REVIEWER NOTES:

- I. THE BRIDGE WAS CLOSED DUE TO STRUCTURAL DEFICIENCIES ON 12/23/2015.
- 2. THERE IS AN 8" MUNICIPAL SEWER MAIN ON THE EASTERLY SIDE OF THE EXISTING BRIDGE, AND AN 8" INSULATED WATER MAIN ON THE WESTERLY SIDE. 3 PHASE TRANSMISSION AND COMMUNICATION CABLES RUN ALONG AND ACROSS TH I NEXT TO THE EXISTING BRIDGE. THESE UTILITIES WILL NEED TO BE RELOCATED FOR THIS PROJECT.

3. THE 8" MUNICIPAL SEWER MAIN AND THE 8" INSULATED WATER MAIN WILL BE RELOCATED BY DIRECTIONAL BORING PRIOR TO CONSTRUCTION OF THE NEW STRUCTURE.

- 4. EXISTING RIGHT-OF-WAY IS CLOSE TO THE EXISTING BRIDGE AND WINGWALLS. IT IS ANTICIPATED THAT ADDITIONAL RIGHT-OF-WAY WILL BE NEEDED FOR CONSTRUCTION.
- 5. SUPERSTRUCTURE AND SUBSTRUCTURES SHOWN ARE CONCEPTUAL IN NATURE AND WILL BE DESIGNED AT A LATER TIME.
- 5. PROPOSED BRIDGE FINAL GRADE RAISED 3" TO ACCOUNT FOR MINIMUM LOW BEAM ELEVATION. IN ACCORDANCE WITH A SITE FLOOD INSURANCE SURVEY, THE ROADWAY AND BRIDGE CANNOT BE RAISED HIGHER THAN 0.3'.

TO VTH. PT

19×00

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 2 SURVEYED BY : RG SURVEYED DATE : 6-13-2014 DATUM

VERTICAL NAVD 88 NAD 1983 (96) HORIZONTAL

BEGIN PROJECT STA 21+25.00 MM 0.4025

20×00

(PRATT H

BEGIN BRIDGE STA 21+60.48

STATE OF VERMONT

AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT

BRIDGE PROJECT

TOWN OF CAVENDISH

COUNTY OF WINDSOR

ROUTE NO: TH I (CLASS 2), LOCAL TOWN ROAD BRIDGE: 58

PROJECT LOCATION: ON TH I (DEPOT STREET), BRIDGE 58 OVER THE BLACK RIVER APPROXIMATELY O. I MILES SOUTHEAST OF THE JUNCTION WITH VT 131.

PROJECT DESCRIPTION: FULL REPLACEMENT OF EXISTING BRIDGE WITH NECESSARY ROADWAY APPROACH AND CHANNEL WORK

+====

SCALF I'' = 40'-0''

-23+00

END BRIDGE

STA 22+57.51

END PROJECT

MM 0.4403

STA 23+25.00

LENGTH	OF	STRUCTURE:	94	FEET
LENGTH	OF	ROAD:	106	FEET
LENGTH	OF	PROJECT:	200	FEET

BL

ACK RIVER

-22-+-00





4

____25+00-

S

TH-I TO VT RT 131

PRELIMINARY PLANS 07-JUN-2017

DIRECTOR OF PROJEC	CT DELIVERY
APPROVED	DATE
PROJECT MANAGER :	ROB YOUNG, P.E.
PROJECT NAME : Project number :	CAVENDISH BO 1442 (38)
SHEET I OF 36	SHEETS

STATE OF VERMONT AGENCY OF TRANSPORTATION



INDEX OF SHEETS

	PLAN SHEETS		
1	TITLE SHEET	A-76	STANDAF
2	PRELIMINARY INFORMATION SHEET	B-71	STANDAF
3 - 5	TYPICAL SECTIONS	C-2A	PORTLAN
6	LEGEND SHEET	C-3A	SIDEWAL
7	TIE SHEET	C-10	CURBING
8	EXISTING CONDITIONS	D-1	PRECAS1
9	LAYOUT SHEET	D-10	REINFOR
10	MAINLINE PROFILE	D-15	PRECAST
11	TH 31 PROFILE	D-16	DRAINAG
12	DRAINAGE LAYOUT AND PROFILES	E-121	STANDAF
13	UTILITY LAYOUT	E-191	PAVEME
14	SIGN AND PAVEMENT MARKINGS SHEET	E-193	PAVEME
15	RAIL LAYOUT SHEET	G-1	STEEL BE
16	BORING LAYOUT SHEET	G-1D	STEEL BE
17 - 19	BORING LOGS	G-10	ANCHOR
20	DRY MASONARY WALL PLAN AND ELEVATION	T-1	TRAFFIC
21 - 25	MAINLINE CROSS SECTIONS	T-10	CONVEN
26	TH 31 CROSS SECTIONS	T-17	TRAFFIC
27 - 30	CHANNEL CROSS SECTIONS	T-24	TRAFFIC
31	EPSC NARRATIVE	T-28	CONSTRU
32	EPSC LAYOUT	T-29	CONSTRU
33 - 35	EPSC DETAILS	T-30	CONSTRU
36	UNDERGROUND UTILITY LAYOUT (WORK DONE BY OTHERS)	T-31	CONSTRU
		T-40	DELINEA
		T-42	BRIDGE N
		T-45	SQUARE
		T-56	STANDAF

DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	2/9/2012
SD-502.00	CONCRETE DETAILS AND NOTES	10/10/2012
SD-516.10	BRIDGE JOINT ASHPALTIC PLUG	8/29/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011

	TRAFFIC DATA						
YEAR	ADT	DHV	% D	% T	ADTT	20 year ESAL for flexible pavement from	2017 to
2017	1000	140	54	5.5	50	40 year ESAL for flexible pavement from	2017 to
2037	1100	170	54	7.2	70	Design Speed : 25 mph	

PRELIMINARY INFORMATION SHEET (BRIDGE)

		FINAL HYDRAULIC REPORT			
STANDARDS LIST		HYDROLOGIC DATA	Date: August 2016	PROPOSED STRUCTURE	
S FOR TOWN & DEVELOPMENT ROADS	03-03-2003	DRAINAGE AREA · 79.1 sg. mi		STRUCTURE TYPE: Single span steel beam bridge	
CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH S	IDEWALK AD 10-14-2005	CHARACTER OF TERRAIN : Forested, open and	partially developed		
RAMPS	03-10-2008	STREAM CHARACTERISTICS : Incised, sinuous, allu	ivial	CLEAR SPAN(NORMAL TO STREAM):	86'
	02-11-2008	NATURE OF STREAMBED : Sand, gravel and col	bbles		<u>10.8'</u>
REINFORCED CONCRETE DROP INLET DETAILS	06-01-1994 E CURB & CR 06-01-1994	PEAK FLOW DATA - ANNUAL EXCEEDANCE PROBA		WATERWAY OF FULL OPENING.	
REINF CONC. MH-GRATES, CAST IRON GRATE WITH FRAME, 1	TYPE D & E 06-01-1994			WATER SURFACE ELEVATIONS AT:	
DETAILS INCLUDING DROP INLETS, IRON GRATE TYPE B&C,	CONC END S 06-01-1994	43% = <u>2,600 cfs</u> 2% =	7,820 cfs		
SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995	10% = 5,000 cfs $1% = 2.500 cfs$	9,200 cfs	43% AEP = <u>918.7'</u> VELOCITY=	= <u>11.0 fps</u>
MARKING DETAILS	02-01-1999	4% = 6,530 cfs 0.2% =	13,000 cts	$10\% \text{ AEP} = 923.8^{\circ}$	8.3 fps
MARKING DETAILS	03-10-2017	DATE OF FLOOD OF RECORD : Unknown		$2\% \text{ AEP} = \frac{323.0}{927.5'}$	10.1 fps
M GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	03-10-2017	ESTIMATED DISCHARGE: Unknown		1% AEP = 928.0' "	10.3 fps
OR CABLE GUARD RAIL AT OPENINGS	02-23-1995	WATER SURFACE ELEV.: Unknown			
ONTROL GENERAL NOTES	04-25-2016	NATURAL STREAM VELOCITY : @ 2% AEP = 15.2 fj	ps	IS THE ROADWAY OVERTOPPED BELOW 1% AEP:	Yes
ONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012	DEBRIS ¹ Light		RELIEF FLEVATION: 927.9'	
ONTROL FOR MAINTENANCE PAVEMENT MARKING OPERATIC	N 08-06-2012	DOES THE STREAM REACH MAXIMUM HIGHWATER	R ELEV. RAPIDLY? No	DISCHARGE OVER ROAD @ 1% AEP: 80 cfs	
TION SIGN DETAILS	08-06-2012	IS ORDINARY RISE RAPID? No			
CTION SIGN DETAILS	08-06-2012	IS STAGE AFFECTED BY UPSTREAM OR DOWNST	REAM CONDITIONS? Yes	BRIDGE LOW CHORD ELEVATION:	925.8' upstream
TION SIGN DETAILS	08-06-2012	IF YES, DESCRIBE: Vvater backed up into site fro	m downstream rail bridge	FREEBOARD: $\underline{02\%} \text{ AEP} = -1.7$	
DRS AND MILEPOSTS	01-02-2013			SCOUR: Foundations should be 6' minimum below cha	annel bottom.
MBER PLAQUE	04-09-2014	WATERSHED STORAGE: < <u><2%</u> HEADW	ATERS:		
JBE SIGN POST AND ANCHOR	01-02-2013	UNIFOR	X X	REQUIRED CHANNEL PROTECTION: Stone Fill, T	ype IV
SIGN PLACEMENT	10-26-2015	IMMEDI	ATELY ABOVE SITE:		
		EXISTING STRUCTURE INFORM	MATION	FERMIT INFORMATION	
				AVERAGE DAILY FLOW: -	DEPTH OR ELEVATION:
		STRUCTURE TYPE: 2-span concrete t-beam bridg	ge	ORDINARY LOW WATER: -	
		YEAR BUILT: 1940		ORDINARY HIGH WATER:	
		VERTICAL CLEARANCE ABOVE STREAMBED	~13 5'	TEMPORARY BRIDGE REQUIREME	NTS
		WATERWAY OF FULL OPENING: 1015 sq	. ft.		
		DISPOSITION OF STRUCTURE: Remove	and replace	STRUCTURE TYPE: None required	
		TYPE OF MATERIAL UNDER SUBSTRUCTURE:	See borings	CLEAR SPAN (NORMAL TO STREAM):	
		WATER SURFACE ELEVATIONS AT:		VERTICAL CLEARANCE ABOVE STREAMBED:	
		WATER SON ACE ELEVATIONS AT.			
		43% AEP = 918.8' VELOCI	TY = 10.7 fps	ADDITIONAL INFORMATION	
		10% AEP = <u>923.8'</u> "	8.3 fps		
		4% AEP = 925.0' "	9.3 fps		
		$2\% \text{ AEP} = 926.0^{\circ}$ 1% AEP = 929.3'	10.1 fps		
			10.0 103		
		LONG TERM STREAMBED CHANGES: None no	ted	TRAFFIC MAINTENANCE	NOTES
				1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.	
			Yos	2. TRAFFIC SIGNALS ARE NOT NECESSARY.	
		FREQUENCY Below 1% AEP.	1 65	3. SIDEWALKS ARE NOT NECESSART	
		RELIEF ELEVATION: 929.2'			
		DISCHARGE OVER ROAD @ 1% AEP: 330 cfs		DESIGN VALUES	
					HL-93
		UPSTREAM STRUCTURE		2. FUTURE PAVEMENT 3. DESIGN SPAN	
		TOWN: Cavendish	DISTANCE: 4960'		E . <u>30.0011</u>
		HIGHWAY # : VT 103	STRUCTURE #: 21	4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTR	ESSED UNITS) Δ:
		CLEAR SPAN: 157'		5. PRESTRESSING STRAND	fy:
		YEAR BUILT: 1960	FULL WATERWAY:	6. PRESTRESSED CONCRETE STRENGTH	<u> </u>
		STRUCTURE TFE. S-Spantolied beam		8. CONCRETE, HIGH PERFORMANCE CLASS AA	<u> </u>
		DOWNSTREAM STRUCTURE		9. CONCRETE, HIGH PERFORMANCE CLASS A	<i>f</i> 'c: 4.0 KSI
				10. CONCRETE, HIGH PERFORMANCE CLASS B	f'c: 3.5 KSI
			DISTANCE: <u>300'</u>	11. CONCRETE, CLASS C	<u>f'c:</u>
		CLEAR SPAN		13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	<u>ΓΥ:</u> <u>ου κοι</u> f _V : <u>5</u> Ω κοι
		YEAR BUILT:	FULL WATERWAY:		
				14. NOMINAL BEARING RESISTANCE OF SOIL	q <i>n</i> : 4.0 KSF
				15. SOIL BEARING RESISTANCE FACTOR (REFER TO AA	SHTO LRFD) ϕ :
			EACTOPS	16. NOMINAL BEARING RESISTANCE OF ROCK	q n: 10.0 KSF
			TRUCK	A TOUR DEARING REDIDIANCE FAULUR (REFER TO A	
		LOADING LEVELS H-20 HL-93 3S2	6 AXLE 3A. STR. 4A. STR. 5A. SEMI	18. PILE RESISTANCE FACTOR	φ:
		TONNAGE 20 36 36	66 30 34.5 38	19. LATERAL PILE DEFLECTION	Δ:
		INVENTORY			V 3s:
		POSTING		21. WITNIWOW GROUND SNOV LOAD	<u>pg:</u>
		OPERATING			S 1:
		COMMENTS:		23	
AS BUILT	"REBAR" DETAIL			24.	
LEVEL I	LEVEL II LEVEL III	-		25	
	PE: TYPE:	_			
GRADE: GR	ADE: GRADE:			PROJECT NAME: CAVENDISH	
				PROJECT NUMBER: BO 1442(38)	
		7			
D 2037 : 128000					
o 2057 : 270000				DESIGNED RV: T MATTUCINO	
					UILLI 2 UF 30



Version





JOINT SEALER, HOT POURED. SHALL BE SLIGHTLY OVER FILLED THEN WIPED FLUSH WITH A "V" OR "U" SHAPED SQUEEGEE TO PROVIDE A $I_{4}^{\prime\prime}$ wipe zone each side OF JOINT.

TOP COURSE OF PAVEMENT

 $\frac{7}{8}$ " Ø HEAT RESISTANT FOAM BACKER ROD. COMPRESSION FIT REQUIRED TO ENSURE THAT THE ROD POSITION IS MAINTAINED DURING FILLING OPERATION. COST WILL BE INCLUDED WITH UNIT PRICE BID FOR JOINT SEALER.

SAWED PAVEMENT JOINT DETAIL

- THE JOINT SEALER.
- AND EACH END OF THE BRIDGE.



* GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



(NOT TO SCALE)

I. JOINT SHALL BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING

2. SAWED PAVEMENT JOINTS SHALL BE LOCATED BETWEEN THE APPROACH SLABS

PROJECT NAME: PROJECT NUMBER:	CAVENDISH BO 1442(38)	
FILE NAME: SI3j088† PROJECT LEADER: K. DESIGNED BY: T. TYPICAL SECTIONS 2	yp.dgn HIGGINS MATTHEWS	PLOT DATE: 07-JUN-2017 DRAWN BY: T.MATTHEWS CHECKED BY:J.GRIGAS SHEET 4 OF 36



PROJECT NAME: CAVENDI	SH
project number: BO 1442	(38)
FILE NAME: sl3j302ret.dgn	PLOT DATE: 07-JUN-2017
PROJECT LEADER: R. YOUNG	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY:
TYPICAL SECTIONS (3)	SHEET 5 OF 36

GENERAL INFORMATION	COMMON TOPOGRAPHIC POINT SYMBOLS
SYMBOLOGY LEGEND NOTE	POINT CODE DESCRIPTION
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.	POINT CODEDESCRIPTION©APLBOUND APPARENT LOCATION©BMBENCHMARK©BNDBOUND[]]CBCATCH BASIN\$COMBCOMBINATION POLE[]]DITHRDROP INLET THROATED DNC\$ELELECTRIC POWER POLE©GASFILGAS FILLER©GPGUIDE POST\$GUYGUY WIRE\$GVGATE VALVE[]]HTREE HARDWOOD\$HTREE HARDWOOD\$HCTRLCONTROL HORIZONTAL\$HYDHYDRANT\$IPIRON PIPE\$LILIGHT - STREET OR YARD\$MMMILE MARKER\$PMKPROJECT MARKER\$PMKPROJECT MARKER\$PMKPROJECT MARKER\$PMKPROJECT MARKER\$STREES OFTWOOD\$SATSATELLITE DISH\$SIGNSIGN\$SIGNSIGN
	M STUMP STUMP -∞ TEL TELEPHONE POLE ◎ TIF TIF
	·····································
R.O.W. ABBREVIATIONS (CODES) & SYMBOLS POINT CODE DESCRIPTION	∘ WELL WELL ⋈ WSO WATER SHUT OFF
CH CHANNEL EASEMENT CONST CONSTRUCTION EASEMENT CUL CULVERT EASEMENT D&C DISCONNECT & CONNECT DIT DITCH EASEMENT DR DRAINAGE EASEMENT DRIVE DRIVEWAY EASEMENT	THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.
EC EROSION CONTROL	CODE DESCRIPTION
HWY HIGHWAY EASEMENT	PC POINT OF CURVATURE
I&M INSTALL & MAINTAIN EASEMENT	PI POINT OF INTERSECTION
R&RES REMOVE & RESET	CC CENTER OF CURVE
R&REP REMOVE & REPLACE	PCC POINT OF COMPOUND CURVE
SR SLOPE RIGHT	PRC POINT OF REVERSE CURVE
(P) PERMANENT EASEMENT	POB POINT OF BEGINNING
(T) TEMPORARY EASEMENT	PUE PUINT OF ENDING STA STATION PREFIX
BNDNS BOUND SET	AH AHEAD STATION SUFFIX
BNDNS BOUND TO BE SET	BK BACK STATION SUFFIX
◎ IPNF IRON PIN FOUND	D CURVE DEGREE OF (IOOFT)
IPNS IRON PIN TO BE SET	
O PROW PROPOSED ROW POINT	I CURVE LANGENT LENGTH
Image: Im	E CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILIT	IES
— UGU — · · - · - L	JTILITY (GENERIC-UNKNOWN)
— <i>UT</i> — · · — · · –]	TELEPHONE
<i>— UE — · · — · · –</i> E	ELECTRIC
— UC — · · - · · - (CABLE (TV)
<i>— UEC — · · – · · –</i> E	ELECTRIC+CABLE
— <i>UET</i> — · · — · · – E	ELECTRIC+TELEPHONE
— UCT — · · — · · - (CABLE+TELEPHONE
— <i>UECT</i> — · · — · · – E	ELECTRIC+CABLE+TELEP.
— G — · · – · · – (GAS LINE
— <i>w</i> — · · — · · – V	NATER LINE
— s — · · – · · - §	SANITARY SEWER (SEPTIC)
ABOVE GROUND UTILI	TIES (AERIAL)
— AGU — · · — · · - L	JTILITY (GENERIC-UNKNOWN)
— T — · · – · · – 1	TELEPHONE
— E — · · – · · - E	ELECTRIC
— c — · · – · · – (CABLE (TV)
— EC — · · – · · - E	ELECTRIC+CABLE
— ET — ·· — ·· - E	ELECTRIC+TELEPHONE
— AER E&T — · · — · E	ELECTRIC+TELEPHONE
— CT — · · – · · – (CABLE+TELEPHONE
— ECT — ·· — ·· - E	ELECTRIC+CABLE+TELEP.
— · · — · · — ·	JTILITY POLE GUY WIRE
PROJECT CONSTRUCTI	ON SYMBOLOGY
PROJECT DESIGN & L	AYOUT SYMBOLOGY
CZ (CLEAR ZONE
F	PLAN LAYOUT MATCHLINE
PROJECT CONSTRUCTI	ON FEATURES
	TOP OF CUT SLOPE

Δ—	<u> </u>	<u> </u>		TOP OF CUT SLOPE
Θ—	 0	- 0	—Ð	TOE OF FILL SLOPE
୫	8 8	8 8	80	STONE FILL
				BOTTOM OF DITCH 🎚
==	====	====	==:	CULVERT PROPOSED
				STRUCTURE SUBSURFACE
PD		— P D F —		PROJECT DEMARCATION FENCE
ΒF	~~~~	— B F — ×		BARRIER FENCE
XXXX	****	****	XXXX	TREE PROTECTION ZONE (TPZ)
11.	//////	//////	///	STRIPING LINE REMOVAL
\frown	$\sim\sim$	$\sim\sim$	\checkmark	SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES	
TOWN LINE	TOWN BOUNDARY LINE
COUNTY LINE	COUNTY BOUNDARY LINE
STATE LINE	STATE BOUNDARY LINE
— <i>///</i> — — — <i>///</i>	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
$\frac{P}{L} - \frac{P}{L} - \frac{P}{L}$	PROPERTY LINE (P/L)
A SR SR SR O	SLOPE RIGHTS
6f 6f	6F PROPERTY BOUNDARY
4f 4f	4F PROPERTY BOUNDARY
HAZ HAZ	HAZARDOUS WASTE

	FILTER CURTAIN
<u> </u>	SILT FENCE
<u></u>	SILT FENCE WOVEN WIRE
▶ <u></u> ▶ <u></u> ►	CHECK DAM I disturbed adeas
	REQUIRING RE-VEGETATION
	EROSION MATTING
SEE EPSC DETAIL	SHEETS FOR ADDITIONAL SYMBOLOGY
	WETLAND BOUNDARY
	RIPARIAN BUFFER ZONE
	WETLAND BUFFER ZONE
	SOIL TYPE BOUNDARY
HAZ — HAZ —	HAZARDOUS WASTE AREA
AG	AGRICULTURAL LAND
——— НАВІТАТ ———	FISH & WILDLIFE HABITAT
— FLOOD PLAIN —	FLOOD PLAIN
OH₩	ORDINARY HIGH WATER (OHW)
◆◆	SIUKM WAIEK HSDA FOREST SERVICE LANDS
	WILDLIFE HABITAT SUIT/CONN
ARCHEOLOGICA	L & HISTORIC
	ARCHEOLOGICAL BOUNDARY
	HISTORIC ARFA
CONVENTIONAL	TOPOGRAPHIC SYMBOLOGY
CONVENTIONAL Existing fea	TOPOGRAPHIC SYMBOLOGY
CONVENTIONAL Existing fea	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT
CONVENTIONAL Existing fea	TURES TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE
CONVENTIONAL Existing fea	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH
CONVENTIONAL EXISTING FEA	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH —— FOUNDATION
CONVENTIONAL EXISTING FEA	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH — FOUNDATION —×— FENCE (EXISTING)
CONVENTIONAL EXISTING FEA	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION -× FENCE (EXISTING) FENCE WOOD POST
CONVENTIONAL EXISTING FEA 	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FENCE (EXISTING) FENCE WOOD POST FENCE STEEL POST
CONVENTIONAL EXISTING FEA 	TOPOGRAPHIC SYMBOLOGY ATURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FENCE (EXISTING) FENCE STEEL POST GARDEN ROAD GUARDRAIL
CONVENTIONAL EXISTING FEA 	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH — FOUNDATION FENCE (EXISTING) FENCE WOOD POST FENCE STEEL POST GARDEN ROAD GUARDRAIL
CONVENTIONAL EXISTING FEA 	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION FENCE (EXISTING) FENCE WOOD POST FENCE STEEL POST GARDEN ROAD GUARDRAIL RAILROAD TRACKS
CONVENTIONAL EXISTING FEA 	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION FENCE (EXISTING) FENCE WOOD POST GARDEN GARDEN ROAD GUARDRAIL ROAD GUARDRAIL
	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION FENCE (EXISTING) FENCE WOOD POST GARDEN GARDEN ROAD GUARDRAIL ROAD GUARDRAIL ROAD TRACKS
	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION FENCE (EXISTING) FENCE STEEL POST GARDEN ROAD GUARDRAIL TABLEROAD TRACKS ====== CULVERT (EXISTING) WALL WOOD LINF
	TOPOGRAPHIC SYMBOLOGY ATURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION FENCE (EXISTING) FENCE (EXISTING) FENCE STEEL POST GARDEN RAILROAD TRACKS WALL WALL WOOD LINE BRUSH LINE
	TOPOGRAPHIC SYMBOLOGY
	TOPOGRAPHIC SYMBOLOGY TURES TURES TOPOGRAPHIC SYMBOLOGY TURES TURES TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TOPOGRAPHIC SYMBOLOGY TOPOGRAPSIA TOPOGRAPHIC SYMBOLOGY T
	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION FENCE (EXISTING) FENCE WOOD POST GARDEN GARDEN ROAD GUARDRAIL RAILROAD TRACKS WALL WOOD LINE BRUSH LINE HEDGE BODY OF WATER EDGE LEDGE EXPOSED
	TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TOPOGRAPHIC SYMBOLOGY TOPOGR
	TOPOGRAPHIC SYMBOLOGY
	TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TURES TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DITCH FOUNDATION FENCE (EXISTING) FENCE (EXISTING) FENCE STEEL POST GARDEN ROAD GUARDRAIL RAILROAD TRACKS CULVERT (EXISTING) STONE WALL WOOD LINE BRUSH LINE HEDGE BODY OF WATER EDGE LEDGE EXPOSED
CONVENTIONAL EXISTING FEA	TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TURES TOPOGRAPHIC SYMBOLOGY TOPOGRAPHIC SYMBOLOGY T
CONVENTIONAL EXISTING FEA	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL DRIVEWAY EDGE DITCH FOUNDATION FENCE (EXISTING) FENCE wood POST GARDEN ROAD GUARDRAIL RAILROAD TRACKS WALL WOOD LINE BRUSH LINE HEDGE BODY OF WATER EDGE KALPOSED
CONVENTIONAL EXISTING FEA 	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL ORIVEWAY EDGE DITCH FOUNDATION X FENCE (EXISTING) OFENCE STEEL POST GARDEN OLIVERT (EXISTING) STONE WALL WALL WOOD LINE BODY OF WATER EDGE EDGE EXPOSED
CONVENTIONAL EXISTING FEA 	TOPOGRAPHIC SYMBOLOGY TURES ROAD EDGE PAVEMENT ROAD EDGE GRAVEL ORIVEWAY EDGE DITCH FOUNDATION *** FENCE (EXISTING) OFENCE STEEL POST OAD GUARDRAIL WALL CAVENDISH BOLY OF WATER



<u>PT #2</u>	<u>WINERY</u>	
NORTH	= 323790.3600	С
EAST	= 1599016.160	<u><u></u><u></u><u></u><u></u><u></u></u>
ELEV.	<u>= 949.860</u>	

GENERAL LOCATION CAVENDISH, VT. THE MARK IS 0.6 MI NORTHWEST OF THE INTERSECTION OF SCENIC VT ROUTE 131 AND VT ROUTE 103. IT IS 150 M WEST OF WINERY ROAD, BEHIND A METAL GUARD RAIL. IT IS SET FLUSH WITH GROUND IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT. IT IS 4.3 M SOUTH OF THE VT ROUTE 103 SOUTH EDGE OF PAVEMENT, 15.3 M EAST OF THE MOST WESTERLY GUARD RAIL POST, 13.0 M NORTHWEST OF THE SOUTH END OF A 60 CM DIAMETER METAL CULVERT WITH WOODEN MARKER POST, AND 72.0 M WEST OF MILE MARKER 1030/1406/0340.

NORTH = NORTH = EAST = EAST = ELEV. = ELEV. = / 1.5 STORY WOOD FRAME #137 CORNER BOARD 20.15 CORNER BOARD Ē 3 S. APPLE LILAC 🖗 NORTH = NORTH = EAST = EAST = ELEV. = ELEV. =

-	NORTH =	
_	EAST =	
-	ELEV. =	
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	PROJECT NAME: CAVENDISH	
	FILE NAME: xI3j302ti.dgn PLOT DATE: 07-JUN-20	17
	PROJECT LEADER: C. WILLIAMS DRAWN BY: C. CYR	
	DESIGNED BY: VTRANS CHECKED BY: P. BETOR	
	THE SHEET 7 OF 36	





BEGIN TH 31 STA 10+00.00

THE GRADES SHOWN TO THE TENTH ARE THE EXISTING GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT

PROJECT NAME:	CAVENDISH	
PROJECT NUMBER:	BO 1442(38)	
FILE NAME: sI3j302	pro.dgn	PLOT DATE: 07-JUN-2017
PROJECT LEADER:	R. YOUNG	DRAWN BY: T.MATTHEWS
DESIGNED BY:	T.MATTHEWS	CHECKED BY: J. GRIGAS
TH 31 PROFILE		SHEET II OF 36

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s Zo X	HYDRANT (S) P (S)						<u>4</u> STA STA	INCF 20+5 21+5	1 YEL 0 - 1 -	_LOW 2 + 24+(LI II L DO L	<u>NE</u> . T / R T . T / R T
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SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE	N											
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SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER	N N SIGN LEGEND	S DIMEN WIDTH (in)	IGN NSIONS HEIGHT (in)	NEW SIGN ''A''	EXIST POST RETALVAGE	NO: OF POSTS	NE 1.75 1.88	W SIGN SOUARE (in) 2.0 Ib/ft 2.42	N POST E STEE 2.5 3.35	S L A C HOR		REMARKS
SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER 21+63 RT	N SIGN LEGEND BRIDGE 58	Si DIMEN WIDTH (in) 6	IGN NSIONS HEIGHT (in) IO	NEW SIGN ''A'' 0.35	EXIST POST RETALVAGE	NO. OF POSTS I	NE 1.75 1.88	W SIGN SOUARE (in) 2.0 Ib/ft 2.42	<u>POST</u> 2.5 3.35	S L AZCHOR X	м<тп м<тп м	REMARKS
SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER 21+63 RT	N SIGN LEGEND BRIDGE 58	Si DIMEN WIDTH (in) 6	IGN NSIONS HEIGHT (in) IO	NEW SIGN ''A'' 0.35	EXIST POST RETALVAGE	NO. OF POSTS I	NE 1.75 1.88 10	W SIGN SOUARE (in) 2.0 Ib/ft 2.42	<u>POST</u> STEE 2.5 3.35	S L S L S L S L S S L	м-ппг м м	REMARKS
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SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER 21+63 RT 22+73 LT 22+73 LT	N SIGN LEGEND BRIDGE 58 BRIDGE 58 STOP	S DIMEN WIDTH (in) 6 6	IGN NSIONS HEIGHT (in) IO IO	NEW SIGN ''A'' 0.35 0.35	EXIST POST RETALVAGE	NO: OF POSTS I	NE 1.75 1.88 10 10	W SIGN SOUARE (in) 2.0 Ib/ft 2.42	N POST 2.5 3.35	S L S L S L S L S S L S S L S S L S		REMARKS VD-70I
SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER 21+63 RT 22+73 LT 22+73 LT	N SIGN LEGEND BRIDGE 58 BRIDGE 58	S DIMEN WIDTH (in) 6 6	IGN NSIONS HEIGHT (in) IO IO	NEW SIGN ''A'' 0.35 0.35	EXIST POST RETAIN ETAIN E	NO. OF POSTS I	NE 1.75 1.88 10	W SIGN SOUARE (in) 2.0 Ib/ft 2.42	N POST 2.5 3.35	S L ANCHOR X X		REMARKS VD-70I
SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER 21+63 RT 22+73 LT 21+44 RT 21+54 RT	N SIGN LEGEND BRIDGE 58 BRIDGE 58 STOP	Si DIMEN WIDTH (in) 6 6 18	IGN NSIONS HEIGHT (in) IO IO IO	NEW SIGN ''A'' 0.35 0.35 3.00	EXIST POST RETALVAGE	NO. OF POSTS I	NE 1.75 1.88 10	W SIGN SQUARE (in) 2.0 Ib/f† 2.42 I5	2.5 3.35	S L S L S L S L S S L S S L S S S S S S		REMARKS VD-70I
SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER 21+63 RT 22+73 LT 21+44 RT 21+54 RT	N SIGN LEGEND BRIDGE 58 BRIDGE 58 STOP	NED	IGN NSIONS HEIGHT (in) IO IO 24	NEW SIGN ''A'' 0.35 0.35 3.00	EXIST POST RETAIN ETAIN E	NO. OF POSTS I	NE 1.75 1.88 10 10 10	W SIGN SOUARE (in) 2.0 Ib/ft 2.42 I5 I5 I5 I5	N POST 5 STEE 2.5 3.35	S L ANCHOR X X X		 REMARKS VD-701 VD-701
SIGN LEGEND N = NEW R = REMOVE RET = RETAI S = SALVAGE MILEMARKER, STATION, OR SIGN NUMBER 21+63 RT 21+63 RT 21+64 RT 21+54 RT SIGN NUMBER SIGN NUMBER 21+54 RT	SIGN LEGEND BRIDGE 58 BRIDGE 58 STOP STOP INS ARE TO BE DETERMIN ST SIZES ARE COMPUTED ATION FURNISHED ON THE	NED	IGN NSIONS HEIGHT (in) IO IO 24	NEW SIGN ''A'' 0.35 0.35 3.00	EXIST POST REALVAGE	NO. OF POSTS I	NE 1.75 1.88 10 10	W SIGN SOUARE (in) 2.0 Ib/f+ 2.42 I5 I5 I5 I5	POST 2.5 3.35 FT	S L S L X X X		 REMARKS VD-701 VD-701

SOIL CLASSIFICATION	COMMONLY USED SYMBOLS
AASHTO AI Gravel and Sand A3 Fine Sand A2 Silty or Clayey Gravel and Sand A4 Silty Soil - Low Compressibility A5 Silty Soil - Highly Compressible A6 Clayey Soil - Low Compressibility	 Water Elevation Standard Penetration Boring Auger Boring Rod Sounding Sample N Standard Penetration Test Blow Count Per Foot For: 2" 0 D Sampler
ROCK QUALITY DESIGNATION ROCK QUALITY DESIGNATION ROCK DESCRIPTION Very Poor 25 to 50 51 to 75 76 to 90 >90 Excellent	 I 3/8" I. D. Sampler Hammer Weight Of I40 Lbs. Hammer Fall Of 30" VS Field Vane Shear Test US Undisturbed Soil Sample B Blast DC Diamond Core MD Mud Drill WA Wash Ahead HSA Hollow Stem Auger AX Core Size 11/8" BX Core Size 19/8" NX Core Size 2 1/8" M Double Tube Core Barrel Used LL Liquid Limit PL Plastic Limit PI Plasticity Index NP Non Plastic
SHEAR STRENGTHUNDRAINEDSHEAR STRENGTHIN P.S.F.CONSISTENCY<250	 w Moisture Content (Dry Wgt.Basis) D Dry M Moist MTW Moist To Wet W Wet Sat Saturated Bo Boulder Gr Gravel Sa Sand Si Silt CI Clay HP Hardpan Le Ledge NLTD No Ledge To Depth CNPF Can Not Penetrate Further TLOB Top of Ledge Or Boulder NR No Recovery Rec. Recovery %Rec. Percent Recovery
CORRELATION GUIDE OF "N" TO DENSITY / CONSISTENCYDENSITY (GRANULAR SOILS)CONSISTENCY (COHESIVE SOILS)DESCRIPTIVE N <5DESCRIPTIVE TERM <5DESCRIPTIVE N TERM N 25-10NTERM TERM Sole 2-4N Soft Soft Soft Soft Soft Soft Soft Soft Soft Soft Sole Soft Soft Sole Soft Soft Sole Soft Soft Soft Sole Soft Soft Sole	RQD Rock Quality Designation CBR California Bearing Ratio < Less Than > Greater Than R Refusal (N > 100) VTSPG NAD83 - See Note 7 <u>COLOR</u> blk Black pnk Pink bl Blue pu Purple brn Brown rd Red dk Dark tn Tan White
31-60 Hard 360 Very Hard	gn Green yel Yellow It Light mltc Multicolored or Orange
DEFINITION	<u>NS (AASHTO)</u>
 BEDROCK (LEDGE) - Rock in its native location of indefinite thickness. BOULDER - A rock fragment with an average dimension > 12 inches. COBBLE - Rock fragments with an average dimension between 3 and 12 inches. GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve). 	 VARVED - Alternate layers of silt and clay. HARDPAN - Extremely dense soil, cemented layer, not softened when wet. MUCK - Soft organic soil (containing > 10% organic material. MOISTURE CONTENT - Weight of water divided by dry weight of soil.
SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve) SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried. CLAY - Fine grained soil exhibits	FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod. STRIKE - Angle from magnetic north to line of intersection of bed

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

with a horizontal plane.

horizontal plane.

DIP - Inclination of bed with a

	(V	T	STATE OF VERMONT	TION	BOF
	V	Irans	VORKING TO GET YOU INFRE ermont Agency of Transportation MATERIALS & RESEARCH SE SUBSURFACE INFORMATION	CTION ION	B(
	Borin	g Crew:	DAIGNEAULT, JUDKINS, HOOK	Туре:	Casing WB
		Started:	7/21/14 Date Finished: 7/23/14	I.D.: Hamm	er Wt [.] N A
	Statio	n: 4	3+11 Offset: 12.30	Hamm	er Fall: <u>N.A.</u>
	Grour	nd Elevatio	n:931.4 ft	Rig:	CME 55 TRACK
	Depth (ft)	Strata (1)	CLASSIFICATION OF MAT (Description)	ERIALS	
	-		Asphalt Pavement, 0.0 ft - 0.64 ft A-1-a, SaGr, brn-gry, Moist, Rec. = 0.25 ft, L within sample.	ab Note:	Broken Rock was
			Field Note:, NXDC, Cleaned out casing. A-1-b, GrSa, brn-gry, Moist, Rec. = 0.25 ft, L within sample.	ab Note:	Broken Rock was
	10 -		Field Note:, NXDC, Cleaned out casing. A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft, Lab No	ote: Broke	en Rock was
919.50	-	0 0 0 0 0	within sample.		
			Field Note:, NXDC, Cleaned out casing. Field Note:, No Recovery. Appears to be silty sampler.	y sand., R	ock plugged end
	20 -	0	─ Field Note:, Cleaned out with Roller cone		
			A-2-4, Sa, brn, MTW, Rec. = 0.5 ft		
	-		Field Note:, Cleaned out with Roller cone		
			A-4, SiSa, brn, Moist, Rec. = 0.8 ft		
	30 -	0:,0:,	Field Note:, Cleaned out with Roller cone		
	-		Α-2-4, Sa, brn, Moist, Rec. = 0.8 π		
	40 -		SiSa, brn, Moist, Rec. = 1.0 ft, 40.0 ft - 42.0 f	ft	
/14	-	// <i>′</i> //			
DT.GDT 8/5	50 -		Field Note:, Cleaned out with Roller cone		
ERMONT AC			Field Note:, No Recovery. Appears to be sar	id.	
(38).GPJ V	-	-			
DISH BO 1442	60 -		A-2-4, SiSa, brn, Moist, Rec. = 0.6 ft		
JG 2 CAVEN	-	-			
	Viotoor	1. Stratificati 2. N Values	ion lines represent approximate boundary between material ty have not been corrected for hammer energy. C₌ is the hamme	pes. Transition r energy corr	on may be gradual.

RING LOG AVENDISH D 1442(38) H-1 BR-58	i	Boring No.: B-101 Page No.: 1 of 2 Pin No.: 13J302 Checked By: MLM						TION CTION ON	BORING LOG CAVENDISH BO 1442(38) TH-1 BR-58				Bo Pa Pir Ch	ring No. ge No. n No.: necked	р.: .: Ву:	B-1 2 of 13J30 	01 2)2 LM		
Sampler SS 1.5 in 140 lb.	Gro Date 07/22/14	Dep (ft)	ater O th 2.4 B	bserva No efore o	ations otes drilling.		Borin Date VTSF	g Crew: Started: PG NAD83:	DAIGNEAULT, JUDKINS, HOOK 7/21/14 Date Finished: 7/23/14 N 321088.86 ft E 1604273.38 ft	Ca Type: I.D.: Hammer Wt: Hammer Fall:	Ising VB ⊢in I.A.	Samp SS 1.5 i 140 l	ler	Date 07/22/	Groundw e Dep (ft 14 1	oth 2.4 B	bserva N efore	ations otes drilling	g.
$\frac{30 \text{ III.}}{\text{Auto/AWJ}}$ $\underline{C_{\varepsilon} = 1.46}$	07/23/14	. 13	3.4 A	fter dri	illing.	-	Static Groui	on: <u>4</u> nd Elevatio	<u>3+11</u> Offset: <u>12.30</u> n: <u>931.4 ft</u>	Hammer/Rod Type Rig: <u>CME 55 TRA</u>	<u>Auto Auto CK</u>		<u>.</u> 	07/23/	14 1	3.4 A	fter dr	illing.	
Run (Dip deg.) Core Rec. %	Drill Rate	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand % Fines %		Depth (ft)	Strata (1)	CLASSIFICATION OF MAT (Description)	ERIALS	E E	(Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
	R	@3.5" (R)	11.2	63.3	27.7 9.0				A-2-4, Sa, brn, Moist, Rec. = 1.7 ft						7-8-11- 12 (19)	23.0	5.5	75.4	19.1
	R	@5.0" (R)	12.6	33.5	50.6 15.9		80 -		Field Note:, Cleaned out with Roller cone A_2-4 , SiSa, brn. Moist, Rec. = 0.8 ft						6-7-8-7	27.9		76 5	235
of	5-	(9) -2-1-2 (3)	10.0	50.7	40.0				A-2-4, 010a, 011, 1003t, 10ec. – 0.0 ft						(15)	21.3		10.0	20.0
	1-	-1-1-3 (2)	28.6	2.0	85.1 12.9		90 -		A-2-4, Sa, brn, Moist, Rec. = 0.7 ft A-2-4, SiSa, gry-brn, Moist, Rec. = 0.6 ft						16-32- 20-23 (52)	22.0 15.4	2.8 19.3	78.7 59.5	18.5
	2-	-2-3-3 (5)	30.4	0.2	62.5 37.3			-	Field Note:, Cleaned out with Roller cone										
	2-	-3-3-4 (6)	26.9	0.1	82.8 17.1		100 -		A-2-4, SiSa, brn, Moist, Rec. = 0.2 ft						6-10-15- 16 (25)	20.9	15.2	64.7	20.1
	2-	-3-3-4 (6)	30.6		53.9 46.1		110 -	-	_∖A-2-4, Sa, brn, Moist, Rec. = 0.4 ft						R@5.0" (R)	23.6	7.3	73.1	19.6
							41/c/8 10	-	Field Note:, BXDC, Cleaned out casing.										
	1-	-3-3-5 (6)				EST. PILE TIP	120 - 101 120 -		120.0 ft - 124.0 ft, Dark green, Amphibolite, F rock, BX, RMR=72	lard, Unweathered, Go	pod (t	1 55)	70 (58)	9 3 3	Тор	of Bed	rock ((a) 120).0 ft
							38) GPJ VEK		124.0 ft - 129.0 ft, Dark green, Amphibolite, a gneissic hornblende-biotite tonalite. Closely s Hard, Unweathered, Fair rock, BX, RMR=52	and light-gray to white, spaced horizontal jointi	ng. (t	2 55)	80 (8)	6 3 3 4					
	5-	-7-8-8 (15)	28.3	0.6	73.5 25.9		2 CAVENUISH BU 1442(-	Hole stopp Remarks: Hole collapsed at 33.6 ft.	oed @ 129.0 ft				3 4					
other factors than	those present	at the tim	e meas	urement	s were made.		Notes:	1. Stratificati 2. N Values 3. Water lev	ion lines represent approximate boundary between material typ have not been corrected for hammer energy. C _i is the hammer el readings have been made at times and under conditions sta	pes. Transition may be graduated to the second s	.e to other	factors	than the		ent at the tin	ne measi	urement	ts were	made.

PROJECT NAME:	CAVENDISH	
PROJECT NUMBER:	BO 1442(38)	
FILE NAME: SI3j302t PROJECT LEADER: F DESIGNED BY: J BORING LOG (1)	oor.dgn R. YOUNG J. GRIGAS	PLOT DATE: 07-JUN-2017 DRAWN BY: J.GRIGAS CHECKED BY: T.MATTHEWS SHEET 17 OF 36

	VTrans	Working to Get You There Vermont Agency of Transportation Vermont Agency of Transportation Vermont Agency of Transportation Vermont Agency of Transportation Vermont Agency of Transportation	TION CTION ION	BOF CA BC TH
В	oring Crew: _	DAVISON, JUDKINS, HOOK	Type:	Casing WB
D	ate Started: _	7/02/14 Date Finished: 7/17/14	I.D.:	4 in
	TSPG NAD83	: <u>N 321165.60 ft</u> E 1604160.35 ft	Hammer	r Fall: N.A.
G	Ground Elevation	on:929.5 ft	Hammer Rig: _C	r/Rod Type:A CME 45C SKID
d trac t	Strata (1)	CLASSIFICATION OF MAT (Description)	ERIALS	
		Asphalt Pavement, 0.0 ft - 0.64 ft	atas Dealsara	Dealuma
		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft, Lab N within sample.	ote: Broken	Rock was
		A-1-b, SiGrSa, brn, Moist, Rec. = 1.6 ft		
	$5 \rightarrow 0 \circ \circ \circ$	A-1-b, SiGrSa, brn, Moist, Lab Note: Broken	Rock was w	within sample.
		Visual Description:, Sandy Gravel with broke 0.2 ft, Lab Note: Insufficient sample for testi	en rock, gry, ng.	Moist, Rec. =
2 BTM.		A-4, SiSa, brn, Moist, Rec. = 1.5 ft		
19.00		A-2-4, SIGISA, DIT, MOIST, NADC, Cleaned C A-2-4, Sa, brn, MTW, Rec. = 0.25 ft	out casing.	
		Λ_{-1-2} SaGr bro-white MTW/ Rec = 1.0 ft	Lab Noto: B	roken Pock was
		within sample. NXDC, Cleaned out casing		
		↓ Field Note:, NXDC, Cleaned out casing. ↓ Visual Description: Broken Rock, white, Dry	Rec = 0.1	
		Cleaned out casing.	, 1,001 0.11	
		Field Note:, No Recovery. Appears to be Gr	Sa	
	20 - 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7			
	25	A-2-4, Sa, brn, Moist, Rec. = 0.9 ft		
	-			
	30 -01-,01-	A-2-4, SiSa, brn, MTW, Rec. = 1.0 ft		
3/5/14				
DT.GDT 8	35 -0:,0:	A-2-4, SiSa, brn, MTW, Rec. = 0.7 ft		
MONT AG				
SPJ VER	40 - 0:	A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft		
H BO 14	45	A 2 4 C C bro MTM Dec = 0.0 ft		
AVENDIS		A-2-4, SISa, DM, WI I W, Kec. = 0.6 T		
	-		_	
U U U	1. Stratifica	tion lines represent approximate boundary between material ty shave not been corrected for bammer energy. C is the bammer	pes. Transition	may be gradual. tion factor

RING L	Boring No.: B-102											
	SH			Pa	ge N	10.	.: _	1 of 3	3			
O 1442(3	38)			Pin	No			13J30	2			
H-1 BR-	58	1		Ch	necked By: <u>MLM</u>							
g Sam	pler		Gro	Groundwater Observations								
	s in	Dat	e	Dep (ff)	th)		No	otes				
140	lb.	07/08	/14	1:	(ft) 12.5 While							
<u>30</u> Auto/AW	<u>in.</u> 'J	07/09	/14	3.	3.3 B			drilling				
C =	1.33	07/15	/14	1	0.1	N	/hile d	rilling.				
Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Drill Kate minutes/ft Blows/6"		Moisture		Gravel %	Sand %	Fines %			
			9-8- (2	-12-9 20)	9.9	9	39.7	43.8	16.5			
			5-5	5-4-4 9)	8.8	3	33.1	46.3	20.6			
			4-1		9.8	3	35.3	42.5	22.2			
			() 11- 	15) 6-2-2 8)	27.	7	0.8	56.8	42.4			
			3-3 (3-3-3 6)	13.	4	27.1	50.1	22.8			
			4-1	2-15-	24.	5	1.6	85.1	13.3			
S			(2 25	19 27) -25-	11.	8	49.5	38.8	11.7			
			(6 9-4 13- 6-5 (53) 2-25- 14 57) 11-8- 10 19) 5-5-7 10)	24.	9	1.0	84.0	15.0			
			3-5 (*	5-6-5 11)	23.1		0.2	84.6	15.2			
			6-7 (´	7-8-8 15)	27.	3	0.1	74.0	25.9			
			8-6 (´	6-6-8 12)	26.	6	0.1	74.0	25.9			
			4-5 (*	5-6-7 11)	24.	1		73.6	26.4			
			4-6 (´	6-7-8 13)	29.	5		75.4	24.6			

	STATE OF VERMONT		BO	RING	_OG		Во	oring N	lo.:	B-10	02
VTrans	Working to Get You There Vermont Agency of Transportation Agency of Transportation MATERIALS & RESEARCH SE	ATION ECTION	C		SH		Pa	age No).: _	2 of	3
	SUBSURFACE INFORMAT	ION	T	H-1 BR-		Checked By: <u>MLM</u>					
Boring Crew:	DAVISON, JUDKINS, HOOK		Casing	g Sam	pler		Groundv	vater C	Dbserv	ations	
Date Started:	7/02/14 Date Finished: 7/17/14	I ype:	<u></u>	<u>S</u> 1.5	s 5 in	Da	te De (f	pth	N		
VTSPG NAD8	3: N 321165.60 ft E 1604160.35 ft	Hamme	er Wt: <u>N.A.</u>) <u>lb.</u> in	07/08	3/14 ⁽¹⁾	., 12.5 \	While c	Irilling.	
Station:	44+44 Offset: <u>-10.20</u>	Hamm	er/Rod Type:	<u></u> Auto/AW	/J	07/09	9/14 3	3.3 E	Before	drilling].
Ground Elevati	on:929.5 ft	Rig:	CME 45C SKID	<u> </u>	1.33	07/15	5/14 ⁻	10.1	Vhile o	Irilling.	1
Depth (ft) Strata (1)	CLASSIFICATION OF MAT (Description)	TERIALS		Run (Dip deg.)	ore Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
	A-2-4, SiSa, brn, Moist, Rec. = 0.6 ft						5-6-7-8 (13)	27.5		73.4	26.6
55	Field Note:, NXDC, Cleaned out casing.										05.0
	A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft						(14)	28.6	0.1	74.9	25.0
60	A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft						10-9-10- 11 (19)	25.5	2.8	72.5	24.7
65	A-2-4, Sa, brn, Wet, Rec. = 0.5 ft						8-13-12- 11 (25)	32.7	2.8	77.6	19.6
70 -	Field Note:, No Recovery						6-9-10- 12 (19)				
75	A-2-4, SiSa, brn, Moist, Rec. = 1.2 ft						6-12-15- 19 (27)	24.1	2.8	73.4	23.8
80	A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft						10-15- 19-20 (34)	22.9	3.4	73.0	23.6
85	A-2-4, SiSa, brn, Moist, Rec. = 1.0 ft						11-15- 19-21 (34)	24.1	0.7	73.1	26.2
90	A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft						15-20- 22-23 (42)	22.5	2.9	64.5	32.6
- 95 - - - -											
- 1. Stratific 2. N Value 3. Water I	ation lines represent approximate boundary between material ty s have not been corrected for hammer energy. C is the hamme evel readings have been made at times and under conditions st	ypes. Transitio er energy corr ated. Fluctuat	on may be gradual. ection factor. ions may occur due to o	other factor	rs than t	hose pre	esent at the ti	me mea	suremen	ts were r	made.

other factors than those present at the time measurements were made.

project name: CAVENDISH project number: BO 1442(38)	
FILE NAME: sI3j302bor.dgn	PLOT DATE: 07-JUN-2017
PROJECT LEADER: R.YOUNG	DRAWN BY: J.GRIGAS
DESIGNED BY: J.GRIGAS	CHECKED BY: T.MATTHEWS
BORING LOG (2)	SHEET 18 OF 36

	V	Trans	Norking to Get You There Agency of Transportation AGENCY OF TRANSPORTA MATERIALS & RESEARCH SE SUBSURFACE INFORMAT	TION CTION ION	BOF CA BC TH
	Boring Date VTSP Statio Grour	g Crew: Started: PG NAD83: on:4 nd Elevatic	DAVISON, JUDKINS, HOOK 7/02/14 Date Finished: 7/17/14 N 321165.60 ft E 1604160.35 ft 4+44 Offset: -10.20 on: 929.5 ft	Type: I.D.: Hammer Hammer Hammer Rig: _C	Casing <u>WB</u> 4 in Wt: <u>N.A.</u> Fall: <u>N.A.</u> /Rod Type: <u>/</u> ME 45C SKID
	Depth (ft)	Strata (1)	CLASSIFICATION OF MAT (Description)	ERIALS	
		0 0	A-2-4, SiSa, brn, Moist, Rec. = 0.5 ft		
	- 105 -		Field Note:, NXDC, Cleaned out casing., Ap Field Note:, Went inside 4" casing with 3" ca	pears to be c sing.	cobbles.
	- - - - -		Field Note:, BXDC, Cleaned out casing. Field Note:, No Recovery, Appears to be a b	oulder.	
	- 115 –	-			
	120 -	-	Field Note:, BXDC, Cleaned out casing. \A-2-4, GrSiSa, Lt/brn-gry, Moist, Rec. = 0.1	ft	
	125 -				
	130 -		∖A-4, GrSaSi, gry, Moist, Rec. = 0.1 ft		
EST. PILE TIP	135 -		133.5 ft - 134.5 ft, Dark green, Amphibolite, rock, BX, RMR=52 134.5 ft - 138.5 ft, Light gray to white, Gness Tonalite, closely spaced horizontal jointing. I rock, RMR=52	Hard, Unwea sic hornblend Hard, Unwea	athered, Fair le-biotite thered, Fair
	140 – 5		138.5 ft - 143.5 ft, Light gray to white, Gness Tonalite, Hard, Unweathered, Good rock, B>	ic hornblenc (, RMR=72	le-biotite
			Hole stop	ped @ 143.5	5 ft
		1 Stratificat	Remarks: 1. Groundwater was noted by the drillers at 2. Hole collapsed at 13.0 ft.	13.2 ft and 1	2.9 ft on 7/17/14
	Notes:	2. N Values 3. Water lev	have not been corrected for hammer energy. C _∈ is the hammer rel readings have been made at times and under conditions sta	r energy correcti ated. Fluctuations	on factor. s may occur due to o

RING L	ING LOG		Boring No.: B-10			02			
AVENDISH		Pa	Page No.: <u>3 of 3</u>			3			
O 1442(38)		Pin	Pin No.:13J302		2				
H-1 BR-	58			Ch	ecke	ed	By:	ML	<u>M</u>
g Sam Si	pier S		Gro	undw	ater	O	bserva	ations	
1.5	in	Dat	e	Dep (ft	th		N	otes	
140	lb.	07/08	/14	1	2.5	W	/hile d	rilling.	
<u>30</u> Auto/AW	<u>in.</u> 'J	07/09	/14	3	.3	B	efore	drilling	
<u> </u>	1.33	07/15	/14	1	0.1	W	/hile d	rilling.	
g.)	с. % %)	s/ft		e)	e S	0	%	%	%
Run p de	e Rec OD	ill Ra nutes	/SMO	Valu	oistu	ופ	ave	and ⁶	nes '
Di Di	Core (R	D I	BI	Z	ŠČ	5	G	Ñ	ΪĹ
			9-16	5-18- 22	21.3	3	0.2	77.7	22.1
			(3	34)					
			R@)0.0" Ř)					
				(x)					
			R@	0.5"	11.	4	23.5	47.3	29.2
			(1	R)					
			R@	0.5"	12.	7	23.6	26.3	50.1
			(R)					
				—	(-				
1 (?)	94 (0)	4 4		Торо	ot Be	ed	rock @	v 133.	5 ft
~ /		6							
		6							
2	74	4							
(?)	(60)	3							
		2							
		3							

14 and 7/18/14, respectively.

other factors than those present at the time measurements were made.

PROJECT NAME:	CAVENDISH	
PROJECT NUMBER:	BO 1442(38)	
FILE NAME: sI3j302t	oor.dgn	PLOT DATE: 07-JUN-2017
PROJECT LEADER: F	R. YOUNG	DRAWN BY: J.GRIGAS
DESIGNED BY:	J. GRIGAS	CHECKED BY: T.MATTHEWS
BORING LOG (3)		SHEET 19 OF 36

STA.22+00 TO STA.

	project name: CAVENDISH project number: BO 1442(38)	
. 22+75	FILE NAME: sI3j302xs.dgn PROJECT LEADER: R.YOUNG DESIGNED BY: J.GRIGAS MAINLINE CROSS SECTIONS (3)	PLOT DATE: 07-JUN-2017 DRAWN BY: J.GRIGAS CHECKED BY:T.MATTHEWS SHEET 23 OF 36

	PROJECT NAME: CAVENDISH PROJECT NUMBER: BO 1442(38)	
4.10+75	FILE NAME: sI3j302xs.dgn PROJECT LEADER: R. YOUNG DESIGNED BY: J. GRIGAS TH 3I CROSS SECTIONS	PLOT DATE: 07-JUN-2017 DRAWN BY: J.GRIGAS CHECKED BY: T.MATTHEWS SHEET 26 OF 36

	FILE NAME: sI3j302xs.dgn	PLOT DATE: 07-JUN-2017	
	PROJECT LEADER: R. YOUNG	DRAWN BY: J.GRIGAS	
	DESIGNED BY: J. GRIGAS	CHECKED BY: T. MATTHEWS	
51+00	CHANNEL CROSS SECTIONS (2)	SHEET 28 OF 36	
			1

	project name: CAVENDISH	
	project number: BO 1442(38)	
.52+00	FILE NAME: sI3j302xs.dgn PROJECT LEADER: R.YOUNG DESIGNED BY: J.GRIGAS CHANNEL CROSS SECTIONS (4)	PLOT DATE: 07-JUN-2017 DRAWN BY: J.GRIGAS CHECKED BY:T.MATTHEWS SHEET 30 OF 36

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REMOVAL OF BRIDGE 58 IN ITS ENTIRETY. BRIDGE 58 WILL BE REPLACED WITH A NEW STRUCTURE, SPANNING 94 FEET OVER THE BLACK RIVER, ON NEW ABUTMENTS ALONG THE EXISTING ALIGNMENT. BRIDGE 58 IS LOCATED IN THE TOWN OF CAVENDISH, ON TOWN HIGHWAY 1 (DEPOT STREET), APPROXIMATELY 0.1 MILES SOUTHEAST OF THE JUNCTION WITH VT 131.

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 0.44 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 FORESTED AND PARTIALLY DEVELOPED WITH OCCASIONAL OPEN AREAS FOR RESIDENTIAL AND AGRICULTURAL USE. TOWN HIGHWAY 1 (DEPOT STREET), TOWN HIGHWAY 31 (PRATT HILL ROAD), AND TWO DRIVEWAYS ARE WITHIN THE PROJECT SITE.

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

THE BLACK RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BLACK RIVER IS CLASSIFIED AS INCISED, SINUOUS, AND ALLUVIAL. THE STREAM BED CONSISTS OF COBBLES, GRAVEL, AND SAND. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 79.1 MILES².

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD AND SOFTWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. SOILS ON THE PROJECT SITE ARE URBAN LAND-COLTON-CROGHAN COMPLEX, 0% TO 8% SLOPES, "K FACTOR" = 0.24/0.17 AND PODUNK FINE SANDY LOAM, 0% TO 3% SLOPES, "K FACTOR" = 0.24. BOTH OF THESE SOILS ARE CONSIDERED TO BE NOT HIGHLY ERODIBLE.

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: YES, HISTORICAL STONEWALLS ON NORTH SIDES OF THE BRIDGE. PRIME AGRICULTURAL LAND: NO THREATENED AND ENDANGERED SPECIES: NO WATER RESOURCE: BLACK RIVER WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, 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.

BARRIER FENCE (BF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES AS PROPOSED ON THE EPSC PLAN.

PROJECT DEMARCATION FENCE SHALL BE PLACED TO VISIBLY DEPICT LIMITS OF CLEARING. THE PROJECT DEMARCATION FENCE MUST BE PLACED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO ANY CLEARING ACTIVITIES.

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 CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES 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 WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER FABRIC DROP INLET PROTECTION WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

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.

NO DIVERSIONARY MEASURES ARE ANTICIPATED ON THIS PROJECT.

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.

NO CHECK STRUCTURES ARE ANTICIPATED ON THIS PROJECT.

1.4.7 CONSTRUCT PERMANENT CONTROLS

DROP INLETS, OPTION PIPES AND STONE LINED DITCHES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

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.

BIODEGRADABLE EROSION CONTROL SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

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.

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

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.

1.5 SEQUENCE AND STAGING

1.5.1 CONSTRUCTION SEQUENCE

PROJECT NAME:	CAVENDISH	
PROJECT NUMBER:	BO 1442(38)	
FILE NAME: SI3j3020 PROJECT LEADER: F DESIGNED BY:	ero_narrative.dgn R.YOUNG T.MATTHEWS	PLOT DATE: 07-JUN-2017 DRAWN BY: T.MATTHEWS CHECKED BY:
EPSC NARRATIVE		SHEET SI UF SO

	VAOT LOW GROW/FINE FESCUE MIX						
IC .							
YDROSEED	NAME	LATIN NAME	GERM	PURITY			
95	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90 %	98 %			
72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95 %			
37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%			
37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90 %	95 %			
7.5	INERTS						
250							

	VAOT RURAL AREA MIX					
NC						
YDROSEED	NAME	LATIN NAME	GERM	PURITY		
45	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98 %		
45	TALL FESCUE	FESTUCA ARUNDINACEA	90 %	95 %		
6	RED TOP	AGROSTIS GIGANTEA	90 %	95 %		
18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98 %		
6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95 %		
120						

GENERAL AMENDMENT GUIDANCE				
FERTILIZER	ERTILIZER LIME			
10/20/10	AG LIME	PELLITIZED		
500 LBS/AC	2 TONS/AC	1 TONS/AC		

CONSTRUCTION GUIDANCE

I.SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.

2.SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) 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.HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.

7.TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ANS TECHNICAL LANDSCAPE MANUAL FOR AND TRANSPORTATION FACILITIES	TURF ESTABLISHMENT
E PERFORMED IN ACCORDANCE WITH D (PAY ITEM 651.15)	REVISIONS JANUARY 12,2015 WHF

PROJECT NAME:	CAVENDISH	
PROJECT NUMBER:	BO 1442(38)	
FILE NAME: sI3j302	ero_det.dgn	PLOT DATE: 07-JUN-2017
PROJECT LEADER:	R. YOUNG	DRAWN BY: T.MATTHEWS
DESIGNED BY:	T.MATTHEWS	CHECKED BY:
EPSC DETAILS		SHEET 33 OF 36

A''MIN TAMP SOIL SYMBOL FIRMLY S''MIN I''MIN 6''-12'' STAPLE JUTE MESH EXCELSIOR BLANKET EROSION CONTROL MATTING STAPLE DETAIL DETAIL I TERMINAL FOLD 3
STAPLES JUTE MESH EXCELSIOR BLANKET EROSION CONROL MATTING DETAIL 2 JUNCTION SLOT
TAMP SOIL FIRMLY FIRMLY JUTE MESH EXCELSIOR BLANKET EROSION CONTROL MATTING DETAIL 3 ANCHOR SLOT
DETAIL 4 LAP JUINT
CONSTRUCTION SPECIFICATIONS
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 (RECP) SIDE SLOPE
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).
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PROJECT NAME:	CAVENDISH	
PROJECT NUMBER:	BO 1442(38)	
FILE NAME: sI3j302	ero_det.dgn	PLOT DATE: 07-JUN-2017
PROJECT LEADER: I	R. YOUNG	DRAWN BY: T.MATTHEWS
DESIGNED BY:	T.MATTHEWS	CHECKED BY:
EPSC DETAILS (3)		SHEET 35 OF 36

	EXISTING BUILDING
FM	EXISTING FORCE MAIN
	PROPOSED FORCE MAIN
W	EXISTING WATER MAIN
W	PROPOSED WATER MAIN
	PROPERTY LINE

PROFILE

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SHEET 2 OF 2