STATE OF VERMONT
AGENCY OF TRANSPORTATION

RECORD PLANS

CONTRACTOR: WEAVER EXCAVATING, INC.- SHAFTSBURY, VT

RESIDENT ENGINEER: RON LEMAIRE

CONSTRUCTION BEGAN: SEPTEMBER 25,2014

CONSTRUCTION COMPLETE: NOVEMBER 19, 2014

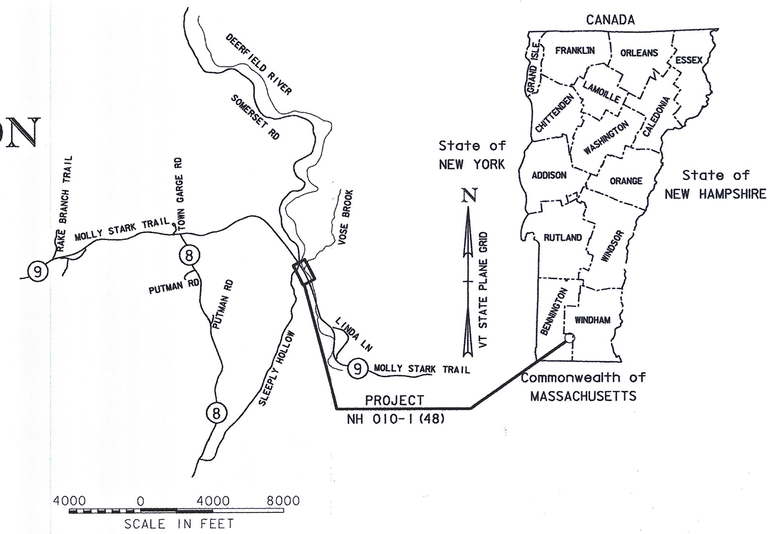
RECORD PLANS BY: RON LEMAIRE & C. PIERCE

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

BY _____ RESIDENT ENGINEER

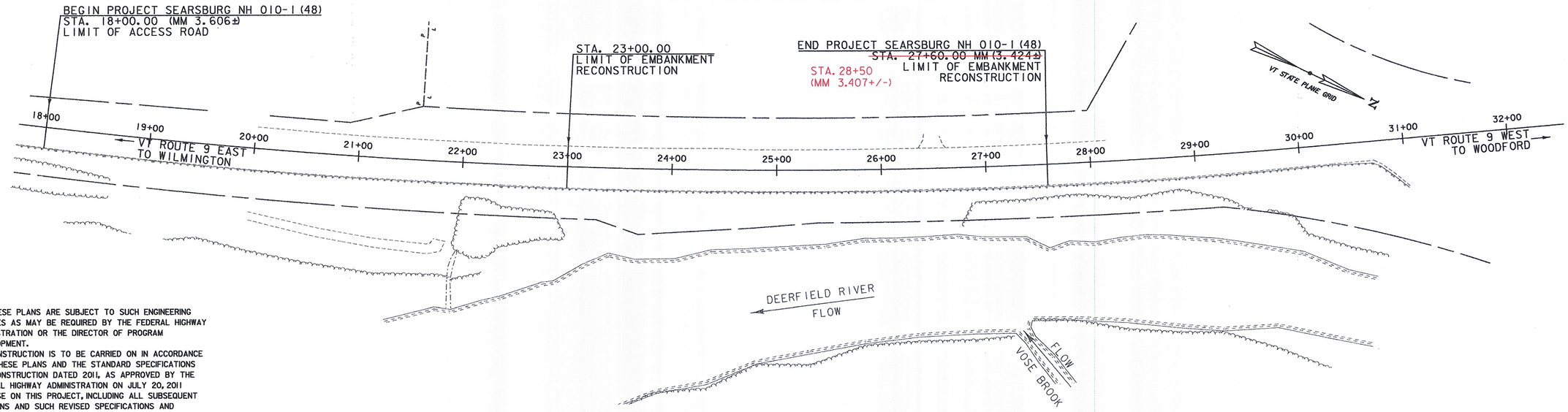
DATE 3/7/16 Ronald Lemaire

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



PROPOSED IMPROVEMENT
TOWN OF SEARSBURG
COUNTY OF BENNINGTON
VT ROUTE 9 (PRINCIPAL ARTERIAL - NHS)

BEGINNING IN THE TOWN OF SEARSBURG ON VT ROUTE 9 AT STATION 18+00.00 (MM 3.606±)
EXTENDING EASTERLY TO STATION ~~27+60.00 (MM 3.424±)~~ 28+50 (MM 3.407)
LENGTH OF PROJECT ~~=960.00 FEET (0.182 MILES)~~ 1050.00 FEET (0.199 MILES)
THIS PROJECT CONSISTS OF EMBANKMENT RECONSTRUCTION, GUARDRAIL, CONSTRUCTION OF ACCESS ROAD, INSTALLING STONE FILL AND EROSION PREVENTION AND SEDIMENT CONTROL



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL I

SURVEYED BY : VTRANS VERMONT SURVEY AND ENGINEERING

SURVEYED DATE : 4/15/2012 & 1/22/2013

DATUM

VERTICAL NAVD 88 FT

HORIZONTAL NAD 83/(1992) sFT

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2013	3,600	430	52%	9.8%	430
2023	3,700	580	52%	11.5%	520

18 kip ESAL for flexible pavement from 2013 to 2023: 1,433,000
18 kip ESAL for flexible pavement from 2013 to 2033: 3,123,000
Design speed: N/A

0 50 100
SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
KO ISHIKURA
CIVIL
No. 39447
REGISTERED PROFESSIONAL ENGINEER

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

DIRECTOR OF PROGRAM DEVELOPMENT

APPROVED _____ DATE 6-16-14

PROJECT MANAGER : PAUL LIBBY

PROJECT NAME : SEARSBURG

PROJECT NUMBER : NH 010-1(48)

SHEET 1 OF 45 SHEETS

INDEX OF SHEETS

STANDARDS LISTS

D-3	06/01/1994
D-4	08/13/2007
E-193	08/18/1995
G-1	02/10/2014
T-1	08/06/2012
T-10	08/06/2012
T-24	08/06/2012
T-30	08/06/2012
T-31	08/06/2012
T-40	01/02/2013
T-45	01/02/2013

NOTE:
ALL UTILITIES HAVE BEEN PLOTTED TO QUALITY LEVEL "C"; SEE BELOW.

UTILITY QUALITY LEVEL INFORMATION INDEX (SEE ASCE/CI 38-02):

UTILITY QUALITY LEVEL A:
PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. MINIMALLY INTRUSIVE EXCAVATION EQUIPMENT IS TYPICALLY USED TO MINIMIZE THE POTENTIAL FOR UTILITY DAMAGE. A PRECISE HORIZONTAL AND VERTICAL LOCATION, AS WELL AS OTHER UTILITY ATTRIBUTES, ARE SHOWN ON PLAN DOCUMENTS. ACCURACY IS TYPICALLY SET TO 0.05 FEET (15-MM) VERTICAL AND TO APPLICABLE HORIZONTAL SURVEY AND MAPPING ACCURACY AS DEFINED OR EXPECTED BY THE PROJECT OWNER. INFORMATION IS ONLY VALID WITHIN THE VISIBLE LIMITS OF THE TEST HOLE.

UTILITY QUALITY LEVEL B:
INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

UTILITY QUALITY LEVEL C:
INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL D:
INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⊡	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCH MARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALUE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEP.
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEP.
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PROJECT DEMARCATION FENCE
- BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN BOUNDARY LINE
- COUNTY BOUNDARY LINE
- STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- PROPERTY LINE (P/L)
- SLOPE RIGHTS
- 6F PROPERTY BOUNDARY
- 4F PROPERTY BOUNDARY
- HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

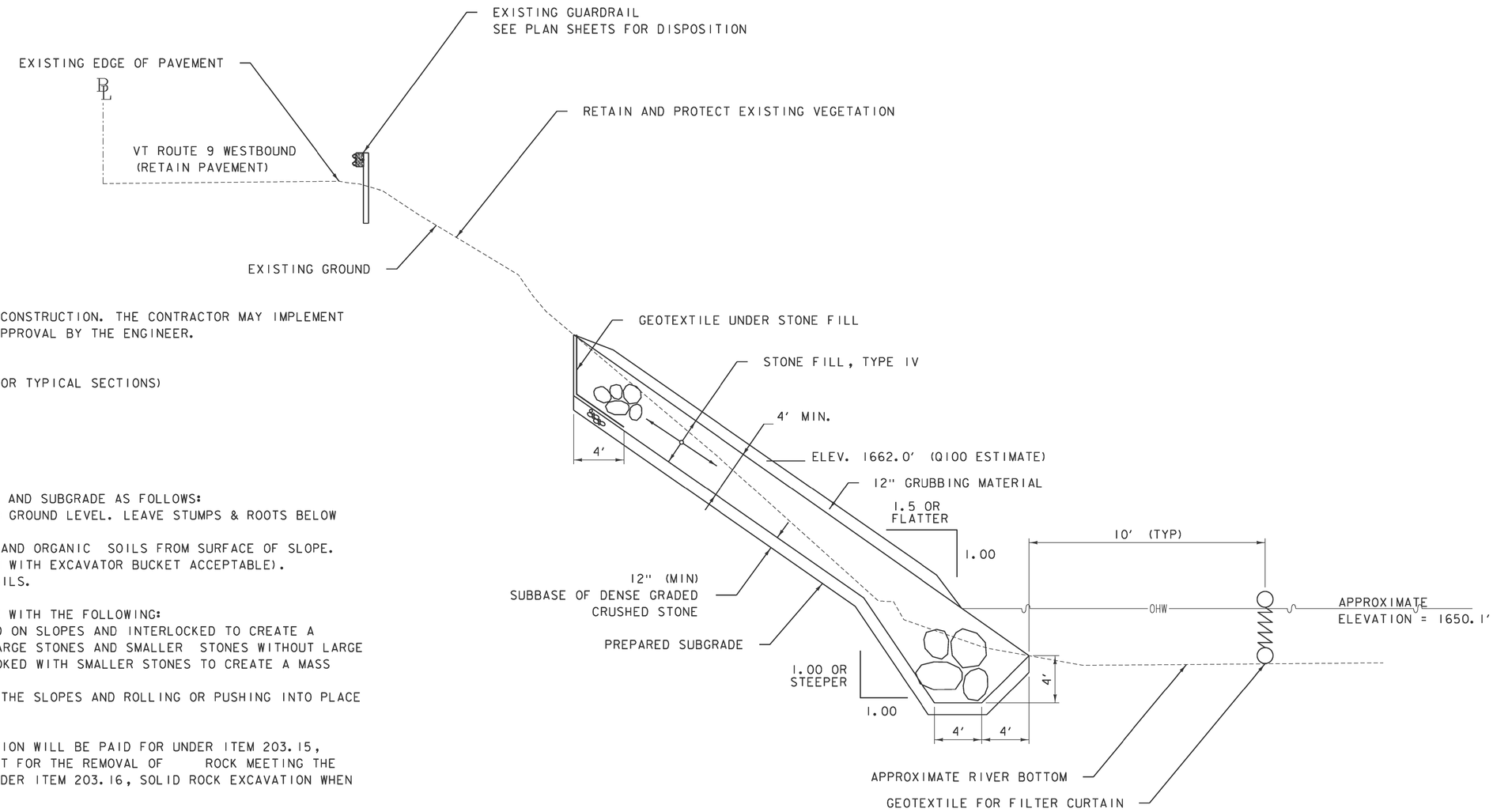
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404lgnd.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CONVENTIONAL SYMBOLOGY LEGEND SHEET

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 3 OF 45

TYPICAL SECTIONS



GENERAL NOTES:

1. THE FOLLOWING IS A SUGGESTED SEQUENCE OF CONSTRUCTION. THE CONTRACTOR MAY IMPLEMENT AN ALTERNATIVE SEQUENCE UPON REVIEW AND APPROVAL BY THE ENGINEER.
   - A. IMPLEMENT TRAFFIC CONTROLS
   - B. REMOVE GUARDRAIL
   - C. CONSTRUCT ACCESS ROAD (SEE SHEET 6 FOR TYPICAL SECTIONS)
   - D. CONSTRUCT EMBANKMENT IMPROVEMENTS
   - E. STABILIZE ACCESS ROAD
   - F. RESET GUARDRAIL
   - G. REMOVE TRAFFIC CONTROLS
   - H. RESTORE PAVEMENT MARKINGS

2. PRIOR TO PLACING MATERIALS, PREPARE SLOPE AND SUBGRADE AS FOLLOWS:
   - A. CUT OFF TREES AND EXISTING STUMPS TO GROUND LEVEL. LEAVE STUMPS & ROOTS BELOW GRADE IN PLACE.
   - B. EXCAVATE VEGETATION (EXCEPT STUMPS) AND ORGANIC SOILS FROM SURFACE OF SLOPE.
   - C. COMPACT SURFACE OF SLOPE (COMPACTION WITH EXCAVATOR BUCKET ACCEPTABLE).
   - D. PLACE MATERIALS AS SHOWN ON THE DETAILS.

3. PLACEMENT OF STONE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   - A. STONE FILL SHALL BE CAREFULLY PLACED ON SLOPES AND INTERLOCKED TO CREATE A STABLE AND WELL-GRADED MIXTURE OF LARGE STONES AND SMALLER STONES WITHOUT LARGE VOIDS IN BETWEEN. VOIDS SHALL BE CHOKED WITH SMALLER STONES TO CREATE A MASS FREE OF LARGE VOIDS.
   - B. DUMPING OF STONE FILL AT THE TOP OF THE SLOPES AND ROLLING OR PUSHING INTO PLACE WILL NOT BE PERMITTED.

4. ALL EXCAVATION FOR EMBANKMENT RECONSTRUCTION WILL BE PAID FOR UNDER ITEM 203.15, COMMON EXCAVATION. IF ENCOUNTERED, PAYMENT FOR THE REMOVAL OF ROCK MEETING THE REQUIREMENTS OF 203.01(b) WILL BE MADE UNDER ITEM 203.16, SOLID ROCK EXCAVATION WHEN APPROVED BY THE ENGINEER.

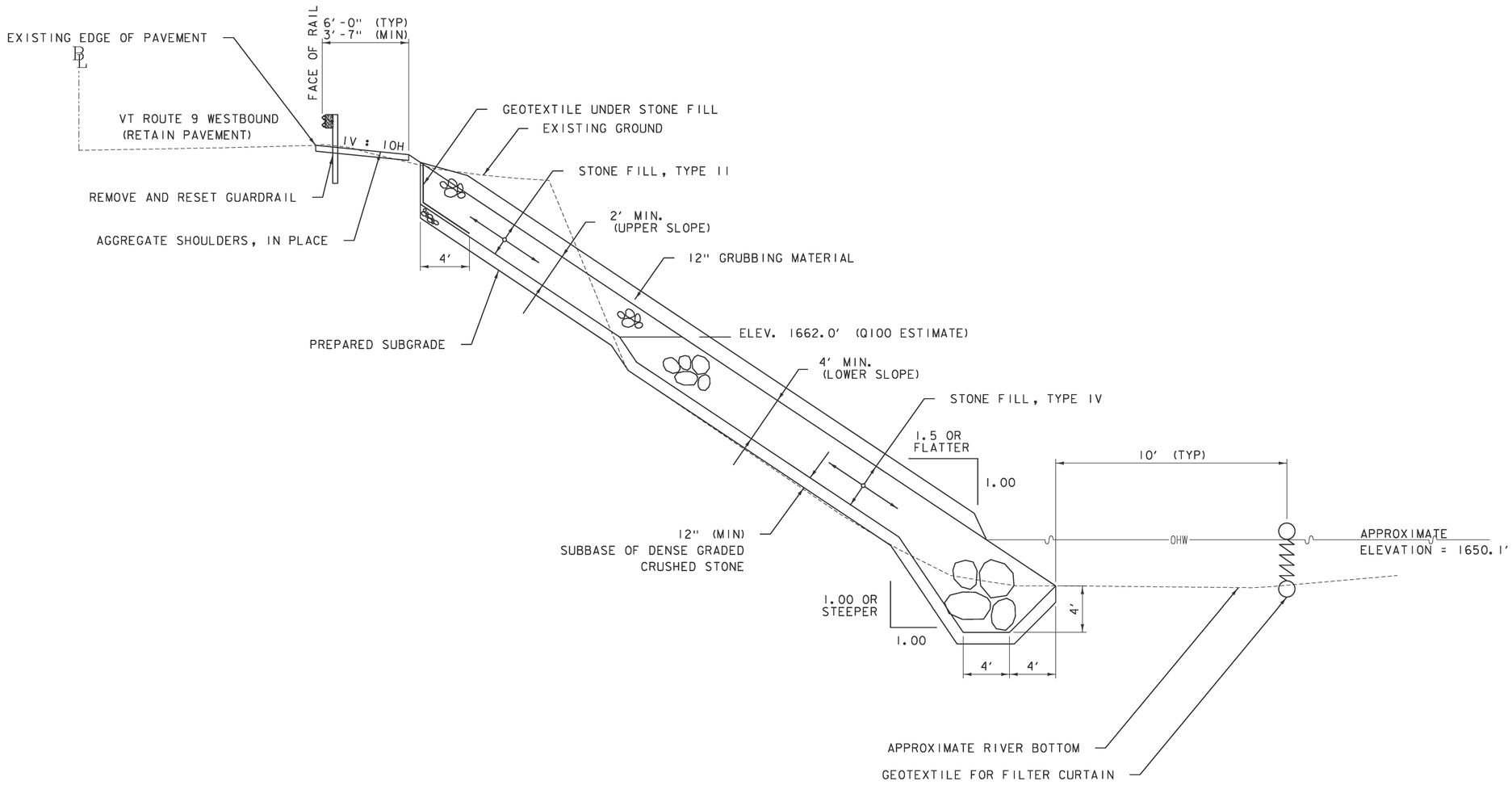
5. WORK UNDER THIS CONTRACT IS ANTICIPATED TO BE PERFORMED DURING LOW FLOW CONDITIONS. TEMPORARY STREAM DIVERSION OR EXCAVATION DEWATERING IS NOT ANTICIPATED TO BE REQUIRED. THE CONTRACTOR SHALL SCHEDULE THEIR WORK TO OCCUR DURING PERIODS OF LOW FLOW. TRANSCANADA OPERATES THE SEARSBURG DAM UPSTREAM OF THE PROJECT SITE AND THEY CONTROL THE FLOW OF WATER. THE CONTRACTOR SHALL CONTACT TRANSCANADA TO DETERMINE THEIR RELEASE SCHEDULE. SHOULD TEMPORARY STREAM DIVERSION BE REQUIRED SANDBAGS OR ENGINEER APPROVED EQUAL MAY BE USED TO TEMPORARILY DIVERT THE STREAM AWAY FROM THE WORK AREA. SHOULD EXCAVATION DEWATERING BE REQUIRED AND WHEN APPROVED BY THE ENGINEER THE CONTRACTOR SHALL USE FILTER BAGS IN ACCORDANCE WITH THE VANR LOW RISK HANDBOOK. ALL WORK FOR THE TEMPORARY DIVERSION OF THE STREAM OR WORK IN THE WET SHALL BE CONSIDERED INCIDENTAL TO THE WORK UNDER THIS CONTRACT AND NO ADDITIONAL PAYMENT WILL BE MADE.

TYPICAL VT ROUTE 9 EMBANKMENT SECTION
STA. 23+00.00-23+75.00 AND 27+00.00-~~27+60.00~~ 28+50.00
NOT TO SCALE

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	NH 010-1(48)
FILE NAME: z12B404typ.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: M. BRADLEY
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
TYPICAL SECTION SHEET 1	SHEET 4 OF 45

TYPICAL SECTIONS



TYPICAL VT ROUTE 9 EMBANKMENT SECTION
STA. 23+75.00-27+00.00

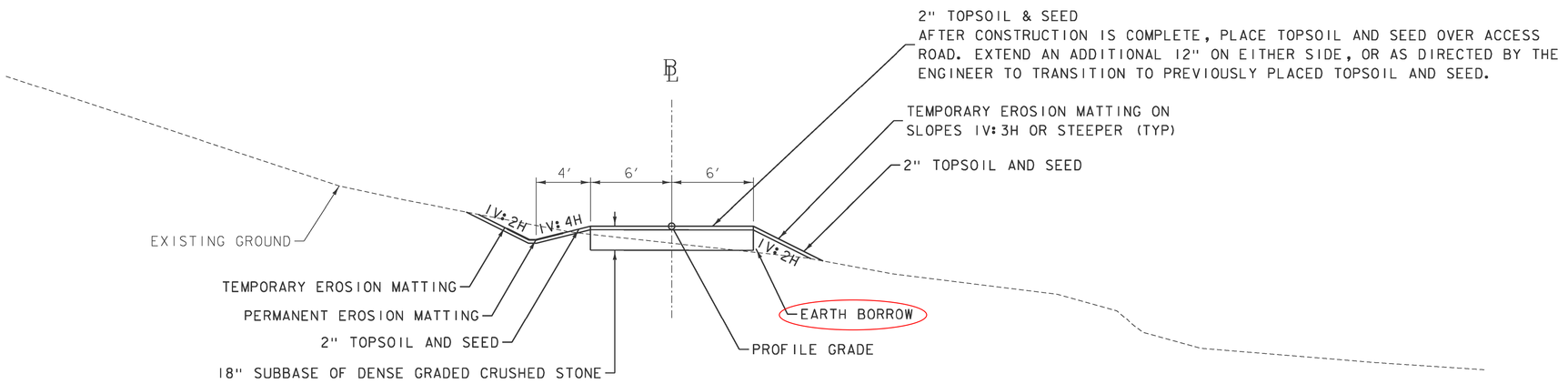
NOT TO SCALE

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: NH 010-1(48)	
FILE NAME: z12B404typ.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: M. BRADLEY
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
TYPICAL SECTION SHEET 2	SHEET 5 OF 45

TYPICAL SECTIONS

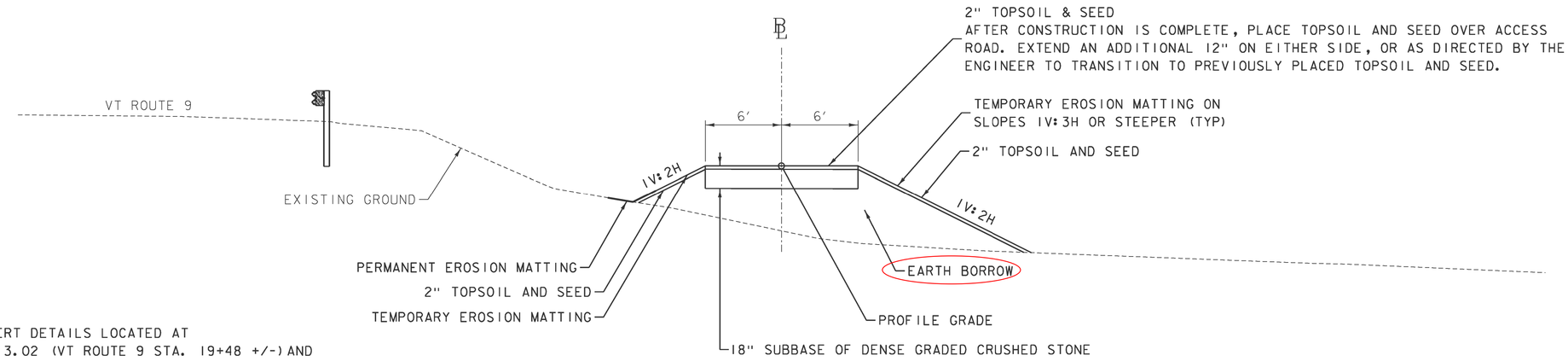
18" SUBBASE OF DENSE GRADED CRUSHED STONE



TYPICAL ACCESS ROAD SECTION
STA. 83+62.00-84+87.58

NOT TO SCALE

EARTH BORROW NOT USED
CONTRACTOR GRADED EXISTING AREA + MATERIALS



NOTES: FOR CULVERT DETAILS LOCATED AT
STA. 81+13.02 (VT ROUTE 9 STA. 19+48 +/-) AND
STA. 83+70.52 (VT ROUTE 9 STA. 21+98 +/-),
REFER TO CROSS SECTIONS

TYPICAL ACCESS ROAD SECTION
STA. 80+21.52-83+62.00

NOT TO SCALE

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	NH 010-1(48)
FILE NAME: z12B404typ.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: M. BRADLEY
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
TYPICAL SECTION SHEET 3	SHEET 6 OF 45

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

GPS/NGS CONTROL POINTS

SOMERSET RD

PID AB7362
N = 141730.78
E = 1519571.26
ELEV. = 1677.48

DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1991 (CHR). GENERAL LOCATION, SEARSBURG, VT., ABOUT 4.5 MI (7.2 KM) WEST OF WILMINGTON, VT., ABOUT 12.5 MI (20.1 KM) EAST OF BENNINGTON, AND ABOUT 10.5 MI (16.9 KM) NORTH OF THE MASSACHUSETTS/VERMONT STATE LINE. TO REACH FROM THE INTERSECTION OF VT ROUTES 8 AND 9 IN SEARSBURG, GO EAST ALONG VT ROUTE 9 FOR 1.6 MI (2.6 KM) TO THE MARK ON THE LEFT. TO REACH FROM THE INTERSECTION OF VT ROUTES 9 AND 100 NORTH AT THE TRAFFIC LIGHT IN WILMINGTON, GO WEST ALONG VT ROUTE 9 FOR 5.0 MI (8.0 KM) TO THE MARK ON THE RIGHT, ABOUT 100 M (328.1 FT) SOUTHEAST OF A GRAY 1+1/2 STORY WOOD FRAME HOUSE WITH GARAGE. THE MARK IS SET 5 CM BELOW GROUND SURFACE IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT. IT IS 9.3 M (30.5 FT) EAST OF AND ABOUT 0.5 M (1.6 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 9, 3.4 M (11.2 FT) EAST OF THE EAST FACE OF A STEEL GUARD RAIL, 7.6 M (24.9 FT) WEST OF POLE 75/574, 28.2 M (92.5 FT) SOUTH OF A PICNIC AREA/NEPCO SIGN, AND 0.5 M (1.6 FT) WEST OF A FIBERGLASS WITNESS POST. NOTE, THIS MARK IS INTERVISIBLE WITH MARK SOMERSET RD AZ MK.

SOMERSET RD AZ MK

PID AB7361
N = 143739.14
E = 1518317.53
ELEV. = 1819.94

RECOVERY NOTE BY VERMONT GEODETIC SURVEY 2011 (MJA). GENERAL LOCATION, SEARSBURG. TO REACH FROM THE INTERSECTION OF VT ROUTE 8 AND VT ROUTE 9, GO EAST ALONG VT ROUTE 9 FOR 0.9 MI (1.4 KM) TO THE SITE OF THE MARK ON THE LEFT. THE MARK IS SET 30 CM (12 INCHES) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCH) DIAMETER CONCRETE MONUMENT. IT IS 10.9 M (35.8 FT) EAST OF AND 0.3 M (1.0 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 9, 2.5 M (8.2 FT) EAST OF THE VT ROUTE 9 EAST EDGE OF PAVEMENT, 35.1 M (115.2 FT) NORTH-NORTHWEST OF POLE NO 354/57, 37.7 M (123.7 FT) SOUTH OF POLE NO 571/3-01, 19.4 M (63.6 FT) EAST OF THE MOST EASTERLY SUPPORT POST FOR A RUNAWAY TRUCK RAMP SIGN WITH FLASHING LIGHTS, 30.5 M (100.1 FT) SOUTH-SOUTHWEST OF THE CENTER THE EAST (OUTLET) END OF A 60 CM (24 INCH) DIAMETER METAL CULVERT WITH STEEL MARKER POST AND 0.3 M (1.0 FT) WEST OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES

HVCTRL#2 — VTSM DISK SOMERSET RD

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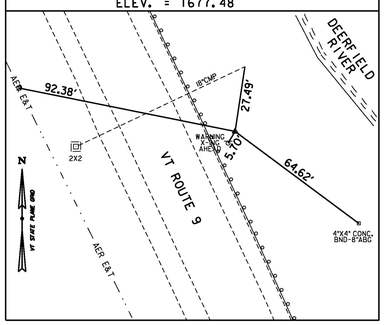
EAST = 1519571.26
ELEV. = 1677.48



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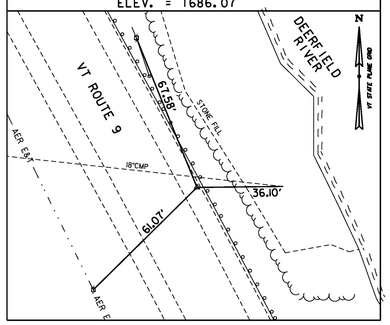
EAST = 1519414.93
ELEV. = 1686.07

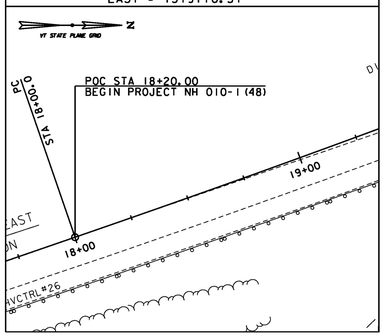


* CONTROL POINT #21 SET JANUARY 19, 2013 BY PATON SURVEYS, C. PATON-PC

ALIGNMENT TIES

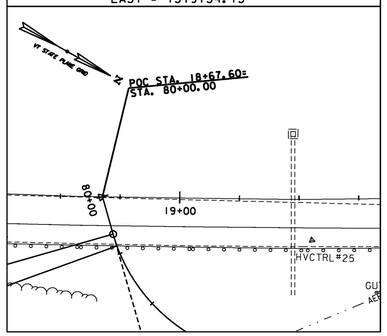
PC STA 18+00.00

NORTH = 141137.97
EAST = 1519776.51



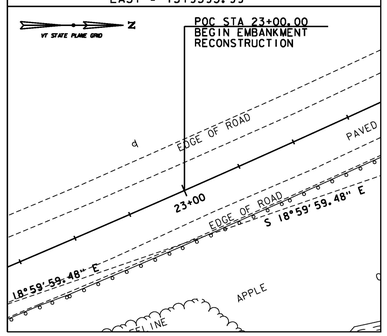
POC STA 18+67.60= STA. 80+00.00

NORTH = 141201.74
EAST = 1519754.15



POC STA 23+00.00

NORTH = 141603.48
EAST = 1519593.99



PI STA 24+14.11

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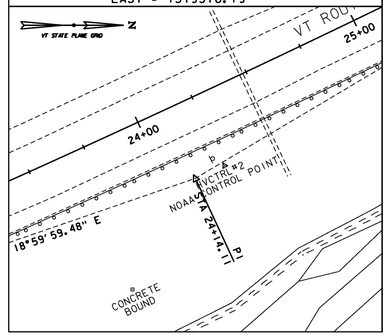
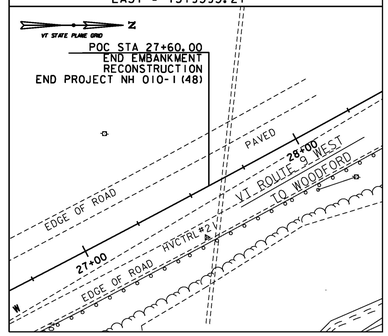
EAST = 1519576.79



POC STA 27+60.00

NORTH = 142015.50
EAST = 1519393.27



DATUM
VERTICAL — NAVD 88 FT
HORIZONTAL — NAD 83(1992) sFT
ADJUSTMENT — NONE

0 30 60
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

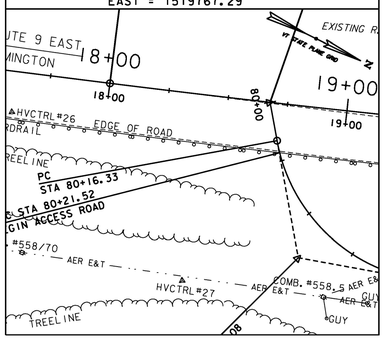
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404tie2.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
TIE SHEET 1

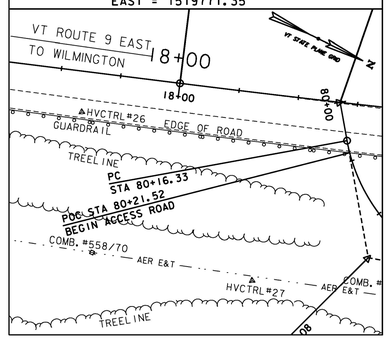
PLOT DATE: 6/16/2014
DRAWN BY: C. MORIN
CHECKED BY: E. ATKINS
SHEET 7 OF 45

ALIGNMENT TIES

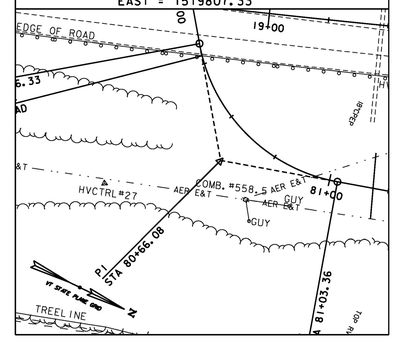
PC STA. 80+16.33
NORTH = 141211.43
EAST = 1519767.29



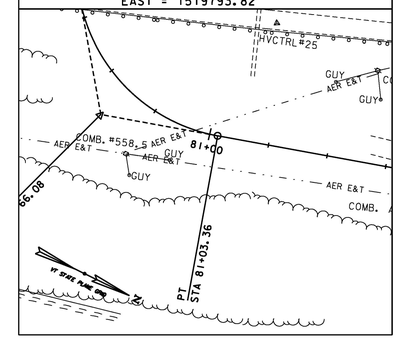
POC STA. 80+21.52
NORTH = 141214.65
EAST = 1519771.35



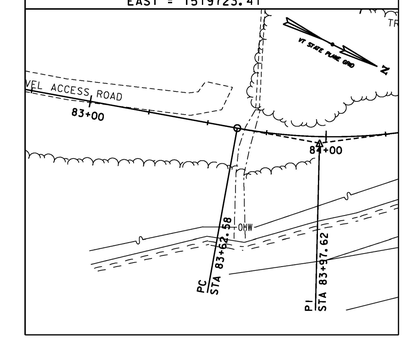
PI STA. 80+66.08
NORTH = 141240.94
EAST = 1519807.33



PT STA. 81+03.36
NORTH = 141288.82
EAST = 1519793.82



PC STA. 83+62.58
NORTH = 141538.30
EAST = 1519723.41



ALIGNMENT TIES

PI STA. 83+97.62
NORTH = 141572.01
EAST = 1519713.90

PT STA. 84+32.08
NORTH = 141601.18
EAST = 1519694.48

PT STA. 84+87.58
NORTH = 141647.36
EAST = 1519663.72

ALIGNMENT TIES

DATUM

VERTICAL NAVD 88 FT

HORIZONTAL NAD 83(1992) sFT

ADJUSTMENT NONE

0 30 60

SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404tie2.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
TIE SHEET 2

PLOT DATE: 6/16/2014
DRAWN BY: C. MORIN
CHECKED BY: E. ATKINS
SHEET 8 OF 45

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES			TOTALS		DESCRIPTIONS			
ROADWAY	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1			1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-
3550			3550		CY	COMMON EXCAVATION	203.15	30
176			176		CY	SOLID ROCK EXCAVATION	203.16	-
650			650		CY	EARTH BORROW	203.30	72
100			100		CY	TRENCH EXCAVATION OF EARTH	204.20	13
1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
1350			1350		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	50
50			50		CY	AGGREGATE SHOULDERS, IN PLACE	402.10	14
20			20		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415	-
50			50		LF	18" PCCSP .079 (2-2/3 X 1/2)	601.0416	4
60			60		LF	18" CPEP(SL)	601.2615	6
2			2		EACH	18" PCCSP ELBOW .064 (2-2/3 X 1/2)	601.5415	-
2			2		EACH	18" CPEP ELBOW	601.5814	-
1			1		EACH	18" CSPES .064 (2-2/3 X 1/2)	601.6015	-
1			1		EACH	18" CPEPES	601.7015	-
	20		20		CY	STONE FILL, TYPE I	613.10	16.8
	1400		1400		CY	STONE FILL, TYPE II	613.11	42
	2600		2600		CY	STONE FILL, TYPE IV	613.13	56
2			2		EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	-
4			4		EACH	YIELDING MARKER POSTS	619.17	-
100			100		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	-
2			2		EACH	ENERGY ABSORPTION ATTENUATOR	621.56	-
475			475		LF	REMOVE AND RESET GUARDRAIL	621.75	-
750			750		LF	TEMPORARY TRAFFIC BARRIER	621.90	19
160			160		HR	UNIFORMED TRAFFIC OFFICERS	630.10	-
700			700		HR	FLAGGERS	630.15	-
		1	1		LS	FIELD OFFICE, ENGINEERS	631.10	-
		3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-
1			1		LS	MOBILIZATION/DEMOBILIZATION	635.11	-
1			1		LS	TRAFFIC CONTROL	641.10	-
2			2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-
2200			2200		LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402	30
2200			2200		LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412	30
2200			2200		LF	TEMPORARY 4 INCH WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6011	30
2200			2200		LF	TEMPORARY 4 IN YELLOW LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6111	30
1500			1500		SF	PAVEMENT MARKING MASK	646.86	73
	450		450		SY	GEOTEXTILE UNDER STONE FILL	649.31	41
	200		200		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515	11
	500		500		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61	28
	50		50		LB	SEED	651.15	5.1

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404qty.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
QUANTITY SHEET 1

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 9 OF 45

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
							ROADWAY	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								50		50		LB	SEED, WINTER RYE	651.17	5.1			
								200		200		LB	FERTILIZER	651.18	12.9			
								0.8		0.8		TON	AGRICULTURAL LIMESTONE	651.20	0.05			
								0.8		0.8		TON	HAY MULCH	651.25	0.05			
								90		90		CY	TOPSOIL	651.35	4.8			
							1130			1130		SY	GRUBBING MATERIAL	651.40	7.9			
								1		1		LS	EPSC PLAN	652.10	-			
								150		150		HR	MONITORING EPSC PLAN	652.20	EST			
								1		1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-			
								800		800		SY	TEMPORARY EROSION MATTING	653.20	26			
								300		300		SY	PERMANENT EROSION MATTING	653.21	24			
								40		40		CY	VEHICLE TRACKING PAD	653.35	3			
								700		700		LF	BARRIER FENCE	653.50	48			
								650		650		LF	PROJECT DEMARCATION FENCE	653.55	22			
							24			24		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	-			
							1			1		EACH	REMOVING SIGNS	675.50	-			
							1			1		EACH	ERECTING SALVAGED SIGNS	675.60	-			
							1			1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404qty.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
QUANTITY SHEET 2

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 10 OF 45

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL AND DRAINAGE SHEET

STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		PIPE		ALLOWABLE OPTIONS				PIPE ELBOW	ES	CB	MH	DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	MANHOLE COVER	CRM	TRENCH EXCAVATION		GRAN BKFILL STRUCT	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
			NO. DEG.	INLET	OUTLET	D IN	L FT	RCP CLASS	CAAP TH	CPEP SL	PCCSP TH	NO. DEG.	EA	EA	EA	FT	CY	LBS	TYPE	EA	CY	EARTH CY	ROCK CY	CY	SY	CY	TYPE	LT EA	RT EA	
EXISTING DRAINAGE																														* REFER TO ROADWAY LAYOUT SHEETS FOR REMOVAL OR ABANDONMENT REQUIREMENT FOR EXISTING PIPES. QUANTITY OF PIPE REMOVAL IS INCLUDED IN TRENCH EXCAVATION WHERE APPLICABLE
VT ROUTE 9																														
1 19+47.7	19+47.5	LT-RT		DI	PIPE																									RETAIN EXISTING PIPE TO PROPOSED ELBOW
2 21+97.9	21+97.9	LT-RT		DI	PIPE																									RETAIN EXISTING PIPE TO PROPOSED ELBOW
3 24+47.9	24+47.9	LT-RT		DI	PIPE																									RETAIN EXISTING PIPE TO 10-FEET FROM DOWNSTREAM END
4 28+13.3	27+31.1	LT-RT		PIPE	PIPE																									RETAIN EXISTING PIPE TO 10-FEET FROM DOWNSTREAM END
PROPOSED DRAINAGE																														
VT ROUTE 9																														
1 19+47.5	19+47.5	RT-RT		DI	ES	18	54			X		22.5/22.5	1									49.0			40	1.9	TYPE I		1	FIELD CUT AS REQUIRED TO ACCEPT NEW PIPE ELBOW, SEE 1 1
2 21+97.9	21+97.9	RT-RT		DI	ES	18	46				0.079	11.25/22.5	1									38.0			35	1.3	TYPE I		1	FIELD CUT AS REQUIRED TO ACCEPT NEW PIPE ELBOW, SEE 2 2
3 24+47.9	24+47.9	RT-RT		DI	PIPE	18	10				0.064																		1	FIELD CUT AS REQUIRED TO ACCEPT NEW PIPE, SEE 3
4 27+35.7	27+31.1	RT-RT		PIPE	PIPE	18	10				0.064																		1	FIELD CUT AS REQUIRED TO ACCEPT NEW PIPE, SEE 4
TOTALS						**18** **18** **18**	**54** **46** **20**	**CPEP(SL)** **PCCSP(0.079)** **PCCSP(0.064)**				**2** **2**	**1** **1**									**87.0**			**75.0**	**3.2**			**4**	

STEEL BEAM GUARDRAIL, GALVANIZED

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	END TREATMENT LEFT FT	END TREATMENT RIGHT FT
VT ROUTE 9					
23+75.0	27+25.0		350		
18+00.0	19+25.0		125		
TOTAL REMOVE AND RESET			**475**		
VT ROUTE 9					
DAMAGED RAIL SECTIONS			100	AS DIRECTED	
TOTAL NEW GUARDRAIL			**100**	BY ENGINEER	
TOTALS					

CURB

TOTALS					

UNDERDRAIN

BEGIN STATION	END STATION	POSITION	TYPE	DIA IN.	LENGTH FT	TRENCH EARTH CY.	TRENCH ROCK CY.	GRAN BKFILL CF	FB EA	MRK. POST EA
TOTALS										

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404itemdet.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
ITEM DETAIL AND DRAINAGE SHEET

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 11 OF 45

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

STATION	DIST FT.	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.	AREA S.F.	VOLUME C.Y.
VT ROUTE 9									
20+00		0				0			
	25		0				0		
20+25		0				0			
	50		0				0		
20+75		0				0			
	25		0				0		
21+00		0				0			
	25		0				0		
21+25		0				0			
	25		0				0		
21+50		0				0			
	25		0				0		
21+75		0				0			
	25		0				0	CUT	1628
22+00		0				0		ROCK	0
	25		0				0	R.FAC	.495
22+25		0				0		FILL	21
	25		0				0	F.FAC	1.15
22+50		0				0		EX. C	1603
	25		0				0		
22+75		0				0			
	25		65				0		
23+00		140				0			
	25		125				0		
23+25		130				0			
	25		109				0		
23+50		105				0			
	25		216				1		
23+75		362				3			
	25		266				3		
24+00		212				3			
	25		200				5		
24+25		220				8			
	25		201				6		
24+50		215				5			
	25		209				4		
24+75		236				3			
	25		237				2		
25+00		275				1			
	25		250				1		
25+25		264				1			
	25		212				4		
25+50		193				7			
	25		191				25		
25+75		220				48			
	25		172				62		
26+00		152				86			
	25		125				85		
26+25		117				98		CUT	1753
	25		104				95	ROCK	0
26+50		107				107		R.FAC	.495
	25		152				70	FILL	363
26+75		221				45		F.FAC	1.15
	25		164				21	EX. C	1336
27+00		134				0			
	25		144				0		
27+25		176				0			
	25		160				0		
27+50		170				0			
	25		79				0		
27+75		0				0			
	25		0				0		
28+00		0				0			
	25		0				0		
28+25		0				0			
	25		0				0		
28+50		0				0			
	25		0				0		
28+75		0				0			
	25		0				0		
29+00		0				0			

STATION	DIST FT.	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.	AREA S.F.	VOLUME C.Y.
ACCESS ROAD									
80+00		0				0			
	21		11				0		
80+21		28				0			
	29		15				56		
80+50		0				105			
	50		0				125		
81+00		0				30			
	50		0				49		
81+50		0				24			
	50		1				39		
82+00		1				19			
	50		5				34		
82+50		4				18			
	50		4				48		
83+00		1				34			
	50		0				72		
83+50		0				44			
	50		11				57		
84+00		12				18		CUT	139
	50		45				20	ROCK	0
84+50		36				4		R.FAC	.495
	38		47				3	FILL	503
84+88		30				0		F.FAC	1.15
								EX. C	-439

STATION	DIST FT.	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.	AREA S.F.	VOLUME C.Y.

SUMMARY AND BALANCES

STATION TO STATION		TOT EXC. EARTH & ROCK C.Y.	ROCK EXCAV C.Y.	EMBANK C.Y.	EXCESSES CUT	EXCESSES FILL	ACUMULATIVE EXCESSES CUT	ACUMULATIVE EXCESSES FILL
SEARSBURG NH 010-1(48)								
20+00	29+00	3381		442	2939		2939	
ACCESS ROAD		139		578		439	2500	
5% CONTINGENCY			176		176		2676	
TOTAL		3520	176	1020			2676	

REMARKS

EARTH AND ROCK EXCAVATION		3696
SOLID ROCK EXCAVATION		176
EARTH EXCAVATION		3520
BACKFILL FOR TRENCH EXCAVATION (CB AND PIPES)		100
PLANIMETERED FILL		887
LESS FACTORED SOLID ROCK		0
LESS DISPLACEMENT OF ANY LARGE STRUCTURES		0
NET PLANIMETERED FILL		887
FACTOR		1.15
PLANIMETERED FILL INCLUDING FACTOR		1020
MATERIALS AVAILABLE FOR FILLS		3620
EARTH EXCAVATION		3520
CHANNEL EXCAVATION		
UNDERDRAIN EXCAVATION		
STRUCTURE EXCAVATION		
TRENCH EXCAVATION FOR DRAINAGE		100
TRENCH EXCAVATION OF ROCK		
TOTAL MATERIAL AVAILABLE FOR FILL		3620
TOTAL FILL INCLUDING FACTOR		1120
TOTAL MATERIAL FOR FILL		3620
BORROW		578
EXCESS EXCAVATION		3078

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404ewqty.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
EARTHWORKS SHEET

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 12 OF 45

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	ROW LAYOUT NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	T / P	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	TRANSCANADA HYDRO NORTHEAST INC.,	1-2	18+34 RT	23+00 RT			CONST	T	0.11 A						INCL. BF & EC; 4,890 SF±
	joined by VERMONT LAND TRUST, INC.		18+56 RT	20+16 RT			SLOPE	T	1,050 SF						
			18+75 RT	23+00 RT			ACCESS	P	0.24 A						25.00' WIDE ACCESS BY VEHICLES AND PEDESTRIANS FOR
															MAINTENANCE OF RIVER BANK
			19+12 RT	19+42 RT			CONST	T	135 SF						INCL. PDF
			19+47.5 RT				CUL, DIT & DR	P							
			19+56 RT	21+67 RT			CONST	T	710 SF						INCL. PDF
			20+50 RT	22+01 RT			SLOPE	T	360 SF						
			21+97.9 RT				CUL, DIT & DR	P							
			22+43 RT	23+00 RT			SLOPE	T	190 SF						
			22+46 RT	23+64 RT			CONST	T	900 SF						INCL. PDF
			22+90 RT	27+71 RT			INSTALL	T	0.12 A						FILTER CURTAIN; 5,040 SF±
			23+00 RT	27+39 RT			SLOPE	P	0.28 A						INCL. STONE FILL; 12,260 SF±

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE
1	3, 4	PARCEL 1, TRANSCANADA - MINOR	12/13/13
		CHANGES TO TEMPORARY SLOPE AND	
		CONSTRUCTION EASEMENTS.	
		COMPL. BY: MT CO #9852 APPR. BY: RC	

APPROVED: RYAN CLOUTIER DATE: 10-15-13
CHIEF, PLANS & TITLES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404rowbdr.dgn
PROJECT LEADER: P. LIBBY
DESIGNED BY: R. WHITE
R.O.W. DETAIL SHEET

PLOT DATE: 6/16/2014
DRAWN BY: M. TROTTIER
CHECKED BY: E. PIERCE
SHEET 13 OF 45

STONE FILL, TYPE I
81+16.3 RT - 81+19.2 RT (LENGTH=17.5' X WIDTH=3')
83+70.6 RT - 83+73.4 RT (LENGTH=11' X WIDTH=3')

REMOVE AND RESET GUARDRAIL
18+00.0 RT - 19+25.0 RT

• NOTE: GUARDRAIL SHALL BE REMOVED AND STOCKPILED DURING CONSTRUCTION AND USE OF ACCESS ROAD. ONCE ALL WORK IS COMPLETED THE CONTRACTOR SHALL RESET THE GUARDRAIL.

WHEN ACCESS IS NEEDED TO PROVIDE MAINTENANCE IN THE FUTURE THE GUARDRAIL AND POSTS CAN BE TEMPORARILY REMOVED AND RESET TO PROVIDE ACCESS TO THE ACCESS ROAD.

EXISTING DRAINAGE

[1] 19+47.7 LT - 19+47.5 RT
EXISTING PIPE - REMOVE DOWNSTREAM 10.5'

[2] 21+97.9 LT - 21+97.9 RT
EXISTING PIPE - REMOVE DOWNSTREAM 23.0'

NEW DRAINAGE

(1) 19+47.5 RT ~ 19+47.5 RT
NEW 18" X 54' PIPE CPEP (SL) W/ CPEPES
W/2 PIPE ELBOWS (SEE ACCESS ROAD SECTIONS)

(2) 21+97.9 RT ~ 21+97.9 RT
NEW 18" X 46' PCCSP W/ CSPES
W/2 PIPE ELBOWS (SEE ACCESS ROAD SECTIONS)

VT STATE PLANE GRID N

VT ROUTE 9
CURVE # 1
DELTA = 11°43'31" LT
D = 0°57'29"
R = 5980.51'
T = 614.08'
L = 1223.88'
E = 31.44'
BANK = 0.020 @ 50 MPH

BEGIN PROJECT SEARSBURG NH 010-1(48)
STA. 18+00.00

TO
N 141021.92
E 1519784.84
PROJ. TQF 010-1(9)
715+00, 25' RT

PC STA 18+00.0

POC STA. 18+67.60=
STA. 80+00.00

401.00'
S20°14'32"E

ACCESS ROAD
CURVE #1
DELTA = 69°22'10" LT
D = 79°42'31"
R = 71.88'
T = 49.74'
L = 87.03'
E = 15.53'

71.37'
S38°03'49"E

N 141398.15
E 1519646.10
20+90.14, 31.60' LT
=PROJ. TQF 010-1(9)
711+00, 30' RT

N 141454.35
E 1519602.10
21+59.24, 51.21' LT
=PROJ. TQF 010-1(9)
710+30, 50' RT

R=5679.54'
[L=634.22']
CH= S25°20'05"E
[633.89']

VT ROUTE 9 EAST
TO WILMINGTON

VT ROUTE 9

STATE OF VERMONT
PROJ. TQF 010-1(9)
(1977)

EDGE OF ROAD
PAVED
GUARDRAIL
TREELINE
COMB. #350
COMB. #559
COMB. #558/70
COMB. #558.5
COMB. ABANDONED
GRASS
GUY
AER E&T
CONST(T)
SR(T)
PDF
BF
CZ

18+00
19+00
20+00
21+00
22+00

88.14'
S18°18'05"E

PC STA 80+16.33

POC STA 80+21.52
BEGIN ACCESS ROAD

S 18°59'59.48" W

R=5779.54'
[L=558.04']
CH= S21°04'03"E
[557.83']

81+00
82+00
83+00

VEHICLE TRACKING PAD

N 15°45'40.04" W

ACCESS(P)
25'00"

EXISTING SLOPE EASEMENT
PROJ. TQF 010-1(9)

GRAVEL ACCESS ROAD

ACCESS ROAD
CURVE # 2
DELTA = 17°54'01"
D = 25°45'19"
R = 222.46'
T = 35.04'
L = 69.50'
E = 2.74'

MATCHLINE STA. 22+50
LAYOUT SHEET 2

TO
N 141045.47
E 1519856.05
PROJ. TQF 010-1(9)
715+00, 50' LT

ROW PC
N 141129.16
E 1519828.37
17+74.81, 46.17' RT
=PROJ. TQF 010-1(9)
714+11.86, 50' LT

P I STA 80+66.08

ADJUST FILL SLOPE AS REQUIRED AROUND GUY ANCHOR

CUL.DIT &DR(P)

P T STA 81+03.36

ADJUST FILL SLOPE AS REQUIRED AROUND GUY ANCHOR AND POLE

P C STA 83+62.58

P I STA 83+97.62

DEERFIELD RIVER
FLOW

BEGIN ROW PROJECT
STA. 18+34, 47' RT

(1)

TRANSCANADA HYDRO NORTHEAST INC.
joined by
VERMONT LAND TRUST, INC.

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

0 20 40
SCALE IN FEET

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404rowbdr.dgn
PROJECT LEADER: P. LIBBY
DESIGNED BY: GREEN INTL. AFFIL.
R.O.W. PLAN SHEET 1

PLOT DATE: 6/16/2014
DRAWN BY: E. PIERCE
CHECKED BY: E. PIERCE
SHEET 14 OF 45

SUBBASE OF DENSE GRADED CRUSHED STONE

VT ROUTE 9 23+00.0 RT - VT ROUTE 9 27+60.0 RT

AGGREGATE SHOULDERS, IN PLACE

VT ROUTE 9 23+75.0 RT - VT ROUTE 9 27+20.0 RT

STONE FILL, TYPE II

VT ROUTE 9 23+75.0 RT - VT ROUTE 9 27+00.0 RT

STONE FILL, TYPE IV

VT ROUTE 9 23+00.0 RT - VT ROUTE 9 27+60.0 RT

RELOCATE MAILBOX, SINGLE SUPPORT

VT ROUTE 9 26+43.0 X2 (MOVE TO TEMPORARY LOCATION THEN RELOCATE BACK TO PERMANENT LOCATION)

REMOVE AND RESET GUARDRAIL

VT ROUTE 9 23+75.0 RT - VT ROUTE 9 27+25.0 RT

VT ROUTE 9
CURVE # 1
DELTA = 11°43'31" LT
D = 0°57'29"
R = 5980.51'
T = 614.08'
L = 1223.88'
E = 31.44'
BANK = 0.020 @ 50 MPH

GRUBBING MATERIAL

VT ROUTE 9 23+75.0 RT - VT ROUTE 9 27+00.0 RT

REMOVING SIGNS

VT ROUTE 9 25+22.0 RT

ERECTING SALVAGED SIGNS

VT ROUTE 9 25+22.0 RT

EXISTING DRAINAGE

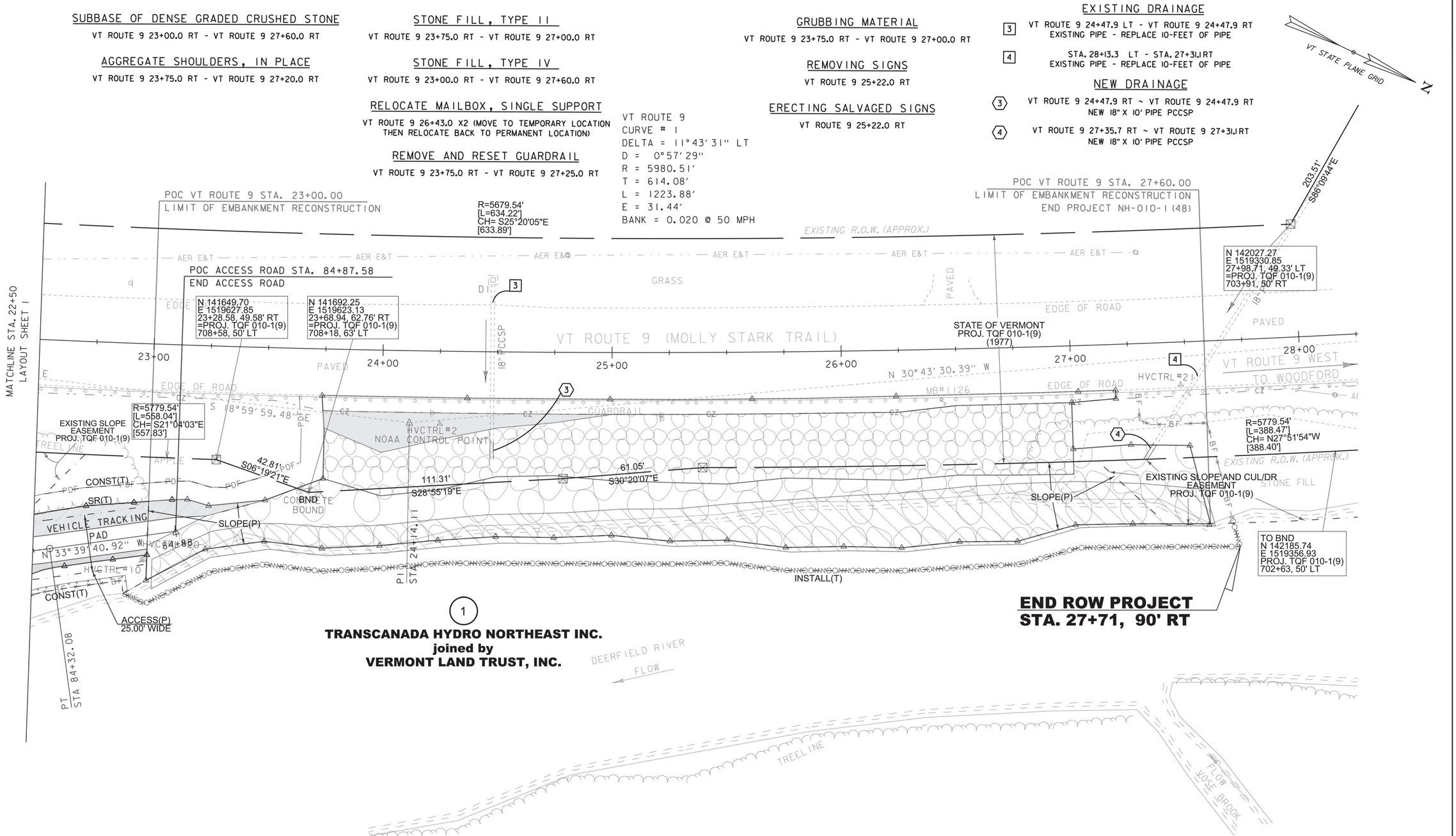
[3] VT ROUTE 9 24+47.9 LT - VT ROUTE 9 24+47.9 RT
EXISTING PIPE - REPLACE 10-FEET OF PIPE

[4] STA. 28+13.3 LT - STA. 27+31.1RT
EXISTING PIPE - REPLACE 10-FEET OF PIPE

NEW DRAINAGE

<3> VT ROUTE 9 24+47.9 RT ~ VT ROUTE 9 24+47.9 RT
NEW 18" X 10' PIPE PCCSP

<4> VT ROUTE 9 27+35.7 RT ~ VT ROUTE 9 27+31.1RT
NEW 18" X 10' PIPE PCCSP



1

TRANSCANADA HYDRO NORTHEAST INC.
joined by
VERMONT LAND TRUST, INC.

END ROW PROJECT
STA. 27+71, 90' RT

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

0 20 40
SCALE IN FEET

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404rowbdr.dgn
PROJECT LEADER: P. LIBBY
DESIGNED BY: GREEN INTL. AFFIL.
R.O.W. PLAN SHEET 2

PLOT DATE: 6/16/2014
DRAWN BY: E. PIERCE
CHECKED BY: E. PIERCE
SHEET 15 OF 45

SUBBASE OF DENSE GRADED CRUSHED STONE
18+31.0 RT - 22+50.0 RT

STONE FILL, TYPE I
81+16.3 RT - 81+19.2 RT (LENGTH=17.5' X WIDTH=3')
83+70.6 RT - 83+73.4 RT (LENGTH=11' X WIDTH=3')

REMOVE AND RESET GUARDRAIL
18+00.0 RT - 19+25.0 RT

• NOTE: GUARDRAIL SHALL BE REMOVED AND STOCKPILED DURING CONSTRUCTION AND USE OF ACCESS ROAD. ONCE ALL WORK IS COMPLETED THE GUARDRAIL SHALL BE RESET.

EXISTING DRAINAGE

[1] 19+47.7 LT - 19+47.5 RT
EXISTING PIPE - REMOVE DOWNSTREAM 10.5'

[2] 21+97.9 LT - 21+97.9 RT
EXISTING PIPE - REMOVE DOWNSTREAM 23.0'

NEW DRAINAGE

(1) 19+47.5 RT ~ 19+47.5 RT
NEW 18" X 54' PIPE CPEP (SL) W/ CPEPES
W/2 PIPE ELBOWS (SEE ACCESS ROAD SECTIONS)

(2) 21+97.9 RT ~ 21+97.9 RT
NEW 18" X 46' PCCSP W/ CSPES
W/2 PIPE ELBOWS (SEE ACCESS ROAD SECTIONS)

VT ROUTE 9
CURVE # 1
DELTA = 11°43'31" LT
D = 0°57'29"
R = 5980.51'
T = 614.08'
L = 1223.88'
E = 31.44'
BANK = 0.020 @ 50 MPH

VT STATE PLANE GRID N

BEGIN PROJECT SEARSBURG NH 010-1(48)
STA. 18+00.00 (MM 3.606±)

PC STA 18+00.0

POC STA. 18+67.60=
STA. 80+00.00

ACCESS ROAD
CURVE #1
DELTA = 69°22'10" LT
D = 79°42'31"
R = 71.88'
T = 49.74'
L = 87.03'
E = 15.53'

VT ROUTE 9 EAST
TO WILMINGTON

EXISTING R.O.W. (APPROX.)

18+00 80+00 19+00 20+00 21+00 22+00

VT ROUTE 9 PAVED

S 18°59'59.48"

HVCTRL #26
GUARDRAIL
EDGE OF ROAD
CZ
TREELINE
HVCTRL #25
HVCTRL #27
COMB. #558/70
COMB. #558.5
COMB. #559
COMB. #350/
AER E&T
GUY
GRASS
COMB. ABANDONED

PC STA 80+16.33
POC STA 80+21.52
BEGIN ACCESS ROAD

PI STA 80+66.08

PT STA 81+03.36

ADJUST FILL SLOPE AS REQUIRED
AROUND GUY ANCHOR

ACCESS ROAD
N 15°45'40.04" W
GRAVEL ACCESS ROAD

ADJUST FILL SLOPE AS REQUIRED
AROUND GUY ANCHOR AND POLE

ACCESS ROAD
CURVE # 2
DELTA = 17°54'01"
D = 25°45'19"
R = 222.46'
T = 35.04'
L = 69.50'
E = 2.74'

18" PCCSP

PC STA 83+62.58

PI STA 83+97.62

MATCHLINE STA. 22+50
LAYOUT SHEET 2

DEERFIELD RIVER
FLOW

WORK DONE ESSENTIALLY
AS SHOWN

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404bdr.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
PLAN SHEET 1

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 16 OF 45

SUBBASE OF DENSE GRADED CRUSHED STONE

23+00.0 RT - 27+60.0 RT
22+50.0 RT - 23+34.0 RT

AGGREGATE SHOULDERS, IN PLACE

~~23+75.0 RT - 27+20.0 RT~~
NOT USED

STONE FILL, TYPE II

23+75.0 RT - 27+00.0 RT

STONE FILL, TYPE IV

23+00.0 RT - ~~27+60.0 RT~~ 28+50 RT

RELOCATE MAILBOX, SINGLE SUPPORT

26+43.0 X2 (MOVE TO TEMPORARY LOCATION
THEN RELOCATE BACK TO PERMANENT LOCATION)

REMOVE AND RESET GUARDRAIL

~~23+75.0 RT - 27+25.0 RT~~
24+00 RT - 27+00 RT

VT ROUTE 9
CURVE # 1
DELTA = 11°43'31" LT
D = 0°57'29"
R = 5980.51'
T = 614.08'
L = 1223.88'
E = 31.44'
BANK = 0.020 @ 50 MPH

GRUBBING MATERIAL

23+~~75.0~~ RT - ~~27+00.0~~ RT
00 28+50

REMOVING SIGNS

25+22.0 RT

ERECTING SALVAGED SIGNS

25+22.0 RT

EXISTING DRAINAGE

[3] 24+47.9 LT - 24+47.9 RT
EXISTING PIPE - REPLACE 10-FEET OF PIPE

[4] 28+13.3 LT - 27+31.1RT
EXISTING PIPE - REPLACE 10-FEET OF PIPE

NEW DRAINAGE

(3) 24+47.9 RT ~ 24+47.9 RT
NEW 18" X 10' PIPE PCCSP

(4) 27+35.7 RT ~ 27+31.1RT
NEW 18" X 10' PIPE PCCSP

VT STATE PLANE GRID
N

MATCHLINE STA. 22+50
LAYOUT SHEET 1

POC STA. 23+00.00
BEGIN EMBANKMENT RECONSTRUCTION

POC STA. 84+87.58
END ACCESS ROAD

END PROJECT SEARSBURG NH-010-1(48)
POC STA. ~~27+60.00 (MM 3.424)~~ 28+50(MM 3.407)
END EMBANKMENT RECONSTRUCTION

EXISTING R.O.W. (APPROX.)

AER E&T

GRASS

PAVED

EDGE OF ROAD

DI

18" PCCSP

VT ROUTE 9

23+00 24+00 25+00 26+00 27+00 28+00

VT ROUTE 9 WEST
TO WOODFORD

N 30°43'30.39" W

S 18°59'59.48" E

CZ

GUARDRAIL

MB#1-26

HVCTRL#2

NOAA CONTROL POINT

HVCTRL#21

TREELINE

APPLE

ACCESS ROAD

CONCRETE BOUND

N 33°39'40.92" W 84.88

HVCTRL#10

PI STA 24+14.1

PT STA 84+32.08

STONE FILL

DEERFIELD RIVER
FLOW

TREELINE

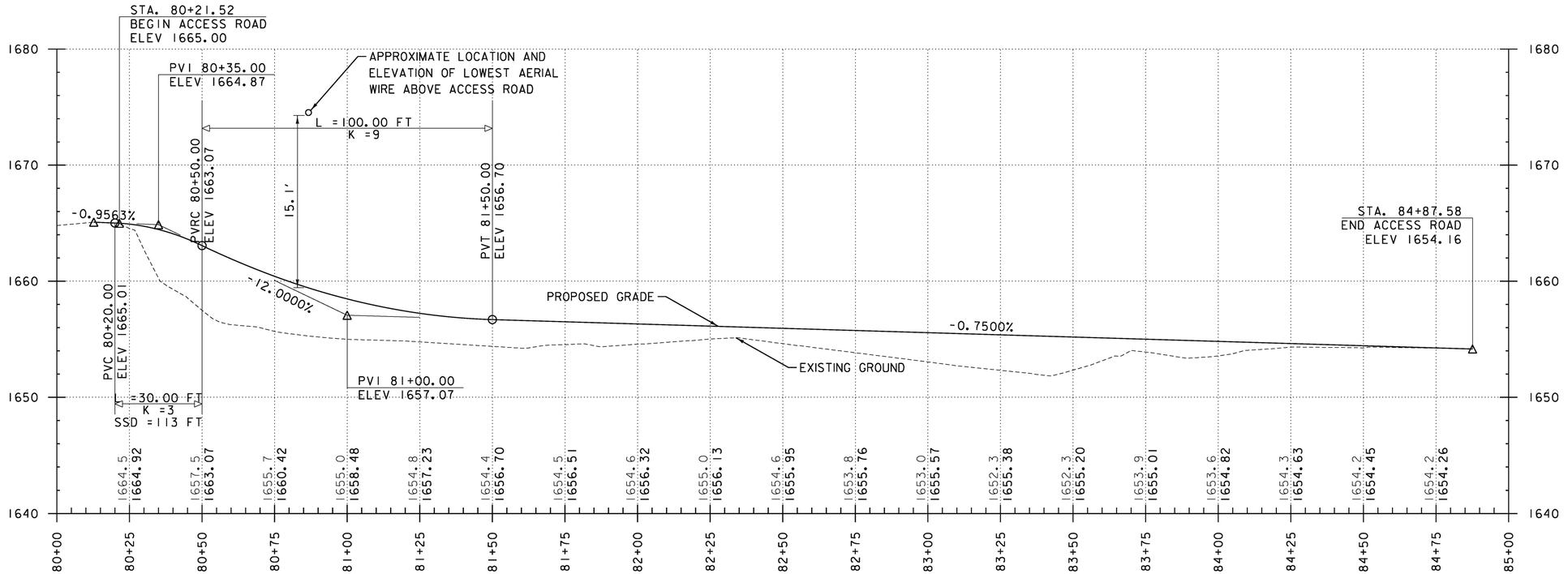
FLOW
VOSE BROOK

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: NH 010-1(48)	
FILE NAME: z12B404bdr.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: M. BRADLEY
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
PLAN SHEET 2	SHEET 17 OF 45

ACCESS ROAD



THE GRADES SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ELEVATIONS ALONG THE NEW ALIGNMENT. THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

NOTES:

1. STATIONING & ELEVATION ARE IN FEET
2. PROFILE GRADES ARE TO FINAL TOPSOIL SURFACE. SUBTRACT 2" (0.17') FOR TOP OF SUBBASE ELEVATIONS

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
ACCESS ROAD PROFILE

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 18 OF 45

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF APPROXIMATELY 460-FEET OF RIVER EMBANKMENT AND RECONSTRUCTION OF APPROXIMATELY 475-FEET OF ACCESS ROAD. THE EMBANKMENT WILL BE RECONSTRUCTED WITH SUBBASE OF DENSE GRADED CRUSHED STONE AND STONE FILL ARMORING. THE PROJECT IS LOCATED IN THE TOWN OF SEARSBURG, ALONG VT ROUTE 9, APPROXIMATELY AT MILE MARKER (MM) 3.44.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.21 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS AN EMBANKMENT THAT IS NEARLY BARE EXCEPT FOR THE TOP OF SLOPE AND TEMPORARY ACCESS ROAD. VT ROUTE 9 RUNS ADJACENT TO THE CONSTRUCTION AREA. THERE ARE TWO RESIDENCES ON THE OPPOSITE SIDE OF VT ROUTE 9.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE UPPER DEERFIELD RIVER AND VOSE BROOK ARE THE ONLY WATER SOURCES ON THE PROJECT SITE. THE STREAM BED CONSISTS OF GRAVEL, COBBLES AND BOULDERS. THERE ARE A NUMBER OF DROP INLETS THAT DISCHARGE VIA CROSS CULVERTS IN AND ADJACENT TO THE CONSTRUCTION SITE. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT WILL RECEIVE RUNOFF FROM THE ADJACENT ROADWAY.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF SMALL TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY SLOPE RECONSTRUCTION AND TEMPORARY ACCESS ROAD RECONSTRUCTION. UPON PROJECT COMPLETION, THE TEMPORARY ACCESS ROAD WILL LEFT IN PLACE. DISTURBED VEGETATION IN AREAS THAT ARE NOT ARMORED WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA WAS OBTAINED FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF BENNINGTON, VERMONT. SOILS ON THE PROJECT SITE ARE HOUGHTONVILLE-MANADNOCK ASSOCIATION, HILLY, VERY STONY AND MUNDAL - HOUGHTONVILLE ASSOCIATION, ROLLING, VERY STONY "K FACTOR" RANGES FROM 0.24 TO 0.32. THE SOIL IS CONSIDERED WELL DRAINED.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS
CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: UPPER DEERFIELD RIVER
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES
SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

1.4.2 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE AND FILTER CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS. THIS PROJECT WILL ONLY UTILIZE WOVEN WIRE REINFORED SILT FENCE.

1.4.5 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE ROADWAY IS SUPERELEVATED AWAY FROM THE DISTURBED AREAS; THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS ARE NOT ANTICIPATED ON THIS PROJECT.

1.4.7 CONSTRUCT PERMANENT CONTROLS
PERMANENT STORMWATER TREATMENT DEVICES ARE NOT ANTICIPATED ON THIS PROJECT.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES
DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING COFFERDAM IS NOT ANTICIPATED.

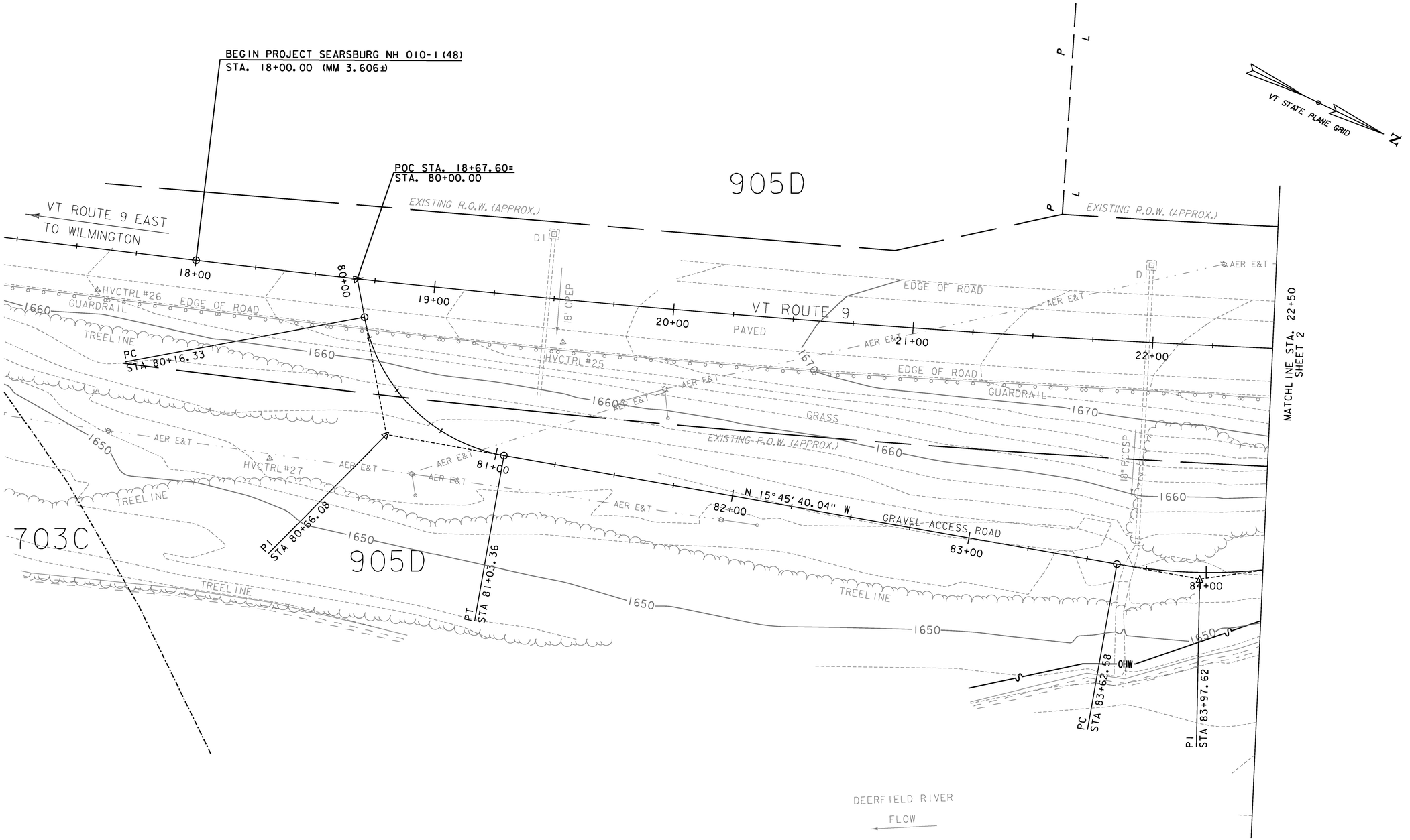
1.4.12 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.



LEGEND

- SOIL TYPE BOUNDARY
- 300 — 10' INTERVAL CONTOUR
- 2' INTERVAL CONTOUR
- EXIST. PROPERTY/ROW LINE
- LIMIT OF WORK

SOIL LEGEND

SOIL DESIGNATION	HYDROLOGIC SOIL GROUP CLASSIFICATION	SOIL ERODIBILITY COEFFICIENTS (K)
905D = HOUGHTONVILLE - MONADNOCK ASSOCIATION, HILLY, VERY STONY	B	0.24 - 0.32
703C = MUNDAL - HOUGHTONVILLE ASSOCIATION, ROLLING, VERY STONY	C	0.28 - 0.32

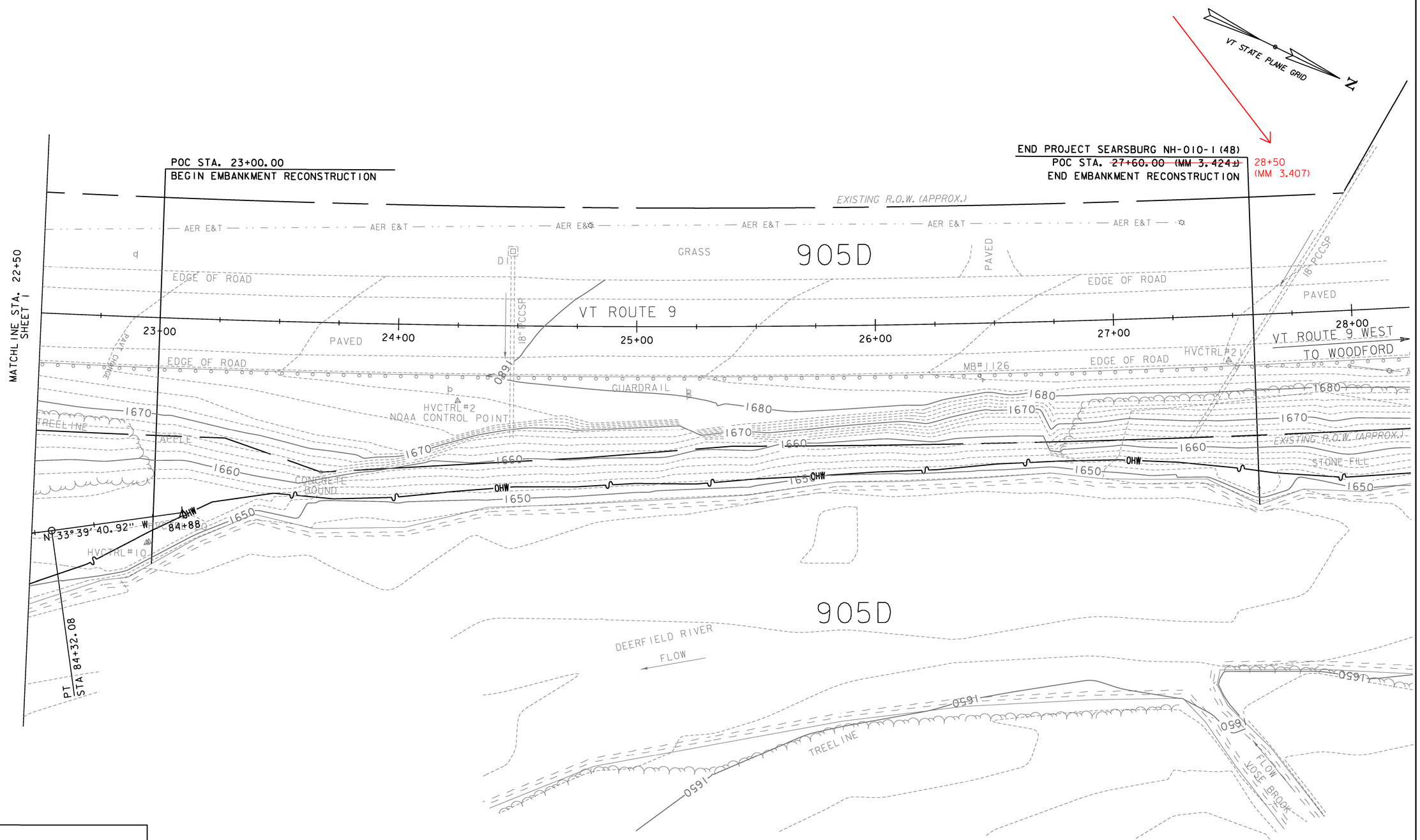
0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404ecbdr.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: A. ACHARYA
EPSC EXISTING CONDITIONS PLAN SHEET 1

PLOT DATE: 6/16/2014
DRAWN BY: A. ACHARYA
CHECKED BY: E. ATKINS
SHEET 20 OF 45



LEGEND

- SOIL TYPE BOUNDARY
- 300 — 10' INTERVAL CONTOUR
- 2' INTERVAL CONTOUR
- EXIST. PROPERTY/ROW LINE
- LIMIT OF WORK

SOIL LEGEND

SOIL DESIGNATION	HYDROLOGIC SOIL GROUP CLASSIFICATION	SOIL ERODIBILITY COEFFICIENTS (K)
905D = HOUGHTONVILLE - MONADNOCK ASSOCIATION, HILLY, VERY STONY	B	0.24 - 0.32

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: NH 010-1(48)	
FILE NAME: z12B404ecbdr.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: A. ACHARYA
DESIGNED BY: A. ACHARYA	CHECKED BY: E. ATKINS
EPSC EXISTING CONDITIONS PLAN SHEET 2	SHEET 21 OF 45

BEGIN PROJECT SEARSBURG NH 010-1(48)
STA. 18+00.00 (MM 3.606±)

POC STA. 18+67.60=
STA. 80+00.00

NOT USED
~~GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED~~
~~STA. 18+00 RT ~ 22+50 RT~~

SEED
18+09 RT ~ 22+50 RT
18+89 RT ~ 22+50 RT
18+31 RT ~ 22+50 RT (SEE NOTE 4)

SEED, WINTER RYE
18+09 RT ~ 22+50 RT
18+89 RT ~ 22+50 RT
18+31 RT ~ 22+50 RT (SEE NOTE 4)

FERTILIZER
18+09 RT ~ 22+50 RT
18+89 RT ~ 22+50 RT
18+31 RT ~ 22+50 RT (SEE NOTE 4)

AGRICULTURAL LIMESTONE
18+09 RT ~ 22+50 RT
18+89 RT ~ 22+50 RT
18+31 RT ~ 22+50 RT (SEE NOTE 4)

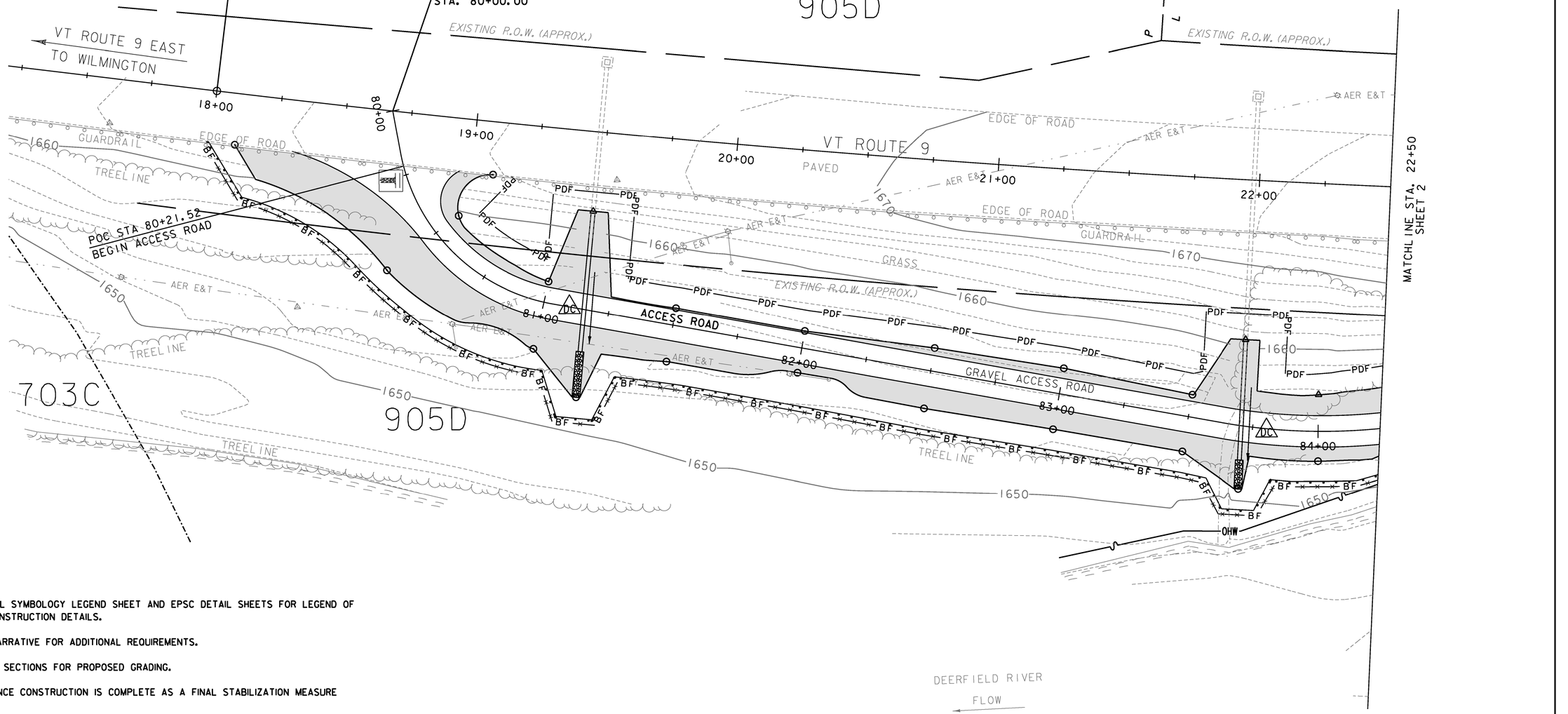
HAY MULCH
18+09 RT ~ 22+50 RT
18+89 RT ~ 22+50 RT
18+31 RT ~ 22+50 RT (SEE NOTE 4)

TEMPORARY EROSION MATTING
~~18+09 RT ~ 22+50 RT~~
~~18+89 RT ~ 22+50 RT~~

PERMANENT EROSION MATTING
~~18+89 RT ~ 22+50 RT~~ NOT USED

BARRIER FENCE
18+00 RT ~ 22+50 RT

PROJECT DEMARCATION FENCE
19+16 RT ~ 22+50 RT



NOTES:
1. SEE CONVENTIONAL SYMBOLOGY LEGEND SHEET AND EPSC DETAIL SHEETS FOR LEGEND OF SYMBOLS AND CONSTRUCTION DETAILS.
2. SEE THE EPSC NARRATIVE FOR ADDITIONAL REQUIREMENTS.
3. REFER TO CROSS SECTIONS FOR PROPOSED GRADING.
4. TO BE PLACED ONCE CONSTRUCTION IS COMPLETE AS A FINAL STABILIZATION MEASURE

LEGEND

- SOIL TYPE BOUNDARY
- 300 — 10' INTERVAL CONTOUR
- 2' INTERVAL CONTOUR
- EXIST. PROPERTY/ROW LINE
- LIMIT OF WORK

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: NH 010-1(48)	
FILE NAME: z12B404ecbdr.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: A. ACHARYA
DESIGNED BY: A. ACHARYA	CHECKED BY: E. ATKINS
EPSC CONSTRUCTION PLAN SHEET 1	SHEET 22 OF 45

~~GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED~~
~~22+50 RT ~ 22+90 RT~~

~~GEOTEXTILE FOR FILTER CURTAIN~~
~~22+90 RT ~ 27+68 RT~~ NOT USED

SEED
23+25 RT ~ 24+75 RT
22+50 RT ~ 23+51RT
22+50 RT ~ 23+34 RT
22+50 RT ~ 23+00 RT (SEE NOTE 4)

SEED, WINTER RYE
23+25 RT ~ 24+75 RT
22+50 RT ~ 23+51RT
22+50 RT ~ 23+34 RT
22+50 RT ~ 23+00 RT (SEE NOTE 4)

FERTILIZER
23+25 RT ~ 24+75 RT
22+50 RT ~ 23+51RT
22+50 RT ~ 23+34 RT
22+50 RT ~ 23+00 RT (SEE NOTE 4)

AGRICULTURAL LIMESTONE
23+25 RT ~ 24+75 RT
22+50 RT ~ 23+51RT
22+50 RT ~ 23+34 RT
22+50 RT ~ 23+00 RT (SEE NOTE 4)

HAY MULCH
23+25 RT ~ 24+75 RT
22+50 RT ~ 23+51RT
22+50 RT ~ 23+34 RT
22+50 RT ~ 23+00 RT (SEE NOTE 4)

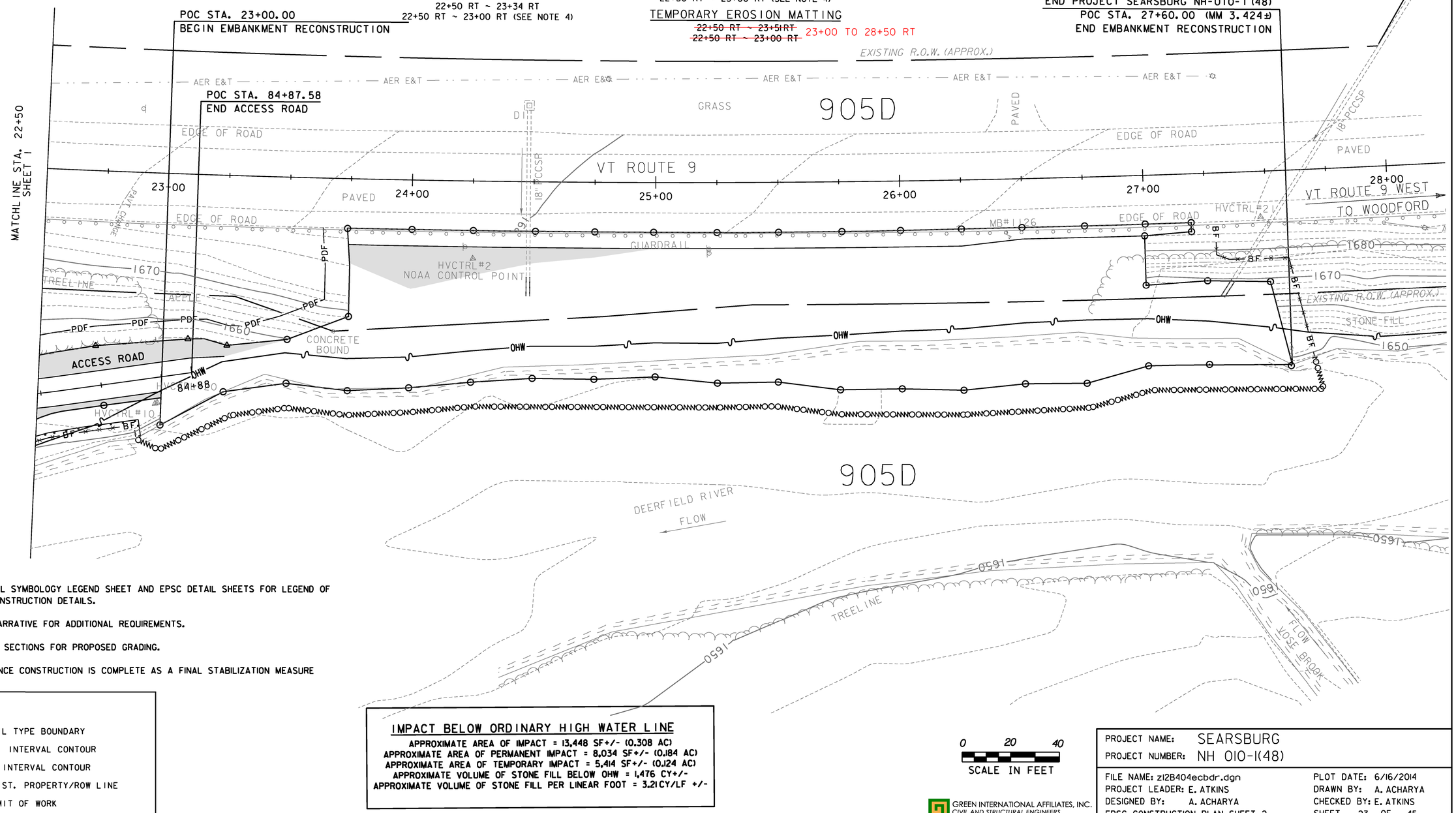
TEMPORARY EROSION MATTING
~~22+50 RT ~ 23+51RT~~
~~22+50 RT ~ 23+00 RT~~ 23+00 TO 28+50 RT

NOT USED
~~PERMANENT EROSION MATTING~~
~~22+50 RT ~ 23+51RT~~

BARRIER FENCE
27+29 RT ~ 27+68 RT
22+50 RT ~ 22+90 RT

PROJECT DEMARCATION FENCE
22+50 RT ~ 23+64 RT

VT STATE PLANE GRID
N



NOTES:
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3. REFER TO CROSS SECTIONS FOR PROPOSED GRADING.
4. TO BE PLACED ONCE CONSTRUCTION IS COMPLETE AS A FINAL STABILIZATION MEASURE

LEGEND

- SOIL TYPE BOUNDARY
- 300 — 10' INTERVAL CONTOUR
- 2' INTERVAL CONTOUR
- EXIST. PROPERTY/ROW LINE
- LIMIT OF WORK

IMPACT BELOW ORDINARY HIGH WATER LINE

APPROXIMATE AREA OF IMPACT = 13,448 SF+/- (0.308 AC)
APPROXIMATE AREA OF PERMANENT IMPACT = 8,034 SF+/- (0.184 AC)
APPROXIMATE AREA OF TEMPORARY IMPACT = 5,414 SF+/- (0.124 AC)
APPROXIMATE VOLUME OF STONE FILL BELOW OHW = 1,476 CY+/-
APPROXIMATE VOLUME OF STONE FILL PER LINEAR FOOT = 3.21CY/LF +/-

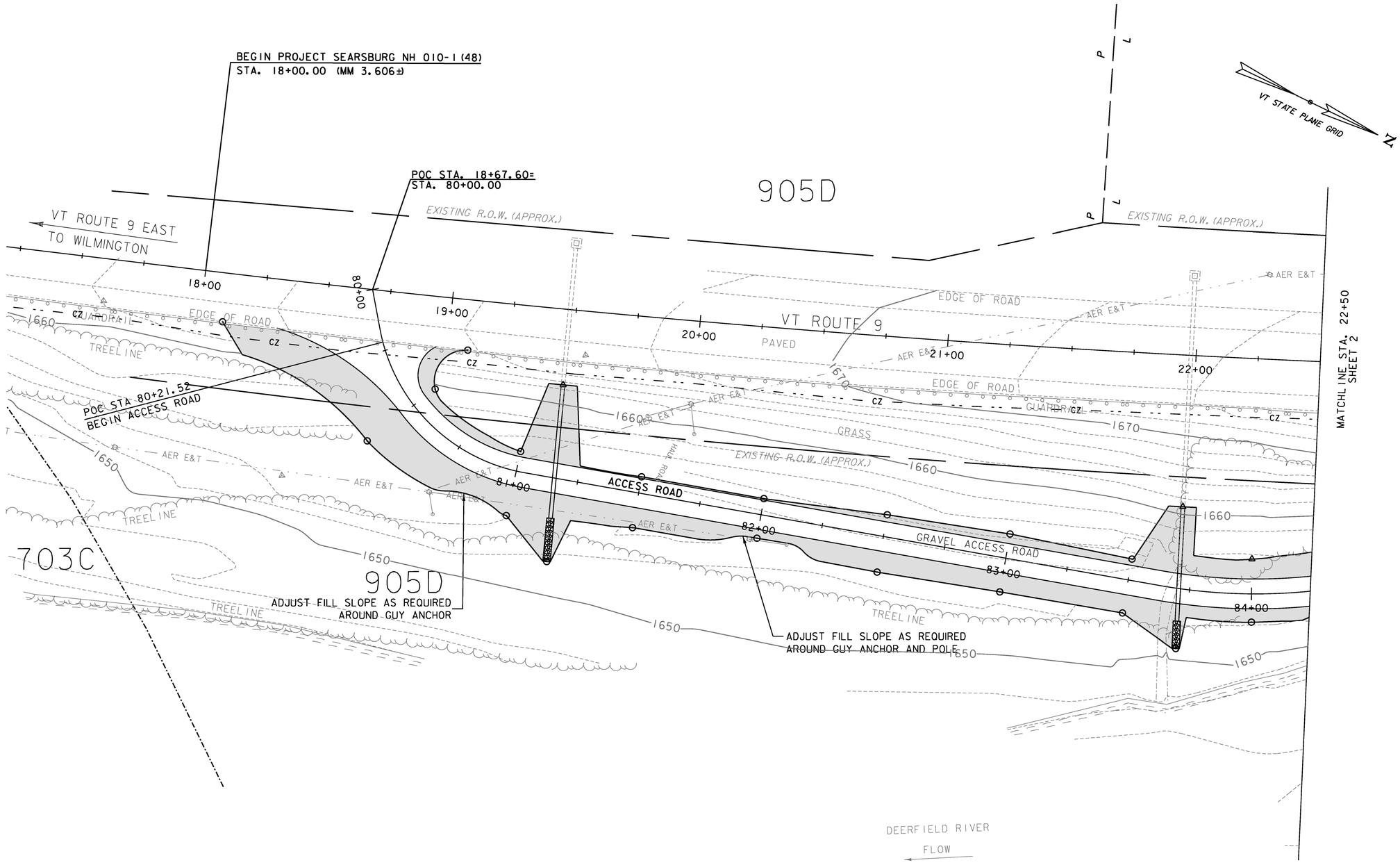
0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404ecbdr.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: A. ACHARYA
EPSC CONSTRUCTION PLAN SHEET 2

PLOT DATE: 6/16/2014
DRAWN BY: A. ACHARYA
CHECKED BY: E. ATKINS
SHEET 23 OF 45

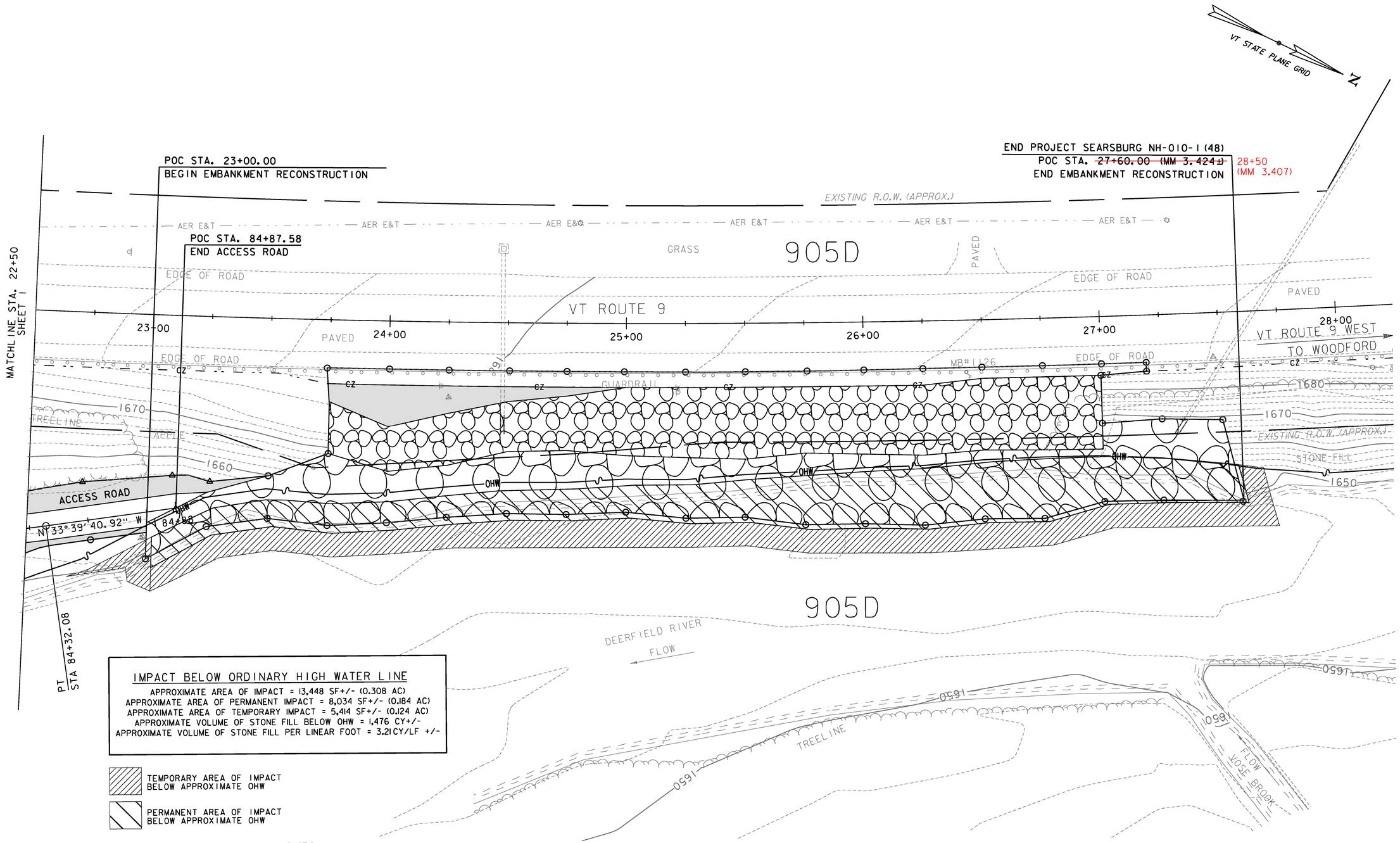


NOTE:
SEE CROSS SECTIONS FOR PROPOSED GRADING

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: NH 010-1(48)	
FILE NAME: z12B404ecbdr.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: A. ACHARYA
DESIGNED BY: A. ACHARYA	CHECKED BY: E. ATKINS
EPSC FINAL CONDITIONS PLAN SHEET 1	SHEET 24 OF 45



IMPACT BELOW ORDINARY HIGH WATER LINE

APPROXIMATE AREA OF IMPACT = 13,448 SF+/- (0.308 AC)
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APPROXIMATE AREA OF TEMPORARY IMPACT = 5,414 SF+/- (0.124 AC)
APPROXIMATE VOLUME OF STONE FILL BELOW OHW = 1,476 CY+/-
APPROXIMATE VOLUME OF STONE FILL PER LINEAR FOOT = 3.21CY/LF +/-

TEMPORARY AREA OF IMPACT BELOW APPROXIMATE OHW

PERMANENT AREA OF IMPACT BELOW APPROXIMATE OHW

NOTE:

SEE CROSS SECTIONS FOR PROPOSED GRADING

0 20 40
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

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PROJECT LEADER: E. ATKINS	DRAWN BY: A. ACHARYA
DESIGNED BY: A. ACHARYA	CHECKED BY: E. ATKINS
EPSC FINAL CONDITIONS PLAN SHEET 2	SHEET 25 OF 45

VAOT RURAL AREA MIX					
	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX					
	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	*FOLLOW*	PELLETIZED	*FOLLOW*
500 LBS/AC	*MANUFACTURER*	2 TONS/AC	*MANUFACTURER*

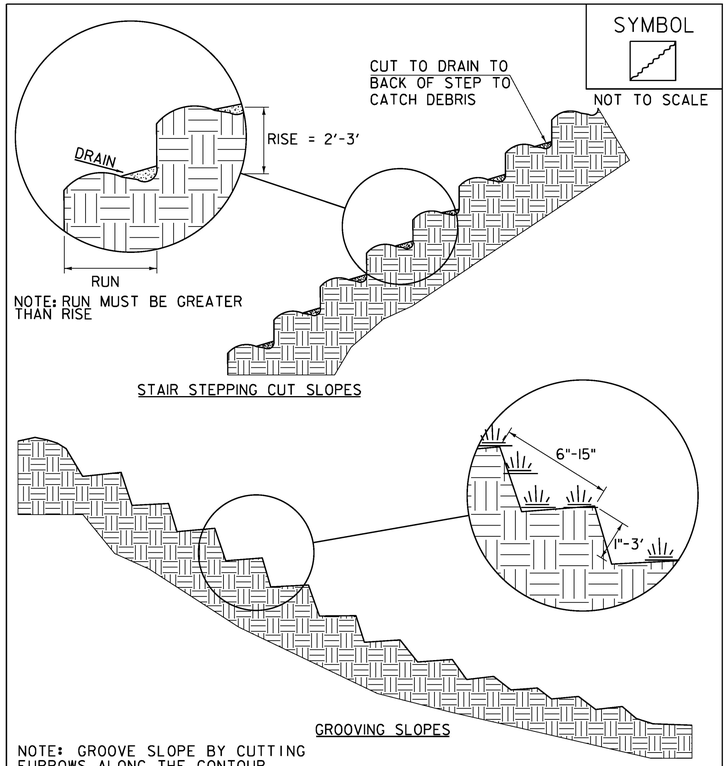
CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF



NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

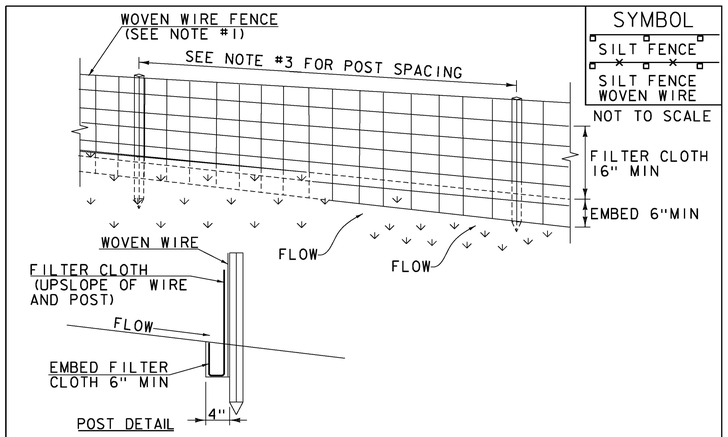
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SURFACE ROUGHENING

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR ~~GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR~~ GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515)

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

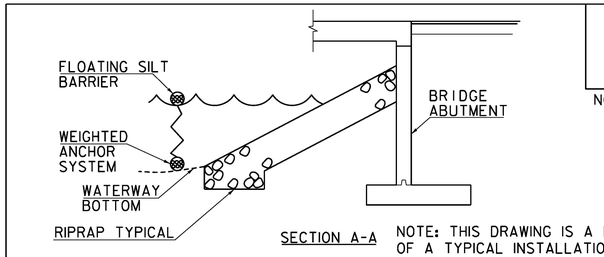
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404ecdet.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
EPSC DETAIL SHEET 1

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 26 OF 45

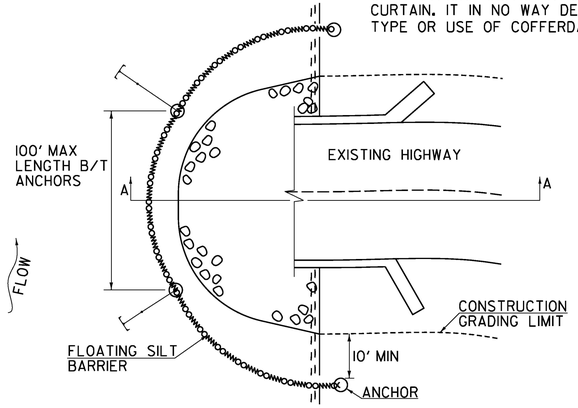
SYMBOL

NOT TO SCALE



SECTION A-A

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.



CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

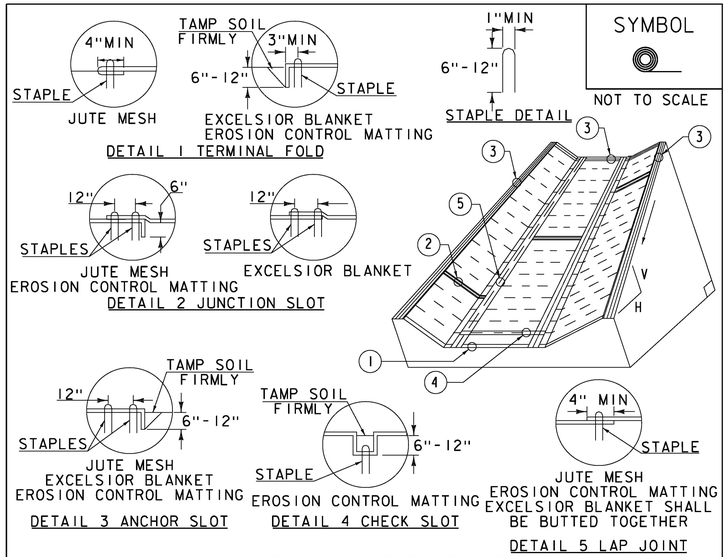
FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

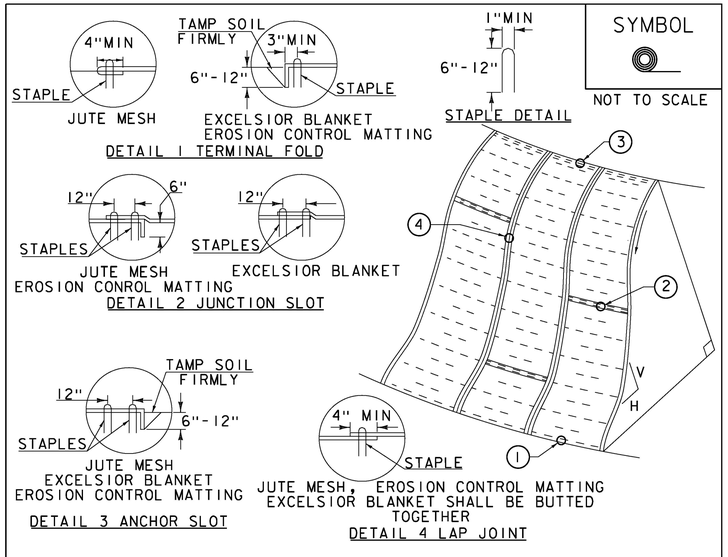
ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H: 1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
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REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

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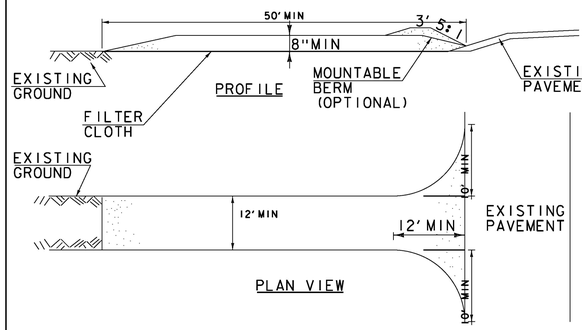
PROJECT NUMBER:	NH 010-1(48)
FILE NAME: z12B404ecdet.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: M. BRADLEY
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
EPSC DETAIL SHEET 2	SHEET 27 OF 45

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

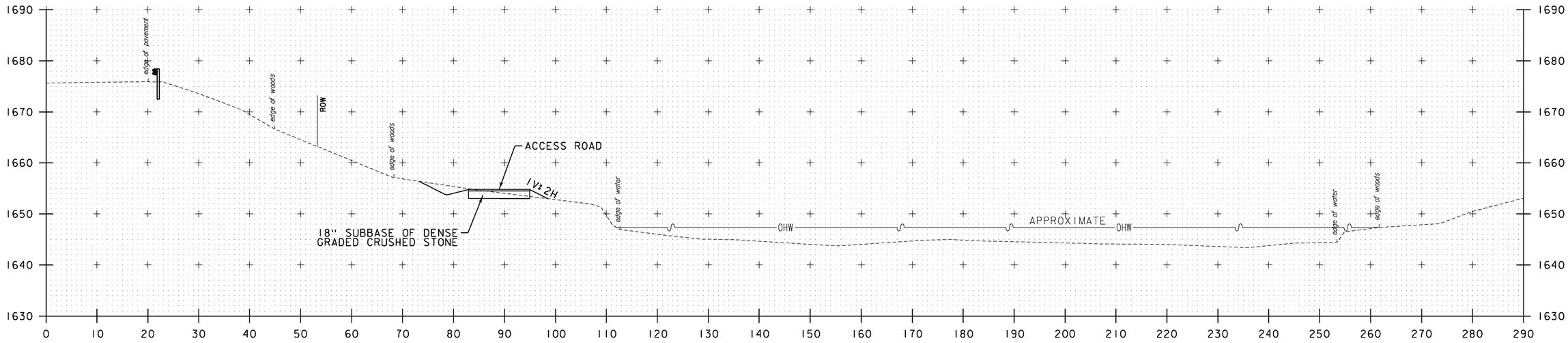
REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404ecdet.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
EPSC DETAIL SHEET 3

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 28 OF 45



22+75

BUILT ESSENTIALLY
AS SHOWN

STA. 22+75

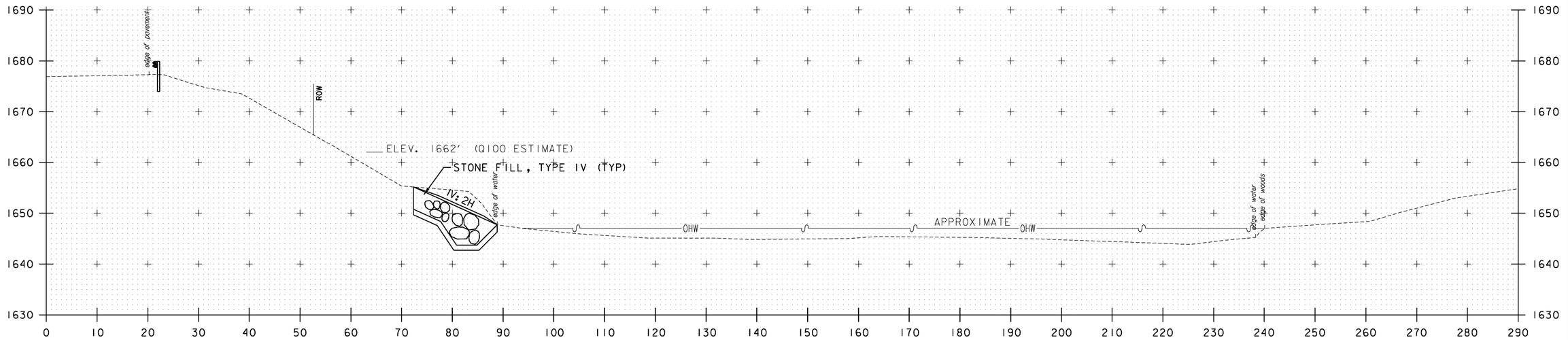
0 10 20
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

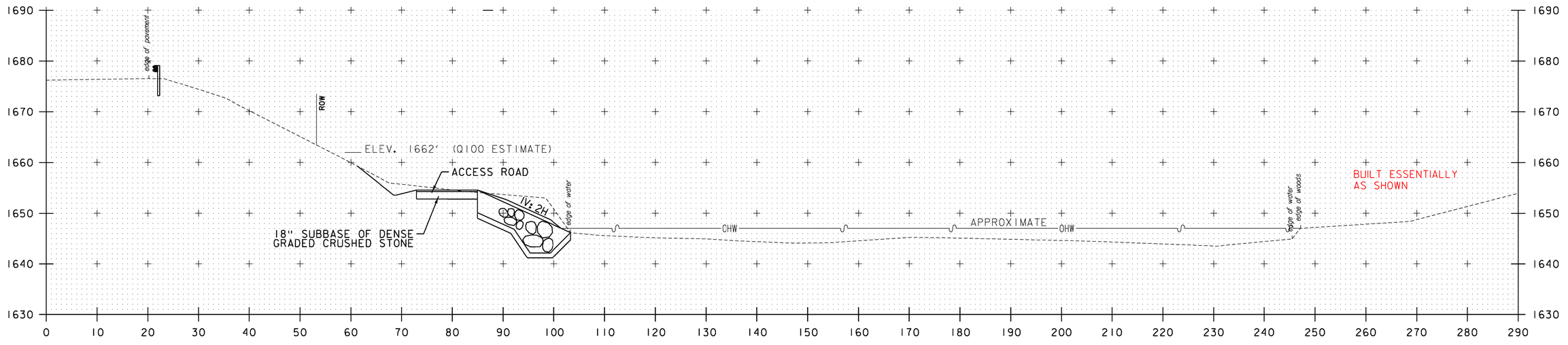
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 1

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 29 OF 45



23+25



23+00
BEGIN EMBANKMENT RECONSTRUCTION

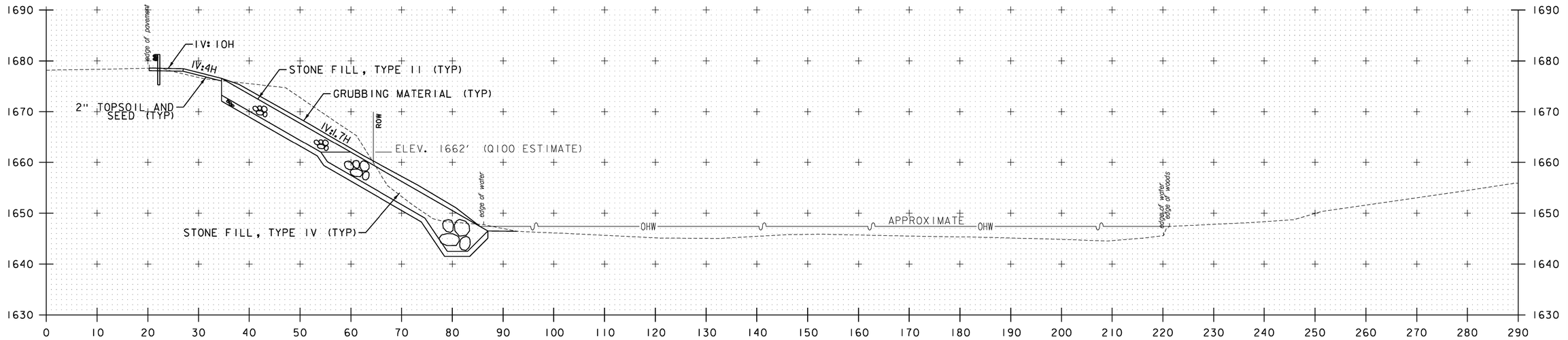
0 10 20
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

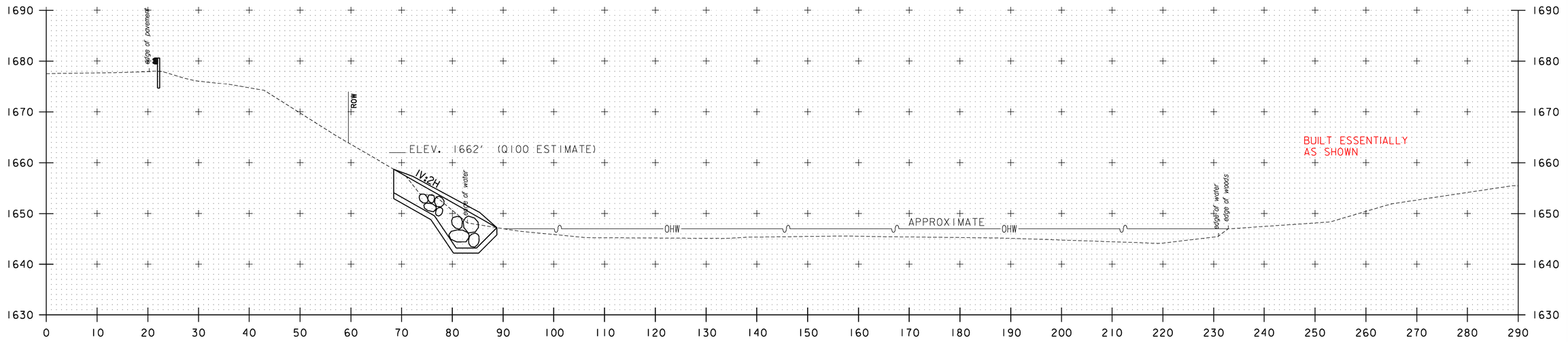
STA. 23+00 TO STA. 23+25

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	NH 010-1(48)

FILE NAME: z12B404xsl.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: M. BRADLEY
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
CROSS SECTION SHEET 2	SHEET 30 OF 45



23+75



23+50

STA. 23+50 TO STA. 23+75

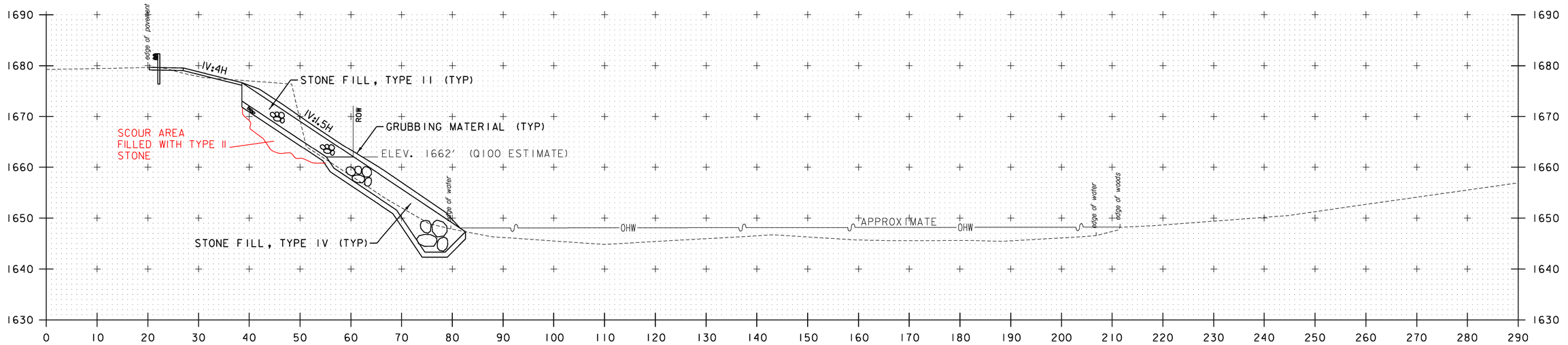
0 10 20
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

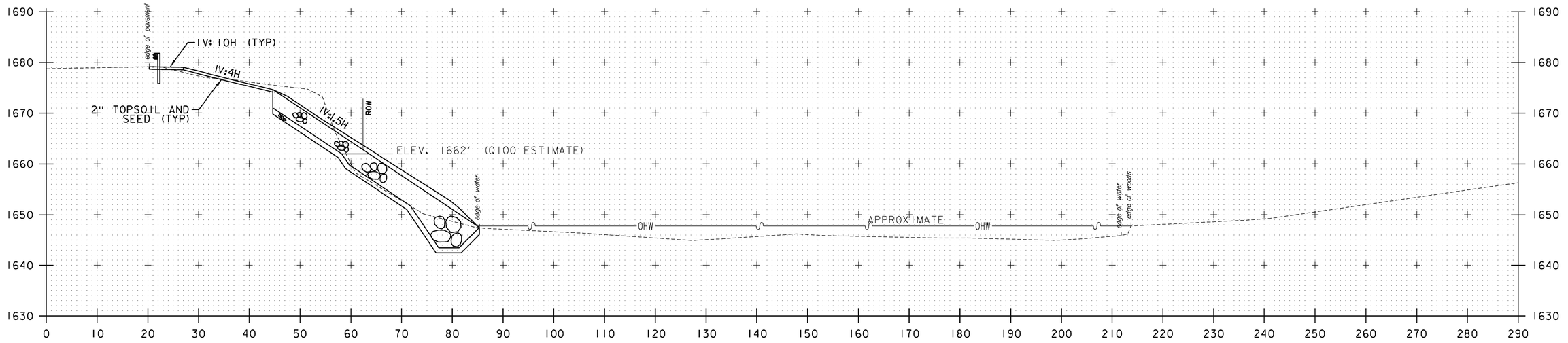
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 3

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 31 OF 45



24+25



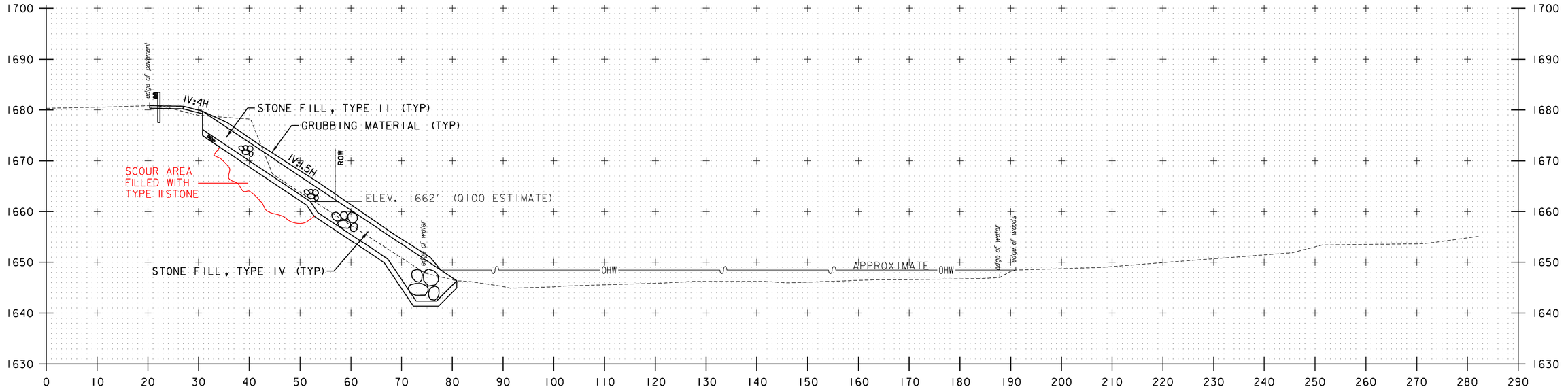
24+00

STA. 24+00 TO STA. 24+25

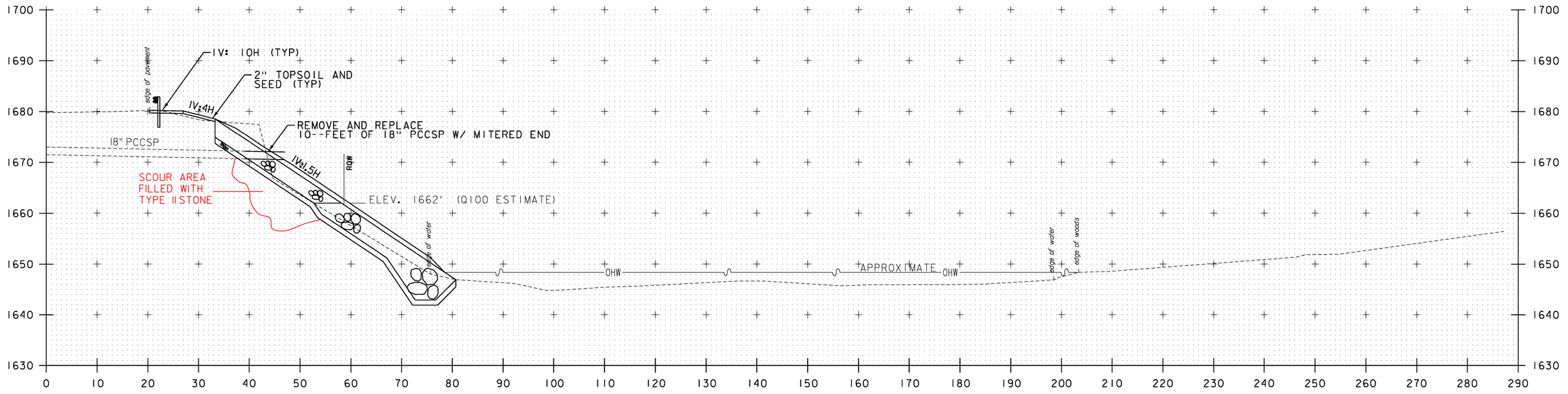
0 10 20
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: NH 010-1(48)	
FILE NAME: z12B404xsl.dgn	PLOT DATE: 6/16/2014
PROJECT LEADER: E. ATKINS	DRAWN BY: M. BRADLEY
DESIGNED BY: M. BRADLEY	CHECKED BY: E. ATKINS
CROSS SECTION SHEET 4	SHEET 32 OF 45



24+75



24+50

0 10 20
SCALE IN FEET

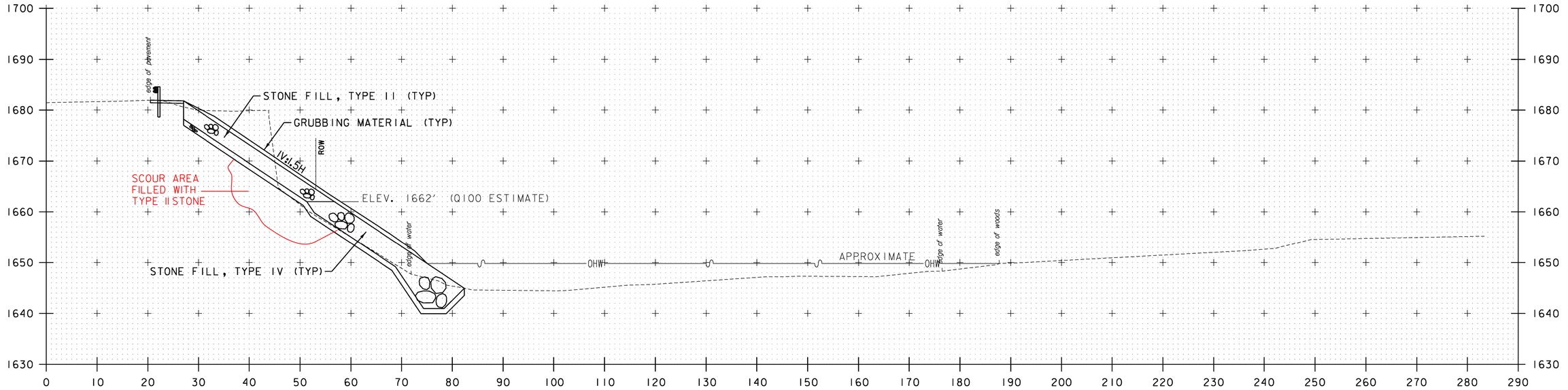
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

STA. 24+50 TO STA. 24+75

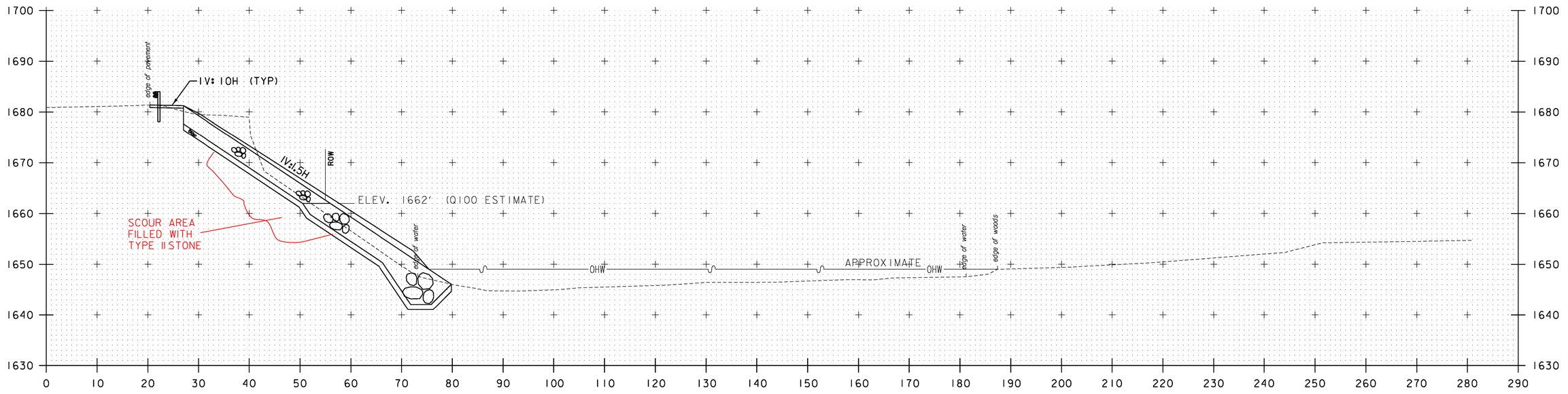
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 5

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 33 OF 45



25+25



25+00

0 10 20
SCALE IN FEET

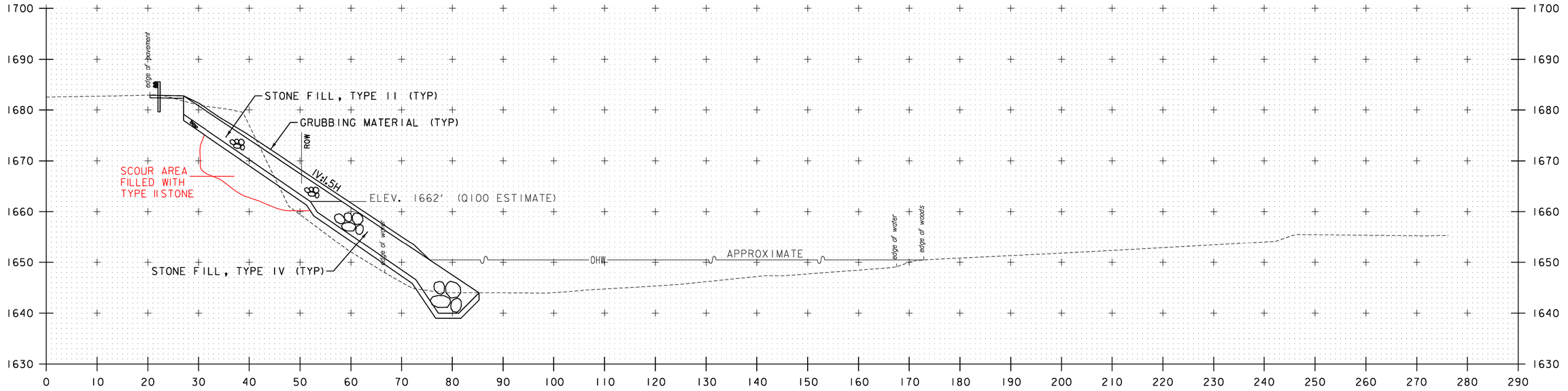
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

STA. 25+00 TO STA. 25+25

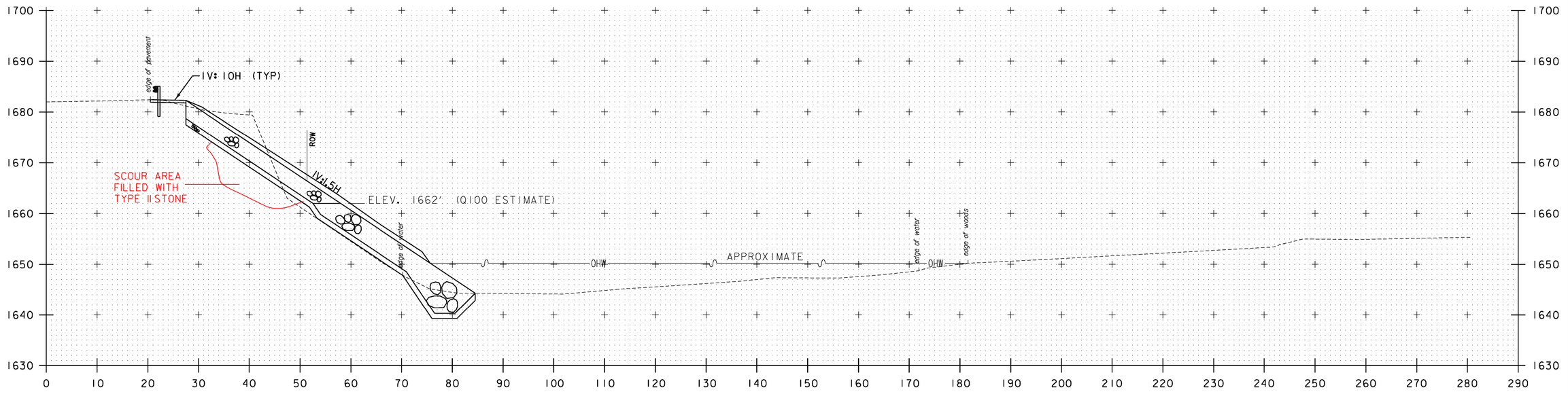
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 6

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 34 OF 45



25+75



25+50

0 10 20
SCALE IN FEET

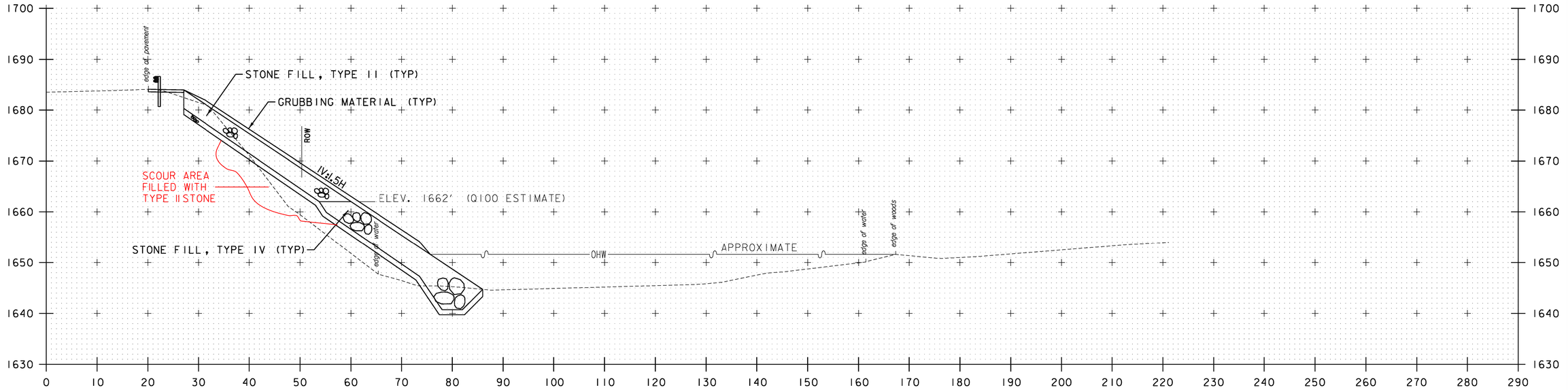
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

STA. 25+50 TO STA. 25+75

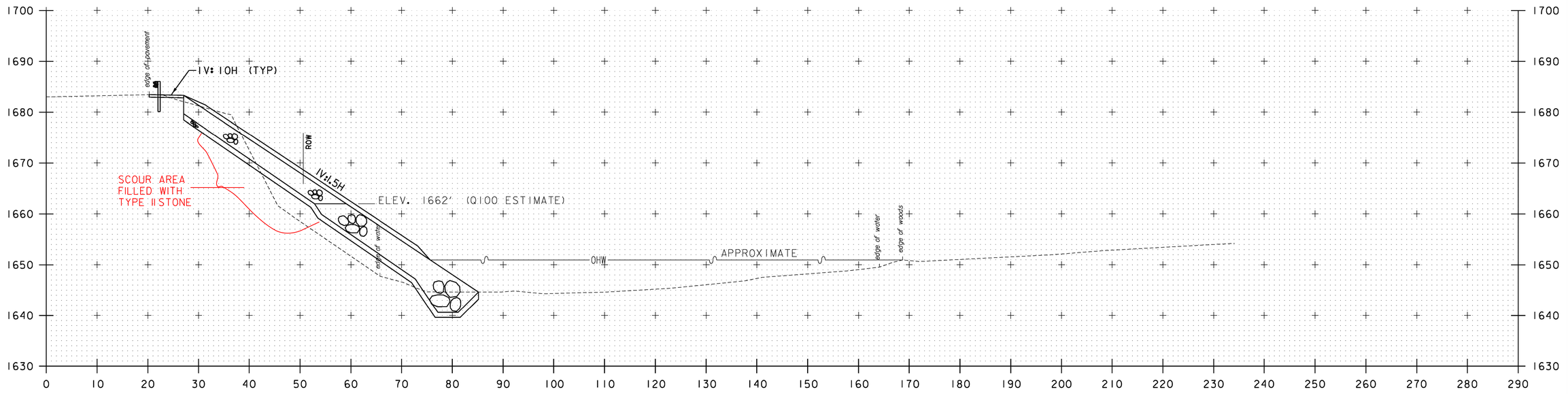
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 7

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 35 OF 45



26+25



26+00

STA. 26+00 TO STA. 26+25

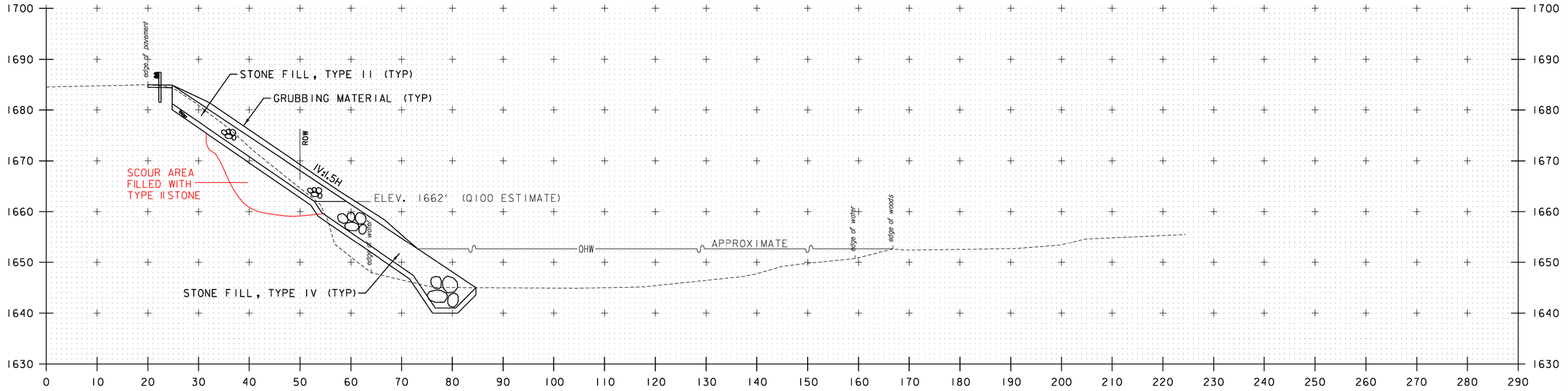
0 10 20
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

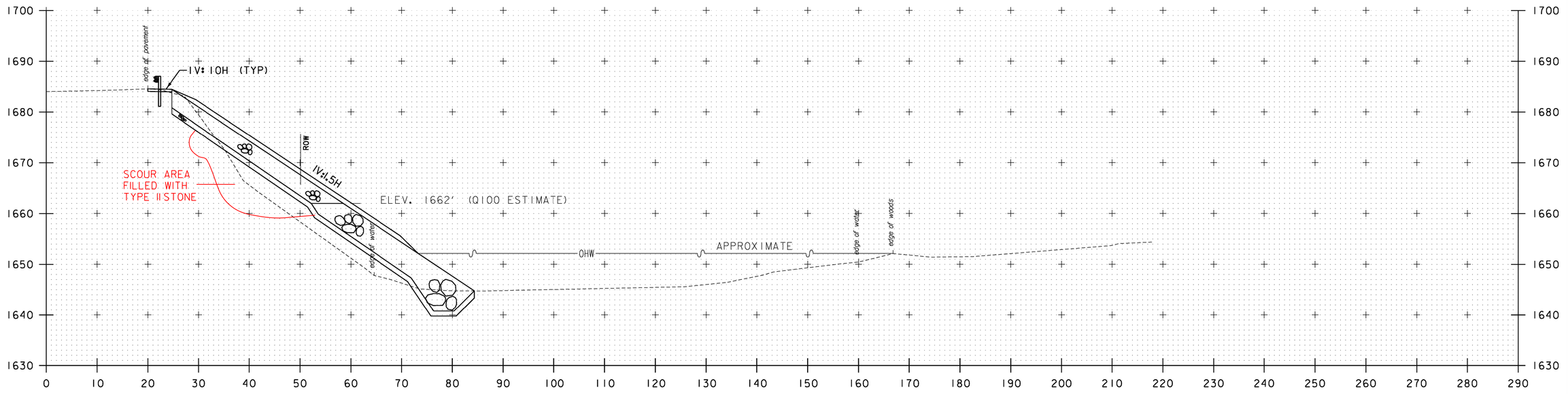
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 8

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 36 OF 45



26+75



26+50

STA. 26+50 TO STA. 26+75

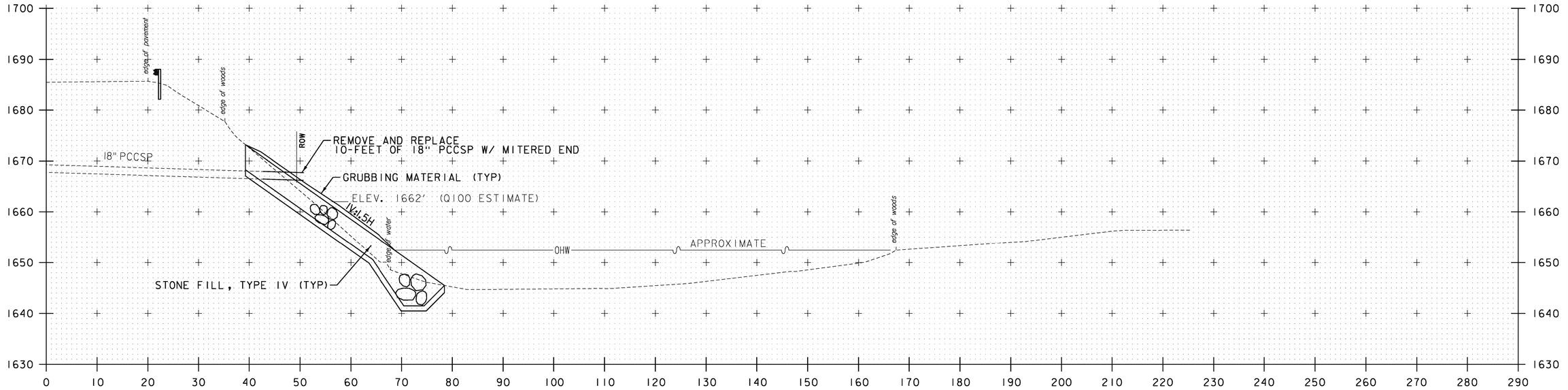
0 10 20
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

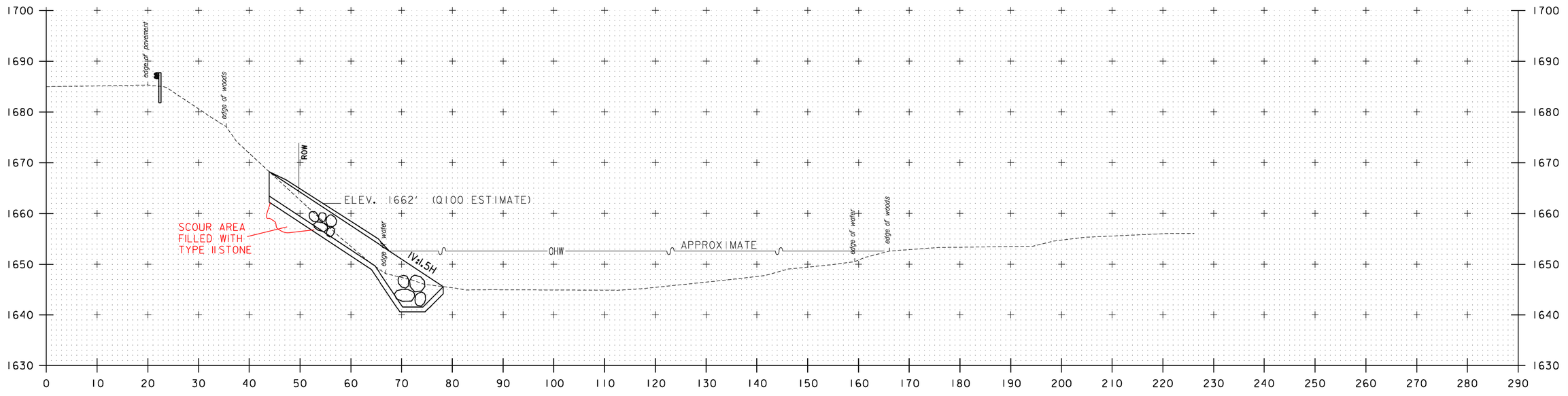
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 9

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 37 OF 45



27+25



27+00

STA. 27+00 TO STA. 27+25

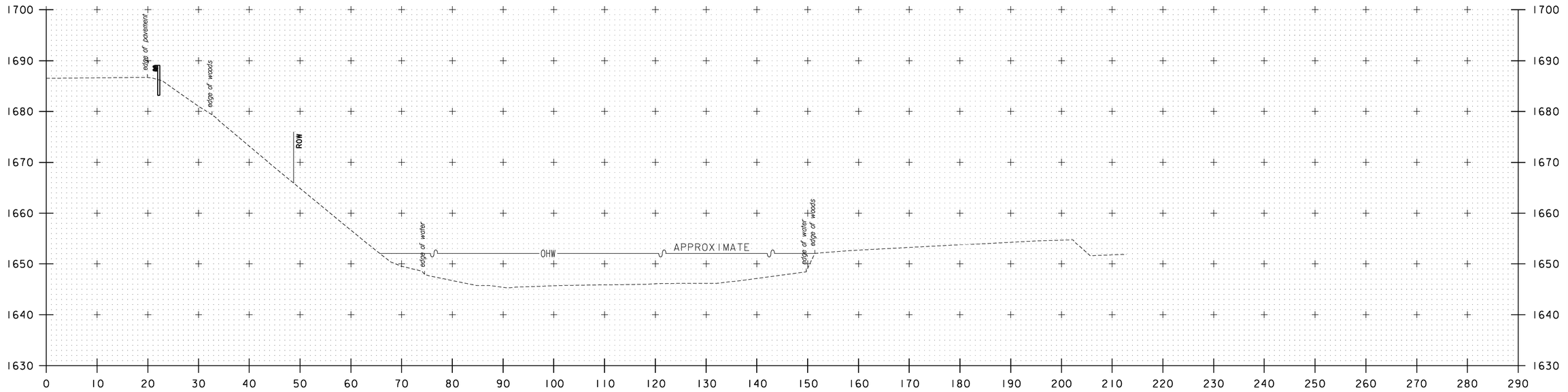
0 10 20
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

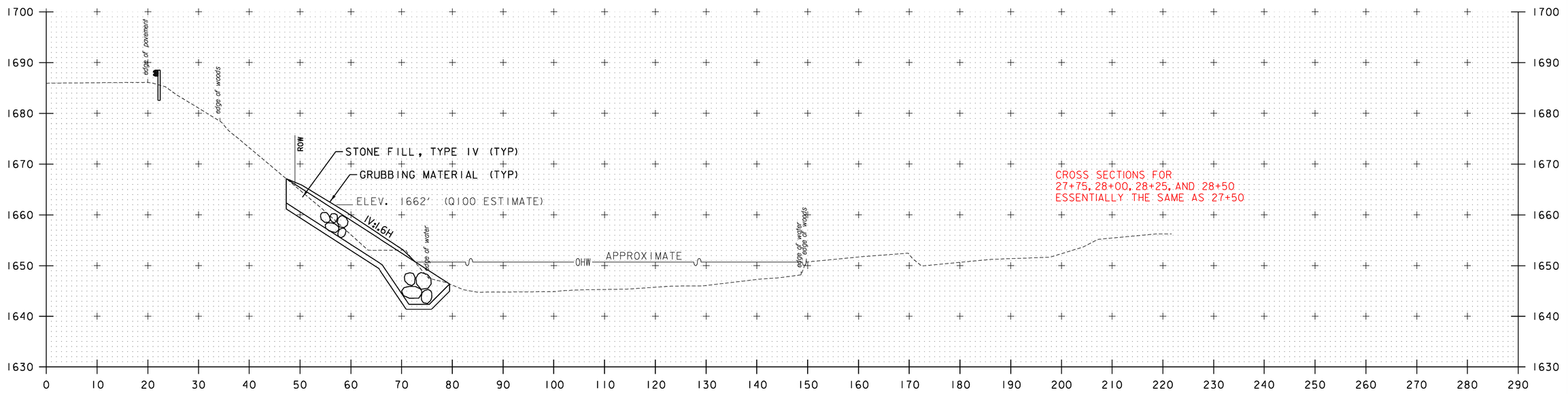
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 10

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 38 OF 45



27+60
END EMBANKMENT RECONSTRUCTION



27+50

STA. 27+50 TO STA. 27+75

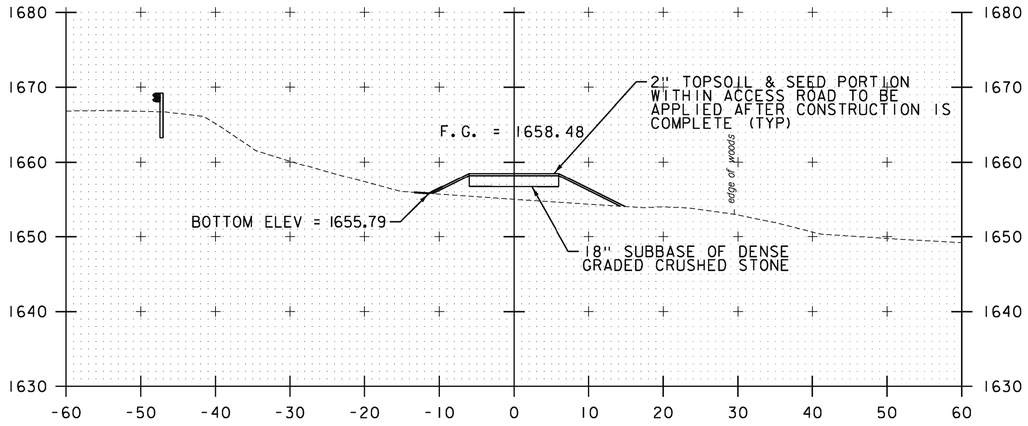
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

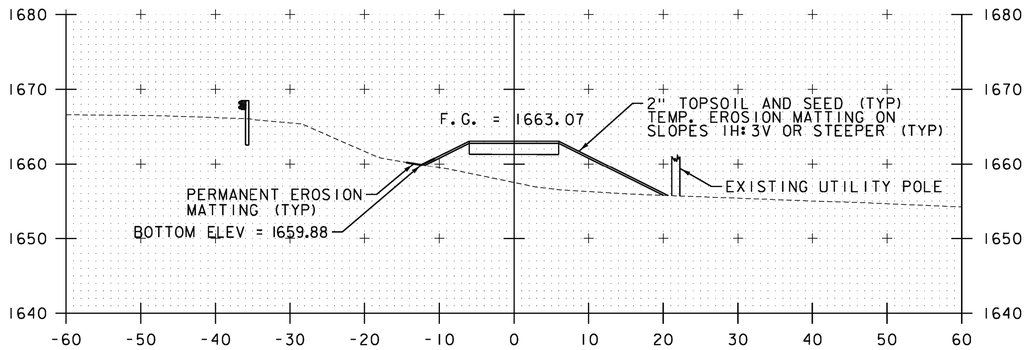
PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET II

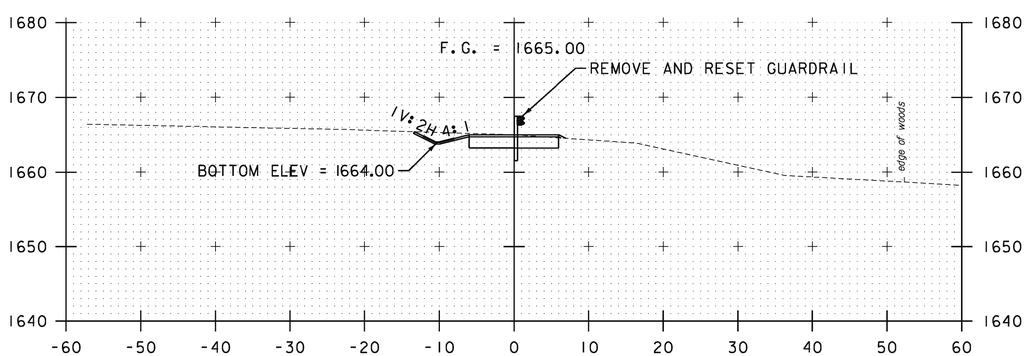
PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 39 OF 45



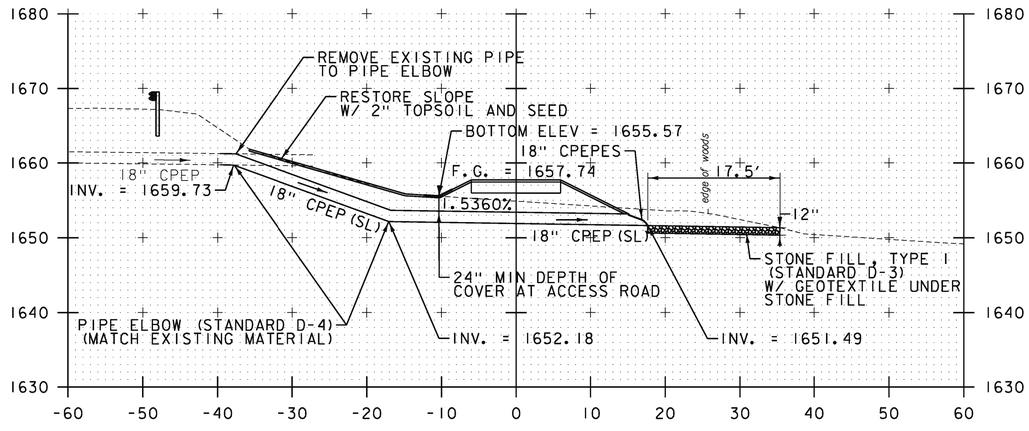
81+00



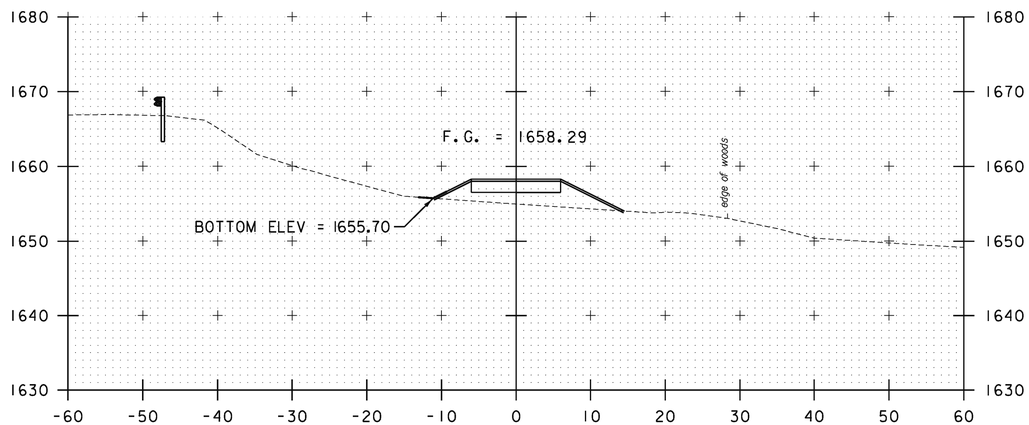
80+50



80+21.52
BEGIN ACCESS ROAD



81+13.02 18" CPEP (SL) CULVERT
SKEWED 85° 17' 58.6" LT



BUILT ESSENTIALLY AS SHOWN

81+03.36 PT

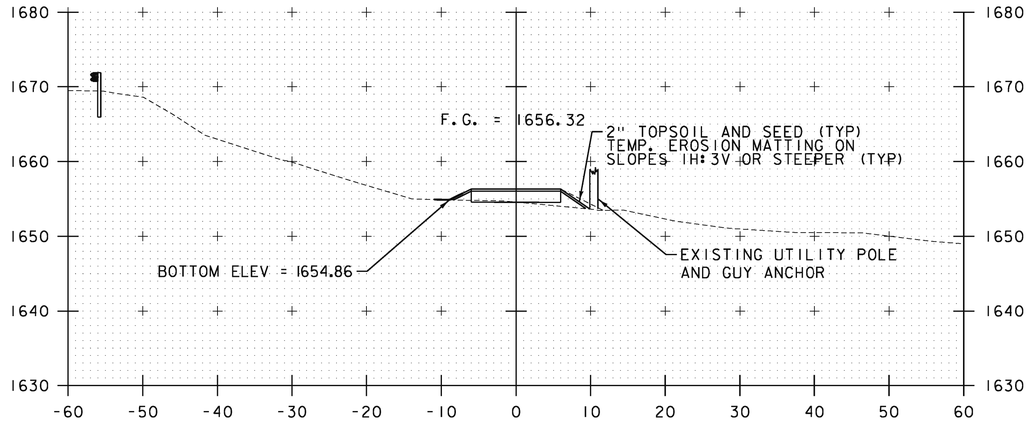
STA. 80+21.52 TO STA. 81+13.02

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

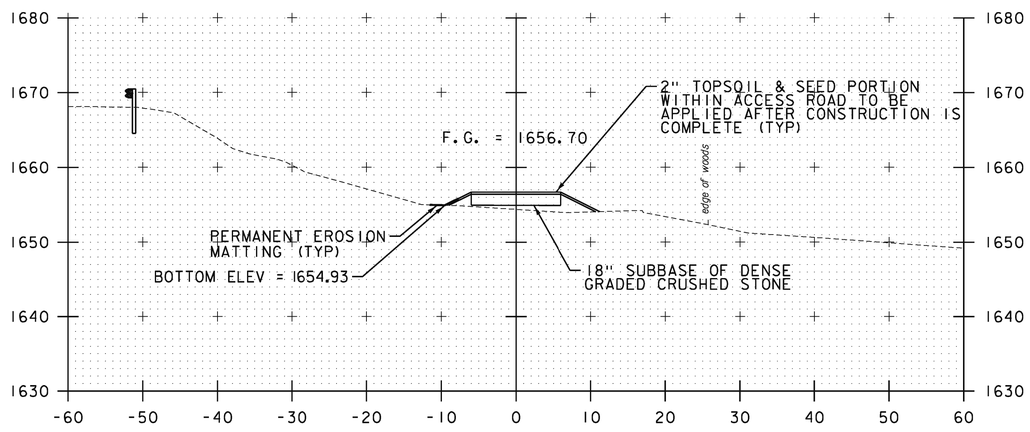
FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 12

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 40 OF 45

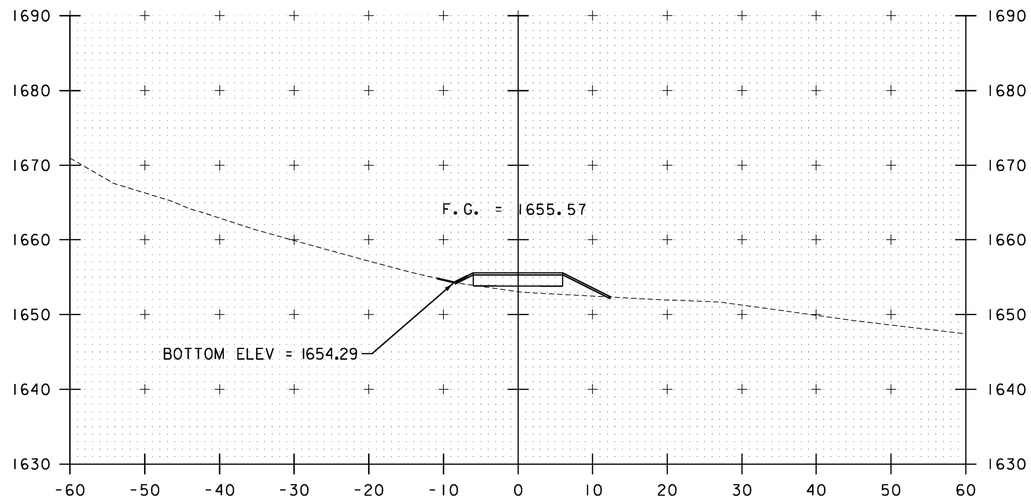
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



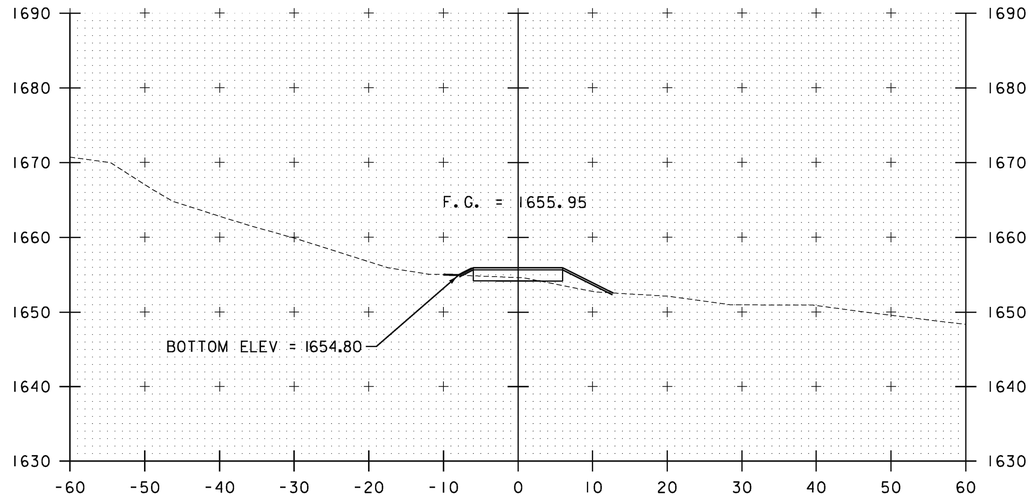
82+00



81+50



83+00



82+50

BUILT
ESSENTIALLY
AS SHOWN

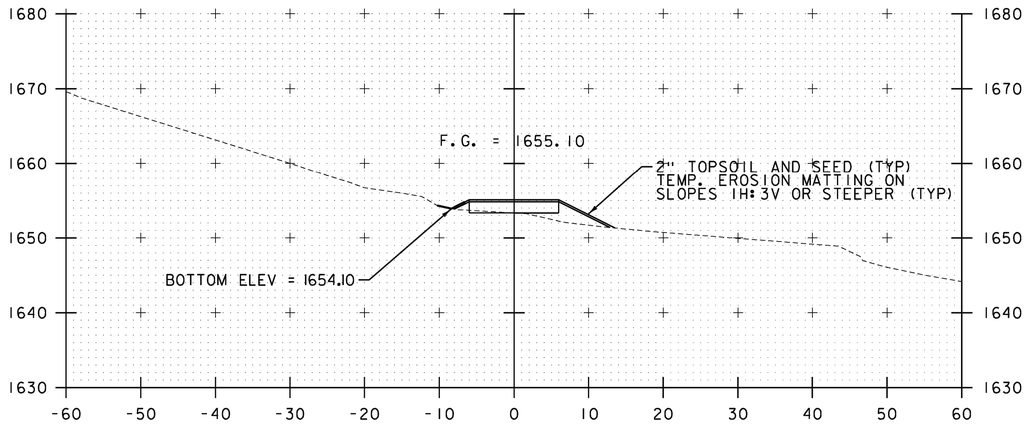
STA. 81+50 TO STA. 83+00

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

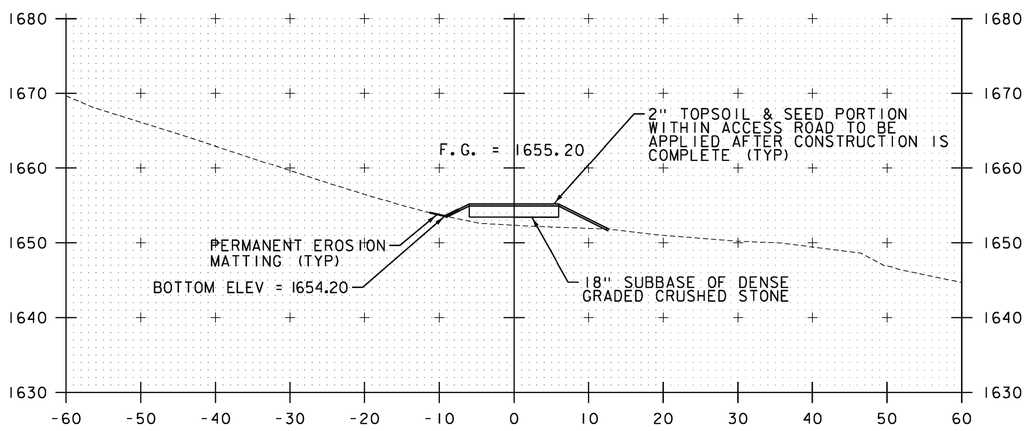
FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 13

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 41 OF 45

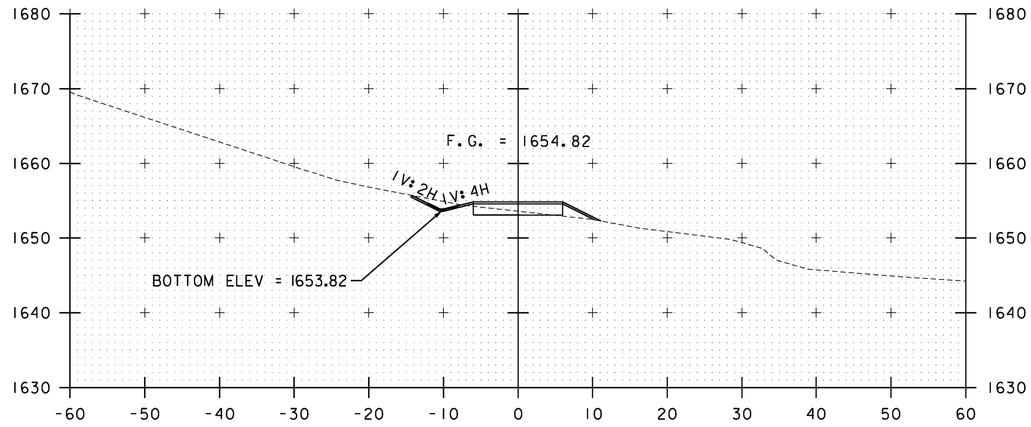
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



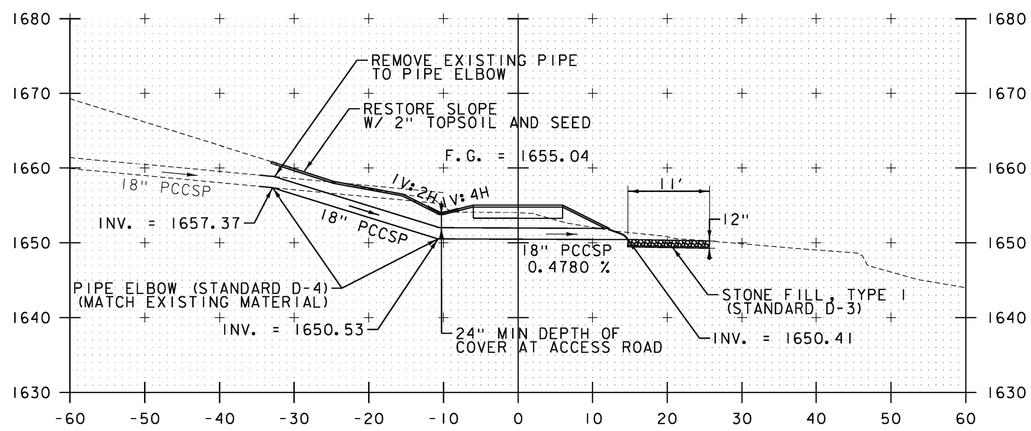
83+62.58 PC



83+50



84+00



83+70.52 18" PCCSP CULVERT
SKEWED 85° 17' 30.5" LT

BUILT
ESSENTIALLY
AS SHOWN

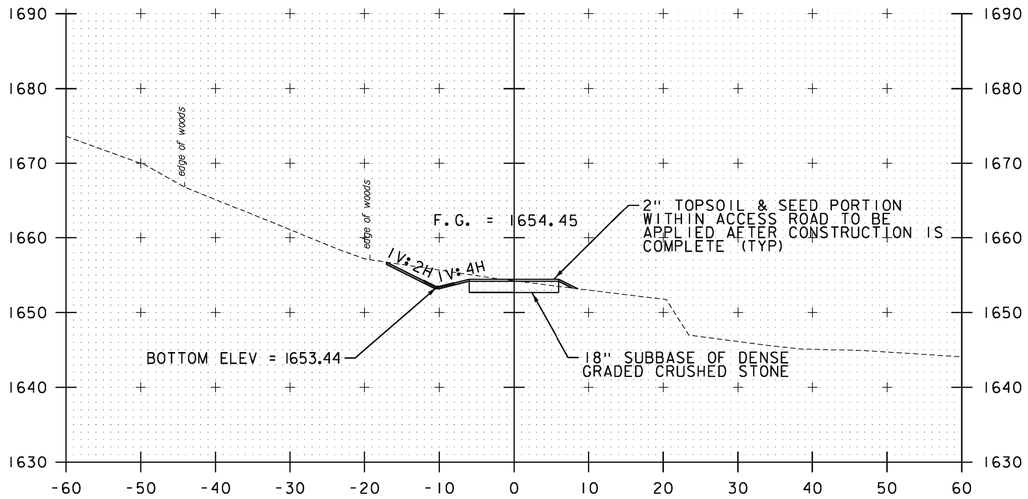
STA. 83+50 TO STA. 84+00

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

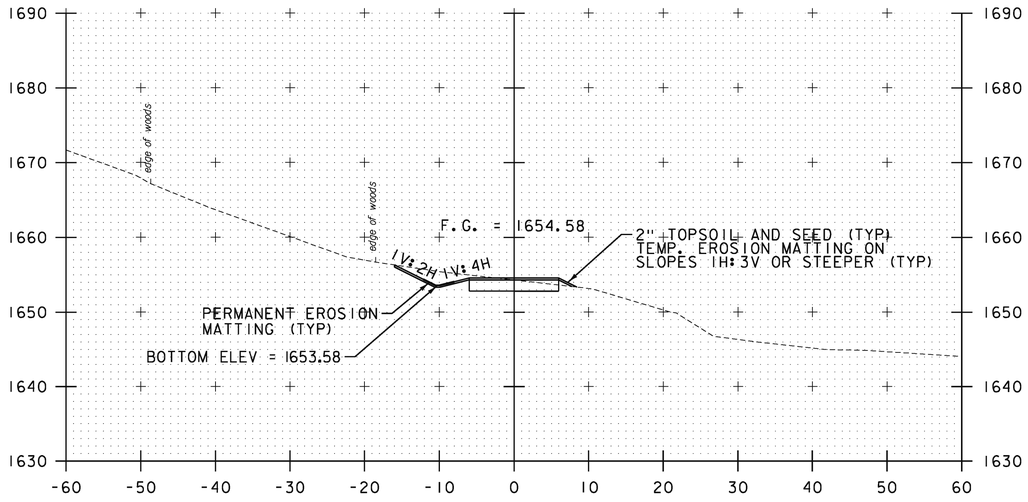
FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 14

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 42 OF 45

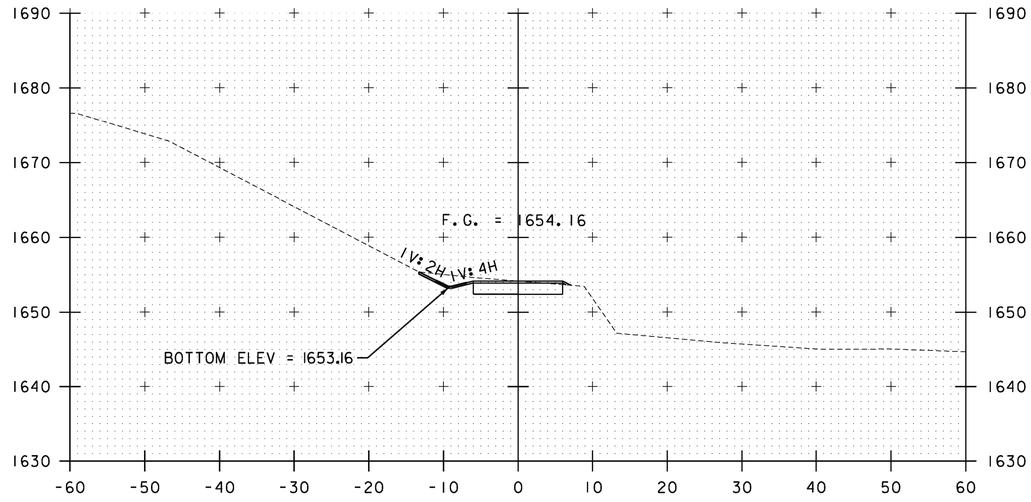
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS



84+50



84+32.08 PT



84+87.58
END ACCESS ROAD

BUILT ESSENTIALLY AS SHOWN

STA. 84+32.08 TO STA. 84+87.58

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404xsl.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
CROSS SECTION SHEET 15

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 43 OF 45

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

ENERGY ABSORPTION ATTENUATOR

~~19+04.4 RT, IEA~~

NOT USED

~~DURABLE 4 INCH WHITE LINE, THERMOPLASTIC~~

~~20+23.2 RT - 26+00.0 RT X2 (EL) = 575 L.F.~~

NOT USED

~~DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC~~

~~20+23.2 RT - 26+00.0 RT X2 (DYCL) = 575 L.F.~~

TEMPORARY TRAFFIC BARRIER

~~21+81.0 RT - 26+00.0 RT~~
25+25 RT - 27+50 RT

TEMPORARY 4 INCH WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE

~~20+23.2 RT - 26+00.0 RT X2 (EL) = 575 L.F.~~
23+00 TO 30+00 RT x 2

TEMPORARY 4 INCH YELLOW LINE, TEMPORARY PAVEMENT MARKING TAPE

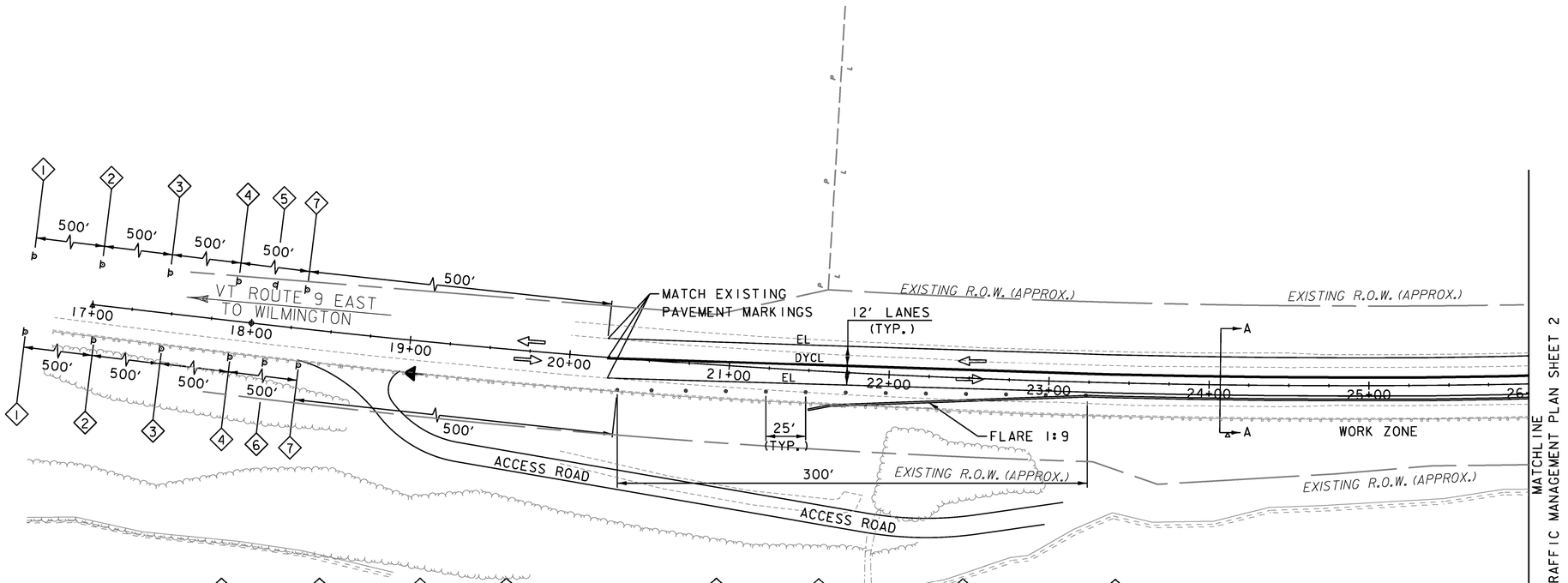
~~20+23.2 LT - 26+00.0 LT X2 (DYCL) = 575 L.F.~~
23+00 TO 30+00 x 2

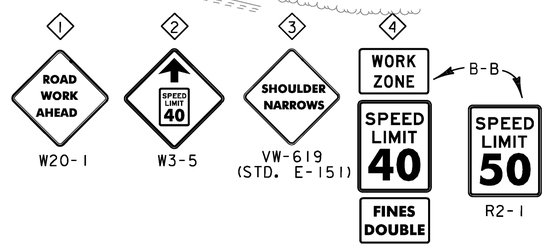
16+00 TO 23+00 - PASSING ZONE ELIMINATION
x2

PAVEMENT MARKING MASK

~~20+24.4 RT - 26+00.0 RT X2~~
~~20+24.4 LT - 26+00.0 LT X2~~
23+00 TO 30+00
x 3

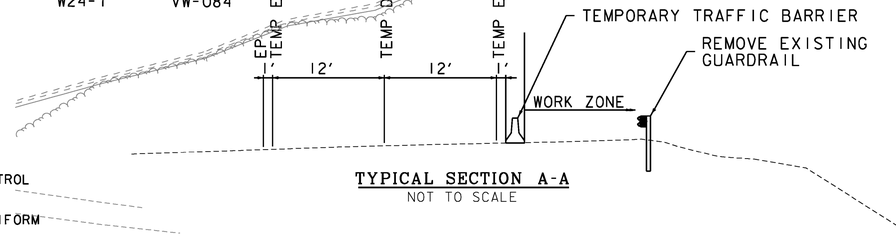
VT STATE PLANE GRID N





LEGEND

◇2	CONSTRUCTION SIGN ASSEMBLY I.D.
═══	TEMPORARY TRAFFIC BARRIER
•	REFLECTORIZED PLASTIC DRUM
ơ	SIGN
DYCL	TEMP DOUBLE YELLOW CENTER LINE
EL	TEMP EDGE LINE
⇦	FLOW OF TRAFFIC
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN



TYPICAL SECTION A-A
NOT TO SCALE

GENERAL TRAFFIC MAINTENANCE NOTES:

1) CONTRACTOR SHALL RELOCATE OR COVER ALL EXISTING SIGNS WHERE THEY WOULD CONFLICT WITH CONSTRUCTION SIGNAGE. THE COST SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING CONSTRUCTION SIGNAGE SO AS NOT TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE AND CORNER SIGHT DISTANCE. THE COST SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
3) ALL TEMPORARY TRAFFIC BARRIERS SHALL BE DELINEATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE LATEST EDITION OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
4) PAYMENT FOR FURNISHING AND PLACING TEMPORARY TRAFFIC SIGNS AND REMOVING AND RELOCATING TEMPORARY TRAFFIC SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.
5) PAYMENT FOR REMOVING AND RESETTING TEMPORARY TRAFFIC BARRIER SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL
6) THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL BEAM GUARDRAIL AND POSTS AS REQUIRED TO ALLOW THE INSTALLATION OF THE TEMPORARY TRAFFIC BARRIER. THE STEEL BEAM RAIL AND POSTS SHALL BE STORED ON THE PROJECT IN A LOCATION AS DETERMINED BY THE ENGINEER. WHEN THE TEMPORARY TRAFFIC BARRIER IS REMOVED, THE CONTRACTOR SHALL REINSTALL THE EXISTING STEEL BEAM GUARD RAIL AND POSTS. ANY POSTS AND/OR BEAM RAIL THAT WERE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED WITH NEW. THIS WORK SHALL BE INCIDENTAL TO ITEM 621.90, TEMPORARY TRAFFIC BARRIER. ANY RAIL OR POSTS THAT WERE DETERMINED BY THE ENGINEER TO BE DAMAGED AT NO FAULT TO THE CONTRACTOR SHALL BE REPLACED WITH NEW AND INCLUDED FOR PAYMENT UNDER ITEM 621.20
7) THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN CORRUGATED REFLECTIVE METAL STRIPS (ALTERNATING ORANGE AND WHITE) ON TEMPORARY TRAFFIC BARRIER. STRIPS SHALL BE INSTALLED ON TRAFFIC SIDE FACE OF BARRIER PER MANUFACTURER'S RECOMMENDATIONS AND AS APPROVED BY THE ENGINEER. THIS WORK SHALL BE INCIDENTAL TO ITEM 621.90, TEMPORARY TRAFFIC BARRIER.
8) FINAL LOCATION OF PCMS AND MESSAGES TO BE APPROVED BY THE ENGINEER.

0 40 80
SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404tmpbdr.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
TRAFFIC CONTROL SHEET 1

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 44 OF 45

~~DURABLE 4 INCH WHITE LINE, THERMOPLASTIC~~
~~26+00.0 RT - 30+70.0 RT X2 (EL) = 469 L.F.~~

NOT USED

~~DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC~~
~~26+00.0 RT - 30+70.0 RT X2 (DYCL) = 469 L.F.~~

TEMPORARY TRAFFIC BARRIER
~~26+00.0 RT - 9 29+31.73 RT~~

SEE LIMITS ON PREVIOUS SHEET

TEMPORARY 4 INCH WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE
~~26+00.0 RT - 30+70.0 RT X2 (EL) 469 L.F.~~

TEMPORARY 4 INCH YELLOW LINE, TEMPORARY PAVEMENT MARKING TAPE
~~26+00.0 LT - 30+70.0 LT X2 (DYCL) = 469 L.F.~~

PAVEMENT MARKING MASK
~~26+00.0 RT - 30+70.0 RT X2~~
~~26+00.0 LT - 30+70.0 LT X2~~

PCMS DISPLAY
LANE SHIFT AHEAD
REDUCE SPEED

VT STATE PLANE GRID N

EXISTING R.O.W. (APPROX.)

12' LANES (TYP.)

MATCH EXISTING PAVEMENT MARKINGS

500' 500' 500' 500' 500' 500' 1500'

500' 500' 500' 500' 500' 500'

500' SOMERSET RD

27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 34+48

DYCL EL

RVCTRL #2 RVCTRL #1 COMB. #T9 SIGN #B2 COMB. #B2

WORK ZONE

FLARE 1:9

25' (TYP.)

EXISTING R.O.W. (APPROX.)

CONCRETE BOUND

300' GUY

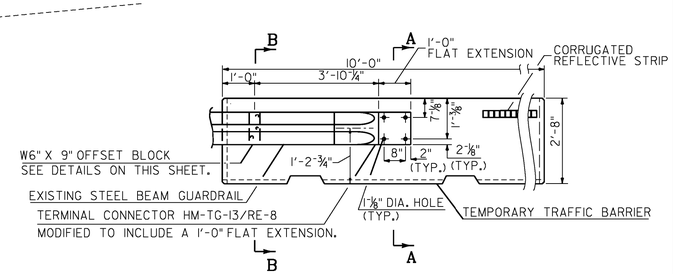
500'

DEERFIELD RIVER FLOW

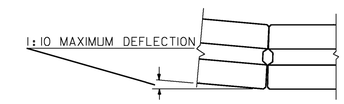
FLOW

VOSE BROOK

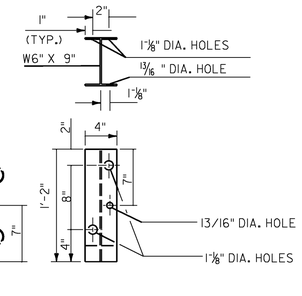
MATCHLINE TRAFFIC MANAGEMENT PLAN SHEET 1



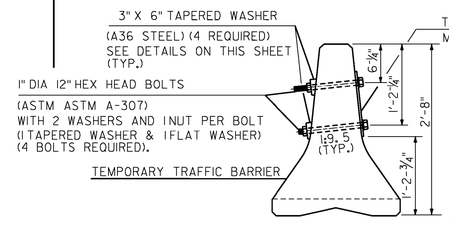
ELEVATION VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY TRAFFIC BARRIER AND EXISTING GUARD RAIL



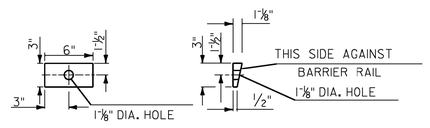
TEMPORARY TRAFFIC BARRIER DEFLECTION DETAIL



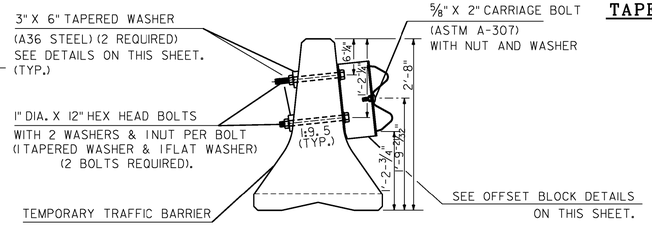
OFFSET BLOCK DETAILS



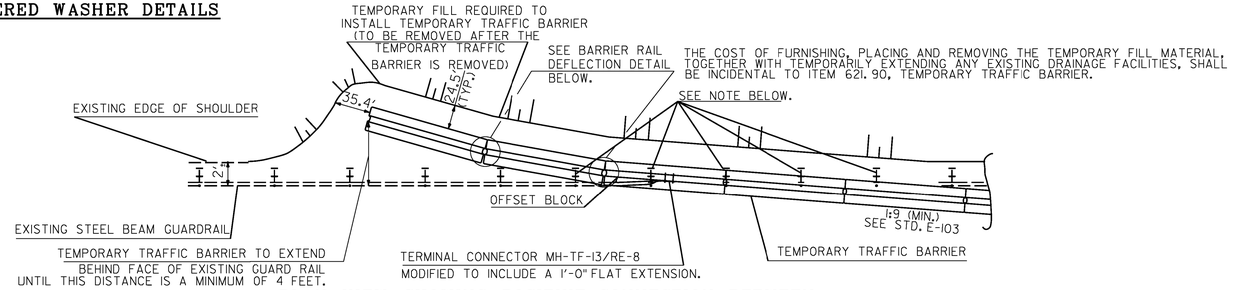
SECTION A-A



TAPERED WASHER DETAILS



SECTION B-B



PLAN VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY TRAFFIC BARRIER AND EXISTING GUARD RAIL

LEGEND

◇2	CONSTRUCTION SIGN ASSEMBLY I.D. (SEE SHEET 44)
═══	TEMPORARY TRAFFIC BARRIER
•	REFLECTORIZED PLASTIC DRUM
⊙	SIGN
DYCL	TEMP DOUBLE YELLOW CENTER LINE
EL	TEMP EDGE LINE
⇦	FLOW OF TRAFFIC
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

0 40 80
SCALE IN FEET

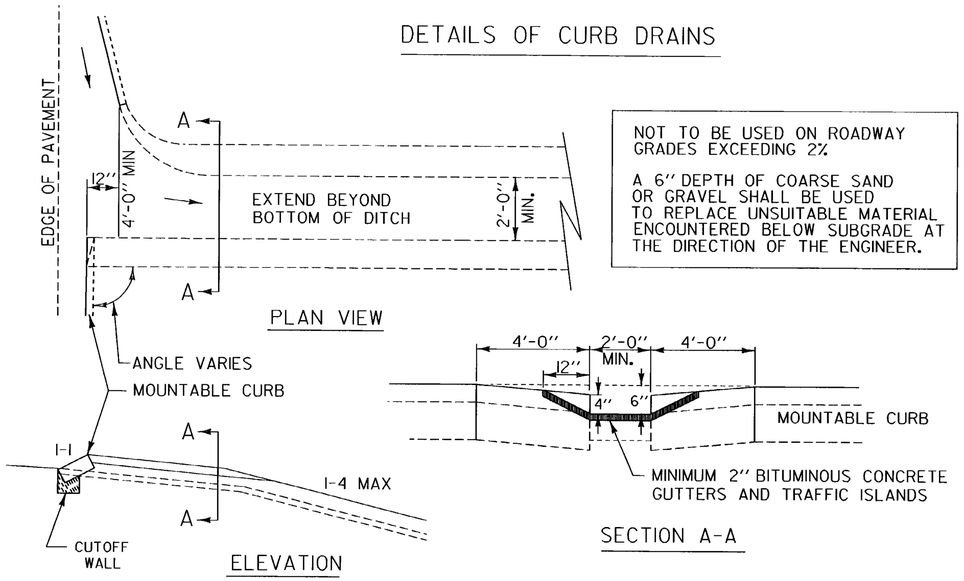
GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: NH 010-1(48)

FILE NAME: z12B404tmpbdr.dgn
PROJECT LEADER: E. ATKINS
DESIGNED BY: M. BRADLEY
TRAFFIC CONTROL SHEET 2

PLOT DATE: 6/16/2014
DRAWN BY: M. BRADLEY
CHECKED BY: E. ATKINS
SHEET 45 OF 45

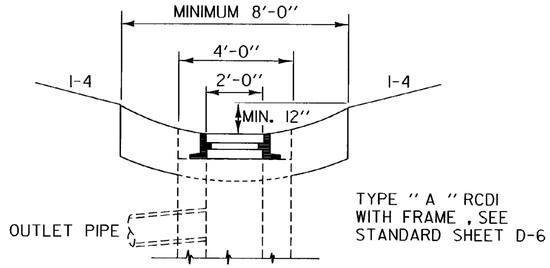
DETAILS OF CURB DRAINS



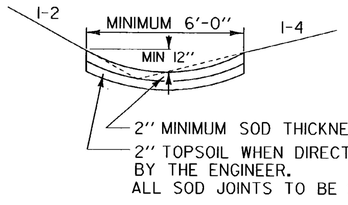
NOT TO BE USED ON ROADWAY GRADES EXCEEDING 2%

A 6" DEPTH OF COARSE SAND OR GRAVEL SHALL BE USED TO REPLACE UNSUITABLE MATERIAL ENCOUNTERED BELOW SUBGRADE AT THE DIRECTION OF THE ENGINEER.

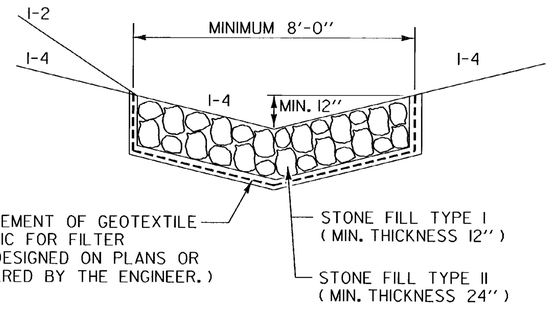
DROP INLET WITH GRATE IN TREATED GUTTER



SODDING

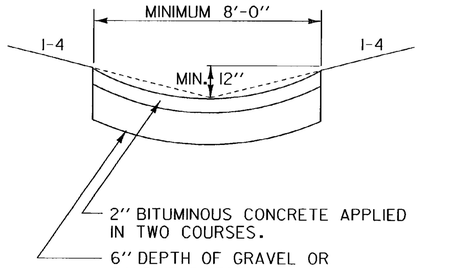


STONE FILL TYPE I
STONE FILL TYPE II

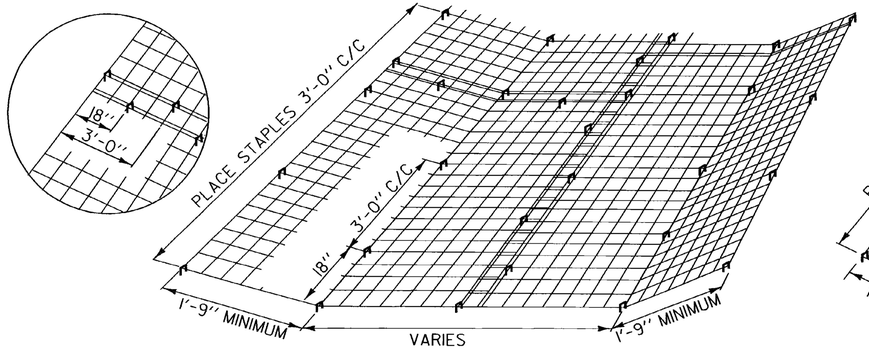


EXCAVATION PAID FOR AS COMMON EXCAVATION.

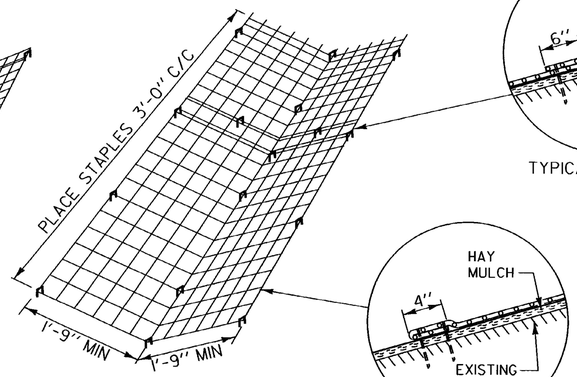
BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS



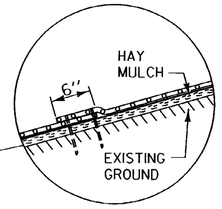
ON ALL OVERLAPS, PLACE STAPLES EVERY 18", ALTERNATING ON BOTH SIDES OF 6" OVERLAP.



TYPICAL FLAT BOTTOM DITCH



TYPICAL "V" DITCH

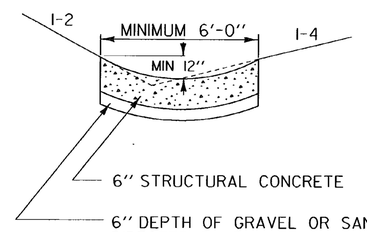


TYPICAL OVERLAP

TYPICAL OVERLAP AT ALL ENDS AND EDGES

DETAILS OF PLACING EROSION MATTING

PORTLAND CEMENT CONCRETE GUTTER



REVISIONS AND CORRECTIONS

APR. 2, 1986 - ORIGINAL APPROVAL DATE

JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

APPROVED

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

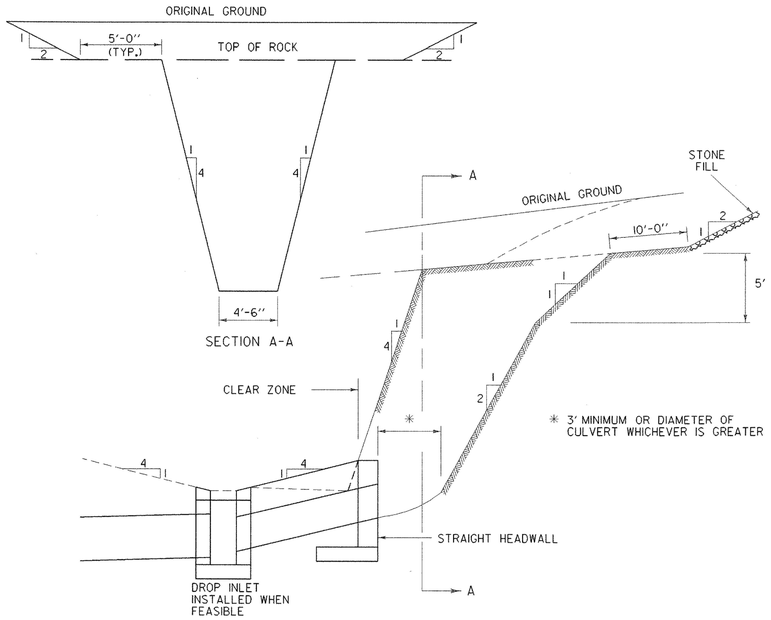
DIRECTOR OF ENGINEERING

DESIGN ENGINEER

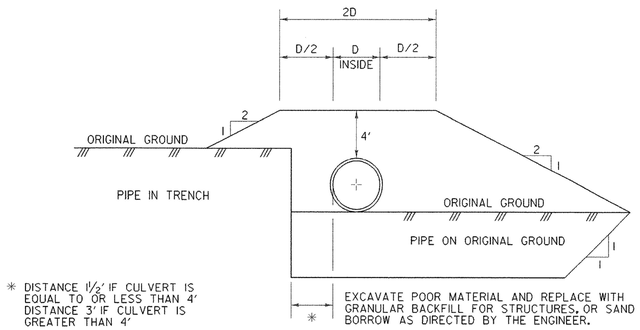
TREATED GUTTERS

VERMONT AGENCY OF TRANSPORTATION

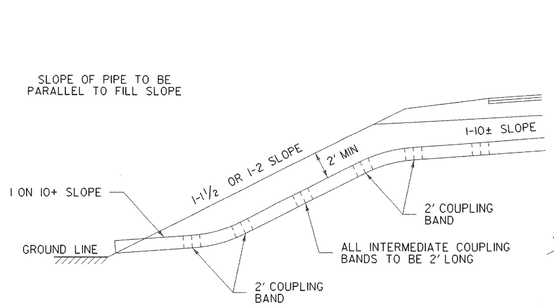
STANDARD D-3



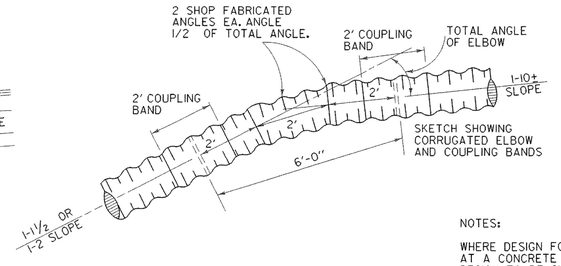
TYPICAL WATERFALL FOR CULVERTS



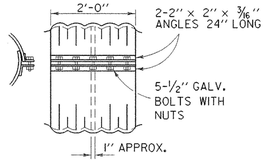
GRANULAR MATERIAL AT METAL CULVERT LOCATIONS
(MAX SIZE CULVERT 10')



TYPICAL APPLICATION
OF CORRUGATED ELBOW
ON HIGH FILL



CORRUGATED PIPE ELBOW



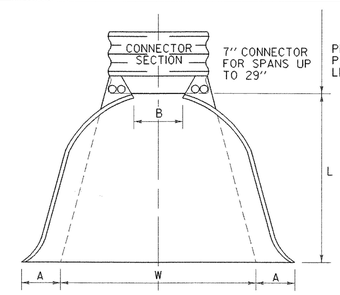
DETAILS FOR
COUPLING BAND

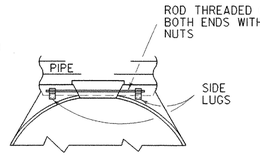
NOTES:

WHERE DESIGN FOR SLOPE PIPE AND ELBOWS START AT A CONCRETE JUNCTION BOX OR DROP INLET, DESIGN TO BE SUCH AS TO PERMIT A 2' LONG SECTION OF PIPE THRU THE STRUCTURE WALL TO WHICH THE CORRUGATED ELBOW WILL BE ATTACHED.

COUPLING BANDS 1'-9" LONG MAY BE USED IN CONJUNCTION WITH PIPE FABRICATED WITH HELICAL CORRUGATIONS IN PLACE OF CIRCUMFERENTIAL CORRUGATED BANDS 2' LONG.

BANDS CONFORMING TO SECTION 711 AND EQUIPPED WITH SILO RODS OR CABLES FOR POSITIVE ATTACHMENT MAY ALSO BE USED IN LIEU OF THE COUPLING BAND SHOWN.



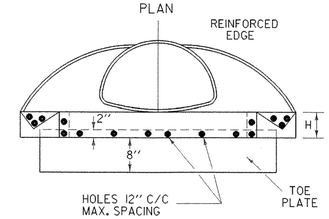


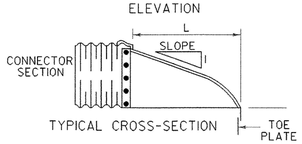
FOR 18" x 11" THRU 29" x 18"

TOE PLATE TO BE PUNCHED TO MATCH HOLES IN SKIRT LIP. ⅜" GALV. BOLTS TO BE FURNISHED. LENGTH OF TOE PLATE W+10" FOR PIPE ARCHES WITH RISE 11" TO 18" INCL.

SKIRT SECTION FOR PIPE-ARCHES WITH RISE OF 11" TO 18" INCL. TO BE MADE IN ONE PIECE.

CONNECTOR SECTION, CORNER PLATE, AND TOE PLATE TO BE SAME GAUGE AS SKIRT.

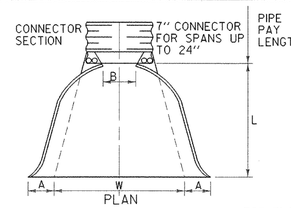


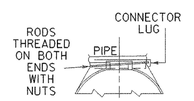


PIPE ARCH DIMENSIONS SPAN	RISE	THICK	DIMENSIONS A 1" ±	B MAX.	H 1" ±	L 1½"±	W 2" ±	APP. SLOPE	BODY
18	11	.064	7	9	6	19	30	2½	1 PC
22	13	.064	7	10	6	23	36	2½	1 PC
29	18	.064	9	14	6	32	48	2½	1 PC

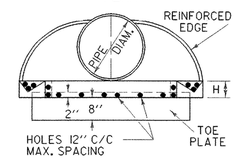
CORRUGATED PIPE ARCH END SECTION

ALTERNATE CONNECTIONS





FOR 12" THRU 24"

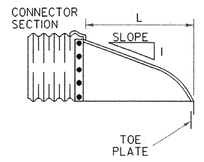


ELEVATION

TOE PLATE TO BE PUNCHED TO MATCH HOLES IN SKIRT LIP. ⅜" GALVANIZED BOLTS TO BE FURNISHED. LENGTH OF TOE PLATE IS W+10" FOR 12" TO 24" DIA. PIPE INCL.

SKIRT SECTION FOR 12" TO 24" DIAMETER PIPE INCL. TO BE MADE IN ONE PIECE.

CONNECTOR SECTION, CORNER PLATE, AND TOE PLATE TO BE SAME GAUGE AS SKIRT.



TYPICAL CROSS-SECTION

PIPE DIAM.	THICK	DIMENSIONS A 1" ±	B MAX.	H 1" ±	L 1½"±	W 2" ±	APP. SLOPE	BODY
12	.064	6	6	6	21	24	2½	1 PC
15	.064	7	8	6	26	30	2½	1 PC
18	.064	8	10	6	31	36	2½	1 PC
21	.064	9	12	6	36	42	2½	1 PC
24	.064	10	13	6	41	48	2½	1 PC

CORRUGATED PIPE END SECTION

NOT TO SCALE

REVISIONS AND CORRECTIONS

DEC. 6, 1971 - ORIGINAL APPROVAL DATE.
JULY 24, 1975 - GRANULAR MATERIAL AT CULVERT LOCATIONS CORRECTED.
OCT. 30, 1985 - REVISED TO CONFORM TO 1986 SPECIFICATIONS.
JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.
AUG 13, 2007 - MINOR CORRECTIONS & REVISIONS DELETED EXTERIOR SERVICE BOX AND CURB STOP, MOVED UNDERDRAIN RISER TO STD D-30.

APPROVED

Kevin A. Marchia
ROADWAY, TRAFFIC & SAFETY ENGINEER

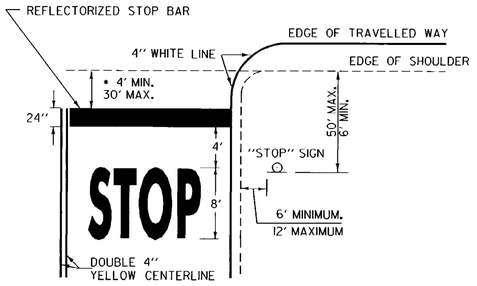
Richard Tetreault
DIRECTOR OF PROGRAM DEVELOPMENT

Mark D Richter
FEDERAL HIGHWAY ADMINISTRATION

CORRUGATED PIPE END SECTION, ARCH END SECTION, AND ELBOW
GRANULAR MATERIAL AT METAL CULVERT LOCATIONS
TYPICAL WATERFALL FOR CULVERTS

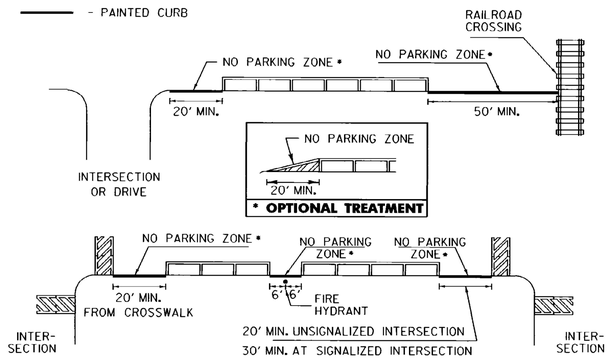
VERMONT AGENCY OF TRANSPORTATION

STANDARD
D-4

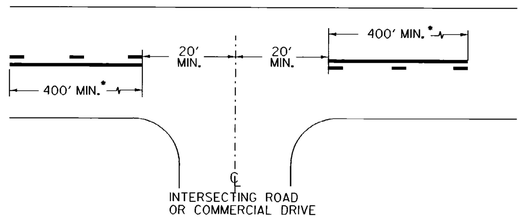


• THE "DESIRED STOPPING POINT" IS THE LOCATION BASED ON SITE CONDITIONS THAT BEST ALLOWS THE STOPPED VEHICLE TO VIEW THE APPROACHING TRAFFIC.

STOP BAR LAYOUT



NO PARKING LAYOUT DETAILS



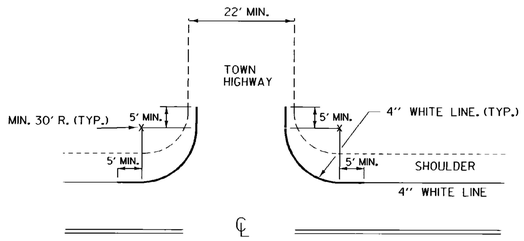
• THE SOLID LINE SHALL BE PAIRED WITH EITHER A SOLID OR DASHED LINE DEPENDING ON SIGHT DISTANCE AVAILABILITY IN THE OPPOSING DIRECTION. ADJUSTMENTS TO THE 40 FOOT CENTERLINE OPENING MAY BE MADE TO ACCOMMODATE SKEWED INTERSECTIONS.

CENTERLINE BREAKES:

A. AT ALL STATE HIGHWAYS AND TOWN HIGHWAYS, INCLUDING CLASS 4 TH'S. THAT HAVE STOP AND LEGAL LOAD LIMIT SIGNS INSTALLED

B. COMMERCIAL DRIVES:
1. WHERE A SEPERATE TURN LANE EXISTS ON THE MAIN LINE (LT. OR RT.)
2. SIGNIFICANT TRAFFIC VOLUMES EXISTS.
3. IF MOTORISTS NEED ASSISTANCE TO DEFINE ENTRANCE POINTS.

CENTERLINE LAYOUT

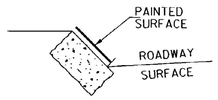


EDGELINES SHALL BE APPLIED TO ALL STATE HIGHWAYS AND SHOULD BE MAINTAINED AT A CONSTANT DISTANCE FROM THE CENTERLINE UNLESS PAVEMENT WIDTH INCREASES TO ALLOW WIDER LANES.

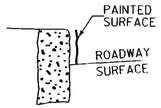
APPLY EDGELINE AS DETAILED ON ALL PAVED CLASS 1 & CLASS 2 TOWN HIGHWAYS AND ANY CLASS 3 TOWN HIGHWAY 22 FEET OR MORE IN WIDTH.

IF MIN. 30 FOOT RADIUS CANNOT BE OBTAINED, OR THE TOWN HIGHWAY IS NOT PAVED, BREAK THE EDGELINE USING AN 80 FOOT GAP AT INTERSECTION.

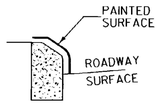
EDGELINE LAYOUTS



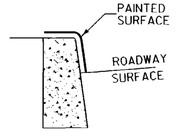
GRANITE SLOPE EDGING



VERTICAL GRANITE CURB

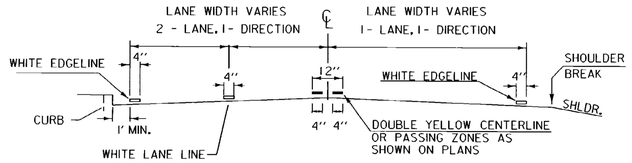


TYPE A (CONCRETE)

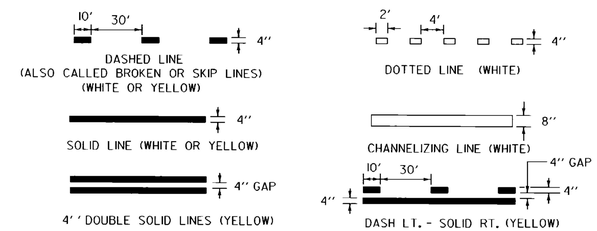


TYPE B (CONCRETE)

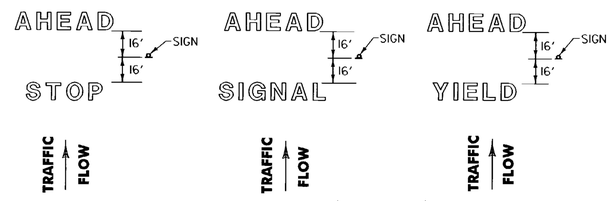
PAINTED CURB



PAVEMENT MARKING PLACEMENT DETAIL

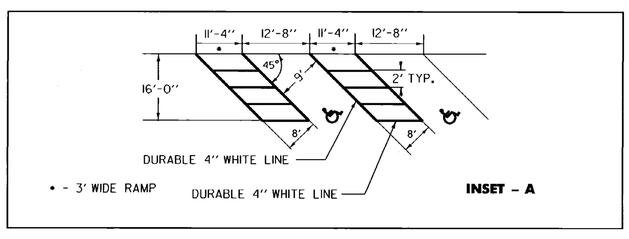


PAVEMENT MARKING LINE DETAILS



LETTER IN WORD MARKING SPACING DETAIL

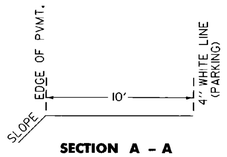
NOTE: SINGLE WORDS CENTERED ON SIGN ie: SCHOOL OR YIELD



INSET - A

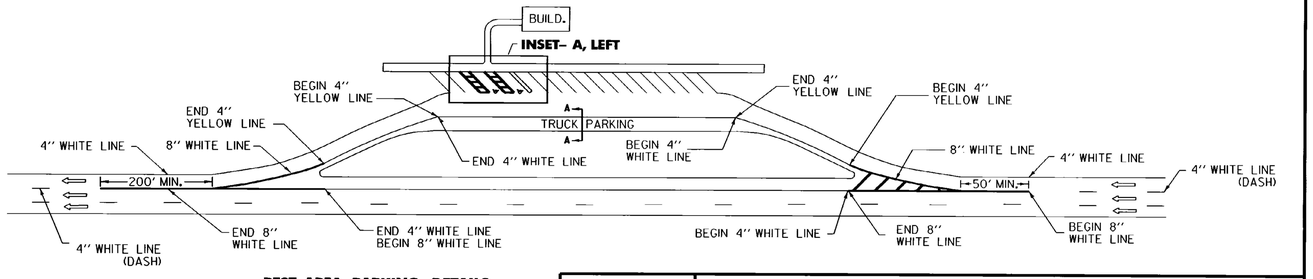
NOTE:

SEE STANDARD SHEET E-191 FOR HANDICAP SYMBOL POSITIONING AND DETAIL.



SECTION A - A

TRUCK PARKING DETAIL



REST AREA PARKING DETAILS

THIS SHEET IS NOT TO SCALE

OTHER STDS. E - 191, E - 192 REQUIRED

REVISIONS AND CORRECTIONS

AUG. 18, 1995 - DATE OF ORIGINAL ISSUE

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

DIRECTOR OF ENGINEERING

TRAFFIC AND SAFETY ENGINEER

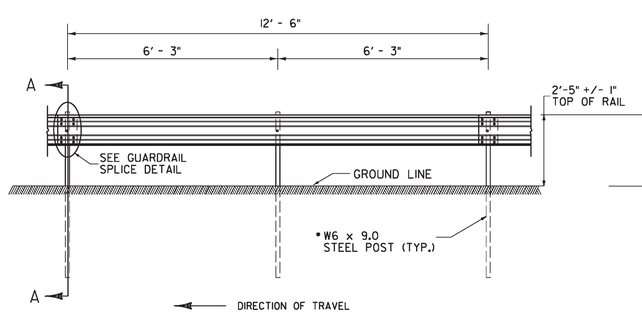
PAVEMENT MARKING DETAILS

/traf/std/stdel93.dgn/stdel93.i

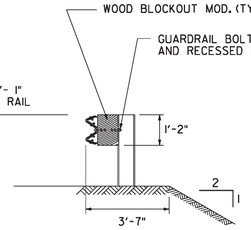
VERMONT AGENCY OF TRANSPORTATION

STANDARD E-193

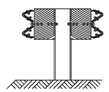
"W" BEAM GUARDRAIL WITH STEEL POSTS



ELEVATION FROM ℄ OF ROAD



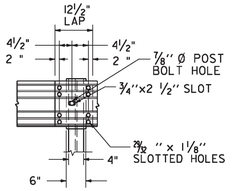
SINGLE - FACED BARRIER



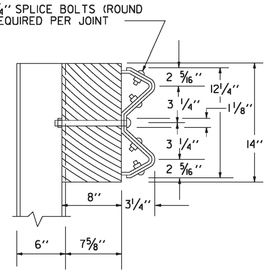
DOUBLE - FACED BARRIER

PLAN

SECTION A -A

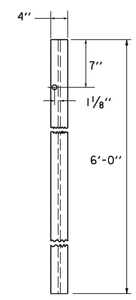


ELEVATION

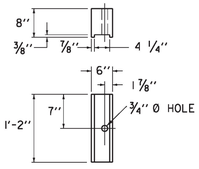


SECTION

GUARDRAIL SPLICE DETAIL



FRONT FACE
STEEL POST

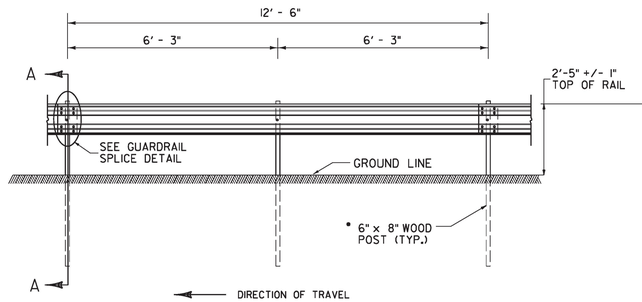


POST FACE
MODIFIED WOOD BLOCKOUT- ROUTED
6"X 8"X 1'-2"
FOR USE W/ STEEL POSTS ONLY

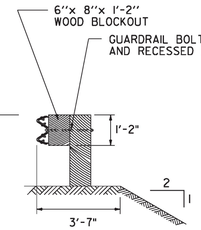
NOTES:

1. BLOCKS SHALL BE MADE OF TIMBER WITH A STRESS GRADE OF 1200 PSI OR MORE. TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU OR OTHER APPROPRIATE ASSOCIATION. TIMBER FOR BLOCKS SHALL BE ROUGH SAWN (UNPLANED) WITH DIMENSIONS INDICATED. THE SIZE TOLERANCE OF ROUGH SAWN BLOCKS IN THE DIRECTION OF THE BOLT HOLES SHALL BE NOT MORE THAN +/- ¼".
2. SUPPLY WOOD BLOCKS PER AASHTO M 168.
3. TREAT WITH PRESERVATIVE PER AASHTO M 133.
4. BLOCKOUTS MAY ALSO BE MADE OF APPROVED ALTERNATIVE MATERIAL.

"W" BEAM GUARDRAIL WITH WOOD POSTS

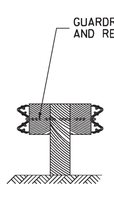


ELEVATION FROM ℄ OF ROAD



SINGLE - FACED BARRIER

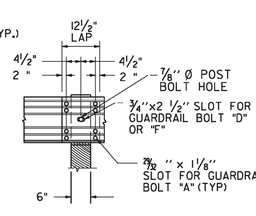
• NOTE : UNLESS OTHERWISE SPECIFIED ON PLANS



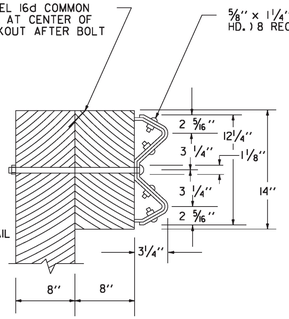
DOUBLE - FACED BARRIER

PLAN

SECTION A -A

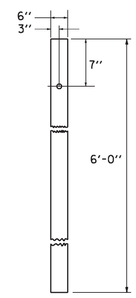


ELEVATION

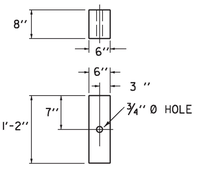


SECTION

GUARDRAIL SPLICE DETAIL



FRONT FACE
WOOD POST

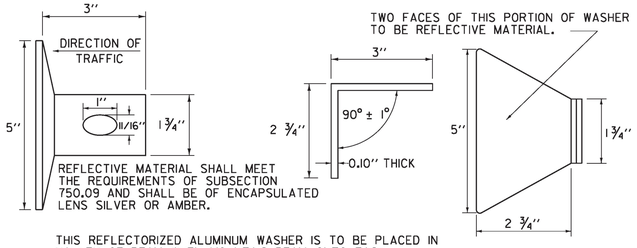


POST FACE
WOOD BLOCKOUT
6"X 8"X 1'-2"

NOTES:

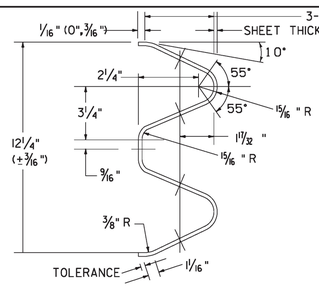
1. BLOCKS SHALL BE MADE OF TIMBER WITH A STRESS GRADE OF 1200 PSI OR MORE. TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU OR OTHER APPROPRIATE ASSOCIATION. TIMBER FOR BLOCKS SHALL BE ROUGH SAWN (UNPLANED) WITH DIMENSIONS INDICATED. THE SIZE TOLERANCE OF ROUGH SAWN BLOCKS IN THE DIRECTION OF THE BOLT HOLES SHALL BE NOT MORE THAN +/- ¼".
2. SUPPLY WOOD BLOCKS PER AASHTO M 168.
3. TREAT WITH PRESERVATIVE PER AASHTO M 133.
4. BLOCKOUTS MAY ALSO BE MADE OF APPROVED ALTERNATIVE MATERIAL.

GUARDRAIL DELINEATOR

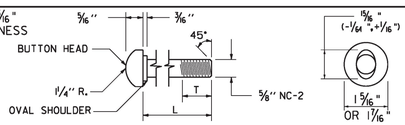


REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.09 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER.

THIS REFLECTORIZED ALUMINUM WASHER IS TO BE PLACED IN VALLEY OF BEAM WHEN MOUNTING BEAM ONTO EACH FIFTH POST. WASHER SHALL MEET SPECIFICATION REQUIREMENTS FOR A.S.T.M. B-209 ALLOY 5052-H32.

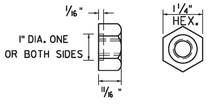


ARTBA RE-3(206'-3"=12'-6" CLASS A, TYPE 1)-73
TYPICAL GUARDRAIL SECTION

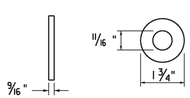


GUARDRAIL BOLT

GUARDRAIL BOLTS				FASTENER USED IN	
BOLT DES.	ARTBA REF. NO.	L	T (MIN.)	STEEL POSTS	WOOD POSTS
"A"	F-3(11¼)-76	1¼"	1"	X	X
"C"	F-3(9½)-76	9½"	1¾"	X	
"D"	F-3(18)-76	18"	2½"		X
"F"	F-3(25)-76	25"	2"		X



RECESSED NUT FOR GUARDRAIL BOLT



WASHER FOR ⅝" BOLTS
ARTBA F-13-73
NOTE: WASHER IS USED UNDER RECESSED NUT WHERE GUARDRAIL BOLT IS USED WITH WOOD POSTS.

GENERAL NOTES:

1. GUARDRAIL SHALL MEET THE REQUIREMENTS OF AASHTO M 180, CLASS A, TYPE 1, UNLESS OTHERWISE DESIGNATED.
2. GUARDRAIL SHALL BE SINGLE FACED UNLESS OTHERWISE DESIGNATED.
3. GUARDRAIL SECTIONS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW FOR THE LANE NEAREST THE GUARDRAIL.
4. FOR DESCRIPTION AND SPECIFICATION OF PARTS IDENTIFIED BY (ARTBA ...) AND OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS & RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO. 13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE", LATEST EDITION.
5. STANDARD STEEL BEAM TO BE 1/8" AND THE HEAVY DUTY TO BE 3/64 " THICK.

OTHER STANDARD REQUIRED: G-1d

REVISIONS AND CORRECTIONS

JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

JAN. 3, 2000 - UPDATED TO REFLECT METRIC STD. CHANGES

FEB. 10, 2014 - UPDATED TO REFLECT GUARDRAIL HEIGHT OF 29"; AS NOTED IN FHWA LETTER DATED MAY 17, 2010

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

STEEL BEAM GUARDRAIL WITH STEEL POSTS
STEEL BEAM GUARDRAIL WITH WOOD POSTS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

G-1

1. TRAFFIC CONTROL DEVICES NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAOT) "STANDARD DRAWINGS" OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

2. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.

3. CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.

4. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.

5. NO CROSS-BRACING OR BACK-BRACING TO KEEP POSTS PLUMB WILL BE ALLOWED. CONCRETE FOUNDATIONS, COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED. CONSTRUCTION SIGNS SHALL BE PLACED ON TWO POSTS.

6. CONSTRUCTION SIGNS INSTALLED ON POSTS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT, FOUR FEET OUTSIDE GUARDRAIL, OR TWO FEET OUTSIDE CURBING OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE SIDEWALK OR EDGE OF PAVEMENT, WHICHEVER IS HIGHER.

7. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.

8. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.

9. ROLL UP CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE VI AND TYPE VII UNLESS OTHERWISE NOTED.

10. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE VIII OR IX REQUIREMENTS UNLESS OTHERWISE NOTED.

11. WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.

12. ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.

13. THESE STANDARD DRAWINGS ARE INTENDED TO SERVE AS VTRANS STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS, AT THE DISCRETION OF THE ENGINEER.

OTHER STDS. REQUIRED: **NONE**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

TRAFFIC CONTROL GENERAL NOTES

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-1

LEGEND

(A) ROAD WORK AHEAD — W20-1

(B) ROAD WORK 500 FT — W20-1

(C) SIDE ROAD WORK AHEAD — VC-869

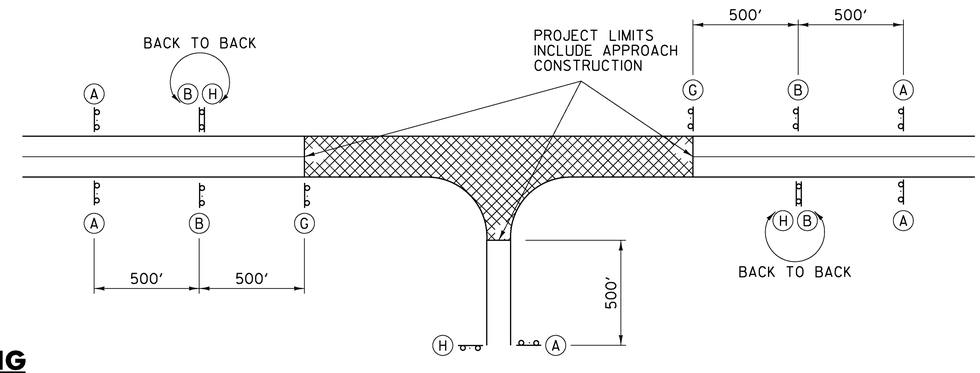
(D) SIDE ROAD WORK 500 FT — VC-869

(E) SIDE ROAD WORK LEFT — VC-869

(F) SIDE ROAD WORK RIGHT — VC-869

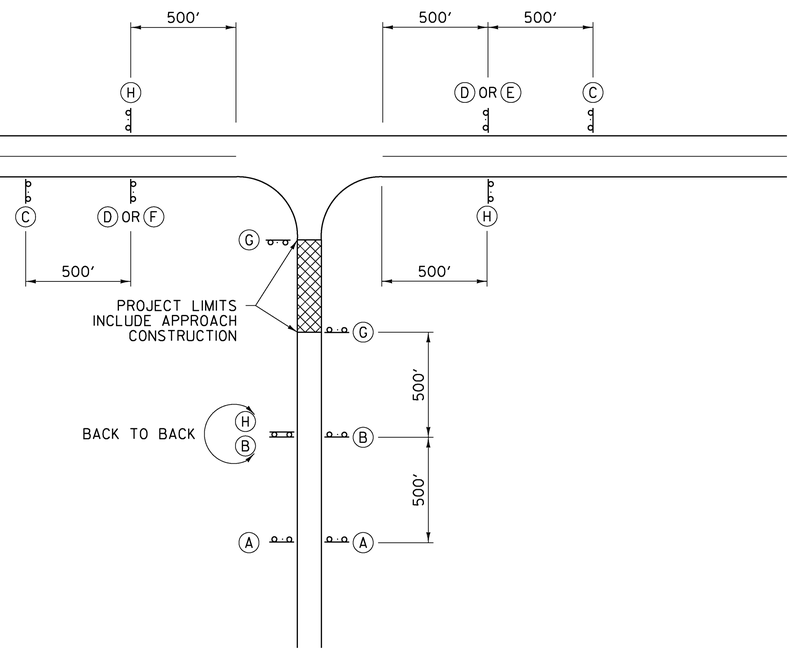
(G) ROAD WORK NEXT XX MILES — G20-1

(H) END ROAD WORK — G20-2



TYPICAL APPROACH SIGNING

FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.



SIDE ROAD APPROACH SIGNING

TO BE USED WHEN CONSTRUCTION IS UP TO 1000 FEET FROM THE INTERSECTION. FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.

GENERAL NOTES:

1. SIGNS SHOWN ON THIS SHEET ARE INTENDED FOR USE IN PROVIDING ADVANCE WARNING AND INFORMATION ON CONSTRUCTION PROJECTS OVER WHICH TRAFFIC WILL BE MAINTAINED. WHEN ADDITIONAL APPROACH SIGNS OR OTHER TYPES OF ADVANCE SIGNING OR CONTROL ARE NECESSARY, THE PLANS AND/OR THE SPECIFICATIONS FOR THAT PROJECT WILL GIVE THE DETAILS OF THE SIGNS AND DEVICES REQUIRED. FOR ON-PROJECT CONSTRUCTION SIGNS, REFER TO APPROPRIATE STANDARD SHEETS.
2. THE "ROAD WORK NEXT XX MILES" SIGN (G20-1) SHALL BE INSTALLED IN ADVANCE OF TEMPORARY TRAFFIC CONTROL ZONES THAT ARE MORE THAN TWO MILES IN LENGTH OR AS DIRECTED BY THE ENGINEER. DISTANCES SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. SIGNS SHALL BE LOCATED AS DETAILED ON THIS SHEET OR AS OTHERWISE SHOWN ON THE PLANS. THEY SHALL APPEAR AT EACH END OF THE HIGHWAY UNDER CONSTRUCTION AND ON ALL INTERSECTING PUBLIC HIGHWAYS. THE ENGINEER SHALL DETERMINE THE EXACT LOCATIONS.

OTHER STDS. REQUIRED: T-1, T-28

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

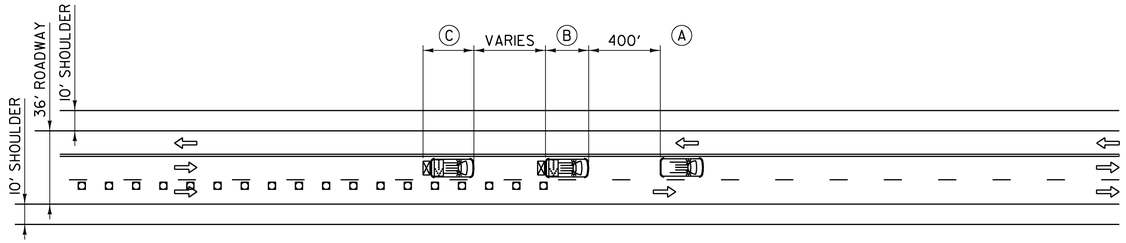
Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING

VERMONT AGENCY OF TRANSPORTATION

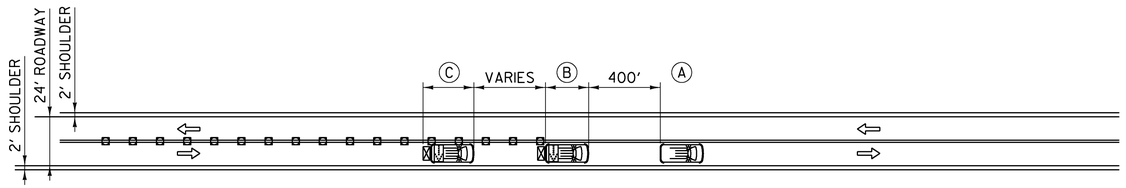
STANDARD T-10



PAVEMENT MARKING OPERATION ON MULTI-LANE ROAD

NOTES:

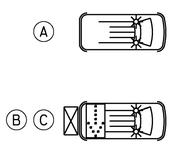
1. PAVEMENT MARKING OPERATION VEHICLE Ⓒ SHOULD TRAVEL AT A VARYING DISTANCE FROM THE PAVEMENT MARKING OPERATION SO AS TO PROVIDE ADEQUATE SIGHT DISTANCE FOR TRAFFIC APPROACHING FROM THE REAR.
2. ON HIGH SPEED ROADWAYS, A THIRD PROTECTION VEHICLE SHOULD BE USED - THE FIRST PROTECTION VEHICLE ON THE SHOULDER (IF POSSIBLE), THE SECOND PROTECTION VEHICLE IN THE CLOSED LANE, AND THE THIRD PROTECTION VEHICLE IN THE CLOSED LANE.
3. ARROW PANELS SHALL BE AS A MINIMUM TYPE B, 60 INCHES BY 30 INCHES (MUTCD FIGURE 6F-6, SECTION 6F.61).
4. WORK SHOULD BE PERFORMED DURING OFF-PEAK TRAFFIC HOURS WHEN PRACTICAL.



PAVEMENT MARKING OPERATION ON TWO LANE ROAD

NOTES:

1. ALL PAVEMENT MARKING VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.
2. THE DISTANCE BETWEEN THE WORK AND PROTECTION VEHICLES MAY VARY ACCORDING TO TERRAIN AND OTHER FACTORS. PROTECTION VEHICLES ARE USED TO WARN TRAFFIC OF THE OPERATION AHEAD.
3. UNIFORMED TRAFFIC OFFICERS MAY BE USED TO CONTROL TRAFFIC AT INTERSECTIONS.
4. VEHICLE MOUNTED SIGNS SHALL BE MOUNTED WITH BOTTOM OF THE SIGN AT A MINIMUM HEIGHT OF ONE FOOT ABOVE THE PAVEMENT. SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
5. ARROW PANELS ARE OPTIONAL; WHEN USED ARROW PANELS SHALL BE DISPLAYED IN CAUTION MODE.



OPERATION VEHICLE SYMBOLOGY

- FLOW OF TRAFFIC
- FLASHING ARROW PANEL
- TRUCK MOUNTED ATTENUATOR (TMA)
- CONE
- PAVEMENT MARKING OPERATION VEHICLE
- Ⓐ PAVEMENT MARKING VEHICLE WITH FLASHING ARROW PANEL, "WET PAINT WITH LEFT ARROW" VC-886L, "WET PAINT WITH RIGHT ARROW" VC-886R SIGNS.
- Ⓑ PROTECTION VEHICLE WITH CONE CAPABILITIES AND TMA.
- Ⓒ PROTECTION VEHICLE WITH FLASHING ARROW PANEL, TMA, "WET PAINT" VC-885, "WET PAINT WITH LEFT ARROW" VC-886L, "WET PAINT WITH RIGHT ARROW" VC-886R SIGNS.

GENERAL NOTES:

1. ALL VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS IN ADDITION TO VEHICLE HAZARD LIGHTS.
2. PROTECTION VEHICLE Ⓒ SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
3. SIGNS LOCATED ON PAVEMENT MARKING OPERATION VEHICLES SHALL BE PLACED SO AS NOT TO OBSCURE OTHER SIGNS OR FLASHING ARROW PANELS.
4. REPEAT "WET PAINT" (VC-885) SIGN AS NEEDED AT SIDE ROADS
5. ALL DISTANCES ARE DESIRABLE MINIMUMS. FIELD CONDITIONS SHALL CONTROL THE ACTUAL SPACING OF THE VEHICLES.
6. CONE SPACING SHALL BE ADEQUATE SO THAT DRIVERS CAN ALWAYS SEE ONE CONE.

OTHER STDS. REQUIRED: T-1, T-29

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

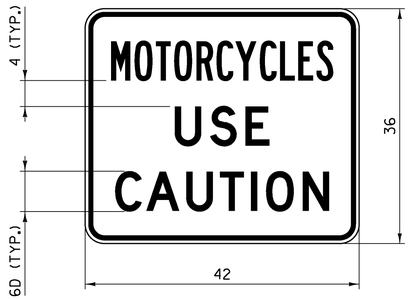
FEDERAL HIGHWAY ADMINISTRATION

TRAFFIC CONTROL FOR MAINTENANCE PAVEMENT MARKING OPERATION

VERMONT AGENCY OF TRANSPORTATION

STANDARD

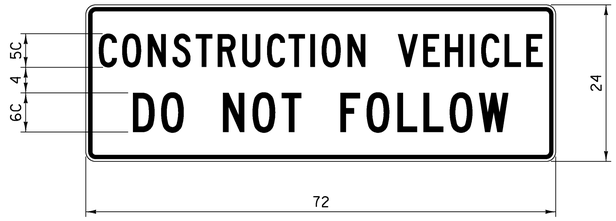
T-24



VC-004P

NOTES:

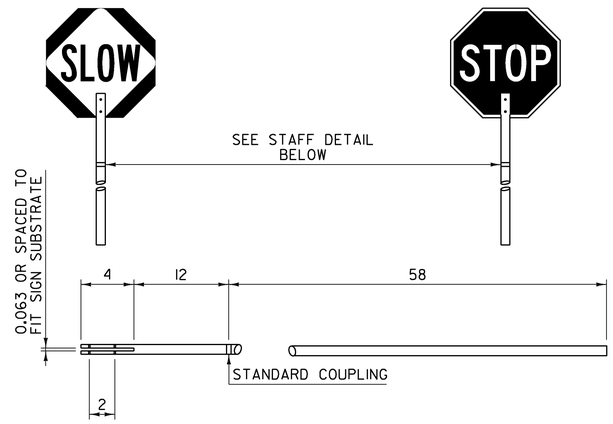
1. CORNERS SHALL BE ROUNDED TO A THREE INCH RADIUS.
2. THE BORDER SHALL BE 3/4 INCH WIDE WITH A 1/2 INCH INDENT FROM THE EDGE OF THE SIGN.
3. "MOTORCYCLES" SHALL HAVE A SPECIFIED WIDTH OF 34 INCHES.
4. "USE" SHALL HAVE A SPECIFIED WIDTH OF 14 1/2 INCHES.
5. "CAUTION" SHALL HAVE A SPECIFIED WIDTH OF 32 3/4 INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.



VC-007

NOTES:

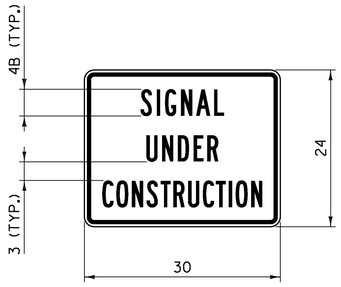
1. CORNERS SHALL BE ROUNDED TO A 1 1/2 INCH RADIUS.
2. THE BORDER SHALL BE 5/8 INCH WIDE WITH A 3/8 INCH INDENT FROM THE EDGE OF THE SIGN.
3. "CONSTRUCTION VEHICLE" SHALL HAVE A SPECIFIED WIDTH OF 68 INCHES.
4. "DO NOT FOLLOW" SHALL HAVE A SPECIFIED WIDTH OF 57 1/2 INCHES.
5. SIGN SHALL BE MOUNTED IN A CONSPICUOUS LOCATION ON THE REAR OF THE CONSTRUCTION VEHICLE.
6. THE SIGN SHALL BE MOUNTED AS NOT TO INTERFERE WITH THE VISIBILITY OF DIRECTIONAL SIGNALS OR TAIL LIGHTS AS REQUIRED BY LAW.
7. SIGN SHALL BE COVERED OR REMOVED WHEN NOT IN USE.



STOP-SLOW PADDLE & STAFF DETAIL

NOTES:

1. REFER TO THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) "TEMPORARY TRAFFIC CONTROL - WARNING SIGNS" FOR THE STOP-SLOW PADDLE DESIGN.
2. COLORS FOR THE SLOW SIDE OF THE PADDLE SHALL BE BLACK LEGEND AND BORDER ON A FLUORESCENT ORANGE DIAMOND WITH RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE VII, VIII OR IX REQUIREMENTS.
3. COLORS FOR THE STOP SIDE OF THE PADDLE SHALL BE WHITE RETROREFLECTIVE LEGEND AND BORDER ON A RED RETROREFLECTIVE OCTAGON. BOTH COLORS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE III.
4. SIGN SUBSTRATE MATERIALS SHALL BE ALUMINUM, ACRYLONITRILE BUTADIENE STYRENE (ABS) PLASTIC OR EQUIVALENT.
5. THE STAFF MAY BE RIGID ABS PLASTIC OR WOOD WITH A ONE TO 1 1/2 INCH DIAMETER.
6. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE COMPLETELY VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.



VC-820

NOTES:

1. CORNERS SHALL BE ROUNDED TO A 1 1/2 INCH RADIUS.
2. THE BORDER SHALL BE 5/8 INCH WIDE WITH A 3/8 INCH INDENT FROM THE EDGE OF THE SIGN.
3. "SIGNAL" SHALL HAVE A SPECIFIED WIDTH OF 12 3/4 INCHES.
4. "UNDER" SHALL HAVE A SPECIFIED WIDTH OF 11 INCHES.
5. "CONSTRUCTION" SHALL HAVE A SPECIFIED WIDTH OF 24 1/2 INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.

GENERAL NOTES:

1. ALL LEGEND SHALL BE CENTERED VERTICALLY AND HORIZONTALLY UNLESS OTHERWISE NOTED.
2. COLORS FOR SIGNS SHALL BE BLACK LEGEND AND BORDER ON FLUORESCENT ORANGE BACKGROUND UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS IN INCHES.

OTHER STDS. REQUIRED: T-1

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

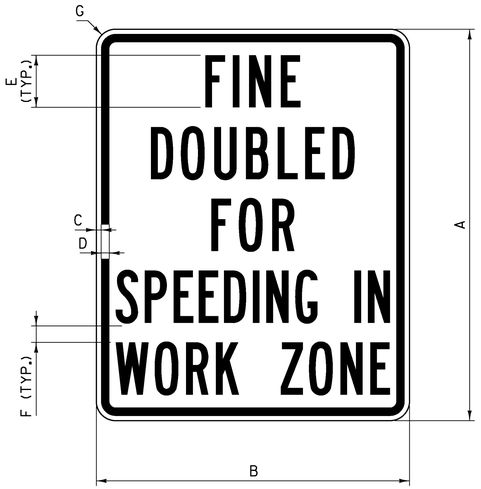
FEDERAL HIGHWAY ADMINISTRATION

CONSTRUCTION SIGN DETAILS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-30

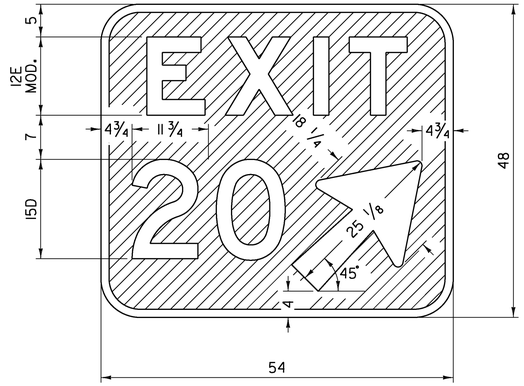


VR-355

SIGN	DIMENSIONS						
	A	B	C	D	E	F	G
STANDARD	36	30	1/2	3/4	4C	2 1/4	1 7/8
EXPRESSWAY/ FREEWAY	60	48	3/4	1 1/4	8B	3	3

NOTES:

1. "SPEEDING IN" AND "WORK ZONE" SHALL EACH HAVE A SPECIFIED WIDTH OF 26 INCHES FOR STANDARD AND 42 INCHES FOR EXPRESSWAY/FREEWAY.
2. THE SIGN SHALL HAVE BLACK LEGEND AND BORDER ON A WHITE BACKGROUND WITH RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
3. LEGEND SHALL BE CENTERED HORIZONTALLY AND VERTICALLY.



VC5-1A

NOTES:

1. THE SIGN SHALL BE WHITE RETROREFLECTIVE LEGEND ON A GREEN RETROREFLECTIVE BACKGROUND, BOTH SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
2. CORNERS SHALL BE ROUNDED TO A SIX INCH RADIUS.
3. THE SIGN SHALL HAVE A 1 1/4 INCH WIDE BORDER ALONG THE EDGE OF THE SIGN.
4. EXIT NUMBER SHALL BE AS PER PLANS, OPTICALLY SPACED.
5. "EXIT" SHALL BE CENTERED HORIZONTALLY.

GENERAL NOTES:

1. ALL DIMENSIONS IN INCHES.

OTHER STDS. REQUIRED: T-1

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

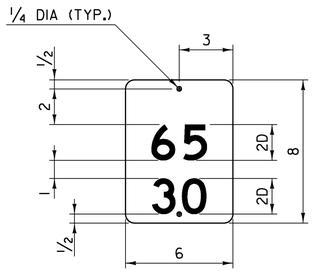
Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

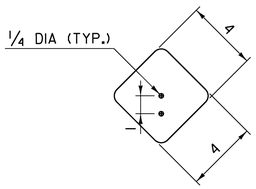
CONSTRUCTION SIGN DETAILS

VERMONT AGENCY OF TRANSPORTATION

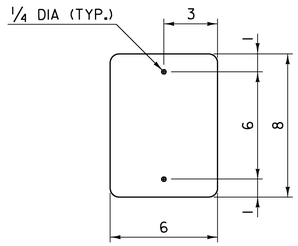
STANDARD T-31



INTERSTATE MILEPOST PLAQUE



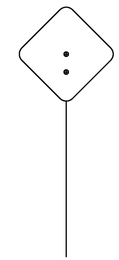
TYPE I DELINEATOR



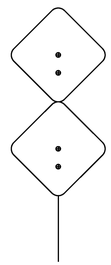
TYPE II DELINEATOR

GENERAL NOTES:

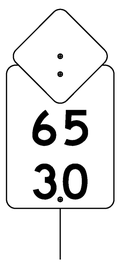
1. THE FIRST LINE OF TEXT ON INTERSTATE MILEPOST PLAQUES INDICATES THE WHOLE NUMBER MILEAGE FROM THE BEGINNING OF A ROUTE. MILEAGE IS ALWAYS MEASURED TRAVELING FROM THE SOUTH TO NORTH OR FROM THE WEST TO EAST. THE ROUTE DIRECTION IS ESTABLISHED USING THE VERMONT AGENCY OF TRANSPORTATION (VAOT) ROUTE LOGS.
2. THE SECOND LINE OF TEXT ON INTERSTATE MILEPOST PLAQUES INDICATES THE ADDITIONAL MILEAGE, IN HUNDREDTHS, FROM THE BEGINNING OF A ROUTE. MILEAGE IS ALWAYS MEASURED TRAVELING FROM THE SOUTH TO NORTH OR FROM THE WEST TO EAST. THE ROUTE DIRECTION IS ESTABLISHED USING THE VAOT ROUTE LOGS.
3. THE INTERSTATE MILEPOST PLAQUE SHALL BE GREEN RETROREFLECTIVE LEGEND ON A WHITE RETROREFLECTIVE BACKGROUND AND SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
4. ALL LINES OF TEXT SHALL BE CENTERED HORIZONTALLY AND SHALL BE AS IDENTIFIED IN THE PLANS.
5. THE INTERSTATE MILEPOST PLAQUE AND DELINEATOR BASE MATERIAL SHALL BE 0.063 INCH FLAT SHEET ALUMINUM.
6. CORNERS SHALL BE ROUNDED TO A 1/2 INCH RADIUS.
7. A TYPE III DELINEATOR CONSISTS OF A TYPE I DELINEATOR FACING THE NORMAL DIRECTION OF TRAVEL AND A SINGLE RED TYPE I DELINEATOR FACING THE OPPOSITE DIRECTION. THE WHITE DELINEATOR AND RED DELINEATOR COMBINATION IS PLACED ON THE DRIVER'S RIGHT AND THE AMBER DELINEATOR AND RED DELINEATOR COMBINATION ON THE DRIVER'S LEFT.
8. DELINEATORS SHALL HAVE WHITE, GREEN, OR BLUE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 ASTM D 4956 TYPE III, OR RED OR YELLOW RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 ASTM D 4956 TYPE VII, VIII, OR IX.
9. A SINGLE 14 GAGE, 1.75 INCH SQUARE STEEL POST AND 12 GAGE, TWO INCH SQUARE ANCHOR SHALL BE USED FOR INSTALLATION. THE ANCHOR SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
10. THE TOP OF POST SHALL BE ONE INCH ABOVE THE UPPER HOLE FOR ALL TYPE I DELINEATORS.
11. THE TOP OF POST SHALL BE FLUSH WITH THE TOP OF ALL TYPE II DELINEATORS.
12. ALL DIMENSIONS SHOWN IN INCHES.



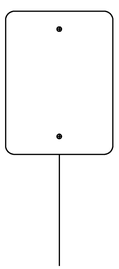
TYPE I



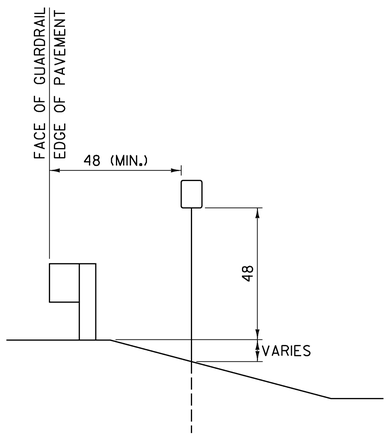
TYPE I – U-TURNS



WHITE TYPE I WITH MILEPOST PLAQUE



TYPE II



INSTALLATION DETAIL*

• INSTALLATION DETAIL APPLICABLE TO ALL DELINEATOR ASSEMBLIES

OTHER STDS. REQUIRED: T-45

REVISIONS AND CORRECTIONS

JAN. 2, 2013 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

DELINEATORS AND MILEPOSTS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-40

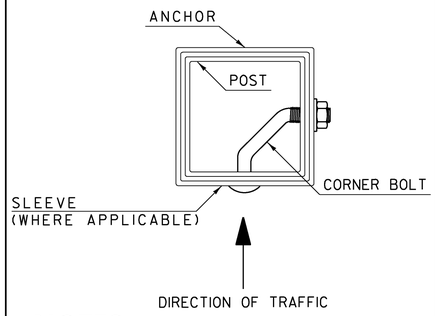
POST AND ANCHOR SELECTION CHART

POST SIZE (IN.)	POST THICKNESS (IN.)	POST WEIGHT (LBS/FT.)	POST GAGE	SECTION MODULUS (IN.³)	ONE POST SV	TWO POST SV	THREE POST SV	POSTS PERMITTED IN 8' PATH	ANCHOR SIZE (IN.)	ANCHOR GAGE	MINIMUM ANCHOR LENGTH
1.75	.083	1.88	14	0.222	45	90	135	TWO	2.00	12	30
2.00	.109	2.42	12	0.393	80	160	240	TWO	2.25	12	48
2.50	.109	3.35	12	0.673	137	274	411	ONE	3.00	7	48

NOTES:

1. ALL SIGN POSTS SHALL HAVE 7/16 INCH HOLES EVERY ONE INCH ON CENTER (ALL FOUR SIDES).
2. THE NUMBER OF SIGN POSTS PERMITTED WITHIN AN EIGHT FOOT PATH ASSUMES THAT THE SIGN ASSEMBLY IS NOT PROTECTED BY GUARDRAIL OR IS LOCATED WITHIN A GUARDRAIL'S DEFLECTION DISTANCE DETERMINED PER THE CURRENT "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) ROADSIDE DESIGN GUIDE. ADDITIONAL POSTS MAY BE INSTALLED USING SLIP BASES THAT MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION.
3. TO USE THE SELECTION VALUE (SV) COLUMNS IN THE TABLE ABOVE, MULTIPLY A SIGN'S SURFACE AREA IN SQUARE FEET (H x L) BY THE SIGN'S HEIGHT IN FEET MEASURED FROM THE GROUND TO THE CENTROID OF THE SIGN ASSEMBLY (h). THIS RESULT MUST BE LESS THAN OR EQUAL TO THE CORRESPONDING SELECTION VALUE. NOTE THAT FOR SIGNS WITH MULTIPLE POSTS, THE LARGEST HEIGHT DIMENSION SHALL BE USED TO CALCULATE THE POST SELECTION VALUE.
4. THE DESIGN CRITERIA UTILIZED IN SIGN POST AND ANCHOR SELECTION IS AS FOLLOWS: WIND SPEED OF 70 MPH (10 YEAR MEAN RECURRENCE INTERVAL), WIND PRESSURE OF 19 PSF, STEEL MINIMUM YIELD OF 55,000 PSI, AND AN ALLOWABLE STRESS OF 1.4 (0.60 FY).

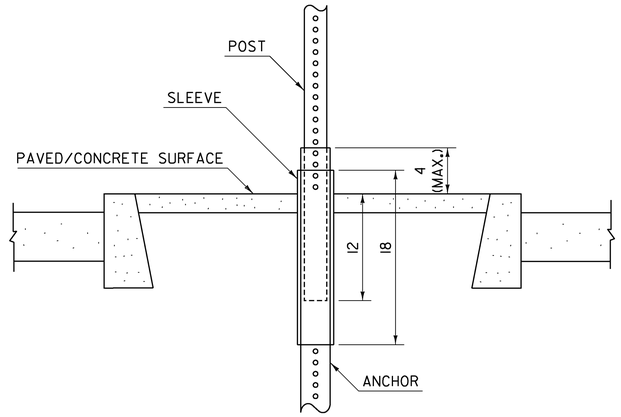
CORNER BOLT INSTALLATION DETAIL



NOTES:

1. CORNER BOLTS SHALL BE 5/16 INCH DIAMETER WITH 18 THREADS PER INCH AND DIMENSIONS SHALL BE DETERMINED BASED ON THE OUTERMOST DIMENSION OF THE SLEEVE, ANCHOR OR POST. THREAD EXPOSURE MUST EXCEED THE CORRESPONDING NUT WIDTH. THE CORNER BOLT AND CORRESPONDING HARDWARE SHALL BE ZINC PLATED, MEETING OR EXCEEDING THE REQUIREMENTS OF THE "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) A307.

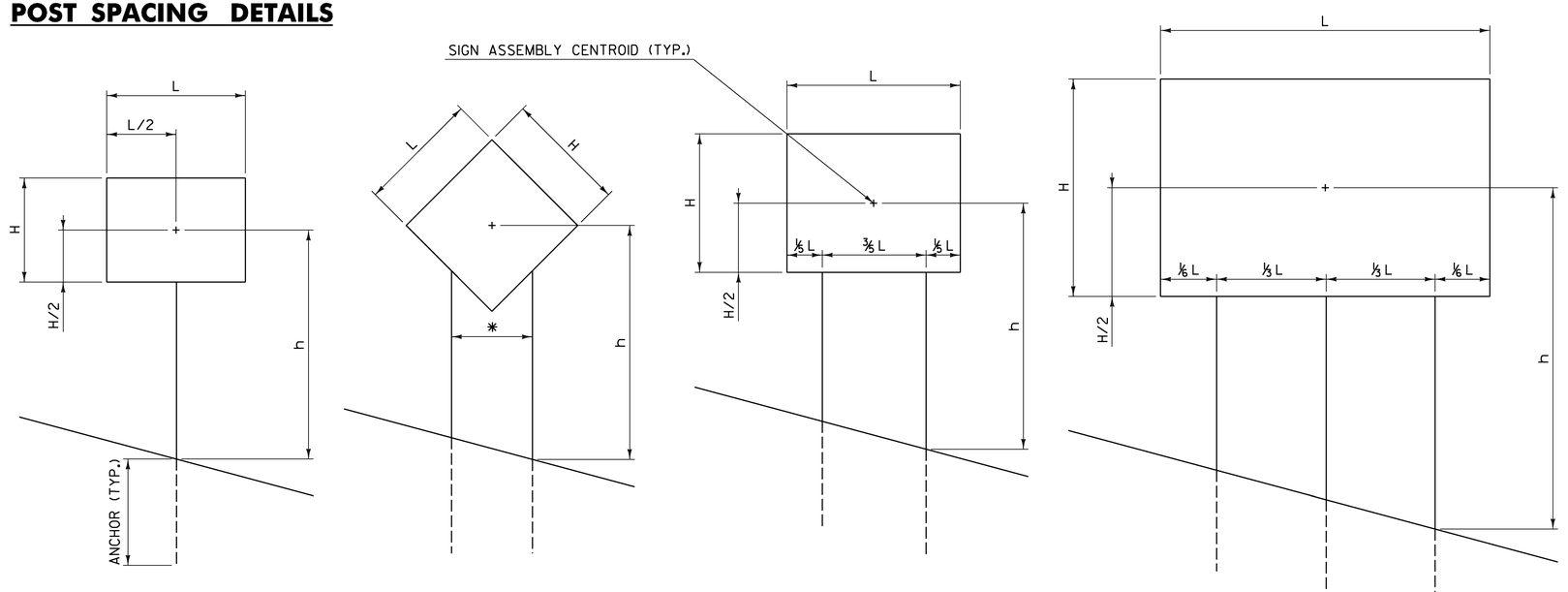
SLEEVE /ANCHOR INSTALLATION DETAIL



NOTES:

1. A SLEEVE SHALL BE INSTALLED FOR SIGN INSTALLATIONS IN CONCRETE OR PAVEMENT.
2. THE SLEEVE SHALL BE 18 INCHES MINIMUM IN LENGTH.
3. THREE INCH SLEEVES THAT DO NOT HAVE HOLES WILL REQUIRE THAT 7/16 INCH HOLES ARE DRILLED TO FACILITATE CONNECTIONS.
4. REFER TO CURRENT EDITION OF THE "VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION" FOR MATERIAL REQUIREMENTS.

POST SPACING DETAILS



* POST SPACING FOR DIAMOND SHAPED SIGNS SHALL BE AS FOLLOWS: 30" SIGN - 15"~20" SPACING, 36" SIGN - 18"~24" SPACING, 48" SIGN - 24"~32" SPACING.

GENERAL NOTES:

1. ALL SQUARE TUBE STEEL POSTS AND ANCHORS SHALL BE FORMED INTO A SIZE AND SHAPE IN SUCH A MANNER THAT NEITHER FLASH NOR WELD SHALL INTERFERE WITH THE TELESCOPING PROPERTIES, NOR DAMAGE THE GALVANIZING.
2. ANCHORS MAY BE DRIVEN OR SET INTO A DUG HOLE AND BACKFILLED. IF DRIVEN, A DRIVING CAP SHALL BE USED. THE DUG HOLE INSTALLATION METHOD SHALL BE UTILIZED IN AREAS WITH POOR SOIL CONDITIONS OR AS DIRECTED BY THE ENGINEER. BACKFILL SHALL BE COMPACTED AS DIRECTED BY THE ENGINEER.
3. THE TOPS OF SIGN POSTS SHALL BE AT OR NEAR THE TOP OF SIGN. THE POST SHALL NOT EXTEND ABOVE THE TOP OF SIGN.
4. SIGN POSTS SHALL BE INSTALLED A MINIMUM OF ONE FOOT BELOW GROUND, INSIDE THE ANCHOR. THE LENGTH OF ANCHOR EXPOSED ABOVE GROUND SHALL NOT EXCEED FOUR INCHES.
5. ALL DIMENSIONS SHOWN IN INCHES.

OTHER STDS. REQUIRED: **NONE**

REVISIONS AND CORRECTIONS

JAN. 2, 2013 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

SQUARE TUBE SIGN POST AND ANCHOR

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-45