095-2(3)
SHEET 59a OF 74



FROM STA. 15+50 TO STA. 16+50
PROJECT NAME NORTHFIELD
NO. RF-BRF035-2(3) PLOTTED 11/13/75
SURVEYED BY FANTONI 10/75
SHEET 60 OF 74 SHEETS

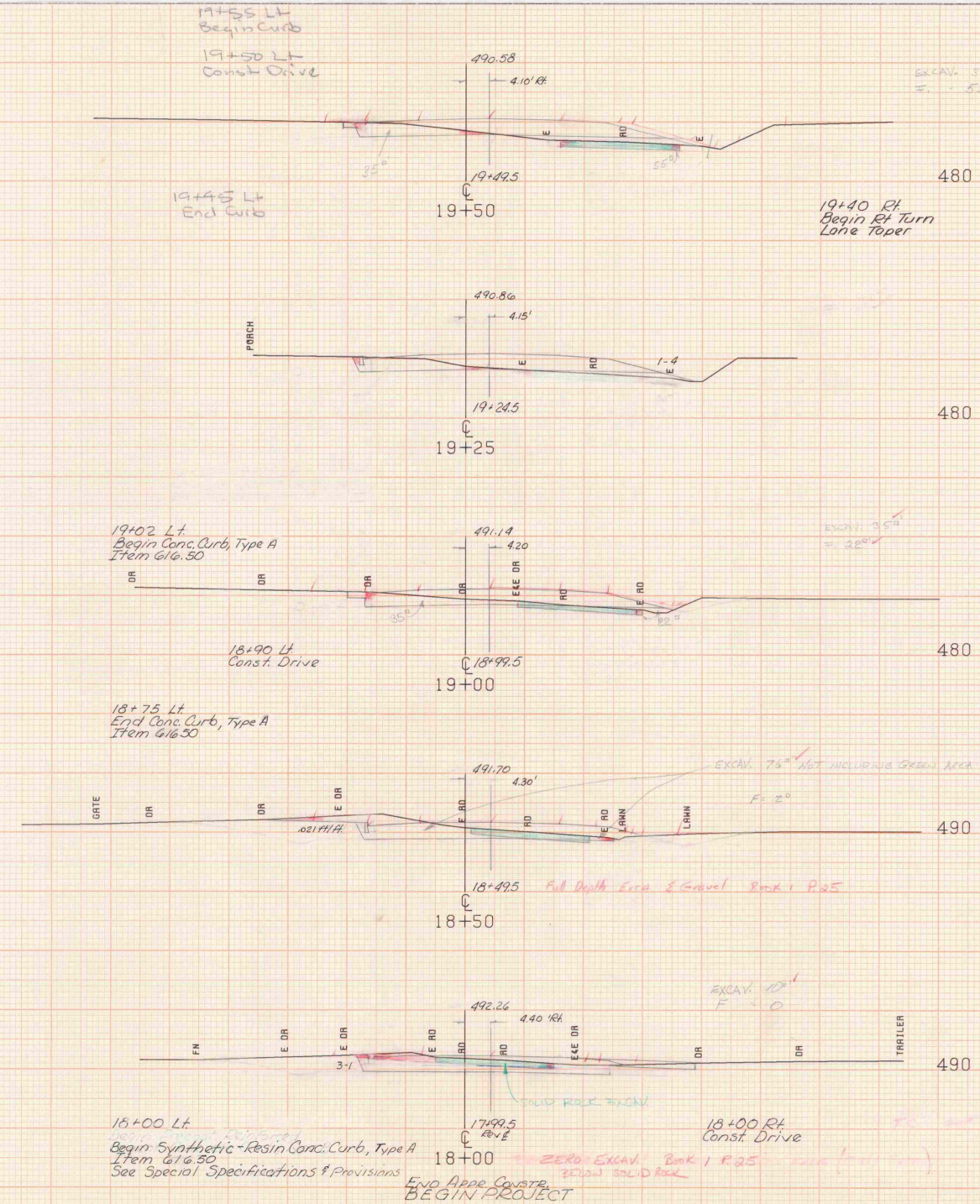
SCALE 10 FEET



PLAN. 8-29-77 FKP
✓ Plan 9-1-77 DEB

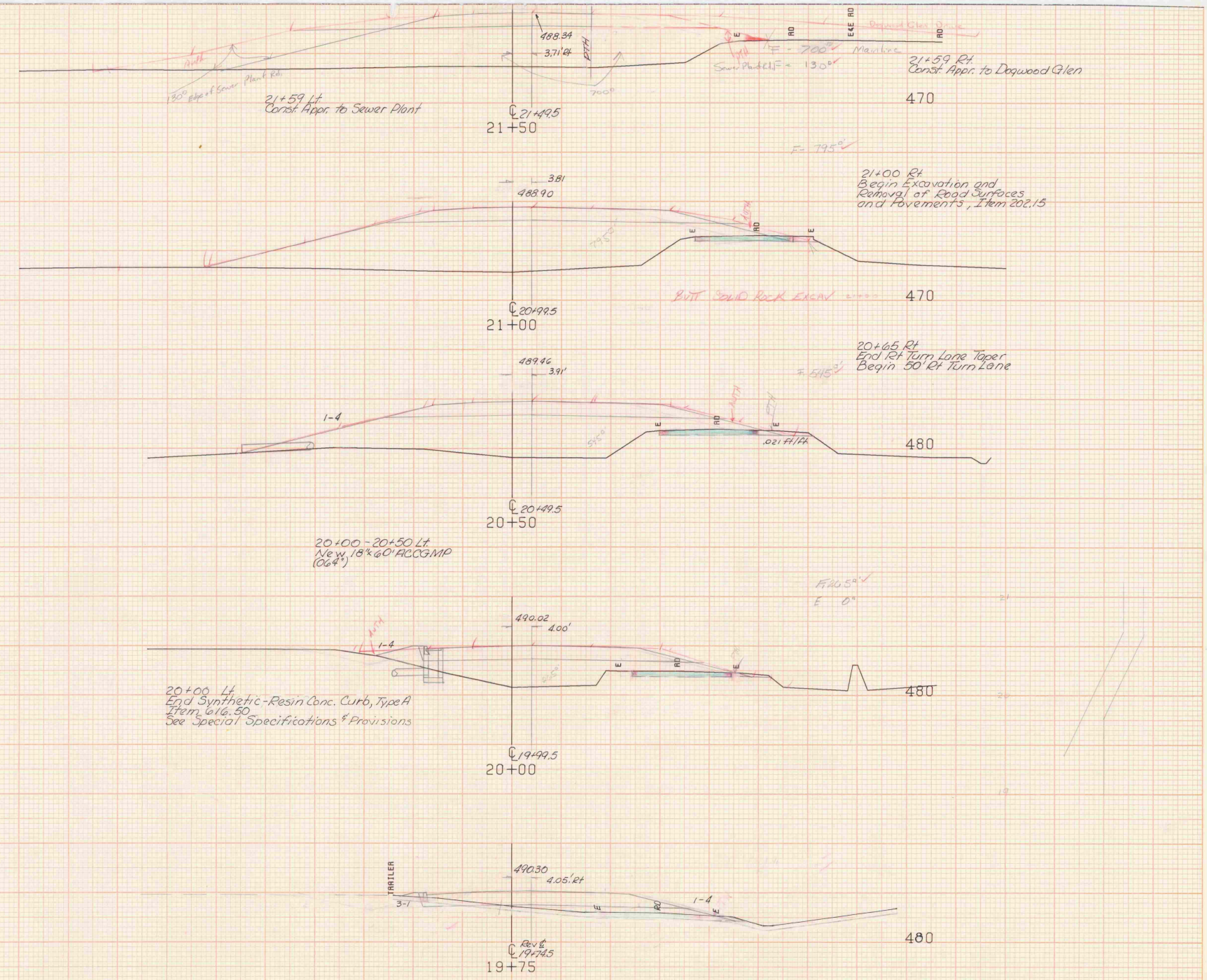
SCALE 10 FEET

FROM STA. 16+90	TO STA. 17+60
PROJECT NAME NORTHFIELD	
NO. RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY FANTONI	10/75
SHEET 60 OF 74 SHEETS	



FROM STA. 18+00	TO STA. 19+50
PROJECT NAME NORTHFIELD	
NO. RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY FANTONI	10/75
SHEET 62 OF 74 SHEETS	

SCALE 10 FEET

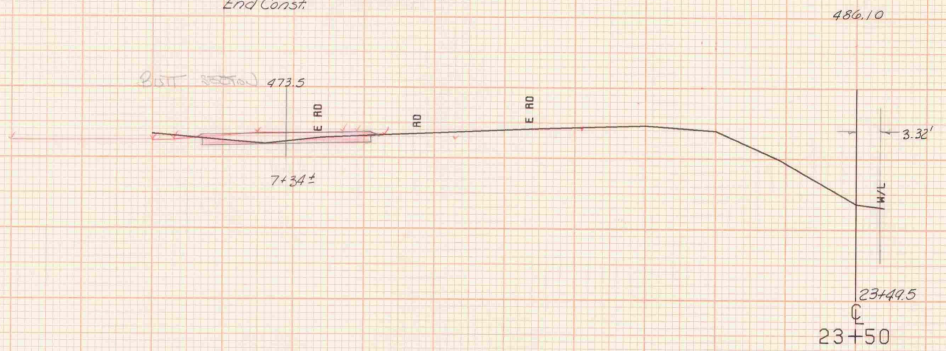


FROM STA. 19+75		TO STA. 21+50
PROJECT NAME	NORTHFIELD	
NO.	RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY	FANTONI	10/75
SHEET 63 OF 74	SHEETS	

SCALE 10 FEET

✓ Dlm 9-1-77 RBB
Plan 8-29-77 FRP
Plotter RWJ 8-29-77

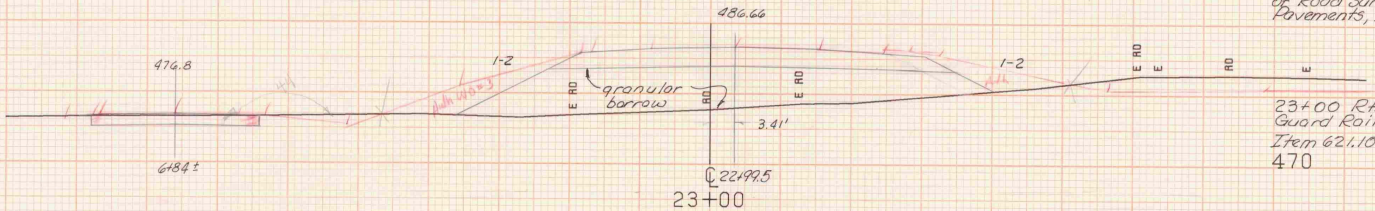
7+93± =
11+50 Sewer Plant Rd. Survey
End Const.



460

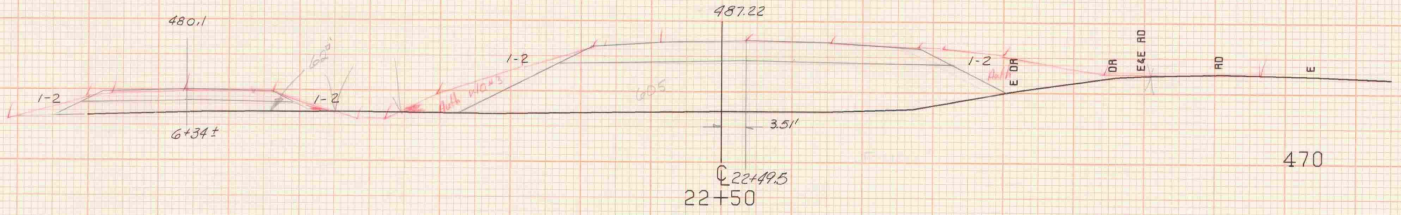
23+37.85
STOP ROADWAY
BEGIN BRIDGE

23+15 Rt.
End Excavation and Removal of Road Surfaces and Pavements, Item 202.15



23+00 Rt.
Guard Rail, Plank (Barricade)
Item 621.10

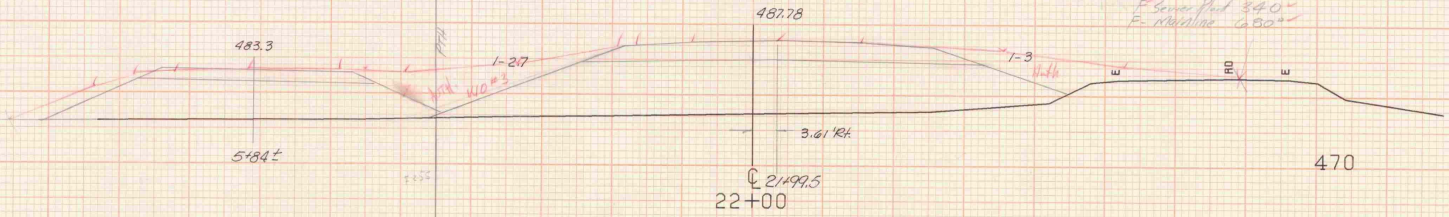
470



470

22+25.5 - 23+38 Lt.
Approach Railing, Item 617.45

21+97.5 - 23+1.0 Rt.
Approach Railing, Item 617.45

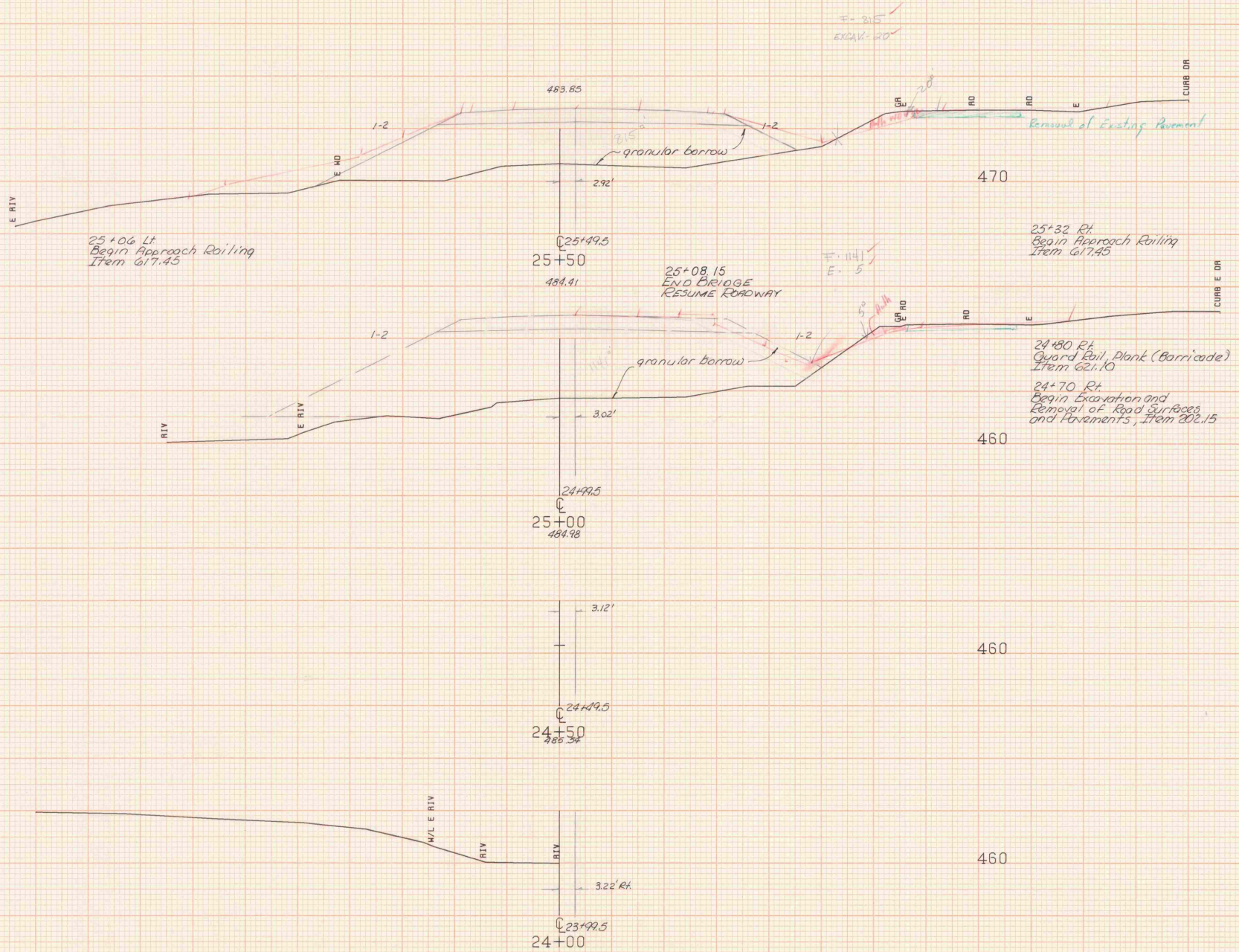


470

FROM STA. 22+00	TO STA. 23+50
PROJECT NAME	NORTHFIELD
NO.	RF-BRF035-2(3)
SURVEYED BY	FANTONI
SHEET 64 OF 74 SHEETS	

PLOTTED 11/13/75
10/75

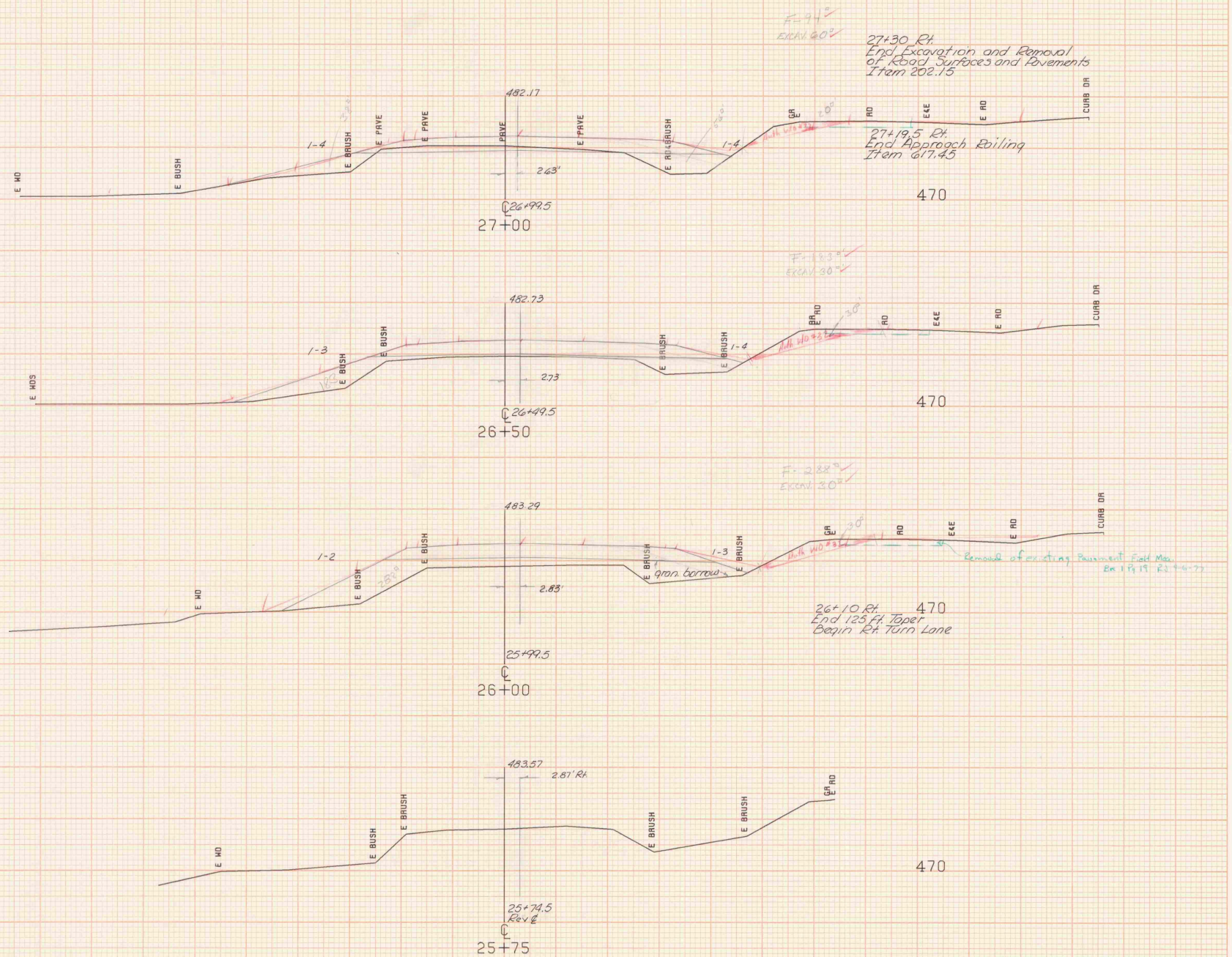
SCALE 10 FEET



FROM STA. 24+00	TO STA. 25+50
PROJECT NAME	NORTHFIELD
NO.	RF-BRF035-2(3)
SURVEYED BY	FANTONI
SHEET 65 OF 74 SHEETS	

PLOTTED 11/13/75
10/75

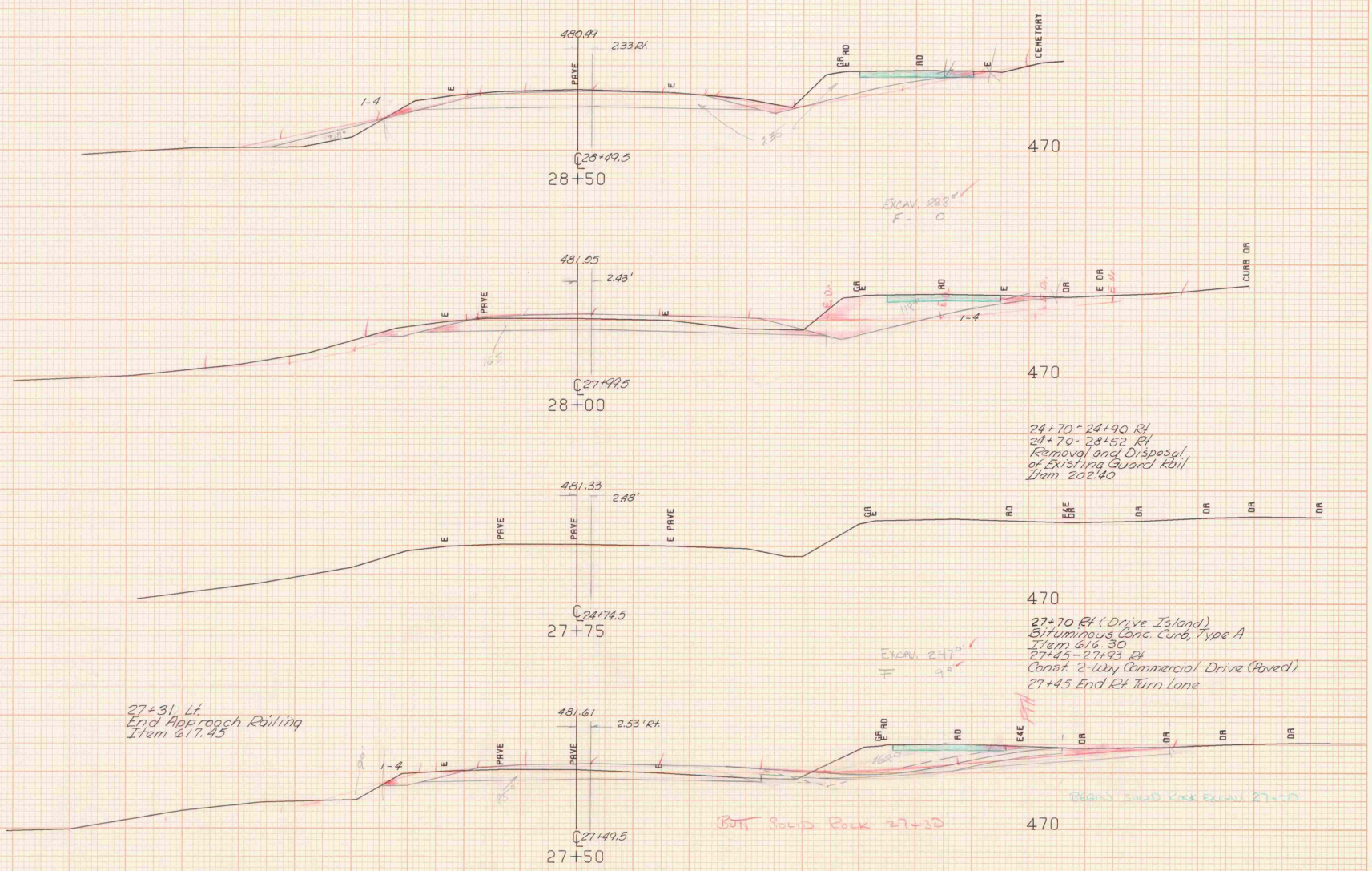
SCALE 10 FEET



FROM STA. 25+75		TO STA. 27+00
PROJECT NAME	NORTHFIELD	
NO.	RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY	FANTONI	10/75
SHEET 66 OF 74 SHEETS		

SCALE 10 FEET

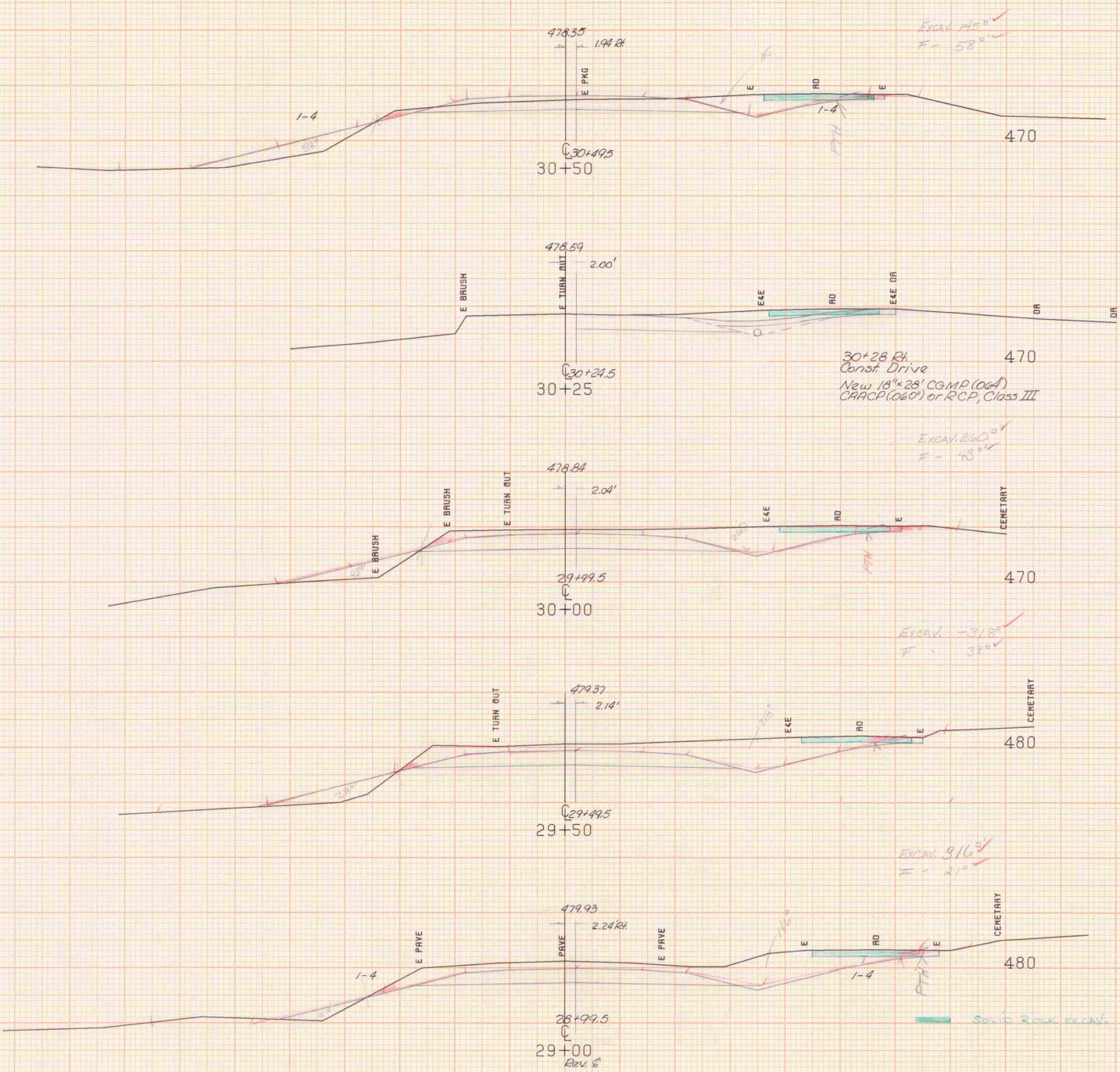
✓Plan REB 9-1-77
PLAN FRP 8-30-77
Plotted RWJ 8-4-77



Plan ✓ 9-6-77 RAN
PLAN 8-30-77 FRP
RAN 8-25-77 Plotted

SCALE 10 FEET

FROM STA. 27+50		TO STA. 28+50
PROJECT NAME	NORTHFIELD	
NO.	RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY	FANTONI	10/75
SHEET 67 OF 74 SHEETS		



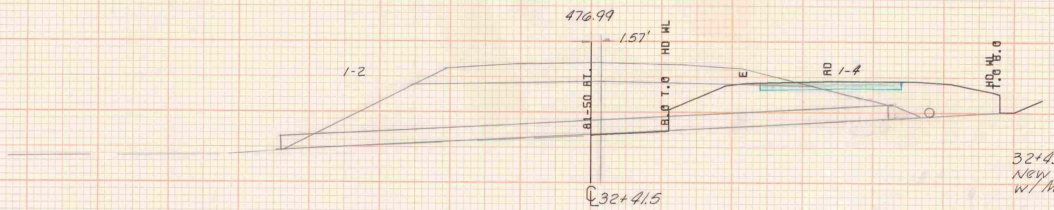
Plan. ✓ Rev. 7-6-77

PLAN. FRP 8-30-77

Plotted Rev. 8-15-77

SCALE 10 FEET

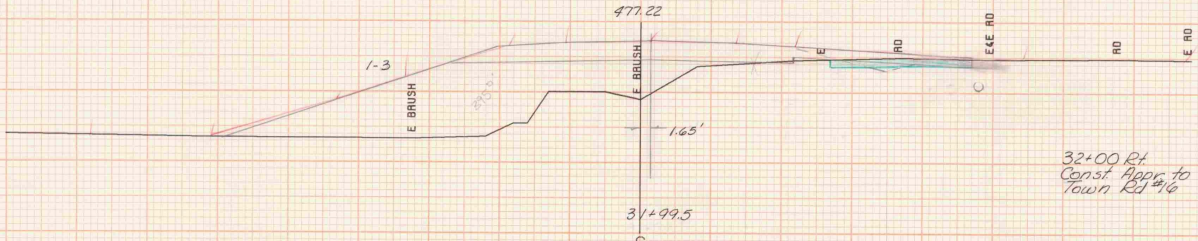
FROM STA. 29+00		TO STA. 30+50
PROJECT NAME	NORTHFIELD	
NO.	RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY	FANTONI	10/75
SHEET 68 OF 74 SHEETS		



32+45 ℄
New 24"x86' ACCGMP(.064")
w/ Metal End Section @ Inlet.

32+42

EXCAV. 63 c.y.
F- 395 s.f.

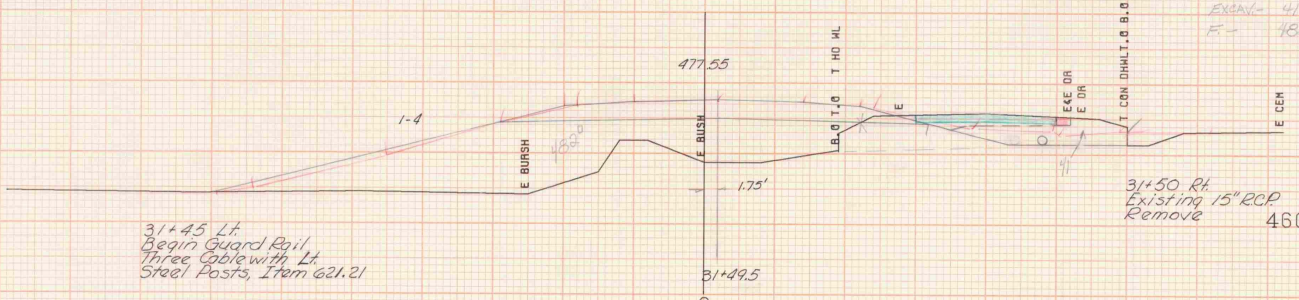


32+00 Rt.
Const. Approach to
Town Rd #16

31+99.5
32+00

31+60 - 32+40 Rt.
New 18"x80' CGMP(.064")
CAACP(.060") or RCP Class III

EXCAV.- 41 c.y.
F.- 182 s.f.

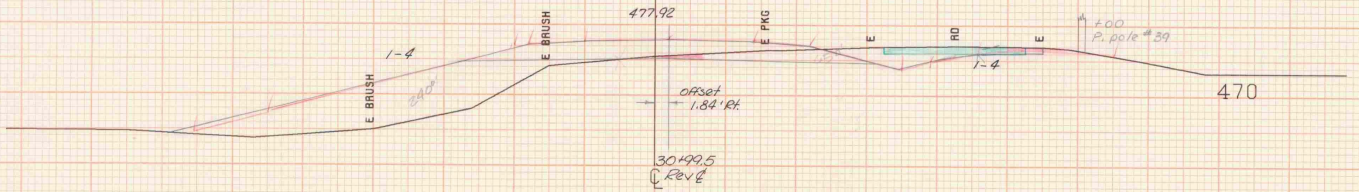


31+50 Rt.
Existing 15" RCP
Remove

31+45 Lt.
Begin Guard Rail,
Three Cable with Lt.
Steel Posts, Item 621.21

31+49.5
31+50

EXCAV. 65 c.y.
F- 260 s.f.

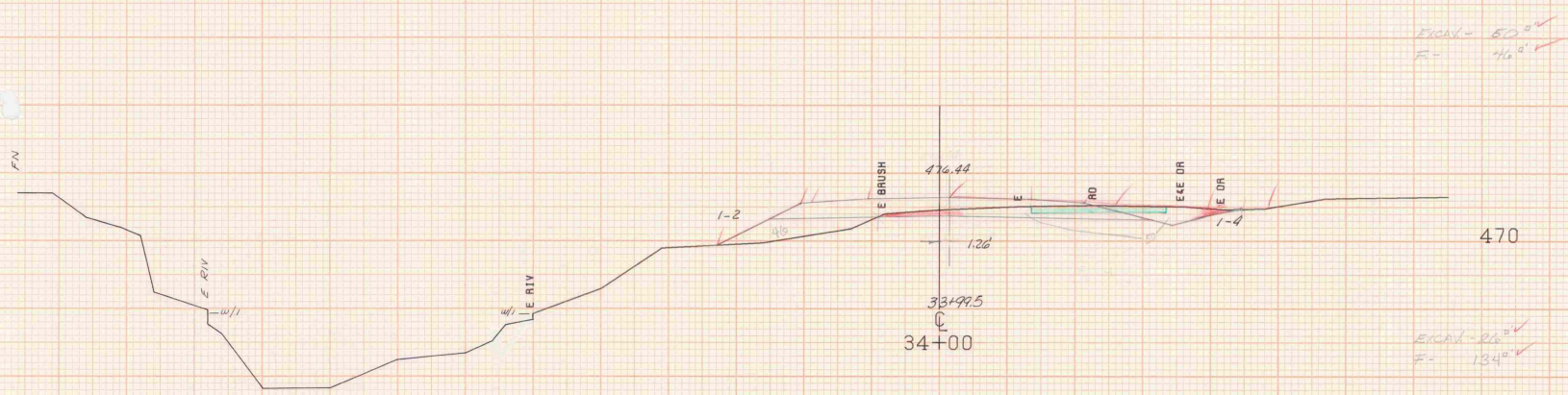


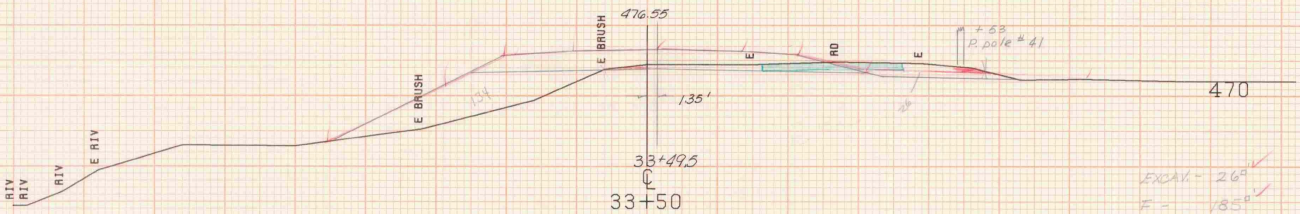
30+99.5 Rev ℄
31+00

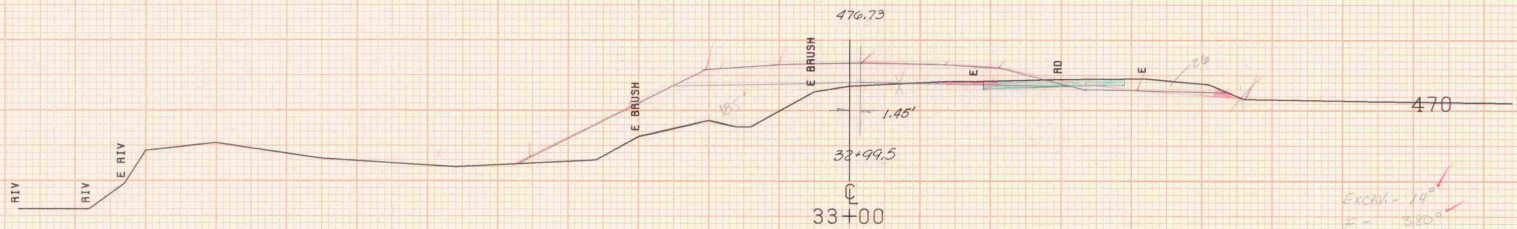
Plan ✓ 2nd J 9-6-77
PLAN TRP 9-21-77
Plotted Rev'd 9-25-77

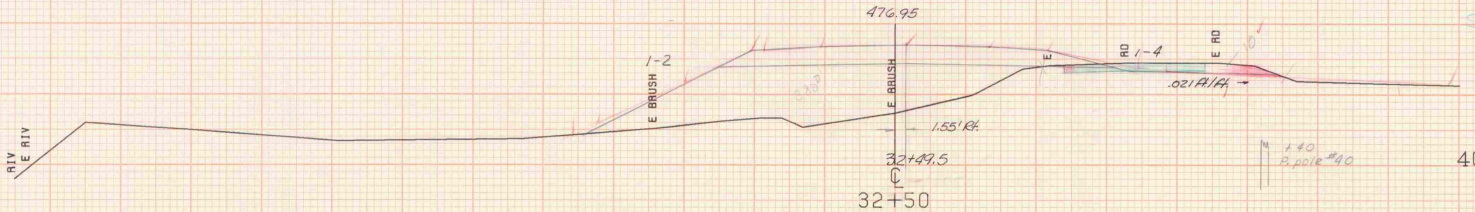
SCALE 10 FEET

FROM STA. 31+00	TO STA. 32+42
PROJECT NAME NORTHFIELD	
NO. RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY FANTONI	10/75
SHEET 69 OF 74 SHEETS	





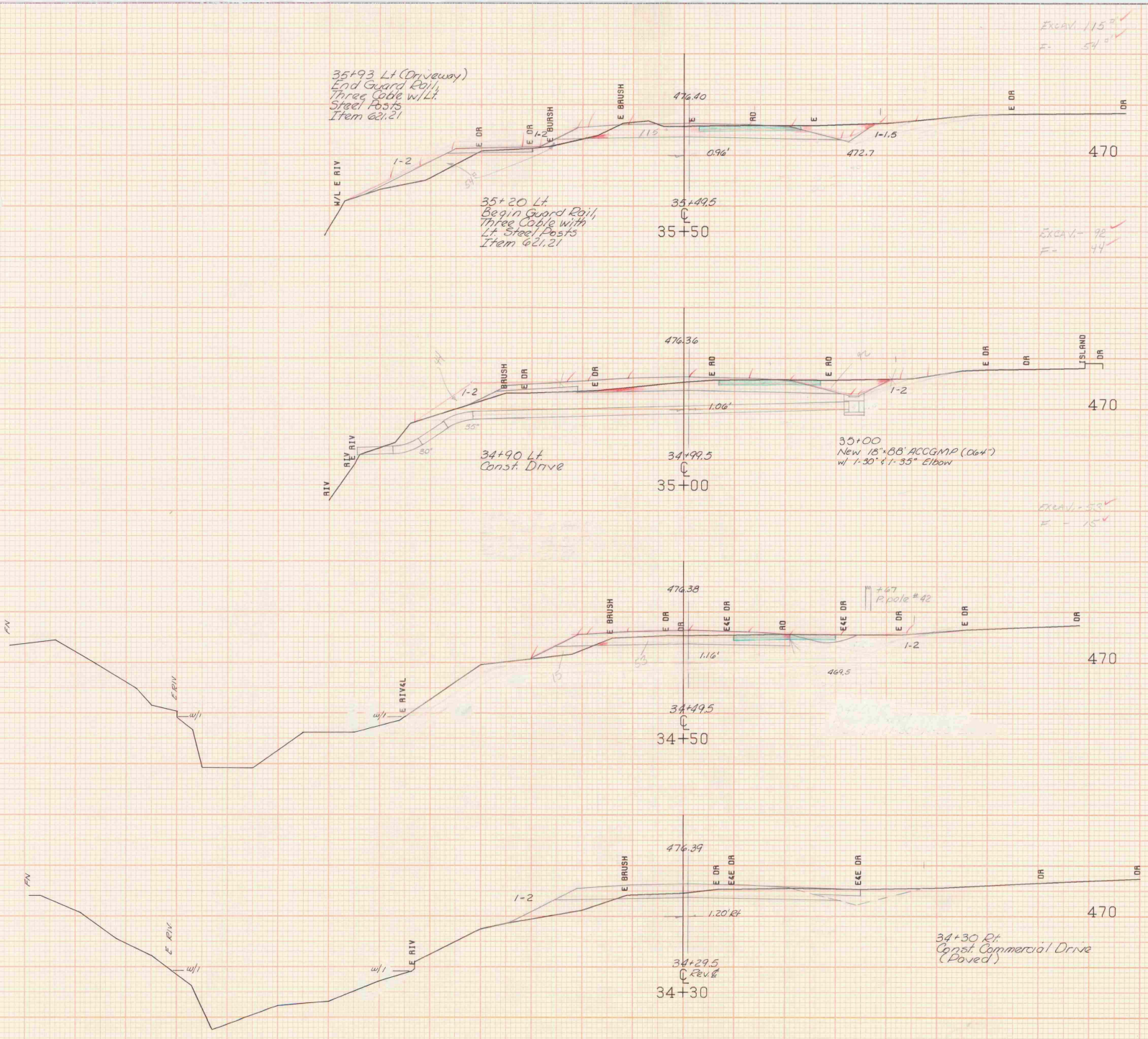




Plans Rec'd 9-6-77
Plans Rec'd 9-21-77
Plotted Rec'd 9-22-77

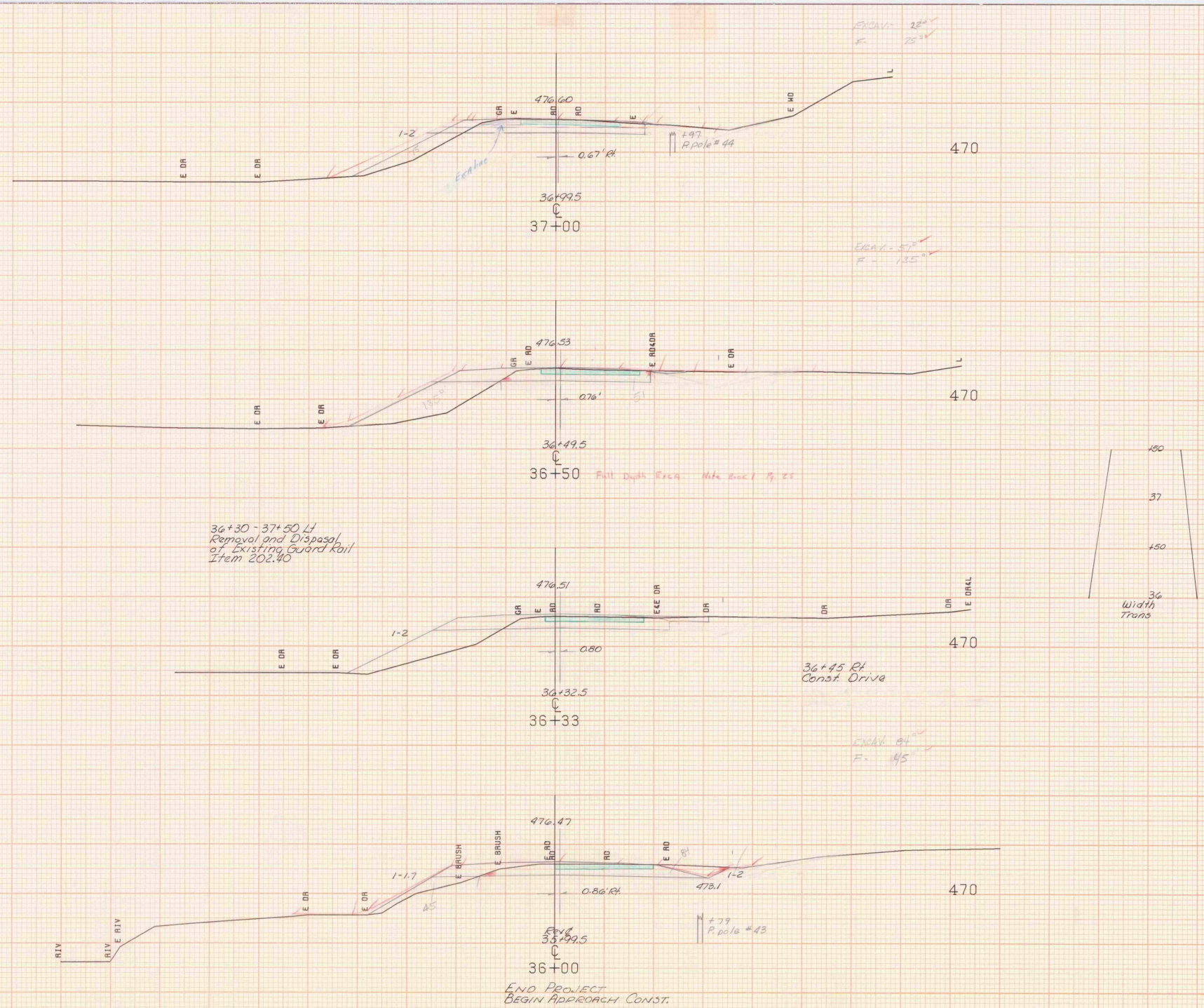
SCALE 10 FEET

FROM STA. 32+50	TO STA. 34+00
PROJECT NAME NORTHFIELD	
NO. RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY FANTONI	10/75
SHEET 70 OF 74 SHEETS	



FROM STA. 34+30		TO STA. 35+50
PROJECT NAME	NORTHFIELD	
NO.	RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY	FANTONI	10/75
SHEET 71 OF 74 SHEETS		

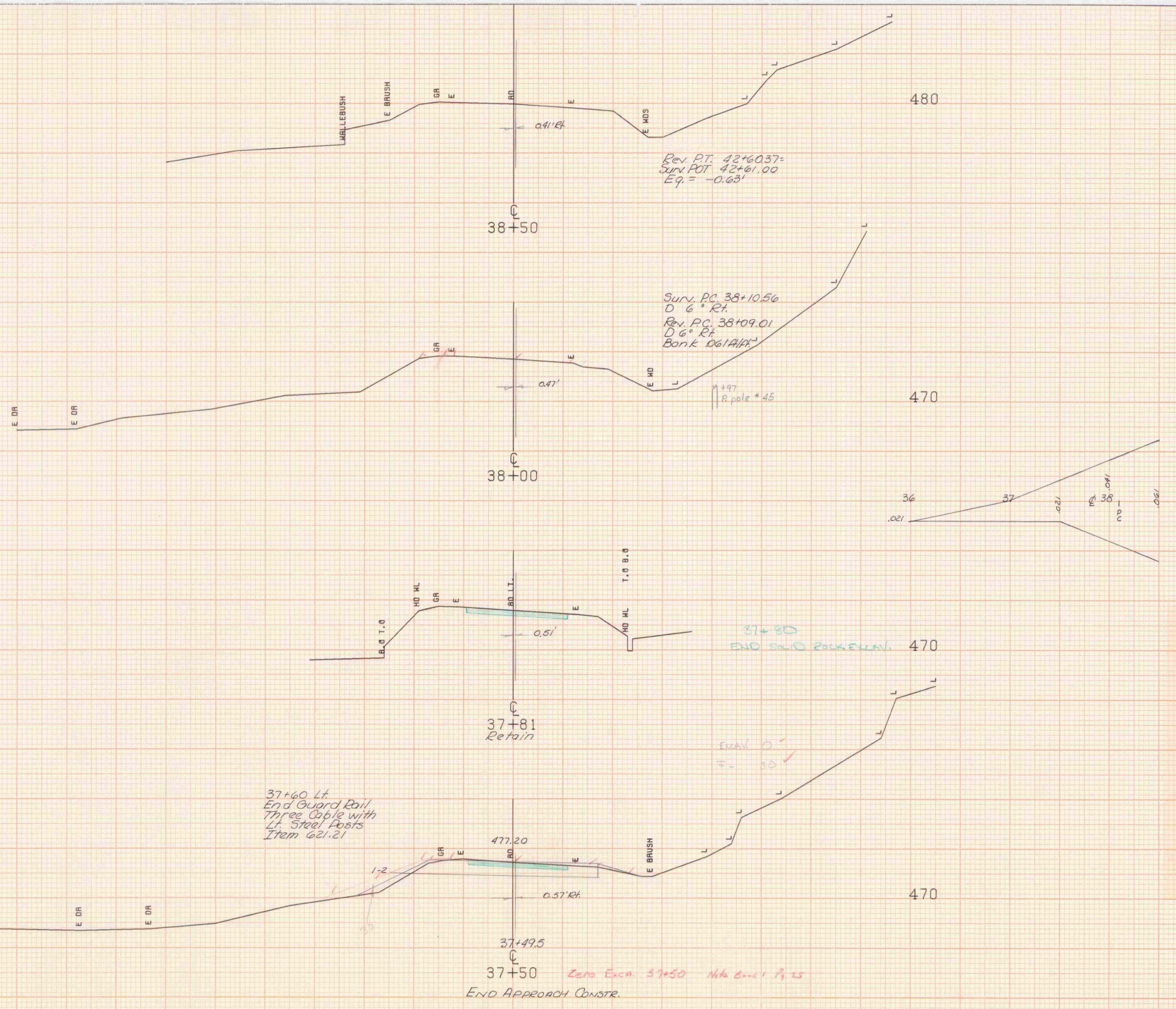
SCALE 10 FEET



Plan. ✓ RJ 9-6-77
PLAN - FRP 9-8-77
Plotted BWJ 8-26-77

SCALE 10 FEET

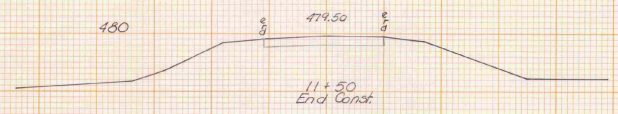
FROM STA. 36+00		TO STA. 37+00
PROJECT NAME	NORTHFIELD	
NO.	RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY	FANTONI	10/75
SHEET 72 OF 74 SHEETS		



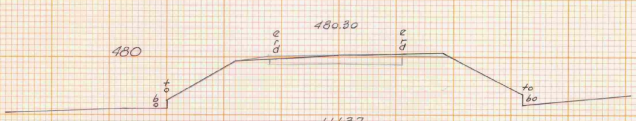
Plan ✓ RWJ 9-6-77
PLAN FRP 8-31-77
RWJ 8-26-77

SCALE 10 FEET

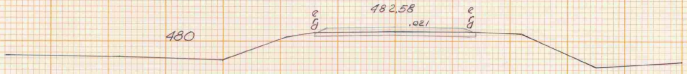
FROM STA. 37+50	TO STA. 38+50
PROJECT NAME NORTHFIELD	
NO. RF-BRF035-2(3)	PLOTTED 11/13/75
SURVEYED BY FANTONI	10/75
SHEET 73 OF 76 SHEETS	



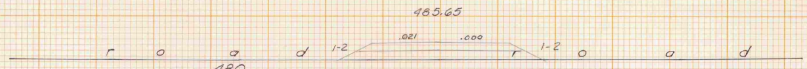
11+50
End Const.



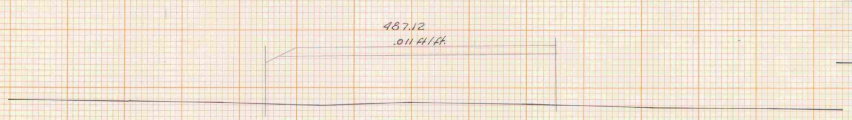
11+37
18" ACCGMP
Retain



11+00



10+50



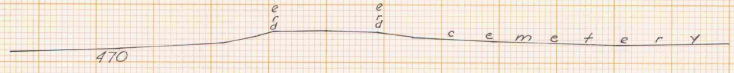
10+25

10+12
Begin Const.

10+00.0=
Vt. Rte 12 21+39.0
Dogwood Glen
℄



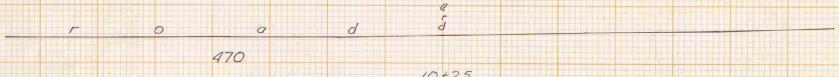
11+50



11+00



10+50



10+25

10+00.0=
Vt. Rte 12 31+95.5
Town Rd # 16
℄

Dogwood Glen &
Town Rd 16 (Cemetery)

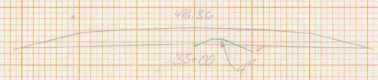
Northfield
RF-BRF 035-2(3)
74 of 74

Fantoni 10-75

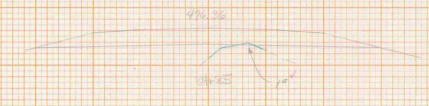
NORTHFIELD
RF-3(RFD35-2(3)

LEDGE X-SECT. NO.1

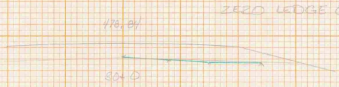
ZERO LEDGE @ 35+15



STA.	AREA	DIST.	VOL.
36+15	0	10	5
36+15	1	15	37.5
35+00	4	15	30.0
35+15	0		



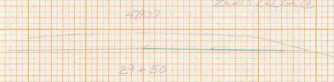
ZERO LEDGE @ 34+75



ZERO LEDGE @ 36+10



STA.	AREA	DIST.	VOL.
29+50	0	15	62.5
29+15	12.5	15	37.5
30+10	0	25	312.5



ZERO LEDGE @ 29+50

ZERO LEDGE @ 35+90





STA.	AREA	DIST.	VOL.
35+65	0	5	0.5
35+40	1	10	5.0
35+40	3.5	25	87.5
35+15	0	15	26.25
35+40	0		

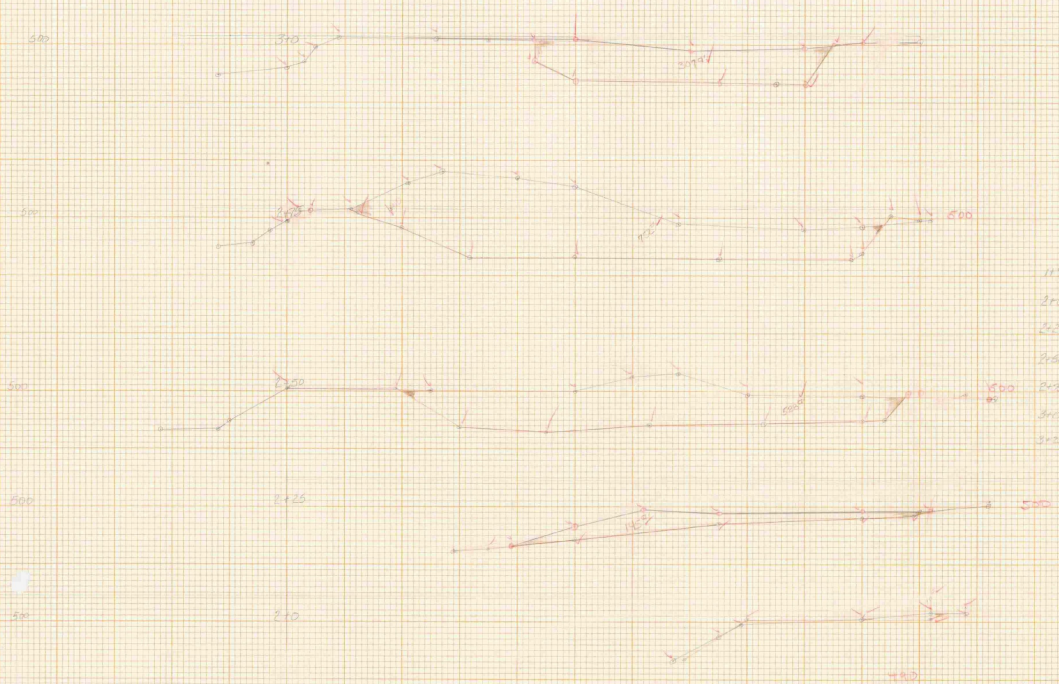


ZERO LEDGE @ 35+65

FINAL SURVEY
DATE
BY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.

ORIGINAL SURVEY
DATE
BY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.

ZERO PIT @ 3+25



1+75	0		
2+0	25	5	125
2+25	25	145	1957.5
2+50	25	528	8412.5
2+75	25	752	14000.0
3+0	25	307	13527.5
3+25	25	0	3937.5

43550 × 1/27 = 1613 CY

PKN 22 NOV 76

T.P. 9-7-77

Book #1 P. 33

ZERO PIT @ 1+75

PLAN & PLOTTING CHECKED BY FRP 9-7-77

K+E 10 X 10 TO THE INCH KEUFFEL & ESSER CO. PRINTED IN U.S.A. 1510

Northfield
RF-BRF 055-2(3)
Gran Borrow (Quebec) Pit #1
PKNyo 18 Nov 76

SHEET No. 5



14+90	0		4900
12+0	980		29,875
12+25	1410		29,375
12+50	940		17,500
12+75	460		14,375
13+0	695	767	17,687.5
13+25	720	550	15750
13+50	380	190	2800
13+70	0		

131,335 ÷ 27 = 4864 CY RWS 8-23-77

FINAL SURVEY — NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

K+E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO.

SHEET No. 6

GROSS PIT #1



Granular Borrow

GROSS PIT

12+50	0		
12+75	25	695	17,375
13+0	25	895	22,375
13+0 BACK	400		
13+0 AHEAD	544		
13+25	25	520	13,000
13+50	25	418	10,450
13+60	10	170	1,700

64,900 x 1/27 = 2404 CY.

DuBois PIT 1613 CY.

4017 CY.

Northfield

RF-BRF 035-2(3)

Gross Pit #1

Earth Borrow

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

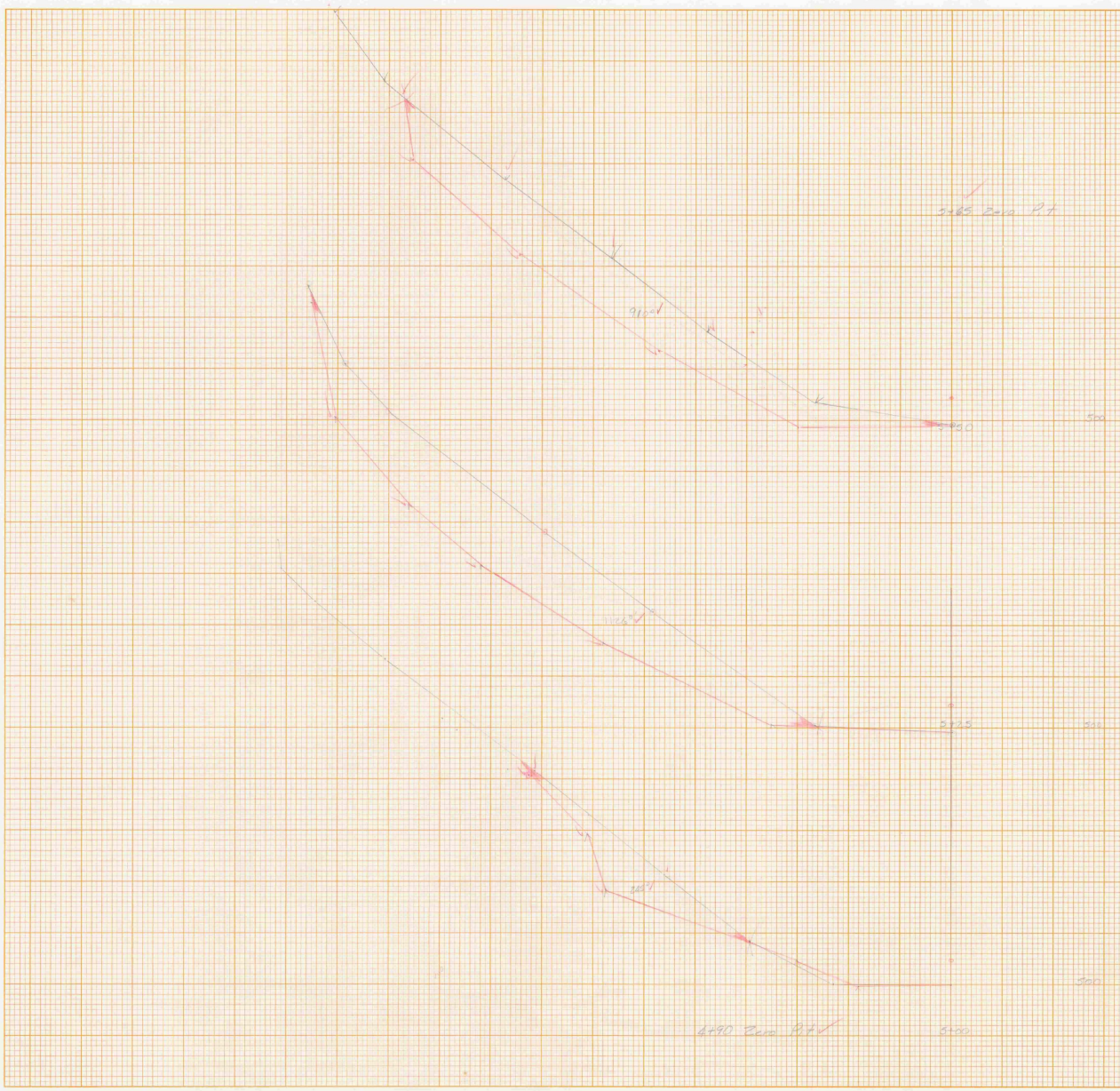
ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

K+E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO.

SHEET No. 7

Northfield RF-BRF 035-2(3)

Earth Borrow Gross Pit No. 2



	Dist		
4+90	Zero Pit	0	
	10		1,225.0
5+00		245	17,137
	25		14,575.0
5+25		1126	
	25		85,450.0
5+50		910	
	15		6,825.0
5+65	Zero Pit	0	

50,637.0 × 1/27 = 1875 cy. 5-26-77 Eng

Book No. 1 P. 31

SHEET No. 8

EARTH BORROW

Gross Pit No. 2

Northfield RF-BRF 035-2(3)

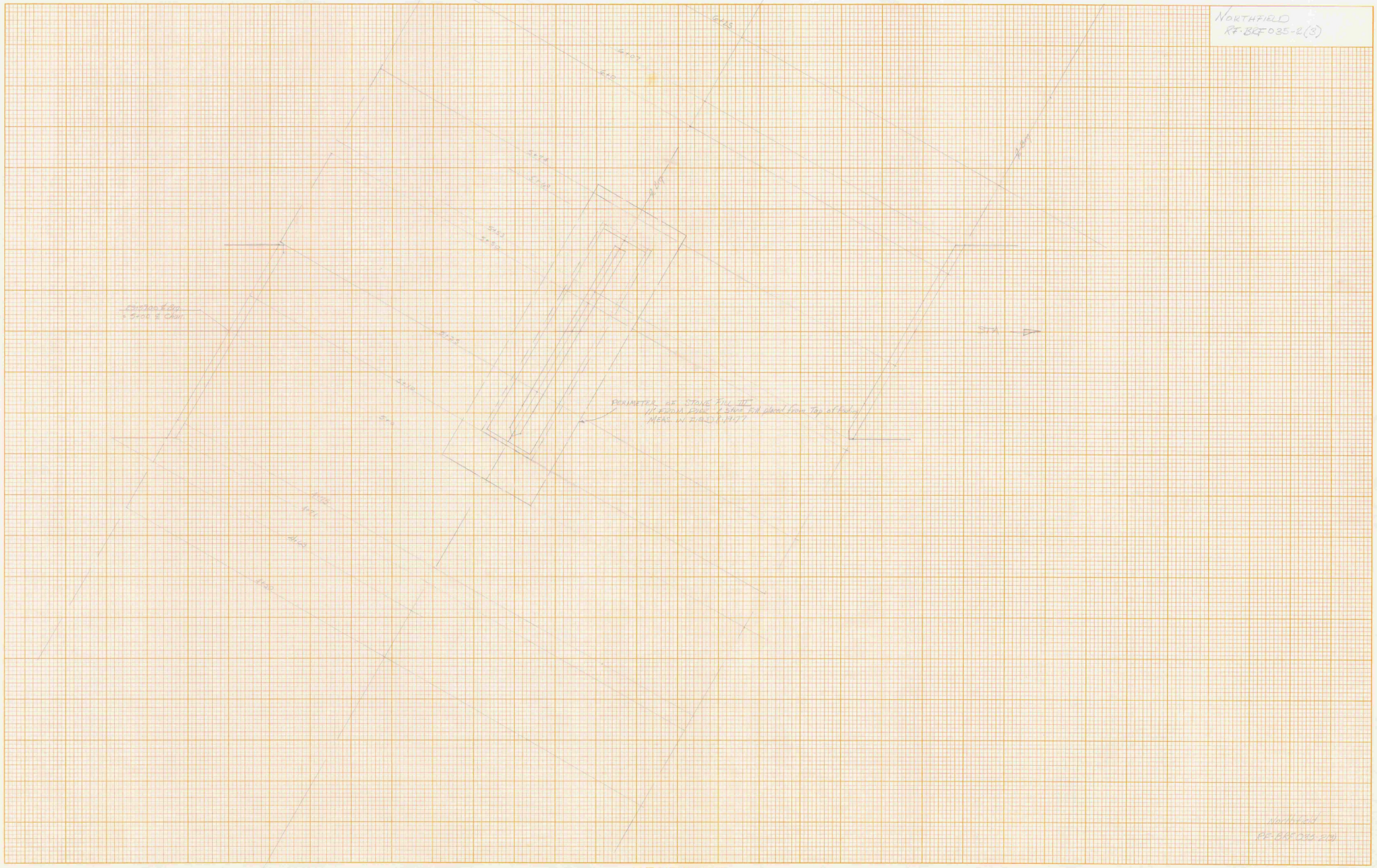
K+E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO.

PLAN & PLATING CHECKED FEB 9-7-77

FINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED BY DATE

ORIGINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED BY DATE

NORTHFIELD
RF-BRF 035-2(3)



FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

Northfield
RF-BRF 035-2(3)

K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

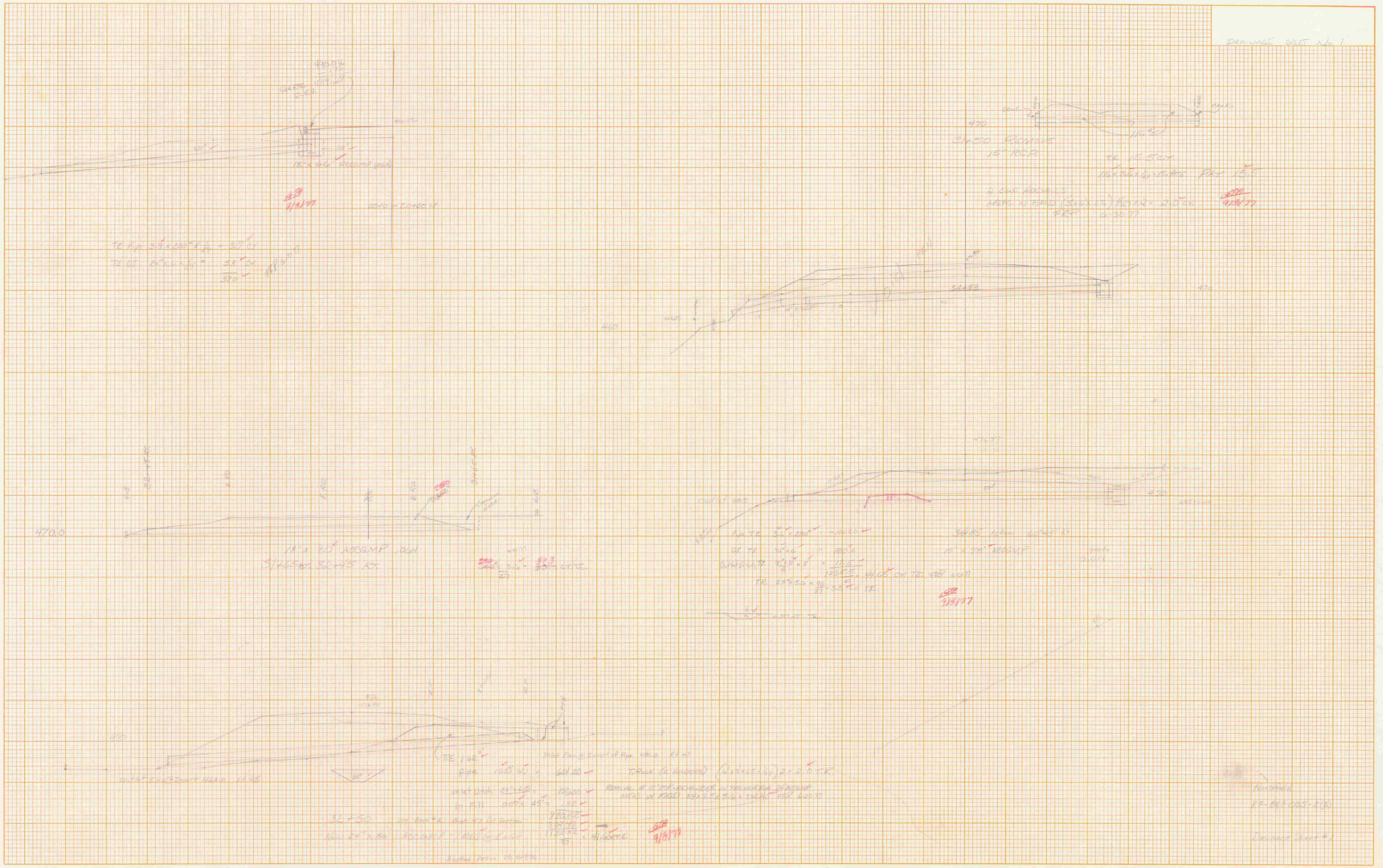
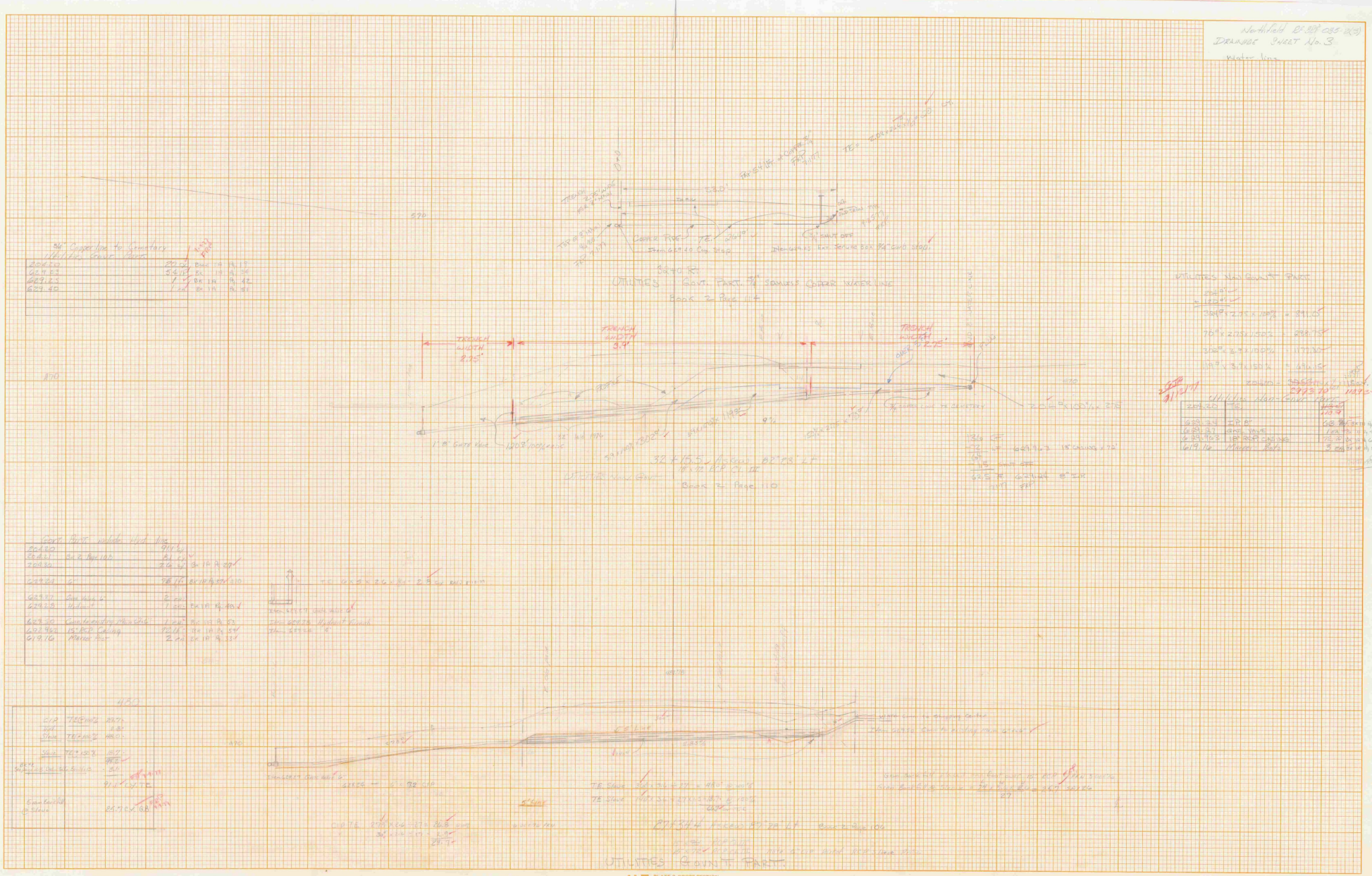
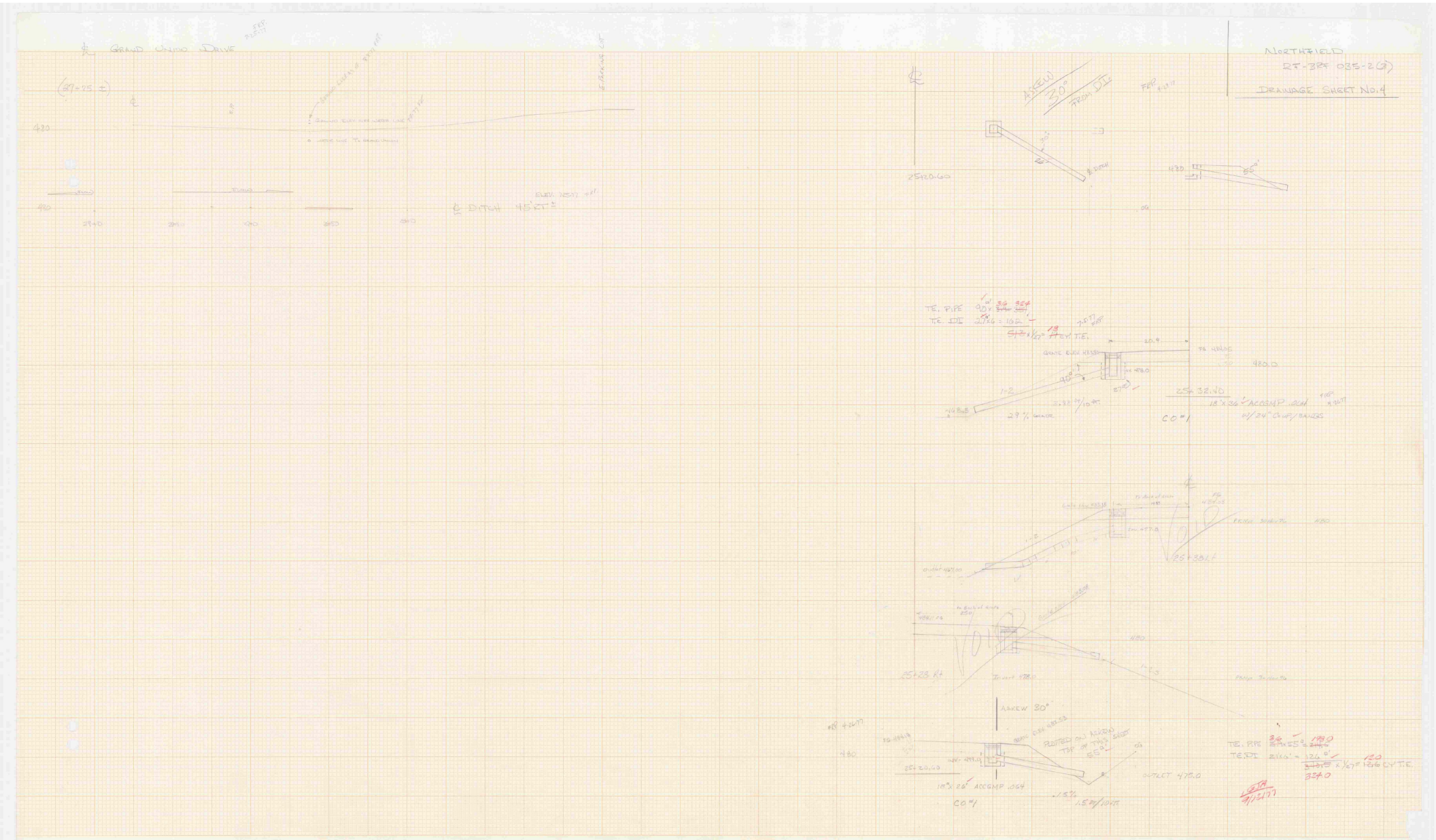


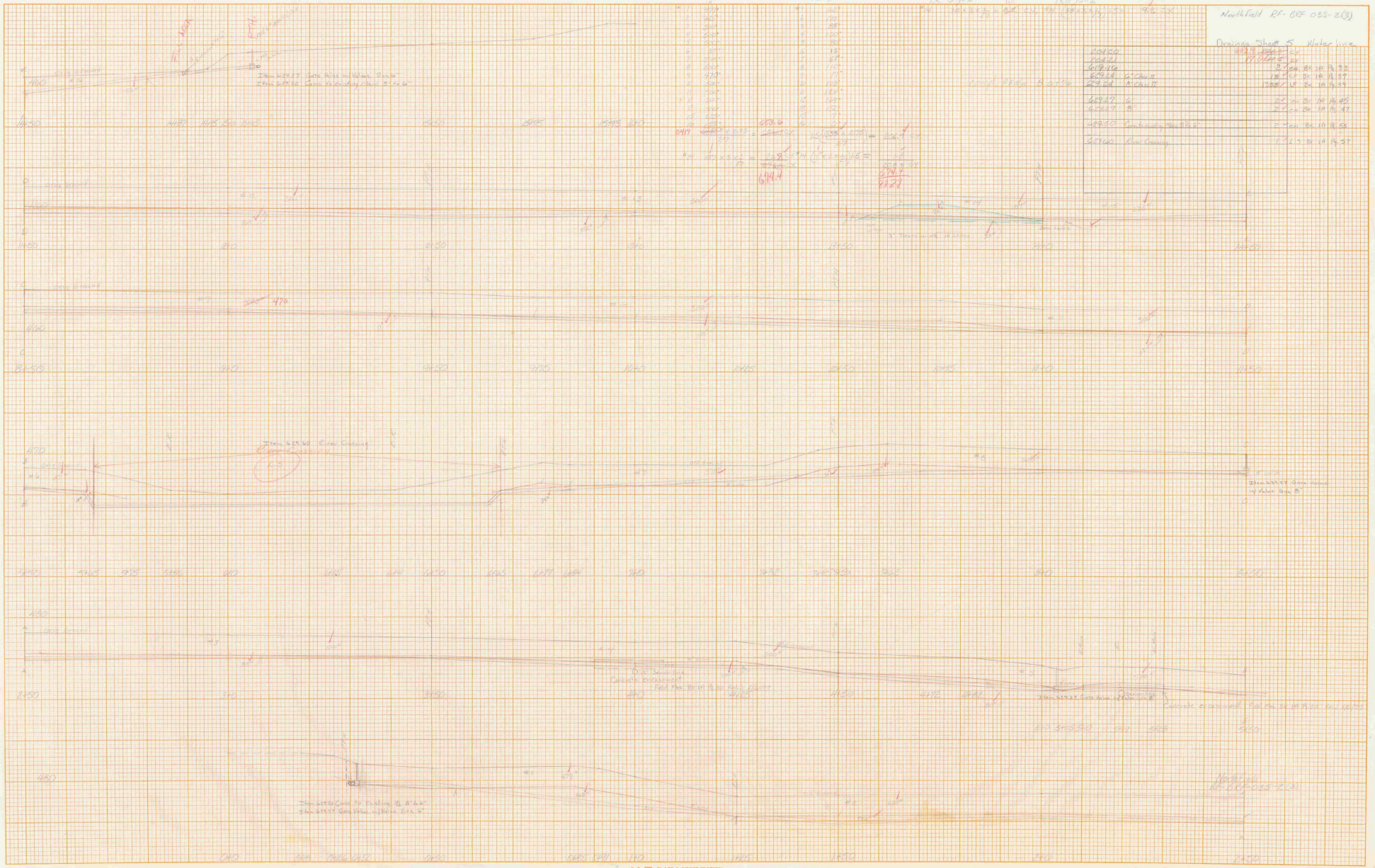
PLATE 3. CROSS SECTION
KEUFFEL & ESSER CO.

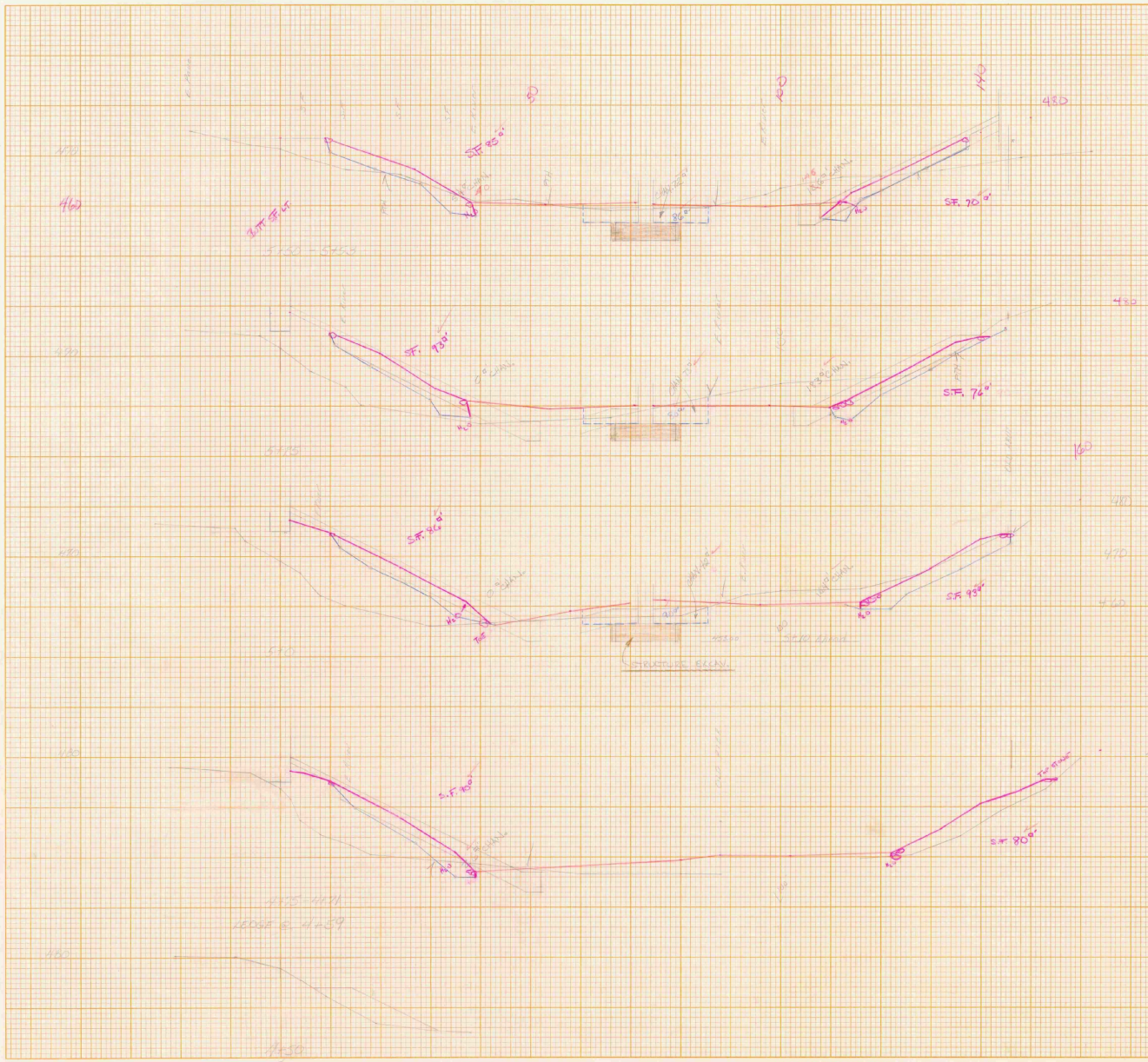
Northfield RF 3RP 035-2(3)
DRAINAGE SHEET No. 3
Water line



K+E PLATE 3. CROSS SECTION
KEUFFEL & ESSER CO.


NORTHFIELD
2T-3RT 035-2(G)
DRAINAGE SHEET NO. 1
GRAND UNIMO DRIVE
(87+75 ±)
420
490
2940
3040
3140
3240
3340
ELEV. 3537.7 +FF
℄ DITCH 45'RT
25+20.60
SKEW 30°
FROM DF
FFP 4219.11
4830
85°
TE. PIPE 90 V 36 36
TE IDI 27.46 = 164
1/22 = 7.45 TE.
20.4
FG 480.05
GRATE ELEV 483.50
INV 479.0
480.0
1-2
-.32 FT/10 FT
7.45
25+32.40
18"X 36" ACCMP .064
W/ 24" CL IIIF/ BANDS
28% GRADE
CO #1
FG 484.55
EXIST. SIDEWALK
INV 477.8
OUTLET 467.00
25+38.11
FG 484.18
INV 479.0
480
25+28.44
TRUNK 478.0
SKEW 30°
FFP 4267.77
FG 484.18
INV 479.0
25+20.49
18"X 28" ACCMP .064
CO #1
1.5% 1.5 FT/10 FT
OUTLET 478.0
TE. PIPE 36 8 INES 180
TE IDI 21.46 = 12.0
1/67 = 1.79 x 1/67 FT 120 CY TE
300
4/12/17


Northfield RF-BRF 035-2(3)
Drainage Sheet 5 Water line
204.20 CY
204.21 CY
619.46 2 ea. Bk 1A Pg 33
629.24 6" Class II 18 LF Bk 1A Pg 37
629.24 8" Class II 1355 LF Bk 1A Pg 39
629.27 6" 2 ea. Bk 1A Pg 45
629.27 8" 2 ea. Bk 1A Pg 47
629.50 Concrete Cutting Main 8" to 6" 2 ea. Bk 1A Pg 55
629.60 River Crossing 1 L.S. Bk 1A Pg 57
Item 629.27 Gate Valve w/ Valve Box 6"
Item 629.30 Conn. to existing Main 8" to 6"
Item 629.60 River Crossing
Item 629.27 Gate Valve w/ Valve Box 8"
Concrete encasement
Item 629.50 Conn. to Existing Main 8" to 6"
Item 629.27 Gate Valve w/ Valve Box 6"
Northfield RF-BRF 035-2(3)
FINAL SURVEY
ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE
K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.



CHANNEL EXCAV.

PIER			
STA.	DIST.	AREA	VOL.
5+0		42	
	25		1,487.5
5+25		73	
	25		1,812.5
5+50		72	
	26		2,553.0
5+76		109	

SUB-TOTAL 5,603.0

LT.			
STA.	DIST.	AREA	VOL.
4+60		0	
	15		195.0
4+75		26	
	25		325.0
5+0		0	
	25		0
5+25		0	
	25		590.0
5+50		49	
	25		1,545.0
5+75		72	
	25		1,550.0
6+0		52	
	25		1162.5
6+25		41	
	25		512.5
6+50		0	

SUB-TOTAL 5,995.0
5695

RT.			
STA.	DIST.	AREA	VOL.
4+75		0	
	25		2,350.0
5+0		164	
	25		4,557.5
5+25		183	
	25		4,112.5
5+50		146	
	25		3,960.5
5+75		138	
	25		2,375.0
6+0		52	
	25		1475.0
6+25		66	
	20		660.0
6+45		0	

SUB-TOTAL 18,040.0
18,560.0

5,603.0
5,995.0 5695
14,060.0 18,560
29,808
29,658 / 27 = 1,098.4 CY. CHAN. EXCAV.
1,098.4 CY. CHAN. EXCAV. 203.27
TOTAL 1,134.4 CY. CHAN. EXCAV. 203.27
1140 DFM 9-14-77

STONE FILL III

PIER			
STA.	DIST.	AREA	VOL.
5+0		90	
	25		2125
5+25		80	
	25		2095
5+50		86	
	26		2132
5+76		78	

6332 / 27 = 234.5 CY.

FINAL STONE FILL
FINAL CHANNEL X-SECT.
ORIG. CHANNEL X-SECT.

LT.			
STA.	DIST.	AREA	VOL.
4+60		90	
	15		1350
4+75		90	
	25		2250
5+0		86	
	25		2275
5+25		93	
	25		2345
5+50		85	

8012.5 / 27 = 296.8 CY

RT.			
STA.	DIST.	AREA	VOL.
4+60		0	
	15		600
4+75		80	
	25		2125
5+0		93	
	25		2125
5+25		73	
	25		1825
5+50		80	
	25		1925
5+75		84	
	25		2175
6+0		90	
	25		2175
6+25		84	
	20		1690
6+45		84	

14,655.0 / 27 = 542.8 CY

PIER	234.5
LT.	296.8
RT.	542.8
BK 3 P.85 FIELD MEAS.	36.0
	1110.1 CY.

613.12

DFM 9-14-77

STRUCTURE EXCAV. 14' x 59' x 3.5' x 1/27 = 107.07 CY. 204.25

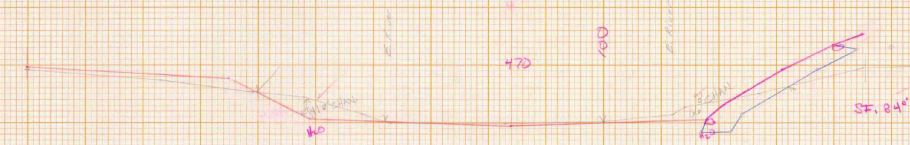
DFM 9-9-77

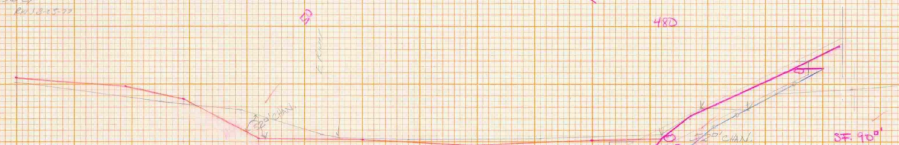
Northfield
RF-BRF 035-2(5)

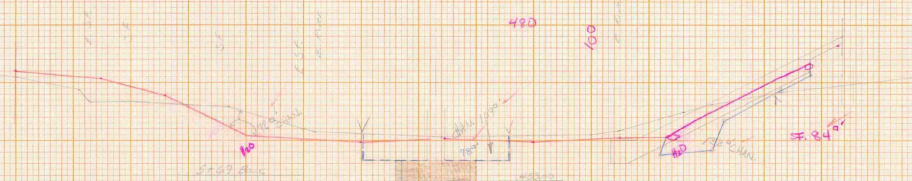
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

K+E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO.







K&E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO.

FINAL DRAINAGE SUMMARY

PROJECT NORTHFIELD
NO. RF BRF 035-2(5)

STATION	STATION	R.C.P. CONC	R.C.P. REINF STEEL	TYPE GRATE A	TYPE GRATE B	TYPE GRATE C	PRCC D.I.	CCB	CRM	R.C.P. CLASS	R.C.P. CL.	R.C.P. CL.	R.C.P. CL.	18" CGMP .064	18" ACCGMP .064	24" ACCGMP .064	ACCGMP GAGE	ACCGMP GA.	ACCGMP GA.	ACCGMP GA.	6" PACCGM U-DRAIN	6" ACCGM U-DRAIN Corrug. Pipe	24" ACCGMP M.E.S.	ELBOWS	TRENCH EARTH 100%	TRENCH EARTH 150%	TRENCH ROCK 100%	TRENCH ROCK 150%	STRUC EXCAV.	CHANNEL EXCAV. EARTH	CHANNEL EXCAV. ROCK	STONE FILL GRAVEL B. F.	STONE FILL HEAVY	STONE FILL LIGHT	RIP RAP	STEEL MARKER POSTS	BOOK	PAGE
82+00	204+50 RT	3.07	203	1											66										372											0	8	30
	254+26 LT	8.62	891	1											256										120											0	2	68
254+26 LT		0.8	834	1											34										18.6											0	2	60
	264+50 RT	—	—											30																					0	2	44
294+50 RT																					80	43			11.3										1	2	26
	301+28 RT													28																					0	2	38
	314+50 RT	REMOVAL																							15.5	8.0									0	0	34
314+65	324+95 RT													80											20.2										0	2	38
324+50 LT															36									1	21.6	20									0	2	42
344+98		1.77	150	1										78											41.2	8.5									0	2	50
354+50 RT	LT																				88	20			14.8	3.9									1	2	42
	Totals	10.1	2918	4										198	706	812					168	63	1		2558	382									2		
																									256												
0+00	Elec. Service Brk. @ Curb 2.0 RT																																				
0+82	Elec. Line 32.2													36" CGMP Stub			UTILITIES Govt't Part																				
0+82	15+08																18" RCP Connection																				
2+77.4	Phone Pedestal RT																																				
2+77.4	8+40 RT																72"																				
	7+84 LT																																				
											1	1	1				72				54	54																
32+10	Phone RT 32+22																																				
																	72																				

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	Fill AREA	Fill CU. YDS.
17+00							
	50						
17+50		0					
	50	1	9				
18+00		10				0	
	50		80				2
+50		70				8	
	50		103				22
19+00		95				22	
	50		68				71
+50		35				55	
	50		32				230
20+00		0				265	
	50						750
+50						595	
	50						1241
21+00						395	
	50						1384
22+00						388	
	50						1278
+50						680	
	50						1190
23+00						605	
	50						1000
23+40						471	
	40						706
+40	Bot					471	
	50		Bridge 2x87.83				
24+00							
	50						
+50							
	50		Bridge 25'0"R.S.				
25+28	Butt	5				1141	
	22		18				906
+50		20				815	
	50		46				1021
26+00		30				288	
	50		54				436
+50		40				183	
	82		83				250
27+00		40				94	
	50		284				93
+50		247				9	
	50		435				8
28+00		322				0	
	50		424				26
+50		232				28	
	50		510				45
29+00		316				21	
	50		567				55
+50		518				38	
	50		635				75
30+00		260				43	
	50		375				94
+50		145				58	
	50		194				274
31+00		65				240	
	50		98				668
+50		41				482	
	50		38				817
32+00		0				395	
	50		19				718
+50		14				380	
	50		37				523
33+00		26				185	
	50		48				295
+50		26				134	
	50		80				167
34+00		60				46	
	50		105				56
+50		53				15	
	50		134				55
35+00		92				44	
	50		192				94
+50		118				54	
	50		184				92
36+00		84				45	
	50		125				167
+50		51				138	
	50		68				194
37+00		72				75	
	50		20				97
+50		0		Butt		30	
	50						
38+00							
CARRIED FORWARD							
COLUMN TOTAL			4972				15170

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	Fill AREA	Fill CU. YDS.
						SEWAGE	PLANT RD.
7+34.4	Butt	15					
6+84		44	54			0	
6+34		0	41			67	57
5+84						340	372
5+12	Butt					130	622
Totals			95				1051

Station	Total Excavation Design	Total Excavation Final	Total Excavation Diff.	Rock Design	Rock Diff.
16+50–20+50	715	470	-245	206	181 - 25
20+50–25+10	70	74	+ 4	56	74 + 18
25+10–30+00	3057	3172	+115	304	270 + 16
30+00–35+10	1580	1492	-88	407	373 - 34
35+10–39+00	949	796	-153	148	279 +131
N. Totals	6371	6084	-287		
Rd to Sewage Plant	125	95	-30		
Hayward Gen.	73	0	- 73		
Grand Union Co.	0	156	+156	Rd. Gravel	
Total	6569	6255	-314	1021	1127 +106

		TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.												
STATION	DIST																

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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2	PROJECT TYPICAL SHEET
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7–10	LAYOUT SHEETS
11–15	TRAFFIC SIGN SUMMARY SHEETS
16–19	TRAFFIC SIGN DETAIL SHEETS
20	CONSTRUCTION APPROACH SIGNING & TRAFFIC CONTROL DETAIL SHEET
21	UTILITY, SIDEWALK RAMP & DROP INLET DETAIL SHEET
22	SANITARY SEWER MANHOLE RECONSTRUCTION DETAIL SHEET
23–24	TRAFFIC SIGNAL LAYOUT SHEETS
25–29	MAST ARM CANTILEVER DETAIL SHEETS
30	RAILROAD CROSSING DETAIL SHEET
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C-3	SIDEWALK RAMPS	09-15-93 R
D-4	CORRUGATED STEEL PIPE END SECTION	10-30-85 R
D-6	REINFORCED CONCRETE DROP INLET	04-04-73 R
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E-100	CONSTRUCTION APPROACH SIGNS	10-21-92 R
E-101	CONSTRUCTION SIGN DETAILS	10-21-92 R
E-102	CONSTRUCTION SIGN DETAILS	10-21-92 R
E-106	TRAFFIC CONTROL MISCELLANEOUS DETAILS	09-20-93 R
E-107	CONSTRUCTION AREA BARRICADES AND DELINEATION	09-20-93 R
E-107a	BREAKAWAY BARRICADE DETAILS	09-20-93 R
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	09-20-93
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	09-20-93 R
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E-121	STANDARD SIGN PLACEMENT CONVENTIONAL ROAD	01-23-89
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E-143	REGULATORY SIGN DETAILS	10-30-87
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E-160	FLANGED CHANNEL STEEL SIGN POST	10-21-92 R
E-161	W-SHAPED STEEL SIGN POST	10-21-92 R
E-162	TUBULAR ALUMINUM SIGN POST	10-21-92 R
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E-171A	TRAFFIC CONTROL SIGNALS GENERAL NOTES AND DETAILS	11-17-93 R
E-171B	TRAFFIC CONTROL SIGNALS MISCELLANEOUS DETAILS	11-17-93 R
E-171C	TRAFFIC CONTROL SIGNALS CANTILEVER MOUNTING DETAILS	11-17-93
E-172	VEHICLE DETECTOR LOOP DETAILS	11-17-93 R
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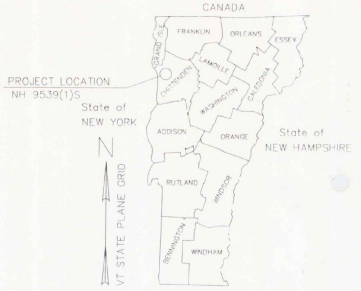
E-191	PAVEMENT MARKING DETAILS	01-23-89 R
*D-20	HIGHWAY CROSSING FOR UNDERGROUND UTILITIES	03-10-95
*E-141	REGULATORY SIGN DETAILS	10-30-87

* STANDARDS OUT OF ORDER

CANADA



PROJECT LOCATION
NH 9539(1)S

State of NEW YORK

State of NEW HAMPSHIRE

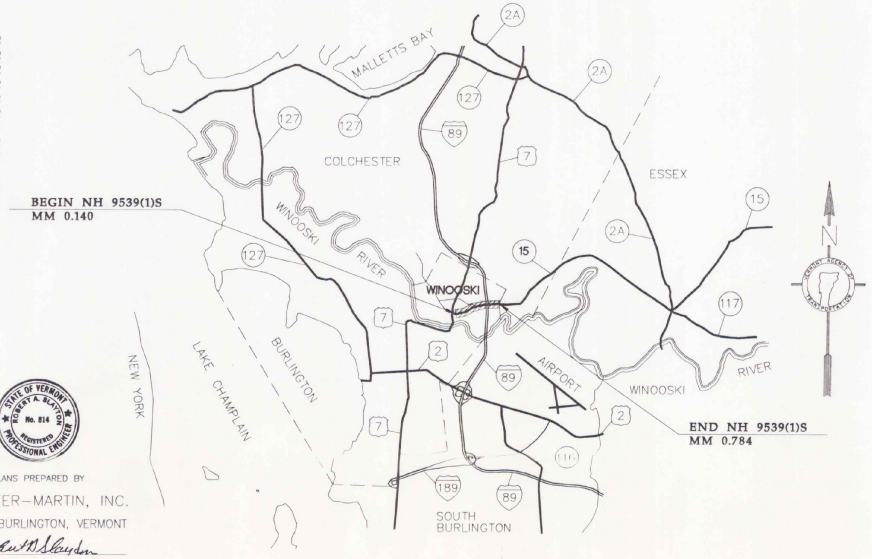
Commonwealth of MASSACHUSETTS

PROPOSED IMPROVEMENT
CLASS I TOWN HIGHWAY
CITY OF WINOOSKI
COUNTY OF CHITTENDEN
VT ROUTE 15, F.A.P.

BEGINNING IN WINOOSKI CITY ON VT ROUTE 15 AT MILE MARKER 0.140 AND EXTENDING EASTERLY ALONG VT ROUTE 15 FOR A DISTANCE OF 0.644 MILES TO THE WINOOSKI CITY/COLCHESTER TOWN LINE AT MILE MARKER 0.784 IN WINOOSKI CITY.

MILE MARKER TO MILE MARKER DATA	LENGTH (FEET)	LENGTH (MILES)
CITY OF WINOOSKI VT ROUTE 15		
MM 0.140 TO MM 0.784 =	3400.32	0.644

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING AND RESURFACING OF THE EXISTING HIGHWAY, NECESSARY SAFETY IMPROVEMENTS, NEW PAVEMENT MARKINGS AND INCIDENTAL ITEMS.



TRAFFIC DATA

WINOOSKI NH 9539(1)S	1995 ADT(DHV)	2005 ADT(DHV)	CUM. ESALS
U.S. 7 TO BARLOW ST.	14230(1425)	16340(1635)	1,601,000
BARLOW ST. TO E. SPRING ST.	19130(1915)	22050(2205)	2,415,000
E. SPRING ST. TO I-89(RAMP A)	23850(2385)	27350(2735)	3,036,000
I-89(RAMP A) TO LIME KILN RD. (COLCHESTER)	27160(2715)	31160(3115)	3,315,000

RIGHT-OF-WAY LIMITS, IF APPLICABLE, ARE PROVIDED SOLELY FOR THE CONVENIENCE OF THE STATE AND ITS CONTRACTOR DURING THE COURSE OF THIS PAVING PROJECT. ANY REFERENCES TO OFFSETS ON THESE PLANS ARE APPROXIMATE AND SHOULD NOT BE RELIED UPON FOR ANY PURPOSES.

UNLESS OTHERWISE NOTED, ALL DRAWINGS AND DETAILS ON THESE PLANS ARE DRAWN "NOT TO SCALE".

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

CONVENTIONAL SIGNS

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

C:\PAVING\WINOS_15\TITLE_24, 04/28/95 at 03:07

DATUM
VERTICAL N/A
HORIZONTAL N/A

STATE OF VERMONT HERBERT A. BLATCH No. 814 REGISTERED PROFESSIONAL ENGINEER

PLANS PREPARED BY
WEBSTER-MARTIN, INC.
SOUTH BURLINGTON, VERMONT
BY Robert H. Blatch

APPROVED Earl R. Evans DATE 6/14/95
DIRECTOR OF CONSTRUCTION, ROAD & MAINTENANCE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE: _____
DIVISION ADMINISTRATOR

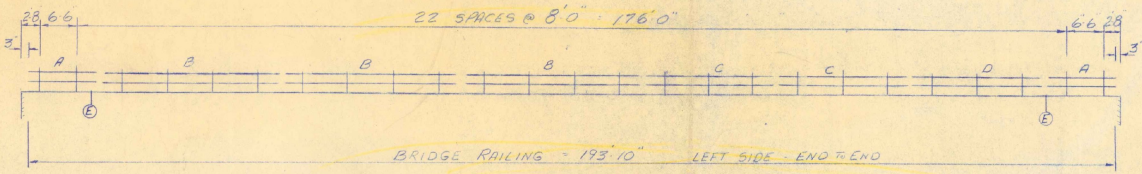
PROJECT WINOOSKI CITY
NH 9539(1)S

SHEET 1 OF 31 SHEETS

RAIL REQUIREMENTS

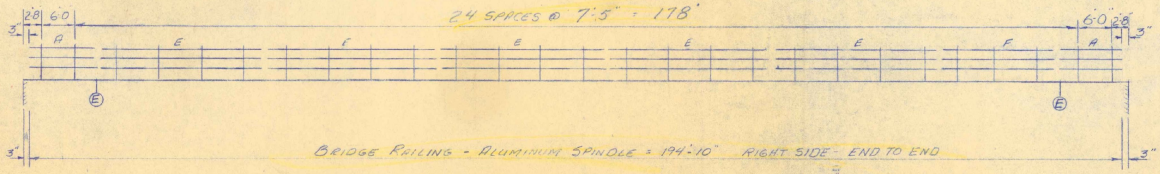
CODE	LENGTH	BARRIER RAIL	HAND RAIL
A	12'-0"	8	2
B	32'-0"	6	0
C	24'-0"	4	0
D	25'-24"	2	0
E	30'-0"	10	8
F	20'-24"	2	1

2- RAIL



STATIONING

3- RAIL



SPINDLE PANELS

24 ea = 11 Ballusters @ 7" oc 70" - Panel Length 80½"

2 ea 9 Ballusters @ 7" oc 56" - Panel Length 66½" 63½"

NOTES:
1. Provide 2" expansion at (E) Joints.
2. Provide 3/4" expansion at all remaining rail joints.

STATE COPY

STATE COPY

APR 26 1977

RECEIVED
CK'D BY DEL OK'D BY
RESUBMIT
BY J. WOOD APPROVED
DATE 4-27-77

Rev. #2 22 April 77 Changed Post Spacing Back To Orig. Design
Rev. #1 22 Mar 77 Changed Post Spacing.

LAFAYETTE - SHELDON INC.
KELLOGG ROAD ESSEX JUNCTION VT.

SCALE NONE APPROVED BY: DRAWN BY: JMP
DATE MAR 77 CHECKED: REVISED:

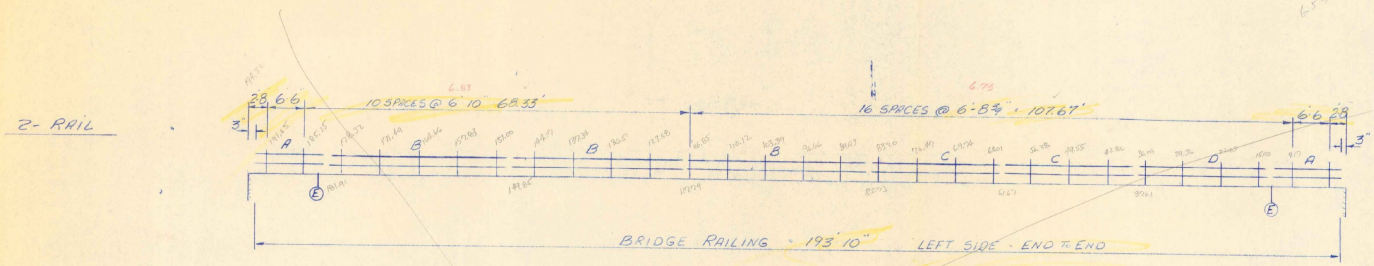
Aluminum Bridge Rail
VT Rte 12 over Dog River
Northfield

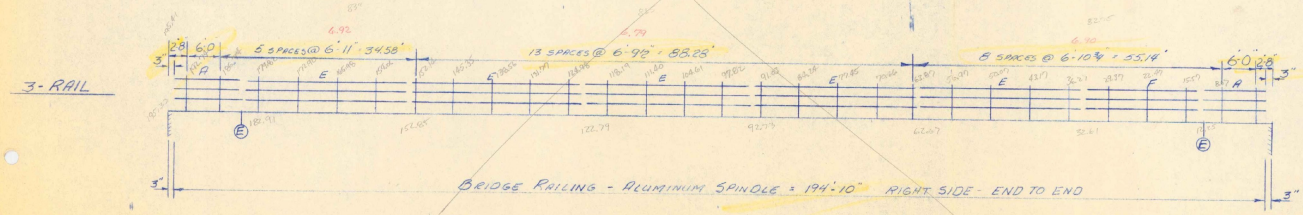
NORTHFIELD
RF BR# 035-2(3)

1/4

RAIL REQUIREMENTS

CODE	LENGTH	BARRIER RAIL	HAND RAIL
A	12'-0"	8	2
B	32'-0"	6	0
C	24'-0"	4	0
D	25'-2¼"	2	0
E	30'-0"	10	5
F	20'-2¼"	2	1





SPINDLE PANELS

26 ea = 10 Ballusters @ 7" oc = 63" - Panel Length = 73½" (73")

2 ea = 9 Ballusters @ 7" oc = 56" - Panel Length = 66½" (63½")

NOTES:
1. Provide 2" expansion at Ⓔ Joints.
2. Provide 3¼" expansion at all remaining rail joints.

STATE COPY

VOID

MAR 25 1977

RECEIVED
CK'D BY DEL OK'D BY WBT
RESUBMIT ____ APPROVED As Noted
BY J. WOOD DATE 3-29-77

Rev #1 22 Mar 77 Changed Post Spacing.

LAFAYETTE - SHELDON INC.
KELLOGG ROAD ESSEX JUNCTION VT.

SCALE NONE	APPROVED BY	DRAWN BY AMP
DATE MAR 77		REVISED

Aluminum Bridge Rail
Vt Rte 12 over Dog River

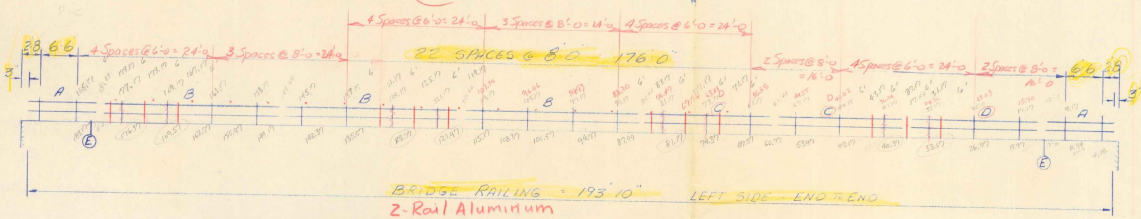
Northfield RF-BRF 035-2(3) | DRAWING NUMBER LC-442

RAIL REQUIREMENTS

CODE	LENGTH	BARRIER RAIL	HAND RAIL
A	12'-0	8	2
B	32'-0	6	0
C	24'-0	4	0
D	25'-24	2	0
E	30'-0	10	5
F	20'-24	2	1

2- RAIL

Recommendation
26 Spaces @ 6'-9¼ = 176'-0

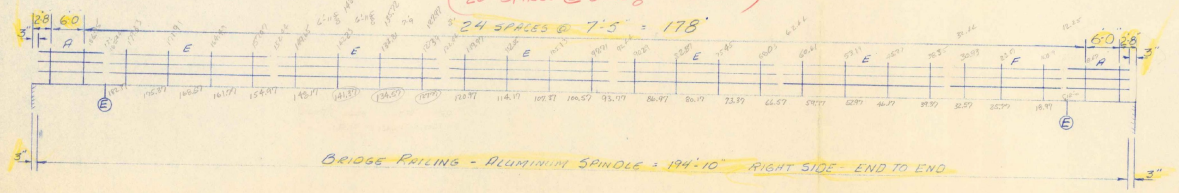


BRIDGE RAILING = 193'-10" LEFT SIDE END TO END
2-Rail Aluminum

STATIONING

3- RAIL

Recommendation
26 SPACES @ 6'-10⅛ = 178'-00
24 SPACES @ 7'-5" = 178'



BRIDGE RAILING - ALUMINUM SPINDLE = 194'-10" RIGHT SIDE - END TO END

SPINDLE PANELS

24 ea = 11 Ballusters @ 7" oc = 70" - Panel Length = 80½"
2 ea = 9 Ballusters @ 7" oc = 56" - Panel Length = 66½"

NOTES:
1. Provide 2" expansion at Ⓔ Joints.
2. Provide ¾" expansion at all remaining rail joints.

STATE COPY VOID

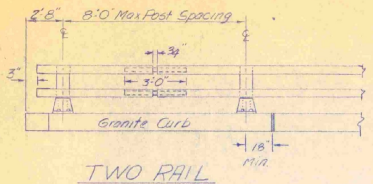
MAR 4 1977

VOID

RECEIVED
CK'D BY DEJ OK'D BY WAT
RESUBMIT APPROVED
BY J. WOOD DATE 3-15-77

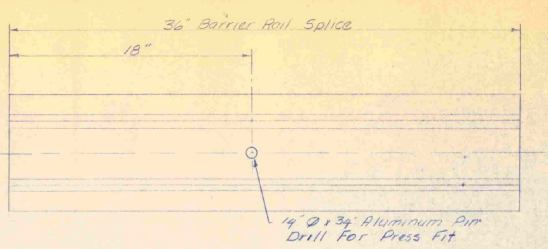
LAFAYETTE - SHELDON INC.
KELLOGG ROAD ESSEX JUNCTION VT.
SCALE NONE APPROVED BY DRAWN BY RMP
DATE MAR 77 REVISED
Aluminum Bridge Rail
Vt Rte 12 over Dog River
Northfield RF-BRF 035-2(3) DRAWING NO. LC-442

1/4

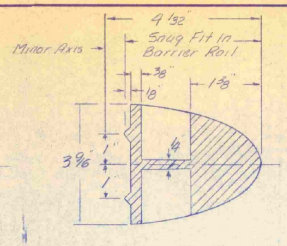


TWO RAIL

Allowable Stresses
Railing 21,000 PSI
Posts 17,000 PSI

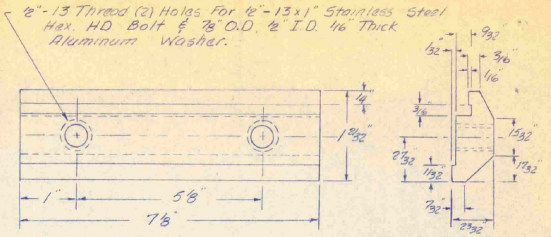


Elevation



Barrier Rail Splice Section

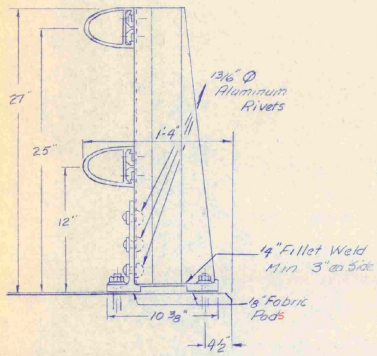
SPLICE DETAILS



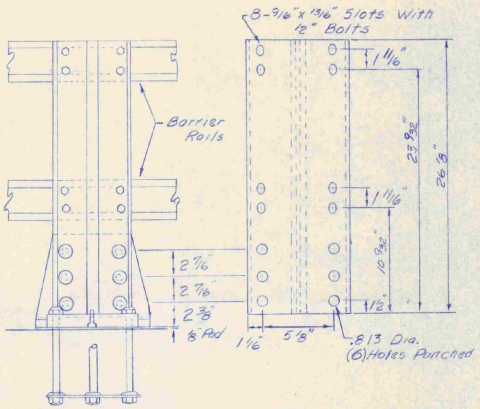
Elevation

Barrier Rail Section

POST CONNECTION

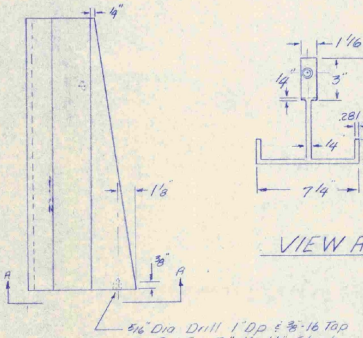


SIDE ELEVATION



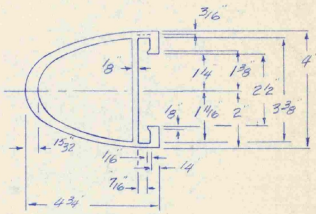
BACK ELEVATION

FRONT



SIDE

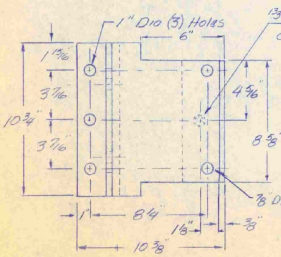
VIEW AA



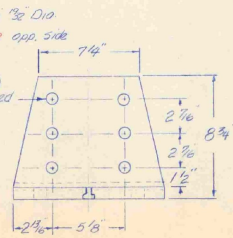
BARRIER RAIL SECTION

NOTES

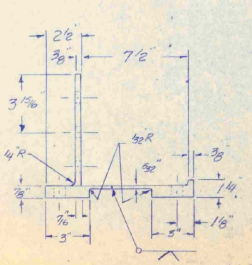
1. Design specifications: Current AASHTO specifications and AST M standards.
2. Material specifications: Posts, post bases splice bars and connection bars Aluminum ASTM B-221 Alloy 6061-T6. Washers for post connection bolts: Aluminum ASTM B-209 Alloy Alclad 2024-T4 Post connection bolts: Stainless steel ASTM A-276. Rivets: Aluminum ASTM B-221 Alloy 6061-T6 Anchor plates: Steel ASTM A-36. Welds: Weld filler wire ASTM B-285 Alloy E.R.5356 metal inert gas process. Fabric pad: Preformed fabric AASHTO 210.3(M) 1/8" thick.
3. Railing system shall be continuous with each rail section attached to a minimum of three posts where possible. Each joint in rail lengths shall be spliced as detailed with splices of all rails occurring in the same panel. Each joint 3/8" unless noted.
4. Lineal foot price shall include all hardware, post connections, and fabric pads necessary to erect railing.
5. Ends of tube sections are to sawed or milled. Cut ends to be true smooth and free from burrs or ragged edges.
6. Rivets shall be button head, cone point, Cold driven.
7. Post attached to base plate with 3/8" x 1" Stainless steel cap screw.



PLAN

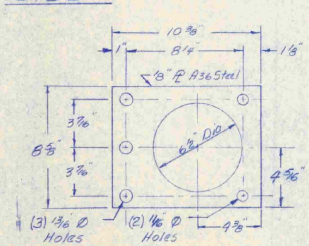


FRONT ELEVATION

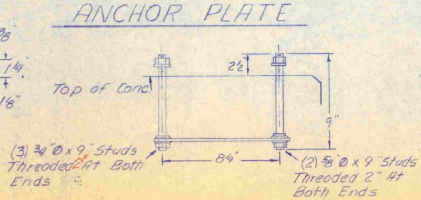


SECTION

POST BASE DETAILS



ANCHOR PLATE

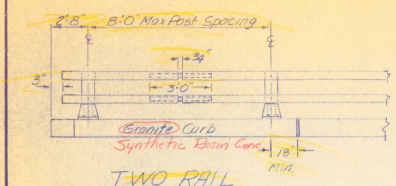


POST ANCHOR ASSEMBLY

Material Specifications for Anchor Bolts:
ASTM A 276 Type 430 Stainless Steel
Top Nuts & Washer Alum. ASTM B-211
Alloy 6061-T6

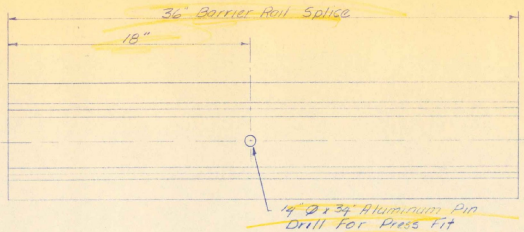
STATE COPY
APR 26 1977
RECEIVED
CK'D BY DEL OK'D BY WET
RESUBMIT APPROVED A Noted
BY J. WOOD DATE 4-27-77

LAFAYETTE-SHELDON INC.
KELLOGG ROAD ESSEX JUNCTION VT.
SCALE NONE APPROVED BY: DRAWN BY AMP
DATE MAR 77 REVISED:
ALUMINUM BRIDGE RAIL: 2-RAIL POST CONNECTIONS, SLEEVE & RAIL
NORTH FIELD RF-BRF 035-2(3) DRAWING NUMBER Standard

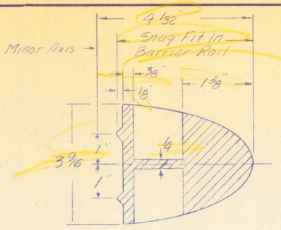


TWO RAIL

Allowable Stresses
Railing 21,000 PSI
Posts 17,000 PSI

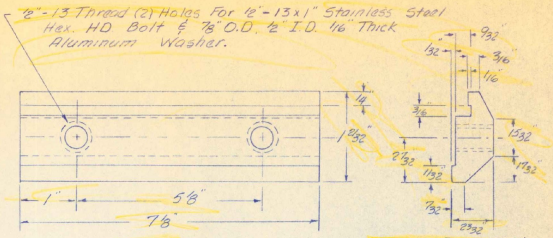


Elevation



Barrier Rail Splice Section

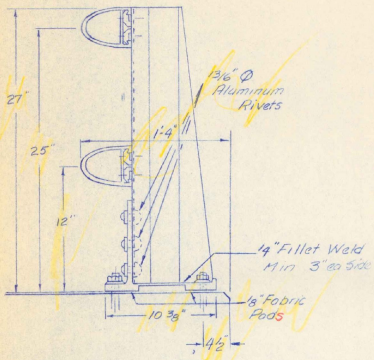
SPLICE DETAILS



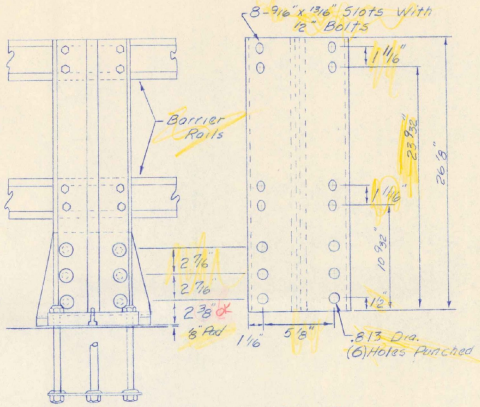
Elevation

Barrier Rail Section

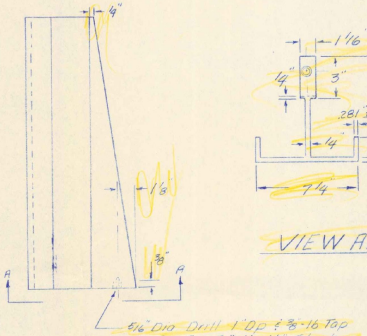
POST CONNECTION



SIDE ELEVATION

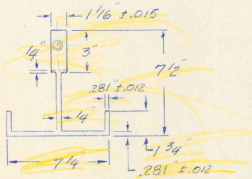


BACK ELEVATION

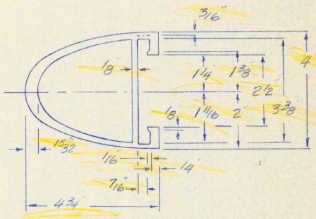


FRONT

SIDE



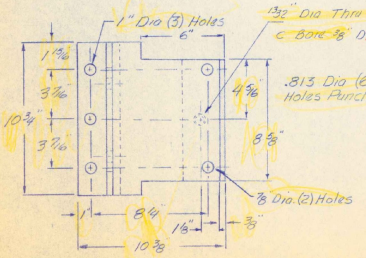
VIEW AA



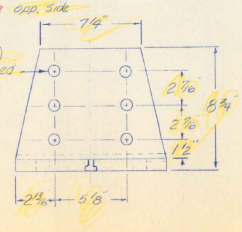
BARRIER RAIL SECTION

NOTES

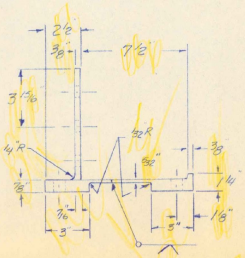
1. Design specifications: Current AASHTO specifications and ASTM standards.
2. Material specifications: Posts, post bases splice bars and connection bars Aluminum ASTM B-221 Alloy 6061-T6.
   Washers for post connection bolts Aluminum ASTM B-209 Alloy Welded 2024-T4
   Post connection bolts: Stainless steel ASTM A-276.
   Rivets: Aluminum ASTM B-221 Alloy 6061-T6
   Anchor plates: Steel ASTM A-36.
   Welds: Weld filler wire ASTM B-285 Alloy ER-5356 metal inert gas process.
   Fabric pad: Preformed fabric AASHTO 210.3(M) 1/8" thick.
3. Railing system shall be continuous with each rail section attached to a minimum of three posts where possible. Each joint in rail lengths shall be spliced as detailed with splices of all rails occurring in the same panel. Each joint 3/8" unless noted.
4. Lineal foot price shall include all hardware, post connections and fabric pads necessary to erect railing.
5. Ends of tube sections are to sawed or milled. Cut ends to be true and free from burrs or ragged edges.
6. Rivets shall be button head, cone point, cold driven.
7. Post attached to base plate with 3/8" x 1 1/2" Stainless steel cap screw.



PLAN

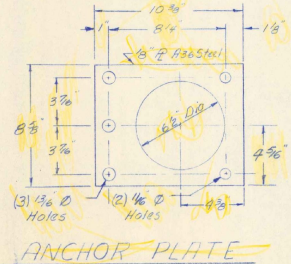


FRONT ELEVATION

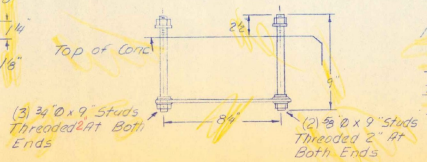


SECTION

POST BASE DETAILS



ANCHOR PLATE



POST ANCHOR ASSEMBLY

Material Specifications for Anchor Bolts:
ASTM A 276 Type 430 Stainless Steel
Top Nuts & Washer Alum. ASTM B-211 Alloy 6061-T6

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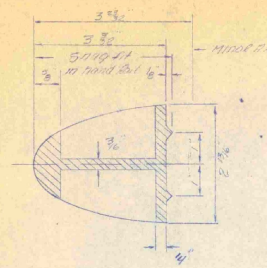
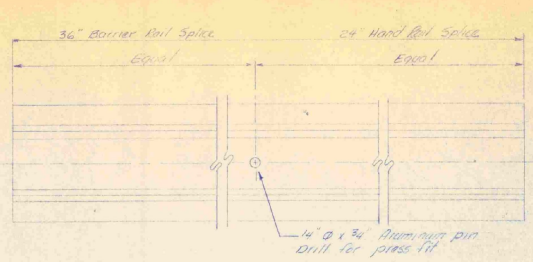
RESUBMIT BY J. WOOD RECEIVED DATE 3-15-77

LAFAYETTE-SHELDON INC.
KELLOGG ROAD ESSEX JUNCTION, VT.
SCALE NONE APPROVED BY: DRAWN BY AMP
DATE MAR 77 REVISED
ALUMINUM BRIDGE RAIL: 2-RAIL
POST CONNECTIONS, SLEEVE & RAIL
NORTHFIELD RF-BRF 035-2(3) DRAWING NUMBER Standard

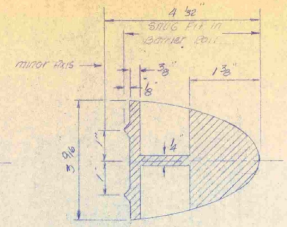


HAND RAIL SPLICE SECTION

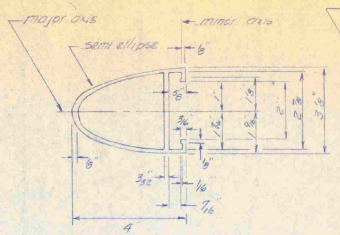


ELEVATION

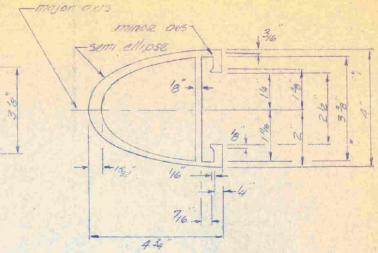
SPLICE DETAILS



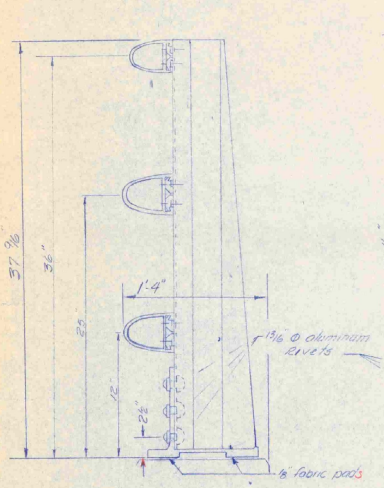
BARRIER RAIL SPLICE SECTION



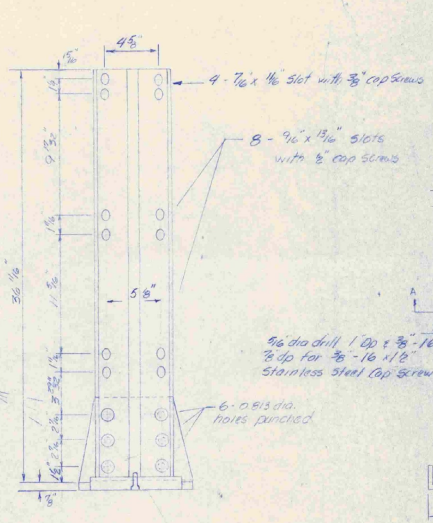
HAND RAIL SECTION



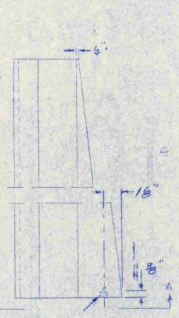
BARRIER RAIL SECTION

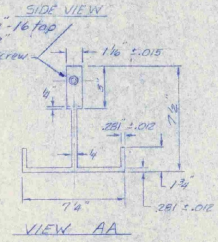


SIDE ELEVATION



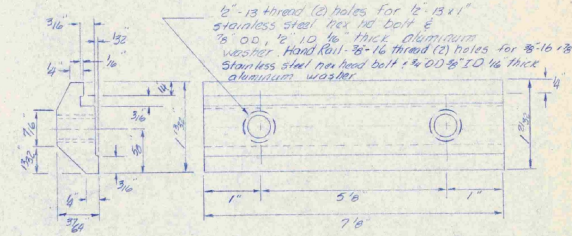
BACK ELEVATION





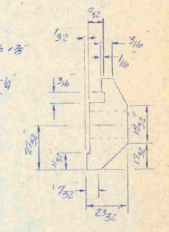
VIEW AA

RAIL POST DETAILS



HAND RAIL SECTION

ELEVATION

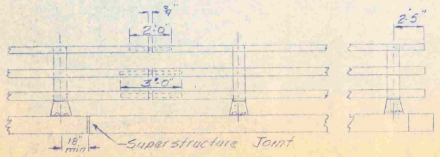


BARRIER RAIL SECTION

POST CONNECTION

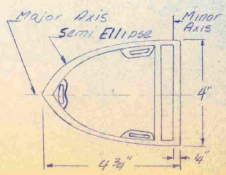
NOTES

1. Design specifications: Current AASHTO specifications and ASTM standards.
2. Material specifications: Posts, post bases, splice bars and connection bars: Aluminum ASTM B-221 Alloy 6061-T6.
   Washers for post connection bolts: Aluminum ASTM B-209 Alloy Alclad 2024-T4.
   Post connection bolts: Stainless steel ASTM A-276 Type 430.
   Rivets: Aluminum ASTM B-221 Alloy 6061-T6 or Aluminum ASTM B-316 Alloy 6061-T6.
   Anchor plates: Steel ASTM A 36.
   Welds: Weld filler wire ASTM B 285 Alloy ER-5356 metal inert gas process.
   Fabric pad: Preformed fabric AASHTO 210.3 (M) ¼ inch thick.
3. Railing system shall be continuous with each rail section attached to a maximum of three posts where possible. Each joint in rail lengths shall be spliced as detailed with splices of all rails occurring in the same panel. Each joint ¾ unless otherwise noted.
4. Railing is to be paid for per linear foot and the cost shall include all hardware, post connectors, and fabric pads necessary to erect railing.
5. Ends of tube sections are to be sawed or milled. Cut ends to be true, smooth and free from burrs or rough edges.
6. Rivets shall be button head, cone point cold driven.
7. Four sets of shop drawings shall be submitted to the Department of Highways for approval prior to fabrication.
8. Post attached to base plate with ⅜"x1½" stainless steel cap screw.
9. Exposed ends of rail tube shall be closed with drive-in type rail caps if Item 612.15 (approach rail) is not going to be used.

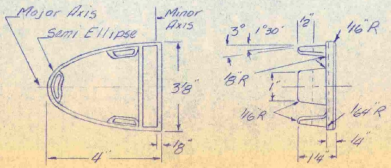


THREE RAIL

Notes: Rail posts are set normal to grade
30" joint unless other wise noted on bridge plans
allowable stresses: Railing 21,000 psi
Posts 17,000 psi



BARRIER RAIL END CAP



HAND RAIL END CAP

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APR 26 1977

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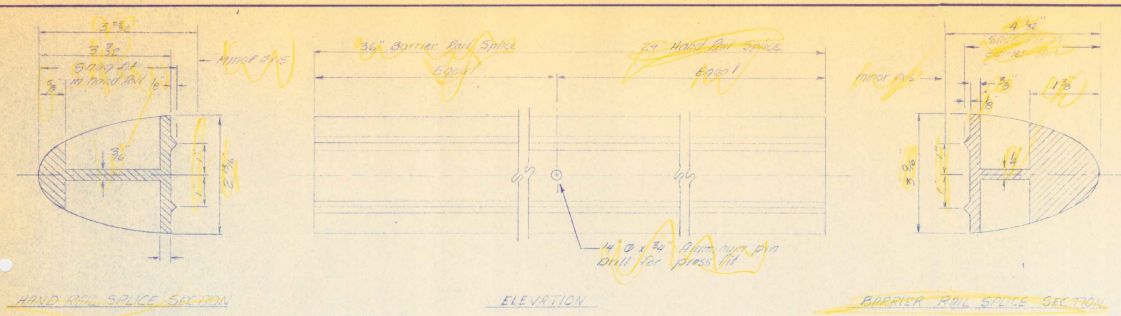
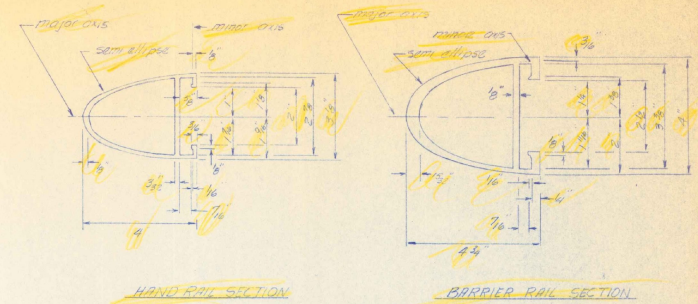
BY J. WOOD DATE 4-27-77

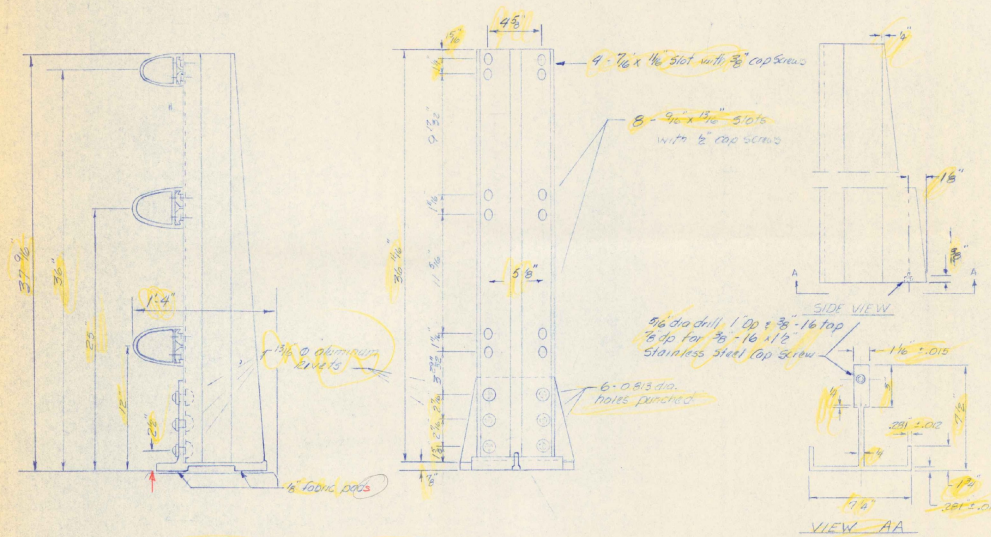
LAFAYETTE - SHELDON INC	
KELLOGG ROAD	ESSEX JUNCTION, VT
SCALE: NONE	APPROVED BY:
DATE: MAR 77	DRAWN BY: JWP
	REVISED
ALUMINUM BRIDGE RAIL: 3 RAIL POST CONNECTIONS, SLEEVES & CAPS	
NORTHFIELD BF-13(F)035-2(3)	DRAWING NUMBER Sheet 4 of 4

3/71

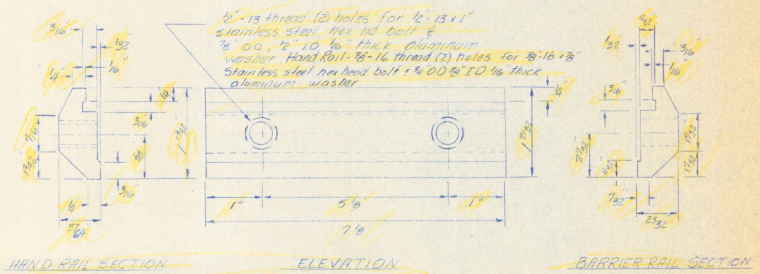


SPLICE DETAILS





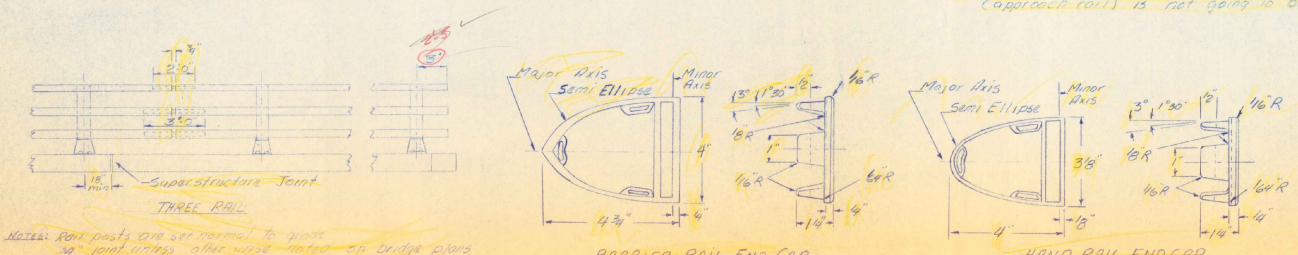
RAIL POST DETAILS



POST CONNECTION

NOTES

1. Design specifications: Current AASHTO specifications and ASTM standards.
2. Material specifications: Posts, post bases, splice bars and connection bars: Aluminum ASTM B-221 Alloy 6061-T-6.
   Washers for post connection bolts: Aluminum ASTM B-209 Alloy Alclad 2024-T4.
   Post connection bolts: Stainless steel ASTM A-276. Type 430.
   Rivets: Aluminum ASTM B-221 Alloy 6061-T6 or Aluminum ASTM B 316 Alloy 6061-T6.
   Anchor plates: Steel ASTM A-36.
   Welds: Weld filler wire ASTM B 285 Alloy ER-5356, metal inert gas process.
   Fabric pad: Preformed fabric AASHTO 2.10.3 (M) 1/8 inch thick.
3. Railing system shall be continuous with each rail section attached to a minimum of three posts where possible. Each joint in rail lengths shall be spliced as detailed with splices of all rails occurring in the same panel. Each joint 3/4" unless otherwise noted.
4. Railing is to be paid for per lineal foot and the cost shall include all hardware, post connections, and fabric pads necessary to erect railing.
5. Ends of tube sections are to be sawed or milled. Cut ends to be true, smooth and free from burrs or ragged edges.
6. Rivets shall be button head, cone point cold driven.
7. Four sets of shop drawings shall be submitted to the Department of Highways for approval prior to fabrication.
8. Post attached to base plate with 3/8" x 1 1/2" stainless steel cap screw.
9. Exposed ends of rail tube shall be closed with drive-in type rail caps if Item 617.45 (approach rail) is not going to be used.



NOTES: Rail posts are set normal to grade
3/4" joint unless otherwise noted on bridge plans
allowable stresses: Railing: 21,000 psi
Posts: 17,000 psi

MAR 4 1977

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BY J. WOOD APPROVED As Noted
DATE 3-15-77

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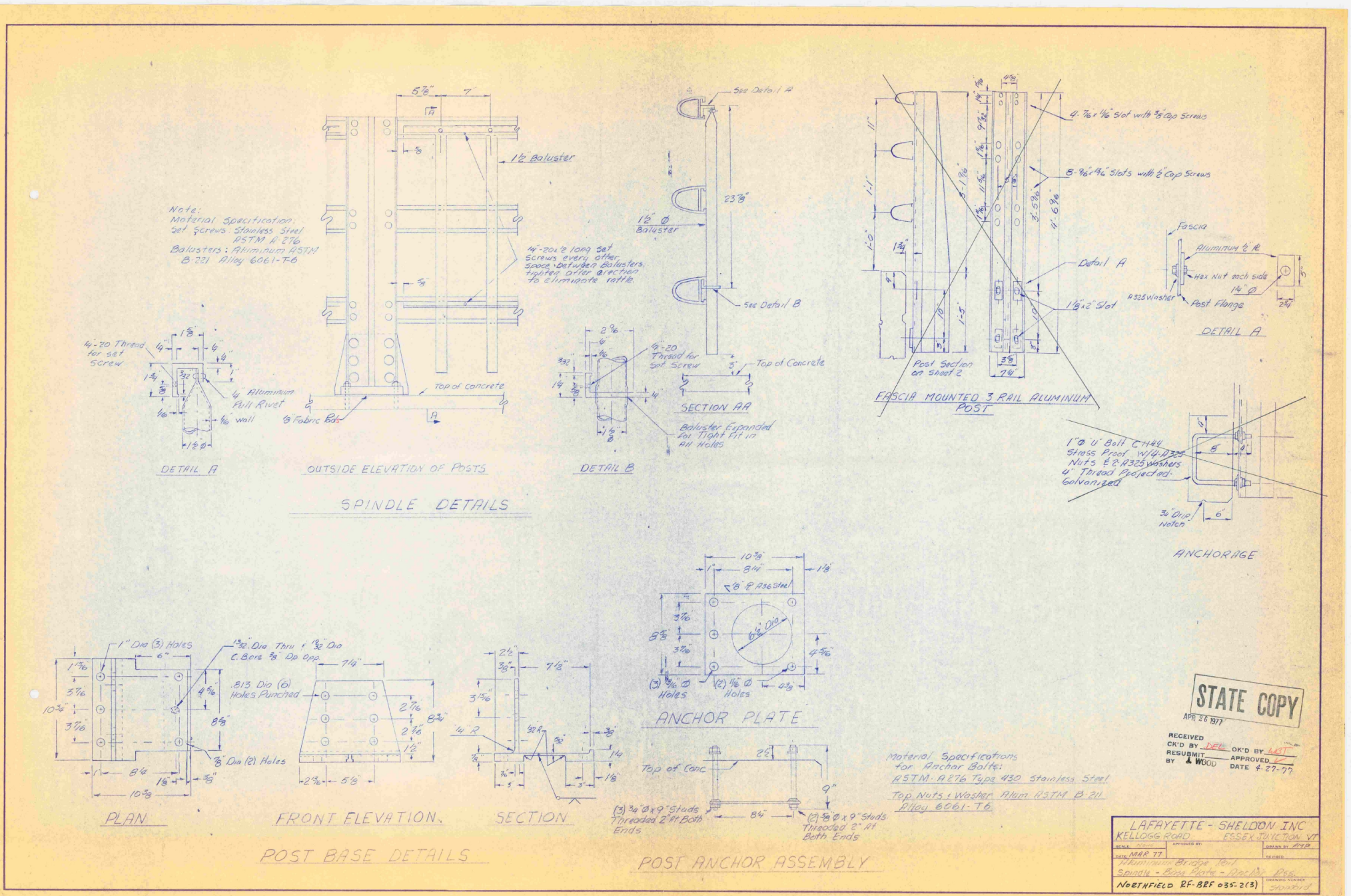
LAFAYETTE - SHELDON INC
KELLOGG ROAD ESSEX JUNCTION VT.

SCALE NONE	APPROVED BY:	DRAWN BY AMP
DATE MAR 77		REVISED

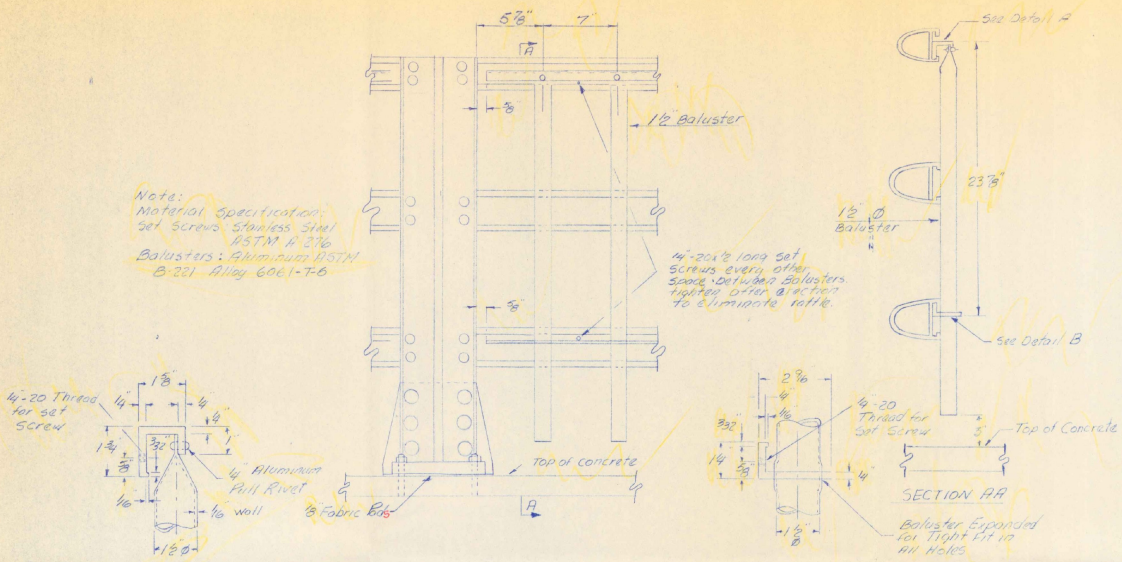
ALUMINUM BRIDGE RAIL: 3-RAIL
POST CONNECTIONS SLEEVESE RAIL

NORTHFIELD RF-BRF 035-2(3) DRAWING NUMBER Standard

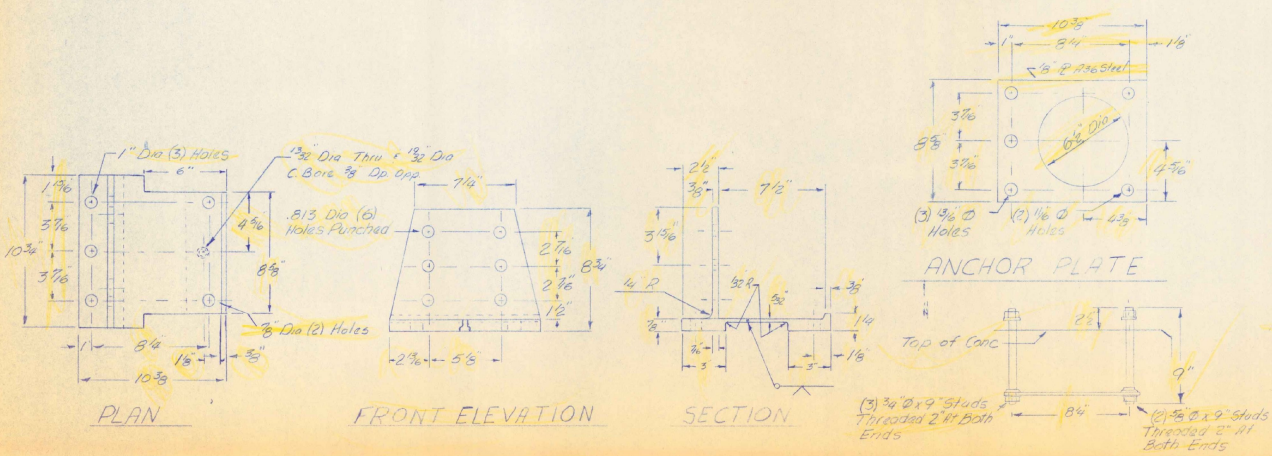
3/4



Note:
Material Specification:
Set Screws: Stainless Steel ASTM A-276
Balusters: Aluminum ASTM B-221 Alloy 6061-T-6
1½" Baluster
¼"-20 x ½ long set screws every other space between Balusters, tighten after erection to eliminate rattle.
See Detail A
See Detail B
1½" Ø Baluster
Top of Concrete
⅛" Fabric Pads
¼"-20 Thread for set Screw
¼" Aluminum Pull Rivet
1/16" wall
DETAIL A
OUTSIDE ELEVATION OF POSTS
SECTION AA
Baluster Expanded for Tight Fit in All Holes
DETAIL B
SPINDLE DETAILS
4-7/16" x 1 1/16" Slot with ⅜" Cap Screws
8-9/16" x 1 3/16" Slots with ½" Cap Screws
Detail A
1⅛" x 2" Slot
Post Section on Sheet 2
FASCIA MOUNTED 3 RAIL ALUMINUM POST
Fascia
Aluminum ½" PL
Hex Nut each side
A325 Washer
Post Flange
DETAIL A
1" Ø "U" Bolt C1144 Stress Proof W/4-A325 Nuts & 2-A325 Washers 4" Thread Projected-Galvanized
¾" Drip Notch
ANCHORAGE
1" Dia (3) Holes
13/32" Dia Thru & 19/32" Dia C. Bore ⅜" Dp. Opp.
.813 Dia (6) Holes Punched
⅞" Dia (2) Holes
PLAN
FRONT ELEVATION.
SECTION
POST BASE DETAILS
⅛" PL A36 Steel
6½" Dia
(3) 13/16" Ø Holes
(2) 11/16" Ø Holes
ANCHOR PLATE
Top of Conc
(3) ¾" Ø x 9" Studs Threaded 2" At Both Ends
(2) ⅜" Ø x 9" Studs Threaded 2" At Both Ends
POST ANCHOR ASSEMBLY
Material Specifications for Anchor Bolts:
ASTM-A276 Type 430 Stainless Steel
Top Nuts & Washer Alum ASTM B-211 Alloy 6061-T6
STATE COPY
APR 26 1977
RECEIVED
CK'D BY DEL
OK'D BY WBT
RESUBMIT
APPROVED
BY J. WOOD
DATE 4-27-77
LAFAYETTE - SHELDON INC
KELLOGG ROAD
ESSEX JUNCTION VT
SCALE None
APPROVED BY:
DRAWN BY AMP
DATE MAR 77
REVISED
Aluminum Bridge Rail
Spindle - Base Plate - Anchor Ass.
NORTHFIELD RF-BRF 035-2(3)
DRAWING NUMBER Standard
4/4



SPINDLE DETAILS



POST BASE DETAILS

POST ANCHOR ASSEMBLY

Material Specifications for Anchor Bolts:
ASTM-A276 Type 430 Stainless Steel
Top Nuts & Washer Alum ASTM B-211 Alloy 6061-T6

STATE COPY

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MAR 4 1977

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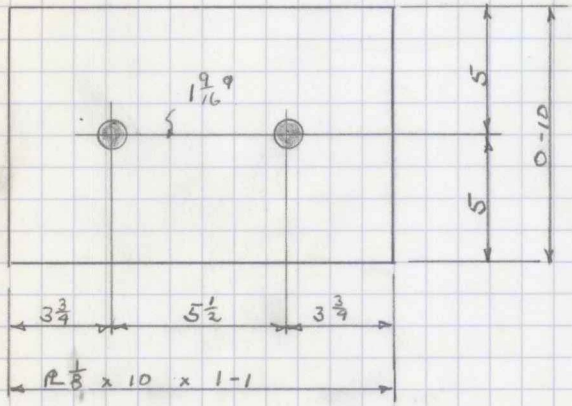
CK'D BY DEL OK'D BY WAT
RESUBMIT APPROVED As Noted
BY J. WOOD DATE 3-15-77

LAFAYETTE - SHELDON INC
KELLOGG ROAD ESSEX JUNCTION VT

SCALE: None	APPROVED BY:	DRAWN BY AMP
DATE MAR 77		REVISED
Aluminum Bridge Rail Spindle - Base Plate - Anchor Ass.		
NORTHFIELD RF-BRF035-2(3)		DRAWING NUMBER Standard

4/4



ONE SHIM PLATE SP1

600 QCP 576

LATHER SALES COMPANY PITTSBURGH, PA.

ENGINEERS APPROVED

ASTM-A588

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		ONE - SHIM PLATE SP1				
1		PL 1/8 x 10	1	1	STK.	

VERMONT STRUCTURAL STEEL CORP. BURLINGTON, VERMONT

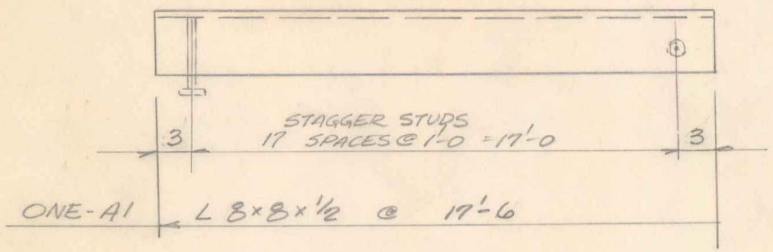
		DATE
DRAWN BY	HP	1-24-77
C'K'D BY		

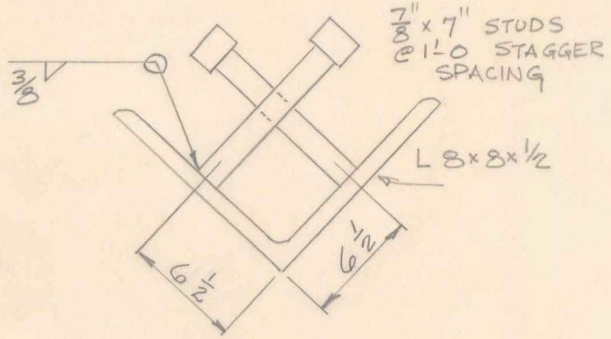
HOLES AS NOTED
RIVETS
PAINT

PROJECT VT #12 OVER DOG RIVER.
LOCATION NORTHFIELD, VT.
CUSTOMER LUKOE CONST. CO.
ARCHITECT
JOB NO. 76-3865 SHEET NO. S M 1

PRINT RECORD

DATE	NO.	FOR
1-24	1	SHOP
3-4	1	STATE





ASSEMBLY TO BE
GALVANIZED AFTER
FABRICATION

A36 GALV AFTER FAB

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
ONE	A1	L 8×8×½	17	6	1-9	462
18		7/8×7 SHEAR STUDS	0	7	3-12	24
						486

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT
PROJ# RF-BRF-035-2(3)

		DATE
DRAWN BY	J.B.	9/16/76
C'K'D BY		

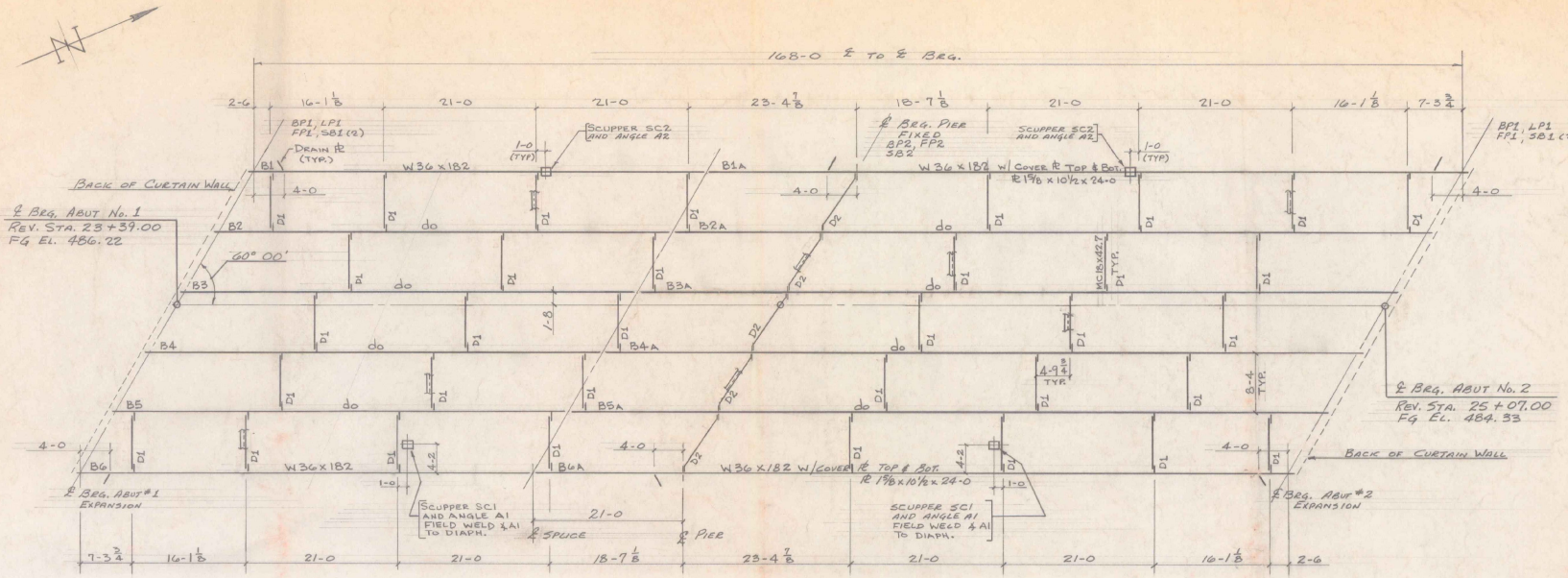
HOLES
BOLTS
PAINT GALVANIZED

PROJECT VT. #12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
JOB NO. 76-2865 SHEET NO. A1

PRINT RECORD

NO.	FOR	DATE
5	APPR	9/16
3-①	SHOP	9/22
2	WT STATE	11-2
3	STATE	3-9

7M QCP 269



FRAMING PLAN

USE THIS DWG. WITH VT. HWY. DEPT. DWGS.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT. PROJ # RF-BRF-035-2 (3)

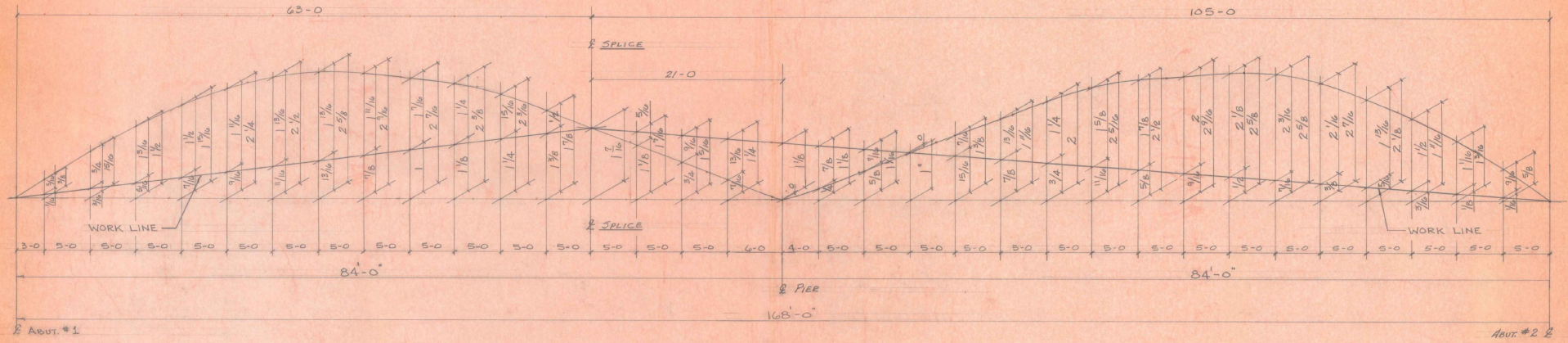
		DATE
DRAWN BY	JERRY BARNER	9/16/76
CK'D BY	HP	9-27-76

HOLES AS REQ'D
BOLTS 7/8 Φ A325 WEATH.
PAINT SEE NOTES ON DETAIL DWGS.

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
JOB NO. 76-2865 SHEET NO. E1

PRINT RECORD

NO.	FOR	DATE
5	HFP	9-30
1	PRELIM SHOP	10-20
4	1-SHOP 3-FIELD	10/26
2	WT STATE	11-2
1	STATE	3-4



CAMBER DIAGRAM

SCALE: FULL VERT. -- 3/16" HORIZ.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT. PROJ # RF-BRF-035-2(3)

		DATE
DRAWN BY	JERRY BARNIER	9/16/76
CK'D BY	JP	9-27-76

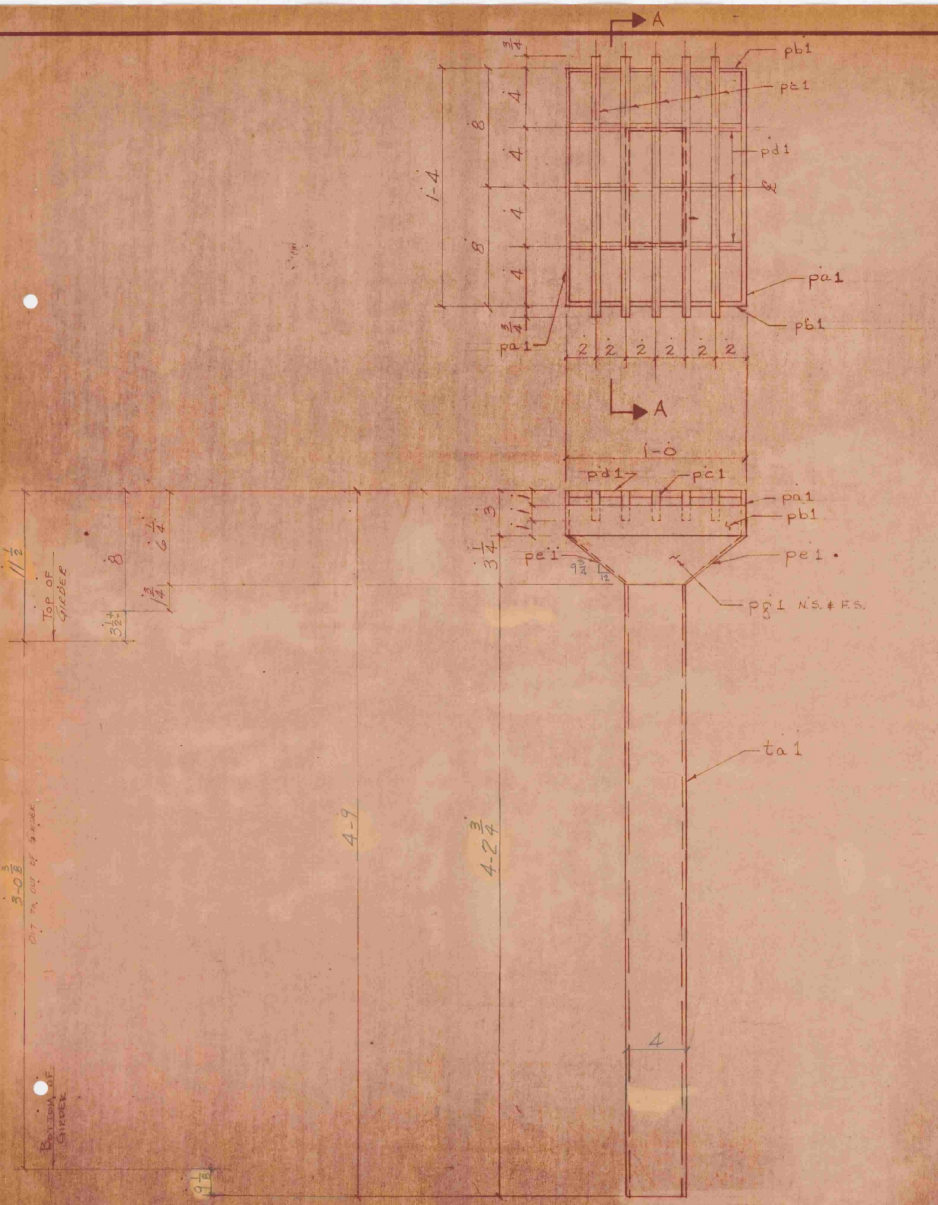
HOLES ——
BOLTS ——
PAINT ——

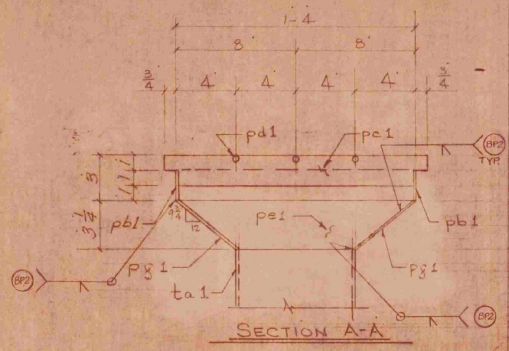
PROJECT VT. Rte. #12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
JOB NO. 76-2865 SHEET NO. CD1

PRINT RECORD

NO.	FOR	DATE
5	APP	9-30
1	PRELIM SHOP	10-20
3	Shop	10/26
2	VT STATE	11-2
1	STATE	3-4

1500 10-72 GCP





SECTION A-A

SCUPPERS TO BE WELDED CONSTRUCTION AND WATERTIGHT.

AFTER FABRICATION SCUPPERS TO BE GALVANIZED TO SPEC. ASTM 123.

2 - SCUPPERS - SC1

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT	LENGTH IN		WEIGHT	CLASSIFICATION WT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A36 U/N

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT	LENGTH IN		WEIGHT	CLASSIFICATION WT	CLASSIFICATION HOLES
		2 - SCUPPERS - SC1					345	--
AFSC 2	ta1	TUBE 8 x 4 x 1/4	4	2 3/4 SC16	3-4	163	✓	
4	pa1	BAR 3 x 1/4	1	3 1/4	3-6	13	✓	
4	pb1	BAR 2 x 1/4	1	0	3-7	7	✓	
10	pc1	BAR 6 x 1/2	1	6 1/4	3-8	50	✓	
6	pd1	1/2" ϕ BAR	0	11 1/4	3-9	4	✓	
4	pe1	PL 1/4 x 5 1/8	1	3 1/2	3-6	22	✓	
4	pg1	do	1	0	3-7	17	✓	
						276	✓	
		PLAIN ANGLES - GALVANIZED						
2	A1	L 2 x 2 x 5/16	1	1 1/2	3-10	9	311	--
						285	✓	

VERMONT STRUCTURAL STEEL CORPORATION BURLINGTON, VERMONT

Proj. No: RF-BRF-055-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO. REV. #	BY	REVISION
5-10	8 WK	6		
10-26	FAB	1		Details
12/20	Subst	5		
1-12	SHOP	2		
3-6	SHOP	1		

PROJECT Vt. #12 over Dog River

LOCATION Northfield, Vermont

CUSTOMER Lunde Const. Co.

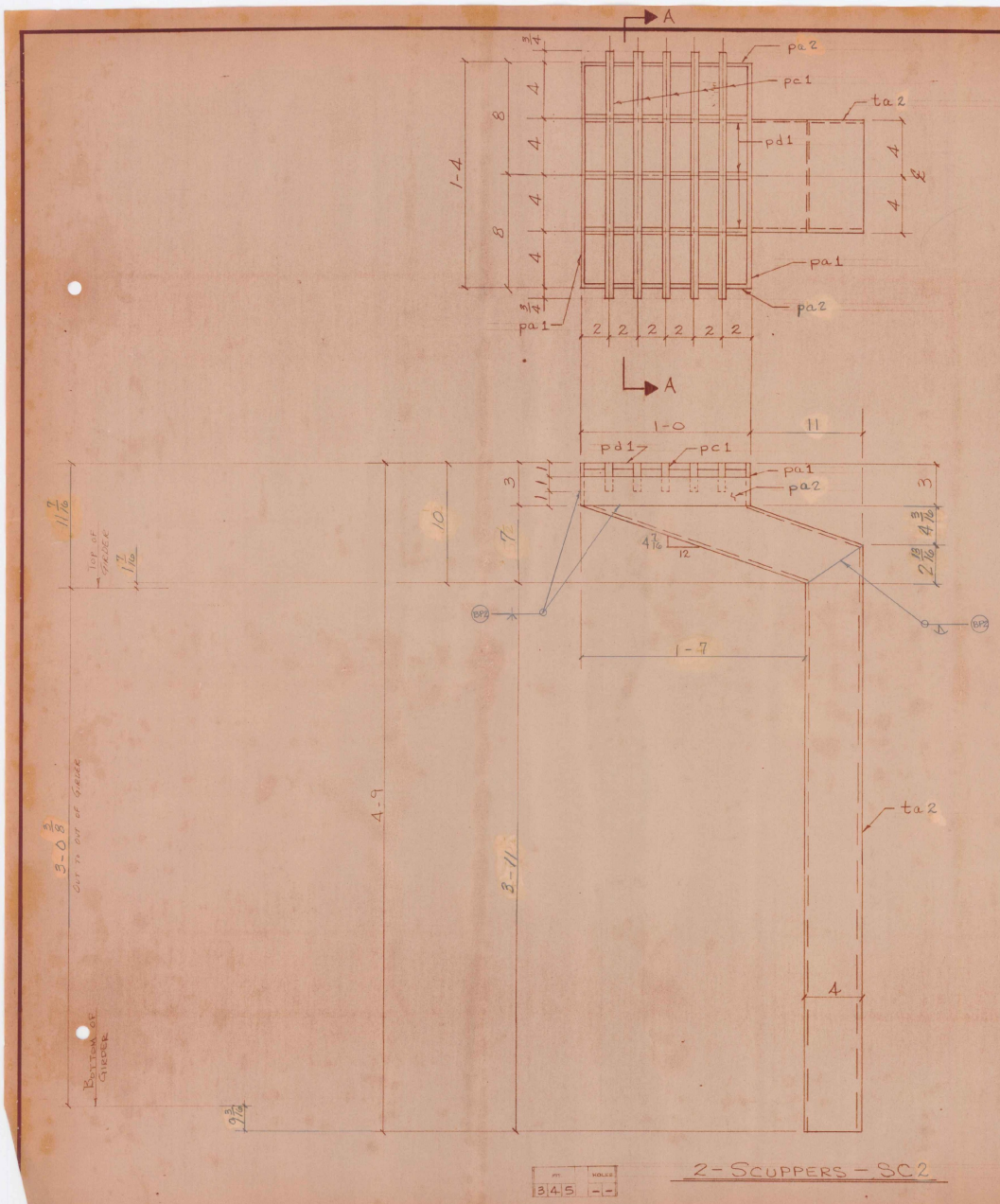
ARCHITECT Vermont Dept. of Hwys. Jeff

HOLES None DRAWN BY Parker

BOLTS None CHECKED BY HP

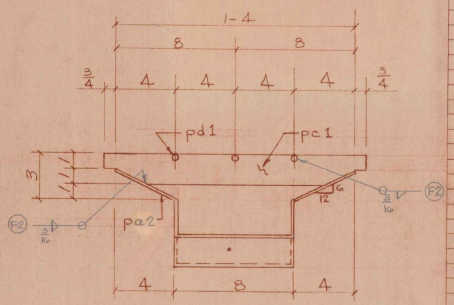
PAINT See Notes DATE Sept. 14, 1976

JOB NO. 76-2865 SHEET NO. 1 OF



FT.	HOLES
345	--

2-SCUPPERS - SC2



SECTION A-A

SCUPPERS TO BE WELDED CONSTRUCTION AND WATERTIGHT.

AFTER FABRICATION SCUPPERS TO BE GALVANIZED TO SPEC. ASTM 123.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A36 U/N

BILL OF MATERIAL

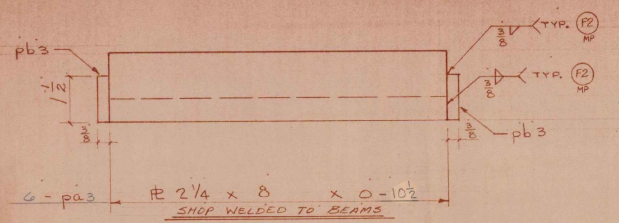
NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
		2-SCUPPERS - SC2					345	--
A501 2	ta2	TUBE 8 x 4 x 1/4	6	1	3-4	235	✓	
4	pa1	BAR 3 x 1/4	1	3 1/2	3-6	13	✓	
4	pa2	BAR 4 1/2 x 1/4	1	0	3-7	15	✓	
10	pc1	BAR 2 x 1/2	1	5 1/2	3-8	50	✓	
6	pd1	1/2" ϕ BAR	0	11 1/2	3-9	4	✓	
						317	✓	
		PLAIN ANGLES -- GALVANIZED						
2	A2	L 2 x 2 x 5/16	1	3 1/4	3-10	9	311	--
						326	✓	

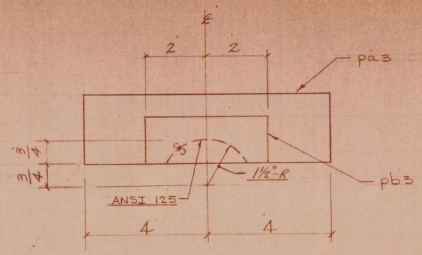
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ. No.: RF-BRF-035-2 (3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	HPP	5			
10-20	FRB SHOP	1			
10/26	SHOP	3			
11-2	WT. CONN.	2			
3-4	STATE	1			

PROJECT VT. #12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES NONE DRAWN BY J. BARNIER
BOLTS NONE CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 14, 1976
JOB NO. 76-2865 SHEET NO. 2





SHOP NOTES:

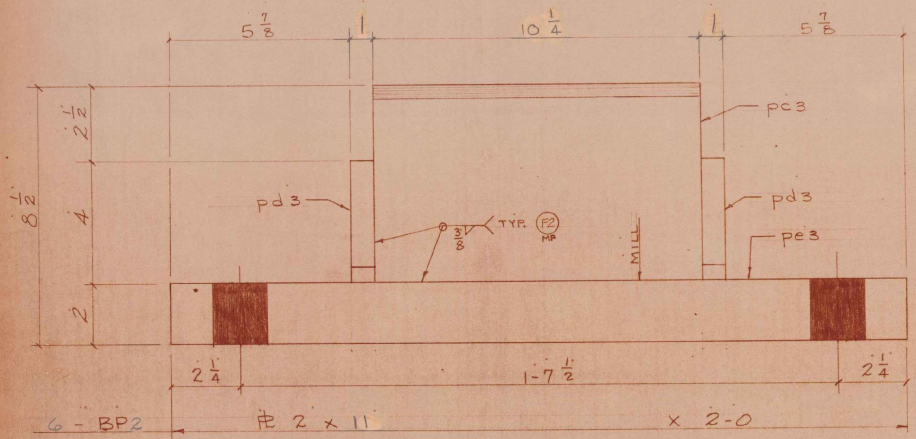
1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

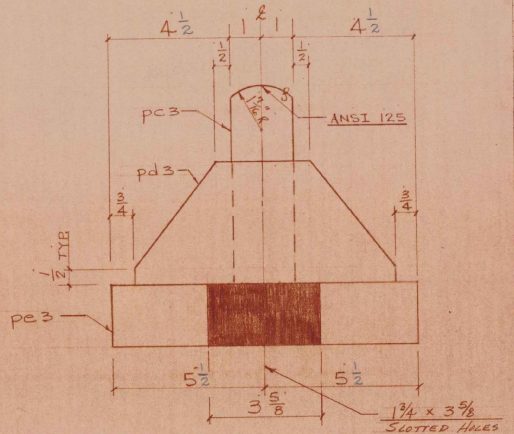
2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

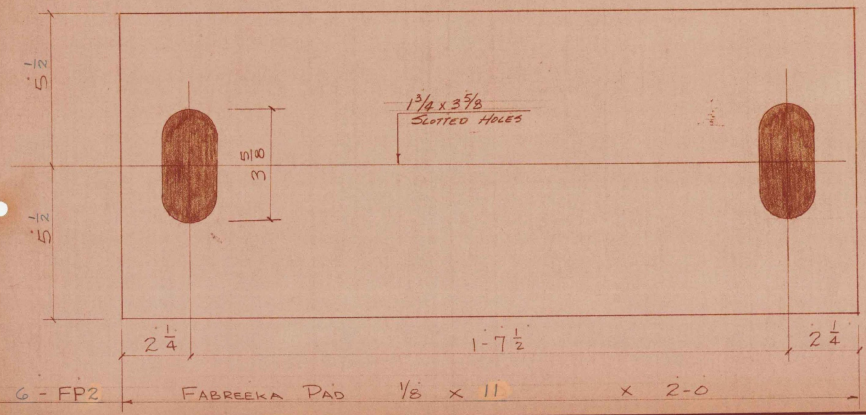
MAGNETIC PARTICLE TESTING

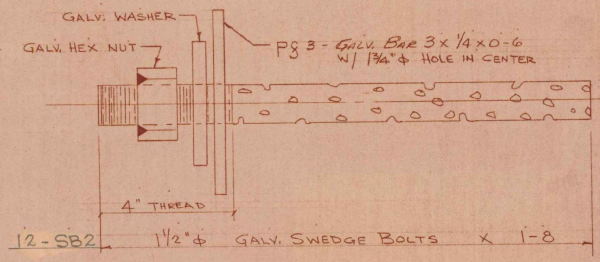
In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shows - one test).









BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 U/N

BILL OF MATERIAL

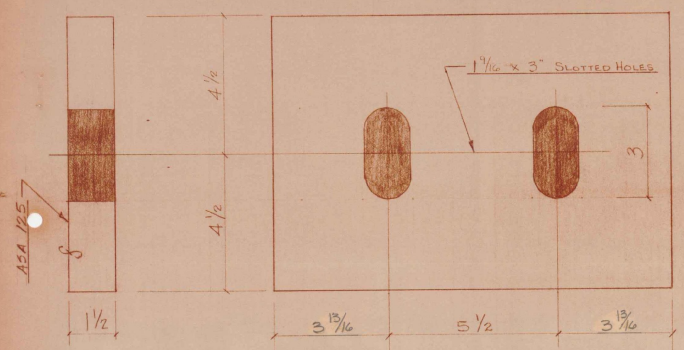
NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
		BEARING DEVICES						
6	pa3	PL 2 1/4 x 8	0	10 1/2	2-4	—		
12	pb3	BAR 4 x 3/8	0	1 1/2	2-8	—		
		THESE PLS SHOP WELDED TO BEAMS						
		6 ASSEMBLIES BP2						
6	pc3	PL 2 x 6 1/2	0	10 1/4	2-6	226	✓	
12	pd3	BAR 4 x 1	0	9 1/2	2-7	129	✓	
6	pe3	PL 2 x 11	2	0	2-5	898	✓	
						1253		
		FABREEKA PADS			ORD. #43350			
— 6	FP2	FABREEKA PAD 1/8 x 11	2	0	FABREEKA TO SHOP	11	✓	
		SWEDGE BOLTS						
A36 12	SB2	1 1/2"φ ROD	1	8	2-15	120	✓	
A36 12	pg3	BAR 3 x 1/4	0	6	2-10	15	✓	
A307 12		1 1/2" GALV. HEX NUT			2-17	11	✓	
A307 12		1 1/2" GALV. WASHERS			2-18	5	✓	
						151		
						1415		

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ. No.: RF-BRF-035-2(3)

PRINT AND REVISION RECORD

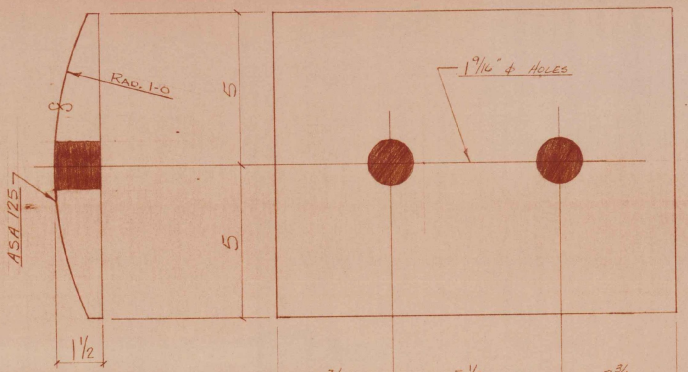
DATE	FOR	NO.	REV. #	BY	REVISION
5-20	APP	5			
10-20	PRE SHOP	1			
10/26	Shop	3			
11-2	WT STAMP				
3-9	do	1			

PROJECT VT. #12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES AS SHOWN DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY TP
PAINT NONE SEE NOTES DATE SEPT. 15, 1976
JOB NO. 76-2865 SHEET NO. 3

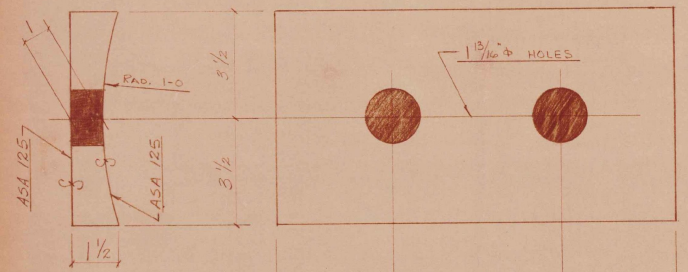


12 - pa4 — PL 1 1/2 x 9 x 1-1 1/8

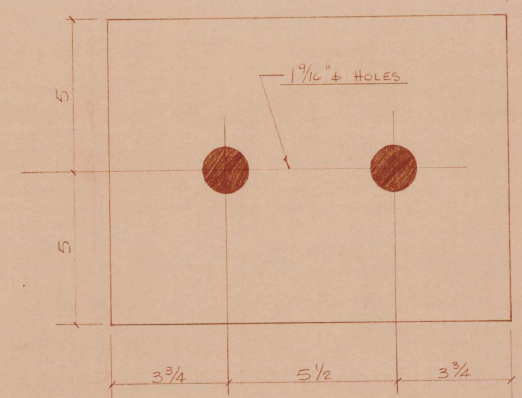
NOTE: THESE PLs SHOP WELDED TO BEAMS.



12 - BP1 — PL 1 1/2 x 10 x 1-1

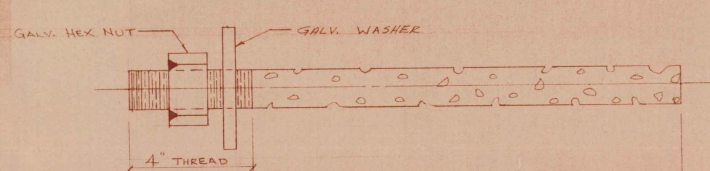


12 - LP1 — LUBRITE PL 1 1/2 x 7 x 1-1



12 - FP1 — FABREEKA PAD 1/8 x 10 x 1-1

To be Cast Bronze - A.S.T.M. - B22 Copper Alloy 905* or 911. This plate shall have trepanned recesses filled with a lubricating compound. The lubricating area shall comprise not less than 25% of the total bearing area. The manufacturer shall supply additional lubricant in liquid form with which the Contractor shall thoroughly coat the bearing surfaces that contact the lubricated portion of the bronze plate. The coefficient of friction shall not exceed 0.10. (*Copper Alloy 905 - maximum lead content allowed is 2.5%).



24 - SB1 — 1 1/4" ϕ GALV. SWEDGE BOLTS x 1-8

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 U/N

BILL OF MATERIAL

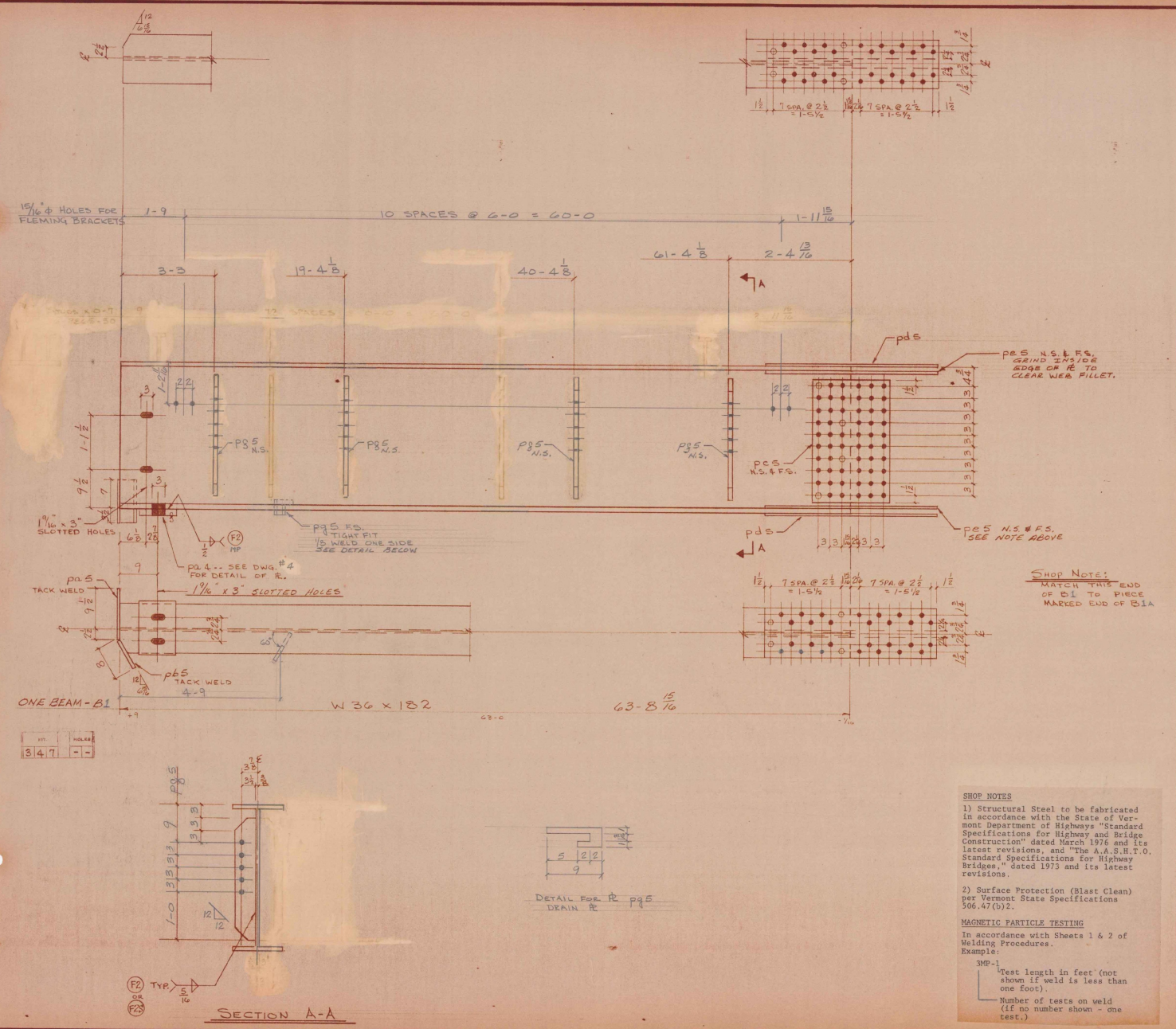
NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
		BEARING DEVICES						
12	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	—		
		THESE PLs - SHOP WELDED TO BEAMS						
12	BP1	PL 1 1/2 x 10	1	1	2-12	662	✓	
		LUBRITE PLATES			2 pcs FROM STK.			
12	LP1	LUBRITE PL 1 1/2 x 7	1	1	10 pcs ORD. # 43349 COSMIC INC. TO SHOP	403	✓	
		FABREEKA PADS						
12	FP1	FABREEKA PAD 1/8 x 10	1	1	ORD. # 43350 FABREEKA TO SHOP	10	✓	
		SWEDGE BOLTS						
24	SB1	1 1/4" ϕ RODS	1	8	2-20	167	✓	
24		1 1/4" GALV. HEX NUTS			3-1	19	✓	
24		1 1/4" ϕ GALV. WASHERS			3-2	6	✓	
						192		
						1267	✓	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ No.: RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	[illegible]	5			
10-20	PAE [illegible]	1			
10/26	Shop	3			
11-2	[illegible]	2			
3-9	do	1			

PROJECT VT. #12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES AS SHOWN DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 15, 1976
JOB NO. 76-2865 SHEET NO. 4



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES-CHARPY V-NOTCH TEST--AASHTO M222.

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
		BEAMS						
* ONE	B1	W 36 x 182	63	8 15/16	1-2	11603	3 4 7	- -
ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50	✓	
ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9	✓	
ONE	pb5	do	0	8	2-1	6	✓	
2	pc5	PL 3/8 x 19	2	6	1-19	121	✓	
2	pd5	PL 5/8 x 12	3	6	1-16	179	✓	
4	pe5	PL 5/8 x 5 1/2	3	6	1-17	164	✓	
4	pg5	BAR 5 x 1/2	2	6	1-13	85	✓	
ONE	pg5	PL 1/4 x 3 3/16	0	9	1-21	2	✓	
						12219	✓	
4		7/8" ϕ A325 WEATHERING BOLTS	0	2 3/4	3-15	—		
8		do	0	3 3/4	3-14	—		
		[illegible]						
		[illegible]						
		[illegible]						
		[illegible]						

SHOP NOTES

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shown - one test.)

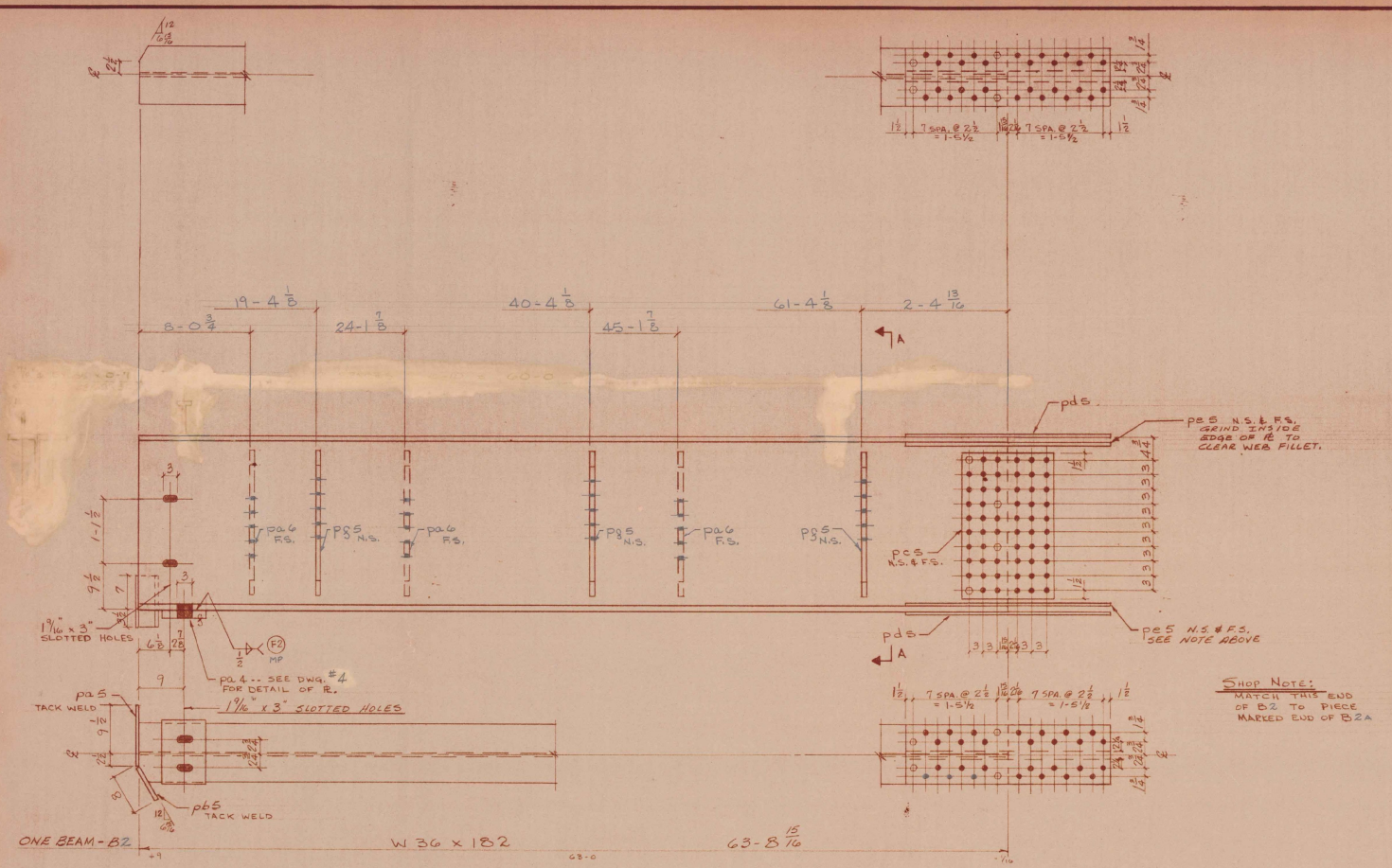
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

PROJ. # RF-BRF-035-2(3)

PRINT AND REVISION RECORD

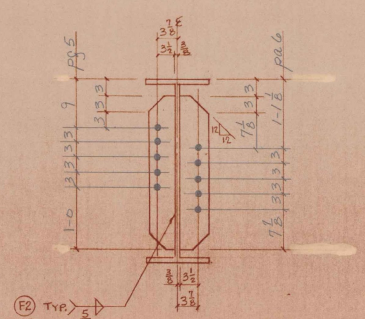
DATE	FOR	NO.	REV. #	BY	REVISION
5-30	NHP	5			
10-20	PRE SHOP	1			
10/26	Shop	3			
11-2	STRUCT.	2			
3-4	do	1			

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 22, 1976
JOB NO. 76-2865 SHEET NO. 5



SHOP NOTE: MATCH THIS END OF B2 TO PIECE MARKED END OF B2A

FIT.			HOLES	
3	4	7	-	-



SECTION A-A

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shows - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES - CHARPY V-NOTCH TEST -- AASHTO M222.

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS						
*	ONE	B2	W 36 x 182	63	8 15/16	1-2	11603	3 4 7	- -
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50		
	ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9		
	ONE	pb5	do	0	8	2-1	6		
	2	pc5	PL 3/8 x 19	2	6	1-19	121		
	2	pd5	PL 5/8 x 12	3	6	1-16	179		
	4	pe5	PL 5/8 x 5 1/2	3	6	1-17	164		
	3	pg5	BAR 5 x 1/2	2	6	1-13	64		
	3	pa6	do	2	6	1-13	64		
							12260		
	4		7/8" ϕ A325 WEATHERING BOLTS	0	2 3/4	3-15			
	8		do	0	3 3/4	3-14			

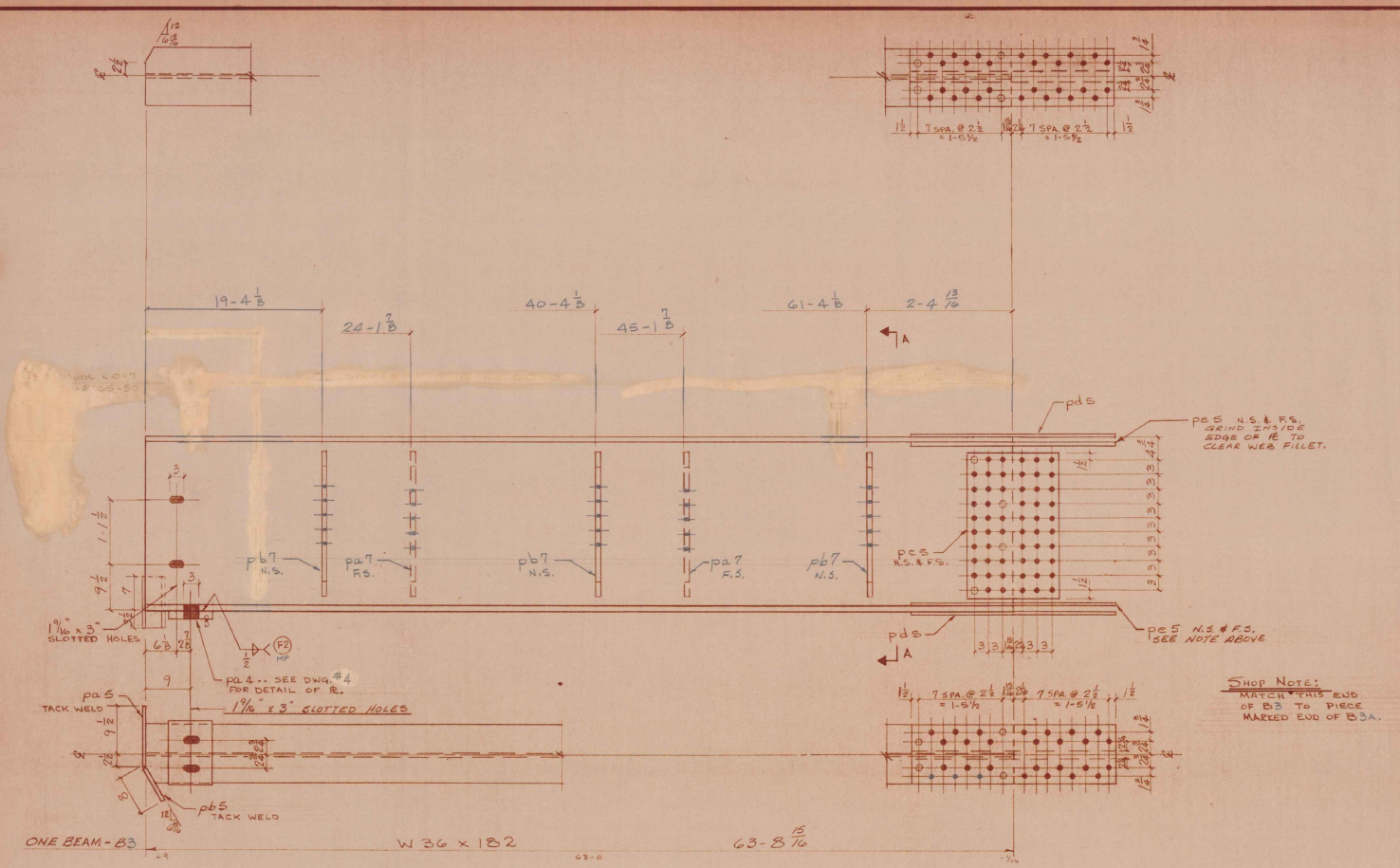
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

PROJ. # RF-BRF-035-2(3)

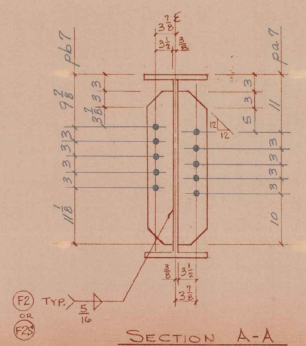
PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	[illegible]	5			
11/20	FOR [illegible]	1			
10/26	[illegible]	3			
11-2	[illegible]	2			
3-4	do	1			

PROJECT Vt. Rte # 12 over Dog River
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY [illegible]
PAINT NONE SEE NOTES DATE SEPT. 22, 1976
JOB NO. 76-2865 SHEET NO. 6



FIT.		HOLES
3 4 7		- -



SECTION A-A

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1 — Test length in feet (not shown if weld is less than one foot).
— Number of tests on weld (if no number shown - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES - CHARPY V-NOTCH TEST -- AASHTO M222.

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS						
*	ONE	B3	W 36 x 182	63	8 15/16	1-2	11603	3 4 7	- -
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50		
	ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9		
	ONE	pb5	do	0	8	2-1	6		
	2	pc5	PL 3/8 x 19	2	6	1-19	121		
	2	pd5	PL 5/8 x 12	3	6	1-16	179		
	4	pe5	PL 5/8 x 5 1/2	3	6	1-17	164		
	2	pa7	BAR 5 x 1/2	2	6	1-13	43		
	3	pb7	do	2	6	1-13	64		
							12239		
	4		7/8" ϕ A325 WEATHERING BOLTS	0	2 3/4	3-15	—		
	8		do	0	3 3/4	3-14	—		
			[illegible] 76-2865-50						
	146		7/8" ϕ SHEAR STUDS	0	7	[illegible]			

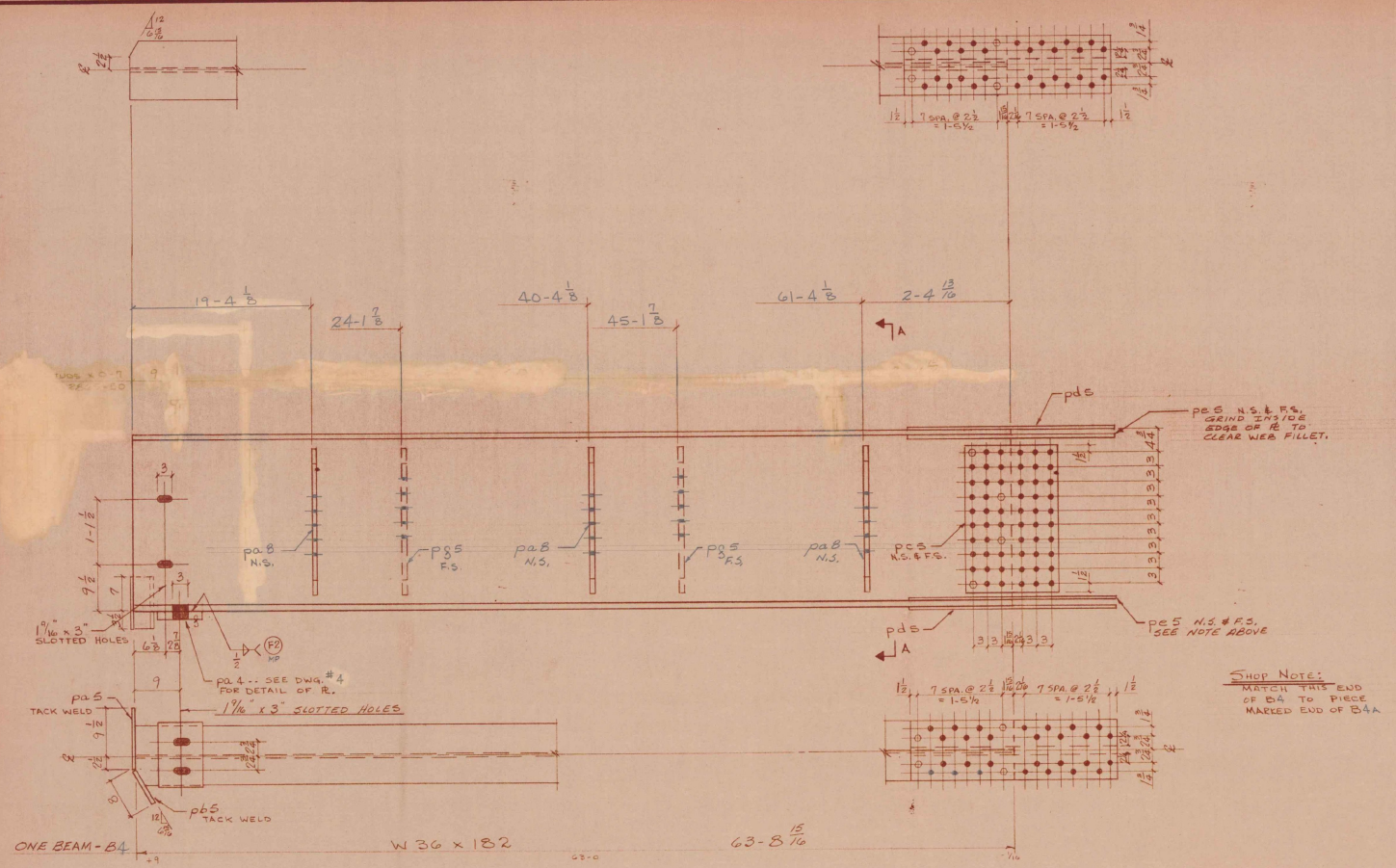
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

PROJ. # RF-BRF-035-2(3)

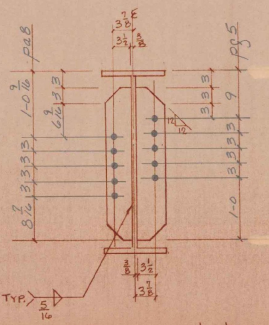
PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	[illegible]	5			
10/10	PRE SHOP	1			
10/26	SHOP	3			
11-2	STEM	2			
3-4	do	1			

PROJECT Vt. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY [illegible]
PAINT NONE SEE NOTES DATE SEPT. 22, 1976
JOB NO. 76-2865 SHEET NO. 7



SHOP NOTE:
MATCH THIS END OF B4 TO PIECE MARKED END OF B4A



SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:
3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shows - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588

BILL OF MATERIAL *-INDICATES-CHARPY V-NOTCH TEST--AASHTO M 222.

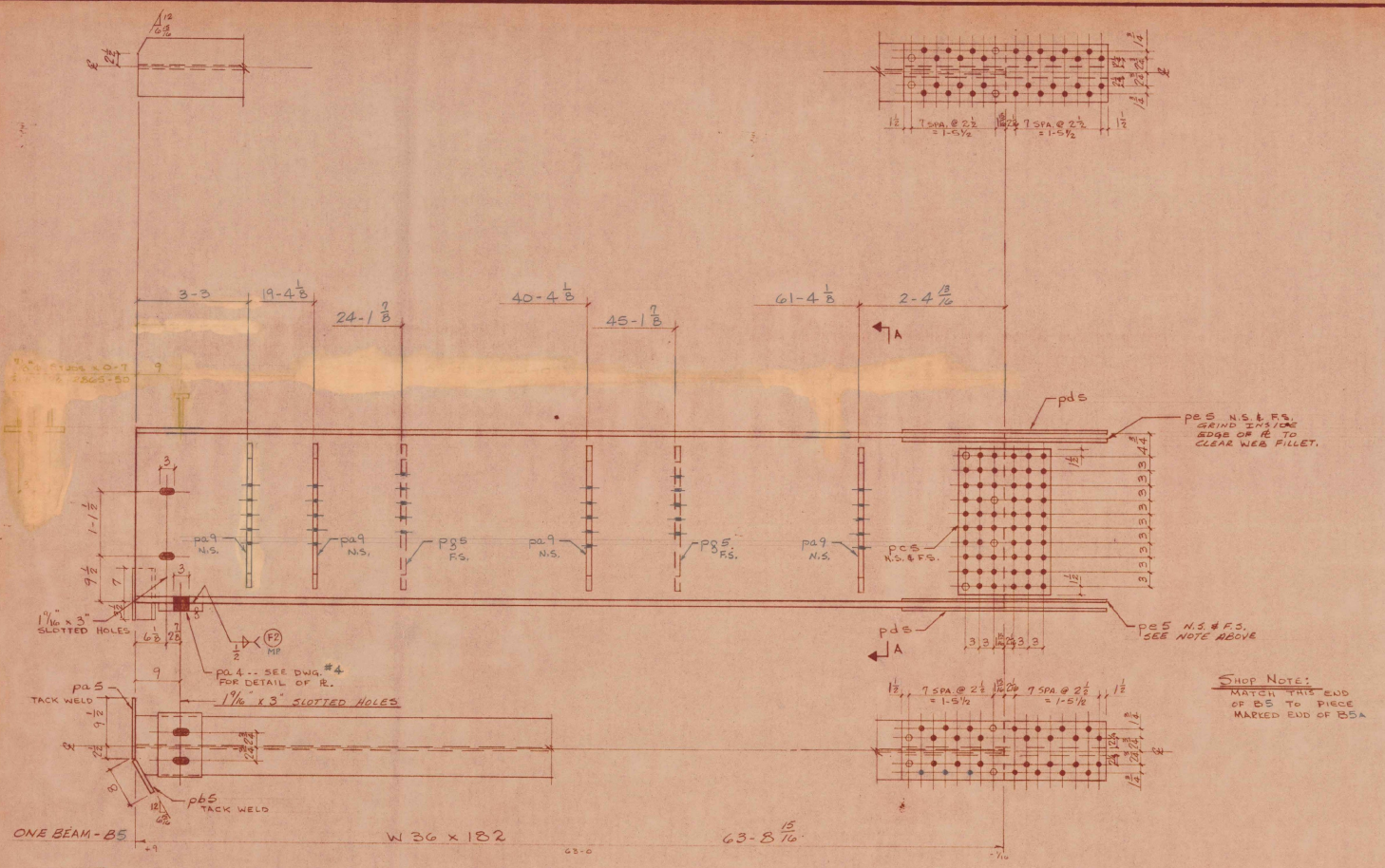
NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
		BEAMS						
* ONE	B4	W 36 x 182	63	8 15/16	1-2	11603	3	4 7 - -
ONE	pa4	PL 1 1/2 x 9	1	1 5/8	2-13	50	✓	
ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9	✓	
ONE	pb5	do	0	8	2-1	6	✓	
2	pc5	PL 3/8 x 19	2	6	1-19	121	✓	
2	pd5	PL 5/8 x 12	3	6	1-16	179	✓	
4	pe5	PL 5/8 x 5 1/2	3	6	1-17	164	✓	
2	pg5	BAR 5" x 1/2	2	6	1-13	93	✓	
3	pa8	do	2	6	1-13	64	✓	
						12239	✓	
4		7/8" ϕ WEATHERING A325 BOLTS	0	2 3/4	3-15	—		
8		do	0	3 3/4	3-14	—		

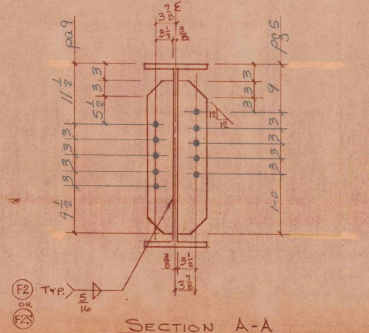
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT
PROJ. # RF-BEF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO. REV. #	BY	REVISION
8-30		5		
9/6		4		
9/20	SHOP	3		
11-2		2		
3-9		1		

PROJECT VT Rte # 12 over Dog River
LOCATION Northfield, Vermont
CUSTOMER Lunde Const. Co.
ARCHITECT Vermont Dept. of Hwys.
HOLES 15/16" ϕ U/N DRAWN BY Jerry Barnier
BOLTS As Shown CHECKED BY HP
PAINT None See Notes DATE Sept. 22, 1976
JOB NO. 76-2865 SHEET NO. 8





SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.

3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shown - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES-CHARPY V-NOTCH TEST--AASHTO M222.

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS						
*	ONE	B5	W36 x 182	63	8 15/16	1-2	11603	3 4 7	- -
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50		
	ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9		
	ONE	pb5	do	0	8	2-1	6		
	2	pc5	PL 3/8 x 19	2	6	1-19	121		
	2	pd5	PL 5/8 x 12	3	6	1-16	179		
	4	pe5	PL 5/8 x 5 1/2	3	6	1-17	164		
	2	pg5	BAR 5 x 1/2	2	6	1-13	43		
	4	pa9	do	2	6	1-13	85		
							12260		
	4		7/8" ϕ A325 WEATHERING BOLTS	0	2 3/4	3-15	—		
	8		do	0	3 3/4	3-14	—		

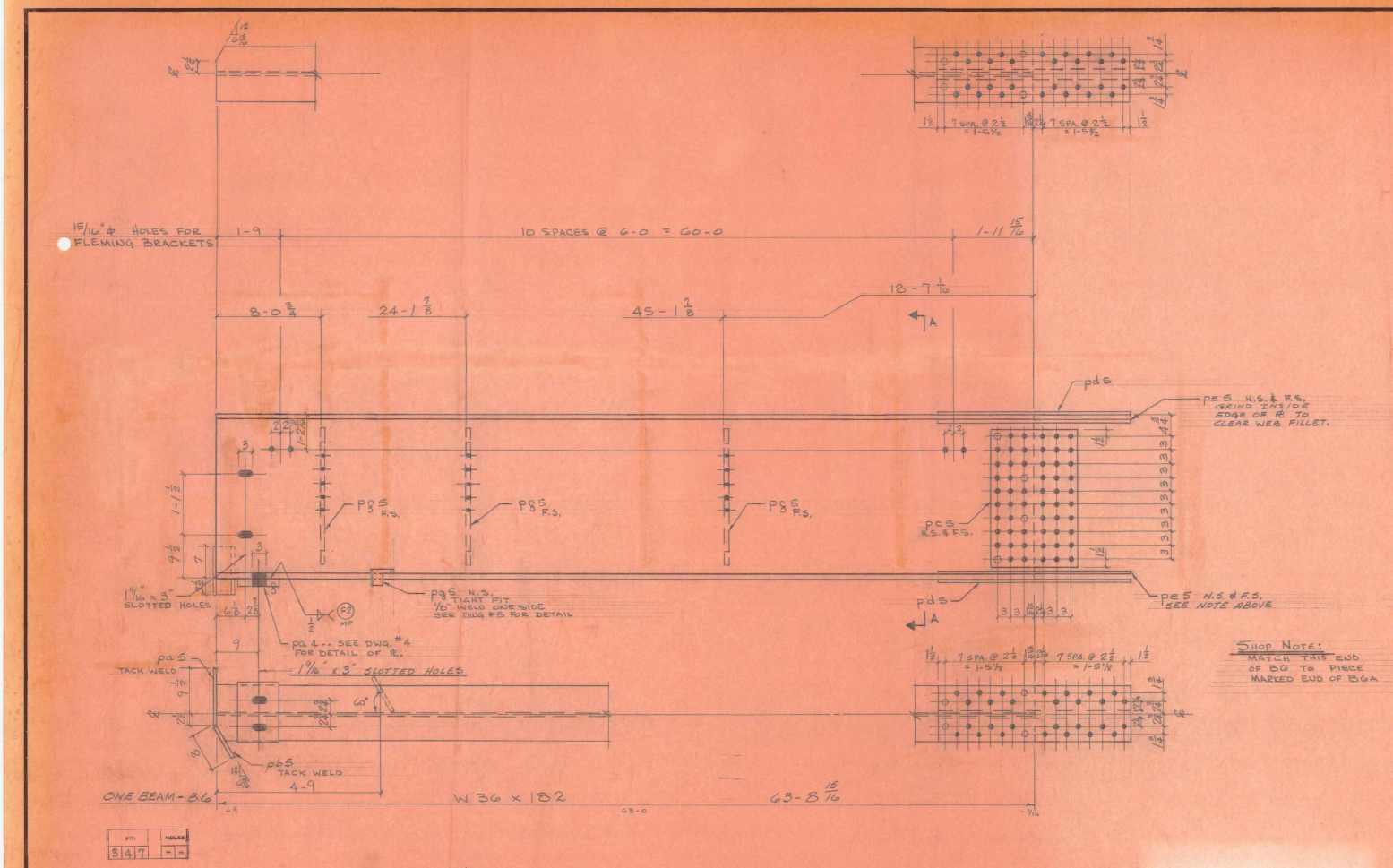
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

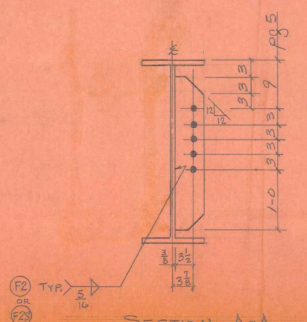
PROJ. #RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
6-30	9 PR	5			
10/20	AFE SHOP	1			
10/20	SHOP	3 (1)			
11-2	SHOP	2			
3-9	do	1			

PROJECT Vt. Rte #12 over Dog River
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 22, 1976
JOB NO. 76-2865 SHEET NO. 9





SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1 — Test length in feet (not shown if weld is less than one foot).
— Number of tests on weld (if no number shown - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588

BILL OF MATERIAL *-INDICATES - CHARPY V-NOTCH TEST -- AASHTO M222.

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
		BEAMS						
* ONE	B6	W 36 x 182	63	8 15/16	1-2	11603	3 4 7	- -
ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50		
ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9		
ONE	pb5	do	0	8	2-1	6		
2	pc5	PL 3/8 x 19	2	6	1-19	121		
2	pd5	PL 5/8 x 12	3	6	1-16	179		
4	pe5	PL 5/8 x 5 1/2	3	6	1-17	164		
3	pg5	BAR 5 x 1/2	2	6	1-13	64		
ONE	pg5	PL 1/4 x 3 3/16	0	9	1-21	2		
						12198		
4		7/8" ϕ A325 WEATHERING BOLTS	0	2 3/4	3-15	—		
8		do	0	3 3/4	3-14	—		

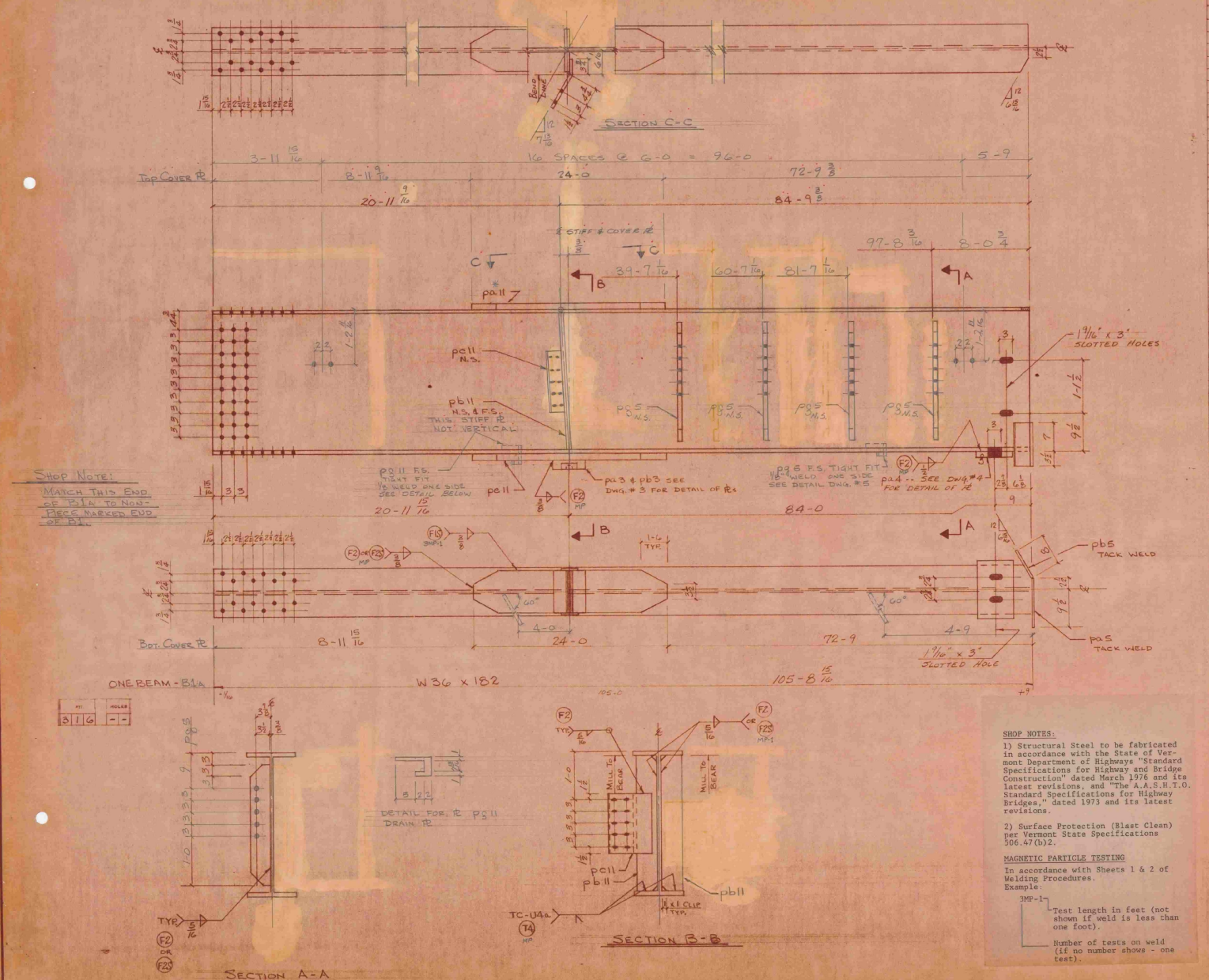
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

PROJ. # RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
8-30	NOP	5			
10/20	BRF CONST	1			
10/26	Shop	3			
11-2	W.F. STEEL	2			
3-9	do	1			

PROJECT Vt. Rte # 12 over Dog River
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 22, 1976
JOB NO. 76-2865 SHEET NO. 10



SHOP NOTE:
MATCH THIS END OF B1A TO NON-PIECE MARKED END OF B1.

MT.	HOLES
3 1 6	- -

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1 — Test length in feet (not shown if weld is less than one foot).
— Number of tests on weld (if no number shows - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES - CHARPY V-NOTCH TEST -- AASHTO M222.

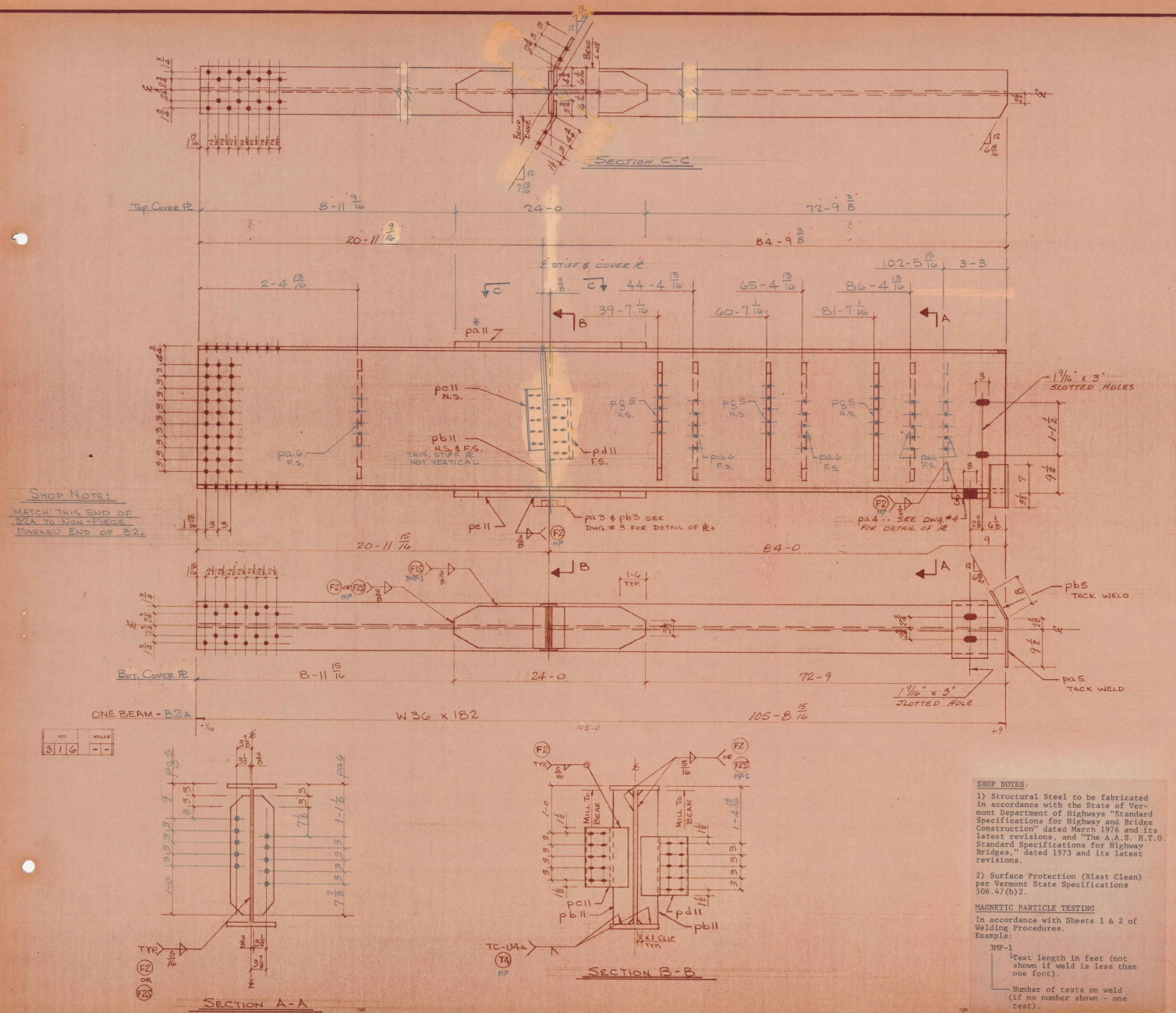
NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
		BEAMS						
* ONE	B1A	W 36 x 182	105	8 15/16	1-1	19247	3 16	- -
* ONE	pa11	PL 1 5/8 x 10 1/2	24	0	1-4	1392	✓	
2	pb11	BAR 5 x 3/4	2	10	M/E 1-11	72	✓	
ONE	pc11	BT. PL 1/2 x 13	1	3	1-14	28	✓	
ONE	pa3	BAR 8 x 2 1/4	0	10 1/2	2-4	54	✓	
2	pb3	BAR 4 x 3/8	0	1 1/2	2-8	1	✓	
ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50	✓	
ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9	✓	
ONE	pb5	PL 1/4 x 10 1/2	0	8	2-1	6	✓	
ONE	pe11	PL 1 5/8 x 10 1/2	24	0	1-5	1392	✓	
4	pg5	BAR 5 x 1/2	2	6	1-13	85	✓	
ONE	pg5	PL 1/4 x 3 3/16	0	9	1-21	2	✓	
ONE	pg11	PL 1/4 x 4 13/16	0	9	1-21	3	✓	
						22341		

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ. # RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-3-76	AMP	5			
10/1/76	PRE GRAP	1			
10/22	-	-	△1	JB	PIER STIFF PL - BEVELED
10/26	FIN APPL	5	—	—	—
10/26	SHOP	3			
11-3	WT. DRAW	2			
3-4	do	1			

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 27, 1976
JOB NO. 76-2865 SHEET NO. 11



PIT			HOLES	
3	1	6	-	-

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S. H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shown - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES-CHARPY V-NOTCH TEST--AASHTO M222.

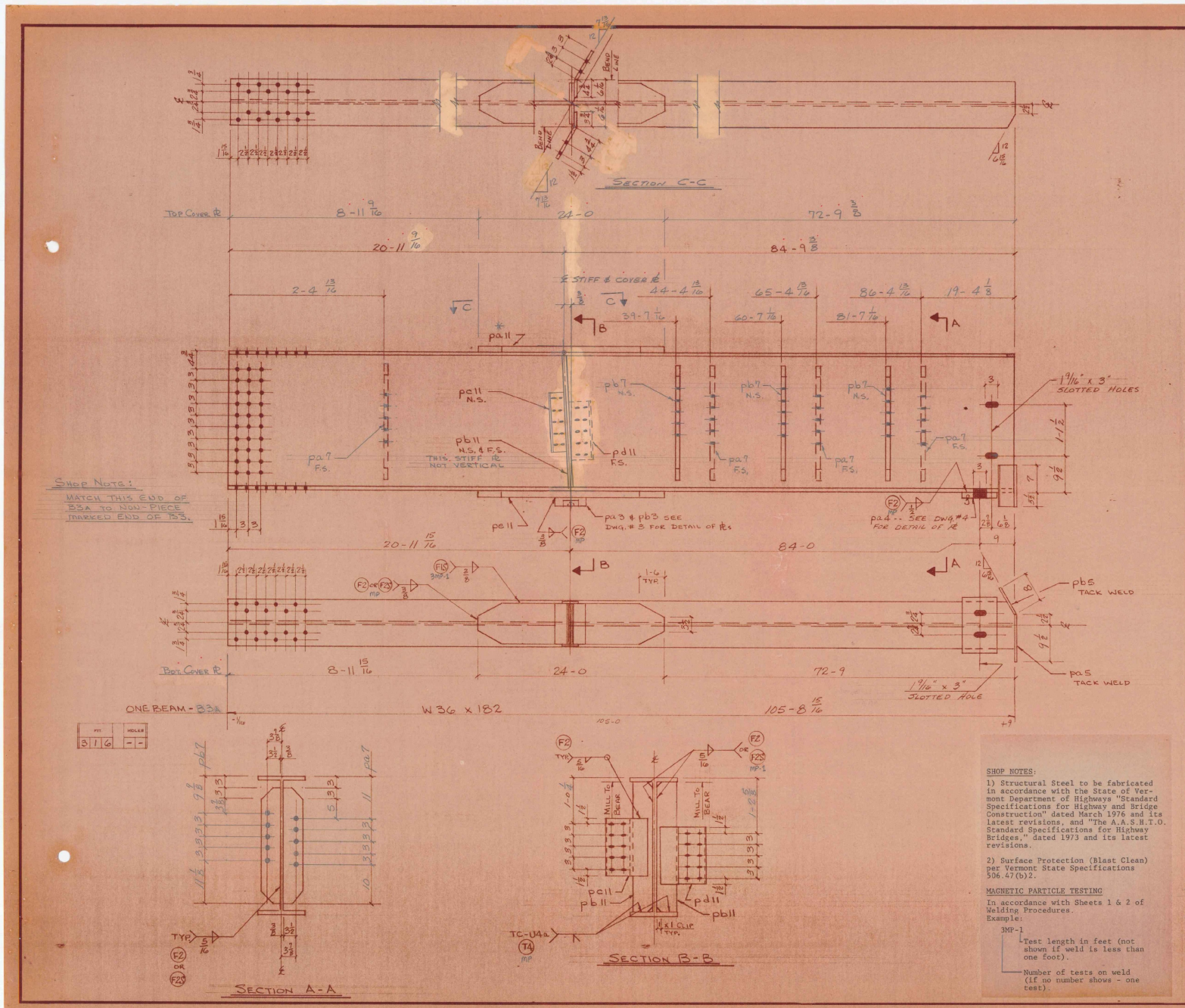
	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.			WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS							
*	ONE	B2A	W 36 x 182	105	8 15/16		1-1	19247	3 1 6	- -
*	ONE	pa11	PL 1 5/8 x 10 1/2	24	0		1-4	1392	✓	
	2	pb11	BAR 5 x 3/4	2	10	MIE	1-11	72	✓	
	ONE	pc11	BT. PL 1/2 x 13	1	3		1-14	28	✓	
	ONE	pd11	BT. PL 1/2 x 13	1	3		1-14	28	✓	
	ONE	pa3	BAR 8 x 2 1/4	0	10 1/2		2-4	54	✓	
	2	pb3	BAR 4 x 3/8	0	11 1/2		2-8	1	✓	
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8		2-13	50	✓	
	ONE	pa5	PL 1/4 x 10 1/2	1	0		2-2	9	✓	
	ONE	pb5	PL 1/4 x 10 1/2	0	8		2-1	6	✓	
	ONE	pe11	PL 1 5/8 x 10 1/2	24	0		1-5	1392	✓	
	3	pg5	BAR 5 x 1/2	2	6		1-13			
	5	pa6	do	2	6		1-13	170	✓	
								22449	✓	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ. # RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	SHOP	5			
10/20	PRE STRUCT	1			
10/22	—	—	△	J.B.	PIER STIFF - BEVELED
10/22	FIN. STRUCT	5	—	—	—
10/26	SHOP	3			
11-2	STRUCT	2			
3-4	do	1			

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 27, 1976
JOB NO. 76-2865 SHEET NO. 12



FIT			HOLES	
3	1	6	-	-

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shows - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES- CHARPY V-NOTCH TEST--AASHTO M222.

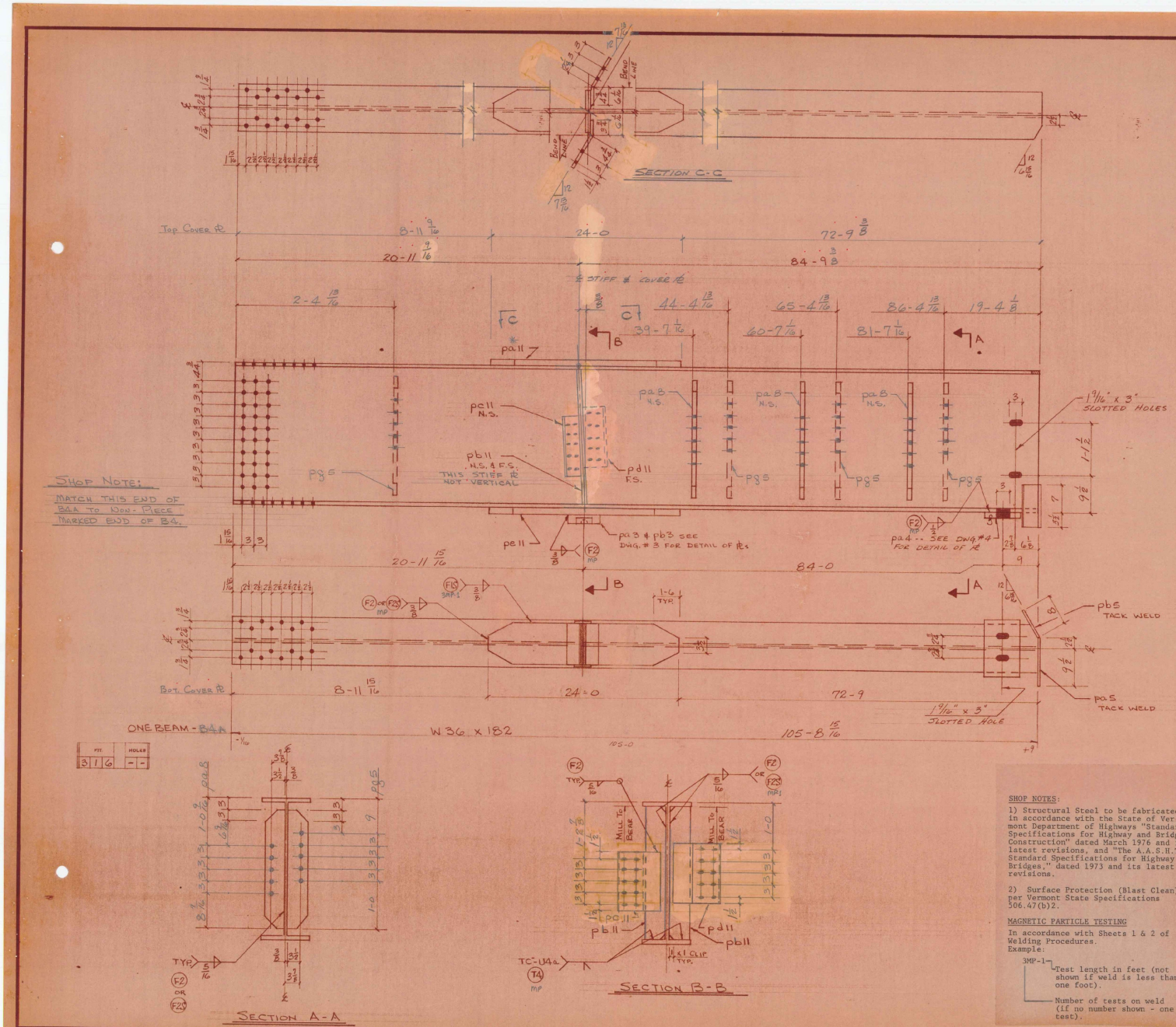
	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.			WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS							
*	ONE	B3A	W 36 x 182	105	8 15/16		1-1	19247	3 1 6	- -
*	ONE	pa11	PL 1 5/8 x 10 1/2	24	0		1-4	1392		
	2	pb11	BAR 5 x 3/4	2	10	MIE	1-11	72		
	ONE	pc11	BT. PL 1/2 x 13	1	3		1-14	28		
	ONE	pd11	BT. PL 1/2 x 13	1	3		1-14	28		
	ONE	pa3	BAR 8 x 2 1/4	0	10 1/2		2-4	54		
	2	pb3	BAR 4 x 3/8	0	1 1/2		2-8	1		
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8		2-13	50		
	ONE	pa5	PL 1/4 x 10 1/2	1	0		2-2	9		
	ONE	pb5	PL 1/4 x 10 1/2	0	8		2-1	6		
	ONE	pe11	PL 1 5/8 x 10 1/2	24	0		1-5	1392		
	4	pa7	BAR 5 x 1/2	2	6		1-13			
	3	pb7	do	2	6		1-13	149		
								22428		

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ.# RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	PRP	5			
10/20	PRE STOP	1			
10/22	-	-	△	JB	PIER STIFF PL - BEVELED
10/28	FIN. ADDS	5	-	-	—
10/28	SHOP	3			
11-2	SHOP	2			
3-4	do	1			

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 27, 1976
JOB NO. 76-2865 SHEET NO. 13



FIT.		HOLES
3	1	6	-	-

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1 — Test length in feet (not shown if weld is less than one foot).
— Number of tests on weld (if no number shown - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES-CHARPY V-NOTCH TEST--AASHTO M222.

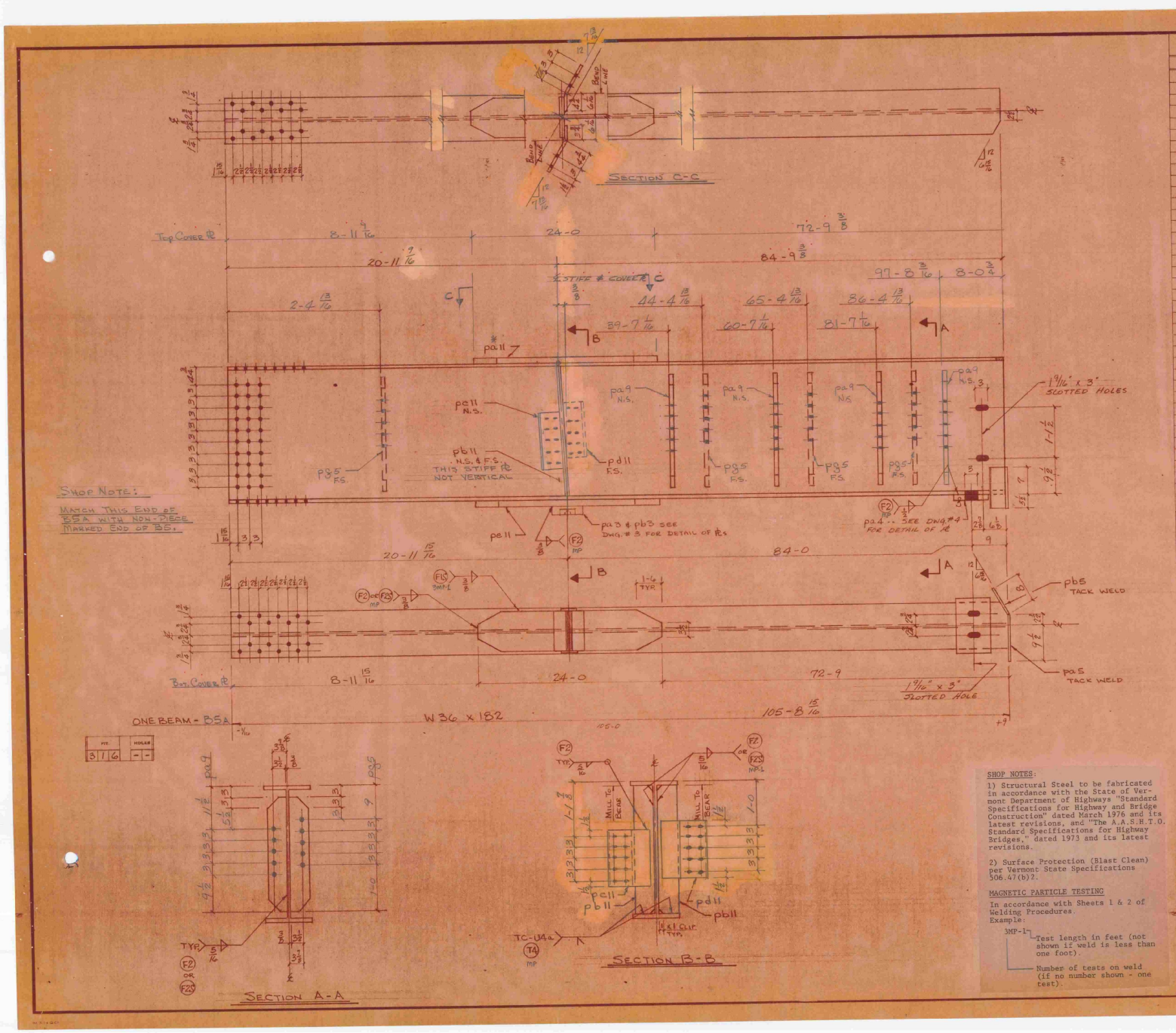
	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS						
*	ONE	B4A	W 36 x 182	105	8 15/16	1-1	19247	3 16	- -
*	ONE	pa11	PL 1 5/8 x 10 1/2	24	0	1-4	1392	✓	
	2	pb11	BAR 5 x 3/4	2	10	MIE 1-11	72	✓	
	ONE	pc11	BT. PL 1/2 x 13	1	3	1-14	28	✓	
	ONE	pd11	BT. PL 1/2 x 13	1	3	1-14	28	✓	
	ONE	pa3	BAR 8 x 2 1/4	0	10 1/2	2-4	54	✓	
	2	pb3	BAR 4 x 3/8	0	1 1/2	2-8	1	✓	
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50	✓	
	ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9	✓	
	ONE	pb5	PL 1/4 x 10 1/2	0	8	2-1	6	✓	
	ONE	pe11	PL 1 5/8 x 10 1/2	24	0	1-5	1392	✓	
	4	pg5	BAR 5 x 1/2	2	6	1-13			
	3	pa8	do	2	6	1-13	149	✓	
							22428	✓	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT. PROJ. # RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-20	ADP	5			
10/20	FRC	1			
10/22	—	—	△1	JB	PIER STIFF PL-BEVELED
10/22	FIN	5	—	—	—
10/26	SHOP	3			
1-3	JTT	2			
3-4	do	1			

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 27, 1976
JOB NO. 76-2865 SHEET NO. 14



SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1 — Test length in feet (not shown if weld is less than one foot).
— Number of tests on weld (if no number shown - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES - CHARPY V-NOTCH TEST -- AASHTO M222.

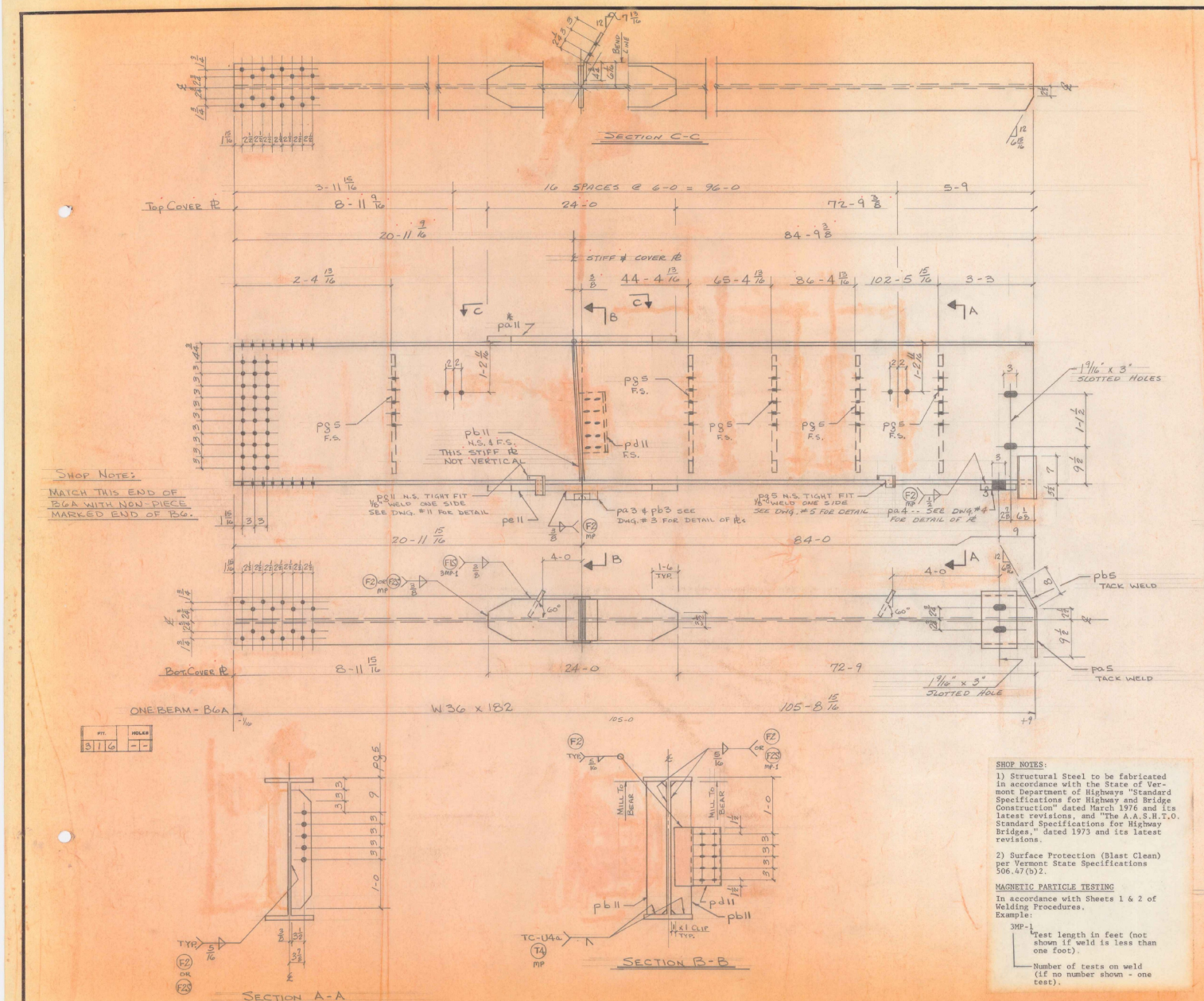
	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS						
*	ONE	B5A	W 36 x 182	105	8 15/16	1-1	19247	3 1 6	- -
*	ONE	pa11	PL 1 5/8 x 10 1/2	24	0	1-4	1392	✓	
	2	pb11	BAR 5 x 3/4	2	10 MIE	1-11	72	✓	
	ONE	pc11	BT. PL 1/2 x 13	1	3	1-14	28	✓	
	ONE	pd11	BT. PL 1/2 x 13	1	3	1-14	28		
	ONE	pa3	BAR 8 x 2 1/4	0	10 1/2	2-4	54	✓	
	2	pb3	BAR 4 x 3/8	0	1 1/2	2-8	1	✓	
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8	2-13	50	✓	
	ONE	pa5	PL 1/4 x 10 1/2	1	0	2-2	9	✓	
	ONE	pb5	PL 1/4 x 10 1/2	0	8	2-1	6	✓	
	ONE	pe11	PL 1 5/8 x 10 1/2	24	0	1-5	1392	✓	
	4	pg5	BAR 5 x 1/2	2	6	1-13			
	4	pa9	do	2	6	1-13	170	✓	
							22449	✓	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ. # RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-31	APP	5			
10/20	APP	1			
10/22	-	-	△	J.B.	PIER STIFF PL-BEVELED
10/22	FIN. APP.	5	-	-	—
10/26	SHOP	3			
11-2	SHOP	2			
3-9	do	1			

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY JP
PAINT NONE SEE NOTES DATE SEPT. 27, 1976
JOB NO. 76-2865 SHEET NO. 15



SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

MAGNETIC PARTICLE TESTING

In accordance with Sheets 1 & 2 of Welding Procedures.
Example:

3MP-1
- Test length in feet (not shown if weld is less than one foot).
- Number of tests on weld (if no number shown - one test).

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES

JOB NO. SHEET NO.

ASTM A588 BILL OF MATERIAL *-INDICATES-CHARPY V-NOTCH TEST--AASHTO M222.

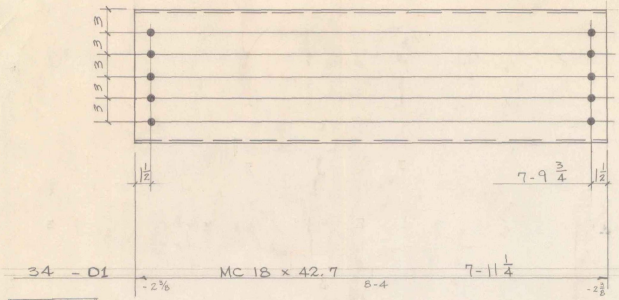
	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.			WEIGHT	CLASSIFICATION FIT	CLASSIFICATION HOLES
			BEAMS							
*	ONE	B6A	W 36 x 182	105	8 15/16		1-1	19247	3 1 6	- -
*	ONE	pa11	PL 1 5/8 x 10 1/2	24	0		1-4	1392	✓	
	2	pb11	BAR 5 x 3/4	2	10	MIE	1-11	72	✓	
							1-14			
	ONE	pd11	BT. PL 1/2 x 13	1	3		1-14	28	✓	
	ONE	pa3	BAR 8 x 2 1/4	0	10 1/2		2-4	54	✓	
	2	pb3	BAR 4 x 3/8	0	1 1/2		2-8	1	✓	
	ONE	pa4	PL 1 1/2 x 9	1	1 1/8		2-13	50	✓	
	ONE	pa5	PL 1/4 x 10 1/2	1	0		2-2	9	✓	
	ONE	pb5	PL 1/4 x 10 1/2	0	8		2-1	6	✓	
	ONE	pe11	PL 1 5/8 x 10 1/2	24	0		1-5	1392	✓	
	5	pg5	BAR 5 x 1/2	2	6		1-13	106	✓	
	ONE	pg5	PL 1/4 x 3 3/16	0	9		1-21	2	✓	
	ONE	pg11	PL 1/4 x 4 13/16	0	9		1-21	3	✓	
								22362	✓	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ. # RF-BRF-035-2(3)

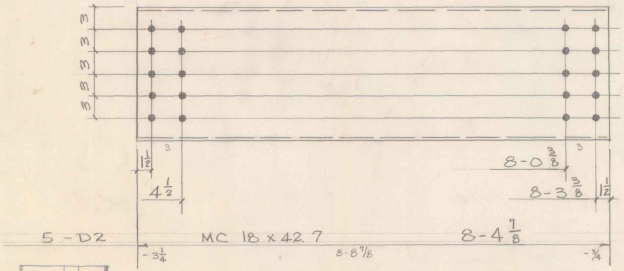
PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	ADD	5			
10/20	PRE STIFF	1			
10/22	-	-	1	JB	PIER STIFF PL - BEVELED
10/22	FIN. APPL	5	-	-	—
10/26	Stop	30			
11-2	W/ STAR	2			
3-4	do	1			

PROJECT VT. Rte # 12 OVER DOG RIVER
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ U/N DRAWN BY JERRY BARNIER
BOLTS AS SHOWN CHECKED BY JP
PAINT NONE SEE NOTES DATE SEPT. 28, 1976
JOB NO. 76-2865 SHEET NO. 16



FIT.			HOLES	
3	4	1	-	-



FIT.			HOLES	
3	4	1	-	-

SHOP NOTES:

1) Structural Steel to be fabricated in accordance with the State of Vermont Department of Highways "Standard Specifications for Highway and Bridge Construction" dated March 1976 and its latest revisions, and "The A.A.S.H.T.O. Standard Specifications for Highway Bridges," dated 1973 and its latest revisions.

2) Surface Protection (Blast Clean) per Vermont State Specifications 506.47(b)2.

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.			WEIGHT	CLASSIFICATION FIT			HOLES	

JOB NO. SHEET NO.

ASTM A588

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.			WEIGHT	CLASSIFICATION FIT			HOLES	
			DIAPHRAGMS										
	34	D1	MC 18 x 42.7	7	11 1/4		1-7	11523	3	4	1	-	-
	5	D2	do	8	4 7/8		1-6	1795	3	4	1	-	-
								13318					
			FIELD MATERIAL										
440	460		7/8" ϕ WEATHERING A325 BOLTS	0	2 1/4	DIAPH.	3-16	—	3	1	1	-	-
360	375		do	0	2 3/4	WEB	3-15	—	3	1	1	-	-
384	400		do	0	3 3/4	FLG	3-14	—	3	1	1	-	-
	1235		7/8" ϕ WEATHERING HARD WASHERS				3-17	—	3	1	1	-	-
112	115		3/4" ϕ WEATHERING A325 BOLTS	0	1 1/2	F.B.	STK	—	3	1	1	-	-

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT PROJ. # RF-BRF-035-2(3)

PRINT AND REVISION RECORD

DATE	FOR	NO.	REV. #	BY	REVISION
5-30	[illegible]	5			
10/10	BRT [illegible]	1			
10/26	Shop	3			
11-2	STAT [illegible]	2			
3-4	do	1			

PROJECT VT. Rte. #12 over Dog River
LOCATION NORTHFIELD, VERMONT
CUSTOMER LUNDE CONST. CO.
ARCHITECT VERMONT DEPT. OF HWYS.
HOLES 15/16" ϕ DRAWN BY JERRY BARNIER
BOLTS AS NOTED CHECKED BY HP
PAINT NONE SEE NOTES DATE SEPT. 28, 1976
JOB NO. 76-2865 SHEET NO. 17

INDEX OF SHEETS

INDEX OF SHEETS

1	Title Sheet
2	Typical Sections
3	Item Quantity and Drainage Sheet
4	Earthwork and Grade Sheet
5-8	Layouts and Profile Sheet
9-23	Cross Sections

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

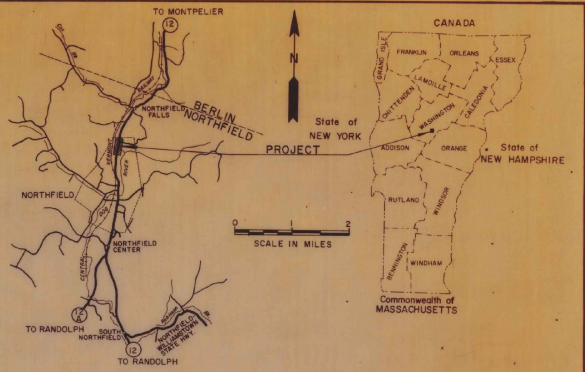
FEDERAL AID PROJECT

PROPOSED IMPROVEMENT
TOWN OF NORTHFIELD
COUNTY OF WASHINGTON
MONTPELIER-RANDOLPH ROAD
VT. RTE. 12

BEGINNING AT A POINT APPROXIMATELY 0.729 MILES SOUTHERLY OF THE BERLIN-NORTHFIELD TOWN LINE AND EXTENDING 0.341 MILES NORTHERLY.

LENGTH OF ROADWAY	FEET	MILES
LENGTH OF BRIDGE	FEET	MILES
LENGTH OF PROJECT 1800.00	FEET 0.341	MILES
LENGTH OF R.O.W PROJ. 2190.14	FEET 0.414	MILES

R.O.W. PLANS



BEGIN R.O.W. PROJ. RF-BRF-035-2(3)
STA. REV. VT. RTE. 12 17+19.86 LT.

STA. 16+50
BEGIN APPROACH CONSTRUCTION

STA. 18+00
END APPROACH CONST.
BEGIN PROJECT

TO SEWER PLANT

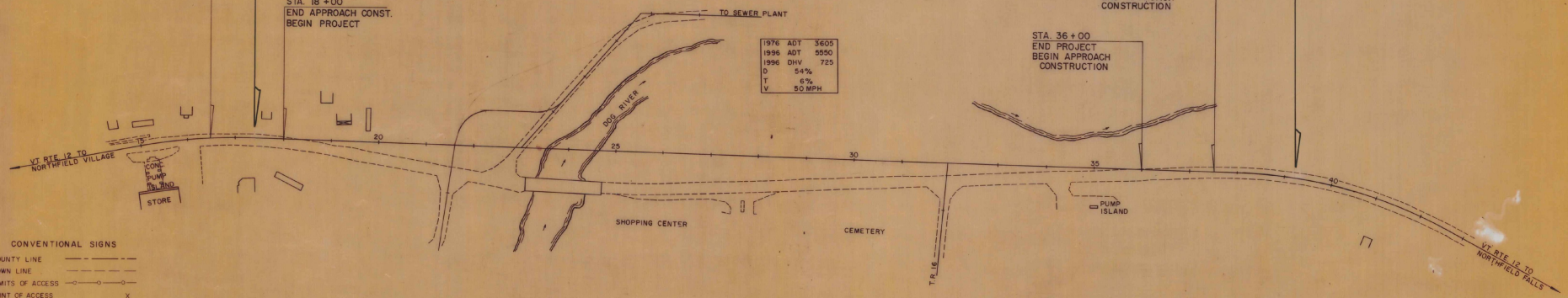
1976	ADT	3605
1996	ADT	5550
1996	DHV	725
D		54%
T		6%
V		50 MPH

DOG RIVER

STA. 36+00
END PROJECT
BEGIN APPROACH CONSTRUCTION

STA. 37+50
END APPROACH CONSTRUCTION

END R.O.W. PROJ. RF-BRF-035-2(3)
STA. REV. VT. RTE 12 39+10 LT.



CONVENTIONAL SIGNS

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

SCALE IN FEET

These plans are subject to such engineering changes as may be required by the Federal Highway Administration or the Chief Engineer.

Construction is to be carried on in accordance with these plans and the Standard Specifications for Highway and Bridge Construction dated January 3, 1972 as approved by the Federal Highway Administration on December 28, 1971 for use on this project, including all subsequent revisions and such revised specification and special provisions as are incorporated in these plans.

APPROVED W.R. Lawrence
R.O.W. DIRECTOR
DATE 1-5-76

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD
APPROVED E. H. Stickney DATE 1-5-76
CHIEF ENGINEER

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

PROJECT RF-BRF Nº 035-2(3)
SHEET 1 OF 7 SHEETS

D-10 SRS 12/17/70

VT. RTE. 12 TYPICAL SECTIONS

SEEDING FORMULA
ITEM 651.10
RURAL AREAS

% WT.	LBS/A	NAME	PUR. %	GERM %
41.67	25	CREEPING RED FESCUE	98	85
25.00	15	ALFALFA	99	85
8.33	5	RED TOP	92	85
16.67	10	PERENNIAL RYE GRASS	95	90
8.33	5	BIRDFOOT TREFOIL (VAR. EMPIRE)	98	80
100.00	60			

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

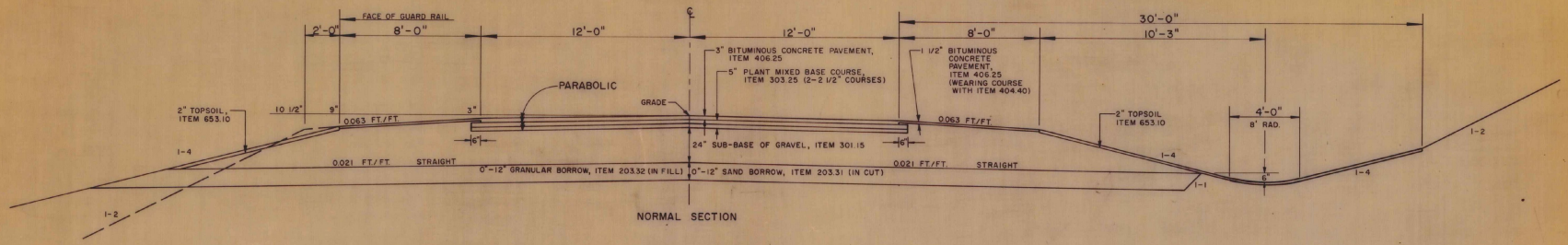
3" BITUMINOUS CONCRETE PAVEMENT, ITEM 406.25 (± 1/4") (1 1/4" BINDING COURSE OVER 1 3/4" WEARING COURSE)
5" PLANT MIXED BASE COURSE, ITEM 303.25 (± 1/2") (2-2 1/2" COURSES)
24" SUB-BASE OF GRAVEL, ITEM 301.15 (± 1")

SHOULDERS: 1 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 406.25 (WEARING COURSE, WITH ITEM 404.40)

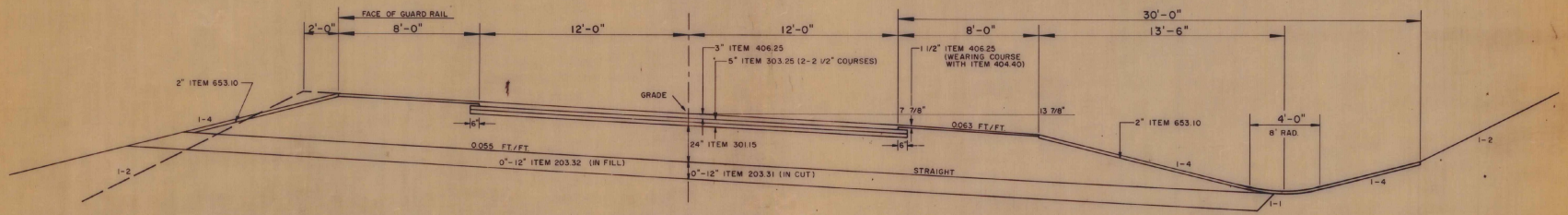
0"-12" GRANULAR BORROW, ITEM 203.32 (IN FILL) (± 1")
0"-12" SAND BORROW, ITEM 203.31 (IN CUT) (± 1")

TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER

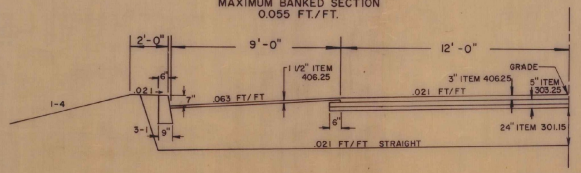
PERMISSABLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY.



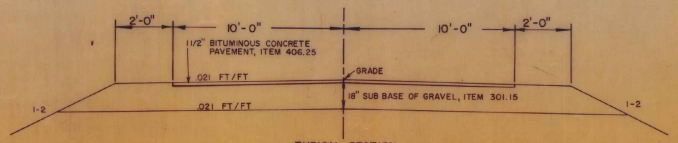
NORMAL SECTION



MAXIMUM BANKED SECTION
0.055 FT./FT.



NORMAL SECTION
W/ CEMENT CONCRETE CURB,
TYPE B
18+00 - 20+00 LT.



TYPICAL SECTION
SEWER PLANT ROAD

GENERAL NOTES:

FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-5.
STEEL MARKER POSTS, ITEM 619.16, TO BE PLACED AS DIRECTED BY THE ENGINEER.
HAY MULCH, ITEM 651.25, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE.
FERTILIZER, ITEM 651.15, SHALL BE MIXED AS FOLLOWS:

NITROGEN	10 %
PHOSPHORUS	20 %
POTASH	10 %

FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT TO EXCEED 100 LBS. EA. AND IS TO BE APPLIED AT THE RATE OF 500 LBS. PER ACRE.
AGRICULTURAL LIMESTONE, ITEM 651.20, TO BE APPLIED TO ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE OR AS DIRECTED BY THE ENGINEER.
FOR RIGHT TURN LANE FOR COMMERCIAL DRIVE, SEE DETAIL F, STANDARD SHEET B-71.

NORTHFIELD

SURVEYED BY _____ DATE _____
DRAWN BY DUFFY DATE 11/75
TRACED BY DUFFY DATE 11/75

PROJ. RF-BRF NO. 035-2 (3)
SHEET 2 OF 7

D-8

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

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1	NEILL, PHILIP A. & GENEVIEVE J.	4	REV. VT. RTE.12 17+19.86 LT. REV. VT. RTE.12 18+00 LT.	REV. VT. RTE.12 19+85 LT. REV. VT. RTE.12 19+85 LT.	0.06 At	N/A	SLOPE (T) (479 S.F.±)	WD	8-16-76	NORTHFIELD	67	388A 388B	(2657 S.F.±)
2	BEAN, PAUL	4	REV. VT. RTE.12 19+85 LT.	REV. VT. RTE.12 23+25 LT.	0.60 At	N/A		WD	5-15-79	NORTHFIELD	72	390	
3	VILLAGE OF NORTHFIELD	4	REV. VT. RTE.12 22+35 RT. REV. VT. RTE.12 21+59 LT. REV. VT. RTE.12 20+55 LT.	REV. VT. RTE.12 24+43 LT. REV. VT. RTE.12 24+00 LT.	0.26 At	N/A	DRIVE (T) DRAINAGE (P)	WD	9-8-76	NORTHFIELD	67	409 410	
4	BABCOCK, A. JUDSON	4	REV. VT. RTE.12 21+59 RT.				DRIVE (T)	WD	7-7-76	NORTHFIELD	67	340 341 342	

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	ALL	Project: Added "RF" To Project Number Per C.O. #3063	1-16-76	KDP	T.P.M.
2	3	Parcel #2 Bean & Parcel #3 Village Of Northfield Changed Drainage + Drive Rt. On Parcel #2 To Parcel #3 Per C.O. #3068	29 Jan 76	KDP	T.P.M.
3	4	Parcel #4 Babcock Added Deceleration Lane To Plans Per C.O. #3091	25 Mar 76	KDP	T.P.M.

MADE BY: K.D. Perkins DATE 1-2-76

CHECKED BY: J. Paterson DATE 1-2-76

DR. RT. — DRAINAGE RIGHT
DIT. RT. — DITCHING RIGHT
CH. RT. — CHANNEL RIGHT
DRIVE RT. — DRIVE RIGHT
CUL. RT. — CULVERT RIGHT
(D) — DEMOLITION OR REMOVAL
(W) — WATER SOURCES

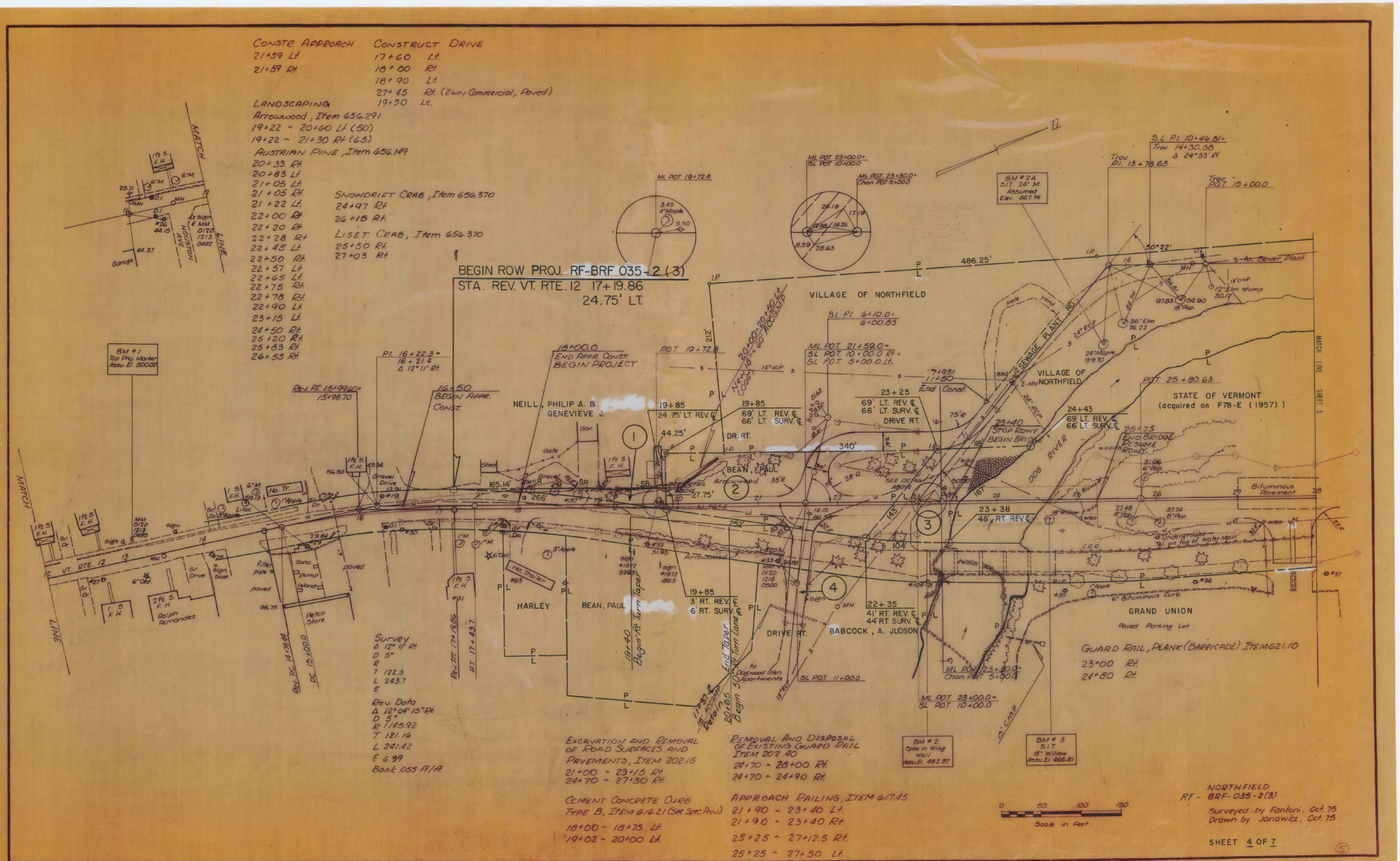
LEGEND

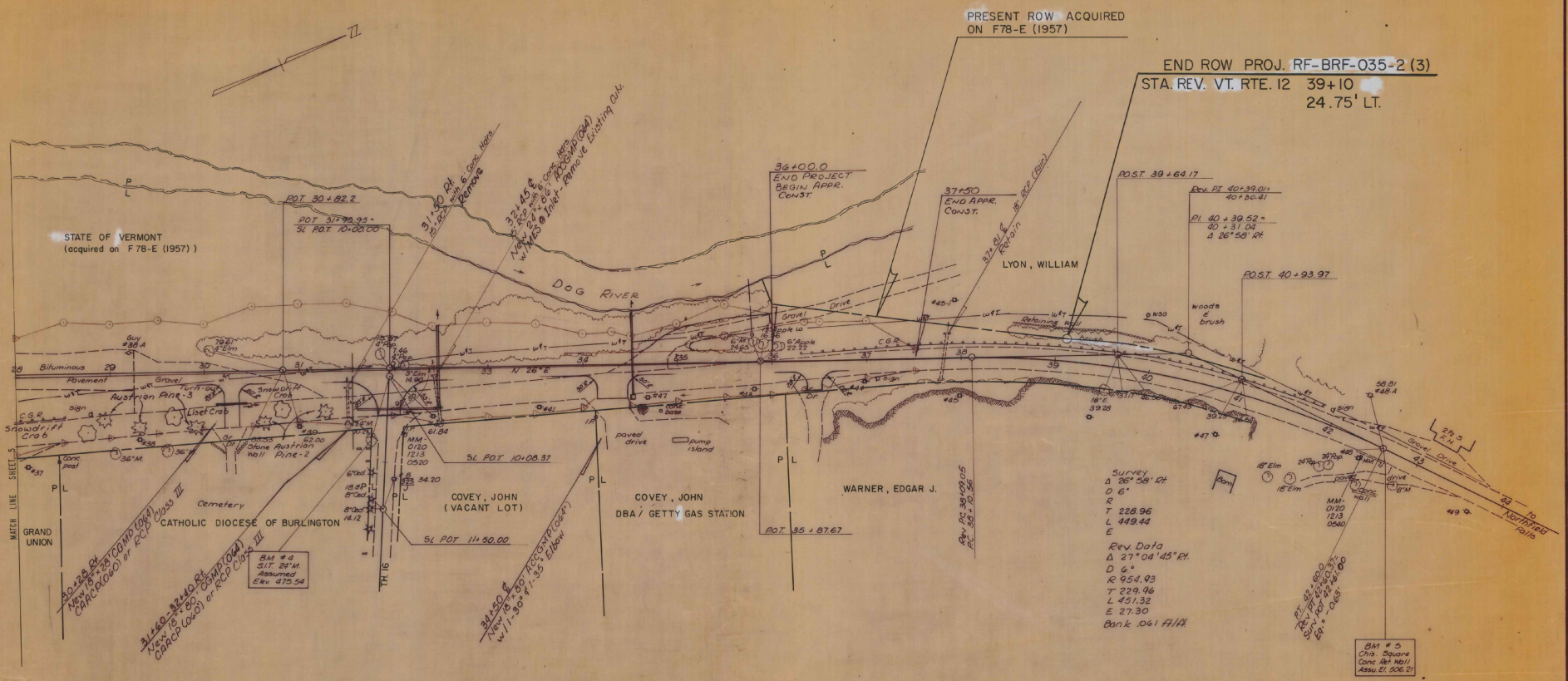
PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINES
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT
SR SR SLOPE RIGHTS
P/L P/L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

APPROVED Thomas F. Mayo CHIEF OF PLANS & TITLES DATE 1-5-76

PROJECT NORTHFIELD
NO. RF-BRF035-2(3)
SHEET 3 OF 7

ROW


CONSTR. APPROACH
21+59 Lt
21+59 Rt.
CONSTRUCT DRIVE
17+60 Lt.
18+00 Rt.
18+90 Lt.
27+45 Rt. (2way Commercial, Paved)
19+50 Lt.
LANDSCAPING
Arrowwood, Item 656.291
19+22 ~ 20+60 Lt (50)
19+22 ~ 21+30 Rt (65)
AUSTRIAN PINE, Item 656.149
20+33 Rt.
20+83 Lt.
21+05 Lt.
21+05 Rt.
21+22 Lt.
22+00 Rt.
22+20 Rt.
22+28 Rt.
22+45 Lt.
22+50 Rt.
22+57 Lt.
22+65 Lt.
22+75 Rt.
22+78 Rt.
22+90 Lt.
23+15 Lt.
24+50 Rt.
25+20 Rt.
25+83 Rt.
26+55 Rt.
SNOWDRIFT CRAB, Item 656.370
24+97 Rt.
26+15 Rt.
LISET CRAB, Item 656.370
25+50 Rt.
27+03 Rt.
BEGIN ROW PROJ. RF-BRF 035-2 (3)
STA. REV. VT. RTE. 12 17+19.86
24.75' LT.
VILLAGE OF NORTHFIELD
NEILL, PHILIP A. & GENEVIEVE J.
BEAN, PAUL
HARLEY
BABCOCK, A. JUDSON
DRIVE RT.
DOG RIVER
STATE OF VERMONT
(acquired on F78-E (1957))
GRAND UNION
Paved Parking Lot
MATCH LINE SHEET 5
Survey
Δ 12° 11' Rt.
D 5°
R
T 122.3
L 243.7
E
Rev. Data
Δ 12° 04' 15" Rt.
D 5°
R 1145.92
T 121.16
L 241.42
E 6.39
Bank .055 Ft/Ft.
EXCAVATION AND REMOVAL OF ROAD SURFACES AND PAVEMENTS, ITEM 202.15
21+00 ~ 23+15 Rt.
24+70 ~ 27+30 Rt.
CEMENT CONCRETE CURB TYPE B, ITEM 616.21 (See Spec. Prov.)
18+00 ~ 18+75 Lt.
19+02 ~ 20+00 Lt.
REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL ITEM 202.40
24+70 ~ 28+00 Rt.
24+70 ~ 24+90 Rt.
APPROACH RAILING, ITEM 617.45
21+90 ~ 23+40 Lt.
21+90 ~ 23+40 Rt.
25+25 ~ 27+12.5 Rt.
25+25 ~ 27+50 Lt.
GUARD RAIL, PLANK (BARRICADE) ITEM 621.10
23+00 Rt.
24+80 Rt.
NORTHFIELD
RF- BRF-035-2(3)
Surveyed by Fantoni, Oct. 75
Drawn by Janowicz, Oct. 75
SHEET 4 OF 7
Scale in Feet
D-8



LANDSCAPING
AUSTRIAN PINE, ITEM 656.149
28+93 Rt.
29+30 Rt.
29+91 Rt.
30+63 Rt.
31+25 Rt.
SNOWDRIFT CRAB, ITEM 656.370
28+75 Rt. and 30+81 Rt.
LISET CRAB, ITEM 656.370
29+65 Rt.

REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL, ITEM 202.40
28+00 - 28+52 Rt.
36+30 - 37+50 Lt.

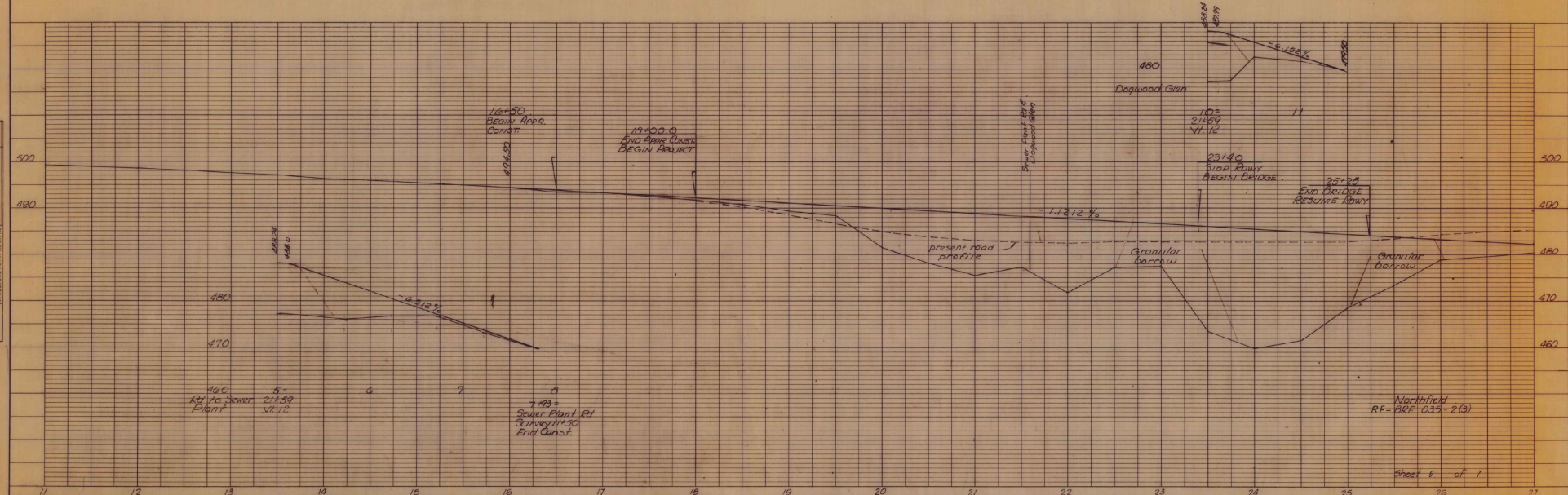
GUARD RAIL, THREE CABLE WITH LT. STEEL POSTS, ITEM 621.21
31+45 - 35+93 Lt. (Drive)
35+20 - 37+60 Lt.

CONSTRUCT APPROACH
32+00 Rt. (Town Rd #8)

CONSTRUCT DRIVE
34+30 Rt. (Commercial, Paved)
34+90 Lt.
36+45 Rt.
30+28 Rt.

NORTHFIELD
RF-BRF 035-2(3)
Surveyed by Fantoni, Oct 75
Drawn by Janawicz, Oct 75
SHEET 5 OF 7

D-8



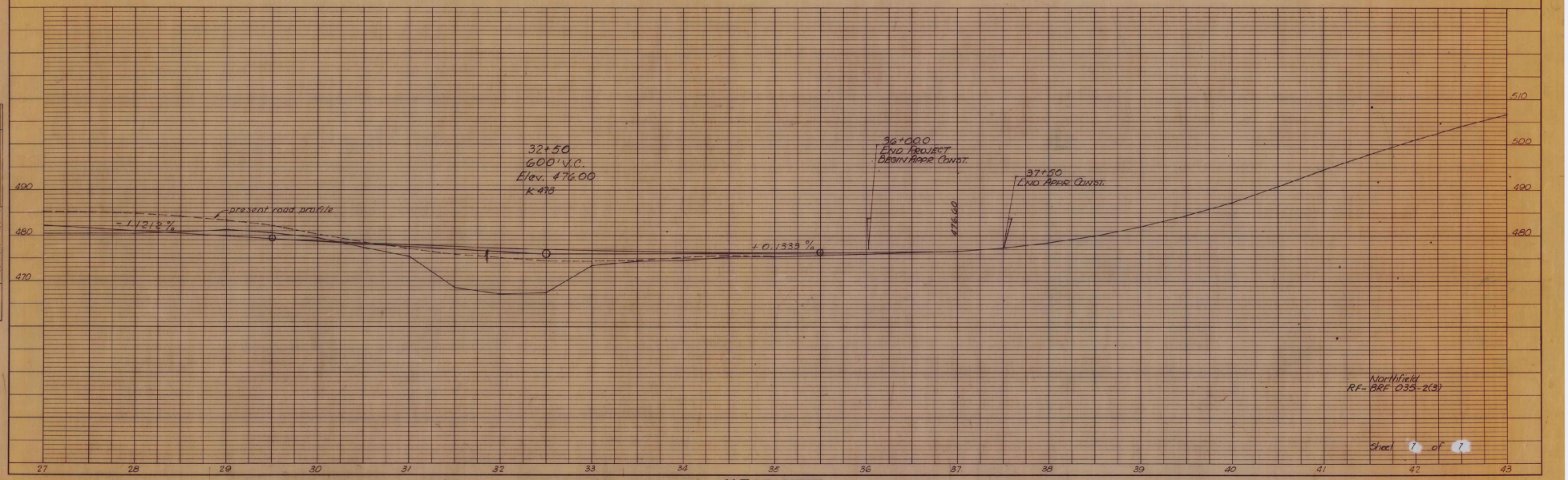
PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B. M. NOTED
STRUCTURE NOTATNS CH'KD
BY
Fantoni
Shangrow, Lorenzo
DATE
10-78
11-78

K+E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.

48 7012 IMPERIAL™ TRACING CLOTH 23006

6



PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
R. M.S NOTED
STRUCTURE NOTATIONS CHECKED
BY Fenton, Sorenson, Conowicz
DATE 10.75 11.75

K+E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.

48 7012 IMPERIAL™ TRACING CLOTH

Vermont Agency of
Transportation
PHASE 2-INTERSTATE
#122302-01
INITIALS DONE
Hanger 3023
INITIALS DONE

NORTHFIELD RF-BRF 035-2(3) 1 of 1

1977 BRIDGE M 1977

Bridge
1977

Northfield
RF-BRF035-2(3)

1977

R.O.W.
1976 ROW NORTHFIELD RF-BRF-035-2(3) 1976