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RECORD PLANS

CONTRACTOR: WINTERSET, LYNDONVILLE, VT.

RESIDENT ENGINEER: ROSS CLARK

CONSTRUCTION BEGAN: June 9, 1997
CONSTRUCTION COMPLETED: Oct. 16, 1998

RECORD PLANS BY: Jacques Couture

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

BY for R. Clark RESIDENT ENGINEER

DATE 02-24-03

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

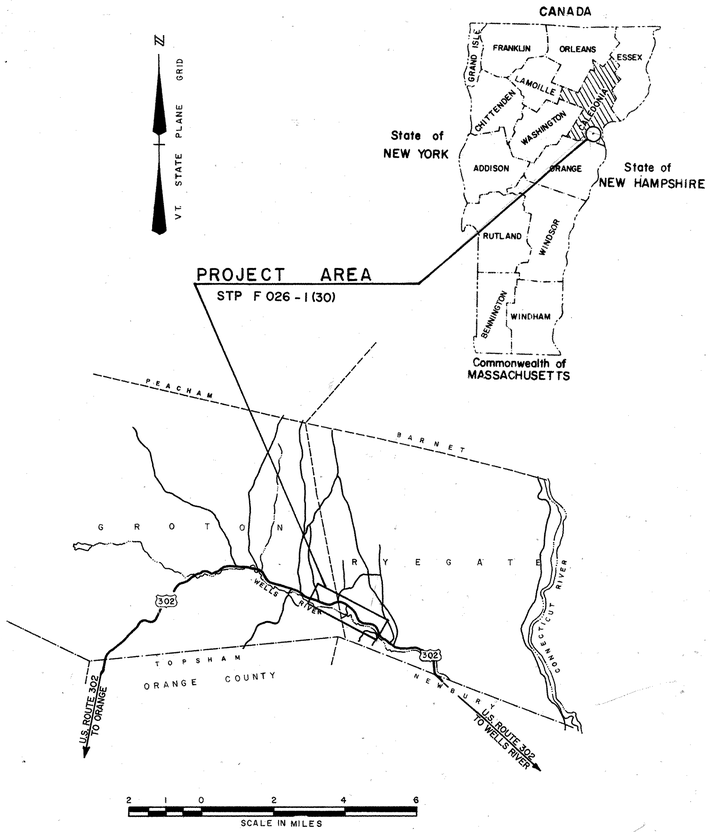
STATE OF VERMONT
AGENCY OF TRANSPORTATION

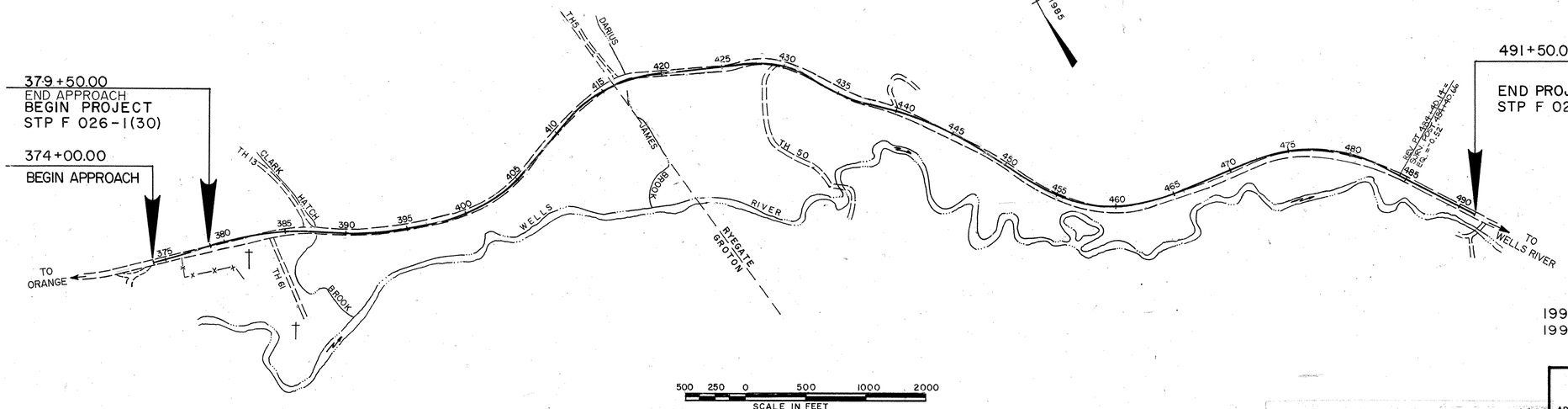
PROPOSED IMPROVEMENT
TOWNS OF GROTON AND RYEGATE
COUNTY OF CALEDONIA
U.S. ROUTE 302 (MINOR ARTERIAL)

BEGINNING AT A POINT ON U.S. ROUTE 302 APPROXIMATELY 7.091 MILES EASTERLY OF THE TOPSHAM-GROTON TOWN LINE AND EXTENDING EASTERLY 2.121 MILES.

LENGTH OF ROADWAY	11199.48 FEET = 2.121	MILES
LENGTH OF BRIDGE	0.00 FEET = 0.000	MILES
LENGTH OF PROJECT	11199.48 FEET = 2.121	MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES GRADING, DRAINAGE, SUBBASE, AND PAVEMENT FOR A U.S. HIGHWAY RELOCATION.





CONVENTIONAL SIGNS

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

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

TRAFFIC DATA

1998 ADT	2850
2018 ADT	3880
2018 DHV	535
2018 ADTT	220
T	4%
D	53%
V	50 MPH
1998-2018 ESAL'S	1,870,000
1998-2038 ESAL'S	4,709,000

DuBois & King inc.
engineering planning management development

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

APPROVED _____ DATE 3/7/97
DIRECTOR OF ENGINEERING

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

GROTON-RYEGATE
PROJECT STP F 026-1(30)

SHEET 1 OF 152 SHEETS

BRUNING 44-131 40592-1

D-10

S.R.S. 12/17/70

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	VERTICAL GRANITE CURB	
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	CAST IN PLACE CONCRETE CURB	
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	GRANULAR BORROW AT CULVERT LOCATIONS	
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	TWISTED END TERMINAL	
	ANCHOR FOR STEEL BEAM RAIL	
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	STEEL BEAM MEDIAN BARRIER	
	ANCHOR FOR STEEL BEAM RAIL	
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DATUM
VERTICAL _____
HORIZONTAL _____

REV. 3-31-97

SURVEYED BY _____ DATE _____
DRAWN BY B. MCAVOY DATE 7/7/92
SQUAD LEADER S. MENARD
DESIGN FILE NO. /sqdc/78d073/dd073.dgn
IPARM FILE dd073ind.i DATE PLOTTED 1-APR-1997
PROJ. NAME GROTON - RYEGATE
PROJ. NO. F 026 - 1(30)
SHEET 2 OF 152 SHEETS

TYPICAL SECTIONS

3-1/2" BITUMINOUS CONCRETE PAVEMENT (1-1/2" TYPE III OVER 2" TYPE II)

3" BITUMINOUS CONCRETE PAVEMENT TYPE I (1 LIFT)

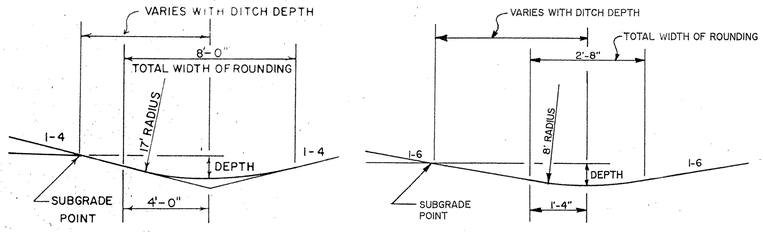
24" SUBBASE OF DENSE GRADED CRUSHED STONE

18" SAND BORROW (3" IN ROCK CUTS)

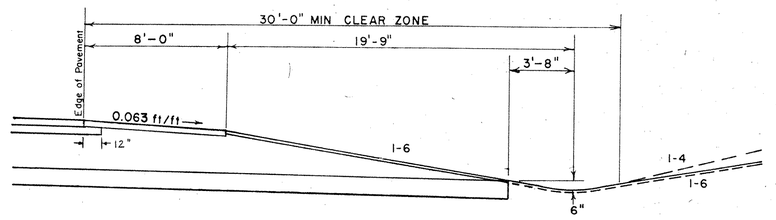
SHOULDERS: 3-1/2" BITUMINOUS CONCRETE PAVEMENT (1-1/2" TYPE III OVER 2" TYPE II)

NOTE: ALL BITUMINOUS CONCRETE PAVEMENT TO BE PG 58-34

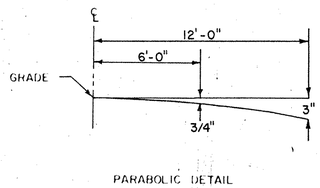
NOTE: FOR T.H. TYPICALS SEE APPLICABLE CROSS SECTION SHEETS



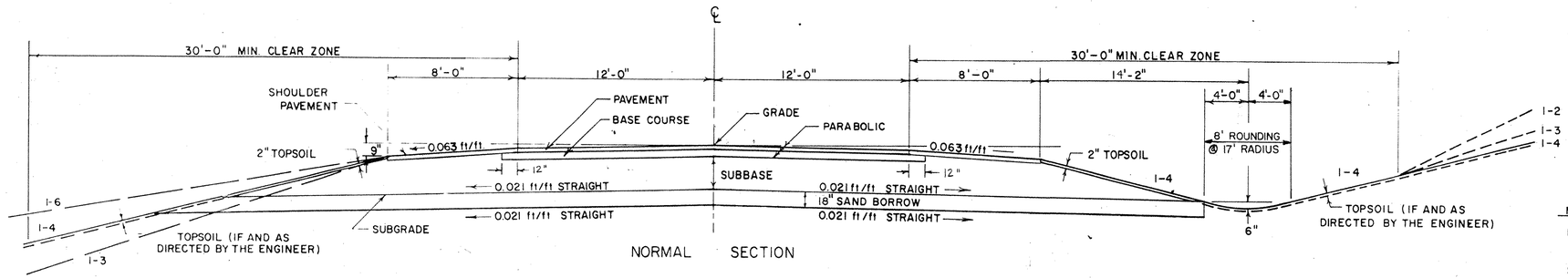
TYPICAL DITCH DETAILS



NORMAL SECTION IN CUT WITH 1-6 SLOPES

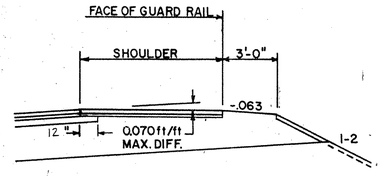


PARABOLIC DETAIL

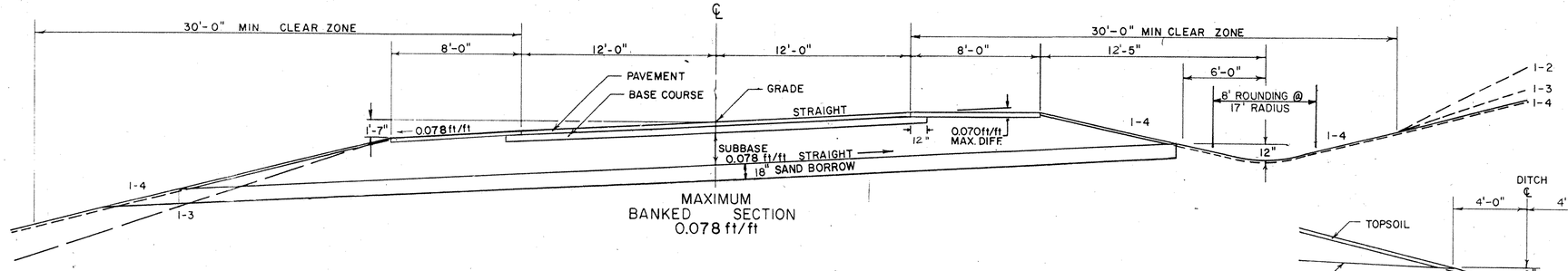


NORMAL SECTION

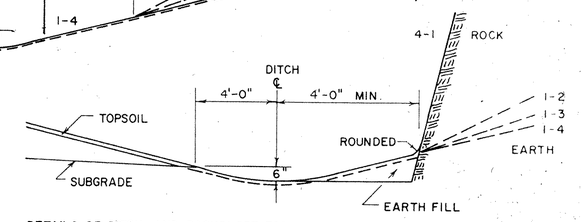
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	± 1/4"
SUBBASE	± 1"
SAND BORROW	± 1"



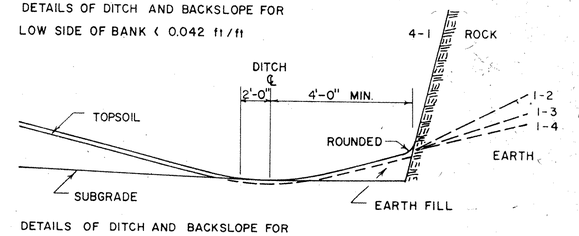
DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION



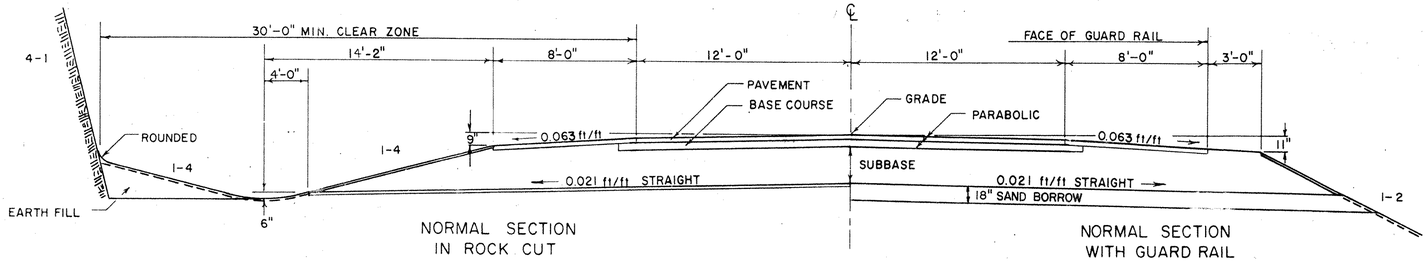
MAXIMUM BANKED SECTION 0.078 ft/ft



DETAILS OF DITCH AND BACKSLOPE FOR LOW SIDE OF BANK ⟨ 0.042 ft/ft



DETAILS OF DITCH AND BACKSLOPE FOR LOW SIDE OF BANK ≥ 0.042 ft/ft.



NORMAL SECTION IN ROCK CUT

NORMAL SECTION WITH GUARD RAIL

FOR SLOPES IN SOLID ROCK EXCAVATION AND DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, SEE STANDARD SHEET A-60.

SEEDING FORMULA

RURAL AREAS CONSERVATION MIX

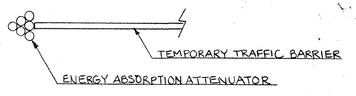
% WT.	LBS/A	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

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

GENERAL NOTES

1. SEED - To be applied per Seeding Formula as directed by the Engineer
2. FERTILIZER - Formula 19-19-19 to be used with seed, applied at the rate of 500 lbs /Acre.
3. AGRICULTURAL LIMESTONE - To be applied at the rate of 2 tons /Acre or as directed by the Engineer.
4. HAY MULCH - To be placed on earth slopes at the rate of 2 tons /Acre.
5. TOPSOIL - To be used with seed as indicated on the plans or as directed by the Engineer.
6. MARKER POSTS - (Wood or Steel, as specified) - To be placed as directed by the Engineer.
7. SLOPE ROUNDING - All cut slopes to be rounded in accordance with Standard Sheet B-5.
8. PAY LIMITS OF SAND BORROW WHEN USED IN CONJUNCTION WITH UNDERDRAIN - See Standard Sheet D-2.
9. TACK COAT - Emulsified asphalt is to be applied at the rate of 0.015 gal/sy between successive courses of pavement as directed by the Engineer.

ENERGY ABSORPTION ATTENUATOR DETAIL



NOTE: SAND OR WATER FILLED BARRELS TO BE PLACED AS DIRECTED BY THE RESIDENT ENGINEER.

TYPICAL SECTIONS FOR

REV. 3-31-97

PROJECT GROTON/RYEGATE RTE 302

NO. F 026-1(30)

SHEET 3 OF 152 SHEETS

BRUNING 44 131 40592

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	LS	CLEARING AND GRUBBING (PLUS INDIVIDUAL TREES AND STUMPS)	201.10	-
					131000	131000	CY	COMMON EXCAVATION	203.15	701
					32000	32000	CY	SOLID ROCK EXCAVATION	203.16	398
				1750		1750	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	-
					34500	34500	CY	SAND BORROW	203.31	427
				1880		1880	CY	GRANULAR BORROW	203.32	-
					84600	84600	SY	FINE GRADING-SUBGRADE	203.40	47
		300			7800	8100	CY	TRENCH EXCAVATION OF EARTH	204.20	84
					1300	1300	CY	TRENCH EXCAVATION OF ROCK	204.21	8
				1110		1110	CY	STRUCTURE EXCAVATION	204.25	-
				116	204	320	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	4
					250	250	LF	DRILLING AND BLASTING OF SOLID ROCK	205.10	EST.
					5950	5950	SY	DRILLING AND BLASTING OF SOLID ROCK SUBGRADE	205.20	26
					160	160	SY	COLD PLANING - BIT. PAVEMENT	210.10	4
					7270	7270	SY	SCARIFYING PAVEMENT	212.20	3
					44300	44300	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	40
					1200	1200	CY	AGGREGATE SURFACE COURSE	401.10	43
					105	105	CWT	EMULSIFIED ASPHALT	404.65	-
					16700	16700	TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	190
					1	1	LS	PRICE ADJUSTMENT ASPHALT CEMENT	406.50	-
				62	73	135	CY	CONCRETE, CLASS B	501.25	2.5
				4080	5620	9700	LB	REINFORCING STEEL	507.15	76
				1		1	EA	84'' CORRUGATED ALUM. ALLOY PLATE PIPE (120 LF, 7356 LBS)	511.25	-
				1		1	EA	14'-0'' X 8'-7'' CORRUGATED ALUM. ALLOY PLATE PIPE ARCH (90 LF, 9306 LBS)	511.30	-
				1		1	LS	TWO-WAY TEMPORARY BRIDGE - STA 388+25	528.11	-
				1		1	LS	TWO-WAY TEMPORARY BRIDGE - STA 418+36	528.11	-
				1		1	EA	REMOVAL OF STRUCTURE - STA 388+25	529.15	-
				1		1	EA	REMOVAL OF STRUCTURE - STA 418+36	529.15	-
								** BEGIN OPTION ITEMS **		
					56	56	LF	12'' CSP .064	601.0005	
					56	56	LF	12'' CAAP .060	601.0205	
					56	56	LF	12'' CPEP	601.0905	
					644	644	LF	15'' CSP .064	601.0010	
					644	644	LF	15'' RCP CL III	601.0810	
					644	644	LF	15'' CPEP	601.0910	
					44	44	LF	18'' CSP .064	601.0015	
					44	44	LF	18'' CPEP	601.0915	
					842	842	LF	18'' RCP CL III	601.0815	
					842	842	LF	18'' CPEP	601.0915	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
128763	CY	MAINLINE
1162	CY	DRIVES AND APPROACHES
374	CY	DESIGNED DRAINAGE
701	CY	ROUNDING
131000	CY	TOTAL
		TRENCH EXCAVATION OF EARTH
3248	CY	DRAINAGE
4408	CY	UNDERDRAIN
60	CY	TEST TRENCH
84	CY	ROUNDING
7800	CY	TOTAL
		TRENCH EXCAVATION OF ROCK
126	CY	DRAINAGE
1166	CY	UNDERDRAIN
8	CY	ROUNDING
1300	CY	TOTAL
		SOLID ROCK EXCAVATION
30113	CY	ROCK CUT
1489	CY	OVERBREAKAGE
398	CY	ROUNDING
32000	CY	TOTAL
		CONCRETE, CLASS B
71.6	CY	DRAINAGE STRUCTURES
7.5	CY	DRIVE AT STA. 393+10.8
3.9	CY	ROUNDING
83.0	CY	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SUBBASE OF DENSE GRADED CRUSHED STONE
43462	CY	MAINLINE
148	CY	TOWN HIGHWAY #5
306	CY	TOWN HIGHWAY #13
344	CY	TOWN HIGHWAY #61
40	CY	ROUNDING
44300	CY	TOTAL
		AGGREGATE SURFACE COURSE
966	CY	DRIVES AND APPROACHES
191	CY	TURNOUT (STA 487+00 - 489+50 RT)
43	CY	ROUNDING
1200	CY	TOTAL
		BITUMINOUS CONCRETE PAVEMENT (PG 58-34)
15803	TON	MAINLINE
373	TON	DRIVES AND APPROACHES
184	TON	DETOUR AT CLARK HATCH BROOK
143	TON	DETOUR AT DARIUS JAMES BROOK
7	TON	TURNOUT (STA 404+50 - 405+30 RT)
190	TON	ROUNDING
16700	TON	TOTAL
		TEMPORARY EROSION CONTROL (INCLUDED IN EROSION CONTROL TOTALS)
300	CY	TRENCH EXCAVATION OF EARTH
150	CY	STONE FILL, TYPE I
4300	SY	GEOTEXTILE FOR SILT FENCE
250	LB	SEED-WINTER RYE
4	TON	HAY MULCH
3300	EA	HAY BALES
500	SY	EROSION MATTING

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - I(30)

REV. 3-31-97 dd073ql.i 1-APR-1997

SHEET 6 OF 152 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					164	164	LF	18'' CAAP .060	601.0215	
					164	164	LF	18'' PCCSP .064	601.0415	
					164	164	LF	18'' RCP CL III	601.0815	
					164	164	LF	18'' CPEP	601.0915	
					738	738	LF	18'' CAAP .060	601.0215	
					738	738	LF	18'' PCCSP .064	601.0415	
					738	738	LF	18'' CPEP	601.0915	
					78	78	LF	24'' CSP .064	601.0025	
					78	78	LF	24'' CPEP	601.0920	
					694	694	LF	24'' CAAP .060	601.0225	
					694	694	LF	24'' PCCSP .064	601.0425	
					694	694	LF	24'' CPEP	601.0920	
					96	96	LF	24'' CAAP .060	601.0225	
					96	96	LF	24'' PCCSP .064	601.0425	
					96	96	LF	24'' RCP CL III	601.0825	
					96	96	LF	24'' CPEP	601.0920	
					576	576	LF	24'' RCP CL III	601.0825	
					576	576	LF	24'' CPEP	601.0920	
					184	184	LF	30'' CAAP .075	601.0236	
					184	184	LF	30'' PCCSP .079	601.0436	
					184	184	LF	30'' CPEP	601.0925	
					68	68	LF	30'' RCP CL III	601.0835	
					68	68	LF	30'' CPEP	601.0925	
					86	86	LF	42'' CAAP .105	601.0252	
					86	86	LF	42'' PCCSP .109	601.0452	
					132	132	LF	48'' CAAP .105	601.0257	
					132	132	LF	48'' PCCSP .109	601.0457	
					4	4	EA	12'' CSP .064 ELBOW	601.5005	
					4	4	EA	12'' CAAP .060 ELBOW	601.5205	
					4	4	EA	12'' CPEP ELBOW	601.5802	
					4	4	EA	18'' CAAP .060 ELBOW	601.5215	
					4	4	EA	18'' PCCSP .064 ELBOW	601.5415	
					4	4	EA	18'' CPEP ELBOW	601.5814	
					5	5	EA	18'' CSPES .064	601.6015	
					5	5	EA	18'' CAAPES .060	601.6215	
					5	5	EA	18'' CPEPES	601.7015	
					1	1	EA	18'' CSPES .064	601.6015	
					1	1	EA	18'' CPEPES	601.7015	
					4	4	EA	24'' CSPES .064	601.6025	
					4	4	EA	24'' CAAPES .060	601.6225	
					4	4	EA	24'' CPEPES	601.7020	
								** END OPTION ITEMS **		
					2	2	EA	PRCCDI W/CAST IRON GRATE	604.30	-
					17	17	EA	CAST IRON GRATE W/FRAME TYPE A	604.45	-
					6	6	EA	CAST IRON GRATE W/FRAME TYPE B	604.46	-
					1	1	EA	CAST IRON GRATE W/FRAME TYPE D	604.51	-
					11500	11500	LF	6'' UNDERDRAIN	605.10	28
					700	700	LF	6'' UNDERDRAIN CARRIER PIPE	605.20	58
					32	32	EA	UNDERDRAIN FLUSHING BASIN	605.95	-
					170	170	HR	ROADWAY PATROL MAINTENANCE	607.10	EST.
					1	1	HR	BULLDOZER RENTAL, TYPE I (NOT A BID ITEM)	608.10	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

REV. 3-31-97 dd073q2.i 1-APR-1997

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	HR	BULLDOZER RENTAL, TYPE II (NABI)	608.11	
					1	1	HR	ALL PURP. EXCAVATOR RENTAL, TYPE I(NABI)	608.25	
					1	1	HR	ALL PURP. EXCAVATOR RENTAL, TYPE II(NABI)	608.26	
					1	1	HR	TRUCK RENTAL (NABI)	608.37	
					1	1	HR	LOADER RENTAL TYPE I (NABI)	608.40	
					3000	3000	M. GAL	DUST CONTROL W/WATER	609.10	EST.
					10	10	TON	DUST AND ICE CONTROL W/CALC. CHLORIDE	609.15	EST.
		850				850	CY	STONE FILL, TYPE I	613.10	45
				360	590	950	CY	STONE FILL, TYPE II	613.11	13
				370		370	CY	STONE FILL, TYPE III	613.12	-
				900	100	1000	CY	STONE FILL, TYPE IV	613.13	-
					700	700	LF	GRANITE SLOPE EDGING	616.20	-
					625	625	LF	TREATED TIMBER CURB	616.35	-
					10	10	EA	RELOCATE MAILBOXES, SINGLE SUPPORT	617.10	-
					55	55	EA	BOUNDARY MARKERS	619.10	2
					95	95	EA	YEILDING MARKER POSTS	619.17	-
					20	20	EA	REMOVING AND RESETTING PROP. MARKER	619.20	EST.
					200	200	LF	CHAIN-LINK FENCE, 4 FEET	620.11	-
					2	2	EA	BRACING ASSEM. FOR CHAIN-LINK FENCE, 4'	620.20	-
					790	790	LF	REMOVING AND RESETTING FENCE	620.50	-
					150	150	LF	PLANK RAIL	621.15	-
					5100	5100	LF	STEEL BEAM GUARD RAIL	621.20	-
					20	20	EA	MODIFIED ECCENTRIC LOADER TERMINAL	621.52	-
					3	3	EA	ENERGY ABSORPTION ATTENUATOR	621.57	-
					1	1	EA	ANCHOR FOR STEEL BEAM GUARD RAIL	621.60	-
					162.5	162.5	LF	REMOVE AND RESET GUARD RAIL	621.75	-
					3416.5	3416.5	LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	-
					1000	1000	LF	TEMPORARY TRAFFIC BARRIER	621.90	EST.
					220	220	LF	SLEEVES FOR UTILITIES	625.10	-
					60	60	LF	SEAMLESS COPPER WATER TUBE - 3/ 4''	629.23	-
					90	90	LF	SEAMLESS COPPER WATER TUBE - 1''	629.23	-
					2	2	EA	EXTENSION SERVICE BOX & CURB STOP	629.25	EST.
					170	170	LF	PLASTIC WATER PIPE, FLEXIBLE -3/ 4''	629.32	-
					1400	1400	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.
					12100	12100	HR	FLAGGERS	630.15	EST.
					1	1	LS	FIELD OFFICE - ENGINEERS	631.10	-
					1	1	LS	TESTING EQUIPMENT - CONCRETE	631.16	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS		PAVEMENT WIDTHS			EQUATIONS		FEET	MILES	REMARKS
FROM	TO				+	-			
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

REV. 3-31-97

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-
					1	1	LS	FIELD OFFICE - TELEPHONE (NABI)	631.25	-
			2600			2600	HR	EMPLOYEE TRAINEESHIP	634.10	EST.
					1	1	LS	MOBILIZATION	635.10	
					1	1	LS	TRAFFIC CONTROL	641.10	
					4	4	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-
					24000	24000	LF	DURABLE 4'' WHITE LINE	646.40	265
					24000	24000	LF	DURABLE 4'' YELLOW LINE	646.41	350
					75	75	LF	DURABLE 24'' STOP BAR	646.46	5
					8	8	EA	DURABLE LETTER OR SYMBOL	646.50	-
					47000	47000	LF	TEMPORARY 4'' WHITE LINE	646.60	748
					47000	47000	LF	TEMPORARY 4'' YELLOW LINE	646.61	680
					75	75	LF	TEMPORARY 24'' STOP BAR	646.66	5
					300	300	EA	LINE STRIPING TARGETS	646.73	5
					2000	2000	SY	GEOTEXTILE FOR ROADBED SUBGR. SEPARATOR	649.11	EST.
				1660		1660	SY	GEOTEXTILE UNDER STONE FILL	649.31	-
		4300				4300	SY	GEOTEXTILE FOR SILT FENCE	649.51	EST.
		1560				1560	LB	SEED	651.15	-
		250				250	LB	SEED-WINTER RYE	651.17	-
		13000				13000	LB	FERTILIZER	651.18	-
		52				52	TON	AGRICULTURAL LIMESTONE	651.20	-
		56				56	TON	HAY MULCH	651.25	-
		3300				3300	EA	HAY BALES FOR EROSION CONTROL	651.26	EST.
					2400	2400	CY	TOPSOIL	651.35	-
				300	3200	3500	SY	GRUBBING MATERIAL	651.40	-
		6150				6150	SY	EROSION MATTING	654.10	4
					10	10	EA	EVERGREEN TREES (RED PINE, PINUS RESINOSA), B&B, 10' HEIGHT	656.20	-
					2	2	EA	DECIDUOUS TREES (FLOWERING CRABAPPLE, MALUS SPP. - HARVEST GOLD CRABAPPLE), 1''- 2'' CAL, 10' HEIGHT	656.30	-
					2	2	EA	TRANSPLANTING SHRUBS	656.50	-
					130	130	SF	TRAFFIC SIGNS, TYPE A	675.20	2.805
								** BEGIN OPTION ITEMS **		
					1050	1050	LB	FLANGED CHANNEL SIGN POST	675.30	18
					1050	1050	LB	SQUARE TUBE STEEL POSTS AND ANCHORS	675.34	18
								** END OPTION ITEMS **		
					23	23	EA	REMOVING SIGNS	675.50	-
					4	4	EA	ERECTING SALVAGED SIGNS	675.60	-
	17					17	SF	TRAVEL INFORMATION SIGNS (MOD.)	680.20	.4

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

dd073q4.i 12-MAR-1997
SHEET 9 OF 152 SHEETS

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	SEAMLESS COPPER WATER TUBE FT	PIPE ELBOW NO-DEG	ES EA	CB	PRCVD	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	PLASTIC WATER PIPE LF	SLEEVE FOR UTIL. LF	REMARKS
374+00		CL								18	50	.064	.060			X						3.5	1.9	158	B		38								1	I	1	1				
375+91.9		CL	80-16 LT							18	84	.064	.060			X			1								56								1	I	1	1			REMOVE EXISTING 12'' RCP
376+00	377+50	LT-LT																									44								44	I					STONE FILL TYPE I
377+50	377+80	LT-LT																															13								EROSION MATTING
378+11		LT								15	58			III	.064	X																										DRIVE CULVERT, REMOVE EXISTING 12'' RCP
378+40	379+50	LT-LT																															49								EROSION MATTING
381+85	382+75	RT-LT																									19	55											170	90	3/4'' FLEXIBLE PLASTIC WATER PIPE W/ 6'' SLEEVE FOR UTIL.
381+99		RT								15	50			III	.064	X																										DRIVE CULVERT
382+00	384+00	LT																															89								EROSION MATTING
382+25	384+00	RT-RT																															78								EROSION MATTING
384+00	387+00	LT-LT																									89								89	I					STONE FILL TYPE I
386+08.2		CL	89-13 LT							18	114	.064	.060			X			1								42								2	II	1	1			REMOVE EXIST 18'' RCP
388+00		LT-RT	84-00 LT	NEW 84'' X 120' CAAPP SEE SHEET 77 OF 153 FOR SECTIONS AND SHEET 76 OF 153 FOR DETAILS AND QUANTITIES																																						
388+25		LT-RT	78-43 RT	SEE SHEET 77 OF 153 FOR SECTIONS AND SHEET 76 OF 153 FOR DETAILS AND QUANTITIES																																					REMOVE EXISTING BOX CULVERT
388+75	391+00	RT-RT																															100								EROSION MATTING
388+75	391+00	LT-LT																															100								EROSION MATTING
392+80	393+50	RT-LT								18	96			III		X						3.5	1.9	158	A		51															
393+50	394+35	LT								18	84			III		X						4.0	2.1	193	A		58															
394+35	397+00	LT-LT								24	264			III		X						6.5	3.2	278	A		231															
394+50		LT																									10														REMOVE EXIST 12'' GMP
395+50	397+00	LT-LT																															80								EROSION MATTING
395+50	397+30	RT-RT																															80								EROSION MATTING
396+00		RT								15	30			III	.064	X																										DRIVE CULVERT
397+00		RT-LT								18	68			III		X						4.0	2.1	193	A		39											1	1			
397+00	399+50	LT-LT								24	248			III		X						5.0	2.6	231	A		180															
397+40	399+50	LT-LT																												65					65	I					STONE FILL TYPE I DITCH LININGS
397+30	399+50	RT-RT																												65					65	I					STONE FILL TYPE I DITCH LINING
399+50		LT-RT								30	68			III		X						5.5	3.6	288	B		91											1	1			4' X 6' DI AT INLET
399+50	400+00	RT-RT								30	78	.079	.075			X						10.0	6.7	471	B		218								2	II		1			4' X 6' DI AT INLET
399+50	401+50	LT-LT																															89								EROSION MATTING DITCH LINING
399+50	400+75	RT-RT																															56								EROSION MATTING
401+65		LT								15	62			III	.064	X																										DRIVE CULVERT
402+86.2		LT-RT	72-04' RT							24	84	.064	.060			X			1								47								1	I	1	1			REMOVE EXISTING 18'' RCP
				TOTALS						15	200			III	.064	X						24.1	1970	5-A		1213	55	130					734	266	I	6	7	170	90		
				SHEET 1 OF 4						18	248	.064	.060			X			2						3-B									4	II						
										18	248			III		X																									
		TOTALS								24	512			III		X																									
										24	84	.064	.060			X			1																							
										30	68			III		X																									
										30	78	.079	.075			X																									

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT MELT	END TREATMENT ANCHOR
373+87.5	377+00		312.5	2	
TH 61					
3+50	388+64		737.5	1	1
TH 13					
1+12.5	389+50.5	287.5		2	
400+02.5	403+15		312.5	2	
417+33.5	418+46		112.5	2	
418+13.5	418+63.5	50		2	
422+37.5	431+00		862.5	2	
433+37.5	442+00		862.5	2	
446+77.5	458+52.5		1175	2	
482+65	486+52.5		387.5	2	
489+50	489+87.5			1	
		337.5	4762.5		
TOTALS =		5100		20	1
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	STN FILL	MKR PST
377+00	378+00	C	LT	6	100	12					
377+00	379+45	U	RT	6	246	82			1		1
378+00	381+50	U	LT	6	350	53	127		1		1
379+50	383+50	U	RT	6	400	324			1		1
381+55	385+00	U	LT	6	346	70	135		1		1
383+50	384+00	C	RT-RT	6	58	6			1	1	2
385+00	385+50	C	LT	6	50	6					
389+00	393+50	U	LT	6	450	153			1		1
393+50	397+00	U	LT	6	350	134			1		1
398+00	399+50	U	LT	6	150	53			1		1
399+60	401+50	U	LT	6	190	66			1		1
401+50	402+75	C	LT	6	126	18					
402+75	403+00	C	LT	6	26	4					
403+00	404+50	U	LT	6	150	51			1		1
404+56	406+90	U	LT	6	234	59			1		1
407+10	411+50	U	LT	6	440	149			1		1
415+50	418+00	U	RT	6	250	76			1		1
418+00	418+00	C	RT	6	16	2					1
422+50	423+50	C	LT	6	100	25					
423+50	425+95	U	LT	6	246	108			1		1
426+00	428+00	U	LT	6	200	67			1		1
431+00	433+50	U	RT	6	250	86			1		1
433+50	433+50	C	RT	6	28	3				1	1
435+00	437+00	U	LT	6	200	52	37		1		1
437+00	440+50	U	LT	6	350	100	40		1		1
441+23	443+97	U	LT	6	274	44	84		1		1
442+50	445+00	U	RT	6	250	123	42		1		1
444+00	448+00	U	LT	6	400	92	151		1		1
TOTALS		U				5726	2018	616		21	2	24
		C				504					

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

dd073dl.1 12-MAR-1997
SHEET 10 OF 152 SHEETS

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	SEAMLESS COPPER WATER TUBE FT	PIPE ELBOW NO-DEG	ES EA	CB	PRCD	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	PLASTIC WATER PIPE LF	SLEEVE FOR UTIL. LF	REMARKS
403+45	404+50	LT-LT																																	47								EROSION MATTING DITCH LINING
404+42.3		CL	63-24' LT							18	96			III		X						4.0	2.1	193	A			103	4									1	1			REMOVE EXISTING 15'' RCP AND DI RIGHT
404+42.3		RT								24	78				.064	X						8.5	4.1	354	A			68								1	I		1			REMOVE 15'' CMP
405+20		RT-LT															90											18													70	1'' SEAMLESS COPPER WATER TUBE W/ 6'' SLEEVE FOR UTIL.
406+50	409+25	LT-LT																																	122								EROSION MATTING DITCH LINING
407+00		LT-RT	74-00' LT							24	88	.064	.060			X						4.0	2.1	193	B			55								1	I	1	1			REMOVE EXIST 18'' RCP
411+75	416+25	LT-LT																																	200								EROSION MATTING DITCH LINING
414+20.6		CL	88-39' RT							18	90	.064	.060			X			1									34								1.5	I	1	1			REMOVE EXIST 18'' RCP
415+50	418+00	RT-RT																												74						74	I					TYPE I STONE FILL
416+25	417+00	LT-LT																												22						22	I					TYPE I STONE FILL
417+91		LT																										3														REMOVE 12'' GMP
418+20		LT-RT	83-30' LT						NEW	14'-0''		X 8'-7'' X 90' CAAPPA SEE SHEET 79 OF 153																															
418+36		LT															SEE SHEET 79 OF 153																										REMOVE EXIST 12'-10'' X 8'-4'' X 68' CGMPPA & CRADLE H.W.
422+50		RT								12	30		.060		.064	X		2-15		1								10								.5	I		1			
422+56.44		LT-RT	79-08' RT							24	124	.064	.060			X			1									31								3	I	1	1			REMOVE EXIST 18'' GMP
423+50	428+50	LT-LT																												148						148	I					STONE FILL TYPE I DITCH LINING
426+00		LT-RT								18	86	.064	.060	III		X						4.0	2.1	193	B			63								1	I	1	1			
428+50	429+50	LT-LT																																	44								EROSION MATTING DITCH LINING
429+78.7		CL	69-33 LT							24	108	.064	.060			X			1									113								3	I	1	1			REMOVE EXIST. 18'' RCP
431+50	433+00	RT-RT																																	67								EROSION MATTING
433+02.77		LT-RT	65-51 RT							24	108	.064	.060			X			1									59								1	I	1	1			REMOVE EXIST 18'' RCP
435+50		RT								12	26		.060		.064	X		1-15		1								2								.5	I		1			
437+05.5		LT-RT	87-17 RT							30	106	.079	.075			X		1-25				4.5	3.1	252	A			133								4	II	1	1			REMOVE EXIST. 18'' RCP
437+50	442+75	LT-LT																																	233								EROSION MATTING
441+05		LT																																									EXISTING 18'' DRIVE CULVERT - RETAIN
441+27.9		LT-RT	74-07 RT							24	82	.064	.060			X						5.0	2.6	231	A			78								8	I	1	1			REMOVE EXIST 24'' RCP
																																				3	II					
441+98		LT								15	74			III	.064	X																											DRIVE CULVERT
445+30	448+50	LT-LT																																	142								EROSION MATTING
445+87.5		RT	80 RT																									7	2													REMOVE EXIST 12'' RCP AND D.I.
448+00		LT-RT								18	78	.064	.060	III		X						4.0	2.1	193	B			39	7							1	I	1	1			
448+50	452+00	LT-LT																										104								104	I					STONE FILL TYPE I
				TOTALS						12	56		.060		.064	X	90	3-15		2		18.2	1609	4-A			920	13	244					855	369.5	1	10	13	70			
				SHEET 2 OF 4						15	74			III	.064	X		1-25						3-B											7	II					
										18	90	.064	.060			X			1																									
										18	96			III		X																											
										18	164	.064	.060	III		X																											
										24	510	.064	.060			X			3																									
										24	78				.064	X																											
										30	106	.079	.075			X																											
		TOTALS																																								

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT MELT	END TREATMENT ANCHOR
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	STN FILL	MKR PST
445+00	445+00	C	RT	6	30	14				1	1
452+01	454+75	U	LT	6	274	76	18		1		1
454+75	457+93	U	LT	6	318	40	96		1		1
458+00	461+50	U	LT	6	350	7	136		1		1
461+57	464+70	U	LT	6	314	101			1		1
464+80	468+50	U	LT	6	370	120			1		1
468+54	473+00	U	LT	6	446	271			1		1
468+54	473+38	U	RT	6	484	248			1		1
REV	REV										
474+40	476+48	U	RT	6	208	111			1		1
REV											
476+48		C	RT	6	22	0				1	1
REV	REV										
480+49	483+49	U	LT	6	300	121			1		1
REV											
483+55	487+00	U	LT	6	346	173			1		1
487+00	487+40	C	LT	6	46	4				1	1
487+15	489+50	U	RT	6	236	96			1		1
489+50	489+50	C	RT	6	40	8				1	1
SHEET #2 SUB TOTAL		U			3646	1390	250		11	4	15
		C			138						
SHEET #1 SUB TOTAL		U			5726	2018	616		21	2	24
		C			504						
EST. UNDERDRAIN					2100	1000	300				
GRAND TOTALS		U			11472	4408	1166		32	6	39
TOTALS		C			642						

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - I(30)

dd073d2.I 12-MAR-1997
SHEET 11 OF 152 SHEETS

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	SEAMLESS COPPER WATER TUBE FT	PIPE ELBOW NO-DEG	ES	CB	PRCD	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	PLASTIC WATER PIPE LF	SLEEVE FOR UTIL. LF	REMARKS
450+68.9		LT-RT	87-28 RT							48	132	.109	.105										3.4	21				196	28							10	II	1	1			REMOVE EXIST 36" BOX CULVERT
																																		100	IV					
452+00	453+50	LT-LT																																67							EROSION MATTING
453+75	458+25	RT-RT																																2528	508	II					EROSION MATTING & STONE FILL FOR SLOPE PROTECTION
454+75.3		LT-RT	85-10 RT							18	94	.064	.060			X		1-35				3.5	1.9	158	A			72	10							2	I	1	1			REMOVE EXIST 18'' RCP AND DI
455+25	459+25	LT																1-25																178							EROSION MATTING
458+00		LT-RT								18	104	.064	.060			X		2-35				4.0	2.1	193	A			45	20							1	I	1	1			
462+00	467+50	LT-LT																																244							EROSION MATTING
462+11		RT	87-07 LT																									33													REMOVE 18'' RCP
464+70	467+02	LT								18	232			III		X						4.0	2.1	193	A			117													
REV																																									
464+72.9		LT-RT	84-41 RT																									34													REMOVE EXIST 18'' RCP
467+02	468+50	LT								18	148			III		X						4.0	2.1	193	A			75													
467+25		RT								15	38			III	.064	X																									DRIVE PIPE
468+50		LT-RT								24	64			III		X						4.5	2.3	200	A			40										1			
468+50		RT								24	100	.064	.060			X						5.5	2.8	239	A			162								6	II		1			
469+16		LT																																							REMOVE EXISTING 18'' GMP
471+00		LT								15	46			III	.064	X																									DRIVE PIPE
REV																																								
473+09		LT-RT	71 RT							18	50			III		X		•				4.0	2.1	193	A			29										1	1			REMOVE EXIST 18'' RCP
REV																																									
473+09		LT-RT	71 RT							24	96	.064	.060	III		X						8.5	4.1	354	A			61								4	I		1			
473+18	473+85	RT-RT								18	68			III		X						4.5	2.3	200	D			48											1			
474+60		LT-RT																60										22												60	3/ 4'' SEAMLESS COPPER WATER TUBE W/6''
REV																																								SLEEVE FOR UTILITIES
476+39.8		LT-RT	83-20 RT							42	86	.109	.105										3.0	21				101								33	II	1	1			REMOVE EXIST BOX CULVERT
478+50		LT								15	72			III	.064	X																									DRIVE PIPE
480+00		RT								15	44			III	.064	X																									DRIVE PIPE
480+50	481+50	RT-RT																																78							EROSION MATTING
481+50	486+30	LT-LT																																213							EROSION MATTING
483+75	485+25	RT-RT																																689							EROSION MATTING FOR SLOPE PROTECTION
486+50		LT								15	56			III	.064	X																									DRIVE PIPE
487+26			67-57 LT							18	96	.064	.060			X			1									33								1	I	1	1			REMOVE EXIST 18'' GMP
489+00		LT								15	40			III	.064	X																									DRIVE PIPE
489+50	490+85	LT-LT																																60							EROSION MATTING
491+32		LT								15	48			III	.064	X																									DRIVE PIPE
				TOTAL$						15	344			III	.064	X	60	1-25				28.2	1965	8-A			1068	58						4057	8	I	7	9		60	
				SHEET	3	OF 4				18	294	.064	.060			X		3-35	1					1-D											557	II					
										18	498			III		X																				100	IV					
										24	96	.064	.060	III		X																									
										24	100	.064	.060			X																									
										24	64			III		X																									
										42	86	.109	.105																													
										48	132	.109	.105																													
		TOTALS																																							

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT MELT	END TREATMENT ANCHOR

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	SEAMLESS COPPER WATER TUBE FT	PIPE ELBOW NO-DEG	ES EA	CB	PRCD	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	PLASTIC WATER PIPE LF	SLEEVE FOR UTIL. LF	REMARKS
TH #61	3+50	RT-LT								18	44				.064	X			1									13								1	I	1	1			
TH #13	1+00	LT-RT								18	42	.064	.060			X			1									11								1	I	1	1			
TH #5	0+38.23	LT-RT	79-21 LT							18	64	.064	.060			X												13														
TH #5	0+55	LT-RT	82 LT																									10														REMOVE 18'' RCP
TH #5	0+60	RT								15	26			III	.064	X																			3.5	I					REMOVE 12'' CGMP
				TOTALS						15	26			III	.064	X												47							5.5	I	2	2			
				SHEET	4	OF 4				18	106	.064	.060			X			1																						
										18	44				.064	X			1																						
			TOTALS							12	56		.060		.064	X	150	3-15			2	70.5	5544	17-A			3248	126	374					5646	649	I	25	31	170	220	
			SHEETS 1	THRU 4						15	644			III	.064	X		2-25						6-B										568	II					
										18	44				.064	X		3-35	1					1-D										100	IV					
										18	842			III		X																								
										18	164	.064	.060	III		X																								
										18	738	.064	.060			X			5																						
										24	78				.064	X																								
										24	694	.064	.060			X		°	4																						
										24	96	.064	.060	III		X																								
										24	576			III		X																								
										30	68			III		X																								
										30	184	.079	.075			X																								
										42	86	.109	.105																											
										48	132	.109	.105																											
			TOTALS																																					

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT MELT	END TREATMENT ANCHOR
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	STN FILL	MKR PST
TOTALS											

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

dd073d4.i 12-MAR-1997
SHEET 13 OF 152 SHEETS

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GRADES V.C.	GRADES % GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		373					0				0			
												82		
		+50	803.20				0				89		C	661
						50		106				110	F	363
		374	804.85				115				30		F FAC	1.15
						50		273				72	EX C	244
		+50	806.50				180				48			
						50		282				99		
		375	808.15				125				59			
						50		214				147		
		+50	809.80				107				100			
						50		99				244		
		376	811.45				0				164			
						50		0				247		
X		+50	813.10	813.10	0.00		0				103			
	+3.3013%					50		66				127		
		377	814.75	814.66	-0.09		72				34		C	4397
						50		254				31	R	507
		+50	816.41	816.01	-0.40		202				0		R FAC	1.30
						50		349				0	F	816
		378	818.06	817.18	-0.88		175						F FAC	1.15
						50		343					EX C	3710
		+50	819.71	818.14	-1.57		195							
						50		473						
		379	821.36	818.92	-2.44		316		0		0			
						50		956		121		0		
		+50	823.01	819.48	-3.53		716		131		11			
						50		1643		386		20		
		380	824.66	819.87	-4.79		1058		286		11			
						50		2165		832		20		
		+50	826.31	820.06	-6.25		1280		613		11			
						50		2415		1040		20		
900' VC		381	827.96	820.05	-7.91		1328		510		11			
						50		2753		1081		20		
		+50	826.10	819.85	-6.25		1645		658		11			
						50		2828		1048		20		
		382	824.23	819.45	-4.78		1409		474		11		C	16715
						50		2170		692		20	R	5586
		+50	822.37	818.85	-3.52		935		273		11		R FAC	1.30
						50		1512		440		20	F	1727
		383	820.50	818.06	-2.44		698		202		11		F FAC	1.15
						50		1150		320		41	EX C	17494
		+50	818.64	817.08	-1.56		544		144		33			
						50		894		133		139		
		384	816.78	815.90	-0.88		422		0		117			
						50		594				493		
		+50	814.91	814.52	-0.39		219				415			
	-3.7280%					50		234				934		
		385	813.05	812.95	-0.10		34				594			
						50		37				1308		
X		+50	811.18	811.18	0.00		6				819			
						50		6				1544		
		386	809.32				0				848			
						50						1392		
		+50	807.46								655			
						50						1052		
		387	805.59	805.59	0.00						481			
						50						1222	C	3215
X		+50	803.73	803.84	+0.11						839		F	9015
						50						1374	F FAC	1.15
		388	801.86	802.32	+0.46		0				645		EX F	7152
300' VC						50		2				860		
X		+50	800.00	801.02	+1.02		2				284			
						50		429				263		
		389	799.50	799.96	+0.46		461				0			
						50		1185						
		+50	799.00	799.11	+0.11		819							
						50		1556						
X		390	798.50	798.50	0.00		862							
	-1.0000%					50		1208						
		+50	798.00				443							
						50		736						
		391	797.50				352							
						50		625						
		+50	797.00				323							
			CARRIED FORWARD					2569						
			COLUMN FOOTINGS					27557		6093		11921		

GRADES V.C.	GRADES % GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		391+50	797.00				323							
						50		506						
		392	796.50				223							
						50		361						
		+50	796.00				167							
						50		296					C	5482
		393	795.50				153						F	0
						50		301					F FAC	1.15
		+50	795.00				148						EX C	5482
						50		371						
		394	794.50				253							
						50		538						
		+50	794.00				328							
	-1.0000%					50		540						
		395	793.50				255							
						50		434						
X		+50	793.00	793.00	0.00		214							
						50		350						
		396	792.50	792.40	-0.10		164							
						50		375						
		+50	792.00	791.58	-0.42		241							
						50		469						
X		397	791.50	790.56	-0.94		265							
						50		597					C	7129
		+50	789.75	789.33	-0.42		380						F	98
						50		648					F FAC	1.15
		398	788.00	787.90	-0.10		320						EX C	7016
						50		794						
X		+50	786.25	786.25	0.00		538							
						50		1208						
		399	784.50	784.61	+0.11		767							
						50		1423						
		+50	782.75	783.20	+0.45		770					0		
						50		831					98	
		400	781.00	782.02	+1.02		127					106		
						50		471					98	
		+50	779.25	781.07	+1.82		382					0		
						50		480					252	
		401	777.50	780.34	+2.84		136					272		
						50		177					1113	
X		+50	775.75	779.84	+4.09		55					930		
						50		90					1260	
		402	776.73	779.56	+2.83		42					431		
						50		60					456	C 2183
		+50	777.70	779.52	+1.82		23					61	F	4008
						50		68					216	F FAC 1.15
		403	778.68	779.70	+1.02		50					172	EX F	2426
						50		156					386	
		+50	779.65	780.10	+0.45		119					245		
	+1.9500%					50		218					227	
		404	780.63	780.74	+0.11		116					0		
						50		223						
X		+50	781.60	781.60	0.00		125							
						50		240						
		405	782.58				134							
						50		252						
		+50	783.55				138							
						50		264						
		406	784.53				147					0		
						50		256					21	
		+50	785.50				130					23		
						50		287					53	
		407	786.48				180					34		
						50		303					56	C 3426
		+50	787.45				147					27	F	1228
						50		264					149	F FAC 1.15
X		408	788.43	788.43	0.00		138					134	EX C	2014
						50		256					271	
		+50	789.40	789.30	-0.10		138					159		
						50		313					315	
		409	790.38	789.99	-0.39		200					181		
						50		444					265	
		+50	791.35	790.47	-0.88		280					106		
						50		787					98	
		410	792.33	790.77	-1.56		570					0		
			CARRIED FORWARD					15651					5334	
			COLUMN FOOTINGS											

GRADES V.C.	GRADES % GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		410	792.33	790.77	-1.56		570				0			
						50		1009				0		
		+50	793.30	790.87	-2.43		520							
						50		811						
		411	794.28	790.77	-3.51		356				0			
						50		596				23		
X		+50	795.25	790.48	-4.77		288				25			
						50		498				31		
		412	793.50	790.00	-3.50		250				8		C	5068
						50		551				7	F	648
		+50	791.75	789.32	-2.43		345				0		F FAC	1.15
						50		641				32	EX C	4323
		413	790.00	788.44	-1.56		347				34			
						50		519				119		
		+50	788.25	787.37	-0.88		214				94			
						50		240				208		
		414	786.50	786.11	-0.39		45				131			
						50		86				170		
		+50	784.75	784.65	-0.10		48				53			
						50		117				58		
X		415	783.00	783.00	0.00		78				10			
						50		286				9		
		+50	781.25				231				0			
						50		497				0		
		416	779.50				306							
						50		581						
		+50	777.75				322							
						50		620						
		417	776.00				348							
						50		675					C	3188
		+50	774.25	774.25	0.00		381						F	553
						50		441				0	F FAC	1.15
		418	772.50	772.61	+0.11		95				0		EX C	2552
						50		88				80		
		+50	770.75	771.18	+0.43		0				86			
						50		0				124		
		419	769.00	769.96	+0.96						48			
						50						124		
		+50	767.25	768.95	+1.70						86			
						50						216		
		420	765.50	768.16	+2.66						147			
						50						434		
		+50	763.75	767.58	+3.83						322			
						50						715		
		421	762.00	767.21	+5.21						450			
						50						969		
X		+50	760.25	767.05	+6.80						597			
						50						1072		
		422	761.90	767.11	+5.21						561			
						50		0				973	C	2839
		+50	763.55	767.38	+3.83		0				490		F	7699
						50		13				844	F FAC	1.15
		423	765.20	767.86	+2.66		14				422		EX F	6015
						50		52				807		
		+50	766.85	768.55	+1.70		42				450			
						50		373				845		
		424	768.50	769.46	+0.96		361				463			
						50		1039				678		
		+50	770.15	770.58	+0.43		761				269			
						50		1362				362		
		425	771.80	771.91	+0.11		710				122			
						50		1472				113		
X		+50	773.45	773.45	0.00		1080				0			
						50		2166				0		
		426	775.10	775.01	-0.09		1459							
						50		2640						
		+50	776.75	776.39	-0.36		1392							
						50		2171						
		427	778.40	777.59	-0.81		953							
						50		1294						
		+50	780.05	778.62	-1.43		445				0			
			CARRIED FORWARD					9743				113		
			COLUMN FOOTINGS					20838				9013		

PROJECT NAME	GROTON - RYGATE	dd073ewl.i	12-MAR-1997
PROJECT NUMBER	F 026-1(30)	SHEET 14 OF 152 SHEETS	

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
600' VC	-1.0000%	427+50	780.05	778.62	-1.43		445				0			
						50		545				29		
		428	781.70	779.46	-2.24		144				31			
						50		217				159		
		+50	783.35	780.13	-3.22		90				141		C	10818
						50		139				323	F	1613
		429	782.85	780.61	-2.24		60				208		F FAC	1.15
						50		94				473	EX C	8963
		+50	782.35	780.92	-1.43		41				303			
						50		80				516		
		430	781.85	781.04	-0.81		45				254			
						50		98				349		
		+50	781.35	780.99	-0.36		61				123			
						50		146				114		
		431	780.85	780.76	-0.09		97				0			
						50		395				0		
		+50	780.35	780.35	0.00		330							
						50		586						
		432	779.85				303						C	4909
						50		497					R	219
		+50	779.35				234						R FAC	1.30
						50		392					F	985
		433	778.85	778.85	0.00		189				0		F FAC	1.15
						50		259				66	EX C	3885
		+50	778.35	778.40	+0.05		91				71			
						50		530				130		
		434	777.85	778.07	+0.22		481				69			
						50		988				145		
		+50	777.35	777.84	+0.49		586		0		88			
						50		1018		219		181		
500' VC		435	776.85	777.72	+0.87		513		237		107			
						50		904		416		216		
		+50	776.35	777.71	+1.36		463		212		126			
						50		677		239		268		
		436	776.94	777.81	+0.87		268		46		163			
						50		285		43		387		
		+50	777.53	778.02	+0.49		40		0		255			
						50		75		0		627		
		437	778.12	778.33	+0.21		41				422		C	11015
						50		133				647	R	2670
		+50	778.70	778.76	+0.06		103				277		R FAC	1.30
						50		489				331	F	2673
		438	779.29	779.29	0.00		425				80		F FAC	1.15
						50		1132				74	EX C	9263
		+50	779.88				798		0		0			
						50		1929		483		11		
		439	780.47				1285		522		12			
						50		2815		986		56		
		+50	781.06				1755		543		48			
						50		2576		503		56		
		440	781.65				1027		0		13			
						50		1578				30		
		+50	782.23				677				19			
						50		1019				36		
		441	782.82				423				20			
						50		759				57		
		+50	783.41				397				42			
						50		931				47		
		442	784.00				609		0		9		C	14468
						50		1108		199		19	R	6248
		+50	784.59	784.59	0.00		588		215		11		R FAC	1.30
						50		1309		590		20	F	289
		443	785.18	785.08	-0.10		826		422		11		F FAC	1.15
						50		1657		1019		20	EX C	17228
		+50	785.76	785.38	-0.38		964		678		11			
						50		1915		1535		20		
750' VC		444	786.35	785.49	-0.86		1104		980		11			
						50		2086		1795		20		
		+50	786.94	785.40	-1.54		1149		959		11			
						50		2106		1110		20		
		445	787.53	785.12	-2.41		1126		240		11			
						50		2095		893		20		
		+50	788.12	784.65	-3.47		1137		724		11			
						50		1739		814		20		
		446	788.71	783.99	-4.72		741		155		11			
		CARRIED FORWARD						3834		1707		40		
		COLUMN FOOTINGS						35301		10844		5487		

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
750' VC	-4.6000%	446	788.71	783.99	-4.72		741		155		11			
		+25	789.00	783.58	-5.42	50		1417		175		45		
		+50	787.85	783.13	-4.72		789		34		38			
						50		1271		192		75		
		447	785.55	782.08	-3.47		584		173		43		C	9290
						50		883		212		118	R	2522
		+50	783.25	780.84	-2.41		370		56		84		R FAC	1.30
						50		584		116		252	F	3323
		448	780.95	779.41	-1.54		261		69		188		F FAC	1.15
						50		531		92		434	EX C	6717
		+50	778.65	777.78	-0.87		313		30		281			
						50		481		28		581		
		449	776.35	775.97	-0.38		206		0		347			
						50		240		0		769		
		+50	774.05	773.95	-0.10		53				484			
						50		49				1009		
		450	771.75	771.75	0.00		0				606			
						50						1423		
		+50	769.45	769.58	+0.13						931			
						50						1471		
		451	767.15	767.69	+0.54		0				658			
						50		23				1116		
		+50	764.85	766.05	+1.20		25				547			
						50		262				846		
		452	762.55	764.69	+2.14		258				367			
						50		531				607		
		+50	760.25	763.60	+3.35		316				289			
						50		731				538		
600' VC	+1.8250%	453	757.95	762.77	+4.82		475		0		270		C	4610
						49.99		838		19		577	R	728
		+49.99	758.86	762.21	+3.35		430		20		353		R FAC	1.30
													F	8723
		+50	758.86	762.21	+3.35	49.98		784		19		637	F FAC	1.15
													EX F	5061
		+99.97	759.77	761.91	+2.14		417		0		335			
		454	759.77	761.91	+2.14	49.97		732		218		680		
		+49.94	760.69	761.90	+1.21		374		236		400			
		+50	760.69	761.89	+1.20	49.97		709		472		828		
		+99.91	761.60	762.14	+0.54		392		274		495			
		455	761.60	762.14	+0.54	49.96		711		477		1014		
		+49.87	762.51	762.64	+0.13		376		242		601			
		+50	762.51	762.64	+0.13	49.95		468		233		1021		
		+99.82	763.42	763.42	0.00		130		10		503			
		456	763.43	763.43	0.00	49.94		545		84		830		
		+49.76	764.33				459		81		395			
													C	11968
		+50	764.34			49.94		1399		818		646	R	7906
													R FAC	1.30
		+99.70	765.24				1054		804		303		F	4049
													F FAC	1.15
		457	765.25			49.93		1339		989		364	EX C	11225
		+49.63	766.16				394		266		91			
		457+50	766.16			49.92		770		406		94		
		+99.55	767.07				439		173		11			
		458	767.08	767.08	0.00	49.91		1050		637		20		
		+49.46	767.98	767.89	-0.09		697		516		11			
		CARRIED FORWARD						6282		3644		3989		
		COLUMN FOOTINGS						16348		5187		15995		

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
600' VC	+1.8250%	458+49.46	767.98	767.89	-0.09		697		516		11			
		458+50	767.99	767.90	-0.09	49.90		1527		1109		20		
		+99.36	768.89	768.54	-0.35		955		684		11			
		459	768.90	768.55	-0.35	49.90		1822		1424		20		
		+49.26	769.80	769.02	-0.78		1017		857		11			
		+50	769.81	769.02	-0.79	49.89		2337		1729		20		
		+99.15	770.71	769.31	-1.40		1513		1014		11			
		460	770.73	769.32	-1.41	49.89		2592		1745		20		
		+49.04	771.62	769.44	-2.18		1292		875		11			
		+50	771.64	769.44	-2.20	49.87		2138		1395		20		
		+98.91	772.53	769.38	-3.15		1023		636		11			
		461	772.55	769.38	-3.17	49.87		1493		587		13		
		+48.78	771.38	769.16	-2.22		594		0		3			
		+50	771.35	769.15	-2.20	49.87		1002				21		
		+98.65	770.18	768.75	-1.43		491				20			
		462	770.15	768.74	-1.41	49.86		1176				31		
		+48.51	768.99	768.18	-0.81		783				14		C	11342
		+50	768.95	768.16	-0.79	49.85		1317				42	R	3727
		+98.36	767.79	767.43	-0.36		644				32		F	812
		463	767.75	767.40	-0.35	49.84		885				80	R FAC	1.30
		+48.20	766.59	766.50	-0.09		315				55		F	812
		+50	766.55	766.46	-0.09	49.84		369				114	F FAC	1.15
		+98.04	765.40	765.40	0.00		85				69		EX C	12253
		464	765.35	765.35	0.00	49.83		147				234		
		+47.87	764.20				74				185			
		+50	764.15			49.83		223				237		
		+97.70	763.01				168				72			
		465	762.95			49.82		192				116		
		+47.52	761.81				40				54			
		+50	761.75	761.75	0.00	49.82		57				84		
		+97.34	760.61	760.67	+0.06		22				37			
		466	760.55	760.62	+0.07	49.81		171				38		
		+47.15	759.42	759.67	+0.25		163				4			
		+50	759.35	759.62	+0.27	49.81		220				6		
		+96.96	758.22	758.80	+0.58		76				3			
		CARRIED FORWARD						640				244		
		COLUMN FOOTINGS						17668		7989		1116		

PROJECT NAME GROTON - RYGATE
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EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		466+96.96	758.22	758.80	+0.58		76				3			
		467	758.15	758.75	+0.60	49.80		172				3		
		+46.76	757.78	758.07	+0.29		111				0			
		+50	757.75	758.02	+0.27	49.98		299						
		+96.74	757.38	757.46	+0.08		212							
		468	757.36	757.43	+0.07	50.00		433					C	3384
													F	247
		+46.74	756.98	756.98	0.00		256						F FAC	1.15
													EX C	3100
		+50	756.96	756.96	0.00	50.00		487						
		+96.74	756.59				270							
		469	756.56			50.00		600						
		+46.74	756.19				378							
		+50	756.16			50.00		753						
		+96.74	755.79				435							
		470	755.77			50.00		758						
		+46.74	755.40				384							
		+50	755.37			50.00		781						
		+96.74	755.00				460							
300' VC	-0.7941 %	471	754.97			50.20		788						
		+46.94	754.60				391							
		+50	754.58			50.00		728						
		+96.94	754.20				395							
		472	754.18			49.80		937						
													C	7175
		+46.74	753.81				621						EX C	7175
		+50	753.78			50.00		1075						
		+96.74	753.41				540							
		473	753.39			50.00		894						
		+46.74	753.01				425							
		+50	752.99	752.99	0.00	50.00		601						
		+96.74	752.62	752.69	+0.07		224							
		474	752.49	752.67	+0.08	50.17		364						
		+46.91	752.22	752.52	+0.30		168							
		+50	752.19	752.52	+0.70	50.24		249						
		+97.15	751.82	752.52	+0.70		100				0			
400' VC		475	751.80	752.53	+0.73	50.22		194				6		
		+47.37	751.42	752.68	+1.26		109				6			
		+50	751.40	752.69	+1.29	50.22		125				80		
		+97.59	752.25	753.00	+0.75		25				80			
		CARRIED FORWARD						319				86		
		COLUMN FOOTINGS						10238				89		

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		475+97.59	752.25	753.00	+0.75		25				80			
		476	752.29	753.02	+0.73	50.21		81				87		
		+47.80	758.15	753.49	+0.34		62				14			
		+50	753.19	753.51	+0.32	50.20		293				22		
		+98.00	754.05	754.14	+0.09		253				10			
		477	754.08	754.16	+0.08	50.18		388				33		
		+48.18	754.95	754.95	0.00		164				26		C	1303
													F	1266
		+50	754.98	754.98	0.00	50.18		180				152	F FAC	1.15
													EX F	153
		+98.36	755.84				30				138			
		478	755.87			50.16		28				265		
		+48.52	756.74				0				147			
		+50	756.77			50.15		7				245		
		+98.67	757.64				8				117			
		479	757.66			50.14		7				188		
		+48.81	758.54				0				86			
		+50	758.56			50.12						188		
		+98.93	759.43				0				117			
+1.7894 %		480	759.45			50.12		34				154		
		+49.05	760.33				37				49			
		+50	760.35			50.10		109				50		
		+99.15	761.23				80				5			
		481	761.24			50.08		349				5		
		+49.23	762.12				296				0			
		+50	762.14	762.14	0.00	50.08		535						
		+99.31	763.02	762.92	-0.10		281							
		482	763.03	762.93	-0.10	50.06		596					C	7269
													F	293
		+49.37	763.91	763.51	-0.40		362						F FAC	1.15
													EX C	6932
		+50	763.93	763.52	-0.41	50.05		857						
		+99.42	764.81	763.90	-0.91		563							
500' VC		483	764.82	763.90	-0.92	50.03		1116						
		+49.45	765.71	764.09	-1.62		642							
		+50	765.72	764.09	-1.63	50.02		1127						
		+99.47	766.60	764.07	-2.53		575				0			
		484	766.61	764.06	-2.55	50.53		1231				31		
EQ.-0.52		+40.14	765.69	763.90	-1.79		740				33			
		=+40.66												
		+50	765.48	763.84	-1.62	59.34		1315				53		
		485	764.34	763.43	-0.91		457				15			
		CARRIED FORWARD						8253				1473		
		COLUMN FOOTINGS												

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		485	764.34	763.43	-0.91		457				15			
						50		687				31		
		+50	763.19	762.79	-0.40		285				18			
						50		449				30		
		486	762.05	761.95	-0.10		200				14			
						49.48		290				31		
		+49.48	760.92	760.92	0.00		116				20			
		486+50	760.91			50.52		195				19		
		487	759.77				92				0		C	4744
						50		160				78	F	283
-2.2829 %		+50	758.63				81				84		F FAC	1.15
						50		260				86	EX C	4419
		488	757.49				200				9			
						50		440				8		
		+50	756.35				275				0			
						50		489				0		
		489	755.20				253							
						50		630						
		+50	754.06				427							
						50		1144						
		490	752.92				808							
						50		1217						
		+50	751.78				506							
						50		685					C	2278
		491	750.64				234						EX C	2278
						50		376						
		+50	749.50				172							
		CARRIED FORWARD												
		COLUMN FOOTINGS					7022					283		

PROJECT NAME GROTON - RYGATE
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EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
					TOWN	HIGHWAY #61								
		0+20	814.17	814.17	0.00						0			
						30						163		
		+50	812.37	812.26	-0.11						293		C	282
						50						804	F	2685
		1+00	806.37	806.37	0.00						575		F FAC	1.15
						50						856	EX F	2806
		+50	800.37								350			
						50		0				478		
		2+00	794.37				29				123			
						50		45				182		
		+50	788.37				20				74			
						50		28				103		
		3+00	782.37	782.37	0.00		10				37			
						50		109				67		
		+50	776.37	777.15	+0.78		108				35			
						50		100				32		
		4+00	773.50	773.50	0.00		0				0			
					TOWN	HIGHWAY #13								
		0+20	803.45	803.45	0.00						0			
						30						45		
		+50	802.76	803.07	+0.31		0				51			
						50		17				69	C	119
		1+00	801.60	803.86	+2.26		18				23		F	137
						50		59				22	F FAC	1.15
		+50	806.10	806.42	+0.32		46				1		EX F	39
						50		43				1		
		2+00	810.60	810.60	0.00		0				0			
						50		0						
		+50	815.10											
					TOWN	HIGHWAY #5								
		0+20	776.04	776.04	0.00		0							
						30		79					C	242
		+50	776.50	776.52	+0.02		142						EX C	242
						50		147						
		1+00	782.00	782.00	0.00		17							
						50		16						
		+50					0							
		CARRIED FORWARD												
		COLUMN FOOTINGS						643				2822		

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		CARRIED FORWARD												
		COLUMN FOOTINGS												

SUMMARY AND BALANCES

STATION TO STATION		TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
373+00	375+00	661	0	363	244		244	
375+00	380+00	4397	507	816	3710		3954	
380+00	385+00	16715	5586	1727	17494		21448	
385+00	390+00	3215	0	9015		7152	14296	
390+00	395+00	5482	0	0	5482		19778	
395+00	400+00	7129	0	98	7016		26794	
400+00	405+00	2183	0	4008		2426	24368	
405+00	410+00	3426	0	1228	2014		26382	
410+00	415+00	5068	0	648	4323		30705	
415+00	420+00	3188	0	553	2552		33257	
420+00	425+00	2839	0	7699		6015	27242	
425+00	430+00	10818	0	1613	8963		36205	
430+00	435+00	4909	219	985	3885		40090	
435+00	440+00	11015	2670	2673	9263		49353	
440+00	445+00	14468	6248	289	17228		66581	
445+00	450+00	9290	2522	3323	6717		73298	
450+00	455+00	4610	728	8723		5061	68237	
455+00	460+00	11968	7906	4049	11225		79462	
460+00	465+00	11342	3727	812	12253		91715	
465+00	470+00	3384	0	247	3100		94815	
470+00	475+00	7175	0	0	7175		101990	
475+00	480+00	1303	0	1266		153	101837	
480+00	485+00	7269	0	293	6932		108769	
485+00	490+00	4744	0	283	4419		113188	
490+00	491+50	2278	0	0	2278		115466	
SUB TOTALS		158876	30113	50711				
TOWN HIGHWAY #61		282	0	2685		2806	112660	
TOWN HIGHWAY #13		119	0	137		39	112621	
TOWN HIGHWAY #5		242	0	0	242		112863	
DRIVES		519	0	1943		1715	111148	
SUB TOTALS		1162	0	4765			111148	
TOTALS		160038	30113	55476			111148	

SHEET NO.	COL. NO.	SUMMARY BY COLUMNS EXCAVATION TOTAL CY	EXCAVATION ROCK CY	EMBANKMENT CY

REMARKS

EARTH AND ROCK EXCAVATION	160038
SOLID ROCK EXCAVATION	30113
EARTH EXCAVATION	129925
PLANIMETERED FILL	55476
LESS FACTORED SOLID ROCK (1.3)	39147
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	-
NET PLANIMETERED FILL	16329
FACTOR	0.15
PLANIMETERED FILL INCLUDING FACTOR	18778
MATERIALS AVAILABLE FOR FILLS	-
EARTH EXCAVATION	129925
CHANNEL EXCAVATION (60% X 1710)	1026
UNDERDRAIN EXCAVATION (60% X 4266)	2560
STRUCTURE EXCAVATION (60% X 1110)	666
TOTAL MATERIAL AVAILABLE FOR FILL	134177
TOTAL FILL INCLUDING FACTOR	18778
TOTAL MATERIAL FOR FILL	134177
BORROW	-
EXCESS EXCAVATION	115399

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F026 -1(30)

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SHEET 17 OF 152 SHEETS

: Sheet Number: 17

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
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Y		
Z		
*		

REVISED 08-23-95

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DATE PLOTTED: 12-MAR-1997

GROTON-RYEGATE

F 026-1(30)

R.O.W. SHEET 6 OF 24 SHEETS
SHEET 19 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1	MORSE, GERALD I., TRUSTEE OF GERALD I. MORSE TRUST. & MORSE, GERALD I. & MORSE, NORMAN B., TRUSTEES OF THE HAZEL G. MORSE TRUST.	16	372+89 CL. 372+89 RT. 372+89 RT. 374+00 RT. 375+90 RT.	376+43 RT. 376+43 RT. 376+43 RT.	0.20A±		ALL R. T. & I. SLOPE (P) 0.12A± CONST. (T) 0.08A± CUL., DIT. & DR. (P) CUL., DIT. & DR. (P)	WD	09-12-95	GROTON	45	307-309	U.S. RTE. 302 3550 S.F.±
2	SANVILLE, FRANCIS & CHARLOTTE SANVILLE, ARNOLD F. BRUNELL, KELLEY L.	16	372+89 CL. 373+50 LT. 373+60 LT.	374+20 LT. 374+20 LT. 374+20 LT.	0.07A±		ALL R. T. & I. CONST. (T) 0.01A± SLOPE (P) 0.02A±	WD	11-16-95	GROTON	45	384-386	U.S. RTE. 302 3250 S.F.± 650 S.F.± 1000 S.F.±
3A	MURRAY, JAMES D. & EILEEN V.	16,17	376+27 LT. 374+20 LT. 374+20 LT. 376+00 LT. 377+00 LT. 377+00 LT. 377+75 LT. 378+00 LT. 378+11 LT.	379+62 LT. 379+70 LT. 377+00 LT. 377+75 LT. 379+72 LT.	0.25A±		SLOPE (P) 0.25A± CONST. (T) 0.06A± CULVERT & DITCH (P) PLANT (T) PLANT (T) PLANT (T) CONST. (T) 0.04A± DRIVE (T)	WD		GROTON			2500 S.F.± CRAB APPLE TREES 10 RED PINES CRAB APPLE TREES 1600 S.F.± 12' GRAVEL M.P. 0718
3B		16,17	374+20 LT.	379+50 RT.	0.30A±		ALL R. T. & I.						U.S. RTE. 302
4A	TOWN OF GROTON	16,17	380+08 RT. 381+99 RT. 383+88 RT.	380+63 LT. 384+00 RT.	0.04A±		DRIVE (T) SLOPE (T) 0.01A±	WD	11-17-95	GROTON	45	389-390	1630 S.F.± 14' GRAVEL M.P. 0725 50 S.F.±
4B		16,17	380+05 RT. 376+43 RT.	380+59 RT. 384+00 RT.	0.03A±		ALL R. T. & I. EXCEPT & RESERVE						U.S. RTE 302 CEMETERY MONUMENTS & MARKERS
4C		17	383+90 RT. 384+17 RT. T.H. 61 1+55 RT. T.H. 61 1+85 RT.	384+48 RT. T.H. 61 4+00 CL. T.H. 61 3+95 RT. T.H. 61 3+78 RT.	0.03A±		ALL R. T. & I. APPROACH (T) CONST. (T) 0.05A± SLOPE (P) 0.03A±						T.H. 61 1250 S.F.± 2350 S.F.± 1375 S.F.±
4D		17	387+05 LT. 387+50 LT.	387+75 LT.	0.03A±		ALL R. T. & I. APPROACH (T)						T.H. 13 1250 S.F.±

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	6,7 16	PARCEL NO. 1 MORSE. CHANGE NAME TO MORSE, GERALD I., TRUSTEE OF GERALD I. MORSE TRUST. & MORSE, GERALD I. & MORSE, NORMAN B., TRUSTEES OF THE HAZEL G. MORSE TRUST. PER C.O. 8580.	07-19-94	C.C.P.	L.W.B.
2	11	PARCEL NO. 12B CLOUGH. CHANGE TH 50 3+60 RT. TO TH 50 3+60 LT. ON CONST. (T). PER C.O. 8581.	07-19-94	C.C.P.	L.W.B.
3	9,18	PARCEL NO. 7C PAGE. TO DETAIL SHEET, ADD "DRIVE (T)" AT STA. 404+25 RT. TO LAYOUT, ADD "DRIVE (T)" AT STA. 404+25 RT. ALSO ADD "SLEEVE" NOTE AND "CONSTRUCT PAVED TURNOUT" NOTE. PER C.O. 8586.	07-19-94	C.C.P.	L.W.B.
4	6,8, 17	PARCEL NO. 5 MURRAY. REMOVE MARION H. MURRAY FROM TITLE. PER C.O. 8603.	09-27-94	M.J.R.	L.W.B.
5	12	PARCEL NO. 13 WETHERBEE. ADD ENDING STATION AND ALL R. T. & I. TO WATERLINE. BY OPTION ONLY. PER C.O. 8613.	12-12-94	M.J.R.	L.W.B.
6	13	PARCEL NO. 16 DOE. ADD EASEMENT (T) TO STOCKPILE TOPSOIL BY OPTION ONLY AT TWO LOCATIONS: 16B; REV. 369+22 LT. ~ 485+17 LT. 16C; REV. 459+74 RT. ~ 492+40 RT. PER C.O. 8616.	12-12-94	M.J.R.	L.W.B.
7	13,24	PARCEL NO. 16 DOE. DELETE CONST. (T) AT REV. STA. 482+85 RT. ~ 485+10 RT. REDUCE SLOPE (P) AT REV. 483+00 RT. ~ 485+00 RT., 0.16A± TO REV. 483+55 RT. ~ 485+00 RT., 0.06A±, 2615 S.F.±. ADD SLOPE (P) FROM REV. 483+00 RT. ~ REV. 483+37 RT., 0.01A±, 175 S.F.±. ADD NOTE ABOUT NO ACTIVITY OUTSIDE CONSTRUCTION LIMITS. CHANGE DESIGN TO 20' PULLOUT. PER C.O. 8628.	12-15-94	M.J.R.	L.W.B.

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

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

LEGEND
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D. PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 7 OF 24 SHEETS
SHEET 20 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS			TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
5A	MURRAY, NORMAN W.	17	379+50 RT.	387+05 LT.	1.08A±					WD		GROTON			
			379+70 LT.	382+50 LT.			CONST.	(T)	0.07A±						3050 S.F.±
			379+70 LT.	382+65 LT.			SLOPE	(P)	0.33A±						
			TH 13 1+45 LT.	TH 13 1+65 LT.			SLOPE	(P)	0.01A±						125 S.F.±
			TH 13 1+37 LT.	TH 13 1+90 LT.			CONST.	(T)	0.01A±						340 S.F.±
			382+75 LT.				EASEMENT	(T)							RELOCATE WATER LINE
			383+20 LT.	386+00 LT.			SLOPE	(P)	0.08A±						3500 S.F.±
			384+00 LT.	386+10 LT.			CONST.	(T)	0.08A±						2000 S.F.±
5B		17	379+48 RT.	380+08 RT.	0.03A±		ALL R. T. & I.								US 302 1425 S.F.±
5C		17	380+55 RT.	387+50 LT.	0.44A±		ALL R. T. & I.								US 302 & TH 13
6A	BROWN, JANICE A.	17,18	390+07 LT.	398+47 LT.	0.21A±					WD	11-28-95	GROTON	45	436-438	
			TH 13 0+30 RT.	TH 13 1+50 RT.			SLOPE	(P)	0.02A±						750 S.F.±
			TH 13 1+00 RT.				DRAINAGE	(P)							
			387+78 LT.	391+50 LT.			CONST.	(T)	0.11A±						
			387+78 LT.	388+50 LT.			CHANNEL	(P)	0.05A±						2250 S.F.±
			388+00 LT.	388+08 LT.			CULVERT	(P)							
			388+50 LT.	390+85 LT.			SLOPE	(P)	0.09A±						3875 S.F.±
			393+75 LT.				DRIVE	(T)							12' GRAVEL M.P. 0747
			393+81 LT.	399+00 LT.			CONST.	(T)	0.09A±						4000 S.F.±
			393+81 LT.	394+55 LT.			SLOPE	(T)	0.02A±						700 S.F.±
			394+61 LT.				DRIVE	(T)							12' GRAVEL M.P. 0749
			395+85 LT.	396+10 LT.			SLOPE	(T)	0.01A±						25 S.F.±
			397+67 LT.	399+10 LT.			SLOPE	(T)	0.03A±						1250 S.F.±
6B		17,18	384+48 RT.	395+45 RT.	0.73A±					WD	11-28-95	GROTON	45	436-438	
			TH 61 4+00 LT.	386+62 RT.			CONST.	(T)	0.08A±						3500 S.F.±
			TH 61 1+30 LT.	TH 61 3+65 LT.			SLOPE	(P)	0.06A±						2500 S.F.±
			TH 61 3+50 LT.				CUL. & DR.	(P)							
			385+63 RT.	387+50 RT.			SLOPE	(P)	0.08A±						3650 S.F.±
			386+10 RT.				CUL., DIT. & DR.	(P)							
			386+32 RT.	390+53 RT.			DETOUR	(T)	0.13A±						
			387+35 RT.	388+70 RT.			CONST.	(T)	0.07A±						3000 S.F.±
			387+50 RT.	388+50 RT.			CHANNEL	(P)	0.19A±						
			387+65 RT.				DRAINAGE	(P)							
			387+90 RT.	388+00 RT.			CULVERT	(P)							
			388+50 RT.	389+75 RT.			SLOPE	(P)	0.02A±						850 S.F.±
			390+45 RT.	392+25 RT.			CONST.	(T)	0.04A±						1600 S.F.±
			390+70 RT.	391+78 RT.			SLOPE	(T)	0.01A±						475 S.F.±
			393+10.8 RT.				DRIVE	(T)							12' CONCRETE M.P. 0746
			393+76 RT.	395+45 RT.			CONST.	(T)	0.03A±						1310 S.F.±
			394+12 RT.	394+65 RT.			SLOPE	(T)	0.01A±						250 S.F.±
6C		17,18	384+40 RT.	399+11 RT.	1.37A±		ALL R. T. & I.			WD	11-28-95	GROTON	45	436-438	US 302 & TH 13

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
8	11	PARCEL NO. 11 PLUMMER. ADD DRIVE (T) TO DETAIL SHEET. STA. 434+04 LT., 15' GRAVEL M.P. 0029. PER C.O. 8625.	12-20-94	M.J.R.	L.W.B.
9	15,17	PARCEL NO. 22 GOULD. ADD NEW PARCEL & ASSOCIATED RIGHTS. PER C.O. 8623.	12-20-94	M.J.R.	L.W.B.
10	8,17	PARCEL NO. 5 MURRAY. CHANGE TAKING & RIGHTS DUE TO THE CREATION OF PARCEL NO. 22. PER C.O. 8624.	12-20-94	M.J.R.	L.W.B.
11		DISREGARD - ACTUALLY REVISION 12			
12	11,20 21	PARCEL NO. 11 PLUMMER. CHANGE TITLE TO JOSEPH E. WALTERS. PER C.O. 8646.	02-14-95	M.J.R.	L.W.B.
13	9,18	PARCEL NO. 7 PAGE EXTEND CULVERT AT STA. 403+52 RT. CHANGE BEG. STA. OF CUL. (P) FROM 403+52 RT. TO 403+42 RT. MOVE DRIVE AT STA. 405+75 RT. TO STA. 405+40 RT. PARCEL 7D. ADD EASE. (T) TO RESET FENCE AT STA. 399+10 LT. ~ 404+50 LT. PER C.O. 8645.	02-14-95	M.J.R.	L.W.B.
14	12,21	PARCEL NO. 14 CASSIDY. ADD INSTALL (T) FOR FENCE AT STA. 443+00 LT.± ~ 445+00 LT.±. BY OPTION ONLY. PER C.O. 8661.	03-28-95	M.J.R.	L.W.B.
15	13,15 22,23 24	PARCEL NO. 23 SPOONER. ADD NEW PARCEL 23A AND 23B. SELL OFF FROM PARCEL NO. 16. PER C.O. 8661.	03-28-95	M.J.R.	L.W.B.
16	13,15 22,23 24	PARCEL NO. 16 DOE. CHANGE TAKING AND RIGHTS DUE TO SELL-OFF TO SPOONER PARCEL NO. 23 PER C.O. 8678.	03-28-95	M.J.R.	L.W.B.
17	13,23	PARCEL NO 16 DOE. ON PARCEL 16B, DELETE 'REMOVE (T)', BARN, AT STA. REV. 473+30 RT. ~ REV. 473+92 LT. FROM DETAIL SHEET AND LAYOUT. PER C.O. 8687.	05-16-95	C.C.P.	L.W.B.
18	6,7 16	PARCEL NO. 2 SANVILLE & BRUNELL. CHANGE SPELLING OF 'KELLEY' ON ALL SHEETS. PER C.O. 8709.	07-05-95	M.J.R.	L.W.B.
19	8,17	PARCEL NO. 6A BROWN. ADD DRAINAGE (P) AT STA. TH 13 1+00 RT. ADD CULVERT (P) AT STA. 388+00 LT. ~ 388+08 LT. PER C.O. 8710.	07-05-95	M.J.R.	L.W.B.

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DATE PLOTTED 12-MAR-1997
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DR.(P)- DRAINAGE RIGHT
DIT.(P)- DITCHING RIGHT
CH.(P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL.(P)- CULVERT RIGHT
[W]- WATER SOURCES

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

LEGEND
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R.O.W. PLANS

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 8 OF 24 SHEETS
SHEET 21 OF 152

STATE OF VERMONT
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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
7A	PAGE, LOUISE M.	18,19 20	403+80 LT. 399+03 LT. 399+07 LT. 401+65 LT. 402+00 LT. 402+23 LT. 404+72 LT. 406+25 LT.	406+20 LT. 399+50 LT. 399+23 LT. 404+85 LT. 404+70 LT. 405+15 LT.	0.04A±		CONST. SLOPE DRIVE CONST. SLOPE REMOVE	(T) (T) (T) (T) (T) (T)	0.01A± 0.01A± 0.03A± 0.06A±	WD		GROTON			1530 S.F.± 125 S.F.± 15 S.F.± 12' GRAVEL M.P. 0762 1375 S.F.± 2750 S.F.± CULVERT DRIVE 24' ASPHALT M.P. 0771
7B		19	408+50 LT. 409+00 LT.	410+00 LT. 410+05 LT.	0.01A±		SLOPE	(P)	0.02A±						650 S.F.± 750 S.F.±
7C		18,19	399+15 RT. 399+30 RT. 399+55 RT. 399+22 RT. 400+03 RT. 403+00 RT. 403+42 RT. 404+00 RT. 404+25 RT. 405+20 CL. 405+40 RT. 406+15 RT. 406+90 RT. 406+50 RT. 412+05 RT. 414+20 RT.	417+35 RT. 403+35 RT. 400+00 RT. 403+65 RT. 404+08 RT. 417+20 RT. 411+70 RT. 416+82 RT.	1.08A±		CONST. CULVERT SLOPE DITCH & DRAINAGE CUL., DIT. & DR. CUL., DIT. & DR. DRIVE DRIVE DRIVE CONST. CULVERT & DRAINAGE SLOPE SLOPE CUL., DIT. & DR.	(T) (P) (P) (P) (P) (P) (T) (T) (T) (T) (P) (T) (T) (P)	0.10A± 0.24A± 0.25A± 0.20A± 0.10A±			12' GRAVEL M.P. 0767 50' GRAVEL M.P. 0767 WATERLINE 20' GRAVEL M.P. 0769
7D		18,19	399+10 LT. 399+10 LT.	417+15 RT. 404+50 LT.	1.77A±		ALL R. T. & I. EASE.	(T)							US RTE 302 RESET FENCE
7E		19,20	417+15 RT. 417+68 RT. 419+50 RT. 422+60 RT. 422+70 RT.	425+46 RT. 418+45 RT.	1.37A±		CHANNEL DRIVE DRAINAGE DRAINAGE	(P) (T) (P) (P)	0.11A±	WD		RYEGATE			20' GRAVEL M.P. 0796 ALSO ROW FOR GMP & VELCO
7F		19,20	417+03 LT.	425+10 RT.	0.47A±		ALL R. T. & I.								US RTE 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
20	6, 8 17, 18	PARCEL NO. 6 BROWN. CHANGE TITLE TO JANICE A. BROWN. PER C.O. 8721.	07-05-95	M.J.R.	L.W.B.
21	9	PARCEL NO. 7C PAGE. REMOVE DITCH & DRAINAGE (P) AT STA. 403+47 RT. FROM DETAIL SHEET. PER C.O. 8711.	07-05-95	M.J.R.	L.W.B.
22	10	PARCEL NO. 9 BECK. CHANGE ENDING STATION OF CHANNEL (P) FROM 418+30 LT. TO 418+41 LT. PER C.O. 8712.	07-05-95	M.J.R.	L.W.B.
23	21	PARCEL NO. 14 CASSIDY. CORRECT SPELLING OF 'MARJORY.' PER C.O. 8713.	07-05-95	M.J.R.	L.W.B.
24	13	PARCEL NO. 16 DOE. DELETE PARCEL 16A. COMBINE ALL RIGHTS THAT WERE IN 16A WITH 16C AND CALL IT 16C. CHANGE BEGINNING STA. OF EASE. (T) AT STA. REV. 459+74 TO REV. 469+22 RT. PER C.O. 8714.	07-05-95	M.J.R.	L.W.B.
25	7, 16 17	PARCEL NO. 4B GROTON VILLAGE CEMETERY. CHANGE ALL R.T. & I. TO READ 380+05 RT. ~ 380+59 RT.; 0.03A±. PER C.O. 8719.	07-05-95	M.J.R.	L.W.B.
26	15, 20 21, 22	PARCEL NO. 12 & 24 CLOUGH. ADD NEW PARCEL 24A, 24B, AND 24C AND RIGHTS AS SHOWN TO RELEASE CONSERVATION RESTRICTIONS IMPOSED BY; VT LAND TRUST, VT DEPT. OF AGRICULTURE AND VT HOUSING & CONSERVATION BOARD ON PARCELS 12A, 12B & 12C. PER C.O. 8704.	07-10-95	C.C.P.	L.W.B.
27	7, 16 17	PARCEL NO. 4 TOWN OF GROTON. REMOVE 'GROTON VILLAGE CEMETERY' FROM DETAIL AND PLAN SHEET. PARCEL SHOULD READ 'TOWN OF GROTON. PER C.O. 8728.	08-23-95	C.C.P.	L.W.B.
	16	PARCEL NO. 1 MORSE TRUST. ADD NOTE TO PLAN SHEET TO BEGIN COLD PLANING & PAVING AT STATION 373+50 CL. PER C.O. 8734.	08-23-95	C.C.P.	L.W.B.
28	11, 21	PARCEL NO. 12 CLOUGH. ON PARCEL 12C, REMOVE DRIVE (T) AT STA. 446+20 RT. AND ADD SLOPE (T) AT STA. 446+12 RT. ~ 446+95 RT., 0.01A±, 650 S.F.±. PER C.O. 8735.	08-23-95	C.C.P.	L.W.B.
29	13, 23 24	PARCEL NO. 16 DOE. MOVE ALL RIGHTS FROM PARCEL 16C TO NEW PARCEL 25 ON NEW SHEET 15A. ADD 'ALL R. T. & I.', US RTE. 302, REV. 469+22 CL. ~ 485+00 LT., 1.05A± TO TO PARCEL 16C. ADD NEW 1558' PROPERTY LINE TO CENTER OF ROADWAY ON LAYOUTS. PER C.O. 8736.	08-23-95	C.C.P.	L.W.B.

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

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TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
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(T) TEMPORARY EASEMENT

LEGEND
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R.O.W. PLANS

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 9 OF 24 SHEETS
SHEET 22 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

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8A	DARLING, COLLEEN C.	19	409+95 LT. 410+00 LT. 410+98 LT. 411+10 LT. 415+67 LT. TH 5 0+55 LT.	416+85 LT. 411+00 LT. 413+85 LT. 416+25 LT. TH 5 0+75 LT.	0.36A±		SLOPE (P) 0.03A± DRIVE (T) SLOPE (T) 0.08A± SLOPE (T) 0.01A± SLOPE (T) 0.01A±	WD		GROTON			1140 S.F.± 12' GRAVEL M.P. 0780 3625 S.F.± 150 S.F.± 65 S.F.±
8B		19	409+88 LT.	417+03 LT.	0.49A±		ALL R. T. & I.						US RTE 302
9	BECK, KENDALL J., SR. & MYRTIE L.	19	417+00 LT. 417+30 LT. 417+35 LT. 418+05 LT. TH 5 0+43 RT. TH 5 0+60 RT.	418+41 LT. 418+45 LT. 418+15 LT. 418+41 LT. TH 5 0+63 RT.	0.09A±		ALL R. T. & I. CONST. (T) 0.05A± SLOPE (P) 0.03A± CHANNEL (P) 0.04A± CULVERT & DITCH (P) DRIVE (T)	WD		RYEGATE			TH 5 & US 302 3850 S.F.± 2000 S.F.± 1125 S.F.± 1875 S.F.± 12' GRAVEL
10A	RESTELLI, STEPHEN C. & TERRY L.	19,20	423+33 LT. 418+40 LT. 418+40 LT. 418+40 LT. 418+45 LT. 418+55 LT. 419+00 LT. 419+60 LT. 419+95 LT. 420+00 LT. 420+23 LT. 422+00 LT.± 422+50 LT. 423+00 LT.	424+75 LT. 418+50 LT. 424+63 LT. 424+63 LT. 418+60 LT. 419+00 LT. 420+25 LT. 423+00 LT. 424+10 LT. 423+00 LT.± 424+63 LT.	0.03A±		CHANNEL (P) 0.02A± CONST. (T) 0.01A± DETOUR (T) 0.01A± DRIVE (T) SLOPE (T) 0.12A± CONST. (T) 0.06A± CULVERT & DITCH (P) SLOPE (P) 0.12A±	WD		RYEGATE			1250 S.F.± 875 S.F.± RESET-ROSE BUSH RESET-CURRANT BUSH 125 S.F.± 150 S.F.± WOOD FENCE 12' GRAVEL & PARKING AREA M.P. 0005 SIGN - PERSONAL 2775 S.F.± STOCKPILE-GARDEN TOPSOIL
10B		19,20	418+40 LT.	424+93 LT.	0.37A±		ALL R. T. & I.						US RTE 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
30	15A 23,24	PARCEL NO. 25 HOBBS. ADD NEW PARCEL 25 TO NEW DETAIL SHEET 15A AND LAYOUT. TRANSFER ALL RIGHTS FROM PARCEL 16C TO PARCEL 25, AND CHANGE AREA OF "ALL R. T. & I." FROM 3.42A± TO 2.37A±. PER C.O. 8737.	08-23-95	C.C.P.	L.W.B.
31	14	PARCEL NO. 17 CRAIGE. ON PARCEL 17B, CHANGE TAKE AREA FROM 0.26A± TO 0.86A±. PER C.O. 8738.	08-23-95	C.C.P.	L.W.B.
32	10,19 20	PARCEL NO. 10 RESTELLI. ADD FOLLOWING TOPO: 1) CEDAR CLUMP AT 418+76 LT.± & MARK "SAVE" 2) ROSE BUSH AT 419+75 LT.± AND ON DETAIL SHEET ADD "RESET - ROSE BUSH" AT STA. 418+40 LT. ~ 424+63 LT. 3) CURRANT BUSH AT 421+56 LT.± AND ON DETAIL SHEET ADD "RESET - CURRANT BUSH" AT STA. 418+40 LT. ~ 424+63 LT. 4) GARDEN AREA AT 422+05 LT.± AND ON DETAIL SHEET ADD "STOCKPILE GARDEN TOPSOIL" AT STA. 422+00 LT.± ~ 423+00 LT.±. PER C.O. 8741.	10-04-95	C.C.P.	L.W.B.
33	10,19	PARCEL NO. 9 BECK. CONSTRUCT DRIVE OFF T.H. 5 AND ADD "DRIVE (T)" TO DETAIL SHEET AND LAYOUT AT T.H. 5 STA. 0+60 RT. PER C.O. 8743.	10-04-95	C.C.P.	L.W.B.
34	21	PARCEL NO. 14 CASSIDY. ADD T.V. CABLE TO LAYOUT AT 444+00 LT. AND ADD 18" X 40' DRIVE CULVERT AT STA. 441+05 LT. PER C.O. 8751.	10-04-95	C.C.P.	L.W.B.
35	18	PARCEL NO. 26 KRIES. (FORMERLY PART OF PARCEL NO. 6 BROWN). ADD DRIVE APRON TO LAYOUT AT STA. 396+00 RT. PER C.O. 8753.	10-04-95	C.C.P.	L.W.B.
36	9,18 19	PARCEL NO. 7 PAGE. MOVE WESTERLY PROPERTY LINE ON SOUTHERLY SIDE OF RTE. 302 TO THE WEST PER SURVEY OF KRIES' LAND. ALSO DUE TO IRON PIPE AND FENCE FOUND. PER C.O. 8755.	10-04-95	C.C.P.	L.W.B.
37	6,8 15A 17,18	PARCEL NO. 6 BROWN AND 26 KRIES. CREATE NEW PARCEL NO. 26 KRIES DUE TO SELL-OFF OF PORTION OF PARCEL NO. 6 BROWN. PER C.O. 8756.	10-04-95	C.C.P.	L.W.B.
38	15A 24	PARCEL NO. 25 HOBBS. ADD DRAINAGE (P) AT STA. 487+00 RT. TO DETAIL & LAYOUT. PER C.O. 8759.	10-04-95	C.C.P.	L.W.B.

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CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D. PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 10 OF 24 SHEETS
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11A	WALTERS, JOSEPH E.	20, 21	424+63 LT. 424+03 LT. 424+12 LT. 429+95 LT. 430+50 LT. 431+ 85 LT.	430+00 LT. 432+40 LT. 428+00 LT. 432+20 LT.	0.53A±		CONST. SLOPE CULVERT & DITCH SLOPE DRIVE	(T) (P) (P) (T) (T)	0.16A± 0.41A± 0.01A±	WD		RYEGATE			 600 S.F.± 16' PAVED M.P. 0025
11B		20, 21	435+90 LT. 432+50 LT. 432+82 LT. 433+55 LT. 434+04 LT. 436+95 LT.	439+56 LT. 438+25 LT. 436+37 LT. 439+17 LT.	0.11A±		CONST. CULVERT & DITCH SLOPE DRIVE SLOPE	(T) (P) (P) (T) (P)	0.15A± 0.17A± 0.07A±						 15' GRAVEL M.P. 0029
11C		20, 21	424+75 LT.	439+56 LT.	1.25A±		ALL R. T. & I.								U.S. RTE. 302
12A	CLOUGH, RICKY & KELLY A.	20, 21 22	425+10 RT. 426+00 RT. 428+60 RT. 429+46 RT. 429+46 RT.	430+42 RT. TH 50 3+00 RT. TH 50 2+43 RT.	0.30A±		 DRAINAGE CONST. DRAINAGE SLOPE	 (P) (T) (P) (P)	 0.05A± 0.04A±	WD	09-22-95	RYEGATE	53	396- 399	 2375 S.F.± 1875 S.F.±
12B		20, 21	430+76 RT. TH 50 1+00 LT. 431+15 RT. 431+17 RT. 432+00 RT. 433+35 RT. 433+50 RT. 435+50 RT. 437+10 RT.	440+15 RT. TH 50 3+60 LT. 434+00 RT. 432+30 RT. 444+00 RT.	0.82A±		CONST. CONST. ALL R. T. & I. DRAINAGE DRAINAGE DRAINAGE DRAINAGE	(T) (T) (P) (P) (P) (P)	0.05A± 0.04A±						2000 S.F.± 1875 S.F.± BARN WATERLINE
12C		21, 22	447+40 RT. 443+50 RT. 443+50 RT. 445+00 RT. 446+12 RT. 448+00 RT. 450+68 RT. REV. 454+80 RT. REV. 458+00 RT.	REV. 459+74 RT. 444+60 RT. 444+40 RT. 446+95 RT.	1.18A±		REMOVE ALL R. T. & I. DITCH & DRAINAGE SLOPE DRAINAGE DITCH & DRAINAGE DRAINAGE DRAINAGE	(T) (P) (T) (P) (P) (P) (P)	0.11A± 0.01A±						BARN BARN & H2O LINE 650 S.F.±
12D		20	430+10 RT.	431+05 RT.	0.07A±		ALL R. T. & I.								TH 50 2875 S.F.±
12E		20, 21	424+93 LT.	440+15 CL.	1.29A±		ALL R. T. & I.								US RTE. 302 & TH 50
12F		21, 22	443+53 RT.	REV. 459+74 RT.	1.24A±		ALL R. T. & I.								US RTE. 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
39	14, 24	PARCEL NO. 17 CRAIGE. PULL SLOPES IN TO AVOID DRY WELL. ADD CLEAR ZONE (P) AT 486+72 LT. ~ 487+50 LT.; 0.02A±, 780 S.F.±. REDUCE TAKING OF 7A TO 0.15A±. PER C.O. 8763.	10-17-95	M.J.R.	L.W.B.
40	10, 19	PARCEL NO. 9 BECK. ADD "CULVERT & DITCH (P)" AT STA. TH 5 0+43 RT. ~ TH 5 0+63 RT. TO DETAIL SHEET AND LAYOUT. PER C.O. 8773.	11-22-95	C.C.P.	L.W.B.
41	12, 21	PARCEL NO. 14 CASSIDY. DESIGNATE "INSTALL (T), 4' CHAIN LINK FENCE" ON PARCEL 14A AS A SEPARATE PARCEL 14C. ALSO DELETE "BY OPTION ONLY" NOTATION FROM REMARKS COLUMN. PER C.O. 8774.	11-22-95	C.C.P.	L.W.B.
42	15, 22 23	PARCEL NO. 23 SPOONER. TO LAYOUT, ADD A LONGITUDINAL PIPE TO CONNECT PROPOSED CULVERT PIPES AT STATIONS REV. 464+70.69 AND REV. 468+50 RT. ALSO TO LAYOUT, ADD NOTE: "EXCAVATION FOR INSTALLATION OF CULVERT AT STA. REV. 468+50 RT. BE KEPT TO A MINIMUM NOT TO EXCEED 30 FEET IN WIDTH. ALSO, REMOVE DRAINAGE (P) AT STA. REV. 464+77 RT. FROM DETAIL SHEET & LAYOUT. PER C.O. 8772. REPRODUCIBLES TO DESIGN 02-07-96	11-29-95	C.C.P.	L.W.B.
43	15A 17, 18	ADD PARCEL 27 "BROWN LIVING TRUST, N. DALE BROWN & JANICE A. BROWN, TRUSTEES. NEW RIGHTS INCLUDE CONST.(T), SLOPE(P) & DRIVE (T). PER C.O. 8863. REPRODUCIBLES TO DESIGN 03-11-97	03-03-97	C.C.P.	L.W.B.

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AGENT D, PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 11 OF 24 SHEETS
SHEET 24 OF 152

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13A	WETHERBEE, BERNARD O. & EARLENE J.	21	440+12 RT. 440+50 RT. 441+20 RT. 441+30 RT. 443+00 CL.± 443+37 RT.	442+87 RT. 442+27 RT. 442+00 RT. 441+41 RT. 445+00 LT.±	0.07A±		CONST. (T) 0.02A± SLOPE (T) 0.01A± CUL., DIT. & DR. (P) ALL R.T. & I. DRIVE (T)	WD		RYEGATE			3250 S.F.± 875 S.F.± 250 S.F.± WATER LINE & APPURTENANCES 12' GRAVEL M.P. 0050
13B		21	440+15 RT.	443+56 RT.	0.20A±		ALL R. T. & I.						US RTE. 302
13C		21	440+05 RT. 443+00 LT.	443+53 RT.	0.59A±	0.00A±	ALL R. T. & I.	WD	01-07-98	RYEGATE	57	159-160	TOTAL TAKE SPRING
14A	CASSIDY, WILLIAM A. & MARJORY F.	21,22	439+17 LT. 438+15 LT. 438+25 LT. 441+60 LT. 442+00 LT. 444+53 LT. 448+13 LT. 450+62 LT. 451+80 LT. 452+00 LT.	REV. 458+32 LT. 449+00 LT. 441+32 LT. 443+50 LT. 447+50 LT. 448+85 LT. REV. 455+20 LT. REV. 456+97 LT.	2.33A±		CONST. (T) 0.26A± SLOPE (P) 0.29A± DRIVE (T) SLOPE (P) 0.03A± SLOPE (P) 0.10A± SLOPE (P) 0.02A± DITCH (P) CONST. (T) 0.07A± SLOPE (P) 0.46A±	WD		RYEGATE			 16' PAVED M.P. 0047 1125 S.F.± 925 S.F.± 3000 S.F.±
14B		21,22	439+50 LT.	REV. 458+32 LT.	1.78A±		ALL R. T. & I.						US RTE. 302
14C		21	443+00 LT.±	445+00 LT.±			INSTALL (T)						4' CHAIN LINK FENCE
15A	WELCH, WILBER M. & SYLVIA J.	22,23	REV. 456+97 LT. REV. 455+00 LT. REV. 455+20 LT. REV. 464+00 LT. REV. 464+50 LT. REV. 466+40 LT. REV. 467+25 LT. REV. 468+60 LT.	REV. 469+22 LT. REV. 461+50 LT. REV. 461+43 LT. REV. 469+22 LT. REV. 465+40 LT. REV. 468+30 LT. REV. 469+22 LT.	1.71A±		CONST. (T) 0.14A± SLOPE (P) 0.54A± CONST. (T) 0.11A± SLOPE (P) 0.01A± SLOPE (P) 0.02A± DRIVE (T) SLOPE (P) 0.01A±	WD		RYEGATE			 500 S.F.± 750 S.F.± 12' GRAVEL M.P. 0095 500 S.F.±
15B		22,23	REV. 458+20 LT.	REV. 469+22 RT.	0.78A±		ALL R. T. & I.						US RTE. 302

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46	11, 21	PARCEL NO. 12 CLOUGH. ADD PARCELS 12G & 12H TO LAYOUT AND DETAIL SHEET. VALUE ENGINEERING INDICATES A SAVINGS IF THESE PARCELS ARE PURCHASED. PER C.O. 8918.	09-18-97	W. L. G.	L. W. B.
47	12, 21	PARCEL NO. 13 WETHERBEE. ADD PARCEL 13C TO PLANS MAKING THIS PARCEL A TOTAL TAKE. VALUE ENGINEERING INDICATES A SAVINGS IF THESE PARCELS ARE PURCHASED. PER C.O. 8919.	09-18-97	W. L. G.	L. W. B.
48	15, 21	PARCEL NO. 24 VERMONT LAND TRUST. ADD PARCELS 24D & 24E TO LAYOUT AND DETAIL SHEET. RESULT OF VALUE ENGINEERING STUDY. PER C.O. 8920.	09-18-97	W. L. G.	L. W. B.

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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
16A	DELETED												N/F SPOONER
16B	DOE, BERNARD W. & CYNTHIA T.	23, 24	REV. 469+22 LT.	485+17 LT.	1.58A±			WD		RYEGATE			
			REV. 469+22 LT.	485+17 LT.			EASE. (T)						STOCKPILE TOPSOIL (BY OPTION ONLY)
			REV. 469+22 LT.	REV. 471+05 LT.			CONST. (T) 0.04A±						1780 S.F.±
			REV. 469+22 LT.	REV. 471+00 LT.			SLOPE (P) 0.06A±						2500 S.F.±
			REV. 471+00 LT.				DRIVE (T)						12' GRAVEL M.P. 0102
			REV. 471+32 LT.	REV. 474+45 LT.			CONST. (T) 0.07A±						3000 S.F.±
			REV. 471+32 LT.	REV. 474+00 LT.			SLOPE (P) 0.15A±						6500 S.F.±
			REV. 476+00 LT.	REV. 478+00 LT.			CONST. (T) 0.06A±						2750 S.F.±
			REV. 474+00 LT.±										WATER LINE TO BARN
			REV. 474+50 LT.										DRIVE 12' GRAVEL M.P. 0109
			REV. 474+60 CL.±										WATER LINE TO HOUSE
			REV. 476+32 LT.				DITCH (P)						
			REV. 476+60 LT.	REV. 477+67 LT.			SLOPE (P) 0.02A±						750 S.F.±
			REV. 478+50 LT.				DRIVE (T)						12' GRAVEL M.P. 0116
			REV. 480+75 LT.	485+50 LT.			CONST. (T) 0.14A±						
			REV. 481+50 LT.	485+42 LT.			SLOPE (P) 0.45A±						
16C		23, 24	REV. 469+22 CL.	485+00 LT.	1.05A±		ALL R. T. & I.						US RTE. 302

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

0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cd7.i

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

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

LEGEND
CLEAR ZONE CZ (P)
CONSTRUCTION EASEMENT CONST. (T)
SLOPE RIGHTS SR SR
PROPERTY LINE P L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 13 OF 24 SHEETS
SHEET 26 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
17A	CRAIGE, KELMAN D., JR.	24	485+00 LT. 485+17 LT. 485+40 LT. 486+50 LT. 486+72 LT. 489+26 LT. 489+26 LT. 491+32 LT.	488+44 LT. 486+65 LT. 486+00 LT. 487+50 LT. 490+94 LT. 490+94 LT.	0.15A±		SLOPE (P) 0.07A± CONST. (T) 0.01A± DRIVE (T) CLEAR ZONE (P) 0.02A± CONST. (T) 0.04A± SLOPE (P) 0.09A± DRIVE (T)	WD	11-28-95	RYEGATE	54	6-8	3125 S.F.± 500 S.F.± 12' GRAVEL M.P. 0131 780 S.F.± 1875 S.F.± 3625 S.F.± 12' GRAVEL M.P. 0141 3750 S.F.±
17B		24	485+00 LT.	492+40 CL.	0.86A±		ALL R. T. & I.	WD	11-28-95	RYEGATE	54	6-8	US RTE. 302
18A	TOWN OF RYEGATE	19	417+00 LT. 417+30 LT.	417+54 LT.	0.03A±		ALL R. T. & I. APPROACH (T)	QCD	10-18-95	RYEGATE	53	453-454	US RTE. 302 1350 S.F.± TH 5 PAVED
18B		20	430+00 RT.				APPROACH (T)	AGREE.					TH 50 "CLOUGH ROAD" PAVED
	MAINTENANCE AGREEMENT AREA #1	17	384+05 RT.	384+30 RT.				AGREE.		GROTON			TH 61 LENGTH 25' "NEW CEMETERY ROAD"
	MAINTENANCE AGREEMENT AREA #2	17	387+47 LT.	387+35 LT.				AGREE.		GROTON			TH 13 LENGTH 23'
	MAINTENANCE AGREEMENT AREA #3	19	417+25 LT.	417+16 LT.				AGREE.		RYEGATE			TH 5 LENGTH 32'
	MAINTENANCE AGREEMENT AREA #4	20	430+00 RT.	430+00 RT.				AGREE.		RYEGATE			TH 50 LENGTH 42' "CLOUGH ROAD"
	RELINQUISHMENT NO. I	20	429+73 RT.	430+10 RT.						RYEGATE			TH 50

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0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cd8.i

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

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

LEGEND
CLEAR ZONE CZ (P)
CONSTRUCTION EASEMENT CONST.(T)
SLOPE RIGHTS SR SR
PROPERTY LINE P L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D. PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 14 OF 24 SHEETS
SHEET 27 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
19	GREEN MOUNTAIN POWER CORPORATION												UTILITY
20	VERMONT ELECTRIC POWER CORPORATION												UTILITY
21	NORTHLAND TELEPHONE COMPANY OF VERMONT												UTILITY
22	GOULD, BRYANT P. & MARSHA J.	17	382+65 LT.	383+20 LT.	0.01A±			WD	10-10-95	GROTON	45	359-360	430 S.F.±
			382+45 LT.	384+30 LT.			CONST. (T) 0.04A±						1800 S.F.±
			382+50 LT.	384+00 LT.			SLOPE (P) 0.04A±						1930 S.F.±
			382+65 LT.±				EASEMENT (T)						RELOCATE WATER LINE
23A	SPOONER, RAYMOND W. & SUSAN P.	22,23	REV. 459+74 RT.	REV. 462+06 RT.	0.10A±			WD		RYEGATE			
			REV. 462+40 RT.	REV. 463+35 RT.			CONST. (T) 0.02A±						1000 S.F.±
			REV. 462+65 RT.	REV. 463+07 RT.			SLOPE (P) 0.01A±						100 S.F.±
			REV. 467+25 RT.				DRIVE (T)						16' GRAVEL M.P. 0095
			REV. 468+00 RT.	REV. 469+22 RT.			CONST. (T) 0.02A±						900 S.F.±
			REV. 468+50 RT.				CUL., DIT. & DR. (P)						
			REV. 468+75 RT.	REV. 469+22 RT.			SLOPE (T) 0.01A±						45 S.F.±
23B			REV. 459+74 RT.	REV. 469+22 RT.	0.80A±		ALL R.T. & I.						U.S. RTE. 302
24A	VERMONT LAND TRUST, INC.	20,21	425+10 RT.	430+42 RT.	0.30A±			QCD		RYEGATE			
	VERMONT DEPARTMENT OF AGRICULTURE,	22	426+00 RT.				DRAINAGE (P)						
	VERMONT HOUSING & CONSERVATION BOARD		429+46 RT.				DRAINAGE (P)						
			429+46 RT.	TH 50 2+43 RT.			SLOPE (P) 0.04A±						1875 S.F.±
24B		20,21	430+76 RT.	440+15 RT.	0.82A±								
			433+35 RT.				DRAINAGE (P)						
			433+50 RT.				DRAINAGE (P)						
			435+50 RT.				DRAINAGE (P)						
			437+10 RT.				DRAINAGE (P)						
24C		21,22	447+40 RT.	REV. 459+74 RT.	1.18A±								
			445+00 RT.				DITCH & DRAINAGE (P)						
			448+00 RT.				DRAINAGE (P)						
			450+68 RT.				DITCH & DRAINAGE (P)						
			REV. 454+80 RT.				DRAINAGE (P)						
			REV. 458+00 RT.				DRAINAGE (P)						

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

0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cd9.i

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

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

LEGEND
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R.O.W. PLANS

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 15 OF 24 SHEETS
SHEET 28 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
25	HOBBS, MICHAEL F. & SARAH A. O.	23,24	REV. 469+22 RT.	492+40 CL.	2.37A±		ALL R. T. & I.	WD		RYEGATE			US RTE. 302
			REV. 469+22 RT.	REV. 473+97 RT.			CONST. (T) 0.12A±						
			REV. 469+22 RT.	REV. 473+20 RT.			SLOPE (T) 0.04A±						1655 S.F.±
			REV. 469+22 RT.	492+40 RT.			EASE. (T)						STOCKPILE TOPSOIL
													BY OPTION ONLY
			REV. 473+30 RT.	REV. 473+50 RT.			CULVERT (P)						
			REV. 473+47 RT.	REV. 473+52 RT.			DITCH & DRAINAGE (P)						
			REV. 473+48 RT.	REV. 473+86 RT.			ALL R. T. & I.						
			REV. 473+48 RT.	REV. 473+86 RT.			REMOVE (T)						GARAGE
			REV. 474+00 RT.				DRIVE (T)						GARAGE
			REV. 474+60 CL.										12' PAVED M.P. 0108
			REV. 476+15 RT.	REV. 476+90 RT.			CONST. (T) 0.02A±						H20 LINE
			REV. 476+32 RT.	REV. 476+71 RT.			SLOPE (T) 0.01A±						700 S.F.±
			REV. 476+46 RT.				DRAINAGE (P)						250 S.F.±
			REV. 477+92 RT.	REV. 479+94 RT.			SLOPE (T) 0.03A±						1250 S.F.±
			REV. 480+00 RT.				DRIVE (T)						12' GRAVEL M.P. 0119
			REV. 480+00 RT.				CULVERT (T)						DRIVE
			REV. 480+06 RT.	REV. 481+00 RT.			SLOPE (T) 0.02A±						1000 S.F.±
			REV. 481+00 RT.	REV. 482+00 RT.			CONST. (T) 0.05A±						2375 S.F.±
			REV. 481+00 RT.	REV. 482+00 RT.			SLOPE (P) 0.04A±						1875 S.F.±
			REV. 481+50 RT.				CUL., DIT. & DR. (P)						
			REV. 482+00 RT.	REV. 483+00 RT.			SLOPE (T) 0.02A±						1000 S.F.±
			REV. 483+00 RT.	REV. 483+37 RT.			SLOPE (P) 0.01A±						175 S.F.±
			REV. 483+55 RT.	485+00 RT.			SLOPE (P) 0.06A±						2615 S.F.±
			487+00 RT.				DRAINAGE (P)						
			487+67 RT.	490+50 RT.			CONST. (T) 0.05A±						2375 S.F.±
			487+90 RT.	488+20 RT.			SLOPE (T) 0.01A±						125 S.F.±
			489+50 RT.				DRAINAGE (P)						
26A	KRIES, G. RICHARD & DIANE H.	18	395+45 RT.	399+22 RT.	0.27A±			WD		GROTON			
			395+45 RT.	399+35 RT.			CONST. (T) 0.08A±						3410 S.F.±
			396+00 RT.										12' DRIVE M.P. 0751
			396+30 RT.	399+30 RT.			SLOPE (T) 0.15A±						
26B		18	395+45 RT.	399+11 LT.	0.22A±		ALL R. T. & I.						U.S. RTE 302

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

0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cl0.1

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

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

LEGEND
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 15A OF 24 SHEETS
SHEET 29 OF 152

PLAN

SURVEYED	BW	DATE
PLOTTED	DSC	12-16-94
ALIGNMENT CHECKED		12-16-94
NOTE BOOK		
NO. 96		
STRUCTURE NOTATIONS (NEW)		

SANVILLE, ARNOLD F.
BRUNELL, KELLEY L.
SANVILLE, FRANCIS & CHARLOTTE

MURRAY, JAMES D. & EILEEN V.

MORSE, GERALD I., TRUSTEE OF GERALD I. MORSE TRUST & MORSE, GERALD I. & MORSE, NORMAN B., TRUSTEES OF THE HAZEL G. MORSE TRUST

TOWN OF GROTON

REMOVAL AND DISPOSAL OF GUARDRAIL
RT 373+95 ~ 376+45

373+50 BEGIN COLD PLANING BEGIN PAVING

PC STA. 373+68.39

BEGIN APPROACH STA. 374+00

PI STA. 374+97.88 BK
STA. 374+97.75 AHD

372+89 25' LT.

372+89 25' RT.

374+20 ℄

376+43 ℄

376+27 25' LT.

376+43 25' RT.

374+00 CONST. (T) SR (P)

374+20 25' LT.

CUL. & DIT. (P)

CUL., DIT. & DR. (P)

SR (P) CONST. (T)

CONCRETE BOUND

WELL

HSE

POLE BRACE

CMP 7 16 LPG

CMP 8

15" APPLE CMP 8

4' RET WALL

3-5' RET WALL

CMP 9

CMP 10

205'

223'

358'

1529'

747'

(304)377+P

P 374

S 4°03'16" E

S 5°35'04" E

PLAN
SCALE: 1" = 50'

50 25 0 50
SCALE IN FEET

CURVE 2
Δ 4° 31' 48"
D 1° 45' 00"
R 3274.05'
L 258.85'
T 129.49'
E 2.56 FT/FT
B 0.21 FT/FT

374+00 NEW 18"X30" PCCSP(0604) OR CAAP(1060) OR CPEP(SL) W/ TYPE I STONE FILL AT OUTLET

375+81.9 REMOVE EXIST. INSP. PIT REPLACE W/ NEW 24" PCCSP(0604) OR CAAP(1060) OR CPEP(SL) W/ TYPE I STONE FILL AT OUTLET

MATCH LINE TO SHEET 17

N MAG. 1986

STEEL BEAM GUARDRAIL
RT 373.75-377.00

BREAK AWAY CABLE TERMINAL
RT 373.50-373.75

STONE FILL TYPE I
LT 376+00-377+00
RT

SCARIFY EXISTING PAVEMENT
376.00 ~ 377.00

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

BEGIN R.O.W. PROJECT
F 026-1(30) STA. 372+89 ℄

07-14-94 REVISION 1

PROFILE

SURVEYED	EGJ DK	DATE
PLOTTED	CAF	12-16-94
GRADES CHECKED	EGJ DK	12-16-94
NOTE BOOK		
NO. 96		
STRUCTURE NOTATIONS (NEW)	RSL	12-16-94

PC STA. 373+68.39
5" ASH
SIGNPOST
1.7' G.R. POST

PT STA. 376+27.24
16.5'
15"
23.2'
POST HOLE

PI STA. 374+97.88 BK

TIES TO PC STA. 373+68.39
BEGIN APPROACH STA. 374+00
TIES TO PT STA. 376+27.24

9.30 13 %

EXISTING GROUND

MATCH LINE

810
800
790
780
770
760
750
740

369+00 370+00 371+00 372+00 373+00 374+00 375+00 376+00 377+00

HORIZONTAL
50 25 0 50
SCALES IN FEET

10 0
VERTICAL

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 16 OF 24 SHEETS

30 OF 152

PLATE I SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131-5342B

EVERGREEN TREES
LT.
377+00~377+75, 55'+-LT, 5 RED PINE, 10' HEIGHT@15' C-C
377+00~377+75, 65'+-LT, 5 RED PINE, 10' HEIGHT@15' C-C

NOTE: NEW TREES @ STA. 377+00 ~ 377+75 ARE TO BE PLANTED AS DETERMINED BY THE ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER.

DECIDUOUS TREES
LT.
377+00 & 377+75
76'-LT, 2 FLOWERING CRABAPPLES, 10' HEIGHT

BEGIN MAINT. AGREE. AREA NO. 1
STA. 384+05 20' RT.

BEGIN MAINT. AGREE. AREA NO. 2
STA. 387+47 20' LT.

END MAINT AGREE. AREA NO. 2
STA. 387+35 41' LT. (LENGTH 23')

END MAINT. AGREE. AREA NO. 1
STA. 384+30 43' RT. (LENGTH 25')

MURRAY, JAMES D & EILEEN V.

MURRAY, NORMAN W.

GOULD, BRYANT P. & MARSHA J.

BROWN LIVING TRUST, N. DALE BROWN & JANICE A. BROWN, TRUSTEES

BROWN, JANICE A.

TOWN OF GROTON

CEMETERY

LEGEND
- CEMETERY LOT CORNER
- GRAVE MARKER OR MONUMENT

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
AS-BUILT CHECKED

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
NO. 2515
GRADES CHECKED
ALIGNMENT CHECKED
STRUCTURE NO(S)/TNS CHKD

PV I
STA 381+00
ELV 827.96
LVC 900
E 7.91
K 12.8
SSD 413'

PV I
STA 386+50
ELV 800.00
LVC 900.00
E 1.02
K 110

NOTE: SEE SHEET 10C FOR PROFILE TH #6
SEE SHEET 14C FOR PROFILE TH #13

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 17 OF 24 SHEETS

TYPE I STONE FILL
LT 397+30-399+50
RT 397+30-399+50

EROSION MATTING
LT 396+50-397+30, 399+50-401+50, 403+45-404+50
RT 395+50-397+30, 399+50-400+75

REMOVE AND RESET FENCE
LT 399+10-402+00 (RESET TO NEW R.O.W. LINE)
402+00-404+50 (RESET BEYOND CONSTRUCTION LIMITS, THEN TO NEW R.O.W. LINE)

STEEL BEAM GUARDRAIL
LT
RT 399+90-403+27.5

BREAK AWAY CABLE TERMINAL
LT 399+65-399+90, 403+27.5-403+52.5

GRANITE SLOPE EDGING
LT 405+00-406+00

BROWN LIVING TRUST
N. DALE BROWN &
JANICE A. BROWN
TRUSTEES

BROWN, JANICE A.

REMOVAL AND DISPOSAL OF GUARD RAIL
RT 402+75 ~ 403+60

PAGE, LOUISE M.

KREIS, G. RICHARD & DIANE H.

BROWN, JANICE A.

BROWN LIVING TRUST
N. DALE BROWN &
JANICE A. BROWN
TRUSTEES

PAGE, LOUISE M.

CUL., DIT. & DR.(P)

CUL., DIT. & DR.(P)

MATCH LINE TO SHEET 17

MATCH LINE TO SHEET 19

PI STA. 392+72.44 BK
STA. 392+70.57 AHD

PI STA. 403+00.66 BK
STA. 402+64.85 AHD

CURVE 4
Δ 12° 14' 23"
D 2° 30'
R 2291.83'
L 489.59'
T 245.73'
E 13.14'
B 0.046'

CURVE 5
Δ 39° 15' 31"
D 4° 30' 00"
R 1273.24'
L 872.41'
T 454.11'
E 78.56'
B 0.067 FT/FT

CONSTRUCT DRIVE
LT 394+61 GRAVEL (12' WIDE); 401+65 GRAVEL (12' WIDE); 403+75 GRAVEL (12' WIDE)
RT 393+10.8 CONCRETE (12' WIDE); 404+00 GRAVEL (12' WIDE); 405+40 GRAVEL (20' WIDE); 404+25 GRAVEL (50' WIDE); 396+00 GRAVEL (12' WIDE)

CONSTRUCT PAVED TURNOUT
404+50 – 405+15 RT. (4' WIDE)

TBM #3
SPIKE IN ROOT
12" SCOTCH PINE
ELEV. 790.17

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SCALE: 1" = 50'
50 25 0 50
SCALE IN FEET

07-14-94 REVISION 3

PLAN
SURVEYED 05-25-94 EJC EJ
PLOTTED 06-15-94 JCC EJ
NOTE BOOK
ALIGNMENT CHECKED
RT. OF WAY CHECKED
NO.

BY	DATE
EDJ, DSL	DEC. 95
SPF	OCT. 96
EDJ, DSL	DEC. 97
SDS, DSL	DEC. 97
RWJ	FEB. 98

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
ALIGNMENT CHECKED
NOTE BOOK
NO.
STRUCTURE NO.&MKD

PVI
STA. 397+00
EL. 791.50
L.V.C. 300'
E 0.99'
K 120
5.90 4.16

PVI
STA. 401+50
L 775.75'
V.C. 600'
E 4.09'
K 109

TIES TO PT STA. 395+16.30
TIES TO PC STA. 398+46.55
TIES TO POC STA. 403+00

-1.000 %
EXISTING GROUND
+5.00 %
+.950 %
EXISTING GROUND

MATCH LINE
MATCH LINE

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026 (30)
R.O.W. SHEET 18 OF 24 SHEETS

391+00 392+00 393+00 394+00 395+00 396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00

810 800 790 780 770 760 750 740

SBRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

TYPE I STONE FILL
LT 416+25-417+00 RT 415+50-418+00

TYPE II STONE FILL
LT 418+20 RT 418+00

EROSION MATTING
LT 406+50-409+25 411+75-416+25 RT

CONSTRUCT DRIVE
LT RT
406+25 ASPHALT (24) 419+50 GRAVEL (20')
410+98 GRAVEL (12') TH 5 - 0+60 (12')
419+60 GRAVEL (12')

CONSTRUCT T.H. APPROACH
LT TH 5 417+30.23 RT

STEEL BEAM GUARDRAIL
LT 418+01 - 418+76 RT 417+21 - 418+58.5

BREAKAWAY CABLE TERMINAL
LT 417+76 - 418+01 418+76 - 419+01 RT 416+96 - 417+21 418+58.5 - 418+83.5

PAGE, LOUISE M.

DARLING, COLLEEN C.

PAGE, LOUISE M.

PAGE, LOUISE M.

PAGE, LOUISE M.

PAGE, LOUISE M.

RESTELLI, STEPHEN C. & TERRY L.

BECK, KENDALL J., SR. & MYRTLE L.

TOWN LINE GROTON RYEGATE

MATCH LINE

TO SHEET 18

TO SHEET 20

406+20 42' LT.

409+95 41' LT.

408+50 50' LT.

410+00 50' LT.

417+00 50' LT.

416+85 50' LT.

418+41 53' LT.

416+50 42' RT.

417+35 65' RT.

PC STA. 412+45.23

PT STA. 407+18.96

PT STA. 420+41.54

PI STA. 416+63.97
STA. 416+22.80

STA. 417+30.23 = STA. 0+00 SIDE ROAD
ASKEW 79°32'39" RT

STA. 407+00 ASKEW 74°-00'-00" LT
REMOVE EXISTING 18" RCP
NEW 24"-48" FCSP (0.064") / CSAP (0.064") / CSEP (SL)
TYPE I STONE PAD AT OUTLET

STA. 414+20.5 ASKEW 88°-39'-0" RT
REMOVE EXISTING 18" RCP REPLACE W/
NEW 18"-90 FCSP (0.064") / CSAP (0.064") / CSEP (SL)
TYPE I STONE FILL AT INLET
AND OUTLET, END SECTION AT INLET

STA. 416+20.5 ASKEW 83°-30' LT
NEW 12"-30"-7'-8" - 4" x 90°
COMPTA

STA. 416+56.5
REMOVE EXIST. CGMPTA
SEE SHEET 33 OF 140

STA. 0+55 15°SKEW 82° LT
REMOVE 16" RCP

STA. 0+38.23 ASKEW 79°-22" LT
NEW 18"-60' FCSP (0.064") / CSEP (SL)
TIE 5-01150 (0.064") / CSEP (SL)
NEW 16" x 26" CSP (0.064") / RCP CL III (CPEP/SL)
STA. 417+31
EXIST. 417+39 BE REMOVED
EXIST. GAP TO BE REMOVED

STA. 416+100 RT.
NEW 6" x 15" UNDERDRAIN
CORNER OF PIPE

406+50 - 416+00
NEW 6" x 240' UNDERDRAIN W/
F.E. AT 415+50

406+00 - 406+50
NEW 6" x 50' UNDERDRAIN W/
F.B. AT 406+50

407+10 - 411+50
NEW 6" x 440' UNDERDRAIN W/
F.B. AT 411+50

TBM #5
CHISELED "X" ON TOP PLATE BOLT
EL. 768.09

TRANSPLANTING SHRUBS
419+75 LT - ROSE BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

END MAINT. AGREE. AREA NO. 3
STA. 417+16 51' LT.
(LENGTH 32')

BEGIN MAINT. AGREE. AREA NO. 3
STA. 417+25 20' LT.

SCARIFY EXISTING PAVEMENT
419+00-421+00

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1" = 50'
50 25 0 50
SCALE IN FEET

CURVE 6
Δ 43° 47' 49"
D 5° 30'
R 104.74'
L 796.31'
T 418.74'
E 81.01'
B .074 FT/FT

CUL. & DIT. (P)
CUL., DIT. & DR. (P)
CUL. & DR. (P)
DRIVE (T)
DRIVE (P)
CHANNEL (P)
APPROACH (T)

PAVED ENTRANCE

© TRANS POLF

PLAN
SURVEYED
PLOTTED
DRAWN CHECKED
QUANTITY CHECKED
RT. OF WAY CHECKED
NOTE BOOK
NO.

BY: KCS DRL | VAF | KCS DRL | KCS DRL
DATE: DEC. 82 | FEB. 83 | DEC. 82 | FEB. 83

STRUCTURE NO. 07NO

CULVERT POST
PT STA 407+18.96
+2.90
0.76
ELECT FENCE

ASPHALT DRIVE

TIES TO PT STA 407+18.96

+1.950 %
EXISTING GROUND

MATCH LINE

PC STA. 412+45.23
12.8
14.2
POST
ELECT FENCE

TIES TO PC STA 412+45.23

PVI
STA 411+50
EL 795.25
LVC 100'
E 4.77'
K 12.8
SSD 415'

NOTE: SEE SHEET "10A" FOR TH 5 PROFILE

2' OFF ROAD
POC STA 416+50

TIES TO POC STA 416+50

-3.500 %
EXISTING GROUND

STA 417+35
H.Y. CUP

STUMP
20.2
16.2
PT STA 420+41.54
PK END 2' STONE WALL

TIES TO PT STA 420+41.54

HORIZONTAL
50 25 0 50
SCALES IN FEET

VERTICAL
20
10
0

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 19 OF 24 SHEETS

406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00

800 790 780 770 760 750 740 730

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131-53428

EROSION MATTING
LT 428+50 ~ 429+50 RT 431+50 ~ 433+00

TYPE I STONE FILL
LT 423+50 ~ 428+50 RT

TRANSPLANTING SHRUBS
421+56 LT - CURRANT BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

NOTE: 422+05 ± ~ 422+92 ± LT. STOCKPILE TOPSOIL FOR GRADING OF GARDEN AREA (COST TO BE INCLUDED IN COMMON EXCAVATION)

BEGIN MAINT. AGREE. AREA NO. 4
STA. 430+00 20' RT.

STEEL BEAM GUARDRAIL
LT RT
MAINLINE 422+25 TH#50 2+00
TH#50 1+50 MAINLINE 431+08.5
MAINLINE 433+25 MAINLINE 436+00

RESTELLI, STEPHEN C. & TERRY L.
WALTERS, JOSEPH F.
PAGE, LOUISE M.
CLOUGH, RICKY & KELLY A.

CURVE 7
Δ 32°07'49"
D 6°30'00"
R 881.47
L 494.31
T 253.84
E 35.82

TBM #6
SPIKE IN ROOT
16" POPLAR
EL. 783.52

PI STA. 431+50.26 BK
STA. 431+36.89 AHD

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL
LT 428+40 – 430+60, 432+40 – 433+45
RT 423+10 – 426+00, 427+58 – 430+50, 432+78 – 433+54

DEMOLITION AND DISPOSAL OF BUILDING
1, 431+50 RT

TREATED TIMBER CURB
LT 422+50 ~ 426+25, 433+00 ~ 435+50 RT

CONSTRUCT DRIVE
LT 431+85 PAVED (16' WIDE), 434+04 GRAVEL (15' WIDE) RT

CONSTRUCT TH. 50
LT 430+00 PAVED RT

BREAKAWAY CABLE TERMINAL
LT TH#50 1+75-1+50
RT 422+00-422+25 TH#50 2+00-2+25, 431+08.5-431+33.5, 433+00-433+25

BEGIN RELINQUISHMENT NO. I
STA. 429+73 64' RT.

STA. 430+00 = SIDEROAD STA. 0+00

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

END RELINQUISHMENT NO. I
STA. 430+10 64' RT.
DRILLING & BLASTING SOLID ROCK SUBGRADE

END MAINT. AGREE. AREA NO. 4
STA. 430+00 64' RT. (LENGTH 42')

SCARIFY EXISTING PAVEMENT
421+00 ~ 423+50

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SURVEYED: E.C.S. DEC.
PLOTTED: E.M.F. FEB.
CHECKED: E.C.S. DEC.
R.O.W. AGREEMENT CHECKED: D.P.K. DEC.
(R.M.★ NOTED, STRUCTURE NOTATIONS OMITTED): E.C.S. DEC. K.M. FEB.
NOTE BOOK
NO.
RT. OF WAY CHECKED

PROFILE
SURVEYED
PLOTTED
CHECKED
R.O.W. AGREEMENT CHECKED
(R.M.★ NOTED, STRUCTURE NOTATIONS OMITTED)
NOTE BOOK
NO.

PVI
STA 421+50
EL 760.25
LVC 800'
E 6.80
K 118

PVI
STA. 428+50
EL. 783.35
LVC 600'
E 3.23
K 140
SSD 491.00

PVI
STA. 435+50
EL. 776.35
LVC 500'
E 1.36
K 230

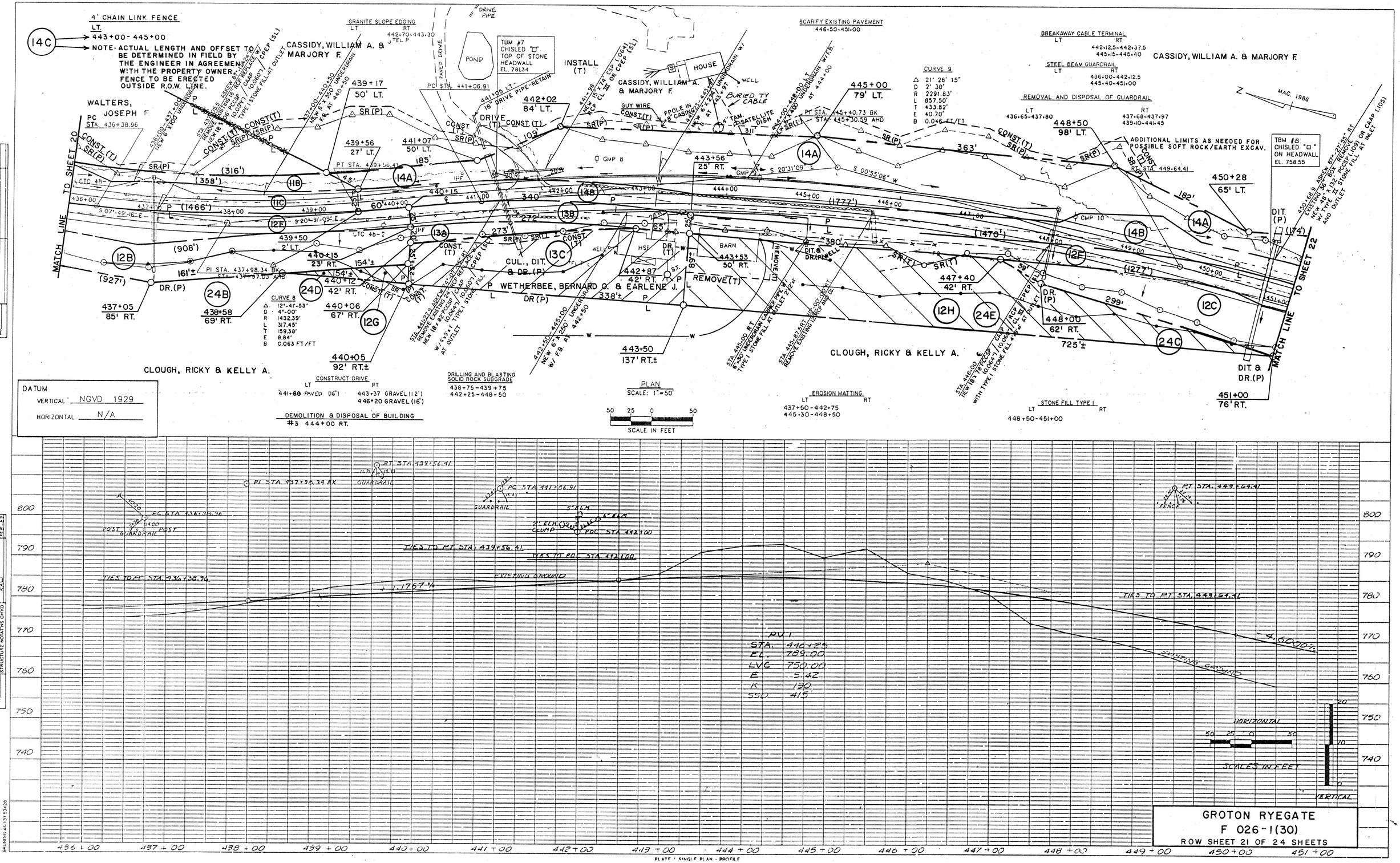
CENTERLINE
BASELINE
END NEW PAVEMENT MATCH TO EXISTING GRAVEL 4150
LILAC BUSH
END POST
PC STA. 428+96.78
PT STA. 433+90.73
PI STA. 431+50.56 BK
PI STA. 431+50.56 AHD
TIES TO PI STA. 431+50.56 BK
TH 50 SEE SHT 104 OF 130.
TIES TO PC STA. 428+96.78
TIES TO PT STA. 433+90.73
APPROACH (T)
EXISTING GROUND
MATCH LINE
+3.300%
-1.000%
HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00
790 780 770 760 750 740

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 20 OF 24 SHEETS

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.


4' CHAIN LINK FENCE
LT
443+00 - 445+00
14C
NOTE: ACTUAL LENGTH AND OFFSET TO BE DETERMINED IN FIELD BY THE ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER. FENCE TO BE ERECTED OUTSIDE R.O.W. LINE.
WALTERS, JOSEPH F.
PC STA. 436+38.96
MATCH LINE TO SHEET 20
CASSIDY, WILLIAM A. & MARJORY F.
GRANITE SLOPE EDGING
LT RT
442+70-443+30
TEL P
TBM #7
CHISLED "□" TOP OF STONE HEADWALL EL. 781.34
POND
DRIVE PAVED DRIVE
PC STA. 441+06.91
INSTALL (T)
HOUSE
WELL
BURIED TY CABLE
GUY WIRE
SATELLITE DISH
SCARIFY EXISTING PAVEMENT
446+50-451+00
BREAKAWAY CABLE TERMINAL
LT RT
442+12.5-442+37.5
445+15-445+40
STEEL BEAM GUARDRAIL
LT RT
436+00-442+12.5
445+40-451+00
REMOVAL AND DISPOSAL OF GUARDRAIL
LT RT
436+65-437+80
437+68-437+97
439+10-441+45
CURVE 9
Δ 21° 26' 15"
D 2° 30'
R 2291.83'
L 857.50'
T 433.82'
E 40.70'
B 0.046 FT/FT
PT STA. 445+40.73 BK
STA. 445+30.59 AHD
439+17 50' LT.
439+56 27' LT.
441+07 50' LT.
442+02 84' LT.
445+00 79' LT.
448+50 98' LT.
450+28 65' LT.
437+05 85' RT.
438+58 69' RT.
440+12 42' RT.
440+06 67' RT.
440+05 92' RT.±
443+50 137' RT.±
442+87 42' RT.
443+53 50' RT.
443+56 25' RT.
447+40 42' RT.
448+00 62' RT.
451+00 76' RT.
CONST (T) SR(P)
DRIVE (T) CONST (T) SR(P)
CONST (T) SR(P)
SR(P)
CONST (T) SR(P)
SR(T)
CONST (T)
CUL., DIT. & DR. (P)
REMOVE (T)
DR. (T)
BARN
HSE
DIT. & DR. (P)
DR. (P)
DIT. (P)
WETHERBEE, BERNARD O. & EARLENE J.
CLOUGH, RICKY & KELLY A.
CASSIDY, WILLIAM A. & MARJORY F.
CLOUGH, RICKY & KELLY A.
(316')
(358')
(1466')
(908')
(927')
(1777')
(1470')
(1277')
(174')
363'
340'
272'
273'
338'±
299'
725'±
182'
161'±
154'±
89'±
380'
CTC 48-2
CTC 48-1
PI STA. 437+98.34 BK
STA. 437+97.03 AHD
S 07°49'16" E
S 20°31'09" E
S 00°55'06" W
CURVE 8
Δ 12°-41'-53"
D 4°-00'
R 1432.39'
L 317.45'
T 159.38'
E 8.84'
B 0.063 FT/FT
CMP 8
CMP 9
CMP 10
MAG. 1986
ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAV.
TBM #8
CHISLED "□" ON HEADWALL EL. 758.55
MATCH LINE TO SHEET 22
STA. 436+65 RT. REMOVE EXISTING 18" RCP & REPLACE W/ NEW 18" RCP (0.064") / CAAP (0.064") / CMP (0.064") TYPE I STONE FILL AT OUTLET
STA. 437+00-440+50 NEW 6"x100' UNDERDRAIN F.S. AT 440+50
STA. 437+00-440+50 NEW 6"x350' UNDERDRAIN F.S. AT 440+50
STA. 441+98 NEW 15"x24" CSP (LOCAL) CL III OR CPEP (SL)
STA. 441+95 LT - 18" DRIVE PIPE-RETAIN
STA. 442+00-448+00 LT NEW 6"x400' UNDERDRAIN W/F.S. AT 444+00
STA. 442+50-455+00 NEW 6"x250' UNDERDRAIN W/ F.S. AT 442+50
STA. 443+00 RT. NEW 6"x270' UNDERDRAIN W/F.S. AT 443+97
STA. 445+00 RT. 6"x30' UNDERDRAIN CAAP TYPE I W/ TYPE I STONE FILL AT OUTLET 2.2'x4'
STA. 445+67.5 RT. REMOVE EXISTING TANK AND OIL
STA. 445+00-450+00 RT. NEW 18"x78" RCSP (0.064") / CAAP (0.064") / RCP CL III / CPEP (SL) WITH TYPE I STONE FILL 4'x4' AT OUTLET
STA. 441+63.5 RT. REMOVE EXISTING 18" RCP & REPLACE W/ NEW 18" RCP (0.064") / CAAP (0.064") / CMP (0.064") TYPE I STONE FILL AT OUTLET
STA. 449+50-450+00 NEW 48"x36" BOX REMOVE OR CAAP (10G) AND OUTLET TYPE I STONE FILL AT INLET
12B 24B 12G 24D 12C 24C 12E 24E 12H 14A 14B 14C 11B 11C 12F 13A 13B 13C
CONSTRUCT DRIVE
LT RT
441+68 PAVED (16') 443+37 GRAVEL (12') 446+20 GRAVEL (16')
DEMOLITION & DISPOSAL OF BUILDING
#3 444+00 RT.
DRILLING AND BLASTING SOLID ROCK SUBGRADE
438+75-439+75
442+25-448+50
EROSION MATTING
LT RT
437+50-442+75
445+30-448+50
STONE FILL TYPE I
LT RT
448+50-451+00
PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A
PLAN
SURVEYED DEC. 82
PLOTTED FEB. 86
GRADES CHECKED FEB. 86
R.W. NOTED DEC. 85
STRUCTURE NOTATIONS CHKD FEB. 86
NOTE BOOK
NO.
BY
DRC, MAS, SCM
DRC
DRC, EG
DRC, EG

PROFILE
SURVEYED DEC. 82
PLOTTED FEB. 86
GRADES CHECKED FEB. 86
R.W. NOTED DEC. 85
STRUCTURE NOTATIONS CHKD FEB. 86
NOTE BOOK
NO.
BY
SCM, DRC
KAU
EGS, DRC
KAU
PT STA. 439+56.41
PI STA. 437+98.34 BK
PC STA. 436+38.96
POST GUARDRAIL POST
TIES TO PT STA. 439+56.41
TIES TO PC STA. 436+38.96
TIES TO PC STA. 441+06.91
TIES TO PT STA. 449+64.41
EXISTING GROUND
+1.1767%
-4.6000%
PC STA. 441+06.91
GUARDRAIL
5" ELM
24" ELM CLUMP
6" ELM
POC STA. 442+00
FENCE
PVI
STA. 440+25
EL. 789.00
LVC 750.00
E 5.42
K 130
SSD 415
800
790
780
770
760
750
740
436+00
437+00
438+00
439+00
440+00
441+00
442+00
443+00
444+00
445+00
446+00
447+00
448+00
449+00
450+00
451+00
HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL
GROTON RYEGATE
F 026-1(30)
ROW SHEET 21 OF 24 SHEETS
PLATE 1 SINGLE PLAN - PROFILE
BRUNING 46-131-53426

PLAN	BY	DATE
SURVEYED	DBC, JMF, GLF	OCT. 84
PLOTTED	DBC	DEC. 84
NOTE BOOK ALIGNMENT CHECKED		DEC. 84
NO. RT. OF WAY CHECKED		DEC. 84

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

MATCH LINE TO SHEET 21

452+00 102' LT. (174')

CONST (T) SR (P) L

452+01 - 454+75 LT. NEW 6'X 174' UNDERDRAIN W/ FB AT 452+01

14B

451+00 77' RT.

12C

12F

24C

REV PC 452 + 55.20

451+00 (315')

452+00

453+00

454+00

455+00

456+00

457+00

458+00

459+00

460+00

461+00

462+00

463+00

464+00

375'

(1470')

(1277')

CLOUGH, RICKY & KELLY A.

DR (P)

REV. 454+81 87' RT.

TYPE I STONE FILL LT 451+00-452+00

EROSION MATTING LT 452+00-453+50 455+25-459+25 462+00-466+00

EROSION MATTING FOR SLOPE PROTECTION RT. 453+75-458+25

TYPE II STONE FILL FOR SLOPE PROTECTION RT. 453+75-458+25

GRUBBING MATERIAL RT 453+75 — 458+25

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAVATION

DRILLING AND BLASTING SOLID ROCK SUBGRADE 454+25 — 461+50

SCARIFY EXISTING PAVEMENT 451+00-457+50 462+50-466+00

STEEL BEAM GUARDRAIL RT 451+00-458+65

BREAKAWAY CABLE TERMINAL RT 458+65-458+90

REMOVAL AND DISPOSAL OF GUARDRAIL RT 451+00 ~ 458+37 460+20 ~ 462+63

CASSIDY, WILLIAM A. & MARJORY F.

315'

STA 454+72.5 - 455+53 REMOVE EXIST. 18" RCP & APRON NEW 18" RCP W/ 10.0641 FCCSP / CAAP (6060) / CPEP (SL) OUTLET LEDGE AND TYPE I STONE W/ FLOW LINE AS SHOWN ON SHEET

STA 454+72.5 - 455+53 NEW 6'X 318' UNDERDRAIN W/ FB AT 457+93

REV. 455+27 60' LT.

REV. 456+97 79' LT.

163'

192'

132'

17'

STA 458+00 NEW 18" RCP W/ 2-35° 8'-0" STONE APRON 10.0641 FCCSP / CAAP (6060) / CPEP (SL) OUTLET LEDGE AND TYPE I

REV. 458+20 16' LT.

REV. 458+32 7' LT.

REV. 458+30 18' RT.

REV. 459+00 75' LT.

REV. 459+74 60' RT.

REV. 458+75 111' RT.

REV. 459+74 95' RT.

WELCH, WILBUR M. & SYLVIA J.

REV: CURVE 10
Δ 57° 02' 40"
D 3° 49' 11"
R 1500.00'
L 1493.42'
T 815.19'
E 207.20'
B 0.061 FT/FT

456+00 - 461+50 NEW 6'X 530' UNDERDRAIN W/ FB AT 460+50

REV. 461+00 62' LT.

REV. 462+00 115' LT.

110'

190'

15A

15B

23A

23B

(1102')

(960')

(745')

242'

245'

104'

423'

148'

30

35

CMP 12

CMP 13 REV. 459+74 28L 87'

CMP 14

TBM #9 SPIKE IN ROOT 18" ELM EL. 771.46

EDGE OF RIVER

SPOONER, RAYMOND W. & SUSAN P.

REV. PI 460+70.50 = 459+33.54 Δ 57°12'40" T 3°49'11"

REV. 462+06 85' RT.

REV. 464+00 60' LT.

REV. 465+50 50' LT.

451+00 ~ 458+37 460+20 ~ 462+63

464+80-466+00 NEW 6'X 120' UNDERDRAIN W/ FB AT 464+80

461+00 ~ 464+10 REMOVE EXISTING 18" RCP & APRON

461+11.45 SKEW 87°-01' LT. EXISTING 18" RCP REMOVE

REV. 464+72 REMOVE EXISTING 18" RCP

REV. STA 464+70 - 466+00 LT NEW 6'X 120' RCP OR CPEP (SL) W/ 4:1 A.D.T. III OR III INLET

MAG. 1986

MATCH LINE TO SHEET 23

PROFILE	BY	DATE
SURVEYED	CCJ, DBC	DEC. 83
PLOTTED	CALJ	DEC. 84
NOTE BOOK	CCJ, DBC	DEC. 84
NO.	SRAU	FEB. 85

POLE 11
POC STA. 452+02.45
NAIL
POST
POST

TIES TO POC STA. 452+02.45

TIES TO POC STA. 455+00

MATCH LINE

+6.000%

+1.825%

EXISTING GROUND

PVI
STA. 453+00
ELV. 757.93
LVC. 600'
E 4.82
K 193

POC STA. 455+00

1 BIRCH
3" SPRUCE
2" MAPLE

TIES TO POC STA. 455+00

+1.825%

-6.000%

-0.294%

MATCH LINE

PVI
STA. 461+00
ELV. 772.55
LVC. 600'
E 3.17
K 142'
SSD 434'

REV. PI STA. 460+77.65 OK
STA. 455+70.64 APC
Δ 57°12'40" LT
D 3.49'11"

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 22 OF 24 SHEETS

451+00 452+00 453+00 454+00 455+00 456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00

790 780 770 760 750 740 730

BRUNING 44-131-53428

PLATE I SINGLE PLAN + PROFILE
CHARLES BRUNING CO.

PLAN

DATE	BY	
6-27-74	DAC	SURVEYED
12-2	DAC	PLOTTED
		GRADES CHECKED
		ALIGNMENT CHECKED
		R.T. OF WAY CHECKED

NOTE BOOK
NO.

WELCH, WILLIAM M. & SYLVIA J.

DOE, BERNARD W. & CYNTHIA

EROSION MATTING
LT 466+00-467+50
RT 480+50-481+00

STA 466+00-467+02 LT
NEW 15" X 102' RCP CL III OR CPEP(SL)

STA 466+00-466+50
6" X 250' UNDERDRAIN

467+25 LT
NEW 15" X 46' CSP .064 OR RCP CL III OR CPEP(SL)

REV PT 467+48.74

REV. 469+22
50' LT.

REV. 469+22
2' RT.

REV 469+22
26' RT.

REV 469+22
53' RT

466+00 X-OMIT 15.0 467+00

467+25 RT
NEW 15" X 34' CSP .064 OR RCP CL III OR CPEP(SL)

STA 466+50
NEW 24"x58' RCP CLIII / CPEP (SL)

466+50 RT
NEW 24" X 100' PCSP (.064) OR CPEP (SL)
OR CSAP (.060) W/ TYPE I STONE
AT OUTLET

CUL., DIT. & DR.(P)

SPOONER, RAYMOND W. & SUSAN, P.

466+54 RT
NEW 6" X 44' UNDERDRAIN W/
F.E. AT 466+54

HOBBS, MICHAEL F & SARAH A.O.

REV. STA 473+00 LT 45' NEW 15" RCP CL III
NEW 24" X 99' PCSP (.064) / CSAP (.060) RCP (CPEP (SL)
W/ 3 X 2 CONCRETE / STONE FILL AT OUTLET

STA 473+16 RT
NEW 15" X 62' RCP CL III / CPEP (SL)

REV. 472+50 RT
NEW 6" X 105' UNDERDRAIN W/
F.E. AT +74 + 10 RT

TO SPRING

APPROX W/L

DEMOLITION AND DISPOSAL OF BUILDING
@ 473+50 LT

REMOVE EXISTING 18" RCP (LW) / CPEP (SL)
NEW 24" RCP CL III / CPEP (SL)

REV. PC 474+07.37

474+60
NEW 3/4" X 60' SEAMLESS COPPER WATER TUBE IN
NEW 6" X 60' SLEEVE FOR UTILITIES

"BM #1C
CHISLED "O"
ON HEADWALL
EL. 748.57

STA 476+35 RT
REMOVE EXIST. 22" X 40' RCSP / CAMP (.060) / CPEP (SL)
NEW 42" X 40' RCSP / CAMP (.060) / CPEP (SL)

REV. STA 476+48 RT.
NEW 6" CARRIER PIPE UNDERDRAIN

GRANITE SLOPE EDGING
RT
473+30-473+90

HOBBS, MICHAEL F. & SARAH A.O.

SCARIFY EXISTING PAVEMENT
475+50-480+50

MAG 1936

REV. PT STA 479+66.37 B.K.
STA 478+98.12 AHD
Δ 49° 3' 23"
D 4° 45'

REV. PT STA 479+67.80 E
478+89.71

REV. CURVE 11
Δ 49° 3' 23"
D 4° 45'
R 1206.23'
L 1032.77'
T 550.43'
E 119.65'
S 0.069 FT/FT

480+00 RT
NEW 15" X 44' CSP (.064) OR CPEP (SL) III
OR RCP CL

CONSTRUCT DRIVE
LT RT
471+00 GRAVEL (12') 467+25 GRAVEL (16')
478+50 GRAVEL (12') 474+00 PAVED (12')
474+50 GRAVEL (12') 480+00 GRAVEL (12')
467+25 GRAVEL (12')

MATCH LINE TO SHEET 24

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1" = 50'
50 25 0 50
SCALE IN FEET

PROFILE

DATE	BY	
6-27-74	DAC	SURVEYED
12-2	DAC	PLOTTED
	GFF	GRADES CHECKED
	RAU	ALIGNMENT CHECKED
	DAC	R.T. OF WAY CHECKED
	SCHOR	
	KALU	

NOTE BOOK
NO.
STRUCTURE (ATTATHS CHKD)

MATCH LINE

EXISTING GROUND

PVI
STA 467+00
EL. 758.15'
LVC 300'
E 0.60
K 1.87

PVI
STA 475+50
EL. = 751.40'
LVC = 400'
E = 1.20
K = 1.75

GAS POST

PI STA 479+66.37 B.K.

PI STA 479+67.80 E

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

THIS SHEET FOR R.O.W. USE ONLY

GROTON RYEGATE
F 026-1(30)
ROW SHEET 23 OF 24 SHEETS

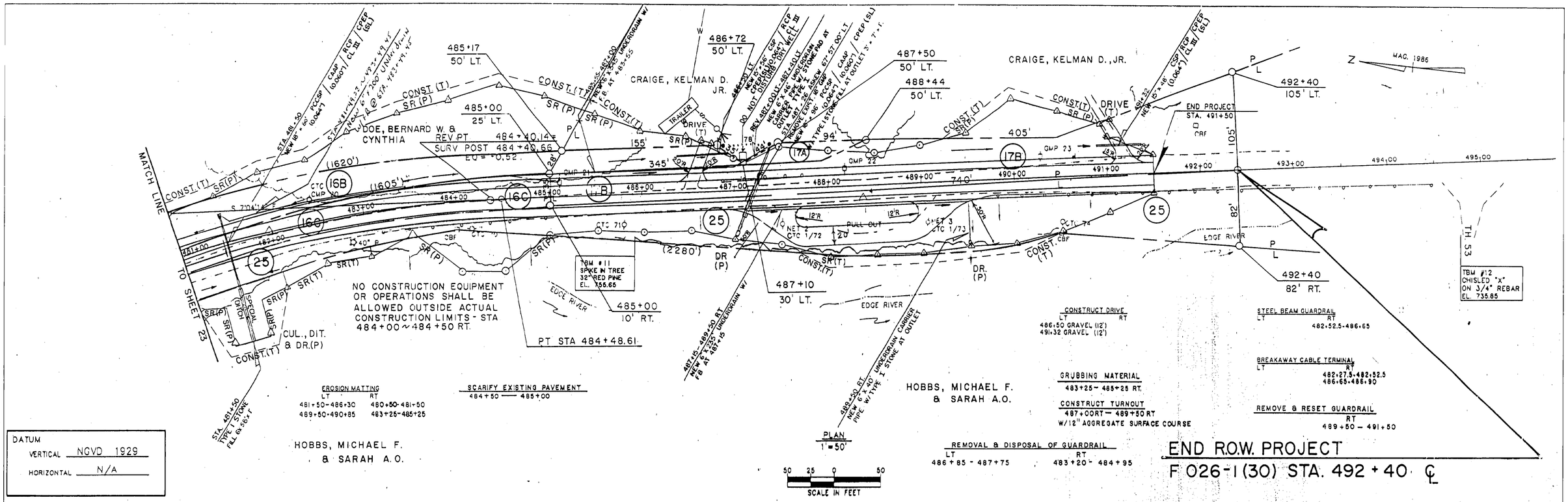
790 780 770 760 750 740 730 720 710

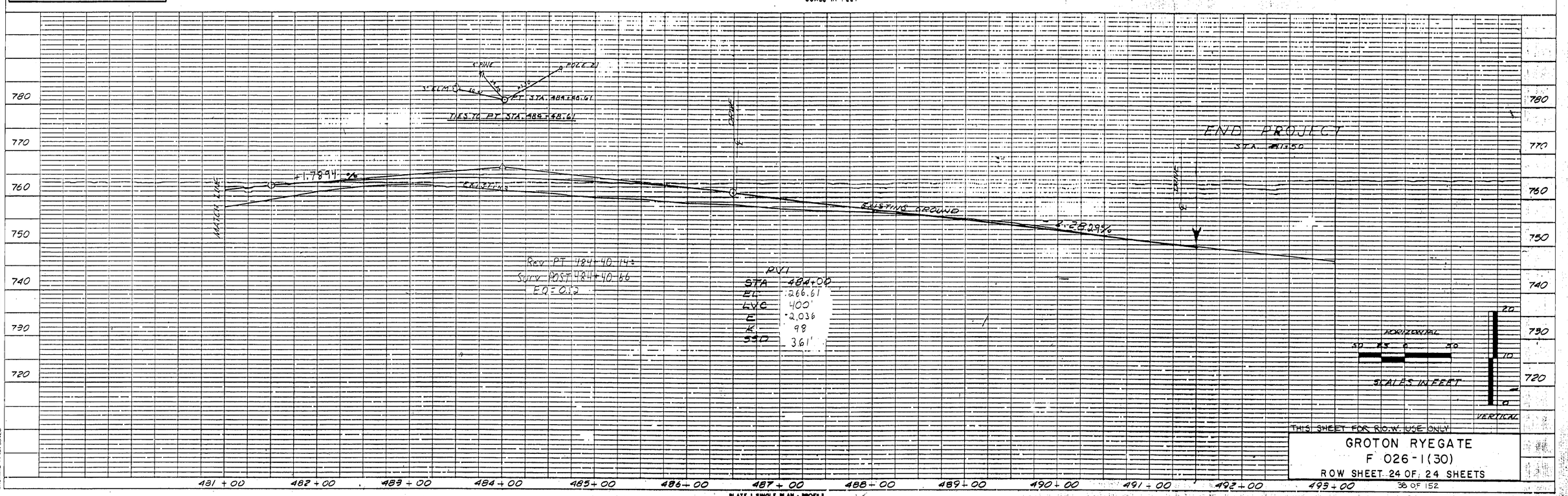
466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00 474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00

PLATE I SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

37 OF 152

BRUNING 44-131 5542B





PLAN — SURVEYED; PLOTTED; QUANTITIES CHECKED; R.M.'s NOTED; STRUCTURE NOTATIONS (2ND); NOTE BOOK; NO.; BY; DATE

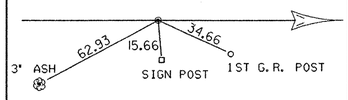
PROFILE — SURVEYED: E.G.J. DEC.; PLOTTED: E.F.C. DEC. 84; QUANTITIES CHECKED: E.G.J. DEC. 84; R.M.'s NOTED: E.G.J. DEC.; STRUCTURE NOTATIONS (2ND): R.A.W.; NOTE BOOK; NO.; BY; DATE: DEC. 84; FEB. 85; DEC. 84; FEB. 85; SCALES

BRUNING 44-131-53428

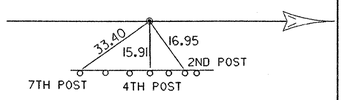
PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

Sheet Number: 40

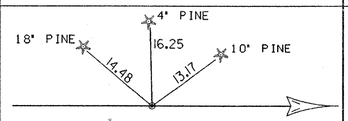
PC STA. 373+68.39



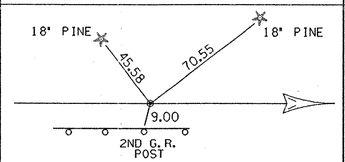
PT STA. 376+27.24



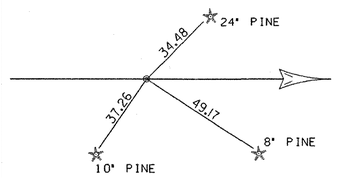
PC STA. 381+26.64



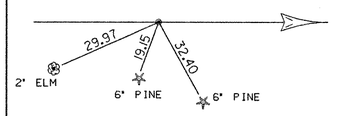
PT STA. 386+10.00



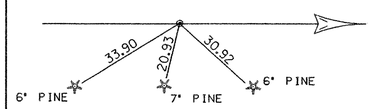
PC STA. 390+26.71



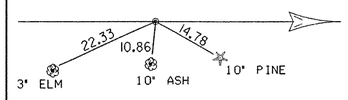
PI STA. 392+72.44



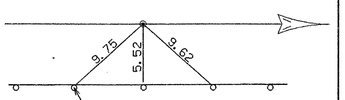
PT STA. 395+16.30



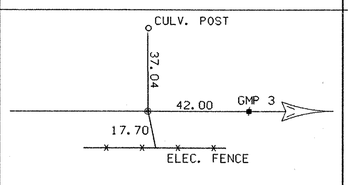
PC STA. 398+46.55



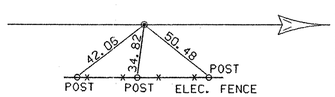
POC STA. 403+00.00



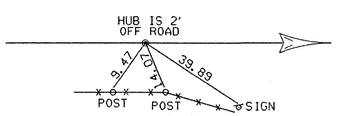
PT STA. 407+18.96



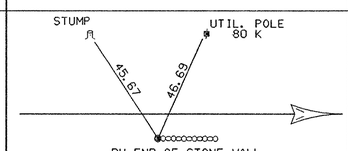
PC STA. 412+45.23



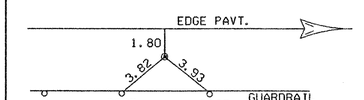
POC STA. 416+50.00



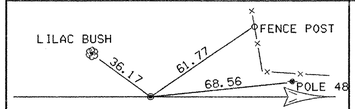
PT STA. 420+41.54



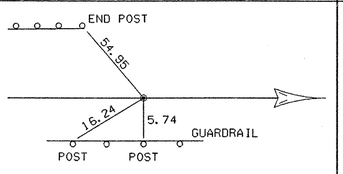
PC STA. 428+96.72



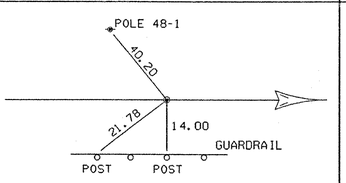
PI STA. 431+50.56 BK



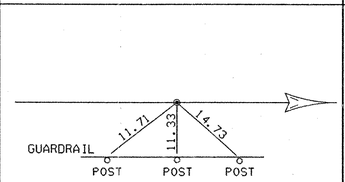
PT STA. 433+90.73



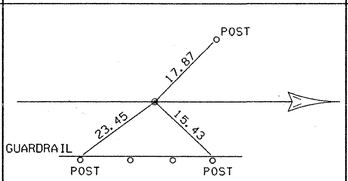
PC STA. 436+38.96



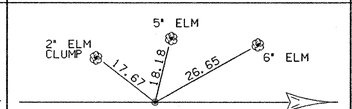
PT STA. 439+56.41



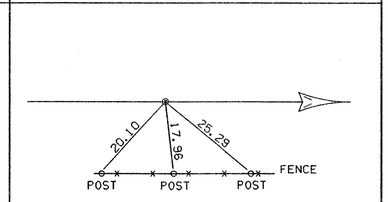
PC STA. 441+06.91



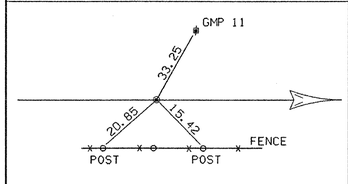
POC STA. 442+00.00



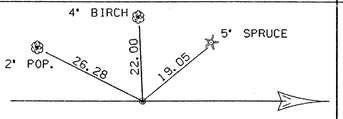
PT STA. 449+64.41



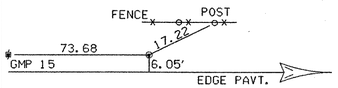
PC STA. 452+62.45



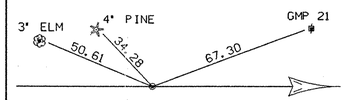
POC STA. 459+00.00



PT STA. 467+55.89



PT STA. 484+48.61



TIES NOT TO SCALE

SURVEYED BY	D & K	DATE	DEC 85
DRAWN BY	B. MCAVOY	DATE	DEC 96
SQUAD LEADER	S. MENARD		
DESIGN FILE NO.	/sqdc/T8d073/dd073.dgn		
IPARM FILE	dd073tie.i	DATE PLOTTED	12-MAR-1997
PROJ. NAME	GROTON - RYEGATE		
PROJ. NO.	F 026 - 1(30)		
SHEET	40 OF 152 SHEETS		

EVERGREEN TREES
LT
377+00 ~ 377+75, 55'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C
377+00 ~ 377+75, 65'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C

NOTE: NEW TREES @ STA. 377+00 ~ 377+75 ARE TO BE PLANTED AS DETERMINED BY THE ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER.

DECIDUOUS TREES
LT
377+00 & 377+75
75'+- LT. 2 FLOWERING CRABAPPLES, 10' HEIGHT

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

CONSTRUCT SIDEROAD
LT 387+50 PAVED
RT 384+17.69 PAVED

CONSTRUCT DRIVE
378+11 GRAVEL (12' WIDE)
381+99 GRAVEL (14' WIDE)

GRANITE SLOPE EDGING
377+375 - 381+87 RT
52 78

EROSION MATTING
LT 377+50-377+80, 378+40-379+80, 382+00-384+00, 388+75-391+00
RT 382+25-384+00, 388+75-391+00

1-1½ TO 1-2 SLOPE

CURVE 3
Δ 19° 20' 04" RT
D 4° 00' 00"
R 1432.40'
L 483.36'
T 244.00'
E 20.63'
B .083 FT/FT

TYPE I STONE FILL
LT 377+00-377+50 (EXCAV. TO BE PAID AS TRENCH)
RT

TYPE IV STONE FILL
LT 387+80
RT 387+80

TYPE II STONE FILL
LT 387+80
RT 387+80

NOTE: BOUNDARY MARKERS PLACED ALONG PROPERTY OF JANICE A. BRAWN ARE TO BE SET 6" HIGH AS PER STD. J-1

MAG. 1955

BM-SPOT ON H-STEEL PIN TOP CONC. POST EL. 813.93

SIDEROAD CURVE 1
PC 1+97.25
PI 2+00
PT 2+02.75
Δ 3° 00' 18" RT
D 57° 01' 34"
R 104.74'
L 5.27'
T 2.75'
E 0.036'

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

MICHT
LT 1+50 TO 1+87.5 TH #3 389+50-389+88
RT 377+00-377+48 377+52-377+56 388+64-389+01.5
1+50 RT TO 389+89 TH #3 389+89 TO 390+26.5
377+00 TO 377+48 377+52 TO 389+00 TH #3 388+64 389+00 TO 389+37.5

STEEL BEAM GUARDRAIL
LT
RT
TH #3 377+00 TO 377+48 377+52 TO 389+00 TH #3 388+64

ANCHOR FOR STEEL BEAM GUARD RAIL
LT TH #61 3+43.75
RT 70

REMOVAL AND DISPOSAL OF GUARD RAIL
LT 387+95 - 388+55
RT 384+70 - 386+12 387+40 - 386+60

SCARIFY EXISTING PAVEMENT
384+00-388+50
383+0

DRILLING & BLASTING SOLID ROCK SUBGRADE
379+26-384+00
379+50 TO 382+60

TEMPORARY DETOUR LIMITS

CHANNEL LINE STA. 5+55
DEFLECT 46°-02'-10" RT

PC STA. 390+26.71

MATCH LINE TO SHEET 12

MATCH LINE TO SHEET 14

PROFILE

PVI
STA 381+00
ELV 827.16
LVC 70.0'
E 7.71
K 12.8
SSD 413'

NOTE:
SEE SHEET 150 FOR PROFILE TH #56
SEE SHEET 151 FOR PROFILE TH #3

PVI
STA 388+50
ELV 800.00
LVC 900.00
E 1.02
K 110

ARCHIVED IN DPR

HORIZONTAL 50 25 0 50
VERTICAL 0 10 20
SCALES IN FEET

PLAN AND PROFILE
STA. 377+00 TO STA. 391+00
STATION - RYEGATE 1 CURB = (150)

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131 68428

TYPE I STONE FILL
LT 397+40 – 399+50 RT 397+30 – 399+50

EROSION MATTING
LT 395+50 – 397+00, 399+50 – 401+50, 403+45 – 404+50
RT 395+50 – 397+30, 399+80 – 400+75

REMOVE AND RESET FENCE
LT
399+10 ~ 402+00 (RESET TO NEW R.O.W. LINE)
402+00 ~ 404+30 (RESET BEYOND CONSTRUCTION LIMITS, THEN TO NEW ROW. LINE)

STEEL BEAM GUARDRAIL
LT RT 400+02.5 – 403+15

MELT
LT RT 399+65 – 400+02.5, 403+15 – 403+52.5

GRANITE SLOPE EDGING
LT RT 405+00 – 406+00

NOTE: BOUNDARY MARKERS PLACED ALONG PROPERTY OF JANICE A. BROWN ARE TO BE SET 6" HIGH AS PER STD. J-1

MATCH LINE TO SHEET 13

PI STA. 392+72.44 BK
STA. 392+70.67 AHD

391+00 S 36°13'00" E

392+00

393+00

394+00

395+00

396+00

397+00

398+00

399+00

400+00

401+00

402+00

403+00

404+00

405+00

406+00

S 44°29'23" E

S 14°28'23" E

S 83°44'52" E

MATCH LINE TO SHEET 15

GMP 9
GMP 8
GMP 7
GMP 6
GMP 5
GMP 4
GMP 3
GMP 2
GMP 1

PTC 31 – 2

CTC 32 1/2
CTC 33
CTC 34

BUSH

HSE

ELM

BARN

CURB STOP

395+50 – 397+00 NEW 6" x 260' UNDERDRAIN W/ FB AT 395+50 355

394+50 LT EXISTING 12" CMP REMOVE

393+50 – 394+35 LT NEW 18" x 64' RCP CL III OR CPEP x 64' RCP CL III

STA. 394+88 LT 35' – 397+00 LT 35' NEW 6" x 1264' UNDERDRAIN W/ FB AT 397+00 240

STA. 397+00 ℄ NEW 24" x 428' RCP CL III ℄ CTC 32 1/2

396+00 – 399+50 NEW 6" x 350' UNDERDRAIN W/ FB AT 399+50 154

STA. 399+50 ℄ NEW 30" x 98' RCP CL III W/ 4'x4'ø DI INLET

399+50 – 404+50 NEW 6" x 1904' UNDERDRAIN W/ FB AT 399+40 305

STA. 402+75 LT NEW 24" x 428' CPEP CL III

401+65 LT – 402+75 LT NEW 6" x 128' UNDERDRAIN W/ FB AT 402+75 LT

401+50 – 402+75 NEW 6" x 128' UNDERDRAIN W/ FB AT 402+75 LT

STA. 402+85.2 (SKEW 72.0) LT NEW 24" x 44' RCP CL III W/ TYPE I STONE FILL 4.5'H x 7' AT OUTLET

REMOVE EXISTING INLET TOP AND REPLACE WITH NEW 24"x24" FOCSP / CPEP WITH TYPE I STONE FILL 4.5'H x 7' AT OUTLET

402+75 – 403+50 NEW 6" x 75' UNDERDRAIN W/ FB AT 403+50

403+50 – 404+50 NEW 6" x 100' UNDERDRAIN W/ FB AT 404+50 115

STA. 404+42.3 (SKEW 53.2) 25.6' LT REMOVE EXISTING INLET AND CAMP FROM NEW DI LT TO NEW DI AT AND NEW 24"x98' CPEP / CPEP WITH TYPE I STONE FILL AT OUTLET

STA. 404+42.3 (SKEW 53.2) 25.6' LT NEW 18" x 40' RCP CL III TO NEW DI LT AND NEW 24"x98' CPEP / CPEP W/ 4'x4' TYPE I STONE FILL AT OUTLET

404+94 – 405+00 NEW 6" x 144' UNDERDRAIN 150

405+00 – 405+50 NEW 6" x 50' UNDERDRAIN 52

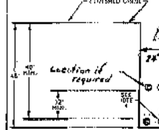
STA. 405+20 NEW 1" WATER TUBE, NEW 6" x 50' SLEEVE FOR UTILITIES

NEW 6" x 50' SLEEVE

CURB STOP

BM-NW COR. CONC. STEP EL. 781.11

TYPICAL TRENCH CROSS-SECTION
U.G. CABLE IN CONDUIT



LEGEND
① CONDUIT(S) FOR ELECTRICAL CABLE
② TELEPHONE CABLE
③ TELEVISION CABLE
•• UNDERGROUND ELECTRICAL CABLE MARKING TAPE

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

ASPEN PERMANENT AERIAL UTILITY RELOCATION (TYP.) BY GMP / NORTHLAND TELEPHONE AND HELIX CATV

PT STA. 395+16.30

CURVE 4
Δ 12° 14' 23" LT
D 2° 30'
R 2291.83'
L 489.59'
T 245.73'
E 13.14'
B 0.046'

CONSTRUCT DRIVE
LT
394+61 GRAVEL (12' WIDE) 393+10.8 CONCRETE (12' WIDE)
401+66 GRAVEL (12' WIDE) 404+00 GRAVEL (12' WIDE)
393+76 GRAVEL (12' WIDE) 405+40 GRAVEL (20' WIDE)
397+15 GRAVEL (2' WIDE) 404+28 GRAVEL (50' WIDE)
396+00 GRAVEL (12' WIDE)

CONSTRUCT PAVED TURNOUT
404+50 – 405+30 RT (4' WIDE)

396+00 LT NEW 18" x 30' RCP CL III W/ 6'x6' DI INLET CPEP 33

397+15 109' LT 4' Wide Stone Surface Conduits To Be Laid On Ground Surface As Shown On Detail Sheet For Details Of Conduits & Ties Shown On This Sheet

TBM #3
SPIKE IN ROOT
12" SCOTCH PINE
ELEV. 790.17

PC STA. 398+46.55

PLAN
SCALE: 1" = 50'

50 25 0 50
SCALE IN FEET

DECIDUOUS TREES
CRAB APPLE
1" – 2" CAL. 10' HEIGHT
397± RT - 2 EACH

399+50 RT 35' – 400+00 RT 35' NEW 6" x 50' UNDERDRAIN W/ FB AT 400+00 109

399+50 RT 35' – 400+00 RT 35' NEW 6" x 50' STONE FILL 6'H x 6' AT OUTLET

399+50 RT 35' – 400+00 RT 35' NEW 6'x6' DI AT INLET CPEP

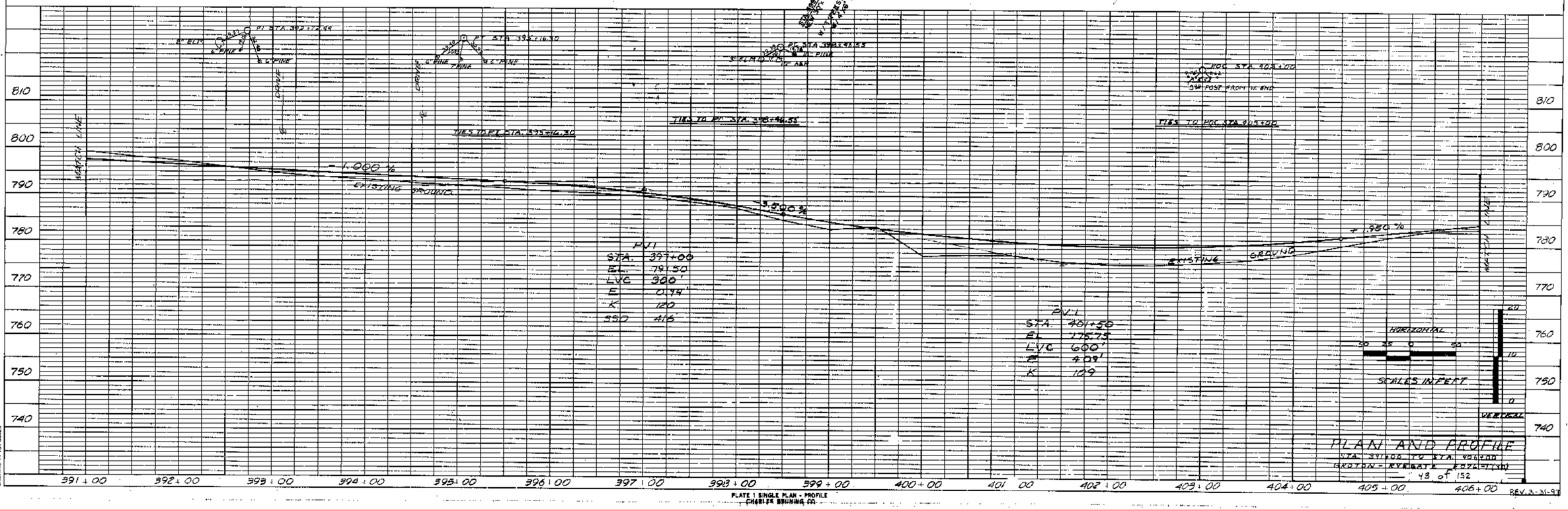
PI STA. 403+00.66 BK
STA. 402+84.85 AHD

CURVE 6
Δ 39° 15' 31" LT
D 4° 30' 00"
R 1273.24'
L 872.41'
T 454.11'
E 78.56'
B 0.067 FT/FT

PROFILE
SURVEYED
PLOTTED
DRAWN, CHECKED
ALIGNMENT CHECKED
NOTE BOOK
NO.
STRUCTURE NOTATING CHKD

BY: K.D. FOSK, R.F. FOSK, C.M.J. FOSK, S.M.J. FOSK

DATE: DEC. 96, FEB. 97, FEB. 97, FEB. 97



PLAN AND PROFILE
STA. 391+00 TO STA. 406+00
GROTON – RYEGATE F 027-1(10)

REV. 3-31-97

PLATE 1 SINGLE PLAN – PROFILE
CHESTER BRUNING CO.

BRUNING 44-131 SX456

TYPE I STONE FILL
LT 418+25-417+00 RT 415+50-418+00
TH 5 - 0+30 - 0+46

TYPE II STONE FILL
LT 418+20 RT 418+00

EROSION MATTING
LT 406+50-409+25 RT 411+75-416+25

CONSTRUCT DRIVE
406+25 ASPHALT (24) 419+50 GRAVEL (20')
410+98 GRAVEL (12') TH 6 - 0+60 (12)
419+60 GRAVEL (12')

CONSTRUCT SIDE ROAD
LT 417+30.23

STEEL BEAM GUARDRAIL
LT 418+13.5 - 418+63.5 RT 417+33.5 - 418+96

MELT
LT 417+76 - 418+13.5, 418+63.5 - 419+01 RT 416+96 - 417+33.5, 418+46 - 418+83.5

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL
LT 418+25-418+70 RT 417+94-418+44

TRANSPLANTING SHRUBS
419+75 LT - ROSE BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

TEMPORARY DETOUR LIMITS

PI STA. 418+63.97 BK
STA. 418+22.30 AHD

TBM #5
CHISELED "X" ON TOP PLATE BOLT
EL. 768.09

MAG. 1986

PC STA. 412+45.23

PT STA. 407+18.96

PT STA. 420+41.54

MATCH LINE TO SHEET 14

MATCH LINE TO SHEET 16

PAVED ENTRANCE

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SCARIFY EXISTING PAVEMENT
419+00-421+00
423+80

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

CURVE 6
Δ 43° 47' 48" RT
D 5° 30'
R 1041.74'
L 796.31'
T 418.74'
E 81.01'
B .074 FT/FT

PLAN
DATE: OCT. 82, DEC. 84
BY: K.S. JOHNSON, G.C.P., R.M.J., R.M.J.
SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED
NOTE BOOK NO.
STRUCTURE NO. FAP(NH) OR STATE PROJECT NO.

PROFILE
DATE: DEC. 84, FEB. 85, FEB. 85, FEB. 85
BY: K.S. JOHNSON, G.C.P., R.M.J., R.M.J.
SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED
NOTE BOOK NO.
STRUCTURE NO. FAP(NH) OR STATE PROJECT NO.

CULVERT POST
PT STA. 407+18.96
EXIST. FENCE
TIES TO PT STA 407+18.96
+1.950 %
EXISTING GROUND
MATCH LINE
ASPHALT DRIVE
TIES TO PC STA 412+45.23
TIES TO POC STA 416+50
3.5:1.0 %
EXISTING GROUND
STA 419+25.36
15.1' LEP
NOTE: SEE SHEET 15B FOR TH #5 PROFILE
PVI
STA 411+50
EL 785.25
LVC 700'
E 4.77'
K 128
SSD 415
PC STA. 416+75.23
EXIST. FENCE
POST
4" OFF ROAD
POST STA 416+50
STUMP
16.23
PT STA 420+91.54
WEND OF STONE WALL
TIES TO PT STA 420+91.54
GRAVEL DRIVE
ASPHALT DRIVE
MATCH LINE
HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL
20 10 0
406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00
800 790 780 770 760 750 740 730

PLAN AND PROFILE
STA. 406+00 TO STA. 421+00
GROTON - RYE GATE FAPG-1(39)
44 of 152

BRUNING 44-131-93428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

EROSION MATTING

LT	RT
428+50 ~ 429+50	431+50 ~ 433+00

TYPE I STONE FILL

LT	RT
423+50 ~ 428+50 +20	

TRANSPLANTING SHRUBS
421+56 LT - CURRANT BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

NOTE: 422+05± ~ 422+92± LT STOCKPILE TOPSOIL FOR GRADING OF GARDEN AREA (COST TO BE INCLUDED IN COMMON EXCAVATION)

HIGH TENSION LINES

APPROX. LOC. GARDEN AREA 44

CURRANT BUSH

MATCH LINE TO SHEET 15

423+50 – 423+80 LT
NEW 18" X 100' CORRUGATED POLYETHYLENE CARRIER PIPE UNDERDRAIN

STA. 423+56.4 ASKEW 79° 08' 07" LT – RT
REMOVE EXIST. 18" CSP
NEW 24"x24" RCCSP
W/ TYPE I STONE FILL AT OUTLET 4'x9'±
(0.060m) CAAP / CPEP
AT INLET AND OUTLET
W/ END SECTION AT INLET

APPROX. TEMPORARY & PERMANENT AERIAL UTILITY RELOCATION, RTE 5, CMP, NORTHLAND TELEPHONE AND HELICON CATV

STA 423+50 RT
NEW 12"x 28" CSP (.060) OR CAAP (.060) OR CPEP
W/ PRCCD, 2.8° ELBOW AND TYPE I STONE AT OUTLET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

STA 425+00 RT
NEW 18"x86' RCCSP / CAAP (0.060m) / CPEP
W/ 4'x4' DI AT INLET
W/ TYPE I STONE FILL AT OUTLET 4'x9'±

APPROX. PERMANENT AERIAL UTILITY RELOCATION, RTE 5 CMP, NORTHLAND TELEPHONE AND HELICON CATV

TREATED TIMBER CURB

LT	RT
422+50 ~ 426+25	433+00 ~ 435+50

CONSTRUCT DRIVE

LT	RT
431+85 PAVED (12' WIDE)	
434+04 PAVED (12' WIDE)	

* SEE SPECIAL PROVISIONS CONCERNING T.H. 50 APPROACH

PLAN
SCALE: 1"=50'

50 25 0 50
SCALE IN FEET

MELT

LT	RT
	422+00 – 422+37.5
	431+00 – 431+37.5
	433+00 – 433+37.5

STEEL BEAM GUARDRAIL

LT	RT
	MAINLINE 422+37.5
	MAINLINE 433+37.5

MAINLINE 431+00
MAINLINE 436+00

486+00 – 428+00
NEW 6'x 200' UNDERDRAIN W/ FB AT 428+00

423+50 – 425+95
NEW 6'x 246' UNDERDRAIN W/ FB AT 425+95

PC STA. 428+96.42

CTC 46

CTC 1/46 1/2

1/45

STA 428+78.7 ASKEW 69°33'26" LT
REMOVE EXISTING RIGID RELEASE W/
NEW 24" HDPRCCSP
W/ TYPE I STONE FILL AT OUTLET 4'x9'±
(0.060m) / CAAP / CPEP
AT INLET AND END SECTION

HSE

PI STA. 431+50.26 BK
STA. 431+36.89 AHD

TBM #6
SPIKE IN ROOT
36" POPLAR
EL. 783.52

VT TEL CO 48
GUY POLE

S 39°57'05" E

S 07°49'16" E

PT 443+90.73

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL

LT	RT
428+40 – 430+80	423+10 – 426+00
432+40 – 433+45	427+58 – 430+50
	432+78 – 433+54

MAG. 1986

435+00-436+00
NEW 6'x 100' UNDERDRAIN W/ FB AT 435+00

MATCH LINE TO SHEET 17

APPROX. PERMANENT AERIAL UTILITY RELOCATION, RTE 5, CMP, NORTHLAND TELEPHONE, AND HELICON CATV

431+00-433+50
NEW 6'x 250' UNDERDRAIN W/ FB AT 433+00

STA 433+09.27 ASKEW 85°51'06" RT.
REMOVE EXIST. 18" RCP
NEW 24"x108' RCCSP
(0.060m) / CAAP / CPEP
W/ TYPE I STONE FILL AT OUTLET
AT INLET 9'±, AND END SECTION

433+50 RT.
NEW 6'x 78' UNDERDRAIN CARRIER PIPE W/ TYPE I STONE AT OUTLET

CURVE 7
△ 32° 07' 49" RT
D 6° 30' 00"
R 881.47
L 494.31
T 253.84
E 35.82
B 0.078 FT/FT

DRILLING & BLASTING SOLID ROCK SUBGRADE
434+75 – 436+25

433+50 RT.
NEW 12"x 24.2' CSP (.060) OR CAAP (.060) OR CPEP
W/ 15° ELBOW W/ PRCCD, 1.25' RING
STONE AT OUTLET I

SCARIFY EXISTING PAVEMENT
421+00 ~ 423+50
+80

PV I
STA 421+50
EL 760.25
LVC 800'
E 6.80
K 118

+3.300%

EXISTING GROUND

MATCH LINE

PV I
STA. 428+50
EL. 783.35
LVC 600'
E 3.23
K 140
SSD 431.00

TIES TO PC STA. 428+96.72

LILAC BUSH 68.56 POLE 48
PI STA 431+50.56 BK

TIES TO PI STA 431+50.56 BK

END POST 54.85
PT STA 433+90.73

TIES TO PT STA. 433+90.73

-1.000%

PV I
STA. 435+50
EL 776.35
LVC 500'
E 1.36
K 230

MATCH LINE

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

PLAN AND PROFILE
STA. 421+00 TO STA. 436+00
GROTON - KYE GATE, FOZH-1(38)
45 of 152

421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131 53428

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

MATCH LINE TO SHEET 16

Rev P.C. 436+55.97

PC STA. 436+38.96

436+00–437+00 NEW 6'X100' UNDERDRAIN

STA. 437+05 ± ASKEW 87°-17'-24" RT REMOVE EXISTING 36" RCP REPLACE W/ NEW 30"X 106' RCP / CMAP (0.075") / CPEP (0.075") W/ 8'X11'X 2' TYPE I STONE FILL AT OUTLET

Rev P.I. 437+98.34 Bk = 437+98.09 Ah

PI STA. 437+98.34 BK
STA. 437+87.03 AHD

CURVE 8
Δ 12°-41'-53" LT
D 4°-00'
R 1432.39'
L 317.45'
T 159.38'
E 8.84'
B 0.063 FT/FT

Rev. Curve #8
Δ 6°-24'-00" LT
D 2°-15'-00"
R 2546.48'
L 284.44'
T 142.37'
E 3.98

APPROX. PERMANENT AERIAL UTILITY RELOCATION P/E, BY CAMP NORTHLAND TELEPHONE AND HELICON CATV

GRANITE SLOPE EDGING
LT RT
442+70–443+30

TEL P

DRIVE PIPE

FAVED DRIVE

POND

PC STA. 441+06.91

Rev 108' ± 441+10

437+00–440+50 NEW 6'X 360' UNDERDRAIN W/ F.B. AT 440+50

TBM #7
CHISLED "D" TOP OF STONE HEADWALL EL. 781.34

GM – NE. COR. HEADWALL
Elev. 778.24

441+05 LT 18" Dewe Pipe RETAIN

Rev 441+20± 40' LT

Rev 441+39± 74' LT

441+39 NEW 85'X 24" CSP (.064") W/ CL III OR CPEP

Rev 15'X 24" CMP

Rev 441+45± 0'

441+23–442+87 NEW 6'X 274' UNDERDRAIN W/ F.B. AT 442+87

Rev 441+40± 40' LT

APPROX. UNDERGROUND UTILITY REPLACEMENT

SCARIFY EXISTING PAVEMENT
446+50–451+00
Rev 447+70 ~ 447+60

444+00–448+00 LT NEW 6"X 400' UNDERDRAIN W/ F.B. AT 444+00

PI STA. 445+40.73 BK
STA. 445+30.59 AHD

CURVE 9
Δ 21° 26' 15" RT
D 2° 30'
R 2291.83'
L 857.50'
T 433.82'
E 40.70'
B 0.046 FT/FT

Rev Curve #9
Δ = 15°-08'-22" RT
D = 3°-30'
R = 1637.02
L = 432.58
T = 217.53
E = 14.39
Bank

MELT
LT RT
442+00 442+37.5
446+40 446+77.5

STEEL BEAM GUARDRAIL
LT RT
Rev 436+00–442+00
446+75 451+00

REMOVAL AND DISPOSAL OF GUARDRAIL
LT RT
436+65–437+80
Rev 436+60 to +98 437+68–437+97
439+10–441+45

MAG. 1986

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAV.

TBM #8
CHISLED "D" ON HEADWALL EL. 758.55

RT STA. 449+64.41

Rev P.I. 448+38.79 Bk = 448+36.25 Ah

450+68.9 ASKEW 87°-27'-55" RT EXISTING 36" BOX REMOVE OR CMAP (.105) W/ TYPE II STONE FILL AT INLET AND 48" X 132" PROPOSED CMAP (.105) W/ CASCADE ENERGY DISSIPATOR AT INLET AND OUTLET

MATCH LINE TO SHEET 18

Rev P.C. 450+53.81 = Surv P.O.T. 450+60.64 EQ = – 6.83

4' CHAIN LINK FENCE
LT
443+00 – 445+00

(NOTE: ACTUAL LENGTH AND OFFSET TO BE DETERMINED IN FIELD BY THE ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER, FENCE TO BE ERECTED OUTSIDE R.O.W. LINE)

STONE FILL TYPE I
LT RT
448+50–451+00 (EXCAV. TO BE PAID AS TRENCH)
441+28

CONSTRUCT DRIVE
LT RT
441+98 PAVED (16') (ASKEW 47°-00'-00" RT)
443+37 GRAVEL (12')
446+20 GRAVEL (16')

DRILLING AND BLASTING SOLID ROCK SUBGRADE
438+75–439+75
442+25–448+50
438+40 ~ 440+50

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

EROSION MATTING
LT RT
437+50–442+75
445+30–448+50

STA. 441+27.9 ASKEW 87°-17'-24" RT REMOVE EXISTING 36" RCP REPLACE W/ NEW 24" RCP/CMAP (.064") / CPEP (.060") W/ 8'X11'X 2' TYPE I STONE FILL AT OUTLET

Rev STA 441+24 @ 29° NEW 24" X 114" CPEP W/ DIG INLET TYPE I STONE FILL @ OUTLET

442+50–445+00 NEW 6'X 250' UNDERDRAIN W/ F.B. AT 442+50

STA. 445+00 RT 87.00' NEW UNDERDRAIN CARRIER PIPE W/ STONE FILL AT OUTLET 2'X2'W

STA 445+97.5 RT 80.00' REMOVE EXISTING 12" RCP AND DI

Rev PC STA 446+21.25

APPROX. PERMANENT AERIAL UTILITY RELOCATION P/E, BY CAMP NORTHLAND TELEPHONE AND HELICON CATV

STA 448.00 NEW 18"X 78' RCP / CMAP (.064") / RCP (.060") / CPEP (.060") WITH TYPE I STONE FILL 4'X 9' AT OUTLET

PT STA. 439+56.41
11.71 / 18.73
GUARDRAIL

PI STA. 437+98.34 BK

PC STA. 436+38.96
POST 14.00 POST
GUARDRAIL

PC STA. 441+06.91
GUARDRAIL

5" ELM
2" ELM CLUMP
6" ELM
POC STA. 442+00

PT STA. 449+64.41
FENCE

TIES TO PT STA. 439+56.41

TIES TO POC STA. 442+00

TIES TO PC STA. 436+38.96

EXISTING GROUND

+1.1767 %

PVI
STA. 446+25
EL. 789.00
LVC 750.00
E 5.42
K 130
SSD 415

TIES TO PT STA. 449+64.41

-4.6000 %

EXISTING GROUND

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

PLAN AND PROFILE
STA. 436+00 TO STA. 451+00
GROTON – RYEGATE F026-1(30)

46 of 152

800 790 780 770 760 750 740

436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00 448+00 449+00 450+00 451+00

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131 53428

MATCH LINE TO SHEET 17

WOODS

GMP

REV PC 452 + 55.20

APPROX. PERMANENT AERIAL UTILITY RELOCATION (RTE 69 GMP NORTHWARD AND TELEPHONE AND HELICON CATV)

STA 452+62.45 RT
NEW 18"x 74' CSP w/ 12 ELBOWS
4+4 DI @ INLET
STONE FILL TYPE II @ OUTLET

STA 452+80 - 454+75 LT
NEW 6'X 274' UNDERDRAIN
W/ FB AT 452+01

STA 455+33 SKEW 85° OR 45° RT
REMOVE EXIST. 18" RCP AND DI
NEW 18"+ 114' RCP(1) / 104' RCP(2) / CAMP / OREGON (10.064) / AAAP (10.060) / CPEP (10.060)
W/ 1-35° & 1-28° ELBOWS AT OUTLET
@ INLET: TYPE I STONE OUTLET

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAVATION

DRILLING AND BLASTING SOLID ROCK SUBGRADE
454+25 – 461+50
453+50 ~ 461+50
458+80 ~ 459+30
462+25 ~ 463+50

SCARIFY EXISTING PAVEMENT
451+00-457+50 451+30 ~ 453+50
462+50-466+00 457+10 ~ 458+50

STEEL BEAM GUARDRAIL
RT
451+00-458+52.5

MELT
RT
458+52.5-458+90

REMOVAL AND DISPOSAL OF GUARDRAIL
RT
451+00 ~ 458+37
460+20 ~ 462+63

STA 456+00
NEW 18" + 104' RCP / CAMP / OREGON (10.060) AND TYPE I ELBOWS AT OUTLET
W/ 2-35° ELBOWS AND STONE AT OUTLET

STA 454+75 - 457+55
NEW 6'X 315' UNDERDRAIN W/
NEW 6'X 35' FB AT 457+55

REV.
CURVE 10
Δ 57° 02' 40" LT
D 3° 49' 11"
R 1500.00'
L 1493.42'
T 815.19'
E 207.20'
B 0.061 FT/FT

STA 458+00 - 460+50
NEW 6'X 250' UNDERDRAIN W/
FB AT 461+50

STA 461+32 - 464+70
NEW 6'X 338' UNDERDRAIN W/
FB AT 465+87

STA 461+11 SKEW 87°07' LT
EXISTING 18" RCP
REMOVE

STA 464+80 - 466+00
NEW 6'X 120' UNDERDRAIN W/ FB
AT 464+80

MAG. 1986

MATCH LINE TO SHEET 19

WOODS

GMP 12

GMP 13

MF 14

TBM 9

TBM #9
SPIKE IN ROOT
18" ELM
EL. 771.46

EDGE OF RIVER

APPROX. PERMANENT AERIAL UTILITY RELOCATION (RTE 69 GMP NORTHWARD AND TELEPHONE AND HELICON CATV)

STA 464+70 - 466+00 LT
NEW 18"+ 120' RCP
W/ 4+4 DI @ INLET

SEV. STA 464+70 - 466+00 LT
REMOVE EXISTING 18" RCP

REV. PI 460+70.50 =
459+33.54
Δ 57° 2' 40"
D 3° 49' 11"

EROSION MATTING
LT
452+00-453+50
455+25-459+25
462+00-466+00

EROSION MATTING FOR SLOPE PROTECTION
RT.
453+75-458+25

TYPE I STONE FILL
LT
451+00-452+00
(EXCAV. TO BE PAID AS TRENCH)

TYPE II STONE FILL FOR SLOPE PROTECTION
RT.
453+75-458+25

GRUBBING MATERIAL
RT
453+75 – 458+25

PLAN
SCALE: 1"=50'

50 25 0 50
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

POLE 11
P.C. STA. 452+62.45
POST
POST

TIES TO P.C. STA. 452+62.45

4" BIRCH
8" SPRUCE
2" POP.
POC STA. 459+00

TIES TO POC STA. 459+00

SURV. PI STA 460+77.65 BK
STA 459+40.61 AHD
Δ 57° 2' 42" LT
D 3° 49' 11"

MATCH LINE

-4.6000 %

+1.8250

EXISTING GROUND

+1.8250 %

-2.4000 %

MATCH LINE

PVI
STA 453+00
ELEV 757.95'
LVC 600'
E 4.82
K 93'

PVI
STA 461+00
ELEV 772.55'
LVC 600'
E 3.17
K 142'
SSD 434'

HORIZONTAL
50 25 0 50
SCALES IN FEET

20
10
0
VERTICAL

790 780 770 760 750 740 730

451+00 452+00 453+00 454+00 455+00 456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00

PLAN AND PROFILE
STA. 451+00 TO STA. 466+00
GROTON – RYEGATE FOTA-1 (10)
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PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-1315428

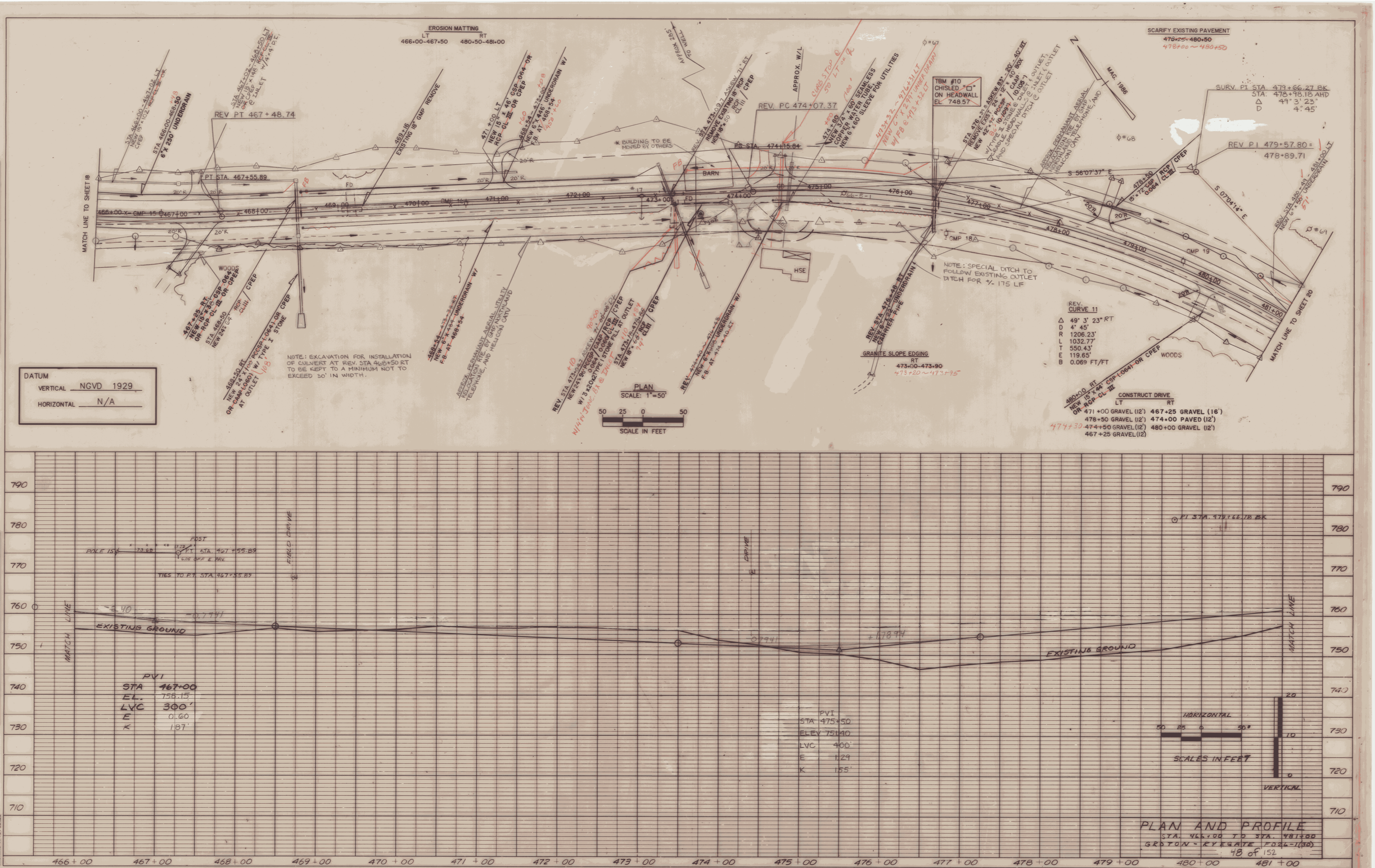
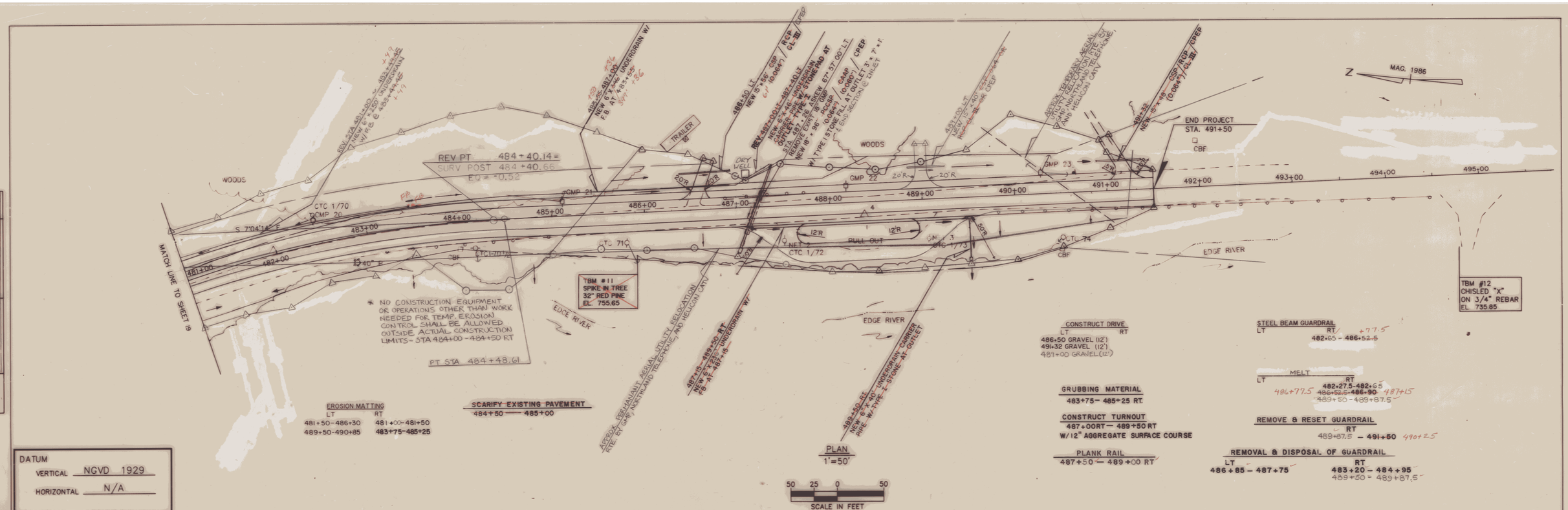
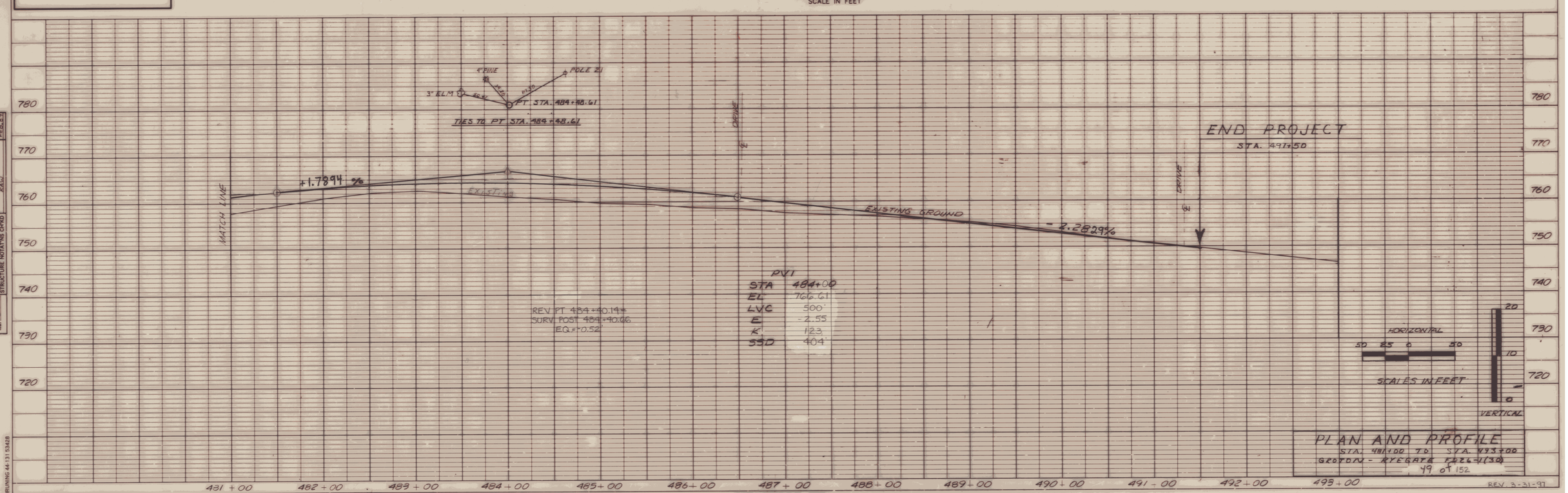


PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-1315428





PLAN AND PROFILE

STA. 481+00 TO STA. 493+00

GROTON - KYEGATE F022-1(30)

49 OF 152

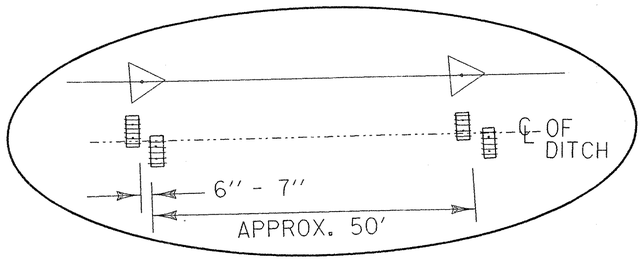
REV. 3-31-97

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131-53428

TEMPORARY EROSION CONTROL PLANS TYPICAL SHEET

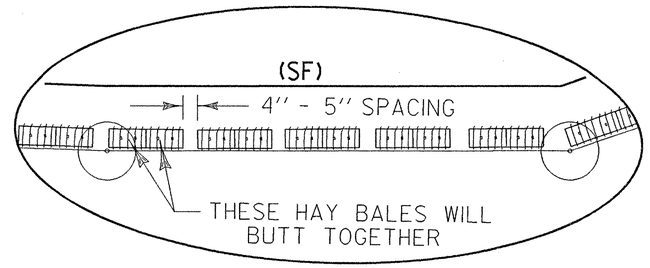
1. HAY BALE DITCH CHECK DAMS



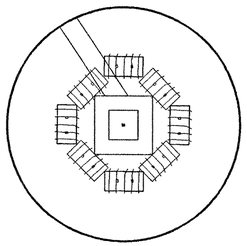
** DOF ← / → DOF DIRECTION OF FLOW

(SF) DENOTES GEOTEXTILE FOR SILT FENCE **

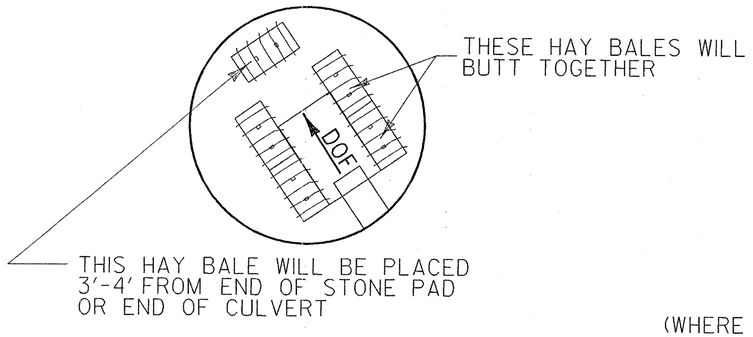
2. SILT FENCE & HAY BALE EROSION CHECK @ FILL TOE / DAYLIGHT SECTION



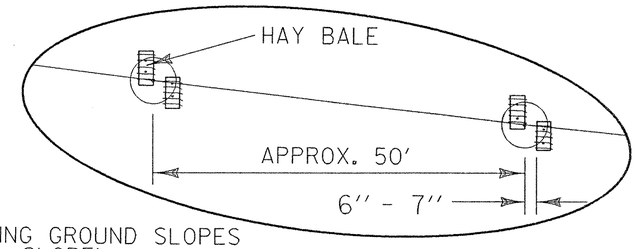
3. HAY BALE PROTECTION @ DROP INLET



4. CULVERT OUTLET PROTECTION BEYOND CONSTRUCTION LIMIT OR IN DITCH

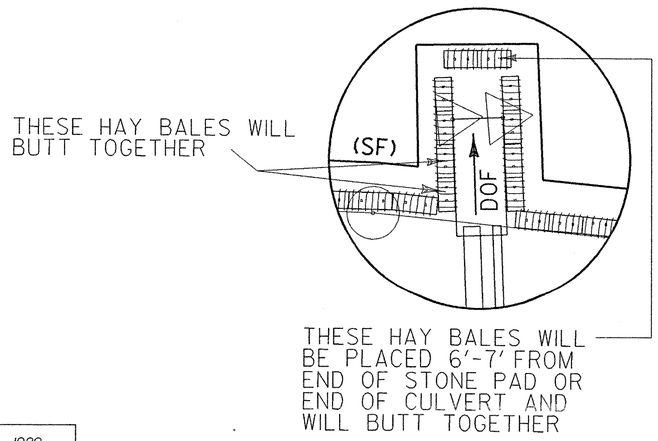


5. TOE OF FILL HAY BALE CHECK DAM

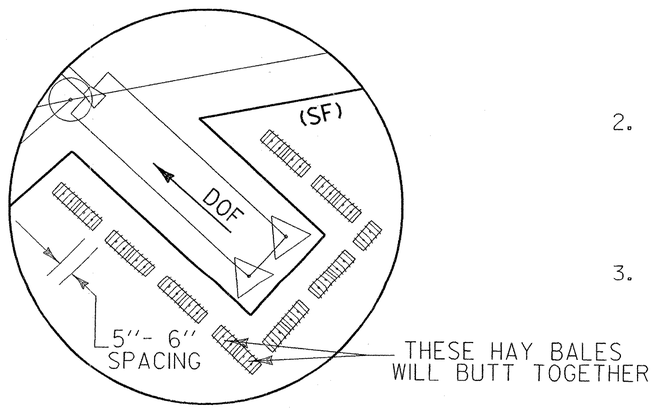


(WHERE EXISTING GROUND SLOPES TOWARDS FILL SLOPE)

6. CULVERT OUTLET PROTECTION @ TOE OF FILL



7. EXPOSED CULVERT INLET PROTECTION



GENERAL NOTES

1. EROSION CONTROL MATERIALS WILL BE PLACED AS ILLUSTRATED, OR AS DIRECTED BY THE RESIDENT ENGINEER, ON NEWLY CONSTRUCTED AREAS AS SOON AS POSSIBLE.

2. DURING CONSTRUCTION EVERY EFFORT WILL BE MADE TO KEEP DEBRIS AND SEDIMENT OUT OF THE DITCH. HAY BALES WILL BE USED AS ILLUSTRATED TO INSURE BANK STABILITY.

3. HAY BALES SHALL BE INSPECTED AND CLEANED AS NEEDED.

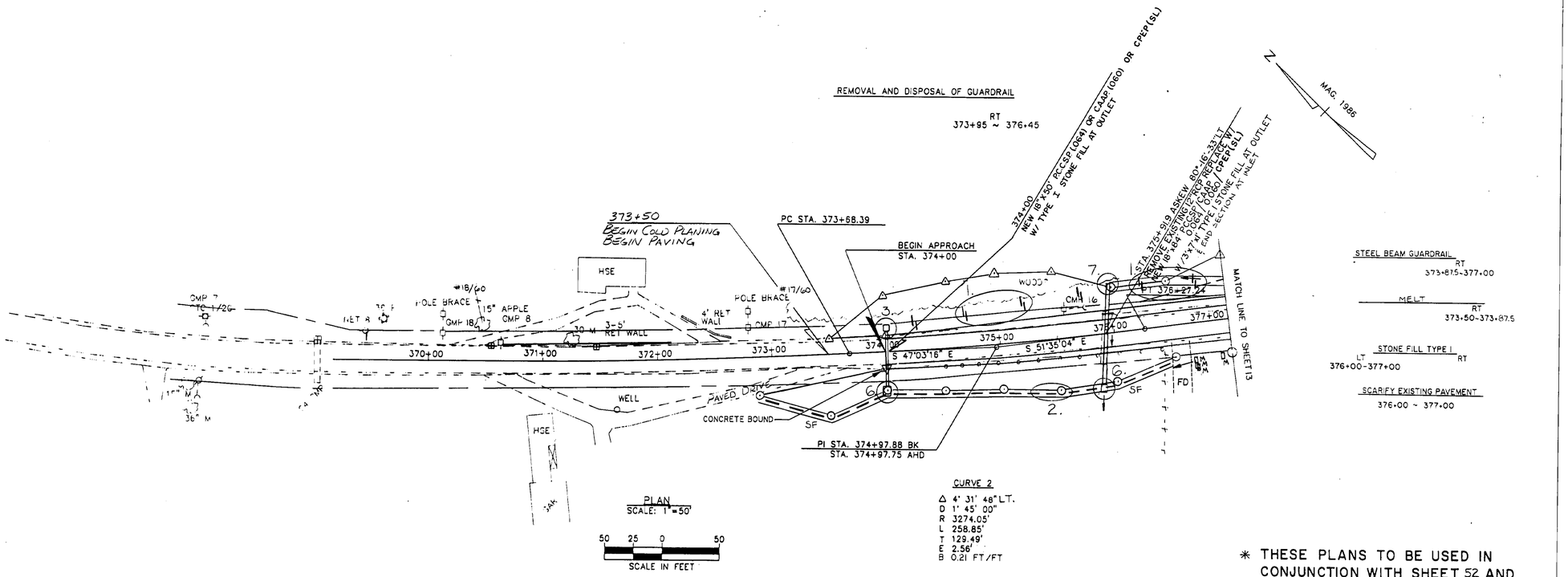
NOT TO SCALE

DATUM VERTICAL	NGVD 1929
HORIZONTAL	N/A

SURVEYED BY	DATE
DRAWN BY	B.MCAVOY DATE
SQUAD LEADER	S.MENARD
DESIGN FILE NO.	/sqdc/78d073/dd073.dgn
IPARM FILE	dd073ero1 DATE PLOTTED 12-MAR-1997
PROJ. NAME	GROTON - RYEGATE
PROJ. NO.	F 026 - 1(30)
SHEET	52 OF 152 SHEETS

PLAN	BY	DATE
SURVEYED	DBC, MAR, GJB	OCT. 86
PLOTTED	DBC	DEC. 86
NOTE BOOK ALIGNMENT CHECKED		
NO. 610 RT. OF WAY CHECKED		

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

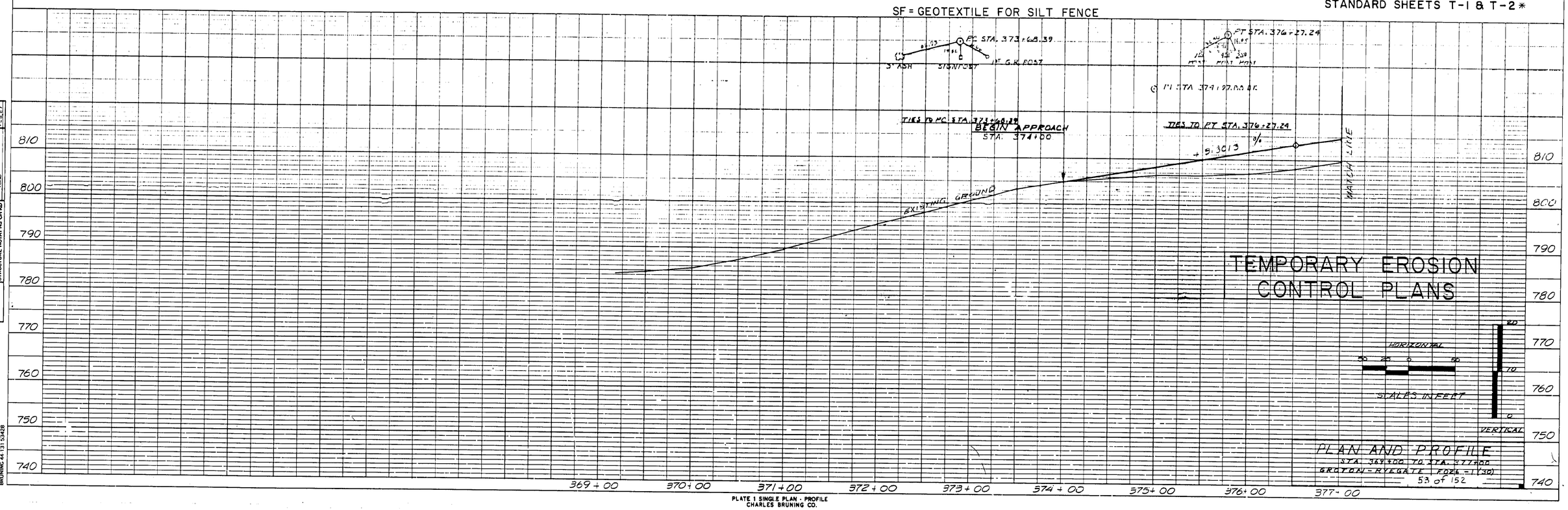


CURVE 2
Δ 4° 31' 48" LT.
D 1° 45' 00"
R 3274.05'
L 258.85'
T 129.49'
E 2.56'
B 0.21 FT/FT

* THESE PLANS TO BE USED IN CONJUNCTION WITH SHEET 52 AND STANDARD SHEETS T-1 & T-2 *

SF = GEOTEXTILE FOR SILT FENCE

PROFILE	BY	DATE
SURVEYED	DBC	DEC. 86
PLOTTED	GJB	JAN. 87
GRADES CHECKED	AMJ	FEB. 87
R.R. CROSSING		
NOTE BOOK		
NO. 282 STRUCTURE NO.ATHS 074D	DBC, DBC	FEB. 87



TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL
20
10
0

PLAN AND PROFILE
STA. 369+00 TO STA. 377+00
GROTON - RYEGATE FOR 6-1(30)
53 of 152

BRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

EVERGREEN TREES
LT.
377+00 ~ 377+75, 55'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C
377+00 ~ 377+75, 65'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C

NOTE: NEW TREES @ STA. 377+00 ~ 377+75 ARE TO BE PLANTED AS DETERMINED BY THE ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER.

DECIDUOUS TREES
LT.
377+00 & 377+75
75'+- LT, 2 FLOWERING CRABAPPLES, 10' HEIGHT

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

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

BY	DATE
DBL, MAC, GJF	OCT. 84
	DEC. 84

EROSION MATTING
LT RT
377+50-377+80
378+40-379+50 382+25-384+00
382+00-384+00 388+75-391+00
388+75-391+00

1-1½ TO 1-2 SLOPE

CURVE 3
Δ 19° 20' 04" RT
D 4° 00' 00"
R 1432.40'
L 483.36'
T 244.00'
E 20.63'
B .063 FT/FT

TYPE I STONE FILL
LT RT
377+00-377+50
384+00-387+50

SIDEROAD CURVE 1
PC 1+97.25
PI 2+00
PT 2+02.75
Δ 3° 00' 19" RT
D 57° 01' 34"
R 104.74'
L 5.27'
T 2.75'
E 0.036'

CONSTRUCT SIDEROAD
LT RT
387+50 PAVED 384+17.69 PAVED

CONSTRUCT DRIVE
LT RT
378+11 GRAVEL (12' WIDE) 381+99 GravEL (14' WIDE)

GRANITE SLOPE EDGING
377+25 — 381+87 RT

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

SF = GEOTEXTILE FOR SILT FENCE

TYPE IV STONE FILL
LT RT
387+80

TYPE II STONE FILL
LT RT
387+80

MELT
LT RT
1-12.5-1+50 (TH 13) 377+00-377+37.6
389+50.5-389+88 388+64-389+01.5

STEEL BEAM GUARDRAIL
LT RT
TH#13 1-12.5~389+50.5
TH#61 3+50 LT~388+64

ANCHOR FOR STEEL BEAM GUARD RAIL
LT RT
TH #61 3+43.75

REMOVAL AND DISPOSAL OF GUARD RAIL
LT RT
387+95-388+55 384+70-386+2
387+40-388+60

SCARIFY EXISTING PAVEMENT
384+00-388+50

DRILLING & BLASTING SOLID ROCK SUBGRADE
379+25-384+00

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
ALIGNMENT CHECKED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.

BY	DATE
ECS, DBL	FEB. 85
GJF	MAY 85
ZAW	FEB. 86
DBL	FEB. 86
PAJ	FEB. 86

PVI
STA 381+00
ELV 827.96
LVC 900'
E 7.91
K 128
SSD 413'

PVI
STA 388+50
ELV 800.00
LVC 900.00
E -1.08
K 110

NOTE:
SEE SHEET 150 FOR PROFILE TH #61
SEE SHEET 151 FOR PROFILE TH #13

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL 20 10 0

PLAN AND PROFILE
STA. 377+00 TO STA. 391+00
GROTON - RYEGATE FOR 026-1(30)
54 of 152

BRUNING 44-131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

PLAN	BY	DATE
SURVEYED	DRL, CJAR, GLR	OCT. 84
PLOTTED		OCT. 84
NOTE BOOK	ALIGNMENT CHECKED	
NO.	RT. OF WAY CHECKED	

PROFILE	BY	DATE
SURVEYED	EQ, DSK	OCT. 84
PLOTTED	SPF	DEC. 84
NOTE BOOK	GRADES CHECKED	DEC. 84
NO.	R.R. & HWY. CROSS	DEC. 84
	STRUCTURE NOTATNS CHKD	FEB. 85

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

TYPE I STONE FILL
LT 397+30-399+50 RT 397+30-399+50

EROSION MATTING
LT 395+50-397+30, 399+50-401+50, 403+45-404+50
RT 395+50-397+30, 399+50-400+75

REMOVE AND RESET FENCE
LT
399+[illegible] ~ 402+00 (RESET TO NEW R.O.W. LINE)
402+00 ~ 404+30 (RESET BEYOND CONSTRUCTION LIMITS, THEN TO NEW ROW. LINE)

STEEL BEAM GUARDRAIL
LT 400+02.5 - 403+15
RT

MELT
LT 399+65 - 400+02.5, 403+15 - 403+52.5
RT

GRANITE SLOPE EDGING
LT 405+00-406+00
RT

REMOVAL AND DISPOSAL OF GUARD RAIL
RT 402+75 ~ 403+60

MATCH LINE TO SHEET 13

391+00 S 32°15'00" E

STA. 391+00 393+50 LT NEW 6 X 250' UNDERDRAIN

392+00 393+00 394+00 395+00 396+00 397+00 398+00 399+00 400+00 401+00 402+00

S 44° 29' 23" E

STA. 393+50-394+50 NEW 18"Ø RCP CL III FR AT 393+50 W/ 6 X 150' UNDERDRAIN

STA. 393+50 - 394+35 LT NEW 18"Ø RCP CL III OR CPEP (SL) RCP CL III

394+50 LT EXISTING 12" GMP REMOVE

STA. 394+35 LT 33' - 397+00 LT 35' NEW 24" X 64' RCP CL III / CPEP (SL)

STA. 397+00 ℄ NEW 18"Ø RCP CL III / CPEP (SL)

STA. 397+50 LT 38' - 398+10 LT 34.5' NEW 24" X 48' RCP CL III / CPEP (SL)

STA. 398+00 - 399+50 NEW 6 X 150' UNDERDRAIN W/ FR AT 398+00

STA. 398+50 ℄ NEW 30" X 68' RCP CL III / CPEP (SL) W/ 4'X6' D.I. INLET

399+60 - 401+50 NEW 6' X 190' UNDERDRAIN W/ FR AT 399+60

401+65 LT NEW 15" X 62' RCP CL III OR CSP (.064") OR CPEP (SL)

401+50 - 402+75 NEW 6' X 126' UNDERDRAIN CARRIER PIPE

STA. 402+86.3 ASKEW 72°-00'-08" RT REMOVE EXISTING 18" RCP REPLACE WITH NEW 24'-8" RCP / CPEP (SL) WITH 1 - 10'-0" X 5'-7" PCCSP / CAAP / (0.064") / CPEP (SL) ONE SET TO NEW ℄ FILL 4'-9" AT OUTLET

402+75 - 403+00 CL III UNDERDRAIN CARRIER PIPE NEW 6" X 25' UNDERDRAIN

403+00 - 404+50 NEW 6" X 150' UNDERDRAIN W/ FR AT 404+50

STA. 404+62.3 ASKEW 68°-23'-56" RT REMOVE EXISTING 15" RCP AND CAP FROM NEW D.I. LT TO NEW D.I. LT REPLACE WITH NEW 18"Ø RCP CL III / CPEP (SL)

TO NEW D.I. RT AND NEW 24"X 78" CSP (0.064") W/ 4'-9" TYPE I STONE FILL AT OUTLET / CPEP (SL)

404+56 - 405+00 NEW 6" X 144' UNDERDRAIN

MAG 1996

MATCH LINE TO SHEET 15

PI STA. 392+72.44 BK
STA. 392+70.57 AHD

PT STA. 395+16.30

PC STA. 398+46.55

PI STA. 403+00.66 BK
STA. 402+64.85 AHD

392+80 RT - 393+50 LT NEW 18"Ø X 86' RCP CL III OR CPEP (SL) RCP CL III

394+00 RT NEW 15" X 30' CSP (.064") RCP CL III CPEP (SL)

STA. 399+50 RT 35' - 400+00 RT 35' NEW 30" X 78' PCCSP (0.075") / CAAP (0.079") / CPEP (SL) W/ 4'-6" STONE FILL (0.075") AT OUTLET 4'6 DI AT INLET

CURVE 4
Δ 12° 14' 23" LT
D 2° 30'
R 2291.83'
L 489.59'
T 245.73'
E 13.14'
B 0.046'

CURVE 5
Δ 39° 15' 31" LT
D 4° 30' 00"
R 1273.24'
L 872.41'
T 454.11'
E 78.56'
B 0.067 FT/FT

CONSTRUCT DRIVE
LT
394+61 GRAVEL (12' WIDE) 393+10.8 CONCRETE (12' WIDE)
401+65 GRAVEL (12' WIDE) 404+00 GRAVEL (12' WIDE)
393+75 GRAVEL (12' WIDE) 405+40 GRAVEL (20' WIDE)
404+25 GRAVEL (6' WIDE)
392+20 GRAVEL (21' WIDE)
RT

CONSTRUCT PAVED TURNOUT
404+50 - 405+30 RT (4' WIDE)

TBM #3
SPIKE IN ROOT
12" SCOTCH PINE
ELEV. 790.17

PLAN
SCALE: 1" = 50'

50 25 0 50
SCALE IN FEET

SF = GEOTEXTILE FOR SILT FENCE

PROFILE

2" ELM 6" PINE 6" PINE DRIVE

PI STA 392+72.44

PT STA 395+16.30

6" PINE 6" PINE DRIVE

TIES TO PT STA. 395+16.30

TIES TO PC STA. 398+46.55

8" ELM 30" ASH

PC STA 398+46.55

14" PINE

TIES TO POC STA 403+00

9.75 S 44° E 39' POST FROM W-END

POC STA. 403+00

MATCH LINE

-1.000 %

EXISTING GROUND

-3.500 %

+1.950 %

EXISTING GROUND

PVI
STA. 397+00
EL. 791.50
LVC 300'
E 0.44'
K 120
SSD 4/6

PVI
STA 401+50
EL 776.75
LVC 600'
E 4.09'
K 109

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

PLAN AND PROFILE
STA. 391+00 TO STA. 406+00
GROTON - RYEGATE F026-1(30)

55 of 52

810 800 790 780 770 760 750 740

391+00 392+00 393+00 394+00 395+00 396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00

PLATE I SINGLE PLAN - PROFILE
CHARLES BRUNING CO

3RUNING 44-131 53426

TYPE I STONE FILL
LT 416+25-417+00 RT 415+50-418+00
TH 5-0130 - 0+40

TYPE II STONE FILL
LT 418+20 RT 418+00

EROSION MATTING
LT 406+50-409+25 RT 411+75-416+25

CONSTRUCT DRIVE
LT 406+25 ASPHALT (24) 419+50 GRAVEL (20')
410+98 GRAVEL (12') TH 5-0160 (12')
419+60 GRAVEL (12')

CONSTRUCT SIDE ROAD
LT 417+30.23

STEEL BEAM GUARDRAIL
LT 418+13.5 - 418+63.5 RT 417+33.5 - 418+96

MELT
LT 417+76-418+13.5, 418+63.5-419+01 RT 416+96-417+33.5, 418+96-418+83.5

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL
LT 416+25-418+70 RT 417+94-418+44

TRANSPLANTING SHRUBS
419+75 LT - ROSE BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

PI STA. 416+63.97 BK
STA. 416+22.80 AHD

TBM #5
CHISLED "X" ON TOP PLATE BOLT
EL. 768.09

PC STA. 412+45.23

PT STA. 407+18.96

PT STA. 420+41.54

TEMPORARY DETOUR LIMITS

MATCH LINE TO SHEET 14

MATCH LINE TO SHEET 16

STA. 407+00 - 406+80 RT
REMOVE EXISTING 18" RCP
NEW 24"x48" PCSSP / CAAP (10.060") / CPEP (SL)
TYPE I STONE PAD AT OUTLET

406+00 - 406+80
NEW 6"x 30' UNDERDRAIN W/
F&B AT 406+90

407+10 - 411+50
NEW 6"x 440' UNDERDRAIN W/
F&B AT 411+50

STA. 414+06 ASKEW 88°-39'-01" RT
REMOVE EXISTING 18" RCP
NEW 18"x 90' PCSSP / CAAP (10.060") / CPEP (SL)
W/ 3'x7'x1' TYPE I STONE FILL AT INLET
AND OUTLET, END SECTION AT INLET

415+50 - 416+00
NEW 6"x 250' UNDERDRAIN W/
F&B AT 415+50

STA. 417+30.23 STA. 0+00 SIDE ROAD
ASKEW 74°32'39" RT

STA. 0+55 ASKEW 82° LT
REMOVE 18" RCP

STA. 0+38.23 ASKEW 73°-25" LT
NEW 18"x 64' PCSSP / CAAP (10.060") / CPEP (SL)
W/ STONE FILL @ OUTLET

STA. 418+20 ASKEW 83°-30' LT
NEW 12"x 90' PCSSP / CAAP (10.060") / CPEP (SL)
W/ 12'-0"x 8'-0"x 1'-0" TYPE II STONE FILL
CLAMPA W/ 12'-0" TO EMBANKMENT
CONCRETE COLLAR, HEADWALL
AT INLET, AND OUTLET

418+00 RT ASKEW 83°-30' LT
NEW 6"x 16' PIPE UNDERDRAIN
CARRIER

STA. 418+36
REMOVE EXIST. CORRUGATED METAL CHANNEL BASELINE STA.
SEE SHEET 15 OF 152 W. STA. 418+30 ASKEW 83°-30' LT

STA. 417+43 LT
NEW 12" RCP
TYPE II STONE FILL (TYP)

TYPE II STONE FILL (TYP)

CURVE 6
Δ 43° 47' 49" RT
D 5° 30'
R 1041.74'
L 796.31'
T 418.74'
E 81.01'
B .074 FT/FT

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

SCARIFY EXISTING PAVEMENT
419+00-421+00

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SF = GEOTEXTILE FOR SILT FENCE

PAVED ENTRANCE

© TRANS POLE

GROTON - RYEGATE FOR-026-1(30)

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
PLAN MAT. CHECKED
NOTE BOOK
NO.
BY DRN. WARE, SLB DES. JDC
DATE DEC. 84

PROFILE
SURVEYED ECS & JDC
PLOTTED ECS
GRADES CHECKED KAU
ELM. NOTED ECS, JDC
STRUCTURE NOTATNS CHKD JDC
BY
DATE FEB. 85, FEB. 85, FEB. 85, DEC. 84, FEB. 85

CULVERT POST
PT STA. 407+18.96
42.00
17.70
FLEET FENCE

TIES TO PT STA. 407+18.96

+1.950 %

EXISTING GROUND

MATCH LINE

ASPHALT DRIVE

PV I
STA 411+50
EL 795.25
LVC 700'
E 4.77'
K 128
SSD 413'

TIES TO PC STA. 412+45.23

-3.500 %

TIES TO PVC STA. 416+50

PC STA. 412+45.23
42.00
17.70
FLEET FENCE
POST

2' OFF ROAD
POC STA. 416+50
5.70
5.70
FLEET FENCE

STUMP
16.63
PT STA. 420+41.54
PC END OF STONE FILL

TIES TO PT STA. 420+41.54

EXISTING GROUND

STA. 419+36
BY CUP

NOTE: SEE SHEET #152 FOR TH #5 PROFILE

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET

VERTICAL
20 10 0

PLAN AND PROFILE
STA. 406+00 TO STA. 421+00
GROTON - RYEGATE FOR-026-1(30)
56 of 152

406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00

800 790 780 770 760 750 740 730

BRUNING 44 131 53426

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

NOTE: 422+05 ± ~ 422+12 ± LT STOCKPILE TOPSOIL FOR GRADING OF GARDEN AREA (COST TO BE INCLUDED IN COMMON EXCAVATION)

EROSION MATTING
LT: 428+50 ~ 429+50
RT: 431+50 ~ 433+00

TYPE 1 STONE FILL
LT: 423+50 ~ 428+50
RT

TRANSPLANTING SHRUBS
421+56 LT - CURRANT BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

HIGH TENSION LINES

APPROX. LOC. GARDEN AREA

422+50 - 423+50 LT NEW 6'X 20' CMP ARCH PIPE UNDERDRAIN

STA. 422+56.4, 15% SKEW, 75° 08' 07" LT. RT. REMOVE EXIST. 18" CMP NEW 24" ø PCCSP (0.064") / CAAP (0.060") / CPEP (SL) W/ TYPE I STONE FILL AT INLET AND OUTLET 4'-9" W/ END SECTION AT INLET

423+50 - 425+25 NEW 6'X 200' UNDERDRAIN W/ FB AT 425+25

426+00 - 428+00 NEW 6'X 200' UNDERDRAIN W/ FB AT 428+00

STEEL BEAM GUARDRAIL
LT: MAINLINE 422+37.5 MAINLINE 431+00
RT: MAINLINE 433+37.5 MAINLINE 436+00

PC STA. 428+96.42

STA. 429+28.7, 45° SKEW, 69°-33'-28" LT. REMOVE EXIST. 18" RCP REPLACE W/ NEW 24" ø HDPECSP (0.064") / CAAP (0.060") / CPEP (SL) W/ TYPE I STONE FILL AT INLET AND OUTLET 4'-9" W/ END SECTION AT INLET

HSE

PI STA. 431+50.26 BK
STA. 431+36.89 AHD

TBM #6
SPIKE IN ROOT
36" POPLAR
EL. 783.52

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL

LT	RT
428+40 – 430+80	423+10 – 426+00
432+40 – 433+45	427+58 – 430+50
	432+78 – 433+54

MAG. 1986

PT 443+90.73

7" TEL CO. & P. & L. POLE

S 39°57'05" E

S 67°49'16" E

435+00 - 436+00 NEW 6'X 100' UNDERDRAIN W/ FB AT 435+00

MATCH LINE TO SHEET 15

MATCH LINE TO SHEET 17

CONSTRUCT DRIVE
LT: 431+85 PAVED (12' WIDE)
RT: 434+04 GRAVEL (12' WIDE)

* SEE SPECIAL PROVISIONS CONCERNING T.H. 50 APPROACH

TREATED TIMBER CURB
LT: 422+50 ~ 426+25
RT: 433+00 ~ 435+50

422+50 RT NEW 12"X 30" CSP (.064") OR CAAP (.060") OR CPEP (SL) W/ PRCDI 2-15" ELBOW AND TYPE I STONE AT OUTLET

STA 426+00 PCCSP / CAAP / RCP (0.060") / CL III / CPEP (SL) NEW 18"ø (0.064") W/ 4'-4" DI AT INLET W/ TYPE I STONE FILL AT OUTLET 4'-9"

MELT
LT
RT: 422+00 - 422+37.5
431+00 - 431+37.5
433+00-433+37.5

PLAN
SCALE: 1"=50'

50 25 0 50
SCALE IN FEET

431+00-433+50 NEW 6'X 250' UNDERDRAIN W/ FB AT 431+00

STA 433+00.27 45° SKEW 65° 51' 06" RT. REMOVE EXIST. 18" RCP NEW 24" ø PCCSP (0.064") / CAAP (0.060") / CPEP (SL) W/ TYPE I STONE FILL AT OUTLET 4'-9" AND END SECTION AT INLET

433+50 RT NEW 6'X 28' UNDERDRAIN CARRIER PIPE W/ TYPE I STONE AT OUTLET

435+50 RT NEW 12"X 30" CSP (.064") OR CAAP (.060") W/ PRCDI 1-15" ELBOW W/ TYPE I STONE AT OUTLET 1-25° BND CPEP (SL)

CURVE 7
Δ 32° 07' 49" RT
D 6° 30' 00"
R 881.47
L 494.31
T 253.84
E 35.82
B 0.078 FT/FT

DRILLING & BLASTING SOLID ROCK SUBGRADE
434+75 – 436+25

SCARIFY EXISTING PAVEMENT
421+00 ~ 423+50

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SF = GEOTEXTILE FOR SILT FENCE

PLAN
SURVEYED: P.K., W.A.S., C.L.R.
PLOTTED: D.R.C.
GRADES CHECKED: A.J.W.
R.W. OF WAY CHECKED: D.R.C.
NOTE BOOK:
NO.:

BY	DATE
P.K., W.A.S., C.L.R.	OCT. 82
D.R.C.	DEC. 82

PROFILE
SURVEYED: E.A.S., D.R.C.
PLOTTED: D.R.C.
GRADES CHECKED: E.A.S., D.R.C.
R. M.'s NOTED: K.A.W.
STRUCTURE NOTATIONS CHKD:
NOTE BOOK:
NO.:

BY	DATE
E.A.S., D.R.C.	DEC. 82
D.R.C.	FEB. 84
E.A.S., D.R.C.	DEC. 82
K.A.W.	FEB. 83

PVI
STA 421+50
EL 760.25'
LVC 800'
E 6.80'
K 118

PVI
STA. 428+50
EL. 783.35
LVC 600'
E 3.23
K 140
SSD 431.00

PVI
STA. 435+50
EL. 776.35
LVC. 500'
E 1.36
K 230

TIES TO PC STA. 428+96.72
CONCENTRICS 388 373 POST POST
TIES TO PI STA. 431+50.56 BK
LILAC BUSH 4.1 1.37 46.56 6" POLE 98 PI STA. 431+50.56 BK
END POST 54.60 PT STA. 433+90.73
TIES TO PT STA. 433+90.73

+3.300%
-1.000%
EXISTING GROUND
MATCH LINE

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL 50 25 0 50
SCALES IN FEET
VERTICAL 20 10 0

PLAN AND PROFILE
STA. 421+00 TO STA. 436+00
GROTON - KYE GATE, FOZO-1(30)
57 of 152

421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00

790 780 770 760 750 740

BRUNING 44-131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO

PLAN

BY	DATE
DBC/MAS/GCB	OCT. 86
DBC	DEC. 86

SURVEYED
PLOTTED
CHECKED
ALIGNMENT CHECKED
RT. OF WAY CHECKED

NOTE BOOK
NO.

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

GRANITE SLOPE EDGING
LT 442+70-443+30 RT
TEL P

TBM #7
CHISLED "□"
TOP OF STONE
HEADWALL
EL. 781.34

PC STA. 441+06.91

PC STA. 436+38.96

436+00-437+00
NEW 6'X100' UNDERDRAIN

STA. 437+09.5 ASKEW 87°-17'-24" RT
REMOVE EXISTING 18" RCP REPLACE W/
NEW 18" 105 PCCSP / CAAP (0.064") / (0.060") CPEP (SL)
W/ 5'X1'X1' TYPE I STONE FILL AT OUTLET

437+00-440+50
NEW 6'X 350' UNDERDRAIN W/
F.B. AT 440+50

PT STA. 439+56.91

PI STA. 437+98.34 BK
STA. 437+97.03 AHD

CURVE 8
Δ 12°-41'-53" LT
D 4°-00'
R 1432.39'
L 317.45'
T 159.38'
E 8.84'
B 0.063 FT/FT

STA. 441+27.9 ASKEW 74°-07'-35" LT
REMOVE EXISTING 24" RCP REPLACE W/
NEW 18" 80 PCCSP / CAAP (0.064") / CPEP (SL)
W/ 5'X3'X1' TYPE I STONE FILL
AT OUTLET & 5'X1'X1' TYPE I
STONE FILL AT INLET

441+98
NEW 15"X24" CSP (.064")
RCP CL III OR CPEP (SL)

441+23-445+50
NEW 6'X 274' UNDERDRAIN W/
F.B. AT 443+37

442+50-445+00
NEW 6'X 250' UNDERDRAIN
W/ F.B. AT 442+50

TBM #7
CHISLED "□"
TOP OF STONE
HEADWALL
EL. 781.34

DRIVE PIPE
POND
PAVED DRIVE
WELL
BURIED TV CABLE
SAT DISH
FPOLE
GMP 7
GMP 6
HSF

CONSTRUCT DRIVE
LT 441+98 PAVED (16') (ASKEW 47°-00'-00" RT)
RT 443+37 GRAVEL (12') 446+20 GRAVEL (16')

DRILLING AND BLASTING SOLID ROCK SUBGRADE
438+75-439+75
442+25-448+50

SCARIFY EXISTING PAVEMENT
446+50-451+00

444+00-448+00 LT
NEW 6'X 400' UNDERDRAIN W/F.B.
AT 444+00

PI STA. 445+40.73 BK
STA. 445+30.59 AHD

STA. 445+00 ℄
6'X30' UNDERDRAIN CARRIER PIPE W/
TYPE I STONE FILL AT OUTLET 2'x2'W

STA. 445+87.5 RT 80°-00'-00" ASKEW
REMOVE EXISTING 12" RCP AND

STA. 445+00 ℄
NEW 18" 78 PCCSP / CAAP / RCP / CPEP (SL)
CL III
WITH TYPE I STONE FILL 4.5'W AT OUTLET

CURVE 9
Δ 21° 26' 15" RT
D 2° 30'
R 2291.83'
L 857.50'
T 433.82'
E 40.70'
B 0.046 FT/FT

MELT
LT 442+00-442+37.5 RT
446+40-446+77.5

STEEL BEAM GUARDRAIL
LT 436+00-442+00 RT
446+77.5-451+00

REMOVAL AND DISPOSAL OF GUARDRAIL
LT 436+65-437+80 RT 437+68-437+97 439+10-441+45

MAG. 1986

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAV.

RT STA. 449+64.41

TBM #8
CHISLED "□"
ON HEADWALL
EL. 758.55

550+68.5 ASKEW 87°-27'-45" RT
EXISTING 36" BOX REMOVE &
NEW 48"X 132" BOX PCCSP (109) OR CAAP (.105)
W/ TYPE I STONE FILL AT INLET
AND OUTLET / SADDLE INLET
AT INLET AND OUTLET / HEADWALLS

MATCH LINE TO SHEET 16

MATCH LINE TO SHEET 18

4' CHAIN LINK FENCE
LT 443+00~445+00
(NOTE: ACTUAL LENGTH AND OFFSET TO BE DETERMINED IN FIELD BY THE ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER, FENCE TO BE CONSTRUCTED OUTSIDE R.O.W. LINE)

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

EROSION MATTING
LT 437+50-442+75 RT
445+30-448+50

STONE FILL TYPE I
LT 448+50-451+00 RT
441+28

SF = GEOTEXTILE FOR SILT FENCE

PROFILE

BY	DATE
EJS, DBC	DEC. 86
GAC	FEB. 86
RAU	DEC. 87
ECA, DBC	DEC. 87
KAU	FEB. 89

SURVEYED
PLOTTED
CHECKED
ALIGNMENT CHECKED
BL. MK.= NOTED
STRUCTURE NOTATIONS CHKD

NOTE BOOK
NO.

PT STA. 439+56.91
PI STA. 437+98.34 BK
PC STA. 436+38.96
PC STA. 441+06.91
PT STA. 441+56.91
PC STA. 442+00
PT STA. 449+64.41
TIES TO PT STA. 439+56.91
TIES TO PC STA. 436+38.96
TIES TO PC STA. 442+00
TIES TO PT STA. 449+64.41
EXISTING GROUND
4.6000%
-1.1787%
5" RCP
2" RCP CURB
CRUMP
6" RCP
POST GUARDRAIL
POST GUARDRAIL
GUARDRAIL
GUARDRAIL
FENCE

PVI
STA. 446+25
EL. 789.00
LVC 750.00
E 5.42
K 130.
SSD 415

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL
20 10 0

PLAN AND PROFILE
STA. 436+00 TO STA. 451+00
GROTON - RYE GATE FOZ41(30)
58 of 152

800 790 780 770 760 750 740

436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00 448+00 449+00 450+00 451+00

BRUNING 44 131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

MATCH LINE TO SHEET 17

STA 451+00

452+01 – 454+75 LT
NEW 6'X 214' UNDERDRAIN
W/ FB AT 452+01

WOODS

GMP

452+00

453+00

454+00

455+00

456+00

457+00

458+00

459+00

460+00

461+00

462+00

463+00

464+00

465+00

466+00

SF

REV PC 452 + 55.20

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAVATION

DRILLING AND BLASTING
SOLID ROCK SUBGRADE
454+25 – 461+50

SCARIFY EXISTING PAVEMENT
451+00-457+50
462+50-466+00

STEEL BEAM GUARDRAIL
RT
451+00-458+52.5

MELT
RT
458+52.5-458+90
REMOVAL AND DISPOSAL OF GUARDRAIL
RT
451+00 ~ 458+37
460+20 ~ 462+63

STA 454+73.3, SKEW 85° OR 42.5°
REMOVE EXIST. 18" RCP AND D-INLET
NEW 18"-44' RCCP / 18" RCP AND D-INLET / CAAP / (10.064')
W/ 1-35° & 1-25° ELBOW / (10.CCC') / CPEP(SL)
@ INLET & TYPE I STONE @ OUTLET

454+75-457+93
NEW 6'X 318' UNDERDRAIN W/
FB AT 457+93

STA 459+00
NEW 18" / 104' PCCSP / CAAP / (10.064') / CPEP (SL)
W/ 2-35° ELBOWS AND TYPE I
STONE AT OUTLET

REV.
CURVE 10
Δ 57° 02' 40"LT
D 3° 49' 11"
R 1500.00'
L 1493.42'
T 815.19'
E 207.20'
B 0.061 FT/FT

458+00 – 461+57
NEW 6'X 350' UNDERDRAIN W/
FB AT 460+50

461+57 – 462+70
NEW 6'X 114' UNDERDRAIN W/
FB AT 462+57

462+11 45°SKEW 87'0" LT
REMOVE EXISTING 18" RCP

464+80-466+00
NEW 6'X 120' UNDERDRAIN W/ FB
AT 465+80

MAG. 1986

MATCH LINE TO SHEET 19

EROSION MATTING
LT
452+00-453+50
455+25-459+25
462+00-466+00

TYPE I STONE FILL
LT
451+00-452+00

TYPE II STONE FILL
FOR SLOPE PROTECTION
RT.
453+75-458+25

EROSION MATTING
FOR SLOPE PROTECTION
RT.
453+75-458+25

PLAN
SCALE: 1"=50'

50 25 0 50
SCALE IN FEET

GRUBBING MATERIAL
RT
453+75 — 458+25

TBM 8

TBM #9
SPIKE IN ROOT
18" ELM
EL. 771.46

EDGE OF RIVER

REV PI 460+70.50=
459+33.54
Δ 57° 2' 40"
D 3° 49' 11"

STA 464+80-466+00
NEW 18"-130' RCP CL III OR
CMEP (.52) W/ 4:1 & 6:1 E. INLET

REMOVE EXISTING 18" RCP

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN

BY	DATE
DBC, LWAF, GLB	OCT. 84
DBC	DEC. 84
DBC	

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

SF = GEOTEXTILE FOR SILT FENCE

POLE 11
POT 0.5' OUT
POT 0.5' OUT
POC STA 452+62.45

TIES TO PC STA 452+62.45

TIES TO POC STA 459+00

4" BIRCH
8" & 4" SPRUCE
2" POP 0.5' OUT
POC STA 459+00

SURV PT STA 460+77.66 BK
STA 451+40.01 AHD
Δ 57° 2' 43" LT
D 3° 49' 11"

MATCH LINE
-4.6000%
+1.8750
EXISTING GROUND
-2.4000%
MATCH LINE

PVI
STA 455+00
ELEV 757.95'
LVC 600'
E 4.82'
K 93'

PVI
STA 461+00
ELEV 772.55'
LVC 600'
E 9.17'
K 142'
SSD 434'

790
780
770
760
750
740
730

451+00 452+00 453+00 454+00 455+00 456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00

PROFILE

BY	DATE
EGS, DBC	OCT. 84
GAP	DEC. 84
LCW, DBC	FEB. 85
GAU	DEC. 85
GAU	FEB. 86

SURVEYED
PLOTTED
GRADES CHECKED
R/W MONUMENTED
NOTE BOOK
NO.
STRUCTURE NO'S ATTN'S CHK'D

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

PLAN AND PROFILE
STA. 451+00 TO STA. 466+00
GROTON - RYEGATE F021-1(10)
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BRUNING 44-131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

PLAN	BY	DATE
SURVEYED	DRC, MAK, KLB	DEC. 84
PLOTTED		DEC. 84
ALIGNMENT CHECKED	DRC	
GRADES CHECKED		
NOTE BOOK		
NO.		

EROSION MATTING
LT 466+00-467+50 RT 480+50-481+00

STA 466+00-466+50 6"X 250' UNDERDRAIN

STA 466+50-467+50 NEW 24" X 100' RCP CL III OR CMP (.064) W/ TYPE I STONE

REV PT 467+48.74

PT STA. 467+55.89

467+25 RT NEW 15" X 45' CSP .064 OR RCP CL III OR CPEP(SL)

STA 468+50 NEW 24" CMP

WOODS

468+50 RT NEW 24" X 100' RCSP (.064) OR CPEP(SL) OR CMP (.060) AT OUTLET W/ TYPE I STONE

NOTE: EXCAVATION FOR INSTALLATION OF CULVERT AT REV. STA 468+50 RT TO BE KEPT TO A MINIMUM NOT TO EXCEED 30' IN WIDTH.

STA 469+16 EXISTING 18" CMP REMOVE

468+54 - 471+33.54 NEW 6" X 4.46' UNDERDRAIN W/ F.B. AT 468+54

471+00 LT NEW 15" X 46' CSP .064 OR RCP CL III OR CPEP (SL)

468+54 - 472+00 NEW 6" X 446' UNDERDRAIN W/ F.B. AT 468+54

REV. STA 473+00.7 SKEW 71° RT REMOVE EXISTING 18" RCP NEW 15" X 50' RCP CL III / CPEP (SL)

TO WELL 285'

APPROX. W/L

REV. PC 474+07.37

BARN

HSE

REV. STA 473+00.67 SKEW 77° RT 06'06" CR NEW 24" X 50' RCSP (.064) / CMP (.060) CL III / CPEP (SL) W/ 3'x 2'x 2' TYPE I STONE FILL AT OUTLET

STA 473+15-473+65 NEW 18" X 6.5' RCP CL III / CPEP (SL)

REV. 474+40 - 471+48 NEW 6" X 2.08 UNDERDRAIN W/ F.B. AT 474 + 40 RT

474+50 NEW 3/4" COPPER WATER TUBE, NEW 6" X 60' SEAMLESS SLEEVE FOR UTILITIES

TBM #10 CHISLED "□" ON HEADWALL EL 748.57

STA 476+35 SKEW 85° RT - 20' - 40' CR REMOVE EXIST. 42" X 42" RCSP / 10.103' / CMP W/ TYPE II STONE & SAND FILL AT OUTLET, NEW 42" X 42" BOX CULVERT / 10.103' / CPEP (SL) W/ TYPE II STONE & SAND FILL AT OUTLET, HEADWALL & SAND FILL @ INLET & OUTLET AND SPECIAL DITCH @ OUTLET

REV. STA 476+46.85 NEW 6" X 2.08 UNDERDRAIN W/ CURVED PIPE

GRANITE SLOPE EDGING RT 473+00-473+90

NOTE: SPECIAL DITCH TO FOLLOW EXISTING OUTLET TO PITCH FOR ± 175 LF

MAG. 1986

SCARIFY EXISTING PAVEMENT
478+25-480+50

SURV PI STA 479+66.27 BK
STA: 478+98.18 AHD
Δ 49° 3' 23"
D 4° 45'

REV PI 479+57.80 = 478+89.71

S 56°07'37" E

S 07°04'14" E

478+50 15" X 72' CSP 0.064 / CL III / CPEP (SL)

REV. CURVE 1
Δ 49° 3' 23" RT
D 4° 45'
R 1206.23'
L 1032.77'
T 550.43'
E 119.65'
B 0.069 FT/FT

480+00 RT NEW 15" X 44' CSP (.064) OR CPEP (SL) OR RCP CL III

CONSTRUCT DRIVE

LT	RT
471+00 GRAVEL (12')	467+25 GRAVEL (16')
478+50 GRAVEL (12')	474+00 PAVED (12')
474+50 GRAVEL (12')	480+00 GRAVEL (12')
467+25 GRAVEL (12)	

MATCH LINE TO SHEET 18

MATCH LINE TO SHEET 20

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1" = 50'

50 25 0 50
SCALE IN FEET

SF = GEOTEXTILE FOR SILT FENCE

PROFILE	BY	DATE
SURVEYED	ES + DBL	DEC. 84
PLOTTED	RAU	DEC. 84
GRADES CHECKED	ES + DBL	DEC. 84
X-SECTIONS PLOTTED	RAU	DEC. 84
NOTE BOOK	ES + DBL	DEC. 84
NO.	RAU	DEC. 84

STRUCTURE NOTATING CHKD

BRUNING 44-131 53428

PVI
STA 467+00
EL. 756.15
LVC 300'
E 01.60
K 187'

PVI
STA 475+50
ELEV 751.40
LVC 400'
E 1.29
K 155'

POST
POLE 15V
73.82
0.39 OFF
PT STA 467+55.89
6.58 OFF E BAY
TIES TO PT STA 467+55.89

GATE POST
BARN
PC STA 474+15.84
TIES TO PC STA 474+15.84

PI STA 479+66.27 BK

EXISTING GROUND

-0.40
-0.79
-0.79
+1.79
+1.79

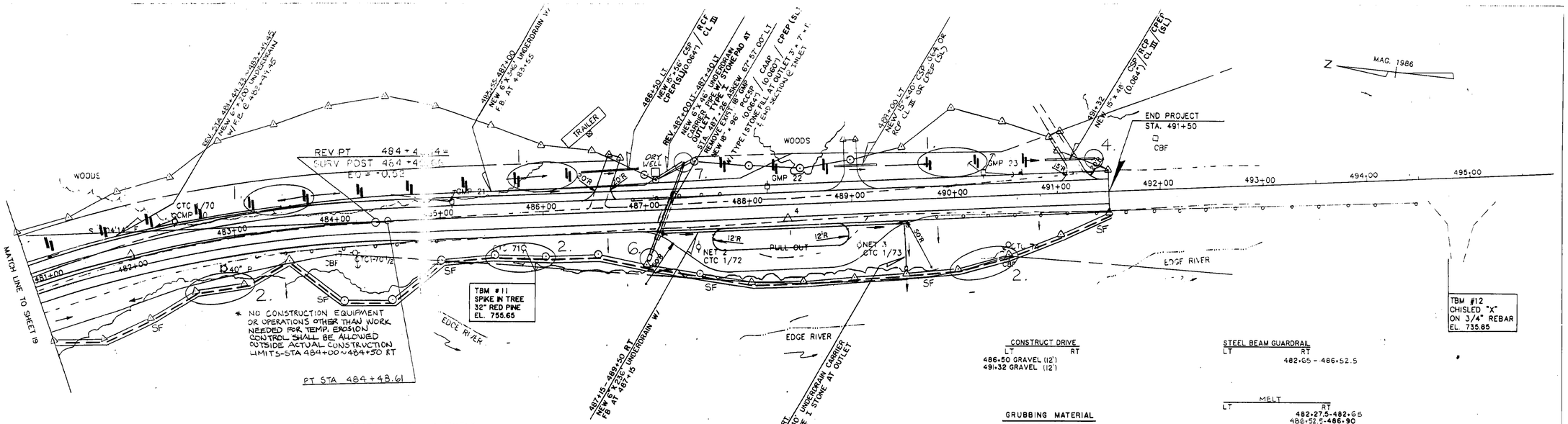
TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

PLAN AND PROFILE
STA 466+00 TO STA 481+00
GROTON - EYEGATE ROAD - 1(10)

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

PLAN
SURVEYED:
PLOTTED:
DRAWN BY:
CHECKED:
NOTE BOOK
NO.
BY | DATE
ALL WORK CHECKED.



EROSION MATTING

LT	RT
481+50-486+30	481+00-481+50
489+50-490+85	483+75-485+25

SCARIFY EXISTING PAVEMENT
484+50 — 485+00

CONSTRUCT DRIVE

LT	RT
486+50 GRAVEL (12')	
	491+32 GRAVEL (12')

GRUBBING MATERIAL
483+75- 485+25 RT.

CONSTRUCT TURNOUT
487+00RT — 489+50 RT
W/12" AGGREGATE SURFACE COURSE

PLANK RAIL
487+50 — 489+00 RT

STEEL BEAM GUARDRAIL

LT	RT
	482+65 - 486+52.5

MELT

LT	RT
	482+27.5-482+65
	486+52.5-486+90
	489+50-489+87.5

REMOVE & RESET GUARDRAIL
RT
489+87.5 — 491+50

REMOVAL & DISPOSAL OF GUARDRAIL

LT	RT
486+85 — 487+75	483+20 — 484+95
	489+50 - 489+87.5

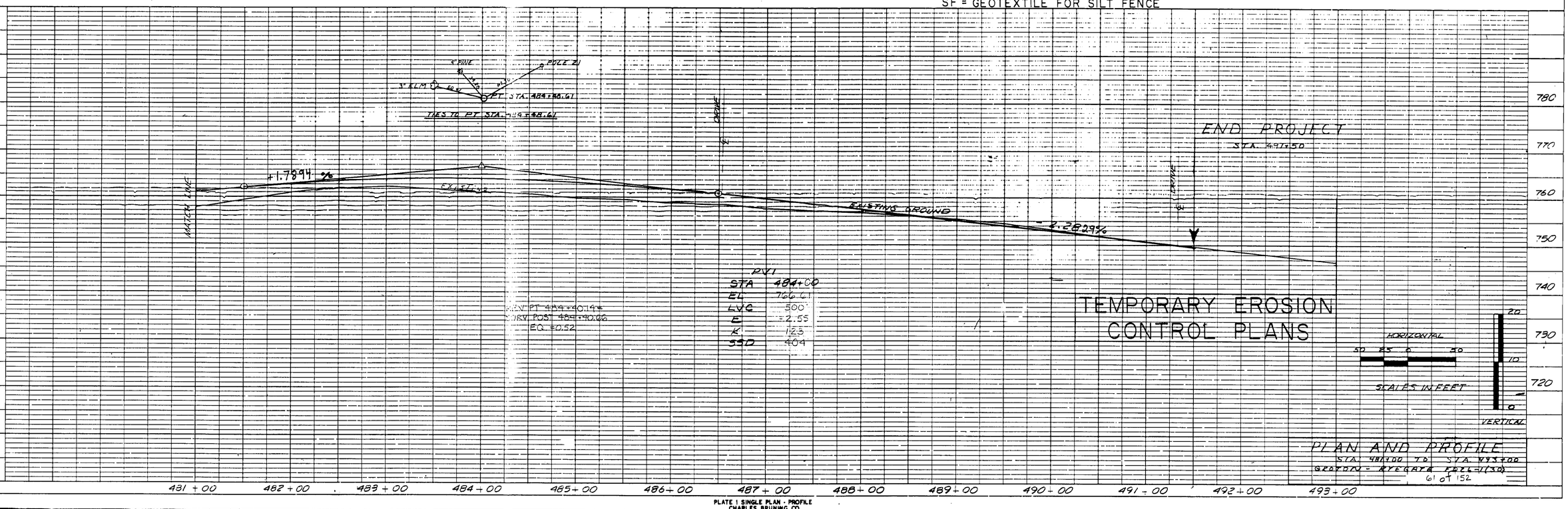
PLAN
1"=50'

50 25 0 50
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

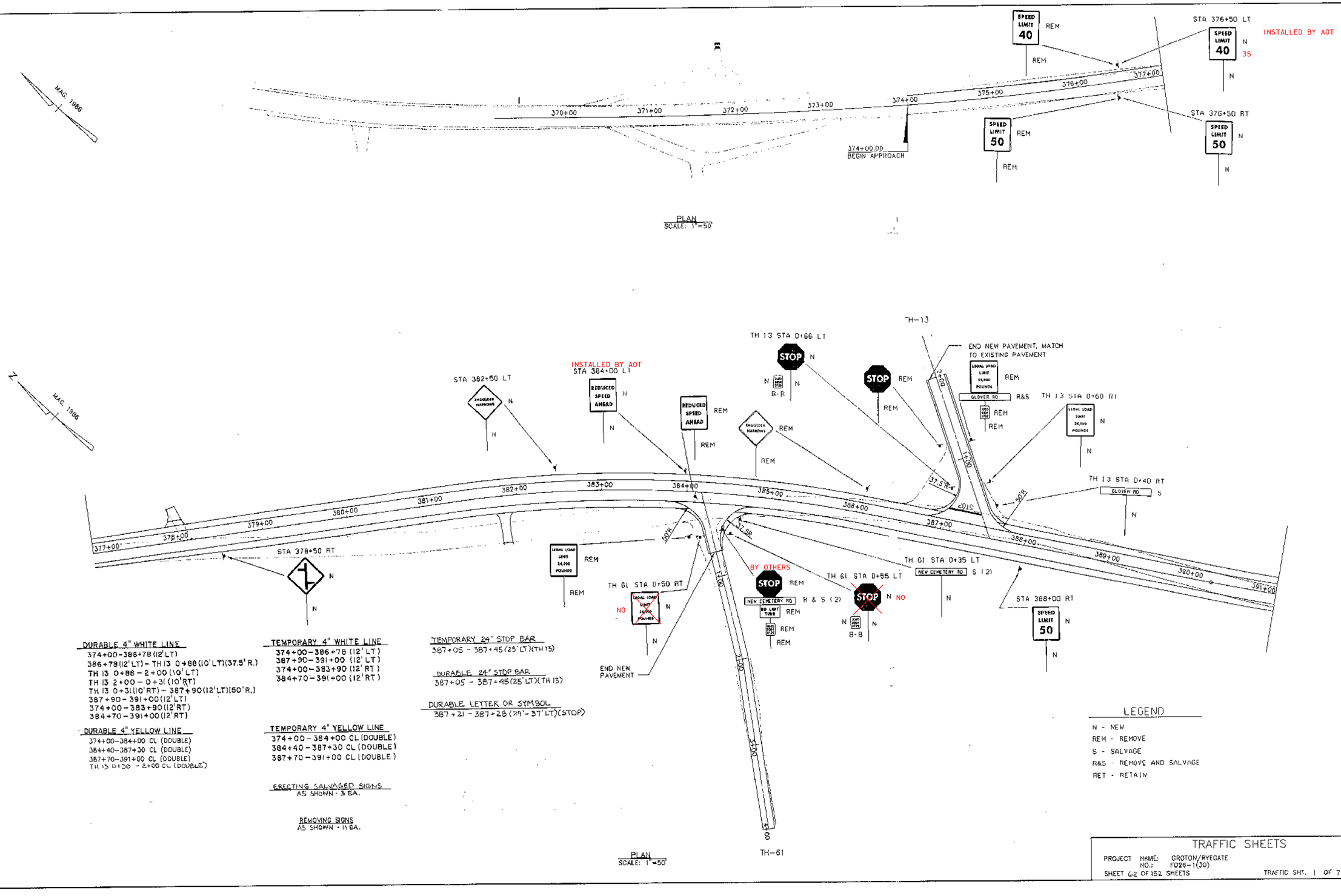
SF = GEOTEXTILE FOR SILT FENCE

PROFILE
SURVEYED: CCS, DBC
PLOTTED: GPC
DRAWN BY: CCS, DBC
CHECKED: FSA, RM
ALL WORK CHECKED: FSA, RM
NOTE BOOK
NO.
BY | DATE
STRUCTURE NOTATING CHANGED: ESA, RM



BRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.



DURABLE 4" WHITE LINE
374+00-386+78 (12' LT)
386+78 (12' LT) - TH 13 0+88 (10' LT) (37.5' R.)
TH 13 0+88 - 2+00 (10' LT)
TH 13 2+00 - 0+31 (10' RT)
TH 13 0+31 (10' RT) - 387+90 (12' LT) (50' R.)
387+90 - 391+00 (12' LT)
374+00 - 383+90 (12' RT)
384+70 - 391+00 (12' RT)

DURABLE 4" YELLOW LINE
374+00 - 384+00 CL (DOUBLE)
384+40 - 387+30 CL (DOUBLE)
387+70 - 391+00 CL (DOUBLE)
TH 13 0+30 - 2+00 CL (DOUBLE)

TEMPORARY 4" WHITE LINE
374+00 - 386+78 (12' LT)
387+90 - 391+00 (12' LT)
374+00 - 383+90 (12' RT)
384+70 - 391+00 (12' RT)

TEMPORARY 4" YELLOW LINE
374+00 - 384+00 CL (DOUBLE)
384+40 - 387+30 CL (DOUBLE)
387+70 - 391+00 CL (DOUBLE)

ERECTING SALVAGED SIGNS
AS SHOWN - 3 EA.

REMOVING SIGNS
AS SHOWN - 11 EA.

TEMPORARY 24" STOP BAR
387+05 - 387+45 (25' LT) (TH 13)

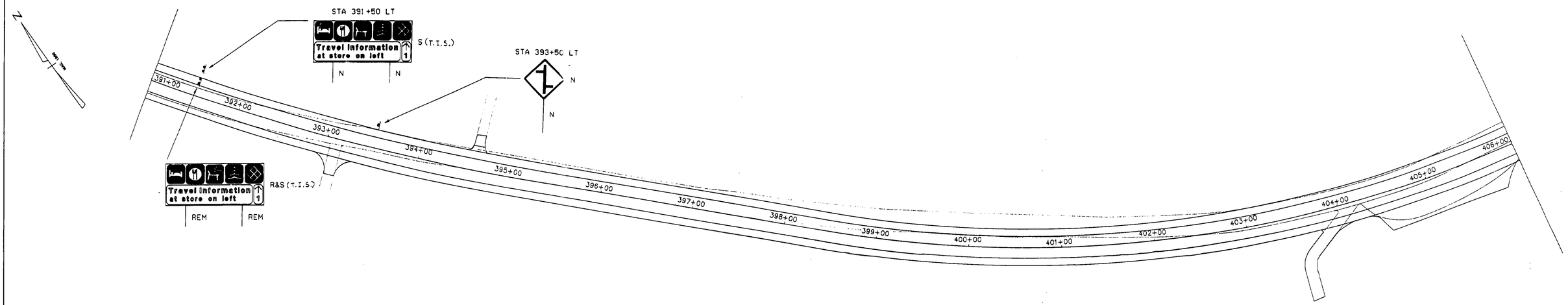
DURABLE 24" STOP BAR
387+05 - 387+45 (25' LT) (TH 13)

DURABLE LETTER OR SYMBOL
387+21 - 387+28 (29' - 37' LT) (STOP)

LEGEND
N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: CROTON/RYEGATE
NO.: FD26-1(30)
SHEET 62 OF 152 SHEETS
TRAFFIC SHT. 1 OF 7



PLAN
SCALE: 1"=50'

DURABLE 4" WHITE LINE

391+00–416+80 (12'LT)
417+62–421+00 (12'LT)
391+00–421+00 (12'RT)
TH5 0+58(11' LT)–1+00(11' LT)
TH5 0+40(11' RT)1+00(11' RT)

DURABLE 4" YELLOW LINE

391+00–417+10 CL (DOUBLE)
417+50–421+00 CL (DOUBLE)
TH5 0+25 - 1+00 CL (DOUBLE)

TEMPORARY 24" STOP BAR

TH5 0+26 (0'-30' LT)

DURABLE 4" WHITE LINE

416+80(12'LT) - TH5 0+58(11'LT)(37.5 R.)
TH 5 0+40(11 RT) - 417+62(12'LT)(50' R.)

DURABLE 24" STOP BAR

TH5 0+26 (0'-30' LT)

DURABLE LETTER OR SYMBOL

TH5 0+31(LT)–0+39(LT) (STOP)

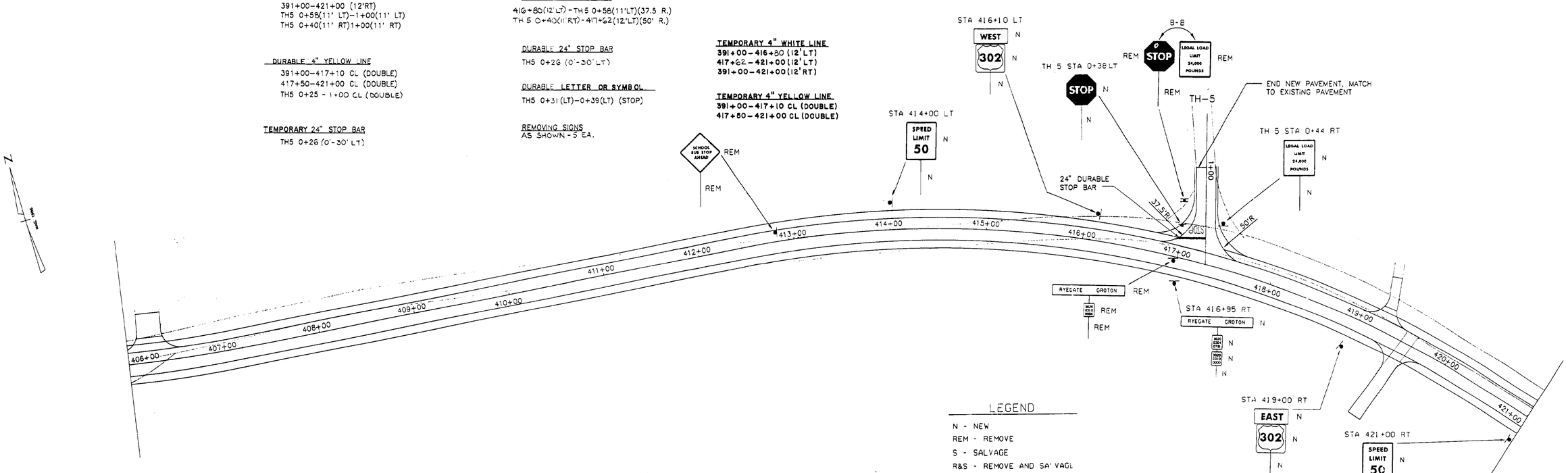
REMOVING SIGNS
AS SHOWN - 5 EA.

TEMPORARY 4" WHITE LINE

391+00–416+80 (12'LT)
417+62–421+00 (12'LT)
391+00–421+00(12'RT)

TEMPORARY 4" YELLOW LINE

391+00–417+10 CL (DOUBLE)
417+50–421+00 CL (DOUBLE)



PLAN
SCALE: 1"=50'

LEGEND

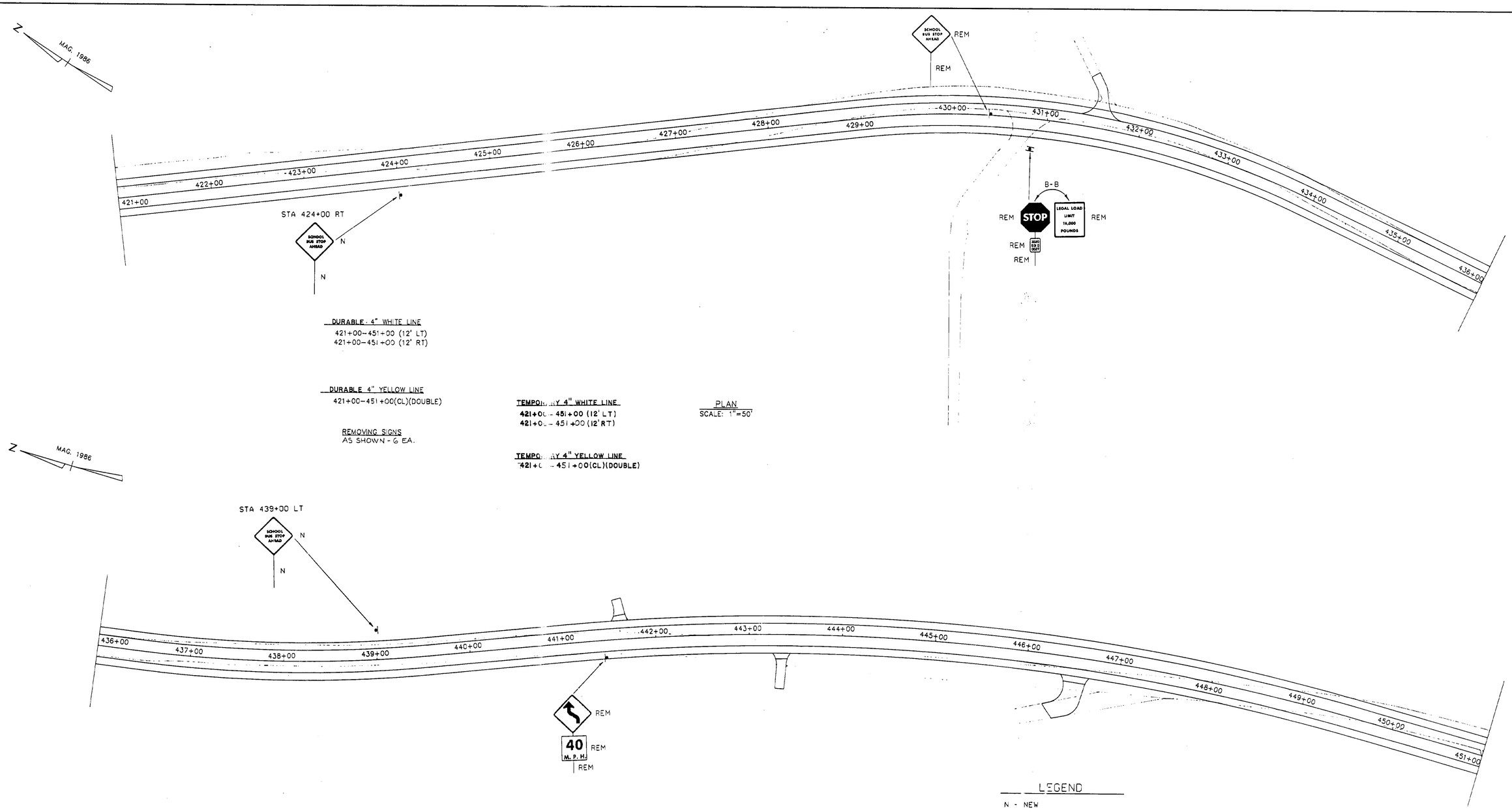
N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)

SHEET 63 OF 152 SHEETS

TRAFFIC SHT. 2 OF 7



PLAN
SCALE: 1"=50'

DURABLE 4" WHITE LINE
421+00–451+00 (12' LT)
421+00–451+00 (12' RT)

DURABLE 4" YELLOW LINE
421+00–451+00(CL)(DOUBLE)

REMOVING SIGNS
AS SHOWN - 6 EA.

TEMPORARY 4" WHITE LINE
421+00 – 451+00 (12' LT)
421+00 – 451+00 (12' RT)

TEMPORARY 4" YELLOW LINE
421+00 – 451+00(CL)(DOUBLE)

PLAN
SCALE: 1"=50'

LEGEND

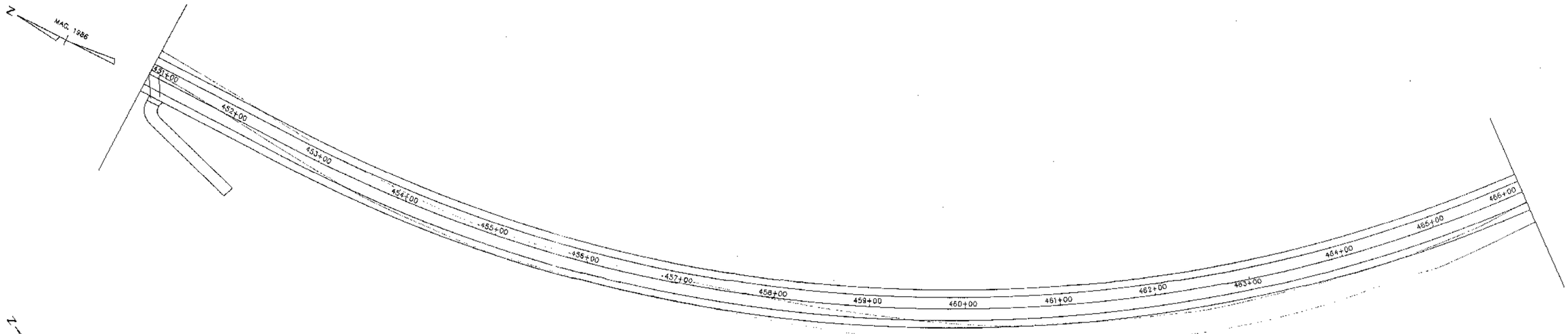
N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: FO26-1(30)

SHEET 64 OF 152 SHEETS

TRAFFIC SHT. 3 OF 7



DURABLE 4" WHITE LINE
451+00-491+00, 12'LT
451+00-491+00, 12'RT

DURABLE 4" YELLOW LINE
451+00-491+00, ℄ (DOUBLE)

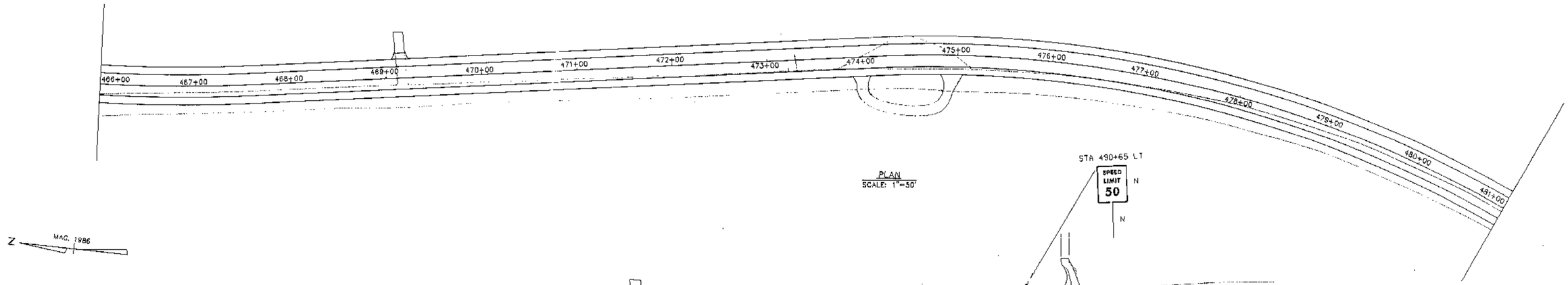
REMOVING SIGNS
AS SHOWN - 1 EA.

ERECTING SALVAGED SIGNS
AS SHOWN - 1 EA.

TEMPORARY 4" WHITE LINE
451+00- 491+00, 12'LT
451+00- 491+00, 12'RT

TEMPORARY 4" YELLOW LINE
451+00- 491+00, ℄ (DOUBLE).

PLAN
SCALE: 1"=50'



PLAN
SCALE: 1"=50'

PLAN
SCALE: 1"=50'

LEGEND

N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)

SHEET 65 OF 152 SHEETS

TRAFFIC SHT. 4 OF 7

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																			REMARKS	SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			FOUND-ATION	TUBULAR STEEL Ø (in) lb/ft				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN REQUIRED		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.12	2.0	3.0	1.75	2.0	2.5			3.0	4.0	4.0 MOD		3.0	3.5	4.0	5.0	24"	30"						
															1.88	2.16	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
376+50 LT	SPEED LIMIT 50 STOP SL BY VAOT	1	24	30	5.0						~~1~~			~~X~~			~~X~~	~~1~~														NOT ERECTED BY US SL 35 ERECTED BT VAOT R2-1 PAY FOR AS ORDERED BEFORE		E-142
376+50 RT	SPEED LIMIT 50	1	24	30	9/2/98 5.0						1 16			9/2/98 X 48			~~X~~	~~1~~														R2-1		E-142
378+50 RT	STOP L	1	30	30	9/2/98 6.25						1 14			9/2/98 X 42			~~X~~	~~1~~														SEE DETAIL B	69	
382+50 LT	REVERSE CURVE	1	36	36	9/2/98 9.0						1 14			9/2/98 X 42			~~X~~	~~1~~														VW-619		E-151
384+00 LT	REDUCED SPEED AHEAD BY VAOT	1	24	30	5.0						~~1~~			~~X~~			~~X~~	~~1~~														ERECTED BY VAOT R2-5A PAY FOR AS ORDERED BEFORE		E-142
TH 61 0+50 RT	LEGAL LOAD LIMIT 54,000 POUNDS	1	24	30	5.0						~~1~~			~~X~~			~~X~~	~~1~~														TH61 NOT SIGNED VR-017 PAY FOR AS ORDERED BEFORE		E-141
TH 61 0+55 LT	STOP DOUBLE YIELD AHEAD	1 1	30 6	30 8	6.25 0.33						~~1~~			~~X~~			~~X~~	~~1~~														TH61 NOT SIGNED (BACK TO BACK) R1-1 VD-700 PAY FOR AS ORDERED BEFORE		E-143 E-138
TH 61 0+35 LT	NEW CEMETERY RD						9/2/98 2				1 14			9/2/98 X 42			~~X~~	~~1~~														BACK TO BACK		
TOTALS					SF 41.83	SF	EA. 2	SF				LB	LB	LB ~~322~~ 174	LB	LB	LB ~~322~~	LB	LB	LB	LB	LB	EA.	LB	LB	LB	LB	EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: GROTON - RYEGATE	PROJECT NO.: STP F 026-1(30)
DESIGN FILE NAME: /sqdc/78d073/dd073.dgn	
IPARM FILE NAME: dd073tsl.i	PLOT DATE: 13-MAR-1997
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: S. MENARD	DRAWN BY: B. MCAVOY
	SHEET: 66 OF 152

: Sheet Number: 66

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) lb/ft FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
TH 13 0+66 LT	STOP	1 1	30 6	30 8	9/2/98 6.25 0.33						1 14			9/2/98 X 42			~~X~~	~~1~~																(BACK TO BACK) R1-1 VD-700		E-143 E-138
TH 13 0+40 RT	GLOVER RD	2	18	6	9/2/98 0.75 0.75		~~1~~				1 14			9/2/98 X 42			~~X~~	~~1~~																PAY BOTH SIGNS AS CONTRACTOR WAS TOLD TO IN ORDER 2.		
TH 13 0+60 RT	STOP	1	24	30	9/2/98 5.0						1 14			9/2/98 X 42			~~X~~	~~1~~																VR-017		E-141
388+00 RT	SPEED LIMIT 50	1	24	30	9/2/98 5.0						1 16			9/2/98 X 48			~~X~~	~~1~~																R2-1		E-142
391+50 LT	Travel Information at store on left 1							~~17~~ ~~16.6~~ 9/2/98																									POSTS INCLUDED IN ITEM 680.20 (MOD.) (NON-FED. PART IC.)		E-125
393+50 LT		1	30	30	9/2/98 6.25						1 14			9/2/98 X 42			X	1																SEE DETAIL B	69	
414+00 LT	SPEED LIMIT 50	1	24	30	9/2/98 5.0						1 14			9/2/98 X 42			X	1																R2-1		E-142
416+10 LT	WEST	1	24	12	9/2/98 2.0						1 16			9/2/98 X 48			X	1																M3-4		E-136
	302	1	30	24	9/2/98 5.0																													M1-4		E-136
												LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF ~~34.83~~ 36.33	SF	EA. 1	SF ~~16.6~~ 17				LB ~~281~~ 306			LB ~~281~~					LB			EA.	LB				EA.	EA.	LB							

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: GROTON - RYEGATE	PROJECT NO.: STP F 026-1(30)
DESIGN FILE NAME: /sqdc/78d073/dd073.dgn	
IPARM FILE NAME: dd073ts2.i	PLOT DATE: 13-MAR-1997
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: S. MENARD	DRAWN BY: B. MCAVOY
	SHEET: 67 OF 152

: Sheet Number: 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
416+95 RT	~~EXIT~~ GROTON	1	60	7.5	3.125 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															VD-024		E-124
	0000 0000 0000	1	6	8	0.33 9/2/98																											VD-700		E-138
	0000 0000 0000	1	6	8	0.33 9/2/98																											VD-700		E-138
TH 5 0+38 LT	STOP	1	30	30	6.25 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															RI-1		E-143
TH 5 0+44 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.0 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															VR-017		E-141
419+00 RT	EAST	1	24	12	2.0 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															M3-2		E-136
	302	1	30	24	5.0 9/2/98																											M1-4		E-136
421+00 RT	SPEED LIMIT 50	1	24	30	5.0 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															R2-1		E-142
	~~STOP~~																																		
424+00 RT	SCHOOL BUS STOP AHEAD	1	30	30	6.25 9/2/98						1 14			9/2/98 X 48			~~X~~	~~1~~															S3-1		E-153
439+00 LT	SCHOOL BUS STOP AHEAD	1	30	30	6.25 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															S3-1		E-153
												LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 39.535	SF	EA.	SF				LB ~~281~~ 300			LB ~~281~~					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

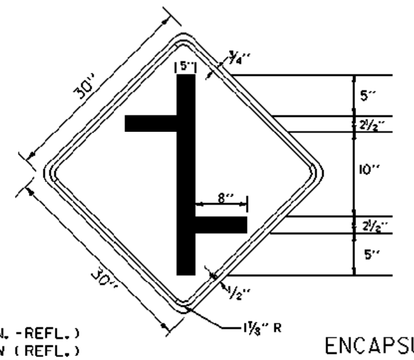
PROJECT: GROTON - RYEGATE	PROJECT NO.: STP F 026-1(30)
DESIGN FILE NAME: /sqdc/78d073/dd073.dgn	
IPARM FILE NAME: dd073ts3.i	PLOT DATE: 13-MAR-1997
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: S. MENARD	DRAWN BY: B. MCAVOY
	SHEET: 68 OF 152

Sheet Number: 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) lb/ft FOUNDATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REFRAMED REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
488+30 RT	ERECT SALVAGE						9/2/98 L				~~1~~ ~~2~~ 18			9/2/98 X 54			~~X~~	~~1~~																NEW POSTS ONLY		
	ERECT SALVAGE	~~1~~	~~24~~	~~36~~	~~6.0~~		9/2/98 1																											VR-023		E-144
431+00 RT	STOP		30	30	6.25																													ORDERED FOR TH. TH THROWN UP. PAYED FOR SIGN GAVE TO STATE		
490+65 LT	SPEED LIMIT 50	1	24	30	9/2/98 5.0						1 14			9/2/98 X 42			~~X~~	~~1~~																	R2-1		E-142
	SHEET 66 SHEET 67				41.83 36.33		2							174 306																							
	SHEET 68				39.535									300																							
	SHEET 69				11.25		2							96																							
	PROJECT TOTALS				128.945		4							876																							



COLORS

LEGEND - BLACK (NON.-REFL.)
BACKGROUND - YELLOW (REFL.)
REFER TO STD. E-150 FOR MATERIALS AND SPECIFICATIONS

ENCAPSULATED LENS

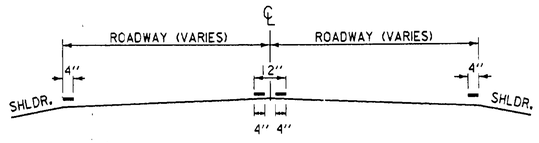
DETAIL B
NOT TO SCALE

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

		LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB		LB	LB	LB	LB																			
TOTALS	SF ~~11.0~~ 11.25	SF	EA. ~~1~~ 2	SF		LB ~~148~~ 96			LB ~~148~~			LB	EA.	LB				EA.	EA.	LB																		

PROJECT: GROTON - RYEGATE	PROJECT NO.: STP F 026-1(30)
DESIGN FILE NAME: /sqdc/78d073/dd073.dgn IPARM FILE NAME: dd073ts4.i SURVEYED BY: SQUAD LEADER: S. MENARD	PLOT DATE: 13-MAR-1997 SURVEY DATE: DRAWN BY: B. MCAVOY SHEET: 69 OF 152

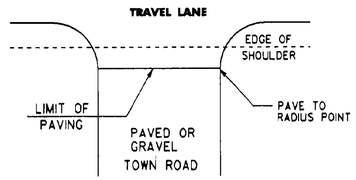
: Sheet Number: 69



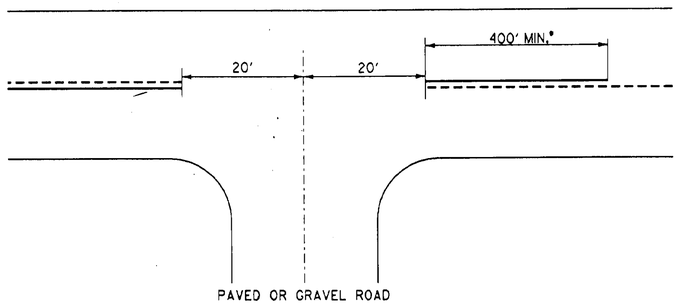
PAVEMENT MARKING PLACEMENT DETAIL

TRAFFIC NOTES

NOT TO SCALE



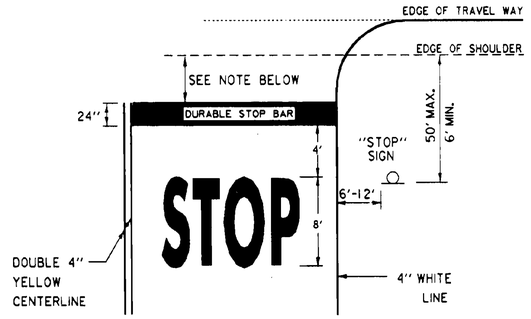
PAVING LIMITS FOR TOWN ROADS



A SOLID LINE IN THE DIRECTION OF TRAVEL IS BEGUN AT A LOCATION 400 FEET IN ADVANCE OF THE INTERSECTION. THE DISTANCE IS MEASURED FROM A POINT 20 FEET IN ADVANCE OF THE CENTERLINE OF THE INTERSECTING ROADWAY.

* CENTERLINE TREATMENT SHALL CONSIST OF A MINIMUM OF 400 FEET OF SOLID LINE IN ADVANCE OF THE INTERSECTION AND SHALL BE PAIRED WITH EITHER A SOLID OR DASHED LINE DEPENDING ON SIGHT DISTANCE AVAILABILITY IN THE OPPOSING LANE.

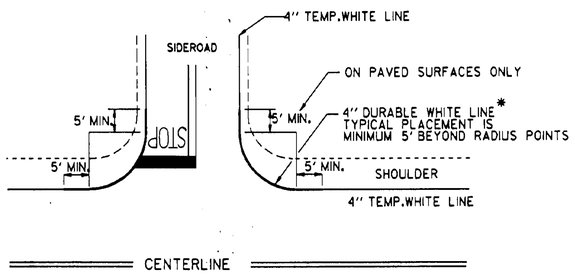
APPROACH TO A SIDE ROAD INTERSECTION



THE "DESIRED STOPPING POINT" IS THE LOCATION BASED ON SITE CONDITIONS THAT BEST ALLOWS THE STOPPED VEHICLE TO VIEW THE APPROACHING TRAFFIC , IN NO CASE MORE THAN 30 FEET OR LESS THAN 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.

PAVEMENT MARKING DETAILS

(SEE TRAFFIC NOTE "F")



* FOR ALL PAVED CLASS 1 & CLASS 2 TOWN HIGHWAYS AND ANY CLASS 3 TOWN HIGHWAY WIDER THAN 22 FEET.

DURABLE EDGELINE RADIUS LAYOUT TYPICAL

GUIDELINES FOR MINIMUM INTERIM PAVEMENT MARKINGS FOR CONSTRUCTION ZONES

A. DEFINITION - INTERIM MARKINGS ARE MARKINGS THAT ARE PLACED PRIOR TO THE APPLICATION OF FINAL PAVEMENT MARKINGS ON THE WEARING COURSE AS SPECIFIED IN THE PROJECT PLANS. THE COST ASSOCIATED WITH THE INTERIM MARKINGS INCLUDING MATERIAL COST, PLACEMENT COSTS, AND REMOVAL COSTS SHALL BE SUBSIDIARY TO THE SPECIFIED FINAL PAVEMENT MARKINGS.

B. INTERIM MARKINGS SHALL CONSIST OF TAPE, OR, TEMPORARY RAISED PAVEMENT MARKERS (RPM'S).

THE TAPE SHALL BE OF A TYPE EASILY REMOVED IF PLACED ON THE FINAL PAVEMENT SURFACE. INTERIM TAPE MARKINGS OR RPM'S WILL BE OFFSET AND REMOVED IMMEDIATELY UPON APPLICATION OF THE SPECIFIED FINAL MARKINGS AND SHALL BE APPLIED AS DESCRIBED BELOW.

STATEMENTS A OR B PERTAIN TO THE PAVEMENT MARKINGS PLACED ON THE WEARING COURSE. MARKINGS PLACED ON THE BASE COURSE OR VARIOUS LIFTS OF PAVEMENT MAY CONSIST OF TAPE, PAINT OR RPM'S. IF TAPE IS USED, IT SHALL THE TYPE THAT CAN BE PAVED OVER OR A TYPE EASILY REMOVED. IF RPM'S ARE USED, PAYMENT SHALL BE THE LINEAR RATE AS IF A SOLID LINE WAS APPLIED.

C. CENTERLINE AND GORE AREA MARKINGS SHALL BE APPLIED AT THE END OF EACH WORKING DAY. THE FOLLOWING LAYOUT REQUIREMENTS SHALL BE MET:

NO PASSING ZONE
- -SOLID STRIPES- DOUBLE YELLOW REMOVABLE PAVEMENT MARKING TAPE LINES SPACED 4" APART.

OR
- -RAISED PAVEMENT MARKERS- IN NO CASE SHALL TEMPORARY RAISED PAVEMENT MARKERS BE USED FOR MORE THAN THREE CALENDAR DAYS BEFORE THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

RAISED PAVEMENT MARKERS (REMOVABLE) WHEN USED, SHALL BE PLACED ON 5'CENTERS WITH EVERY 4TH MARKER BEING REFLECTORIZED. THE RAISED PAVEMENT MARKINGS SHALL BE SUPPLEMENTED WITH BLACK ON ORANGE "DO NOT PASS" SIGNS PLACED AT THE BEGINNING OF THE NO PASSING ZONE AND EVERY 1000' THEREAFTER THROUGHOUT THE NO PASSING ZONE. ALL TEMPORARY RAISED PAVEMENT MARKERS SHALL BE REMOVED IMMEDIATELY UPON PLACEMENT OF THE SPECIFIED FINAL MARKINGS, ALL COSTS ASSOCIATED WITH "DO NOT PASS" SIGNS AND THEIR INSTALLATION SHALL BE SUBSIDIARY TO THE SPECIFIED FINAL PAVEMENT MARKINGS.

DASHED LINE
- -10-FOOT SOLID LINE WITH 30-FOOT GAP.

OR
- FOR MARKINGS TO BE USED FOR THREE DAYS OR LESS
- -4 FOOT SOLID LINE WITH 36 FOOT GAP TO BE REMOVED IMMEDIATELY UPON THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

OR
- -4 RETRO-REFLECTIVE RPM'S ON THREE FOOT CENTERS WITH A 30 FOOT GAP TO BE REMOVED IMMEDIATELY UPON THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

GORE AREAS
GORE AREAS TO INCLUDE 8" CHANNELIZING LINE AND 4" DASHED LINE. SEE STANDARD E-191.

D. EDGE LINES
UNLESS SPECIFIED, FINAL EDGE LINES ARE NOT REQUIRED UNTIL COMPLETION OF THE PROJECT. EDGE LINES HOWEVER SHOULD BE APPLIED AT THE END OF THE DAY. WHERE TRAFFIC VOLUMES ARE HIGH AND/OR A DELAY OF SEVERAL DAYS IS ANTICIPATED, IN THESE INSTANCES, TAPE, PAINT OR RPM'S CAN BE USED AS THE MARKING. MATERIAL QUANTITIES ARE TO BE PAID UNDER THE APPROPRIATE BID ITEM FOR TEMPORARY LINES. RPM'S SHOULD BE RETRO-REFLECTIVE TEMPORARY MARKERS ON A 5' SPACING PATTERN AND THE SAME COLOR AS THE LINE THEY ARE SUBSTITUTING FOR.

E. PRIOR TO ACCEPTANCE, THE PAVEMENT MARKINGS SHALL BE COMPLETED FOR THE ENTIRE PROJECT BY THE CONTRACTOR AS DETAILED ON THE PLANS OR DIRECTED BY THE RESIDENT ENGINEER.

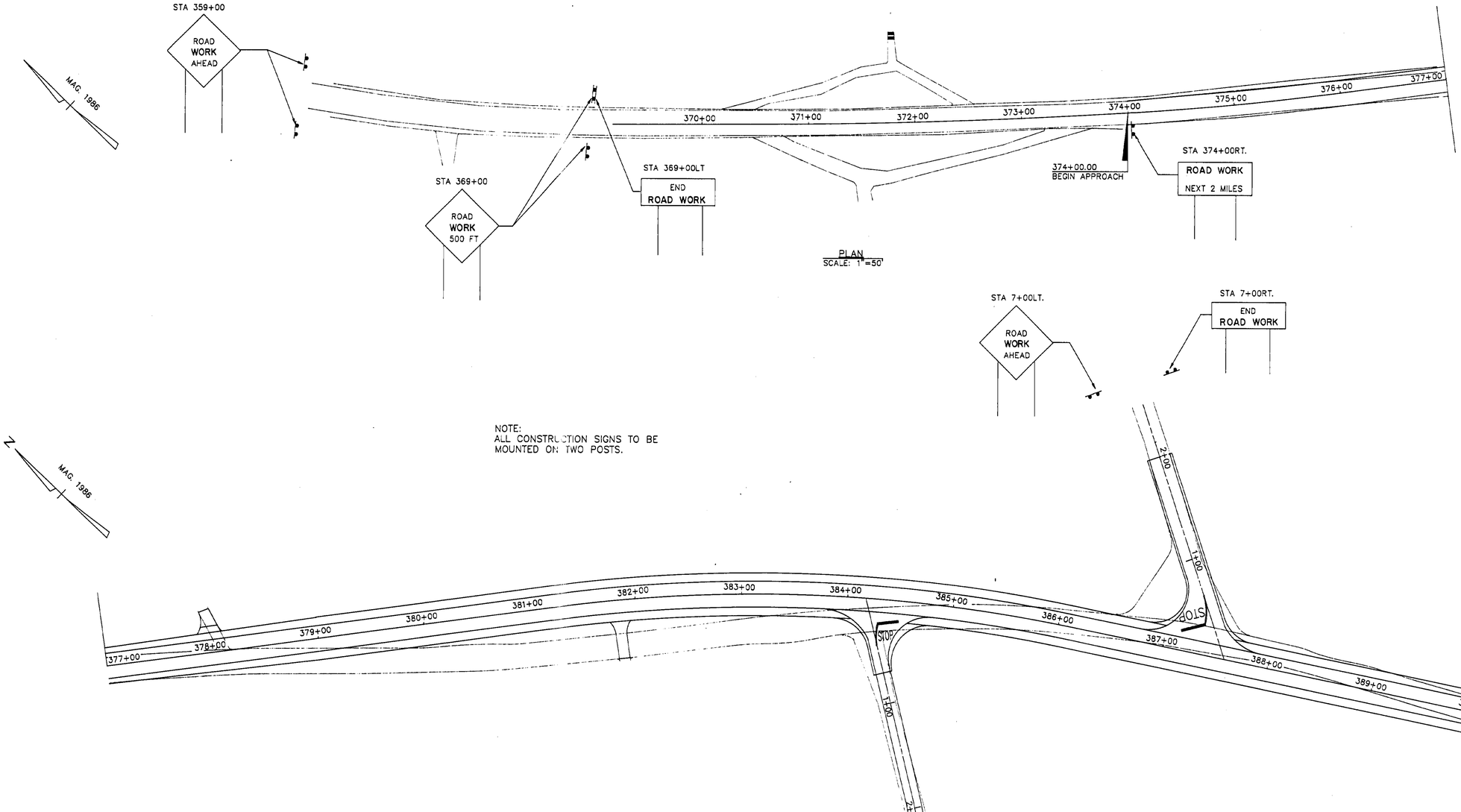
F. THE DURABLE STOP BAR SHALL BE APPLIED AT ALL SIDEROAD LOCATIONS, BUT THE DURABLE "STOP" MARKINGS ARE TO BE APPLIED ONLY ON PAVED SIDEROADS OR AS DIRECTED BY THE RESIDENT ENGINEER.

MASHMA.DGN

REVISIONS

DELETED DRIVE DETAIL
REVISED STOPBAR - CL
07/11/89
NOTES CHANGED, SIGN ADDED
10/03/89 DAR

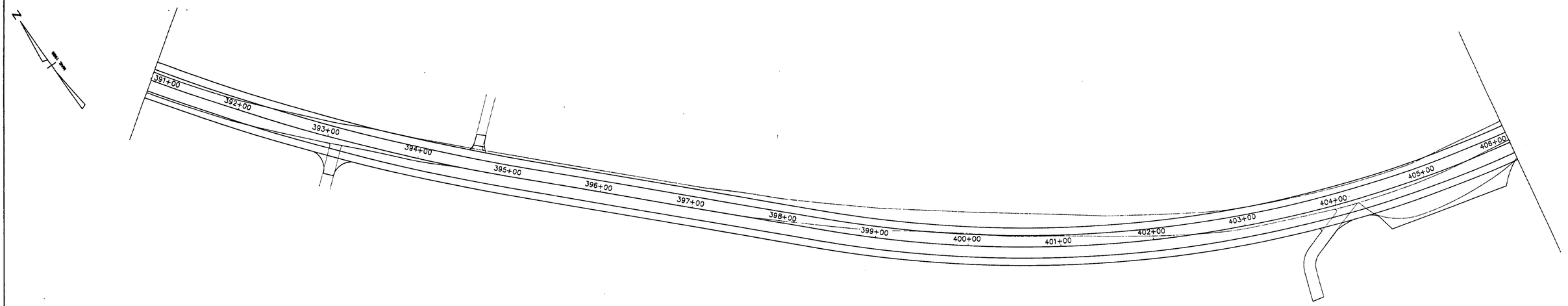
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
SQUAD LEADER _____
DESIGN FILE NO. _____ DATE PLOTTED _____
PROJ. NAME
PROJ. NO. TRAFFIC SHEET 7 OF 7
SHEET 70 OF 152 SHEETS



NOTE:
ALL CONSTRUCTION SIGNS TO BE MOUNTED ON TWO POSTS.

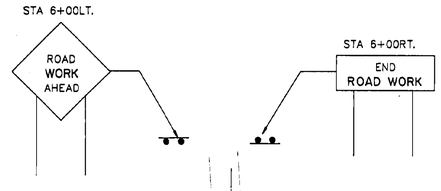
TRAFFIC SHEETS

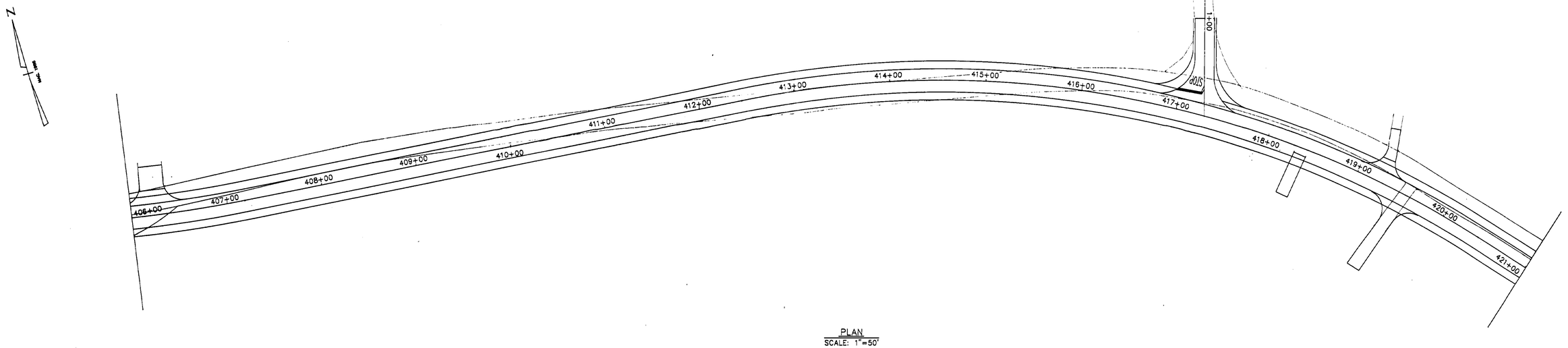
PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)
SHEET 71 OF 152 SHEETS
CONSTRUCTION SHT. 1 OF 4



PLAN
SCALE: 1"=50'

NOTE:
ALL CONSTRUCTION SIGNS TO BE MOUNTED ON TWO POSTS.





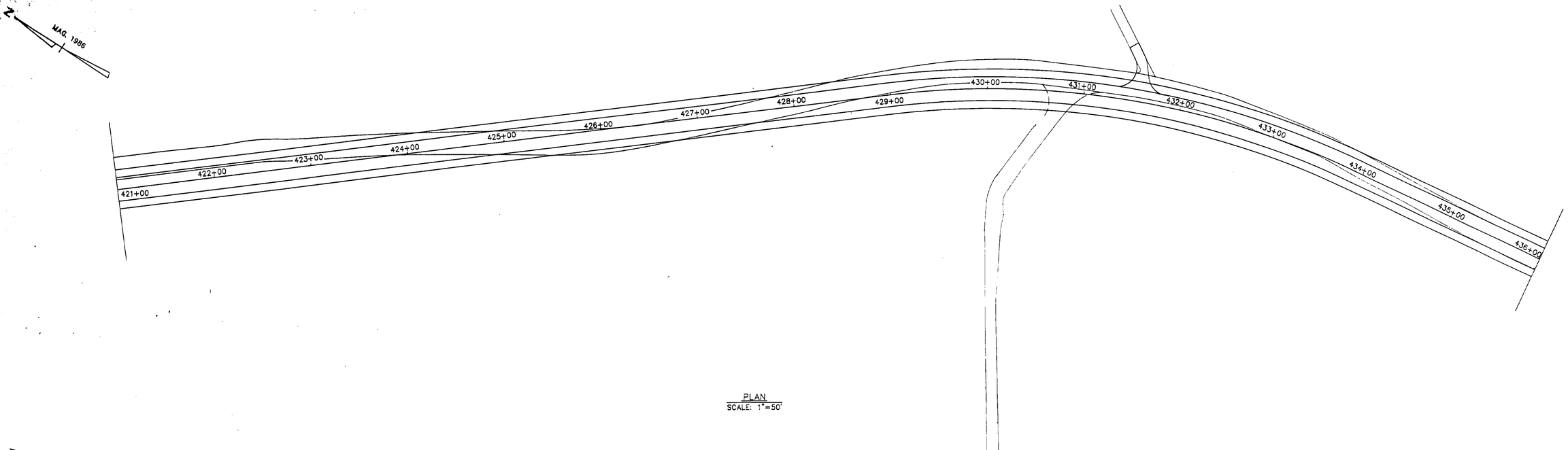
PLAN
SCALE: 1"=50'

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)

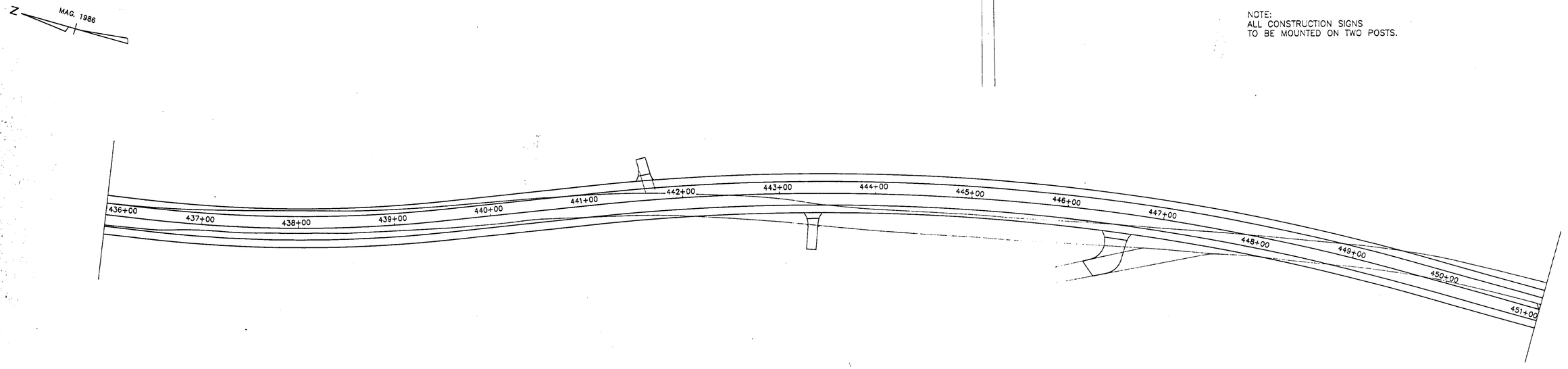
SHEET 72 OF 152 SHEETS

CONSTRUCTION SHT. 2 OF 4



PLAN
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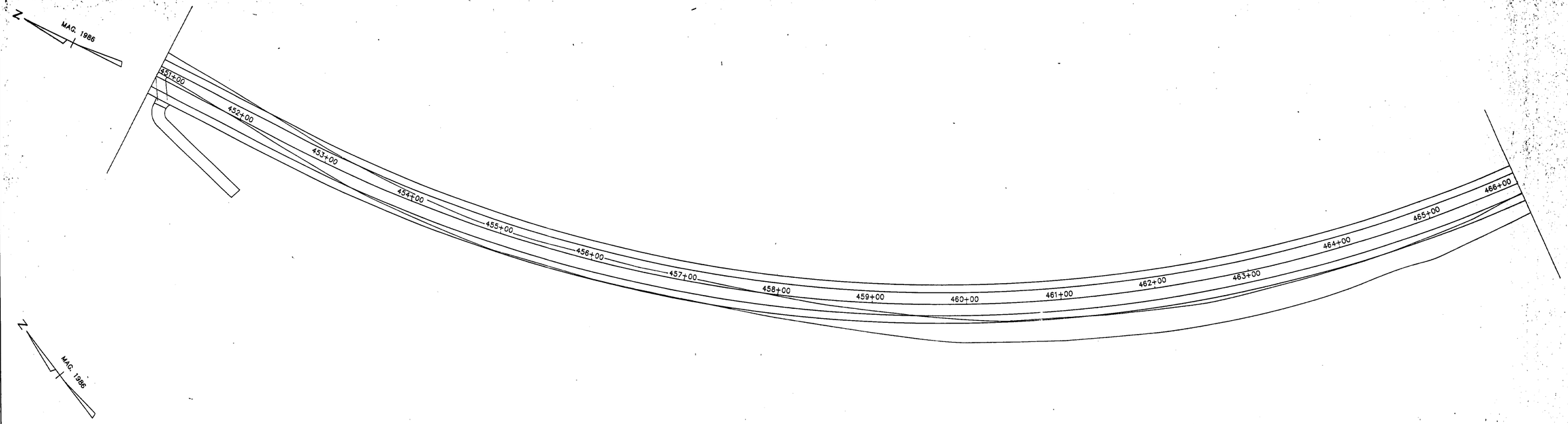
NOTE:
ALL CONSTRUCTION SIGNS
TO BE MOUNTED ON TWO POSTS.



PLAN
SCALE: 1"=50'

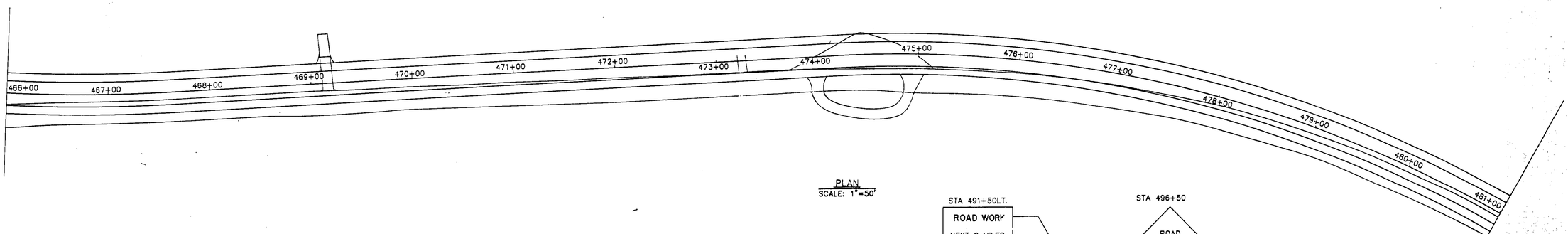
TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)
SHEET 73 OF 152 SHEETS
CONSTRUCTION SHT. 3 OF 4

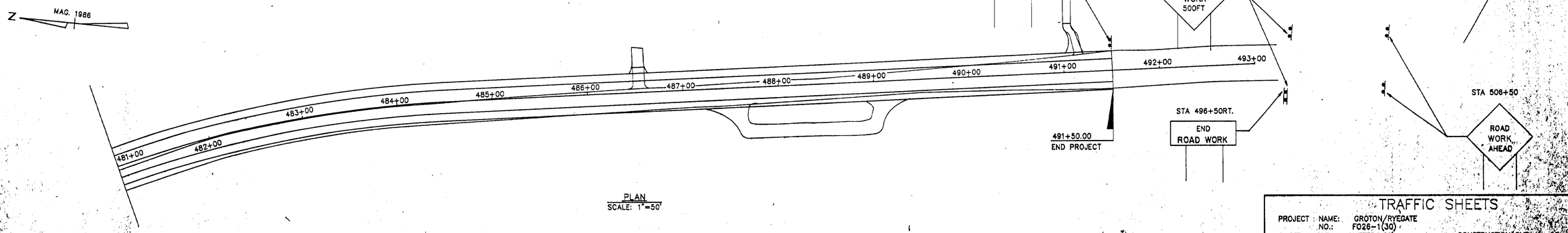


PLAN
SCALE: 1"=50'

NOTE:
ALL CONSTRUCTION SIGNS TO BE MOUNTED ON TWO POSTS.



PLAN
SCALE: 1"=50'



PLAN
SCALE: 1"=50'

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: FO26-1(30)

SHEET 74 OF 152 SHEETS

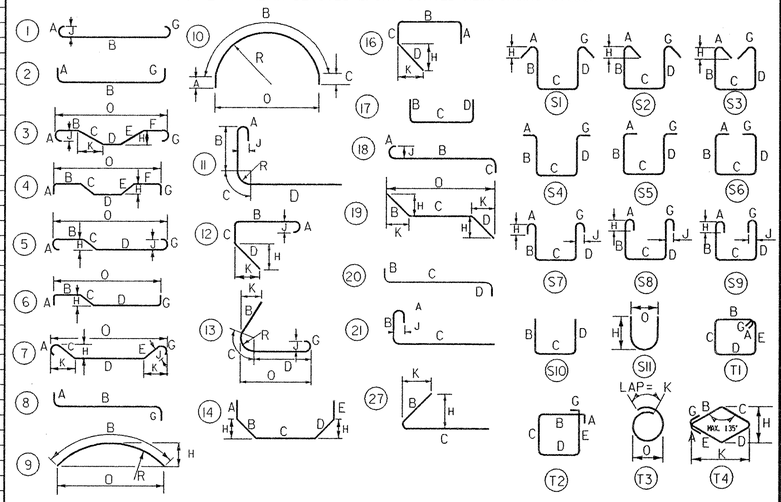
CONSTRUCTION SHT. 4 OF 4

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN: CLARK HATCH BROOK	QUANTITY BREAKDOWN: DARIUS JAMES BROOK	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CY	670	1080	1750	
203.32	GRANULAR BORROW	CY	1120	760	1880	
204.25	STRUCTURE EXCAVATION	CY	370	740	1110	
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY	56	60	116	
501.25	CONCRETE, CLASS B	CY	29	33	62	
507.15	REINFORCING STEEL	LB	3600	480	4080	
511.25	84" CORRUGATED ALUMINUM ALLOY PLATE PIPE (120 LF X 7356 LBS)	EA	1		1	
511.30	14'-0"x 8'-7" CORR. ALUM. ALLOY PLATE PIPE ARCH (90 LF = 9306 LBS)	EA		1	1	
528.11	TWO-WAY TEMPORARY BRIDGE @ STA. 388+25	LS	1		1	
528.11	TWO-WAY TEMPORARY BRIDGE @ STA. 418+36	LS		1	1	
529.15	REMOVAL OF STRUCTURE @ STA. 388+25	EA	1		1	
529.15	REMOVAL OF STRUCTURE @ STA. 418+36	EA		1	1	
613.11	STONE FILL, TYPE II	CY	40	320	360	
613.12	STONE FILL, TYPE III	CY		370	370	
613.13	STONE FILL, TYPE IV	CY	900		900	
649.31	GEOTEXTILE UNDER STONE FILL	SY	700	960	1660	
651.40	GRUBBING MATERIAL	SY	110	190	300	

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	G	H	K
				PIPE INLET HEADWALL								
*	40	5	7-9	IHW503	STR							
	14	5	14-3	IHW505	STR							
	18	5	13-3	IHW506	STR							
	14	5	6-3	IHW507	STR							
	18	5	5-1	IHW508	STR							
	20	5	7-11	IHW501	17			4-6	3-5			
	19	5	5-2	IHW502	17		3-5	1-9				
	9	5	2-9	IHW504	S10		1-0	0-9	1-0			
*	40	6	5-6	IHW601	STR							
				PIPE OUTLET HEADWALL								
*	51	5	7-9	OHW503	STR							
	14	5	24-0	OHW505	STR							
	18	5	24-0	OHW506	STR							
	25	5	7-11	OHW501	17			4-6	3-5			
	25	5	5-2	OHW502	17		3-5	1-9				
	10	5	2-9	OHW504	S10		1-0	0-9	1-0			
*	50	6	5-6	OHW601	STR							
				PIPE ARCH HEADWALLS								
△	6	5	25-6	HW501	STR							
△	8	6	25-6	HW601	STR							

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-91). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

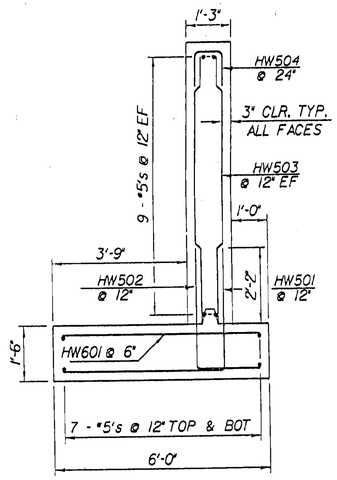
Town Of GROTON-RYEGATE	Bridge No.
	Log Sta.
Highway No. US 302	Surv. Sta. 388+00 & 418+20

US 302 OVER CLARK HATCH & DARIUS JAMES

QUANTITY AND REINFORCING SHEET

Designed By RSD & R WHITCOMB	Drawn By G. ROY
Checked By R. WHITCOMB Date 2/96	Bridge Design Supervisor J. H. WEAVER Date 2/96
PROJECT GROTON- RYEGATE	PROJECT NO. F 026 - 1(30)
I.G.C. Info. /str3/78d073/sd073.dgn	sd073q1
Bridge Sheet No. 1 OF 5	Sheet 75 of 152

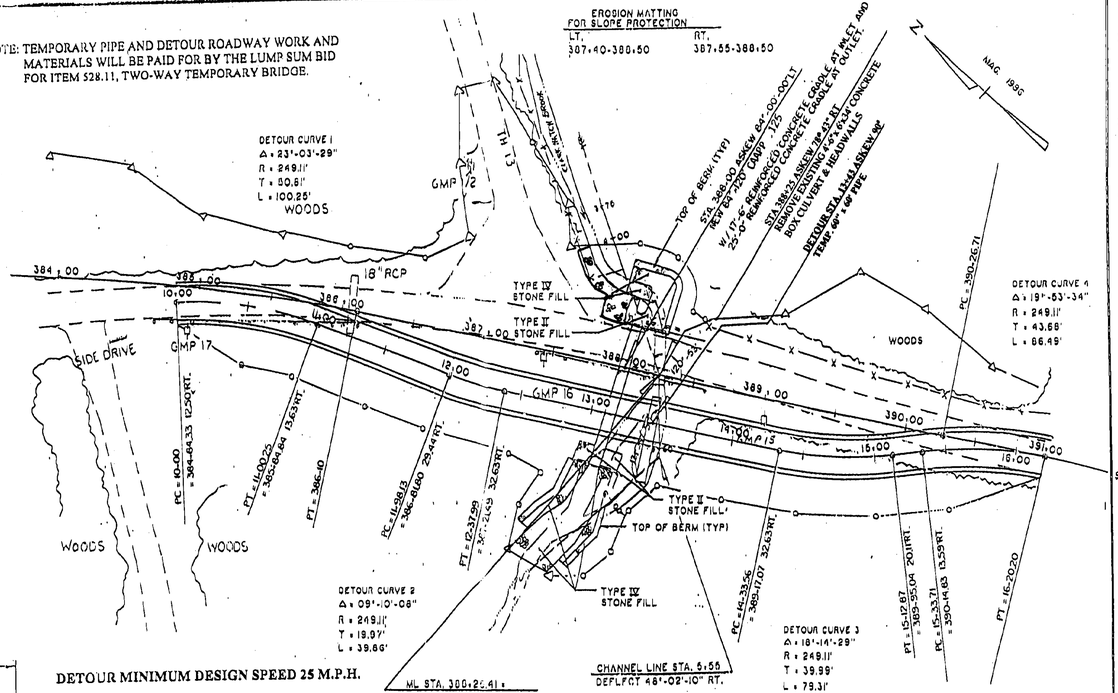
PLOTTED 12-MAR-1997



HEADWALL TYPICAL SECTION

1/2" = 1'-0"

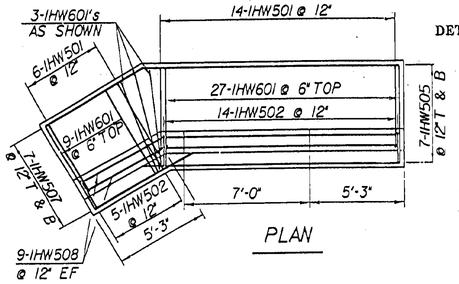
NOTE: TEMPORARY PIPE AND DETOUR ROADWAY WORK AND MATERIALS WILL BE PAID FOR BY THE LUMP SUM BID FOR ITEM 528.11, TWO-WAY TEMPORARY BRIDGE.



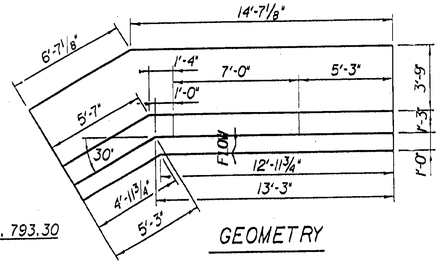
DETOUR PLAN

1" = 50'

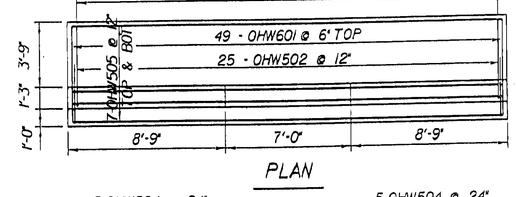
DETOUR MINIMUM DESIGN SPEED 25 M.P.H.



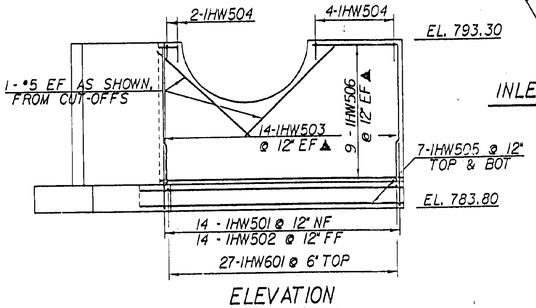
PLAN



GEOMETRY



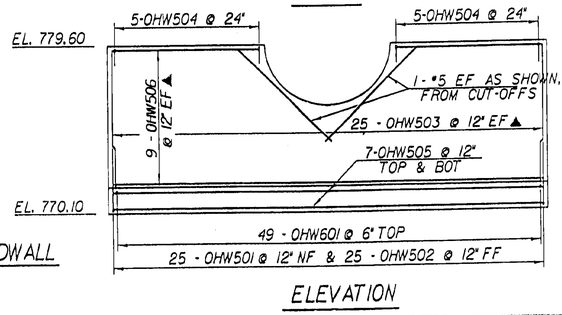
PLAN



INLET HEADWALL

1/4" = 1'-0"

ELEVATION



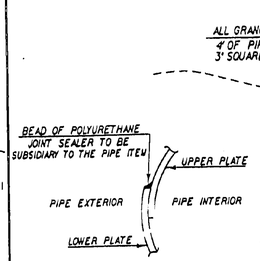
OUTLET HEADWALL

1/4" = 1'-0"

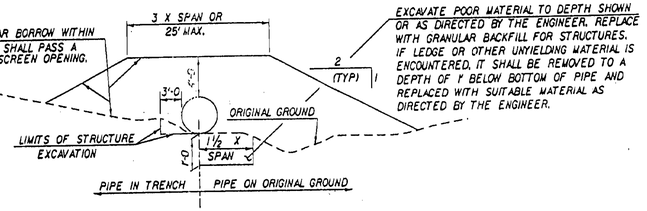
ELEVATION

~ NOTES ~

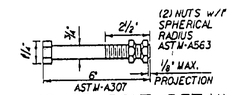
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AND THE LATEST A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGWAY BRIDGES. DESIGN IS FOR HS-25 LIVE LOAD.
2. UNLESS OTHERWISE INDICATED, 5 1/3 BOLTS PER LINEAR FOOT FOR ALUMINUM PLATES ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH BOLTS MEETING ASTM A-307 (GALVANIZED AFTER FABRICATION).
3. IN LONGITUDINAL JOINTS LOCATED AT THE SPRING LINE OF PLATE PIPE ARCHES OR WITHIN 20° OF HORIZONTAL ON PIPES, THE BOLT NEAREST THE VISIBLE EDGE OF LAPPED JOINTS, AS VIEWED FROM INSIDE THE PIPE, SHALL BE PLACED IN THE VALLEY OF THE CORRUGATIONS.
4. WHEN NORMAL CONSTRUCTION OR REGULAR TRAFFIC IS MAINTAINED OVER THE PIPE THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF THREE (3) FEET OF COMPACTED MATERIAL.
5. ALUMINUM PIPE WHICH IS TO BE IN CONTACT WITH CONCRETE SHALL HAVE CONTACT SURFACES THOROUGHLY COATED WITH BITUMINOUS OR ASPHALTIC PAINT.
6. PIPES SHALL BE FACTORY ELONGATED 5% (PIPE ARCHES SHALL NOT BE ELONGATED).
7. THE ENDS OF THE PIPE SHALL BE CUT SQUARE.
8. THE CONTRACTOR SHALL INCLUDE AT THE OUTLET END, A 10 FOOT PIECE OF 6" UNDERDRAIN EACH SIDE ON SAME GRADIENT AS CULVERT CONFORMING TO SUBSECTIONS 711.01. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CULVERT PIPE.



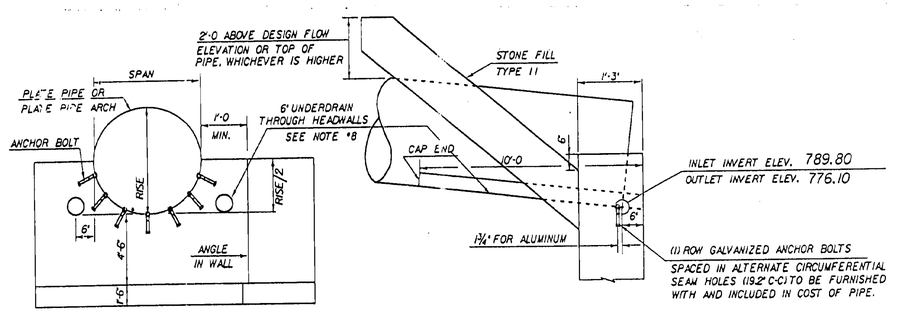
LAP DETAIL



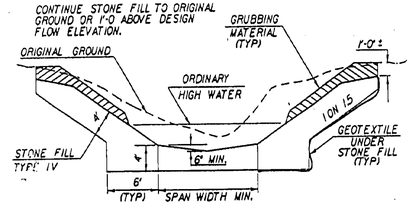
EXCAVATION AND BACKFILL DETAILS



ANCHOR BOLT DETAIL



CRADLE HEADWALL DETAILS



TYPICAL CHANNEL SECTION

~ HYDRAULIC DATA ~

DRAINAGE AREA	1.25 SQ MI	DESIGN FLOW Q 50	DESIGN OUTLET VELOCITY 23.8 FPS
DESIGN TAILWATER DEPTH	2.1 FT	ELEVATION	778.2
ORDINARY HIGH WATER DEPTH	0.5 FT		
Q 10 FLOW	160 CFS	HEADWATER ELEVATION	794.84
Q 25 FLOW	200 CFS	HEADWATER ELEVATION	795.61
Q 50 FLOW	275 CFS	HEADWATER ELEVATION	797.08
Q 100 FLOW	300. CFS	HEADWATER ELEVATION	797.50
COMMENTS			

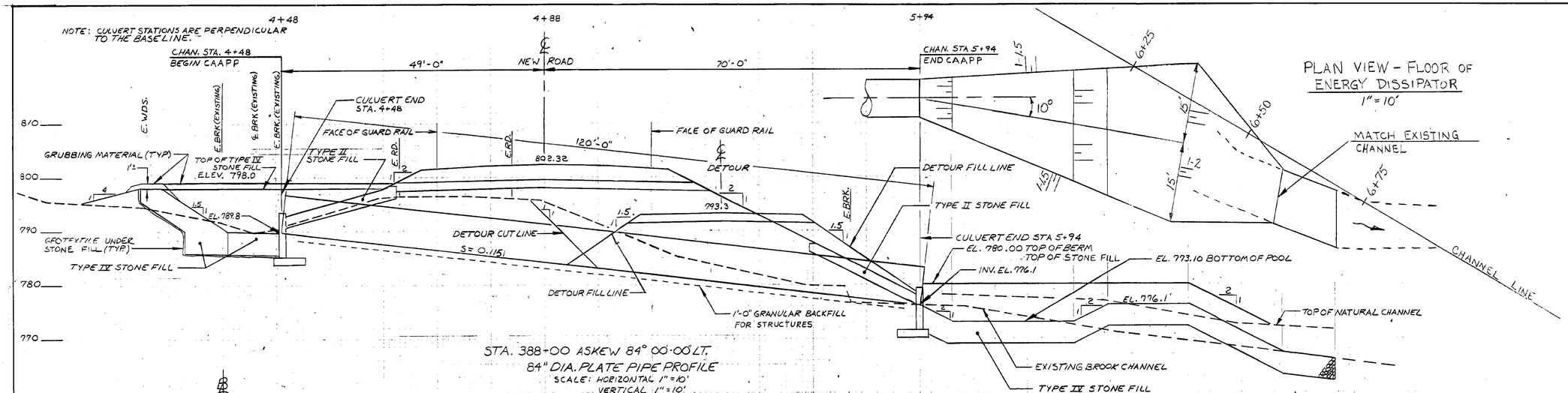
DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

	ALUMINUM
CORRUGATIONS	9" x 2 1/2"
SIZE OF PIPE OR PIPE ARCH	84"
WATERWAY AREA	38.5 SF
PLATE THICKNESS (COATED)	0.125"
BOLT SIZE	3/4"
WEIGHT PER LINEAR FOOT	61.3 LBS.
TOTAL WEIGHT	7356 LBS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

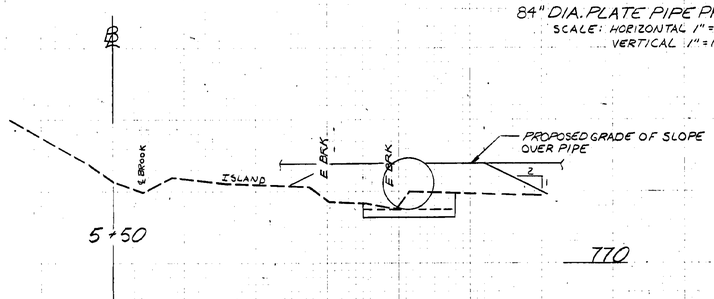
Town Of GROTON	Bridge No.
Highway No. US 302	Log Sta. Surv. Sta. 388+00
US 302 OVER CLARK HATCH BROOK	
DETAILS FOR 84" X 120' CAAPP	
Designed By RSD & R WHITCOMB	Drawn By RAW & R WHITCOMB
Checked By G ROY Date	Bridge Design Supervisor J H WEAVER Date
PROJECT GROTON- RYEGATE	PROJECT NO. F026-1(30)
I.C.C. Info. /str3/78d073/sd073.dgn	sd073pd.l
Bridge Sheet No. 2 OF 5	Sheet 76 of 152

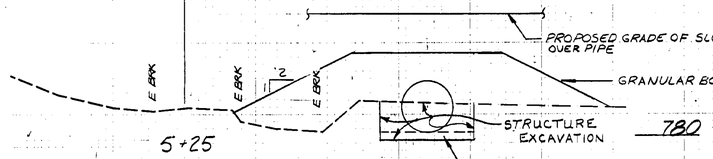
NOTE: CULVERT STATIONS ARE PERPENDICULAR TO THE BASE LINE.



PLAN VIEW - FLOOR OF ENERGY DISSIPATOR
1" = 10'

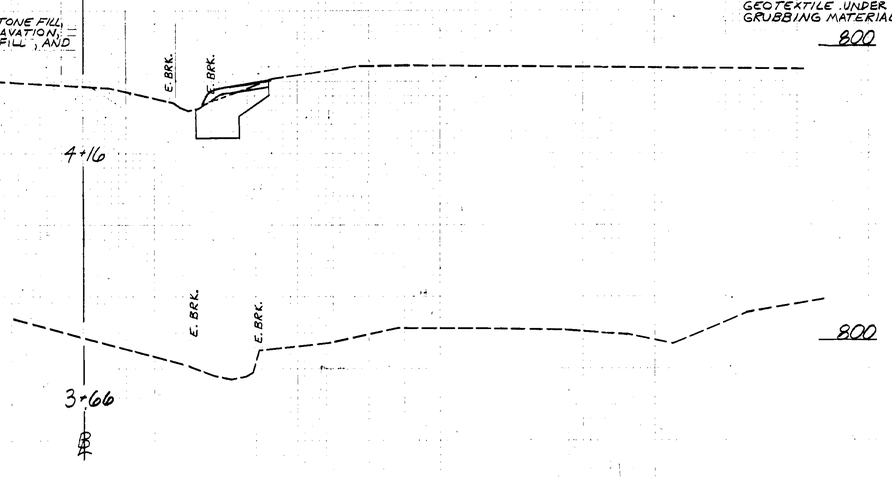
STA. 388+00 ASKEW 84° 00·00 LT.
84" DIA. PLATE PIPE PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'





STA 4+60 LT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE FABRIC FOR FILTERS, AND GRUBBING MATERIAL.

STA 4+20 LT. BEGIN TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.



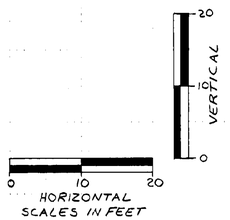
STA 4+70 RT. END TYPE II STONE FILL

STA 4+50 RT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

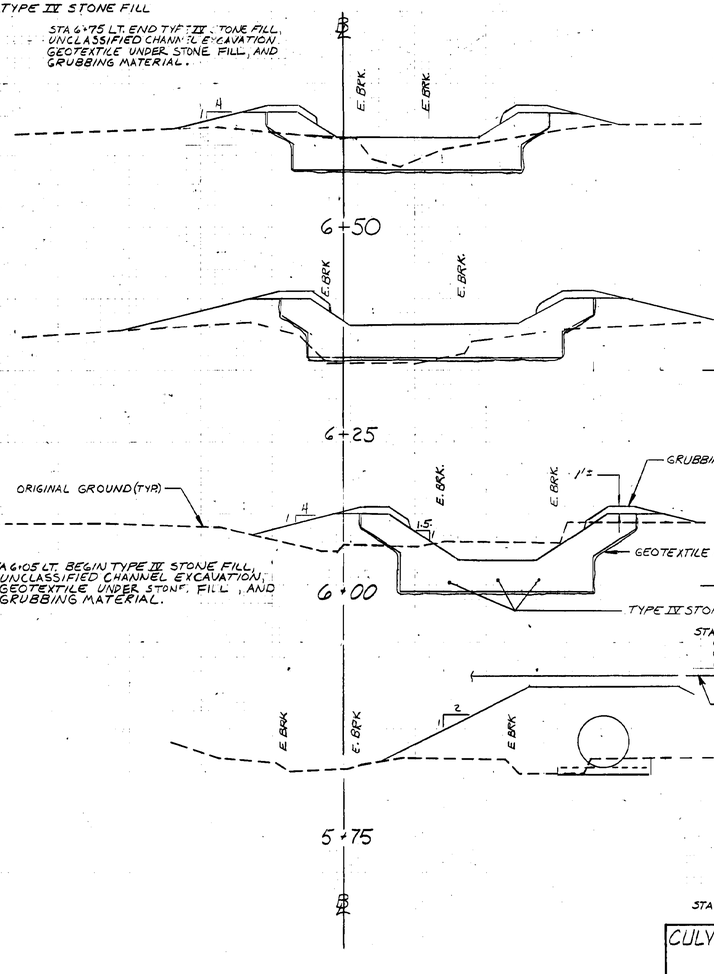
STA 4+45 RT. BEGIN TYPE II STONE FILL

STA 4+00 RT. BEGIN TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

800



STA 6+75 LT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

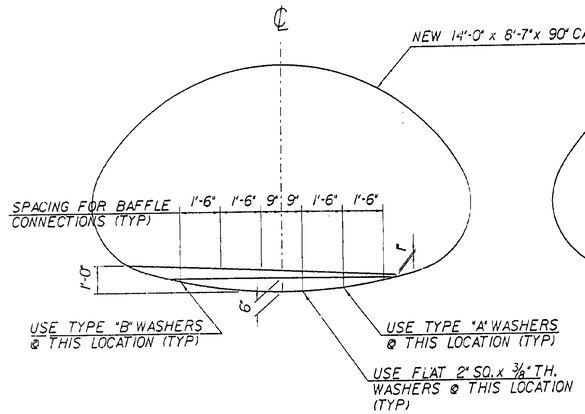


STA 6+75 RT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

770

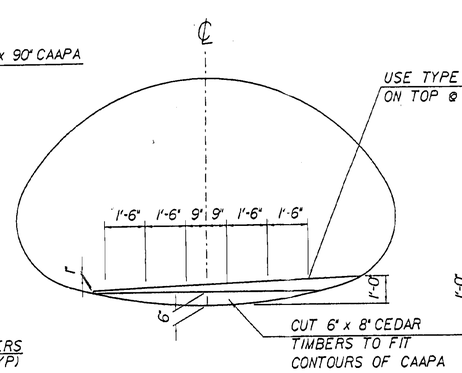
CULVERT PROFILE & CHANNEL SECTIONS
STA. 388+00
CLARK HATCH BROOK

BRIDGE SHEET 3 OF 5 SHEET 77 OF 152.



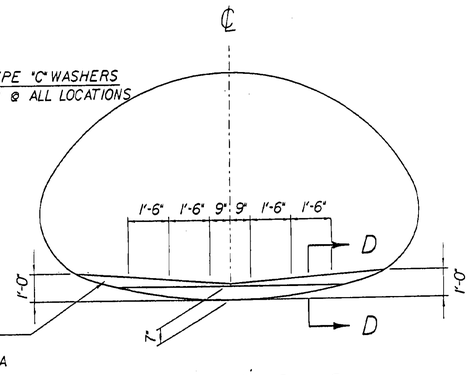
SECTION A - A

3/8" = 1'-0"



SECTION B - B

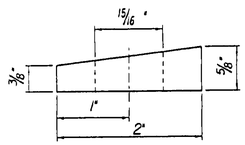
3/8" = 1'-0"



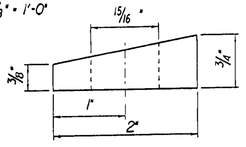
SECTION C - C

3/8" = 1'-0"

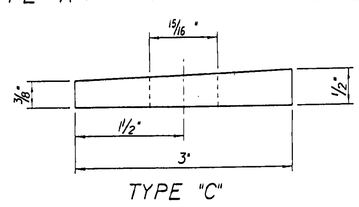
NOTE: ALL ATTACHMENT HARDWARE SHALL BE GALVANIZED AS PER SECTION 506 OF THE STANDARD SPECIFICATIONS.



TYPE "A"



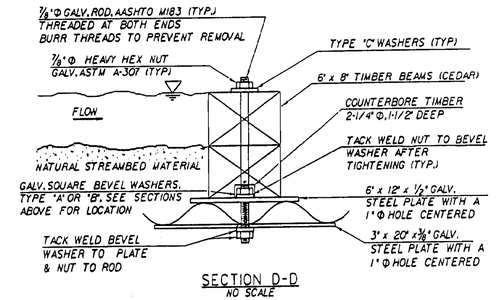
TYPE "B"



TYPE "C"

BEVELED PLATE WASHERS

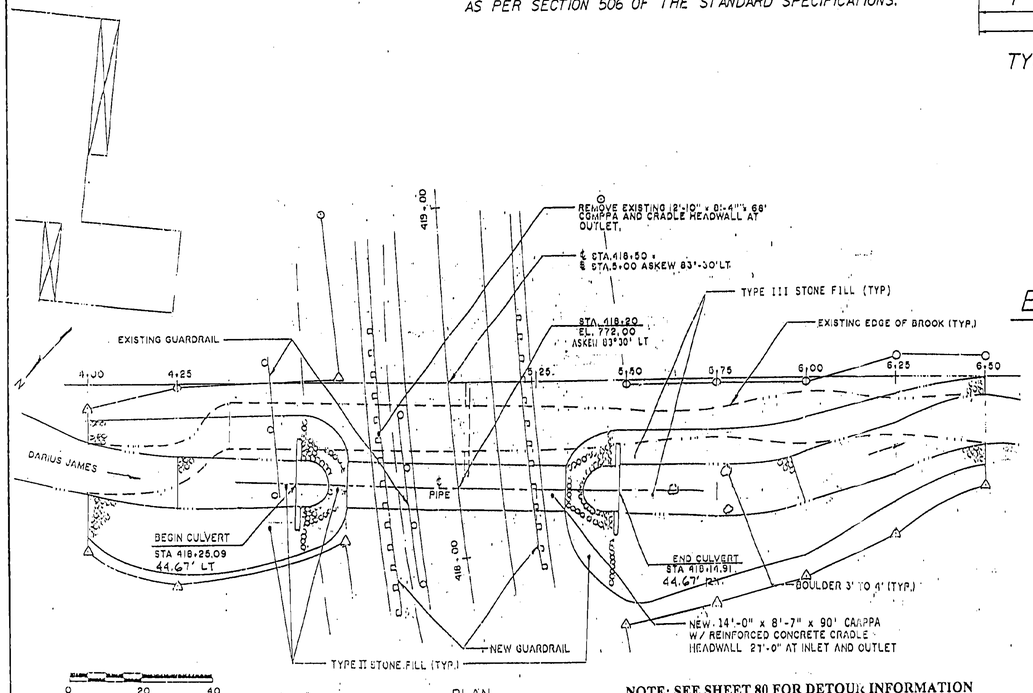
1" = 1"



SECTION D-D

NO SCALE

NOTE: ROD LENGTH AND TIMBER CROSS SECTIONS VARY W/LOCATION OF CROSS SECTION.

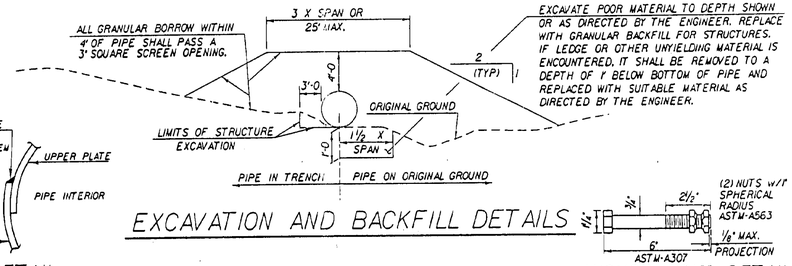


PLAN

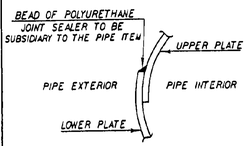
NOTE: SEE SHEET 80 FOR DETOUR INFORMATION

~ NOTES ~

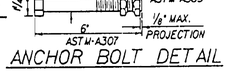
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AND THE LATEST A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGWAY BRIDGES. DESIGN IS FOR HS-25 LIVE LOAD.
2. UNLESS OTHERWISE INDICATED, 5 1/3 BOLTS PER LINEAR FOOT FOR ALUMINUM PLATES ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH BOLTS MEETING ASTM A-307 (GALVANIZED AFTER FABRICATION).
3. IN LONGITUDINAL JOINTS LOCATED AT THE SPRING LINE OF PLATE PIPE ARCHES OR WITHIN 20° OF HORIZONTAL ON PIPES, THE BOLT NEAREST THE VISIBLE EDGE OF LAPPED JOINTS, AS VIEWED FROM INSIDE THE PIPE, SHALL BE PLACED IN THE VALLEY OF THE CORRUGATIONS.
4. WHEN NORMAL CONSTRUCTION OR REGULAR TRAFFIC IS MAINTAINED OVER THE PIPE THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF THREE (3) FEET OF COMPACTED MATERIAL.
5. ALUMINUM PIPE WHICH IS TO BE IN CONTACT WITH CONCRETE SHALL HAVE CONTACT SURFACES THOROUGHLY COATED WITH BITUMINOUS OR ASPHALTIC PAINT.
6. PIPES SHALL BE FACTORY ELONGATED 5% (PIPE ARCHES SHALL NOT BE ELONGATED).
7. THE ENDS OF THE PIPE SHALL BE CUT SQUARE.
8. THE CONTRACTOR SHALL INCLUDE AT THE OUTLET END, A 10 FOOT PIECE OF 6" UNDERDRAIN EACH SIDE ON SAME GRADIENT AS CULVERT CONFORMING TO SUBSECTIONS 711.01. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CULVERT PIPE.



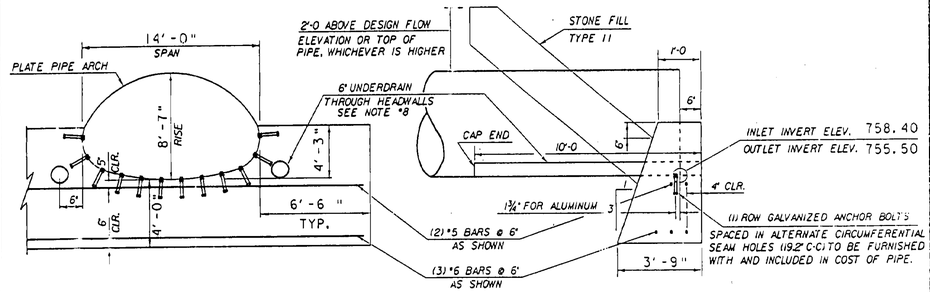
EXCAVATION AND BACKFILL DETAILS



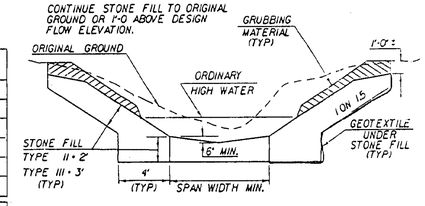
LAP DETAIL



ANCHOR BOLT DETAIL



CRADLE HEADWALL DETAILS



TYPICAL CHANNEL SECTION

REINFORCING STEEL SCHEDULE

NO. PCS.	SIZE	LENGTH	MARK	TYPE
SEE SHEET 1 OF 5				

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
SEE SHEET 1 OF 5				

~ HYDRAULIC DATA ~

DRAINAGE AREA 2.8 SQ. MI. DESIGN FLOW Q_{50} DESIGN OUTLET VELOCITY 13.9 FPS

DESIGN TAILWATER DEPTH 2.9 FT ELEVATION 758.9

ORDINARY HIGH WATER DEPTH 2.0 FT

Q 10 FLOW	311 CFS	HEADWATER ELEVATION	764.0	
Q 25 FLOW	360 CFS	HEADWATER ELEVATION	764.5	
Q 50 FLOW	571 CFS	HEADWATER ELEVATION	766.3	
Q 100 FLOW	587 CFS	HEADWATER ELEVATION	766.5	

COMMENTS

DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

	ALUMINUM
CORRUGATIONS	9" x 2 1/2"
SIZE OF PIPE OR PIPE ARCH	14'-0" x 8'-7"
WATERWAY AREA	94
PLATE THICKNESS (COATED)	0.125"
BOLT SIZE	3/4"
WEIGHT PER LINEAR FOOT	103.4
TOTAL WEIGHT	9306

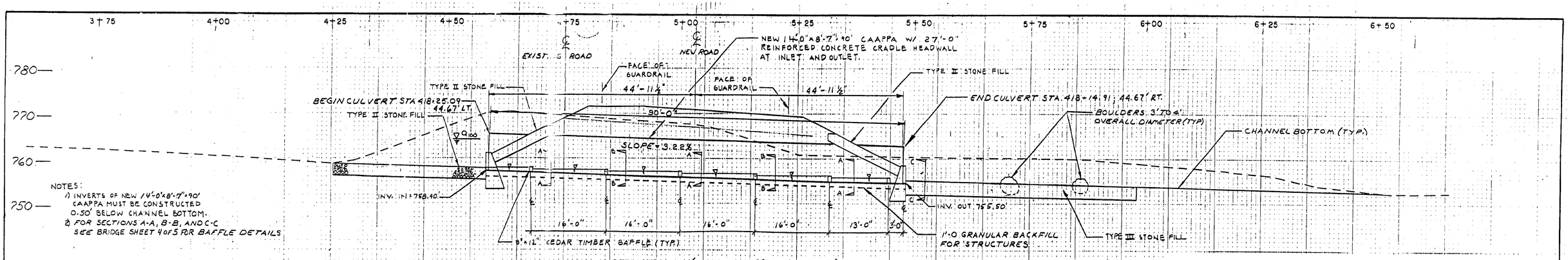
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of RYEGATE	Bridge No.
Highway No. US 302	Log Sta.
	Surv. Sta. 418+20

US 302 OVER DARIUS JAMES BROOK

DETAILS FOR 14'-0" X 8'-7" CAAPA

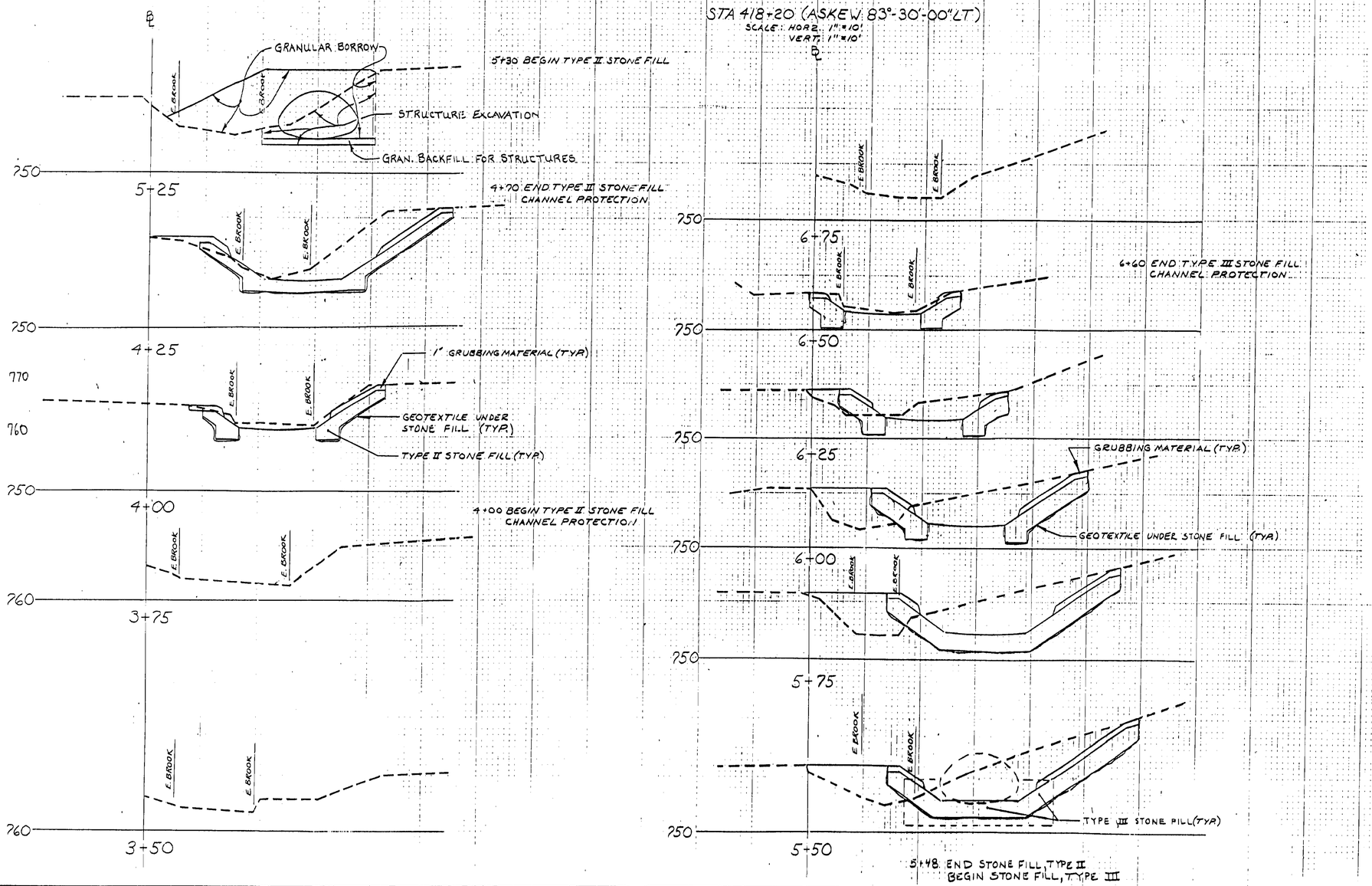
Designed By RSD & R WHITCOMB	Drawn By RAW & R WHITCOMB
Checked By G ROY Date	Bridge Design Supervisor J H WEAVER Date
PROJECT GROTON- RYEGATE	PROJECT NO. F026-1(30)
I.C.C. Info. /str3/78d073/sd073.dgn	sd073adj
Bridge Sheet No. 4 OF 5	Sheet 78 of 152



NOTES:
1) INVERTS OF NEW 14'-0"x8'-7"x40' CAAPPA MUST BE CONSTRUCTED 0.50' BELOW CHANNEL BOTTOM.
2) FOR SECTIONS A-A, B-B, AND C-C SEE BRIDGE SHEET 4 OF 5 FOR BAFFLE DETAILS

STA 418+20 (ASKEW 83°-30'-00"LT)

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

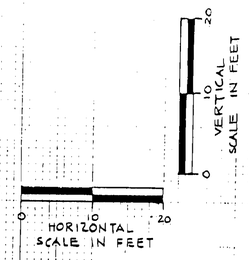


PROPOSED CONSTRUCTION SEQUENCE FOR INSTALLING NEW CAAPPA:

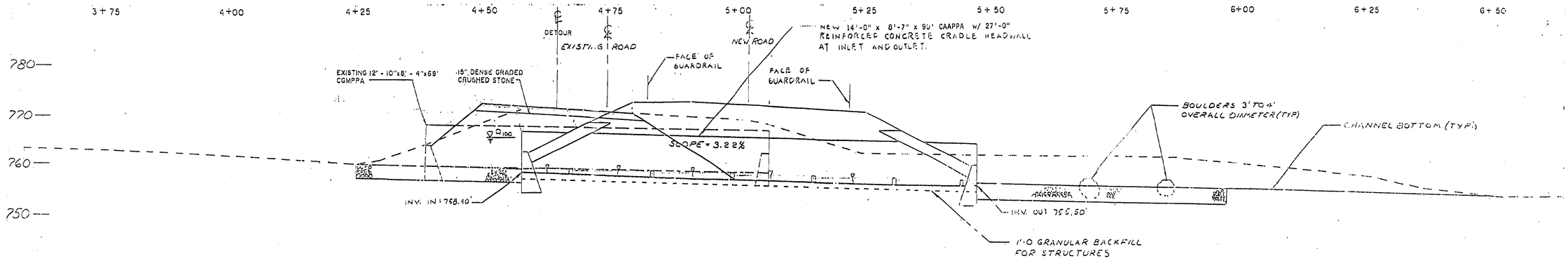
1. CONSTRUCT TWO-WAY DETOUR OVER NORTHERLY END OF EXISTING PIPE.
2. ATTACH PIPE EXTENSION TO THE SOUTHERLY END OF THE EXISTING PIPE. PIPE USED FOR EXTENSION SHALL BE THE SAME SIZE AS EXISTING.
3. INSTALL SOUTHERLY SECTION OF NEW PIPE ARCH.
4. CONSTRUCT NEW ROADWAY EMBANKMENT TO A MINIMUM ELEVATION OF THREE FEET OVER THE NEW PIPE WITH ROADWAY WIDTH AND SUBBASE MATERIAL AS PER SECTION 528 FOR TWO-WAY TRAFFIC.
5. SHIFT TRAFFIC AND INSTALL REMAINDER OF NEW PIPE.
6. DIVERT STREAM FLOW INTO NEW PIPE.
7. REMOVE NORTHERLY END OF EXISTING PIPE TO THE EXTENT POSSIBLE.
8. SHIFT TRAFFIC OVER THE NORTHERLY END OF NEW PIPE AND REMOVE REMAINDER OF EXISTING PIPE AND THE TEMPORARY EXTENSION.
9. CONSTRUCT REMAINDER OF NEW ROADWAY AND FINISH SLOPES.

ADDITIONAL NOTES:

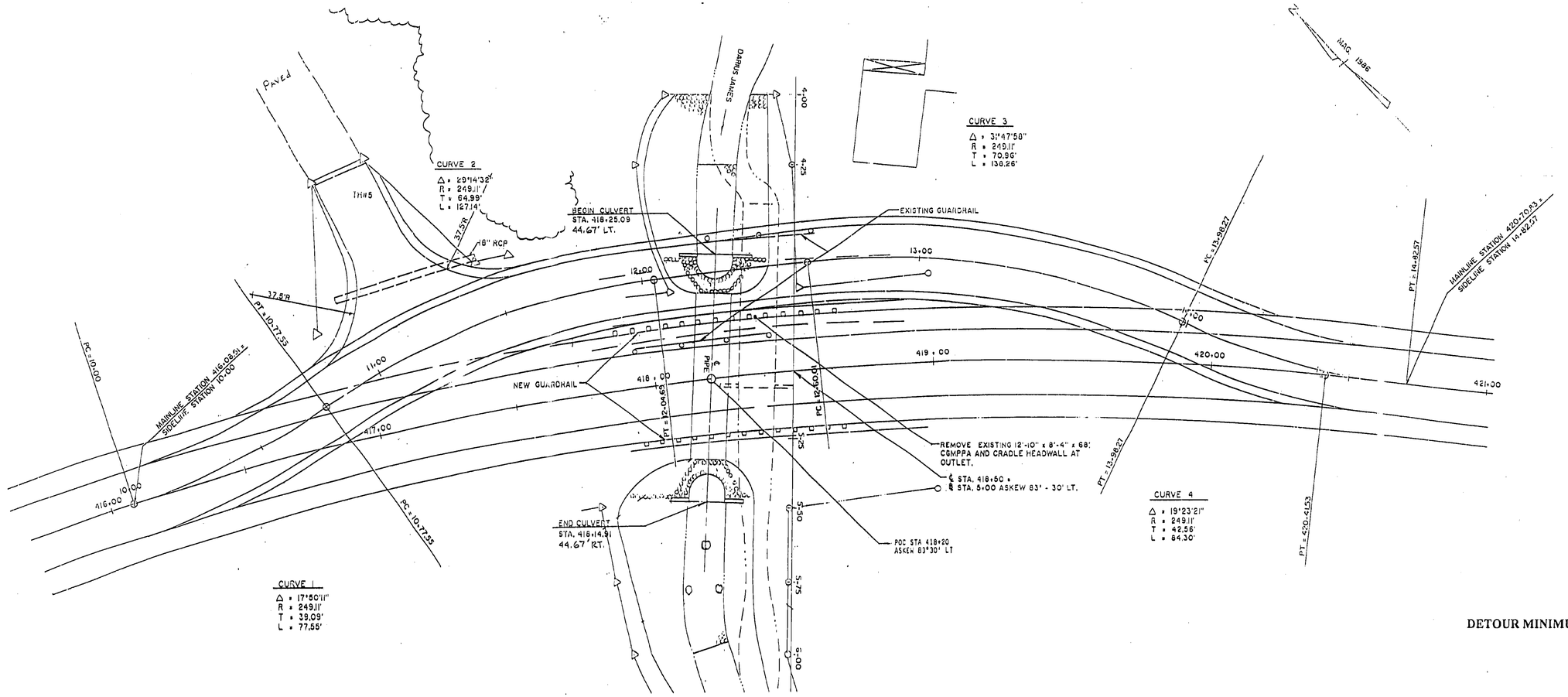
1. THE TEMPORARY SECTION OF PIPE AND ALL DETOUR WORK AND MATERIALS WILL BE PAID FOR UNDER THE LUMP SUM BID FOR ITEM 528.11, TWO-WAY TEMPORARY BRIDGE.
2. THE CONTRACTOR MAY SUBMIT AN ALTERNATE METHOD OF INSTALLING THE NEW PIPE ARCH. THIS ALTERNATE METHOD MUST BE SUBMITTED AND APPROVED AS PER SECTION 528.
3. THE EXISTING PIPE WILL REMAIN THE PROPERTY OF THE STATE OF VERMONT AND WILL BE STORED ON THE PROJECT FOR LATER REMOVAL BY STATE FORCES.



CULVERT PROFILE & CHANNEL SECTIONS
STA. 418+36
DARIUS JAMES BROOK
BRIDGE SHEET 5 OF 5



CROSS SECTION DARIUS JAMES DETOUR
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



DARIUS JAMES BROOK CROSSING DETOUR
PLAN VIEW

DETOUR MINIMUM DESIGN SPEED 25 M.P.H.

DARIUS JAMES BROOK CROSSING
DETOUR
SHEET 20 OF 152

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

ORIGINAL SURVEY	SURVEYED	ECS, R&A, GPF	DATE
NOTE BOOK CBR, JJG	PLOTTED	GPF	AUG. 87
No. 08/86/Misc	TEMPLATE	GPF	APR. 87
	AREA	RAN	JAN. 90
	AREAS CHECKED	SSS	SEPT. 90

RIGHT EDGE EXISTING GRADE -0.018 -0.009 0 +0.005 +0.021 +0.017

LEFT EDGE MATCH -0.018 374+00 -0.005 374+50 -0.021 375+00 -0.021 375+50 -0.021 376+00 -0.021 376+50

℄ GRADE 0.021 FT/FT MAX

PT. 376+23.24

BEGIN CURVE TRANSITION FROM EXISTING ROAD

SCALE: HORZ. 1" = 50'
VERT. 1" = 0.100 FT/FT

800

374+50

E WDS. E RD E RD E RD E DE FACE OF GUARDRAIL

1-2 1-4 +.063 -.0195 -.009 -.063 800+50

800

374+00
BEGIN APPROACH

E WDS. E RD E RD E DE FACE OF GUARDRAIL

1-2 1-4 -.018 800+90 -.018

800

373+50
Begin Cold Planning
Begin 1½" Pavement

E WDS. E RD E RD E DE FACE OF GUARDRAIL

800.5

800

373+00
℄

E DE E RD E RD E DE E DE

GMP9 -.21 -0-

1½" Cold Planning
1½" Bit. Conc. Pav't

½" BCP TYPE II OVER 2" BCP TYPE II
3" BCP TYPE I

12" 24" DENSE GRADED CRUSHED STONE 18" SAND BORROW

PAVEMENT TRANSITION

373+50 374+00 374+25 374+50 375+00 375+25 376+50

374+00 to 376+50 Rt
Remove Existing Guardrail

373+87.5
Begin Steel Beam Guardrail
373+50 - 373+87.5
New Melt

4' 24' 3'
374+50
FACE OF GUARDRAIL
TOP OF SLOPE

3' 22' 3
374+00

373+75
℄ Lane
℄ Shoulder
37.5' Melt
Parabolic Flare

3' 22'
373+50
Begin Cold Planning

NOTE: Unpaved area between drive pavement & guard rail terminal is to be paved w/1½" Pavement as close as possible to face of rail.

Any damage done to drive as a result of construction is to be restored to existing condition w/Pav't and/or Subbase.

Existing Roadway
EDGE OF DRIVE PAV'T

℄
APPROACH TAPER
SCALE: 1"=10'

HORIZONTAL 0 10 20
VERTICAL 0 10 20
SCALES IN FEET

CROSS SECTIONS
STA 373+50 TO STA 374+50
SECTION - RYEGATE FORE(SD)
SHEET 87 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
OGLEBAY NORTON CORPORATION

FINAL SURVEY	SURVEYED	
	PLOTTED	
NOTE BOOK	TRAVERSE	
	AREAS	
NO.	AREAS CHECKED	

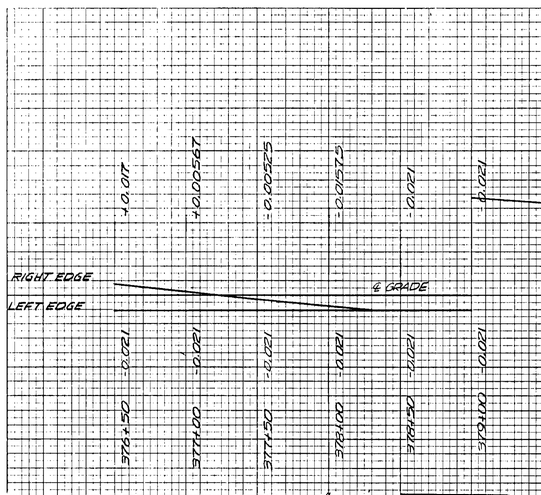
ORIGINAL SURVEY	SURVEYED	SCS, RGB, GF
	PLOTTED	C. FOLEY
NOTE BOOK STS. NO.	TRAVERSE	GF
	AREAS	RAD
NO. 404 & 405	AREAS CHECKED	SJS

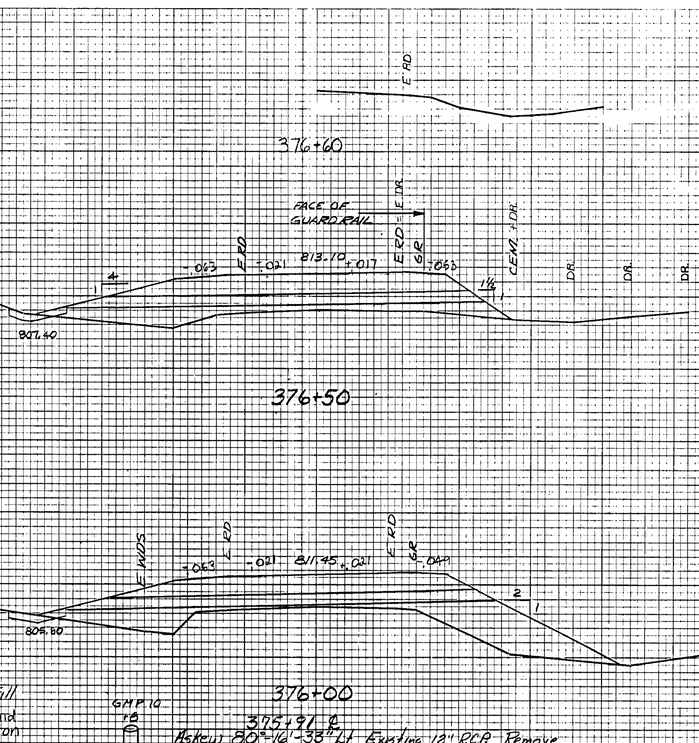
BY

DATE

DEC. 86
MAR. 87
MAR. 87
JAN. 90

SHT. NO.

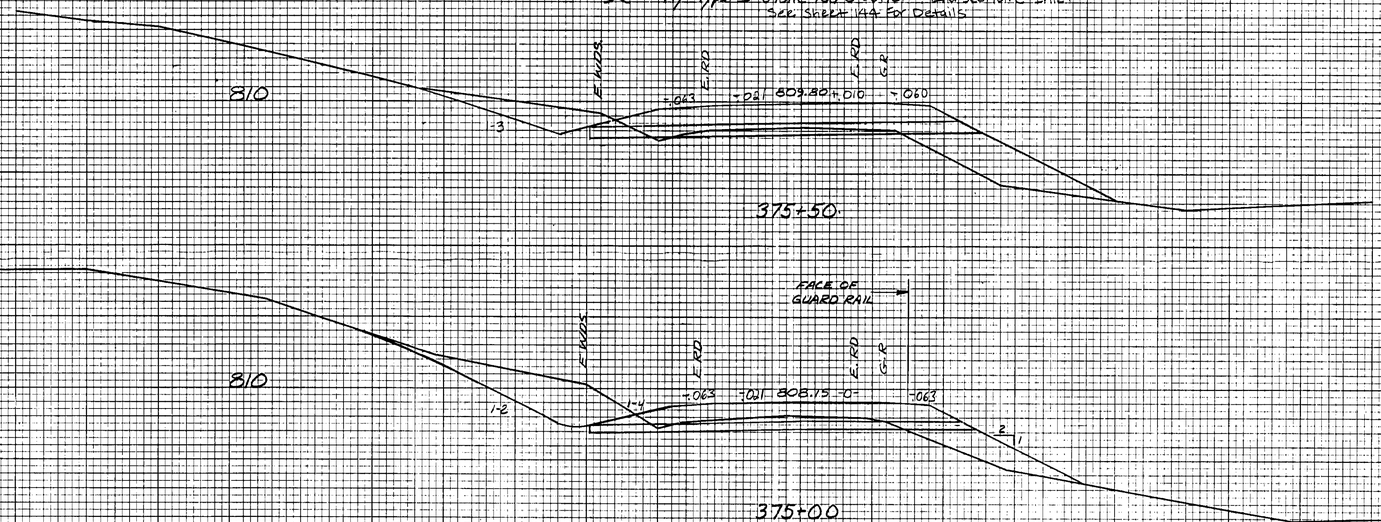




376+00 ℄
Begin Type I Stone Fill
Note: Excavation to be paid as Trench Excavation

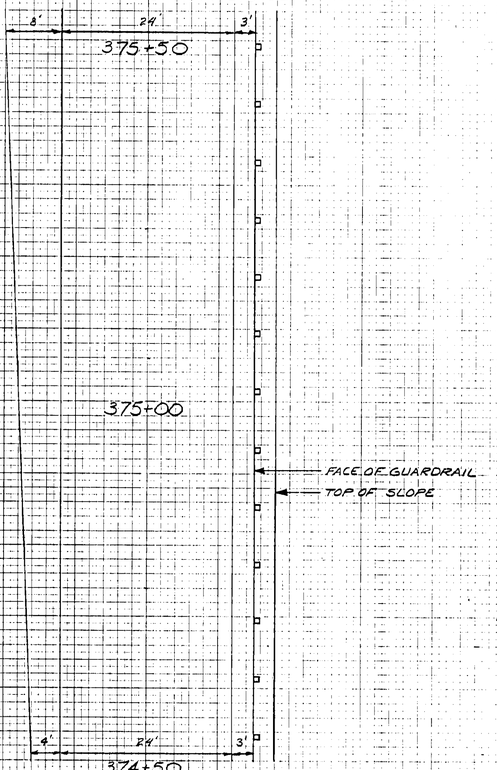
GMP 10
18

375+91.8
Askew 80°-16"-33" ℄ Lt Existing 12" RCP Remove
New 18"x84" RCAP .064 or CAP .060 or C.P.E.P. w/ Type I Stone Rip @ Outlet & End Section @ Inlet
See Sheet 144 For Details

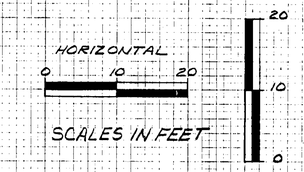


376+00
Begin Scarifying Existing Pavement

NOTE: 8-12-12-3 PAVEMENT AND SHOULDER WIDTHS FROM STA. 375+50 TO 376+50

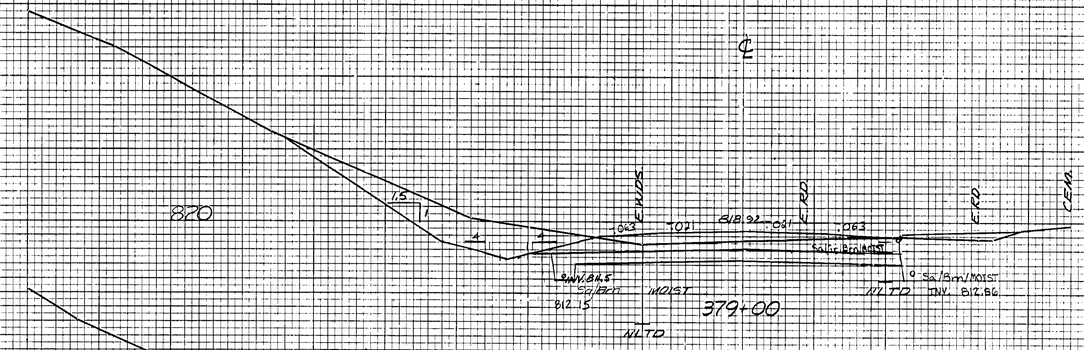


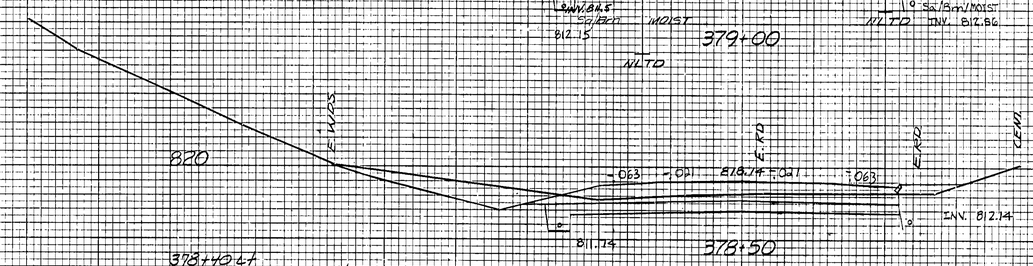
℄
APPROACH TAPER
SCALE 1" = 10'



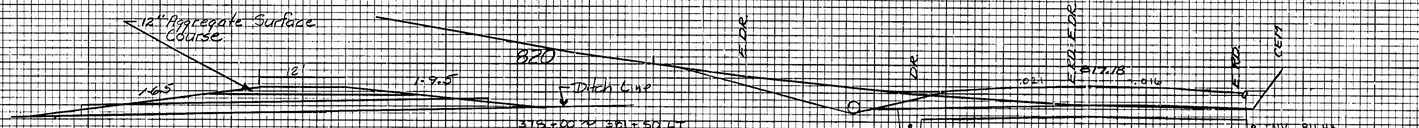
CROSS SECTIONS
STA. 375+00 TO STA. 376+50
GROTON-RYEGATE F026-1(30)
SHEET 38 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION



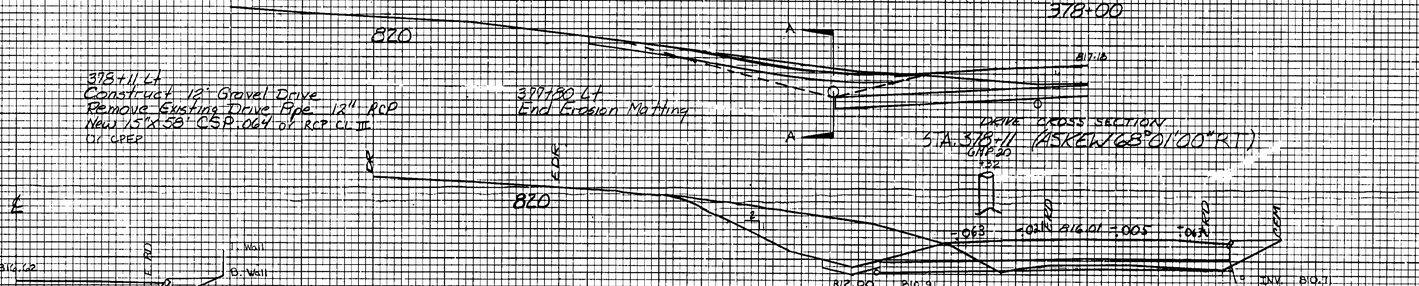


378+40 ℄
Begin Erosion Matting



SECTION A-A

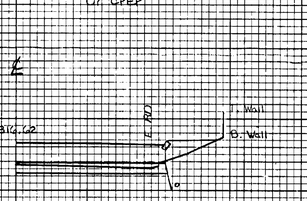
378+00 ~ 381+50 LT
NEW 6" x 550' UNDERDRAIN
W/ FLG @ 381+55 LT



378+11 Lt
Construct 12' Gravel Drive
Remove Existing Drive Pipe 12" RCP
New 15"x58' CSP: .064 or RCP Cl. III
or CPEP

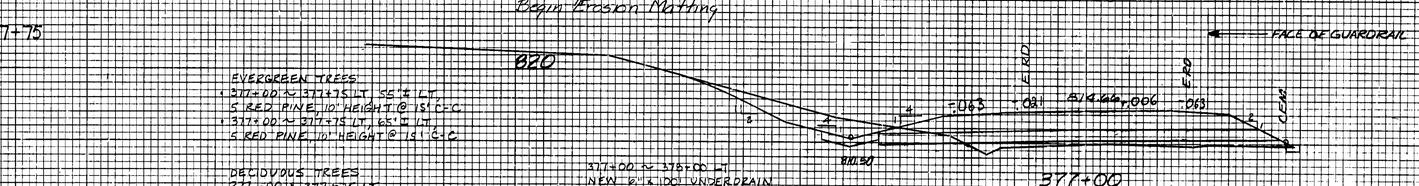
379+90 Lt
End Erosion Matting

DRIVE CROSS SECTION
STA. 378+11
(SKEW @ 50°01'00" RT.)



377+75

379+50 Lt
End Type I Stone Fill
Begin Erosion Matting

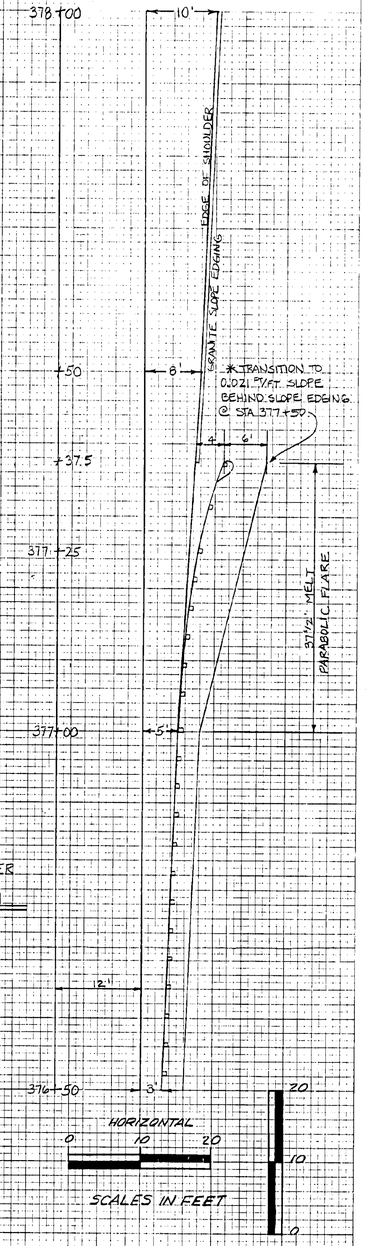


EVERGREEN TREES
+ 377+00 ~ 377+75 LT, 56' ± LT
5 RED PINE, 10' HEIGHT @ 15' C-C
+ 377+00 ~ 377+75 LT, 65' ± LT
5 RED PINE, 10' HEIGHT @ 15' C-C

DECIDUOUS TREES
377+00 & 377+75 LT
75' ± LT 2 FLOWERING CRABAPPLES,
10' HEIGHT (HARVEST GOLD)

NOTE: NEW TREES @ STA 377+00 ~ 377+75 ARE TO BE PLANTED AS DETERMINED BY THE ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER.

377+00 ~ 376+00 LT
NEW 6" x 100' UNDERDRAIN
CARRIER PIPE



SHOULDER TAPER DIAGRAM

377+00 ~ 377+37.5 RT
NEW MELT

377+37.5 Rt
Begin Granite Slope Edging

377+00 Rt - 379+45 Rt
New 6"x96' Underdrain w/ Flushing Basin @ 379+45 Rt and Stone Pad @ Outlet

* UNDERDRAIN LOCATION TO BE VARIED AS NEEDED THROUGHOUT CEMETERY

379+90
End Scarifying Existing Pavement
377+00
END STEEL BEAM GUARDRAIL

CROSS SECTIONS
STA 377+00 TO STA 379+00
GROTON-RYEGATE FOBG-1(30)
SHEET B9 OF 152

PLATE 3 CROSS SECTION C. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.

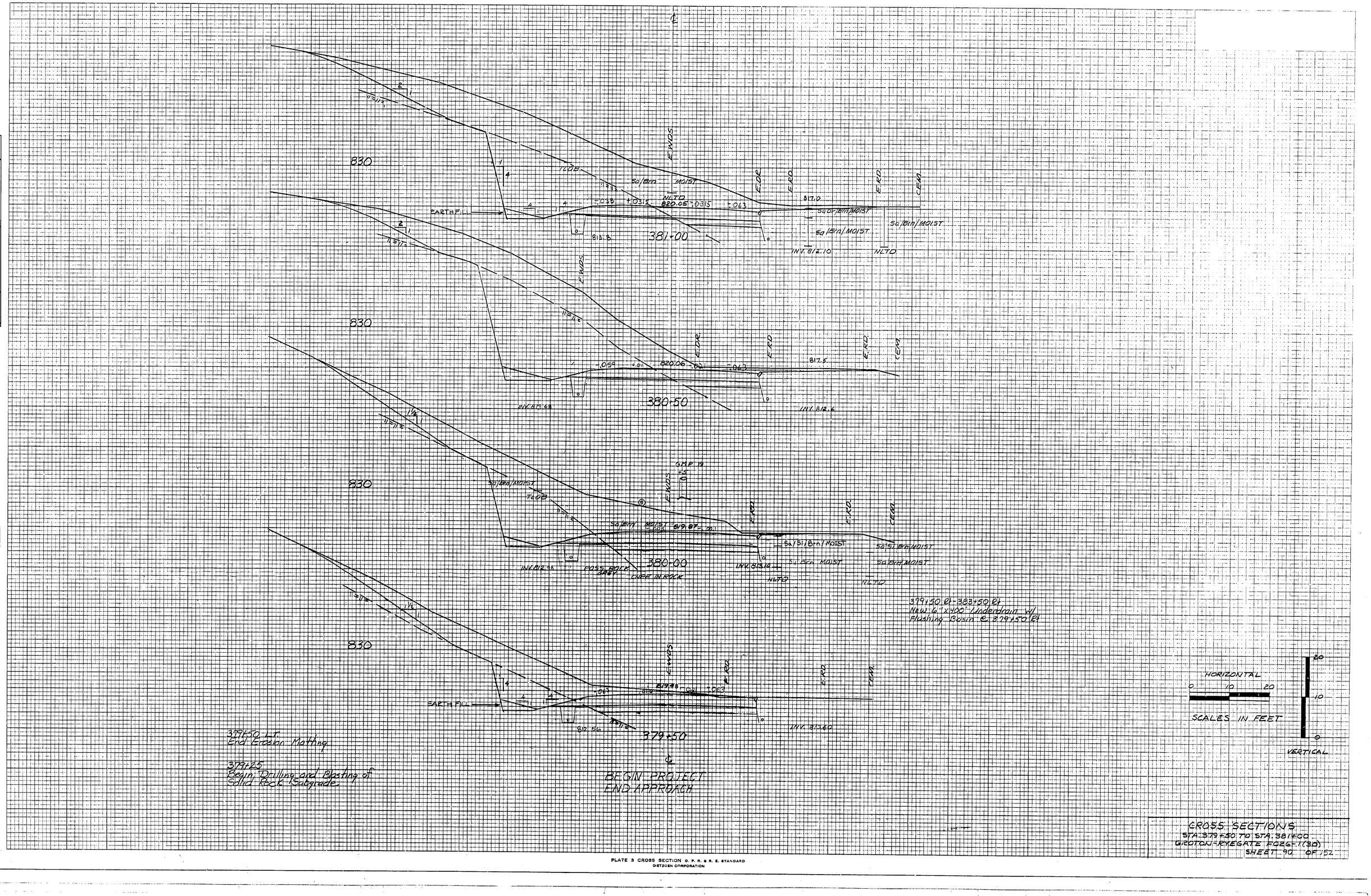
BY	DATE
ECS, RGR, GPF	DEC. 96
GPF, RGR	AUG. 97
GPF	APR. 97
RAU	JAN. 90
SSS	SEPT. 76

ORIGINAL SURVEY
NOTE BOOK
No. 54, 40, 57

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

ORIGINAL SURVEY
NOTE BOOK
No. 44-6258

BY	DATE
ECS - RGB, GAF	DEC. 86
GAF, RJB	MAR. 87
GAF	APR. 90
RMJ	MAY 90
SJS	SEPT. 96



CROSS SECTIONS
STA. 379+50.70 | STA. 381+00
GROTON-RIVEGATE FOAG-1(30)
SHEET 90 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
NO.

SURVEYED
PLOTTED
TEMPLAT
AREAS
AREAS CHECKED

DATE
BY

ORIGINAL SURVEY
NOTE BOOK
NO. 617 425

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY: ECS, RAB, GAF / ECS, GAF, RJB / ECS / RJB / ECS

DATE: DEC. '96 / MAR. '97 / JUNE '97 / JULY '97 / SEPT. '97

BANKING TRANSITION

SCALE: HORZ. 1"=50'
VERT. 1"=0.0100 FT/FT

12.0% DOWNGRADE
5.75% 360+00
-0.025% 360+100
-0.12% 361+00
-0.10% 361+05
4.0% 361+21
LEFT EDGE
℄ GRADE
RT. SHLD. -0.067
LT. SHLD. -0.067
D = 4°00'
MAX. 0.063 FT/FT
RIGHT EDGE
4.0% 361+36
-0.10% 361+52
-0.025% 361+67
5.75% 361+83
-0.12% 362+00
EARTH FILL
INV. 812.6
INV. 813.0
INV. 813.9
INV. 813.8
INV. 813.9
INV. 810.10
INV. 810.60
INV. 811.10
INV. 811.60
NLTD
ERO.
CEM.
ENDS
818.06
818.85
814.5
813.0
813.3
815.3
820.80
383+00
382+50
382+00
381+50
381+00
℄
1:6
SQ/SLS/Bm/MOIST
SLT/Bm/MOIST
POSS. ROCK IN ROCK CNAE
SQ/SLT/Bm/MOIST
SQ/Bm/MOIST
SQ/SLT/Bm/MOIST
SQ/SLT/BD/Bm/MOIST
TLDB
CLIFF IN ROCK
POSS ROCK
-0.063
+0.063
-0.025
+0.063
-0.067
+0.063
-0.067
+0.063
-0.025
+0.063
-0.063
+0.063
-0.067
+0.063
-0.067
+0.063
-0.063
+0.063
-0.063
+0.063
-0.063

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS COMPUTED
BY
DATE
ORIGINAL SURVEY
NOTE BOOK
No. 617, 657
SURVEYED
PLOTTED
TEMPLATE
AREAS CHECKED

BY	DATE
ECS, EKB, GPF	DEC. 96
GPF, RDB	MAR. 97
GPF	MAY 97
RALI	JAN. '98
SJS	SEPT '98

℄

810

385+00 Lt. to 385+30 Lt.
New 6" x 50' Underdrain
Carrier Pipe

810

384+00 Lt.
End Erosion Matting
Begin Type I Stone Fill
Note: Excavation to be paid as Trench Excavation

820

384+00
End Drilling and Blasting of Solid Rock Subgrade

820

EARTH FILL

385-50

385-00

384-50

384-00

383-50

E.M.E.S.

E.R.D.

E.R.D. G.R.

FACE OF GUARDRAIL

FACE OF GUARD RAIL

G.M.P. 17 H4

NLTD (HAND)

P.I.H.

C.E.M.

INV. 806.00

INV. 810.45

INV. 808.60

808.60

810.70

808.6

812.70

809.0

810.0

811.6

383+50 Lt. to 384+00 Lt.
New 6" x 50' Underdrain Carrier
Pipe W/ Flushing Basin @ 383+50 Rt.
and Type I Stone Pad @ Outlet

384+00 Rt. to 386+12 Rt.
Remove Existing Guardrail

3871+69 Rt.
Construct Approach (See Sheet 149 for Details)

384+00 Rt.
End Erosion Matting

384+00
Begin Scarifying Existing Pavement

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA 383+50 TO STA. 385+50
GROTON-RYEGATE F026-1(30)
SHEET 92 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK 538 &/O
NO 9/6,8/20,28
SURVEYED EGS, RGB, GFF
PLOTTED GFF, RWB
TEMPLATE GFF
AREAS RAU
AREAS CHECKED SJS
BY
DATE DEC. 86
JAN. 87
MAR. 87
JAN. 90
SEPT. 90

388+00
NEW 84" X 120' CAAPP 125
SEE SHEET 76 OF 153 FOR DETAILS AND QUANTITIES
AND SHEET 77 OF 153 FOR SECTIONS

800
E WDS
E BRK
E BRK
E BRK
(NEW) T.O.B.
E RD
-.063
-.021
802.32
-.021
-.063
FACE OF GUARDRAIL
(NEW) T.O.B.
(NEW) T.O.B.
E BRK
E BRK
388+00

387+50 Lt
Construct Approach
See Sheet 151 for Details

800
E BRK
E BRK
E BRK
FN
E RD
E RD
-.063
-.016
803.84
-.021
-.063
FACE OF GUARDRAIL
387+50

387+40 Rt - 388+60 Rt
Remove Existing Guardrail

810
E RD
E RD
-.063
-.005
805.59
-.021
-.063
MATCH TO SIDE ROAD SECTION 0+50
798.70
387+00

387+00 Lt
End Type I Stone Fill

800
E WDS
-.055
1.015
807.46
-.021
-.063
ST WALL
E RD
E RD
809.70
E WDS
386+50

386+08.2 Existing 18" RMP Remove
New 18"x 114'-PCPSP(Type 1) or CAAP(.060) or CPEP
w/ Type II Stone & Outlet & End section @ Inlet
See Sheet 144 for Details

820
-.038
+.0315
809.32
-.0315
-.063
FACE OF GUARDRAIL
E WDS
E RD
E RD
803.90
386+00

	LEFT EDGE	@ GRADE	LT. SHLD	RIGHT EDGE	LT. SHLD.
386+00	+0.063	+0.063	-0.055	-0.055	-0.121
386+50	+0.063	+0.063	-0.055	-0.055	-0.121
386+70	+0.055	+0.055	-0.055	-0.055	-0.121
386+90	+0.035	+0.035	-0.055	-0.055	-0.121
387+00	+0.05	+0.05	-0.055	-0.055	-0.121
387+50	0.00	0.00	-0.055	-0.055	-0.121
388+00	0.00	0.00	-0.055	-0.055	-0.121

SCALE 1 HORZ. 1"=50'
VERT. 1"= 0.0100 FT/FT

BANKING TRANSITION

HORIZONTAL 0 10 20
VERTICAL 0 10 20
SCALES IN FEET

CROSS SECTIONS
STA 386+00 TO STA 388+00
GROTON-RYEGATE F026-1(30)
SHEET 93 OF 152

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

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	LCS, RGB, GDF	DEC. 86
No. 617, 637	TEMPLATE	GDF, RWB	MAR. 87
	AREAS CHECKED	CDF	JUNE 87
		RWJ	JULY 87
		SJS	SEPT 88

810

E.WDS

FN/E.WDS

E.R.D

798.00

-.063 -.038 +.038 -.031

1:4 1:4

INV. 792.25

390+50

℄

389+50

800

FN/E.WDS

E.R.D

798.50

-.023 +.023 -.047

E.WDS

INV. 792.75

390+00

389+88

6' 4' 8' 12'

389+80.5-389+88 Lt
New Melt

389+50 Lt
End Steel Beam Guardrail

810

FN/E.WDS

E.R.D

FACE OF GUARD RAIL

-.063 -.081 799.11 +.009 .005

E.WDS

INV. 793.30

389+50

37.5' Melt
PARABOLIC FLARE

389+00 Lt - 393+50 Lt
New 6"x 45" Underdrain
w/ Flashing Basin @ 389+00

3'

389+50

800

FN/E.WDS

E.R.D

-.063 -.081 799.96 -.005 -.063

E.WDS

INV. 794.20

389+00

388+75 Lt
Begin Erosion Matting

GMP.15

388+64 - 389+01.5
New Melt

388+64
End Guardrail

388+75 Rt
Begin Erosion Matting

790

E.WDS

FN

S.R.

E.R.D

-.063 -.081 801.02 -.016 .063

FACE OF GUARDRAIL

E.WDS

388+50

388+50
End Scarifying Existing Pavement

388+50

℄

387+95 Lt - 388+55 Lt
Remove Existing Guardrail

388+25 Existing Box Culvert - Remove
See Sheet 76 of 153 For Details and Quantities
and Sheet 77 of 153 For Sections

℄

389+00

4' 6'

37.5' Melt
Parabolic Flare

388+50

HORIZONTAL
0 10 20
SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS

FROM STA. 388+50 TO STA. 390+50
GROTON-RYEGATE F026-1(30)
SHEET 94 OF 152

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

ORIGINAL SURVEY
NOTE BOOK 1985 H-C-GA
No. 6/16,527
SURVEYED EGG, J.S.& G.S.F.F.
PLOTTED C.F.F. & L.P.
TEMPLATE C.F.F.
AREAS RAW
AREAS CHECKED SJS
BY
DATE DEC. 84
MAR. 85
APR. 85
MAY 85
SEPT. 86

℄

800

INV. 789.00

393+00

800

INV. 789.50

392+50

800

INV. 790.00

392+00

GMP 14

800

INV. 790.50

391+50

391+00 RT
End Erosion Matting

391+00 LT
End Erosion Matting

800

INV. 791.00

391+00

℄

SCALE : HORZ. 1" = 50'
VERT. 1" = 0.0100 FT/FT

SANKING TRANSITION

HORIZONTAL
0 10 20
SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS
STA. 391+00 TO STA. 393+00
GROTON-RYEGATE FOZG-1(30)
SHEET 95 OF 152

PLATE 3 CROSS SECTION G. P. R. & P. E. STANDARD
DIETZGEN CORPORATION

800

790

395+50 Lt
Begin Erosion Matting

395+50 Rt
Begin Erosion Matting

394+61 Lt
Construct Drive (12" Gravel)

INV. 783.67

INV. 784.19

INV. 787.00

395+00

INV. 787.40

DRIVE CROSS SECTION
STA. 394+61 (ASKEW 84°15'15" LT)

INV. 787.90

394+50

Remove Existing 12" CMP (Drive Pipe) INV. 784.33

395+50 Lt - 397+00 Lt
New 6'x 3'50" Underdrain W/
Flushing Basin @ 393+50

397+35 Lt - 397+00 Lt
New 24"x 24A RCP cl III
or CPEP

INV. 785.0(18")

INV. 786.5(24")

394+35

INV. 788.0

INV. 786.0

394+00

393+75 LT
CONSTRUCT DRIVE (12" GRAVEL)

393+50 ∼ 394+35 LT
NEW 18"X 84' RCP CL III
OR CPEP

INV. 788.5

INV. 787.0

INV. 787.5

INV. 788.50

393+50

392+80 RT ∼ 393+50 LT
NEW 18"X 96' RCP CL III OR CPEP

12" AGGREGATE SURFACE COURSE

SECTION C-C

393+50

394+00

DITCH LINE

SECTION B-B

NOTE: SECTION B-B IS CUT PARALLEL TO MAIN LINE.

394+35

12" Aggregate Surface Course

E. SHOULDER

NOTE: CONCRETE IS TO BE REINFORCED WITH WIRE MESH AT MID-SLAB, WITH MINIMUM 2" CLEARANCE FROM ALL EDGES. COST TO BE INCLUDED IN BID PRICE FOR REINFORCING STEEL.

FORM AND POUR IN 4' SECTIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.

CONCRETE DRIVE DETAIL @ 393+10.8 RT

6" CONCRETE CLASS B ON 8" AGGREGATE SURFACE COURSE
CONCRETE IS TO BE REINFORCED WITH WIRE MESH

EXISTING GRADE

SECTION A-A

Note: SECTION A-A IS CUT PARALLEL TO MAIN LINE.

393+10.8 Rt
Construct 12' Concrete Drive

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

MATCH TO EXISTING

CONCRETE DRIVE CROSS SECTION
STA. 393+10.8 (ASKEW 88°36'36" RT)

INV. 789.5 (1:30)

CROSS SECTIONS
STA. 393+50 TO STA. 395+50
GROTON - RYEGATE F026-1(30)
SHEET 96 OF 152

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

ORIGINAL SURVEY	SURVEYED	ECS, RCB, GPF	DEC. 86
NOTE BOOK	PLOTTED	GPF, RJB	AUG. 87
NO. 615, 637	TEMPLATE		
	AREAS CHECKED	GAU	JAN. 90
		SJS	SEPT. 90

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARDS
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
NO.

SURVEYED
PLOTTED
TEMPLATE
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO. 6/1/87

SURVEYED: ECS, RCB, GCF
PLOTTED: GCF, RCB
TEMPLATE: GCF
AREAS CHECKED: CJH, SJS
BY
DATE: DEC. 86, MAR. 87, APR. 87, JUNE 90, SEPT. 90

398+100 Lt - 399+50 Lt
New 6"x 150' Underdrain w/ Flushing Basin @ 398+100

790

F WDS

F RD

FN

-.063 -.044 787.90 +.044 -.0216

783.20

INV. 781.80

785.30

398-00

397+40 Lt - 399+50 Lt
New 24"x 218' R.C.P. cl III or CPEP

C.T.C. 32 1/2

15°

800

F WDS

397+40 Lt
Begin Stone Fill Type I

F RD

F WDS

F RD

F N

1'-0"

-.063 -.030 789.33 +.030 .040 1'-0"

784.30

779.20

786.90

397-50

397+15 Lt
Construct Drive (12' wide)

397+30 Rt
End Erosion Matting
Begin Stone Fill Type I

F RD

F WDS

F RD

B

F N

-.063 +.016 790.56 +.016 -.054

INV. 784.0

B

6" UNDERDRAIN INV. 783.0
18" CROSSPIPE INV. 782.0
21" LATERAL INV. IN = 781.0
24" LATERAL INV. OUT = 780.5

780

397+00 Lt
End Erosion Matting

397+00
New 18"x 68' R.C.P. cl III or CPEP

12" Aggregate Surface Course

10'

1'-3

1'-7

397+0

+15

+40

+50

Section B-B

F RD

F WDS

F RD

F N

-.063 -.001 791.38 +.001 -.063

INV. 783.50

396-50

780

INV. 781.66

GMP. 50

+12

CTC 32

+18

F RD

F WDS

F RD

F N

A

-.063 +.013 792.40 +.013 -.057

A

780.3

4

4

4

4

INV. 786.00

INV. 782.33

780

396+00

396+00 Rt
CONSTRUCT DRIVE (12' WIDE)
NEW 15"x 30' CSP .064, RCP cl III, CPEP

12"AGGREGATE SURFACE COURSE

12'

1'-4

1'-9

SECTION A-A

HORIZONTAL
0 10 20
SCALES IN FEET

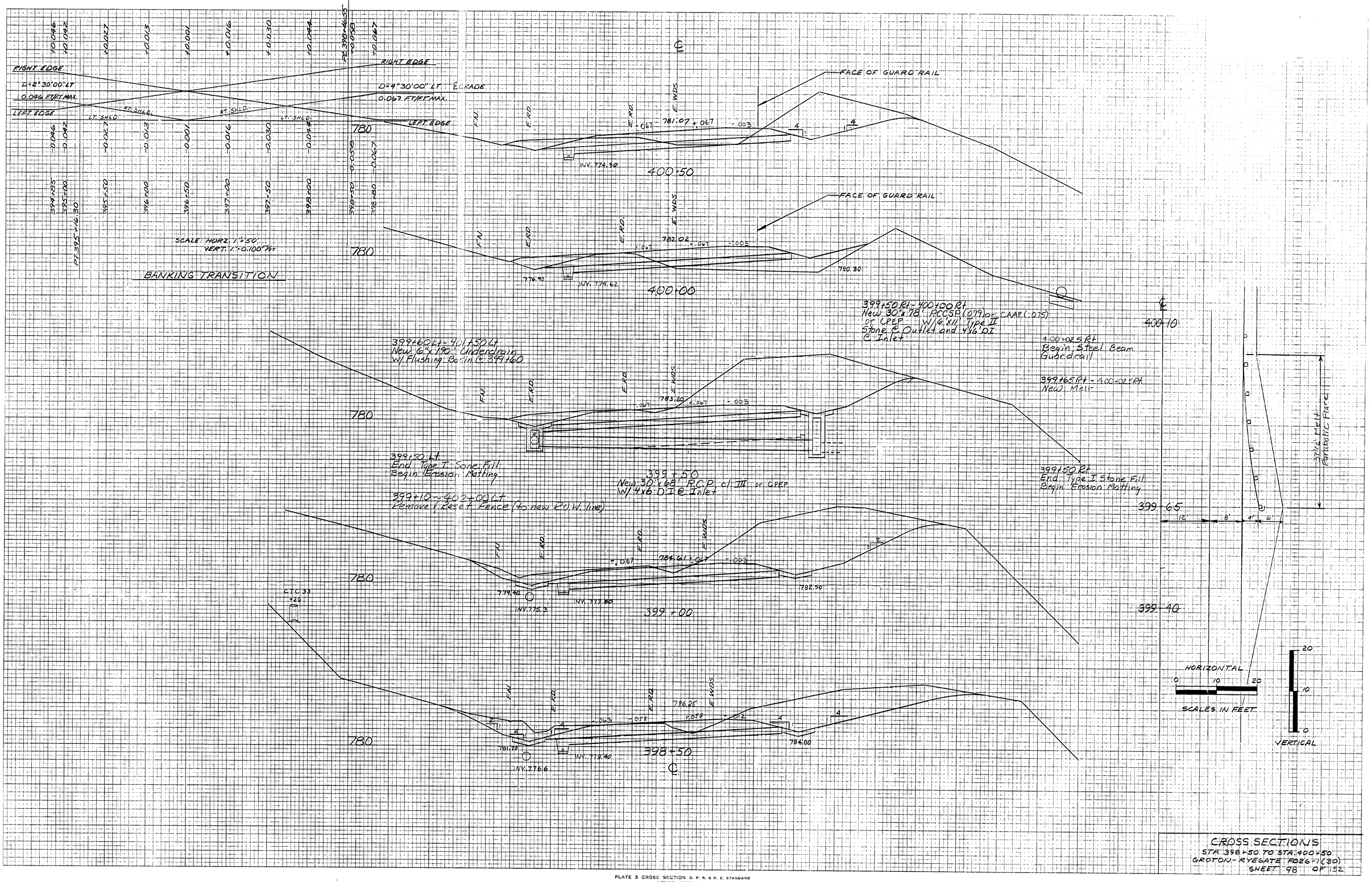
20
10
0
VERTICAL

CROSS SECTIONS
STA. 396+00 TO STA. 398+00
GROTON-RYEGATE F026-1(30)
SHEET 97 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. C. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
No.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	ECS, RLB, GFF	DEC. 86
No. 33, 64	TEMPLATE	CPF, RWS	MAY. 87
	AREAS CHECKED	GFF	JAN. 90
		EAU	SEPT. 90



CROSS SECTIONS

STA. 398+50 TO STA. 400+50

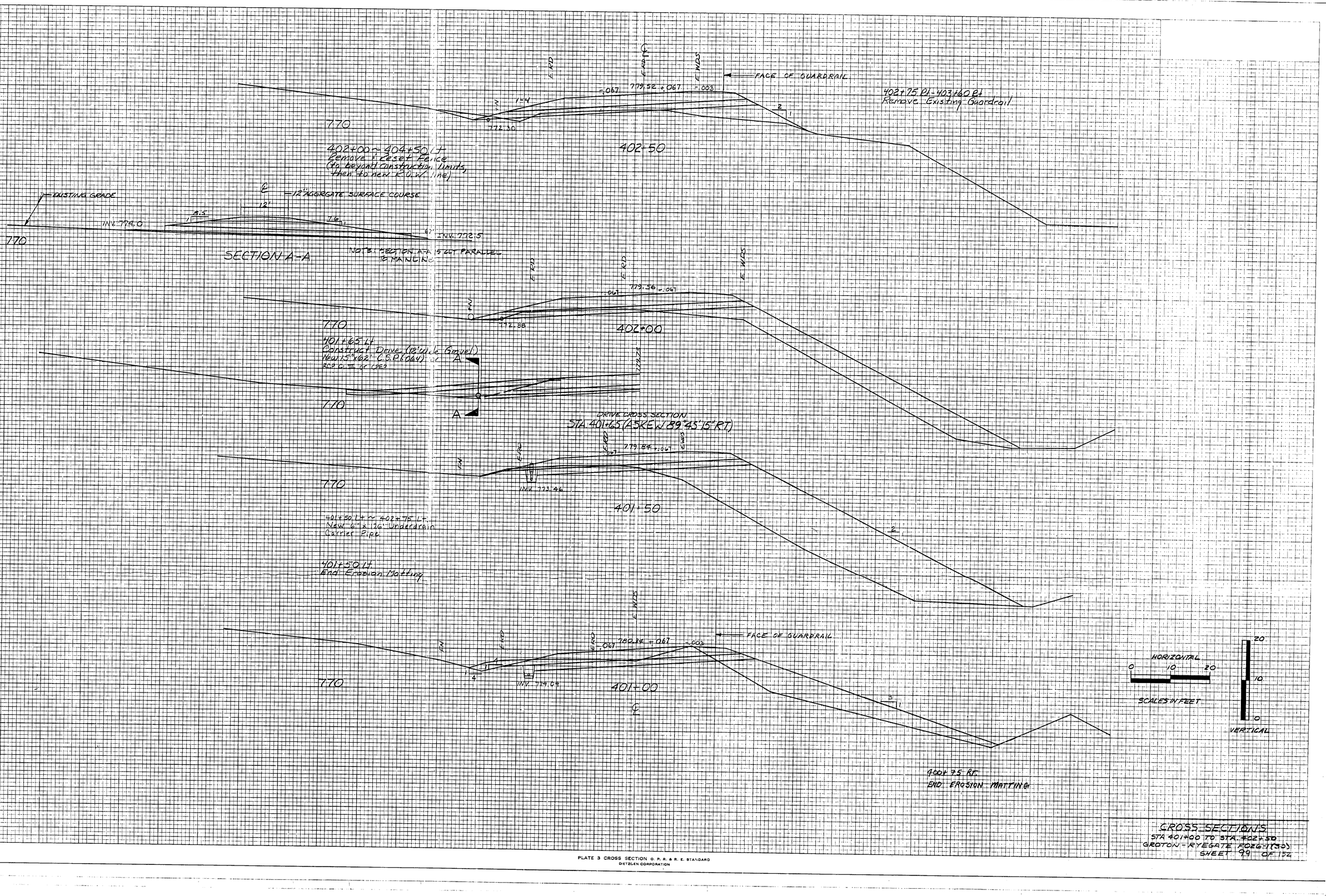
GROTON - RYEGATE FD26-1(30)

SHEET 98 OF 152

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

ORIGINAL SURVEY | NOTE BOOK 338, 410, 411 | No. 6-6-67 | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED

BY	DATE
CCS-RCW-CFF	DEC. 67
CCS-RCW	MAY 70
CFF	APR. 71
RWS	JAN. 90
SSG	4-4-94



CROSS SECTIONS
STA 401+00 TO STA. 402+50
GROTON - RYEGATE F026-1(30)
SHEET 99 OF 152

404+56 Lt - 406+90 Lt
New 6"x 234' Underdrain
w/ Flushing Basin @ 406+90 Lt

404+50 Lt
End Erosion Matting

FIELD DRIVE CROSS SECTION
STA. 404+00 (ASKEW 52°33'24" LT)

STA. 404+25 RT
CONSTRUCT GRAVEL DRIVE - 50' WIDE

404+50 - 405+30 RT
CONSTRUCT PAVED TURNOUT (4' WIDE)

STA. 404+00 ASKEW 52°33' RT
CONSTRUCT GRAVEL DRIVE - 12' WIDE

SECTION A-A
(PARALLEL TO ℄ & 33' RIGHT)

403+45 Lt
Begin Erosion Matting

403+00 Lt - 404+50 Lt
New 6"x 150" Underdrain
w/ Flushing Basin @ 404+50

402+75 Lt - 403+00 Lt
New 6" x 26" Underdrain
Carrier Pipe

404+42.3 ℄ Existing 15" RCP Remove
New 18"x 68" RCP cl III or CPEP
404+42.3 Rt Existing 15" CMP Remove
New 24"x 79' CSP (.064) or CPEP
See Sheet 44 for Details

403+15 - 403+52.5
New Melt

403+15
End Steel Beam Guardrail

402+86.2 Existing 18" RCP Remove
New 24"x 54' RCP CLASS III (.064) or CAAP (.060)
or CPEP w/ Type I Stone @ Outlet & ES @ Inlet
See Sheet 44 for details

CROSS SECTIONS
STA. 403+00 TO STA. 404+50
GROTON-RYEGATE FO26-1(30)
SHEET 100 OF 152

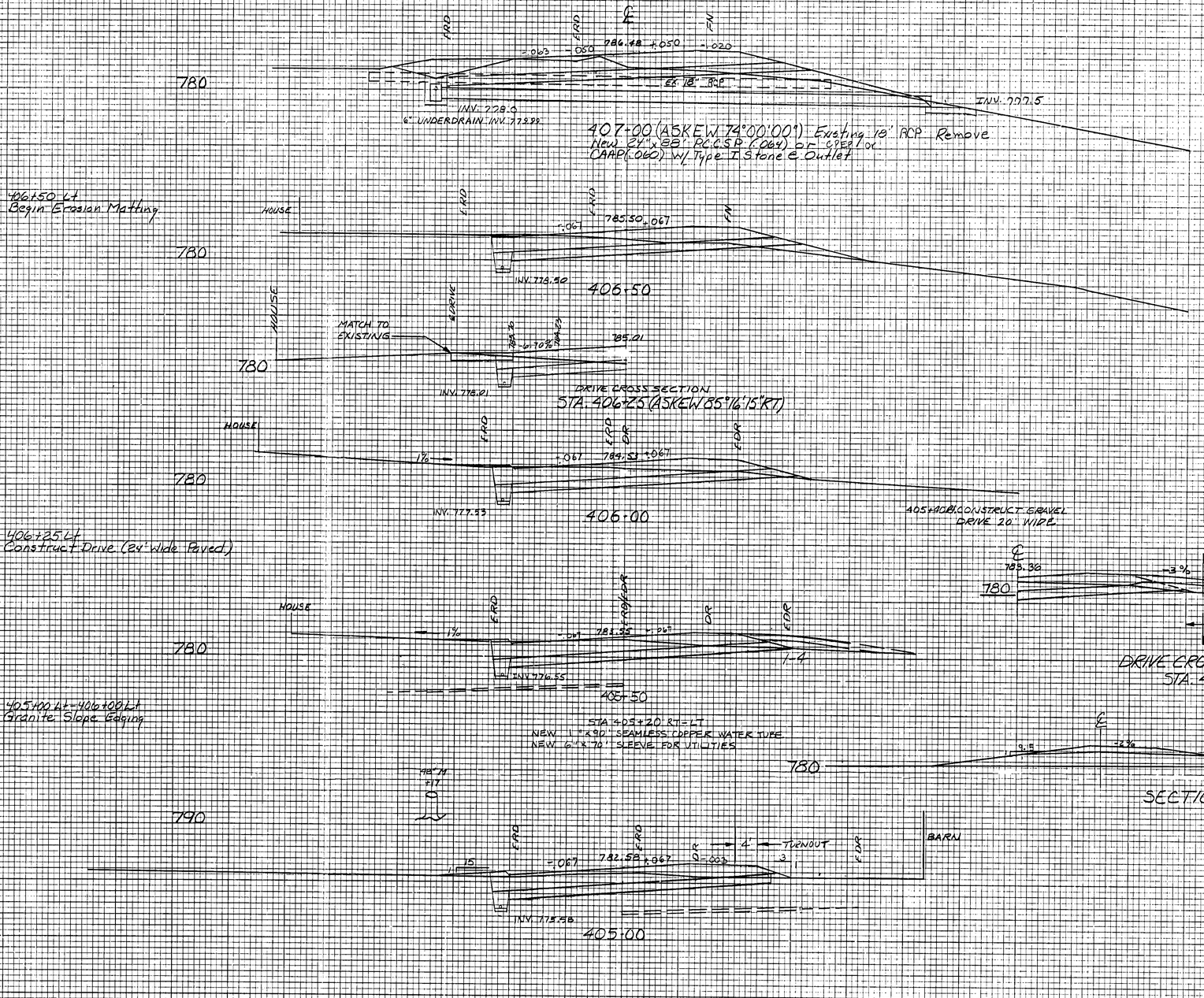
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

406+50 Lt
Begin Erosion Matting

406+25 Lt
Construct Drive (24' Wide Paved)

405+00 Lt - 406+00 Lt
Granite Slope Edging



ORIGINAL SURVEY
NOTE BOOK
CRS. GC. L&L
NO. 142, 251
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE
CGL RLG GPF
GPF RLG
GPF
EAU
SCS
DEC. 84
MAR. 87
APR. 87
JAN. 90
SEPT. 90

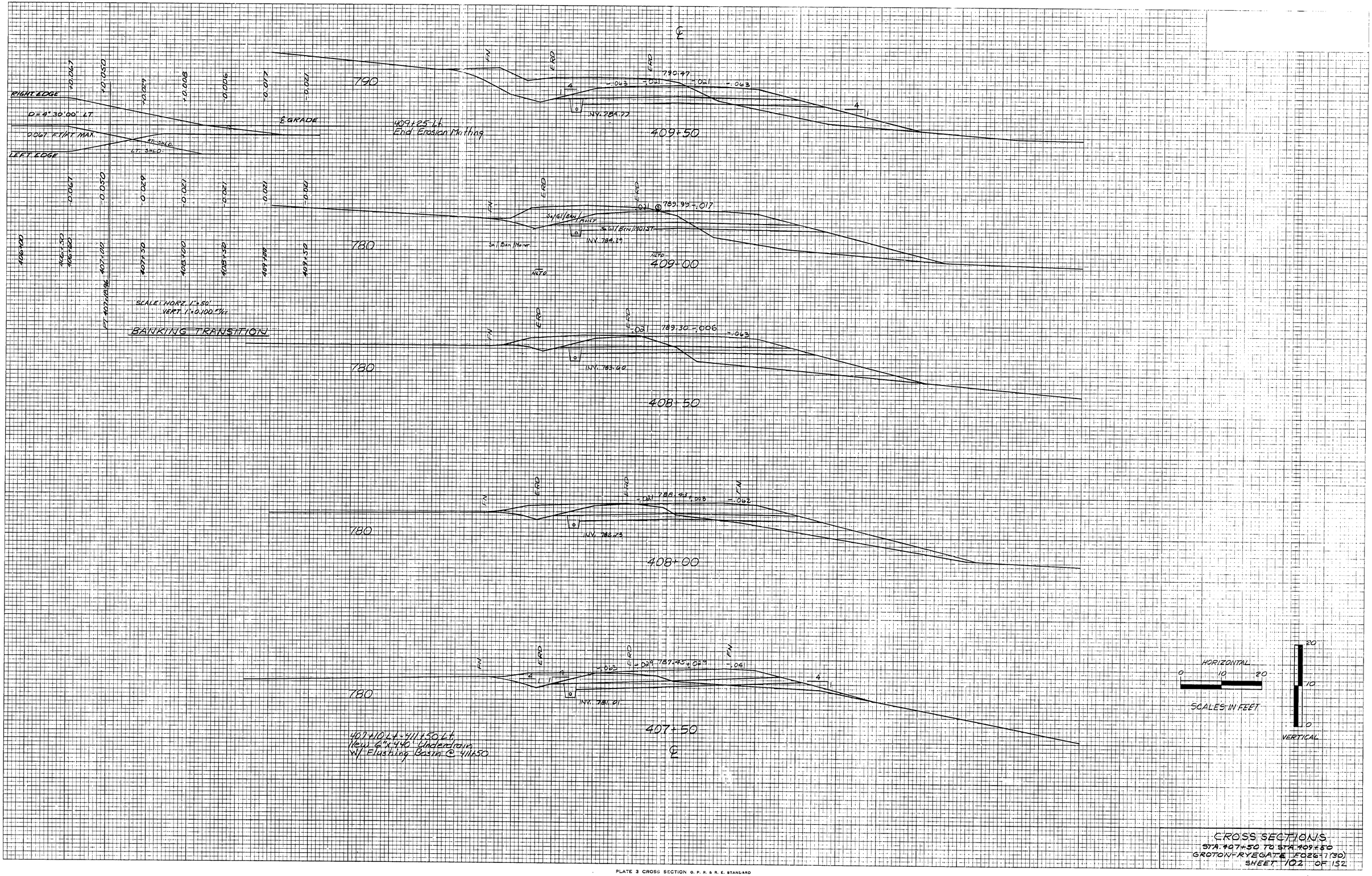
CROSS SECTIONS
STA. 405+00 TO STA. 407+00
GROTON-RYEGATE FO26-1(30)
SHEET 101 OF 152

FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
No.

BY	DATE

ORIGINAL SURVEY
SURVEYED: ESS, JGB, JEFF
PLOTTED: GFF, KWB
TEMPLATE: GFF
AREAS: EAU
AREAS CHECKED: SJS
NOTE BOOK: JGB, KLC
No. 401, 524

BY	DATE
ESS, JGB, JEFF	DEC. 86
GFF, KWB	MAY 87
GFF	APR. 87
EAU	JAN. 90
SJS	SEPT. 90



CROSS SECTIONS
STA. 407+50 TO STA. 409+50
GROTON-RYEGATE F026-1(30)
SHEET 102 OF 152

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

ORIGINAL SURVEY — NOTE BOOK No. 247, 249 — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

BY	DATE
ECS, EAB, LBF	DEC. 84
GPF, RJB	APR. 87
GPF	APR. 87
RJB	JAN. 90
SDS	SEPT. 96

℄

790

LEFT EDGE

℄ GRADE

D = 5° 30' 00" RT.

0.079 FT/FT MAX.

LT. SHLD.

AT. SHLD.

RIGHT EDGE

PT. ALT. 45.23

-0.021 -0.019 -0.009 +0.004 +0.025 -0.047 +0.068 +0.074 -0.021 -0.021 -0.021 -0.022 -0.025 -0.047 -0.068 -0.074

410+00 410+50 411+00 411+50 412+00 412+50 413+00

SCALE: HORZ. 1"=50'
VERT. 1"=0.1700 Ft/Ft.

BANKING TRANSITION

411+75 Lt
Begin Erosion Matting

412+00

ST. WALL

E.R.D.

+.045 790.00 +.045 -.063

790

+.009 790.48 -.021

INV. 785.67

411+50

790

401+98 Lt
Construct Drive
(12' Wide Gravel)

⊄

790.77 -.021 +.008

GISA/BRN/MOIST

INV. 785.42

411+00

1" MTO

790

A

.0079

INV. 781.98

DRIVE CROSS SECTION
STA. 410+95 (SKEW 80°-20'-00" LT)

E.R.D.

8.0 10.0

790

+.019 790.87 -.021

INV. 782.17

410+50

CTC 39

+.19

36"M
+.0

ST. WALL

E.R.D.

790

-.063 +.001 790.77 -.021 +.063

INV. 783.07

410+00

℄

12" AGGREGATE SURFACE COURSE

PITCH LINE

7.8

12"

0.3

SECTION A-A

NOTE: SECTION A-A TO CUT PARALLEL TO MAIN LINE

HORIZONTAL
0 10 20
SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS
STA. 410+00 TO STA. 412+00
GROTON-RYEGATE F026-1(30)
SHEET 103 OF 152

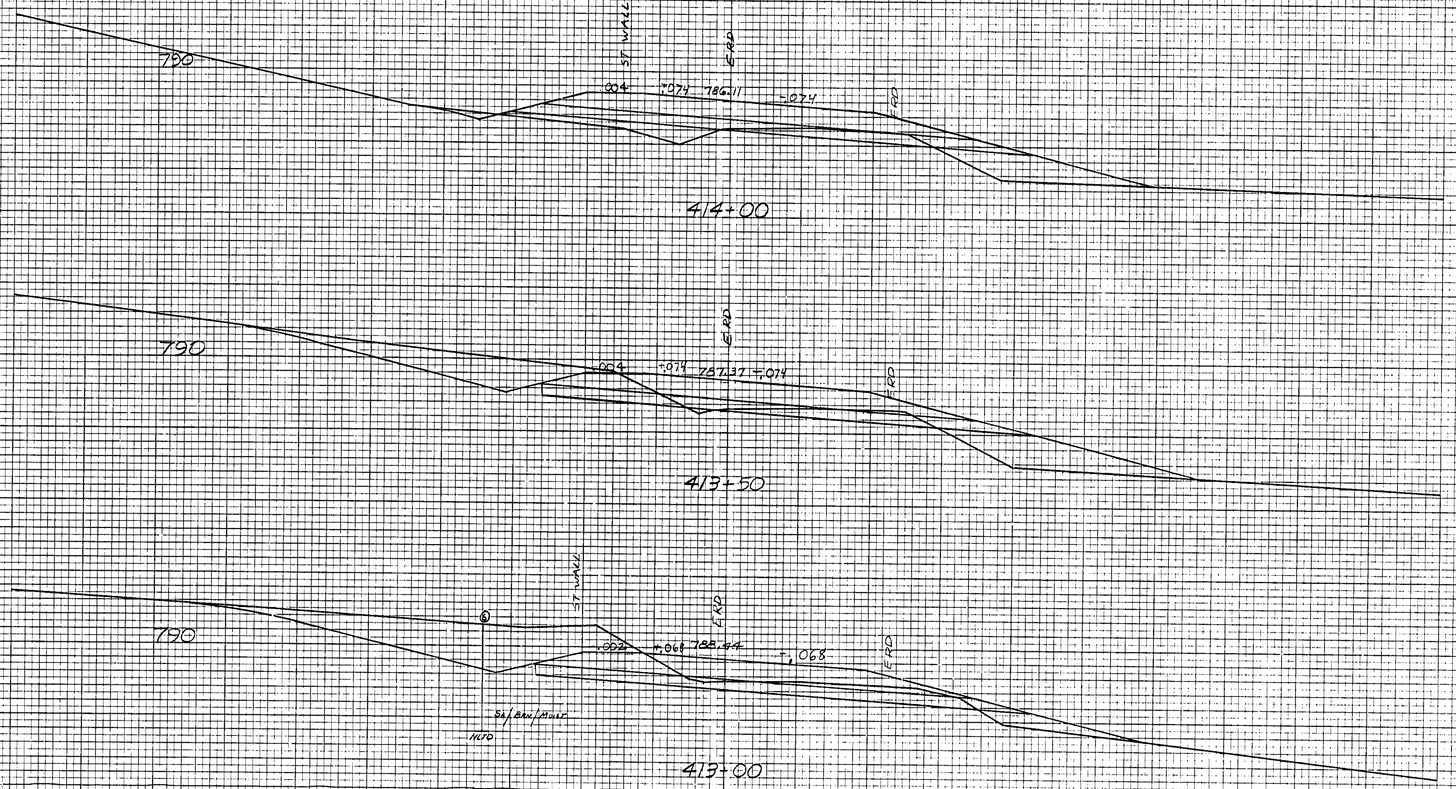
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	ECS, RAB, GDF	DEC. 86
836, 620-625	TEMPLATE	GDF, RAB	AUG. 87
No. 612-615	AREAS	SDF	APR. 89
	AREAS CHECKED	FAW	JAN. 90
		RSS	SEPT. 91

℄

414+20.6 ℄ Existing 18" RCP Remove
New 18"x90° RCCP(.064) or CSP or CAPP(.060) w/ Type I Stone @ Inlet and Outlet
See Sheet 145 for details (End Section @ Inlet)



℄

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

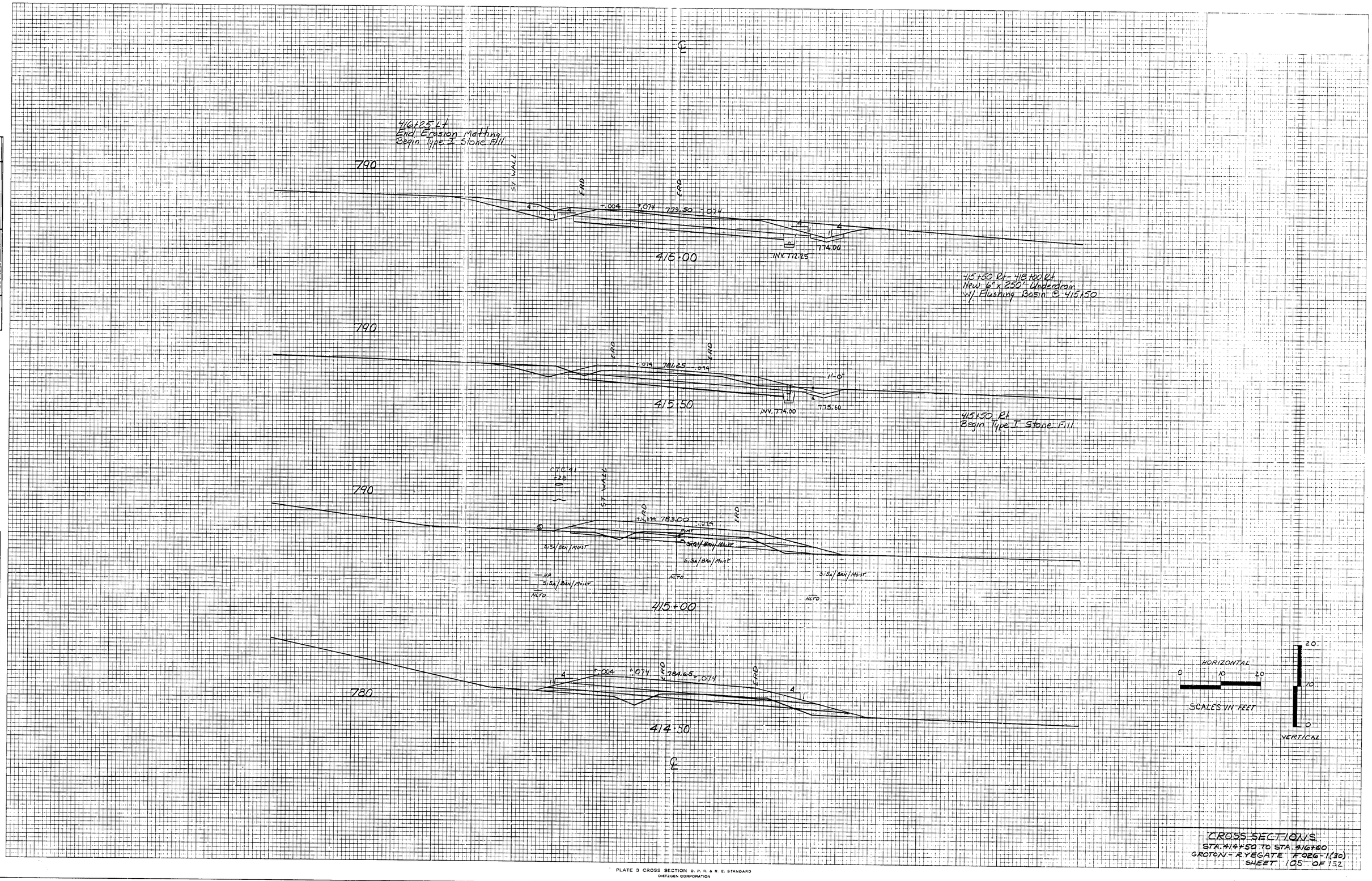
CROSS SECTIONS

STA. 412+50 TO STA. 414+00
GROTON-RYEGATE F022411(30)
SHEET 104 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK
No. NB-427,439
SURVEYED — DEC. & JAN. 89
PLOTTED — EES, RES, GPF — JAN. 90
TEMPLATE — GPF, EJL — MAR. 90
AREAS — PAU — JAN. 90
AREAS CHECKED — SJS — SEPT. 90
DATE
BY



HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 4/4+50 TO STA. 4/6+00
GROTON - RYEGATE F 026-1(30)
SHEET 105 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

418+36 LT
REMOVE EXISTING 6'-10" X 8'-4" X 68' CSMPPA AND CRADLE HEADWALL

S.E. CURB FLD

1.5%

760

418+25 LT - 418+70 LT
Remove Existing Guardrail

418+50

418+35 LT - 418+63 LT
New Steel Beam Guardrail

760

417+91 LT
Remove Existing 12" CMP

417+76 LT - 418+35 LT
New Melt

418+00

418+01

770

417+76

417+30 LT
Construct Approach
See Sheet 112 for Details

417+50

417+00 LT
End Type I Stone Fill

770

MATCH EXIST. SIDE ROAD SLOPE

770

416+50

418+46 RT - 418+83.5 RT
New Melt

418+20 NEW 19'-0" X 8'-7" K-90 CAPPA W/ 27'-0" REINFORCED CONCRETE CRADLE HEADWALL AT INLET AND OUTLET
SEE SHEET 77 OF 133 FOR CROSS SECTIONS AND
SEE SHEET 78 OF 133 FOR DETAILS

418+00 RT A SKEW 83° - 30' LT
New 6"X16' Underdrain Carrier Pipe

418+00 RT
End Type I Stone Fill

417+74 RT - 418+44 RT
Remove Existing Guardrail

417+33.5 RT - 418+46 RT
New Steel Beam Guardrail

418+96 RT - 419+33.5 RT
New Melt

FACE OF GUARDRAIL

S.G.I/BAN/MOIST

767.00
INV. 765.22

769.50
INV. 767.00

772.50

776.0

770.70
INV. 268.75

776.00

772.40
INV. 770.50

1:0

HORIZONTAL
0 10 20
SCALES IN FEET

20
10
0
VERTICAL

372' MELT
PARABOLIC FLARE
0 4' 8' 12'

375' Melt
Parabolic Flare

4'
3'
12'
8'

419+28.5
418+83.5
418+58.5
417+21
416+96
416+51

NOT TO SCALE

CROSS SECTIONS
STA 416+50 TO STA 418+50
GROTON - RYEGATE F026-1(30)
SHEET 106 OF 152

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

ORIGINAL SURVEY
NOTE BOOK
PAGE No. 2-66, 2-67
SURVEYED E.G., R.B., G.B.F. DEC. 26
PLOTTED C.P.F., R.W.R. AUG. 27
TEMPLATE B.A.W. SEPT. 10
AREAS S.Y.S. SEPT. 10
AREAS CHECKED

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY

NOTE BOOK No.	SURVEYED	PLOTTED	TRACED	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY

NOTE BOOK No.	SURVEYED	PLOTTED	TRACED	AREAS	AREAS CHECKED	BY	DATE
338, 646, 646, 647, 659	ECS, RCB, GDE	GDE, RWB	GDE	RAJ	SSS		DEC. 86, MAR. 87, APR. 87, JAN. 90, SEPT. 90

Sta. 419+75 LT
Transplant Shrub = Rose bush
(Placement of shrub to be determined by Engineer in agreement w/ property owner)

Sta. 419+60 LT
Construct Drive (12' Wide Gravel)

Sta. 419+65 N 420+25 ± LT.
Regrade Parking Lot

419+50 RT
Construct Drive (20' Wide Gravel)

Note: Water to drain both directions from drive

DRIVE CROSS SECTION
STA 419+50 (ASKEW 83°18'02" LT)

SECTION B-B
NOTE: SECTION B-B IS CUT PARALLEL TO MAIN LINE.

SECTION A-A
NOTE: SECTION A-A IS CUT PARALLEL TO MAINLINE.

419+00 RT
Begin Scarifying Existing Pavement

418+76 ±
Cedar Clump "Save"

418+63.64 - 419+01.64
New Melt

CROSS SECTIONS
STA 419+00 TO STA 420+50
GROTON-RYEGATE F026-1(30)
SHEET 10 OF 152

PLATE 3 CROSS SECTION O. F. R. & R. L. STANDARD
DETZGEN CORPORATION

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

ORIGINAL SURVEY	SURVEYED	ECS, R&B, GPF	DEC. '86
	PLOTTED	GPF, RWB	AUG. '87
NOTE BOOK	TEMPLATE	GPF	DEC. '87
356, 40-46,	AREAS	RWB	JAN. '90
No. 360, 492	AREAS CHECKED	SJS	SEPT. '90

LEFT EDGE
D=5°30'00" RT
0.074 FT/FT MAX.
RIGHT EDGE
RT SHLD
RT SHLD
EGRADE
+0.074 +0.066 +0.044 +0.023 +0.002 -0.009 -0.020 -0.021
-0.074 -0.066 -0.044 -0.023 -0.021 -0.021 -0.021 -0.021
419+50 419+80 420+00 PT 420+19.54 420+50 421+00 421+50 422+00 422+50 423+00

SCALE: HORZ. 1"=50'.
VERT. 1"=0.0700'/FT.

BANKING TRANSITION

750

STA 422+45 E ~ 422+92 E LT
EXISTING GARDEN AREA - STOCKPILE TOPSOIL FOR GRADING (COST TO BE INCLUDED IN COMMON EXCAVATION)

750

Sta 421+56 LT
Transplant Shrub = Currant Bush
(Placement of shrub to be determined by the Engineer in agreement w/ the property owner)

750

STA 422+75 ± ~ 423+00 ± LT
NEW 6"ø X 100' UNDERDRAIN CARRIER PIPE

℄ 422+50

FACE OF GUARD RAIL
-.063 -.020 767.38 -.021 -.063
INV. 762.50
INV. 753.00
758.1
422+50 Rt
Begin Treated Timber Curb
422+50 Rt
New 12"x30' C.S.P. (.064) or CAAP (.060) or CPEP w/ RPCCD, Inlet and Type I Stone @ Outlet also 2-15° Elbows
422+37.5 Rt
Begin Steel Beam Guardrail

℄ 422+00

FACE OF GUARD RAIL
-.009 767.11 -.021
759.2
422+00 Rt - 422+37.5 Rt
New Melt

℄ 421+50

-.063 -.003 767.05 -.021 -.063
760.0

℄ 421+00

-.047 -.023 767.21 -.023 .063
764.4
S.S. 48" BRN/MELT
INTO

℄

422+50
12' 8' 4'
422+25
12'
422+00
8' 4'
Parabolic Flare 37½' Melt
10
421+50
12'
8'
℄

HORIZONTAL 0 10 20
SCALES IN FEET
20 10 0 VERTICAL

CROSS SECTIONS
STA. 421+00 TO STA. 422+50
GROTON-RIVEGATE FOR E-I(30)
SHEET 108 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	ELD, RGB, CPF	DEC. 86
No.	TRAVERSE	CPF, RLP	MAR 87
	AREAS	CPF	JUN 87
	AREAS CHECKED	DAU	JAN. 90
		SJS	SEPT 90

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	ELD, RGB, CPF	DEC. 86
No. 1044	TRAVERSE	CPF, RLP	MAR 87
No. 420, 492	AREAS	CPF	JUN 87
	AREAS CHECKED	DAU	JAN. 90
		SJS	SEPT 90

℄

770

423+50 Lt - 425+95 Lt
New 16"x 24" Underdrain
w/ Flushing Basin @ 425+95

ST WALL

ERD

770.58 -.02 -.063

776.60

INV. 763.50

ST WALL

FACE OF GUARDRAIL

424+50

770

423+50 Lt
Begin Type I Stone Fill

ST WALL

ERD

769.46 -.02

765.50

INV. 763.10

SLSA/BAN/MULT

ST WALL

424+00

760

ST WALL

1'-0"

ERD

768.55 -.02

764.50

INV. 762.80

ST WALL

423+50

423+50
End Scarifying Existing Pavement

760

ST WALL

FACE OF GUARDRAIL

(HAND)

ERD

767.86 -.02 -.063

760.45

SLSA/BD/BAN/MULT

SLSA/BAN/MULT

SLSA/BAN/MULT

423+00

423+10 Rt - 426+00 Rt
Removal of Existing Guardrail

HORIZONTAL
0 10 20
SCALES IN FEET

20 10 0
VERTICAL

422+56.4 Existing 19" CMP, Remove
New 24"x 124" RCCSP .064 or CAAP .060 ac crep
w/ Type I Stone @ Inlet and Outlet, w/ End Section @ Inlet
See Sheet 145 for Details

CROSS SECTIONS
STA #23+00 TO STA #24+50
GROTON - RIEGATE F 026-1(30)
SHEET 109 OF 152

FINAL SURVEY
NOTE BOOK
NO.

DATE
BY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY
NOTE BOOK
NO. 1042

DATE
DEC. 86
MAR. 87
MAY 87
SEPT. 90
BY
GCS, RCB, GDF
G.P.F., RMB
G.P.F., PMJ
SCS

780

426+00 Lt - 428+00 Lt
New 6"x 200' Underdrain W/
Flushing Basin @ 428+00

FACE OF GUARDRAIL

FRD

-.005 -.021 776.39 -.021 -.063

772.40

INV. 770.50

426+50

S1SA/BRN/MOIST

HP

S1SA/BRN/MOIST

780

S1SA/BRN/MTN

HP

SASI/BRN/COMES UP WET

768

INV. 6" UNDERDRAIN 769.0
INV. 24" CROSSPIPE 769.5

FRD

-.021 -.021 775.01

DRAIN

S1SA/BRN/MOIST

WATER

426+85 Rt
End Treated Timber Curb

INV. 762.5

426+00

New 18"x 86' RCP CL III or CMP(.064) or CAAP(.060) or RCP CL II or CPEP
W/ Type I Stone Fill @ Outlet 4'x 9'x 1'

780

FRD

-.021 -.021 773.45 -.021

769.00

INV. 767.50

425+50

S1SA/BRN/MOIST

HP

S1SA/BRN/MTN

S1SA/BRN/COMES UP WET

768

767.60

INV. 764.50 NITD

FACE OF GUARDRAIL

FRD

-.042 -.021 771.91 -.021 -.063

HP

S1SA/BRN/MOIST

ST WALL

425+00

HORIZONTAL
0 10 20
SCALES IN FEET

10
0
VERTICAL

CROSS SECTIONS
STA. 425+00 TO STA. 426+50
GROTON-RYEGATE F 0226-1(30)
SHEET 110 OF 152

PLATE 3 CROSS SECTION G. P. R. & R. E. STANDARD
LIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
No.	TRAPEZ.	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
No. 338, 60, 61, 439	TRAPEZ.	
	AREAS	
	AREAS CHECKED	

BY: ECS, RCB, EPF; GPF, RWB; GPF; PAU; SPS

DATE: DEC. 80; MAR. 81; MAY 81; JAN. 82; SEPT. 90

BANKING TRANSITION

SCALE: HORIZ. 1" = 50'
VERT. 1" = 0.100' TYP.

LEFT EDGE
RIGHT EDGE
℄ GRADE
RT. SHLD.
LT. SHLD.
D = 6° 30' 00" RT.
0.078 FT/FT MAX.

-0.027 -0.078 -0.027 -0.078 -0.027 -0.078 -0.027 -0.078 -0.027 -0.078 -0.027 -0.078 -0.027 -0.078

426+50 427+00 427+50 428+00 428+50 429+00

℄ 425+76.42 = 464'00 0.046

780 780 780 780

428+30 Lt
End Type T Stone Fill
Begin Erosion Matting

428+40 Lt - 430+80 Lt
Removal of Existing Guardrail

FACE OF GUARDRAIL

FN GR FRD -.063 +.027 780.13 -.027 -.063 FRD GR FN

3 1

428+50

CTC 146'±

FN GR FRD -.063 779.46 -.027 FRD GR FN

4 1

775.60 INV. 774.50

428+00

427+58 Rt - 430+50 Rt
Removal of Existing Guardrail

FN FRD -.063 778.62 -.027 FRD EWDS/FN

780 715.00 INV. 713.50

427+50

CTC 95' ±

FN FRD -.063 770.59 -.027 FRD FACE OF GUARDRAIL FN

2 1

770 778.70 INV. 772.00

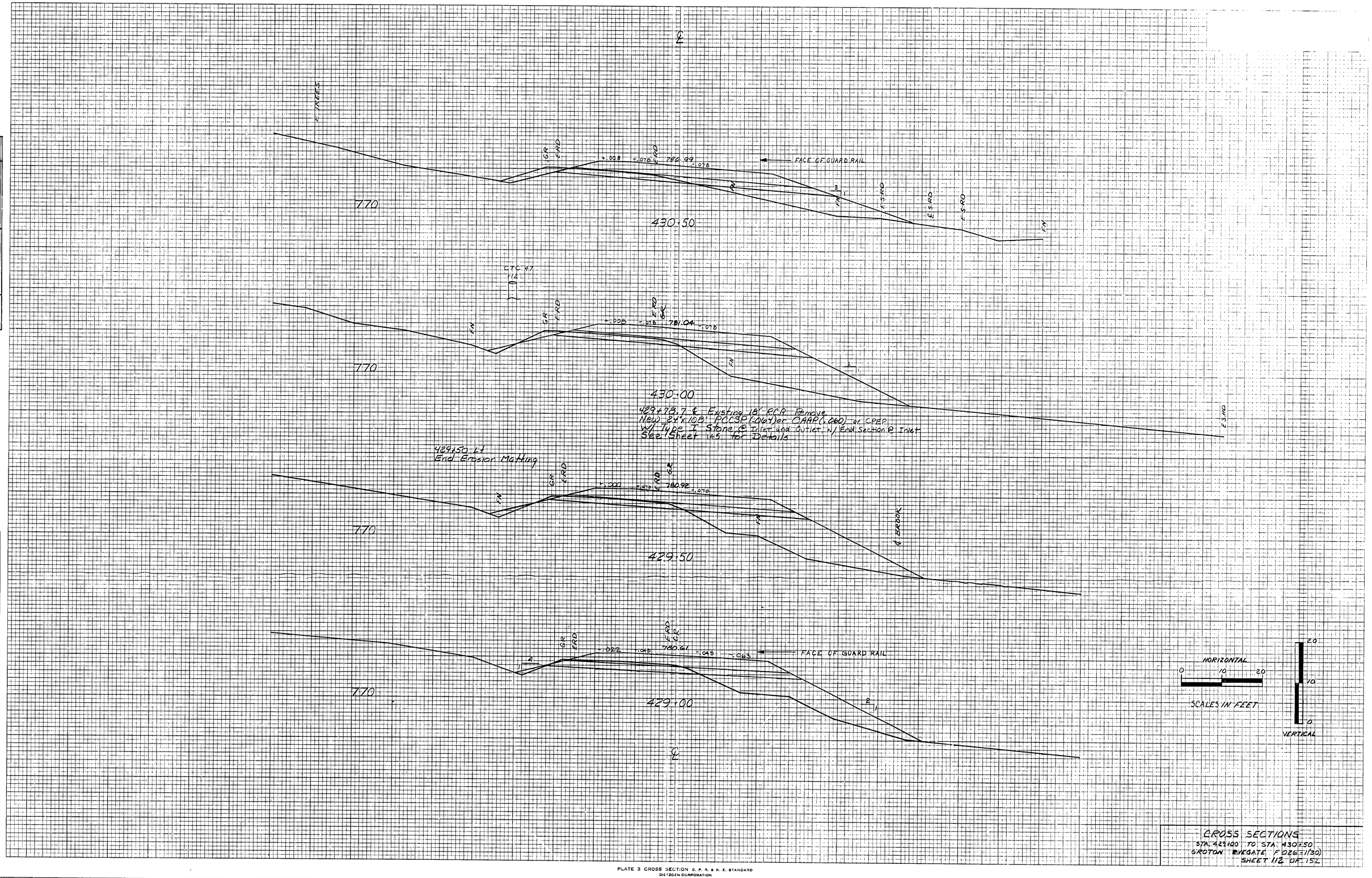
427+00

℄

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA. 427+00 TO STA. 428+50
GROTON-RIDGATE F 026-1(22)
SHEET 111 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION



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

ORIGINAL SURVEY
NOTE BOOK
NO. 376, 670, 696, 697, 698
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY	DATE
EGS, RCB, GBF	DEC. 86
GBF, RCB	AUG. 87
GBF	APR. 89
DAU	JAN. 90
SWS	SEPT. 90

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 429+00 TO STA. 430+50
GROTON BYPASS F 026(1)30
SHEET 112 OF 152

PLATE 3 CROSS SECTION O. P. R. & N. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK
NO. 401, 437
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY: ESJ, R&R, GFE / GFE, ENB / GFE / KMJ / SJS

DATE
DEC. 86
MAR. 87
APR. 87
MAY 87
SEPT. 90

℄

432+76 Rt - 433+54 Rt
Remove Existing Guardrail

432+40 Lt - 433+45 Lt
Remove Existing Guardrail

770

GR
E.R.D.
779.35
+.008
+.076
+.078
F.H.
INV. 777.00
432+50

34" POPLAR
+0

V.T. T.C. 46
+9

GUY POLE
721

780

E.R.D.
779.85
+.078
+.070
INV. 777.50
432+00

431+00 Rt - 433+50 Rt
New 6" x 250' Underdrain
w/ Flushing Basin @ 431+00

780

431+85 Lt
Construct Drive (12" Paved)

A
780.0

DRIVE CROSS SECTION
STA. 431+85 (SKEW 48°56'45" RT)

E.O.R.
E.O.R.
E.O.R.
E.R.D.
780.35
+.078
+.078
INV. 778.00
431+50

431+50 Rt
Begin Erosion Matting

431+37.5

12" Aggregate Surface Course
2" Bituminous Concrete 780
12
8%
78

SECTION A-A

NOTE: SECTION AA TO CUT PARALLEL TO MAIN LINE.

E.O.R.
780

E.R.D.
E.G.R.D.
M.E. BARR. H/G
E.R.D.
778.30
@
4
+.008
+.018
780.76
+.078
INV. 775.50
431+00

FACE OF GUARDRAIL

SJSA/Ben/Moist
NO
SJSA/Ben/Moist
M.H.O.
SJSA/Ben/Moist
SJSA/Ben/Moist

431+00 Rt - 431+37.5 Rt
New Melt

431+00 Rt
End Steel Beam Guardrail

431+37.5

431+00

10
4'
5%
12'
8'
Parabolic Flare
37½' M.L.H.

HORIZONTAL
0 10 20
VERTICAL
20
10
0

CROSS SECTIONS
STA 431+00 TO STA 432+50
GROTON-RYEGATE FOZ6-1(10)
SHEET 113 OF 152

FINAL SURVEY
NOTE BOOK
No.
SUBMITTED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 6/1,697
SUBMITTED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY	DATE
EC3, RGB, GFF	DEC 86
GFF, RJB	MAR 87
RJW	APRIL 90
SJS	SEPT 90

℄

7:10

434+50

℄ FACE OF GUARDRAIL

433+50

433+00

E.W.D.S.

E.R.D.

E.D.R.

E.F.D.

G.R.

F.N.

(434+04-Lt Construct Drive (12' Wide Paved))

(434+09 Construct Gravel Drive)

DRIVE CROSS SECTION
STA. 434+04 (ASKEW 36°58'00" RT)

37 1/2' MELT PARABOLIC FLARE

2" BIT. CONC. PAVT OVER 12" AGGREGATE SURFACE COURSE

SECTION A-A

NOTE: SECTION A-A IS CUT PARALLEL TO MAIN LINE.

433+50 Rt
New 6"x25' Underdrain Carrier Pipe W/ Type I Stone @ Outlet

433+02.77 Existing 10" RCP Remove
New 24"x105' (PCSP(.064")or CAAP(.060") or CPEP W/ Type I Stone @ Outlet End Section @ Inlet
See Sheet 145 for Details

433+37.5 Rt.
Begin Steel Beam Guardrail

433+00 Rt - 433+37.5 Rt
New Melt

433+00 Rt
Begin Treated Timber Curb

433+00 Rt
End Erosion Matting

SAS1/BRN/MTW

SAS1/BRN/WET

SAS1/BRN/Canadian WET

SAS1/GRY/Moist

NATO

INV. 771.00

INV. 765.50

INV. 771.50

Face of Guard Rail

HORIZONTAL 0 10 20

SCALES IN FEET

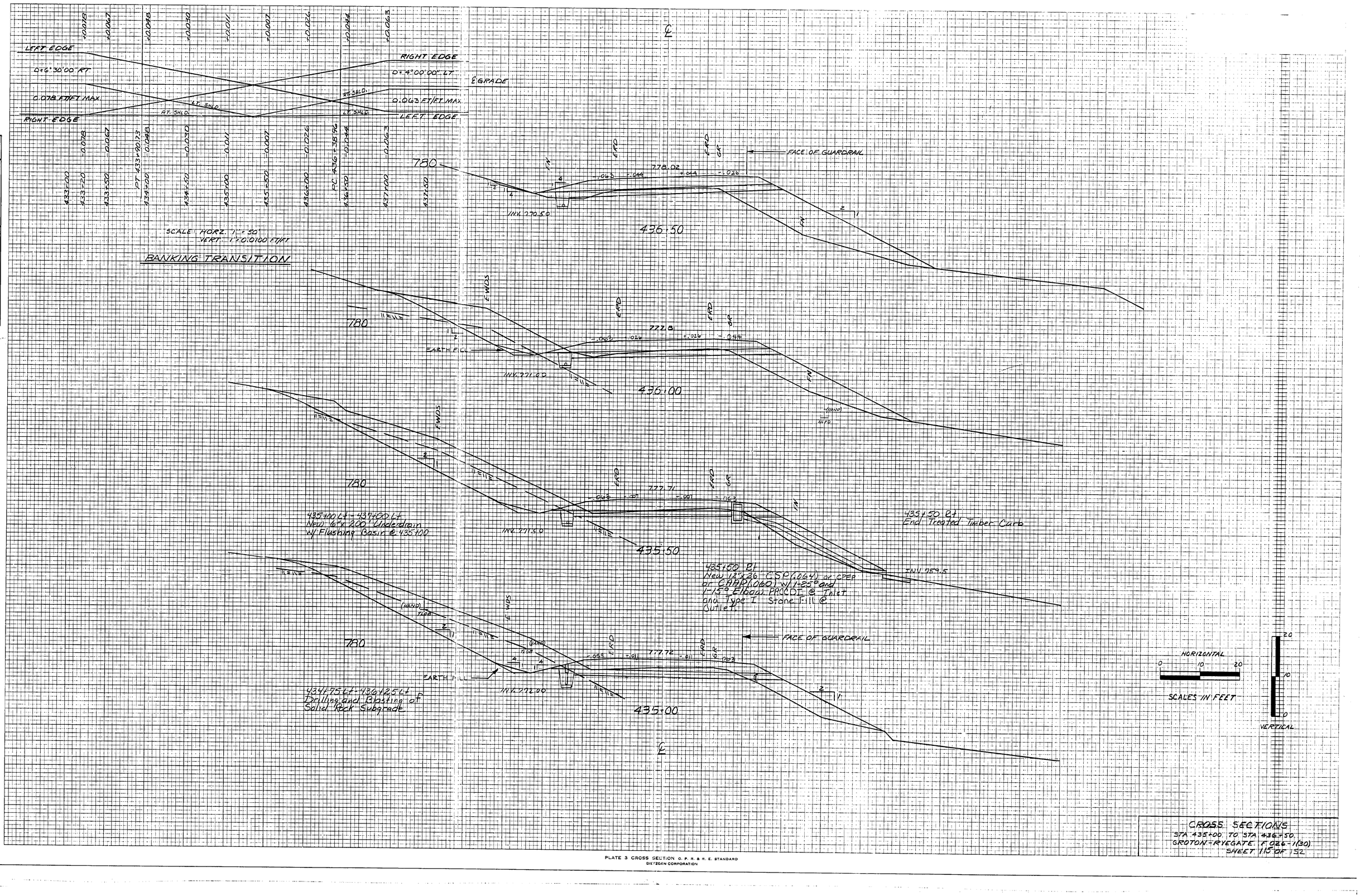
VERTICAL 20 10 0

CROSS SECTIONS
STA. 433+00 TO STA. 434+50
GROTON-RYEGATE PROJECT (30)
SHEET 144 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

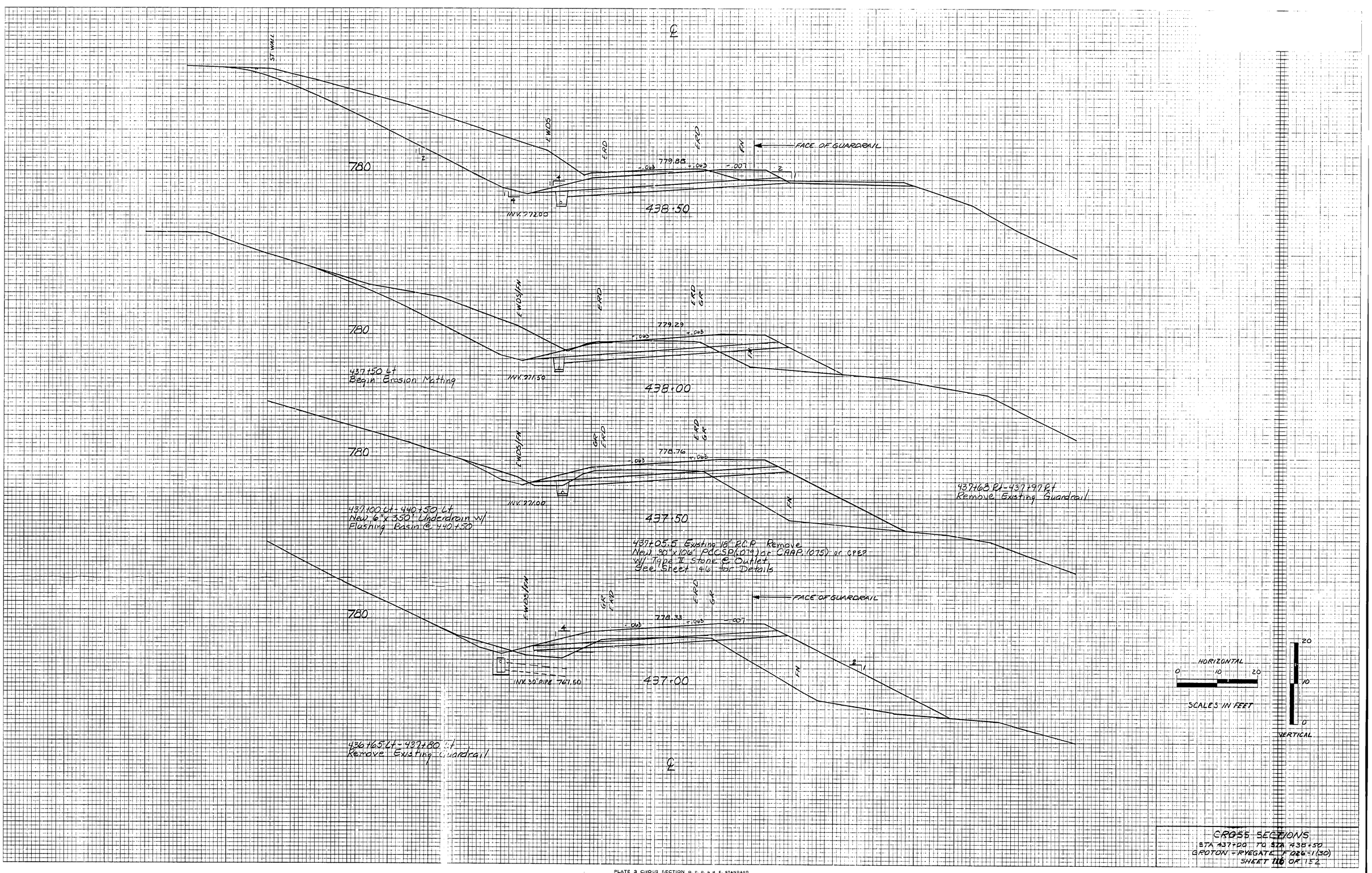
ORIGINAL SURVEY
NOTE BOOK
NO. 662-652
SURVEYED ECS, RGB & SPF
PLOTTED GPF, RJB
TEMPLATE GPF
AREAS JWJ
AREAS CHECKED SATS
DATE ECS & RGB 4/87
PMC 8/87
APC 8/87
JWJ 9/87
SEPT 90



CROSS SECTIONS
STA 435+00 TO STA 436+50
GROTON-RYEGATE F 026-1(30)
SHEET 115 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED	ECS, RGB, GPF	DEC. 86
No.	PLOTTED	GPF, RMB	MAR. 87
	TRIPLATE	MEM	APR. 90
	AREAS	PMJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90



ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED	ECS, RGB, GPF	DEC. 86
No. 440, 455	PLOTTED	GPF, RMB	MAR. 87
	TRIPLATE	MEM	APR. 90
	AREAS	PMJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

PLATE 3 CROSS SECTION O. P. R. & H. E. STANDARD
DIETZGEN CORPORATION

CROSS SECTIONS
STA 437+00 TO STA 438+50
GROTON - RYEGATE F 026-1(30)
SHEET 116 OF 152

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

℄

780

4 | 1

INV. 776.50

440+50

782.23

-.063 -.002 +.002 -.003

FACE OF GUARDRAIL

2 | 1

E.R.D.

E.R.D. G.R.

ST. WALL

P. POLE #2

SASI/BRN/MOIST

HP

SASI/BRN/MOIST

780

INV. 775.00

440+00

781.65

-.063 -.013 -.027

DAT

SUSI/BRN/MOIST

MTD

CTC 48-2 #3

interbedded ledge

E.R.D.

781.06

-.063 +.043 +.043 -.027

780

ST. WALL

L.EDGE

INV. 774.00

439+50

FN

SASI/BRN/MOIST

FLOB

(LAND)

FLOB

L.EDGE

E.R.D.

780.47

-.063 +.063 -.007

FACE OF GUARDRAIL

780

EARTH FILL

INV. 773.00

439+00

FN

439+10 Rt - 441+45 Rt
Remove Existing Guardrail

438+75 - 439+75
Drilling and Blasting of
Solid Rock Subgrade

℄

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA 439+00 TO STA 440+50
GROTON - RYEGATE F.026-1(30)
SHEET 111 OF 752

ORIGINAL SURVEY
NOTE BOOK
No. 97, 459
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY	DATE
ECS, RGB, GPF	DEC. 86
GPF, RWB	MAR. 87
GPF	APR. 87
RWB	JULY 90
SJS	SEPT. 90

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	DEC. 87
No. 265, 268, 269	TEMPLATE	MAR. 87
	AREAS	APR. 87
	AREAS CHECKED	MAY 88
		SEPT. 90

RIGHT EDGE
D=4°00'00" LT
0.063 AT PT. MAX.
LEFT EDGE
LEFT EDGE
D=2°30'00" RT
0.046 FT/FT MAX.
RIGHT EDGE
EGRADE
ATT SHLD.
LT. SHLD.
RT. SHLD.
439+00 -0.063
439+50 -0.063
440+00 -0.023
440+50 -0.002
441+00 -0.018
PI 441+26.97
441+50 -0.038
441+70 -0.046
442+00
790

SCALE: HORZ. 1"=50'
VERT. 1"=0.100 FT/FT

BANKING TRANSITION

442+75 Lt
End Erosion Matting

1:1 1:1 1:1 1:1
ROCK RET. WALL
END
END
NE CRNR HOUSE
EARTH FILL
4 4 4
+.024 +.046 -.046 -.063
784.59
INV. 779.50
INV. 779.90
B
442+50

442+25
Begin Drilling and Blasting of Solid Rock Subgrade

GMP @ +43
790
441+99 Lt
Construct Drive (16' Paved)
New 15"x24" CSP(.064) or CPEP or RCP CL III
E WDS
END
END
ST WALL
FACE OF GUARDRAIL
SAS1/Bon/MAT
SAS1/Bon/MAT
SAS1/Bon/MAT
SAS1/Bon/MAT
SAS1/Bon/MAT
SAS1/Bon/MAT
NATO
NATO
NATO
+.024 +.046 -.046 -.063
784.00
INV. 779.00
442+00
3
1

442+40

442+50 Rt - 445+00 Rt
New 6"x 250' Underdrain w/ Flushing Basin @ 442+50
TEL +26

442+00 Rt - 442+37.5 Rt
New Melt

442+00 Rt
End Steel Beam Guardrail

442+00
4' 6'
Parabolic Flare
37½' Melt
18' 8' 3'

A
A
B
B
-19.75%
-2.56%
784.12
784.40
783.97
INV. 778.98
20' V.C.
E WDS
DRIVE CROSS SECTION
STA. 441+98 (ASKEW 47°00'00" RT.)

790
12" AGGREGATE SURFACE COURSE
7:3
785.92
8.0
INV. 781.0
INV. 781.9
SECTION A-A
NOTE: SECTION A-A IS CUT PARALLEL TO MAINLINE.

441+05 Lt
18" Drive Pipe - Retain
790

441+50
441+22.9 Existing 24" RCP Remove
New 24"x 82' RCSP.064 or CMAP.060 or CPEP
W/ Type II Stone @ Outlet
See Sheet 140 for Details

END
END
782.82
FACE OF GUARDRAIL
SAS1/Bon/MAT
SAS1/Bon/MAT
NATO
NATO
+.024 +.046 -.046 -.063
2
1
441+00

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA 441+00 TO STA 442+50
GROTON-RYEGATE F 026-1(30)
SHEET 118 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TRACED		
No.	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED	ECS, RGR, CFF	DEC. 86
NOTE BOOK	TRACED	CFF, RWB	MAR. 87
No. 602,697	AREAS	RAV	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

444+00 Lt - 448+00 Lt
New 6'x 400' Underdrain
w/ Flushing Basin @ 444+00

820

820

820

LEDGE

4

EARTH FILL

INV. 778.5

444+50

INV. 778.90

785.40

+.024

+.046

-.046

-.062

RET. WALL

E.R.D.

ST WALL

GMP 9
+39

(HAND)
11.0A

INV. 779.4

444+00

INV. 778.40

NTO 785.48

SUBA (BRKN STN)

SUBA (BRKN MOIST)

* NOTE - CONSTRUCT / VARY SLOPE AS NEEDED TO REMOVE REMAINING FOUNDATION WALL AND MATCH EXISTING GROUND BEHIND.

INV. 780.90

443+50

INV. 778.90

785.38

DR

12" AGGREGATE SURFACE COURSE

12'

MAINLINE FILL LINE

SECTION A-A

443+00 ~ 445+00 Lt
New 4' Chain Link Fence
(Actual Length and Offset to be determined in the field by the Engineer in agreement with the Property Owner. Fence to be erected outside I.R.O.W. line.)

MATCH TO EXISTING

HOUSE

785.92

784.77

784.23

-6.7000%

INV. 777.03

DRIVE CROSS SECTION
STA 443+37

443+37 Rt
Construct Drive (12" Gravel)

441+23 Lt - 443+97 Lt
New 6"x 274' Underdrain
w/ Flushing Basin @ 443+97

EARTH FILL

INV. 780.00

785.08

SUBA (BRKN MOIST)

SUBA (BRKN MOIST)

VARIES

INV. 777.40

443+00

442+70 Rt - 443+30 Rt
Granite Slope Edging

HORIZONTAL
0 10 20

SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS
STA. 443+00 TO STA. 444+50
GROTON-PEYGATE F 026-1(30)
SHEET 1190F 1152

FINAL SURVEY	SURVEYED	BY
	PLOTTED	
NOTE BOOK	TEMPLATE	
No.	AREAS	
	AREAS CHECKED	

DATE	BY
DEC. 86	ECG, KEB, CFF
MAR. 87	CPF, DMS
APR. 87	CPF
JAN. 90	KAW
SEPT. 90	SDS

ORIGINAL SURVEY	SURVEYED	
	PLOTTED	
NOTE BOOK	TEMPLATE	
588,89,45	AREAS	
No. 588/45	AREAS CHECKED	

LEDGE

800

EARTH FILL

INV. 778.0

(HARD)

7.0S

782.99

.024 .046 (WIRE) .046 .063

NLTD

3/4" CRUSHED STONE

445+00

445+87.5 Existing 18" RCP Remove
See Sheet 1146 for Details

9476+20 RT
CONSTRUCT DRIVE (16'-WIDE, GRAVEL)

END WALL

END

1:2.5

1:3

12'

8'

3'

9'

6'

DRIVE RADIUS

Penstock Elbow

37½ Mett

+65

+60

+40

+20

446+00

800

LEDGE

7.0S

784.65

INV. 777.40

445+50

445+30 Lt
Begin Erosion Matting

EARTH FILL

INV. 776.60

783.12

INV. 775.40

445+00

INV. 775.05

445+00 Rt
New 6'x 30' Underdrain Carrier Pipe
W/ Type I Stone Pad & Outlet

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS
STA 445+00 TO STA 446+00
GROTON - RYEGATE F.026-1(30)
SHEET 120 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK
No. 617, 452
SURVEYED ECS, RGB, GPF
PLOTTED GPF, RWB
TEMPLATE GPF
AREAS AM
AREAS CHECKED SRS
DATE
DEC. '96
AUG. '97
NOV. '97
SEPT '00

LEDGE
(HAND) 7:08
800
EARTH FILL
11=11
448+00
New 18"x78" PCCSP .064 or CMAP .060 or RCP CL III or CPEP
w/ Type I Stone ¢ Outlet
¢MP 10
+22
FACE OF GUARDRAIL
ERD
EW
779.41
+.024 -.046 -.063
INV. 773.2
INV. 765.0
SI/SAG/MOIST
SI/SI/SAN/MOIST
SI/SAN/WET
2
1
447+50
780.84
INV. 775.0
1-2
782.08
INV. 775.7
1-3
SAG/BAN/MOIST
SISA/SAN/MOIST
SASI/SAN/WET
447+00
783.13
INV. 777.0
446+50
1-3.5+
446+50
Begin Scarifying Existing Pavement
446+77.5 RT.
BEGIN STEEL BEAM GUARDRAIL
446+40 ~ 446+77.5 RT
NEW MELT
HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA 446+50 TO STA 448+00
GROTON-AYER GATE A 026-1(30)
SHEET 121 OF 152

PLATE 3 CROSS SECTION U.P.R.R.A.M.E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK
SEE AUG. 66
No. AUG. 66
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY ECS, RCB, GPF
GPF, KMS
GPF
KMS
SDS
DATE
OCT. 66
MAR. 67
APR. 67
JUNE 90
SEPT. 90

℄

790
LEDGE
LEDGE
4' WDS
790
(HARD) 774
LEDGE
790
(HARD) 774
LEDGE
4' WDS
790
EARTH FILL

FACE OF GUARDRAIL
-.047 +.023 771.75 -.023 -.043
765.00
FND
ERD
FN
3.5% / 86ft / min
450+00
774.70
-.034 +.036 773.95 -.036 -.063
774.40
ERD
ERD
FN
449+50
FN
-.046 775.96 -.046
(HARD) 773.10
774
ERD
ERD
FN
449+00
FN
FACE OF GUARDRAIL
-.024 -.046 777.78 -.046 -.063
ERD
ERD
FN
448+50

448+50 ± t
End Erosion Matting
Begin Type I Stone Fill
Note: Excavation to be paid as Trench Excavation

448+50
End Drilling and Blasting of Solid Rock Subgrade

℄

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA 448+50 TO STA 450+00
GROTON - RYEGATE F026-1(30)
SHEET 122 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. I. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY: ECS, RGB, GAF
NOTE BOOK	PLOTTED	GPF, RJB
NO.	TEMPLATE	GPF
	AREAS	DWM
	AREAS CHECKED	SJS

DATE: DEC. 84; MAR. 87; APR. 87; JUNE 87; SEPT. 90

ORIGINAL SURVEY	
NOTE BOOK	
NO. 670, 657	

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

452+00 Lt
End Type I Stone Fill
Begin Erosion Matting

451+00 Rt
Remove Existing Guardrail

450+68.9 Existing 36" Conc. Box Remove
New 48"x 132" RCPSA (109) or CMAP (.105)
w/ Type II Stone @ Inlet and Energy Dissipator @ Outlet
See Sheet 147 for Details

CROSS SECTIONS
STA 450+50 TO STA 452+00
GROTON - RYEGATE FOPG-1(30)
SHEET 128 OF 152

HORIZONTAL 0 10 20
SCALES IN FEET
VERTICAL 20 10 0

FACE OF GUARDRAIL

2'-6" TYPE I STONE FILL

BLASTED ROCK

18' NATIVE GRUB MATERIAL TO BE SEEDED AND MULCHED

2'-6" TYPE II STONE FILL

453+75 Rt
Begin Type II Stone Fill
Begin Grubbing Material
Begin Erosion Matting (For Slope Protection, Place on Seeded Slope)

Note: Blasted Rock meeting Stone Fill Specs. may be substituted for Stone Fill Type II

453+50 Lt
End Erosion Matting

REV. PC 452+55.30
Δ = 57°02'43"
D = 3°49'11"
B = 0.061 FT/FT

REV. ℄ 453+99.97

REV. ℄ 453+49.99

EARTH FILL

LEDGE

(HAND)

INV. 754.91

INV. 755.70

INV. 755.39

INV. 756.11

INV. 757.31

E WDS

E RD

ERD

GR

FN

GMP II

BANKING TRANSITION

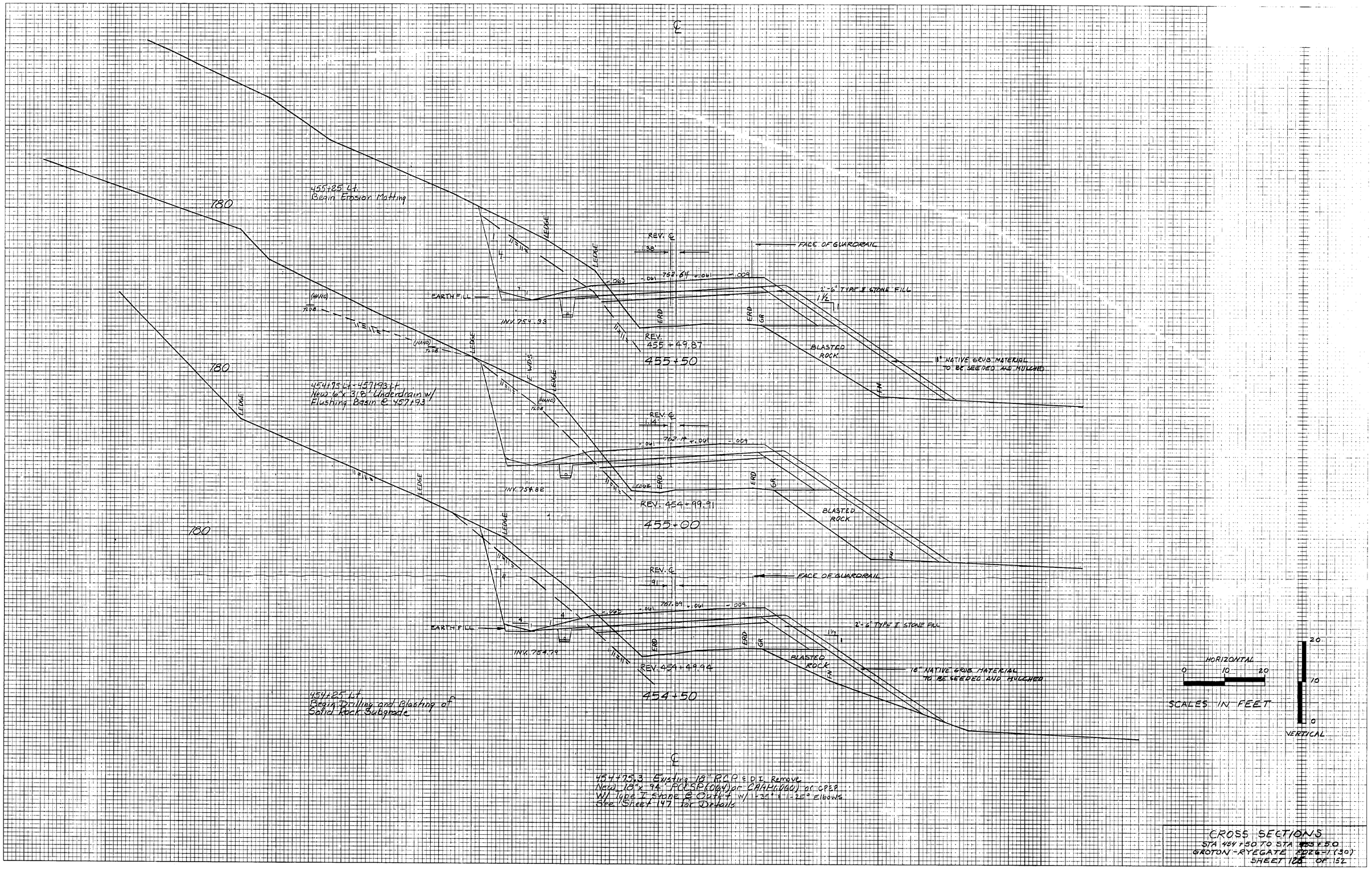
SCALE: HORZ. 1"=50'
VERT. 1"=0:100 FT/FT.

LEFT EDGE
D = 2°30'00" RT.
0.046 FT/FT MAX.

RIGHT EDGE
D = 3°49'11" LT.
0.061 FT/FT MAX.

RT. SHLD.
LT. SHLD.

| | | |



FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TRACED
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
SBS, ECG
No. 6/9, 6/97
SURVEYED ECG, RSG, GPP DEC. 86
PLOTTED GPP, KWB MAR. 87
TRACED GPP APR. 87
AREAS RAM JAN. 90
AREAS CHECKED SJS SEPT. 90

CROSS SECTIONS
STA 454+50 TO STA 455+50
GROTON - AYER GATE 2026-1(30)
SHEET 128 OF 152

FINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TRACED		
No.	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED	EGS, RGG, CPF	DEC. 86
NOTE BOOK	TRACED	CPF, RWR	MAR. 87
1286, 60-64	AREAS	CPF	APRIL 87
No. 612,681	AREAS CHECKED	RAW	JAN. 90
		SJS	SEPT. 90

℄

780

780

780

(HARD) 7.0 ft

HARD 7.0 ft

LEDGE

LEDGE

EARTH F...

INV. 252.93

1:1½

1:1½

1:1½

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

ORIGINAL SURVEY
NOTE BOOK
No. 1, 2, 3, 4, 5
SURVEYED EGS, RC & GPE
PLOTTED GPE, RWB
TEMPLATE GPE
AREAS RWB
AREAS CHECKED SJS

DATE
DEC. 86
DEC. 87
APR. 87
FEB. 88
SEPT. 90

458+00 Lt - 461+50 Lt
New 6"x 350' Underdrain w/
Flushing Basin @ 461+50

℄

780

FACE OF GUARD RAIL

EARTH FILL

INV. 760.58

REV. 458+49.46

458-50

780

EARTH FILL

INV. 758.84

REV. 457+49.63

457-50

780

INV. 758.75

REV. 457+99.55

458-00

New 18"ø RCCSP(0.064) or CAAP(.060) or CPEP
w/ 2-35° Elbows and Type I Stone @ Outlet

458+25 Rt
End Type II Stone Fill
End Grubbing Material
End Erosion Matting

18" NATIVE GRUB MATERIAL
TO BE SEEDED AND MULCHED

INV. 733.25

457+50
End Scarifying Existing Pavement

2'-6" TYPE II STONE FILL

BLASTED ROCK

18" NATIVE GRUB MATERIAL
TO BE SEEDED AND MULCHED

℄

HORIZONTAL 0 10 20

SCALES IN FEET

VERTICAL 20 10 0

CROSS SECTIONS
STA 457+50 TO STA 458+50
GROTON-RYEGATE FOR26-1(20)
SHEET 122 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DETZOEN CORPORATION

460+20 Rt - 462+63 Rt
Remove Existing Guardrail

459+20

458+90

458+50

4' 6' 8' 12'

Parabolic Flare
37½' Melt

E. RIVER

790

EARTH FILL

E.W.D.S.F.N.

E.R.D.

REV. ℄

3.39

769.31

INV. 761.70

REV. 459+99.15

460+00

GMP. 13
12.5

769.02

INV. 761.40

REV. 459+49.26

459+50

459+25 Lt
End Erosion Matting

LEDGE

768.54

INV. 761.23

459+00

REV. 458+99.36

Sa/Bou/Rock
Si.St/Bou/Rock
Sa.Si/Bou/Rock
WATER

458+52.5 Rt - 458+90 Rt
New Melt

458+52.5 Rt
End Steel Beam Rail

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

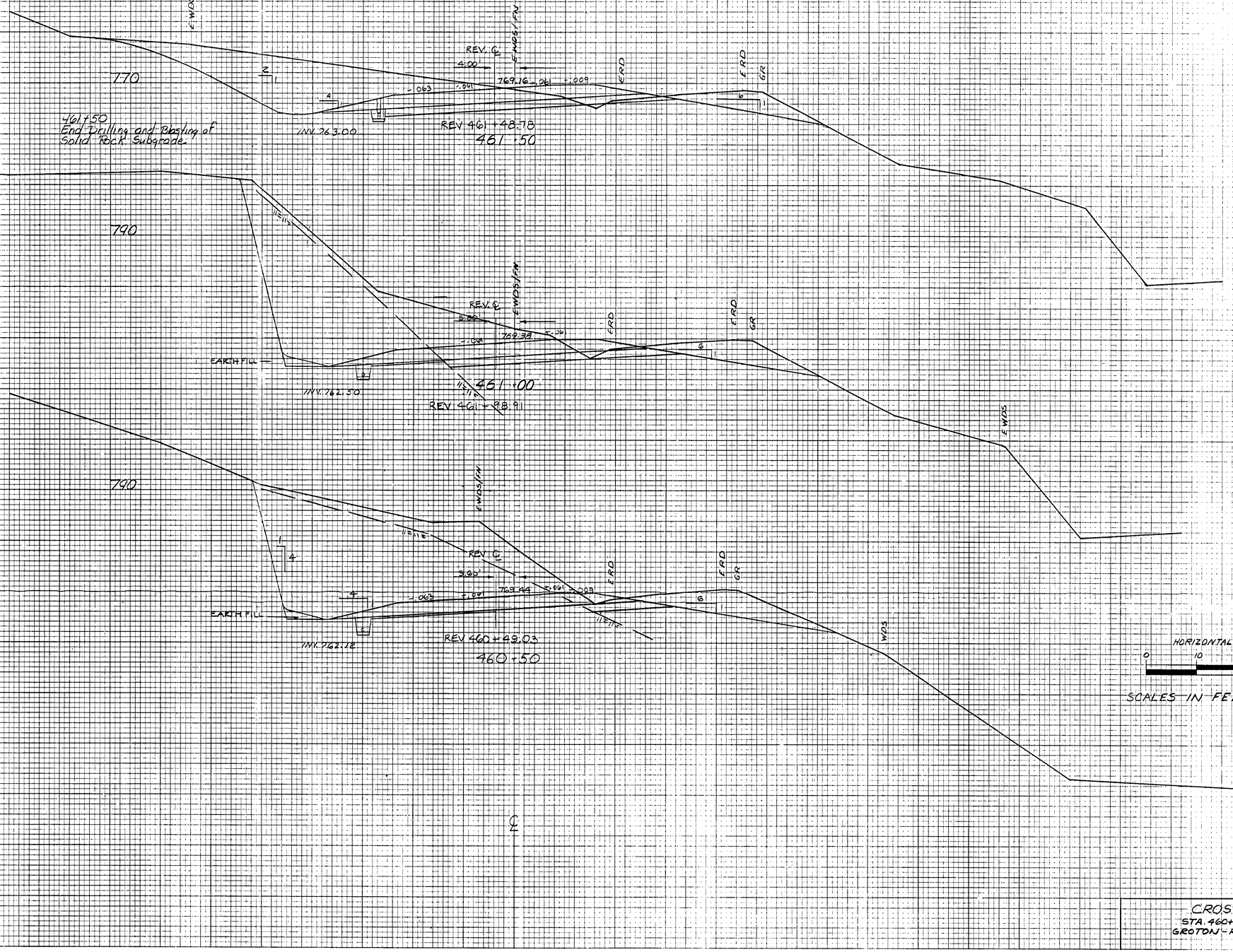
CROSS SECTIONS
STA 459+00 TO STA 460+00
GROTON RYEGATE (026-1(30)
SHEET 188 OF 152

FINAL SURVEY	SUBMITTED	BY	DATE
NOTE BOOK	PLOTTED		
No.	TRACED		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	ECS, RCG, GFF	DEC. 86
286, 40, 41	TRACED	GFF, RWB	JUNE 87
No. 675, 687	AREAS	GFF	MAY 90
	AREAS CHECKED	RAW	JULY 90
		SJS	SEPT. 90

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

461+57 ~ 464+70 LT
NEW 6" x 314' UNDERDRAIN
W/ F.B. @ 461+57 LT



HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA. 460+50 TO STA. 461+50
GROTON - RYEGATE F026-1(30)
SHEET 189 OF 152

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

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK CP-1, CP-4 No. 412, 432	PLOTTED	GS, RGB, GPF	OCT. 86
	TEMPLATE	GPF + RWB	MAR. 87
	AREAS	GPF	APR. 87
	AREAS CHECKED	SWS	JULY 90
		SWS	SEPT 90

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

REV: ℄

4.95

765.40 +.00 -.009

-.061 -.063

760

INV. 758.53

REV 463+98.04

464+00

E.W.O.S.

REV: ℄

4.75

766.50 +.00 -.061

760

INV. 759.50

REV 463+48.20

463+50

E.W.O.S.

REV: ℄

4.57

767.28 +.00 -.061

770

INV. 760.50

463+00

REV 462+98.36

E.W.O.S.

REV: ℄

4.39

768.78 -.061 -.06

770

462+00 Lt.
Begin Erosion Matting

INV. 761.00

462+50

REV 462+48.51

462+11 Existing 18" R.C.P. Remove.
See Sheet 147 for Details

REV: ℄

4.19

768.75 +.00 -.061 -.029

770

INV. 761.50

REV 461+98.65

462+00

℄

E.R.D.

F.N.

GMP 14
+29

462+50
Begin Scarifying Existing Pavement

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS
STA. 462+00 TO STA. 464+00
GROTON-RYEGATE F026-1(30)
SHEET 130 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY	SURVEYED	ECS, RGS, GPF	DEC. '86
	PLOTTED	GPF, RLUE	MAR. '87
NOTE BOOK	TEMPLATE	GPF	APR. '87
VOL. 4 PAGE 43	AREAS CHECKED	RLW	MAY '87
No. 5, 6 & 32		SJS	SEPT '90

FINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	ECS, RCB, GPF
No.	TEMPLATE	GPF, RJB
	AREAS	GPF
	AREAS CHECKED	RJB
		SJS

DATE
DEC. 96
MAR. 97
APR. 97
JULY 97
SEPT. 98

ORIGINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	
No.	TEMPLATE	
	AREAS	
	AREAS CHECKED	

℄

REV. ℄
5.57
FW
760.67
.061
.063
.061
= .002
4
6"UND.
INV. 753.82
751.8
REV 465+97.34
750
ERD
ERD
5
5
466+00
End Scarifying of Exstng. Pavement

REV. ℄
5.62
761.81
.061
FW
ERD
ERD
INV. 754.93
755.0
REV 465+97.70
750
465+50

464+80 LT - 468+50 LT
New 16" x 370' Underdrain w/
Flushing Basin @ 464+80

REV. ℄
5.26
763.01
.061
.061
FW
ERD
ERD
INV. 756.15
754.2
REV 464+97.70
750
465+00

464+10 N 464+02 LT
NEW 18" x 232' RCP ☐ ☐
OR CPEP w/ 4x4 D.I. @ INLET

REV. ℄
5.17
763.70
464+70
INV. UND. 756.76
754.8
REV. ℄
5.04
764.20
.061
= .009
6"UND.
INV. 757.33
REV 464+47.87
760
750
ERD
ERD
5
1
1
1
1
2
464+50

STA 464+72.9
REMOVE 18" RCP

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 464+50 TO STA. 466+00
GROTON - RYEGATE F026-1(30)
SHEET 13 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DETZOLN CORPORATION

RIGHT EDGE

D=3° 49' 11" LT

0.06% FINAL MAX

RT SHLD

LT SHLD

LEFT EDGE

EGRADE

1.00M | 1.00M | 0.02% | 1.00% | 0.02% | 1.00% | 0.02% | 1.00%

467+00 | 467+50 | PT 467+55.89 | 468+00 | 468+50 | 469+00 | 469+50 | 470+00

-0.06% | -0.04% | -0.02% | -0.02% | -0.02% | -0.02% | -0.02%

SCALE: HORZ 1"=50'
VERT. 1"=0.100'/ft

468+54 Lt - REV 473+00
New 6"x 446' Underdrain w/
Flushing Basin @ 468+54

468+54 Rt - 473+38 Rt
New 6"x 484' Underdrain w/
Flushing Basin @ 468+54

℄

760

REV. ℄ 6.00'

FW 756.98 +.00D

.063 .024 .063

INV UND 751.00

INV 18" PIPE 748.3

INV 24" PIPE 747.8

REV 468+46.93

468+50

INV 752.20

INV 24" PIPE 747.5

INV. 24" PIPE 747.2

ERD | ERD | EWDS

468+50
NEW 24" x 64' RCP CL III
OR CPEP

REV. ℄ 6.00'

757.46 +.02I

.063 .024 .049

INV 751.50

REV 467+96.74

468+00

749.0

467+50 Lt
End Erosion Matting

REV. ℄ 5.99'

FW 758.07 +.00I

.063 .041 .029

INV 752.00

REV. 467+46.76

467+50

749.8

12' AGGREGATE SURFACE COURSE

DITCH LINE

℄

467+50 | 467+25 | 467+00

SECTION B-B

467+25 Lt
CONSTRUCT GRAVEL DRIVE - 12' WIDE

467+00 ~ 468+50 Lt
NEW 18" x 148' RCP CL III
OR CPEP W/ 4'x6' DI @ INLET

REV. ℄ 5.82'

FW 758.80 +.00I

.06

INV 752.50

REV. 466+96.96

467+00

750.3

467+25 RT
CONSTRUCT GRAVEL DRIVE - 16' WIDE
NEW 15" x 38' CSP .014 OK
RCP CL III OR CPEP

GMP 15"

REV. ℄ 5.71'

FW 759.67 +.00I

.063 .06

INV 752.00

REV. ℄

REV. 466+47.15

466+50

751.3

468+50
NEW 24" x 100' RCCSP .064 or CMAP .060 or CPEP
W/ Type II Stone Fill @ Outlet

* NOTE: EXCAVATION FOR INSTALLATION OF CULVERT @ REV STA 468+50 RT TO BE KEPT TO A MINIMUM NOT TO EXCEED 30' IN WIDTH.

HORIZONTAL 0 10 20

SCALES IN FEET

20 | 10 | 0 VERTICAL

12' AGGREGATE SURFACE COURSE

1:4 | 1:3 WITHIN CLEAR ZONE

467+50 | 467+25 | 467+00

SECTION A-A (DRIVE IS SKEWED)

CROSS SECTIONS
STA. 466+50 TO STA. 468+50
GROTON-RYEGATE RD26-1(30)
SHEET 152 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

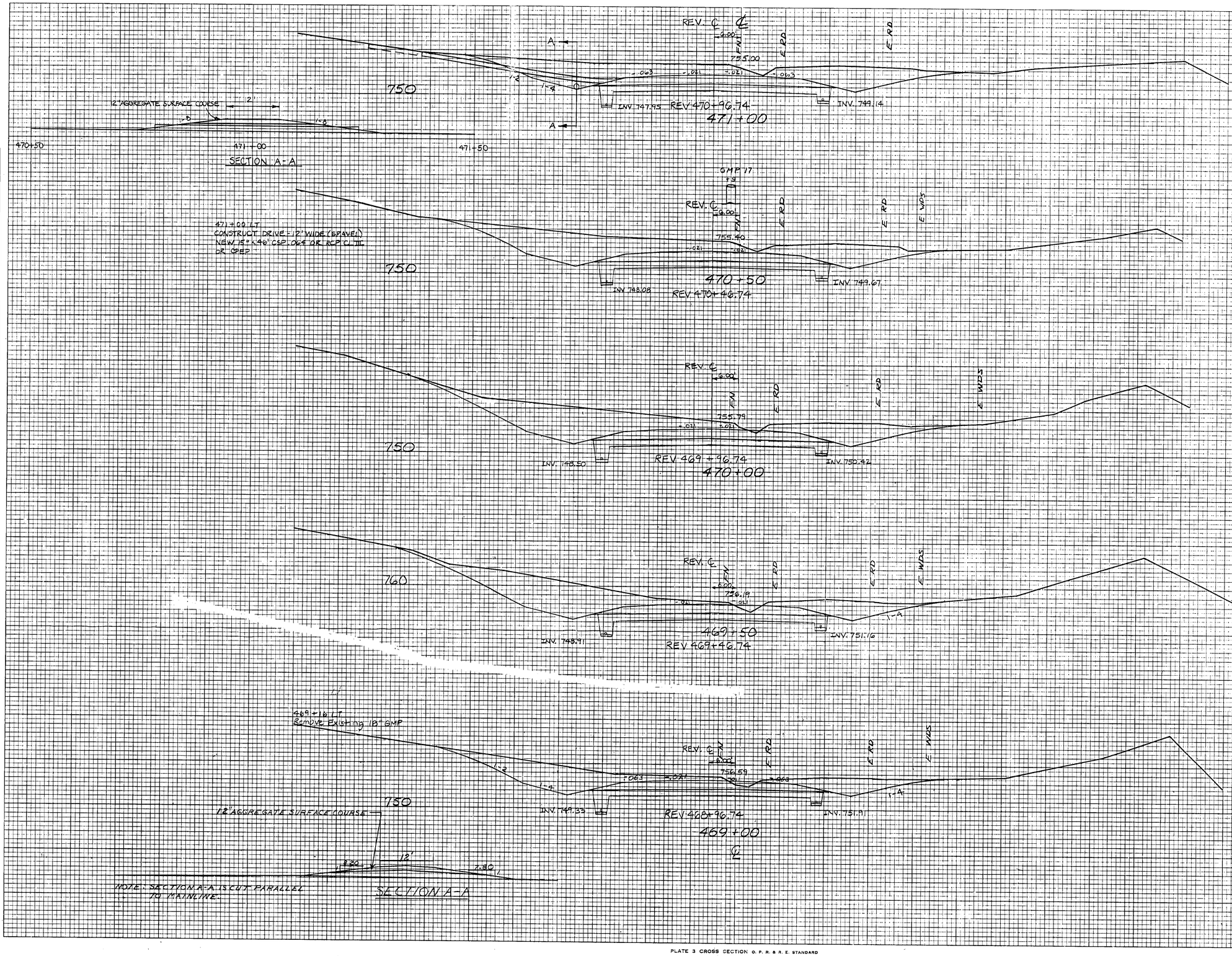
FINAL SURVEY — NOTE BOOK — No. —
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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

BY	DATE
CCS, RGB, RPF	DEC. 96
GPF, RJB	MAR. 97
GPF	APR. 97
KBM	MAY 97
CCS	SEPT. 98

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	RGB GPF	DEC. 86
No.	TEMPLATE	GPF KWB	MAR. 87
	TYPE	GPF	APR. 87
	AREA	RAU	MAY 87
	AREAS CHECKED	SVS	SEPT 90

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	RGB GPF	DEC. 86
No. 6/6/87	TEMPLATE	GPF KWB	MAR. 87
	TYPE	GPF	APR. 87
	AREA	RAU	MAY 87
	AREAS CHECKED	SVS	SEPT 90



CROSS SECTIONS
STA. 469+00 TO STA. 471+00
GROTON - RYEGATE F-026-1(8C)
SHEET 139 OF 752

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

LEFT EDGE

D=4°45'00" RT

0.069 FT/FT MAX.

6' SHLD.

RT. SHLD.

RIGHT EDGE

-0.021 -0.021 -0.021 -0.021 -0.021 -0.021 -0.021 -0.021 -0.021

-0.021 -0.021 -0.021 -0.021 -0.036 -0.036 -0.036 -0.036 -0.069

472+00 472+50 473+00 473+50 474+00 474+50 474+80 475+00

750

SCALE: HORZ. 1"=50'
VERT. 1"=0.100'/ft

BANKING TRANSITION

℄

REV. ℄ 6.00'

BARN TO BE REMOVED BY OTHERS

ERD

4

-0.055 -0.015 753.01 -0.021 -0.065

473+50

REV. 473+96.74

INV. 747.70

REV. 473+00 ~ REV. 473+90 RT.
GRANITE SLOPE EDGING

REV. 473+13 ~ REV. 473+85 RT.
NEW 18"x68' RCP CL III OR CPEP

REV. 473+09.7
NEW 24"x96' PCCSP: 064 OR CAAP: 060
OR RCP CL III OR CPEP w/ TYPE I
STONE ℄ OUTLET

REV. 476.00

INV. 746.90 UND. INV. 746.00 INV. 746.00

-0.021

473+00

REV. 472+96.74

REV. 473+09.7 ℄ EXISTING 18" RCP - REMOVE
NEW 18'x50' RCP CL III OR CPEP
*SEE SHEET #148

REV. ℄ 6.00'

752.8 -0.063 -0.14 -0.021 -0.063 -0.021

INV. 746.92 INV. 746.68

472+50

REV. 472+46.74

REV. ℄ 6.00'

754.20 -0.021 -0.021

INV. 746.83 INV. 747.76

472+00

REV. 471+96.74

REV. ℄ 6.00'

754.60 -0.063 -0.021 -0.021 -0.063

1:4 1:4

INV. 747.25 INV. 748.18

471+50

REV. 471+46.74

℄

RIVER

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS
STA. 471+50 TO STA. 477+50
GROTON - EVERGATE EDR-1-08
SHEET 134 OF 152

FINAL SURVEY
NOTE BOOK
NO.

BY DATE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY
NOTE BOOK
NO.

SURVEYED 2-5-86
PLOTTED FEB. 87
TEMPLATE APR. 87
AREAS MAY 87
AREAS CHECKED SEPT. 90

BY CSS, RGB, GPF
GPF, RJR
GPF
RJR
SJS

DATE
DEC. 86
FEB. 87
APR. 87
MAY 87
SEPT. 90

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	DATE
No.	TRACED	
	AREAS	
	AREAS CHECKED	

BY	DATE
ECS, RGR, GFE	DEC. 86
GFE, RLB	MAR. 87
	APR. 90
KAW	JAN. 92
SJS	SEPT. 96

ORIGINAL SURVEY	SURVEYED	BY
NOTE BOOK 98, 6 GOLF	PLOTTED	DATE
No. 617, 637	TRACED	
	AREAS	
	AREAS CHECKED	

REV. C
5.12'
753.00
-.001 +.041 -.069
E.R.D.
E.R.D.
REV 475+97.59
476+00
INV. 744.90

REV. C
5.27'
752.68
+.04 -.069
E.R.D.
E.R.D.
REV 475+47.37
475+50
INV. 745.30

REV. C
5.21'
752.52
-.00 +.064 -.069
E.O.R.
E.R.D.
E.R.D.
E.O.R.
REV 474+97.15
475+00
INV. 745.70

756.30

750

474+90
REV. C
5.84'
752.32
-.014 -.056 -.063
E.O.R.
E.R.D.
E.R.D.
E.O.R.
E.O.R.
HOUSE
INV. 746.10

REV 474+40 ~ 476+48 RT
NEW 6" x 208" UNDERDRAIN
W/ E.B.'S REV 474+40 RT

474+50 LT
CONSTRUCT DRIVE (12' WIDE - GRAVEL)

474+50
REV 474+46.91
47A = 60
NEW ¾" x 60" SEAMLESS COPPER WATER TUBE
NEW 6" x 60" SLEEVE FOR UTILITIES

474+00 Rt.
Construct Drive (12' Paved)

750

12'
12" AGGREGATE SURFACE COURSE
NEW DITCH LINE
479+00
RVE@ 474+50 LT
474+50
475+00
SECTION B-B

REV. C
6.00'
752.69
-.034 +.034 -.043
E.O.R.
E.R.D.
1'-8"
PROJ. E.O.R.
D.R.
E.O.R.
MATCH TO EXISTING GRADE
INC. CONC. HOUSE
INV. 746.50
474+00
REV 473+96.74

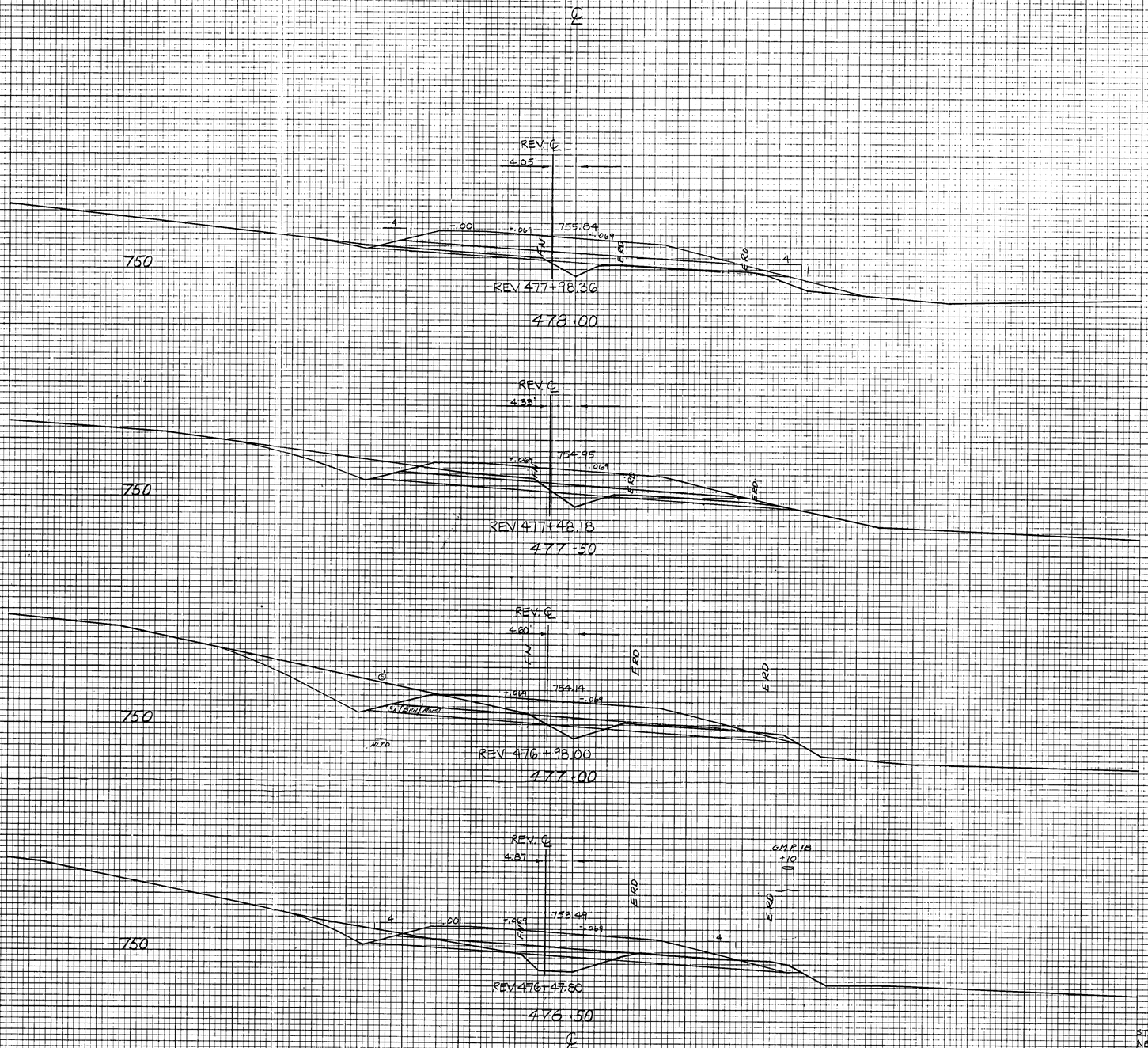
A
A

DRIVE
474+00
2" BITUMINOUS CONCRETE
ON 12" AGGREGATE SURFACE COURSE
EXISTING GROUND
1'-8"
1'-8"
EXISTING GROUND
SECTION A-A

HORIZONTAL
0 10 20
SCALES IN FEET
VERTICAL
20
10
0

CROSS SECTIONS

STA. 474+00 TO STA. 476+00
GRID DIV. = RYE GATE ROAD (30)
SHEET 150 OF 152



Rev. Sta. 476+39.8 Existing 12"x24" Box - Remove
New 42"x92" RCCSP(.109) or CARP(.105)
W/ Type II Stone Inlet and Outlet
See Sheet 148 for Details

STA 476+48 RT
NEW 6" x 22" UNDERDRAIN
CARRIER PIPE
* SEE SHEET 148 FOR DETAILS

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 476+50 TO STA. 478+00
GROTON - RYE GATE FO26-1 (30)
SHEET 136 OF 152

PLATE 3 CROSS SECTION O. P. R. S. N. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK
Obs. 140,145
No. 476-477
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE
ESC & CENG
GPF
KAU
SSS
DEC. 86
MAR. 87
APR. 87
JAN. 90
SEPT. 90

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

ORIGINAL SURVEY	SURVEYED	EES, RGB, GPF	DEC. 86
	PLOTTED	GPF, EWB	MAR. 87
NOTE BOOK	TEMPLATE	GPF	APR. 87
NO. 670, 671	AREAS	RAU	MAY 87
	AREAS CHECKED	SJS	SEPT. 88

℄

480+50 Rt
Begin Erosion Matting

480+50 Rt
End Scarifying Existing Pavement

EWDS

REV ℄
2.55

4:1

-.001 +.069 760.32 -.069

ERD

4:1

750

REV 480+49.05

480+50
REV ℄
2.86'

480+00 RT
CONSTRUCT DRIVE (12' GRAVEL)
NEW 15"X44' CSP .064 OR
RCP CL III OR CPEP

-.068 759.43 -.069

B

B

750

REV 479+98.93

480+00

CMP 19
+9 REV ℄
3.17'

-.069 758.54 -.069

750

REV 479+48.81

479+50
REV ℄
2.45'

+.069 757.64 -.069

750

478+50 Lt
Construct Drive (12' Gravel)
New 15"x72' CSP .064
or RCP CL III or CPEP

REV 478+98.65

479+00
REV ℄
3.76'

A

A

-.001 -.069 756.74 -.069

750

REV 478+48.52

478+50

12" AGGREGATE SURFACE COURSE

℄

12'

7.4

8.7

INV. 754

EXISTING GROUND

INV. 754.2

750

SECTION A-A

12" AGGREGATE SURFACE COURSE

8.7

12"

7.4

SECTION B-B

478+25
Begin Scarifying Existing Pavement

HORIZONTAL
0 10 20

SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS

STA. 478+50 TO STA. 480+50
GRAPTON - RIVERGATE (FOTSL-1(33)
SHEET 1317 OF 1752

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY	SURVEYED	BY: EGS, RWB, GPF	DATE: DEC. 86
NOTE BOOK	PLOTTED	GPF & RWB	MAR. 87
NO. 6/A457	TEMPLATE	GAN	APR. 87
	AREAS CHECKED	GAN	MAY 87
		SSS	SEPT. 90

℄

REV. ℄ 1.27'

E WDS

4

1.5%

760

763.51 +.069 -.069

INV. 759.20

REV 482+49.37

482+50

482+65 Rt
Begin Steel Beam Guard Rail

40° P +0.5

FACE OF GUARDRAIL

GMP 20 +4.5

REV ℄ 1.60'

E RD

762.92 +.069 -.069

INV 759.90

SA/BRN/MOIST

NLTO

482+27.5 Rt - 482+65 Rt
New Melt

482+00

REV 481+99.31

482+00

481+50 Lt
Begin Erosion Matting

REV ℄ 1.92'

762.12 +.069 -.069

INV. 758.60'

REV 481+49.23

481+50

REV 490+49 ~ REV 483+49 LT
NEW 6" ⌀ 300 UNDERDRAIN W/
F.B. @ 483+49 LT.

481+50 Rt
End Erosion Matting

REV ℄ 2.24'

761.23 +.069 -.069

INV. 758.30

REV 480+99.15

481+00

℄

482+70

482+50

482+27.5

482+00

12'

3'

4'

6'

Parabolic Flare
37½' Melt

5
1

HORIZONTAL
0 10 20

20
10
0
VERTICAL

SCALES IN FEET

CROSS SECTIONS

STA. 478+00 TO STA. 484+50
SECTION - EVEGATE FORGET (90)
SHEET 198 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
GIETZGEN CORPORATION

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

BY	DATE
RS, RLB, GPF	DEC. '87
GPF, RLB	MAR. '87
GPF	APR. '87
RLB	SEPT. '87
WMS	SEPT. '87

℄

780

770

760

FACE OF GUARDRAIL

484+50
BEGIN SCARIFYING EXISTING PAVEMENT

18" NATIVE GRUB MATERIAL TO BE SEEDED AND MULCHED (TYP.)

BLASTED ROCK (TYP.)

EQ. 484+40.14 = 484+40.66 (-.52)

E WDS

E FRD

E FRD GR

E RVGR

SA/BRN/MOIST

MLTD

1.5 / 1

1/2

1:4

1:2

1:1

.044 763.86 -.044 -.063

INV. 758.82

484+50

REV. ℄

.029

764.07

.065 +.065 -.065

INV. 759.20

REV. 483+99.47

484+00

REV. 483+55 TO 487+00 LT
NEW 6" X 346 UNDERDRAIN
W/ F.D. @ REV. 483+75 LT

483+75 RT
BEGIN GRUBBING MATERIAL
BEGIN EROSION MATTING (FOR SLOPE PROTECTION, PLACE ON SEEDED SLOPE)

.062 764.09 -.069

INV. 759.80

REV. 483+49.45

483+50

483+20 Rt - 484+95 Rt
Remove Existing Guardrail

.095 769.90 -.069

INV. 759.50

REV. 483+00

REV. 482+99.42

FACE OF GUARD RAIL

SA/BRN/MOIST

SA/GRN/WET

HORIZONTAL 0 10 20

SCALES IN FEET

VERTICAL 20 10 0

CROSS SECTIONS

STA 483+00 TO STA 484+50
SHOWN - RVEGATE ROUTE 1 (30)
SHEET 139 OF 152

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREA
AREAS CHECKED
DATE

LEFT EDGE
D=4°45'00" RT
0.069 FT/FT MAX
RIGHT EDGE
RT SHLD.
RT SHLD.
+0.069
+0.065
+0.044
+0.023
+0.002
-0.009
-0.020
-0.021
-0.021
-0.021

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

ORIGINAL SURVEY
NOTE BOOK 128, 60, 145, 146, 147, 152
SURVEYED DEC 86
PLOTTED APR 87
TEMPLATE JAN 90
AREAS SEPT 90
AREAS CHECKED
DATE
BY CC, JK, RL, GF, CF, JL, DE, GFE, RAU, SKS

489+00 LT
CONSTRUCT DRIVE (12' GRAVEL)
NEW 15" RCP, CSP, .064 OR
RCP CL III OR CPEP

489+00 RT - 489+50 RT
Construct Turnout w/12" Aggregate Surface Course

486+85 LT - 487+15 LT
Remove Existing Guardrail

487+15 RT - 489+50 RT
New 6"x 236' Underdrain w/
Flushing Basin @ 487+15

487+50 - 489+00 RT
PLANK RAIL

487+00 LT - 487+90 LT
NEW 6"X46' UNDERDRAIN CARRIER PIPE
W/TYPE I STONE 1'-2'-1' @ OUTLET

487+26 Existing 18" GMP Remove
New 18"x 96' RPUSP .064 or CMAP .040 or CPEP
w/ Type I Stone @ Outlet, 1/End Section @ Inlet
See Sheet 148 for Details

vary slope as needed
to avoid dry well

486+50 LT
Construct Drive (12' Gravel)
New 15"x36' CSP .064
or RCP CL III or CPEP

DRIVE CROSS SECTION
STA. 486+50 (SKEW 68°53'00" LT)

SECTION A-A

NOTE: SECTION A-A IS CUT PARALLEL TO MAIN LINE.

SECTION B-B

12" AGGREGATE SURFACE COURSE

HORIZONTAL 0 10 20
SCALES IN FEET
VERTICAL 20 10 0

CROSS SECTIONS

STA. 487+00 TO STA. 489+00
GROTON - PINE GATE F026-1(30)
SHEET 141 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY	SURVEYED	ECS, ZGB, JCPE	DEC. '84
	PLOTTED	JCPE	MAY '85
	TEMPLATE	CPE	APR. '87
NOTE BOOK	AREAS	DWJ	JAN. '90
388, 410, 418	AREAS CHECKED	CPE	SEPT. '95
NO. 407, 408, 409			

750

491+32 Lt
Construct Drive (12' Gravel)
New 15"x48' CSP .064 or RCP CL III
or CPEP

E DRIVE

DRIVE CROSS SECTION
STA. 491+32 (ASKEW 59°56'00" RT)

760

EOR

CSX

LRD

GR

FACE OF GUARD RAIL

-.050 +.020 750.69 -.021 -.063

491+00

-0.12L NORMAL SECTION

-0.05

LEFT EDGE

RIGHT EDGE

0

+0.02

+0.04

+0.06

MATCH EXISTING GRADE

491+50 0.12L

490+00 -0.02L

489+50 -0.02L

491+50 -0.04

490+50 0.12L

SCALE: HORZ. 1"=50'
VERT. 1" = 0.0100 FT/FT

END CURVE = TRANSITION TO EXISTING ROAD

491+32 Lt
Construct Drive (12' Gravel)
New 15"x48' CSP .064 or RCP CL III
or CPEP

INV. 746.9

9.8

749.2

6.8

F DITCH LINE
INV. 745.0

12" AGGREGATE SURFACE COURSE

SECTION A-A

NOTE: SECTION A-A IS CUT PARALLEL TO MAIN LINE.

750

490+85 Lt
End Erosion Matting

C.T.C. 79
+0

LRD

FACE OF GUARDRAIL

-.063 .000 751.78 -.021 -.063

6

E WDS

490+50

12'

8'

9'

87.5

489+87.5 to 491+50 RT
REMOVE & RESET GUARDRAIL

750

GMP 23
+29

LRD

LRD

-.063 -.015 752.92 -.021 -.063

E WDS

490+00

489+50

87½ MeH
Parabolic Flare

4'

6'

50' R (TURNOUT)

750

LRD

LRD

EDGE TURNOUT

4

-.063 -.021 750.06 -.021 -.063

6

E WDS

748.34

INV. 745.53

489+50

489+50 to 489+87.5
NEW MELT
REMOVAL & DISPOSAL OF GUARDRAIL

HORIZONTAL
0 10 20

20
10
0
VERTICAL

SCALES IN FEET

491+50 Lt
Begin Erosion Matting

491+50 Rt
New 6"x10' Underdrain Corner Pipe
w/ Type I Stone @ Outlet
2'x2'x1'

CROSS SECTIONS
STA. 489+50 TO STA. 491+00
SROTON - RYEGATE 7026-1(30)
SHEET 142 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. C STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	BY	DATE
SURVEYED	EES, RGB, GPF	DEC. 86
PLOTTED	GPF, EWS	MAR. 87
TEMPLATE	GPF	APR. 87
NOTE BOOK	EWS	JUNE 90
NO.	SJS	SEPT. 90
AREAS CHECKED		

ORIGINAL SURVEY	BY	DATE
SURVEYED	EES, RGB, GPF	DEC. 86
PLOTTED	GPF, EWS	MAR. 87
TEMPLATE	GPF	APR. 87
NOTE BOOK	EWS	JUNE 90
NO. 62-470	SJS	SEPT. 90
AREAS CHECKED		

℄

740

493+00

ERD

ERD

FACE OF GUARDRAIL

2

1

ERIVER

740

492+50

ERD

ERD/GR

ERIVER

740

492+00

ERD

ERD

FACE OF GUARDRAIL

2

1

ERIVER

740

491+50

EWDS

ERD

+.030

+.040

749.30

-.040

-.063

ERD/GR

ERIVER

END PROJECT

℄

HORIZONTAL

0 10 20

SCALES IN FEET

20

10

0

VERTICAL

CROSS SECTIONS

STA. 491+50 TO STA. 493+00

GROTON - RYEGATE E 022-1(30)

SHEET 143 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD

DIETZGEN CORPORATION

STA 404+56 BEGIN 6" UNDERDRAIN

SHORTEN EXISTING 15" CMP AND CONNECT INTO NEW D.I.

D.I.

781.92

15" CMP

INV. 6" UNDERDRAIN 774.60

18" INV. 774.0

404+42.3 REMOVE 15" RCP AND CMP FROM NEW D.I. LEFT INV. 773.00 TO OUTLET. REPLACE W/ NEW 18"x76' RCP (CL III) CPEP

NEW 24"x78' CSP (0.064") CPEP W/ 4'x9'x1' TYPE I STONE FILL AT OUTLET

404+42.3 REMOVE EXISTING D.I. 25' RT.

404 + 42.3
ASKEW 63°-23'-54" LT

771.0

770.00

15" CMP

1-2

INV. 763.3

PLAN
SCALE: 1"=50'

405+00.0

15" CMP

STA 404+42.3
ASKEW 63°23'54" LT

187°21'

E.P.

E.P.

R.P.

D.I.

161°45'

15" CMP

777.65

INV. 772.00

18" RCP

INV. 770.00

STA 402+86.2 REMOVE 18" RCP
NEW 84"x84" / PCCSP 0.064 / CAAP 0.060 / CPEP
W/ 4'x9'x1' TYPE I STONE FILL AT OUTLET & END SECTION AT INLET

402 + 86.2
ASKEW 72°-04'-08" RT

808.32

78" RCP

STA 386+08.2 REMOVE 18" RCP
NEW 18"x114' / PCCSP 0.064 / CAAP 0.060 / CPEP
TYPE II STONE FILL AT OUTLET 3'x7'x2' AND END SECTION AT INLET

785.8

386 + 08.2
ASKEW 89°-12'-50" LT

814.18

809.20

18" RCP

798.0

375 + 91.9
ASKEW 80°-16'-33" LT Existing 18" RCP Remove.
New 18"x84" PCCSP .064 or CPEP or C.A.A.P. .060 w/ End Section @ Inlet and 3'x7' Type II Stone Pad @ Outlet

HORIZONTAL
0 10 20

SCALES IN FEET

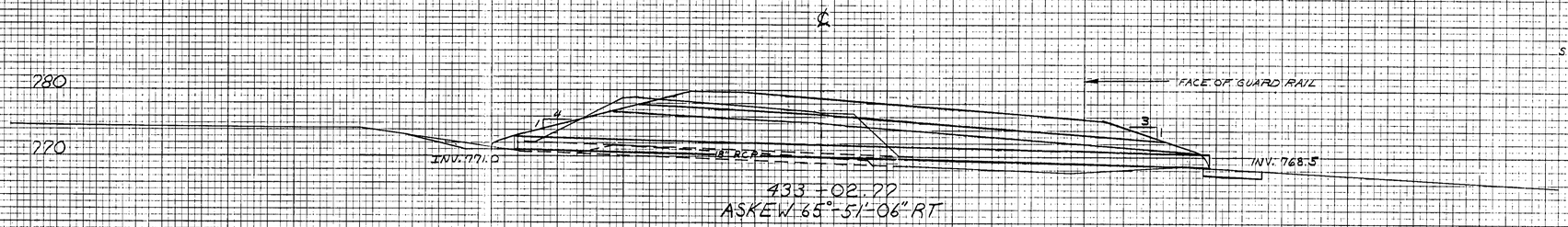
20 10 0
VERTICAL

CROSS SECTIONS
STA 375+92 TO STA 404+42
GROTON-RYEGATE FO26=1(30)
SHEET 144 OF 152

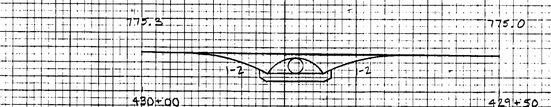
FINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED	REP, ERS	MAR. 85
NOTE BOOK	PLOT CHK	PAU	FEB. 86
No.	AREAS	PAU	MAY 90
	AREAS CHECKED	PAU	JAN. 90
		SJS	SEPT. 90

ORIGINAL SURVEY	SURVEYED	
	PLOTTED	
NOTE BOOK	PLOT CHK	
No. 691	AREAS	
	AREAS CHECKED	

STA 433+02.77 REMOVE 18" RCP
NEW 29"X 108' / PCCSP 0.064" / CAAP 0.060" / CPEP
TYPE I STONE FILL 9'x9'x1' AT OUTLET, W/ END SECTION AT INLET

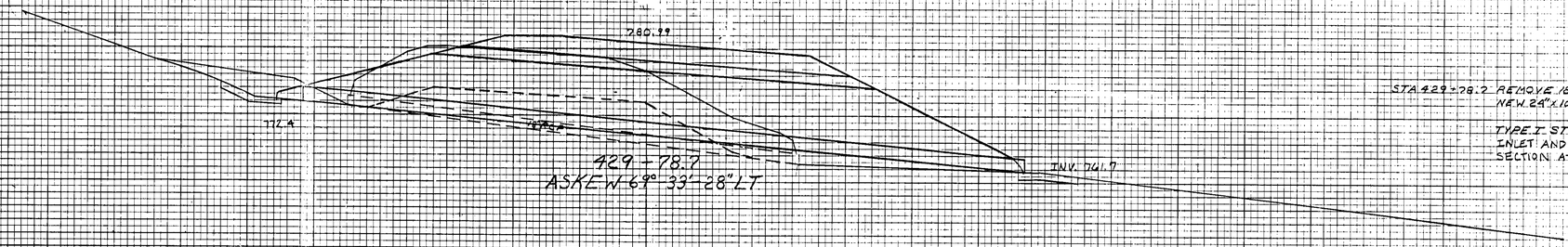


433+02.77
ASKEW 65°-51'-06" RT



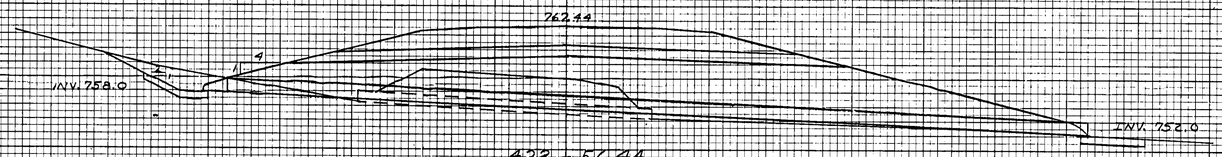
INLET DETAIL @ 429+78.7 LT

STA 429+78.2 REMOVE 18" RCP
NEW 29"X 108' / PCCSP 0.064" / CAAP 0.060" / CPEP
TYPE I STONE FILL 9'x9'x1' AT INLET AND OUTLET, W/ END SECTION AT INLET



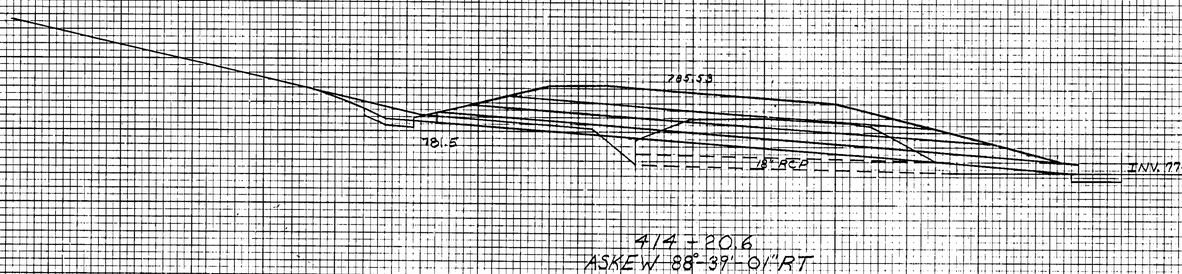
429+78.7
ASKEW 69°-33'-28" LT

STA 422+56.4 REMOVE EXISTING 18" CMP
NEW 29"X 124' / PCCSP (0.064") / CAAP (0.060") / CPEP
TYPE I STONE FILL 9'x9'x1' AT INLET AND OUTLET W/ END SECTION AT INLET



422+56.44
ASKEW 79°-08'-07" RT

STA 414+20.6 REMOVE 18" RCP
NEW 78"X 90' / PCCSP .064 / CAAP 0.060 / CPEP
TYPE I STONE FILL 3'x7'x1' AT INLET AND OUTLET, END SECTION @ INLET



414+20.6
ASKEW 88°-39'-01" RT

HORIZONTAL 0 10 20
VERTICAL 0 10 20
SCALES IN FEET

CROSS SECTIONS
STA 414+20.6 TO STA 433+02.77
GROTON - RYEGATE F036-1(30)
SHEET 145 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	REP	MAY 1981
No. 651	TEMPLATE	RAU	FEB. 82
	AREAS	RAU	FEB. 82
	AREAS CHECKED	RAU	JULY 90
		SJS	SEPT 90

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

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

ORIGINAL SURVEY	SURVEYED	REF. E&S	DATE
NOTE BOOK	PLOTTED	RMJ	FEB. 88
No. 637	TEMPLATE	RMJ	FEB. 88
	AREAS	RMJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

780

780

780

℄

STA. 445+87.5 REMOVE 12" RCP AND O.I.

12" RCP

445+87.5
ASKEW 80°00' RT

12" RCP

STA 441+28 L.I.
STONE FILL TYPE I (8' WIDE)

STA 441+27.9 REMOVE 24" RCP

783.15

STA 441+27.9 NEW 24"x82' | RCCSP | CAAP | CPEP
| 0.064 | 0.060 |

INV. 6" PIPE 777.50

STA 441+23 BEGIN 6" UNDERDRAIN

INV. 24" PIPE 775.5

24" RCP

W/ 4'x9'x2' TYPE II STONE FILL @ OUTLET

441+27.9
ASKEW 74°-07'-35" RT

INV. 767.5

228.38

INV. 2-6" UNDERDRAINS 769.5

STA 437+01 BEGIN 6' UNDERDRAIN

STA 436+79 END 6' UNDERDRAIN

INV. 30" PIPE 767.50

EXISTING 18" RCP

437+05.5
ASKEW 82°-17'-24" RT

INV. 757.2

STA 437+05.5 NEW 30"x106' | RCCSP | CAAP | CPEP
| 0.079 | 0.075 |
REMOVE EXISTING 18" RCP
TYPE II STONE FILL 5'x11'x2' AT OUTLET

HORIZONTAL
0 10 20

SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS

STA. 437+05.5 TO STA. ~~445+87.5~~
GROTON-WEGATE ~~2026-T-(30)~~
SHEET 146 OF 152

PLATE 3 CROSS SECTION C. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK
No. 637
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
RCP 283
GPF
EAU
SJS
DATE
MAR. 88
MAR. 89
JAN. 90
SEPT. 90

770
760
780
760
790
770
750
750

℄

STA 464+72.9 REMOVE 18" RCP

464 - 70.69
ASKEW 84°-41'-39" RT

STA 462+11 REMOVE 18" RCP

462 - 11.0
ASKEW 82°-07-41" LT

STA 454+79 BEGIN 6" UNDERDRAIN INV. 759.65
STA 454+71 END 6' UNDERDRAIN INV. 759.65

INV. 18" PIPE 758.00

454 - 75.3
ASKEW 85°-09'-42" RT

INV. 758.00

150 - 68.9
ASKEW 87°-27'-55" RT

℄

SECTION C-C

SECTION B-B

SECTION A-A

PLAN VIEW
ENERGY DISSIPATOR STA 450+68.9

STA 454+75.3 REMOVE 18" RCP AND DI
NEW 18" X 14" (CCCSP (0.064)) / (CAAP (0.060)) / CPEP
W/ 1-35° ELBOW, 1-25° ELBOW
W/ 4R4 DI AT INLET AND
TYPE I STONE FILL 3'x10'x2'
AT OUTLET

STA 450+68.9 REMOVE 36" RC BOX
STA 450+68.9 NEW 48" 1/32" (CCCSP (0.109")) / (CAAP (0.105"))
W/ TYPE IV STONE FILL 8'16'x2' AT
INLETS ENERGY DISSIPATOR AT OUTLET
W/ CRADLE HEADWALLS AT INLET AND OUTLET

INV. 744.00

GRANULAR BACKFILL FOR STRUCTURES

STONE FILL TYPE IV

TOP OF BERM

BERM AS REQ'D TO SUPPORT RIPRAP (TYP.)

STONE FILL TYPE IV (TYP.)

MATCH EXISTING CHANNEL

48" PIPE

EARTH FILL

REV. C

103

25'

0 5 10 VERTICAL
SCALE IN FEET
FOR SECTION A-A ONLY

0 10 20 VERTICAL
SCALES IN FEET

CROSS SECTIONS
STA 450+68.9 TO STA 464+72.9
GROTON - RIVEGATE F026-1(30)
SHEET 147 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

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

ORIGINAL SURVEY
NOTE BOOK
No. 637
SURVEYED
PLOTTED
TEMPLATE
AREA
AREAS CHECKED

BY	DATE
REP. E&S	04/14/88
EWJ	FEB. 88
EWJ	FEB. 88
EWJ	04/14/88
RWS	5-2-88
RWS	5-2-88

℄

STA 487+26 ASKEW 67°-57'-00" LT
REMOVE EXIST. 18" CMP
NEW 18"x36" PCCSP | CAAP (0.064") | CPEP (0.060") |
W/ TYPE I STONE FILL 3'x7'x1'
AT OUTLET, W/ END SECTION AT INLET

INV. 751.20
18" CMP
INV. 748.29
489.18
4:1
3:1
0

740

487-26.0
ASKEW 67°-57'-00" LT

750
1-2
1-2
STONE FILL TYPE II
476-00
+34
+50
SECTION B-B

STA. 476+42 ASKEW 83°-20'-40"
REMOVE 24'-1 1/2" x 40' BOX CULVERT
NEW 42"x86" PCCSP | CAAP (0.109") | (0.105")
W/ CRADLE HEADWALLS AT INLET AND OUTLET
W/ TYPE II STONE FILL 7'x 14'x 2' AT OUTLET
CONSTRUCT INLET DITCH W/ TYPE II STONE FILL @ INLET AND SPECIAL DITCH @ OUTLET

1:4
1:4
SECTION A-A

B
B
1
1½
4
4.90'
753.40
INV. 747.0
INV. 744.56
A
A
740

REV. 476+39.8
ASKEW 83°-20'-40" RT

REV. ℄
6.00'
753.33
4
.063
+.010
-.02
.063
INV. 8" PIPE 746.0
UND. INV. 746.00
PIPE INV. 746.50
UND. INV. 745.6
24" PIPE INV. 745.0
INV. 744.0
750

STA. 473+13.0 REMOVE EXIST. 18" RCP
NEW 78"x 50" RCP | CPEP (SL) CL III |
REV STA 473+09.7
NEW 29"x 96" PCCSP | CAAP | RCP | CPEP (0.069") | (0.060") | CL III |
W/ 3'x 10'x 2' TYPE I STONE FILL AT OUTLET

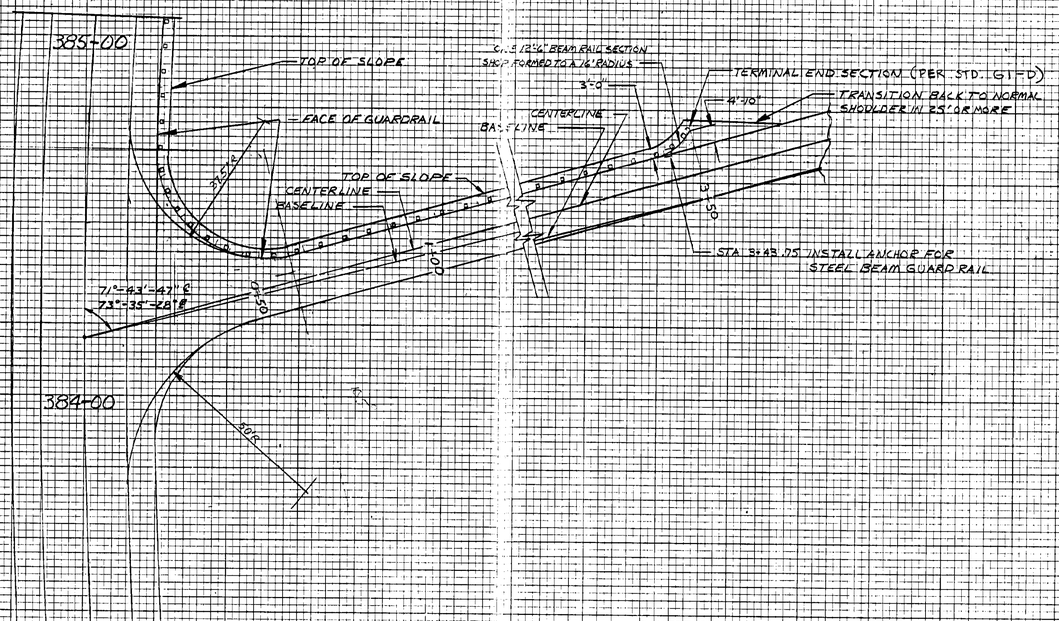
REV. STA 473+09.7 END ℄ UNDERDRAIN

REV. 473+09.7
ASKEW 71°-00'-00" RT

HORIZONTAL 0 10 20
SCALES IN FEET
VERTICAL 20 10 0

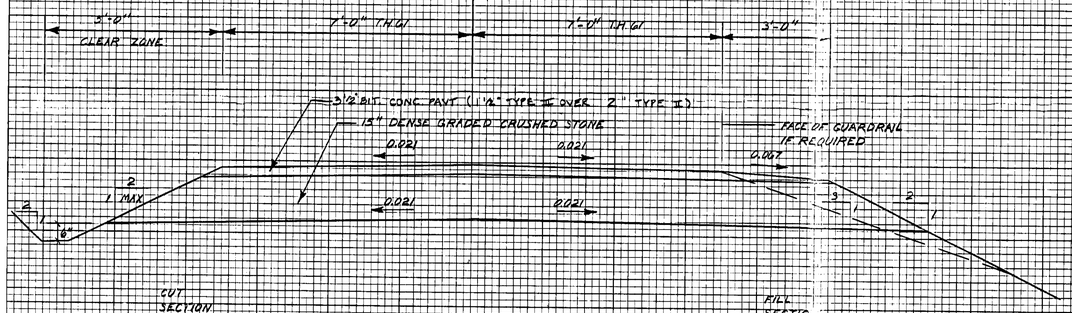
CROSS SECTIONS
STA. 473+13. TO STA. 487+26
GROTON-RYEGATE F026-1(30)
SHEET 18 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION



TOWN HIGHWAY 61 GROTON
SIDE ROAD INTERSECTION: STA. 384+17.69

SCALE: 1" = 20'



TYPICAL SECTION
FOR TH 61 GROTON
NOT TO SCALE

TYPICAL GUARD RAIL @
TH 61 SIDE ROAD INTERSECTION
GROTON - RYEGATE FO26-1(30)
SHEET 149 OF 152

PLATE 3 CROSS SECTION G. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	KFE, RWB	MAR. 87
No.	TEMPLATE	GFE, RWB	MAR. 87
	AREAS	KWJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK 617	PLOTTED	KFE, RWB	MAR. 87
	TEMPLATE	GFE, RWB	MAR. 87
	AREAS	KWJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

SIDE ROAD SECTIONS TH 61
MAINLINE STA 384+17.69
GROTON-RYEGATE F026-1(30)
SHEET 150 OF 152

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

ORIGINAL SURVEY
NOTE BOOK
No. 60
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE
DEC. 60
APR. 61
JAN. 62
SEPT. 62

PROFILE TH-13
SCALE HORZ. 1"=50'
VERT. 1"=10'

800
PVI
STA 11+00
EL. 800.00
V.C. 700'
K = 52.
PVC
-2.3125%
PVI
℄ PAVT
PVI
MAINLINE STA 387+50
SIDELINE STA 0+00
3+0
2+0
1+0
0+0

810
℄
EOD
EOD
810.20
℄ BRK
℄ BRK
MATCH TO EXISTING

800
2+00
EOD
805.12
EOD
FACE OF GUARD RAIL
℄ BRK
℄ BRK
1+50 END MELT
1+12.5 BEGIN MELT
END GUARDRAIL

800
1+50
EOD
805.56
EOD
FACE OF GUARDRAIL
TYPE I STONE FILL
5'X12'X1'
℄ BRK
℄ BRK
INV. 788.38
INV. 788.18
EOD
STA 1+00 NEW 18"X42' PC(SP)/CAAP (CPEP)
(0.062)/(0.060")
W/ END SECTION AT INLET
EOD
FACE OF GUARDRAIL
℄ BRK
℄ BRK

800
1+00
MAINLINE FILL LINE
EOD
MATCH TO MAINLINE STA 387+50
802.77

800
0+50

HORIZONTAL
0 10 20
SCALES IN FEET
VERTICAL
0 10 20

390+00
389+88
37'-6" MELT PARABOLIC FLARE
5%
4%
8' 12' 12' 8'
10'
389+00
37'-6" MELT PARABOLIC FLARE

388+00
FACE OF GUARD RAIL
EOR
EOR
STA 387+50 = SIDE ROAD STA 0+00
FACE OF GUARD RAIL
TOP OF SLOPE
65°-07'
37'-6" MELT PARABOLIC FLARE
50'
50'
387+00
802.2
SIDE ROAD STA 0+00 NEW 18"X42' PC(SP)/CAAP (CPEP) W/ TYPE I STONE FILL OUTLET
STA 2+00, END NEW PAVEMENT, MATCH TO EXISTING PAVEMENT
2%
2%
6%
6%
8'
2'
2'
0 20 40
SCALE IN FEET
1"=20'

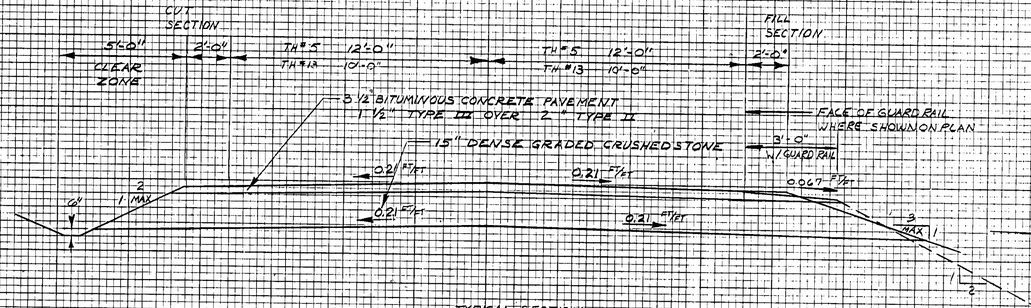
TH #13 SIDE ROAD INTERSECTION: STA. 387+50

SIDE ROAD SECTIONS TH 13
MAINLINE STA 387+50
GROTON-RYEGATE FO26-1(30)
SHEET 151 OF 152

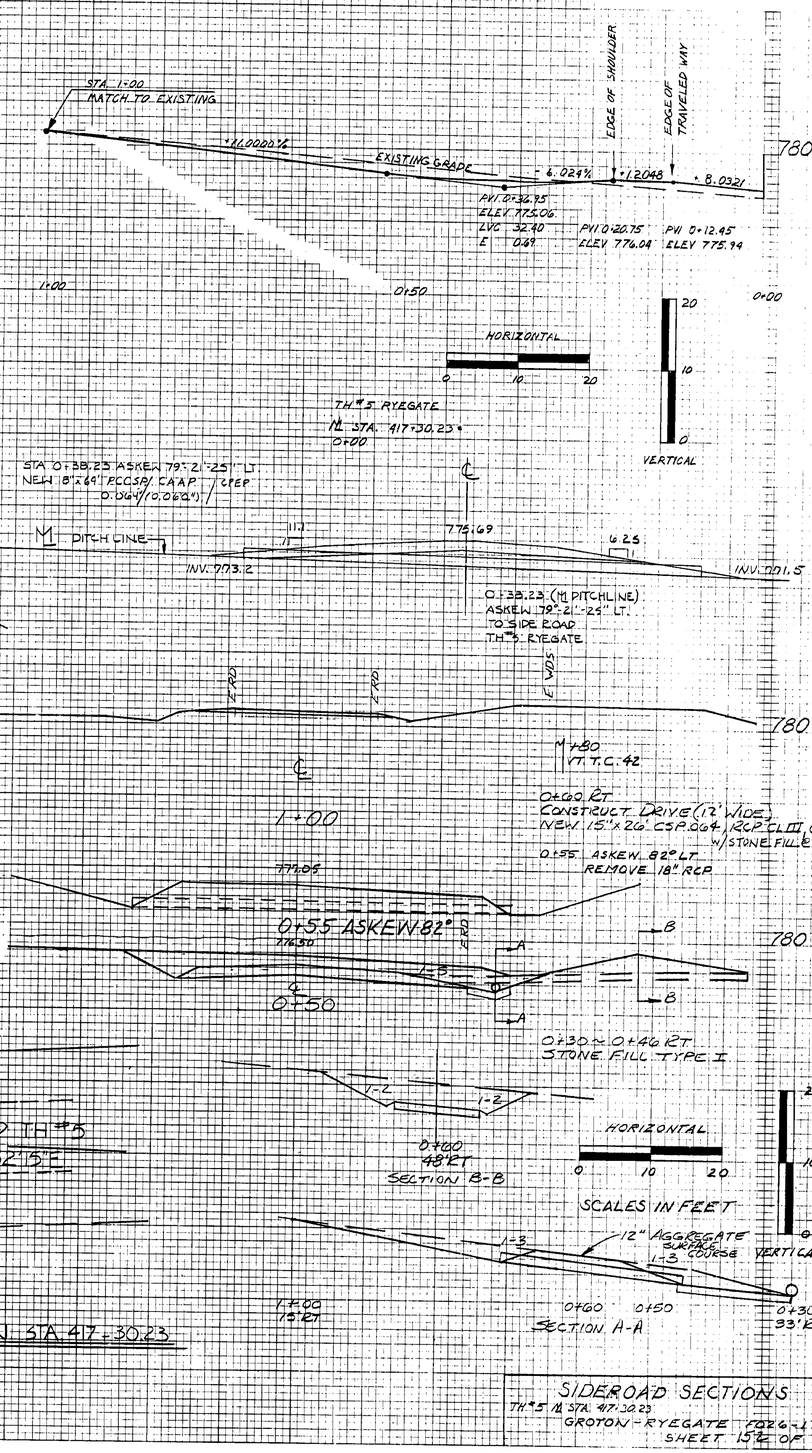
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

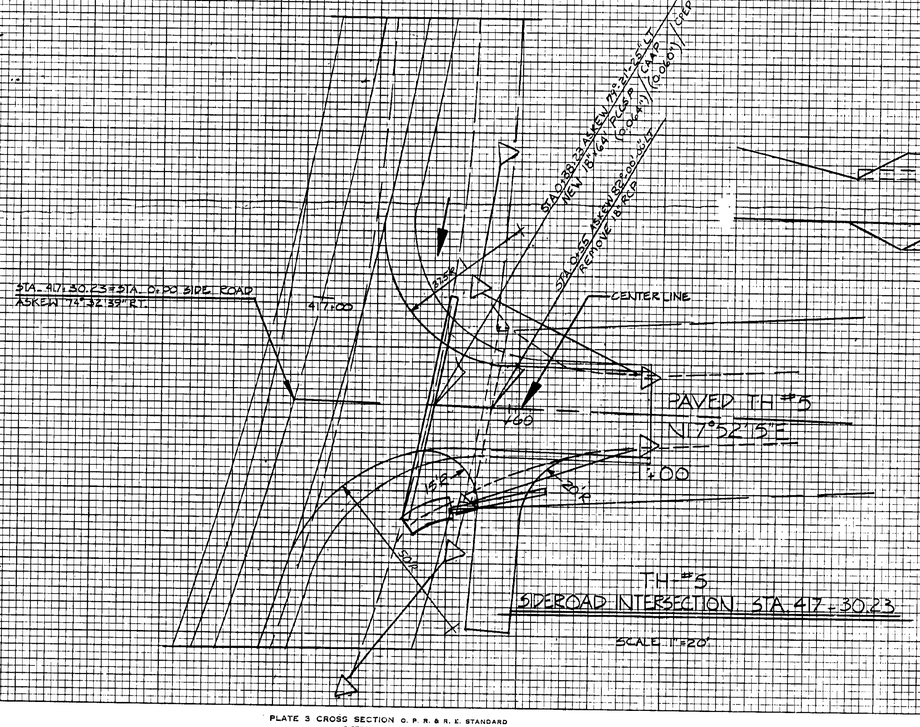
FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. 647 — SURVEYED RF, R.L.B. — PLOTTED GFF, D.J.R. — TEMPLATE GFF — AREAS J.W.H. — AREAS CHECKED S.T.S. — DATE AUG. '67 — APR. '67 — APR. '67 — JULY '68 — SEPT. '70



TYPICAL SECTION
TH 13 GROTON & TH 5 RYEGATE
NOT TO SCALE





SIDEROAD SECTIONS

TH # 5 ℄ STA. 417+30.23
GROTON - RYEGATE FO26-1(30)
SHEET 152 OF 152

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TWIN-WALL TEMP. SCOUR LS	CSP RISER 12" EA	CSP RISER 18" EA	CSP (CONC) 12"	CSP (CONC) 18"	HP CMP LF	HP CMP LF	12" CPEP	15" CPEP	18" CPEP	24" CPEP	30" CPEP	CSPE 12	CSPE 18	CPEPE 12	CPEPE 18	CSPE 18	CSPE 15	CPEPE 18	CPEPE 24	PRCC DI	DI	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV LINEAR	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	GRAN BORROW CY	CAA PP EA	STRUC EXCAV CY	GRAN BKF STRUC CY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	CAA PPA EA	GEOTEX UNDER SY	3/4" TO 1" PLEX PIPE LF	SCREENING LOAM & SEED LF	SEAM LESS CU. ALUM TUBE LF	SEAM LESS CU. ALUM TUBE LF	REMARKS	GRUB MATL.	DENSE GRADED
374+00		℄											51'													4.0	2.1	193	1-B			33'						2.7'	I				5.0					2/1		
376+91.9		℄	80-16 LT										84'									1'										58'						5.3'	I				18					2/2		
378+11		LT										61'									1'																												2/5		
381+82	382+40	RT-LT																													43'	60.1											225'	90'			2/7		
384+99		RT										53'														3.0	1.7	150	1-A			25'																2/8		
386+08.2		℄	89-13 LT		1'		114'																								45'						3.6'	II				9.0					2/12		
392+80	393+50	RT-LT											96'													4.0'	2.1	193	1-A			35'																2/17		
393+50	394+35	LT											84'													4.0'	2.1	193	1-A			64'																2/18		
394+35	397+00	LT-LT												264'												5.5'	28	239	1-A			228'	0.8'															2/19		
396+10		RT										33'									2'																												2/22		
396+15		℄																									11.11				60'														440'				2/22		
397+00		℄											68'													3.5'	1.9	158	1-A			26'	13.7'															2/23		
397+00	398+50	LT-LT												240'												4.5'	2.3	200	1-A			121'	17.2'															2/24		
397+50		LT-RT													68'											5.0'	3.4	284	1-B			83'																2/27		
399+50	400+00	℄													78'											9.0'	5.8	489	1-B			250'						9.5'	III				20'					2/28		
SP. Ditch 402+86		RT																													15'						14.8'	I				56'					2/113		
402+86.2		℄	72-04 RT										88'									1'										46'						5.3'	I				24'					2/32		
SP. Ditch 403+25		RT																													3'						2.7'	I				12'					2/113		
404+23		℄	63-24 LT										97'													3.5'	1.9	158	1-A			78'	3.6'															2/34		
401+65		LT											62'																																			2/31		
404+42		RT												76'												9.5'	4.6	416	1-A			101'						4.4'	I				13'					2/35		
405+20		℄																													57'													91'		100'		2/36		
407+0		℄	74° LT											93'													2.3'	200	1-B			59'						1.0'	I									2/38		
414+20.6		℄	88-39 RT										90'									1'										38'						2.5'	I									2/40		
422+50		RT			38'										1'							1'										15'						5'	I				11'					2/52		
422+56.44		℄	79-08 RT											106'								1'										44'						5.3'	I				24'					2/53		
426+00		℄											86'													4.0'	2.1	193	1-B			70'						9'	II				3'					2/55		
429+78.7		℄	69-30 LT											108'								1'										117'						8.9'	I									2/58		
433+02.77		℄	65-51 RT											108'								1'										87'						3.4'	I									2/60		
435+50		RT			32'										2'							1'										13'						1.8'	I				11'					2/61		
437+05.5		℄	90-46 RT												106'											4.5'	3.1	252	1-A			144'						9'	II				20'					2/62		
441+24.4														114'												CH	1.0	12	0			106'	6'					9'	I									2/65		
441+98		LT										74'									1'										25'																2/66		
445+87.5		RT																													17'	2'															2/68		
Rev. 2 448+0		℄											88'													4.0'	2.1	193	1-B			28'						5.3'	I				20'					2/69		
450+68.9		℄	87-28 RT						132'																	2-CH	3.4	21				195'	62'					5.5' 14.5'	II III				170'					2/71	92'	35'		
454+53																															51'	2'															2/74		
454+50		℄					100'								2'											3.5'	1.9	158	1-A			16'	14'					4'	II				13'					2/75		
					1'	70'	214'		132'		22.1'	806'	1197'	252'	3'	2'			4'	2'	4'	2'				59.71'	37.12	10-A 6-B				2396'	181.4'					164' 1706' 9.5'	I II III				429'	225'	62.1'	100'		92'	35'			

D-4 JAN 85

BRUNING 65083

GUARD RAIL

STA.	STA.	LT.	RT.	ANCHOR

TOTALS

UNDERDRAIN

Book 2A

STA.	STA.	TYP.	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	MKR PST
374+0	375+50	U	LT	6"	150	68			1	
379+0	381+50	U	LT	6"	430	87	128		1	
377+0	377+20	C	LT	6"	20				0	
384+55	385+55	U	LT	6"	395	118	104		1	
389+0	393+50	U	LT	6"	450	170			1	
393+50	397+0	U	LT	6"	355	162			1	
398+0	399+50	U	LT	6"	159	58			1	
399+60	402+75	U	LT	6"	305	119			1	
402+75	404+50	U	LT	6"	175	64			1	
404+52	406+72	U	LT	6"	222	92			1	
409+10	411+0	U	LT	6"	192	142			1	
418+20		C	LT-RT	6"	40				0	
422+50	425+90	U	LT	6"	340	160			1	
424+32		C	RT	6"	80				0	
426+0	428+45	U	LT	6"	245	105			1	
428+30		U	℄	6"	53	12	2		0	
431+0	433+70	U	RT	6"	236	109			1	
435+0	437+01	U	LT	6"	200	109			1	
437+63	441+0	U	LT	6"	400	128	89		0	
441+0	445+0	U	LT	6"	400	156			1	
453+0	457+50	U	LT	6"	150	92	15		1	
457		C	℄ RT	6"	80				0	
454+50	457+90	U	LT	6"	340		150		1	
458+0	460+50	U	LT	6"	250		120		1	
461+50	464+70	U	LT	6"	320	72	51		1	
464+80	468+48	U	LT	6"	370	204			1	
468+60	473+08	U	LT	6"	450	248			1	
472+32	476+31	U	LT	6"	399	132			1	
TOTALS			C		220					
			U		9115	2555	659		22	

PROJECT NAME GROTON-RYEGATE
PROJECT NUMBER STP-F026-1(30)

153
SHEET 1 OF 3 SHEETS

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

GUARD RAIL

STA.	STA.	POSITION	ASKEW	~~END~~ INLET 2-WAY TEMP DR	12"CSP OUT LF	CSP 12" LF	CSP 18" LF	48"CMP	48"CMP	12"CPEP	15" CPEP	18 CPEP	24 CPES	30 CPES	12 CSPE	18 CSPE	12 CPEPE	18 CPEPE	18 CSPES	15 CPEPE	18 CPEPE	24 CPEPE	FOC CCC	DI	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV LINEAR	C R M CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	GRAN BORR CY	CAPA PP CY	STRUC EXCAV CY	GRAN BKF STRUC CY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	CAPA APA	CERTIFIED UNDER SF	3/4"MIN H2O LINE	SCREW FOR UNC	3/4" Cu H2O LINE	EROSION MATTING	REMARKS	BK/PG
453+00		℄					106									2								4.0	2.1	193	I-A			50	28					4	II											2/77
462+11		RT																												50																			2/79
454+82	TEMPORARY EROSION	Control			20																																												2/72
464+70	467+02	LT										232													4.5	2.3	200	I-A			124																			2/80
464+79.9		℄	84-41RT																												34																			2/81
467+02	468+50	LT										148													4.0	2.1	193	I-A			82																			2/82
468+50		℄											64												5.5	2.8	239	I-A			46																			2/84
468+50		RT											108												6.5	3.2	278	I-A			312						826	II											2/85
471+10		LT										46																	1																				2/87
472+09		℄										52													4.0	2.1	193	I-A			30																			2/88
473+09		RT-RT											60												8.0	3.9	347				82.9						4.4	I											2/89
473+10	473+84	RT-RT										74													6.5	3.2	278	I-D			35																			2/90
474+50		℄																													63																			2/91
476+37		℄	82-20 RT	CRABBED OUT				86																	3.0	20					391						160.7	I				37.3							2/92
478+50		LT										72																	1																				2/95
478+10		RT										42																																						2/96
484+50	486+30	LT																																															2/98
486+50		LT										61																	1																				2/100
487+26		℄	67-57LT									96																		1	37	0.6					1.0	I											2/101
					26		106	86			22.1	602	332		2				3	1					24.10	19.41	6-A 1-D				133.7	29					165.1 86.6	I II				37	120	60	108	304		TOTALS

REMOVAL

DRIVE

DRIVE

D-4 JAN 85

UNDERDRAIN

-8/29/88 DS

STA.	STA.	TYP.	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	MKR PST
480+99	483+99	U	LT	6"	282	114			1	
483+50	487+36	U	LT	6"	397	209			1	
484+30		C	RT	6"	6				0	
SHEET "2		C			6	323			2	
		U			699					
FWD SHEET "1		C			220					
		U			7115	2555	659		22	
TOTALS: 6" U-R CARRIER				=	326 LF					
6" U-D				=	2794 LF					
TRENCH EARTH				=	2878 CY					
TRENCH ROCK				=	659 CY					

PROJECT NAME GROTON-RIEGATE
PROJECT NUMBER STP-F026-1(30)

154
SHEET 2 OF 3 SHEETS

BRUNING 65083

FINAL DRAINAGE SUMMARY

PREPARED BY _____ PROJECT GROTON-RYEGATE 3/3
CHECKED BY _____ NO. STP-FOR-1(30)

	STATION	STATION	POSITION	36" RCP	12" CSP	18" CSP	42" CAMP	48" CAMP	12" CPEP	15" CPEP	18" CPEP	24" CPEP	30" CPEP	12" CSP ELB	15" CSP ELB	12" CPEP ELB	15" CPEP ELB	18" CPEP ELB	24" CPEP ELB	PERC COC	DEPTH DI	CONC B	RE STEEL	TE	TR	GRAN BOR.	CAA PP	STRUCT EXC	S.B. STRUCT	S.F. I	S.F. II	S.F. III	S.F. IV	CAA PAA	GEOTEX UNDER SF	3/4" FILTER MATL	SEDIM CTL	4" C.O. LINE	EXIST MAT.	UNCL CL EXC	SUB. DRAIN GRADED	GRUB MATL	REM. OF STRK.	GEOTEX A	GEOTEX B	GEOTEX D	1" NON-WOVEN GEOTEX	BK/PG
Dr. PIPE	488+40		LT							40																																						2/102
	TH 13	0+85																					18																									3/105
TH 61	3+50		E								43					1							17						0.8																		2/106
TH 61	0+53-3+94		RT																				79.1						79.1				308													2/112
TH 13	1+00		E								45					1							14						1.1																		2/107
TH 5	0+42		E								74												15																									2/108
TH 5	0+55																						21																									2/109
TH 5	0+60	RT								28						N																															2/110
SHEET 1	TOTAL				70	214		132		321	806	1197	252	3	2			2	4	1	4	2		57.71	37.12		339.6	181			164	170.6	10		479	225	621				35	92		10	6		100	
SHEET 2	TOTAL					106	86		20	221	602	232			2			1	3					24.22	19.41		133.7	29			165.1	86.6			37	120	60	48	304					6		1		
SHEET 3	TOTAL									68	102							2	1								164				81				303													
PROJECT	TOTAL				70	320	86	132	20	510	1570	1429	252	3	4	0	0	5	8	1	4	2	–	82.41	56.53		389.7	210			410	257	10		769	345	681	108	304		35	92		16	6	1	100	

8/99 DP
8/30/99 RA

BRIDGE

| | | | | | | | | | | | | | | | | | | |

PLOTTED D.M.
L.M.

CLARK HATCH BROOK C/L 7-24-97

Groton-Ryegate STP-F026-1(30)
388400
84"x120' PLATE PIPE CAAPP

781
790
796
792
797
772
773
776
777
779

STR. EX. = 55^A
T.B.
E.BANK
INVERT 780.71
1+20

T.HWY
T.HWY
T.HWY
E.R.R.
E.R.R.
STR. EX. = 160^A
INVERT 784.16
C/L 0+90 = REV & 388+00

EP
EP
STR. EX = 98^A
INVERT 787.61
0+60

STR. EX @ 0+49 BUTT = 98^A
STR EX @ 0+49 BUTT = 203^A
INVERT 788.8
STR. EX
CHAN. EX
E.BANK
E.BANK
STR. EX 0+37 BUTT = 203^A
0+41
INVERT PIPE
STA 0+37 (BUTT) CHAN. EX = 290^A

T.B.
E.BANK
CHAN = 252^A
0+20

T.B.
E.BANK
E.BANK
CHAN = 156^A
0+00
C/L
BUTT @ C/L 28

GRANULAIR BOREROW:

STA	E. AREA	C.Y.
0+40	203	141
0+60	178	297
0+70	358	498
1+20	538	279
1+40	266	107
1+52	216	32
1+60	0	

1119 x 1.15 = 1557 C.Y. 2-98 PAC

ITEM 301.35 DENSE GRADED CRUSHED STONE
1' USED UNDER PIPE
7.0 x 1.0 x 119 x 1/27 = 30.3 CY PAC 2-97

CHANNEL EX.

STA	E. AREA	C.Y.
0 (-) 28 (BUTT)	156	162
0+0	156	151
0+20	252	171
0+37 (BUTT)	290	
1+60 (BUTT)	72	82
~~1+64~~		
1+80	150	100
2+0	120	69
2+20	66	75
2+47 (BUTT)	84	

TOTAL = 810 C.Y. 2-98 PAC

STRUCTURE EX.:

STA	E. AREA	C.Y.
(BUTT) 0+37	203	90
BUTT 0+49	203	
BUTT 0+49	98	
0+60	98	46
0+90	160	193
1+20	55	119
1+40	20	28
(BUTT) 1+52	20	9
(BUTT) 1+52	216	
1+60	216	64
(BUTT) 1+64	216	32

525 CY 2-98 PAC

T.B.
E.BANK
CHAN. EX (BUTT) = 84^A
2+47

T.B.
E.BANK
CHAN EX = 66^A
2+20

CHAN E = 120^A
E.BANK
T.B.
E.BANK
2+00

CHAN EX = 150^A
E.BANK
E.BANK
1+80

CHAN EX. @ 1+60 BUTT = 72^A
STR. EX. @ 1+64 BUTT = 216^A

STR. EX = 216^A
T.B.
E.BANK
E.BANK
T.B.
779.60
OUTLET 776.10
776.10
1+60
OUTLET

Out/f Headwall Structure Excavation
216"x 12' x 1/27 96 cy
DENSE GRADED CRUSHED STONE:
30 x 12 x 1 x 1/27 13.3 cy

1+52
STR. EX. BUTT = 216^A
STR. EX. BUTT = 20^A
T.B.
E.BANK
E.BANK
INVERT 778.40
STR. EX = 20^A
1+40
C/L

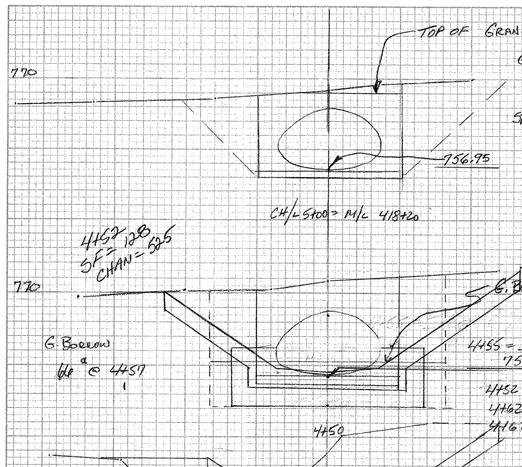
NOTE: STONE FILL WAS FIELD MEAS - PAC

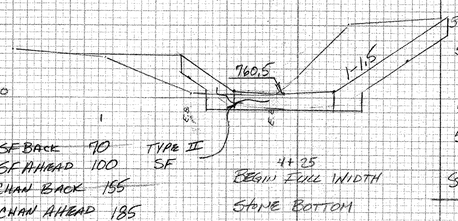
FINAL SURVEY / ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, AREAS CHECKED, NO., BY, DATE

DARIUS JAMES BROOK
Groton-Ryegate STP-F026-1(30)
14'-0" x 8'-1" CAAPPA
4/18+20

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

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



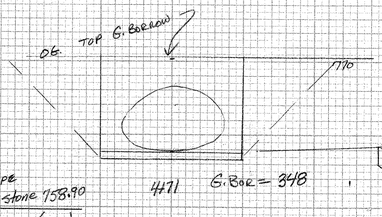


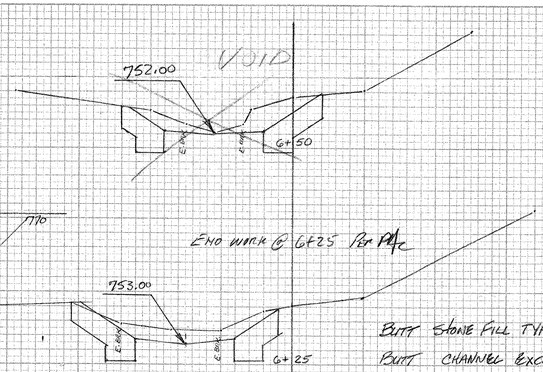
SF BACK 90 TYPE II SF
SF AHEAD 100
CHAN BACK 155
CHAN AHEAD 185

STRUCT. EXCAVATION

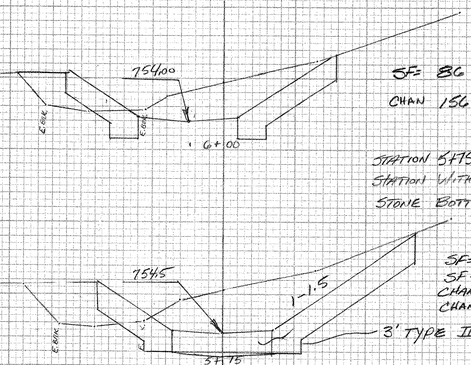
STA	AREA	VOL
4+52	567 (BUTT)	210
4+62	567 (BUTT)	
4+62	286 (BUTT)	316
5+00	248	44
5+05	230	141
5+25	152	66
5+38	122 (BUTT)	
5+38	297 (BUTT)	110
5+48	297 (BUTT)	

STRUCT TOTAL 947 CY 2/98 Diff



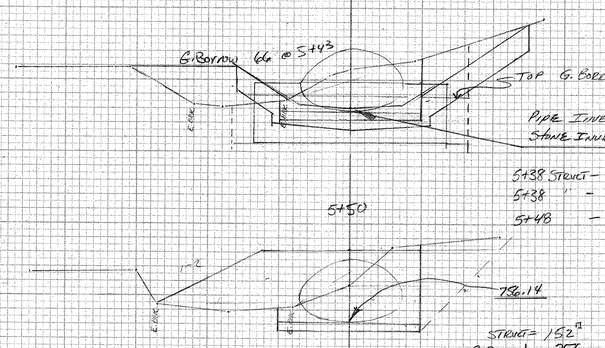


BUTT STONE FILL TYPE III 58 □
BUTT CHANNEL EXCAVATION 100 □



INLET CHANNEL

STA.	AREA SF II	AREA UNC CHAN	VOL SF II	VOL UNC CH
4+00 (BUTT)	50	101		
4+25 BUTT	70	155	55.5	118.5
4+25 BUTT	100	185	44.4	103.8
4+37	100	282	63.3	224.2
4+52	128	525		
			108 CY	328 CY

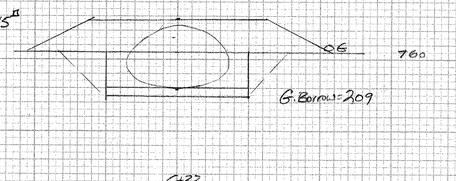


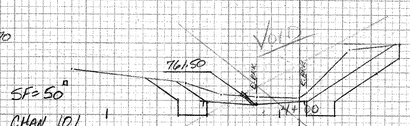
OUTLET CHANNEL

STA	AREA SF III	AREA UNC CHAN.	VOL. SF III	VOL UNC CHAN
5+48 (BUTT)	149	245	152	270
5+75	155 BACK	295		
5+75	113 AHEAD	243	92	185
6+00	86	156	67	119
6+25 (BUTT)	58	100		
			311 CY	574 CY

8/28/98 RJC

TOTAL UNC CHANNEL = 328 + 574 = 902



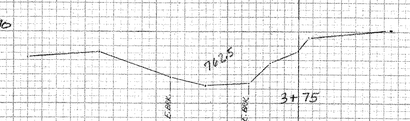


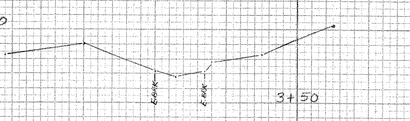
GRANULAR BORROW

STA	AREA	VOL
4+57	66	107
4+71	348	361
5+00	325	55
5+05	271	191
5+25	256	60
5+32	206	155
5+43	66	
	1.15 x 829	953 CY

9/28/98 RJC

958 CY





SUBBASE OF DENSE GRADED CR STONE

HEADWALLS: 2 (33) (9.75) (1.0) (1/27) = 24
PIPE 84 X 20 X 1.0 X 1/27 = 62
2/98 Diff
TOTAL 86 CY

5/28/98 RJC

GEOTEXTILE UNDER SF □ — WIDTH — LENGTH

INLET	81 (AVG)	x	30	x 1/9 =	270	
OUTLET	73 (AVG)	x	80	x 1/9 =	649	
TOTAL					919 SY	8/1/98 Diff

GRUBBING MATERIAL — WIDTH — LENGTH

INLET	48 (AVG)	x	30	x 1/9 =	160	
OUTLET	42	x	80	x 1/9 =	373	
TOTAL					533 SY	8/1/98 Diff

8/28/98 RJC

S = 3.2222%

CL X-SECTIONS DARIUS JAMES BROOK
@ 4/18+20 = CL 5+00 ASKEW 88°-30' LT

K&E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO. 48 7052 MADE IN U.S.A.

9-3-97 VS & E

Groton-Ryegate STP-F026-1(30)

DRAINAGE SHEET PP #2 157
BK #2 PG.

FINAL EARTHWORK SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EARTH EXCAVATION AREA	EARTH EXCAVATION CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.
373							
	50						
+50		0					
			169				
374		183				0	
			466				44
+50		320				48	
			459				96
375		174				56	
			239				116
+50		82				69	
			76				142
376		0				84	
			0				153
+50		0				81	
			65				143
377		70				73	
			291				128
+50		244				65	
			394				121
378		160				66	
			313				122
+50		178				66	
			415				122
379		270		0		66	
			1219		191		114
+50		1046		206		57	
			2067		431		113
380		1186		260		65	
			2607		691		94
+50		1630		486		36	
			2922		765		67
381		1526		340		36	
			3456		600		74
+50		2206		308		44	
			3724		624		82
382		1816		366		45	
			2670		641		84
+50		1068		326		46	
			1826		346		105
383		904		48		67	
			1569		44		134
+50		790		0		78	
			1124				156
384		424				90	
			596				163
+50		220				86	
			237				152
385		36				78	
			39				152
+50		6				86	
			6				161
386		0				88	
			0				165
+50		0				90	
			0				167
387		0				90	
			0				167
+50		0				90	
			0				164
388		0				87	
			3				169
+50		3				95	
			427				151
389		458				68	
			1133				126
+50		766				68	
			1413				126
390		760				68	
	50		1074				126
+50		400				68	
CARRIED FORWARD							
COLUMN FOOTINGS			30975		4333		4199

8-7-98 MA

STATION	DIST	EARTH EXCAVATION AREA	EARTH EXCAVATION CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.
390+50	50	400	693			68	126
391		349	612			68	126
+50		312				68	
			491				126
392		218				68	
			353				126
+50		163				68	
			289				126
393		149				68	
			278				126
+50		151				68	
			366				126
394		244				68	
			524				126
+50		322				68	
			510				126
395		229				68	
			412				126
+50		216				68	
			374				126
396		188				68	
			364				126
+50		205				68	
			445				126
397		276				68	
			606				126
+50		378				68	
			659				126
398		334				68	
			841				126
+50		524				68	
			1348				126
399		882				68	
			1647				126
+50		897				68	
			1064				133
400		241				76	
			588				133
+50		394				68	
			493				133
401		138				76	
			176				141
+50		52				76	
			87				156
402		42				89	
			61				173
+50		24				98	
			59				159
403		40				74	
			161				148
+50		134				86	
			220				152
404		104				78	
			228				141
+50		142				74	
			275				137
405		155				74	
			284				137
+50		152				74	
			278				141
406		148				78	
			265				144
+50		138				78	
			293				148
407		178				82	
			294				148
+50		140				78	
			264				144
408		145				78	
			259				144
+50		135				78	
CARRIED FORWARD							
COLUMN FOOTINGS			16151				4880

CONSTEW. PRF; 1
21-SEP-1989 ZGO: [50.50]CONST. DGN

PROJECT NAME GROTON-RIVEGATE STP
PROJECT NUMBER F026-1(30)

158
SHEET 1 OF SHEETS

FINAL EARTHWORK SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EXCAVATION EARTH AREA	EXCAVATION EARTH CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.								
408	+50	135	319			78	144								
409		210	478			78	141								
	+50	306	817			78	148								
410		576	1022			82	152								
	+50	528	833			82	152								
411		372	598			82	154								
	+50	274	519			84	156								
412		286	575			84	157								
	+50	335	610			86	163								
413		324	496			90	170								
	+50	190	205			94	181								
414		31	68			102	189								
	+50	42	119			102	180								
415		86	251			92	149								
	+50	185	443			69	128								
416		293	569			69	128								
	+50	322	604			69	128								
417		330	615			69	128								
	+50	334	381			69	128								
418		78	78			69	164								
	+50	6	6			108	214								
419		0	0			123	206								
	+50	0	0			100	187								
420		0	20			102	183								
	+50	22	106 27			96	175								
421		93 7	101 21			93	174								
	+50	16	29			95	193								
422		15	27			113	196								
	+50	14	24			99	179								
423		12	56			94	159								
	+50	48	398			78	144								
424		382	1020			78	144								
	+50	720	1293			78	144								
425		676	1593			78	144								
	+50	1044	2413			78	150								
426		1562				84									
CARRIED FORWARD															
COLUMN FOOTINGS			~~16666~~ 16507				5635								

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.								
426		1562				84									
	+50	1420	2761			88	159								
427		1078	2313			88	163								
	+50	456	1420			88	163								
428		162	572			88	163								
	+50	78	222			84	159								
429		70	137			88	159								
	+50	68	128			90	165								
430		58	117			90	167								
	+50	52	102			96	172								
431		82	124			69	153								
	+50	338	389			69	128								
432		296	589			69	128								
	+50	69 228	334 485			69	128								
433		202	251 398			69	136								
	+50	88	269			78	160								
434		688	719			95	162								
	+50	1178	1728			80	148								
435		888	1913			80	169								
	+50	572	1352			102	189								
436		266	776			102	189								
	+50	46	289			102	189								
437		24	65			102	189								
	+50	78	94			102	180								
438		226	281			92	154								
	+50	560	728	0	69	74	137								
439		480	963	75	334	74	137								
	+50	690	1083	286	325	74	137								
440		384	994	65	106	74	137								
	+50	188	530	50	46	74	137								
441		168	330	0		74	137								
	+50	130	276			74	137								
442		85	199			76	139								
	+50	95	167			76	141								
443		164	240			76	141								
	+50	150	291			68	133								
CARRIED FORWARD															
COLUMN FOOTINGS			~~22744~~ 23042		880		5324								

v 8-10-98

CONSTEW. PRF; 1
21-SEP-1989
ZGO: [50, 50] CONST. DGN

PROJECT NAME GROTON-PEACHAM STP
PROJECT NUMBER F026-1(30)

159
SHEET 2 OF SHEETS

37 74

FINAL EARTHWORK SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EXCAVATION EARTH AREA	EARTH CU. YDS.	ROCK EXCAVATION AREA	ROCK CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
443+50		150				68									
	50		285				134								
444		158		0		77									
			170		111		143								
+50		26		120		77									
			159		111		143								
445		146		0		77									
			647				144								
+50		553				78									
			697				144								
446		200				78									
			320				152								
+50		146				86									
			311				159								
447		190				86									
			294				159								
+50		127				86									
			406				159								
448		312				86									
			567				159								
+50		300				86									
			560				159								
449		305				86									
			334				162								
+50		56				89									
			134				165								
450		89				89									
	50		82				165								
+50		0				89									
	43.29		0				143 165								
451		0				89									
	50		26				165								
+50		28				89									
			253				152								
452		245				75									
			575				139								
+50		376				75									
			793				139								
453		480				75									
			1035				139								
+50		638		0		75									
			739		244		133								
454		160		264		69									
			167		613		119								
+50		20		398		60									
			19		866		108								
455		0		537		57									
			44		1034		106								
+50		48		580		57									
			44		699		116								
456		0		175		68									
			28		581		119								
+50		30		452		60									
			94		1409		103								
457		71		1070		51									
			295		1380		98								
+50		248		420		54									
			431		683		94								
458		218		318		48									
			202		1202		94								
+50		0		980		54									
			224		1739		106								
459		242		898		60									
			731		1609		107								
+50		548		840		56									
			1134		1585		104								
460		677		872		56									
			1830		1067		113								
+50		1299		280		66									
	50		2094		369		142								
461		962		118		87									
CARRIED FORWARD															
COLUMN FOOTINGS			15724		15302		4686 4708								

STATION	DIST	EXCAVATION EARTH AREA	EARTH CU. YDS.	ROCK EXCAVATION AREA	ROCK CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
461		962		118		87									
	50		1444		109		161								
+50		598		0		87									
			551				158								
462		429		0		84									
			958		226		155								
+50		606		244		83									
			1178		226		154								
463		666		0		83									
			931				156								
+50		340				86									
			406				159								
464		98				86									
			173				149								
+50		89				75									
			269				139								
465		202				75									
			281				139								
+50		102				75									
			157				139								
466		68				75									
			269				139								
+50		222				75									
			359				132								
467		164				68									
			348				126								
+50		212				68									
			494				126								
468		322				68									
			780				126								
+50		520				68									
			876				126								
469		426				68									
			862				126								
+50		505				68									
			1001				126								
470		576				68									
			1041				126								
+50		548				68									
			981				126								
471		512				68									
			933				126								
+50		476				68									
			921				126								
472		499				68									
			1111				126								
+50		701				68									
			1346				126								
473		753				68									
			1259				126								
+50		607				68									
			867				126								
474		329				68									
			483				126								
+50		193				68									
			352				129								
475		187				71									
			255				137								
+50		88				77									
			109				143								
476		30				77									
			285				163								
+50		278				99									
			518				186								
477		281				102									
			391				186								
+50		141				99									
			149				183								
478		20				99									
	50		19				178								
+50		0				93									
CARRIED FORWARD															
COLUMN FOOTINGS			23355 22355		561		4975								

v.8-11-98 RAC

21-SEP-1989 CONSTEW. PRF; 1 ZGO: [50, 50] CONST. DGN

PROJECT NAME GROTON - IRVEGATE
PROJECT NUMBER STP- F026-1(30)

160
SHEET 3 OF SHEETS

FINAL EARTHWORK SHEET

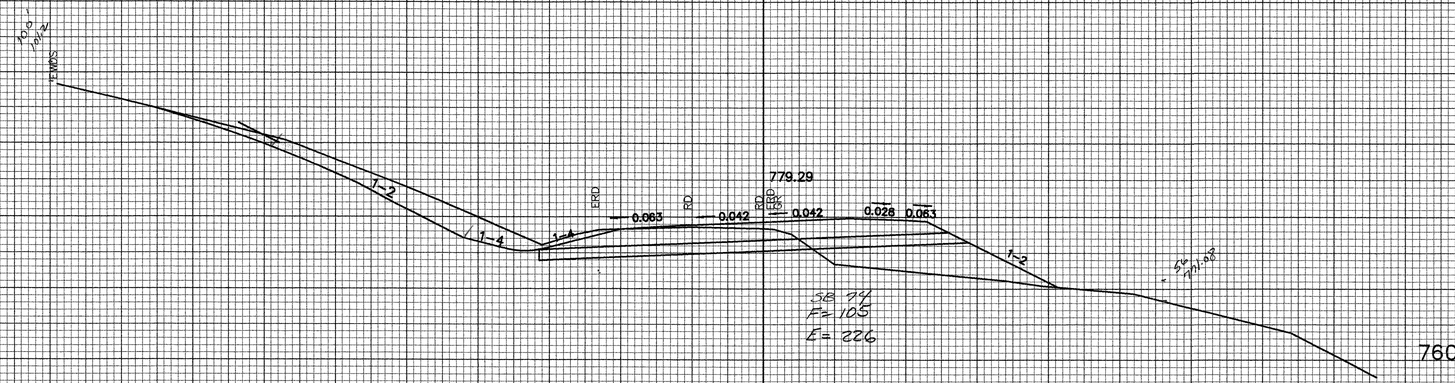
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EXCAVATION EARTH AND ROCK AREA	EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.									TOTAL EXCAVATION EARTH AND ROCK STATION	DIST	AREA	CU. YDS.								
478+50		0				93																					
479		0	0			93	172																				
+50		8	7			93	172																				
480		0	7			93	172																				
+50		42	39			93	172																				
481		118	148			80	160																				
+50		231	323			84	152																				
482		319	509			81	153																				
+50		398	664			87	156																				
483		696	1007			89	163																				
+50		584	1180			83	159																				
484		626	1120			72	144																				
+50		735	1260			74	135																				
485		630	1264			74	137																				
+50		474	1022			74	137																				
486		280	698			83	145																				
+50		132	381			81	152																				
487		48	167			95	163																				
+50		48	89			81	163																				
488		198	228			81	150																				
+50		202	370			82	151																				
489		226	396			82	152																				
+50		392	572			70	141																				
490		798	1102			100	157																				
+50		502	1204			106	191																				
491		255	701			90	181																				
+50	BUTT	160	384			60	139	BUTT																			
492																											
PAGE TOTALS			14842				4069																				
								8-11-98 PAZ																				
BK 7 PAGE 25					7																						
CULVERTS FROM BK 7 PAGE 41					481																						
PAGE 1			30975		4333		4189																				
PAGE 1			16151				4880																				
PAGE 2			16507		880		5635																				
PAGE 2			23042				5324																				
PAGE 3			15724		15302		4708																				
PAGE 3			22355		561		4975																				
PAGE 4			14842				4069																				
CARRIED FORWARD																CARRIED FORWARD											
COLUMN FOOTINGS																COLUMN FOOTINGS											
PROJECT TOTALS			139596		21564		33790	8-11-98 PAZ																			

CONSTEW. PRF; 1
21-SEP-1989
ZGO: [50, 50] CONST. DGN

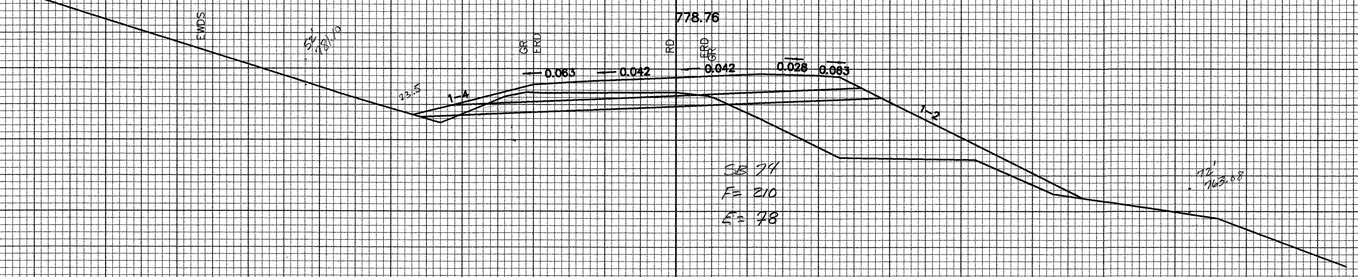
PROJECT NAME GROTON - ICYEGATE
PROJECT NUMBER STP- F026-1(30)

162
SHEET 4 OF SHEETS



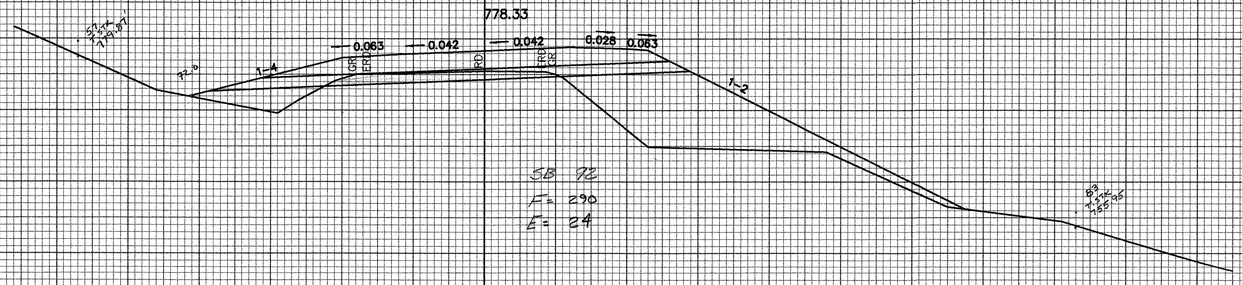
SB 79
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E= 226

℄
438+00



SB 74
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E= 78

℄
437+50

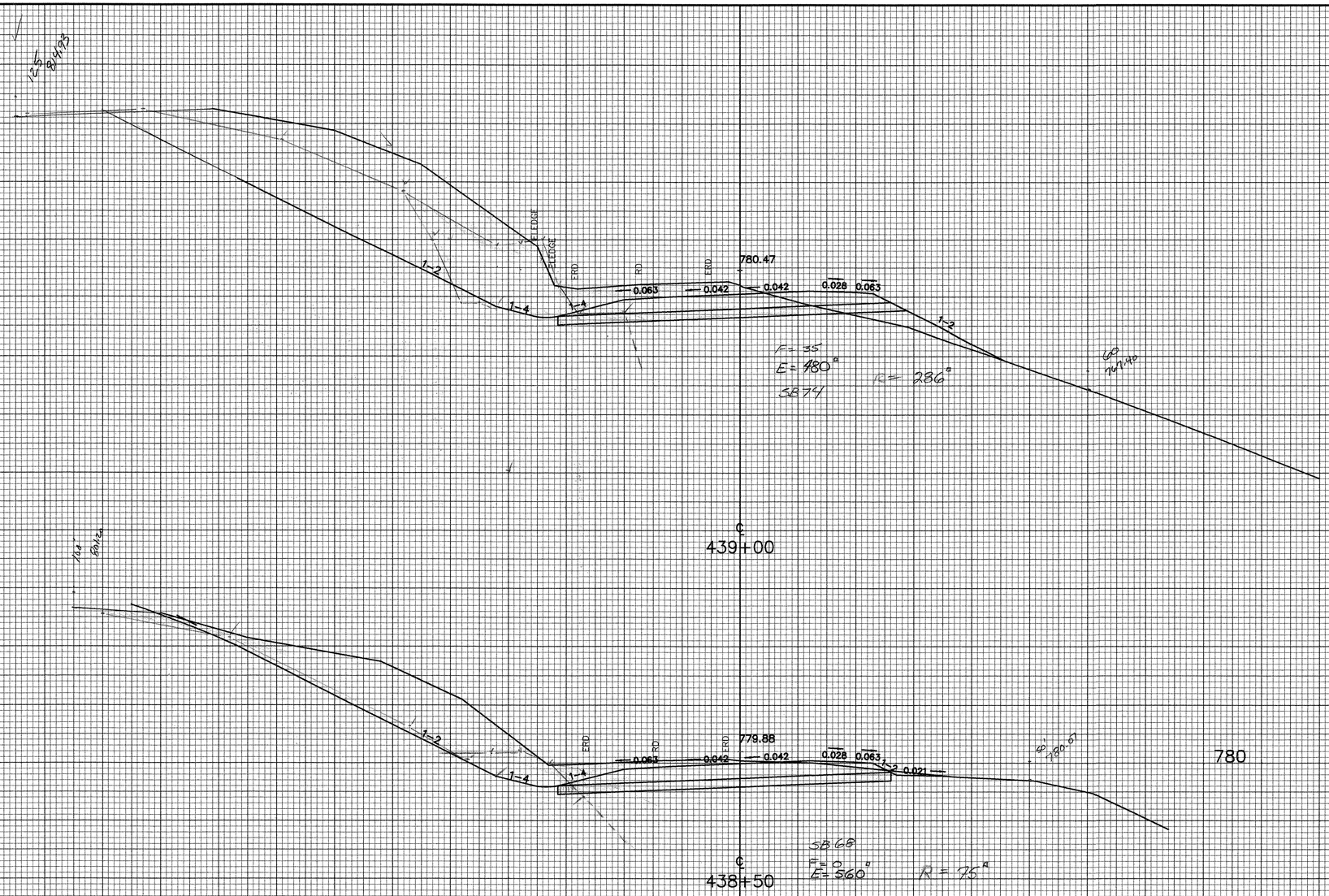


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437+00

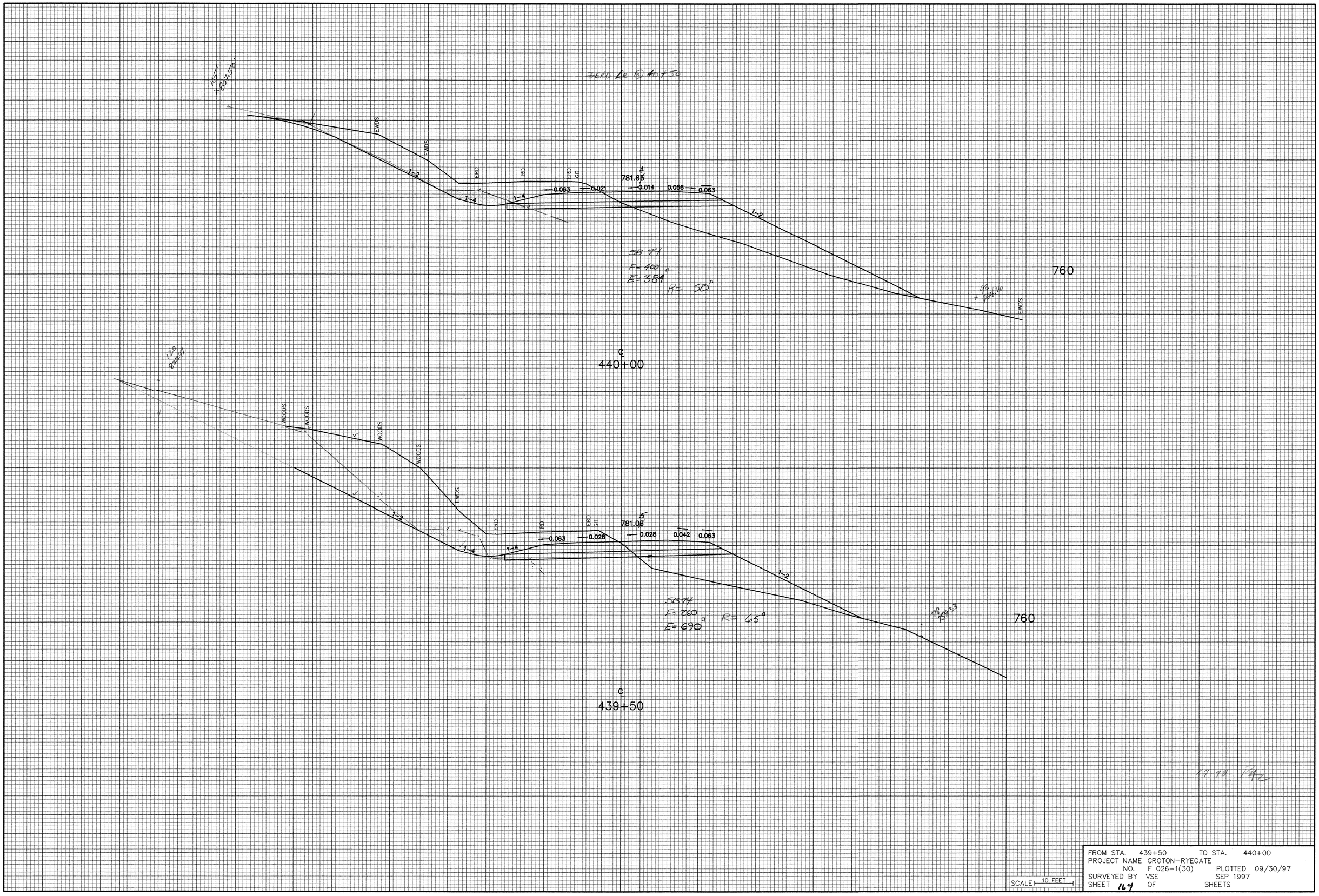
FROM STA. 437+00 TO STA. 438+00
PROJECT NAME GROTON-RYEGATE
NO. F 026-1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 162 OF SHEETS

SCALE 10 FEET



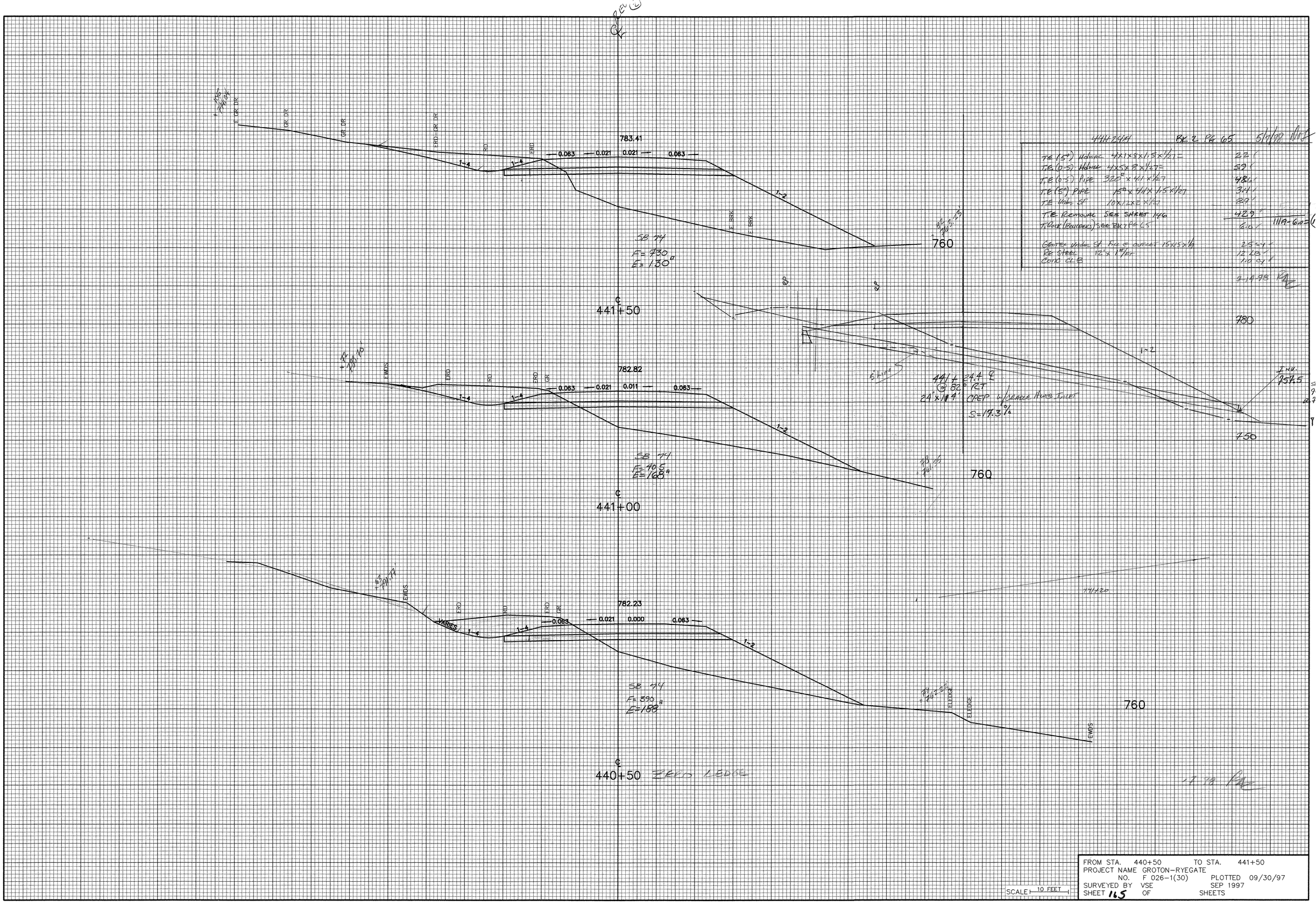
FROM STA.	438+50	TO STA.	439+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	163	OF	SHEETS

SCALE 10 FEET



FROM STA. 439+50 TO STA. 440+00
PROJECT NAME GROTON–RYEGATE
NO. F 026-1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 164 OF SHEETS

SCALE 10 FEET



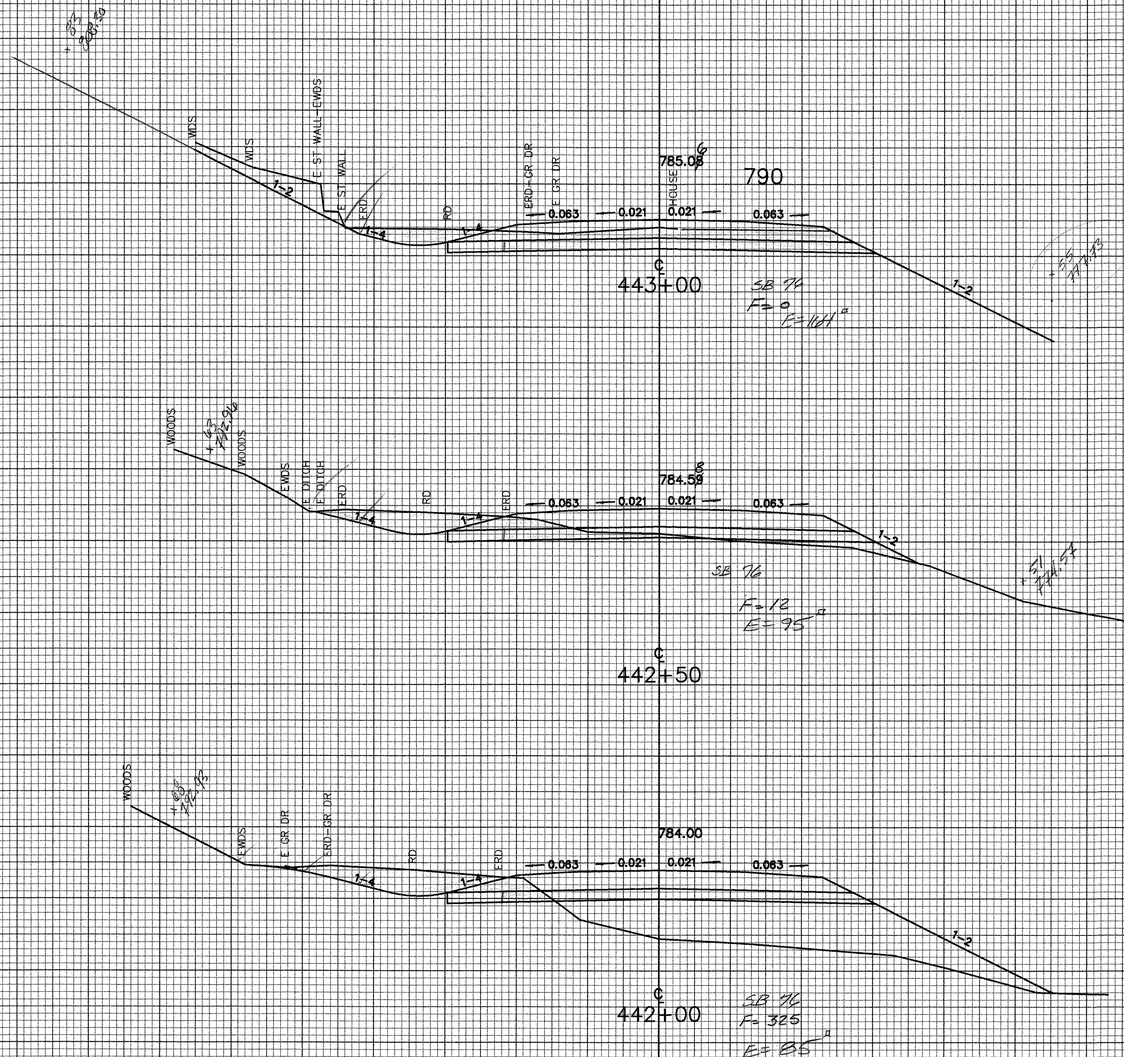
4/14/98 BK 2 PG 65 6/19/98

TE (15") Hdwall	4'X1'X8"X1.5"X1/2"=	22 ℄
TE (0-5) Hdwall	4'X5'X8"X1/2"=	59 ℄
TE (0-5) Pipe	320° X 4'1" X 1/2"	48 ℄
TE (5') Pipe	15° X 4'1" X 1.5" X 1/2"	3.4 ℄
TE Under SP	10'X12'X2"X1/2"	89 ℄
TE Removal	SEE SHEET 140	42.9 ℄ 1119-6=1
TE Curb (Pavement)	SEE BK 2 PG 65	6.0 ℄
Concrete Under SP	Face of curbs 15'X5'X1'	25 C.Y.
Re Steel	12.1 X 1.49/FT	12.1 LB
Cond CI-B		1.0 C.Y.

7.14.98

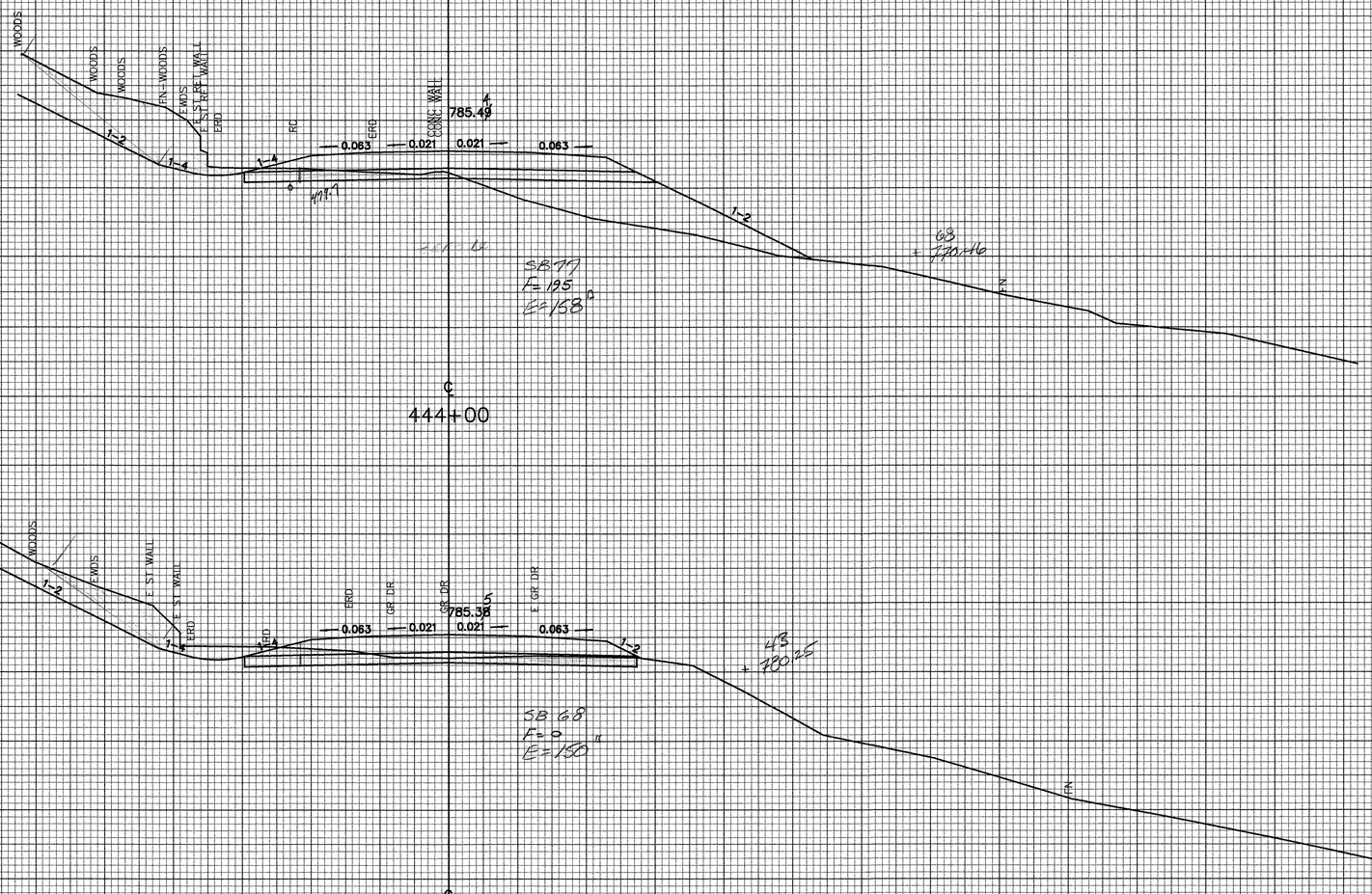
FROM STA.	440+50 TO STA. 441+50
PROJECT NAME	GROTON-RYEGATE
NO.	F 026-1(30) PLOTTED 09/30/97
SURVEYED BY	VSE SEP 1997
SHEET	165 OF SHEETS

SCALE 10 FEET



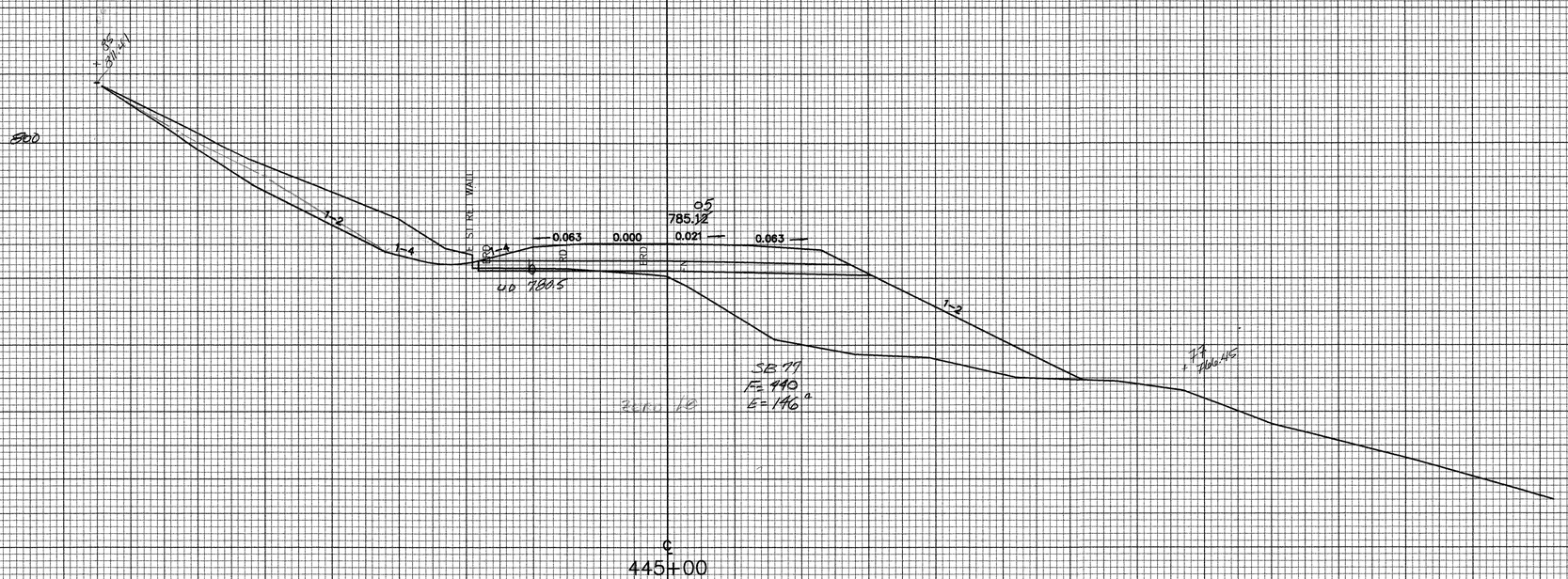
FROM STA.	442+00	TO STA.	443+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	166	OF	SHEETS

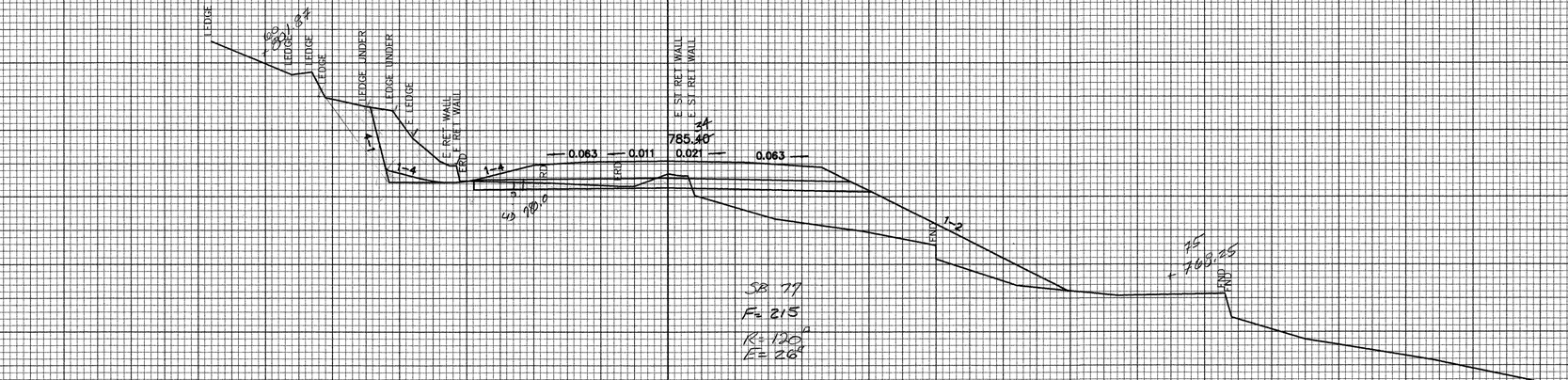
SCALE 10 FEET



FROM STA.	443+50	TO STA.	444+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	167	OF	SHEETS

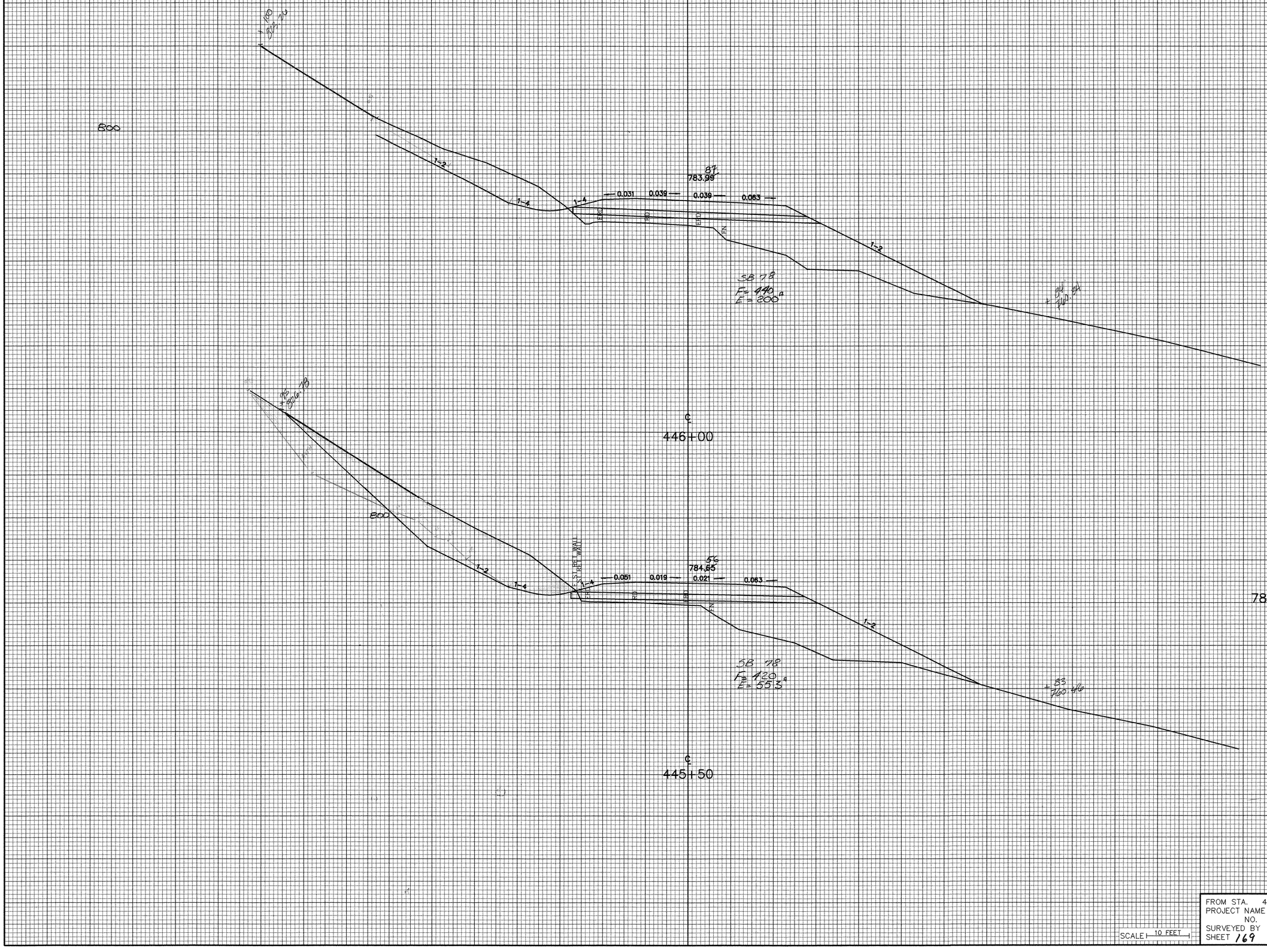
SCALE 10 FEET





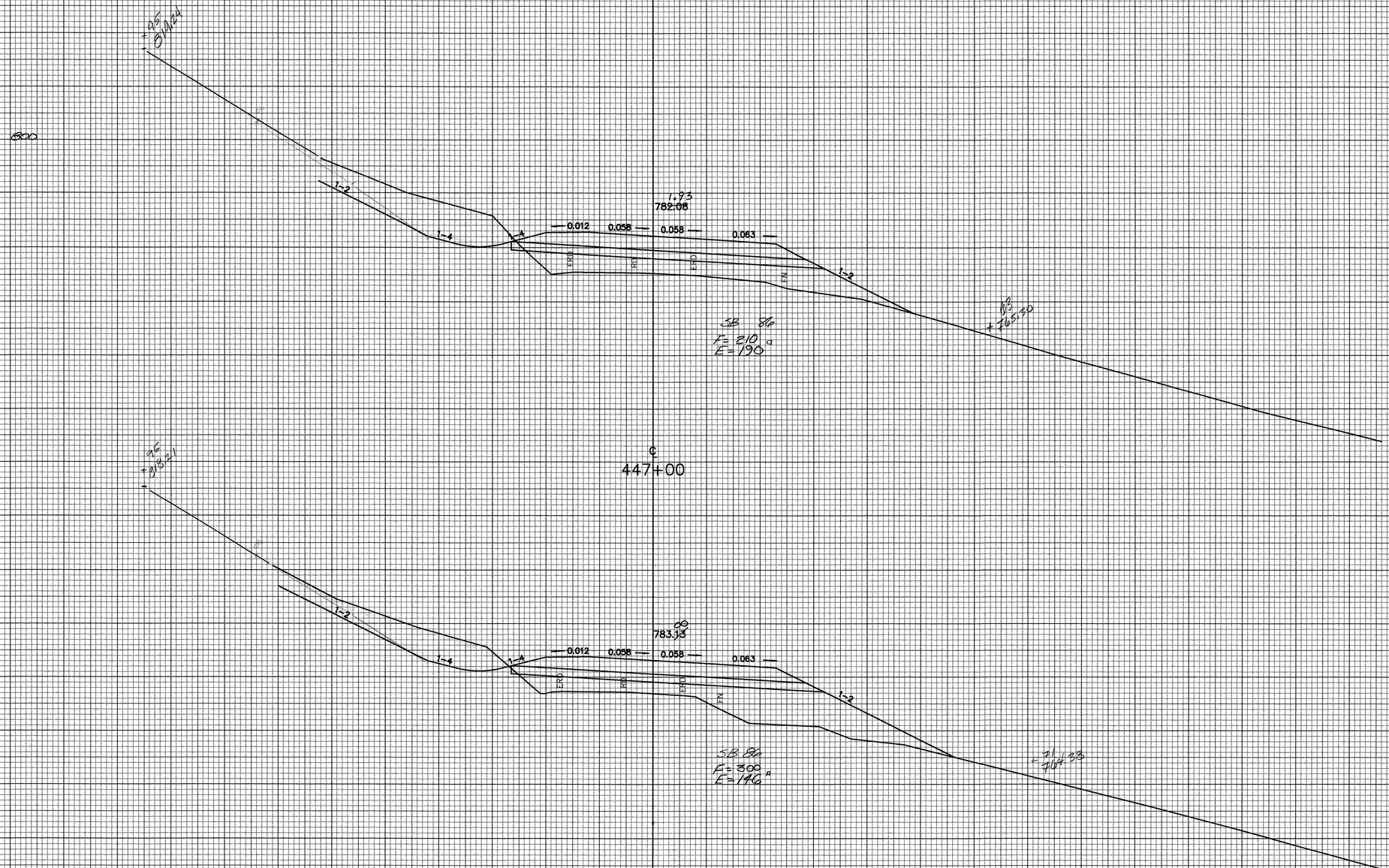
FROM STA. 444+50 TO STA. 445+00
PROJECT NAME GROTON-RYEGATE
NO. F 026-1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 168 OF SHEETS

SCALE 10 FEET



FROM STA. 445+50 TO STA. 446+00
PROJECT NAME GROTON–RYEGATE
NO. F 026–1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 169 OF SHEETS

SCALE 10 FEET



FROM STA.	446+50	TO STA.	447+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	170	OF	SHEETS

SCALE 10 FEET

448+00 6/98 DSE

TE 5° OF	36" X0.5X1.5X1.27=	1.0
TE 0-5 DE	36"X5.0X1.27 =	6.7
TE 0-5 PIPE	102X3.6X1.27 =	13.6
TE0-5 SF @ OUTLET	6X12X2X1.27	7.11
	28.4 SY	28SY TOTAL

SF TYPE E OUTLET	6X12X2X1.27	7.11	
GEOTEX FAB Under SF	10X18X1.27	20 SY	6/98

448+40 @ 90°
18" x 88' EP
3/0=13.6

800

1-1.75

BRUSH

1-2

BRUSH

1-4

BRUSH

E

GRATE
776.15

2
779.41

0.012 0.058 0.058 0.063

ERD RD ERD EFN

1-2

773.0

761.0

76
+0.20

760

SB 86
F=436 ft
E=312

℄
448+00

53
+00.24

800

WOODS

1-2

WOODS

1-4

WOODS

LEWIS

1-4

67
780.84

0.012 0.058 0.058 0.063

ERD RD ERD EFN

1-2

1-1.75

SB 86
F=855
E=127

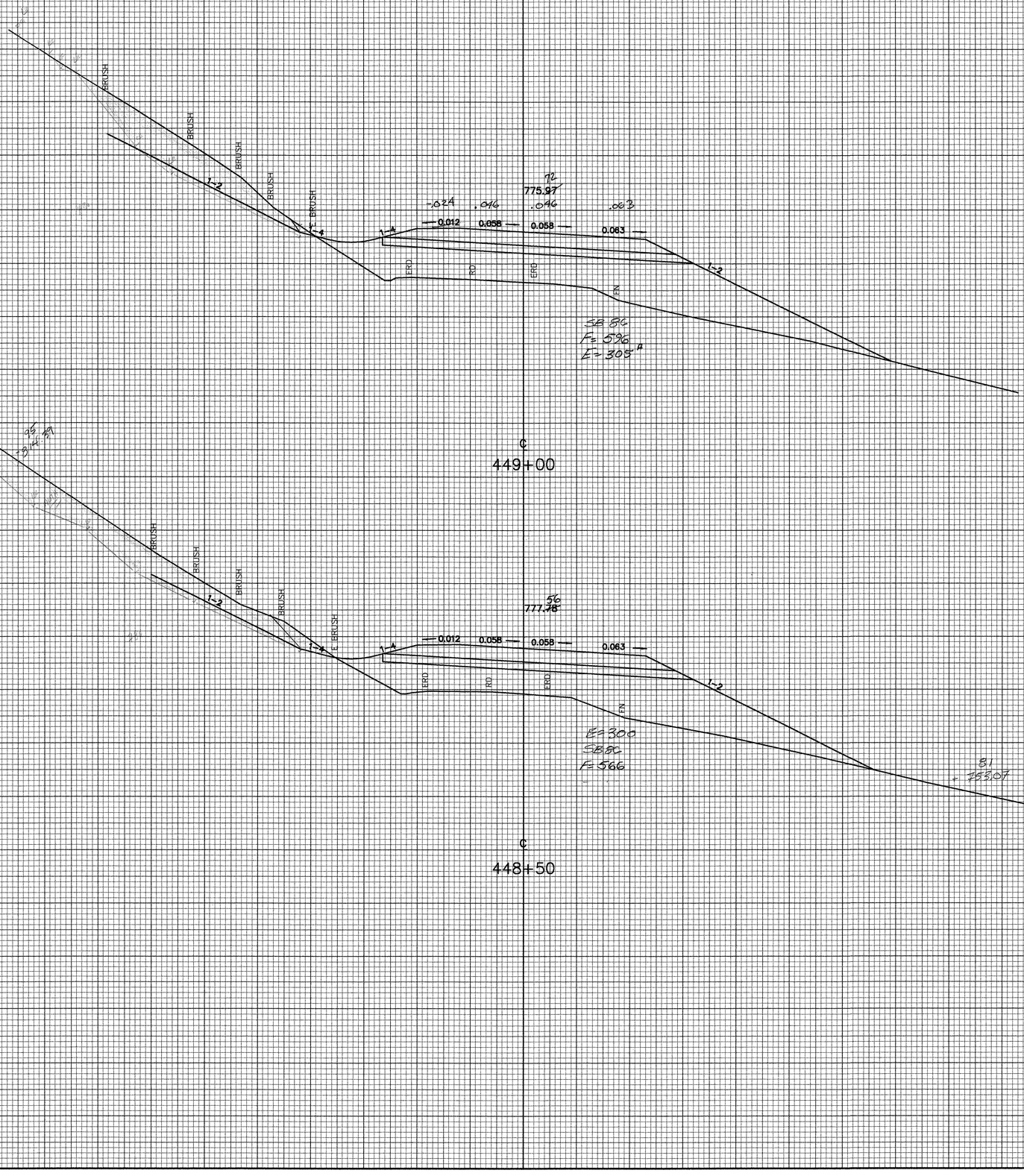
OF
+68.60

760

℄
447+50

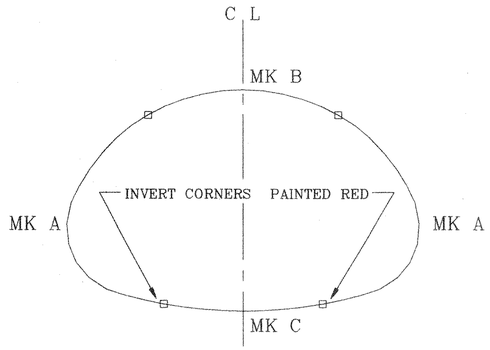
FROM STA. 447+50 TO STA. 448+00
PROJECT NAME GROTON–RYEGATE
NO. F 026–1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 171 OF SHEETS

SCALE 10 FEET

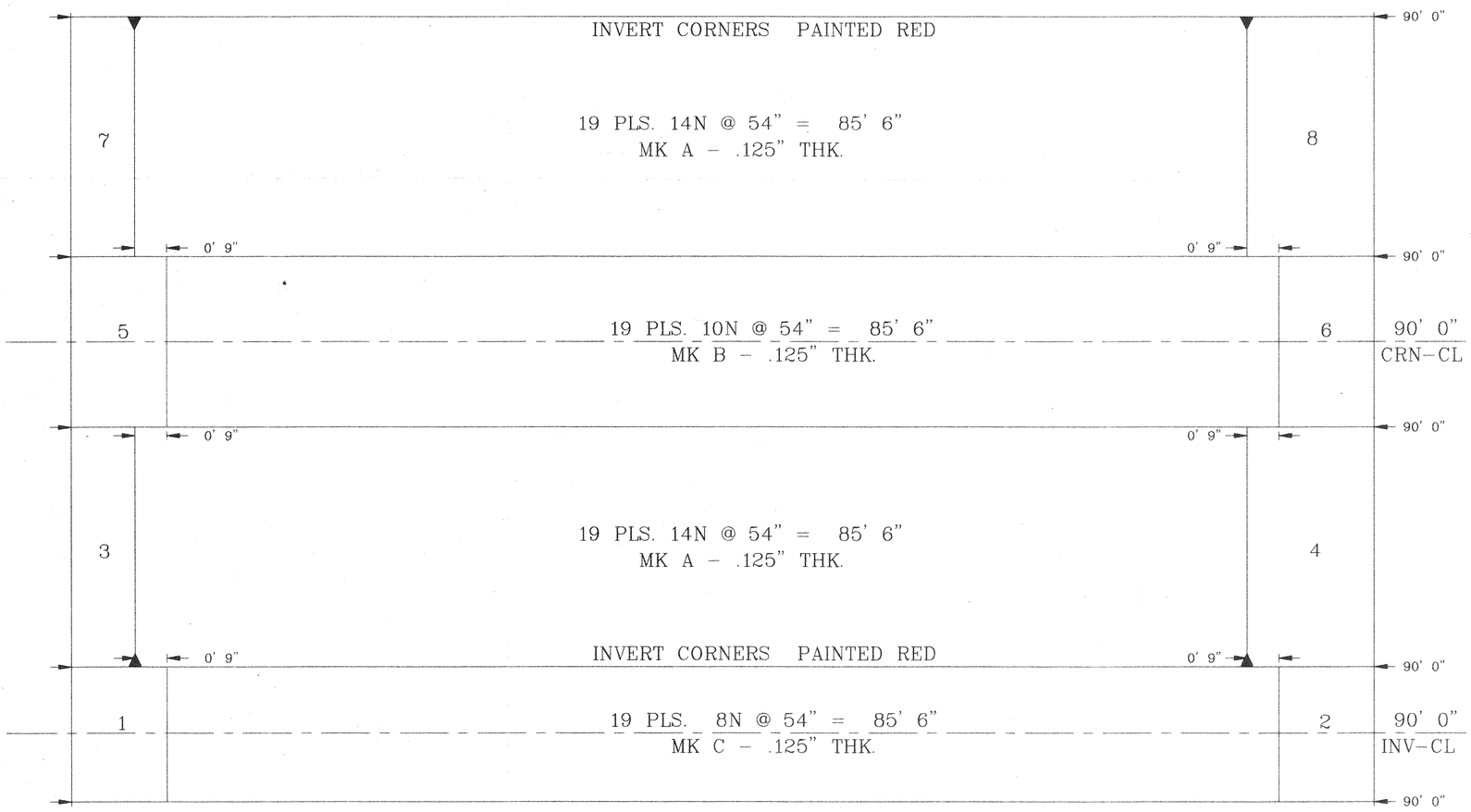


FROM STA. 448+50 TO STA. 449+00
PROJECT NAME GROTON–RYEGATE
NO. F 026–1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 172 OF SHEETS

SCALE 10 FEET



END VIEW



DEVELOPED PLAN - NO SCALE

OUTSIDE SURFACE SHOWN

13 ANCHOR BOLT HOLES REQD. IN EACH END.
9.0" IN FROM THE CUT EDGE AND ON
18.0" CENTERS, BEGINNING AT INVERT C-L
IN BOTTOM HALF OF PIPE ONLY

GENERAL NOTES:

1. Confirmation of cover - This structure is within the minimum and maximum allowable height of cover, for the designated loading, as follows:
   Loading: HS-20 or _____ Minimum cover (FT) 2.70 Maximum cover (FT) 12.0
2. For proper bolt size usage, refer to following:

Plate only	2 plate lap	3 plate lap	4 plate lap
0.100" - 0.125" thk. plate	1-1/4"	1-1/4"	1-1/4"*
0.150" - 0.200" thk. plate	1-1/4"	1-1/2"	N/A
0.225" - 0.250" thk. plate	1-1/2"	2"	N/A
With Reinforcing Rib (if req'd) 1 plate			
0.100" - 0.175" thk. plate	1-1/4"	1-1/2"	2"
0.200" - 0.250" thk. plate	1-1/2"	2"	2"

   *Occurs with full inverts only which have 0.100" thick plates
3. Nuts may be located on structure's interior or exterior to allow conventional access during assembly and torquing. Only one side of nut has a curved surface and it should be in direct contact with plate valley.
4. All plate laps and reinforcing ribs must be properly mated in a tangent fashion using proper alignment techniques and held in alignment by fasteners (finger tightened only). Before backfilling commences, all fasteners must be torqued for adequate component contact. Good component fit is better than high torque.
5. Fastener torque requirements: .0100" thick plate at 90-115 foot-pounds. For all thicker plates and reinforcing ribs, torque at 115-135 foot-pounds. Torque levels are for installation, not residual, in-service requirements. Since torquing may loosen previously tightened fasteners, multiple passes may be necessary. When seam sealant tape is used, fasteners should be torqued again after 24 hours.
6. All aluminum structural plate material is manufactured in accordance with AASHTO M219 and ASTM B746 specifications.
7. See ASSEMBLY INSTRUCTIONS shipped with material in fastener container. Also refer to specific product catalog for additional product information.

FOR APPROVAL

APPROVED BY: _____

DATE: _____

CONTECH® CONSTRUCTION PRODUCTS INC.
ANDERSON, S.C. 29625
(864)224-8837

ALUMINUM STRUCTURAL PLATE PRODUCTS

PROJECT IDENTIFICATION

WINTERSET, INC.
VERMONT DOT PROJECT # F026-1(30)
U.S. ROUTE 302 OVER CLARK HATCH BROOK
CALEDONOA COUNTY, GROTON, VT

PLANT ORDER NO. 10-8967
SALES ORDER NO. 17-0448-02
SALES REGION 4317
BUYERS NO. C 0205
DRAWN BY WASTERLAIN
DATE 06/23/97
SCALE NONE
SHT 1 OF 1

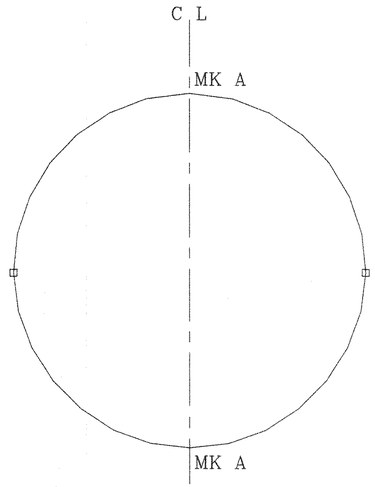
INLET/OUTLET
SKEW NO.
BEVEL

SIZE 14' 0" x 8' 7"
TYPE STRUCTURE PIPE ARCH
INV LENGTH @ ℄ 90' 0"

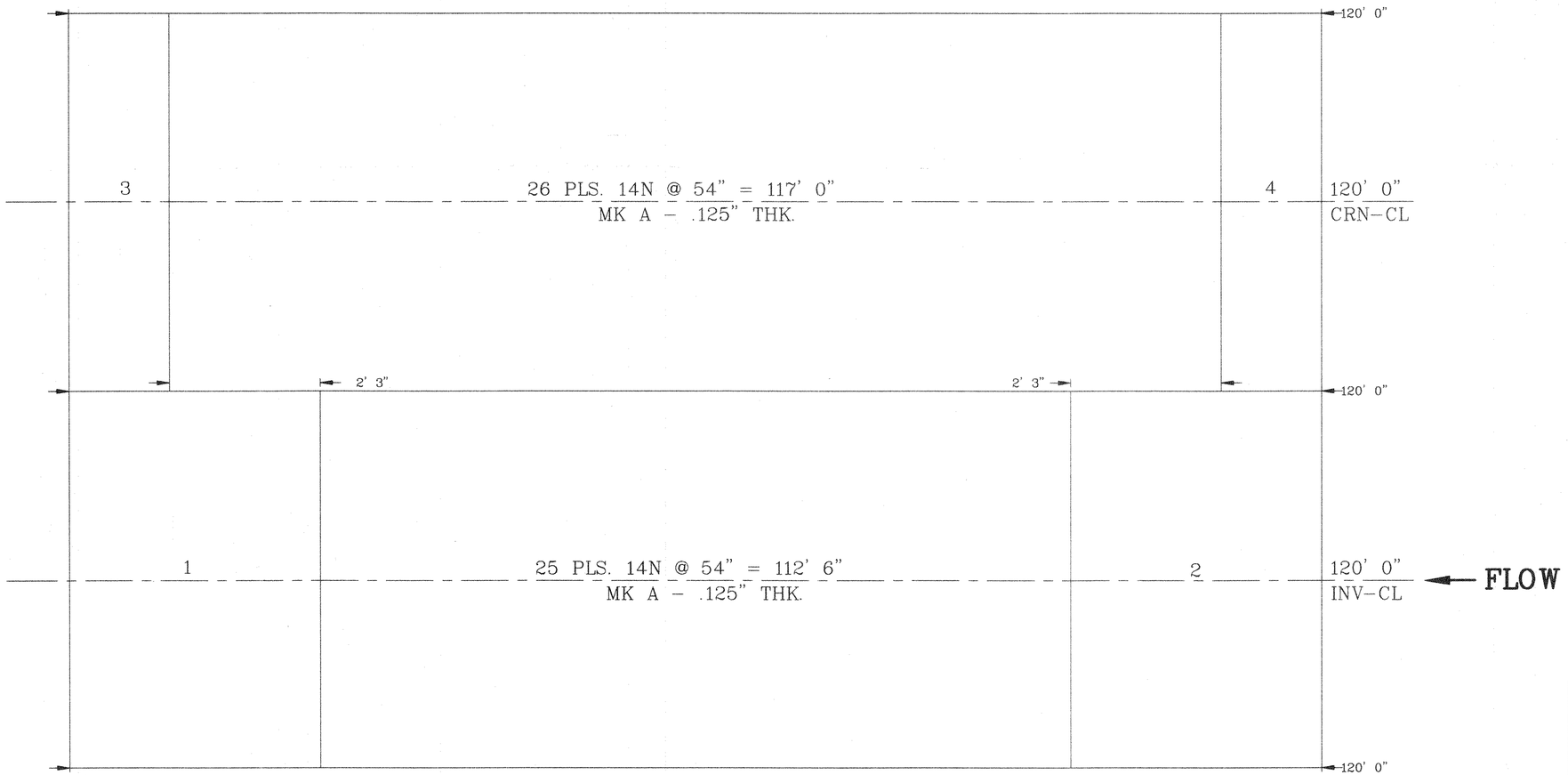
PLATE THICKNESS .125"
REINFORCING RIB SPACING
REINFORCING RIB TYPE
NUMBER OF STRUCTURES 1

NO.	DATE	REVISION	BY	CHK

NOTICE
THE INFORMATION CONTAINED IN THIS DRAWING IS PROPRIETARY TO AND POSSIBLY PATENTED BY CONTECH CONSTRUCTION PRODUCTS INC. WRITTEN CONSENT IS REQUIRED BY CONTECH CONSTRUCTION PRODUCTS INC. FOR ANY INFORMATION THAT IS TO BE USED, DISSEMINATED OR REPRODUCED IN WHOLE OR IN PART. THE INFORMATION HAS BEEN CAREFULLY COMPILED, ADEQUATELY REPRESENTS THE PRODUCT AS ILLUSTRATED AND IS SUBJECT TO REVIEW AND UPDATING. FINAL DETERMINATION OF ANY INFORMATION SUITABLE FOR THE USE CONTEMPLATED IS THE SOLE RESPONSIBILITY OF THE USER



END VIEW



DEVELOPED PLAN – NO SCALE

OUTSIDE SURFACE SHOWN

9 ANCHOR BOLT HOLES REQD. IN EACH END.
9.0" IN FROM THE CUT EDGE AND ON
18.0" CENTERS, BEGINNING AT INVERT C–L
FOR BOTTOM HALF OF PIPE ONLY

NOTE:
PIPE SHALL NOT BE 5% ELONGATED PER
NOTE # 6 ON STATE OF VERMONT PLANS.

FOR APPROVAL

APPROVED BY: _____

DATE: _____

GENERAL NOTES:

1. Confirmation of cover: This structure is within the minimum and maximum allowable height of cover for the designated loading type as follows:
   Loading: HS-20 or _____ Minimum cover (ft): 1.50 , Maximum cover (Ft): 32.00
2. For proper bolt size usage, refer to following:

Plate only	2 plate lap	3 plate lap	4 plate lap
0.100" – 0.125" thk. plate	1-3/4"	1-1/4"	1-1/4"
0.150" – 0.200" thk. plate	1-3/4"	1-1/2"	N/A
0.225" – 0.250" thk. plate	1-3/4"	2"	N/A
With Reinforcing Rib (if req'd) 1 plate			
0.100" – 0.175" thk. plate	1-1/4"	1-1/2"	2"
0.200" – 0.250" thk. plate	1-1/2"	2"	2"

   *Occurs with full inverts only which have 0.100" thick plates.
3. Nuts may be located on structure's interior or exterior to allow conventional access during assembly and torquing. Only one side of nut has a curved surface and it should be in direct contact with plate valley.
4. All plate laps and reinforcing ribs must be properly mated in a tangent fashion using proper alignment techniques and held in alignment by fasteners (finger tightened only). Before backfilling commences, all fasteners must be torqued for adequate component contact. Good component fit is better than high torque.
5. Fastener torque requirements: 0.100" thick plate at 90–115 foot–pounds. For all thicker plates and reinforcing ribs, torque at 115–135 foot–pounds. Torque levels are for installation, not residual, in–service requirements. Since torquing may loosen previously tightened fasteners, multiple passes may be necessary. When seam sealant tape is used, fasteners should be torqued again after 24 hours.
6. All aluminum structural plate material is manufactured in accordance with AASHTO M219 and ASTM B746 specifications.
7. See ASSEMBLY INSTRUCTIONS shipped with material in fastener container. Also refer to specific product catalog for additional product information.

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ALUMINUM STRUCTURAL PLATE PRODUCTS

PROJECT IDENTIFICATION

WINTERSET, INC.
VERMONT DOT PROJECT # F026–1(30)
U.S. ROUTE 302 OVER CLARK HATCH BROOK
CALEDONOA COUNTY, GROTON, VT

PLANT ORDER NO.	10–8966
SALES ORDER NO.	17–0448–01
SALES REGION	4317
BUYERS NO.	C 0205
DWN BY	WASTERLAIN
DATE	06/23/97
SCALE	NONE
SHT / OF	1 / 1

INLET OUTLET
SKEW NO.
BEVEL
SIZE 7' 0" x 7' 0"
TYPE STRUCTURE ROUND
INV LENGTH @ ℄ 120' 0"
PLATE THICKNESS .125"
REINFORCING RIB SPACING
REINFORCING RIB TYPE
NUMBER OF STRUCTURES 1

NO.	DATE	REVISION	BY	CHK.

NOTICE
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REV