STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

SECONDARY PROJECT

TOWN OF FAIR HAVEN

COUNTY OF RUTLAND

RELOCATION OF VERMONT ROUTE 22-A

BEGINNING AT A POINT APPROXIMATELY 0.720 MILES NORTHERLY OF THE INTERSECTION OF U.S. ROUTE 4 AND VT. ROUTE 22-A AND PROCEEDING NORTHERLY 0.179 MILES, RESUMING 0.389 MILES NORTHERLY AND PROCEEDING NORTHERLY 0.729 MILES.

LENGTH OF PROJECT 4,796.00 FEET = 0.908 MILES

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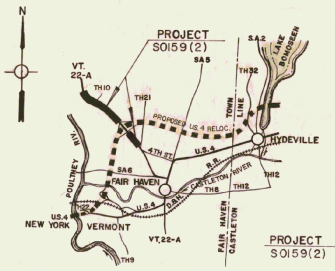
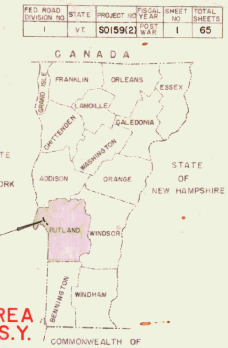




PROJECT S0159(2)

FED ROAD DIVISION NO	STATE	PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
I	VT.	S0159(2)	COST WAY	1	65

PROJECT NAME & NUMBER TYPE PAV'T. AREA
FAIR HAVEN S 0159(2) BIT. CONC. 12,789 S.Y.

RECORD PLANS

MATERIALS

SETTLEMENT PLATFORM & PIEZOMETER — EMPIRE SOILS INVESTIGATION INC. — GROTON, N.Y.
SUBBASE OF GRAVEL & OF SAND — J. CARRARA PITS - POULTNEY, VT. & R. BISHOP PITS - W. HAVEN, VT.
GRAVEL SHOULDERS — PELLETIER PIT — CASTLETON, VT.
CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE & BITUMINOUS CONCRETE — — VERMONT PAVING CORP. — WALLINGFORD, VT.
REFINED TAR — MOBIL OIL CO. — ALBANY, N.Y.
CONCRETE CLASS B — J. CARRARA & SON — RUTLAND, VT.
REINFORCING STEEL — K. ROSS — LEBANON, N.H.
METAL CULVERT PIPE — NEW ENGLAND METAL CULVERT CO. — WHITE RIVER JUNCTION, VT.
REINFORCED CONCRETE PIPE, P.R.C.C.D.I., SIGNS, GUARD RAIL & EROSION CONTROL ITEMS — — S.T. GRISWOLD & CO., INC. — WILLISTON, VT.

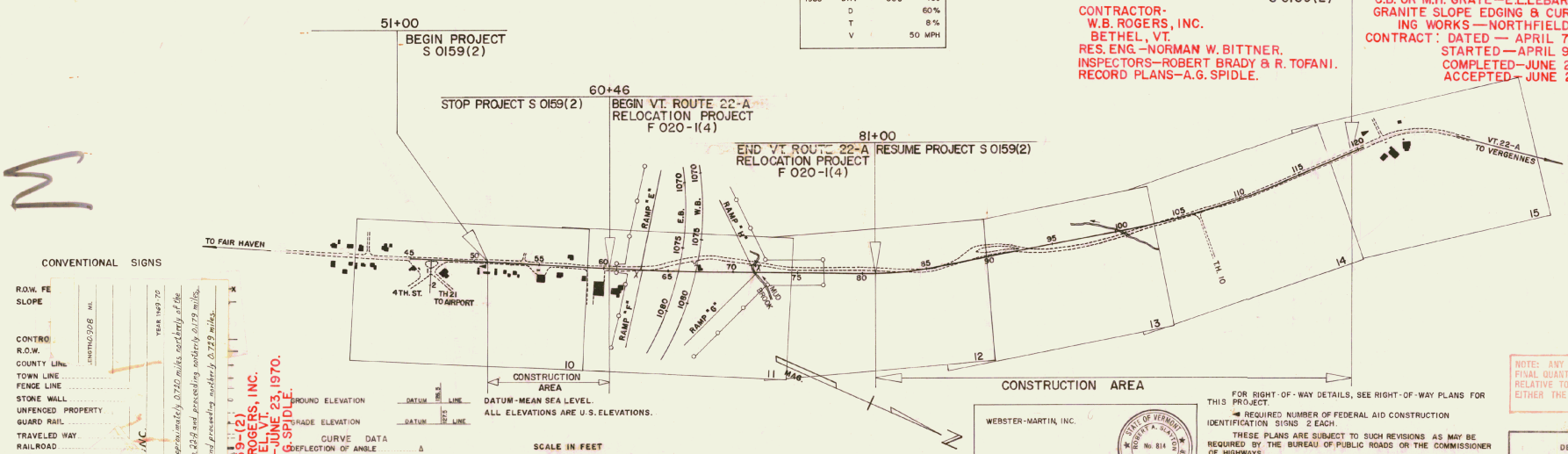
CONTRACTOR-
W.B. ROGERS, INC.
BETHEL, VT.
RES. ENG. — NORMAN W. BITTNER.
INSPECTORS — ROBERT BRADY & R. TOFANI.
RECORD PLANS — A.G. SPIDLE.

CONTRACT: DATED — APRIL 7, 1969.
STARTED — APRIL 9, 1969.
COMPLETED — JUNE 23, 1970.
ACCEPTED — JUNE 23, 1970.

C.I. COVER FOR FL. BASIN — GRAY FOUNDRY, INC. - POULTNEY, V
C.B. OR M.H. GRATE — E.L. LEBARON FDRY. CO. — BROCKTON, MA.
GRANITE SLOPE EDGING & CURB — CETRANGOLO FINISHING WORKS — NORTHFIELD, VT.

TRAFFIC DATA

1965	ADT	1180	1900
1985	ADT	1960	3200
1985	DHV	300	480
	D		60%
	T		8%
	V		50 MPH



CONVENTIONAL SIGNS

R.O.W. FE
SLOPE
CONTRO
R.O.W.
COUNTY LINE
TOWN LINE
FENCE LINE
STONE WALL
UNFENCED PROPERTY
GUARD RAIL
TRAVELED WAY
RAILROAD
RETAINING WALL
CENTER LINE
SURVEY LINE
CULVERT
DROP IN
JOINT O
POWER
TELEPH
TREES
HEDGE
ACCESS

PROJECT FAIR HAVE
NUMBER S 0159 (2)
TYPE Bituminous Con
CONTRACTOR W.B. ROGERS, INC.
BETHEL, VT.
LENGTH 0.908 MI.
YEAR 1969 70
LOCATION Beginning at a point, approximately 0.720 miles northerly of the intersection of U.S. Rte 4 and Vt. Rte 22A and proceeding northerly 0.179 miles, resuming 0.389 miles northerly and proceeding northerly 0.729 miles.

FAIR HAVEN - S 0159 (2)
CONTRACTOR — W.B. ROGERS, INC.
CONST. COMPLETED - JUNE 23, 1970.
RECORD PLANS - A.G. SPIDLE.

	DATUM	LINE
GROUND ELEVATION	DATUM	LINE
GRADE ELEVATION	DATUM	LINE

DATUM - MEAN SEA LEVEL.
ALL ELEVATIONS ARE U.S. ELEVATIONS.

CURVE DATA
DEFLECTION OF ANGLE ..... Δ
DEGREE OF CURVE ..... D
RADIUS OF CURVE ..... R.
TANGENT DISTANCE ..... T.
LENGTH OF CURVE ..... L.
EXTERNAL DISTANCE ..... E.
POINT OF INTERSECTION ..... P.I.
POINT OF CURVE ..... P.C.
POINT OF TANGENT ..... P.T.
POINT ON TANGENT ..... P.O.T.
POINT ON SUB-TANGENT ..... P.O.S.T.
▲ CONSTUCTION IDENTIFICATION SIGNS

SCALE IN FEET
0 400 800 1200

WEBSTER-MARTIN, INC.
Robert A. Slayton
SUBMITTED APRIL 25, 1968
DATE

STATE OF VERMONT — ROBERT A. SLAYTON — No. 814 — REGISTERED PROFESSIONAL ENGINEER

FOR RIGHT-OF-WAY DETAILS, SEE RIGHT-OF-WAY PLANS FOR THIS PROJECT.

⇒ REQUIRED NUMBER OF FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS 2 EACH.

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL, 1964, AS APPROVED BY THE BUREAU OF PUBLIC ROADS ON OCTOBER 12, 1964, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

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

DEPARTMENT OF TRANSPORTATION
BUREAU OF PUBLIC ROADS

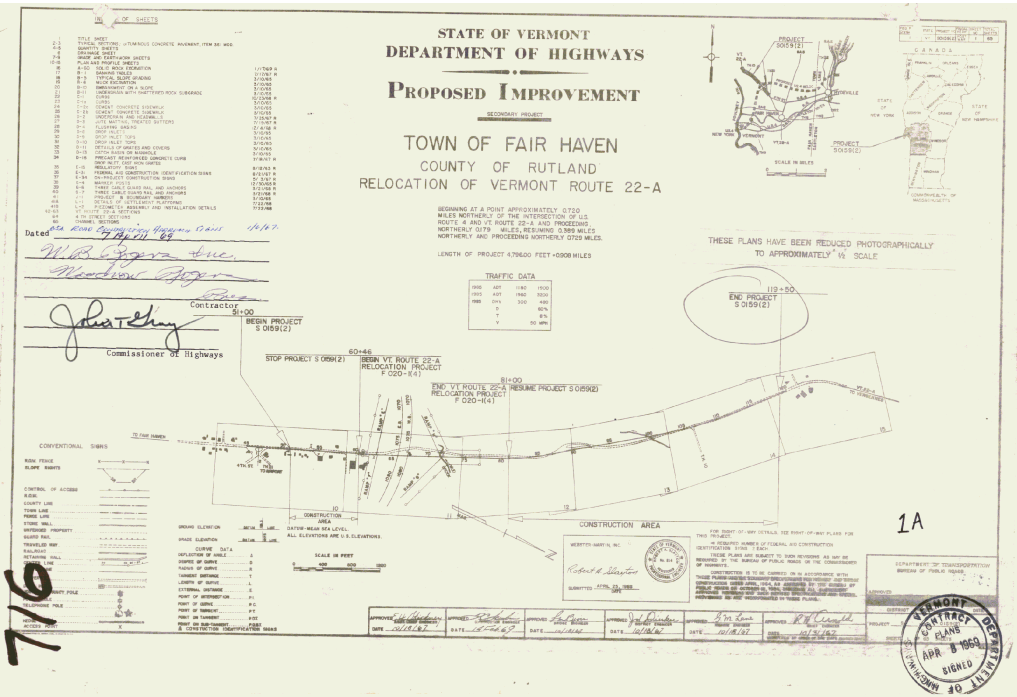
APPROVED
DISTRICT ENGINEER DATE

PROJECT S NO. 0159(2)
SHEET 1 OF 65 SHEETS

APPROVED	DATE
E.W. Hickey, ASST. CHIEF ENGINEER	10/18/67
[illegible], CONSTRUCTION ENGINEER	10/26/67
[illegible], BRIDGE ENGINEER	10/18/67
J. Durkee, DISTRICT ENGINEER	10/18/67
G.M. Lane, HIGHWAY ENGINEER	10/18/67
R.H. Arnold, CHIEF ENGINEER	10/31/67

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

R.L.E.


STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROPOSED IMPROVEMENT
SECONDARY PROJECT
TOWN OF FAIR HAVEN
COUNTY OF RUTLAND
RELOCATION OF VERMONT ROUTE 22-A
BEGINNING AT A POINT APPROXIMATELY 0.720 MILES NORTHERLY OF THE INTERSECTION OF U.S. ROUTE 4 AND VT. ROUTE 22-A AND PROCEEDING NORTHERLY 0.179 MILES, RESUMING 0.389 MILES NORTHERLY AND PROCEEDING NORTHERLY 0.729 MILES.
LENGTH OF PROJECT 4.796.00 FEET = 0.908 MILES
TRAFFIC DATA
THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY TO APPROXIMATELY ½ SCALE
Dated 7 DEC 66
Contractor
Commissioner of Highways
BEGIN PROJECT S 0159(2)
STOP PROJECT S 0159(2)
BEGIN VT. ROUTE 22-A RELOCATION PROJECT F 020-1(6)
END VT. ROUTE 22-A RELOCATION PROJECT F 020-1(6)
END PROJECT S 0159(2)
CONSTRUCTION AREA
CONVENTIONAL SIGNS
1A

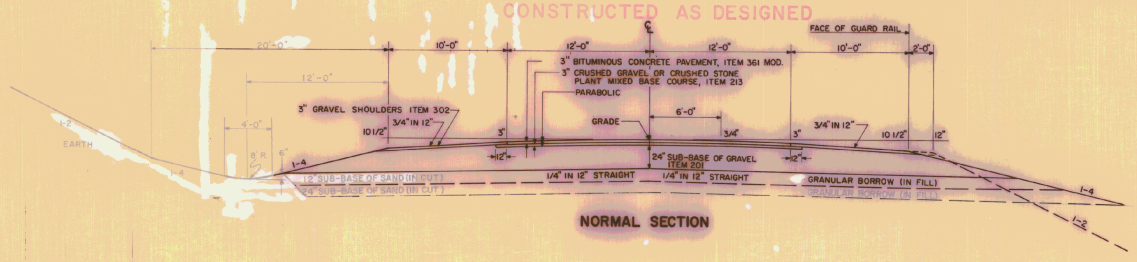
TYPICAL SECTIONS

VT. 22-A RELOCATION

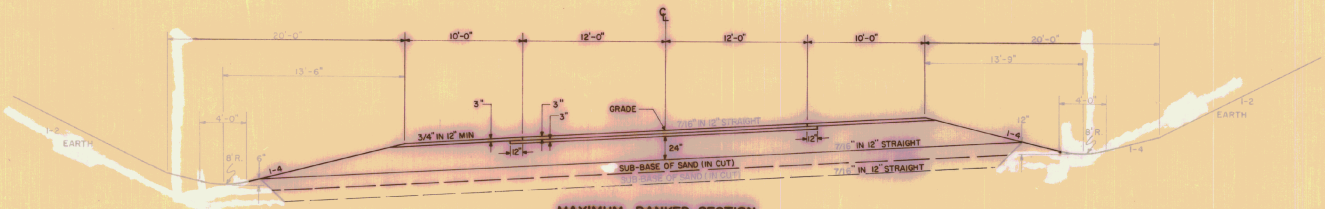
PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD. (± 1/4") 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDING COURSE, TYPE II
3" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (± 1")
SHOULDERS { 3" GRAVEL SHOULDERS, ITEM 302, TACK COAT TYPE III, ITEM 315
6"-12" GRANULAR BORROW, ITEM 105 (± 1") IN FILL } TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER
12"-24" SUB-BASE OF SAND, ITEM 202 (± 1") IN CUT }

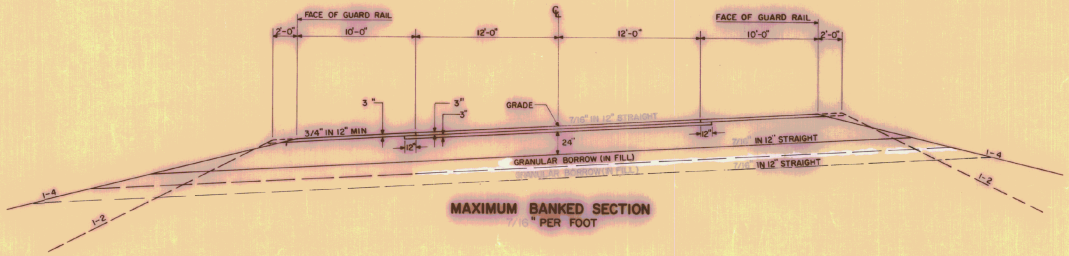
CONSTRUCTED AS DESIGNED



NORMAL SECTION



MAXIMUM BANKED SECTION
7/16" PER FOOT



MAXIMUM BANKED SECTION
7/16" PER FOOT

GENERAL NOTES:

FOR ROUNDING OF SLOPES SEE STANDARD SHEET B-5.

STEEL MARKER POSTS, ITEM 547-D, TO BE PLACED AS DIRECTED BY THE ENGINEER.

THE COMMERCIAL FERTILIZER, ITEM 615, SHALL BE MIXED AS FOLLOWS:

NITROGEN	10 %
PHOSPHORUS	20 %
POTASH	10 %

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

GROUND LIMESTONE, ITEM 616, IS TO BE APPLIED AT THE RATE OF 2 TONS PER ACRE OR AS DIRECTED BY THE ENGINEER.

SEEDING, ITEM 611

%	LB/ACRE	NAME	PURITY %	GERM %
33.33	20	CREEPING RED FESCUE	97	82
10.00	6	TALL FESCUE	95	80
16.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	92	90
16.67	10	DOMESTIC RYE GRASS	98	90
8.33	5	BIRDSFOOT TREFOIL (EMPIRE)	99	80
0.42	1/4	WEED SEED		
6.25	3 3/4	INERT MATERIAL		
100.00	60 LBS PER ACRE			

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
TYPICAL SECTIONS

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

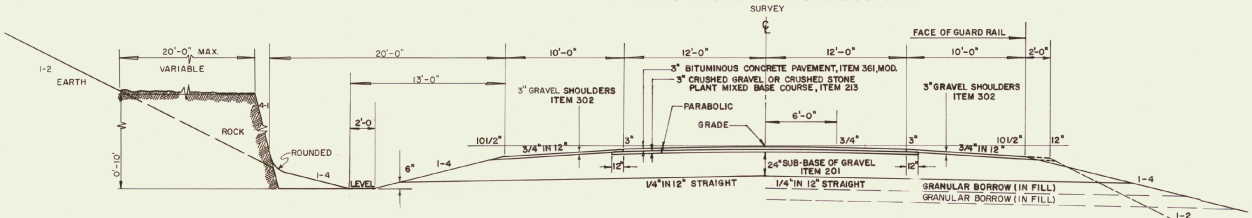
SURVEYED BY / DRAWN BY	W-M INC. / HCM	CHECKED BY / IN CHARGE	RAS / RAS	SCALE / DATE	AS SHOWN / FEB 1968
PROJECT NO	S0159 (2)	SHEET	2	OF	65

TYPICAL SECTIONS
VT. 22-A RELOCATION

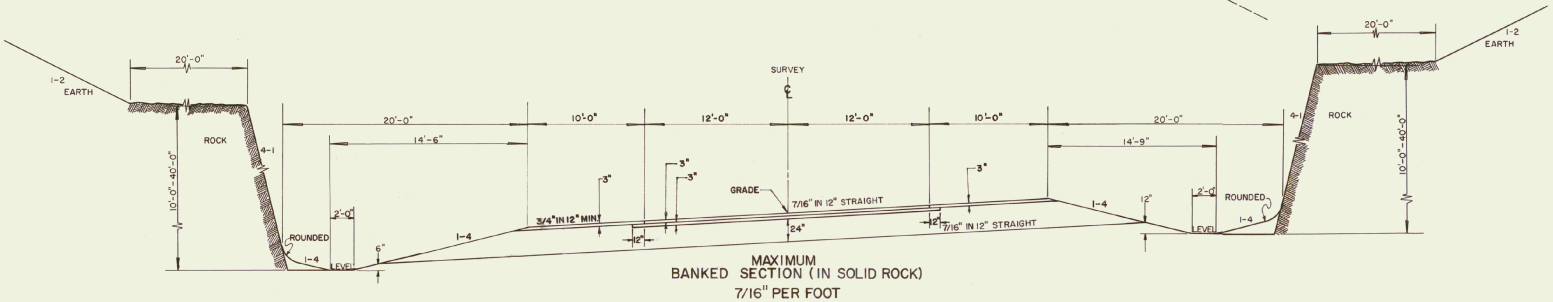
PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY.

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361, MOD. (±1/4") 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDING COURSE, TYPE II.
3" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (±1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (±1")
3" GRAVEL SHOULDERS, ITEM 302, TACK COAT, TYPE III, ITEM 315.
6"-12" GRANULAR BORROW, ITEM 105 (±1") (IN FILL)
12"-24" SUB-BASE OF SAND, ITEM 202 (±1") (IN CUT)
} TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

CONSTRUCTED AS DESIGNED



NORMAL SECTION



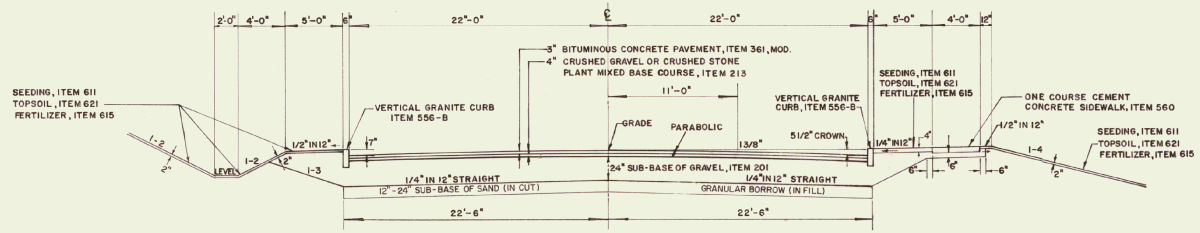
MAXIMUM
BANKED SECTION (IN SOLID ROCK)
7/16" PER FOOT

SLOPES IN SOLID ROCK EXCAVATION

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

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361, MOD. (±1/4") 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDING COURSE, TYPE II
4" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (±1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (±1")
6"-12" GRANULAR BORROW, ITEM 105 (±1") IN FILL
12"-24" SUB-BASE OF SAND, ITEM 202 (±1") IN CUT
} TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

FOR GENERAL NOTES, SEE SHEET 2 OF 65



NORMAL SECTION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT. ROUTE 22A in the town of
FAIR HAVEN
TYPICAL SECTIONS

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

SURVEYED BY W-M INC.	CHECKED BY LKL	SCALE AS SHOWN
DRAWN BY RLE	IN CHARGE RAS	DATE FEB. 1968
PROJECT NO. S 0159(2)	SHEET 3 OF 65	

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

RELOCATION OF VERMONT ROUTE 22-A PROJECT NO. S 0159(2)

FAIR HAVEN

SUMMARY SHEET NO. 1 OF 2 19 68

APPROXIMATE SUMMARY OF QUANTITIES

Erosion Control	Right-of-Way R. O. W.	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.
				1	LS	Clearing and Grubbing (Plus Ind. Trees)	101
				26500	CY	Common Excavation, Class 1	103-A-1
				17350	LV	Solid Rock Excavation, Mod.	103-B
	60		29480	34500	CY	Borrow (Inc. 482 Cy Rounding)	104
				9,000	CY	Granular Borrow Estimated	105
				2450	CY	Trench Ex. of Earth (0-5' Deep)	106-A
				650	CY	Trench Ex. of Earth (Over 5' Deep)	106-A
				300	CY	Trench Ex. of Rock (0-5' Deep)	106-B
				50	CY	Trench Ex. of Rock (Over 5' Deep)	106-B
				36,900	SY	Fine Grading - Subgrade	107
				165	HR	Roadway Patrol Maint., Estimated	110
				715	M/Gal	Dust Control With Water, Estimated	112
				5	TON	Dust and Ice Control With Cal. Cloride, Est.	113
				100	LF	Drilling and Blasting of Solid Rock, Est.	114
				2,800	SY	Drilling and Blasting of Solid Rock Subgrade (Including 4 SY Rounding)	115
				3,800	CY	Muck Excavation (Inc. 3807 Cy Est.)	117
				150	CY	Ex. and Removal of Road Surfaces and/or Pavements (Inc. 1 Cy. Rounding)	119
				15	HR	Bulldozer Rental, Estimated	120
				10	HR	Power Grader Rental, Estimated	121
				15	HR	All Purpose Excavator Rental, Estimated	124
	30		22200	22,230	CY	Sub-base of Gravel	201
				6,700	CY	Sub-Base of Sand	202
				5100	TON	Crushed Gravel or Crushed Stone Plant Mixed Base Course	213
2000	300		299,000	301,300	Cy/Mi	Overhaul (10.0 Miles)	221
200				200	CY	Gravel Backfill for Slope Stabilization, Est	222-A
				201	CY	Gravel Backfill for Structures (Inc. 22 Cy R)	222-B
				5,800	CY	Stripping of Gravel Pits, Estimated	223
				800	CY	Gravel Shoulders (Inc. 21 Cy Rounding)	302
				7,300	Gal	Tack Coat-Type 111 (Inc. 48 Gal Rounding)	315
				3,160	TON	Bit. Conc. Pavement, Mod.	361
				14	HR	Proof-Rolling, Estimated	385
				30	CY	Concrete, Class B, Mod.	401-B
				2100	LB	Reinforcing Steel	402
				12	CY	Cement Rubble Masonary (Inc. 1.7 Cy Estimated	411
				90	LF	18"Corr. Alum. Alloy Culvert Pipe 16 Ga.	420-H
				136	LF	18"Reinf. Concrete Pipe Class 111	421-H
				668	LF	30"Reinf. Concrete Pipe Class 111	421-L
				696	LF	36"Reinf. Concrete Pipe Class 111	421-M
				20	LF	8"Asph. Ctd Corr. Galv. Metal Pipe 16 Ga.Est.	424-B
	40		106	146	LF	18"Asph. Ctd. Corr. Galv. Metal Pipe 16 Ga.	424-H
				90	LF	24"Asph. Ctd. Corr. Galv. Metal Pipe 16 Ga.	424-K
				202	LF	24"Asph. Ctd. Corr. Galv. Metal Pipe 14 Ga.	424-K
				132	LF	48"Asph. Ctd. Corr. Galv. Metal Pipe 10 Ga.	424-O
				168	LF	48"Asph. Ctd. Corr. Galv. Metal Pipe 8 Ga.	424-O
				200	LF	Relaying Pipe Culverts, Estimated	428
				770	CY	Stone Fill for Slope Protection (Light Type) (Including 6 Cy. Rounding)	512
				800	LF	6"Perf. Asph. Ctd.Corr. Galv. Metal Underdrain Estimated	521-1-6
				300	LF	8"Perf Asph. Ctd Corr. Galv. Metal Underdrain Estimated	521-1-8
				450	LF	6"Perf Asph. Ctd. Corr. Galv. Metal Pipe, Est.	521-11-6
				100	LF	8"Perf., Asph. Ctd. Corr. Galv. Metal Pipe Est.	521-11-8
				5	EA	Cast Iron Cover for Asph Ctd. Corr. Galv. Metal Pipe Flushing Basin , Estimated	525
				2	EA	Catch Basin or Manhole -Type MA	527-A
				2	EA	Drop Inlet -Type II	531
				2	EA	Changing Elevations of Catch Basins or Manholes	533
				2	EA	Cast Iron Grate Type A	534-A
				1	EA	Cast Iron Grate Type B	534-A
				2272	LF	Three Cable Guard Rail w/ H.S.Steel Posts	535
				10	EA	Anchors for Three Cable Guard Rail With Posts	535
				25	EA	Steel Marker Posts (Inc. 9 Ea. Est.)	547-D
				750	LF	Removal and Disposal of Present Guard Rail (Including 6 Lf. Rounding)	549
				230	LF	Granite Slope Edging (Inc. 4 Lf. Rounding)	556-A
				2,030	LF	Vertical Granite Curb (Inc. 1 Lf Rounding)	556-B
				480	SY	5"One Course Cement Concrete Sidewalk (Including 9 Sy Rounding)	560
				130	SY	8"One Course Cement Concrete Sidewalk (Including 1 Sy Rounding)	560
				2	EA	Erection of Project Markers	566
				20	EA	Boundary Markers, Estimated	567
				5	EA	Removing and Resetting Property Marker , Est.	568
				1	LS	Payment for Removal of Existing Bridge	590

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION CLASS 1
25864	CY	VT 22-A
643	CY	4th Street Approach
2	CY	Rounding
26500	CY	Total
		SOLID ROCK EXCAVATION, MODIFIED
15341	CY	VT 22-A
1909	CY	10 Percent Unavoidable Overbreakage
15	CY	Rounding
17350	CY	Total
		TRENCH EXCAVATION OF EARTH (0-5' DEEP)
1840	CY	Pipes Ditches and Gutters
725	CY	Underdrain, Estimated
50	CY	Test Trenches for Drilling and Blasting
13	CY	Rounding
2630	CY	Total
		TRENCH EXCAVATION OF EARTH (Over 5' DEEP)
400	CY	Pipes Ditches and Gutters
250	CY	Underdrain, Estimated
2	CY	Rounding
650	CY	Total
		TRENCH EXCAVATION OF ROCK (0-5' DEEP)
53	CY	Pipes Ditches and Gutters
247	CY	Underdrain, Estimated
300	CY	Total
		TRENCH EXCAVATION OF ROCK (Over 5')
25	CY	Pipes Ditches and Gutters
25	CY	Underdrain, Estimated
50	CY	Total

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		FINE GRADING-SUBGRADE
34,908	SY	VT 22-A
500	SY	4th Street Approach
1,167	SY	Drives
226	SY	Approaches
99	SY	Rounding
36,900	SY	Total
		SUBBASE OF GRAVEL
21,391	CY	VT 22-A
334	CY	4th Street Approach
389	CY	Drives
78	CY	Approaches
10	CY	Rounding
22,200	CY	Total
		SUBBASE OF SAND
2,070	CY	VT 22-A
4,626	CY	VT 22-A and 4th Street Approach, Estimated
4	CY	Par Drainage Sheet
6,700	CY	Total
		CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE
3049	Ton	VT 22-A
49	Ton	4th Street Approach
2	Ton	Rounding
3100	Ton	Total
		BITUMINOUS CONCRETE PAVEMENT, MODIFIED
2,940	Ton	VT 22-A
82	Ton	4th Street Approach
98	Ton	Drives
38	Ton	Approaches
2	Ton	Rounding
3,160	Ton	Total
		CONCRETE CLASS B, MODIFIED
2.80	CY	Par Drainage Sheet
3.20	CY	Concrete Curb
6.00	CY	Rounding
12.00	CY	Total

TYPE OF CONSTRUCTION: 3" BITUMINOUS CONCRETE PAVEMENT ITEM 361, MOD.

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS Roadway 44'	PAVEMENT WIDTHS Roadway 24'	EQUATIONS +	EQUATIONS −
51+00.00	60+46.00	946.00			
81+00.00	119+50.00		3850.00		
TOTALS		946.00	3850.00		

LENGTH OF PROJECT

STATIONS		FEET	MILES	REMARKS
51+00.00	60+46.00	946.00	0.179	Width = 44'
81+00.00	119+50.00	3850.00	0.729	Width = 24'
TOTALS		4796.00	0.908	

FAIR HAVEN
RELOCATION OF VERMONT ROUTE 22-A

No. S Filed 0159(2)
Sheet 4 of 65 Sheets

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS
RELOCATION OF VERMONT ROUTE 22-A PROJECT NO. S 0159(2)
FAIR HAVEN
SUMMARY SHEET NO. 2 OF 2 19 68

APPROXIMATE SUMMARY OF QUANTITIES

Erosion Control	R O W	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.
				80	M/HR	Uniformed Traffic Officers, Estimated	598
450				450	LBS	Seeding	611
100				100	SY	Sodding, Estimated	612
3800				3,800	LBS	Fertilizer (Inc. 50 Lbs Rounding)	615
15				15	TON	Ground Limestone	616
400				400	CY	Top Soil (Inc. 72 Cy Estimated)	621
15				15	TON	Mulch	622
370				370	SY	Jute Matting (Inc. 9 Sy Rounding)	623
				20	SF	Traffic Signs (Inc. 1.1 Sf Rounding)	701
				5	Ea	Piezometers, Type I	132-A
				1	Ea	Settlement Platform, Type II	191-B
				6240	Ton	Field Office, Asphalt Plants, Ltd.	699-C
						OPTIONS	
				18	LF	12" Elbows (Optional)	
						Corr. Galv. Metal Pipe Elbow	422-I-D
						Corr. Alum. Alloy Pipe Elbow	453-D
				48	LF	12" Pipe (Optional)	
						Corr. Alum. Alloy Culvert Pipe 16 Gage	420-D
						Corr. Galv. Metal Pipe 16 Gage	423-D
				72	LF	12" Pipe (Optional)	
						Corr. Alum. Alloy Culvert Pipe 16 Gage	420-D
						Reinf. Concrete Pipe Class III	421-D
						Corr. Galv. Metal Pipe 16 Gage	423-D

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

TYPE OF CONSTRUCTION

3" BITUMINOUS CONCRETE PAVEMENT ITEM 361, MOD.

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS −	REMARKS
TOTALS							

LENGTH OF PROJECT

STATIONS	FEET	MILES	REMARKS
TOTALS			

FAIR HAVEN
RELOCATION OF VERMONT ROUTE 22-A

No. S Filed 0159(2)
Sheet 5 of 65 Sheets

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

STA.	STA.	POS.	TYPE INLET	TYPE OUT	CLASS OR GAGE	CAACP D	CAACP L	RCP D	RCP L	ACCGMP D	ACCGMP L	SPECIAL ELBOWS * D	SPECIAL ELBOWS * L	SPECIAL ELBOWS * ° TOP	SPECIAL ELBOWS * ° BOT	CAACP RCP CGMP D	CAACP RCP CGMP L	CGMPP D	CGMPP L	R.C. BOX S	R.C. BOX R	R.C. BOX L	END SECTION TYPE	END SECTION D	PRCP DI&C	PRCC DI&G	CB TYPE 1-A	CONC B	REINF. STEEL	CRN	DI GRATE	DI DEPTH	TRENCH 0'-5' E	TRENCH 0'-5' R	TRENCH OVER 5' E	TRENCH OVER 5' R	UNCLAS. CHAN.	STRUCT. EXCAV.	SUB-BASE OF GRAVEL 201	SUB-BASE OF SAND 202	GRAVEL BACK-FILL	STONE FILL, SI1	STONE FILL, SI2	RIP-RAP 513-A	RIP-RAP 513-B	BIT. CONC. GUTTER 554	CHANGE ELEV.	MARKER POSTS STEEL LT	MARKER POSTS STEEL RT	MARKER POSTS WOOD LT	MARKER POSTS WOOD RT	CONST. DITCH IN	CONST. DITCH OUT	REMARKS
RELOCATION OF VT. ROUTE 22-A																																																		
44+87		C/L																																																
44+88	45+80	RT.																														3																			
45+00		C/L																																															
46+25	47+15	RT.	D.I.& G.		III			18	95																		3.03	257		A	6'0"	57		1																	
47+17	49+99	RT.	D.I.& G.		III			30	284																		5.00	371		A	8'0"	271		12																	
50+01	53+48	RT.	D.I.& G.		III			30	348																		5.00	371		A	8'0"	333		22																	
51+34.5		C/L																														3																	
53+50		C/L	C.B.& G.		III			30	36																1							43		4																	
53+52	56+49	LT.	C.B.& G.		III			36	300																1							321		32																	
56+50		C/L	D.I.& G.		III			18	40																		3.17	252		A	6'6"	26																			
56+51	60+44	LT.	D.I.& G.		III			36	336																		5.22	380		A	8'8"	420		58																	
82+50		C/L	D.I.& G.		16					18	106																2.58	226		B	5'0"	35		2																	
82+86.5		C/L																														13																	
84+20.5		C/L																														13																	
92+00		C/L	D.I.& C.		16					24	60																2.50	225			4'8"	20	23					4													
93+50	96+80	RT.	STONE FILL																																							209									
96+00	98+50	RT.	SPECIAL DITCH																													812		99															
96+50		C/L	SH		14					24	202																		2.7			56		23				46												
96+60.5		RT.																														33		18															
97+25	101+25	LT.	STONE FILL																																							193								
98+68		RT.																														18																	
99+50	100+08	LT.	SPECIAL DITCH																													79																	
100+00		LT.	PRCCD.I.& G.		16							12	12	10	25	12	36								1							17																	
100+08	101+03	LT-RT	CH	CH	8					48	168																		3.4			225		54				74												
100+81		RT.																														19	30		25														
102+25	104+25	RT.	STONE FILL																																							64								
104+00		C/L	CH		16	10	08																						0.8			14																	
106+25	105+72	RT.																														12																	
110+32	110+68	LT.			16/III											12	36															1																	
110+32	110+68	RT.			16/III											12	36															1																	
110+44	110+63	LT.																																																
110+72		RT.																																																
112+75	116+15	RT.	STONE FILL																																							213								
114+80	115+48	LT.	STONE FILL																																							65								
115+50		C/L	CH	CH	10					48	132																		3.4			413		251				58												
116+50		LT.	PRCCD.I.& G		16							12	6	15		12	12								1							4																	
4TH. STREET 1+02		LT.																																																
	TOTALS					18	24	16 GAGE		18	106	16 GAGE													2	2	486	6084	10.3	A 1B		3845	53	825	25			4	178		764			2	9	7 16					

CLASS III	18	36	24	32	16 GAGE	
CLASS III	30	668	24	202	14 GAGE	12 48 CAACP, 16 GAGE OR CGMP, 16 GAGE
CLASS III	36	696	48	132	10 GAGE	12 72 CAACP, 16 GAGE, RCP, CLASS III OR CGMP, 16 GAGE
			48	168	8 GAGE	
			12	18	CAAP OR CGMP	

REMARKS
12" ACCGMP - RETAIN
12" ACCGMP - REMOVE
15" CIP, ASKEW 66°55' LT., REMOVE
Moved to Project F022-1(6)
12" CMP, ASKEW 77° 15' LT., REMOVE
12" CMP, ASKEW 61° 20' LT., REMOVE
24" ACCGMP, ASKEW 70° LT., REMOVE
18" ACCGMP, REMOVE
CAACP OR CGMP 24" COUPLINGS AT ALL JOINTS
4' x 5' CONC. BOX, ASKEW 84° 14' RT., REMOVE
15" RCP REMOVE
CAACP, 16 GA., RCP, CLASS III, CGMP, 16 GA.
CAACP, 16 GA., RCP, CLASS III, CGMP, 16 GA.
15" ACCGMP REMOVE
6" PACCGMP REMOVE
REMOVE EXISTING 48 ACCGMP
CAACP OR CGMP 24" COUPLINGS AT ALL JOINTS

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

THREE CABLE GUARD RAIL
W/ LIGHT STEEL POSTS, ITEM 538

STA.	STA.	LT	RT	Item 619.1 ANCHORS
94+50	104+10		98	2
95+50	101+10	584		2
112+00	116+48		472	2
114+48	116+56	232		2
	TOTALS	816	450	
			272	8

REMOVAL & DISPOSAL OF PRESENT GUARD RAIL

STA.	STA.	LT	RT
111+44	116+28		484
114+14	116+40	226	
119+25	119+50	25	
119+41	119+50		9
	TOTALS	251	493
			744

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

FAIR HAVEN
RELOCATION OF VT. ROUTE 22-A
PROJECT S NO. 0159(2)

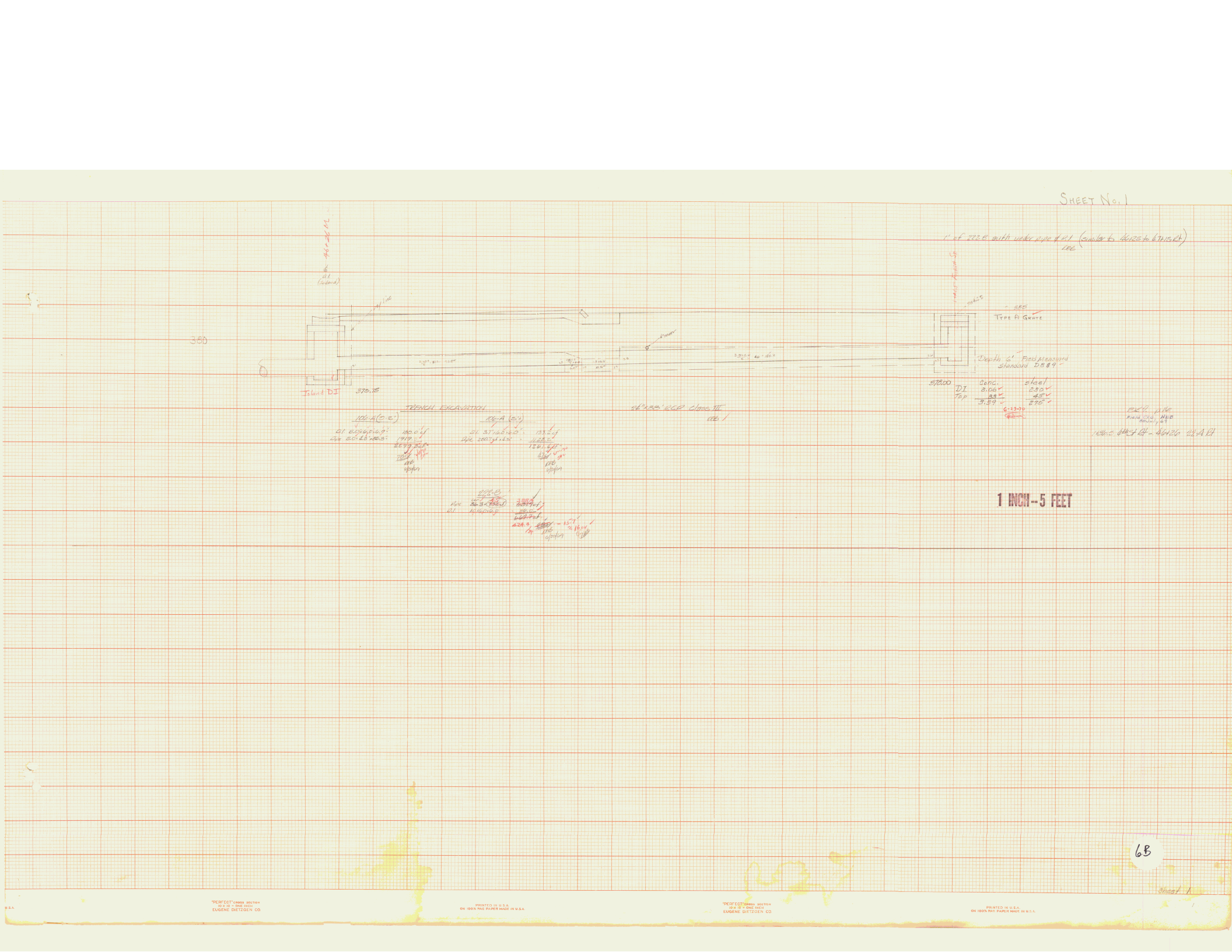
SHEET 6 OF 65

Fair-Haven
S-0159(2)

Drainage

Sheets.

SHEET No. 1



6B

"PERFECT" cross section 10 X 10 = ONE INCH EUGENE DIETZGEN CO.
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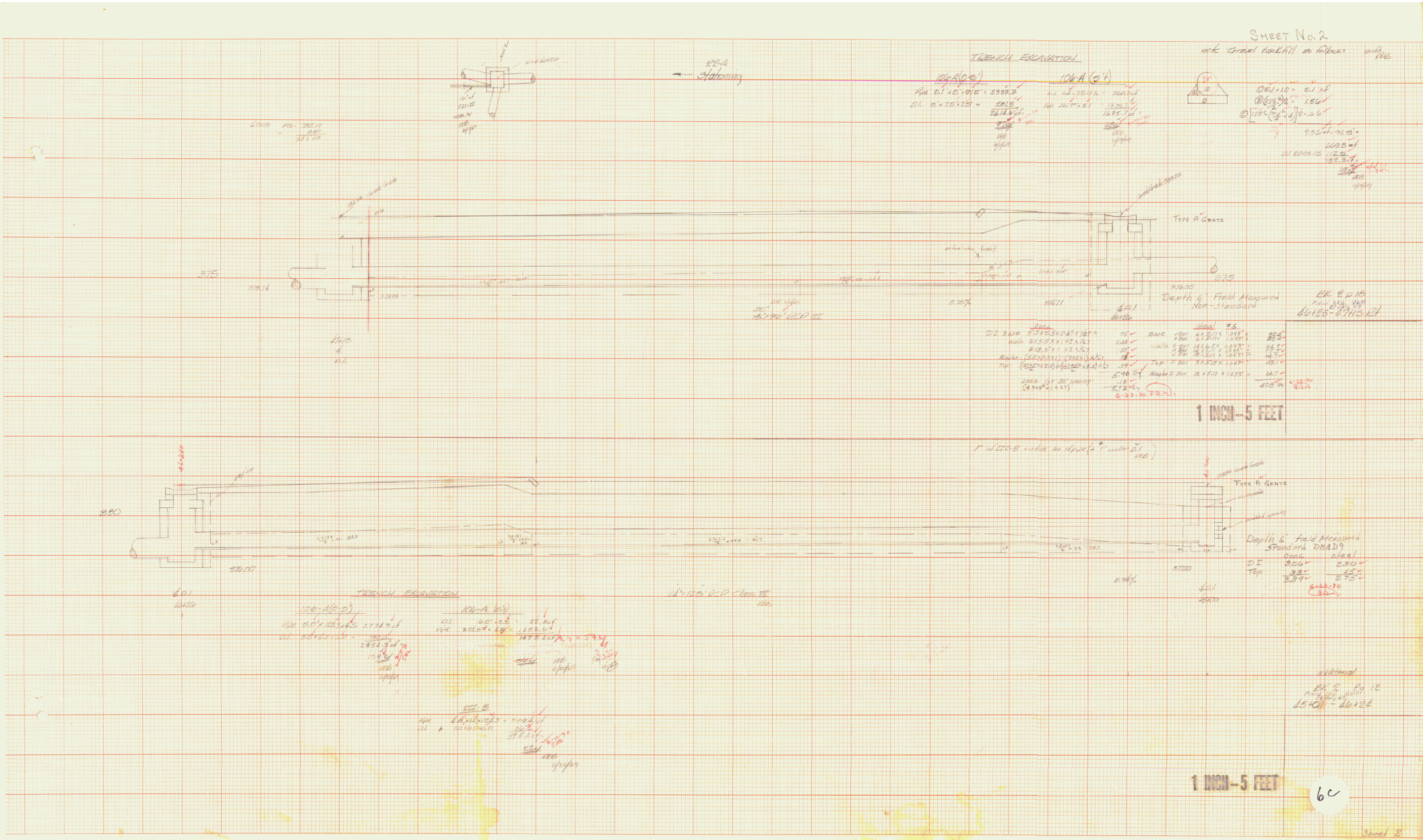
SHEET No. 2



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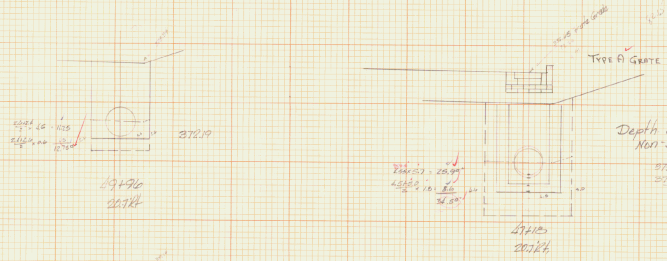
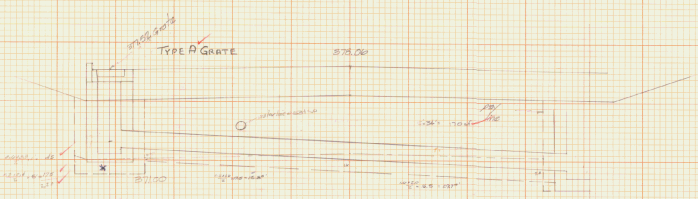
"PERFECT" CROSS SECTION 10 X 10 = ONE INCH EUGENE DIETZGEN CO.

SHEET No. 3



SHEET No. 4

note: 1' 222-B earth under pipe #21.



Depth 5.5' Field Measure
Standard

53+50
18" x 40'
30" x 36' RCP III

BK2 p.30
51+84.5 ℄ 66+55 Lt.
See Sheet #5

106-A @ 100%
D.I. 5' x 6.0 x 6.0 = 180 cf
Pipe 170' x 3.9' = 663
843 cf
316
RRB 6/2/69

106-A @ 150%
D.I. 20' x 6 = 18.2 cf
Pipe 45.5' x 3.9' = 177.4
190.6 cf
*Add 6.0 x 6.0 = 1.0
226.6 cf
85
RRB 6/12/69

	Conc	Steel
DI - D8	2.84	2.07
Top - D9	.33	.45
	3.17	2.52

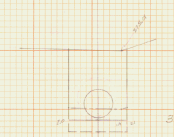
6-29-70

BK2 p.34
Field Oxd. NWB 1 Aug 69
53+50 ℄

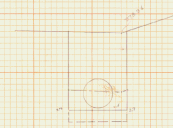
222-B
3.9' x 10' x 36' = 140.4 cf
1 x 6 x 6 = 360
RRB 6/12/69
176 ft/27 = 6.5 cy ≈ 7 cy

1 INCH – 5 FEET

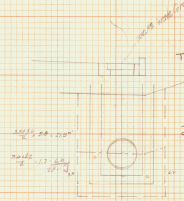
*note from sta. 53+24 to 53+56 depth of 222-B is 1.5'
from 50+0 – 53+24 is 1.0'



53+54
20.7 Rt



50+04
20.7 Rt



D.I. dimensions 42"x42" inside

Depth 6' Field Measure
372.19
371.94

50+00
20.7 Rt

352' 1 Aug 4/24/69
30" x 348' RCP III

106-A 0'-5'
Pipe 5' x 5 x 350 = 392.5 cf
D.I. 5' x 7.5 x 7.5 = 281.3
9206.3 cf
341 cf
RRB 4/24/69

106-A 5'+
Pipe 10' x 10' x 350 = 4042.5 cf
D.I. 28.1' x 7.5 = 210.8
+31' x 10.5 x 5.1' = 79.1
4332.4 cf
160 cf
6/21/69

222-B
332' x 1' x 3.1' = 195.2 cf
65' x 5.1 = 31.4
1899.3
69 cy
RRB 6/21/69
From p.29 Base #2
Pipe 69 cy

	Concrete		Steel	#5
DI Bot.	5.5 x 5.5 x .67 x 1/27 =	0.75	Base: J. Bar 6 x 5.17 x 10.43 =	33.4
Walls	6 x 5.5 x 1 x 2 x 1/27 =	2.44	H. Bar 6 x 5.17 x 1.043	33.4
	6 x 3.5 x 1 x 2 x 1/27 =	1.55	Walls: G. Bar 14 x 6.5 x 1.043	95.7
Adaptor	(5.5 x 5.5 x 1) - (2 x 2 x 1) 1/27 =	.78	H. Bar 14 x 6.5 x 1.043	95.7
	4 x 1 x 1 x 2 x 1/27 =	.30	J. Bar 12 x 5.17 x 1.043	64.7
	2 x 1 x 1 x 2 x 1/27	.15	Adaptor D Bar 12 x 5.17 x 1.043	64.7
Top	Standard D9	.33	Top Standard D9	45.0
		6.50		410.4 lbs
Less	2-30" openings	.36		6-29-70
		6.14		

6-29-70

50+02-53+52
BK2 p.26 Aug 69
Field Oxd NWB 56
50+01-53+48 Rt

1 INCH – 5 FEET

6E

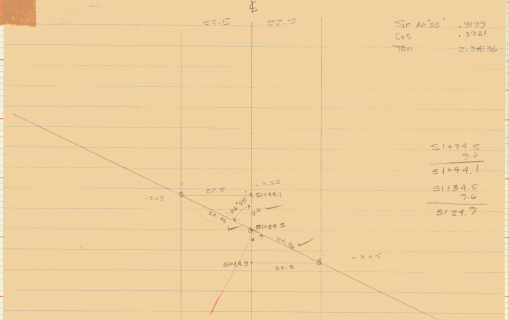
Sheet #4

KEUFFEL & ESSER CO. MADE IN U.S.A. K&E STANDARD CROSS SECTION KEUFFEL & ESSER CO. MADE IN U.S.A. K&E STANDARD CROSS SECTION

Sheet No. 5

Removal

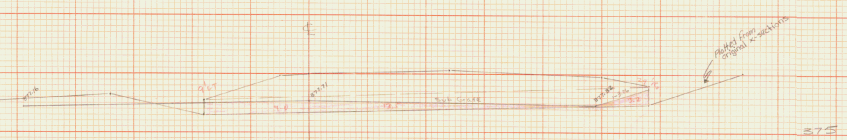
51+34.5



Sin 66°55' .9199
Cos .3921
Tan 2.34636

51+34.5
9.6
51+44.1
51+34.5
7.6
51+24.9

Sta.	Tan Gr.	Corr.	V.G.		S.G.@℄	Grade @ shoulder on S. Grade
51+24.9	380.75	-0.38	380.37	-3.05	377.79	377.32
51+34.5	380.69	-0.40	80.29	-2.58	377.71	
51+44.1	380.64	-0.43	80.21	-3.05	77.63	377.16
51+50	80.60	-0.45	80.15			



51+34.5
15" C.I.P.
Removal

Skewed 66°55' Lt.

106-A @ 100%

~~25.8~~ cy' x 3.6' = 92.9 c.f. / 27 = 3.4 cy

SAL 2-11-70

pay 3 cy

R E Tolani
5/30

Pk #2 pg. 30
51+34.5
Removal
Field Ckd Nurs
28 July 69

1 INCH = 5 FEET

6F

Sheet #5

PRINTED IN U.S.A. ON 100% HAS PAPER MADE IN U.S.A.
PRINTED IN U.S.A. ON 100% HAS PAPER MADE IN U.S.A.
"PERFECT" CROSS SECTION 10 X 10 - ONE INCH EUGENE DIETZGEN CO.
PRINTED IN U.S.A. ON 100% HAS PAPER MADE IN U.S.A.

Sheet No. 6

1' 222-B with under pipe & C.B. RRB

106-A @ 100%

C.B. 5.0'×8.0'×8.0' = 320 cf
Pipe 5.7'×5.0'×33.0' = 940.5
1260.5 cf
47 cy
RRB 5/2/69

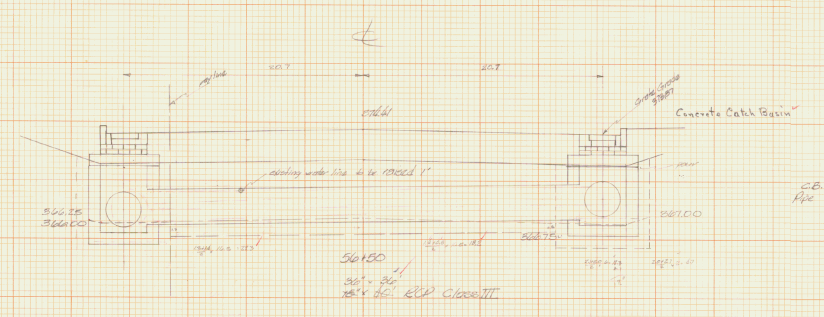
106-A @ 150%

C.B. 17.0'×8 = 136 cf
Pipe 40.5'×5.7 = 230.9
366.9 cf
14 cy
RRB 5/2/69

222-B

C.B. 1.0'×8.0'×8.0 = 64 cf
Pipe 1.0'×5.7'×33 = 133.1
252.7 cf = 9 cy
RRB 5/2/69

BK 2 p.42
Field Ckd NWB 3/4/69
56+50 ℄



1 INCH – 5 FEET

℄

* note 53+61 - 55+74 depth 222-B = 0.5' (incl. D.I. @ 53+58 more than the 1.0 orig. sch.)
(213')

106-A @ 100%

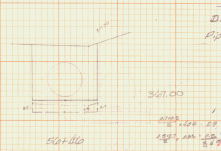
DI 5'×8.0'×8.0' = 320 cf
Pipe 5.0'×5.7'×28.0' = 809.4
841.4 cf
312 cy
RRB 5/2/69

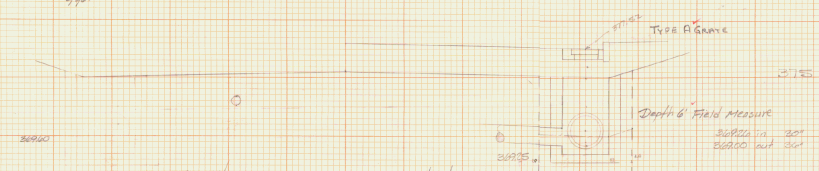
106-A @ 150%

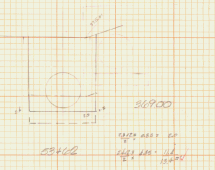
DI 30.9'×8.0' = 247.2 cf
Pipe 3.4'×18.4'/2 × 28.4' = 2385.6
* add 5.7'×0.5'×213' = 607.1
3239.9 cf
120 cy
RRB 5/2/69

222-B

DI 1.5'×8.0'×8.0' = 96 cf
Pipe 5.7'×1.0'×28.6 = 1630.2
1726.2 cf
* add 5.7'×0.5'×213' = 607.1
2333.3 cf
86 cy
RRB 5/2/69







concrete

53+58 DI. Bot. 5.5'×5.5'×1.67'×1/27 = 0.75
20.7 Lt. Walls 5'×5.5'×1'×2'×1/27 = 2.44
6'×5.5'×1'×2'×1/27 = 1.55
Adaptor (5.5'×5.5'×1) - (2'×2'×1) × 1/27 = .98
4'×1'×1'×2'×1/27 = .30
3'×1'×1'×2'×1/27 = .15
Top Standard D9 = .33
6.50
Loss: 1-30" & 1-36" opening .44
288' (4.909" × 1 × 1/27) = 0.18
296' (7.063" × 1 × 1/27) = 0.26
6.08 Cy
36"×300' RCP Class III
6-29-70
0.0

steel

Base J.Bar 6'×5.17'×1.043 = 324
H.Bar 6'×5.17'×1.043 = 324
Walls J.Bar 14'×6.5'×1.043 = 957
H.Bar 14'×5.17'×1.043 = 754
J.Bar 12'×5.17'×1.043 = 647
Adaptor D.Bar 12'×5.17'×1.043 = 647
Top Standard D9 = 453
4104 lbs
6-23-70
0.0

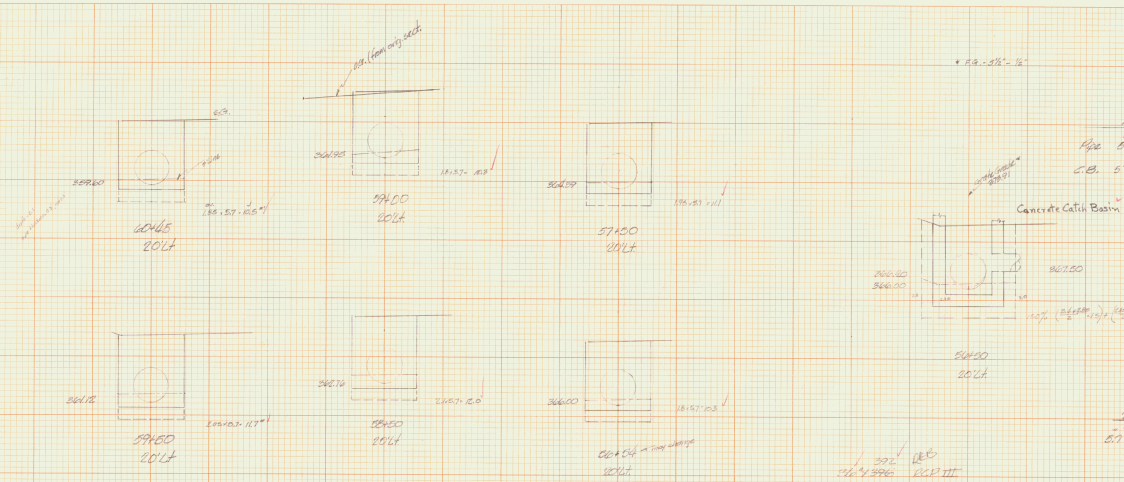
BK 2 p.38
160 1.48
53+52 56+49
Field Ckd NWB 3/4/69

1 INCH – 5 FEET

69

Sheet #6

Sheet No. 7



106-A @ 100%

Pipe 5'×5.7×391 = 11,143.5 cf

C.B. 5'×8.0×8.0 = 320.0

11,463.5 cfs

106-A @ 150%

Sta	Area	Dist	Vol. (cf)
56+54	10.3		
		96	1027.2
57+50	11.1		
		100	1155.0
58+50	12.0		
		50	557.5
59+00	10.3		
		50	550.0
+50	11.7		
		95	1054.5
60+45	10.5		

4344.2 cf

D.I. 189.6

4533.8 cf

168.5

BK 2 p. 46
Field ckd Nu 13 31 July 69
56+52-60+44 Lt

202 Sta 57+90-60+44

5.7×1.0×254 = 1447.8 cf

54 cy

222-B Sta 56+53-57+90

pipe 5.7×1.0×137 = 780.9 cf

C.B. 1.0×8.0×8.0 = 64.0

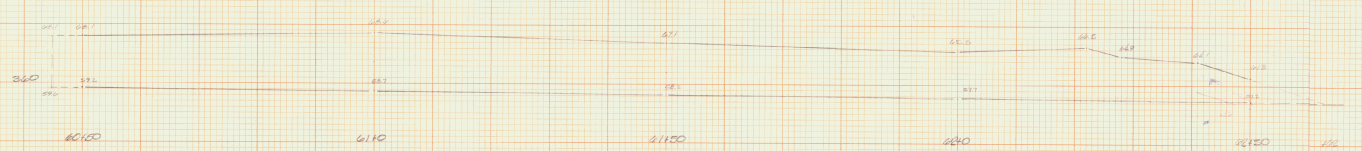
84.49 cf

3 cy

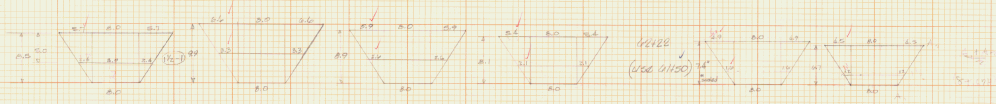
* 1' unsuit backfilled w/ item 202 authorized 4/18/69

1 INCH - 5 FEET

Typical 8' bot. w/ 1½-1 slopes



scale 1"=10'



100% $\frac{19.4+12.8}{2} \times 5.0 = 80.5$ 100% $\frac{21.2+14.6}{2} \times 5.0 = 89.5$ 100% $\frac{19.8+13.2}{2} \times 5.0 = 82.5$ 100% $\frac{18.8+12.2}{2} \times 5.0 = 77.5$ 100% $\frac{17.8+11.2}{2} \times 5.0 = 72.5$ 100% $\frac{17.0+10.4}{2} \times 5.0 = 68.5$

150% $\frac{12.8+8.0}{2} \times 3.5 = 36.4$ 150% $\frac{14.6+8.0}{2} \times 4.9 = 55.4$ 150% $\frac{13.2+8.0}{2} \times 3.9 = 41.4$ 150% $\frac{12.2+8.0}{2} \times 3.1 = 31.3$ 150% $\frac{11.2+8.0}{2}$ 2.4 = 22.9 150% $\frac{10.4+8.0}{2} \times 1.7 = 15.6$

106-A @ 100%

Sta	Dist	Area	Vol
60+45		80.5	
	55		4675
61+00		89.5	
	50		4300
+50		82.5	
	50		4000
62+0		77.5	
	22		1760
+22		82.5	
	6		465
+28		72.5	
	13		916.5
+41		68.5	
	21		119.3
+62		0	

16,835.8 cf

623.5 cy

624 cy

106-A @ 150%

Sta	Dist	Area	Vol (cf)
60+45		36.4	
	55		2524.5
61+00		55.4	
	50		2420.0
+50		41.4	
	50		1817.5
62+0		31.3	
	22		799.7
+22		41.4	
	6		192.9
+28		22.9	
	13		250.3
+41		15.6	
	5		39.0
+46		0	

8043.9 cf

298 cy

1 INCH - 10 FEET

BK 2 P. 48
60+45-62+62 Lt.
Field ckd Nu 13 31 July 69
Special Ditch

Fair Haven
S 0159-(2)
Drainage

6h

Sheet #7

K&E STANDARD CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.

Sheet No 8

106-A @ 100%
3.1 x 164 = 508.4 cf
→ 19.5
RFB 6/10/69

✓ ALL BELOW SUBGRADE

164'

370

BK2 p.54
Field ckd - N 1/3 1 Aug 69
82+86.5 ℄ 77°15' Lt

1 INCH - 5 FEET

center 3" wc

380

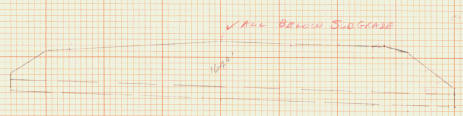
℄ 379.13

TYPE B GRATE

Grate Grade 379.90

375

Depth 3.5 Field Measure



Flowline
371.20
37.5' Lt ℄

82+50
18" x 106' ACCGMP 16 Ga.
RET. 4/10/

FL 368.50
off 68.5' Rt

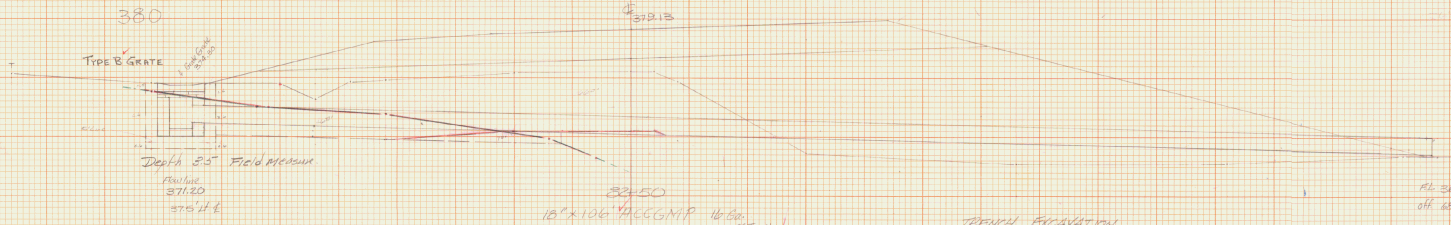
TRENCH EXCAVATION

	Concrete	Steel
DI-D6	1.9	158

6-29-70
P.G.

106-A (0-5')
Ol. 0.5 x 1.4 x 6 = 34.2 cf
Pipe 166.8 x 3.6' = 59.2 cf
63.1.3 cf
28.4
pipe in fill 56 x .004
23.6
26.6
RFB 5/24/69

106-A (5'+)
Pipe 4" x 3.6 = 14.4 cf
0.33 cf
1.4
RFB 5/24/69



106-B (0-5')
Ol. 4.4 x 3.6 x 6 x 6 = 146 cf
Pipe 4.6 x 3.6 = 16.5
RFB 5/24/69

106-B (5'+)
Ol. 0.6 x 6.0 x 6.0 = 21.6 cf
Pipe 7.3 x 3.6 = 28.2
46.8 cf
2.5
RFB 5/24/69

BK2 p.50
Field ckd NWP 4 Aug 69
82+50 ℄

Scale 1 INCH - 5 FEET

61

Sheet # 8

8

K+E STANDARD CROSS SECTION KEUFFEL & ESSER CO. MADE IN U.S.A.

Sheet No. 9



12" CMP
Removal

106-A @ 100%

~~3.1x12' = 375.1 cf~~ Plated Wrong

~~= 14.0~~

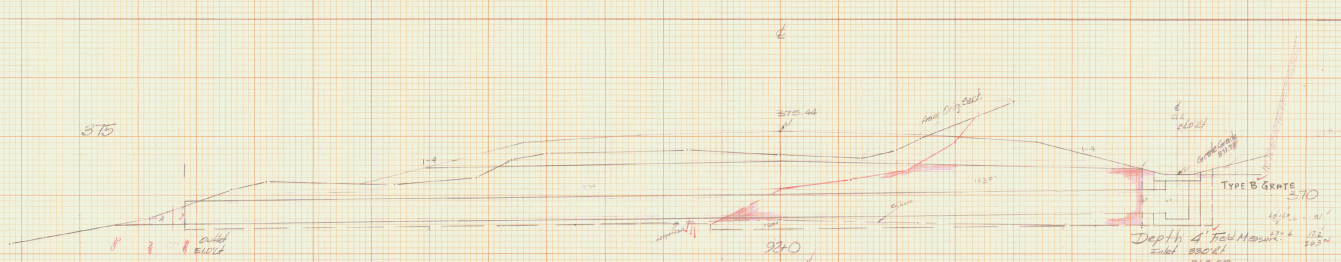
~~4/13/69~~

370 3.1 x 13.9' = 430.9 cf / 27 = 16 c.y. (15.85)

6-29-70
P.O.

BK 2 p. 55
Field ckd. NWB 4 Aug 69
84+20.5 61°20'Lt

1 INCH – 5 FEET



outlet ditch (sect 4) length 6.8 cf / 6 = 0.75 sq. depth

DI-D6 concrete 2.1 steel 1.93

6-29-70
P.O.

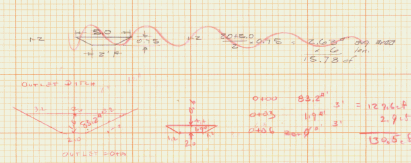
TRENCH EXCAVATION

106-A (0-5')
Pipe 234.0' x 6.1 = 959.6 cf
outlet ditch 150.8 cf
~~975.2 cf~~
1,039.9 cf
~~36 cf~~ 40 c.y.
RRB 2-16-70
5/13/69

106-B (0-5')
D.I. 26.3' x 6' = 157.8 cf
Pipe 4.1 x 143.0' = 886.3
744.1 cf
~~53 c.y.~~
RRB
5/13/69

106-B (5'+)
Pipe 4.1 x 15' = 61.5 cf
~~25~~
RRB
5/13/69

Item 202 4.5 x 0.5 x 4.1 = 92.25 cf
33' x 1 x 4.1 = 155.80
248.05 / 27 = 9.18 c.y.
6-29-70
P.O.



0+00 83.2' 3' = 129.6 cf
0+03 1.9' 3' 2.9 cf
0+06 20.0' 3'
130.5 cf / 27 = 4.8 cy

BK 2 p. 62
Field ck. NWB 4 Aug 69
92+00 ℄

1 INCH – 5 FEET

65

Sheet #9

Sheet No. 10



Sta	Tan	V.C.	Corr
0+0	330.00	330.00	0.00
+25	329.72	329.66	-0.06
+50	329.43	329.18	-0.25
+75	329.14	328.39	-0.85
1+	328.86	327.38	-0.98
+25	328.57	327.03	-1.54
+50	328.29	326.08	-2.21
+75	328.00	325.00	-3.00
2+02	327.70	323.70	-4.00

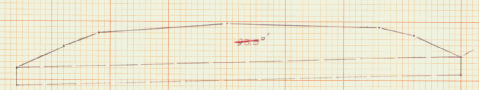
6K

Sheet #10

K+E STANDARD CROSS SECTION KEUFFEL & ESSER CO. MADE IN U.S.A.

Sheet No. 11

ALL BELOW SUBGRADE



330

98+68
18" ACCGMP
REMOVE
RET

Note: This section taken from originals

106-A @ 100%
154" × 3.6' = 554.0 cf / 27 = 20.5 cy
pay 21 cy 2-17-70 SML
RETetani

Bk. 2 pg. 86
98+68 Rt
18" ACCGMP Remove
Fish Ckd. Nmb 4 Aug 69

1 INCH - 5 FEET

6L

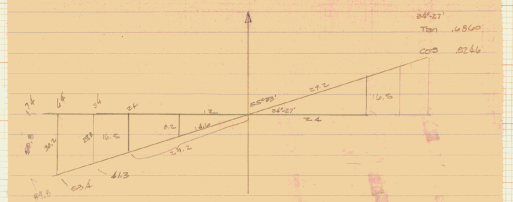
Sheet #11

KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION

Sheet No. 12

89.60
55.33
34.27

℄ 100+569 @ 55°33' Rt


24'-27'
Tan .6869
cos .8266
55°33'
27.2
10.5
24'-27'
2.4
1.30
.64
2%
2%
2%

Sta	Tan	Corr	YG
0+0	333.00	0.00	333.00
1+25	332.77	-0.12	332.59
+41.5	332.68	-0.19	332.44
+50	332.54	-0.27	332.27
+75	332.32	-0.61	331.71
+83	332.25	-0.75	331.50
1+0	332.09	-1.09	331.00
+24.5	331.93	-1.49	330.44
+50	331.86	-1.70	330.16
+100	331.64	-2.45	329.19
+106	331.50	-3.00	328.50

TRENCH EXCAVATION

106-A (0:.5')

CY Cradle: 65' × 5'' × 12' = 215.8
Pipe: 6.1 × 334.8 = 2042.3
3476.1 cf
129 cy

106-A (6'+)

Area: 6.1 × 27.15 = 165.6 cf
CY Cradle: 13 × .8 × 12 = 74.4
TOTAL = 240
89 cy

100-A (0:.5')

Area: 28.5 × 12.0 = 342 cf
Pipe: 1.98 × 6.1 = 12.1
354.1 cf
13.1 cy

100-B (6'+)

100 LF 36" RCP CLASS III
64" x 48" ACCLIMATE BASE

106-B (0:.5')

CY Cradle: 28 × 3.5 × 12.0 = 147.0
Pipe: 1.98 × 6.1 = 12.1
159.1 cf
5.9 cy

100-B (6'+)

100 LF 0.1 = 182.0 cf
5.9 cy

Cradle Headwall (D-2) 2 X 1.7 = 3.4 c.y. C.R.M.

EK #2 pg. 28
100+08 - 101+03 LT.-LT.
FLOW LINE N.1113 4.41% E.F.

1 INCH = 10 FEET

EARTH EXCAVATION

Sta	Dist	Area	100% Vol.	Area	150% Vol.
0+0		17		21	
+07	7	18	122.5	12	420
+57	5'	12	102.5	12	750
+12	16'	29	392.0	18	292.0
+28	12'	27	324.0	18	195.0
+38	3'	27	73.5	15	37.0
+41		22		11	
+41	65'	15	1463	11	35.8
+47.5		27		5	
			1160.8 cf		641.8 cf
			43.0 cy		23.8 cy
			64.27		35.5
			2.57		1.42

106-A (0-6')

Lw = 326.4 = L (TRENCH)
315.4
12.6 round (6-6')

TRENCH ROCK

100%
Cradle: 65 × 10 × 348 = 189.7 cf
Outlet Apron: 12 × 6 × 0.33 = 39.6
Outlet Apron: 10 × 8 × 1.0 = 80.0
Invert: 12 × 8 × 1.0 = 96.0
2 steps: 6 × 0.8 × 1.0 × 0.5 = 2.4
224.2 cf
8.3 cy

150%
(Invert: 65 × 12 × 0.5 = 195.7 cf
Walls: 12 × 8 × 1.0 = 96.0
291.7 cf
10.8 cy

481.8 cf = 4 to deduct
69.0 cf
12.8 cy

EK #2 pg. 102
100+81 Rt. 34°14' Rt.

1 INCH = 5 FEET

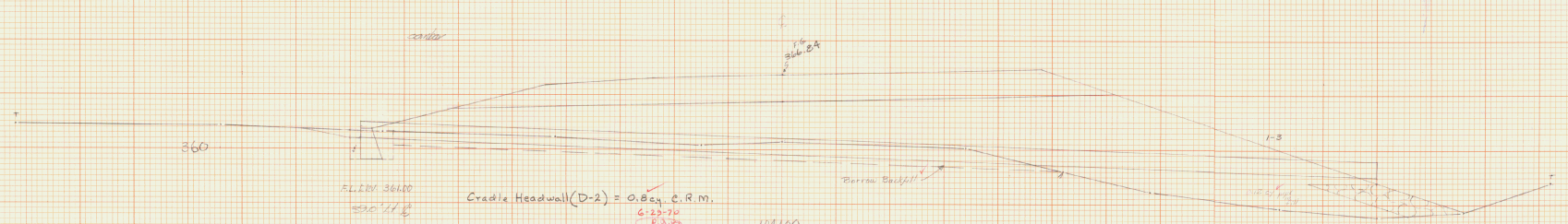
6-N

Sheet No. 13

Sheet No. 14

See X-Sections

BK#2 pg. 106
102+25 - 104+25 Rt.
Stone Fill



F.L. ELEV. 361.00
53.0' Lt ℄

Cradle Headwall (D-2) = 0.8 cy. C.R.M.
6-29-70
P.S.M.

104+00
18" x ~~98'~~ 94' CAACP, 16ga.
KET 4/24

Outlet F.L. Elev. 357.50
55.0 Rt ℄

TRENCH EXCAVATION
106-A (C-5)
C.H. Inlet 9.5' x 9.5' = 71.3 cf
Pipe 86' x 3.6 = 309.6
Pipe in fill 0.006 x 31 = 3809.4 cf
14.1 cy
+12
142 cy
14 cy
RCC
6/4/69

BK. #2 pg. 110
Field ck'd NWS 6 Aug 69
104+00 ℄

6-0

1 INCH - 5 FEET

Sheet # 14

KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION 10 X 10 TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION 10 X 10 TO THE INCH

Sheet No. 15



370

106+25 - 106+72 Rt.
Removal

106-A (0-5) 100%
109.5 ft² x 3.3' = $\frac{361.4 \text{ cf}}{27}$ = 13.4 cy

~~pay 13 c.y.~~

Don't Pay 3.0 c.y. 2-11-80
Pipe removed during undercut operations
2113

R.E. Tafani 3/10

1 INCH - 5 FEET

Bk #2 pg. 114
106+25 - 106+72 Rt.

Bk #2 pg. 118
110+32 - 110+68 Lt.

6P

Sheet # 15

KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION 10 X 10 TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION 10 X 10 TO THE INCH

Sheet No. 16

Bk #2 pg. 122
110+32 Rt

370



110+44 - 110+63 Lt
Removal
RETaini

100% T.E.
$49^{\circ} \times 3.3 = \frac{161.7 \text{ cf.}}{27} = 6.0 \text{ cy}$

~~pay 6.0 cy~~
RET 5/19

Pipe removed during Excavation
TBD

font pay
TBD

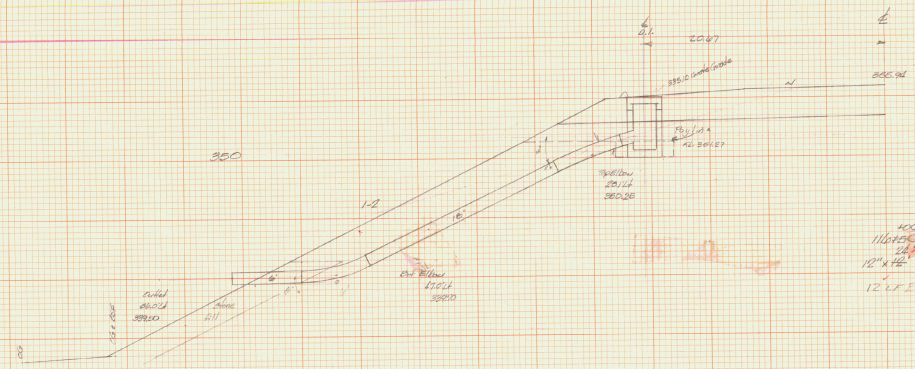
Bk. #2 Pg. 126
110+44 - 110+63 Lt.

1 INCH - 5 FEET

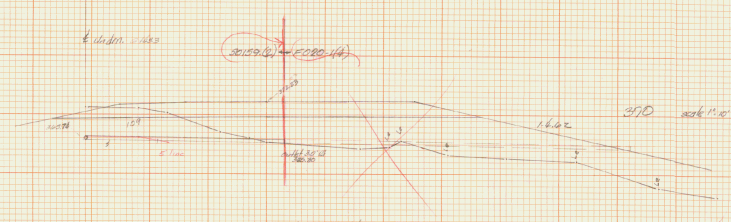
6 Q

Sheet # 16

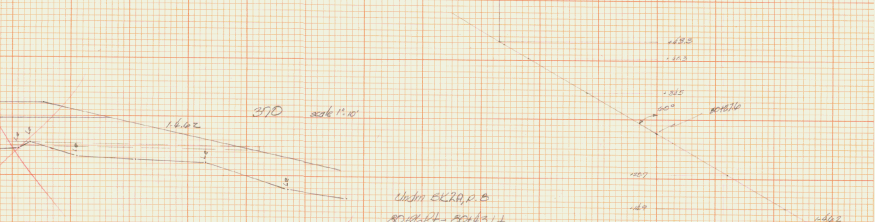
K+E STANDARD CROSS SECTION 10 X 10 TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION 10 X 10 TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.


2067
395.1
395.96
1-2
Outlet
Elev.
394.10
Inlet
Elev.
394.10
Yellow
2014
Yellow
4702
394.10
Yellow
2014
Yellow
4702
394.10
Yellow
2014
Yellow
4702

UNDERDRAIN



Trench Earth 100%
100 x 2.5 x .167 = 1.5 CY

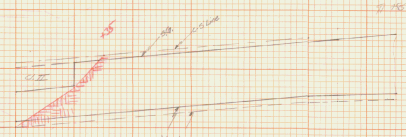


Undrn 8K2R, p. 8
80+68.64 – 86+83 LT

SCALE 1" = 10'
1 INCH – 10 FEET

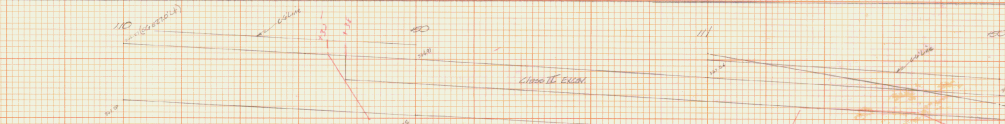
Trench Rock

Sta	Dist	Depth	Area	100% Vol	Area	60% Vol
92+50		0	0			
	10			91.0		
+40		5.0	9.1		0	
~~+40~~	~~5~~	~~6.1~~	~~10.6~~	~~64.8~~	~~0.0~~	~~0.8~~
	5			58.0		
+35		5.1	10.6		0.0	10.5
	35			581.0		
92+00		5.1	10.6		0.9	
	15			200.0		10.8
+85		5.4	12.0		1.1	



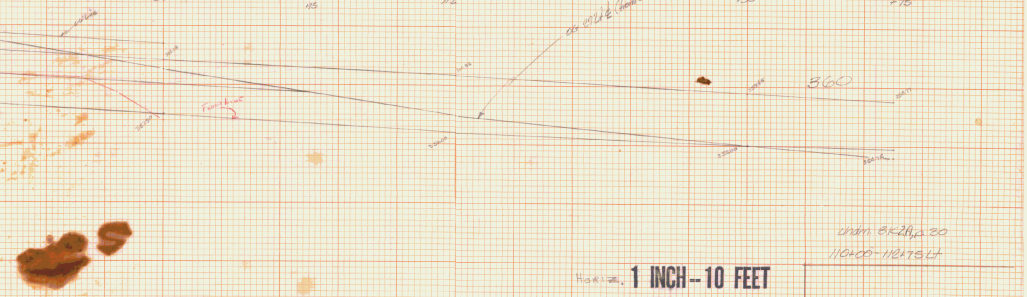
Undrn 8K2R, p. 80
91+85 – 93+75 RT

SCALE Horiz. 1 INCH – 10 FEET
Vert. 1 INCH – 5 FEET



TRENCH ROCK

Sta	Dist	Depth	Area	100% Vol	Area	60% Vol
110		5.9	16.8		0.0	
	35			586.3		22.8
+35		6.2	16.7		0.5	
	7			68.5		1.8
+42		0	0		0	
111 +18		0	0			
	5			15.7		
+16		3.0	9.1			
	60			189.0		
+76		3.2	9.8			
	10			65.0		
+42		2.1	6.2			
	8			25.6		
+50		0	0			

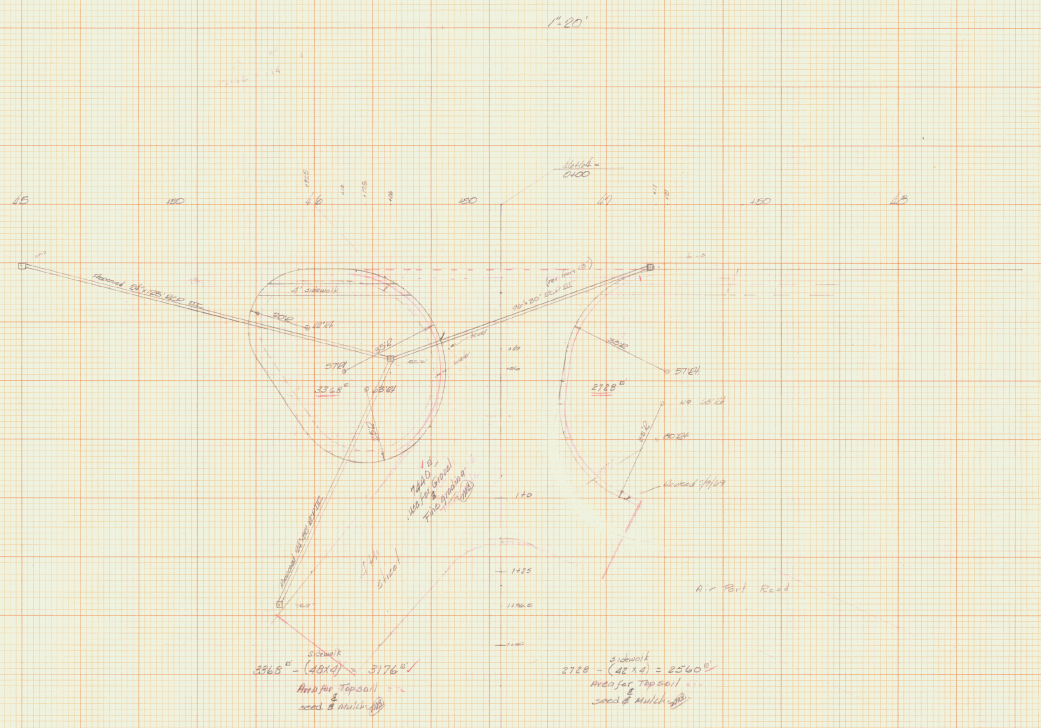


Undrn 8K2R, p. 80
110+00 – 112+75 LT

SCALE Horiz. 1 INCH – 10 FEET
Vert. 1 INCH – 5 FEET

G-5

K&E STANDARD ⊕ CROSS SECTION 10 X 10 TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.



Note. 4th st & Airport Rd. are Box cut

Item 107 (4th st & Air Port Rd

7440 ÷ 9 = 827 Sq yd 7-1-70 D.O.M.

Item 201. 4th st & Air Port Rd (J. Carrara Pit)

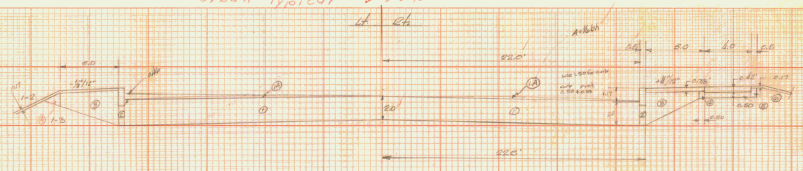
$\frac{7440^{\square} \times 2'}{27} = 551$ CY 7-2-70 D.O.M.

6-T

Sheet #19

Urban Typical 3-3-70

Sheet No. 20



LEFT

①	same as ⑫	14.00
⑫		1.69
②		0.84
③		0.30
④		0.75
⑤	12.34	64.94
		57.55

RIGHT

①	220 x 20 =	44.00
⑫	16 x 220 + 6.6	1.69
②	0.84 x 1.00	0.84
③	0.30 x 1.00	0.30
④	0.50 x 0.50	0.25
⑤	6.00 x 6.0	2.00
⑥	1.00 x 2.75	6.35
		54.30

201 Gravel

Station	Dist	LH Area	RT Area	Incr Total Vol
transition	+50	* 0.0	0.0	0.0
Begin Approach	45+50	12 24.00	20.00	80.90
	30	12 24.00	50.00	129.81
	46	18 24.00	82.00	157.66
	+50	18.5 27.00	55.20	176.24
	47	25 31.00	81.90	160.93
	+50	18.5 35.00	9.70	170.00
	48	18.8 27.20	24.80	117.70
	+50	20.8 24.20	33.8	187.76
	49	21.6 24.00	43.90	189.18
	+50	23. 24.00	102.00	192.30
	50	23.4 16.80	100.90	192.10
	+00	24. 22.00	108.90	206.83
Begin Project	51	59.58	114.48	
	246			6011.06
	50+46	57.58	114.48	6190.72

7-2-70 6191.04

* Column denotes width between ℄ & edge of Box Cut Et only From Cross Sections

107 Excavation

0	+50	1	+50	2	+50	3	+50	4	+50	5	+50	6	+50	7	+50	8	+50	9	+50	
40																				
80	40.9	48.5	45.2																	
	40.9	48.5	22.6																	

90.2 / 2 = 45.1

340 | 28.5 | 20.0 | 38.1 | 40.0 | 42.3 | 42.0 | 44.0 | 45.5 | 371.4

16.9 | 28.0 | 26.6 | 37.6 | 38.0 | 40.0 | 41.8 | 40.8 | 44.0 | 46.6 | 420.8

117.9

6400 - 40 x 16

96 x 16 = 12,672 sf

192.8 x 20 = 24 hrs

12,672 sf x 2.9 = 44.2 cy

7-1-70

8.00 hrs

Sheet #20

6-V

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	VT	S 0159(2)	POST WAR	7	65

RELOCATION OF VT. ROUTE 22-A

VC	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V. CURVES	CORR V. C	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		45+00 BEGIN APPROACH CONSTRUCTION												
		45+00	384.50			50	95	194						
		+50	384.20			50	125	253						
		46+00	383.90			25	148	142						
		+25	383.75			25	158	149						
		+50	383.60			50	164	259			0	7		
		47+00	383.30			50	116	207			8	9	C	2200
		+50	383.00			50	108	186			2	4	F	49
		48+00	382.70			50	93	177			2	6	Fac.	1.25
		+50	382.40	382.40	0	35	98	146			4	3	Ex. C	2140
		+85	382.19	382.18	-0.01	15	127	66			0			
		49+00	382.10	382.09	-0.01	50	109	136			0	2		
		+50	381.80	381.75	-0.05	50	105	223			2	17		
		50+00	381.50	381.39	-0.11	39	136	164			16	20		
		+39	381.27	381.09	-0.18	11	91	46			12	2		
		+50	381.20	381.00	-0.20	15	135	75			0	1		
		+85	381.11	380.88	-0.23	35	135	153			4	12		
		51+00	380.90	380.59	-0.31		110				15	30		
		+34.50	380.69	380.29	-0.40	50		202						
		+50	380.60	380.15	-0.45	19	108	76			17	12		
		+69	380.37	379.98	-0.39	18	106	74			17	12		
		+87	380.16	379.81	-0.35	13	114	56			19	9		
		52+00	380.00	379.69	-0.31	50	117	198			18	27	C	2168
		+50	379.40	379.20	-0.20	17	97	72			11	3	F	184
		+67	379.20	379.03	-0.17	33	132	178			0		Fac.	1.25
		53+00	378.80	378.69	-0.11	34	160	201					Ex. C	1963
		+34	378.39	378.32	-0.07	16	180	86						
		+50	378.20	378.15	-0.05	38	131	177			0	1		
		+86	377.77	377.75	-0.02	14	135	60			2	2		
		54+00	377.60	377.59	-0.01	50	98	175			6	14		
		+50	377.00	377.00	0	38	81	127			9	13		
		+88	376.54	376.53	-0.01	12	89	42			10	6		
		55+00	376.40	376.39	-0.01	50	102	183			17	30		
		+50	375.80	375.75	-0.05	50	96	175			15	28		
		56+00	375.20	375.09	-0.11	33	93	120			15	13		
		+33	374.80	374.64	-0.16	17	104	62			7	6		
		+50	374.60	374.41	-0.19	4	94	15			12	1		
		+54	374.55	374.35	-0.20	46	110	175			6	16		
		57+00	374.00	373.70	-0.30	24	95	89			13	9	C	2122
		+24	373.71	373.36	-0.35	26	106	115			7	3	F	263
		+50	373.40	372.87	-0.43	50	132	209			0	9	Fac.	1.25
		58+00	372.80	372.21	-0.59	41	94	157			10	8	Ex. C	1793
		+41	372.31	371.58	-0.73	9	113	37			1	1		
		+50	372.20	371.44	-0.76	50	109	245			2	61		
		59+00	371.80	370.83	-0.97	50	156	270			64	67		
		+50	370.57	369.81	-0.76		136				8			
		CARRIED FORWARD						1852		0		252		
		COLUMN FOOTINGS						6220		0		464		

VC	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V. CURVES	CORR V. C	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		59+50	370.57	369.81	-0.76	50	136	270			8	11		
		60+00	369.54	368.95	-0.59	50	156	324			4	3		
		+46	368.59	368.15	-0.44		224				0		C	324
													F	3
													Fac.	1.25
													Ex. C	320
		60+46 STOP PROJECT S 0159(2) BEGIN VT. RTE. 22-A RELOCATION F 020-1(-)												
		63+50	362.33	362.33	0									
		65+55	358.11	358.11	0									
		67+55	353.99	355.32	+1.33									
		69+55	355.18	355.18	0									
		72+00	356.64	356.64	0									
		76+25	359.17	361.93	+2.76									
		80+50	372.94	372.74	0									
		81+00 END VT. RTE. 22-A RELOCATION F 020-1(-) RESUME PROJECT S 0159(2)												
		81+00	374.24			57						53		
		+50	375.94			50						171		
		82+00	377.54			50						326		
		+50	379.13			50						413		
		+86.50	380.30			50						425		
		83+00	380.73	380.73	0	50						370		
		+50	382.33	382.22	-0.11	50						358		
		84+00	383.82	383.50	-0.42	50						385		
		+20.50	384.58	383.97	-0.61	50						426		
		+50	385.52	384.57	-0.95	50						426		
		85+00	387.12	385.44	-1.68	50						419		
		+50	388.71	386.08	-2.63	50						366		
		86+00	390.31	386.53	-3.78	50						110		
		+50	391.91	386.76	-5.15	50						0		
		87+00	393.51	386.79	-6.72	50								
		+50	395.10	386.59	-8.51	50								
		88+00	395.70	386.20	-10.50	50								
		+50	394.10	385.59	-8.51	50								
		89+00	391.49	384.77	-6.72	50								
		+50	388.89	383.74	-5.15	50								
		90+00	386.28	382.50	-3.78	50								
		+50	383.68	381.05	-2.63	50								
		91+00	381.07	379.39	-1.88	50								
		+50	378.47	377.52	-0.95	50								
		92+00	375.86	375.44	-0.42	50						0	EXC	8281
		+50	373.26	373.15	-0.11	50						44	EMB	4281
		93+00	370.65	370.65	0	50						205	F	3154
		+50	368.05			50						413	Fac.	1.25
		94+00	365.44	365.44	0							445	Ex. C	7862
		CARRIED FORWARD						8261		4287		1,638		
		COLUMN FOOTINGS						6918		1855		9,469		

VC	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V. CURVES	CORR V. C	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		94+00	365.44	365.44	0						445			
		+50	362.84	362.98	+0.14	50					345	731		
		95+00	360.23	360.78	+0.55	50					503	785		
		+50	357.63	358.86	+1.23	50					1476	1032		
		96+00	355.02	357.20	+2.18	50					2637	3908		
		+50	352.42	355.83	+3.41	50					2691	4933		
		+63.50	351.87	355.57	+3.70	50						4720		
		97+00	349.81	354.72	+4.91	50					2407	4490	F	38694
		+50	347.21	353.89	+6.68	50					2442	4299	Fac.	1.25
		98+00	344.61	353.34	+8.73	50					2200	3926	Ex. F	48362
		+50	342.00	353.05	+11.05	50					2040	3731		
		+68	342.83	353.01	+10.18	50					1990	3587		
		99+00	344.31	353.04	+8.73	50					1884	3369		
		+50	346.61	353.29	+6.68	50					1755	2863		
		100+00	348.92	353.83	+4.91	50					1337	2243		
		+21	349.88	354.13	+4.25	50					1085	1652		
		+50	351.22	354.63	+3.41	50					699	1069	C	3267
		+81	352.65	356.27	+2.62	50					455	780	F	11638
		101+00	353.53	355.71	+2.18	50					387	614	Fac.	1.25
		+50	355.83	357.06	+1.23	50					276	513	Ex. F	14810
		102+00	358.14	358.69	+0.55	50					285	619		
		+50	360.44	360.58	+0.14	50					384	675		
		103+00	362.75	362.75	0	50					345	602		
		+50	365.05	364.92	-0.13	50					305	433		
		104+00	367.36	366.84	-0.52	50					217	269		
		+50	369.66	368.48	-1.18	50					74	96		
		105+00	371.97	369.87	-2.10	50					30	65		
		+30	373.35	370.58	-2.77	30					40	37		
		+50	374.27	370.99	-3.28	20					0		D	17420
		106+00	376.58	371.86	-4.72	50							R	6694
		+50	378.88	372.46	-6.42	50							F	950
		107+00	377.52	372.80	-4.72	50							Fac.	1.25
		+50	376.15	372.87	-3.28	18							Ex. C	10172
		+68	375.66	372.84	-2.82	32								
		108+00	374.79	372.69	-2.10	50								
		+50	373.42	372.24	-1.18	50								
		109+00	372.06	371.54	-0.52	31								
		+31	371.21	370.96	-0.25	19								
		+50	370.70	370.57	-0.13	46								
		+96	369.44	369.44	0.00	4								
		110+00	369.33		0	21								
		+21	368.76			29								
		+50	367.97			50								
		111+00	366.60			50								
		+50	365.24											
		CARRIED FORWARD						2834		593		76		
		COLUMN FOOTINGS						4078		1194		52,372		

FAIR HAVEN

PROJECT RELOCATION OF VT. ROUTE 22-A

PROJECT S NO 0159(2)

SHEET 7 OF 65 SHEETS

FINAL DRAINAGE SUMMARY

PROJECT NO. Fair Haven 50159(2)

STATION	STATION	B CONC	REINF STEEL	TYPE GRATE A	B	C	PRCC D.I.	CCB	CRM	R.C.P. CLASS III 18"	R.C.P. CL. III 24"	R.C.P. CL. III 30"	R.C.P. CL. III 36"	C.A.A.C.P. 16GA 18"	C.G.M.P. 16GA 12"	ACCGMP GAGE 16GA 18"	ACCGMP GA. 16GA 24"	ACCGMP GA. 16GA 30"	ACCGMP GA. 16GA 48"	C.A.A.C.P. 16GA 48"	UNDERDRAIN TYPE II 6"	UNDERDRAIN TYPE I 6"	UNDERDRAIN C.I. COVER F.B.	S-B BEND OF STONE	CGMP 16GA 12"	ELBOWS	TRENCH EARTH 100%	TRENCH EARTH 150%	TRENCH ROCK 100%	TRENCH ROCK 150%	CHANGE ELEV.	STRUC EXCAV.	CHANNEL EXCAV. EARTH	CHANNEL EXCAV. ROCK	STONE FILL GRAVEL B. F.	STONE FILL HEAVY	STONE FILL LIGHT	RIP RAP	REMARKS	BOOK	PAGE
44+87																																										
44+88	45+80 Rt																																										
45+00	46+26 Rt	3.4	275	1					6.0		128																																	
46+00																																										
1+34.5	46+26 Rt	3.4	275	1					6.0		88																																
46+25	47+15 Rt	5.7	408	1					6.0			96																															
47+20	49+78 Rt	6.3	417	1					6.5			278																															
50+02	53+56 Rt	6.1	410	1					6.0			352																															
51+34.5																																										
53+58		3.2	252	1					5.5	40																																
53+60	56+48 Lt	6.1	410	1					6.0				288																														
56+50								1					36																														
56+52	60+44 Lt							1					392																														
60+46	62+62																																										
82+50		1.9	158	M					3.5							106																											
82+86.5																																										
84+20.5																																										
92+00		2.1	193	1					4.0								84																										
93+50	96+60 Rt																																										
96+00	98+50 Rt																																										
96+50									2.7								(202) 16GA																										
96+60.5 Rt																																										
97+25	101+25																																										
98+68																																										
99+50	100+08 Lt																																										
100+00	Lt						1								30											12																	
100+08.6	101+03 Rt								3.4											166																							
100+81	Rt																																										
102+25	104+25 Rt																																										
104+00									0.8					94																													
105+07	105+42														36																												
106+25	106+72 Rt																																										
110+32	110+68 Lt														36																												
110+32	Rt														34																												
110+44	110+63 Lt																																										
112+25	116+15 Rt																																										
114+60	115+42 Lt																																										
115+50	&								3.4											130																							
116+00	Lt						1								22											12																	
118+57	118+93														36																												
1+02 Lt	(4TH ST.)																																										
80+21 Rt - 80+43 Lt																			37								10														UNDERDRAIN	2A	8
80+43 - 82+55 Lt																	2		5	212	1						89		31	4										"	2A	12
94+85 - 93+75 Rt																	2		5	190	1						16		37	1										"	2A	20
93+75 - 94+60 Rt									0.3										34								0													"	2A	26
110+00 - 112+75 Lt																	2		6	278	1						58	0	34	1										"	A	30
112+75 - 113+00 Lt									0.3										31								0													"		36
TOTALS		38.2 X	2798 X	7 X	2 X	2 X	2 X	1 X	N/A	10.7 X	40 X	216 X	72.6 X	716 X	94 X	198 X	106 X	202 (160) 84 16GA X	6 X	166 X	130 X	115 X	680 X	3 X	63 X	24 X	3387 X	1425 X	193 X	27 X	1 X			500 X	784 X						

74

& SPECIAL DITCH
Δ STONE FILL

COMPUTED BY: J.H.L. 2-24-90
CHECKED BY:

D-7

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIV. & ON NO.	STATE	PROJECT NO.	FISCAL YEAR POST A&H	SHEET NO.	TOTAL SHEETS
I	VT	S 0159(2)		8	65

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	MUCK AREA	MUCK CU YDS
		111+50	365.24				71				50			
						50		92				204		
		112+00	363.88				28				170			
						50		34				420		
		+50	362.51				9		C 3963		284			
						30		5	R 673					
		+80	361.69				0		F 7030			755		
						20			Fac 1.25					
		113+00	361.15						Ex F 8378		532			
						50						1101		
		+50	359.78								857			
						50						1341		
		114+00	358.42	358.54	+0.12						791		30	
						50						1525		54
		+50	357.06	357.54	+0.48						856		28	
						50						1608		50
		115+00	355.69	356.76	+1.07						881		26	
						50						1733		47
		+50	354.33	356.24	+1.91						991		25	
						50						1608		42
		116+00	352.98	355.94	+2.98						746		20	
		+25	352.28	355.89	+3.61		0					859		
						25		6						
600' VC		+50	351.90	355.90	+4.30		12				182			
						50		20	C 518			233		
		117+00	353.10	356.08	+2.98		10		F 4697		70			
						50		20	Fac 1.25			91		
		+50	354.60	356.51	+1.91		12		Ex F 8234		28			
						50		53				26		
		118+00	356.10	357.17	+1.07		15				0			
						50		108				9		
		+50	357.60	358.08	+0.48		72				10			
						50		144				38		
		119+00	359.10	359.22	+0.12		84				31			
						50		161				100		
		+50	360.60	360.60	0		90			119+50	77			
										END PROJECT S 0159(2)				

EARTHWORK SUMMARY

SUMMARY OF BALANCES

STATION TO STATION		TOTAL EXCAV. EARTH & ROCK CUBIC YARDS	ROCK EXCAV. CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL	MUCK
RELOCATION OF VT. ROUTE 22-A									
45+00	50+00	2,200		48	2,140		2,140		
50+00	55+00	2,168		164	1,863		4,103		
55+00	60+00	2,122		263	1,793		5,896		
60+00	60+46	324		3	320		6,216		
81+00	85+00	1009	869	4,976		3915	1201		
85+00	90+00	9295	3996	2,841	8741		9942		
90+00	95+00	8251	4289	3,154	7525		17467		
95+00	100+00			38,694		48,368		30931	
100+00	105+00	368		11,636		14180		45081	
105+00	110+00	12420	6534	950	16178			28903	
110+00	115+00	2963	593	7,030		5378		34281	104
115+00	119+50	512		4,697		3359		37640	89
4 TH STREET									
0+50	1+35	383			383			39237	
PROJECT TOTALS		42009	15741	74,456	39023	72,300		39237	193
COLUMN FOOTINGS CARRIED FORWARD									

SUMMARY OF BALANCES

STATION TO STATION		TOTAL EXCAV EARTH & ROCK CUBIC YARDS	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION TOTAL CU YDS.	EXCAVATION ROCK CU. YDS.	EMBANKMENT CUBIC YARDS	MUCK
7	1	6 220	0	464	
7	2	19142	8354	9 469	
7	3	39615	7187	52 872	
8	1	443	0	11,651	193
8	2	383	0	0	
TOTALS		42009	15,741	74,456	193

REMARKS

EARTH AND ROCK EXCAVATION	42009
SOLID ROCK EXCAVATION	15741
EARTH EXCAVATION	26267
PLANIMETERED FILL	74,456
LESS FACTORED SOLID ROCK (1.4)	22037
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	
NET PLANIMETERED FILL	52419
FACTOR (1.25)	13105
PLANIMETERED FILL INCLUDING FACTOR	65524
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	26267
ITEM 119 @ 100 %	140
UNDERDRAIN EXCAVATION	
STRUCTURE EXCAVATION	
T.E. IN SPECIAL DITCHES	1,000
TOTAL MATERIAL AVAILABLE FOR FILL	27,506
TOTAL FILL INCLUDING FACTOR	65524
TOTAL MATERIAL FOR FILL	27506
BORROW	38018
LESS GRANULAR BORROW, EST.	9,000
NET BORROW	29018

PROJECT FAIR HAVEN RELOCATION OF VT. ROUTE 22-A NO. S 0159(2) SHEET 9 OF 65

FINAL EARTHWORK SHEET

FAIR HAVEN RELOCATION OF VT 22-A NO S-0159(2)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	O.B. AREA	O.B. CU. YDS.	10% AREA	10% CU. YDS.	R.B. AREA	R.B. CU. YDS.	Una. Fill AREA	Una. Fill CU. YDS.	EMBANK. AREA	EMBANK. CU. YDS.
BEGIN RAILROAD CONSTRUCTION															
44+50	50	0	94									C 99			
45+00		102													
	50		186												
+50		101													
	50		200												
46+00		116													
	50		197												
+50		98													
	50		199												
47+00		117													
	50		201			C 1878									
+50		100				F 18									
	50		175											0	
48+00		89												2	2
	50		171											0	
+50		96												0	
49+00		99												2	2
	50		181											2	
+50		100												12	
	50		176											11	
50+00		90												18	
	39													14	
+39		—	196											3	
	11													13	
+50		122												3	
	50		215											14	
51+00		110												31	
	50		200											20	
+50		106				C 2099								37	
	50		206			F 163								27	
52+00		116												8	
	50		200											0	
+50		100												4	
	50		241											11	
53+00		160												11	
	50		270											9	
+50		132												16	
	50		218											19	
54+00		103												19	
	50		180											10	
+50		91												8	
	50		173											10	
55+00		96												7	
	50		178											BUTT 50	235
+50		96													264
	50		171												532
56+00		89													340
+50		101													706
	50		176												420
57+00		94													806
	50		181												498
+50		100													781
	50		180												395
58+00		100				C 2040									719
	50		185			F 239									381
+50		114													
	50		198												
59+00		152													
	50		246												
+50		132													
	50		263												
60+00		151													
	50		262												
+96	46		251			C 257									
	ASTM					F 7									
81+00	BUTT	45													
	50		69												
+50		30													
	50		28												
82+00		0										C 993			
	50		6									F 5320			
+50		17		0								R 6977			
	50		26		13				C		C	OB 334			
83+00		21		12		0						10% 34			
	50		146		89				9		7	RB 270			
+50		137		82		17	16								
	50		284		196		56		20		36				
84+00		170		130		44									
CARRIED FORWARD			559		298		72		29		43				380
COLUMN TOTAL			6921		290		72		29		43		0		4235

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	O.B. AREA	O.B. CU. YDS.	10% AREA	10% CU. YDS.	R.B. AREA	R.B. CU. YDS.	Una. Fill AREA	Una. Fill CU. YDS.	EMBANK. AREA	EMBANK. CU. YDS.
84+00															290
+50	50	170	279	130	220	44	115		22		93			381	729
85+00		131		108		80								407	
	50		155		127		147		13		134				783
+50		36		31		79								439	
	50		56		31		92		3		89				812
86+00		24		2		20								438	
+35	35		33	0		0			0		13				798
	15	12												124	
+50	50		27												732
87+00		17										C 9756		367	
+43	43		93	0		0			0		0	F 4908			435
	7	83		32		12						B 1871			
+50	50		335	0		0			0		0	OB 392	103		
	50	279				25						10% 132			
88+00			714									RB 240	95		
+50	50	498												0	
	50	824	1219	0		0									
89+00		967		42	39	75	69		4		65			0	3
+50	50		1658											3	
	50	1740	2306	506	507	80	144		51		93			11	13
90+00		1624	3115	250	1256	0	74		74		0			11	20
+50	50		2595		1509		12		12		0			11	20
	50	1179	2076	780	1780	13	21		21		0			51	57
91+00		1063		602		10								61	76
+50	50		1748		998		9		9		0			31	
	50	825	1104	476	657	0								11	39
92+00		367		234		30	28		28		0			60	66
+50	50		444		217		28		22		6			220	259
	50	113	105	0		0								445	616
93+00		0						C 8072						456	836
+50	50							F 3484						335	734
	50							R 4691				0		52	781
94+00								OB 95					48	525	
+50	50							10% 92				0	48	436	1846
	50							RB 6					33	273	3910
95+00								Una F 48				36	62	269	5018
+50	50											31		249	4801
	50											0	29	245	4582
96+00														283	4336
+50	50													208	3993
	50													208	3787
97+00														201	3593
+50	50											0		187	
	50											21	19	177	3370
98+00												32	47	135	2891
+50	50											14	43	110	2275
	50	0										0	13	70	1676
99+00		14	13						C 415					70	1093
+50	50		90						F 11,730					47	801
	50	83	144						Una F 103					39	616
100+00		73			105									27	519
+50	50	40	41											28	593
	50	4	13											35	663
101+00		10												35	601
+50	50	0	9											29	
	50														
102+00															
+50	50														
	50														
103+00															
+50	50														
	50														
104+00															
+50	50														
	50														
105+00															
CARRIED FORWARD			18677		6851		752		258		493		34		59,286
COLUMN TOTAL															

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	O.B. AREA	O.B. CU. YDS.	10% AREA	10% CU. YDS.	R.B. AREA	R.B. CU. YDS.	Una. Fill AREA	Una. Fill CU. YDS.	EMBANK. AREA	EMBANK. CU. YDS.
105+00															
+30	30														
	20	0													
+50	50	7	3												
106+00		0	6											C 8673	
+50	50		134											F 1155	239
	40	145												R 3924	299
+90	10		383	0		0								OB 851	84
107+00		228		55	10	10	2		1		1			10% 392	100
+50	50	397	579		188	34	41		19		22			RB 459	24
108+00		647	964	148	426	111	134		42		92				
+50	50	921	1449	312	621	28	129		66		67				72
109+00		927	1711	359	660	86	106		66		40				77
+50	50		1788	354	391	114	185		89		96				11
110+00		1004		608		160	254		113		141				20
+30	30	825	1694	610	1128										20
	20		1102	0	559	0	89		34		55				11
+50	50	365													20
111+00		190	514												10
+50	50		246											C 1788	7
	50	116												F 7797	8
112+00		84	93											R 339	32
+50	50		29											OB 89	33
+80	30	7	4											10% 34	243
	20	0												RB 55	229
113+00															575
+50	50														395
114+00															965
+50	50														
115+00															627
+50	50	0													1351
	50	0	0												812
116+00		0	0												1469
+25	25	0	0												775
	25	0	4												1512
+50	50	9	17											C 668	852
117+00		9	27											F 4955	1619
+50	50	20	71												192
118+00		57	123												891
+50	50	76	155												1766
119+00		91	174												1016
+50	50	97	89												1637
120+00		0													758
+50	50														374
121+00														F 197	197
+50	50														1499
122+00															237
+50	50														64
123+00															78
+50	50														89
124+00															19
+50	50														0
125+00															5
+50	50														9
126+00															43
+50	50														40
127+00															119
+50	50														88
128+00															172
+50	50														98
129+00															115
+50	50														BUTT
130+00															14099
+25	25	BUTT 223	11,321		4263		940		426		514		0		
+50	25	124	161												
+75	25	132	119											C 760	
131+00		242	173												
+15	15	198	121												
+25	10	134	60												
+50	25	99	108												
+60	10	0	18												
CARRIED FORWARD															
COLUMN TOTAL			12281		4263		940		426		514		0		14099

Playline Sta 75+00 to 4th Street = 36,915 = 1165'

PROJECT FAIR HAVEN RELOCATION VT 22A S 0159(2)

PROJECT S NO. 0159(2)
SHEET 1 OF 2

9A

COMPUTED BY J.B.D 7-6-70 & T.A.R. 7-6-70

CHECKED BY GRAYR CRANE 7-9-70

0159-1466 FAIR HAVEN-4th STREET

END PROJECT S0159(2)

BEGIN PROJECT S0159(2)

EXAM PREPARATION CONST. BEGIN PROJECT S0159(2)

FAIR HAVEN-RELOCATION OF VT ROUTE 22-A NO. S 0159(2)

FINAL EARTHWORK SUMMARY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

NOTES	STATIONS		TOTAL E&R EXCAVATION DESIGN	TOTAL E&R EXCAVATION FINAL	TOTAL E&R EXCAVATION DIFFERENCE	ROCK DESIGN	ROCK FINAL	ROCK DIFF.	EMBANKMENT DESIGN	EMBANKMENT FINAL	EMBANKMENT DIFFERENCE	UNAUTHORIZED WASTE DESIGN	UNAUTHORIZED WASTE FINAL	UNAUTHORIZED WASTE DIFF.	BASE DESIGN	BASE FINAL	BASE DIFF.	Rock (Ca. 1272 & 23) DESIGN	Rock (Ca. 1272 & 23) FINAL	Rock (Ca. 1272 & 23) DIFF.	UNAUTH FILL DESIGN	UNAUTH FILL FINAL	UNAUTH FILL DIFF.
Excav zero @ 44+50	40+00	45+00	0	94	+94																		
	45+00	50+00	2,200	1572	-328				48	18	-30												
	50+00	55+00	2168	2099	-69				164	163	-1												
	55+00	60+00	2122	2040	-82				263	239	-24												
	60+00	60+46	324	257	-67				3	7	+4												
	81+00	85+00	1003	993	-10	269	647	+378	4976	5320	+344							334	64	270			
	85+00	90+00	9295	9756	+461	3996	1871	-2125	2891	2908	+67							392	132	260			
	90+00	95+00	8251	8072	-179	4289	4661	+372	3154	3484	+330							98	92	6		48	
	95+00	100+00							38,694	39252	+558											191	
	100+00	105+00	365	415	+50				11,636	11730	+94											105	
Excav in design	105+00	110+00	12420	8673	-3747	6594	3924	-2670	950	1155	+205							851	392	459			
Excav in design	110+00	115+00	2365	1988	-377	593	339	-254	7030	7792	+762							89	34	55			
	115+00	120+00	512	660	+148				4697	4955	+258												
	120+00	120+50								197	+197												
	MAIN LINE		61625	36919	-4706	15748	11492	-4299	72,456	77220	+2764							1764	714	1050		344	
	4TH STREET																						
	0+25	1+60	383	760	+377	0	0		0	0													
PROJECT TOTALS			42,008	37679	-4329	15748	11492	-4299	74,456	77220	+2764							1764	714	1050		344	

BREAKDOWN

MAIN LINE	EARTH & ROCK	36,919	
	MINUS SOLID ROCK	-11,492	
	MINUS DEDUCT BOULD.	- 90	Bk 1 Page 15
	MAIN LINE 103A-1	25,337	
	4TH STREET	+760	
	EXTRA EXCAVATION	+342	Bk 1 Page 11
	TOTAL 103 A-1	26,439	
MAIN LINE	SOLID ROCK	11,492	
	10% O.B.	718	
	BOULDERS	+ 90	Bk 1 Page 15
	TOTAL 103-B	12,240	

NOTES

No Granular used this Borrow was equal to Gran. Borrow

COLUMN SUMMARY

SHEET	COLUMN	EARTH EXCAVATION	ROCK	FILL	UNAUTHO-RIZED WASTE	OBS BASE	102	RB
1	1	6321'	298'	4235'		72'	25'	43'
	2	19617'	6881'	58886'	344'	752'	239'	493'
	3	11321'	4263'	14099'		940	226	514
	TOTAL	36919'	11442'	77220'	344'	1764'	714'	1050'
	3	760'	0	0	0'	0'	0	0
PROJECT TOTAL		37679'	11442'	77220'	344'	1764'	714'	1050'

TOTALS

REMARKS

Earth & Rock Excavation	37,679'
Solid Rock Excavation	11,442'
Earth Excavation	26,237'
Planimetered fill	44,220'
Less Deficient Rock (0.4)	17,011'
Net Planimetered Fill	61,231'
~~Factor~~	
~~Planimetered fill including Factor~~	
Material available for fills	
Earth Excavation	26,237
Item 119 (Road Surface excavation)	191
Undercut Excavation	287
Special Ditch	187
Structure Excavation (Th. Earth replaced with 222-B or 202)	768
Mass Ex Excavation	2194
Borrow Item 104	35340
Rock Borrow (1050 x 1.4)	1470
Total	67,939

Job fill factor = 67,939 / 61,231 = 1.11

98

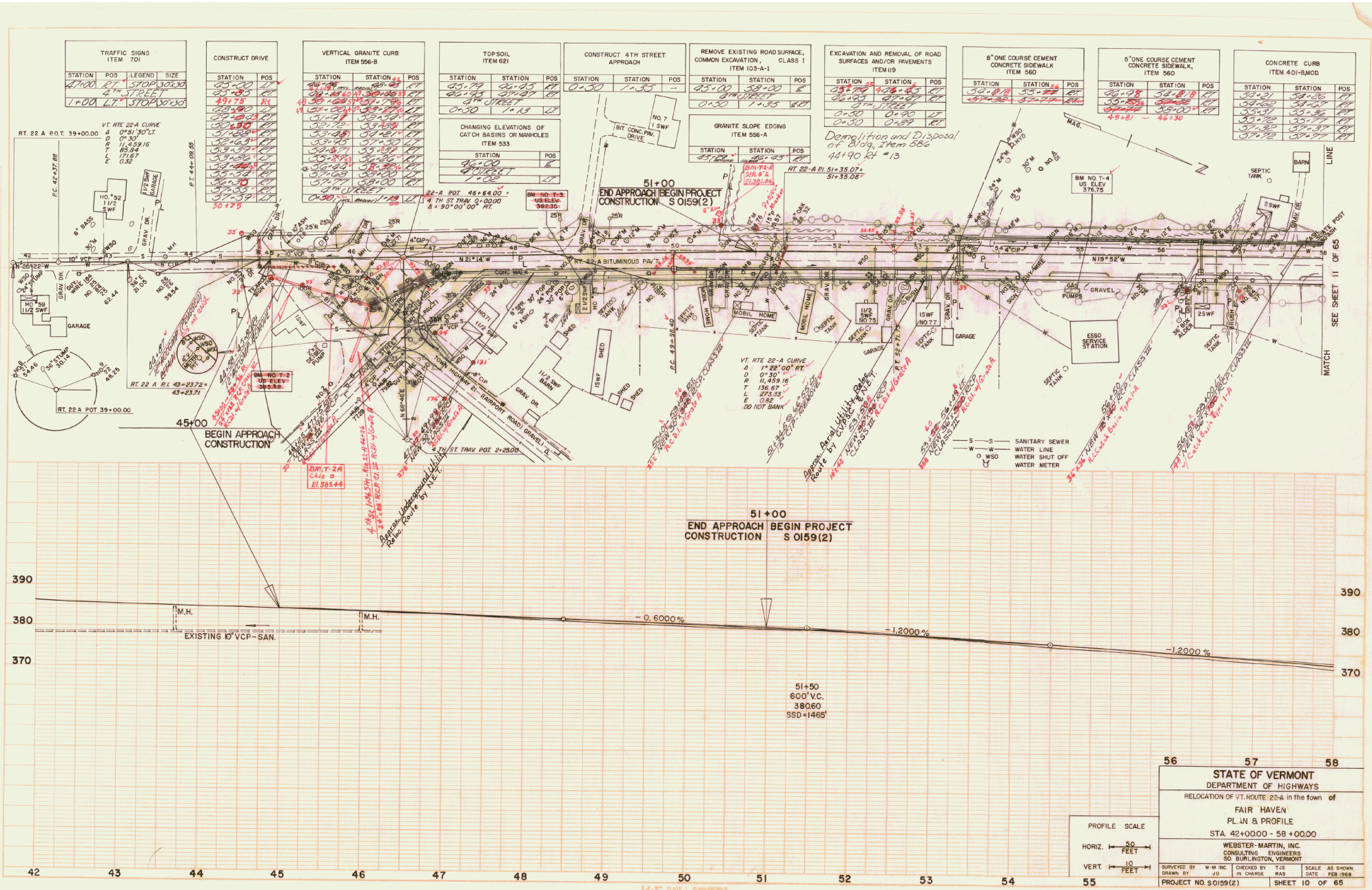
FAIR HAVEN RELOCATION VT 22-A

PROJ. S NO. 0159(2)
SHEET 2 OF 2

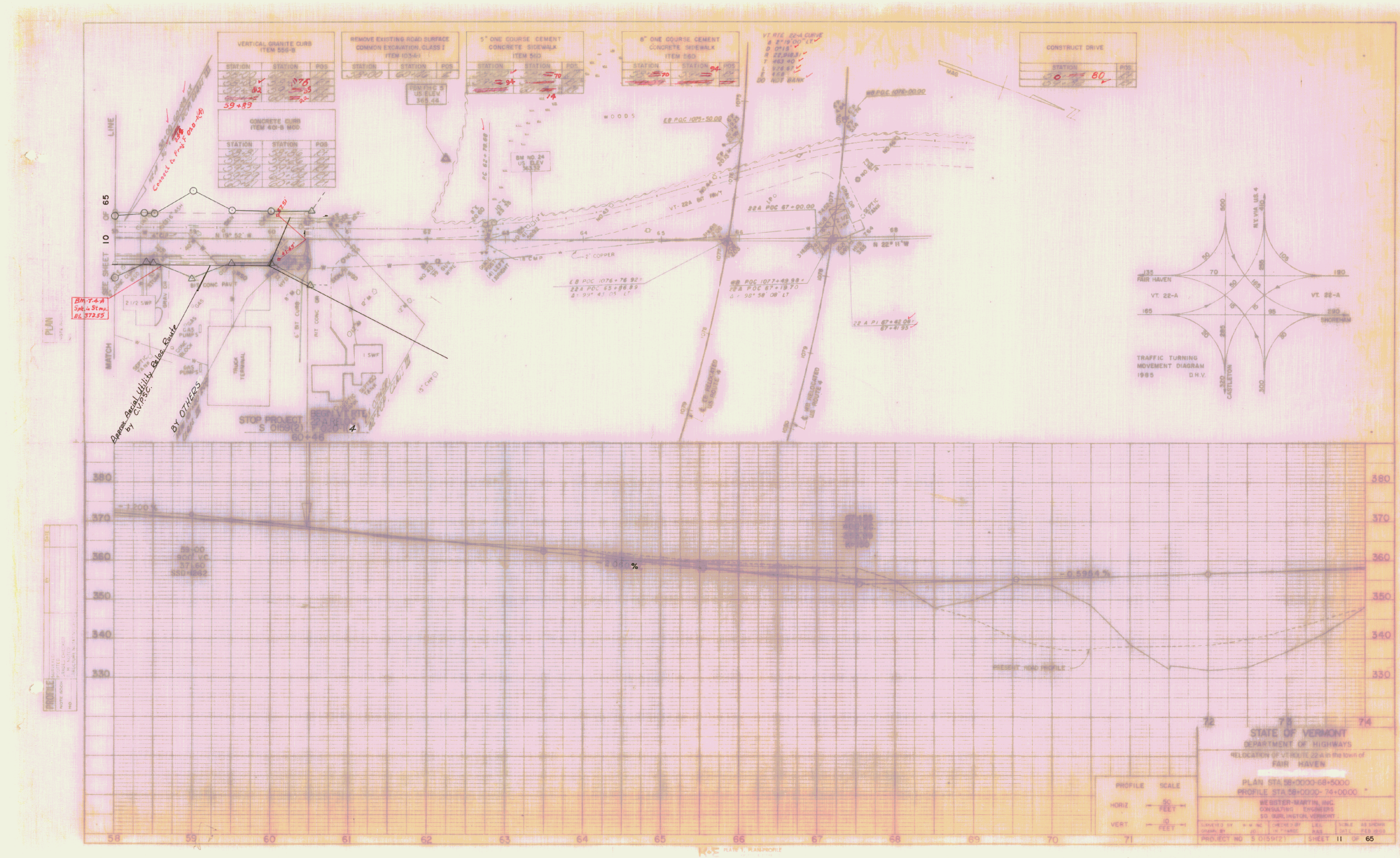
COMPUTED BY GRAY R. CORNE 11-7-70

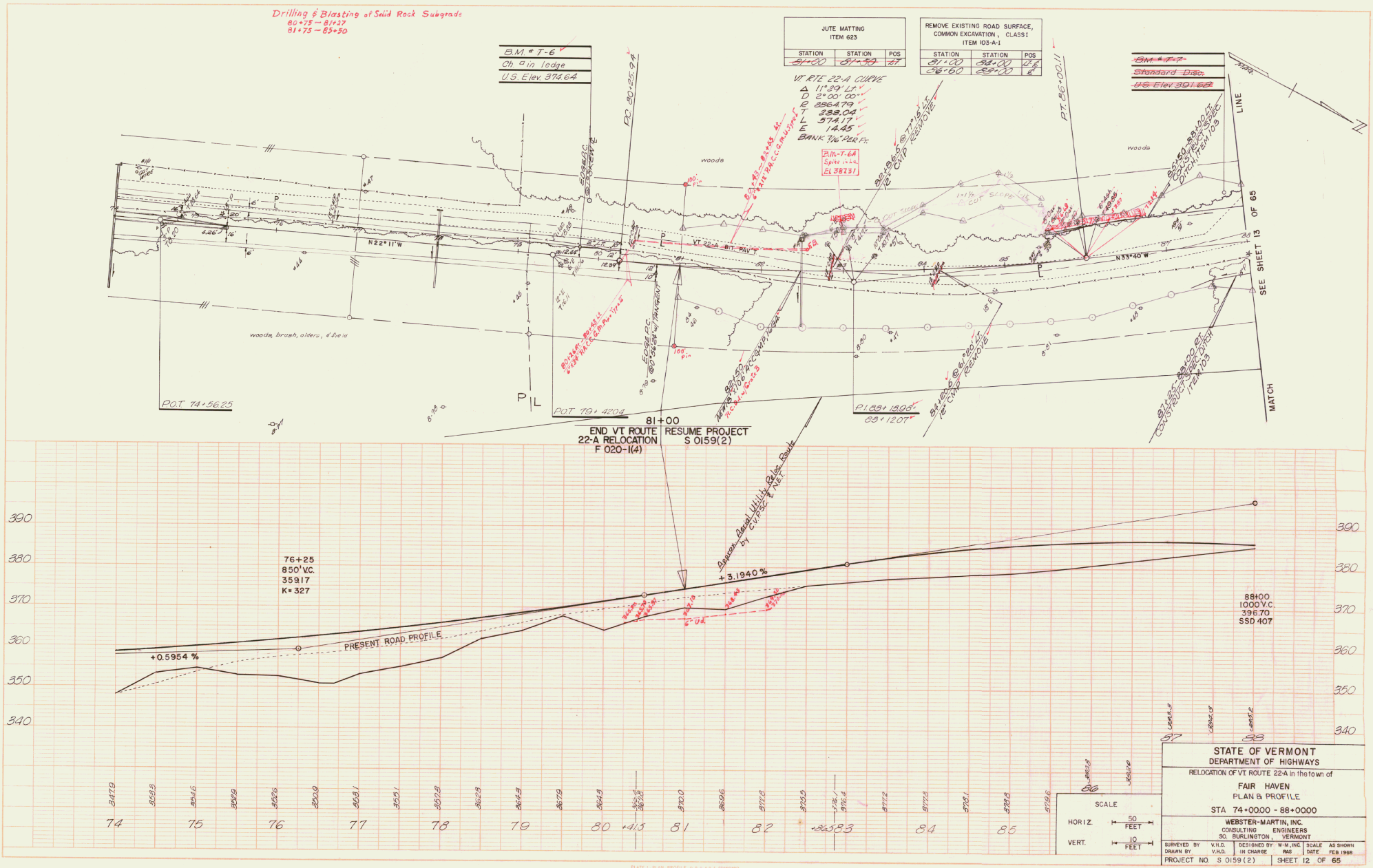
JRW 7-8-71

D-7

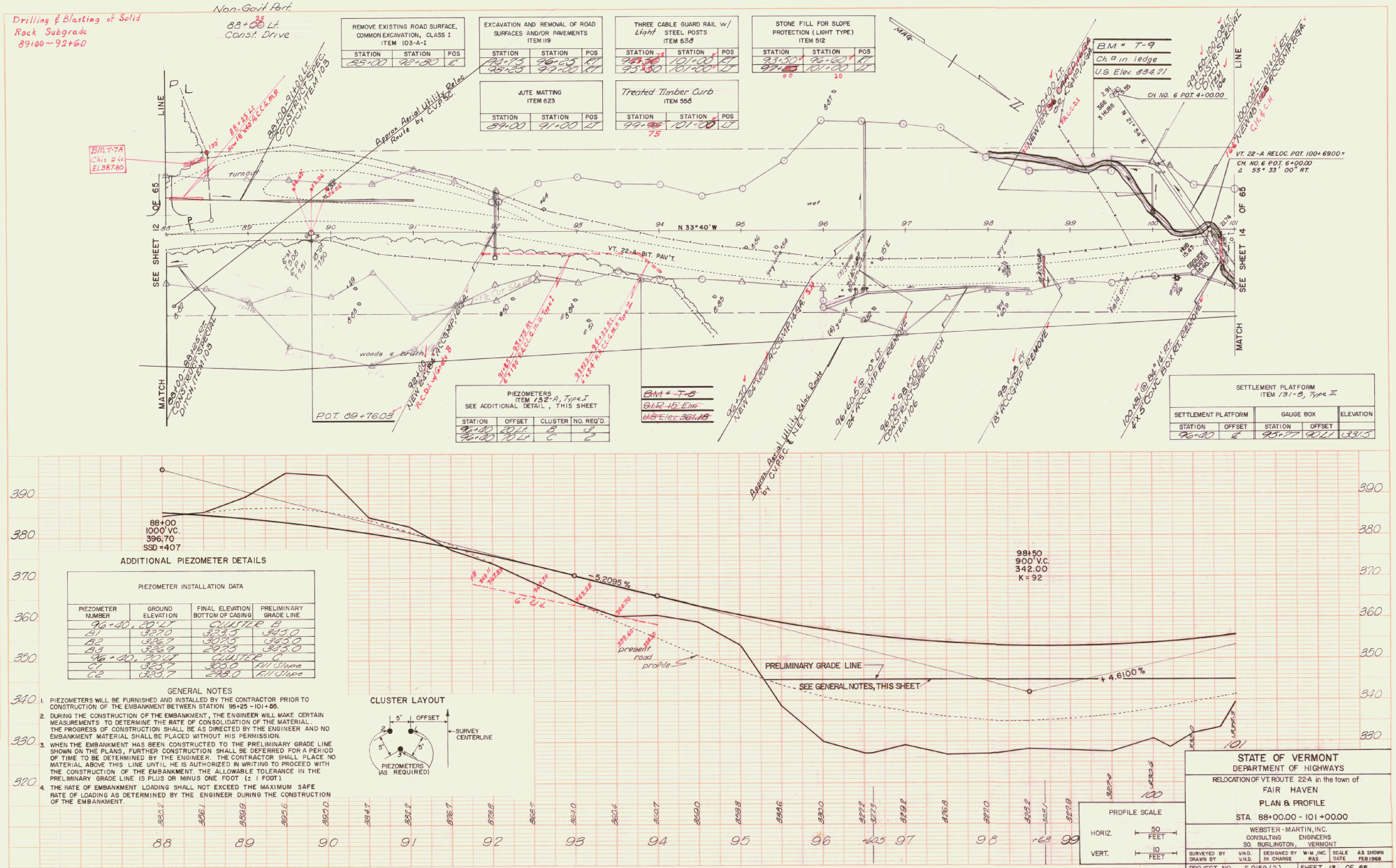


TRAFFIC SIGNS ITEM 701
CONSTRUCT DRIVE
VERTICAL GRANITE CURB ITEM 556-B
TOPSOIL ITEM 621
CONSTRUCT 4TH STREET APPROACH
REMOVE EXISTING ROAD SURFACE, COMMON EXCAVATION, CLASS I ITEM 103-A-1
EXCAVATION AND REMOVAL OF ROAD SURFACES AND/OR PAVEMENTS ITEM 119
8" ONE COURSE CEMENT CONCRETE SIDEWALK ITEM 560
5" ONE COURSE CEMENT CONCRETE SIDEWALK, ITEM 560
CONCRETE CURB ITEM 401-B,MOD.
CHANGING ELEVATIONS OF CATCH BASINS OR MANHOLES ITEM 533
GRANITE SLOPE EDGING ITEM 556-A
Demolition and Disposal of Bldg, Item 586 44+90 Rt #13
51+00 END APPROACH CONSTRUCTION BEGIN PROJECT S 0159(2)
45+00 BEGIN APPROACH CONSTRUCTION
RT. 22 A P.O.T. 39+00.00
RT. 22 A POT 39+00.00
RT. 22 A P.I. 43+23.72 = 43+23.71
RT. 22 A P.I. 51+35.07 = 51+35.06
RT. 22 A BITUMINOUS PAV'T
N 21°14'W
N 19°52'W
BM NO. T-4 US ELEV 376.75
BM NO. T-2 US ELEV 385.38
BM NO. T-3 US ELEV 382.35
BM. T-2A Chis □ El. 385.44
VT. RTE 22-A CURVE
Δ 1°22'00" RT.
D 0°30'
R 11,459.16
T 136.67
L 273.33
E 0.82
DO NOT BANK
SANITARY SEWER
WATER LINE
WATER SHUT OFF
WATER METER
ESSO SERVICE STATION
GAS PUMPS
GRAVEL
BARN
SEPTIC TANK
MOBIL HOME
GARAGE
SHED
TOWN HIGHWAY 21 (AIRPORT ROAD) GRAVEL
4TH ST. TRAV. POT. 2+25.00
Approx. Underground Utility Reloc. Route by N.E.T.
Approx. Aerial Utility Reloc. Route by C.P.S.C. & N.E.T.
SEE SHEET 11 OF 65
MATCH LINE
51+00 END APPROACH CONSTRUCTION BEGIN PROJECT S 0159(2)
M.H.
EXISTING 10" VCP-SAN.
-0.6000%
-1.2000%
-1.2000%
51+50 600' V.C. 380.60 SSD=1465'
390
380
370
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
PLAN & PROFILE
STA. 42+00.00 - 58+00.00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VERMONT
SURVEYED BY W-M INC.
DRAWN BY JO
CHECKED BY TJS
IN CHARGE RAS
SCALE AS SHOWN
DATE FEB 1968
PROJECT NO. S0159(2)
SHEET 10 OF 65


VERTICAL GRANITE CURB ITEM 555-S
REMOVE EXISTING ROAD SURFACE COMMON EXCAVATION, CLASS I ITEM 103-41
5" ONE COURSE CEMENT CONCRETE SIDEWALK ITEM 560
6" ONE COURSE CEMENT CONCRETE SIDEWALK ITEM 560
CONSTRUCT DRIVE
CONCRETE CURB ITEM 401-B MOD.
VT. RTE. 22-A CURVE
D 2°19'00" LT
R 2,510.37
T 163.40
L 326.62
E 4.68
SD NOT BANK
STATION
POS
59+83
1976
82
35
20
94
70
14
80
0
WOODS
EB POC 1075+50.00
WB POC 1076+00.00
BM NO. 24 US. ELEV. 363.33
PC 62+78.69
824 POC 67+90.00
N 22° 11' W
2" COPPER
EB POC 1076+76.92
224 POC 65+86.89
Δ = 99° 43' 05" LT
EB POC 1077+42.98
224 POC 67+19.70
Δ = 98° 58' 08" LT
22-A PI 67+42.08
87+41.93
BM-7-4-A
Spk. in St.ms.
EL 373.55
Bearings Based Utility Poles Route 7 by C.J.P.S.C.
BY OTHERS
STOP PROJECT S 0159(2)
60+46
MATCH LINE
SEE SHEET 10 OF 65
PLAN
PROFILE
TRUCK TERMINAL
1 SWP
2 1/2 SWP
5' CHFD
N.Y. VIA U.S. 4
FAIR HAVEN
VT. 22-A
VT. 22-A
CASTLETON
BRANDON
TRAFFIC TURNING MOVEMENT DIAGRAM
1985 D.H.V.
-1.20 %
59.00 SCVT VC 37.60 SSD=562
2.04 %
-0.59 %
PRESENT ROAD PROFILE
380
370
360
350
340
330
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
PROFILE SCALE
HORIZ 50 FEET
VERT 10 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT ROUTE 22-A in the town of
FAIR HAVEN
PLAN STA 58+0000-68+5000
PROFILE STA 58+0000- 74+00.00
BEISTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VERMONT
PROJECT NO S 0159(2)
SHEET 11 OF 65
PLATE 7: PLAN/PROFILE



Drilling & Blasting of Solid Rock Subgrade
80+75 — 81+27
81+75 — 85+50
B.M. # T-6
Ch. ⊡ in ledge
U.S. Elev. 374.64
JUTE MATTING
ITEM 623
STATION | STATION | POS
81+00 | 81+50 | LT.
REMOVE EXISTING ROAD SURFACE, COMMON EXCAVATION, CLASS I
ITEM 103-A-1
STATION | STATION | POS
81+00 | 84+00 | LT.
86+60 | 88+00 | ℄
VT. RTE. 22-A CURVE
Δ 11°29' Lt.
D 2°00' 00"
R 2864.79
T 288.04
L 574.17
E 14.45
BANK 7/16" PER FT.
B.M.-T-6A
Spike in Ls.
EL 387.31
B.M. # T-7
Standard Disc.
U.S. Elev. 391.68
P.C. 80+25.94
P.T. 86+00.11
woods
woods, brush, alders, & field
N22°11'W
N33°40'W
VT 22-A BIT. PAV'T
P.O.T. 74+56.25
P.O.T. 79+42.04
P.I. 83+13.98
83+12.07
81+00
END VT ROUTE 22-A RELOCATION
F 020-1(4)
RESUME PROJECT
S 0159(2)
SEE SHEET 13 OF 65
MATCH LINE
Approx. Aerial Utility Relo. Route by C.V.P.S.C. & N.E.T.
76+25
850' V.C.
359.17
K=327
+0.5954 %
+3.1940 %
PRESENT ROAD PROFILE
88+00
1000' V.C.
396.70
SSD 407
390
380
370
360
350
340
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
SCALE
HORIZ. 50 FEET
VERT. 10 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT ROUTE 22-A in the town of
FAIR HAVEN
PLAN & PROFILE
STA 74+00.00 - 88+00.00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VERMONT
SURVEYED BY V.H.D.
DRAWN BY V.H.D.
DESIGNED BY W-M, INC.
IN CHARGE RAS
SCALE AS SHOWN
DATE FEB 1968
PROJECT NO. S 0159(2)
SHEET 12 OF 65



ADDITIONAL PIEZOMETER DETAILS

PIEZOMETER INSTALLATION DATA

PIEZOMETER NUMBER	GROUND ELEVATION	FINAL ELEVATION BOTTOM OF CASING	PRELIMINARY GRADE LINE
96+40, 20' LT.		CLUSTER B	
B1	327.0	323.5	345.0
B2	326.7	307.5	345.0
B3	326.9	297.5	345.0
96+40, 70' LT.		CLUSTER C	
C1	325.7	305.0	Fill Slope
C2	325.7	298.0	Fill Slope

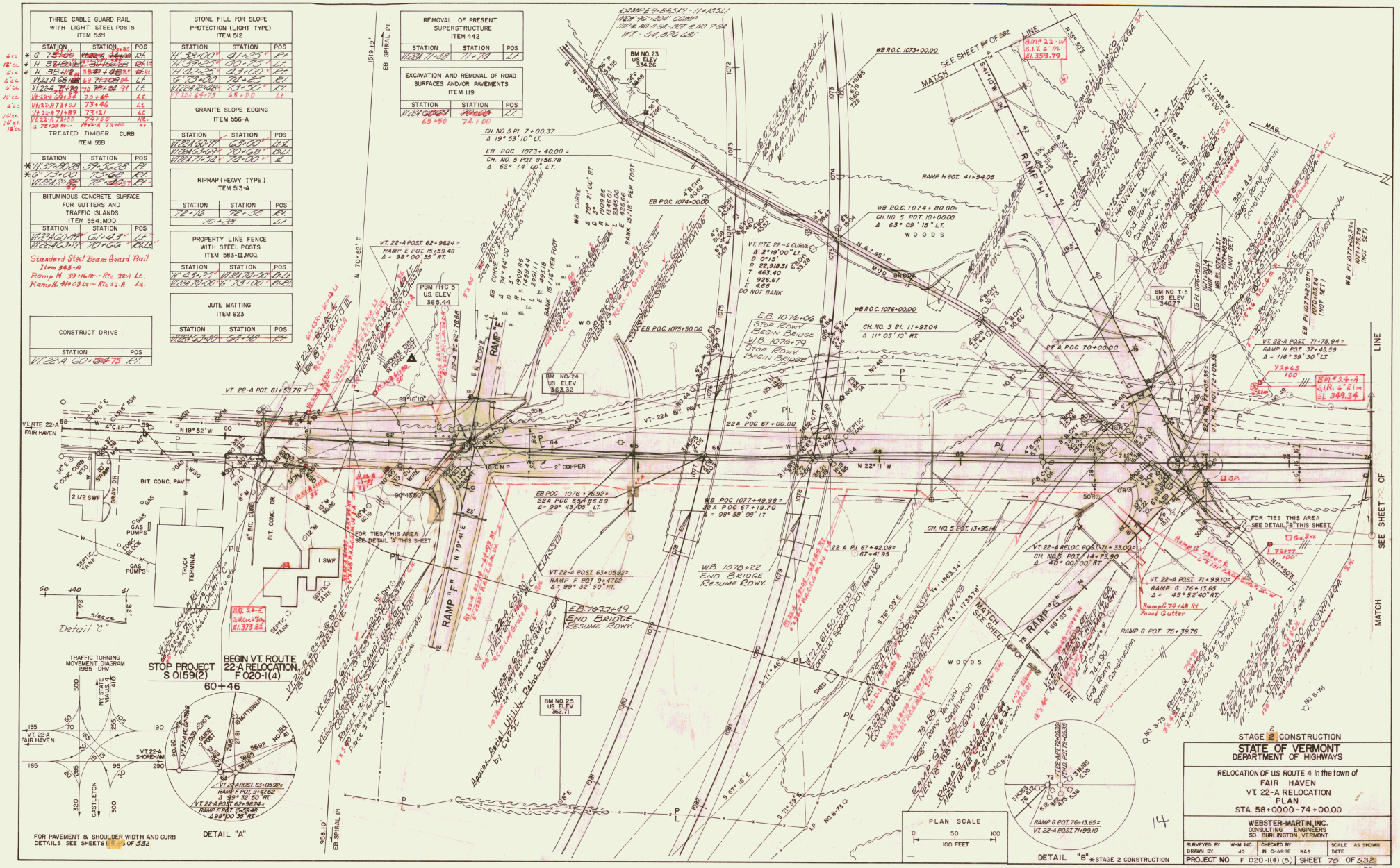
GENERAL NOTES

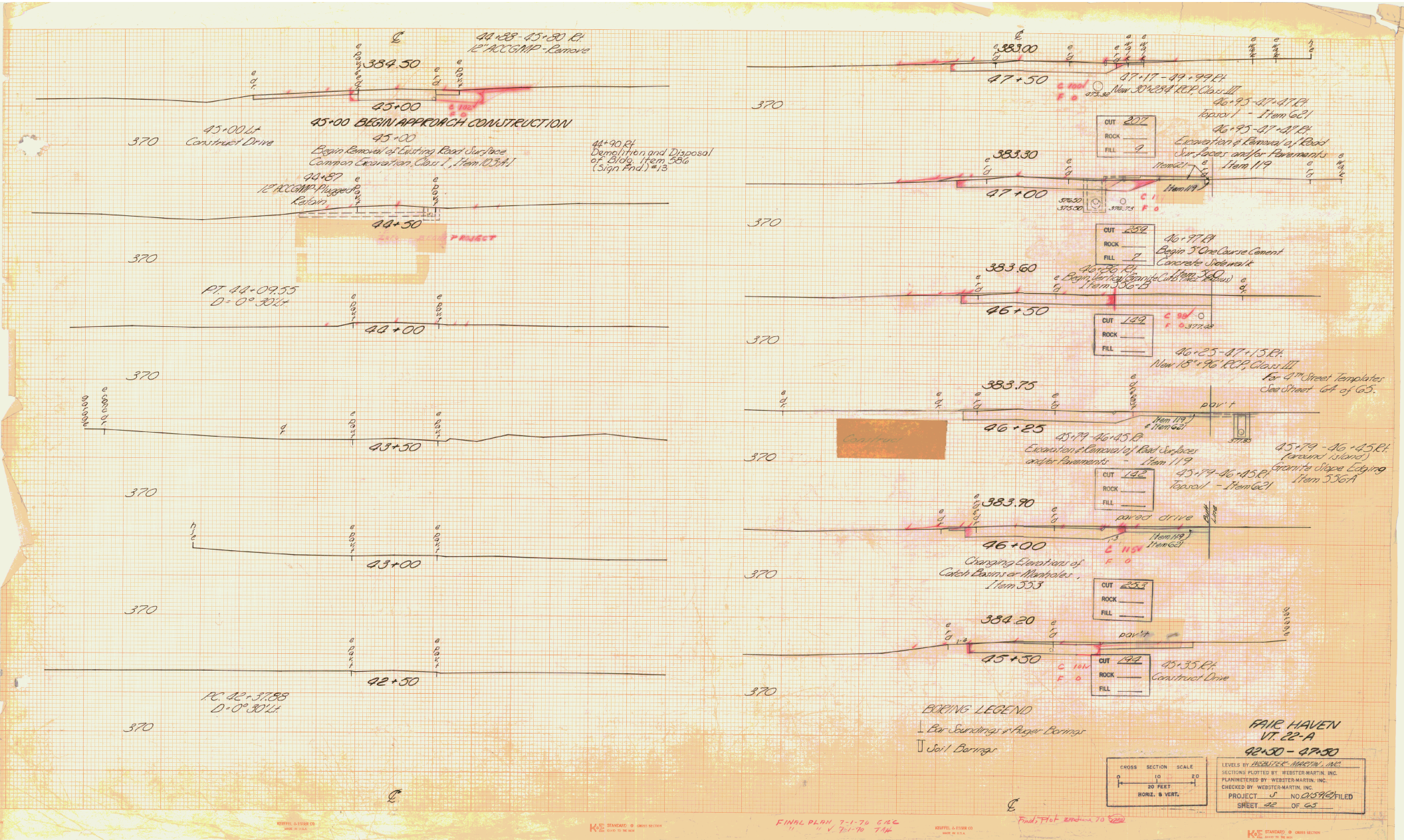
1. PIEZOMETERS WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OF THE EMBANKMENT BETWEEN STATION 95+25 - 101+55.
2. DURING THE CONSTRUCTION OF THE EMBANKMENT, THE ENGINEER WILL MAKE CERTAIN MEASUREMENTS TO DETERMINE THE RATE OF CONSOLIDATION OF THE MATERIAL. THE PROGRESS OF CONSTRUCTION SHALL BE AS DIRECTED BY THE ENGINEER AND NO EMBANKMENT MATERIAL SHALL BE PLACED WITHOUT HIS PERMISSION.
3. WHEN THE EMBANKMENT HAS BEEN CONSTRUCTED TO THE PRELIMINARY GRADE LINE SHOWN ON THE PLANS, FURTHER CONSTRUCTION SHALL BE DEFERRED FOR A PERIOD OF TIME TO BE DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL PLACE NO MATERIAL ABOVE THIS LINE UNTIL HE IS AUTHORIZED IN WRITING TO PROCEED WITH THE CONSTRUCTION OF THE EMBANKMENT. THE ALLOWABLE TOLERANCE IN THE PRELIMINARY GRADE LINE IS PLUS OR MINUS ONE FOOT (± 1 FOOT).
4. THE RATE OF EMBANKMENT LOADING SHALL NOT EXCEED THE MAXIMUM SAFE RATE OF LOADING AS DETERMINED BY THE ENGINEER DURING THE CONSTRUCTION OF THE EMBANKMENT.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT. ROUTE 22-A in the town of FAIR HAVEN
PLAN & PROFILE
STA. 88+00.00 - 101+00.00
WEBSTER-MARTIN, INC. CONSULTING ENGINEERS SO. BURLINGTON, VERMONT

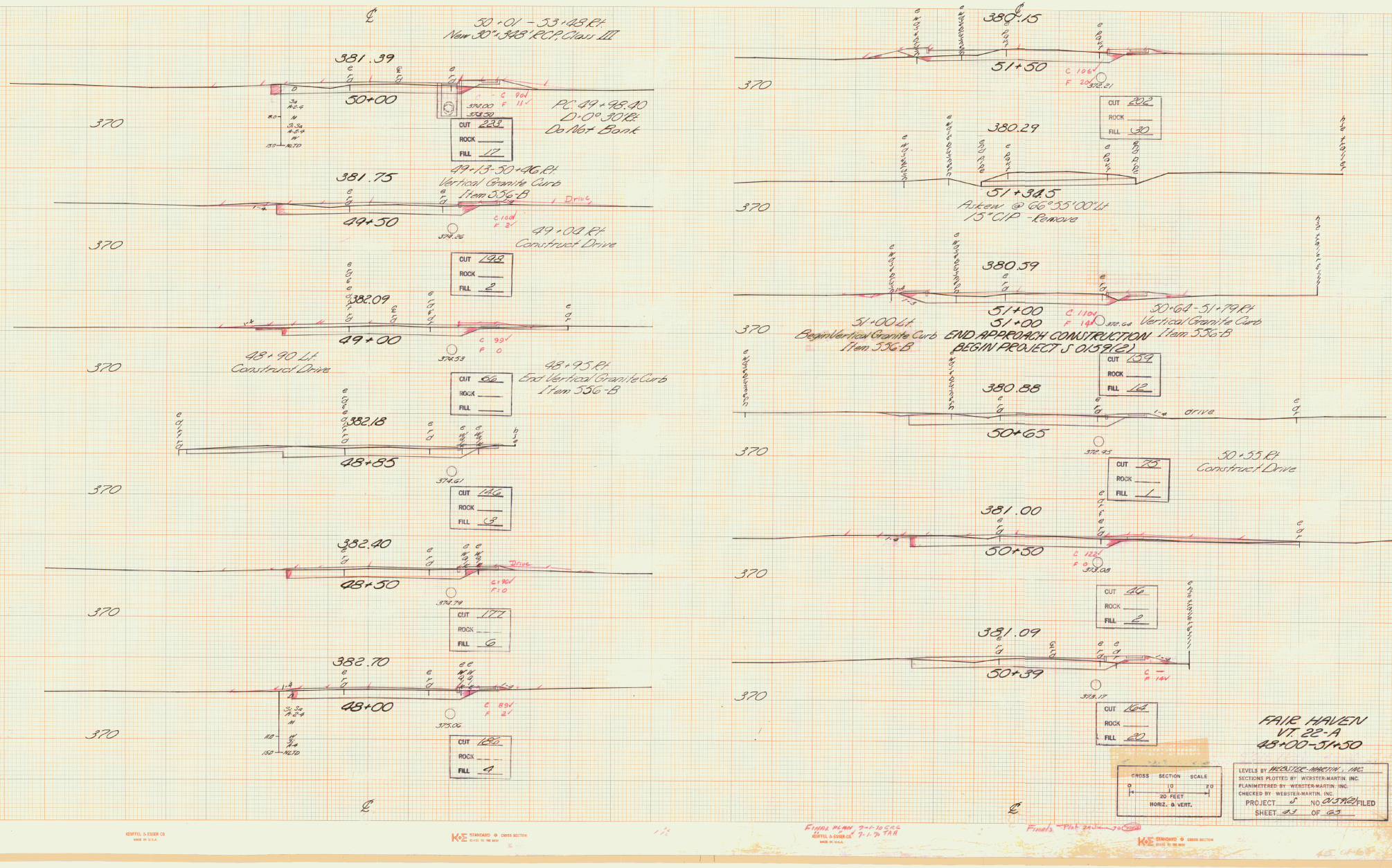
SURVEYED BY	V.H.D.	DESIGNED BY	W-M, INC.	SCALE	AS SHOWN
DRAWN BY	V.H.D.	IN CHARGE	RAS	DATE	FEB 1968

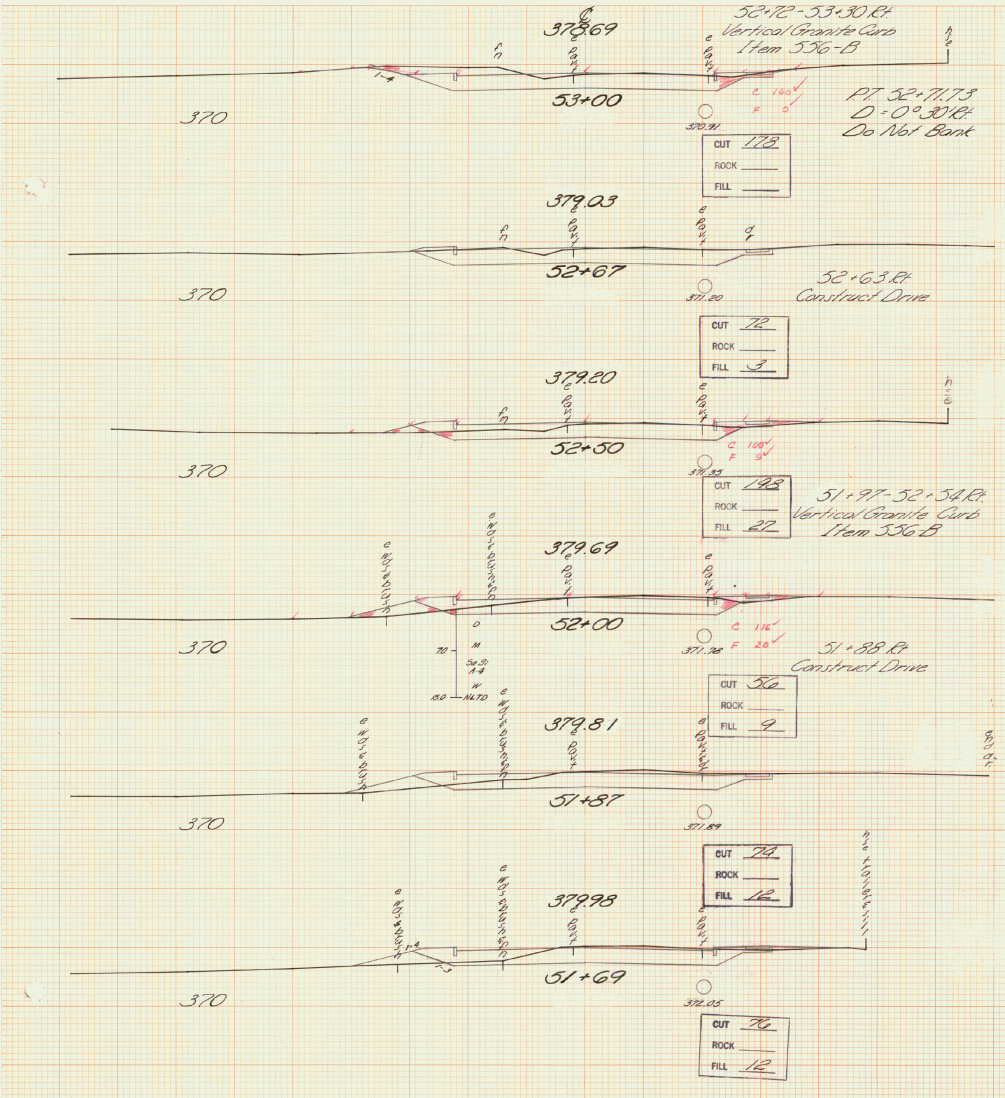
PROJECT NO. S 0159 (2) SHEET 13 OF 65

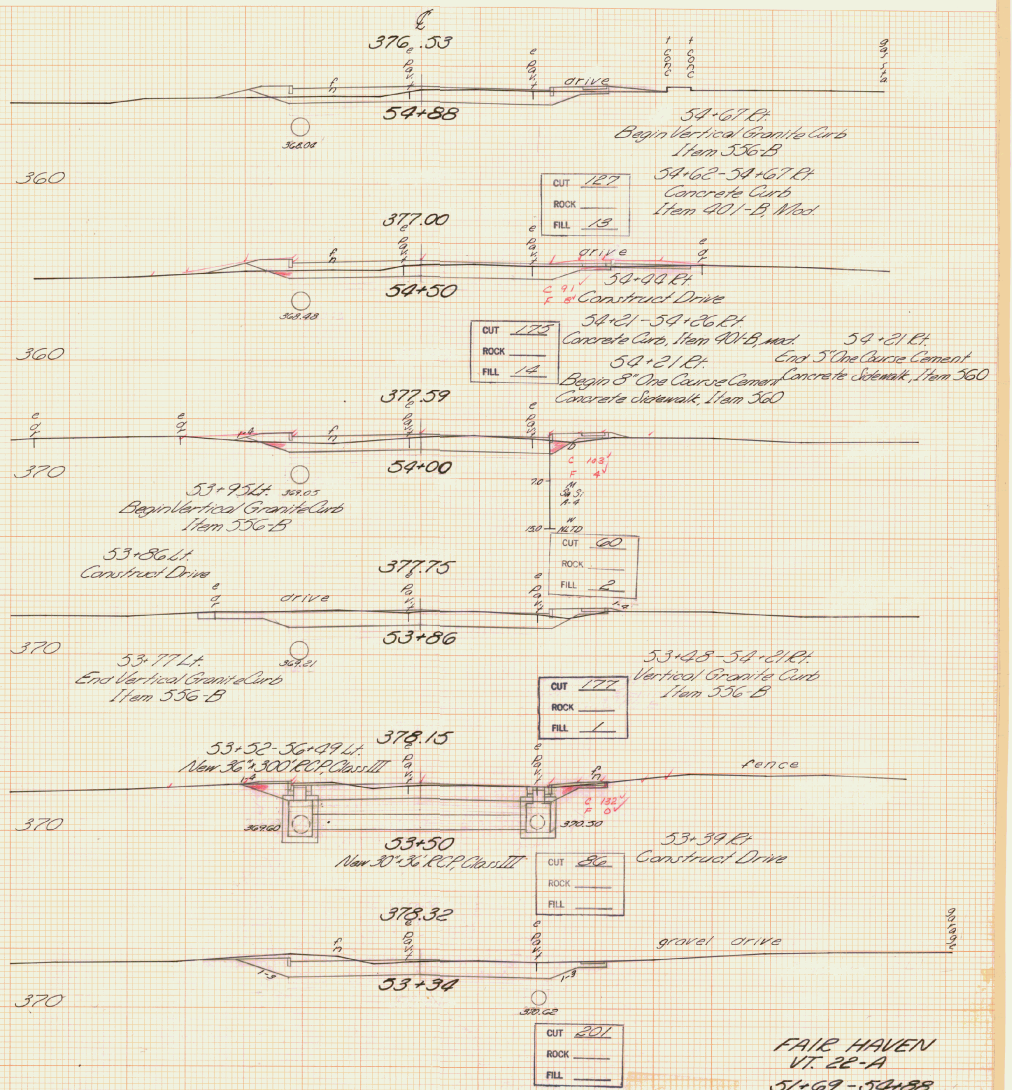

THREE CABLE GUARD RAIL WITH LIGHT STEEL POSTS ITEM 538
STONE FILL FOR SLOPE PROTECTION (LIGHT TYPE) ITEM 512
REMOVAL OF PRESENT SUPERSTRUCTURE ITEM 442
EXCAVATION AND REMOVAL OF ROAD SURFACES AND/OR PAVEMENTS ITEM 119
GRANITE SLOPE EDGING ITEM 556-A
RIPRAP (HEAVY TYPE) ITEM 513-A
TREATED TIMBER CURB ITEM 558
PROPERTY LINE FENCE WITH STEEL POSTS ITEM 583-II,MOD.
BITUMINOUS CONCRETE SURFACE FOR GUTTERS AND TRAFFIC ISLANDS ITEM 554,MOD.
JUTE MATTING ITEM 623
CONSTRUCT DRIVE
Standard Steel Beam Guard Rail Item 545-A
Ramp H 39+46.8 — Rte. 22-A Lt.
Ramp H 41+03.4 — Rte. 22-A Lt.
RAMP E 9+84.5 Pl - 11+10.5 Lt.
NEW 90'-20" CCMP
720 @ 161.3 SH - PDT. 2 NO. 7 GA
WT = 54,876 LBS.
BM NO. 23 US ELEV 334.26
BM NO. 24 US ELEV 362.32
BM NO. 25 US ELEV 362.71
BM NO. T-5 US ELEV 340.77
PBM PH-C 5 US ELEV 365.44
BM # 24-A S.R. 6" Elm EL. 349.34
BM # 23-W S.R. 9" Hk EL. 359.79
RAMP "E"
RAMP "F"
RAMP "G"
RAMP "H"
WB P.O.C. 1073+00.00
EB P.O.C. 1073+40.00 = CH. NO. 5 P.O.T. 8+56.78 Δ 62° 14' 00" LT.
CH. NO. 5 P.I. 7+00.37 Δ 19° 33' 10" LT.
EB P.O.C. 1074+00.00
WB P.O.C. 1074+80.00 = CH. NO. 5 P.O.T. 10+00.00 Δ 63° 09' 15" LT.
WB P.O.C. 1076+00.00
CH. NO. 5 P.I. 11+97.04 Δ 11° 05' 10" RT.
EB P.O.C. 1075+50.00
EB P.O.C. 1076+76.92 = 22A POC 65+96.89 Δ = 39° 43' 05" LT.
WB P.O.C. 1077+49.98 = 22A POC 67+19.70 Δ = 98° 58' 08" LT.
CH. NO. 5 P.O.T. 13+95.14
WB 1078+22 END BRIDGE RESUME ROWY.
E.B. 1077+49 END BRIDGE RESUME ROWY.
E.B. 1076+06 STOP ROWY BEGIN BRIDGE
W.B. 1076+79 STOP ROWY BEGIN BRIDGE
VT. RTE 22-A CURVE Δ 2°19'00" LT. D 0°15' R 22,918.31' T 463.40 L 926.67 E 4.68 DO NOT BANK
VT. 22-A POST. 62+98.24 = RAMP E POT. 15+59.48 Δ = 98° 00' 35" RT.
VT. 22-A POST. 61+53.76
VT. 22-A POST. 63+05.92 = RAMP F POT. 9+47.62 Δ = 99° 32' 50" RT.
VT. 22-A POST. 71+75.94 = RAMP H POT. 37+45.59 Δ = 116° 39' 30" LT.
VT. 22-A POST. 71+99.10 = RAMP G 76+13.65 Δ = 45° 52' 40" RT.
VT. 22-A RELOC. POST. 71+33.00 = CH. NO. 5 POT. 14+73.90 Δ 40° 00' 00" RT.
RAMP G POT. 75+39.76
RAMP G POT. 76+13.65 = VT. 22-A POST. 71+99.10
RAMP G 76+13.65 RT Paved Gutter
RAMP G 75+00.6
RAMP G 75+39.76
RAMP G 76+13.65
RAMP G 76+68.6
RAMP G 77+00.6
RAMP G 77+39.6
RAMP G 77+68.6
RAMP G 78+00.6
RAMP G 78+39.6
RAMP G 78+68.6
RAMP G 79+00.6
RAMP G 79+39.6
RAMP G 79+68.6
RAMP G 80+00.6
RAMP G 80+39.6
RAMP G



44+88-45+80 Rt.
12" ACCGMP-Remove
384.50
45+00
45+00 BEGIN APPROACH CONSTRUCTION
45+00 Lt
Construct Drive
45+00
Begin Removal of Existing Road Surface
Common Excavation, Class I, Item 103A-I
44+90 Rt
Demolition and Disposal
of Bldg. Item 586
(Sign Fnd.) #13
44+87
12" ACCGMP-Plugged
Retain
44+50
PROJECT
PT. 44+09.55
D=0° 30' Lt
44+00
43+50
43+00
42+50
PC. 42+37.88
D=0° 30' Lt
370
383.00
47+50
47+17-49+99 Rt.
New 30"x284' RCP, Class III
46+95-47+47 Rt.
Topsoil - Item 621
46+95-47+47 Rt.
Excavation & Removal of Road
Surfaces and/or Pavements
Item 119
CUT 207
ROCK
FILL 9
383.30
47+00
Item 621
Item 119
CUT 259
ROCK
FILL 7
46+97 Rt
Begin 5" One Course Cement
Concrete Sidewalk
Item 560
383.60
46+86 Rt.
Begin Vertical Granite Curb (Incl. Radius)
Item 556-B
46+50
CUT 149
ROCK
FILL
46+25-47+15 Rt.
New 18"x96' RCP, Class III
For 4th Street Templates
See Sheet 64 of 65.
383.75
46+25
pav't
Item 119
& Item 621
Construct
45+79-46+45 Rt.
Excavation & Removal of Road Surfaces
and/or Pavements - Item 119
45+79-46+45 Rt.
Topsoil - Item 621
45+79-46+45 Rt.
(around island)
Granite Slope Edging
Item 556-A
CUT 142
ROCK
FILL
383.90
paved drive
Item 119
Item 621
46+00
Changing Elevations of
Catch Basins or Manholes,
Item 553
CUT 253
ROCK
FILL
384.20
pav't
45+50
CUT 194
ROCK
FILL
45+35 Rt.
Construct Drive
BORING LEGEND
Bar Soundings & Auger Borings
Soil Borings
FAIR HAVEN
VT. 22-A
42+50 - 47+50
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO. 0159(2) FILED
SHEET 42 OF 65
FINAL PLAN 7-1-70 GRC
" " V 7-1-70 TAH
Final Plot


℄
50+01 – 53+48 Rt.
New 30" 328' RCP, Class III
381.39
50+00
370
CUT 223
ROCK
FILL 17
PC 49+98.40
D-0°30' Rt.
Do 16ft Bank
381.75
49+13-50+46 Rt.
Vertical Granite Curb
Item 556-B
49+50
49+00 Rt.
Construct Drive
CUT 192
FILL 2
382.09
49+00
48+90 Lt.
Construct Drive
48+95 Rt.
End Vertical Granite Curb
Item 556-B
CUT 66
382.18
48+85
CUT 146
FILL 3
382.40
48+50
CUT 177
FILL 6
382.70
48+00
CUT 186
FILL 4
℄
380.15
51+50
CUT 202
ROCK
FILL 30
380.29
51+34.5
Askew @ 66°55'00" Lt
15" CIP - Remove
380.39
51+00
51+00 Lt.
Begin Vertical Granite Curb
Item 556-B
END APPROACH CONSTRUCTION
BEGIN PROJECT S 0159(2)
50+64 - 51+79 Rt.
Vertical Granite Curb
Item 556-B
CUT 159
FILL 12
380.88
50+65
drive
CUT 22
FILL 1
50+55 Rt.
Construct Drive
381.00
50+50
CUT 46
FILL 2
381.09
50+39
CUT 164
FILL 20
℄
FAIR HAVEN
VT. 22-A
48+00-51+50
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO 0159(2) FILED
SHEET 43 OF 63
KEUFFEL & ESSER CO
FINAL PLANS 7-1-70 CRG
KEUFFEL & ESSER CO 7-1-70 TAH
Finals - Plot 24 June 70



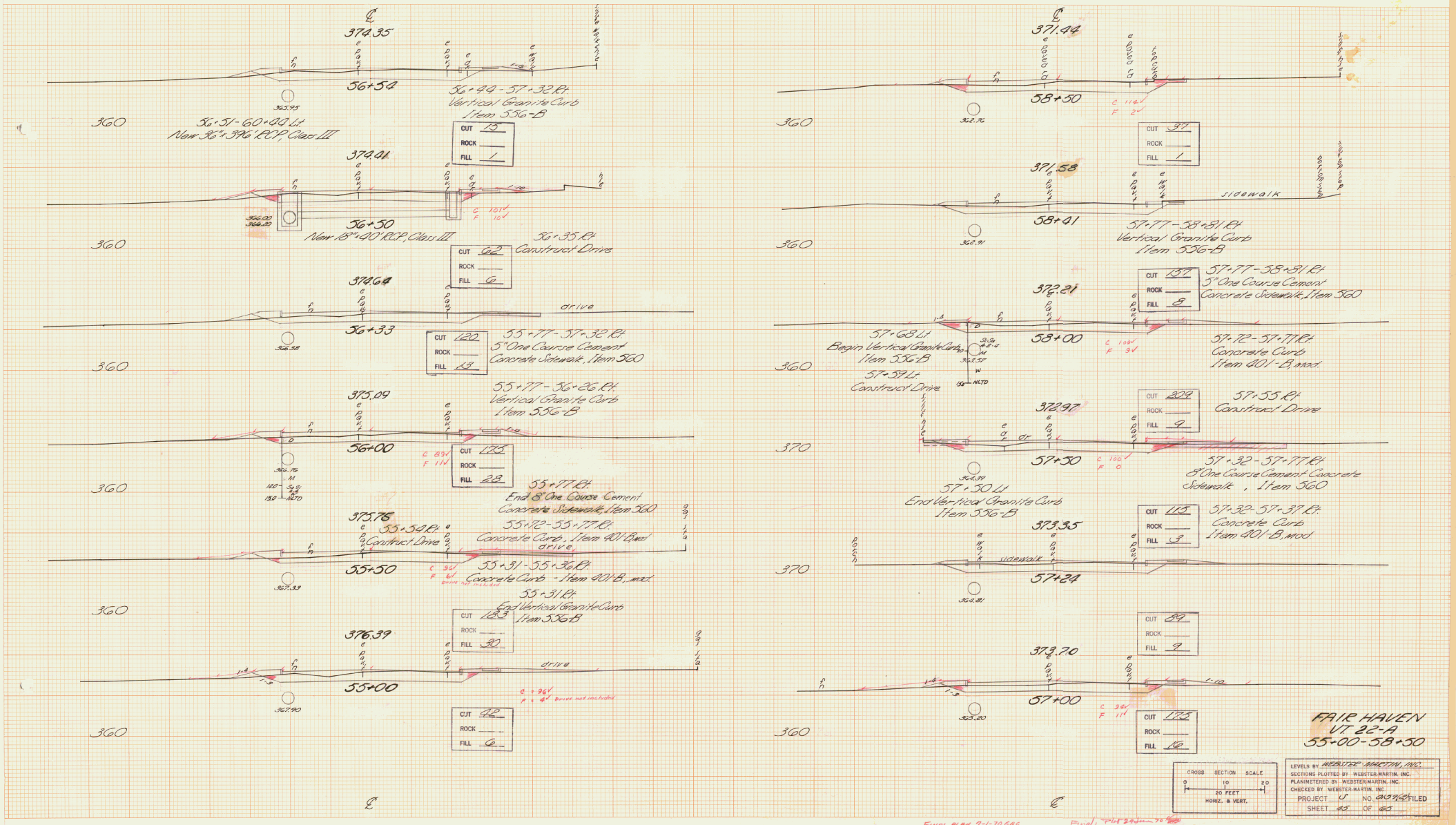


FAIR HAVEN
VT. 22-A
51+69 - 54+88

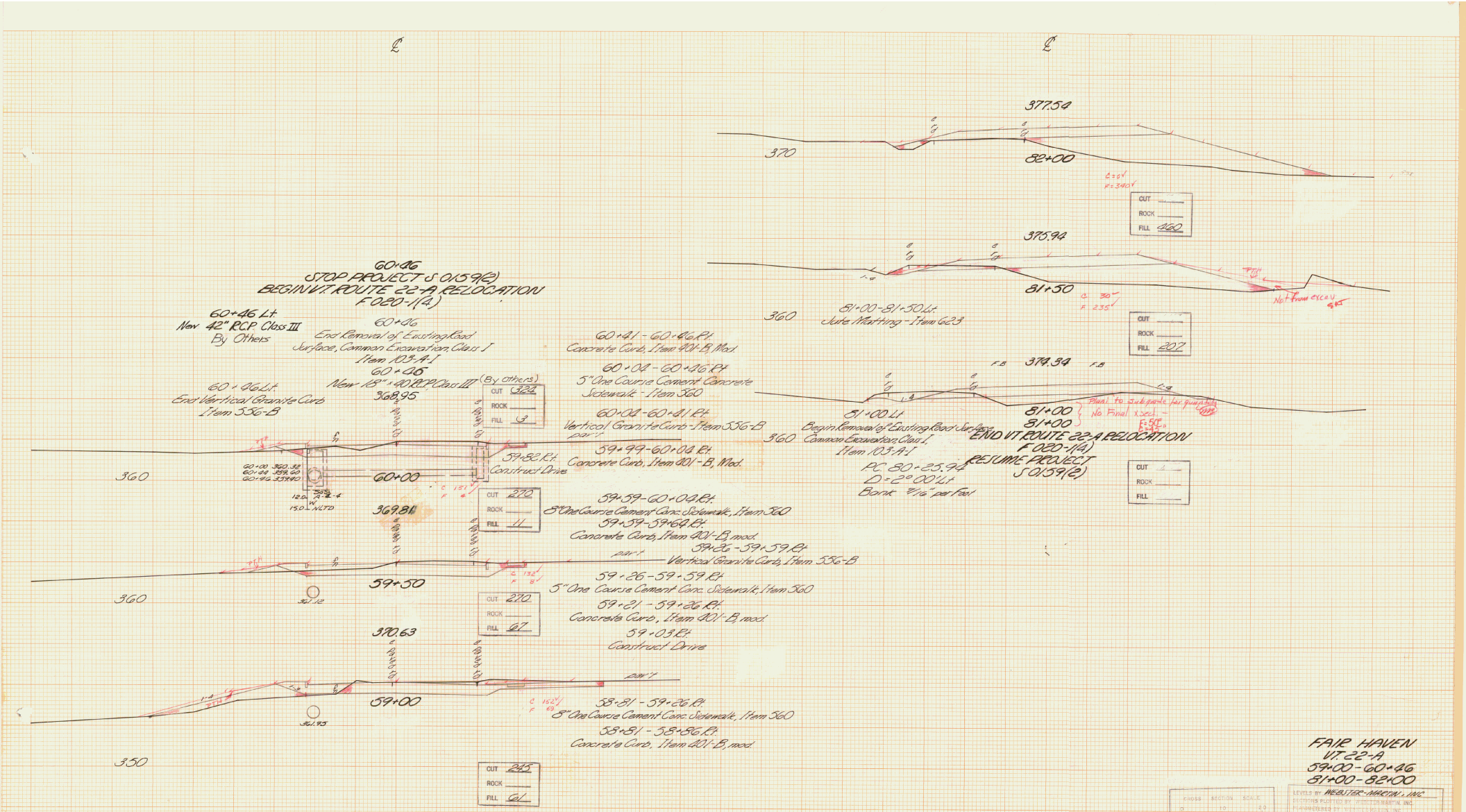
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

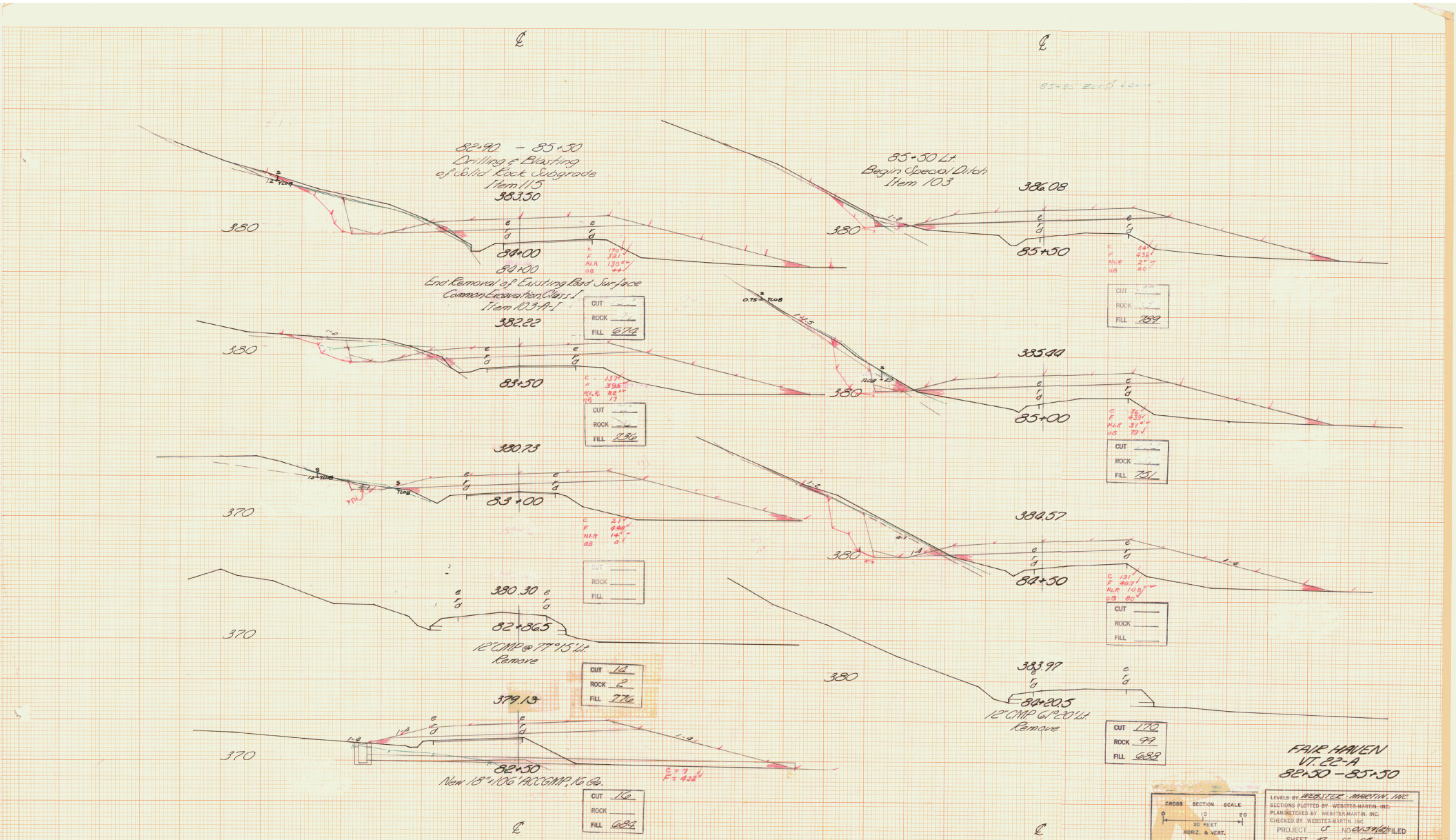
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT F NO. 013962 FILED
SHEET 44 OF 65

K&E STANDARD @ CROSS SECTION RULED TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.
Final Plan 7-1-76 C&C
Plan Chd JED 7-1-76
Finals Plot 24 June 76

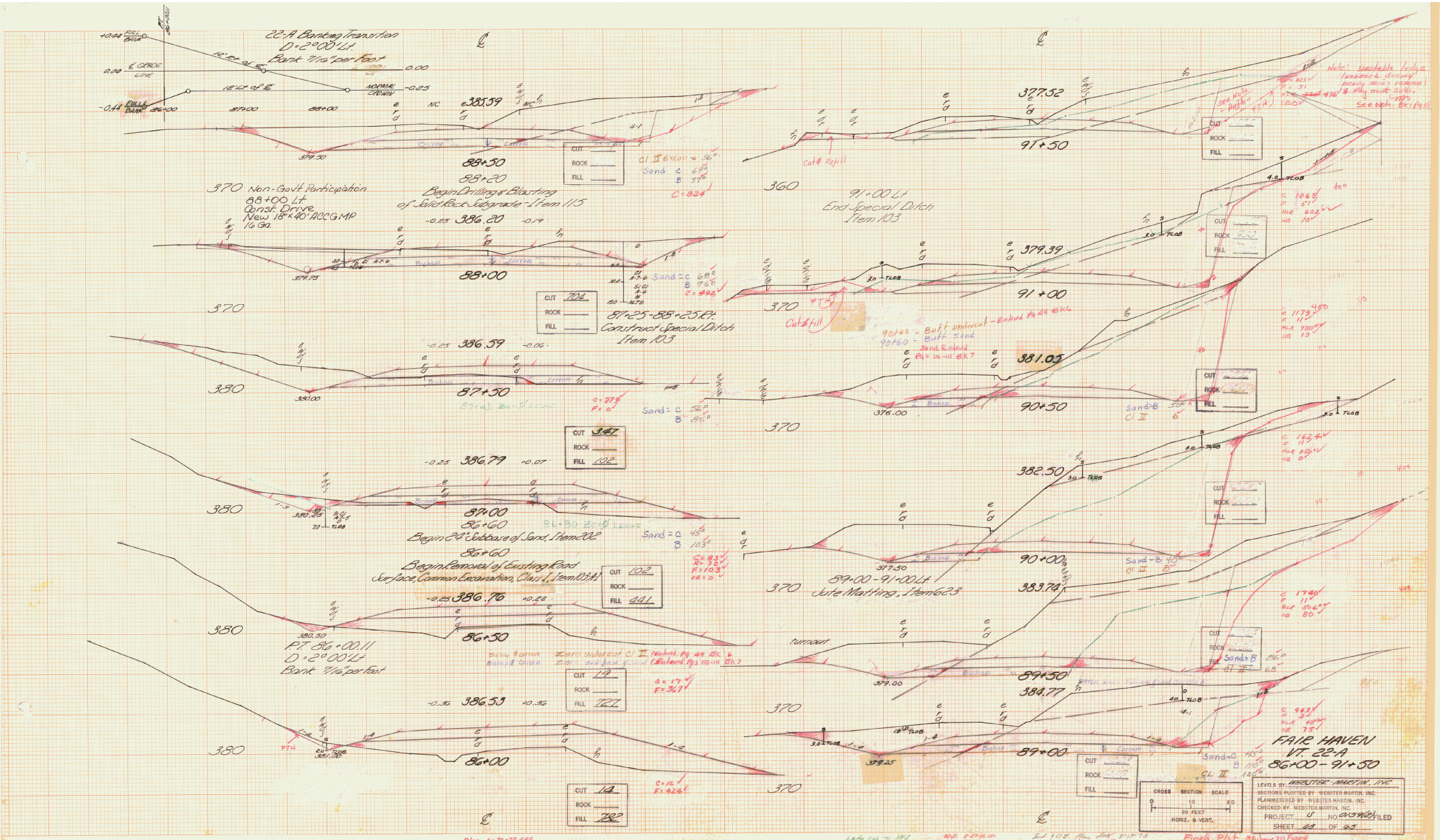


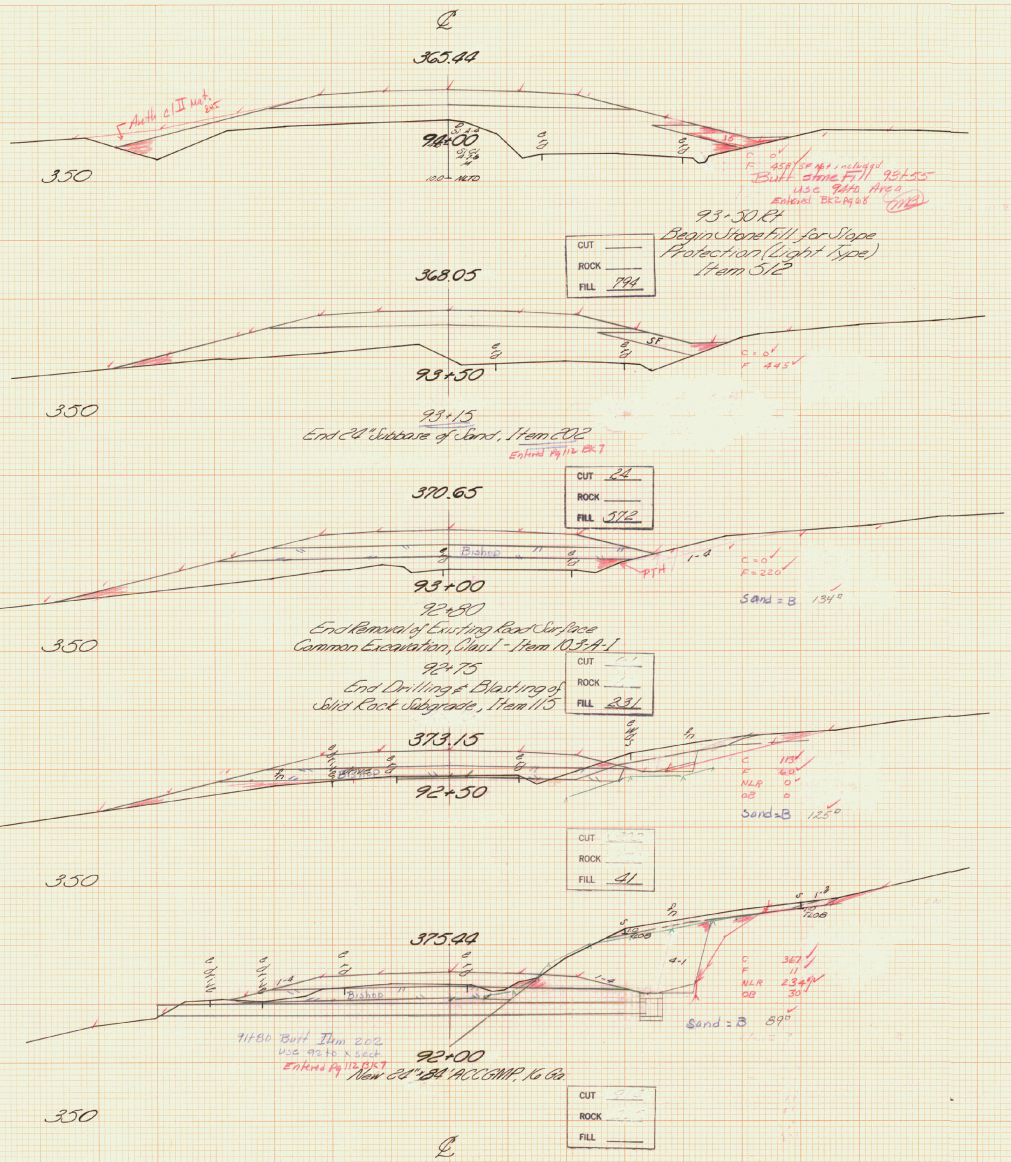
374.35
56+54
56+44 - 57+32 Rt.
Vertical Granite Curb
Item 556-B
365.95
360
56+51 - 60+44 Lt.
New 36"x396' RCP, Class III
CUT 15
ROCK
FILL 1
374.41
56+50
New 18"x40' RCP, Class III
C 101
F 10
56+35 Rt.
Construct Drive
CUT 62
ROCK
FILL 6
374.64
drive
56+33
366.98
55+77 - 57+32 Rt.
5" One Course Cement
Concrete Sidewalk, Item 560
CUT 120
ROCK
FILL 13
375.09
55+77 - 56+26 Rt.
Vertical Granite Curb
Item 556-B
56+00
C 89
F 11
CUT 175
ROCK
FILL 28
366.76
55+77 Rt.
End 8" One Course Cement
Concrete Sidewalk, Item 560
375.75
55+54 Rt.
Construct Drive
55+72 - 55+77 Rt.
Concrete Curb, Item 401-B, mod.
drive
55+50
C 96
F 6
drive not included
55+31 - 55+36 Rt.
Concrete Curb - Item 401-B, mod.
367.33
55+31 Rt.
End Vertical Granite Curb
Item 556-B
CUT 183
ROCK
FILL 30
376.39
drive
55+00
C = 96
F = 4 Drive not included
367.90
CUT 42
ROCK
FILL 6
371.44
58+50
362.76
C 114
F 2
CUT 37
ROCK
FILL 1
371.58
sidewalk
58+41
362.91
57+77 - 58+81 Rt.
Vertical Granite Curb
Item 556-B
CUT 157
ROCK
FILL 8
57+77 - 58+81 Rt.
5" One Course Cement
Concrete Sidewalk, Item 560
372.21
58+00
57+68 Lt.
Begin Vertical Granite Curb
Item 556-B
57+59 Lt.
Construct Drive
C 100
F 9
57+72 - 57+77 Rt.
Concrete Curb
Item 401-B, mod.
CUT 209
ROCK
FILL 9
57+55 Rt.
Construct Drive
372.97
57+50
C 100
F 0
57+32 - 57+77 Rt.
8" One Course Cement Concrete
Sidewalk, Item 560
364.39
57+50 Lt.
End Vertical Granite Curb
Item 556-B
CUT 115
ROCK
FILL 3
57+32 - 57+37 Rt.
Concrete Curb
Item 401-B, mod.
373.35
sidewalk
57+24
364.81
CUT 89
ROCK
FILL 9
373.70
57+00
C 94
F 11
365.20
CUT 175
ROCK
FILL 16
FAIR HAVEN
VT 22-A
55+00 - 58+50
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT U NO. 0159(2) FILED
SHEET 45 OF 65
K&E STANDARD CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.
FINAL PLAN 7-1-70 GRC
" " 7-1-70 TAH
Final: Plot 24 June 70


℄
℄
60+46
STOP PROJECT S 0159(2)
BEGIN VT. ROUTE 22-A RELOCATION
F 020-1(4)
60+46 Lt.
New 42" RCP Class III
By Others
60+46
End Removal of Existing Road
Surface, Common Excavation Class I
Item 103.A.1
60+26
New 18" x 40" RCP Class III (By Others)
368.95
60+26 Lt.
End Vertical Granite Curb
Item 556-B
60+41 - 60+46 Rt.
Concrete Curb, Item 401-B, Mod.
60+08 - 60+46 Rt.
5" One Course Cement Concrete
Sidewalk - Item 360
60+00 - 60+81 Rt.
Vertical Granite Curb - Item 556-B
59+99 - 60+08 Rt.
Concrete Curb, Item 401 - B, Mod.
59+82 Rt.
Construct Drive
60+00
369.81
59+59 - 60+04 Rt.
5" One Course Cement Conc. Sidewalk, Item 360
59+39 - 59+69 Rt.
Concrete Curb, Item 401-B, mod.
59+26 - 59+59 Rt.
Vertical Granite Curb, Item 556-B
59+50
59+26 - 59+59 Rt.
5" One Course Cement Conc. Sidewalk, Item 360
59+21 - 59+26 Rt.
Concrete Curb, Item 401-B, mod.
59+03 Rt.
Construct Drive
370.63
59+00
58+81 - 59+26 Rt.
5" One Course Cement Conc. Sidewalk, Item 360
58+81 - 58+56 Rt.
Concrete Curb, Item 401-B, mod.
377.54
370
82+00
375.94
81+50
360
81+00 - 81+50 Lt.
Jute Matting - Item 623
379.34
81+00 Lt.
Begin Removal of Existing Road Surface
Common Excavation Class I
Item 103.A.1
PC 80+23.94
D = 2° 00' Lt.
Bank 7/16" per foot
81+00
81+00
END VT. ROUTE 22-A RELOCATION
F 020-1(4)
RESUME PROJECT
S 0159(2)
CUT 322
ROCK
FILL 9
CUT 270
ROCK
FILL 11
CUT 270
ROCK
FILL 67
CUT 245
ROCK
FILL 61
CUT
ROCK
FILL 220
CUT
ROCK
FILL 207
CUT
ROCK
FILL
Final to Subgrade for quantity
No Final x sect.
F: 50'
C: 47'
FAIR HAVEN
VT. 22-A
59+00 - 60+46
81+00 - 82+00
CROSS SECTION SCALE
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
DIGITIZED BY VTRANS ENGINEERING
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S 0159(2) FILED
SHEET 49 OF 68
KEUFFEL & ESSER CO
K&E STANDARD CROSS SECTION
Final Plan SBC 7-1-70
Plan Ck'd JBD 7-1-70
Final Plan 24 June 70 SBC



82+90 - 85+50
Drilling & Blasting
of Solid Rock Subgrade
Item 115
383.50
380
84+00
84+00
End Removal of Existing Road Surface
Common Excavation, Class I
Item 103-A-1
CUT
ROCK
FILL 674
382.22
380
83+50
CUT
ROCK
FILL 736
380.73
370
83+00
CUT
ROCK
FILL
380.30
370
82+86.5
12" CMP @ 77°15' Lt.
Remove
CUT 14
ROCK 2
FILL 776
379.13
370
82+50
New 18"×106' ACCGMP, 16 Ga.
CUT 16
ROCK
FILL 684
85+50 Lt.
Begin Special Ditch
Item 103
386.08
380
85+50
CUT
ROCK
FILL 789
385.44
380
85+00
CUT
ROCK
FILL 751
384.57
380
84+50
CUT
ROCK
FILL
383.97
380
84+20.5
12" CMP 61°20' Lt.
Remove
CUT 170
ROCK 99
FILL 688
FAIR HAVEN
VT. 22-A
82+50 - 85+50
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT U NO 0139(2) FILED
SHEET 47 OF 65
Plan 6-30-70 GRC
Pin al Plot 30 June 70 MJD


22-A Banking Transition
D=2°00' Lt.
Bank 7/16" per Foot
Non-Gov't Participation
88+00 Lt.
Const. Drive
New 18"x40' ACCGMP
16 Ga.
Begin Drilling & Blasting
of Solid Rock Subgrade - Item 115
87+25-88+25 Rt.
Construct Special Ditch
Item 103
91+00 Lt
End Special Ditch
Item 103
Begin 24" Subbase of Sand, Item 202
Begin Removal of Existing Road
Surface, Common Excavation, Class I, Item 103-A-1
89+00-91+00 Lt.
Jute Matting, Item 623
P.T. 86+00.11
D=2°00' Lt
Bank 7/16" per Foot
FAIR HAVEN
VT. 22-A
86+00 - 91+50
CROSS SECTION SCALE
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT U NO. 0159(2) FILED
SHEET 48 OF 65
Plan. 6-30-70 GRC
Finals Plot 30 June 70
Plan BD 7-1-70



FAIR HAVEN
VT 22-A
92+00 - 94+00

CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO. 0159(8) FILED
SHEET 49 OF 65

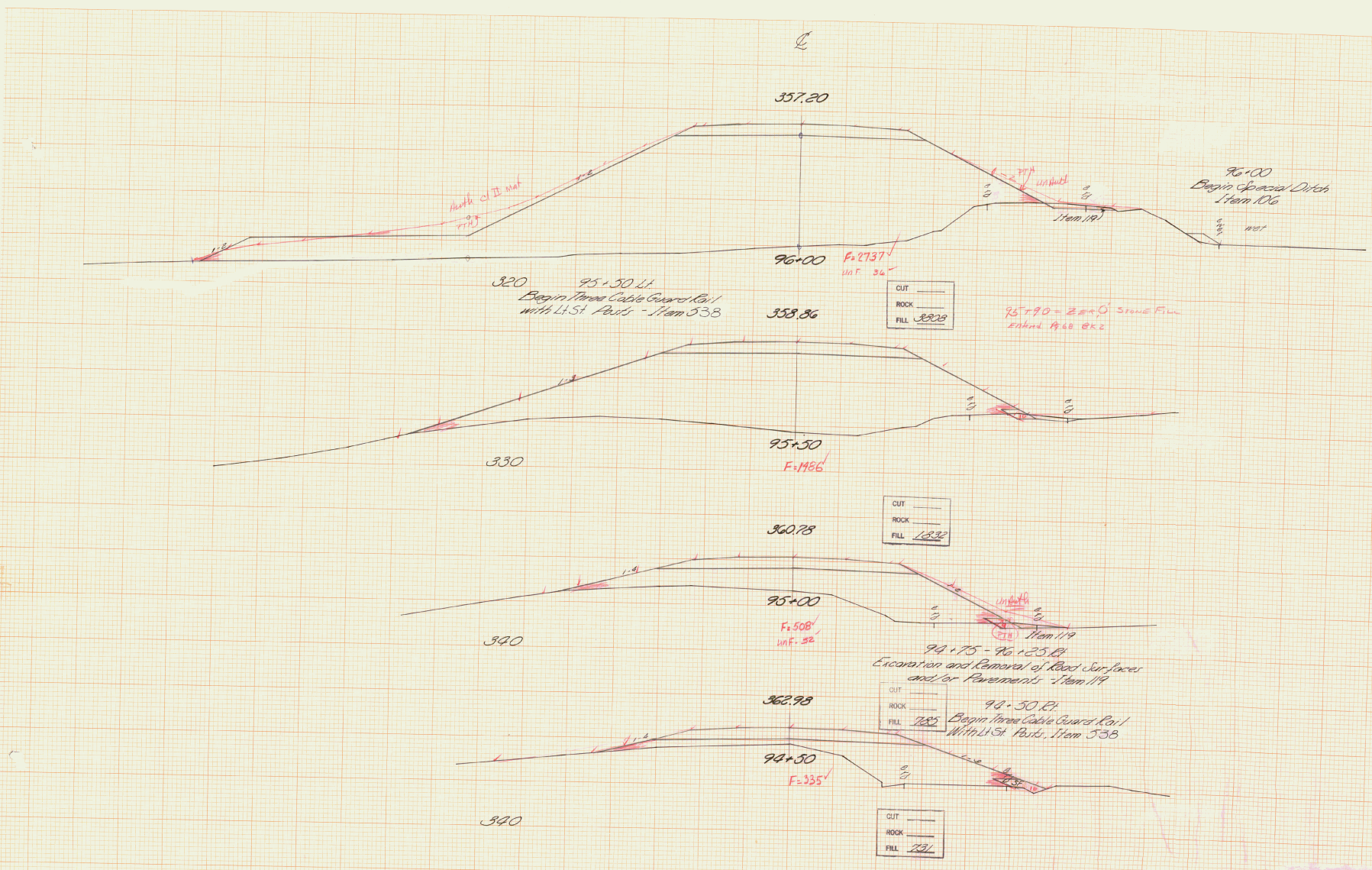
Finals Plot 30 June 70 (MB)

Final Plot GRC 7-1-70
Plan JBD 7-1-70

Ledge Feb '70 [illegible]
Sand Plot 13 Mar 70 NWB
Sand Plans by Survey 3-13-70
[illegible] 13 Mar 70 NWB

NLR 2-27-70 SFC
SF Plot 8 Plan 13 Mar 70 NWB
Plan [illegible] by Survey 3-1-70

KEUFFEL & ESSER CO. MADE IN U.S.A.



FAIR HAVEN
VT 22-A
94+50-96+00

CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

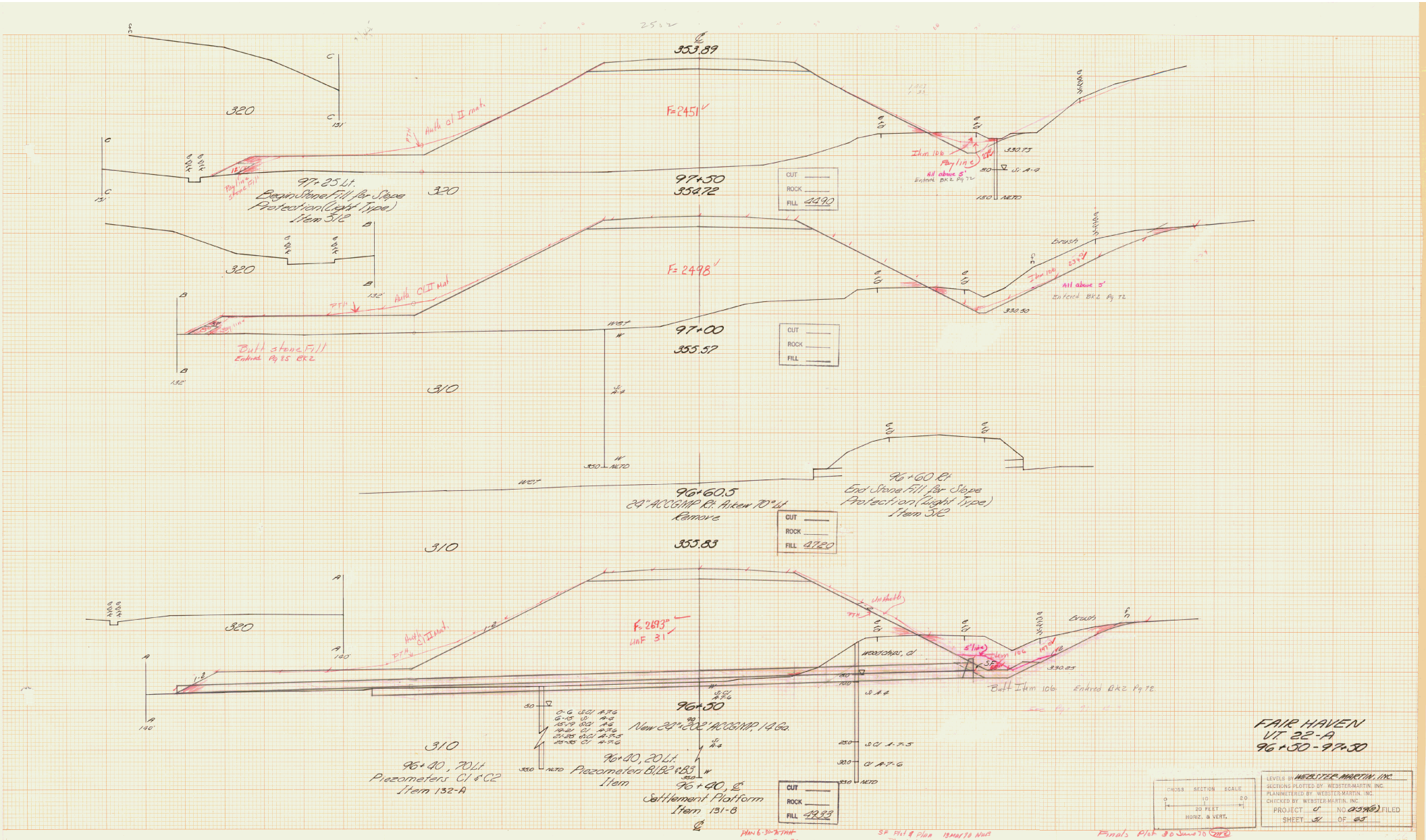
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO 0159(2) FILED
SHEET 50 OF 65

Finals Plot 30 June 70 MB

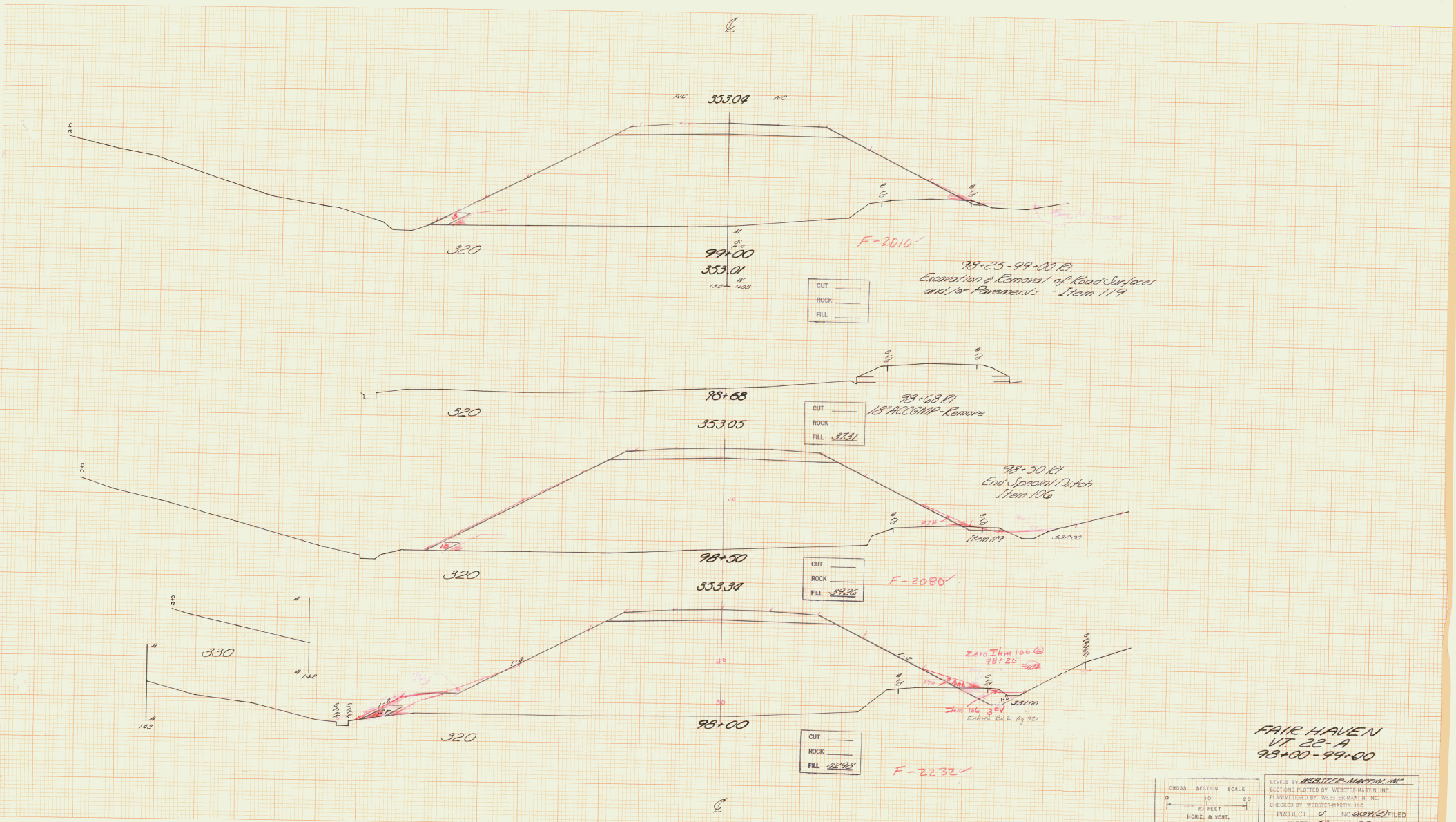
Plan 6-30-70 MAH
Plan 7-1-70 BD

SF Plot & Plan 13 Mar 70 NAB
Plan ck by Sure 3-13-70

KEUFFEL & ESSER CO. MADE IN U.S.A.



353.89
320
F=2451
Auth Cl II mat.
97+25 Lt.
Begin Stone Fill for Slope
Protection (Light Type)
Item 512
97+50
354.72
CUT
ROCK
FILL 4490
Item 106
Pay line
All above 5'
Entered BK2 Pg 72
330.75
320
F=2498
Auth Cl II Mat
Butt stone Fill
Entered Pg 85 BK2
97+00
355.57
brush
All above 5'
Entered BK2 Pg 72
330.50
310
96+60.5
24" ACCGMP Rt. Askew 70° Lt
Remove
96+60 Rt
End Stone Fill for Slope
Protection (Light Type)
Item 512
CUT
ROCK
FILL 4720
355.83
310
320
F=2693°
UnF 31
Auth Cl II Mat.
Unauth
Brush
Woodchips, Cl
Item 106
Butt Item 106 Entered BK2 Pg 72
330.85
96+50
New 24" x 202' ACCGMP, 14 Ga.
310
96+40, 70 Lt
Piezometers C1 & C2
Item 132-A
96+40, 20 Lt.
Piezometers B1, B2 & B3
Item
96+40, ℄
Settlement Platform
Item 131-B
CUT
ROCK
FILL 4933
FAIR HAVEN
VT. 22-A
96+50 - 97+50
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT 5 NO. 0159(8) FILED
SHEET 51 OF 65
Plan 6-30-70 TAH
Plan 7-1-70 CAC
SF Plot & Plan 13 Mar 70 NWB
Plan ck by SWK 3-13-70
Finals Plot 30 June 70 TMR
KEUFFEL & ESSER CO.
MADE IN U.S.A.
STANDARD CROSS SECTION

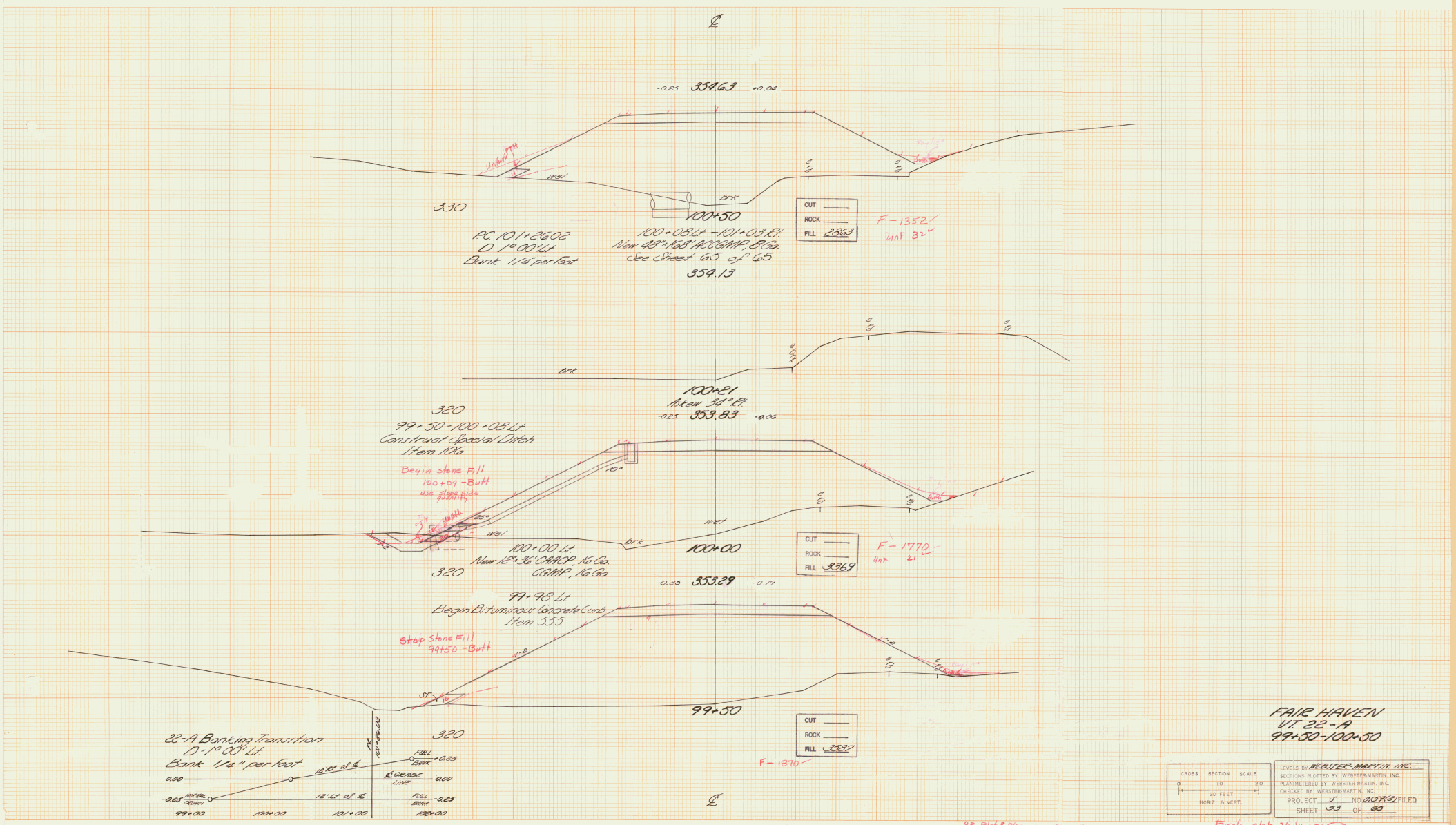


PLAN - by MRR 6/29/70
Checked by D Ross 6-29-70

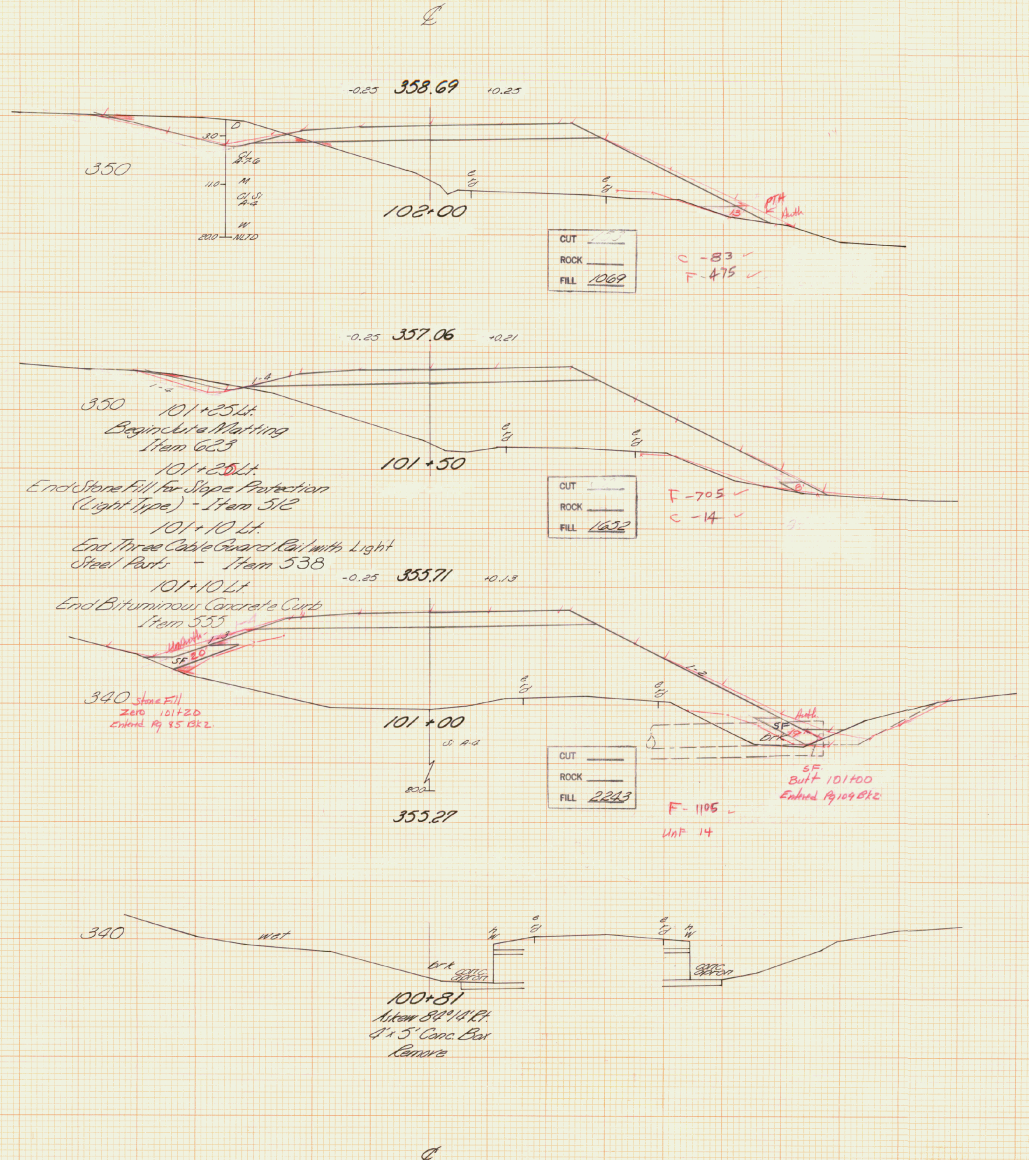
SF Plot & Plan. 13 Mar 70 NWB
Plan ck by SWK 3-13-70

Final Plot 26 June 70 [illegible]

K&E STANDARD CROSS SECTION
KEUFFEL & ESSER CO. MADE IN U.S.A.



℄
-0.25 354.63 +0.04
Unbuilt FTH
wet
brk
330
100+50
P.C. 101+26.02
D 1°00' Lt.
Bank 1/4" per foot
100+08 Lt - 101+03 Rt.
New 48"x168' ACCGMP, 8 Ga.
See Sheet 65 of 65
354.13
CUT
ROCK
FILL 2863
F-1352
UnF 32
brk
100+21
Askew 34° Rt.
-0.25 353.83 -0.06
320
99+50-100+08 Lt.
Construct Special Ditch
Item 106
Begin stone Fill
100+09 - Butt
use slope side quantity
10°
25°
wet
brk
100+00 Lt.
New 12"x36' CAACP, 16 Ga.
CGMP, 16 Ga.
100+00
CUT
ROCK
FILL 3369
F-1770
UnF 21
320
-0.25 353.29 -0.19
99+98 Lt.
Begin Bituminous Concrete Curb
Item 555
Stop Stone Fill
99+50 - Butt
1-2
SF
99+50
CUT
ROCK
FILL 3587
F-1870
320
22-A Banking Transition
D-1°00' Lt.
Bank 1/4" per foot
PC 101+26.02
12' Rt of ℄
FULL BANK +0.25
℄ GRADE LINE 0.00
0.00
-0.25 NORMAL GROWN
12' Lt of ℄
FULL BANK -0.25
99+00
100+00
101+00
102+00
℄
FAIR HAVEN
VT. 22-A
99+50-100+50
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT V NO. 0159(2) FILED
SHEET 53 OF 65
KEUFFEL & ESSER CO. MADE IN U.S.A.
K&E STANDARD CROSS SECTION
PLAN - by - MRR 6/29/70
checked by D. Ross 6-29-70
SF Plot & Plan: 13 Apr 70 NWB
Plan CK by Gauss 5-13-70
Finals plot 26 June 70



FAIR HAVEN
VT. 22-A
100+81-102+00

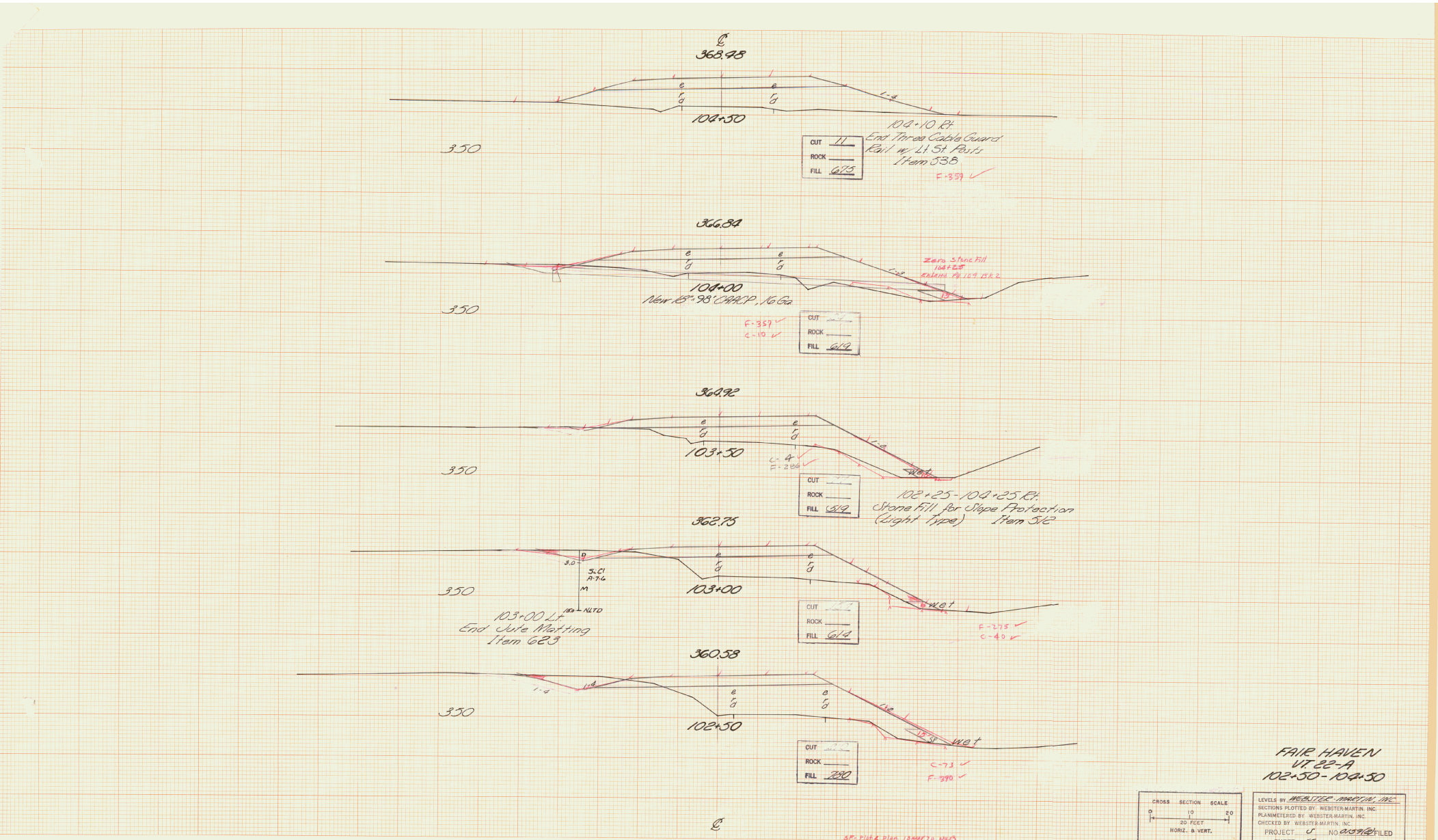
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO. 0159(2) FILED
SHEET 54 OF 65

Finals Plot 26 June 70

Sm plot & plan 12 MAR 70 NHS
Fill ck by Sutk 3-13-70
FILL PLAN. BY DAVID ROSS 6-29-70
PLAN-CK by MRR 6/29/70

K&E STANDARD CROSS SECTION READ TO THE RIGHT
KEUFFEL & ESSER CO. MADE IN U.S.A.



FAIR HAVEN
VT. 22-A
102+50-104+50

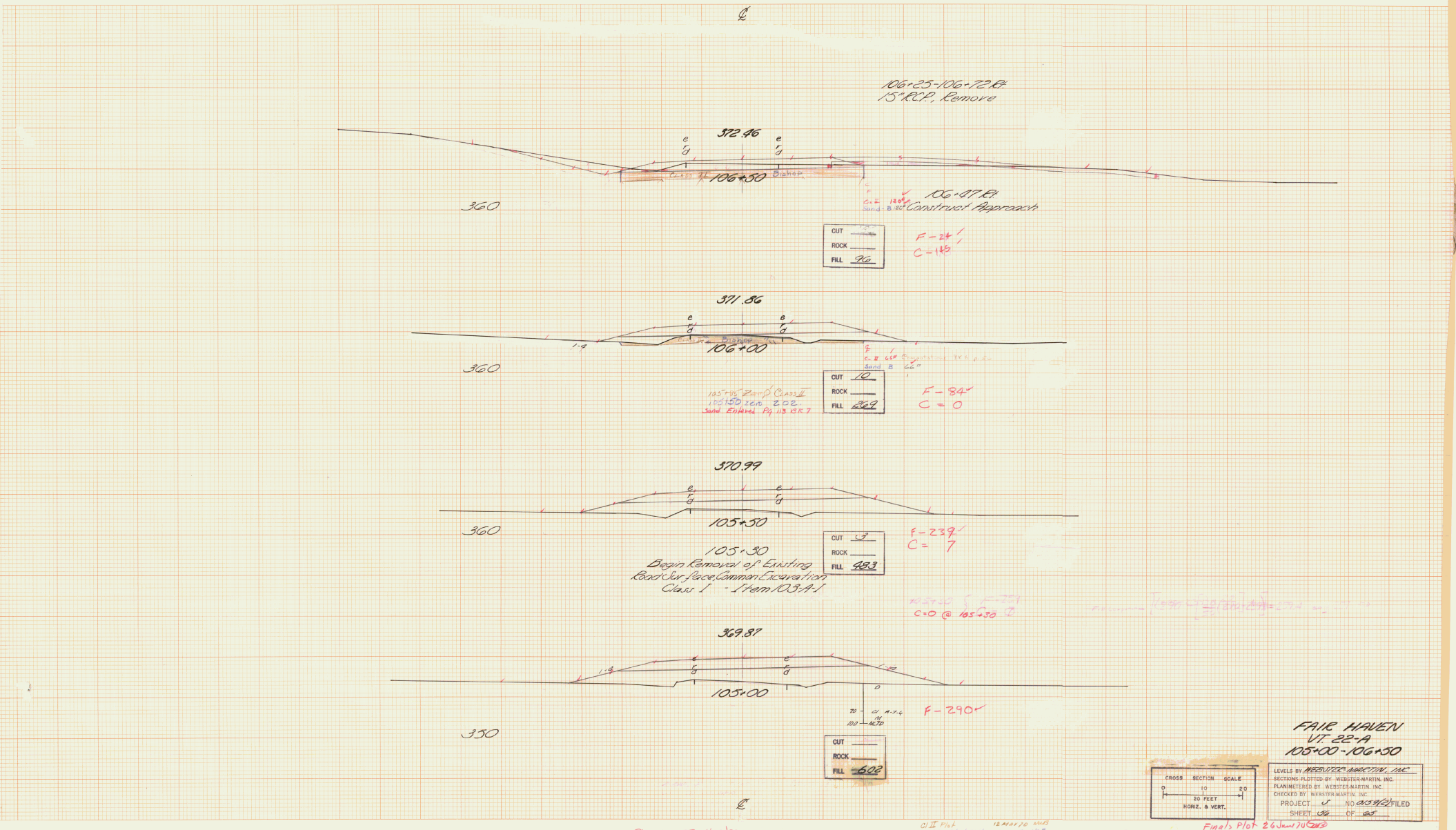
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO 0139(2) FILED
SHEET 55 OF 65

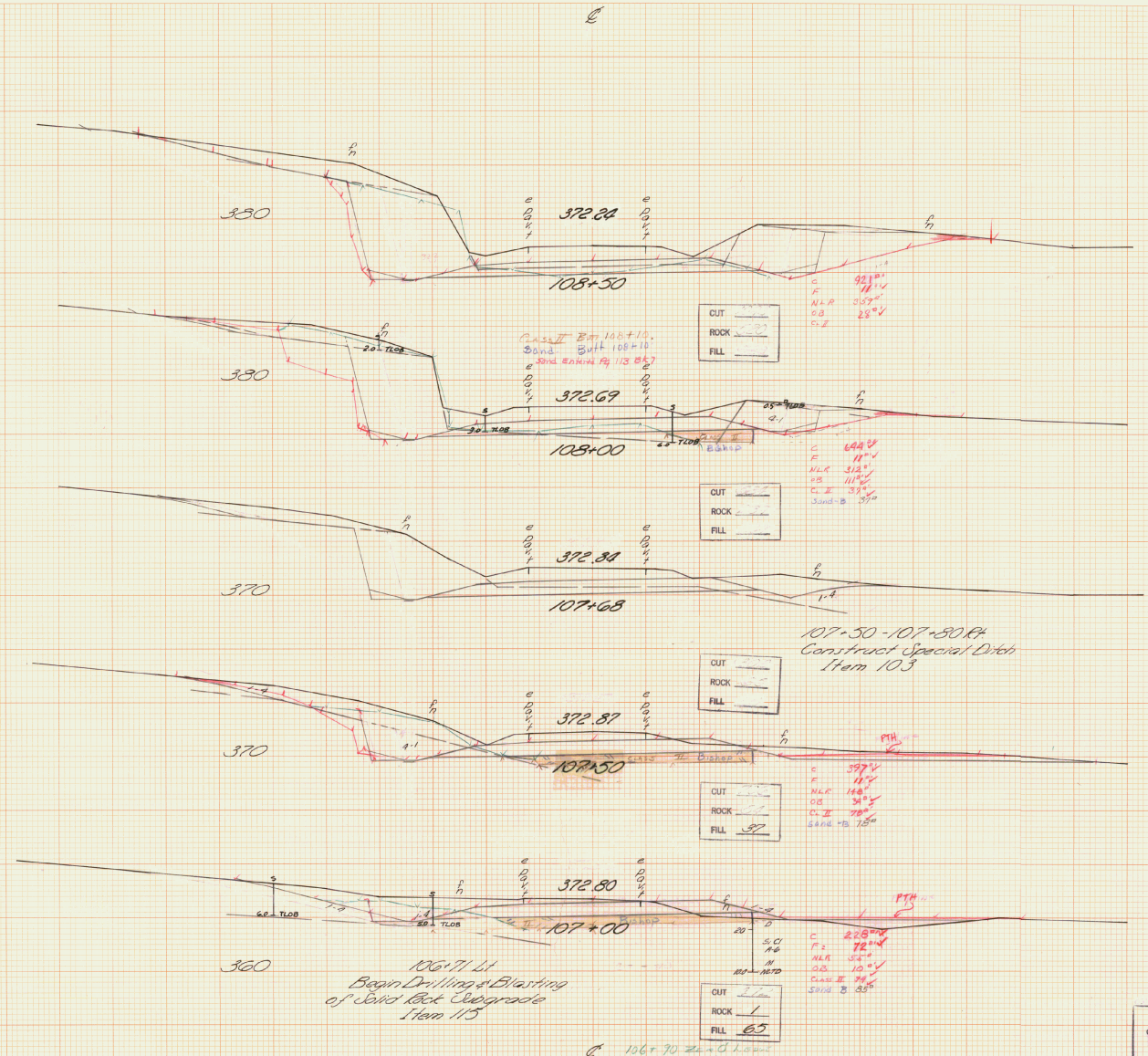
Finals plot 26 June 70

SF- Plot & plan 13 MAR 70 NWB
Sheet ck by SMR 3-13-70
FILL PLAN. BY D. ROSS 6-29-70
PLAN-CK by MRR 6/29/70

KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION EXCEL TO THE INCH



106+25-106+72 Rt.
15" R.C.P., Remove
372.46
106+50
Bishop
106+47 Rt.
Construct Approach
360
CUT
ROCK
FILL 96
F-24
C-145
371.86
106+00
360
CUT 10
ROCK
FILL 269
F-84
C=0
370.99
105+50
360
CUT 3
ROCK
FILL 483
F-239
C= 7
105+30
Begin Removal of Existing
Road Surface, Common Excavation
Class I - Item 103-A-1
C=0 @ 105+30
369.87
105+00
350
CUT
ROCK
FILL 602
F-290
FAIR HAVEN
VT. 22-A
105+00-106+50
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO 0159(2) FILED
SHEET 56 OF 65
Finals Plot 26 June 70
STANDARD CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.
PLAN by MRR 6/29/70
Checked by D.R.Ross 6-29-70
Cl II Plot 12 MAY 70 NWB
Sand backfill Plot 12 MAY 70 NWB
Sand backfill Plan 13 May 70 SWK
Cl II Plan ck by SWK 3-17-70



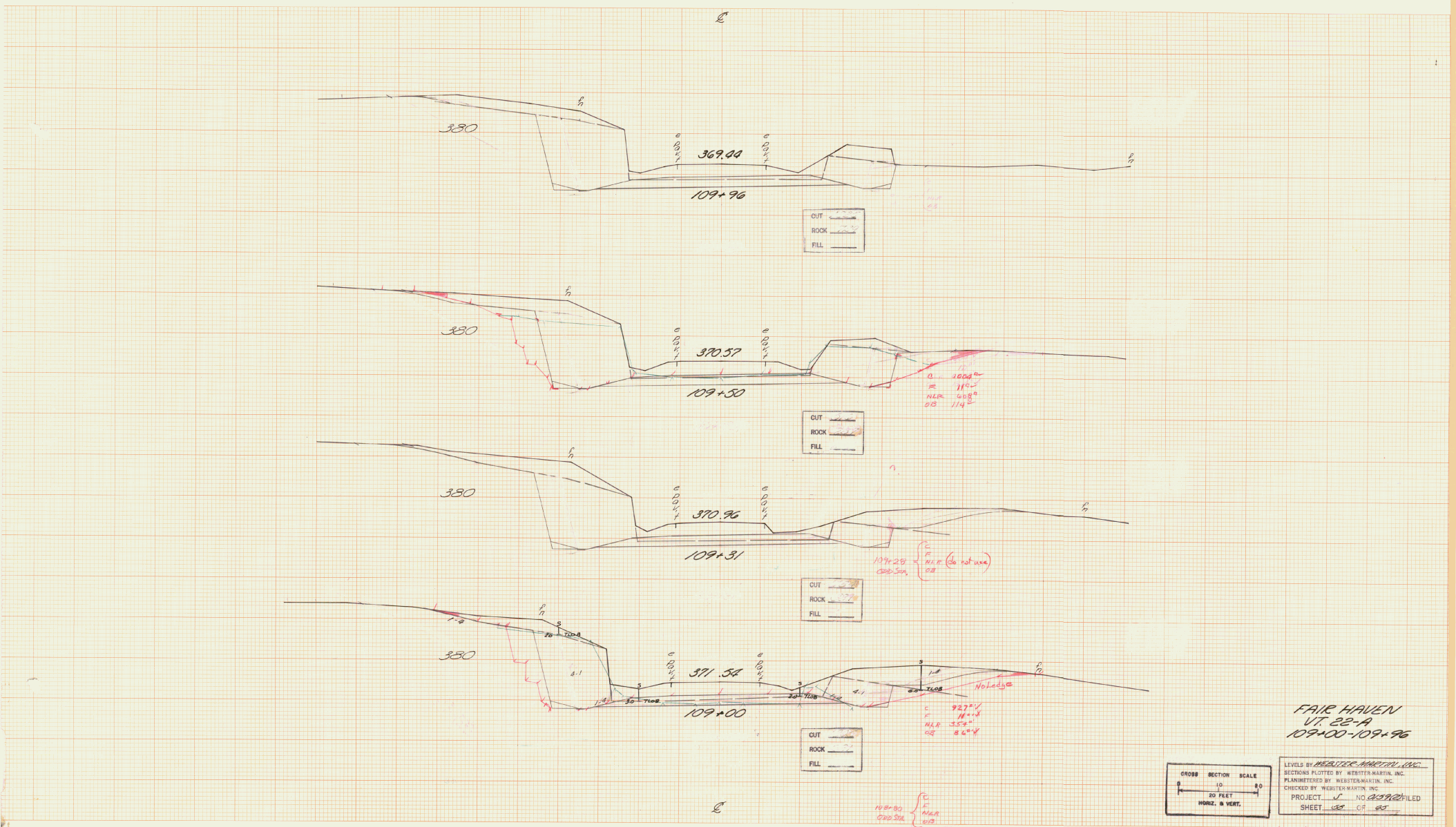
FAIR HAVEN
VT 22-A
107+00 - 108+50

CROSS SECTION SCALE
0 10 20
20 FEET
HORZ. & VERT.

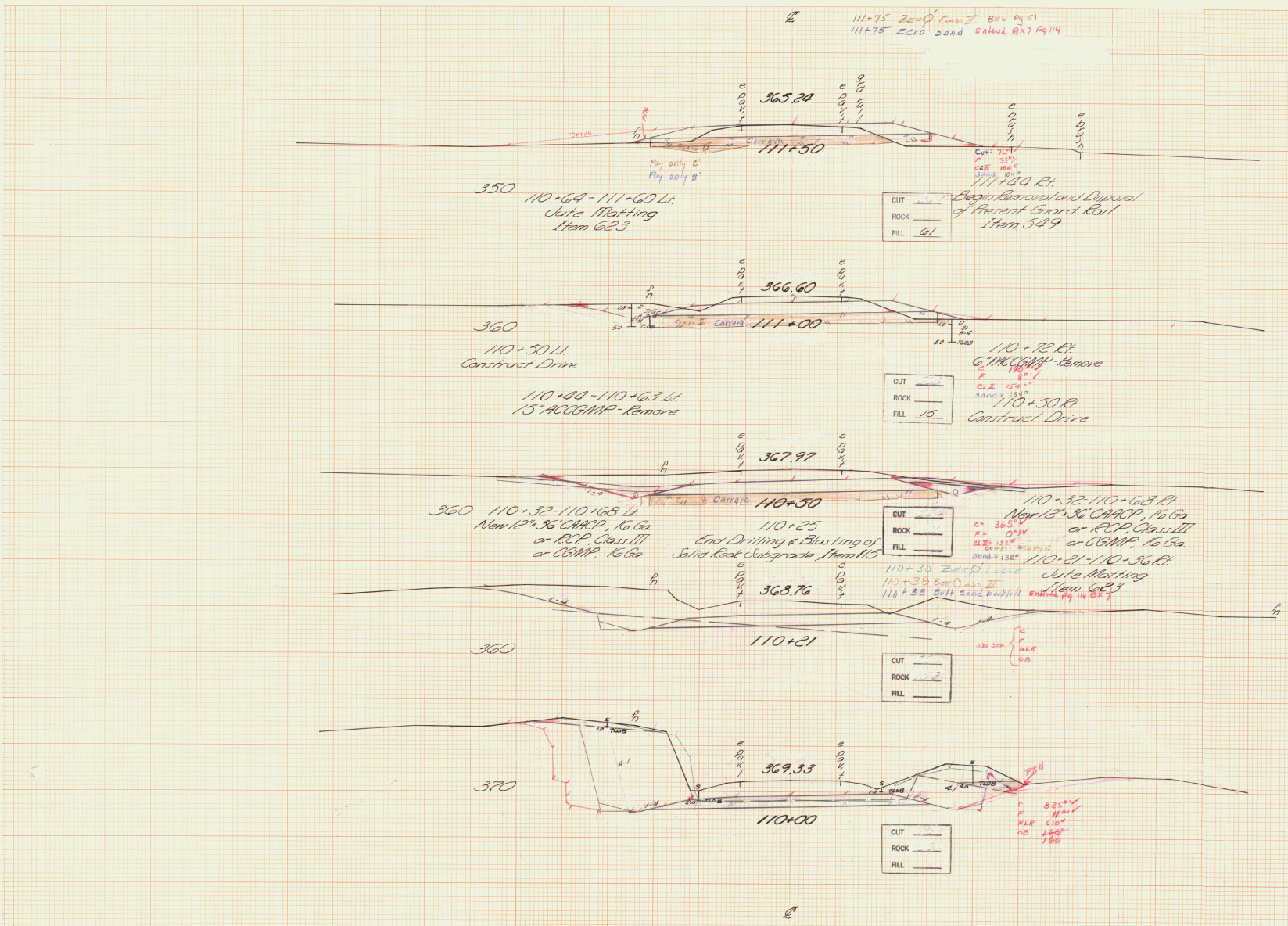
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO 020-2(2) FILED
SHEET 37 OF 65

Finals plot 26 June 70

KE STANDARD ⊕ CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.



380
369.44
109+96
CUT
ROCK
FILL
380
370.57
109+50
C 1004
F 11
NLR 608
OB 114
CUT
ROCK
FILL
380
370.96
109+31
109+28 ODD STA.
C
F
NLR (do not use)
OB
CUT
ROCK
FILL
380
371.54
109+00
No Ledge
C 927
F 14
NLR 354
OB 86
CUT
ROCK
FILL
108+80 ODD STA.
C
F
NLR
OB
FAIR HAVEN
VT. 22-A
109+00-109+96
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO. 0159(2) FILED
SHEET 58 OF 65
Ledge Feb '90 AHL
C-F-OB Plan JBD 6-30-70
C-F-OB Plan + TAH 6-30-70
NLR 2-27-90 AHL
Final, Plot 28 June 70
KEUFFEL & ESSER CO. MADE IN U.S.A.
K&E STANDARD CROSS SECTION



FAIR HAVEN
VT. 22-A
110+00-111+50

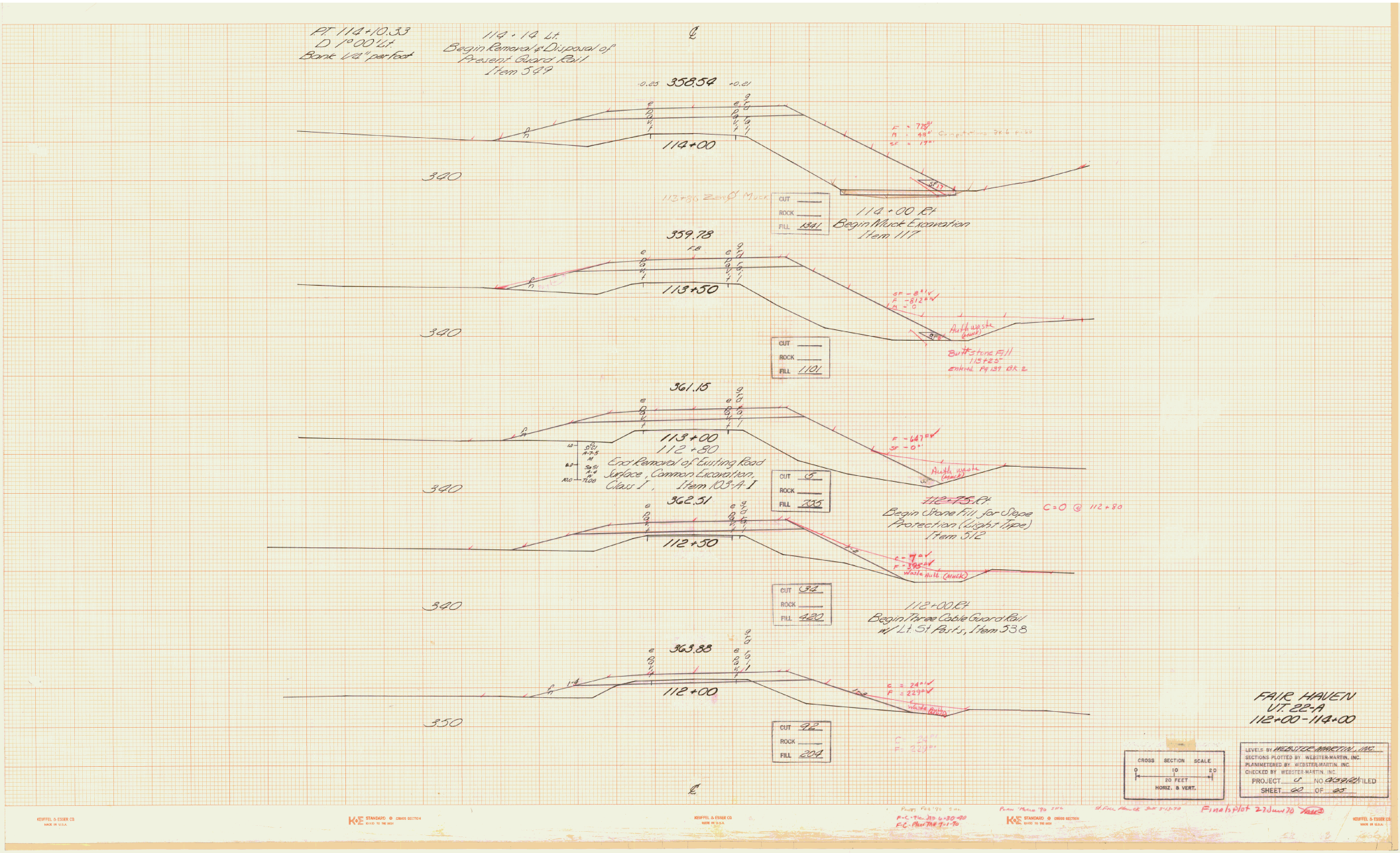
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

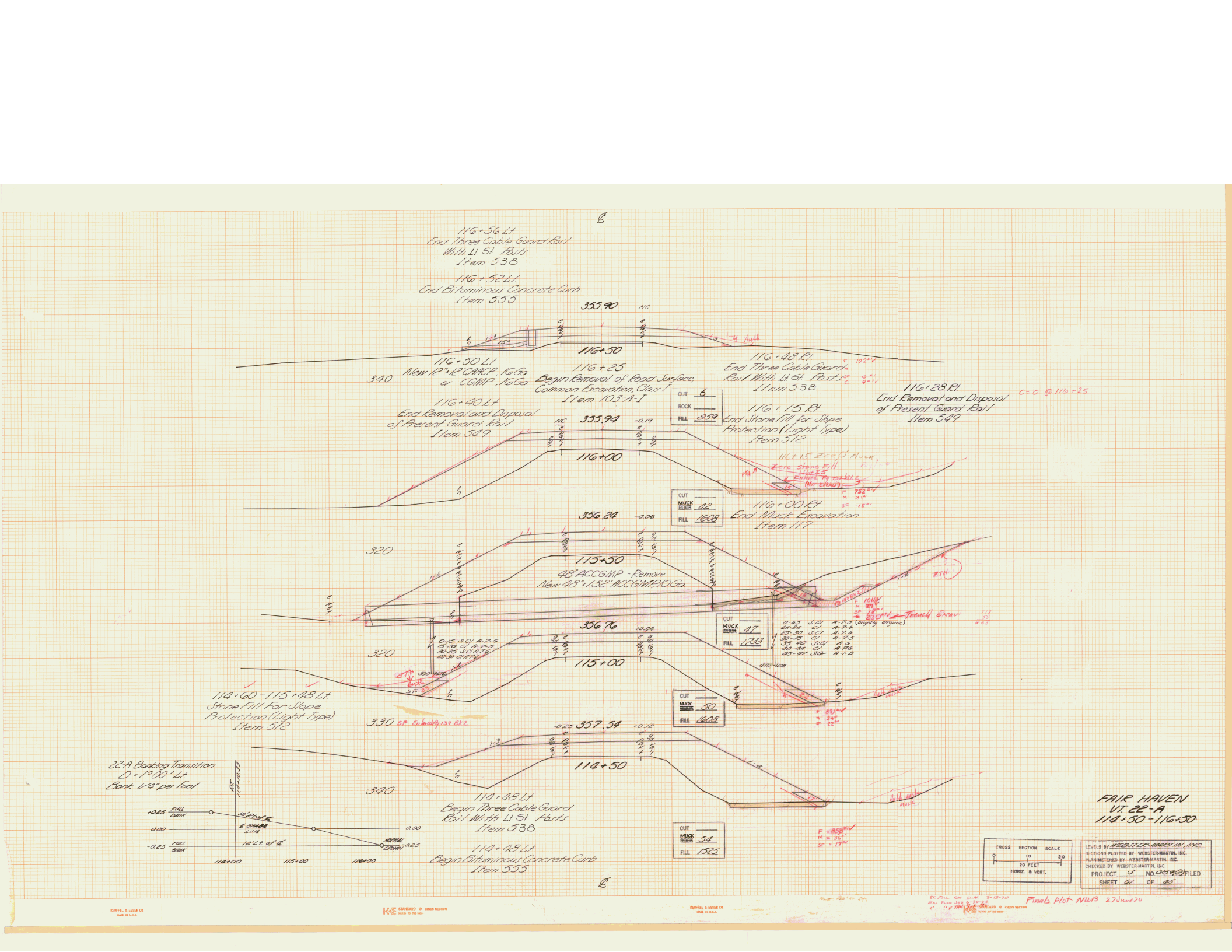
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO. 0159(2) FILED
SHEET 59 OF 65

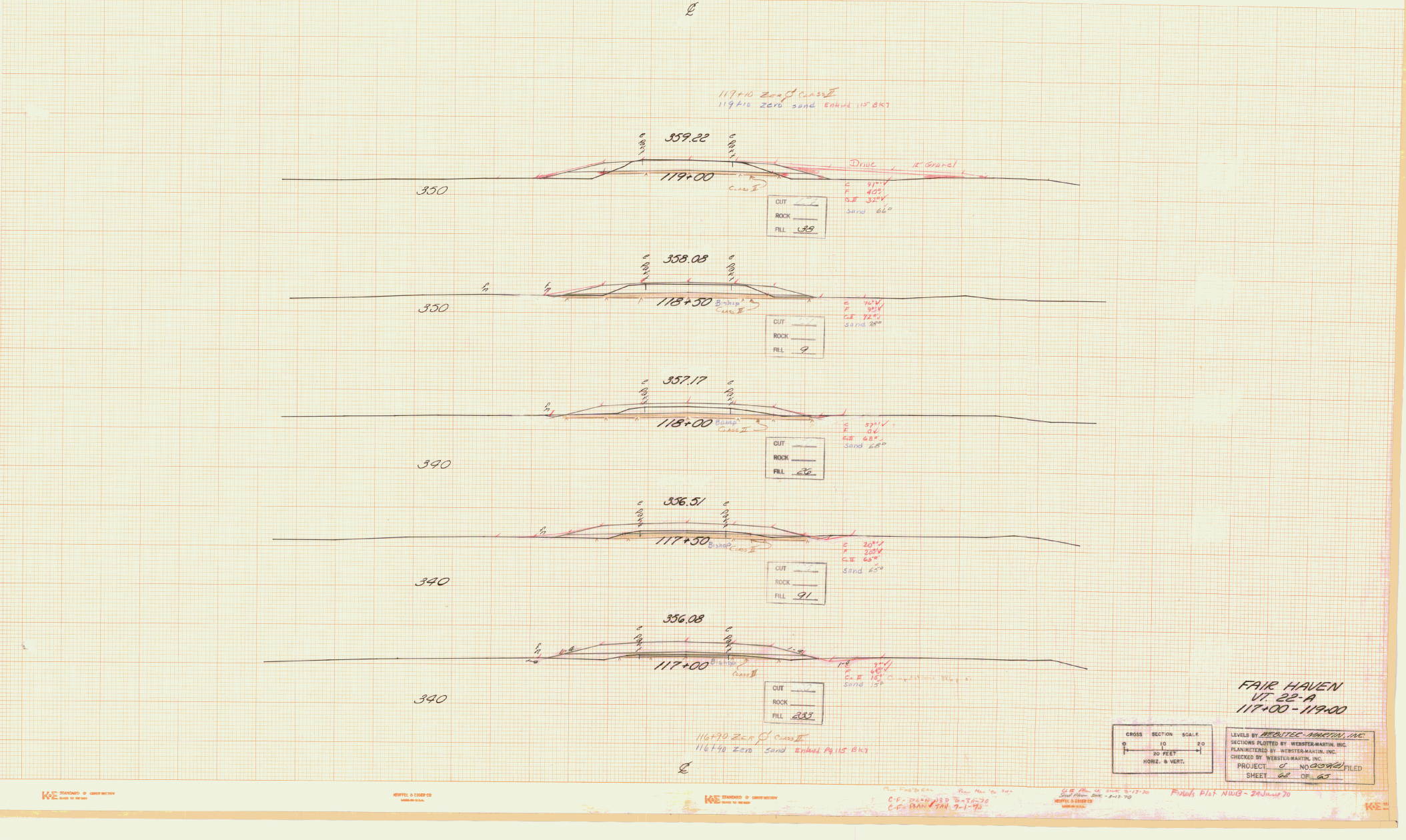
Finals Plot 27 June 70

Plan Feb '70 Sht
Plot Feb '70 Sht
Plan Mar '70 Sht
Cut Plan Ck Sht 3-13-70
Sand Plan by Sht 3-13-70
C-F-OB Plan Ck 6-2070
C-F-OB Plan Ck 7-1-70

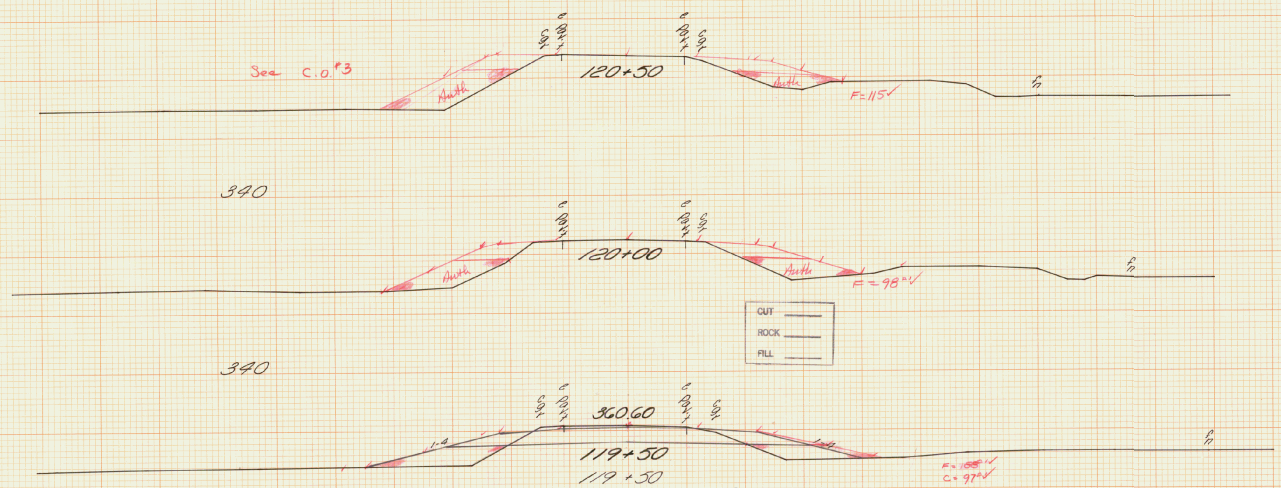
KEUFFEL & ESSER CO. MADE IN U.S.A.
K&E STANDARD CROSS SECTION EXACTLY TO THE INCH


PT. 114+10.33
D 1°00' Lt.
Bank 1/4" per foot
114+14 Lt.
Begin Removal & Disposal of
Present Guard Rail
Item 549
358.54
114+00
340
113+86 Zero Ø Muck
CUT
ROCK
FILL 1341
114+00 Rt
Begin Muck Excavation
Item 117
359.78
113+50
340
CUT
ROCK
FILL 1101
Auth waste (muck)
Buttstone Fill
113+25
Entered Pg 139 Bk 2
361.15
113+00
112+80
End Removal of Existing Road
Surface, Common Excavation,
Class I, Item 103-A-I
340
CUT 5
ROCK
FILL 755
Auth waste (muck)
~~112+75~~ Rt.
Begin Stone Fill for Slope
Protection (Light Type)
Item 512
C=0 @ 112+80
362.51
112+50
340
CUT 34
ROCK
FILL 420
112+00 Rt
Begin Three Cable Guard Rail
w/ Lt. St Posts, Item 538
363.88
112+00
350
CUT 92
ROCK
FILL 204
FAIR HAVEN
VT. 22-A
112+00-114+00
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO 0139(2) FILED
SHEET 60 OF 65
Finals plot 27 June 70
KEUFFEL & ESSER CO.
MADE IN U.S.A.
K&E STANDARD CROSS SECTION
BUILD TO THE BEST


116+56 Lt.
End Three Cable Guard Rail
With Lt. St. Parts
Item 538
116+52 Lt.
End Bituminous Concrete Curb
Item 555
355.90 N.C.
116+50
116+50 Lt
New 12"x18" CMP, 16 Ga.
or CGMP, 16 Ga.
340
116+25
Begin Removal of Road Surface,
Common Excavation, Class I
Item 203-A-1
116+48 Rt.
End Three Cable Guard
Rail With Lt St. Parts
Item 538
116+28 Rt.
End Removal and Disposal
of Present Guard Rail
Item 549
C=0 @ 116+25
116+40 Lt
End Removal and Disposal
of Present Guard Rail
Item 549
355.94 N.C. -0.19
116+00
116+15 Rt
End Stone Fill for Slope
Protection (Light Type)
Item 512
116+15 Zero Stone Fill
Limit
Enlarge Fill 153 Vol.
(Not Exav.)
116+00 Rt
End Muck Excavation
Item 117
CUT 6
ROCK
FILL 359
CUT
MUCK 42
FILL 1609
356.24 -0.06
320
115+50
48" ACCGMP - Remove
New 48"x132" ACCGMP 10 Ga.
356.76 -0.04
320
115+00
CUT
MUCK 47
FILL 1203
CUT
MUCK 50
FILL 1608
114+60 - 115+48 Lt
Stone Fill For Slope
Protection (Light Type)
Item 512
330 SF Enlarge/Reduce 139 Blk.
357.54 -0.25 -0.12
114+50
340
114+48 Lt
Begin Three Cable Guard
Rail With Lt St. Parts
Item 538
114+48 Lt
Begin Bituminous Concrete Curb
Item 555
CUT
MUCK 54
FILL 1525
22A Barking Transition
D = 1°00' Lt.
Bank 1/4" per foot
114+00
115+00
116+00
+0.25 FULL BANK
0.00
-0.25 FULL BANK
12' Lt. of ℄
NATURAL GROUND
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY: WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY: WEBSTER-MARTIN, INC.
PLANIMETERED BY: WEBSTER-MARTIN, INC.
CHECKED BY: WEBSTER-MARTIN, INC.
PROJECT C NO 030621 FILED
SHEET 61 OF 65
FAIR HAVEN
VT. 22-A
114+50 - 116+50
Finals plot NW13 27 June 20
KEUFFEL & ESSER CO.
MADE IN U.S.A.
K&E STANDARD @ CROSS SECTION



119+10 Zero ∅ Class II
119+10 Zero sand Entered 115 BK7
359.22
119+00
Drive
12" Gravel
Class II
350
C 91°
F 40°
C.II 32°
Sand 66°
CUT
ROCK
FILL 38
358.08
118+50
Bishop
Class II
350
C 76°
F 9°
C.II 72°
Sand 28°
CUT
ROCK
FILL 9
357.17
118+00
Bishop
Class II
340
C 57°
F 0
C.II 68°
Sand 68°
CUT
ROCK
FILL 26
356.51
117+50
Bishop
Class II
340
C 20°
F 20°
C.II 65°
Sand 65°
CUT
ROCK
FILL 91
356.08
117+00
Bishop
Class II
340
C.II 15°
Sand 15°
CUT
ROCK
FILL 233
116+90 Zero ∅ Class II
116+90 Zero sand Entered Pg 115 BK7
FAIR HAVEN
VT. 22-A
117+00 - 119+00
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO. 0159(2) FILED
SHEET 62 OF 65
Finals Plot NWB - 29 June 70



119+50
End Removal of Existing Road Surface, Common Excavation, Class 1, Item 203.4.1
119+50
END PROJECT S 0159(2)

340 119+25 - 119+50 Lt.
Removal & Disposal of Present Guard Rail
Item 549

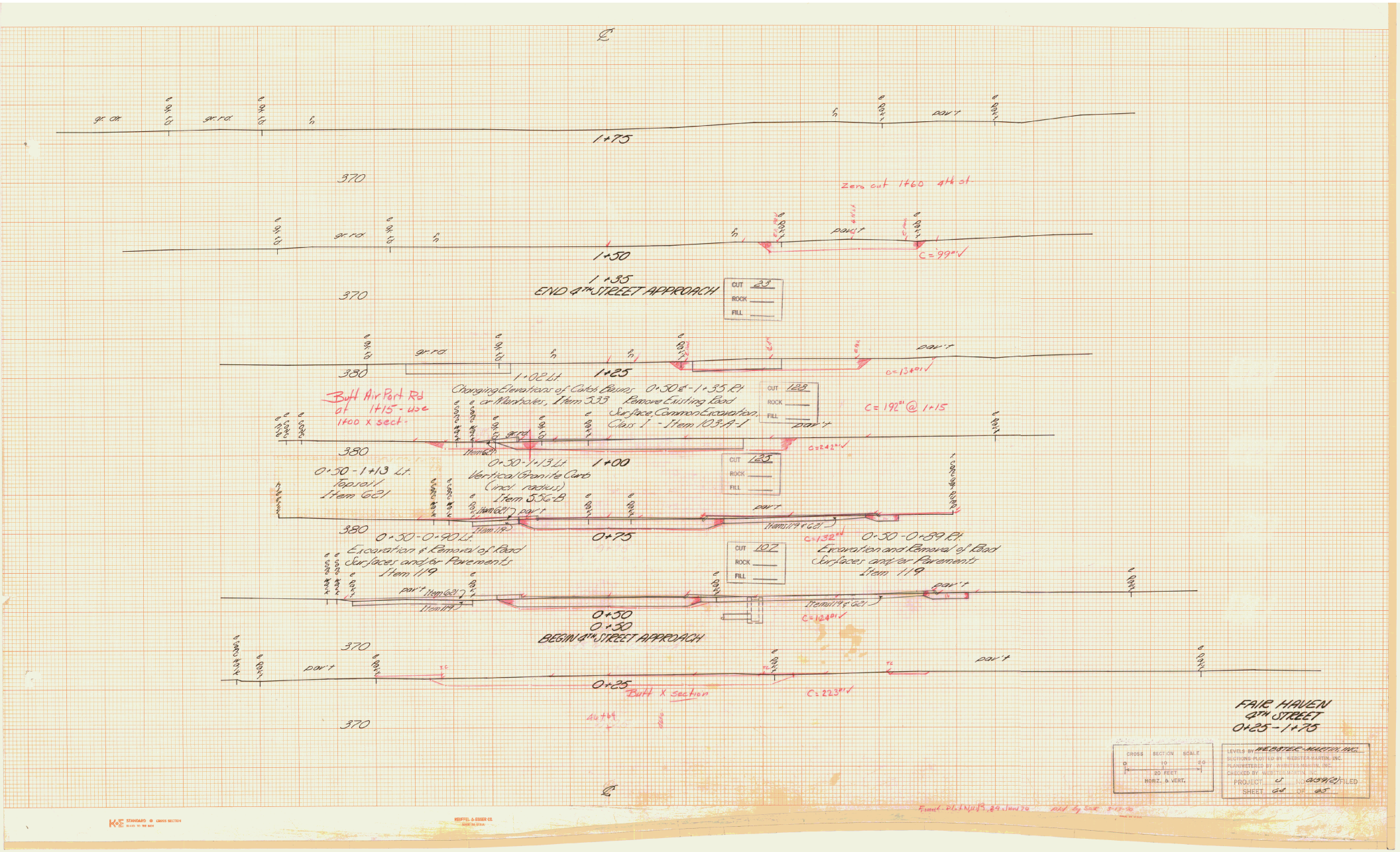
119+91 - 119+50 Rt.
Removal & Disposal of Present Guard Rail
Item 549

CUT	Tot
ROCK	
FILL	100

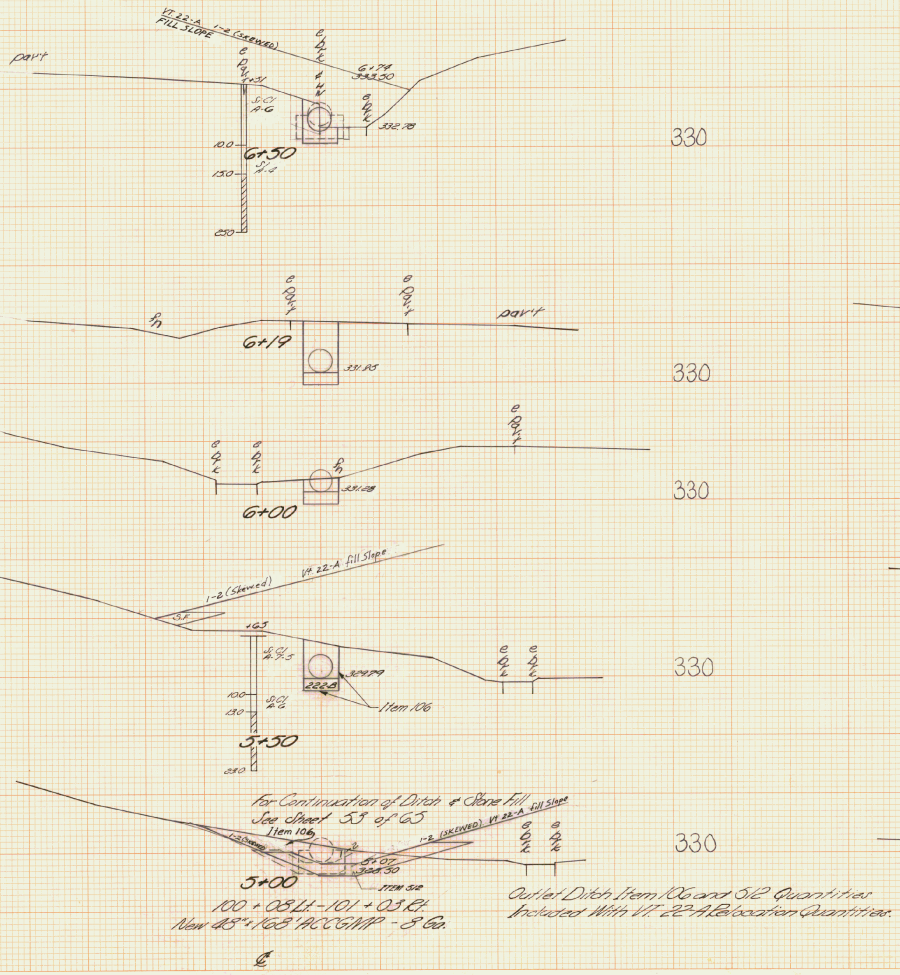
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

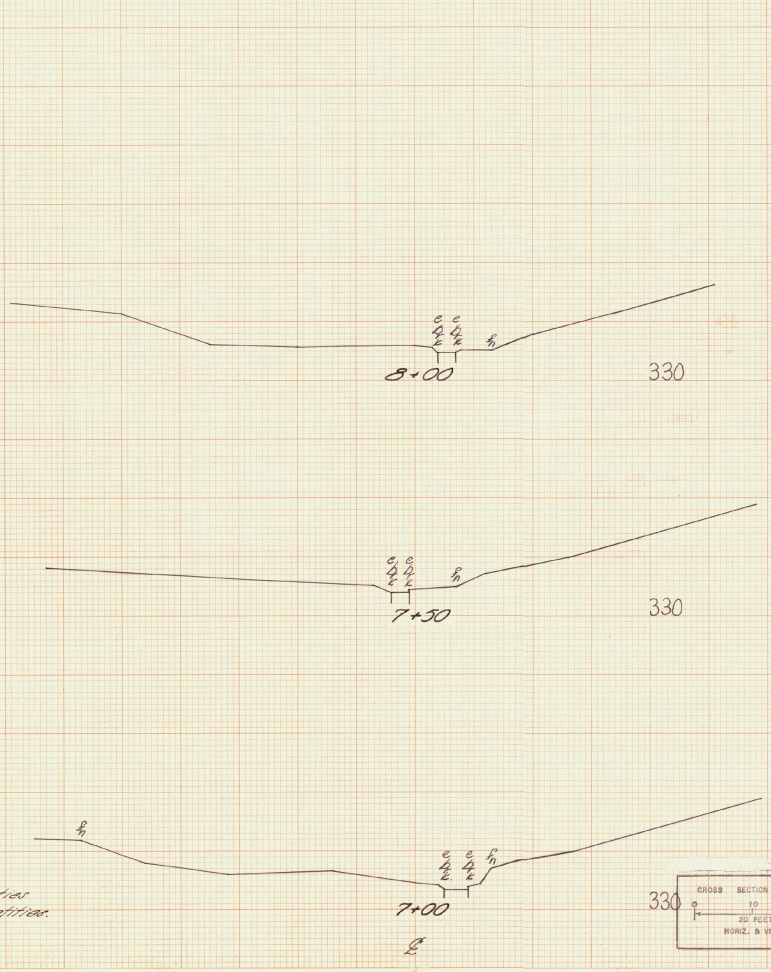
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT S NO 0159(2) FILED
SHEET 62 OF 65

FAIR HAVEN
VT. 22-A
119+50 - 120+50



1+75
370
Zero cut 1+60 4th st.
1+50
C=99.01
1+35
END 4TH STREET APPROACH
CUT 23
ROCK
FILL
380
1+02 Lt.
1+25
C=134.01
Changing Elevations of Catch Basins or Manholes, Item 533
0+50℄-1+35 Rt.
Remove Existing Road Surface, Common Excavation, Class I - Item 103-A-1
CUT 128
ROCK
FILL
Butt Air Port Rd at 1+15 - use 1+00 x sect.
C=192.01 @ 1+15
C=242.01
380
1+00
0+50-1+13 Lt.
Topsoil
Item 621
0+50-1+13 Lt.
Vertical Granite Curb (incl. radius)
Item 556-B
CUT 125
ROCK
FILL
380
0+75
C=132.01
0+50-0+90 Lt.
Excavation & Removal of Road Surfaces and/or Pavements
Item 119
CUT 107
ROCK
FILL
0+50-0+89 Rt.
Excavation and Removal of Road Surfaces and/or Pavements
Item 119
0+50
0+50
BEGIN 4TH STREET APPROACH
C=124.01
370
0+25
Butt X section
C=223.01
370
FAIR HAVEN
4TH STREET
0+25-1+75
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT U NO. 0139(2) FILED
SHEET 68 OF 65



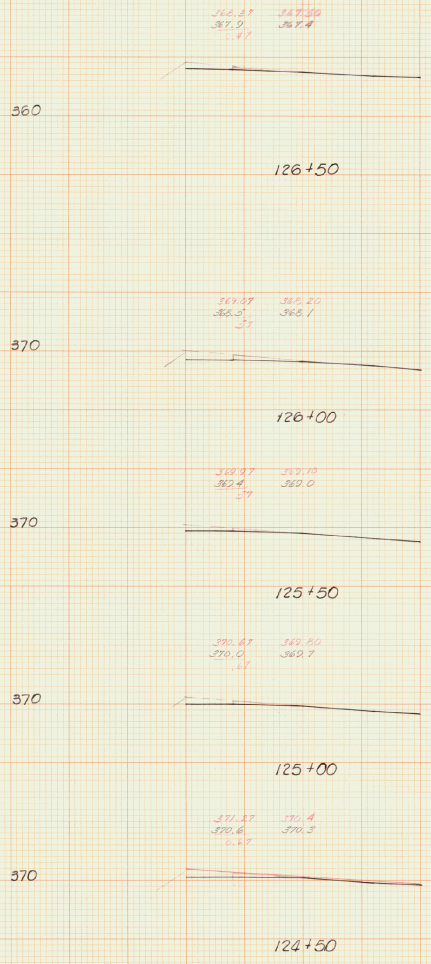


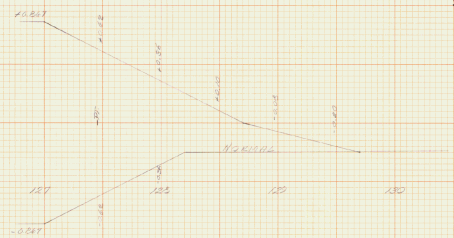
CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

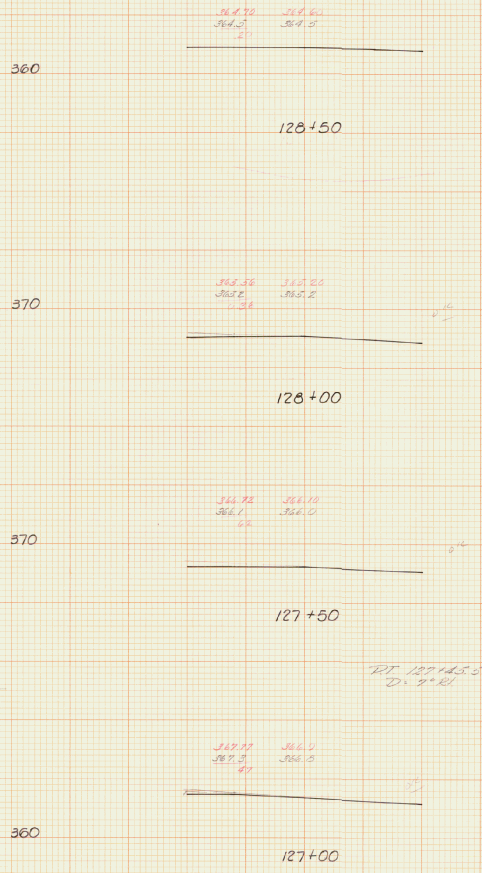
LEVELS BY WEBSTER-MARTIN, INC.
SECTIONS PLOTTED BY WEBSTER-MARTIN, INC.
PLANIMETERED BY WEBSTER-MARTIN, INC.
CHECKED BY WEBSTER-MARTIN, INC.
PROJECT C NO. 0159(2) FILED
SHEET 63 OF 63

FAIR HAVEN
CHANNEL NO. 6
5+00 - 8+00

K&E STANDARD © CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.







65b

FAIR HAVEN
S 0159 (2)
Surv.-Bittner - July, '69
Plotted PW Chkd PW-PM
124+50 - 128+50

2 of 2

1. TITLE SHEET
2.– 3. TYPICAL SECTIONS
4.– 5. DETAIL SHEETS
6.– 11. PLAN SHEETS
12–17. PROFILE SHEETS
A.– E. CRONAFLEX SHEETS

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

SECONDARY PROJECT

TOWN OF FAIR HAVEN

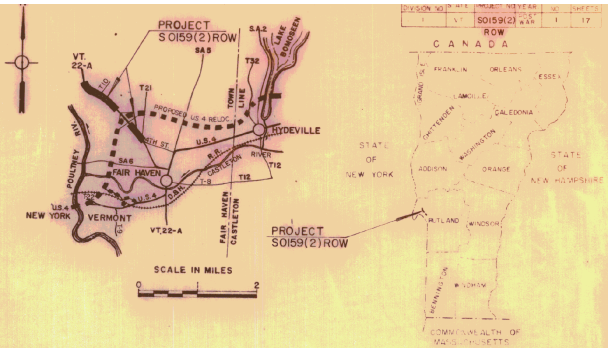
COUNTY OF RUTLAND

RELOCATION OF VERMONT ROUTE 22-A

RIGHT OF WAY PLANS

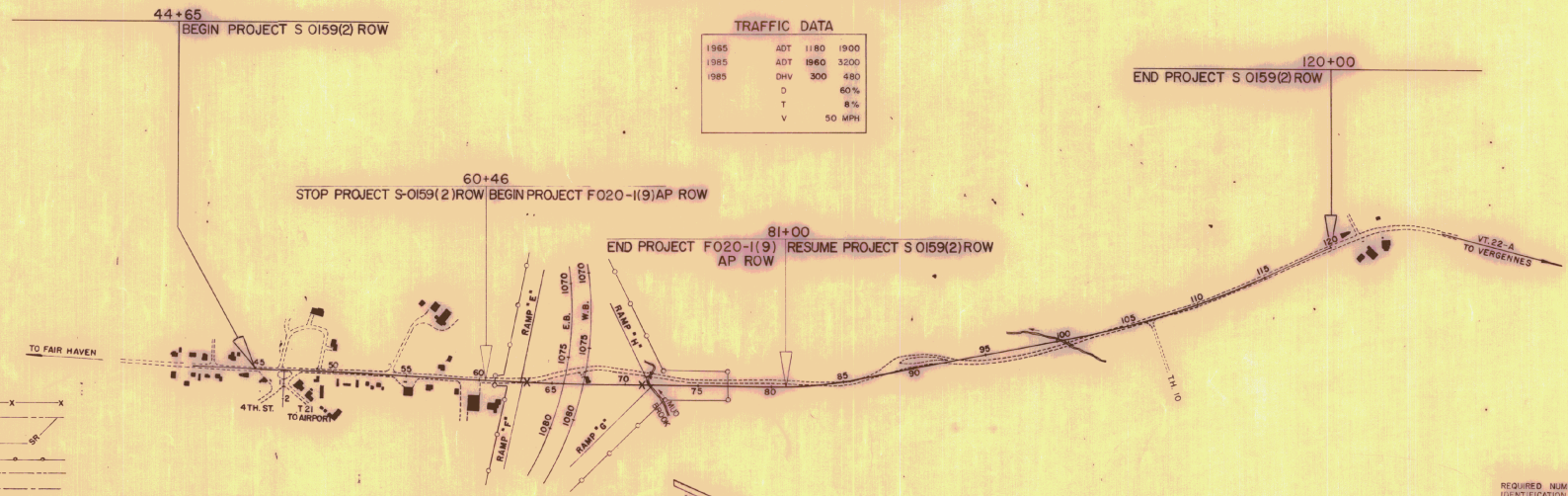
BEGINNING AT A POINT APPROXIMATELY 0.600 MILES NORTHERLY OF THE INTERSECTION OF U.S. ROUTE 4 AND VT. ROUTE 22-A AND PROCEEDING NORTHERLY 0.299 MILES, RESUMING 0.389 MILES NORTHERLY AND PROCEEDING 0.739 MILES.

LENGTH OF PROJECT 5481.00 FEET = 1.038 MILES



TRAFFIC DATA

1965	ADT	1180	1900
1985	ADT	1960	3200
1985	DHV	300	480
	D		60%
	T		8%
	V		50 MPH



CONVENTIONAL SIGNS

R.O.W. FENCE
SLOPE RIGHTS
CONTROL OF ACCESS
R.O.W.
COUNTY LINE
TOWN LINE
FENCE LINE
STONE WALL
UNFENCED PROPERTY
GUARD RAIL
TRAVELED WAY
RAILROAD
RETAINING WALL
CENTER LINE
SURVEY LINE
CULVERT
DROP INLET
JOINT OCCUPANCY POLE
POWER POLE
TELEPHONE POLE
TREES
HEDGE
ACCESS POINT

GROUND ELEVATION
GRADE ELEVATION

CURVE DATA

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

▲ CONSTUCTION IDENTIFICATION SIGNS

DATUM-MEAN SEA LEVEL.
ALL ELEVATIONS ARE U.S. ELEVATIONS.

SCALE IN FEET
0 400 800 1200

REQUIRED NUMBER OF FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS 2 EACH

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL, 1964, AS APPROVED BY THE BUREAU OF PUBLIC ROADS ON OCTOBER 12, 1964, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
DISTRICT ENGINEER DATE

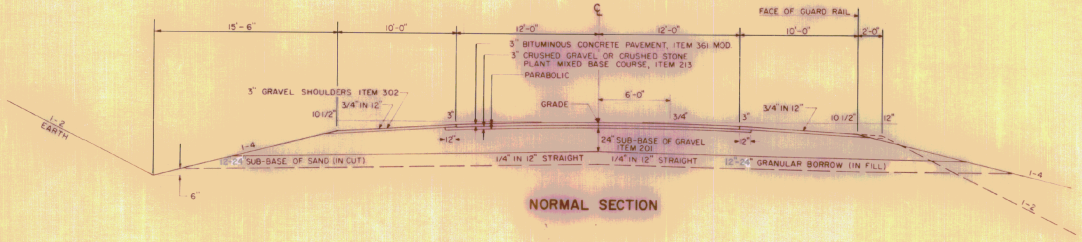
APPROVED R.O.W. DIRECTOR	APPROVED ASST. CHIEF ENGINEER	APPROVED CONSTRUCTION ENGINEER	APPROVED BRIDGE ENGINEER	APPROVED DISTRICT ENGINEER	APPROVED HIGHWAY ENGINEER	APPROVED CHIEF ENGINEER
DATE	DATE	DATE	DATE	DATE	DATE	DATE SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

PROJECT S NO. 0159 (2) R.O.W.
SHEET 1 OF 17 SHEETS

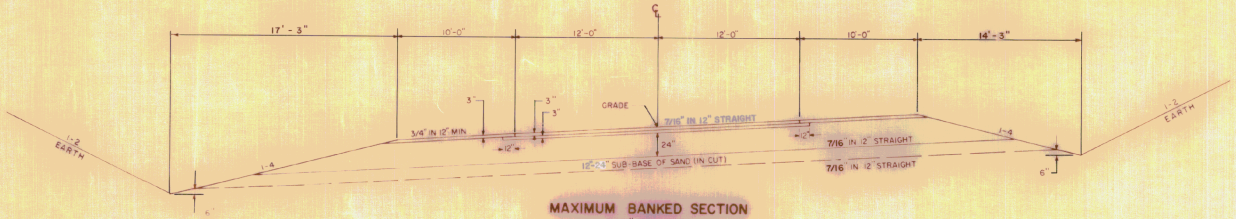
TYPICAL SECTIONS
VT. 22-A RELOCATION

PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY

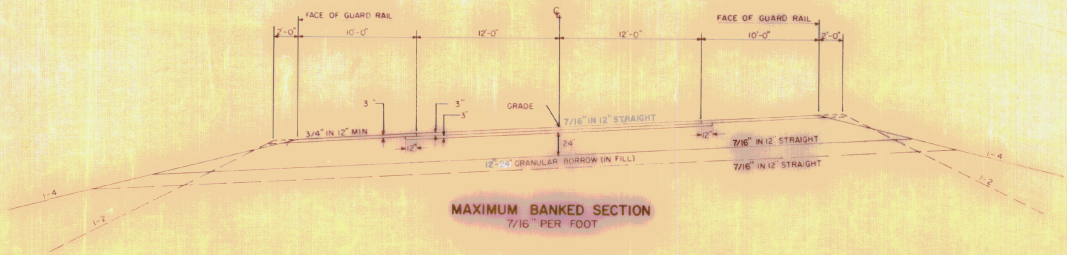
3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD (± 1/4") 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDING COURSE, TYPE II
3" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (± 1")
SHOULDERS { 3" GRAVEL SHOULDERS, ITEM 302, TACK COAT TYPE III,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



NORMAL SECTION



MAXIMUM BANKED SECTION
7/16" PER FOOT



MAXIMUM BANKED SECTION
7/16" PER FOOT

GENERAL NOTES:

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

STEEL MARKER POSTS, ITEM 547-D, TO BE PLACED AS DIRECTED BY THE ENGINEER

THE COMMERCIAL FERTILIZER, ITEM 615, SHALL BE MIXED AS FOLLOWS

NITROGEN	10 %
PHOSPHORUS	20 %
POTASH	10 %

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

GROUND LIMESTONE, ITEM 616, IS TO BE APPLIED AT THE RATE OF 2 TONS PER ACRE OR AS DIRECTED BY THE ENGINEER

SEEDING, ITEM 611

%	LB/ACRE	NAME	PURITY %	GERM %
33.33	20	CREEPING RED FESCUE	97	82
10.00	6	TALL FESCUE	95	80
16.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	92	90
16.67	10	DOMESTIC RYE GRASS	98	90
8.33	5	BIRDSFOOT TREFOIL (EMPIRE)	99	80
0.42	1/4	WEED SEED		
6.25	3 3/4	INERT MATERIAL		
100.00	60 LBS	PER ACRE		

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

SCALE
0 5 10
10 FEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT ROUTE 22-A in the town of
FAIR HAVEN
TYPICAL SECTIONS

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

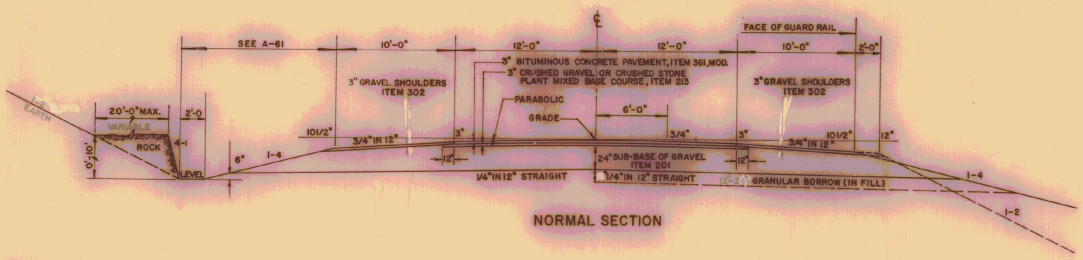
SURVEYED BY	WHM INC	CHECKED BY	RAS	SCALE AS SHOWN
DRAWN BY	HCM	IN CHARGE	RAS	DATE APRIL 1967

PROJECT NO S0159 (2) SHEET 2 OF 17

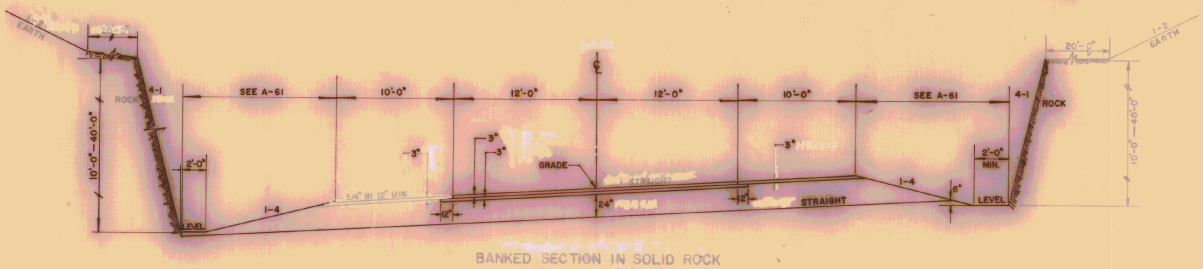
TYPICAL SECTIONS
VT. 22-A RELOCATION

PERMISSIBLE TOLERANCES IN PARENTHESES APPLY TO THICKNESS ONLY.

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361, MOD. (±1/4") 11/4" WEARING COURSE, TYPE III OVER 13/4" BINDING COURSE, TYPE II.
3" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (±1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (±1")
3" GRAVEL SHOULDERS, ITEM 302, TACK COAT, TYPE III, ITEM 315.
12"-24" GRANULAR BORROW, ITEM 105 (±1") IN FILL
12"-24" SUB-BASE OF SAND, ITEM 202 (±1") IN CUT
} TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.



NORMAL SECTION

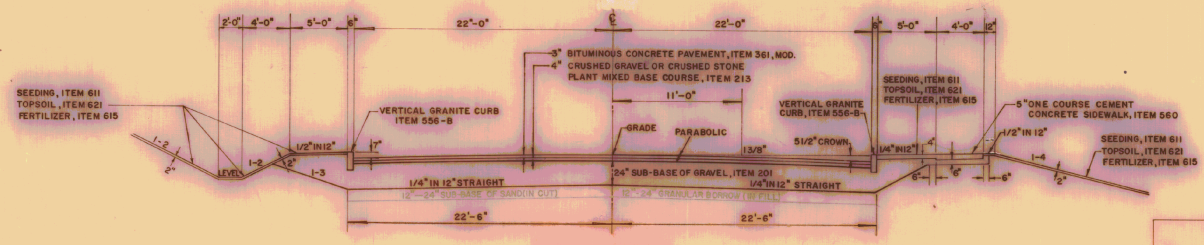


BANKED SECTION IN SOLID ROCK

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

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361, MOD. (±1/4") 11/4" WEARING COURSE, TYPE III OVER 13/4" BINDING COURSE, TYPE II
4" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (±1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (±1")
12"-24" GRANULAR BORROW, ITEM 105 (±1") IN FILL
12"-24" SUB-BASE OF SAND, ITEM 202 (±1") IN CUT
} TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

FOR GENERAL NOTES, SEE SHEET 2 OF 17



NORMAL SECTION

SCALE
0 5 10
10 FEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
TYPICAL SECTIONS

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

SURVEYED BY W-M INC.	CHECKED BY T.G.S.	SCALE AS SHOWN
DRAWN BY M.L.F.	IN CHARGE R.G.S.	DATE APRIL 1967

PROJECT NO. S 0159(2) SHEET 3 OF 17

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET
1 OF 2

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	LABATE, GUY P. AND A. KATHLEEN	6	44+65 LT.	50+58 LT.	0.5	14.9		COND	1-2-69	FAIR HAVEN	35	495-499	7+67LT SIGN OWNED BY CHAMPLAIN FERRY CO.
		6	45+00 LT.				DRIVE RIGHT (T)						
		6	48+90 LT.				DRIVE RIGHT (T)						
2	AUNGST INCORPORATED	6	44+85 RT.	47+00 RT.	2850 SF	0.8		COND	1-2-69	FAIR HAVEN	35	495-499	
		6	45+28 RT.	45+57 RT.			SLOPE RIGHTS 70 SF. (T)						
		6	45+35 RT.				DRIVE RIGHT (T)						
		6	45+85 RT.	46+00 RT.			SLOPE RIGHTS 15 SF. (T)						
3	WAITE, ANNA E.	6	46+40 RT.	47+32 RT.	3036 SF.	4.1		WD	10-17-68	FAIR HAVEN	33	443	
		6	46+26 RT.	46+50 RT.			EASMT. TO CONST. FOURTH ST. (T)						
4	VAN GUILDER, ROBERT E.	6	46+62 RT.	53+50 RT.	0.7	47.8		COND	1-2-69	FAIR HAVEN	35	495-499	SEE PARCEL NO. 19 ON PROJECT F020-1(9)AP FOR ADDITIONAL INFORMATION
		6	47+65 RT.	52+65 RT.			SLOPE RIGHTS 2625 SF. (T)						
		6	49+04 RT.				DRIVE RIGHT (T)						
		6	50+55 RT.				DRIVE RIGHT (T)						
		6	51+88 RT.				DRIVE RIGHT (T)						
		6	52+63 RT.				DRIVE RIGHT (T)						
		6	53+39 RT.				DRIVE RIGHT (T)						
		6	53+30 RT.				SIDEWALK (T)						
		8	47+45 RT.				SIDEWALK (T)						
		6	53+15 RT.				SIDEWALK (T)						
		8	48+00 RT.	48+40 RT.			EASEMENT TO CONSTRUCT FOURTH STREET (T)						
5A	ALLEN, SHERMAN V.	6-7	50+51 RT.	60+46 LT.	0.8			COND	1-2-69	FAIR HAVEN	35	495-499	
5B		8-9	81+00 LT.	88+54 LT.	1.7	116.1							54+55 LT. SIGN OWNED BY METHODIST & BAPTIST CHURCHES
		6	50+58 LT.	50+83 LT.			SLOPE RIGHTS 25 SF. (T)						
		6	51+25 LT.	52+55 LT.			SLOPE RIGHTS 750 SF (T)						
		6	52+83 LT.	53+50 LT.			SLOPE RIGHTS 250 SF. (T)						
		6	53+86 LT.				DRIVE RIGHT (T)						
		6	54+20 LT.	57+00 LT.			SLOPE RIGHTS 1500 SF. (T)						
		6	57+59 LT.				DRIVE RIGHT (T)						
		7	58+40 LT.	60+46 LT.			SLOPE RIGHTS 2125 SF. (T)						
		8	84+95 LT.	85+05 LT.			SLOPE RIGHTS 10 SF. (T)						
		6	87+25 LT.				SIDEWALK (T)						
6	BIRD, JOSEPH D.	6	53+49 RT.	56+24 RT.	0.2	1.1		COND	1-2-69	FAIR HAVEN	35	495-499	
		6	53+63 RT.	56+25 RT.			SLOPE RIGHTS 3000 SF. (T)						
		6	54+44 RT.				DRIVE RIGHT (T)						
		6	55+54 RT.				DRIVE RIGHT (T)						

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	4,6 & 6A	CHANGED PROPERTY LINES AND LOCATION OF SAID PUMP ISLAND AND GAS TANKS THEREBY CHANGING TAKE TO 3049 SF AND INCREASING REMAINDER TO 0.9 AC PER CHANGE ORDER #1 DST. (Parcel #2)	4-19-68	KB	
2	4,5,9	ADDED SLOPE RIGHTS TO DETAIL SHEET FROM STA. 96+15 RT. TO STA. 97+35 WITH A SQUARE FOOTAGE OF 1,520 PER CHANGE ORDER #1099 (Parcel #78)	4-26-68	KB	
3	4&6	Parcel #1 Deleted proposed drive at Sta 46+15 Lt. Per Change Order #1103	5/7/68	M.H.M.	
4	4&6	Parcel #2 Deleted Construction Easement On Fourth Street At Sta 46+01 Rt. And 46+40 Rt. On Layout Sheet & Added Van Guilder On South Side of Fourth Street As Owner Per Change Order #1139	5-16-68	W.&M.	
5	8,11	PARCEL #2 CHANGE IN TITLE FROM ENOS TO CRISTELLON CONST. CO. MODIFYING NEW PARCEL #11 PER CHANGE ORDER #1178	6-13-68	R.G.S.	
6	8,11	Parcel #11 Deleted Slope Rights From Detail Sheet At Station 96+00 Right To 96+40 Right And Changed Slope Rights At Station 96+15-97+35 to (Temporary Use) Per Change Order #1240	9-20-68	K.B.	T.C.B
7	6	Parcel #1 Change In Title From Albert Hook & R. Allen To Aungst Incorporated Per Change Order #1249	10-2-68	K.B.	

MADE BY: WSB DATE APRIL 1967

CHECKED BY: AMM DATE APRIL 1967

LEGEND

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

APPROVED _____ CHIEF OF ACQUISITION DATE _____

APPROVED _____ HIGHWAY ENGINEER DATE _____

APPROVED _____ R.O.W. DIRECTOR DATE _____

PROJECT FAIR HAVEN

NO. S 0159(2) R.O.W.

SHEET 4 OF 17

ROW

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

2 OF 2

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
7	ENOS, ANNA MAE	6	56+24 RT.	56+90 RT.	1375 SF.	0.26		WD	11-5-68	FAIR HAVEN	35	440, 441	
		6	56+24 RT.	56+90 RT.			SLOPE RIGHTS- 425 SF. (T)						
		6	56+35 RT.				DRIVE RIGHT (T)						
8	CHASE TRANSFER CORPORATION	6-7	56+90 RT.	60+20 RT.	0.2	3.1		WD	10-17-68	FAIR HAVEN	35	446, 447	
		6-7	56+90 RT.	58+38 RT.			SLOPE RIGHTS- 2200 SF.(T)						
		6	57+55 RT.				DRIVE RIGHT (T)						
		7	58+53 RT.	59+50 RT.			SLOPE RIGHTS- 816 SF.(T)						
		7	59+03 RT.				DRIVE RIGHT (T)						
		7	59+82 RT.				DRIVE RIGHT (T)						
		7	60+05 RT.	60+20 RT.			SLOPE RIGHTS- 60 SF. (T)						
			59+46 RT.				SIDEWALK (T)						
9	DESPRES, ROBERT W., HELEN M.	7	60+20 RT.	60+46 RT.	598 SF.	1.9		CONT	1-2-69	FAIR HAVEN	35	495, 499	ANIMAL HOSPITAL SIGN
		7	60+20 RT.	60+46 RT.			SLOPE RIGHTS- 432 SF.(T)						
10	MORRIS, EDWARD J., VIVIAN E.	10-11	113+43 RT.	120+00 C/L	1.8	319.4		CONT	1-2-69	FAIR HAVEN	35	495, 498	
		10	115+45 RT.	115+60 RT.			SLOPE RIGHTS- 60 SF. (T)						
11	CASTLETON CONSTRUCTION CO.	8-11	81+00 RT.	118+73 C/L	14.2	280.78		CONT	1-2-69	FAIR HAVEN	35	495, 499	
			82+50 RT.				DRAINAGE (T)						
			87+25 RT.				DRAINAGE (P)						
			89+15 RT.	91+48 RT.			SLOPE RIGHTS - 9000SF(T)						
			92+00 LT.				DRAINAGE (P)						
			98+80 LT.				DRAINAGE & CULVERT (P)						
			99+00 LT.				DRAINAGE (P)						
			104+00 RT.				DRAINAGE (P)						
			107+60 RT.				DRAINAGE (P)						
			108+80 LT.	109+80 LT.			SLOPE RIGHTS- 150SF.(T)						
			114+80 LT.				DRAINAGE (P)						
			116+00 LT.				DRAINAGE (P)						
			124+00 LT.	127+80 LT.			SLOPE RIGHTS- 5100SF(T)						
			129+67 LT.	130+15 RT.			SLOPE RIGHTS- 1602 SF.(T)						

TABLE OF REVISIONS

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

Poor Quality

LEGEND

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

MADE BY: WSB DATE APRIL 1967

CHECKED BY: AMM DATE APRIL 1967

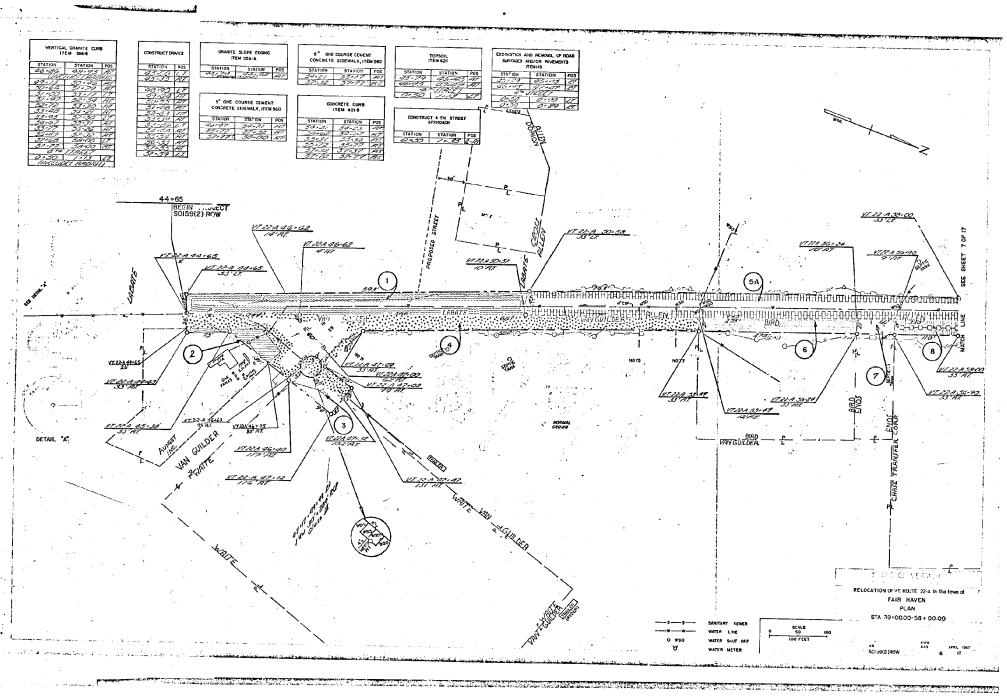
APPROVED _____ DATE _____
CHIEF OF ACQUISITION

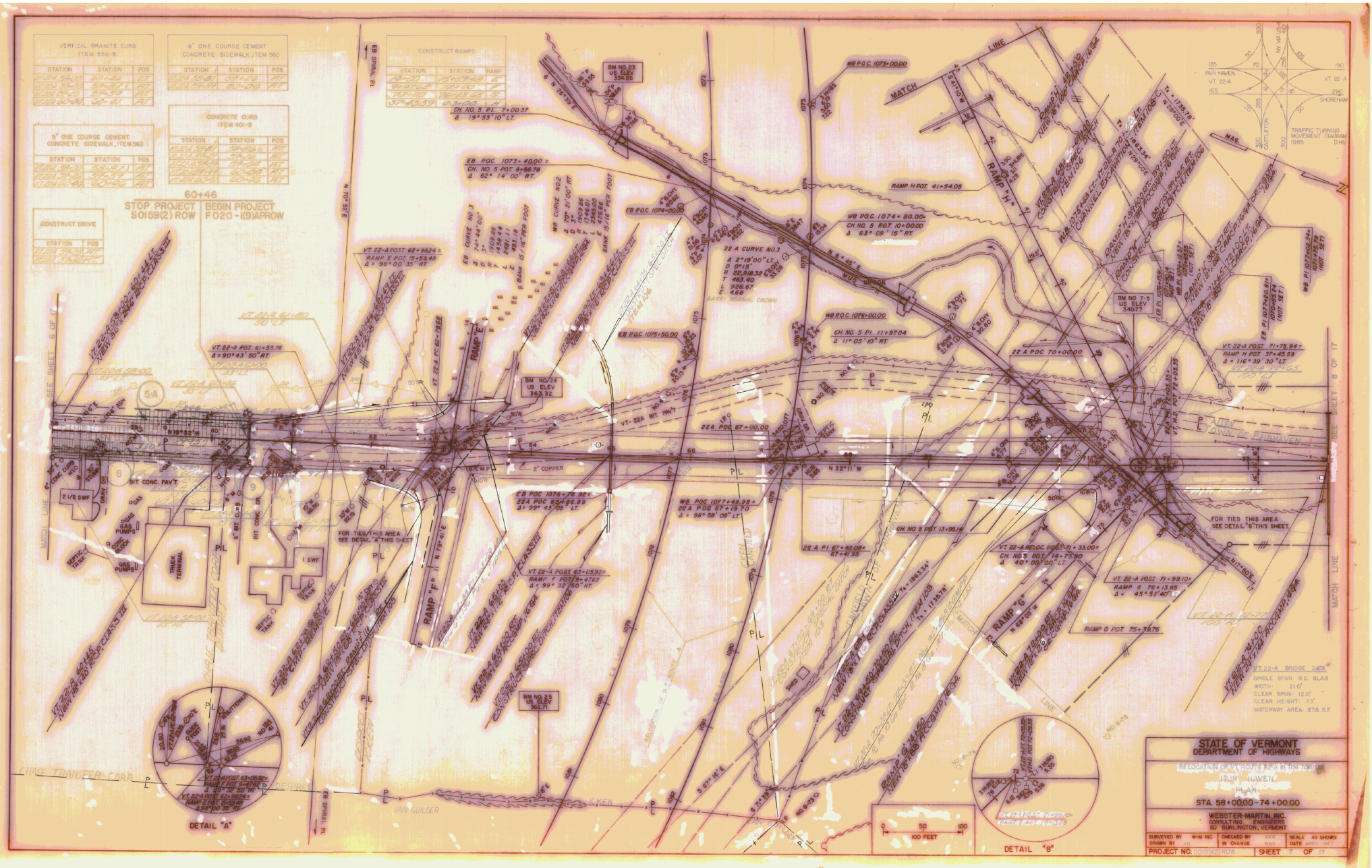
APPROVED _____ DATE _____
HWY. ENGR.

APPROVED _____ DATE _____
R.O.W. DIRECTOR

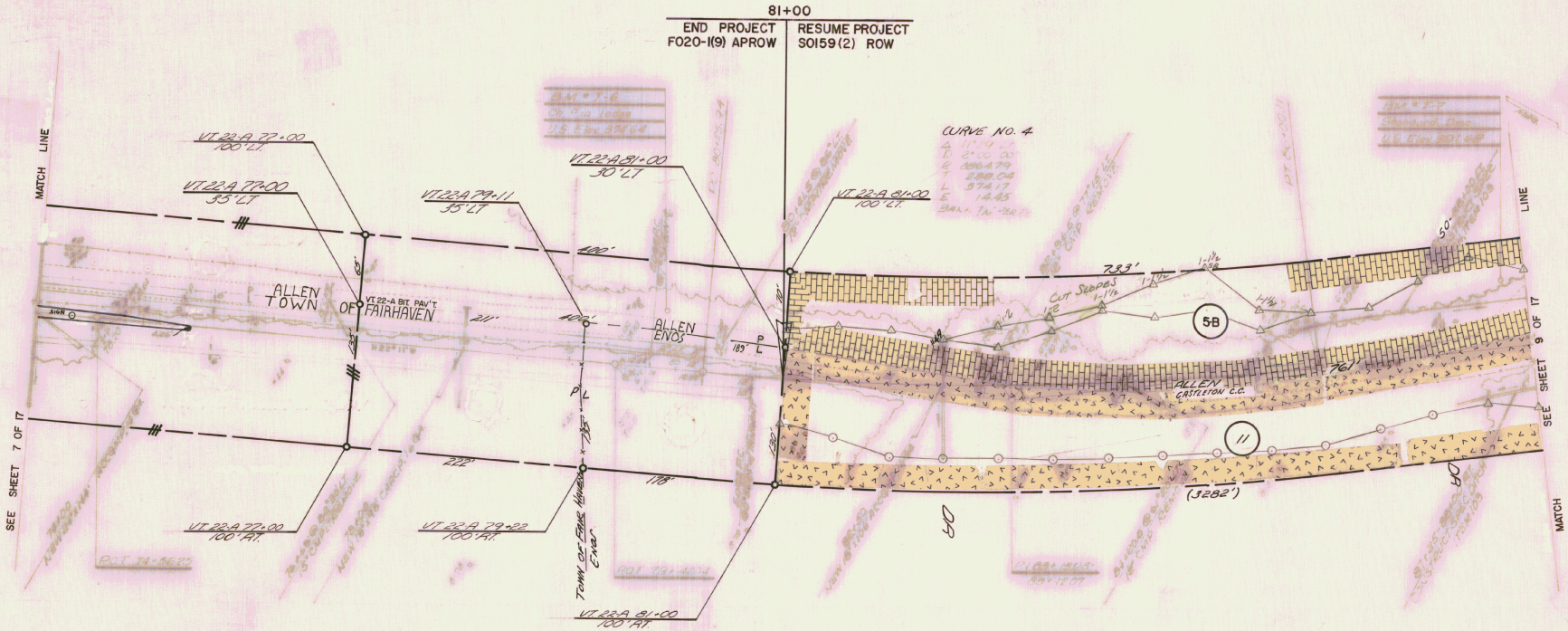
FAIR HAVEN
SHEET 5 OF
SO159(2) ROW

SHEETS 17


VERTICAL GRANITE CURB ITEM 5M.6
CONSTRUCT DRIVES
GRANITE SLOPE FACING ITEM 204.4
6" ONE COURSE CEMENT CONCRETE SIDEWALK, ITEM 5M.3
TOPSOIL ITEM 621
EXCAVATION AND REMOVAL OF ROAD SURFACES AND/OR PAVEMENTS ITEM 5
6" ONE COURSE CEMENT CONCRETE SIDEWALK, ITEM 5M.3
CONCRETE CURB ITEM 609.8
CONSTRUCT 4 IN. STONEY EXTENSION
44+05
SO159(2) ROW
PLEASANT STREET
DRIVE
DRIVE
DRIVE



VERTICAL GRANITE CURB ITEM 556-B
8" ONE COURSE CEMENT CONCRETE SIDEWALK, ITEM 560
CONSTRUCT RAMPS
5" ONE COURSE CEMENT CONCRETE SIDEWALK, ITEM 560
CONCRETE CURB ITEM 401-B
CONSTRUCT DRIVE
60+46
STOP PROJECT S0159(2) ROW
BEGIN PROJECT F020-1(9)APROW
BM NO. 23 US ELEV 334.26
BM NO. 24 US ELEV 363.32
BM NO. 25 US ELEV 362.71
BM NO T-5 US ELEV 340.77
RAMP "H"
RAMP "E"
RAMP "F"
RAMP "G"
MATCH LINE
MUD BROOK
BIT. CONC. PAV'T.
TRUCK TERMINAL
FOR TIES THIS AREA SEE DETAIL "A" THIS SHEET
FOR TIES THIS AREA SEE DETAIL "B" THIS SHEET
DETAIL "A"
DETAIL "B"
100 FEET
TRAFFIC TURNING MOVEMENT DIAGRAM 1985
FAIR HAVEN
VT. 22-A
SHOREHAM
CASTLETON
VT. 22-A BRIDGE DATA
SINGLE SPAN R.C. SLAB
WIDTH: 21.0'
CLEAR SPAN: 12.0'
CLEAR HEIGHT: 7.3'
WATERWAY AREA: 87.6 S.F.
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
PLAN
STA. 58+00.00 - 74+00.00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VERMONT
SURVEYED BY W-M INC.
DRAWN BY JO
CHECKED BY AMM
IN CHARGE RAS
SCALE AS SHOWN
DATE APRIL 1967
PROJECT NO. S0159(2) ROW
SHEET 7 OF 17



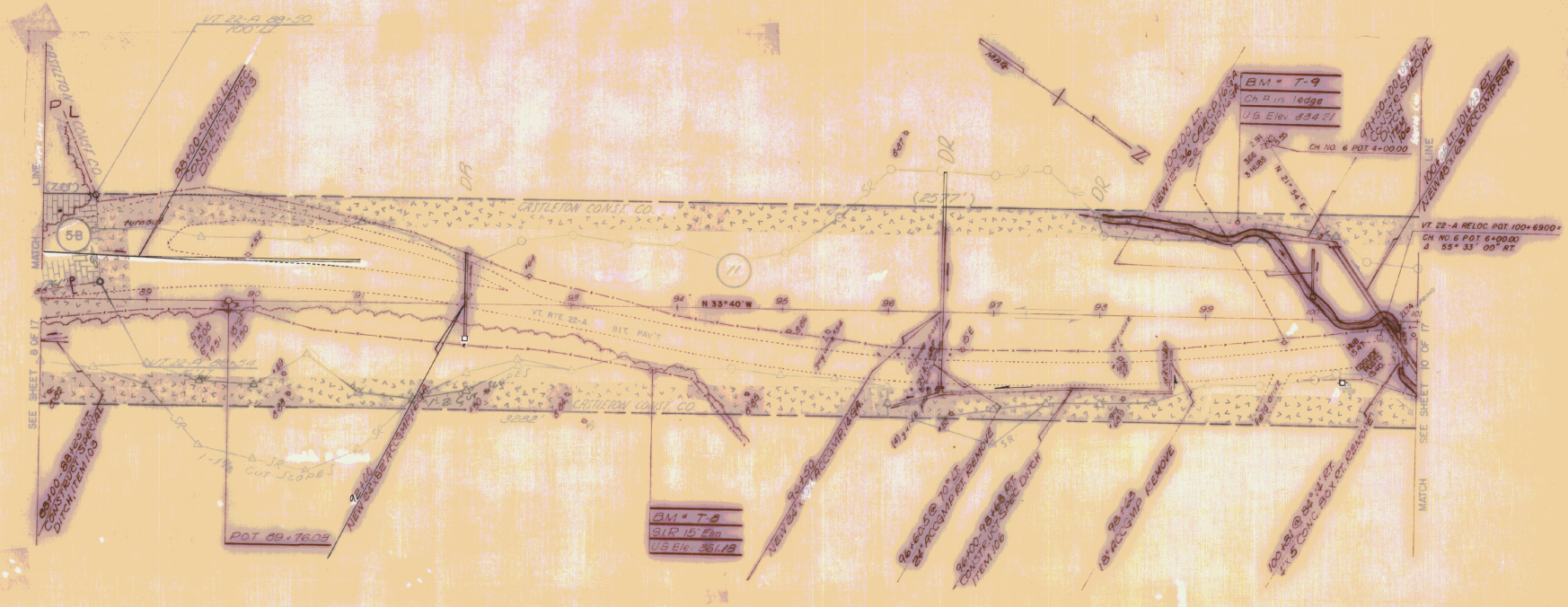
SCALE
0 50 100
100 FEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
PLAN
STA. 74+00.00 – 88+00.00

WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
60 BURLINGTON, VERMONT

INTERVIEWED BY VT. HWY DEPT	CHECKED BY AMM	SCALE AS SHOWN	
DRAWN BY JO	CHECKED BY RAS	DATE APRIL 1967	
PROJECT NO. S0159(2) ROW		SHEET 8 OF 17	



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF U.S. ROUTE 22-A in the Town of

FAIR HAVEN

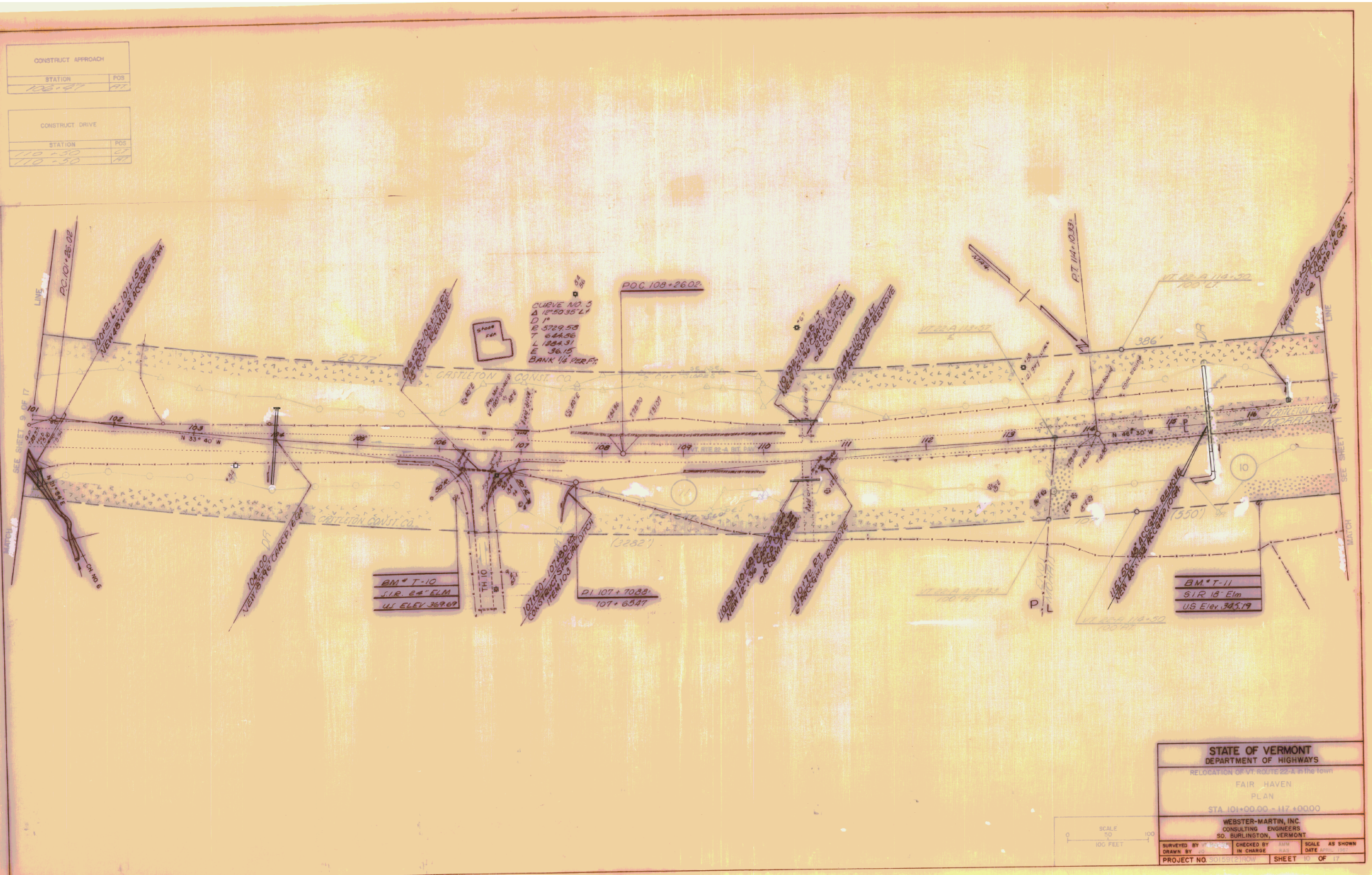
PLAN

STA. 88+00.00 - 101+00.00

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

SURVEYED BY VT. Hwy. Dept. | CHECKED BY IN CHARGE | SCALE AS SHOWN
DRAWN BY | DATE
PROJ. NO. S015S(2)ROW | SHEET 9 OF 17

SCALE 0 50 100 100 FEET


CONSTRUCT APPROACH
STATION
POS
106+47
RT.
CONSTRUCT DRIVE
STATION
POS
110+50
LT
110+50
RT
P.C. 101+26.02
P.O.C. 108+26.02
CURVE NO. 5
Δ 12°50'35" Lt
D 1°
R 5729.58
T 644.56
L 1284.31
E 36.15
BANK 1/4 PER FT.
CASTLETON CONST. CO.
N 33° 40' W
N 46° 30' W
BM # T-10
S.I.R. 24" ELM
U.S. ELEV. 369.69
PI 107+70.88
107+65.47
BM # T-11
S.I.R. 18" Elm
U.S. Elev. 345.19
SEE SHEET 9 OF 17
SEE SHEET 11 OF 17
MATCH LINE
SCALE
0 50 100
100 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT. ROUTE 22-A in the town
FAIR HAVEN
PLAN
STA. 101+00.00 - 117+00.00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VERMONT
SURVEYED BY
DRAWN BY
CHECKED BY
IN CHARGE
SCALE AS SHOWN
DATE
PROJECT NO. 30159(2)ROW
SHEET 10 OF 17



SCALE
0 50 100
100 FEET

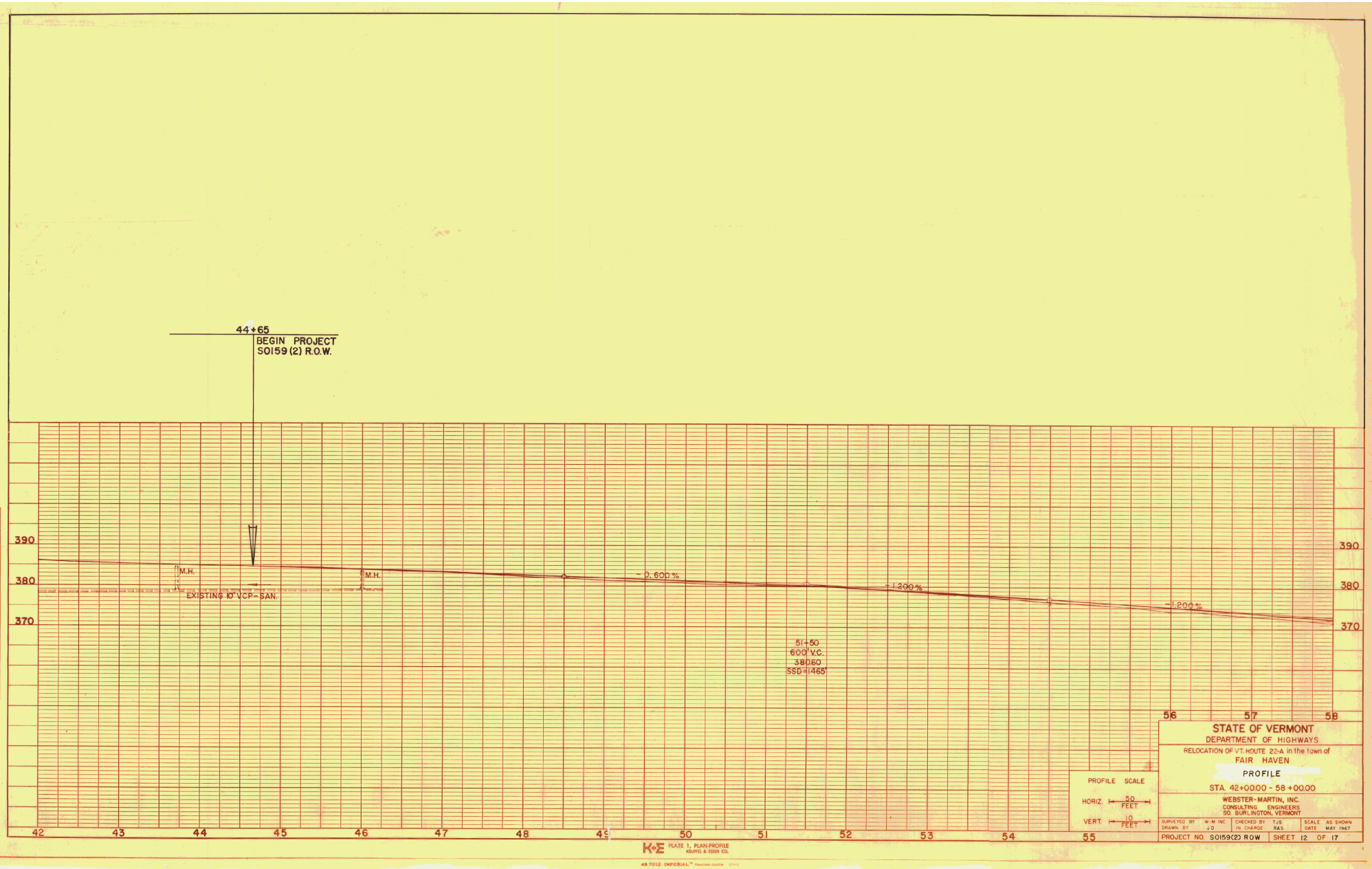
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
PLAN
STA. 117+00.00 - 122+00.00

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

SURVEYED BY VT. DEPT.	CHECKED BY	SCALE AS SHOWN
DRAWN BY JJO	IN CHARGE RAS	DATE APRIL 1970

PROJECT NO. S0159(2) ROW | SHEET 11 OF 17



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN

PROFILE

STA. 42+00.00 - 58+00.00

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

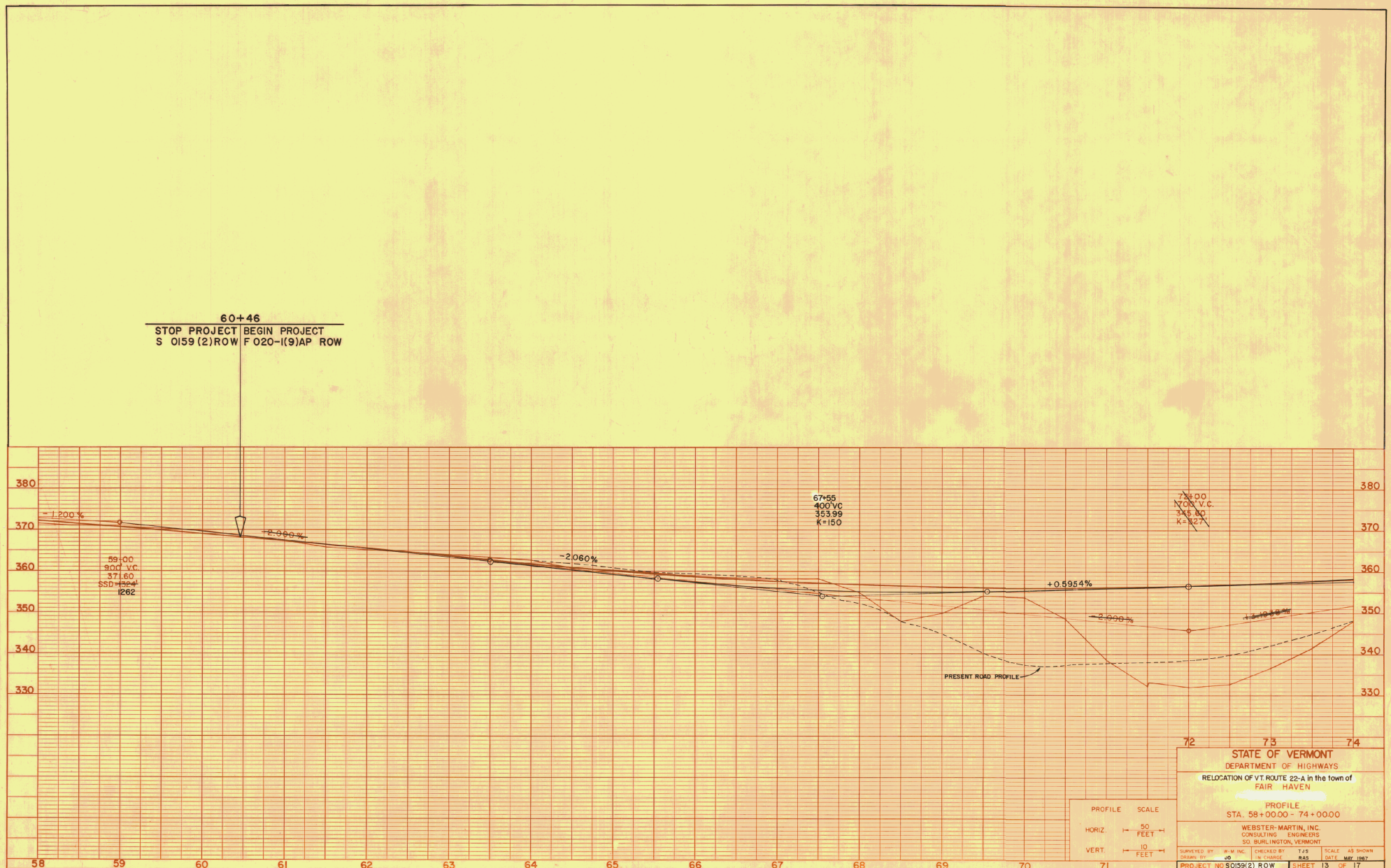
SURVEYED BY	W-M INC	CHECKED BY	TJS	SCALE	AS SHOWN
DRAWN BY	JO	IN CHARGE	RAS	DATE	MAY 1967

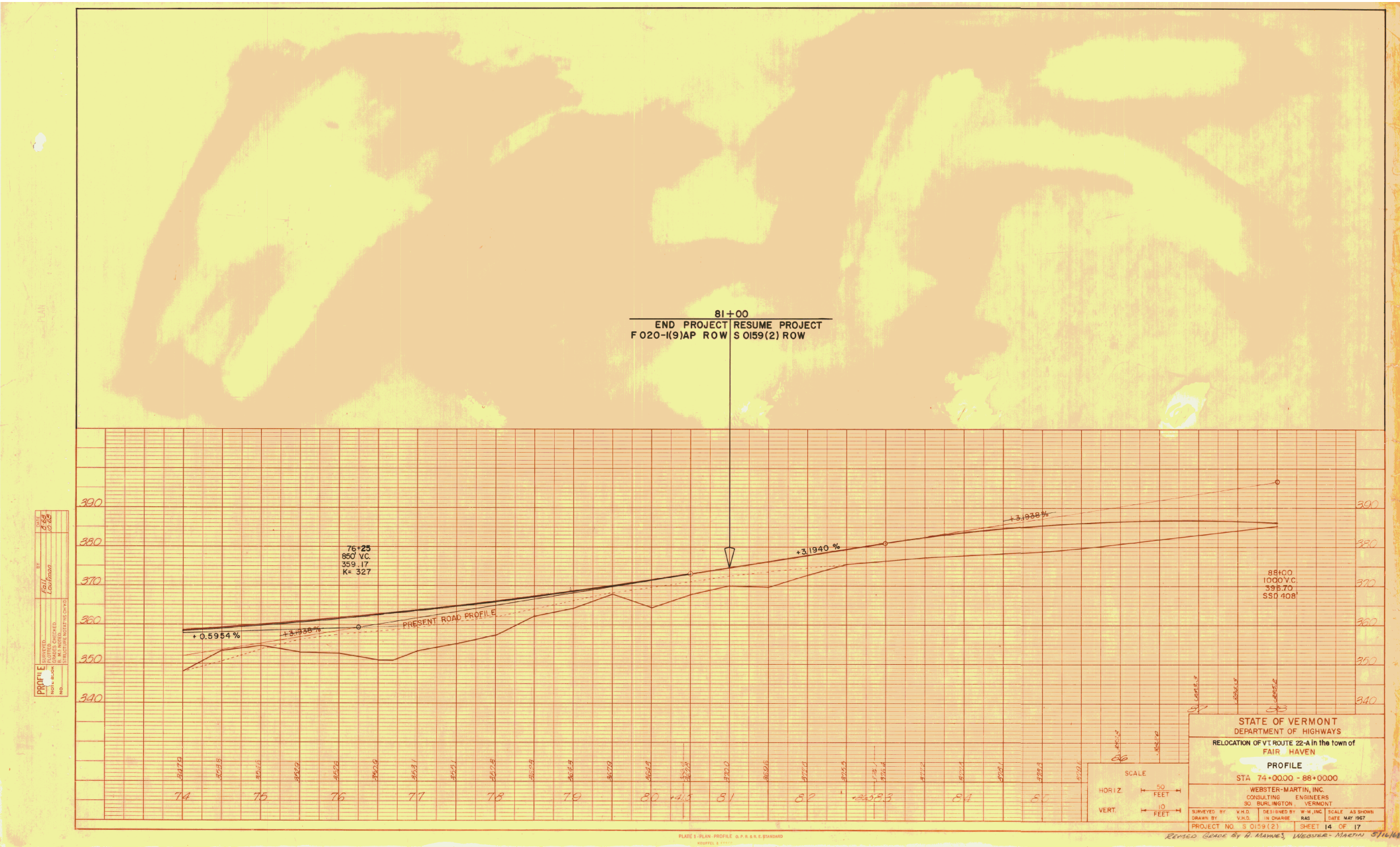
PROJECT NO. S0159(2) ROW | SHEET 12 OF 17

PROFILE
NO. & BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B. M.'s NOTED
STRUCTURE NOTATIONS CH'KD
BY
DATE

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

48 7012 IMPERIAL™ TRACING CLOTH


60+46
STOP PROJECT
S 0159(2)ROW
BEGIN PROJECT
F 020-1(9)AP ROW
-1.200%
-2.000%
59+00
900' V.C.
371.60
SSD=1324'
1262
-2.060%
67+55
400' VC
353.99
K=150
+0.5954%
72+00
1700' V.C.
345.80
K=327'
-2.000%
PRESENT ROAD PROFILE
380
370
360
350
340
330
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B. M. NOTED
STRUCTURE NOTATNS CHKD
NOTE - JH
NO.
BY
DATE
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
PROFILE
STA. 58+00.00 - 74+00.00
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VERMONT
SURVEYED BY W-M INC.
DRAWN BY JO
CHECKED BY TJS
IN CHARGE RAS
SCALE AS SHOWN
DATE MAY 1967
PROJECT NO S0159(2) ROW
SHEET 13 OF 17
K+E PLATE 1, PLAN-PROFILE
REVISED GRADE BY H. MAYNES, WEBSTER-MARTIN, 5/16/68



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN

PROFILE

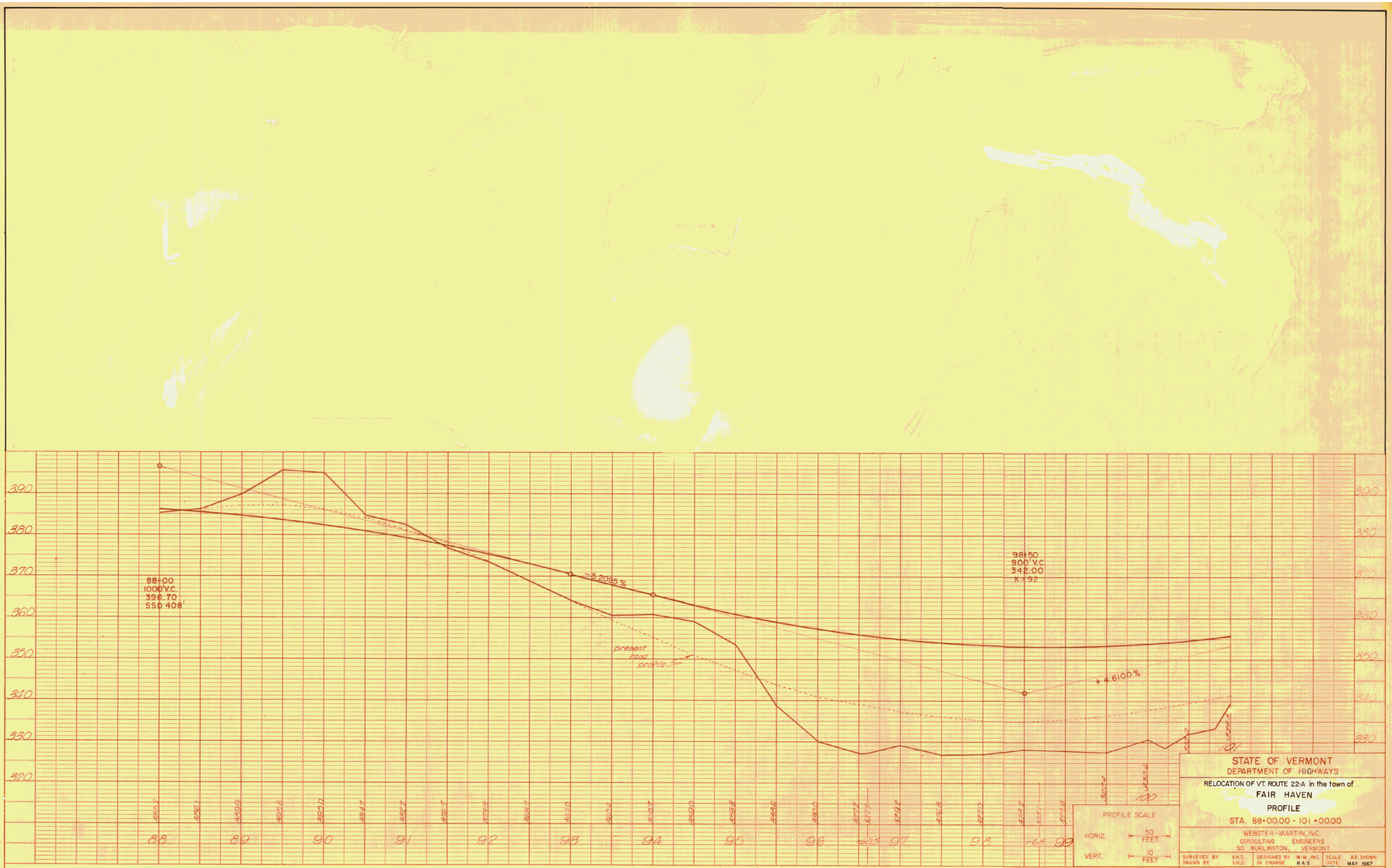
STA 74+00.00 - 88+00.00

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

SURVEYED BY V.H.D.	DESIGNED BY W.M., INC.	SCALE AS SHOWN	
DRAWN BY V.H.D.	IN CHARGE RAS	DATE MAY 1967	
PROJECT NO. S 0159(2)		SHEET 14 OF 17	

REVISED GRADE BY A. MAYNES, WEBSTER-MARTIN 5/16/68

PLATE 1 - PLAN - PROFILE O.P.R. & R.E. STANDARD
KEUFFEL & ESSER



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
PROFILE
STA. 88+00.00 - 101+00.00

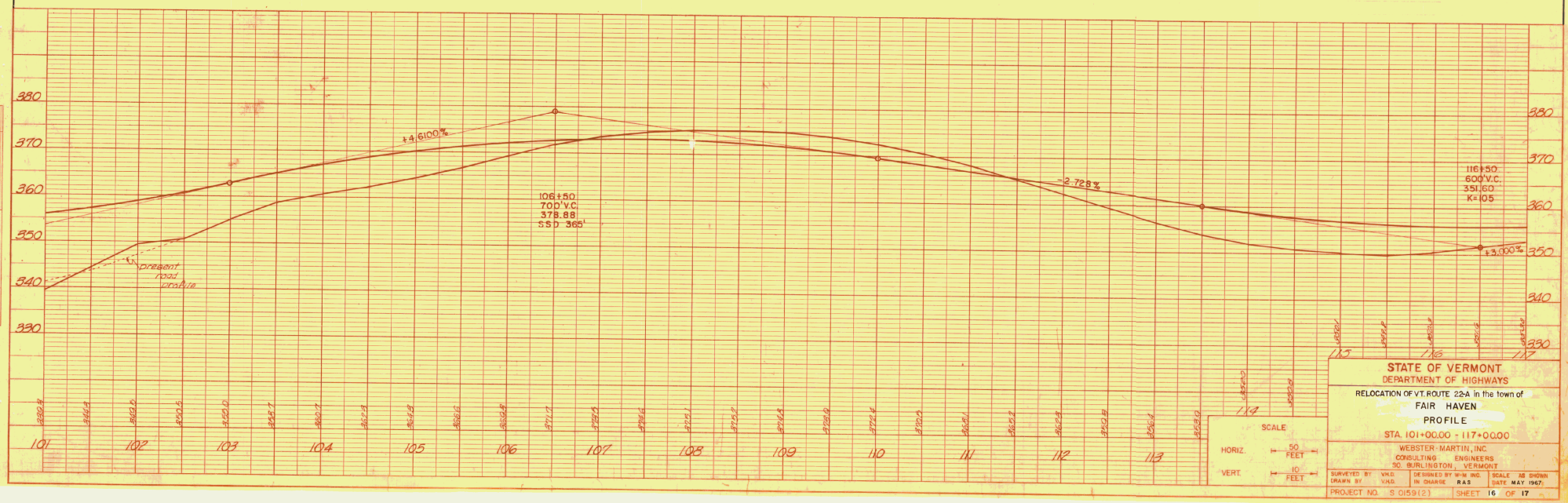
WEBSTER-MARTIN, INC.
CONSULTING ENGINEERS
SO. BURLINGTON, VERMONT

SURVEYED BY	V.H.D.	DESIGNED BY	W-M, INC.	SCALE	AS SHOWN
DRAWN BY	V.H.D.	IN CHARGE	R.A.S.	DATE	MAY 1967

PROJECT NO. S 0159 (2) SHEET 15 OF 17

PROFILE
NO. NO. NO.
SURVEYED
PLOTTED
GRADES CHECKED
B. M. NOTED
STRUCTURE NOTATNS CHK'D
BY Fall Lautman
DATE 8-68 10-68

PLATE 1 - PLAN - PROFILE O. P. R. & R. E. STANDARD



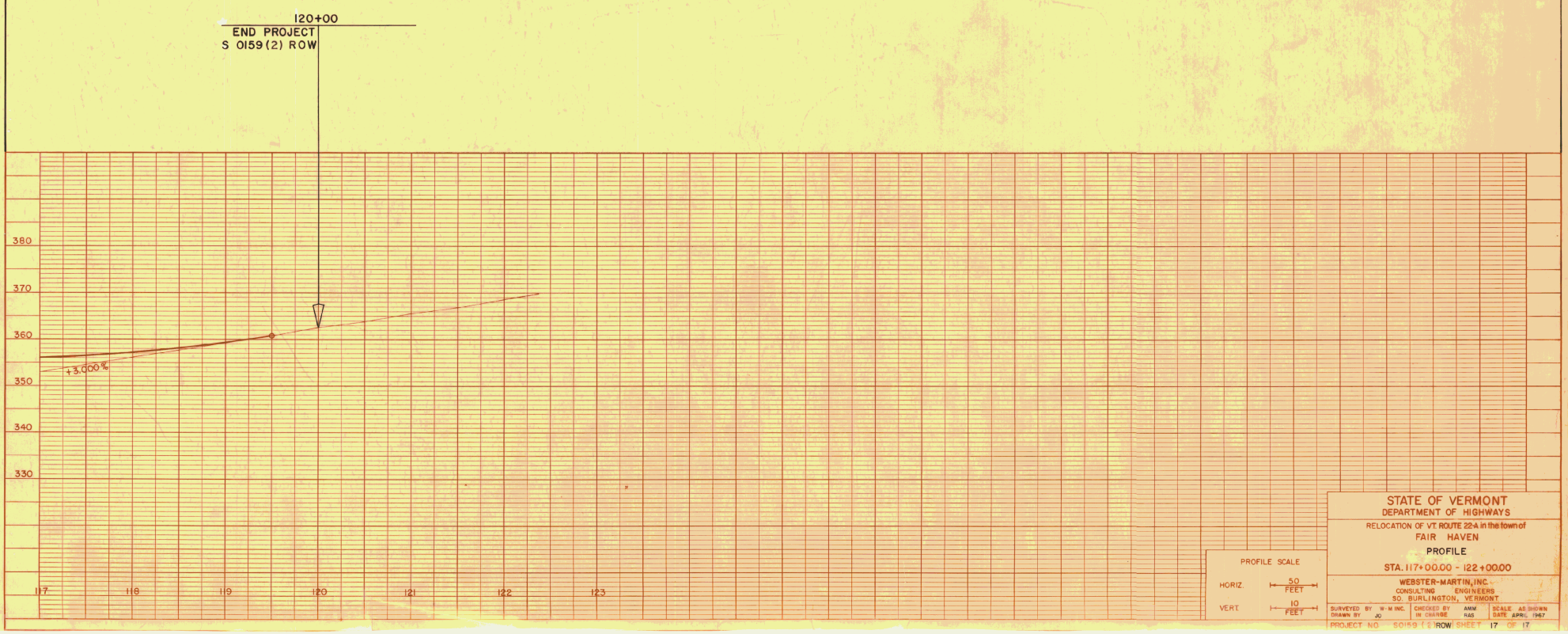
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN
PROFILE
STA. 101+00.00 - 117+00.00

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

SURVEYED BY V.H.D.	DESIGNED BY W-M INC.	SCALE AS SHOWN	
DRAWN BY V.H.D.	IN CHARGE RAS	DATE MAY 1967	
PROJECT NO. S 0159(2)		SHEET 16 OF 17	

PROFILE
SURVEYED
LOTTED
GRADES CHECKED
B. M. NOTED
STRUCTURE NOTATIONS CHKD.
NOTE BOOK
NO.
BY
Fall
Lautman
DATE
8-63
10-68



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATION OF VT. ROUTE 22-A in the town of
FAIR HAVEN

PROFILE

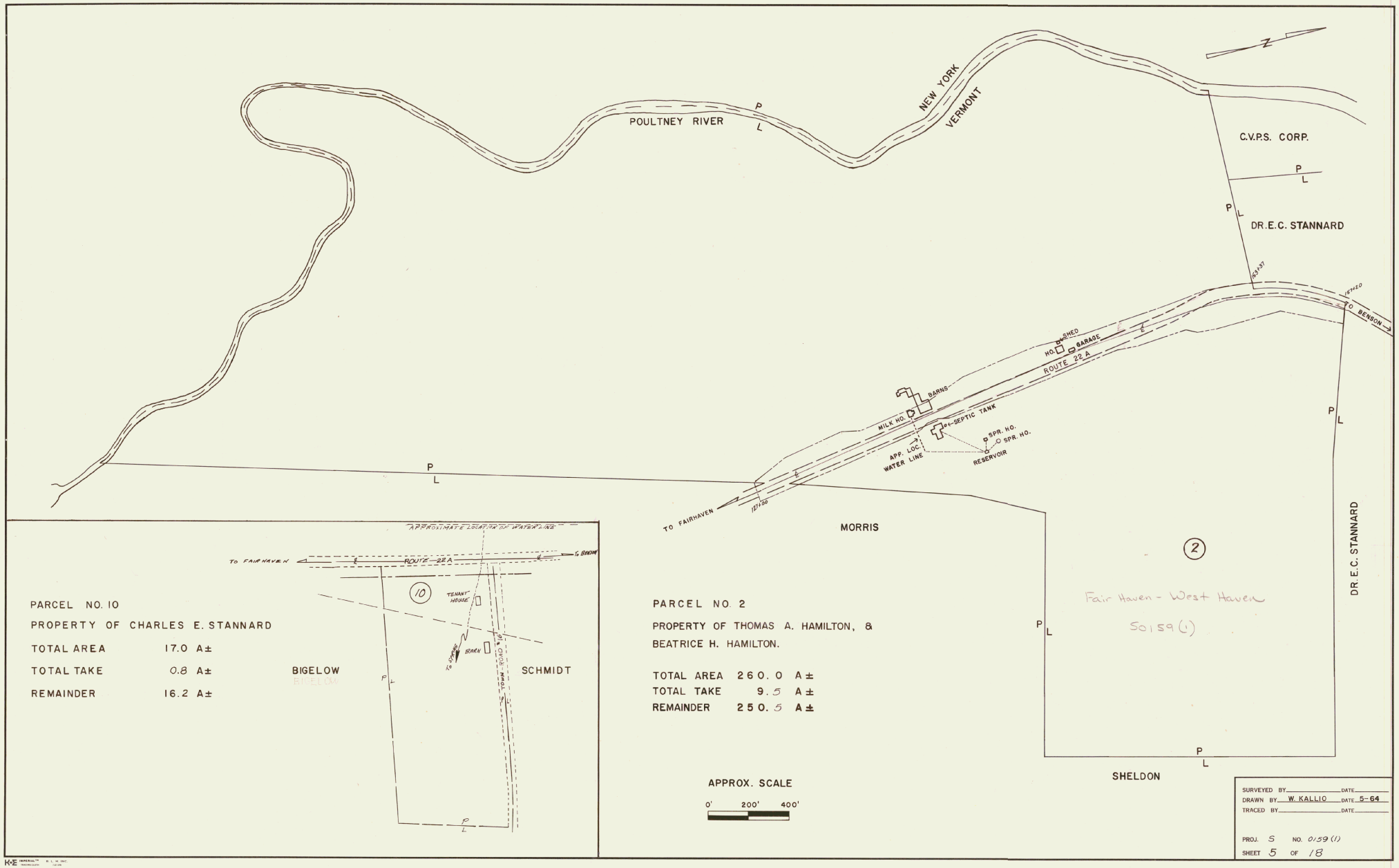
STA. 117+00.00 - 122+00.00

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

SURVEYED BY	W-M INC.	CHECKED BY	AMM	SCALE	AS SHOWN
DRAWN BY	JO	IN CHARGE	RAS	DATE	APRIL 1967

PROJECT NO. S0159 (2) ROW SHEET 17 OF 17

PROFILE
NOTE BOOK
NO.
SURVEYED
TED.
GRADES CHECKED
B. M. NOTED
STRUCTURE NOTATIONS CHKD.
BY
DATE



PARCEL NO. 10

PROPERTY OF CHARLES E. STANNARD

TOTAL AREA	17.0 A±
TOTAL TAKE	0.8 A±
REMAINDER	16.2 A±

PARCEL NO. 2

PROPERTY OF THOMAS A. HAMILTON, & BEATRICE H. HAMILTON.

TOTAL AREA	260.0 A±
TOTAL TAKE	9.5 A±
REMAINDER	250.5 A±

APPROX. SCALE

0' 200' 400'

(2)

Fair Haven - West Haven

50159(1)

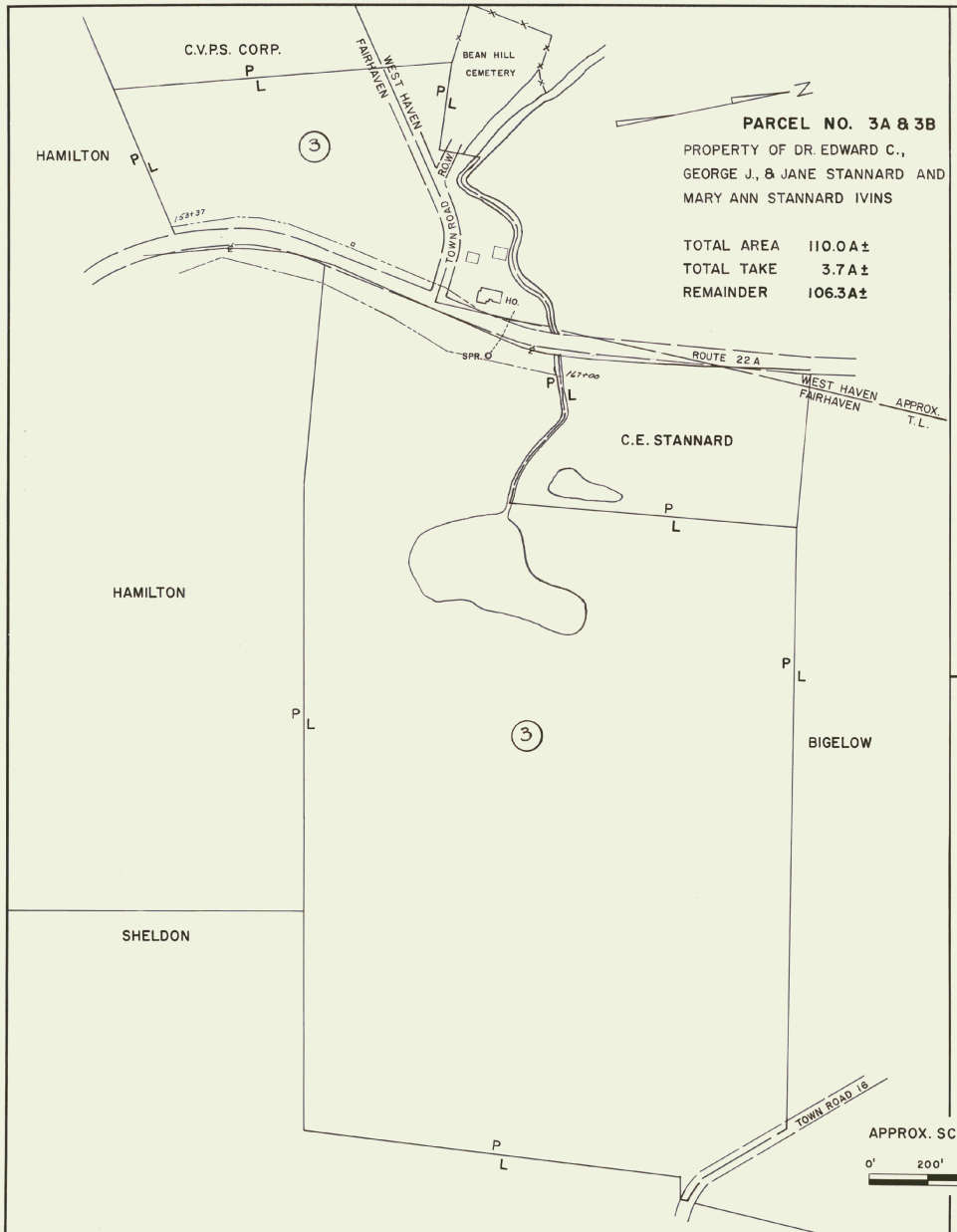
SURVEYED BY _____ DATE _____

DRAWN BY W. KALLIO DATE 5-64

TRACED BY _____ DATE _____

PROJ. S NO. 0159(1)

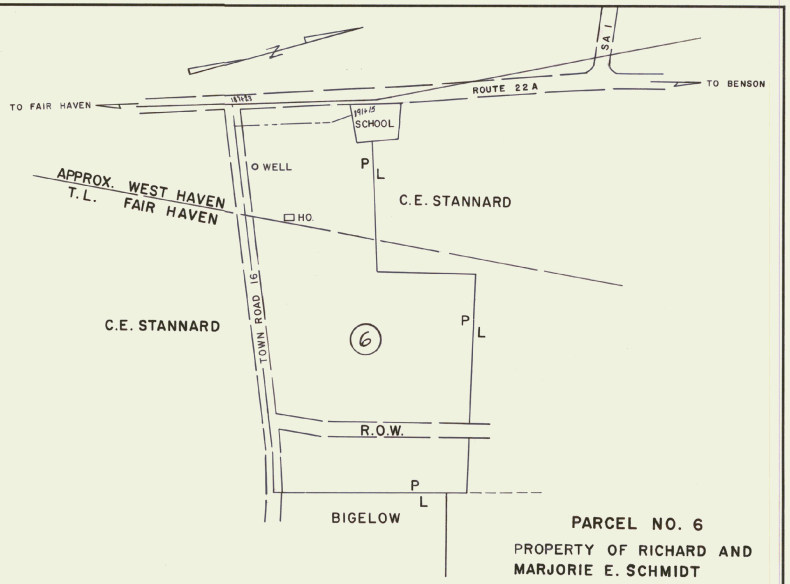
SHEET 5 OF 18



PARCEL NO. 3A & 3B

PROPERTY OF DR. EDWARD C.,
GEORGE J., & JANE STANNARD AND
MARY ANN STANNARD IVINS

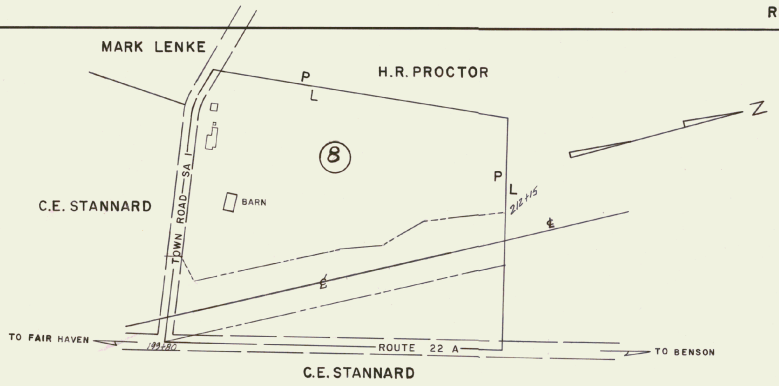
TOTAL AREA	110.0 A±
TOTAL TAKE	3.7 A±
REMAINDER	106.3 A±



PARCEL NO. 6

PROPERTY OF RICHARD AND
MARJORIE E. SCHMIDT

TOTAL AREA	16.0 A±
TOTAL TAKE	0.6 A±
REMAINDER	15.4 A±



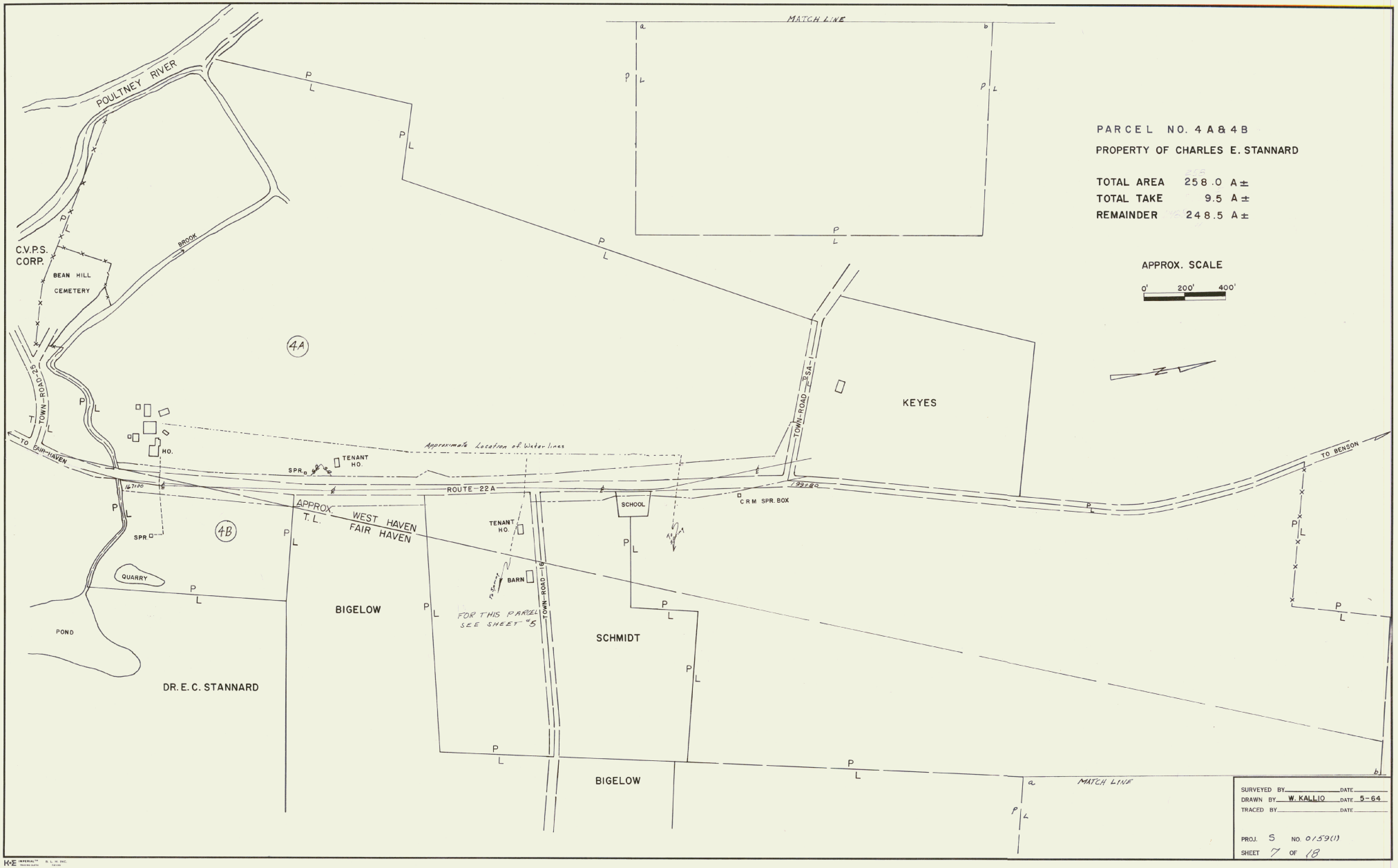
PARCEL NO. 8

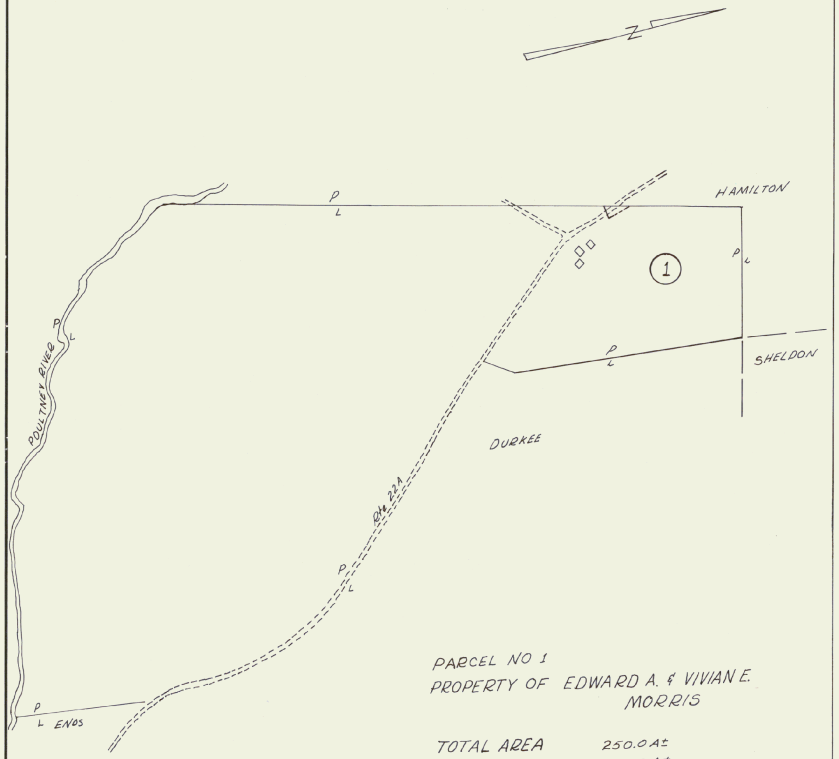
PROPERTY OF STUART H. AND
MARION O. KEYES

TOTAL AREA	23.0 A±
TOTAL TAKE	4.8 A±
REMAINDER	18.2 A±

SURVEYED BY		DATE
DRAWN BY	W. KALLIO	DATE 5-64
TRACED BY		DATE

PROJ. S NO. 0159(1)
SHEET 6 OF 18


MATCH LINE
a
b
POULTNEY RIVER
C.V.P.S. CORP.
BEAN HILL CEMETERY
BROOK
TOWN ROAD 22
TO FAIR HAVEN
4A
4B
HO.
SPR
TENANT HO.
Approximate Location of Water lines
ROUTE-22A
APPROX. T.L. WEST HAVEN FAIR HAVEN
SCHOOL
CRM SPR. BOX
TOWN ROAD 55A
KEYES
TO BENSON
QUARRY
POND
BIGELOW
DR. E. C. STANNARD
BARN
FOR THIS PARCEL SEE SHEET #5
TOWN ROAD 6
SCHMIDT
BIGELOW
MATCH LINE
P
L
PARCEL NO. 4A & 4B
PROPERTY OF CHARLES E. STANNARD
TOTAL AREA 258.0 A±
TOTAL TAKE 9.5 A±
REMAINDER 248.5 A±
APPROX. SCALE
0' 200' 400'
SURVEYED BY
DRAWN BY W. KALLIO DATE 5-64
TRACED BY
PROJ. S NO. 0159(1)
SHEET 7 OF 18

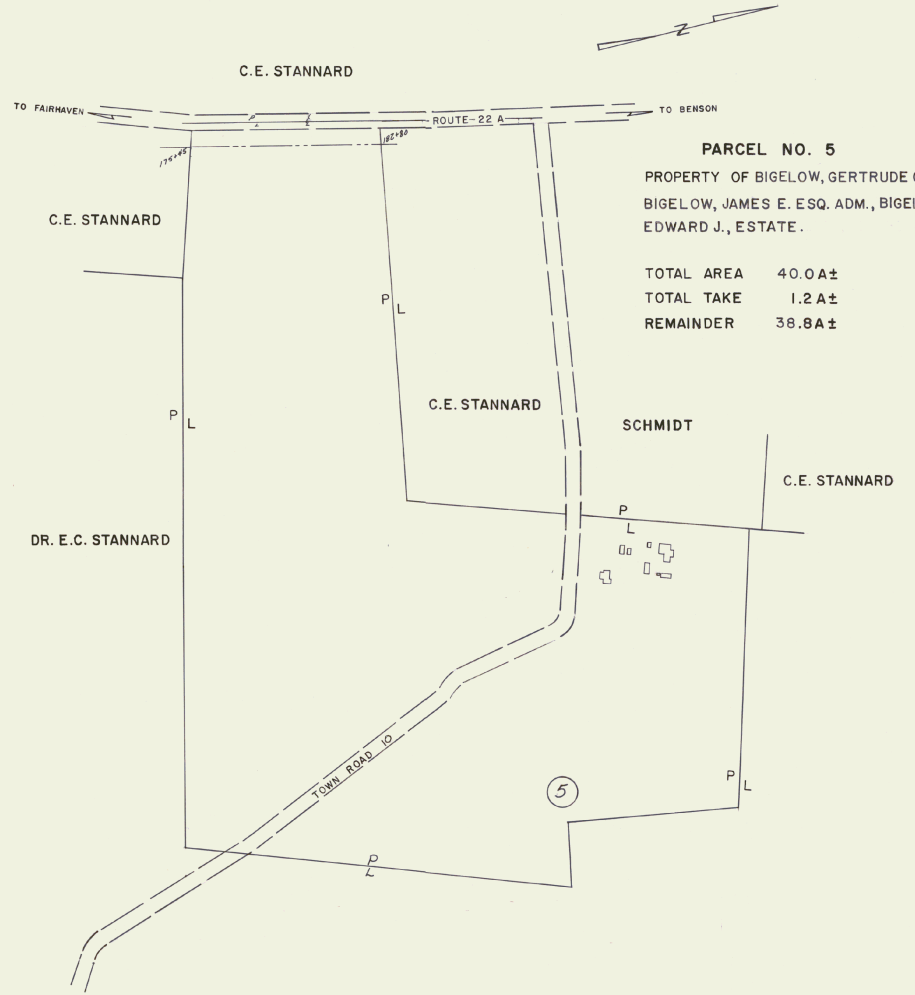


PARCEL NO 1
PROPERTY OF EDWARD A. & VIVIAN E. MORRIS

TOTAL AREA	250.0A±
TOTAL TAKE	0.2A±
REMAINDER	249.8A±

APPROX. SCALE

0' 500' 1000'



PARCEL NO. 5
PROPERTY OF BIGELOW, GERTRUDE C. & BIGELOW, JAMES E. ESQ. ADM., BIGELOW, EDWARD J., ESTATE.

TOTAL AREA	40.0A±
TOTAL TAKE	1.2A±
REMAINDER	38.8A±

APPROX. SCALE

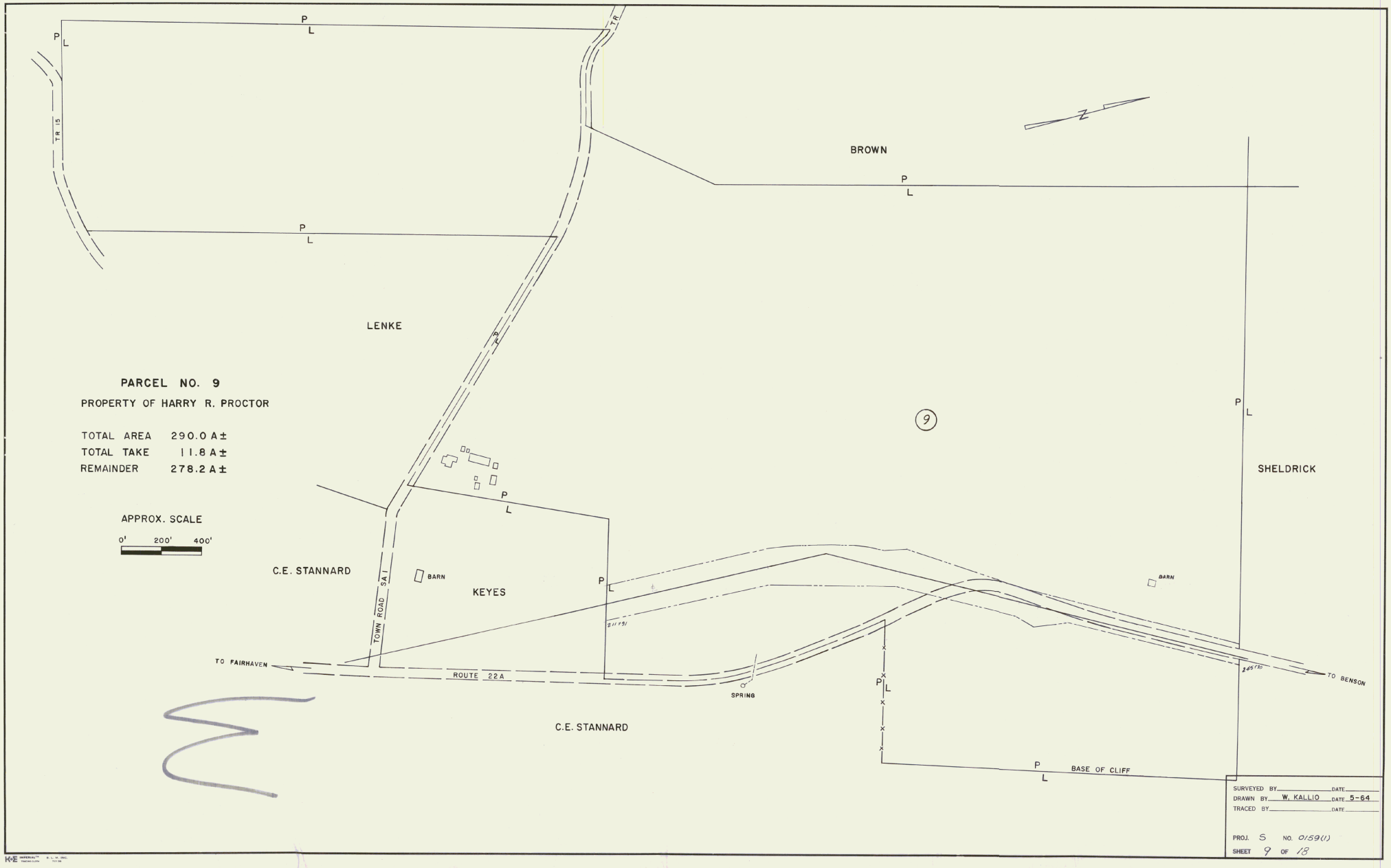
0' 200' 400'

SURVEYED BY _____ DATE _____
DRAWN BY W. KALLIO DATE 5-64
TRACED BY _____ DATE _____

PROJ. S NO. 0159(1)
SHEET 8 OF 18

165½
7/27/64

K+E IMPERIAL™ N. L. M. INC.


P
L
TR 15
TR
BROWN
LENKE
PARCEL NO. 9
PROPERTY OF HARRY R. PROCTOR
TOTAL AREA 290.0 A±
TOTAL TAKE 11.8 A±
REMAINDER 278.2 A±
APPROX. SCALE
0' 200' 400'
9
SHELDRICK
C.E. STANNARD
BARN
KEYES
TOWN ROAD SA 1
TO FAIRHAVEN
ROUTE 22A
SPRING
TO BENSON
C.E. STANNARD
BASE OF CLIFF
SURVEYED BY
DRAWN BY W. KALLIO DATE 5-64
TRACED BY
PROJ. S NO. 0159(1)
SHEET 9 OF 18