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- | | | |
|--------|---|-----------|
| B-5 | SLOPE GRADING, EMBANKMENTS, MUCK CURBS, BITUMINOUS CONCRETE SIDEWALKS | 12-06-71 |
| C-1 | SIDEWALK RAMP | 10-25-85R |
| C-3 | REINFORCED CONCRETE DROP INLET W/GRATE, BOTTOM SECTION | 08-18-89R |
| D-8 | REINFORCED CONCRETE DROP INLET TOP W/VERTICAL CURB | 12-06-71 |
| D-9 | C I GRATE, TYPE E | 10-30-85R |
| D-15 | CONSTRUCTION APPROACH SIGNS | 05-26-89R |
| E-100 | CONSTRUCTION SIGN DETAILS | 10-30-87 |
| E-101 | CONSTRUCTION SIGN DETAILS | 01-23-89R |
| E-102 | TRAFFIC CONTROL - MISCELLANEOUS DETAILS | 01-23-89R |
| E-106 | DELINEATION BARRICADES AND DETOURS FOR CONSTRUCTION AREAS | 04-29-88R |
| E-107 | BREAKAWAY BARRICADE DETAILS | 09-10-87 |
| E-107A | MAJOR MAINTENANCE LANE CLOSURE | 03-01-88R |
| E-110 | STANDARD SIGN PLACEMENT - CONVENTIONAL RAMP | 01-23-89 |
| E-121 | FLANGED CHANNEL | 03-01-88R |
| E-160 | CHAIN LINK FENCE (TYPE I) | 02-01-79R |
| F-2 | CHAIN LINK FENCE (TYPE II) | 02-01-79R |
| F-3 | CHAIN LINK FENCE (TYPE III) | 03-19-79R |
| F-4 | CHAIN LINK FENCE (TYPE IV) | 10-31-85R |
| G-1 | STEEL BEAM GUARD RAIL | 10-31-85R |
| G-1D | STEEL BEAM GUARD RAIL (40 MPH & LESS) | 10-31-85R |
| G-4 | MARKERS - GUIDE POSTS | 11-01-88R |
| G-14 | BREAKAWAY CABLE TERMINAL W/WOOD POSTS | 12-07-76R |
| T-1 | TEMPORARY EROSION CONTROL | 07-05-72 |
| T-2 | TEMPORARY EROSION CONTROL | |

STATE OF VERMONT AGENCY OF TRANSPORTATION

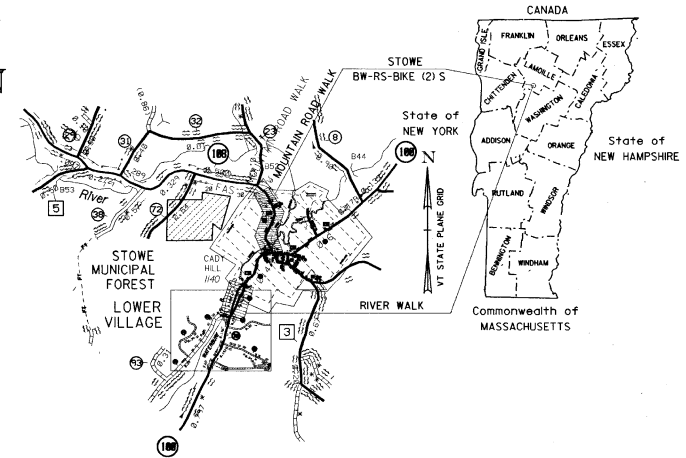


PROPOSED IMPROVEMENT TOWN OF STOWE COUNTY OF LAMOILLE

THIS PROJECT SHALL INCLUDE TWO SECTIONS:
 STOWE RIVER WALK-(SECTION ONE)- BEGINNING AT A POINT WHICH IS APPROXIMATELY 40' ± WESTERLY OF THE CENTERLINE OF VT. ROUTE 100, AND 65' ± NORTHERLY OF THE STOWE VILLAGE/STOWE TOWN LINE. THE PROJECT CONTINUES SOUTHERLY FOR 1141' (0.216 MI), GENERALLY PARALLELING VT. 100, AND TERMINATES AT ITS INTERSECTION WITH TH#5 IN THE TOWN OF STOWE. THIS WILL BE A DUAL USAGE BIKE/PEDESTRIAN FACILITY.

STOWE MOUNTAIN ROAD WALK-(SECTION TWO)-BEGINNING AT A POINT WHICH IS APPROXIMATELY 0.080 MILE NORTHERLY OF THE VT. ROUTE 108 - VT. ROUTE 100 INTERSECTION IN THE VILLAGE OF STOWE. THE PROJECT CONTINUES NORTHEASTERLY AND CONTIGUOUS WITH THE EASTERLY EDGE OF VT. ROUTE 108 FOR A DISTANCE OF 2400' ± (0.455 MI) THIS FACILITY WILL BE FOR PEDESTRIAN USAGE.

PROJECT AREA MAPS FOR SECTIONS ONE AND TWO
ARE SHOWN ON THEIR INDIVIDUAL TITLE SHEETS



CONVENTIONAL SIGNS	
COUNTY LINE	---
TOWN LINE	- - - - -
LIMITS OF ACCESS	○-○-○-○
POINT OF ACCESS	X
FENCE LINE	x-x-x-x
STONE WALL	o-o-o-o-o-o-o-o
TRAVELED WAY	-----
GRADE RAIL	o-o-o-o-o
RAILROAD	
SURVEY LINE	+
CULVERT	-----
POWER POLE	⊕
TELEPHONE POLE	⊕
TREES	⊗
CONTROL OF ACCESS	///
PROPERTY LINE	---
R.O.W. TAKING LINE	SR
SLOPE RIGHTS	△
TOP OF CUT	△
TOE OF SLOPE	△

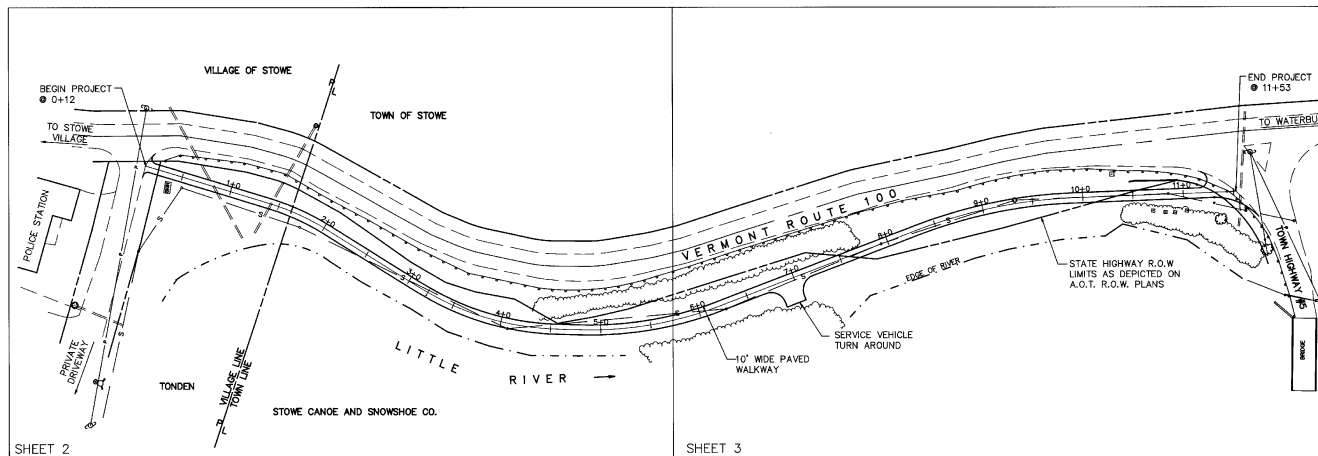
DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

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

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD	
APPROVED <i>Robert Stettin</i> DATE 5/1/92	(Signature) DIRECTOR OF ENGINEERING
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED _____ DATE _____	DIVISION ADMINISTRATOR
PROJECT STOWE BW-RS BIKE (2) S	
SHEET 1 OF 33 SHEETS	

TOWN OF STOWE

RIVER WALK



INDEX OF SHEETS

SHEET NUMBER	TITLE
1	TITLE SHEET
2	SITE PLAN 0+00 TO 5+80
3	SITE PLAN 5+80 TO 11+53
4	CENTERLINE PROFILES
5	QUANTITY SUMMARY
6	EARTHWORK AND TYPICAL SECTIONS
7	SECTIONS 0+00 TO 4+50
8	SECTIONS 5+00 TO 10+00
9	SECTIONS 10+25 TO 11+50
10	DETAILS OF RETAINING WALL AT 10+35
11	TIE DETAIL SHEET
12	SIGN LOCATION PLAN
13	TRAFFIC SIGN SUMMARY
14	SIGN DETAIL SHEET
15	CONSTRUCTION APPROACH SIGNING

BIKE PATH DESIGN SPEED = 20 MPH

APPLICABLE A.O.T. STANDARDS

B-5	SLOPE GRADING, EMBANKMENTS, MUCK
D-15	PRECAST REINFORCED CONCRETE CATCH BASIN WITH C.I. GRATE
E-100	CONSTRUCTION APPROACH SIGNS
E-101	CONSTRUCTION SIGN DETAILS
E-102	CONSTRUCTION SIGN DETAILS
E-106	TRAFFIC CONTROL MISCELLANEOUS DETAILS
E-107	DELINEATION BARRICADES AND DETOURS FOR CONSTRUCTION AREAS
E-107A	BREAKAWAY BARRICADE DETAILS
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE
E-160	FLANGED CHANNEL STEEL SIGN POST
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD
F2	CHAIN LINK FENCE, TYPE I
G1d	GUARD RAIL, HEAVY DUTY STEEL BEAM WITH WOOD POSTS, TYPE II
G4	GUIDE POSTS
G14	BREAKAWAY CABLE TERMINAL WITH WOOD POSTS
T-1	TEMPORARY EROSION CONTROL DETAILS

SITE PLAN

GRAPHIC SCALE



RECORD PLANS

CONTRACTOR: DUBOIS CONST. INC., MONTPELIER, VT.
 RESIDENT ENGINEER: EUGENE PERBODY
 CONSTRUCTION BEGAN: 5/24/93
 CONSTRUCTION COMPLETED: 9/17/93
 RECORD PLANS BY: EUGENE PERBODY

I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.
 By: *Eugene Perbody*, Resident Engineer
 Date: *10/27/93*

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

REVISED 10/25/91

PROJECT SCOPE

THIS PROJECT INVOLVES THE CONSTRUCTION OF A 1141 FEET BITUMINOUS CONCRETE SURFACE BICYCLE PATH AND PEDESTRIAN WALKWAY ALONG THE WEST SIDE OF VERMONT ROUTE 100 IMMEDIATELY SOUTH OF THE VILLAGE OF STOWE. A GRAVEL SUBBASE WILL BE PLACED AND THE PATH WILL BE FENCED TO PROTECT BIKERS FROM THE LITTLE RIVER. THE PROJECT WILL CONNECT TOWN HIGHWAY #5 RIVER ROAD WITH A PRIVATE ROADWAY NEAR THE STOWE POLICE STATION.



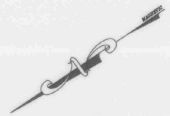
TOWN OF STOWE - RIVER WALK
 "TITLE SHEET"

CHARLES GRENIER
 CONSULTING ENGINEER, P.C.
 BOX 445, WATERBURY, VERMONT
 244-6413

BW-RS-BIKE (25)

DATE: 9-11-91
 DRN BY: T.J.M.
 SCALE: 1"=60'
 SHT. 2 OF 32

MATCHLINE SHEET 2 SHEET 3



CURVE #4
 INCLUDED ANGLE = 18°44'29"
 RADIUS = 477.46'
 TANGENT LENGTH = 79.77'
 ARC LENGTH = 156.18'
 CHORD LENGTH = 155.45'
 EXTERNAL SECANT = 5.45'
 DEGREE OF CURVE = 12°00'00"

CURVE #4
 RT @ 9+12.25 BK
 = 9+10.85 AHD
 INCLUDED ANGLE = 18°44'29" RT

*7+10 NB 88°32'
 NEW 18'x150' CSP
 W/ 1/2" @ 12" INLET*

*10+29.5-10+46.5'
 10+29 TO 10+50 LEFT
 REINFORCED CONCRETE RETAINING WALL
 SEE DETAILS ON SHEET 10*

REMOVABLE WOOD POSTS IN STEEL SLEEVE
 AT CENTERLINE OF PATH 11+15 (ITEM 621.85(MOD.))
 INSTALLED ACCORDING TO STD. G14, SETBACK C.
 ON EACH SIDE OF THE CENTER POST 5' C.C.
 INSTALL A WOOD GUIDE POST, ITEM 621.85
 ACCORDING TO STD. G4

EXISTING RETAINING WALL
 WHICH STARTS AT 10+53 LEFT
 TO REMAIN UNDISTURBED

11+08 LT TO 11+31 LT
 INSTALL STEEL
 BEAM GUARD RAIL WITH
 WOOD POSTS, ITEM 621.20
 ALSO INSTALL NEW ANCHOR
 ITEM 621.60 SEE STD. G14
 ADD 2' END SECTION

END WALKWAY AT STATION 11+53
 CONSTRUCT SATISFACTORY APPROACH
 TO WATERBURY

10+90 TO 11+25 LT
 CONCRETE BLOCK
 RETAINING WALL

11+08 LT TO 11+65 RT
 REMOVE EXISTING HEAVY
 DUTY STEEL BEAM GUARD
 RAIL AND WOOD FENCE
 POSTS, ITEM 621.80

VERMONT ROUTE 100

EXISTING 20' R.O.W. FOR SEWER LINE

100 YEAR FLOOD
 ELEVATION LIMIT

STATE HIGHWAY R.O.W LIMITS
 AS DEPICTED ON A.D.T.
 R.O.W. PLANS

END CHAIN LINK FENCE AT
 END OF GUARD RAIL @ 11+27

EXISTING SIGN TO BE REMOVED
 AS PER AGREEMENT BETWEEN
 TOWN OF STOWE AND STOWE CANOE COMPANY

11+27 TO 11+65 RT INSTALL NEW
 STEEL BEAM GUARD
 RAIL WITH WOOD POSTS, ITEM 621.20

PROJECT BENCHMARK #2
 DISC CORNER OF BRIDGE
 USGS ELEV. = 670.00

BEGIN CONCRETE BLOCK RETAINING
 WALL AT 8+00 RT. 4'x4'x2'
 BLOCKS. SEE TYPICAL ON SHEET 6

CHAIN LINK FENCE, 4 FEET
 ITEM 620.11(MOD.) SEE NOTE
 EXPLAINING MODIFICATION ON
 SHEET 6

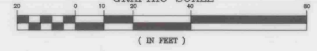
50' R.O.W. ACROSS STOWE CANOE AND SNOWSHOE COMPANY PROPERTY
 R.O.W. WIDENS TO 35' ON THE RIGHT FROM 6+75 TO 7+25

10' WIDE PAVED WALKWAY
 SEE SECTIONS ON SHEETS 7, 8, AND 9
 AND TYPICAL SECTIONS ON SHEET 6

5+00 RT TO 7+50 RT PLACE GEOTEXTILE FABRIC
 FOR SILT FENCE AT THE TOE OF
 SLOPE AS A TEMPORARY EROSION CONTROL MEASURE

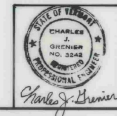
SITE PLAN

GRAPHIC SCALE



CONVENTIONAL SIGNS	
CHAIN LINK FENCE	—○—○—○—
TRAVELED WAY	—○—○—○—
EXISTING GUARD RAIL	—▲—▲—▲—
NEW GUARD RAIL	—▲—▲—▲—
SURVEY LINE	—+—+—+—
QUILBERT	—+—+—+—
POWER POLE	—●—●—●—
TREES (SOFTWOOD)	—○—○—○—
TREES (HARDWOOD)	—●—●—●—
PROPERTY LINE	—+—+—+—
SEWERLINE	—S—S—S—
TOE OF FILL SLOPE	—▲—▲—▲—
TOP OF CUT SLOPE	—▼—▼—▼—
RIGHT OF WAY	—+—+—+—
SILT FENCE	—S—S—S—

BW-RS-BIKE (25)



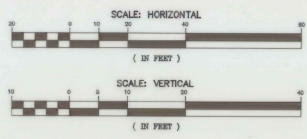
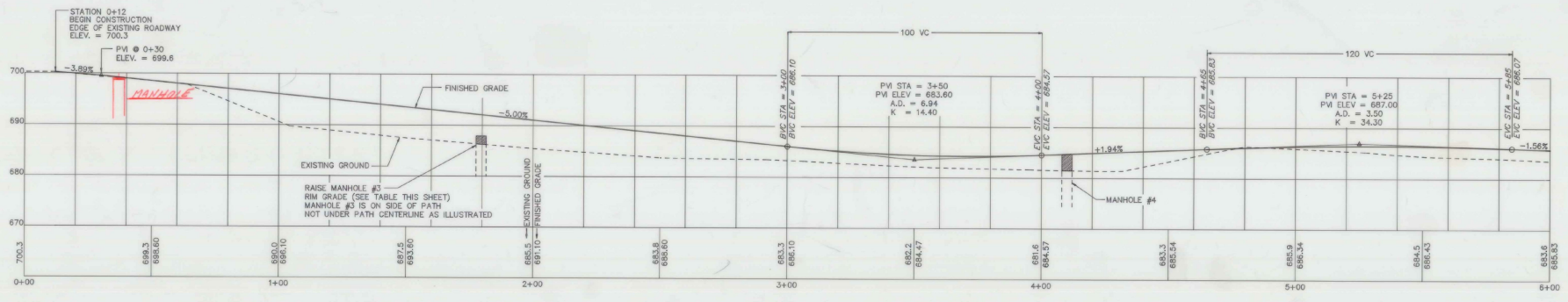
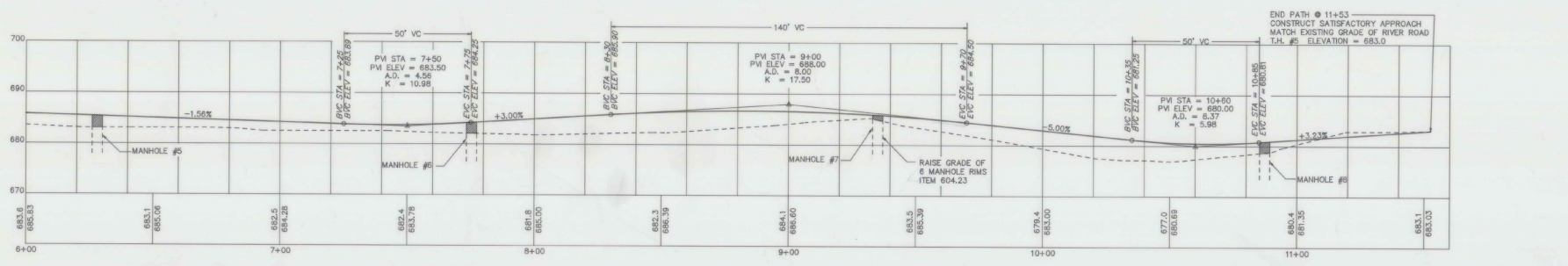
TOWN OF STOWE - RIVER WALK
 "SITE PLAN 5+80 TO 11+53"
CHARLES GRENIER
 CONSULTING ENGINEER, P.C.
 BOX 445, WATERBURY, VERMONT
 244-6413

DATE 10-25-91
 DRN BY A.T.J.M.
 SCALE 1"=20'
 SHT 2 OF 25

59-92 - REVISED STOWE CANOE R.O.W.

ITEM 604.23 CHANGING ELEVATION OF SEWER MANHOLE

MANHOLE NUMBER	STATION	EXISTING RIM GRADE	NEW RIM GRADE	DIFFERENCE IN ELEVATION
3	14+78	685.20	687.5	+2.20'
4	4+08	681.13	684.80	+3.67'
5	6+26	682.87	685.33	+2.46'
6	7+93	681.98	684.80	+2.82'
7	9+33	685.65	686.00	+0.35'
8	10+85	678.50	680.80	+2.30'



TOWN OF STOWE - RIVER WALK
"CENTERLINE PROFILES"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

BW-RS-BIKE (25)

DATE: 9-8-91
DRN BY: T.J.M.
SCALE: 1"=20'
SHT 2 OF 33

EARTHWORK SUMMARY

STATION	FINISHED GRADE	DISTANCE	COMMON EXCAVATION		EMBANKMENT		SUBBASE OF CRUSHED GRAVEL		STONE FILL TYPE I	
			AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
BOX CUT										
0+12	700.3		30	0	0	0	25	0	0	0
0+50	698.6	38	41	50	0	0	14	27	0	0
0+75	697.35	25	15	26	30	14	13	0	0	0
1+00	696.1	25	0	7	83	14	13	0	0	0
1+25	694.85	25	19	5	150	13	13	BUTT	43	0
1+50	693.6	25	0	12	120	13	11	23	24	0
1+75	692.35	25	0	0	35	11	11	33	26	0
2+00	691.1	50	0	0	40	12	12	24	26	0
2+50	689.6	50	0	0	37	11	21	2	24	0
3+00	688.1	50	0	0	19	10	19	3	5	0
3+50	684.5	50	3	3	14	10	19	0	3	0
4+00	684.6	50	0	3	29	9	18	2	2	0
4+50	685.5	50	0	0	9	8	16	10	11	0
5+00	686.3	50	8	7	0	12	13	0	9	0
5+50	686.4	50	0	7	23	13	23	0	0	0
6+00	685.6	50	0	0	53	13	24	0	0	0
6+50	685.1	50	0	0	23	13	24	0	0	0
7+00	684.3	50	0	0	50	30	40	0	0	0
7+50	683.5	50	0	0	8	11	38	0	0	0
8+00	685.0	50	0	0	22	11	20	5	5	0
8+50	686.4	50	0	0	20	9	19	13	17	0
9+00	686.6	33	0	0	14	9	11	1	1	0
9+33	685.96	17	15	9	0	9	6	0	0	0
9+50	685.4	50	7	6	8	9	19	0	4	0
10+00	683.0	50	0	6	34	11	11	4	8	0
10+27	681.6	23	0	0	34	11	11	12	8	0
10+50	680.7	23	0	0	25	11	9	12	9	0
10+90	681.0	40	0	0	22	12	17	8	6	0
11+00	681.4	10	0	5	2	12	4	0	0	0
11+25	682.1	25	0	0	2	12	11	4	2	0
11+30	683.0	5	0	0	0	12	2	4	1	0
11+50	683.0	20	0	5	0	9	8	5	3	0
11+53	683.0	3	0	1	0	0	1	0	1	0
PROJECT TOTALS			177	191	1172	516	522	243	243	0

NOTE: CHARLES GRENIER, CONSULTING ENGINEER, P.C. WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE FROM THE FAILURE OF THE CONTRACTOR TO FOLLOW THE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THAT THE PLANS CONVEY.

LANDSCAPING SPECIFICATIONS SEEDING FORMULA, ITEM 651.15

% WT.	LBS./A	NAME	PUR %	GERM %
37.5	30	CREeping RED FESCUE	98	85
31.25	25	KENTUCKY BLUE GRASS	85	75
31.25	25	PERENNIAL RYE GRASS	85	90
100.00	80			

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

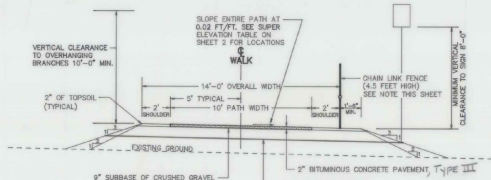
SEED - TO BE APPLIED PER SEEDING FORMULAS DIRECTED BY THE ENGINEER.

FERTILIZER - FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT A RATE OF 500 LBS./ACRE.

AGRICULTURAL LIMESTONE - TO BE APPLIED AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

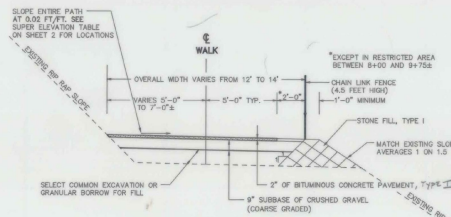
HAY MULCH - TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

SLOPE ROUNDING - ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.



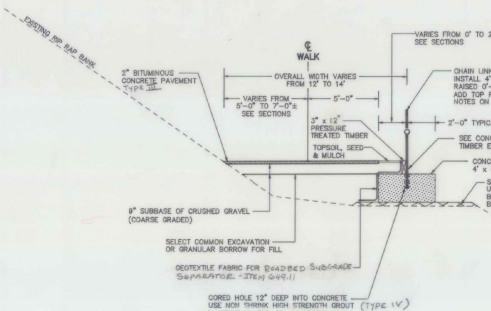
BIKE PATH TYPICAL

FOR STATION 0+00 TO 1+52E AND 5+00E TO 7+50E



BIKE PATH TYPICAL

FOR STATIONS 1+52 TO 5+00 AND 7+50 TO 8+00



BIKE PATH TYPICAL

FOR SECTIONS 1+52 TO 4+44 AND 8+00 TO 11+20

1. BECAUSE OF THE SHORTAGE OF AVAILABLE TOPSOIL, THE COMMON EXCAVATION WHICH INCLUDES THE TOPSOIL SHALL BE USED IN THE EMBANKMENT AREAS. NEW TOPSOIL SHALL BE TRUCKED ONTO THE SITE FOR USE ON THE FINISHED SLOPE WITH PAYMENT UNDER ITEM 651.35.

2. THE COST OF TRAFFIC CONTROL IS SUBSIDIARY TO OTHER PAY ITEMS. SEE STANDARDS E100, E101, E106, E108, E107, E107A, AND E110 FOR DETAILS.

3. THE BITUMINOUS CONCRETE PAVEMENT FOR THE PATH SHALL BE PLACED IN ONE 2" THICK LIFT.

4. ITEM 501.30 CONCRETE, CLASS C SHALL BE MODIFIED AS FOLLOWS:
THE CONCRETE BLOCK RETAINING WALLS SHALL BE CONSTRUCTED WITH LARGE CONCRETE BLOCKS WITH DIMENSIONS OF 4' x 4' x 2', OR 2' x 2' x 4'. A 1" DIMENSION TOLERANCE IS ALLOWED. THESE BLOCKS ARE TO BE CONSTRUCTED OF WASTE CONCRETE FROM AREA SUPPLIERS. THE BLOCKS SHALL BE PLACED WITH THE SMOOTHEST FACE OUTWARD. EACH BLOCK SHALL HAVE LIFTING HOOKS WHICH SHALL BE REMOVED AFTER THE BLOCKS ARE IN PLACE. NO REINFORCING STEEL IS NECESSARY. ALL COSTS ASSOCIATED WITH SUPPLYING, DELIVERING, AND PLACING THE BLOCKS AT THE LOCATION AND GRADE SHOWN ON THE PLANS IS INCLUDED IN THE PER CUBIC YARD COST FOR THIS ITEM. THE EXCAVATION NECESSARY TO SET THE BLOCK WALL SHALL BE INCLUDED IN THE COST OF COMMON EXCAVATION. THE COST OF BACKFILLING AGAINST THE BACK OR BASES OF THE WALLS HAS BEEN INCLUDED IN THE COST OF SUBBASE OF CRUSHED GRAVEL, OR STONE FILL, TYPE I.

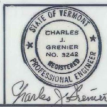
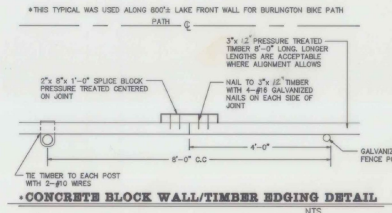
ESTIMATED QUANTITY:

1+52 TO 4+44 RIGHT (TOP ROW)	292' x 4' x 2' = 27	= 86.5 CY
1+58 TO 2+82 RIGHT (BOTTOM ROW)	124' x 4' x 2' = 27	= 36.7 CY
3+46 TO 3+54 LEFT	8' x 4' x 2' = 27	= 2.4 CY
3+46 TO 3+54 LEFT	8' x 2' x 2' = 27	= 1.2 CY
6+00 TO 11+00 RIGHT	300' x 4' x 2' = 27	= 94.8 CY
10+90 TO 11+26 LEFT (14 BLOCKS)	14 x 2' x 2' x 4' = 27	= 8.3 CY
TOTAL		= 229.9 CY

ITEM 620.11 CHAIN LINKED FENCE, 4 FEET SHALL BE MODIFIED AS FOLLOWS.

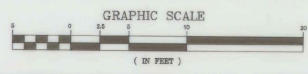
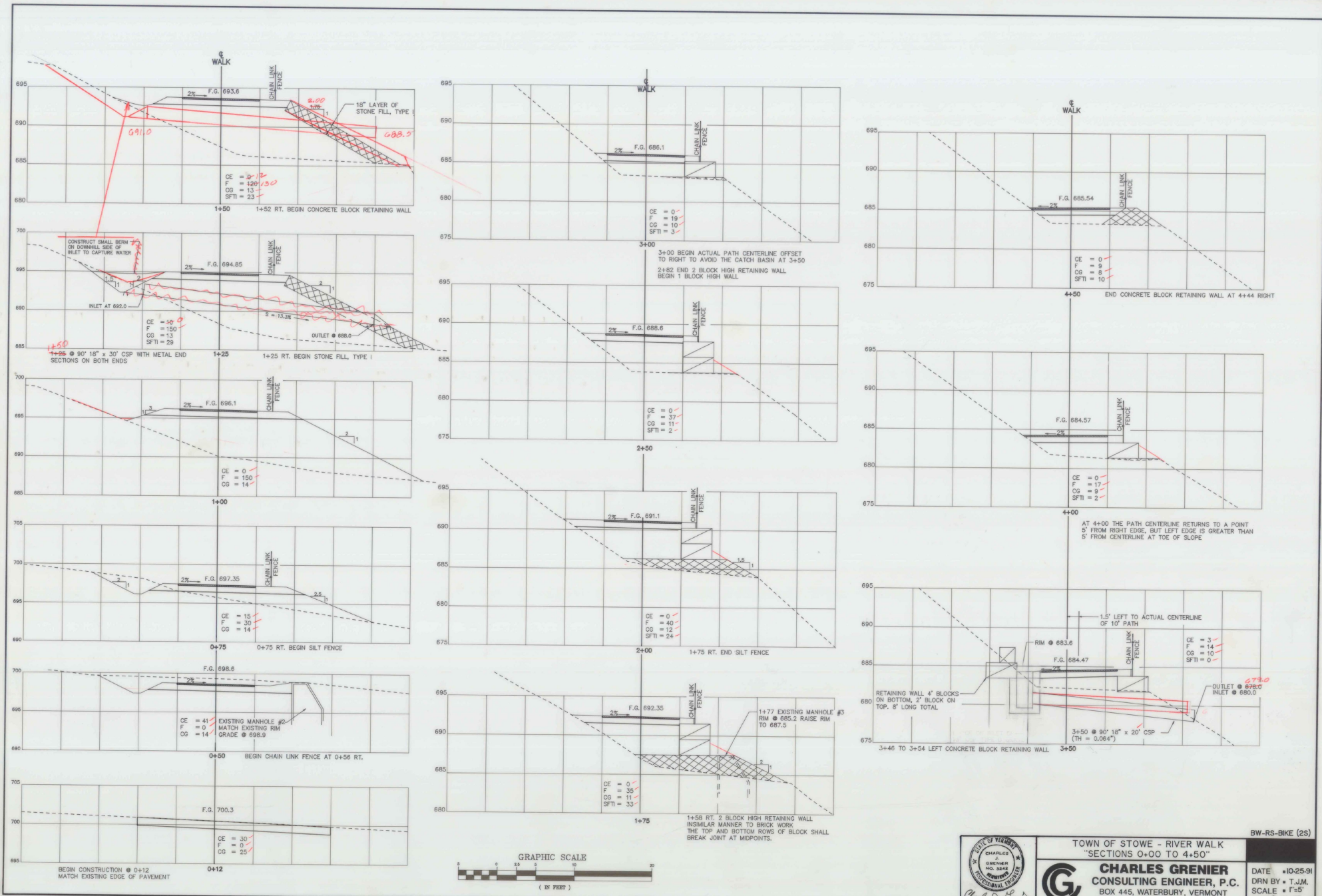
STANDARD F2 SHALL BE FOLLOWED EXCEPT THAT THE POST SPACING SHALL BE 6'-0" CENTER TO CENTER THROUGHOUT THE PROJECT AS OPPOSED TO THE NORMAL SPACING OF 10'-0". THE FENCING MATERIAL SHALL BE BLACK VINYL COATED FABRIC. THE CHAIN LINK FABRIC SHALL MEET THE REQUIREMENTS OF 727.02. IN ADDITION, A 1-5/8" DIAMETER GALVANIZED TOP RAIL SHALL BE INSTALLED THROUGH A LOOP CAP ON TOP OF EACH POST, FROM STATION 1+52 TO 4+44 AND 8+00 TO 11+20 THE FENCING WILL BE INSTALLED BY DRILLING INTO THE CONCRETE BLOCK RETAINING WALL. THE BLOCKS ARE 4' IN LENGTH AND THE POSTS WILL BE 6' ON CENTER. THE POSTS SHALL BE DRILLED IN THE GEOMETRIC CENTER OF EACH OF THE 4' BLOCKS AND SHALL BE VERTICAL. A 2-1/4" MINIMUM DIAMETER HOLE SHALL BE DRILLED INTO EACH CONCRETE BLOCK TO A DEPTH OF 12". THE POST SHALL BE SET INTO THE HOLE AND PACKED WITH A NON SHRINK HIGH STRENGTH GROUT. THE HEIGHT OF THE TOP BAR OF THE FENCE SHALL BE 4'-6" ABOVE THE GROUND SURFACE. A 4" WIDE SHEET OF WIRE FABRIC SHALL BE USED WITH A 6" SPACE AT THE BOTTOM ABOVE THE GROUND SURFACE.

IT HAS BEEN ESTIMATED THAT THERE IS 612 FEET OF FENCING TO BE INSTALLED INTO THE CONCRETE BLOCK WALL AND 467 FEET INTO NORMAL GROUND FOR THE EXISTING RIP RAP. THE CONTRACTOR SHALL ALLOW FOR THE DIFFERENCE IN WORK DURING BIDDING.



TOWN OF STOWE - RIVER WALK EARTHWORK & TYPICAL SECTIONS
CHARLES GRENIER
 CONSULTING ENGINEER, P.C.
 BOX 445, WATERBURY, VERMONT
 244-6413

DATE: 10-25-91
 DRN BY: T.J.M.
 SCALE: A=1/N
 SHT. 14 OF 23

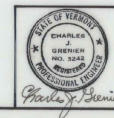
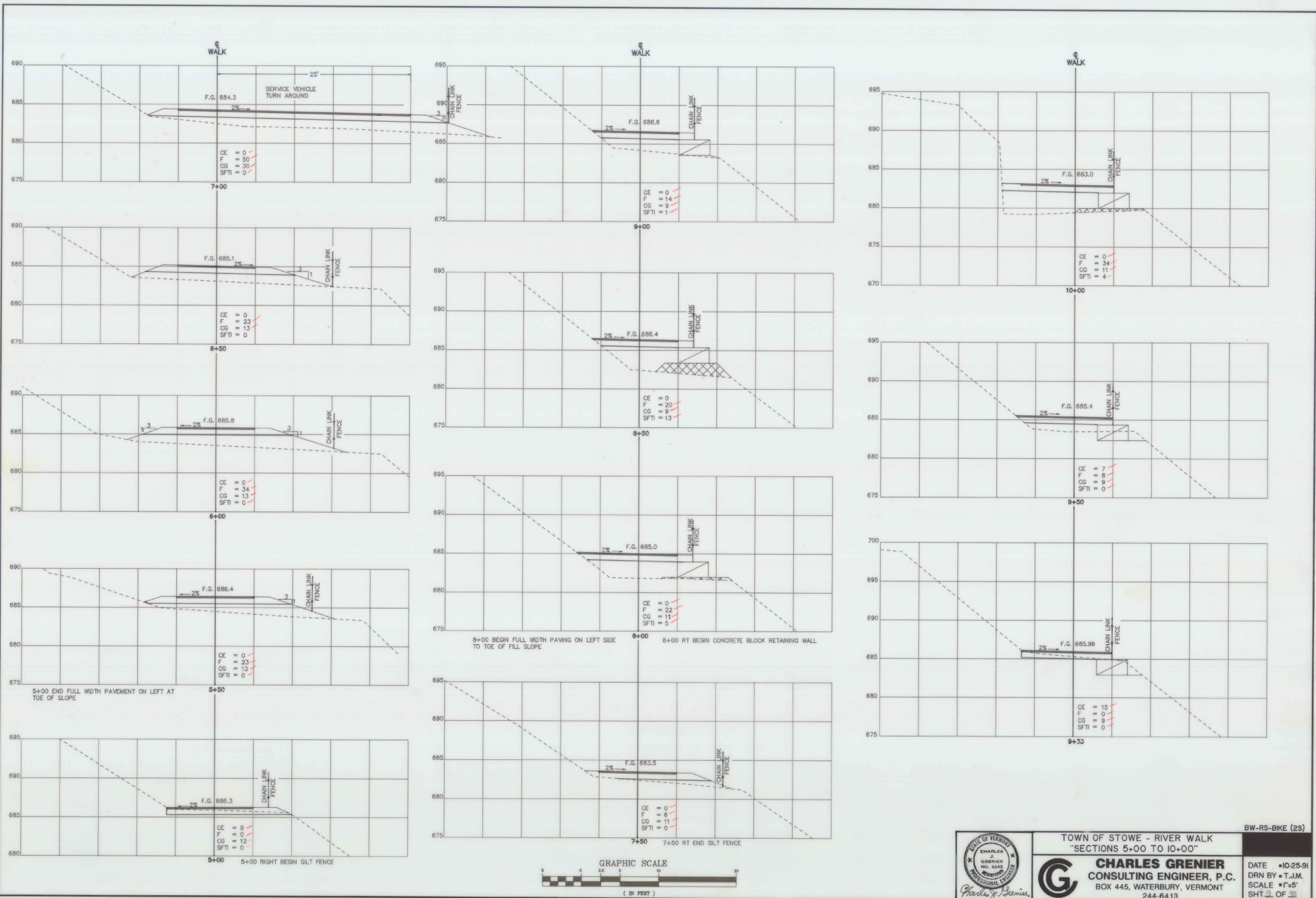


TOWN OF STOWE - RIVER WALK
"SECTIONS 0+00 TO 4+50"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE 10-25-91
DRN BY T.J.M.
SCALE 1"=5'
SHT 2 OF 38

BW-RS-BIKE (2S)

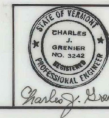
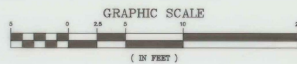
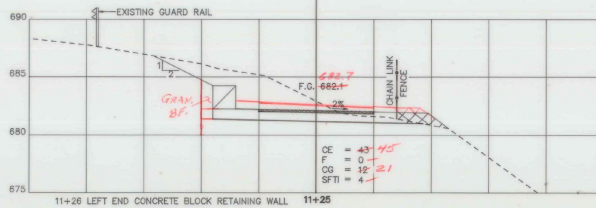
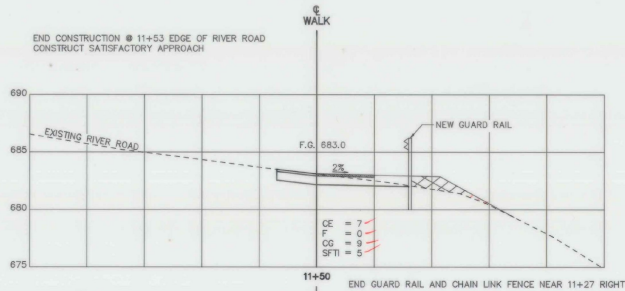
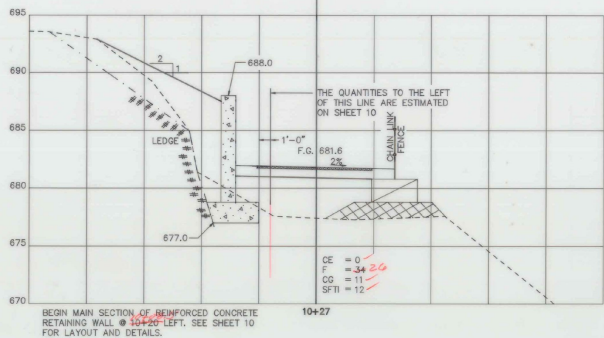
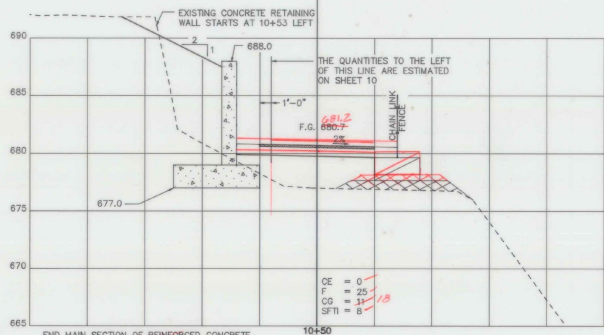
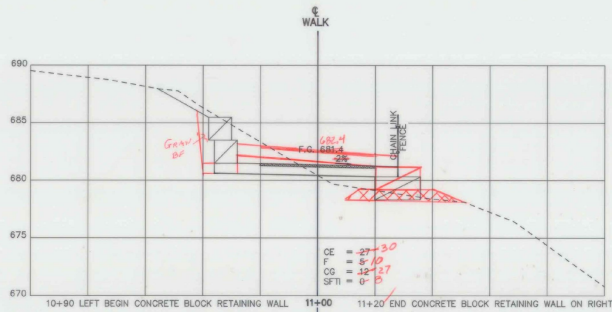


TOWN OF STOWE - RIVER WALK
"SECTIONS 5+00 TO 10+00"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE 10-25-91
DRN BY T.J.M.
SCALE 1"=5'
SHT 2 OF 22

AW-RS-BIKE (2S)



TOWN OF STOWE - RIVER WALK
"SECTIONS 10+25 TO 11+50"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

BW-RS-BIKE (25)

DATE 10-25-91
DRN BY T.J.M.
SCALE 1"=5'
SHT 2 OF 25

GENERAL NOTES

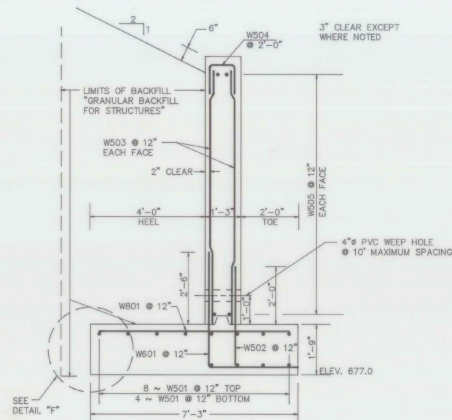
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED MARCH 1990 AND THE A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1990 AND ITS LATEST REVISIONS.
2. ALL CONCRETE IS TO BE STATE OF VERMONT CLASS "B" WITH 28 DAY STRENGTH OF 3500 PSI.
3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS OTHERWISE NOTED.
4. ALL CONCRETE SHALL BE CURED AS PER VERMONT AGENCY OF TRANSPORTATION SPECIFICATIONS, SECTION 501.
5. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE.
6. MINIMUM REBAR SPLICE LENGTH 2'-0".

NO.	PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	G	H	J	K	TOTAL WEIGHT
SECTION A														
12	5		10'-0"	AW501	STR									125
10	5		3'-9"	AW502	STR									39
20	5		11'-0"	AW503	STR									229
24	5		10'-0"	AW505	STR									250
10	8		6'-9"	AW801	STR									180
5	5		2'-10"	AW504	17	1'-0"	0'-10"	1'-0"						15
30	5		5'-0"	AW508	19	2'-6"	2'-6"				1'-9"		1'-9"	156
10	6		6'-10"	AW801	17	2'-10"	4'-0"							102
8	7		5'-0"	AW701	19	2'-6"	2'-6"				1'-3"	2'-2"	2'-2"	82
10	8		4'-11"	AW802	S20	3'-0"	1'-0"			0'-11"	2'-1"	0'-8"	2'-1"	131
SECTION B														
12	5		16'-0"	BW501	STR									225
15	5		3'-9"	BW502	STR									59
30	5		9'-0"	BW503	STR									282
20	5		17'-0"	BW505	STR									355
15	8		6'-9"	BW801	STR									270
8	5		2'-10"	BW504	17	1'-0"	0'-10"	1'-0"						24
15	6		6'-10"	BW601	17	2'-10"	4'-0"							154
5	8		4'-11"	BW802	S20	3'-0"	1'-0"			0'-11"	2'-1"	0'-8"	2'-1"	66
SECTION C														
12	5		16'-0"	CW501	STR									200
15	5		3'-9"	CW502	STR									59
30	5		9'-0"	CW503	STR									282
20	5		15'-0"	CW505	STR									313
15	8		6'-9"	CW801	STR									270
6	5		2'-10"	CW504	17	1'-0"	0'-10"	1'-0"						24
15	6		6'-10"	CW601	17	2'-10"	4'-0"							154
2	8		4'-11"	CW802	S20	3'-0"	1'-0"			0'-11"	2'-1"	0'-8"	2'-1"	26
SECTION D														
12	5		9'-6"	DW501	STR									119
10	5		3'-9"	DW502	STR									39
20	5		10'-6"	DW503	STR									219
24	5		9'-9"	DW505	STR									244
10	8		6'-9"	DW801	STR									180
5	5		2'-10"	DW504	17	1'-0"	0'-10"	1'-0"						15
30	5		3'-0"	DW506	19	2'-0"	2'-0"				1'-9"		1'-9"	156
10	6		6'-10"	DW801	19	2'-10"	4'-0"							102
8	7		5'-0"	DW701	19	2'-6"	2'-6"				1'-3"	2'-2"	2'-2"	82
8	8		4'-11"	DW802	S20	3'-0"	1'-0"			0'-11"	2'-1"	0'-8"	2'-1"	103

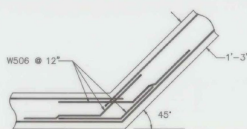
▲ = CUT TO FIT IN FIELD

ESTIMATED QUANTITIES

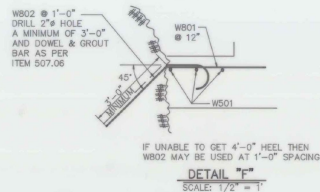
ITEM 204.25	STRUCTURE EXCAVATION	68 CUBIC YARDS
ITEM 204.30	GRANULAR BACKFILL FOR STRUCTURES	87 CUBIC YARDS
ITEM 501.25	CONCRETE, CLASS B	43.5 CUBIC YARDS
ITEM 507.15	REINFORCING STEEL	5333 POUNDS
ITEM 507.18	DRILLING AND GROUTING DOWELS	115 LINEAR FEET
ITEM 514.10	WATER REPELLENT	2 GALLONS



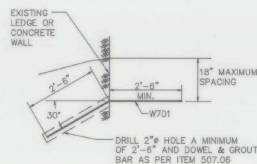
SECTION A - A WALL TYPICAL
SCALE: 1/2" = 1'



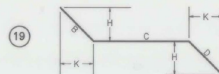
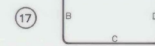
CORNER DETAIL
SCALE: 1/2" = 1'



DETAIL "E"
SCALE: 1/2" = 1'



DETAIL "G"
SCALE: 1/2" = 1'

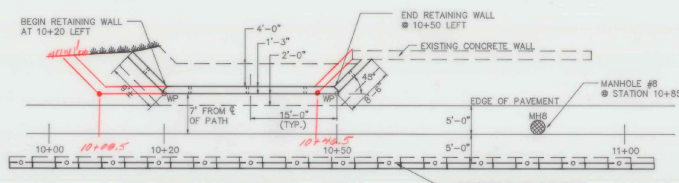


REBAR NOTES

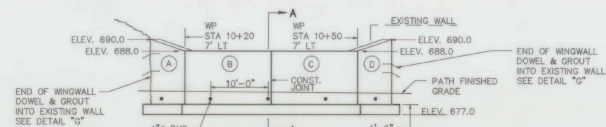
1. ALL REINFORCEMENT FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M31 (ASTM A 615), GRADE 60.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.

REBAR WEIGHT

#5	1.043
#6	1.502
#7	2.044
#8	2.670

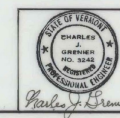


PLAN VIEW
SCALE: 1" = 10'-0"



ELEVATION VIEW
SCALE: 1" = 10'-0"

IMPORTANT NOTE:
WALL SECTIONS @ ~ @ TO BE POURED FIRST



TOWN OF STOWE - RIVER WALK
"DETAILS OF RETAINING WALL AT 10+25"
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

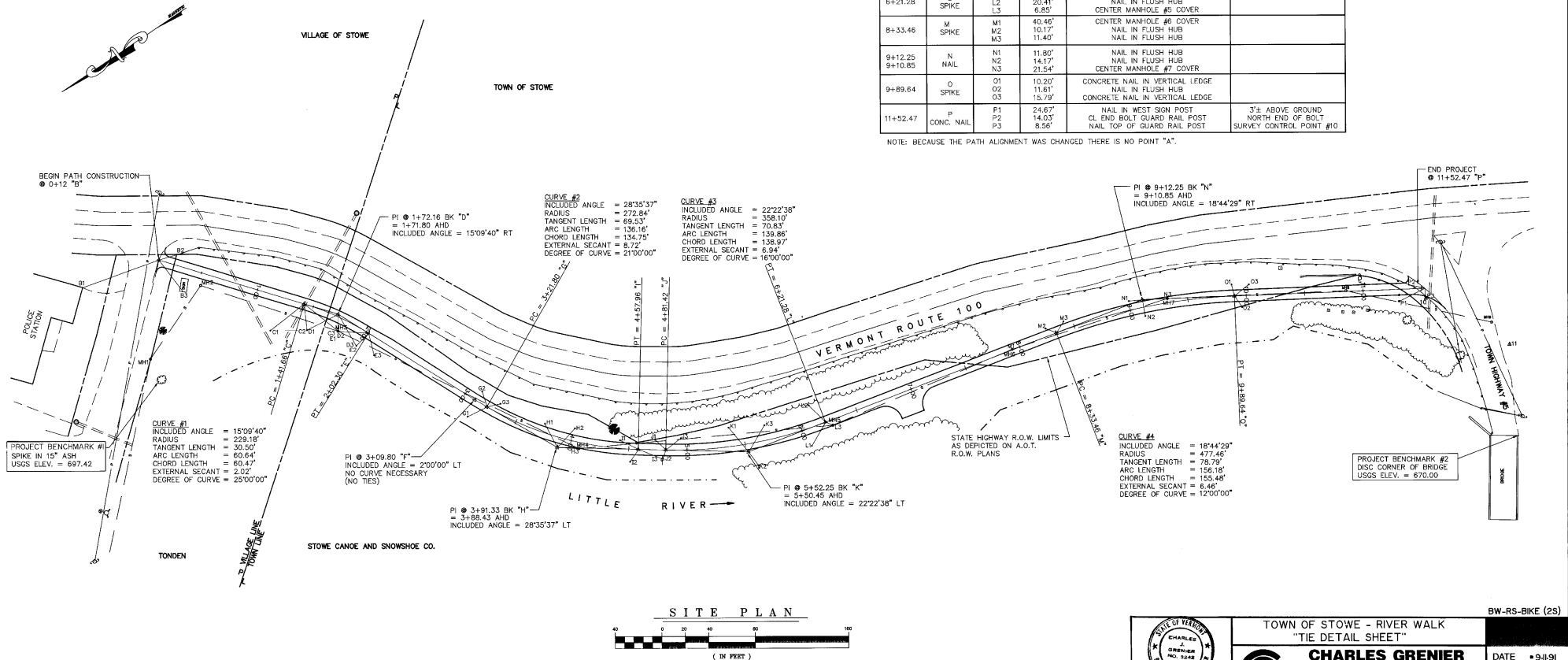
BW-RS-BIKE (25)

DATE: 10-25-91
DRN BY: T.J.M.
SCALE: A/N
SHT. 11 OF 23

TANGENT LINE BEARINGS			
STATION	TIE #	BEARING	DISTANCE
0+12 TO 1+41.66	B TO C	S 50°48'41" W	129.66'
1+41.66 TO 1+72.16 BK 1+71.80 AHD	C TO D	S 50°48'41" W	30.50'
1+72.16 BK TO 2+02.30 1+71.80 AHD	D TO E	S 65°58'21" W	30.50'
2+02.30 TO 3+09.80	E TO F	S 65°58'21" W	107.70'
3+09.80 TO 3+21.80	F TO G	S 63°58'21" W	11.80'
3+21.80 TO 3+91.33 BK 3+88.43 AHD	G TO H	S 63°58'21" W	69.53'
3+91.33 BK TO 4+57.96 3+88.43 AHD	H TO I	S 35°22'44" W	69.53'
4+57.96 TO 4+81.42	I TO J	S 35°22'44" W	23.46'
4+81.42 TO 5+52.25 BK 5+40.45 AHD	J TO K	S 35°22'44" W	70.83'
5+52.25 BK TO 6+21.28 5+50.45 AHD	K TO L	S 13°00'06" W	70.83'
6+21.28 TO 8+33.46	L TO M	S 13°00'06" W	212.18'
8+33.46 TO 9+12.25 BK 9+10.85 AHD	M TO N	S 13°00'06" W	78.79'
9+12.25 BK TO 9+89.64 9+10.85 AHD	N TO O	S 31°44'35" W	78.79'
9+89.64 TO 11+52.47	O TO P	S 31°44'35" W	162.83'

TIE DISTANCE TABLE					
STATION	DESC.	TIE #	DISTANCE	DESCRIPTION	REMARKS
0+12	B SPIKE	B1 B2 B3	69.20' 21.37' 33.97'	CORNER BRICK POLICE STATION (9TH ROW) NAIL IN FIRST GUARD RAIL POST NAIL TOP CENTER WEST END SIGN PLANTER	
1+41.66	C SPIKE	C1 C2 C3	31.81' 22.41' 37.11'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #3 COVER	
1+72.16 1+71.80	D SPIKE	D1 D2 D3	30.12' 14.44' 31.02'	NAIL IN FLUSH HUB CENTER MANHOLE #3 COVER NAIL IN FLUSH HUB	SAME AS C2 SAME AS C3 AND E1 SAME AS E2
2+02.30	E SPIKE	E1 E2 E3	26.20' 15.16' 19.41'	CENTER MANHOLE #3 COVER NAIL IN FLUSH HUB NAIL IN FLUSH HUB	SAME AS C3 AND D2 SAME AS D3
3+09.80	F SPIKE	F1 F2 F3	- - -	- - -	NO TIES NECESSARY SEE POINT "G" NEARBY
3+21.80	G SPIKE	G1 G2 G3	18.32' 13.89' 11.78'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB NAIL IN FLUSH HUB	
3+91.33 3+88.43	H SPIKE	H1 H2 H3	22.96' 22.19' 18.59'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #4 COVER	
4+57.96	I SPIKE	I1 I2 I3	17.74' 12.91' 23.35'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB SPIKE S1 FLUSH	SURVEY CONTROL POINT
4+81.42	J SPIKE	J1 J2 J3	12.64' 8.24' 16.34'	SPIKE FLUSH SPIKE S1 FLUSH SPIKE FLUSH	SAME AS I3
5+52.25 5+50.45	K SPIKE	K1 K2 K3	27.12' 14.15' 26.51'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB NAIL IN FLUSH HUB	
6+21.28	L SPIKE	L1 L2 L3	23.48' 20.41' 8.85'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #5 COVER	
8+33.46	M SPIKE	M1 M2 M3	40.48' 10.17' 11.40'	CENTER MANHOLE #6 COVER NAIL IN FLUSH HUB NAIL IN FLUSH HUB	
9+12.25 9+10.85	N NAIL	N1 N2 N3	11.80' 14.17' 21.54'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #7 COVER	
9+89.64	O SPIKE	O1 O2 O3	10.20' 11.61' 15.79'	CONCRETE NAIL IN VERTICAL LEDGE NAIL IN FLUSH HUB CONCRETE NAIL IN VERTICAL LEDGE	
11+52.47	P CONC. NAIL	P1 P2 P3	24.67' 14.03' 8.56'	NAIL IN WEST SIGN POST CL END BOLT GUARD RAIL POST NAIL TOP OF GUARD RAIL POST	3"± ABOVE GROUND NORTH END OF BOLT SURVEY CONTROL POINT #10

NOTE: BECAUSE THE PATH ALIGNMENT WAS CHANGED THERE IS NO POINT "A".

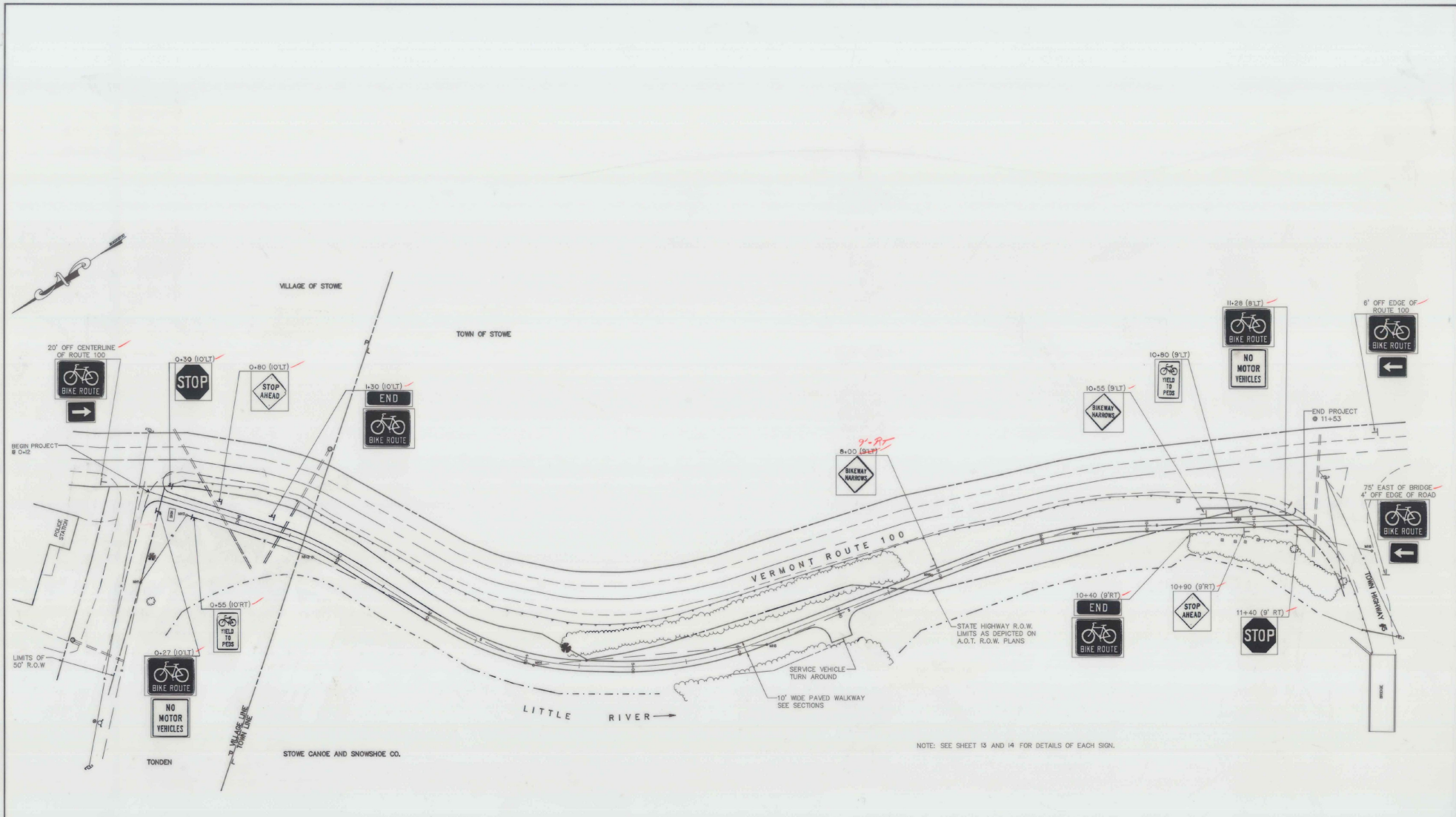


TOWN OF STOWE - RIVER WALK
"TIE DETAIL SHEET"

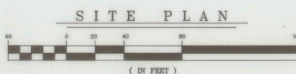
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

9W-RS-BIKE (25)

DATE = 9-8-91
DRN BY = T.J.M.
SCALE = 1"=40'
SHT 2 OF 25



NOTE: SEE SHEET 13 AND 14 FOR DETAILS OF EACH SIGN.



TOWN OF STOWE - RIVER WALK
"SIGN LOCATION PLAN"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

PROJECT
BW-RS-BIKE (25)

DATE = 9-8-91
DRN BY = T.J.M.
SCALE = A/N
SHT 13 OF 25

REVISED 10-25-91

TRAFFIC SIGN SUMMARY

STATION	SIGN LEGEND	SIGN DIMENSIONS	NEW SIGNS SF	# OF POSTS	FLANGED CHANNEL LB/FT	REMARKS	PLAN SHEET #	STD SHEET #
-0+32 LT ✓		24 X 18	3.0	1	3.5	SEE DETAIL A ON ROUTE 100 SOUTHBOUND, NORTH OF DRIVE TO POLICE STATION	14	
		12 X 9	0.8			SEE DETAIL B BELOW PREVIOUS SIGN ON SAME POST	14	
0+27 RT ✓		24 X 18	3.0	1	3.5	SEE DETAIL A FACING SOUTHBOUND TRAFFIC	14	
		24 X 24	4.0			SEE DETAIL D BELOW PREVIOUS SIGN ON SAME POST	14	
0+30 LT ✓		18 X 18	2.3	1	3.5	SEE DETAIL G FACING NORTHBOUND TRAFFIC	14	
0+55 RT ✓		12 X 18	1.5	1	3.5	SEE DETAIL C FACING SOUTHBOUND TRAFFIC	14	
0+80 LT ✓		18 X 18	2.3	1	3.5	SEE DETAIL H FACING NORTHBOUND TRAFFIC	14	
1+30 LT ✓		24 X 6	1.0	1	3.5	SEE DETAIL E FACING NORTHBOUND TRAFFIC	14	
		24 X 18	3.0			SEE DETAIL A BELOW PREVIOUS SIGN ON SAME POST	14	
8+00 LT ✓		18 X 18	2.3	1	3.5	SEE DETAIL F FACING SOUTHBOUND TRAFFIC	14	
10+40 RT ✓		24 X 6	1.0	1	3.5	SEE DETAIL E FACING SOUTHBOUND TRAFFIC	14	
		24 X 18	3.0			SEE DETAIL A BELOW PREVIOUS SIGN ON SAME POST	14	

STATION	SIGN LEGEND	SIGN DIMENSIONS	NEW SIGNS SF	# OF POSTS	FLANGED CHANNEL LB/FT	REMARKS	PLAN SHEET #	STD SHEET #
10+55 LT ✓		18 X 18	2.3	1	3.5	SEE DETAIL F FACING NORTHBOUND TRAFFIC	14	
10+90 RT ✓		18 X 18	2.3	1	3.5	SEE DETAIL H FACING SOUTHBOUND TRAFFIC	14	
10+80 LT ✓		12 X 18	1.5	1	3.5	SEE DETAIL C FACING NORTHBOUND TRAFFIC	14	
11+28 LT ✓		24 X 18	3.0	1	3.5	SEE DETAIL A FACING NORTHBOUND TRAFFIC	14	
		24 X 24	4.0			SEE DETAIL D BELOW PREVIOUS SIGN ON SAME POST	14	
11+40 RT ✓		18 X 18	2.3	1	3.5	SEE DETAIL G FACING SOUTHBOUND TRAFFIC	14	
12+20 RT ✓		24 X 18	3.0	1	3.5	SEE DETAIL A ON SOUTHSIDE OF RIVER ROAD—T.H.#5 75' EAST OF BRIDGE	14	
		12 X 9	0.8			SEE DETAIL B BELOW PREVIOUS SIGN ON SAME POST	14	
12+60 LT ✓		24 X 18	3.0	1	3.5	SEE DETAIL A ON ROUTE 100 NORTHBOUND, ACROSS FROM RIVER ROAD INTERSECTION	14	
		12 X 9	0.8			SEE DETAIL B BELOW PREVIOUS SIGN ON SAME POST	14	

TOTAL SIGN AREA = 50.2 15 = TOTAL # OF POSTS
585 = TOTAL POUNDS *

* THE POSTS LENGTHS ARE TO BE DETERMINED IN THE FIELD.
FOR ESTIMATING PURPOSES 13' AVERAGE POST LENGTH WAS USED.
ALL SIGNS ARE TO BE A MINIMUM OF 8' CLEAR ABOVE THE GROUND SURFACE.



TOWN OF STOWE - RIVER WALK
"TRAFFIC SIGN SUMMARY"
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

PROJECT
BW-RS-BIKE (25)
DATE • 9-5-91
DRN BY • T.J.M.
SCALE • N/A
SHT 11 OF 25

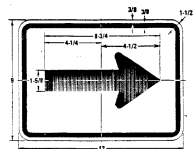


D11-1

SIGN	DIMENSIONS (INCHES)										
	A	B	C	D	E	F	G	H	J	K	L
STD. & MIN.	24	18	1/2	1-1/2	7	3-1/2	3C	5-1/2	9-1/2	1-1/2	
SPECIAL	30	24	5/8	1-3/8	9-3/4	4-3/8	4C	6-7/8	12-1/2	1-1/2	

COLORS
LEGEND - WHITE (REFL)
BACKGROUND - GREEN

DETAIL A



COLORS
LEGEND - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL) WHEN USED w/ M18 SIGN

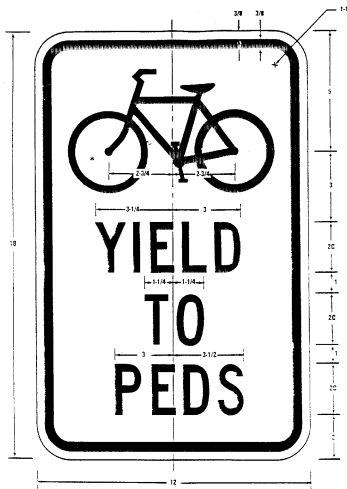
LEGEND - WHITE
BACKGROUND - GREEN WHEN USED w/ M151 & M14 SIGNS

DETAIL B



COLORS: LEGEND - WHITE (REFL)
BACKGROUND - GREEN (REFL)
*INCREASE SPACING 100%

DETAIL E



R9-6
COLORS: LEGEND - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)

DETAIL C



R5-3
COLORS: LEGEND - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)

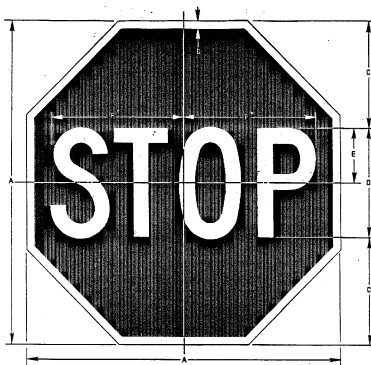
DETAIL D



W5-4
COLORS: LEGEND & BORDER - BLACK (NON-REFL)
BACKGROUND - YELLOW (REFL)

*REDUCE SPACING 50%

DETAIL F

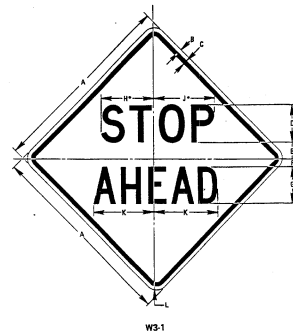


R1-1
*Radius setting 40%

SIGN	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
BIKE	18	3/8	6	6C	3	7-3/4
M18	24	5/8	8	8C	4	10
STD.	30	3/4	10	10C	5	12-1/2
EXPMY.	36	7/8	12	12C	6	16
SPECIAL	48	1-1/4	16	16C	8	20

COLORS
LEGEND - WHITE (REFL)
BACKGROUND - RED (REFL)

DETAIL G



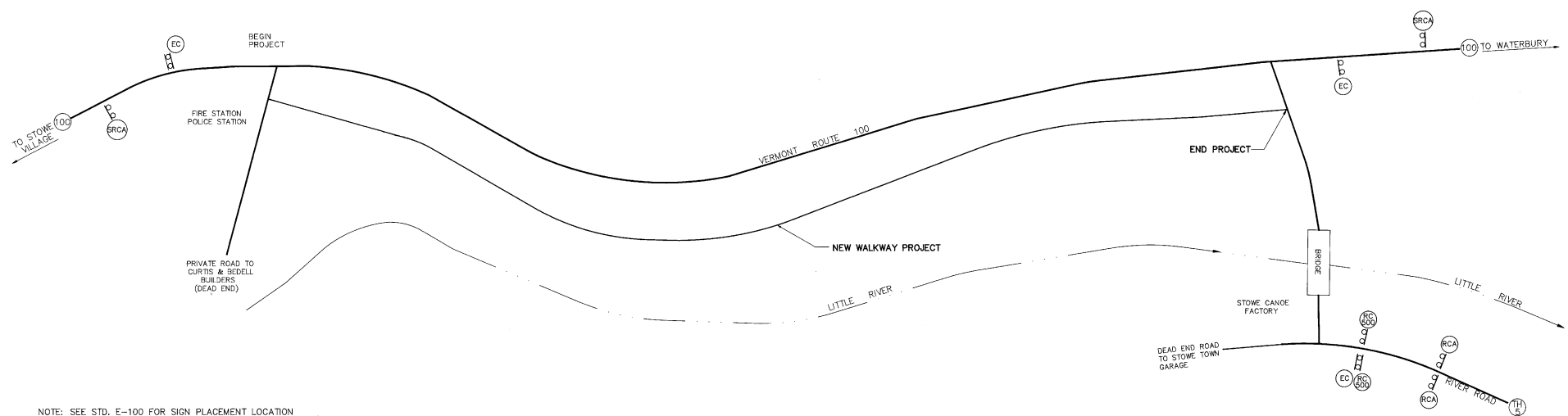
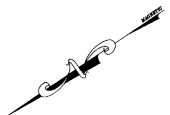
W3-1

SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	
BIKE	18	3/8	5/8	3D	1-3/4	2/4	3C	4-3/4	5-1/4	5-3/8	1-1/2	
M18	24	1/2	3/4	6D	2-1/2	1-1/4	6C	6	6-7/8	10-1/2	1-7/8	
STD.	30	5/8	7/8	7D	3	1-1/2	7C	10-1/2	11-6/16	12-1/4	2-1/4	
SPECIAL	48	3/4	1-1/4	9D	4	2	9C	13-1/2	14-12/16	15-3/4	3	

COLORS
LEGEND - BLACK (NON-REFL)
BACKGROUND - YELLOW (REFL)

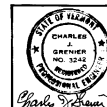
DETAIL H





NOTE: SEE STD. E-100 FOR SIGN PLACEMENT LOCATION

LEGEND	
	= SIDE ROAD CONSTRUCTION AHEAD
	= ROAD CONSTRUCTION AHEAD
	= ROAD CONSTRUCTION 500 FT
	= ROAD CONSTRUCTION NEXT 0.25 MILES
	= END CONSTRUCTION



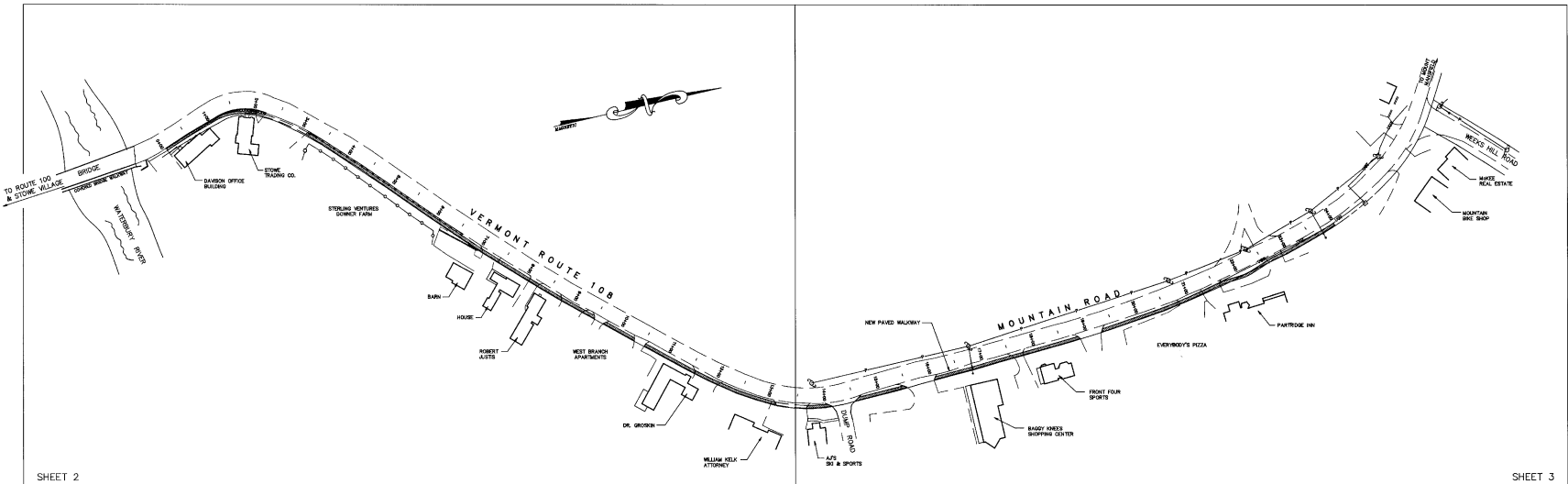
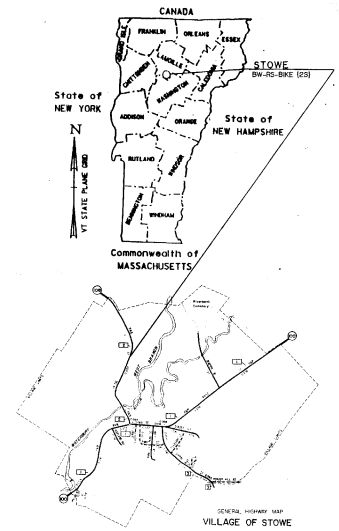
TOWN OF STOWE - RIVER WALK
 "CONSTRUCTION APPROACH SIGNING"
CHARLES GRENIER
 CONSULTING ENGINEER, P.C.
 BOX 445, WATERBURY, VERMONT
 244-6413

PROJECT
 BW-RS-BIKE (2S)
 DATE • 9-11-91
 DRN BY • T.J.M.
 SCALE • A IN
 SHT 14 OF 20

REVISED (025/91)

VILLAGE OF STOWE

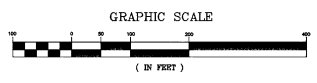
MOUNTAIN ROAD WALK



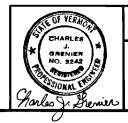
INDEX OF SHEETS

SHEET NUMBER	TITLE
1	TITLE SHEET
2	SITE PLAN 0+00 TO 13+00
3	SITE PLAN 13+00 TO 25+50
4	CENTERLINE PROFILE
5	QUANTITY SUMMARY
6	EARTHWORK SUMMARY
7	SECTIONS 0+00 - 7+00
8	SECTIONS 7+15 - 15+00
9	SECTIONS 15+50 - 25+00
10	TIE DETAIL SHEET 0+00 TO 13+00
11	TIE DETAIL SHEET 13+00 TO 25+50
12	MAILBOX DETAIL SHEET
13	CONSTRUCTION APPROACH SIGNING

APPLICABLE A.O.T. STANDARDS	
B-5	SLOPE GRADING, EMBANKMENT, MUCK
C-1	CURBS, BITUMINOUS CONCRETE SIDEWALKS
C-3	SIDEWALK RAMPS
E-100	CONSTRUCTION APPROACH SIGNS
E-101	CONSTRUCTION SIGN DETAILS
E-102	CONSTRUCTION SIGN DETAILS
E-106	TRAFFIC CONTROL, MISCELLANEOUS DETAILS
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS
E-107A	BREAKAWAY BARRICADE DETAILS
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD
G-1	STEEL BEAM GUARD RAIL
G-14	BREAKAWAY CABLE TERMINAL WITH WOOD POSTS

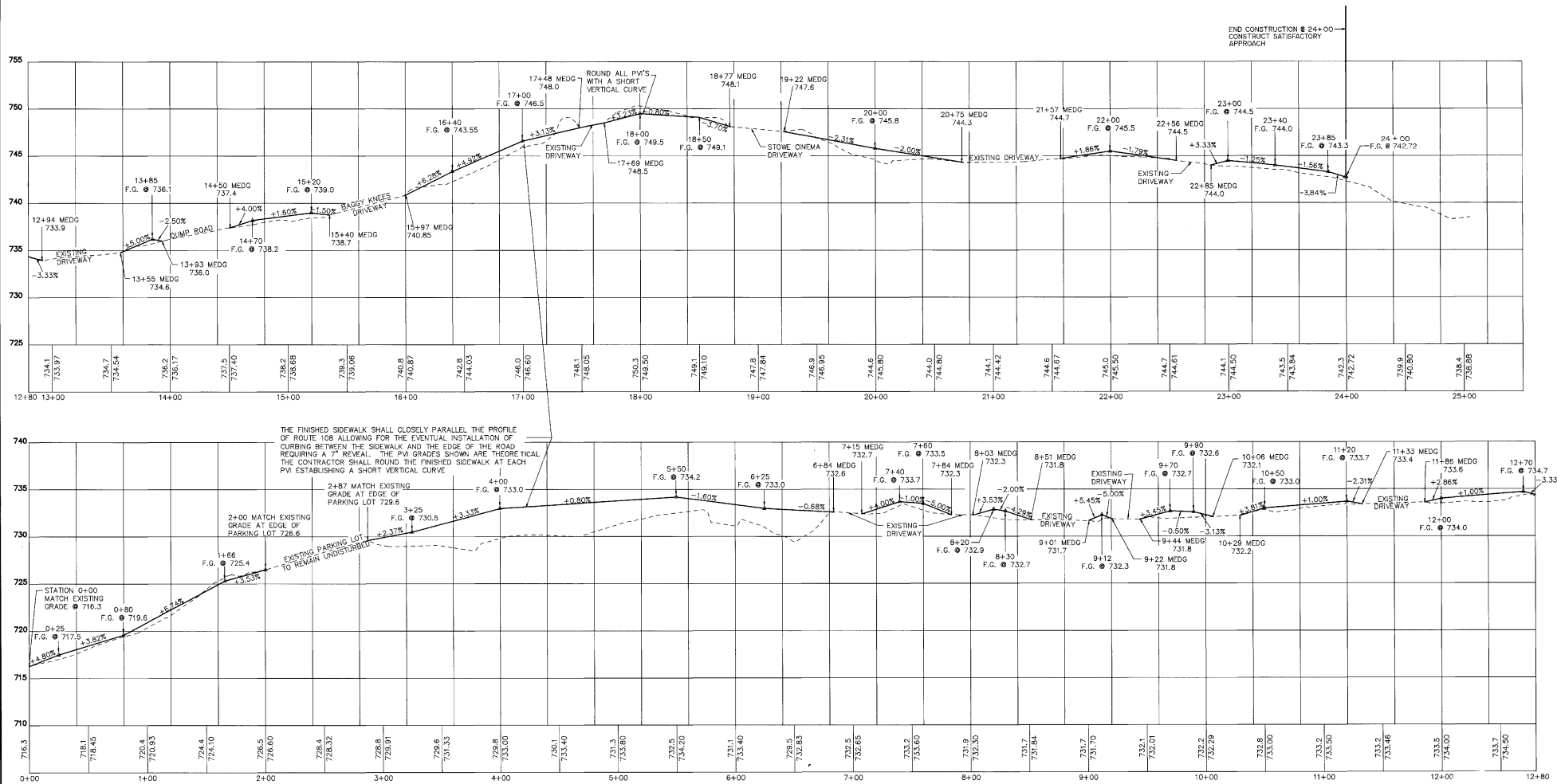


PROJECT SCOPE:
 THIS PROJECT INVOLVES THE CONSTRUCTION OF A BITUMINOUS CONCRETE SIDEWALK ALONG THE EAST SIDE OF VERMONT ROUTE 108 WITHIN THE VILLAGE OF STOWE, STARTING AT THE COVERED BRIDGE WALKWAY OVER THE WATERBURY RIVER AND ENDING SOME 3400' AWAY BEYOND THE PARTRIDGE INN. EXCAVATION AND PLACING A GRAVEL SUBBASE WILL BE REQUIRED.



"TITLE SHEET"
 STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
 CONSULTING ENGINEER, P.C.
 BOX 445, WATERBURY, VERMONT
 244-6413

PROJECT
 BW - RS - BIKE [2S]
 DATE • 8/4-91
 DRN BY • T.J.M.
 SCALE • 1"=100'
 SHT. 2 OF 22



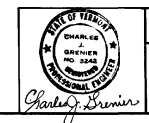
END CONSTRUCTION @ 24+00
 CONSTRUCT SATISFACTORY
 APPROACH

THE FINISHED SIDEWALK SHALL CLOSELY PARALLEL THE PROFILE OF ROUTE 108 ALLOWING FOR THE EVENTUAL INSTALLATION OF CURBING BETWEEN THE SIDEWALK AND THE EDGE OF THE ROAD REQUIRING A 7' REVEAL. THE PVI GRADES SHOWN ARE THEORETICAL THE CONTRACTOR SHALL ROUND THE FINISHED SIDEWALK AT EACH PVI ESTABLISHING A SHORT VERTICAL CURVE

2+00 MATCH EXISTING GRADE AT EDGE OF PARKING LOT 728.6

2+47 MATCH EXISTING GRADE AT EDGE OF PARKING LOT 729.9

EXISTING PARKING LOT TO REMAIN UNDISTURBED



"CENTERLINE PROFILE"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
 CONSULTING ENGINEER, P.C.

BOX 445, WATERBURY, VERMONT
 244-6413

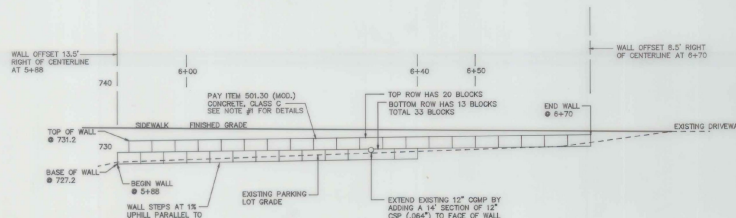
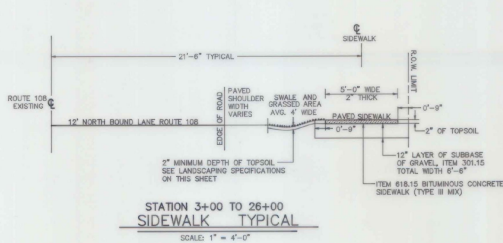
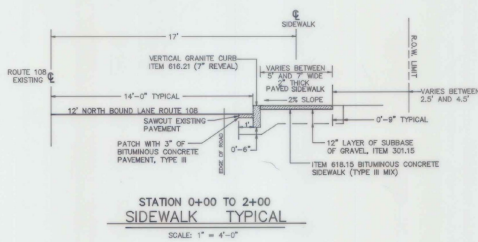
DATE: 8-14-91
 DRN BY: T.J.M.
 SCALE: 1"=40'
 SHT 21 OF 25

REVISED 1-13-92
 REVISED 9-4-98

QUANTITY SUMMARY

APPROXIMATE SUMMARY OF QUANTITIES				
GRAND TOTAL	UNIT	PAY ITEM	PAY ITEM NUMBER	RNGD
1	EACH	REMOVING SMALL STUMPS	201.20	-
2	EACH	REMOVING LARGE STUMPS	201.21	-
420	CY	COMMON EXCAVATION	203.15	11
180	CY	EARTH BORROW	203.30	15
590	CY	SUBBASE OF GRAVEL	301.15	13
39	CY	DRY RUBBLE MASONRY (MOD.)	602.20	-
14	LF	12" CSP (TH=0.084")	601.0005	-
210	CY	STONE FILL, TYPE I	613.10	7
200	LF	VERTICAL GRANITE CURB	616.21	-
34	LF	REMOVAL OF EXISTING CURB (MOD.)	616.41	-
4	EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	-
3	EACH	RELOCATE MAILBOX, MULTIPLE SUPPORT	617.12	-
170	TON	BITUMINOUS CONCRETE SIDEWALK	618.15	9
355	LF	REMOVAL AND RESETTING FENCE	620.50	-
75	LF	REMOVAL OF EXISTING FENCE	620.55	-
300	LF	STEEL BEAM GUARD RAIL	621.20	-
2	EACH	BREAKAWAY CABLE TERMINAL	621.50	-
340	LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	-
20	Hour	UNIFORMED TRAFFIC OFFICERS	630.10	-
160	Hour	FLAGGERS	630.15	-
0.50	LS	TESTING EQUIPMENT - CONCRETE	631.16	-
0.50	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-
0.35	LS	MOBILIZATION	635.10	-
55	SY	GEOTEXTILE FABRIC FOR REINFORCED SUBGRADE/SUBPAVEMENT	648.11	-
40	LB	* SEED	651.15	-
250	LB	* FERTILIZER	651.18	-
1	TON	* AGRICULTURAL LIMESTONE	651.20	-
1	TON	* HAY MULCH	651.25	-
140	CY	* TOPSOIL	651.35	7
3	EACH	ERECTING SALVAGED SIGNS	675.60	-

* CALCULATED 0.5 ACRES OF DISTURBED AREA



GENERAL NOTES

1. ITEM 602.20 Dry Rubble Masonry (Mod.) shall be as follows:

THE CONCRETE BLOCK RETAINING WALL BETWEEN STATION 5+88 TO 6+70 SHALL BE CONSTRUCTED WITH LARGE CONCRETE BLOCKS WITH DIMENSIONS OF 2' x 4' x 4'. A 1" DIMENSION TOLERANCE IS ALLOWED. THESE BLOCKS ARE TO BE CONSTRUCTED OF WASTE CONCRETE FROM AREA SUPPLIERS. THE BLOCKS SHALL BE PLACED WITH THE SMOOTHEST FACE OUTWARD. EACH BLOCK SHALL HAVE LIFTING HOOKS WHICH SHALL BE REMOVED AFTER THE BLOCKS ARE IN PLACE. NO REINFORCING STEEL IS NECESSARY. THE TOP ROW OF BLOCKS SHALL BE OFFSET BY 3" FROM THE BOTTOM ROW. ALL COSTS ASSOCIATED WITH DELIVERING AND PLACING THE BLOCKS AT THE LOCATION AND GRADE SHOWN ON THE PLANS IS INCLUDED IN THE PER CUBIC YARD COST FOR THIS ITEM. THE MINOR AMOUNT OF EXCAVATION NECESSARY TO SET THE BOTTOM ROW OF BLOCKS SHALL ALSO BE INCLUDED IN THE COST OF THIS ITEM. THE COST OF BACKFILLING AGAINST THE BACK OF THE WALL HAS BEEN INCLUDED IN THE COST OF THE SURBASE OF GRAVEL, ITEM 301.15.

2. THIS PROJECT WILL INVOLVE THE REMOVAL OF LESS THAN 10 CUBIC YARDS OF PAVEMENT NORMALLY PAID AS ITEM 203.28 EXCAVATION OF SURFACES AND PAVEMENTS. BECAUSE OF THE SMALL VOLUME, THIS WORK HAS BEEN INCLUDED IN THE COMMON EXCAVATION QUANTITY. ALL PAVEMENT SHALL BE DISPOSED OF NEAR THE BOTTOM OF THE FILL BETWEEN STATION 3+50 AND 6+50.

3. THE LARGE SIGN AT STATION 18+00 MARKED "FRONT FOUR SPORTS" AND THE SIGN NEAR STATION 20+10 MARKED "EVERYBODY'S PIZZA" SHALL BE PROTECTED BY THE CONTRACTOR AS DETAILED ON THE SITE PLAN AND SECTIONS.

4. THE GUY POLE AND ANCHOR NEAR STATIONS 13+65 AND 16+71 SHALL BE RELOCATED BY THE VILLAGE OF STOWE WATER AND LIGHT DEPARTMENT AND IS NOT THE RESPONSIBILITY OF THE CONTRACTOR.

5. THERE ARE THREE PRESSURE TREATED WOOD POSTS MARKING THE DRIVEWAYS BETWEEN STATION 9+00 AND 10+50. THESE POSTS SHALL BE SET TO A LOCATION AT LEAST 2' BEHIND THE SIDEWALK. THE COST ASSOCIATED WITH REMOVING AND RESETTING THESE SMALL POSTS SHALL BE INCLUDED IN THE COST OF COMMON EXCAVATION ITEM 203.15.

6. BECAUSE OF THE VERY CONGESTED AREA ALONG ROUTE 108 AND THE LACK OF AN OBVIOUS TOPSOIL STOCKPILE AREA, THE COMMON EXCAVATION WHICH INCLUDES THE TOPSOIL SHALL BE USED IN THE EMBANKMENT AREAS. NEW TOPSOIL SHALL BE TRUCKED ONTO THE SITE FOR USE IN THE FINISHED LANDSCAPING WITH PAYMENT UNDER ITEM 651.35.

7. REMOVAL OF EXISTING CURB, ITEM 616.41 SHALL BE MODIFIED TO REQUIRE THE CUTTING OF THE REMAINING END OF THE EXISTING CURB ON A TAPER AS DETAILED ON STANDARD C1.

8. THE COST OF TRAFFIC CONTROL IS SUBSIDIARY TO OTHER PAY ITEMS. SEE STANDARDS E100, E101, E108, E107, E107A, AND E110 FOR DETAILS.

9. THE BITUMINOUS CONCRETE SIDEWALK SHALL BE PLACED IN ONE 2" THICK LIFT.

LANDSCAPING SPECIFICATIONS

SEEDING FORMULA, ITEM 651.15

% WT.	LBS./A.	NAME	PUR. %	GERM. %
37.5	30	GREENTOP RED FESCUE	98	85
31.25	25	KENTUCKY BLUE GRASS	85	75
31.25	25	PERENNIAL RYE GRASS	95	90
100.00	80			

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

SEED - TO BE APPLIED PER SEEDING FORMULAS DIRECTED BY THE ENGINEER.

FERTILIZER - FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT A RATE OF 500 LBS./ACRE.

AGRICULTURAL LIMESTONE - TO BE APPLIED AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

HAY MULCH - TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

SLOPE ROUNDING - ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

QUANTITIES

ITEM 201.20 REMOVING SMALL STUMPS (TOTAL OF 1)

0493- 15' 5LM STUMP
6+70± 42" STUMP
7+40± 42" STUMP

ITEM 501.30 (MOD.) CONCRETE, CLASS C

THE CONCRETE BLOCK RETAINING WALL BETWEEN 5+88 AND 6+70 HAS A TOTAL OF 33 BLOCKS (2' x 4' x 4'), OR 33 (2 x 4 x 4) = 27 = 39 CY

ITEM 601.0005, 12" CSP (TH = 0.084")

AT 6+32 AN EXISTING 12" METAL CULVERT SHALL BE EXTENDED BY 36' TO ACCOMMODATE WITH THE FACE OF NEW RETAINING WALL.

ITEM 616.21 VERTICAL GRANITE CURB

VERTICAL GRANITE CURB SHALL BE USED FROM 0+00 TO 2+00 TO SUPPORT THE EDGE OF THE SIDEWALK AND TO PROTECT PEDESTRIANS

ITEM 618.15 BITUMINOUS CONCRETE SIDEWALK QUANTITIES:

- STANDARD 5' SIDEWALK 209' LONG = 10,450 SF
- 2' WIDER SIDEWALK 1400 TO 2400 = 200 SF
- AREAS BETWEEN SIDEWALK AND EDGE OF ROAD AT DRIVEWAYS:
 - 7+00± AREA 45' x 5' = 225
 - 8+00± AREA 25' x 5' = 125
 - 9+75± AREA 55' x 5' = 275
 - 11+50± AREA 80' x 5' = 400
 - 17+50± AREA 30' x 6' = 180
 - 19+00± AREA 55' x 6' = 330
 - 21+00± AREA 90' x 5' = 450
 - 22+75± AREA 35' x 5' = 175

SUBTOTAL = 2060 SF

- PATCHING IN FRONT OF GRANITE CURB (3" THICK) 200' x 1' x 3' x 2' = 300 SF

SUBTOTAL = 13,010 SF

TOTAL TONNAGE = 13,010 x 2" = 2 = 161 TONS

ITEM 621.20 STEEL BEAM GUARD RAIL

3+25 TO 6+25, OR 300 LF

ITEM 621.50 BREAKAWAY CABLE TERMINAL

3+00 TO 3+25 AND 6+25 TO 6+50, OR A TOTAL OF 2

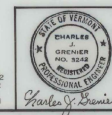
ITEM 621.80 REMOVAL AND DISPOSAL OF GUARD RAIL

2+92 TO 6+32, OR 340 LF

ITEM 648.10 GEOTEXTILE FABRIC FOR FILTERS

BEHIND RETAINING WALL 5+88 TO 6+70 ESTIMATED 6' x 82' - 9 = 55 SY

PROJECT
BW-RS-BIKE [25]



"QUANTITY SUMMARY"
STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE #814-91
DRN BY T.J.M.
SCALE = A.J.N.
SHT 20 OF 25

REVISED 2-27-92
REVISED 1-31-92
REVISED 9-4-91
REVISED 5-20-91

EARTHWORK SUMMARY

STATION	FINISHED GRADE	DISTANCE	COMMON EXCAVATION		SUBBASE OF GRAVEL		EMBANKMENT	
			AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
BOX CUT								
0+00	716.3	22	10.5	8	9	8	0	1
0+22	717.4	22	8	7	10.5	9	4.25	4.2
0+44	718.2	8	8	2	10.5	2	3.3	0.1
0+50	718.5	6	8.5	8.7	10.5	12	3.5	2.4
0+80	719.6	30	7	5	10.5	8	2.4	4.2
1+00	720.9	20	7	5	10.5	8	0.1	0.1
1+50	724.1	50	16	21	11	20	0	0
1+88	725.4	16	15	9	11	7	0	0
2+00	726.6	34	14	18	11	14	0	0
BOX CUT								
2+87	728.6	13	7.5	2	6.5	0	0	2.3
3+00	729.9	50	2	0.5	4.5	8.13	31.40	31.40
3+50	731.3	50	0.25	0.4	8.5	25.30	67.79	67.79
4+00	733.0	50	0.2	0.3	10.5	17.21	47.55	85.100
4+50	733.4	50	0.1	0.2	8.5	15.20	56.75	100.156
5+00	733.8	50	0.1	0.2	8.5	15.20	56.75	89.100
5+50	734.2	50	2.5	2.3	8.5	11.5	44.58	41.54
6+00	733.4	50	0.1	0.2	4.5	0.5	0	0
6+50	732.8	34	3.1	3.2	2.5	4.2	0	1
6+84	732.6	34	8.11	8	6.5	13.5	1	1
BOX CUT								
7+15	732.7	35	7.5	9	6.5	8	1.5	3
7+50	733.6	34	6	9	6.5	8	2.5	2
7+84	732.3	34	7.5	9	6.5	8	0	2
BOX CUT								
8+03	732.3	47	7.5	12	6.5	11	0	0
8+50	731.8	6	6	6.5	6.5	0	0	0
BOX CUT								
9+00	731.7	7	6	6.5	6.5	0	0	0
9+22	731.8	22	6	6	6.5	5	0	0
BOX CUT								
9+44	731.8	6	7.5	2	6.5	2	0	0
9+50	732.0	6	7.5	2	6.5	2	0	0
10+00	732.3	50	7.5	14	6.5	12	0	0
10+06	732.1	6	7.5	2	6.5	2	0	0
BOX CUT								
10+29	732.2	21	7.5	6	6.5	5	1	1
10+50	733.0	50	7.5	14	6.5	12	1	2
11+00	733.5	33	7.5	9	6.5	8	1	1
11+33	733.4	7.5	7.5	6.5	6.5	0	0	1
COLUMN SUBTOTALS			180 CY	291.13	443	368 CY	473	440 CY

STATION	FINISHED GRADE	DISTANCE	COMMON EXCAVATION		SUBBASE OF GRAVEL		EMBANKMENT	
			AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
BOX CUT								
11+86	733.6	14	7.5	3	6.5	3	0	2
12+00	734.0	50	5	7	6.5	12	8	15
12+50	734.5	44	3	5	6.5	11	8	13
12+94	733.9	3	7	5	6.5	8	0	0
BOX CUT								
13+55	734.6	20	7	5	6.5	5	2	2
13+75	735.8	18	7	5	6.5	4	2	3
13+93	736.0	7	7	5	6.5	6	0	0
BOX CUT								
14+50	737.4	50	9	13	6.5	12	0	1
15+00	738.7	40	4.5	7	6.5	10	1.5	2
15+40	738.7	40	4.5	7	6.5	10	1.5	2
BOX CUT								
15+97	740.9	53	6.5	9	6.5	13	0	11
16+50	744.0	50	2.5	6	6.5	12	11	13
17+00	746.6	48	4	23	6.5	12	3.5	3
17+48	748.0	9	9	6.5	6.5	0	0	0
BOX CUT								
17+69	748.5	31	12	16	6.5	7	1	2
18+00	749.5	50	15	23	6.5	12	2	3
18+50	749.1	27	10	10	6.5	7	1	1
18+77	749.1	9	9	6.5	6.5	1	1	1
BOX CUT								
19+22	747.6	28	8	8	6.5	7	3	3
19+50	747.0	50	8	11	6.5	12	3	19
20+00	745.8	50	3.5	8	6.5	12	18	23
20+50	744.8	25	5	5	6.5	6	6.5	6
20+75	744.3	5	5	5	6.5	6	6.5	6
BOX CUT								
21+57	744.7	43	4.5	7	6.5	10	2.5	4
22+00	745.5	50	4.5	11	6.5	12	2.5	2
22+50	744.6	6	7.5	2	6.5	1	0	0
22+56	744.5	6	7.5	2	6.5	1	0	0
BOX CUT								
22+85	744.0	15	6	3	6.5	4	1.5	1
23+00	744.5	50	6	11	6.5	12	1.5	3
23+50	743.8	50	6	13	6.5	13	1.5	2
24+00	742.7	6	8	8	6.5	13	1	2
BOX CUT								

COLUMN #2 SUBTOTALS	211 CY	209 CY	134 CY
COLUMN #1 SUBTOTALS	180 CY	473	440 CY
PROJECT TOTAL	391 CY	577 CY	574 CY

* ADD 18 CY FOR DRIVEWAY WORK FOR A TOTAL OF 409 CY
SEE CALCULATIONS ON THIS SHEET

NOTES

- THE EXISTING MAILBOXES SHALL BE RELOCATED NEAR THEIR ORIGINAL LOCATIONS NEAR THE MIDPOINT BETWEEN THE EDGE OF THE ROAD AND EDGE OF SIDEWALK WITHIN THE GRASS STRIP (5' LEFT OF THE SIDEWALK CENTERLINE), OR AS DIRECTED BY THE ENGINEER. TEMPORARY RELOCATION MAYBE REQUIRED. PAYMENT AS PER ITEM 617.10 AND 617.12
- ITEM 617.10 RELOCATE MAILBOX, SINGLE SUPPORT (TOTAL OF 3)
 $4+97$ 1+25
 $2+97$ 17+25
 $13+00$ 20+50
 $19+30$
- ITEM 617.12 RELOCATE MAILBOX, MULTIPLE SUPPORT (TOTAL OF 3)
 $7+70$
 $10+00$ 9+75
 $17+35$
- EXISTING ROADWAY SIGNS SHALL BE RELOCATED NEAR THEIR ORIGINAL LOCATION AS DIRECTED BY THE ENGINEER AS PER ITEM 675.60
- ITEM 675.60 ERECTING SALVAGED SIGNS (TOTAL OF 3)
 $23+15$
 $21+92$
 $23+00$
- ITEM 620.50 REMOVAL AND RESETTING FENCE
 $3+00$ TO $5+85$ (2 STRAND BARBED WIRE) = 288 292
 $7+30$ TO $7+80$ (WOOD RAIL) = 56 76
 $12+70$ TO $12+90$ (WOOD RAIL) = 28 28
 TOTAL = 352 394
- ITEM 620.55 REMOVAL OF EXISTING FENCE (M.C.)
 A 75' WOOD RAIL FENCE (1+25 TO 2+00) SHALL BE REMOVED, SALVAGED, AND BECOME THE PROPERTY OF THE OWNER, THE STONE TRADING COMPANY, IF THE OWNER DOES NOT WANT THE FENCE, THE CONTRACTOR SHALL ASSUME POSSESSION.

STONE FILL, TYPE I			
STATION	DISTANCE	AREA	VOLUME
BUTT			
3+50	50	15	35
4+00	50	23	45
4+50	50	26	48
5+00	50	26	47
5+50	38	25	28
5+88	15 (EST.)		
BUTT			
TOTAL			203 CY

EARTHWORK SUMMARY

TOTAL EMBANKMENT = 574 CY \times 1.15 = 928
 TOTAL AVAILABLE COMMON EXCAVATION = 409 CY
 EARTH BORROW REQUIRED = 168 CY
 BORROW & PAINT = 500
 538

COMMON EXCAVATION QUANTITIES

ITEM 203.15 ADDITIONAL COMMON EXCAVATION AT DRIVEWAYS:
 $7+00$ ± $40' \times 10' \times 2"$ + (12×27) = 2.5 CY
 $8+00$ ± $25' \times 11' \times 2"$ + (12×27) = 1.5 CY
 $9+75$ ± $55' \times 10' \times 2"$ + (12×27) = 3.5 CY
 $11+50$ ± $55' \times 12' \times 2"$ + (12×27) = 4.0 CY
 $12+50$ ± $25' \times 12' \times 2"$ + (12×27) = 2.0 CY
 $21+50$ ± $40' \times 10' \times 2"$ + (12×27) = 2.5 CY
 $22+75$ ± $35' \times 10' \times 2"$ + (12×27) = 2.0 CY
 TOTAL = 18 CY

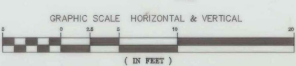
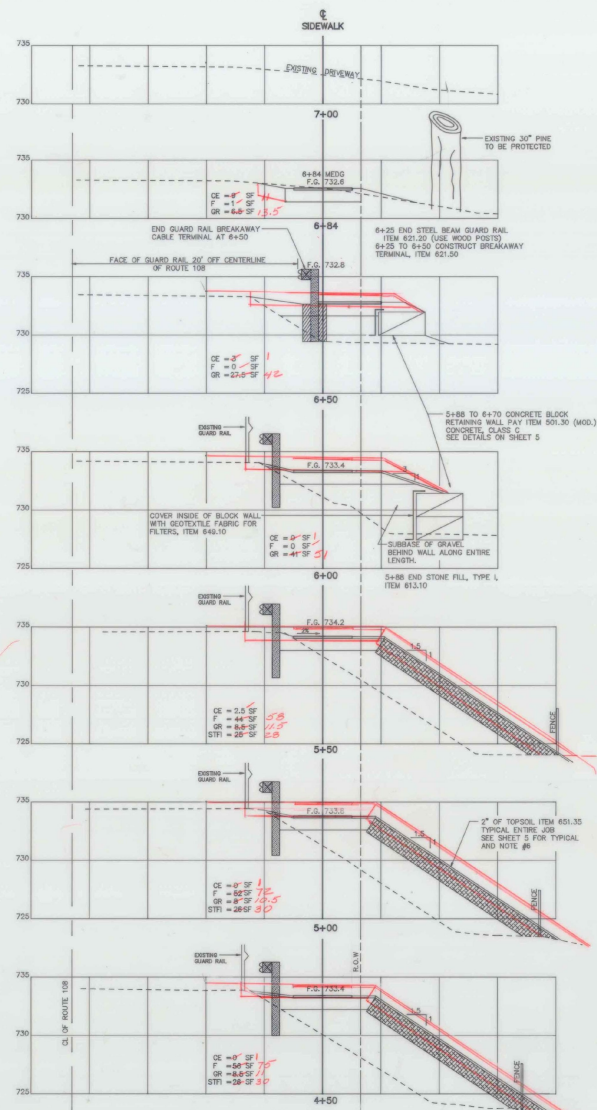
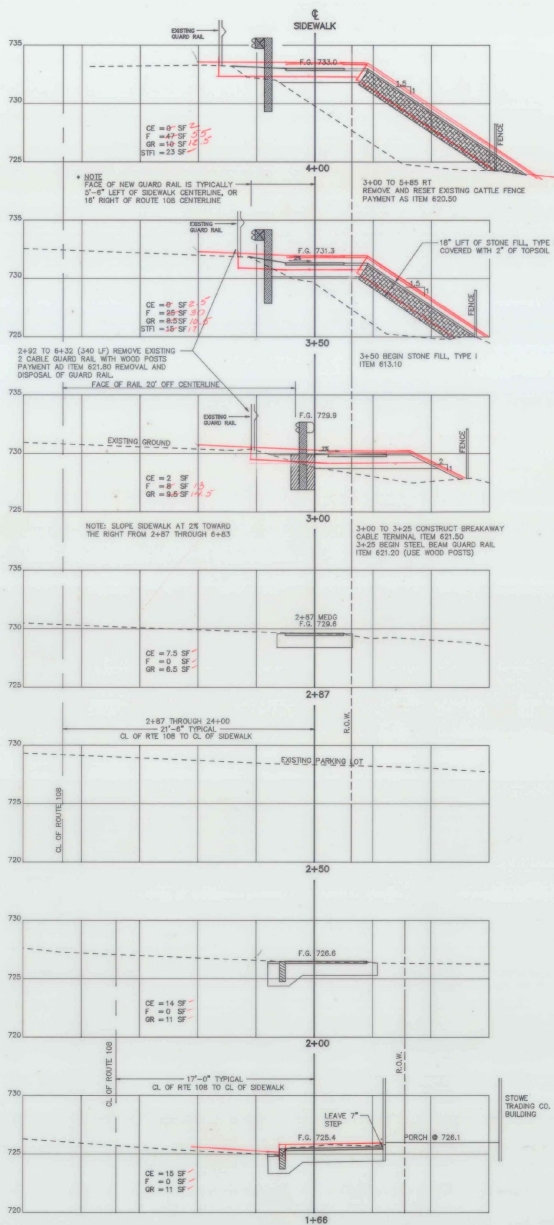
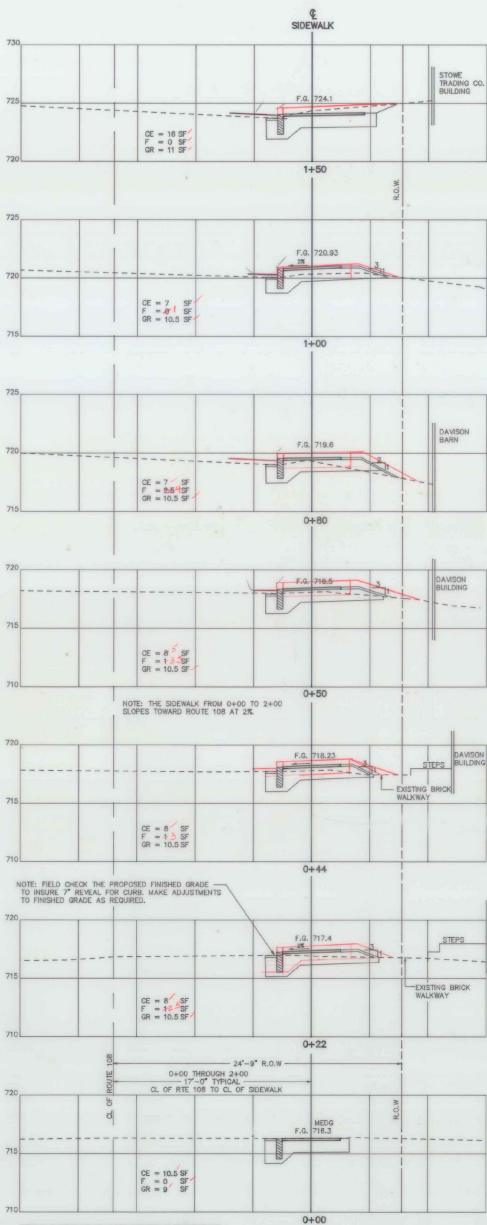


"EARTHWORK SUMMARY"
 STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
 CONSULTING ENGINEER, P.C.
 BOX 445, WATERBURY, VERMONT
 244-6413

DATE • 8/4-91
 DRN BY • T.J.M.
 SCALE • A/L
 SHT. 31 OF 32

REVISED 1-31-92
 REVISED 8-4-91
 REVISED 8-20-91



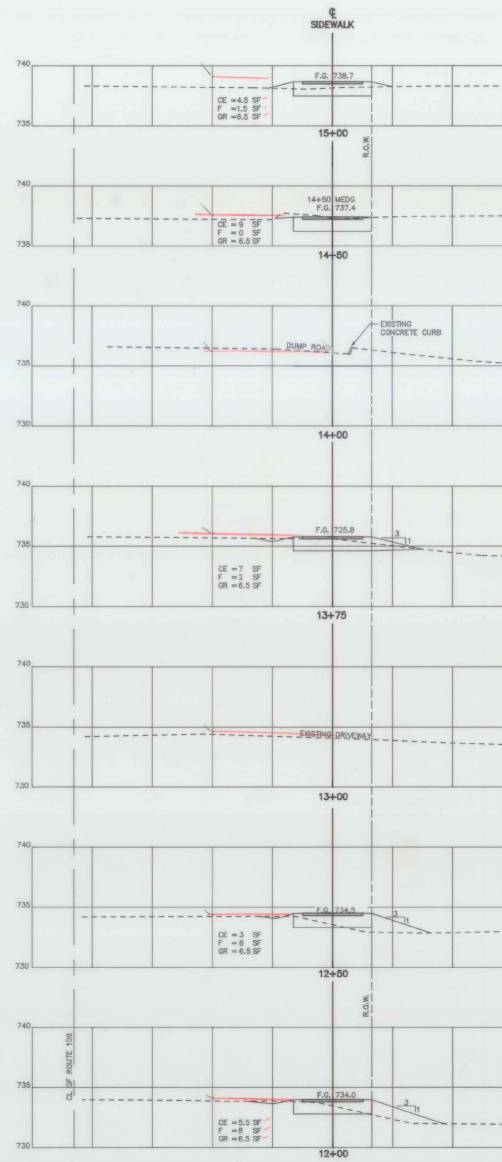
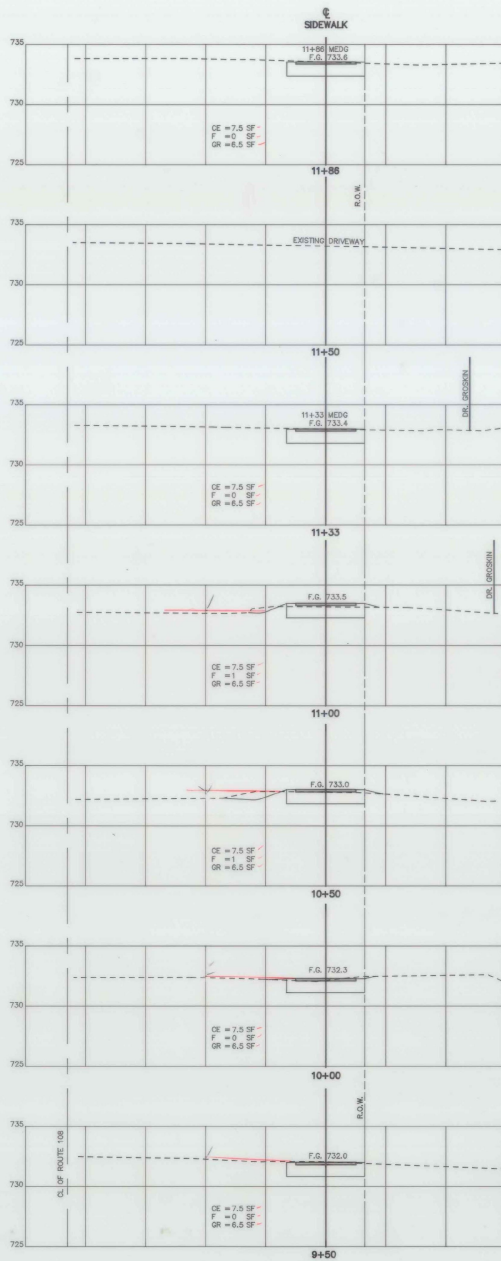
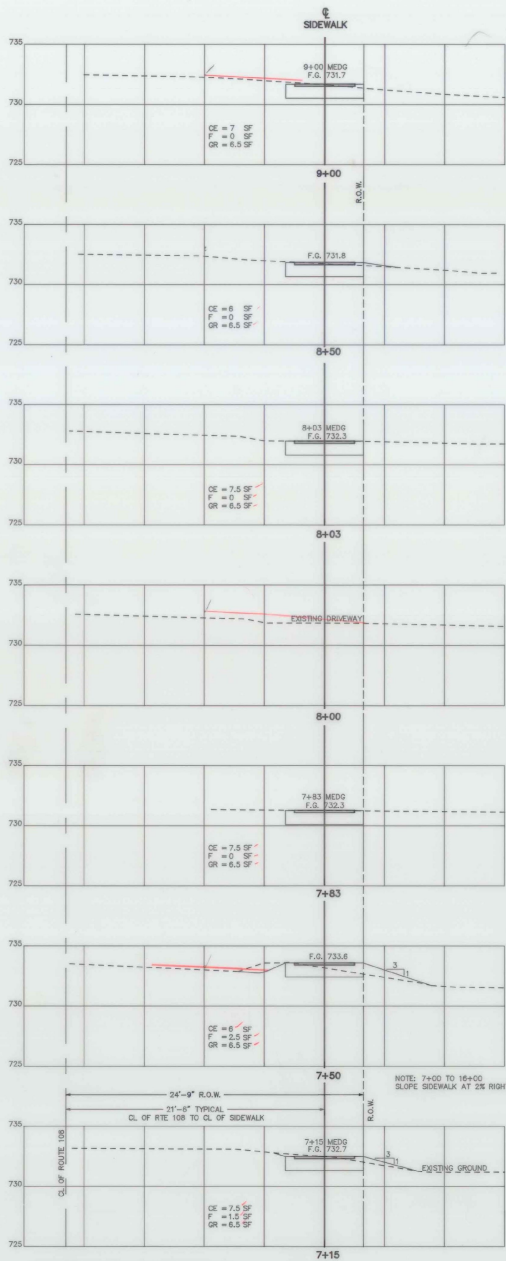
"SECTIONS 0+00 TO 7+15"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

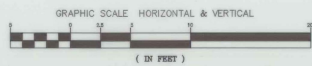
PROJECT
BW-RS-BIKE (2S)

DATE 8-14-91
DRN BY T.J.M.
SCALE 1"=5'
SHT 2 OF 22

REVISED 12/90
REVISED 8/20/91



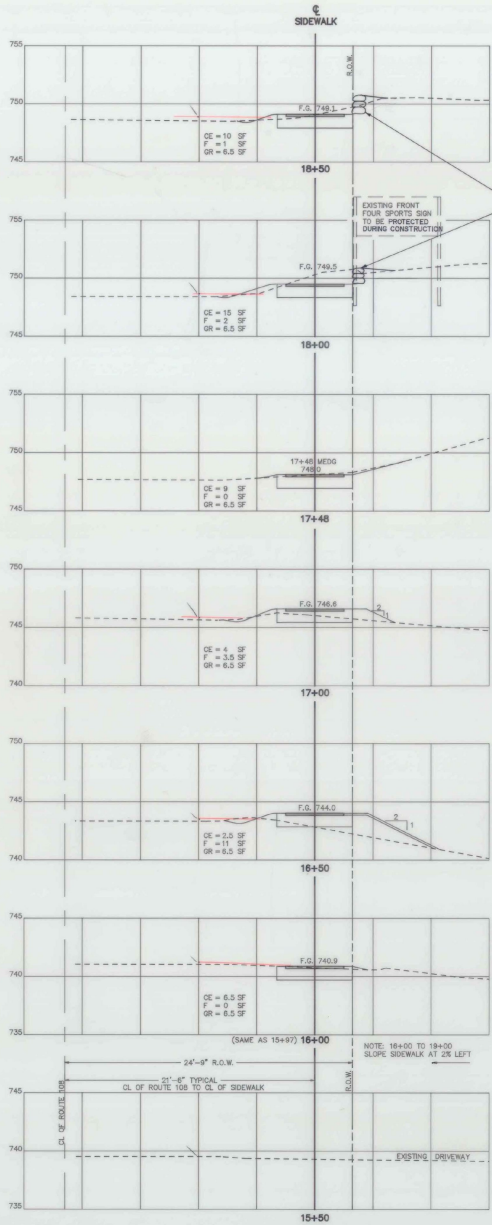
NOTE: MEDG = MATCH EXISTING DRIVEWAY GRADE



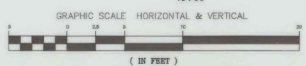
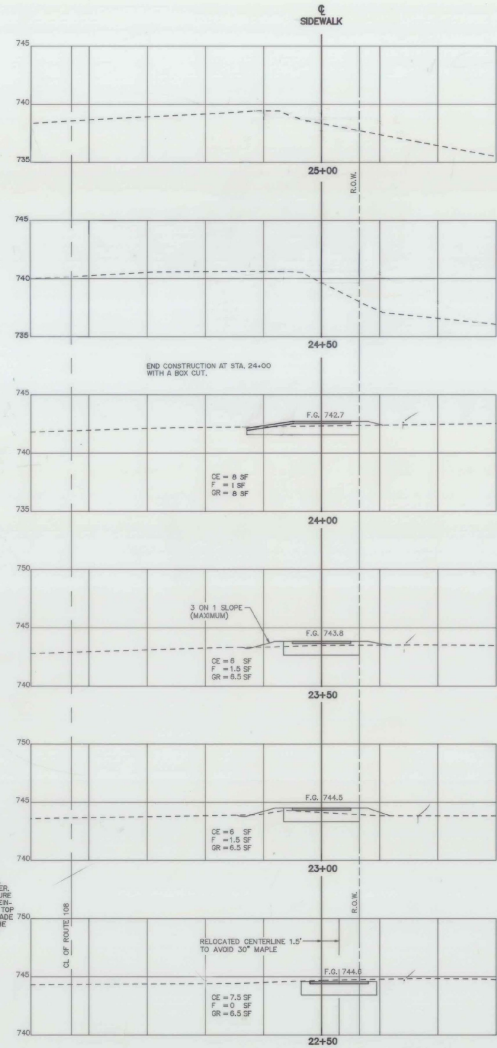
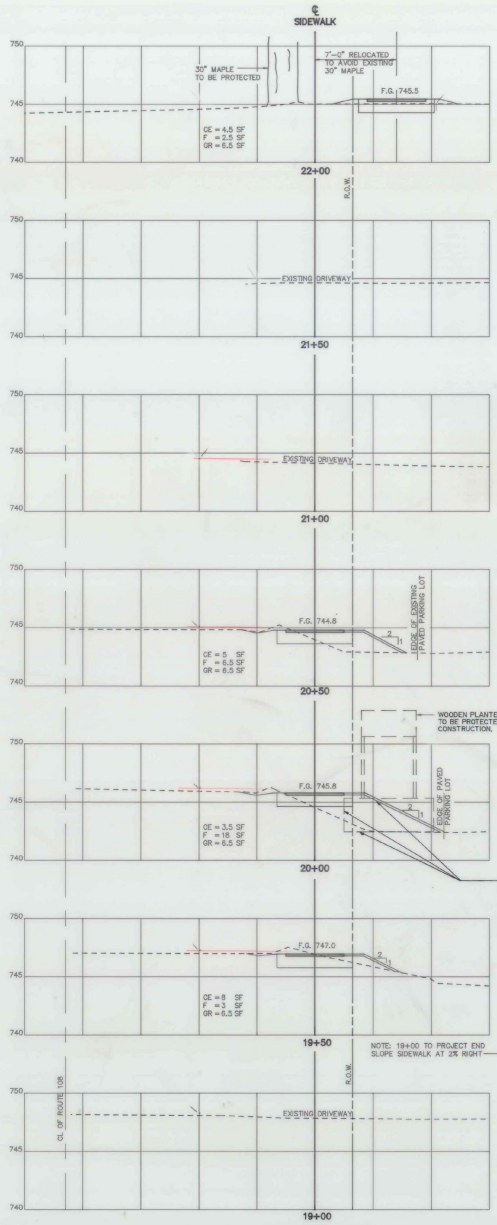
"SECTIONS 7+15 TO 15+00"
 STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
 CONSULTING ENGINEER, P.C.
 BOX 445, WATERBURY, VERMONT
 244-6413

PROJECT
 BW-RS-BIKE (2S)
 DATE 8-14-91
 DRN BY T.J.M
 SCALE 1"=5'
 SHT 22 OF 25

REVISED 1-31-92
 REVISION 9-20-91



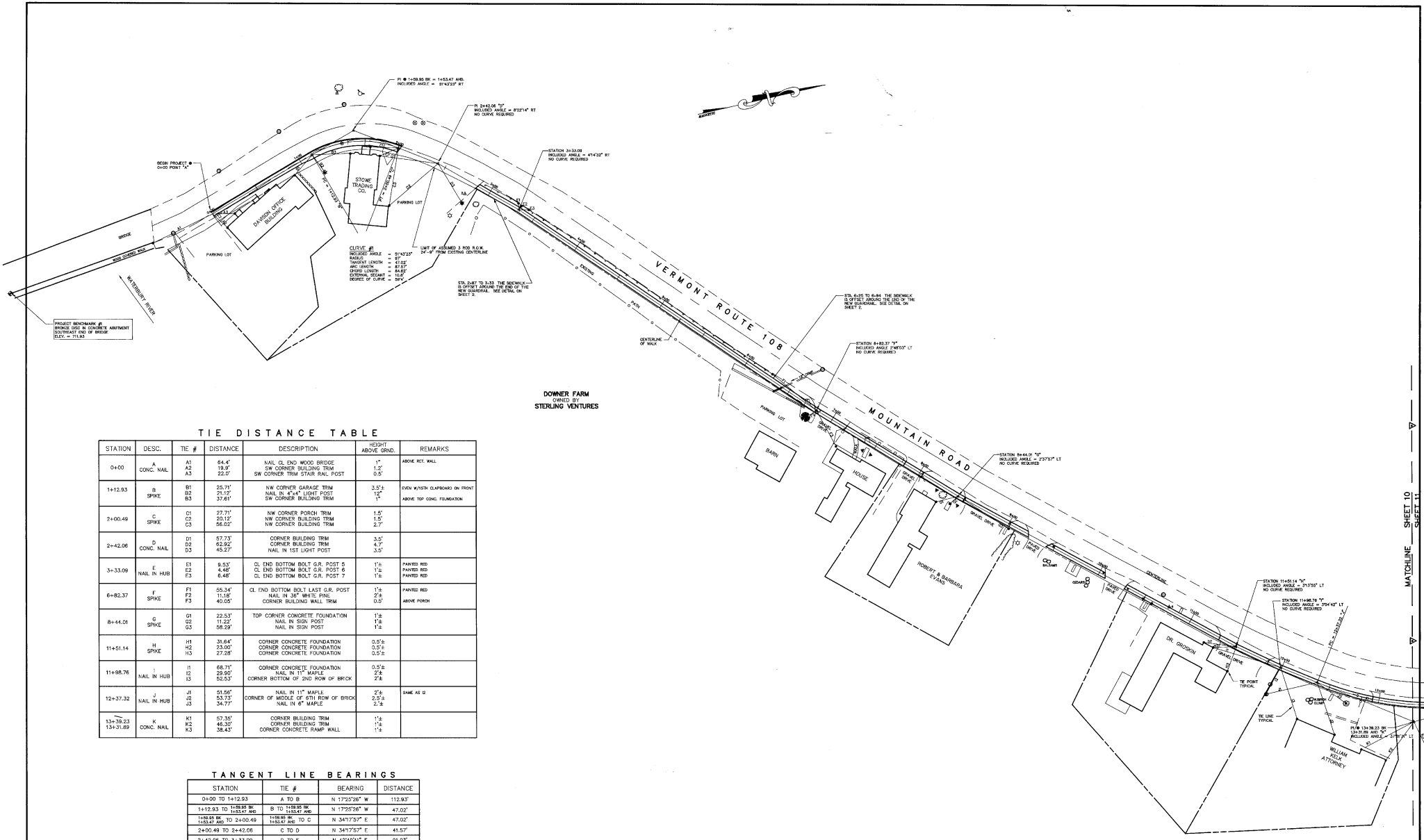
THE CONTRACTOR SHALL EXCAVATE A BENCH ALONG THE EDGE OF THE RIGHT OF WAY TO ALLOW OWNERS OF FRONT FOUR SPORTS TO CONSTRUCT A SMALL STONE RETAINING WALL. THE OWNERS AGREE TO COORDINATE CONSTRUCTION OF THE WALL WITH THE SIDEWALK CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL REED AND MOUND ALL DISTURBED GROUND AFTER THE WALL IS FINISHED.



"SECTIONS 15+00 TO 25+00"
STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

PROJECT
BW-RS-BIKE (2S)
DATE *8-14-91
DRN BY *T.J.M.
SCALE *1"=5'
SHT 21 OF 20

REVISED 2/27/92
REVISED 1/31/92
REVISED 8/20/91



TIE DISTANCE TABLE

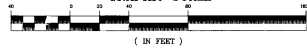
STATION	DESC.	TIE #	DISTANCE	DESCRIPTION	HEIGHT ABOVE GROUND	REMARKS
0+00	A	A1	84.4'	NAIL CL END WOOD BRIDGE	1"	ABOVE RET. WALL
		A2	19.9'	SW CORNER BUILDING TRIM	0.5'	
		A3	22.0'	SW CORNER TRIM STAIR RAIL POST	0.5'	
1+12.93	B	B1	25.7'	NW CORNER GARAGE TRIM	3.5'	EVEN WITH CLARKBOARD ON FRONT
		B2	21.1'	NAIL IN 4"x4" LIGHT POST	1.5'	
		B3	37.6'	SW CORNER BUILDING TRIM	1"	ABOVE TOP CONC. FOUNDATION
2+00.49	C	C1	27.7'	NW CORNER PORCH TRIM	1.5'	
		C2	23.1'	NW CORNER BUILDING TRIM	1.5'	
		C3	56.0'	NW CORNER BUILDING TRIM	2.7'	
2+42.06	D	D1	57.7'	CORNER BUILDING TRIM	3.5'	
		D2	82.9'	CORNER BUILDING TRIM	4.5'	
		D3	45.2'	NAIL IN 1ST LIGHT POST	3.5'	
3+33.09	E	E1	8.5'	CL END BOTTOM BOLT G.R. POST 5	1"	PAINTED RED
		E2	4.4'	CL END BOTTOM BOLT G.R. POST 6	1"	PAINTED RED
		E3	6.4'	CL END BOTTOM BOLT G.R. POST 7	1"	PAINTED RED
6+82.37	F	F1	55.3'	CL END BOTTOM BOLT LAST G.R. POST	1"	PAINTED RED
		F2	11.1'	NAIL IN 3RD WHITE PNL.	2"	
		F3	40.0'	CORNER BUILDING WALL TRIM	0.5'	ABOVE PORCH
8+44.01	G	G1	22.5'	TOP CORNER CONCRETE FOUNDATION	1"	
		G2	11.2'	NAIL IN SIGN POST	1"	
		G3	16.9'	NAIL IN SIGN POST	1"	
11+51.14	H	H1	31.6'	CORNER CONCRETE FOUNDATION	0.5'	
		H2	23.0'	CORNER CONCRETE FOUNDATION	0.5'	
		H3	27.2'	CORNER CONCRETE FOUNDATION	0.5'	
11+98.76	I	I1	68.7'	CORNER CONCRETE FOUNDATION	0.5'	
		I2	29.0'	NAIL IN 1" MAPLE	2"	
		I3	52.5'	CORNER BOTTOM OF 2ND ROW OF BRICK	2"	
12+37.32	J	J1	51.8'	NAIL IN 1" MAPLE	2"	SAME AS I2
		J2	53.7'	CORNER OF BRICK OF 4TH ROW OF BRICK	2.5"	
		J3	34.7'	NAIL IN 6" MAPLE	2.5"	
13+36.23	K	K1	57.3'	CORNER BUILDING TRIM	1"	
		K2	46.3'	CORNER BUILDING TRIM	1"	
		K3	38.4'	CORNER CONCRETE RAMP WALL	1"	

TANGENT LINE BEARINGS

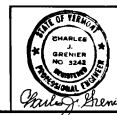
STATION	TIE #	BEARING	DISTANCE
0+00 TO 1+12.93	A TO B	N 17°23'28" W	112.93'
1+12.93 TO 1+58.93 BK	B TO 1+58.93 BK	N 17°25'28" W	47.88'
1+58.93 BK TO 2+00.49	1+58.93 BK TO C	N 34°17'57" E	47.02'
1+58.93 BK TO 2+42.06	1+58.93 BK TO D	N 34°17'57" E	41.57'
2+42.06 TO 3+33.09	D TO E	N 42°40'11" E	91.03'
3+33.09 TO 6+82.37	E TO F	N 46°54'43" E	349.28'
6+82.37 TO 8+44.01	F TO G	N 44°06'40" E	161.64'
8+44.01 TO 11+51.14	G TO H	N 41°28'43" E	307.13'
11+51.14 TO 11+98.76	H TO I	N 38°14'48" E	47.62'
11+98.76 TO 12+37.32	I TO J	N 35°10'06" E	38.57'
12+37.32 TO 13+36.23 BK	J TO K	N 35°10'06" E	101.91'
13+36.23 BK TO 14+33.80	K TO L	N 02°21'25" W	101.91'

SITE PLAN

GRAPHIC SCALE



(IN FEET)



"TIE DETAIL SHEET 0+00 TO 13+00"
STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

PROJECT
BW-RS-BIKE (2S)

DATE 8-14-91
DRN BY T.J.M
SCALE 1"=40'
SHT 22 OF 22

REVISED 12-92
REVISED 2-93
REVISED 8-20-91

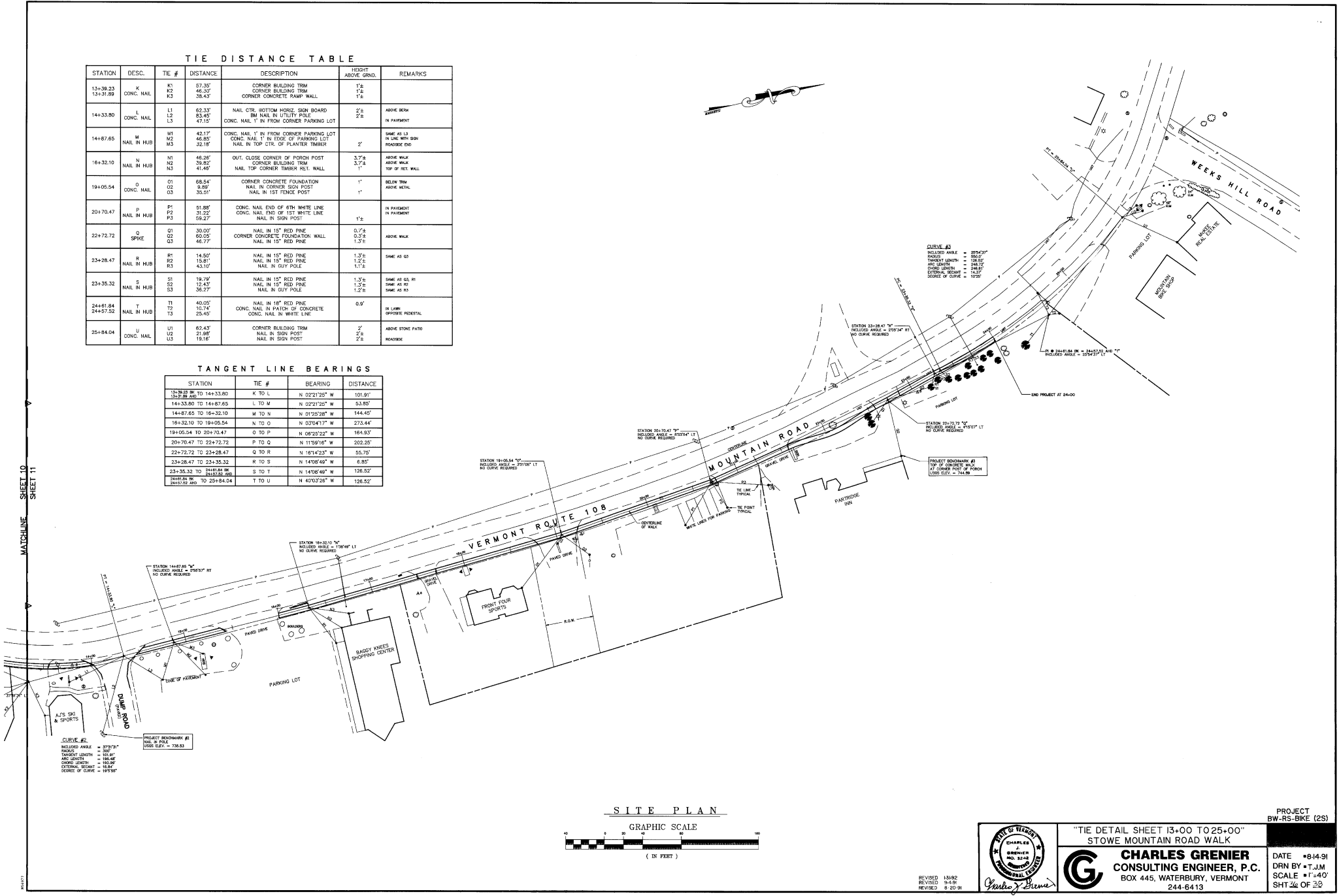
MATCHLINE SHEET 10 SHEET 11

TIE DISTANCE TABLE

STATION	DESC.	TIE #	DISTANCE	DESCRIPTION	HEIGHT ABOVE GRND.	REMARKS
13+39.23 13+31.89	K CONC. NAIL	K1 K2 K3	57.35 46.30 38.43	CORNER BUILDING TRIM CORNER BUILDING TRIM CORNER CONCRETE RAMP WALL	1'± 1'± 1'±	
14+33.80	L CONC. NAIL	L1 L2 L3	62.33 83.45 47.15	NAIL CTR. BOTTOM HORIZ. SIGN BOARD SM NAIL IN UTILITY POLE CONC. NAIL 1" IN FROM CORNER PARKING LOT	2'± 2'± 2'±	ABOVE BERM IN PAVEMENT
14+87.65	M NAIL IN HUB	M1 M2 M3	42.17 46.85 32.18	CONC. NAIL 1" IN FROM CORNER PARKING LOT CONC. NAIL 1" IN EDGE OF PARKING LOT NAIL IN TOP CTR. OF PLANTER TIMBER	2'	SAME AS L3 IN LINE WITH SIGN ROADSIDE END
16+32.10	N NAIL IN HUB	N1 N2 N3	46.26 39.92 41.49	OUT. CLOSE CORNER OF PORCH POST CORNER BUILDING TRIM NAIL TOP CORNER TIMBER RET. WALL	3.7± 2.7± 1'	ABOVE WALK ABOVE WALK TOP OF RET. WALL
19+05.54	O CONC. NAIL	O1 O2 O3	68.54 9.90 35.07	CORNER CONCRETE FOUNDATION NAIL IN CORNER SIGN POST NAIL IN 1ST FENCE POST	1' 1'	BELOW TRIM ABOVE METAL
20+70.47	P NAIL IN HUB	P1 P2 P3	51.98 31.22 59.27	CONC. NAIL END OF 6TH WHITE LINE CONC. NAIL END OF 1ST WHITE LINE NAIL IN SIGN POST	1'±	IN PAVEMENT IN PAVEMENT
22+72.72	Q SPRINK	Q1 Q2 Q3	30.07 60.92 46.77	NAIL IN 15" RED PINE CORNER CONCRETE FOUNDATION WALL NAIL IN 15" RED PINE	0.7± 0.3± 1.3±	ABOVE WALK
23+28.47	R NAIL IN HUB	R1 R2 R3	14.50 15.81 43.10	NAIL IN 15" RED PINE NAIL IN 15" RED PINE NAIL IN GUY POLE	1.3± 1.2± 1.1±	SAME AS Q3
23+35.32	S NAIL IN HUB	S1 S2 S3	19.79 12.43 38.27	NAIL IN 15" RED PINE NAIL IN 15" RED PINE NAIL IN GUY POLE	1.3± 1.3± 1.2±	SAME AS Q3 R1 SAME AS R1 SAME AS R3
24+61.84 24+57.52	T NAIL IN HUB	T1 T2 T3	40.02 10.74 25.40	NAIL IN 15" RED PINE CONC. NAIL IN PATCH OF CONCRETE CONC. NAIL IN WHITE LINE	0.9'	IN LAWN OPPOSITE SIDEWALK
25+84.04	U CONC. NAIL	U1 U2 U3	62.43 21.98 18.16	CORNER BUILDING TRIM NAIL IN SIGN POST NAIL IN SIGN POST	2' 2'± 2'±	ABOVE STONE PATO ROADSIDE

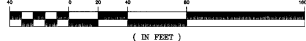
TANGENT LINE BEARINGS

STATION	TIE #	BEARING	DISTANCE
13+39.23 BK TO 14+33.80	K TO L	N 02°21'25" W	100.91'
14+33.80 TO 14+87.65	L TO M	N 02°21'25" W	53.80'
14+87.65 TO 16+32.10	M TO N	N 01°25'28" W	144.45'
16+32.10 TO 19+05.54	N TO O	N 03°04'17" W	273.44'
19+05.54 TO 20+70.47	O TO P	N 06°22'22" W	164.93'
20+70.47 TO 22+72.72	P TO Q	N 11°59'16" W	202.25'
22+72.72 TO 23+28.47	Q TO R	N 16°14'23" W	55.70'
23+28.47 TO 23+35.32	R TO S	N 14°08'49" W	6.85'
23+35.32 TO 24+61.84 BK	S TO T	N 14°08'49" W	128.52'
24+61.84 BK TO 25+84.04	T TO U	N 42°03'28" W	128.52'



SITE PLAN

GRAPHIC SCALE



PROJECT
BW-RS-BIKE (2S)

"TIE DETAIL SHEET 13+00 TO 25+00"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

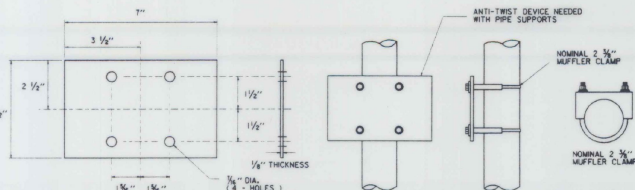


REVISED 15/92
REVISED 9-99
REVISED 8-20-91

DATE *8/4-91
DRN BY *TJM
SCALE *1"=40'
SHT 26 OF 29

NOTES

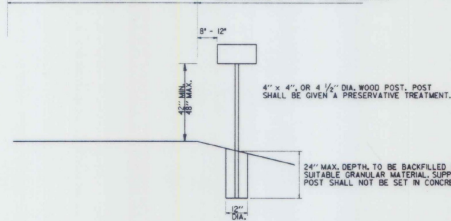
1. ONLY LIGHTWEIGHT MAILBOXES MADE OF LIGHT SHEET METAL OR PLASTIC SHALL BE USED. MAILBOXES SHALL MEET REQUIREMENTS AND APPROVAL OF THE U.S. POSTAL SERVICE.
2. AN ALTERNATE MAILBOX SUPPORT STRUCTURE DESIGN AND CONSTRUCTION MAY BE USED AS LONG AS PROVEN CREDIBILITY AND MEETS GUIDELINES AS SET OUT IN AASHTO'S "GUIDE FOR ERECTING MAILBOXES ON HORIZONTAL SUPPORT STRUCTURE SHALL ALSO MEET REQUIREMENTS OF THE U.S. POSTAL SERVICE."
3. MAILBOX TURNOUT SHALL MEET 8-17 STANDARD AS SET OUT IN "STATE OF VERMONT AGENCY OF TRANSPORTATION DESIGN STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION".
4. IF THE STANDARD TURNOUT OFFSET CANNOT BE ATTAINED DUE TO RIGHT-OF-WAY CONSTRAINTS OR OTHER REASONS THE TURNOUT SHALL BE MODIFIED AS DIRECTED BY THE ENGINEER.



ANTI-TWIST DEVICE DETAIL FOR METAL PIPE

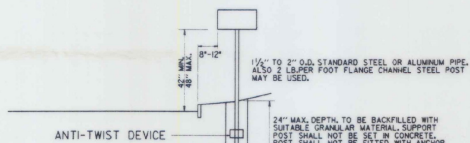
ANTI-TWIST DEVICE ASSEMBLY FOR METAL PIPES (USED FOR SINGLE AND MULTIPLE INSTALLATIONS)

8'-0" OFFSET FROM EDGE OF TRAVEL LANE



4" x 4", OR 4 1/2" DIA WOOD POST. POST SHALL BE GIVEN A PRESERVATIVE TREATMENT.

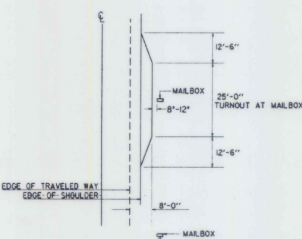
24" MAX. DEPTH TO BE BACKFILLED WITH SUITABLE GRANULAR MATERIAL. SUPPORT POST SHALL NOT BE SET IN CONCRETE.



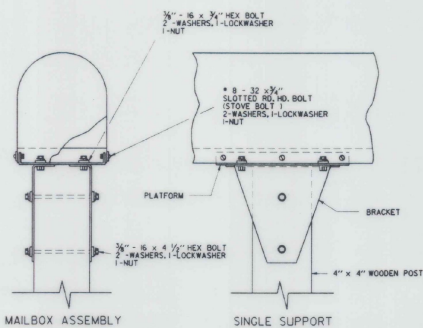
1 1/2" TO 2" O.D. STANDARD STEEL OR ALUMINUM PIPE. ALSO 2 LIPPER FOOT FLANGE CHANNEL STEEL POST MAY BE USED.

24" MAX. DEPTH TO BE BACKFILLED WITH SUITABLE GRANULAR MATERIAL. SUPPORT POST SHALL NOT BE SET IN CONCRETE. POST SHALL NOT BE FITTED WITH ANCHOR PLATE.

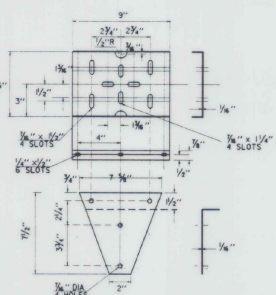
TO BE USED WITH METAL POST. DEVICE SHALL NOT EXTEND MORE THAN 6" BELOW GROUND LINE.



TURNOUT AT MAILBOX NOT NECESSARY IF SHOULDER WIDTH IS 9'-0" OR GREATER.

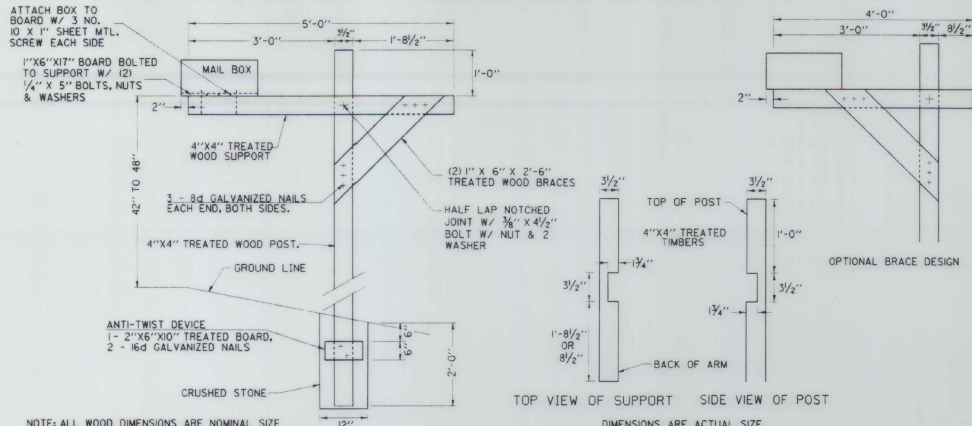


MAILBOX ASSEMBLY SINGLE SUPPORT



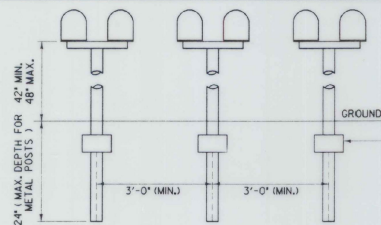
PLATFORM AND BRACKET DETAIL FOR METAL OR WOOD POSTS (USED FOR SINGLE AND MULTIPLE BOXES)

SINGLE MAILBOX SUPPORT

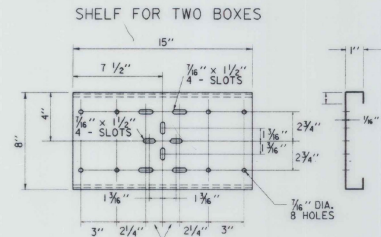


NOTE: ALL WOOD DIMENSIONS ARE NOMINAL SIZE

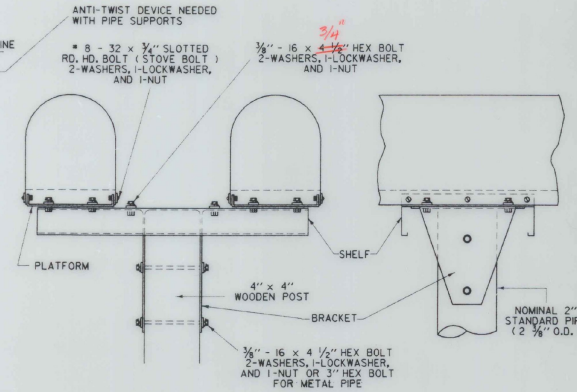
CANTILEVER TYPE MAILBOX SINGLE SUPPORT



SPACING FOR MULTIPLE POST INSTALLATION



SHELF FOR TWO BOXES



MULTIPLE MAILBOX SUPPORT

MAILBOX SUPPORT HARDWARE

(SINGLE AND MULTIPLE SUPPORT)








MAILBOX DETAIL SHEET
STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
CONSULTING ENGINEER
BOX 445, WATERBURY, VERMONT
244-6413

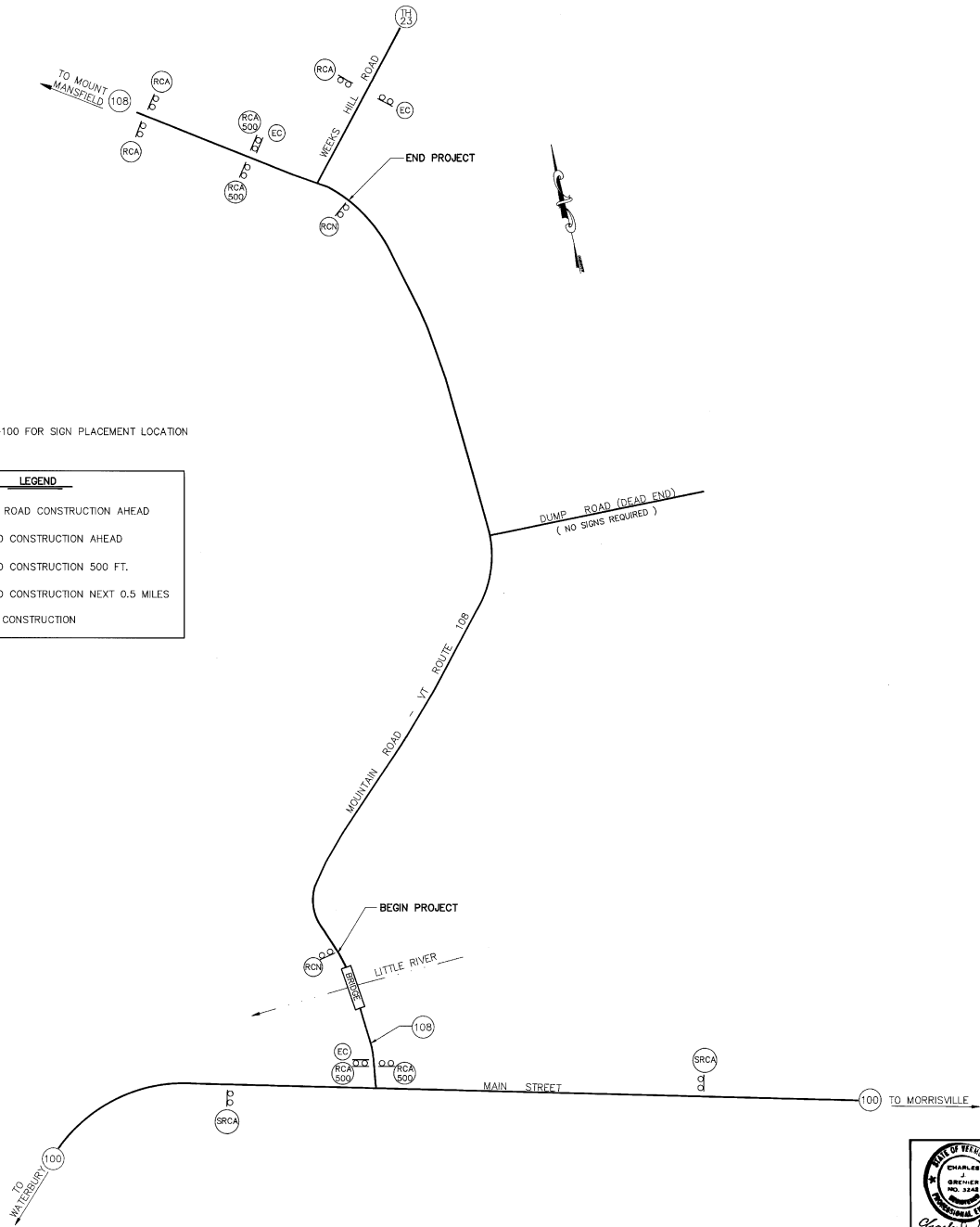
PROJECT
BW-RS-BIKE (2S)

DATE #84-91
DRN BY #C.J.G.
SCALE #A/N
SHT 21 OF 22

REVISED 6-20-91

NOTE: SEE STD. E-100 FOR SIGN PLACEMENT LOCATION

LEGEND	
	= SIDE ROAD CONSTRUCTION AHEAD
	= ROAD CONSTRUCTION AHEAD
	= ROAD CONSTRUCTION 500 FT.
	= ROAD CONSTRUCTION NEXT 0.5 MILES
	= END CONSTRUCTION



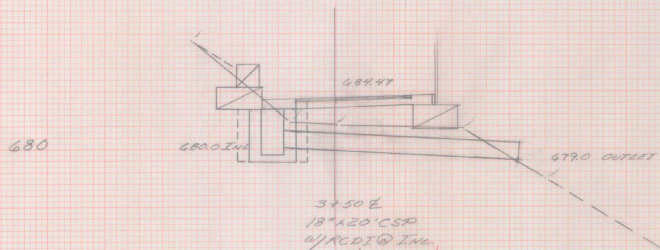
CONSTRUCTION APPROACH SIGNING
STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

PROJECT
BW-RS-BIKE (25)

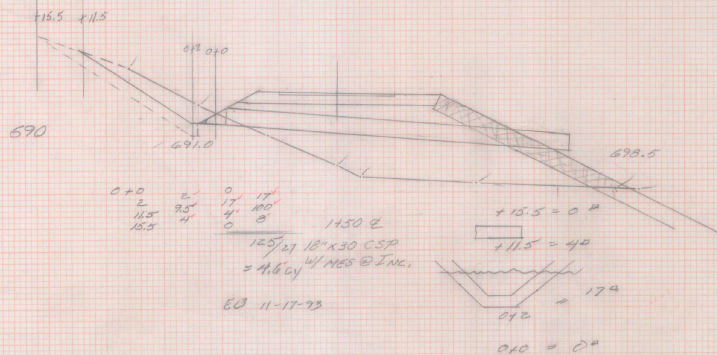
DATE 8-20-91
DRN BY T.J.M
SCALE 1/4" = 1'-0"
SHT 22 OF 33

FINAL
SUBJECT
DATE
SCALE

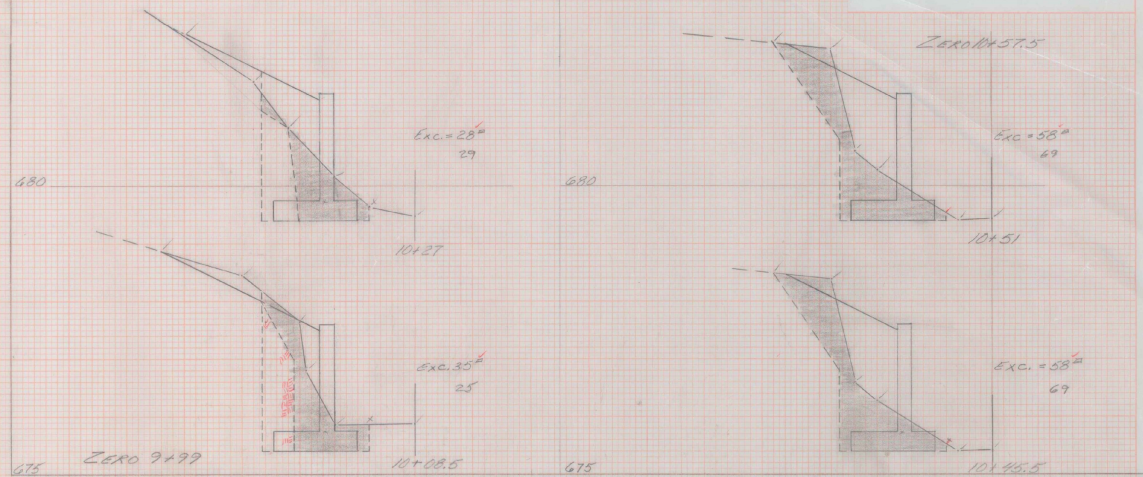
FINAL
SUBJECT
DATE
SCALE



$PIPE\ 24 \times 3.6 = 86.4'$
 $DI\ 26 \times 6 = 156.0'$
 $\frac{242.4}{27} = 9.0'$
 ELP 11-17-93

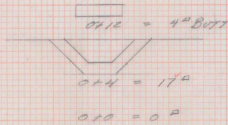
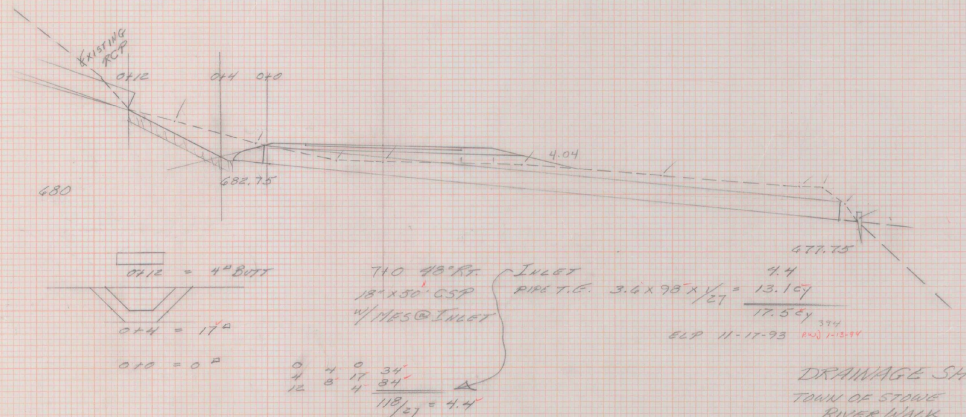


ELP 11-17-93



ELP 12-15-93

9+99	9.5'	5'	16.6'
10+08.5	18.5'	28'	58.3'
10+127	18.5'	28'	73.5'
10+57.5	5.5'	28'	31.7'
10+57.5	6.5'	28'	188'
10+57.5	6.5'	0'	188'
			225.1 x 1/27 = 75.96 cy
			76.0 cy



$710\ 48 \times 36\ Inlet$
 $18 \times 30\ CSP\ PIPE\ T.G.\ 3.6 \times 98 \times 1/27 = 13.167$
 $\frac{17.547}{17.547} = 1.0$
 ELP 11-17-93

$\frac{0\ 4\ 0\ 34}{12\ 4\ 4\ 17\ 34}{119/27} = 4.4$

DRAINAGE SHEET
TOWN OF STONE
RIVER WALK
BW-RS-BIKE (2)S

VERMONT AGENCY OF
TRANSPORTATION
PHASE III-INTERSTATE
HANGER 4018

3
PATH

STOWE BW-RS-BIKE (25)