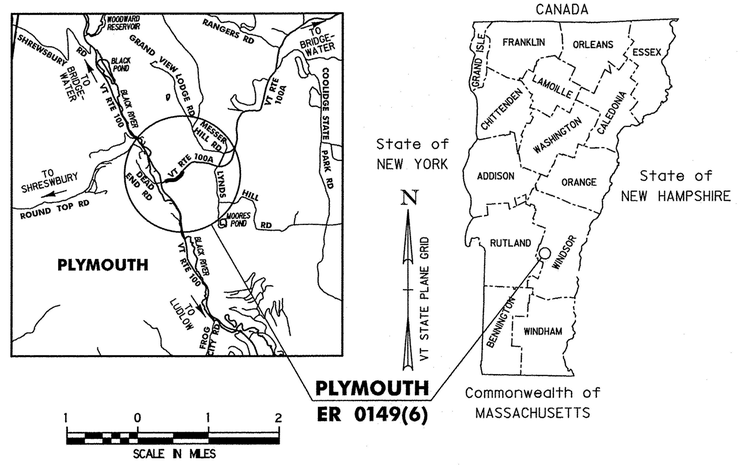
STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC DATA	2016	2036	2056
AADT	930	960	-
DHV	180	190	-
ADTT	55	85	-
%T	8.3	12.3	-
%D	58	58	-
FLEXIBLE ESAL	-	2016 - 2036 254,000	2016 - 2056 563,000

POSTED SPEED = 50 mph
DESIGN SPEED = 50 mph

PROPOSED IMPROVEMENT
TOWN OF PLYMOUTH
COUNTY OF WINDSOR
VT ROUTE 100A (MAJOR COLLECTOR)

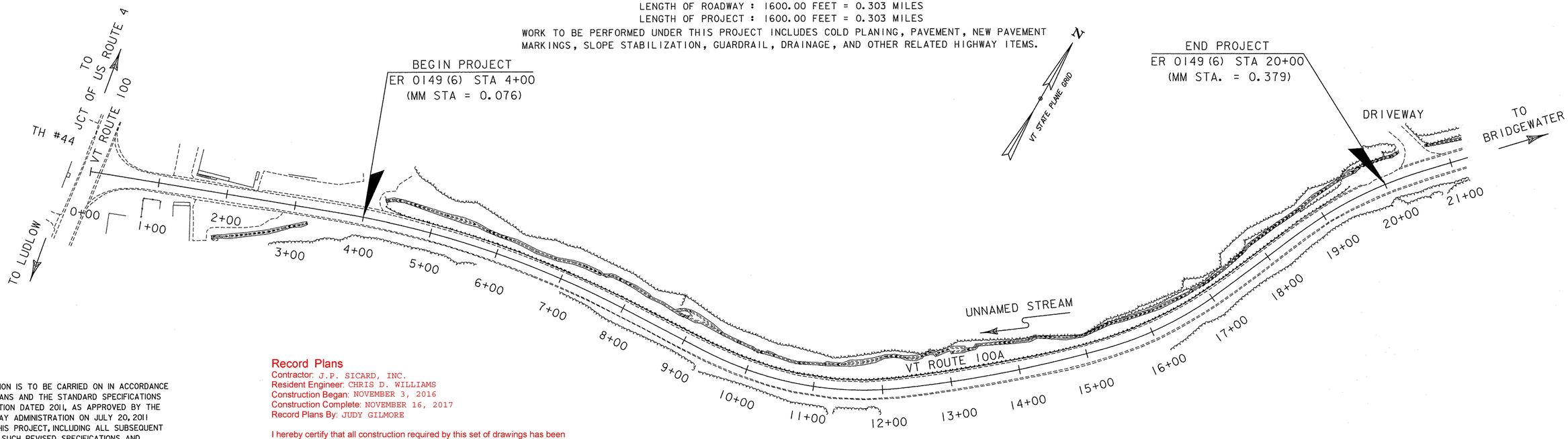


BEGINNING AT A POINT ON VT ROUTE 100A IN THE TOWN OF PLYMOUTH AT STATION 4+00 (MM 0.076) APPROXIMATELY 400 FEET EAST OF THE JCT OF VT ROUTE 100 AND VT ROUTE 100A AND EXTENDING EASTERLY APPROXIMATELY 1600 FEET TO STATION 20+00 (MM 0.379)

LENGTH OF ROADWAY : 1600.00 FEET = 0.303 MILES
LENGTH OF PROJECT : 1600.00 FEET = 0.303 MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING, PAVEMENT, NEW PAVEMENT MARKINGS, SLOPE STABILIZATION, GUARDRAIL, DRAINAGE, AND OTHER RELATED HIGHWAY ITEMS.

BITUMINOUS CONCRETE PAVEMENT SUPERPAVE MIXTURE DESIGN CRITERIA	
DESIGN LIFE ESALS (DESIGN LANE) (20 YR)	147,400
DESIGN NUMBER OF GYRATIONS	65
PERFORMANCE GRADED ASPHALT BINDER	SUBSECTION 490.03(b)



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.

Record Plans
Contractor: J.P. SICARD, INC.
Resident Engineer: CHRIS D. WILLIAMS
Construction Began: NOVEMBER 3, 2016
Construction Complete: NOVEMBER 16, 2017
Record Plans By: JUDY GILMORE

I hereby certify that all construction required by this set of drawings has been accomplished as indicated herein.

BY: E-SIGNED by Christopher Williams on 2019-01-08 12:45:43 UTC Resident Engineer

Date: January 08, 2019

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.

QUALITY ASSURANCE PROGRAM : LEVEL 2

SURVEYED BY : VT SURVEY & ENGINEERING
SURVEYED DATE : 2/7/14

DATUM
VERTICAL NAVD 88 (GEOID12A) FT
HORIZONTAL NAD 83 (2011) sFT

STATE OF VERMONT — CHRISTOPHER M. SANDERSON — NO. 01139 — CIVIL — LICENSED PROFESSIONAL ENGINEER
5/9/16

McFarland Johnson

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE 5/23/2016

PROJECT MANAGER : KEN UPMAL, P.E.

PROJECT NAME : PLYMOUTH
PROJECT NUMBER : ER 0149(6)

SHEET 1 OF 68 SHEETS

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15	EARTHWORK SHEET
16	ROW TITLE SHEET
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67	TRAFFIC CONTROL PLAN AND NOTES
68	DETOUR PLAN

STANDARDS LIST

E-121	08-08-1995
E-127	08-08-1995
E-136B	08-08-1995
E-191	02-01-1999
E-193	08-18-1995
G-1	11-10-2015
G-1d	02-10-2014
T-1	04-25-2016
T-2	04-25-2016
T-10	04-25-2016
T-17	08-06-2012
T-28	08-06-2012
T-29	08-06-2012
T-30	08-06-2012
T-35	08-06-2012
T-36	08-06-2012
T-40	01-02-2013
T-44	04-09-2014
T-45	01-02-2013
T-80	02-12-2016
T-81	02-12-2016
T-82	02-16-2016
T-93	10-26-2015

STANDARD DETAILS

HSD 400.01	03-29-2016
HSD 621.06	11-03-2015

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3181nd.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
INDEX OF SHEETS

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 2 OF 68

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	BENCHMARK
	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

- UTILITY (GENERIC-UNKNOWN)
- 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)

- UTILITY (GENERIC-UNKNOWN)
- 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 — PDF — PROJECT DEMARCATION FENCE
- BF — BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE 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
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6F — 6F — 6F PROPERTY BOUNDARY
- 4F — 4F — 4F PROPERTY BOUNDARY
- HAZ — HAZ — 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 — 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
- Ⓗ HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

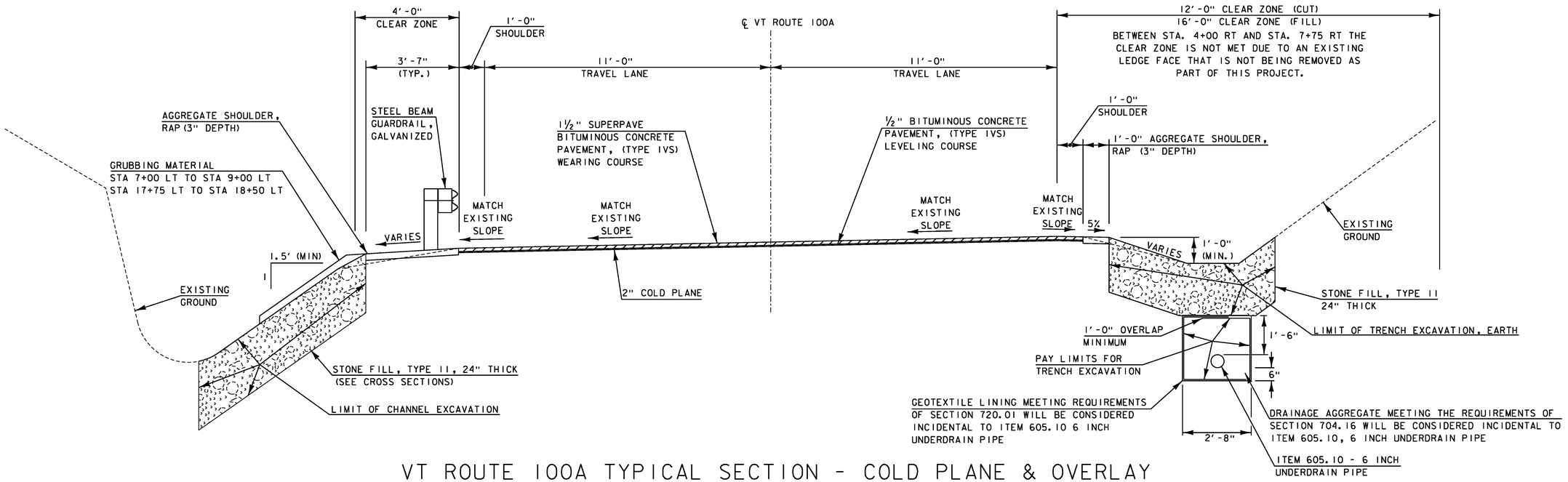
- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318leg.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
STANDARD CONVENTIONAL SYMBOLS SHEET

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 3 OF 68

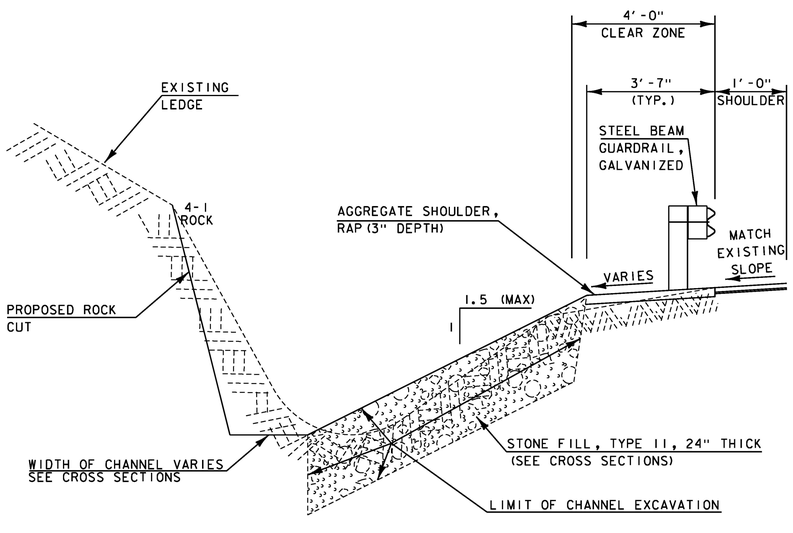


VT ROUTE 100A TYPICAL SECTION - COLD PLANE & OVERLAY

STA 4+00 TO STA 20+00

0 2 4

SCALE IN FEET



LEDGE CUT

STA 6+00 TO STA 7+00

STA 16+15 TO STA 18+75

0 2 4

SCALE IN FEET

MATERIAL TOLERANCES

SURFACE	TOTAL DEPTH
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SHOULDER, RAP	+/- ½"

NOTES:

1. IF DAMAGE TO THE EXISTING PAVEMENT STRUCTURE BELOW THE 2" COLD PLANE OCCURS DUE TO HEAVY EQUIPMENT USE, THE CONTRACTOR SHALL MAKE REPAIRS AS REQUIRED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE STATE.
2. USE 2" TOPSOIL ON SLOPES FLATTER THAN 1:3 BEHIND GUARDRAIL BETWEEN STATION 18+75 LT AND STATION 20+23 LT AND ON ALL SLOPES BETWEEN STATION 19+50 RT AND STATION 20+00 RT.
3. ALL BITUMINOUS CONCRETE PAVEMENT WILL BE PAID UNDER ITEM 900.620 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).
4. EMULSIFIED ASPHALT SHALL BE APPLIED BETWEEN ALL PAVEMENT LAYERS AT A RATE OF 0.01 TO 0.03 GAL/CUBIC YARD AND WILL BE PAID FOR UNDER ITEM 404.65 EMULSIFIED ASPHALT OR ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H)

McFarland Johnson

PROJECT NAME: PLYMOUTH

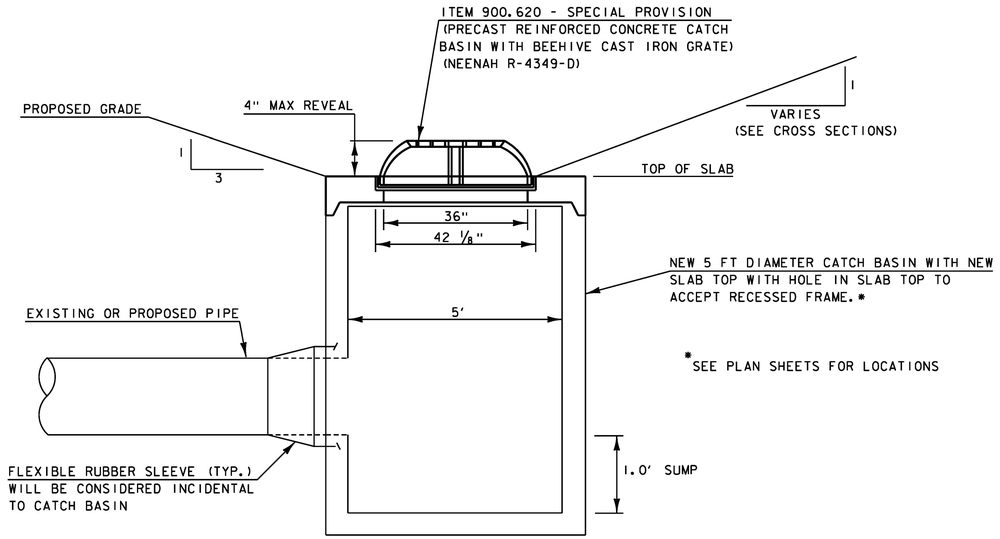
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318typl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
TYPICAL SECTION SHEET

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 4 OF 68

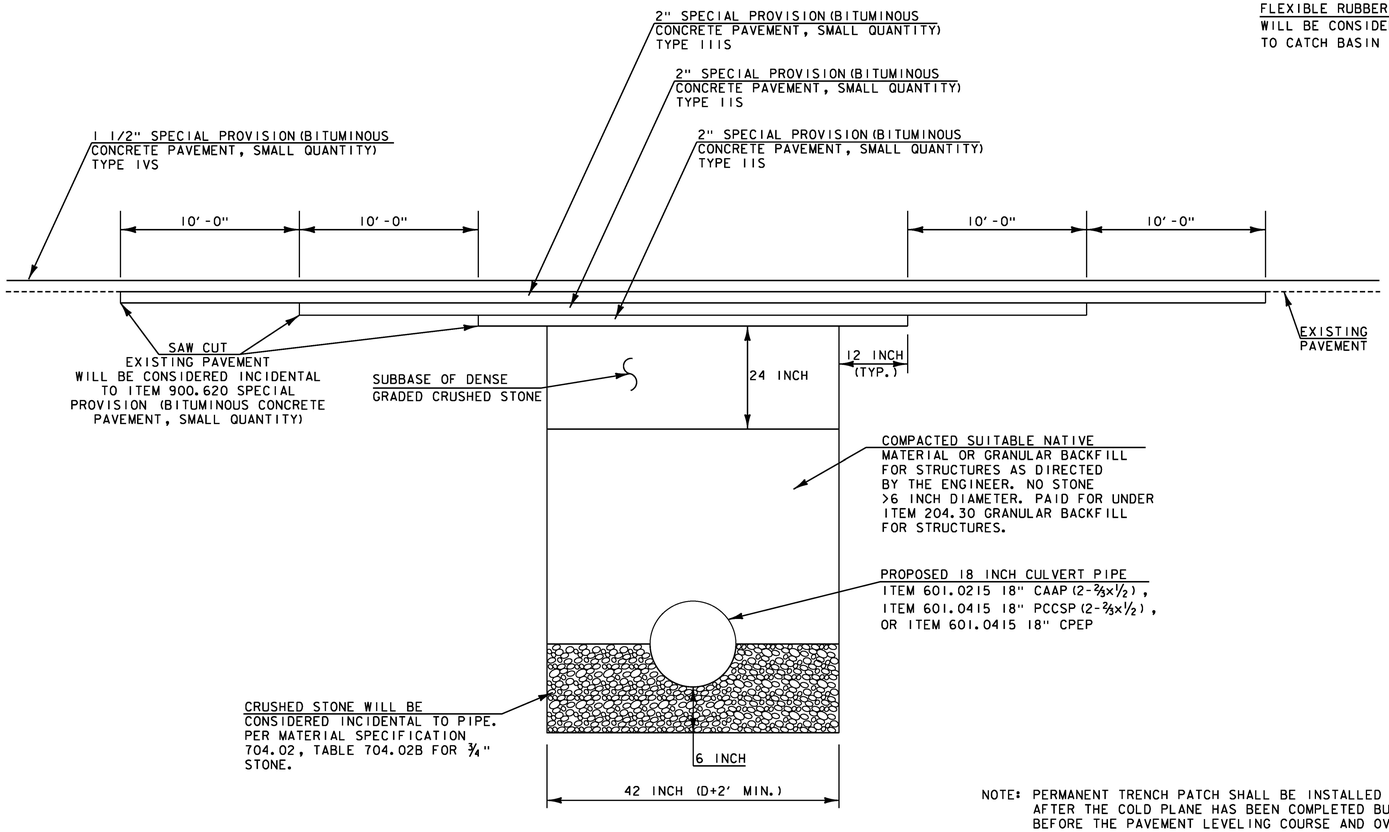
MATERIAL TOLERANCES

SURFACE	TOTAL DEPTH
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
SUBBASE OF DENSE GRADED CRUSHED STONE	+/- 1"



CATCH BASIN AND BEEHIVE GRATE DETAIL

NOT TO SCALE



NOTE: PERMANENT TRENCH PATCH SHALL BE INSTALLED AFTER THE COLD PLANE HAS BEEN COMPLETED BUT BEFORE THE PAVEMENT LEVELING COURSE AND OVERLAY.

TRENCH PATCH DETAIL

NOT TO SCALE

McFarland Johnson

PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: zl3c318det.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J. SANTACRUCE	DRAWN BY: R. LUCHINI
DESIGNED BY: R. LUCHINI	CHECKED BY: B. COLBURN
DETAILS SHEET	SHEET 5 OF 68

GPS CONTROL POINTS

RUTLAND CORS ARP

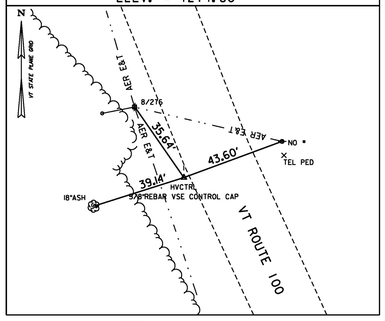
PID DK4109
N = 403876.08
E = 1513436.17
ELLIP HEIGHT = 529.69

STATION IS A GPS CONTINOUSLY OPERATING REFERENCE STATION. STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA. THE MONUMENT IS ATTACHED TO A FIVE STORY CONCRETE BUILDING WITH A 8 FT CONCRETE FOUNDATION. THIS PORTION OF THE BUILDING HOUSES THE STAIRWELL AND ELEVATOR SHAFT FOR A PARKING GARAGE. THE BUILDING WAS BUILT IN 1999. THE MAST IS A 1.75 INCH DIA GALV PIPE THAT IS 108 INCHES LONG. THE MAST IS FIELD WELDED TO THREE STEEL MOUNTING STRUTS. THE TOP STRUT IS ATTACHED TO THE CONCRETE BUILDING WITH TWO 1/2 INCH SS BOLTS SECURED LEAD ANCHORS. THE OTHER TWO STRUTS ARE ATTACHED WITH 2 THROUGH BOLTS THAT CONSIST OF 1/2 INCH SS THREADED RODS AND NUTS.

TRAVERSE TIES

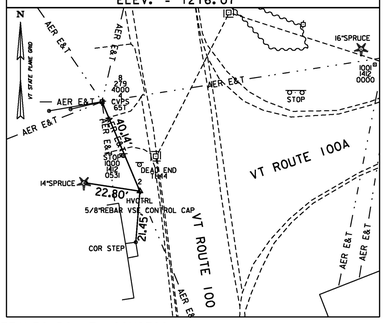
HVCTRL #1 — 5/8"REBAR SET FLUSH YELLOW VSE CONTROL CAP

NORTH = 375002.75
EAST = 1577136.17
ELEV. = 1214.80



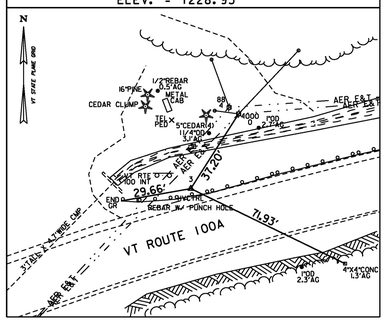
HVCTRL #2 — 5/8"REBAR SET FLUSH YELLOW VSE CONTROL CAP

NORTH = 375429.74
EAST = 1577041.73
ELEV. = 1216.07



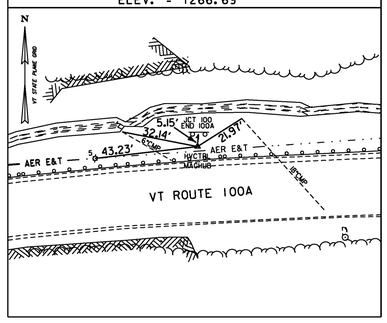
HVCTRL #3 — REBAR W/ PUNCH HOLE

NORTH = 375599.47
EAST = 1577488.79
ELEV. = 1228.93



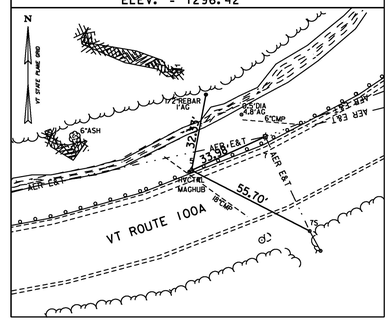
HVCTRL #4 — MAGHUB

NORTH = 375656.45
EAST = 1577810.62
ELEV. = 1266.69



HVCTRL #5 — MAGHUB

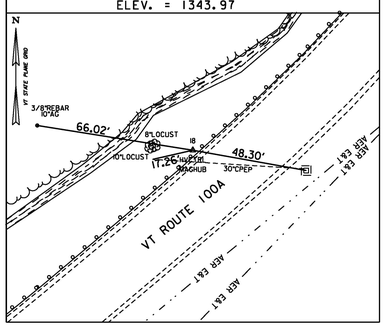
NORTH = 375691.93
EAST = 1578117.93
ELEV. = 1296.42



* SURVEY COMPLETED: JANUARY 23, 2014 BY VSE, T. CATTANEO-PC, T. COMSTOCK

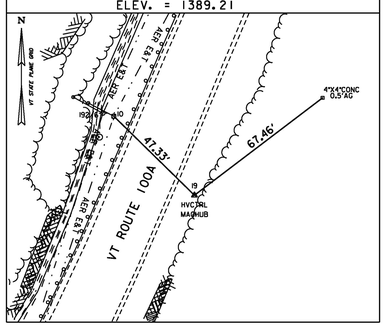
HVCTRL #18 — MAGHUB

NORTH = 375884.52
EAST = 1578388.84
ELEV. = 1343.97



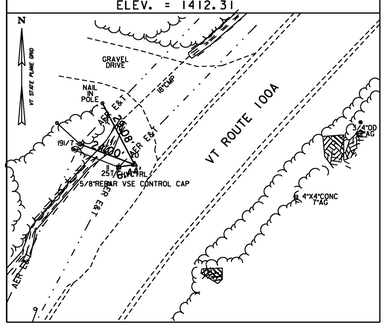
HVCTRL #19 — MAGHUB

NORTH = 376129.62
EAST = 1578609.44
ELEV. = 1389.21



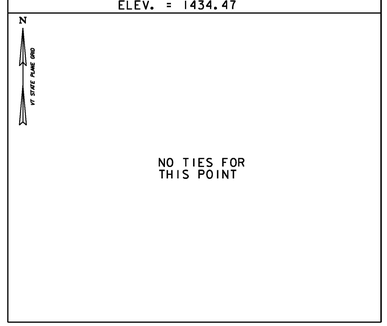
HVCTRL #20 — 5/8"REBAR SET FLUSH YELLOW VSE CONTROL CAP

NORTH = 376374.53
EAST = 1578694.76
ELEV. = 1412.31



HVCTRL #21 — 5/8"REBAR SET FLUSH YELLOW VSE CONTROL CAP

NORTH = 376793.41
EAST = 1579098.93
ELEV. = 1434.47



NO TIES FOR THIS POINT

DATUM
VERTICAL NAVD 88(GEOID12A) FT
HORIZONTAL NAD 83(2011) sFT
ADJUSTMENT LSQ

VERMONT SURVEY AND ENGINEERING

McFarland Johnson

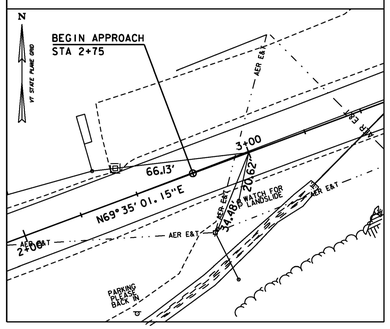
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318t1.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
TIE SHEET 1

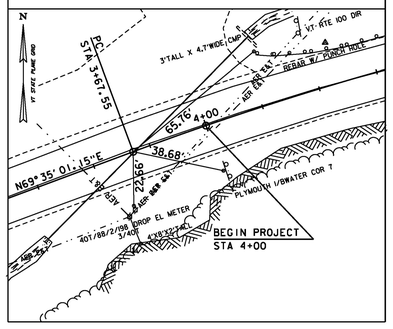
PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 6 OF 68

ALIGNMENT TIES

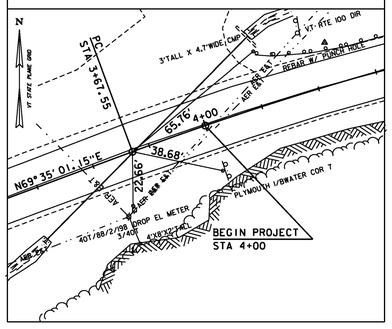
BEGIN APPROACH
NORTH = 375521.50
EAST = 1577321.53



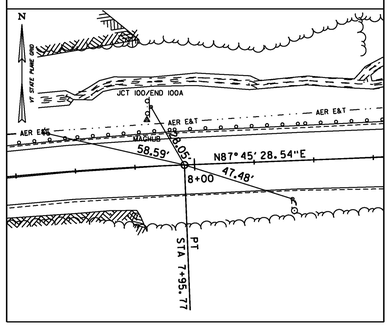
BEGIN PROJECT
NORTH = 375564.73
EAST = 1577438.81



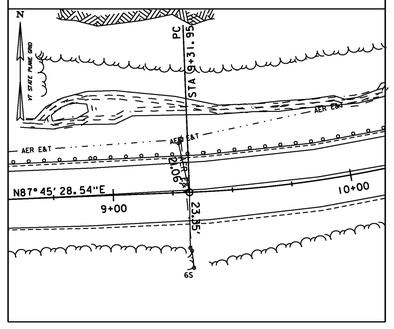
PC STA 3+67.55
NORTH = 375553.79
EAST = 1577408.27



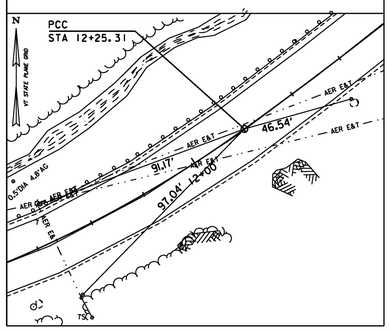
PT STA 7+95.77
NORTH = 375637.56
EAST = 1577826.39



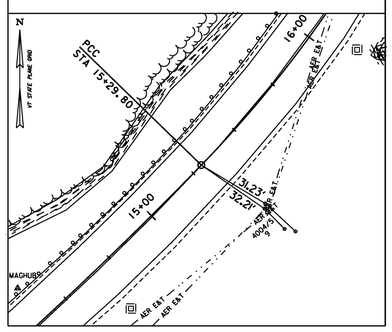
PC STA 9+31.95
NORTH = 375642.88
EAST = 1577962.46



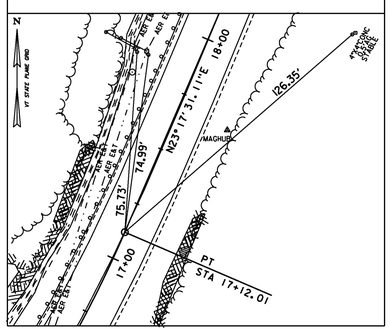
PCC STA 12+25.31
NORTH = 375737.27
EAST = 1578235.80



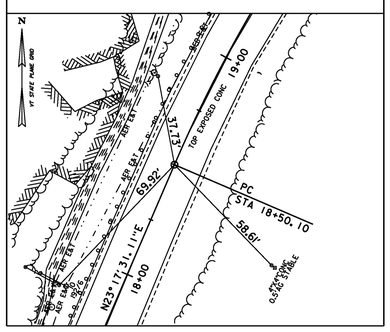
PCC STA 15+29.80
NORTH = 375936.16
EAST = 1578465.85



PT STA 17+12.01
NORTH = 376086.85
EAST = 1578566.48

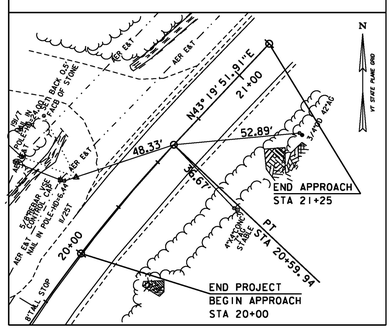


PC STA 18+50.10
NORTH = 376213.68
EAST = 1578621.08

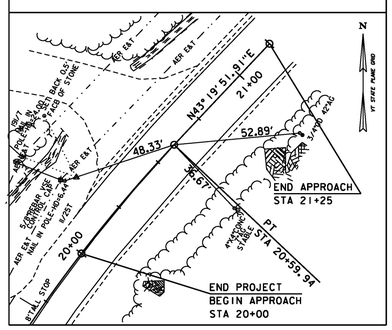


ALIGNMENT TIES

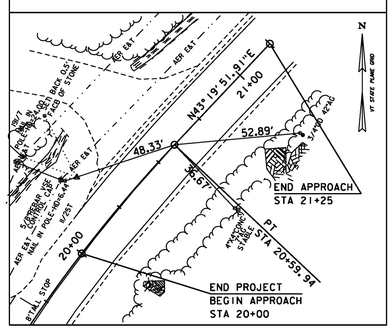
PT STA 20+59.94
NORTH = 376388.16
EAST = 1578735.74



END PROJECT
NORTH = 376342.57
EAST = 1578696.84



END APPROACH
NORTH = 376430.54
EAST = 1578775.72



DATUM
VERTICAL NAVD 88(GEOID12A) FT
HORIZONTAL NAD 83(2011) sFT
ADJUSTMENT LSQ

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318ti.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
TIE SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 7 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: PL-PB-01
SHEET 1 of 1
DATE STARTED: 10/14/14
DATE COMPLETED: 10/14/14

PROJECT NAME: Plymouth STP-ER 0149(6)
SITE NAME: Route 100A Plymouth Notch
STATION: 4+22
OFFSET: 7 RT
VTSPG: N 375565.09 ft E 1577461.84 ft

PROJECT NUMBER: GAI 1401244
SITE NUMBER: -
GROUND ELEVATION: 1221.0 ft
GROUNDWATER DEPTH: Dry 10/14/14
PROJECT PIN NUMBER:

BORING CREW: Great Works Test Borings Inc.
DRILLER: J. Lee
LOGGER: NSC
BORING RIG: Mobile B-53 Track Mounted

BORING TYPE: AUGER
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: JDL

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 1.6 ft, Advanced auger through asphalt					
2.5		S1: 1.6 ft - 3.6 ft, A-2-4, Medium brown, moist, medium dense, silty fine to medium SAND, some gravel, (SM), Rec. = 1.0 ft	8-8-9-8 (17)				
5.0		S2: 3.6 ft - 5.6 ft, A-2-4, Medium brown, moist, medium dense, layered silty fine SAND and fine to coarse SAND, little gravel (SM), Rec. = 1.6 ft	7-7-6-6 (13)	10.3	24.0	52.0	24.0
7.5		Top of Bedrock @ 9.2 ft					
10.0		S3: 9.0 ft - 9.2 ft, A-2-4, Medium brown, moist, medium dense, layered silty fine SAND and fine to coarse SAND, little gravel (auger slough) (SM), Rec. = 0.6 ft	50/0.2' (R)				
12.5		Hole stopped @ 9.2 ft					
15.0							
17.5							
20.0							
22.5							

Notes:
- Boring terminated on refusal of spoon on interpreted bedrock.
- Backfilled with cuttings and cold patch asphalt upon completion.
- No groundwater encountered during drilling.

LOG OF BORING & WELL 141039 PLYMOUTH NOTCH.GPJ VT AOT.GDT 2/9/15

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: PL-PB-02
SHEET 1 of 1
DATE STARTED: 10/14/14
DATE COMPLETED: 10/14/14

PROJECT NAME: Plymouth STP-ER 0149(6)
SITE NAME: Route 100A Plymouth Notch
STATION: 6+25
OFFSET: 7 RT
VTSPG: N 375613.21 ft E 1577657.78 ft

PROJECT NUMBER: GAI 1401244
SITE NUMBER: -
GROUND ELEVATION: 1247.5 ft
GROUNDWATER DEPTH: Dry 10/14/14
PROJECT PIN NUMBER:

BORING CREW: Great Works Test Borings Inc.
DRILLER: J. Lee
LOGGER: NSC
BORING RIG: Mobile B-53 Track Mounted

BORING TYPE: AUGER
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: JDL

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 1.0 ft, Advanced auger through asphalt					
2.5		S1: 1.0 ft - 3.0 ft, A-1-b, Medium brown, moist, dense, fine to coarse SAND and GRAVEL, some silt, (SM), SS, Rec. = 1.4 ft	14-19-16-19 (35)	3.0	51.0	35.0	14.0
5.0		S2: 3.0 ft - 5.0 ft, A-1-b, Medium brown, moist, very dense, fine to coarse SAND and GRAVEL, trace silt, (SM), SS, Rec. = 1.0 ft	26-26-27-19 (53)				
7.5		Top of Bedrock @ 6.5 ft					
10.0		Hole stopped @ 6.5 ft					
12.5							
15.0							
17.5							
20.0							
22.5							

Notes:
- Boring terminated on refusal of auger on interpreted bedrock.
- Backfilled with cuttings and cold patch asphalt upon completion.
- No groundwater encountered during drilling.

LOG OF BORING & WELL 141039 PLYMOUTH NOTCH.GPJ VT AOT.GDT 2/9/15

BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	DEPTH TLOB (FT.)	NORTHING	EASTING
PB-01	4+22	7 RT	1221.0	9.2	375565.09	1577461.84
PB-02	6+25	7 RT	1247.5	6.5	375613.21	1577657.78
PB-03	8+98	7 LT	1277.0	9.0	375648.55	1577928.26
PB-04	11+67	7 RT	1306.5	--	375699.03	1578190.07
PB-05	14+00	7 LT	1340.0	8.5	375851.73	1578367.39
PB-06	18+50	7 RT	1399.0	5.5	376210.82	1578627.47

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318bor1.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
BORING LOG SHEET 1

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 8 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: PL-PB-03
SHEET 1 of 1
DATE STARTED: 10/14/14
DATE COMPLETED: 10/14/14

PROJECT NAME: Plymouth STP-ER 0149(6)
SITE NAME: Route 100A Plymouth Notch
STATION: 8+98
OFFSET: 7 LT
VTSPG: N 375648.55 ft E 1577928.26 ft

PROJECT NUMBER: GAI 1401244
SITE NUMBER: -
GROUND ELEVATION: 1277.0 ft
GROUNDWATER DEPTH: Dry 10/14/14
PROJECT PIN NUMBER:

BORING CREW: Great Works Test Borings Inc.
DRILLER: J. Lee
LOGGER: NSC
BORING RIG: Mobile B-53 Track Mounted

BORING TYPE: AUGER
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: JDL

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 1.0 ft, Advanced auger through asphalt					
2.5		S1: 1.0 ft - 3.0 ft, A-1-b, Medium brown, moist, medium dense, fine to coarse SAND, some gravel, some silt, (SM), SS, Rec. = 1.2 ft	10-7-7-9 (14)	5.7	37.0	46.0	17.0
5.0		S2: 3.0 ft - 5.0 ft, A-1-b, Medium brown, moist, medium dense, fine to coarse SAND, some silt, little gravel, (SM), SS, Rec. = 1.1 ft	14-11-14-15 (25)				
7.5							
		Hole stopped @ 9.0 ft			Top of Bedrock @ 9.0 ft		
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

Notes:
- Boring terminated on refusal of auger on interpreted bedrock.
- Backfilled with cuttings and cold patch asphalt upon completion.
- No groundwater encountered during drilling.

LOG OF BORING & WELL - 141030 PLYMOUTH NOTCH.GPJ VT AOT.GDT 2/5/15

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: PL-PB-04
SHEET 1 of 2
DATE STARTED: 10/14/14
DATE COMPLETED: 10/14/14

PROJECT NAME: Plymouth STP-ER 0149(6)
SITE NAME: Route 100A Plymouth Notch
STATION: 11+67
OFFSET: 7 RT
VTSPG: N 375699.03 ft E 1578190.07 ft

PROJECT NUMBER: GAI 1401244
SITE NUMBER: -
GROUND ELEVATION: 1306.5 ft
GROUNDWATER DEPTH: Dry 10/14/14
PROJECT PIN NUMBER:

BORING CREW: Great Works Test Borings Inc.
DRILLER: J. Lee
LOGGER: NSC
BORING RIG: Mobile B-53 Track Mounted

BORING TYPE: AUGER
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: JDL

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)	RUN	REC (%)	RQD (%)	Drill Rate (min/ft)	UCS (psi)
		0.0 ft - 1.25 ft, Advanced auger through asphalt										
2.5		S1: 1.25 ft - 3.6 ft, A-2-4, Medium brown, moist, medium dense, fine to coarse SAND, some gravel , some silt, (SM), SS, Rec. = 0.7 ft	15-50/0.4' (R)									
5.0		S2: 3.5 ft - 5.6 ft, A-2-4, Medium brown, moist, medium dense, silty fine to coarse SAND, some gravel, (SM), SS, Rec. = 1.2 ft	12-12-18-20 (30)	0.9	30.0	44.0	26.0					
7.5												
10.0		S3: 9.0 ft - 9.2 ft, A-2-4, Medium brown, moist, medium dense, silty fine to medium SAND, little gravel, (SM), SS, Rec. = 1.3 ft	11-13-8-9 (21)									
12.5		12.0 ft - 15.0 ft, Weathered bedrock based on auger cuttings.				Top of Bedrock @ 12.0 ft						
15.0		R1: 15.0 ft - 20.0 ft, NX, Rec. = 0.2 ft, Probable boulders	R1	4	0			1 1 0.75 1.7 2				
17.5												

LOG OF BORING & WELL - 141030 PLYMOUTH NOTCH.GPJ VT AOT.GDT 2/5/15

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: PL-PB-04
SHEET 2 of 2
DATE STARTED: 10/14/14
DATE COMPLETED: 10/14/14

PROJECT NAME: Plymouth STP-ER 0149(6)
SITE NAME: Route 100A Plymouth Notch
STATION: 11+67
OFFSET: 7 RT
VTSPG: N 375699.03 ft E 1578190.07 ft

PROJECT NUMBER: GAI 1401244
SITE NUMBER: -
GROUND ELEVATION: 1306.5 ft
GROUNDWATER DEPTH: Dry 10/14/14
PROJECT PIN NUMBER:

BORING CREW: Great Works Test Borings Inc.
DRILLER: J. Lee
LOGGER: NSC
BORING RIG: Mobile B-53 Track Mounted

BORING TYPE: AUGER
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: JDL

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	RUN	REC (%)	RQD (%)	Drill Rate (min/ft)	UCS (psi)
22.5		R2: 20.0 ft - 25.0 ft, NX, Rec. = 0.4 ft, Probable boulders	R2	8	0	1 1 1.1 2.4 2	
25.0		Hole stopped @ 25.0 ft					
27.5							
30.0							
32.5							
35.0							
37.5							

Notes:
- Backfilled with filter sand, cuttings and cold patch asphalt upon completion.
- No groundwater encountered during drilling.

LOG OF BORING & WELL - 141030 PLYMOUTH NOTCH.GPJ VT AOT.GDT 2/5/15

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318bor2.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
BORING LOG SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 9 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: PL-PB-05
SHEET 1 of 1
DATE STARTED: 10/14/14
DATE COMPLETED: 10/14/14

PROJECT NAME: Plymouth STP-ER 0149(6)
SITE NAME: Route 100A Plymouth Notch
STATION: 14+00
OFFSET: 7 LT
VTSPG: N 375851.73 ft E 1578367.39 ft

PROJECT NUMBER: GAI 1401244
SITE NUMBER: -
GROUND ELEVATION: 1340.0 ft
GROUNDWATER DEPTH: Dry 10/14/14
PROJECT PIN NUMBER:

BORING CREW: Great Works Test Borings Inc.
DRILLER: J. Lee
LOGGER: NSC
BORING RIG: Mobile B-53 Track Mounted

BORING TYPE: AUGER
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: JDL

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 1.2 ft, Advanced auger through asphalt					
2.5		S1: 1.2 ft - 3.2 ft, A-2-4, Medium brown, moist, medium dense, fine to coarse SAND, some gravel, some silt, (SM), SS, Rec. = 0.7 ft	8-8-13-10 (21)				
5.0		S2: 3.2 ft - 5.2 ft, A-1-b, Medium brown, moist, medium dense, fine to coarse SAND, some gravel, little silt, (SM), SS, Rec. = 1.5 ft	9-9-11-14 (20)	7.3	43.0	36.0	21.0
7.5							
		Top of Bedrock @ 8.5 ft					

Hole stopped @ 8.5 ft

Notes:
- Boring terminated on refusal of auger on interpreted bedrock.
- Backfilled with cuttings and cold patch asphalt upon completion.
- No groundwater encountered during drilling.

10.0
12.5
15.0
17.5
20.0
22.5

LOG OF BORING & WELL 141039 PLYMOUTH NOTCH.GPJ VT ADT.GDT 2/5/15

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: PL-PB-06
SHEET 1 of 1
DATE STARTED: 10/14/14
DATE COMPLETED: 10/14/14

PROJECT NAME: Plymouth STP-ER 0149(6)
SITE NAME: Route 100A Plymouth Notch
STATION: 18+50
OFFSET: 7 RT
VTSPG: N 376210.82 ft E 1578627.47 ft

PROJECT NUMBER: GAI 1401244
SITE NUMBER: -
GROUND ELEVATION: 1399.0 ft
GROUNDWATER DEPTH: Dry 10/14/14
PROJECT PIN NUMBER:

BORING CREW: Great Works Test Borings Inc.
DRILLER: J. Lee
LOGGER: NSC
BORING RIG: Mobile B-53 Track Mounted

BORING TYPE: AUGER
SAMPLE TYPE: SPLIT BARREL
HAMMER TYPE: ROPE & CATHEAD
CHECKED BY: JDL

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 6 IN (N VALUE)	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		0.0 ft - 1.1 ft, Advanced auger through asphalt					
2.5		S1: 1.1 ft - 3.1 ft, A-2-4, Top 0.6': Medium brown, moist, medium dense, fine SAND, some silt, (SM). Bottom 0.7': Medium brown, moist, medium dense, fine to coarse SAND, some silt, little gravel, (SM), SS, Rec. = 1.3 ft	10-10-11-13 (21)	7.9	24.0	50.0	26.0
5.0		S2: 3.1 ft - 5.1 ft, A-2-4, Medium brown, moist, medium dense, fine to coarse SAND, some gravel, little silt, (SM), SS, Rec. = 1.0 ft	12-12-50/0.4' (R)				
7.5							
		Top of Bedrock @ 5.5 ft					

Hole stopped @ 5.5 ft

Notes:
- Boring terminated on refusal of auger on interpreted bedrock.
- Backfilled with cuttings and cold patch asphalt upon completion.
- No groundwater encountered during drilling.

10.0
12.5
15.0
17.5
20.0
22.5

LOG OF BORING & WELL 141039 PLYMOUTH NOTCH.GPJ VT ADT.GDT 2/5/15

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318bor3.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
BORING LOG SHEET 3

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 10 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	EROSION CONTROL	FULL CE
1		
3000		
600		
2030		
590		
1380		
130		
10		
31		
4300		
16		
80		
29		
29		
1		
45		
45		
45		
16		
4		
4		
1300		
50		
	2700	
12		
1600		
2		
1530		
800		
2000		
		1
		1
		3000
1		
3		
3300		

TOTALS

GRAND TOTAL	FINAL
1	
3000	
600	
2030	
590	
1380	
130	
10	
31	
4300	
16	
80	
29	
29	
1	
45	
45	
45	
16	
4	
4	
1300	
50	
2700	
12	
1600	
2	
1530	
800	
2000	
1	
1	
3000	
1	
3	
3300	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-
CY	COMMON EXCAVATION	203.15	51
CY	SOLID ROCK EXCAVATION	203.16	10
CY	CHANNEL EXCAVATION OF EARTH	203.25	22
CY	CHANNEL EXCAVATION OF ROCK	203.26	11
CY	TRENCH EXCAVATION OF EARTH	204.20	16.7
CY	TRENCH EXCAVATION OF ROCK	204.21	11.4
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	EST
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	1.8
SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	20.1
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	0.3
TON	AGGREGATE SHOULDERS, RAP	402.13	0.1
	BEGIN OPTION AA		
CWT	EMULSIFIED ASPHALT	404.65	0.5
CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H)	900.683	0.5
	END OPTION AA		
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-
	BEGIN OPTION BB		
LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215	0.5
LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415	0.5
LF	18" CPEP	601.0915	0.5
	END OPTION BB		
LF	18" PCCSP(PI) .064 (2-2/3 X 1/2)	601.0615	-
LF	24" CPEP(SL)	601.2620	-
LF	30" CPEP(SL)	601.2625	-
LF	6 INCH UNDERDRAIN PIPE	605.10	30
LF	6 INCH UNDERDRAIN CARRIER PIPE	605.20	2
CY	STONE FILL, TYPE II	613.11	23
EACH	YIELDING MARKER POSTS	619.17	-
LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	8
EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-
LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	4.2
HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST
HR	FLAGGERS	630.15	EST
LS	FIELD OFFICE, ENGINEERS	631.10	-
LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-
DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-
LS	MOBILIZATION/DEMOBILIZATION	635.11	-
EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-
LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404	100

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)
		TYPE IIS
24.2	T	TRENCH PATCH
		TYPE IIIS
23	T	TRENCH PATCH
		TYPE IVS
365.9	T	WEARING COURSE
122	T	SHIM
24.9	T	ROUNDING
560	T	TOTAL

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318qyl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
QUANTITY SHEET I

PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET II OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES			TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	FULL CE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
3300			3300		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414	100			
9			9		EACH	DURABLE LETTER OR SYMBOL, POLYUREA	646.494	-			
120			120		EACH	LINE STRIPING TARGETS	646.76	-			
	515		515		SY	GEOTEXTILE UNDER STONE FILL	649.31	2.5			
	12		12		LB	SEED	651.15	1.1			
	50		50		LB	FERTILIZER	651.18	4.7			
	0.2		0.2		TON	AGRICULTURAL LIMESTONE	651.20	-			
	0.2		0.2		TON	HAY MULCH	651.25	-			
	10		10		CY	TOPSOIL	651.35	1.8			
	300		300		SY	GRUBBING MATERIAL	651.40	10.1			
	1		1		LS	EPSC PLAN	652.10	-			
	50		50		HR	MONITORING EPSC PLAN	652.20	EST			
	1		1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-			
	100		100		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25	10.6			
	5		5		EACH	PREFABRICATED CHECK DAM	653.30	-			
	7		7		EACH	INLET PROTECTION DEVICE, TYPE I	653.40	-			
	2700		2700		LF	PROJECT DEMARCATION FENCE	653.55	56.1			
	700		700		LF	EROSION LOG	653.60	21.4			
95.8			95.8		SF	TRAFFIC SIGNS, TYPE A	675.20	-			
200			200		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	16.5			
17			17		EACH	REMOVING SIGNS	675.50	-			
18			18		EACH	DELINEATOR WITH STEEL POST	676.10	-			
1			1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
1500			1500		CY	SPECIAL PROVISION (EROSION STONE)	900.608	81			
8			8		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620	-			
7			7		EACH	SPECIAL PROVISION (PRECAST CONCRETE CATCH BASIN WITH BEEHIVE CAST IRON GRATE)	900.620	-			
1			1		EACH	SPECIAL PROVISION (ROCK ANCHOR TESTING)	900.620	-			
2200			2200		LF	SPECIAL PROVISION (ROCK ANCHORS)	900.640	-			
1			1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE)	900.645	-			
1			1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650	-			
1			1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650				
18000			18000		SF	SPECIAL PROVISION (WIRE MESH SLOPE STABILIZATION SYSTEM)	900.670	-			
560			560		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	24.9			

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318qy2.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
QUANTITY SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET 12 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

GUARD RAIL

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	END TREATMENT BEGIN EA	END TREATMENT END EA
		ITEM 621.20 STEEL BEAM GUARDRAIL , GALVANIZED			
4+23	20+15	1592		G1-d	G1-d
	SUBTOTAL	1592			
	ROUNDING	8			
	TOTAL	1600			

UNDERDRAIN

BEGIN STATION	END STATION	TYPE	POSITION	DIA. IN	LENGTH FT	TRENCH EARTH CY	TRENCH ROCK CY	GRAN BKFILL CY	FB EA	MKR PST EA
		DITCHLINE UNDERDRAIN								
8+41.4	11+14.8	U	RT	6	273	64.1	0.0			
11+14.8	12+65.9	U	RT	6	151	35.5	0.0			
12+66.0	14+66.9	U	RT	6	201	47.2	0.0			
14+66.9	16+07.3	U	RT	6	140	33.0	0.0			
16+07.3	17+50.0	U	RT	6	143	33.5	12.6			
17+50.0	18+98.4	U	RT	6	149	35.0	25.0			
		SLOPE STABILIZATION UNDERDRAIN								
11+91	12+11	U (D1)	RT	6	29		6.2			
12+00	12+36	U (D2)	RT	6	48		10.2			
12+07	12+65	U (D3)	RT	6	75		16.0			
12+14	12+56	U (D4)	RT	6	56		12.0			
12+48	12+49	U (D6)	RT	6	5		1.1			
12+49	12+67	C (D5)	RT	6	48		10.2			
		ITEM 605.10 6 INCH UNDERDRAIN PIPE								
	SUBTOTAL				1270	248.3	83.1			
	ROUNDING				30					
	TOTAL				1300					
		ITEM 605.20 6 INCH UNDERDRAIN CARRIER PIPE								
	SUBTOTAL				48		10.2			
	ROUNDING				2					
	TOTAL				50					

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3181dt.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
ITEM DETAIL SHEET

PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET 13 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB	ANGLE	DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS				REMARKS
			NO. DEG.	INLET	OUTLET	IN	OUT	SPAN IN	RISE IN	L FT	D IN	L FT	PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP SL	PCCSP PI TH	NO. DEG.	EA	EA		FT	B CY	LBS	TYPE	EA	CY	EARTH CY	ROCK CY	CY	CY	CY	CY	CY	SY	CY	TYPE	LT EA	RT EA			
8+41.39		RT		PRCCB							18	4.0	X								1		5.7			BH			1.32	2.72									1	1			INSTALL 5 FT CATCH BASIN AND BEEHIVE GRATE. TIE INTO EXISTING PIPE. REMOVE EXISTING BASIN
11+14.83		RT		PRCCB							18	4.0	X								1		5.6			BH			1.31	2.94									1	1			INSTALL 5 FT CATCH BASIN AND BEEHIVE GRATE. TIE INTO EXISTING PIPE. REMOVE EXISTING BASIN
12+65.98		RT		PRCCB							18	4.0	X								1		6.4			BH			1.49	3.06									1	1			INSTALL 5 FT CATCH BASIN AND BEEHIVE GRATE. TIE INTO EXISTING PIPE. REMOVE EXISTING BASIN
14+66.92		RT		PRCCB							30	4.0					X				1		7.2			BH			1.68	3.44													INSTALL 5 FT CATCH BASIN AND BEEHIVE GRATE. TIE INTO EXISTING PIPE. REMOVE EXISTING BASIN
16+07.33		RT		PRCCB							24	4.0					X				1		5.2			BH			1.22	2.62									1	1			INSTALL 5 FT CATCH BASIN AND BEEHIVE GRATE. TIE INTO EXISTING PIPE. REMOVE EXISTING BASIN
17+24.54	17+50.04	RT/LT	50.25	PRCCB							18	44.5	X	X			X				1		8.8			BH			26.65	4.55				29.2					1	1			INSTALL 5 FT CATCH BASIN AND BEEHIVE GRATE INSTALL NEW PIPE
18+98.69		RT		PRCCB							18	4.0	X								1		6.4			BH			0.74	2.99									1	1			INSTALL 5 FT CATCH BASIN AND BEEHIVE GRATE. TIE INTO EXISTING PIPE. REMOVE EXISTING BASIN
																																										NOTE: BH= BEEHIVE GRATE CB=PRCCB
				PROJECT TOTALS							18 18 24 30	44.5 16.0 4.0 4.0	X X	X			X X X				7			PRCCB			7	BH		34.41	22.32				29.2					6	6			

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3l8dds.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
DRAINAGE DETAIL SHEET

PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET 14 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK VOLUME	ROCK EXCAVATION AREA	ROCK EXCAVATION VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME		
	FT.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.
COMMON EXCAVATION									
4+00	0	0.00	0.00	0	0	0.03	0.0		
4+50	50	0.51	0.00	0	0	0.12	0.0		
5+00	50	0.00	0.00	0	0	0.05	0.0		
5+50	50	0.00	0.00	0	0	0.05	0.0		
6+00	50	0.00	0.00	0	0	0.06	0.0		
6+50	50	0.00	0.00	0	0	0.63	1.0		
								CUT	2
7+00	50	0.00	0.00	0	0	0.06	1.0	ROCK	0
								R.FAC	.300
14+00	50	0.00	0.00	0	0	0.19	0.0	FILL	3
								F.FAC	1.00
14+50	50	0.00	0.00	0	0	0.40	1.0	EX. F	1
18+75	25	1.09	1.0	0	0	0.00	0.0		
19+00	25	0.42	1.0	0	0	0.43	0.0		
19+50	50	0.00	0.0	0	0	0.03	0.0		
20+00	50	0.00	0.0	0	0	0.00	0.0		
SLOPE STABILITY AREA EXCAVATION									
9+50	0	0.00	0.0	0	0				
9+75	25	147.00	68.3	29	14				
10+00	25	505.00	302.0	101	60				
10+25	25	775.00	592.5	155	119				
10+50	25	929.00	788.7	186	158				
10+75	25	339.00	586.9	68	117				
11+00	25	96.00	201.5	19	40				
								CUT	2947
11+25	25	0.00	44.6	0	9			ROCK	590
								R.FAC	.300
11+50	25	0.00	0.0	0	0			FILL	0
								F.FAC	1.00
11+75	25	82.00	37.9	16	8			EX. C	3124
12+00	25	69.00	69.9	14	14				
12+25	25	68.00	63.4	14	13				
12+50	25	114.00	84.1	23	17				
12+75	25	59.00	80.1	12	16				
13+00	25	0.00	27.4	0	6				
CHANNEL EXCAVATION									
4+00	0	0.00	0.0	0	0				
4+50	50	0.00	0.0	0	0				
5+00	50	0.00	0.0	0	0				
5+50	50	0.00	0.0	0	0				
6+00	50	44.64	41.0	20	19				
6+50	50	56.08	93.0	44	60				
7+00	50	32.51	82.0	8	48				
7+50	50	43.74	71.0	0	7				
8+00	50	41.32	79.0	0	0				
8+50	50	39.35	75.0	0	0				
9+00	50	39.62	73.0	0	0				

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK VOLUME	ROCK EXCAVATION AREA	ROCK EXCAVATION VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME		
	FT.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.
9+50	50	49.81	83.0	0	0				
10+00	50	40.62	84.0	0	0				
10+50	50	25.73	61.0	0	0				
11+00	50	43.96	65.0	0	0				
11+50	50	63.33	99.0	0	0				
12+00	50	63.01	115.0	0	0				
12+50	50	77.12	128.0	0	0				
13+00	50	68.06	134.0	0	0				
								CUT	2587
13+50	50	73.70	131.0	0	0			ROCK	579
								R.FAC	.300
14+00	50	81.04	143.0	0	0			FILL	0
								F.FAC	1.00
14+50	50	56.26	127.0	0	0			EX. C	2761
15+00	50	31.48	81.0	16	15				
15+50	50	38.17	64.0	0	15				
16+00	50	39.27	72.0	0	0				
16+25	25	45.31	39.0	16	7				
16+50	25	70.44	54.0	42	27				
16+75	25	91.38	75.0	68	51				
17+00	25	183.57	127.0	164	108				
17+25	25	102.16	132.0	86	116				
17+50	25	45.49	68.0	25	52				
17+75	25	42.45	41.0	14	18				
18+00	25	38.86	38.0	0	6				
18+25	25	35.31	34.0	0	0				
18+50	25	59.86	44.0	25	12				
18+75	25	7.41	31.0	7	15				
19+00	25	0.00	3.0	0	3				
19+50	50	0.00	0.0	0	0				
20+00	50	0.00	0.0	0	0				
TRENCH EXCAVATION									
4+00	0	27.18	0.0	0	0				
4+50	50	12.38	37.0	0	0				
5+00	50	11.67	22.0	0	0				
5+50	50	17.16	27.0	0	0				
6+00	50	11.98	27.0	0	0				
6+50	50	7.37	18.0	0	0				
7+00	50	6.41	13.0	0	0				
7+50	50	6.35	12.0	0	0				
8+00	50	11.80	17.0	0	0				
8+50	50	10.96	21.0	0	0				
9+00	50	14.98	24.0	0	0				
9+50	50	14.80	28.0	0	0				
10+00	50	20.37	33.0	0	0				
10+50	50	21.44	39.0	0	0				

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK VOLUME	ROCK EXCAVATION AREA	ROCK EXCAVATION VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME		
	FT.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.	S.F.	C.Y.
11+00	50	18.30	37.0	0	0				
11+50	50	26.00	41.0	0	0				
12+00	50	20.19	43.0	0	0				
12+50	50	26.77	43.0	0	0				
13+00	50	13.42	37.0	0	0				
13+50	50	19.45	30.0	0	0				
14+00	50	23.21	40.0	0	0				
14+50	50	26.15	46.0	0	0				
15+00	50	32.87	55.0	0	0				
15+50	50	26.20	55.0	0	0				
16+00	50	25.77	48.0	0	0				
16+25	25	19.07	21.0	0	0				
16+50	25	15.28	16.0	0	0				
16+75	25	13.39	13.0	0	0				
17+00	25	18.67	15.0	0	0				
17+25	25	22.74	19.0	0	0				
17+50	25	24.27	22.0	0	0				
17+75	25	30.03	25.0	0	0				
18+00	25	27.74	27.0	0	0				
18+25	25	24.86	24.0	0	0				
18+50	25	20.39	21.0	0	0				
18+75	25	22.19	20.0	0	0				
19+00	25	11.29	16.0	0	0				
19+50	50	20.82	30.0	0	0				
20+00	50	0.00	19.0	0	0				

		CUT	1081
		ROCK	0
		R.FAC	.300
		FILL	0
		F.FAC	1.00
		EX. C	1081

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
COMMON EXCAVATION								
(ROADWAY)								
4+00	7+00	0	0	2		2		2
14+00	14+50	0	0	1		1		3
18+75	20+00	2	0	0	2			1
(SLOPE STABILITY AREAS)							3123	
		2947	590		3124			
	TOTAL=	2949	590	3	3126	3	3123	
CHANNEL EXCAVATION								
4+00	5+25	0	0	0	0.0		3123.0	
5+50	10+75	742	134	0	782.2		3905.2	
11+00	16+50	1252	64	0	1271.2		5176.4	
16+75	20+00	593	381	0	707.3		5883.7	
	TOTAL=	2587	579	0	2760.7			
TRENCH EXCAVATION								
(DRAINAGE CHANNEL)								
4+00	5+25	59	0	0	59.0		5942.7	
5+50	10+75	259	0	0	259.0		6201.7	
11+00	16+50	512	0	0	512.0		6713.7	
16+75	20+00	251	0	0	251.0		6964.7	
UNDERDRAIN TRENCH EXCAVATION (ROADWAY)								
4+00	20+00	248.3	37.6	0	259.6		7224.3	
TRENCH EXCAVATION (PROPOSED DRAINAGE PIPE)								
17+25	17+50	20.4	1.9	0	20.6		7244.9	
TRENCH EXCAVATION (PROPOSED DRAINAGE STRUCTURES)								
4+00	20+00	14.0	2.7	0	15.0		7259.9	
TRENCH EXCAVATION (EXISTING DRAINAGE STRUCTURES)								
4+00	20+00	0.0	17.8	0	6.0		7265.9	
UNDERDRAIN TRENCH EXCAVATION (SLOPE)								
9+50	13+00	0.0	55.7	0	16.8		7282.7	
TOTAL TRENCH EXCAVATION								
	TOTAL=	1363.7	115.6	0	1399.0			
TOTAL EXCAVATION								
	SUBTOTAL	6899.7	1284.6	3.0	7285.7	3	7282.7	
	ROUND =	0.3	0.4	0.0	0.3	0	0.3	
	TOTAL=	6900.0	1285.0	3.0	7286.0	3	7283.0	
Use Case II Factor C+0.3R-F								

REMARKS

EARTH AND ROCK EXCAVATION	3126
SOLID ROCK EXCAVATION	590
EARTH EXCAVATION	2949
PLANIMETERED FILL	3
LESS FACTORED SOLID ROCK	386
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	0
NET PLANIMETERED FILL	-383
FACTOR	0
PLANIMETERED FILL INCLUDING FACTOR	-383
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	2949
CHANNEL EXCAVATION	2587
TRENCH EXCAVATION	1363.7
ROUNDING	0.3
TOTAL MATERIAL AVAILABLE FOR FILL	6900
TOTAL FILL INCLUDING FACTOR	383
TOTAL MATERIAL FOR FILL	6900
BORROW	0
EXCESS EXCAVATION	7283

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318ewl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
EARTHWORK SHEET

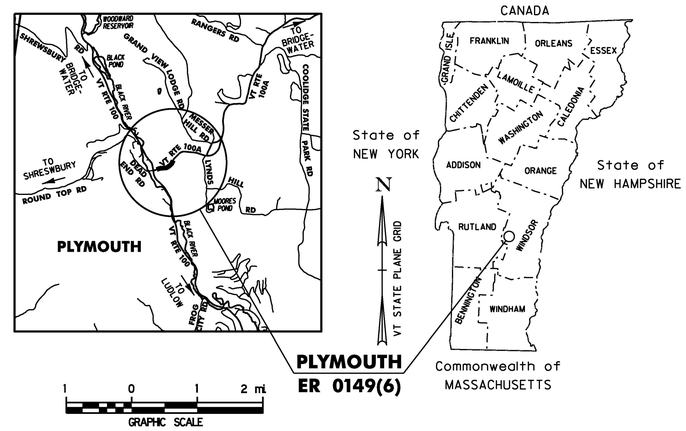
PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET 15 OF 68

R. O. W. PLANS

INDEX OF SHEETS

1	TITLE
2	LEGEND
3	DETAIL
4-7	LAYOUTS
8-9	TIE SHEETS
10-13	EPSC CONSTRUCTION SHEETS
14	TYPICAL
15	DETOUR
16	SLOPE STABILITY WEST
17	SLOPE STABILITY EAST

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROJECT LOCATION : BEGINNING AT A POINT ON VT ROUTE 100A IN THE TOWN OF PLYMOUTH AT STATION 4+00 (MM 0.076) APPROXIMATELY 400 FEET EAST OF THE JCT OF VT ROUTE 100 AND VT ROUTE 100A AND EXTENDING EASTERLY APPROXIMATELY 1600 FEET TO STATION 20+00 (MM 0.379)

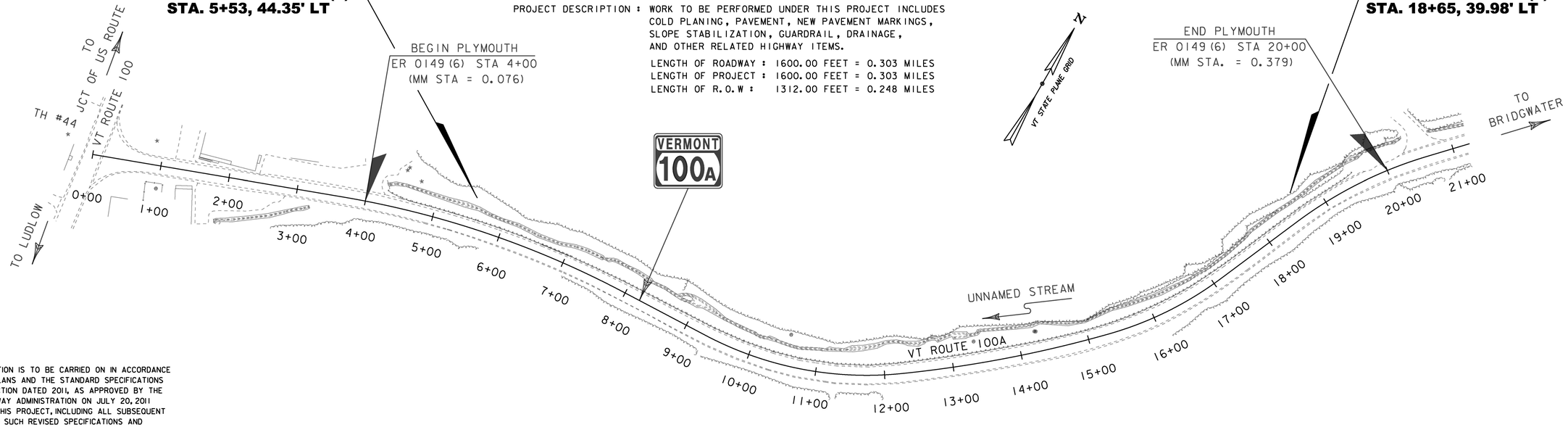
PROJECT DESCRIPTION : WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING, PAVEMENT, NEW PAVEMENT MARKINGS, SLOPE STABILIZATION, GUARDRAIL, DRAINAGE, AND OTHER RELATED HIGHWAY ITEMS.

LENGTH OF ROADWAY : 1600.00 FEET = 0.303 MILES
LENGTH OF PROJECT : 1600.00 FEET = 0.303 MILES
LENGTH OF R.O.W : 1312.00 FEET = 0.248 MILES

PROPOSED IMPROVEMENT
TOWN OF PLYMOUTH
COUNTY OF WINDSOR
VT ROUTE 100A (MAJOR COLLECTOR)

BEGIN R.O.W. PROJECT
PLYMOUTH ER 0149(6)
STA. 5+53, 44.35' LT

END R.O.W. PROJECT
PLYMOUTH ER 0149(6)
STA. 18+65, 39.98' LT



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.

0 100 200
SCALE IN FEET

For Right-Of-Way Purposes Only

QUALITY ASSURANCE PROGRAM : LEVEL 2

SURVEYED BY : VT SURVEY & ENGINEERING
SURVEYED DATE : 2/7/14

DATUM
VERTICAL NAVD 88 (GEOID12A) FT
HORIZONTAL NAD 83 (2011) sFT

ALL DRIVES AS INDICATED ON PLANS ARE SUBJECT TO PERMITS PURSUANT TO TITLE 19 V.S.A. § 1111.

CHIEF OF RIGHT OF WAY
APPROVED ROBERT M. WHITE DATE 05-26-15

PROJECT MANAGER : PAUL LIBBY

PROJECT NAME : PLYMOUTH
PROJECT NUMBER : ER 0149(6)

SHEET 16 OF 68 SHEETS

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	
1A	SWEETSER, RICHARD A. & CAROLE J.	2	5+53 LT	5+68 LT			CONSTRUCTION	T	150 SF						INCL. EC
			5+89 LT	7+11 LT			CONSTRUCTION	T	457 SF						INCL. PDF
			5+97.22 LT	7+01.19 LT			SLOPE	P	213 SF						
1B		3, 4	13+87.34 LT	15+29.62 LT			CHANNEL	P	523 SF						INCL. STONE FILL
			14+43 LT	15+52 LT			CONSTRUCTION	T	556 SF						INCL. EC
			16+14 LT	18+65 LT			CONSTRUCTION	T	759 SF						INCL. EC
			16+23.09 LT	17+40.79 LT			SLOPE	P	201 SF						
2	BASSETT, SUSAN	2, 3	9+57 RT	11+09 RT			CONSTRUCTION	T	1,542 SF						INCL. PDF
			9+61.63 RT	11+03.80 RT			SLOPE	P	0.28 A						INCL. SOIL NAILS; 11,991 SF±
3	FAIVRE, HOLLY	3	12+66.96 LT	13+89 LT			CHANNEL	P	450 SF						INCL. STONE FILL
			12+91 LT	13+11 LT			CONSTRUCTION	T	328 SF						INCL. EC
4	MICHAEL, RUDOLPH C.	3, 4	11+56 RT	12+61 RT			CONSTRUCTION	T	961 SF						INCL. PDF
			11+61.52 RT	12+59.24 RT			SLOPE	P	0.13 A						INCL. SOIL NAILS; 5,571 SF±
5	GREEN MOUNTAIN POWER CORPORATION		5+53 CL	18+65 CL											UTILITY
6	VERMONT TELEPHONE COMPANY, INC.		5+53 CL	18+65 CL											UTILITY
7	COMCAST OF CONNECTICUT/GEORGIA/ MASSACHUSETTS/NEW HAMPSHIRE/ NEW YORK/NORTH CAROLINA/VIRGINIA/ VERMONT, LLC		5+53 CL	18+65 CL											UTILITY

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE

APPROVED: RYAN CLOUTIER DATE: 05-26-15
CHIEF, PLANS & TITLES

PROJECT NAME: **PLYMOUTH**
PROJECT NUMBER: **ER 0149(6)**

FILE NAME: **r13c318detail.xls**
PROJECT LEADER: **P. LIBBY**
DESIGNED BY: **A. EGIZI**
R.O.W. DETAIL SHEET #1

PLOT DATE: 26-MAY-2015
DRAWN BY: **M. TROTTIER**
CHECKED BY: **R. CLOUTIER**
SHEET 17 OF 68

MANUFACTURED TERMINAL SECTION, FLARED
STA 4+23 TO STA 4+48, LT

STEEL BEAM GUARDRAIL, GALVANIZED
STA 4+48 TO STA 5+25, LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 4+29 TO STA 5+25, LT

VT RTE 100A
CURVE I

△ = 18° 10' 27"
D = 4° 14' 39"
R = 1350.00'
T = 215.92'
L = 428.22'
E = 17.16'

SOIL INFORMATION: COLTON FINE SANDY LOAM 3-8% SLOPES
K=0.15, POTENTIALLY HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: A

N

VT STATE PLANE GRID

1A

SWEETSER, RICHARD A. & CAROLE J.
N/F
LYNDS, ARTHUR R. & MICHAEL K.

BEGIN APPROACH
STA 2+75

BEGIN PROJECT
END APPROACH
STA 4+00

FOUND: NUMBER 4 REBAR
1/2' ABOVE GROUND
BENT, LEANING

N 375595.95
E 1577428.04
4+00.00, 33.01' LT

FOUND: 1-1/4" OUTER DIAMETER IRON PIPE
3.1' ABOVE GROUND
BENT, STABLE

FOUND: 1" OUTER DIAMETER IRON PIPE
2.7' ABOVE GROUND
BENT, STABLE

N/F
SALT ASH LAND, LLC.

EXISTING R.O.W.

[R=1303.60']
[L=360.51']

UNNAMED STREAM

CURVE I

[L=278.63']
[R=1240.61']

EXISTING R.O.W.

STONEFILL TYPE II

N 375535.42
E 1577448.93
4+00.00, 31.02' RT

FOUND: 4" X 4" CONCRETE BOUND
1.3' ABOVE GROUND
LEANING, STABLE

MATCHLINE STA 5+25 SEE LAYOUT SHEET 2

TO JCT OF US ROUTE 4

VT ROUTE 100

TO LUDLOW

AER E&T

N69°35'01.15"E

0+00 1+00 2+00 3+00 4+00 5+00

PC STA 3+67.55

EXISTING R.O.W.

UNDERGROUND GAS TANK

N/F
BROWN, THOMAS & JANICE

N/F
GOOD COMMONS, LLC.

2

BASSETT, SUSAN

SOIL INFORMATION: LYMAN ROCK OUTCROP
VERY STONY 35-70% SLOPES
K=0.32, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: D

SOIL INFORMATION: BERKSHIRE & MONADNOCK
FINE SANDY LOAD 35-60% SLOPES
K=0.32, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: B

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.

0 20 40
SCALE IN FEET

FOR R.O.W. USE ONLY

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: r13c318layl.dgn
PROJECT LEADER: P. LIBBY
DESIGNED BY: McFARLAND JOHNSON
R.O.W. LAYOUT SHEET 1 OF 4

PLOT DATE: 26-MAY-2015
DRAWN BY: A. EGIZI
CHECKED BY: R. CLOUTIER
SHEET 18 OF 68

TEMPORARY STONE CHECK DAM, TYPE I
STA 5+25, RT TO STA 10+75, RT

EROSION LOG
STA 5+25, LT TO STA 5+96, LT
STA 9+58, RT TO STA 10+75, RT

PROJECT DEMARCATION FENCE
STA 5+90, LT TO STA 7+00, LT
STA 7+75, RT TO STA 10+75, RT

INLET PROTECTION DEVICE, TYPE I
STA 8+41, RT

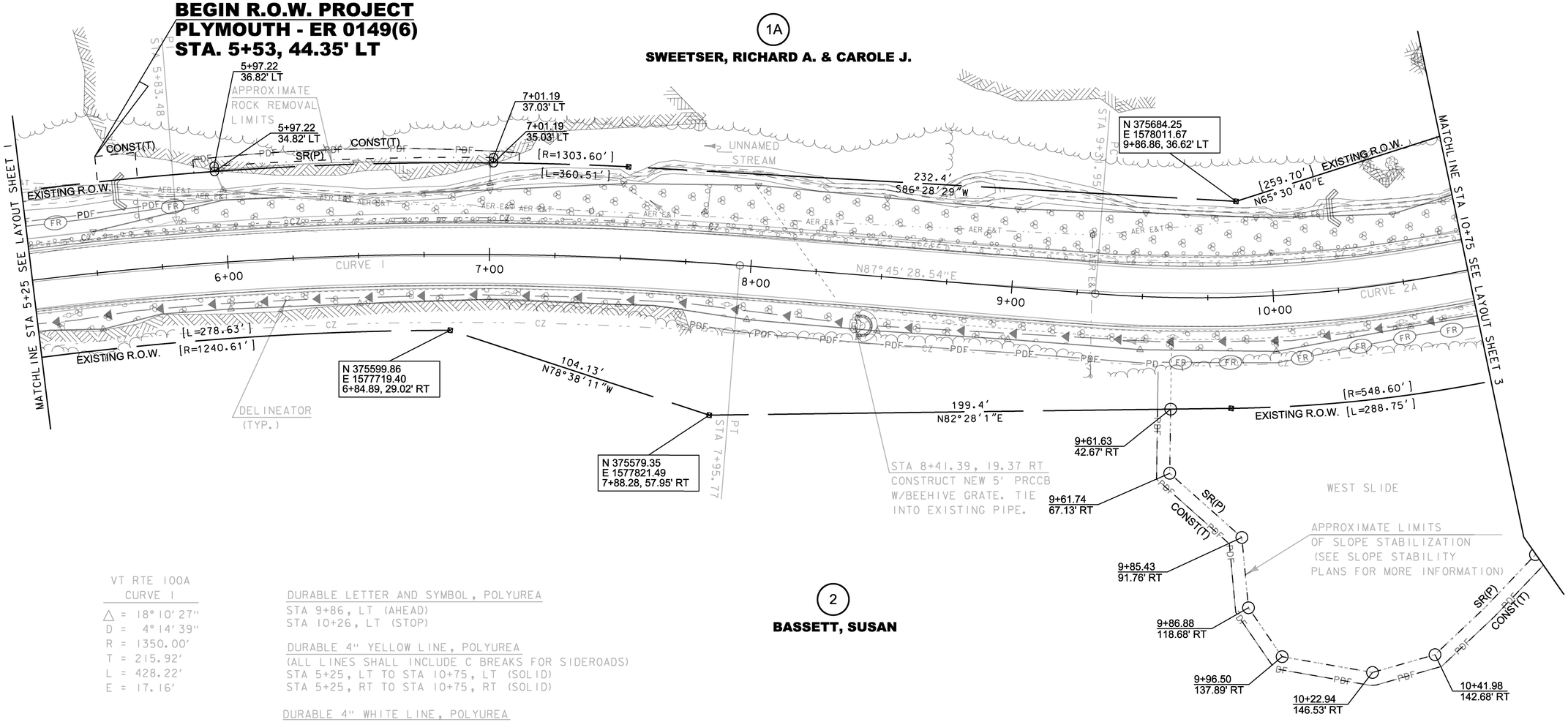
PREFABRICATED CHECK DAM
STA 5+60.0, LT
STA 10+25.0, LT

N
VT STATE PLANE GRID

VT RTE 100A
CURVE 2A
△ = 33°37'02"
D = 11°27'33"
R = 500.00'
T = 151.04'
L = 293.36'
E = 22.32'

BEGIN R.O.W. PROJECT
PLYMOUTH - ER 0149(6)
STA. 5+53, 44.35' LT

1A
SWEETSER, RICHARD A. & CAROLE J.



VT RTE 100A
CURVE 1
△ = 18°10'27"
D = 4°14'39"
R = 1350.00'
T = 215.92'
L = 428.22'
E = 17.16'

DURABLE LETTER AND SYMBOL, POLYUREA
STA 9+86, LT (AHEAD)
STA 10+26, LT (STOP)

DURABLE 4" YELLOW LINE, POLYUREA
(ALL LINES SHALL INCLUDE C BREAKS FOR SIDEROADS)
STA 5+25, LT TO STA 10+75, LT (SOLID)
STA 5+25, RT TO STA 10+75, RT (SOLID)

DURABLE 4" WHITE LINE, POLYUREA
(ALL LINES SHALL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDEROADS)
STA 5+25, LT TO STA 10+75, LT (SOLID)
STA 5+25, RT TO STA 10+75, RT (SOLID)

2
BASSETT, SUSAN

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.

0 20 40
SCALE IN FEET

FOR R.O.W. USE ONLY

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: r13c3181ay2.dgn
PROJECT LEADER: P. LIBBY
DESIGNED BY: McFARLAND JOHNSON
R.O.W. LAYOUT SHEET 2 OF 4

PLOT DATE: 26-MAY-2015
DRAWN BY: A. EGIZI
CHECKED BY: R. CLOUTIER
SHEET 19 OF 68

VT RTE 100A
CURVE 2A
△ = 33°37'02"
D = 11°27'33"
R = 500.00'
T = 151.04'
L = 293.36'
E = 22.32'

VT RTE 100A
CURVE 2B
△ = 09°58'09"
D = 3°16'27"
R = 1750.00'
T = 152.63'
L = 304.49'
E = 6.64'

VT RTE 100A
CURVE 2C
△ = 20°52'47"
D = 11°27'33"
R = 500.00'
T = 92.13
L = 182.21'
E = 8.42'

STEEL BEAM GUARDRAIL, GALVANIZED
STA 10+75 TO STA 16+50, LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 10+75 TO STA 16+50, LT

6 INCH UNDERDRAIN PIPE
STA 10+75.0, RT TO STA 11+14.8, RT
STA 11+14.8, RT TO STA 12+65.9, RT
STA 12+66.0, RT TO STA 14+66.9, RT
STA 14+66.9, RT TO STA 16+07.3, RT
STA 16+07.3, RT TO STA 16+50.0, RT

N
VT STATE PLANE GRID

3
FAIVRE, HOLLY

1B
SWEETSER, RICHARD A. & CAROLE J.

2
BASSETT, SUSAN

4
MICHAEL, RUDOLPH C.

MATCHLINE STA 10+75 SEE LAYOUT SHEET 2

MATCHLINE STA 16+50 SEE LAYOUT SHEET 4

FOUND: NUMBER 4 REBAR
1.0' ABOVE GROUND
STABLE

EXISTING R.O.W.
[259.70']
N65°30'40"E

N 375791.90
E 1578248.00
12+68.11, 36.61' LT

PCC
STA 12+25.31

STONEFILL TYPE II

12+66.96
36.87' LT

13+00.00
37.50' LT

CONST(T)

CH(P)

13+49.61
44.43' LT

13+87.34
35.31' LT

13+89
40' LT

FOUND: NUMBER 3 REBAR
10" ABOVE GROUND
STABLE

14+00.00
38.51' LT

CH(P)

162.43'
N51°25'42"E

SUNNAM STREAM

14+50.00
34.69' LT

[R=641.71']
[L=331.33']

15+00.00
38.66' LT

CONST(T)

CH(P)

PCC
STA 15+29.80

15+29.62
34.22' LT

APPROXIMATE
ROCK REMOVAL
LIMITS

16+25.00
38.22' LT

SR(P)

CONST(T)

16+23.09
37.46' LT

EXISTING R.O.W.

11+00

12+00

13+00

14+00

15+00

16+00

CURVE 2A

CURVE 2B

CURVE 2C

PB-04

PB-05

11+03.80
43.83' RT

10+94.60
70.55' RT

10+77.43
111.76' RT

11+61.52
44.62' RT

[R=548.60']
[L=288.75']

EAST SLIDE

11+76.35
69.59' RT

11+80.47
86.32' RT

11+99.32
119.50' RT

12+55.97
45.39' RT

12+51.94
59.08' RT

12+59.24
76.57' RT

12+52.72
94.35' RT

12+32.25
111.62' RT

PI
STA 13+52.24

337.16'
S52°18'35"W

DELINEATOR
(TYP.)

N 375921.36
E 1578549.46
15+71.49, 72.26' RT

[201.42']
N17°23'40"E

APPROXIMATE LIMITS
OF SLOPE STABILIZATION
(SEE SLOPE STABILITY
PLANS FOR MORE INFORMATION)

STA 11+14.83, 21.37 RT
CONSTRUCT NEW 5' PRCCB
W/BEEHIVE GRATE. TIE
INTO EXISTING PIPE.

STA 12+65.98, 19.41 RT
CONSTRUCT NEW 5' PRCCB
W/BEEHIVE GRATE. TIE
INTO EXISTING PIPE.

STA 14+66.92, 21.95 RT
CONSTRUCT NEW 5' PRCCB
W/BEEHIVE GRATE. TIE
INTO EXISTING PIPE.

STA 16+07.33, 19.34 RT
CONSTRUCT NEW 5' PRCCB
W/BEEHIVE GRATE. TIE
INTO EXISTING PIPE.

DURABLE 4" YELLOW LINE, POLYUREA
(ALL LINES SHALL INCLUDE ℄ BREAKS FOR SIDEROADS)
STA 10+75, LT TO STA 16+50, LT (SOLID)
STA 10+75, RT TO STA 16+50, RT (SOLID)

DURABLE 4" WHITE LINE, POLYUREA
(ALL LINES SHALL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDEROADS)
STA 10+75, LT TO STA 16+50, LT (SOLID)
STA 10+75, RT TO STA 16+50, RT (SOLID)

SIGN LEGEND
R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING - --------
NEW - ————

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.

0 20 40
SCALE IN FEET

FOR R.O.W. USE ONLY

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: r13c3181ay3.dgn
PROJECT LEADER: P. LIBBY
DESIGNED BY: McFARLAND JOHNSON
R.O.W. LAYOUT SHEET 3 OF 4

PLOT DATE: 26-MAY-2015
DRAWN BY: A. EGIZI
CHECKED BY: R. CLOUTIER
SHEET 20 OF 68

VT RTE 100A
CURVE 3
△ = 20°02'21"
D = 9°32'57"
R = 600.00'
T = 106.01'
L = 209.85'
E = 9.29'

STEEL BEAM GUARDRAIL, GALVANIZED
STA 16+50 TO STA 19+90, LT

MANUFACTURED TERMINAL SECTION, FLARED
STA 19+90 TO STA 20+15, LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 16+50 TO STA 19+53, LT

6 INCH UNDERDRAIN PIPE
STA 16+50.0, RT TO STA 17+50.0, RT
STA 17+50.0, RT TO STA 18+98.4, RT

GRUBBING MATERIAL
STA 17+75.0, LT TO STA 18+50.0, LT

N
VT STATE PLANE GRID

END R.O.W. PROJECT
PLYMOUTH - ER 0149(6)
STA. 18+65, 39.98' LT

APPROXIMATE ROCK REMOVAL LIMITS

STONEFILL TYPE II

APPROXIMATE ROCK REMOVAL LIMITS

PT STA 17+12.0

PI STA 19+56.10

1B

SWEETSER, RICHARD A. & CAROLE J.

17+00.00
39.00' LT

17+40.79
35.89' LT

CONST(T)

CONST(T)

SR(P)

EXISTING R.O.W.

[R=641.71']
[L=331.33']

UNNAMED STREAM

R=711.62'
L=292.70'

N 376415.73
E 1578704.26
20+58.50, 41.82' LT

END APPROACH
STA 21+25

EXISTING R.O.W.

MATCHLINE STA 16+50 SEE LAYOUT SHEET 3

17+00

18+00

19+00

CURVE 3

20+00

21+00

N23°17'31.11"E

N43°19'51.91"E

PB-06

N 376170.45
E 1578663.15
18+27.03, 55.73' RT

PC
STA 18+50.10

FOUND: 4" X 4" CONCRETE BOUND
1/2" ABOVE GROUND
STABLE

FOUND: 4" X 4"
CONCRETE BOUND
0.7' ABOVE GROUND
STABLE

N 376360.98
E 1578762.58
20+58.50, 38.17' RT

FOUND: 3/4" OUTER DIAMETER
IRON PIPE
3.5' ABOVE GROUND

[201.42']
N17°23'40"E

EXISTING R.O.W.

78.07'
S43°13'40"W

214.91'
N27°33'32"E

PI STA 20+59.94

EXISTING R.O.W.

DELINEATOR
(TYP.)

STONEFILL TYPE II

4

MICHAEL, RUDOLPH C.

RELOCATED POLE #10
STA 17+80.88, 26.0' RT
WORK TO BE PERFORMED BY OTHERS
PRIOR TO CONSTRUCTION

STA 18+98.69, 17.53 RT
CONSTRUCT NEW 5' PRCCB
W/BEEHIVE GRATE. TIE
INTO EXISTING PIPE.

N/F
GILMAN, TODD

STA 17+24.54, 18.41 LT TO STA 17+50.04 21.08 RT
CONSTRUCT NEW 18" X 44.5' PCCSP, CAAP, OR CPEP(SL)
CONSTRUCT NEW 5' PRCCB W/BEEHIVE GRATE AT 17+50.04 RT

END PROJECT
BEGIN APPROACH
STA 20+00

DURABLE 4" YELLOW LINE, POLYUREA
(ALL LINES SHALL INCLUDE C BREAKS FOR SIDEROADS)
STA 16+50, LT TO STA 20+00, LT (SOLID)
STA 16+50, RT TO STA 20+00, RT (SOLID)

DURABLE 4" WHITE LINE, POLYUREA
(ALL LINES SHALL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDEROADS)
STA 16+50, LT TO STA 20+00, LT (SOLID)
STA 16+50, RT TO STA 20+00, RT (SOLID)

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: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: rl3c318lay4.dgn
PROJECT LEADER: P. LIBBY
DESIGNED BY: McFARLAND JOHNSON
R.O.W. LAYOUT SHEET 4 OF 4

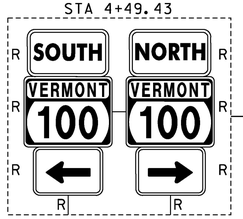
PLOT DATE: 26-MAY-2015
DRAWN BY: A. EGIZI
CHECKED BY: R. CLOUTIER
SHEET 21 OF 68

STEEL BEAM GUARDRAIL, GALVANIZED
STA 4+23 TO STA 5+25, LT

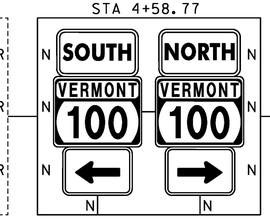
REMOVAL AND DISPOSAL OF GUARDRAIL
STA 4+29 TO STA 5+25, LT

VT RTE 100A
CURVE 1
△ = 18°10'27" RT
D = 4°14'39"
R = 1350.00'
T = 215.92'
L = 428.22'
E = 17.16'
BANK = 0.066

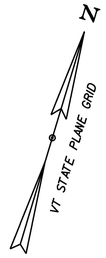
STA 4+49.43



STA 4+58.77



REMOVE SIGNS: 9



BEGIN APPROACH
STA 2+75

BEGIN PROJECT
END APPROACH
STA 4+00

STA 2+75.79

STA 2+89.06

STA 4+01.36

SIGN LEGEND
R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING - ———
NEW - ———

NOTE:

THE CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING FOR THE INSTALLATION OF PROPOSED STONE FILL WHERE UTILITY POLES ARE LOCATED. THE CONTRACTOR SHALL NOT EXCAVATE WITHIN 5' OF UTILITY POLES, (TYP.)

DURABLE 4" YELLOW LINE, POLYUREA
(ALL LINES SHALL INCLUDE ℄ BREAKS FOR SIDEROADS)
STA 4+00, LT TO STA 5+25, LT (SOLID)
STA 4+00, RT TO STA 5+25, RT (SOLID)

DURABLE 4" WHITE LINE, POLYUREA
(ALL LINES SHALL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDEROADS)
STA 4+00, LT TO STA 5+25, LT (SOLID)
STA 4+00, RT TO STA 5+25, RT (SOLID)

0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318bdr.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
PLAN SHEET 1

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 22 OF 68

STEEL BEAM GUARDRAIL, GALVANIZED
STA 5+25 TO STA 10+75, LT

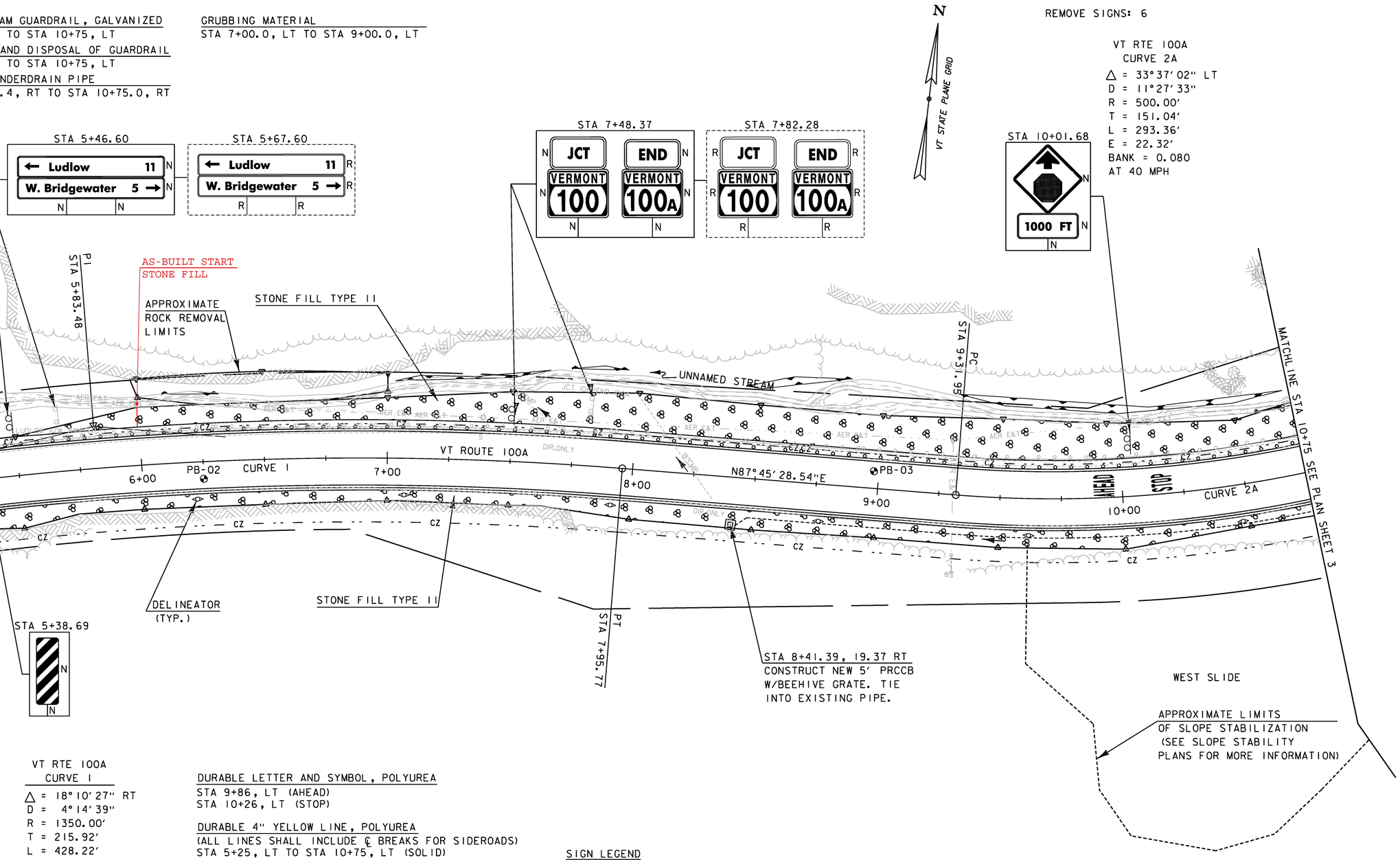
REMOVAL AND DISPOSAL OF GUARDRAIL
STA 5+25 TO STA 10+75, LT

6 INCH UNDERDRAIN PIPE
STA 8+41.4, RT TO STA 10+75.0, RT

GRUBBING MATERIAL
STA 7+00.0, LT TO STA 9+00.0, LT

REMOVE SIGNS: 6

VT RTE 100A
CURVE 2A
△ = 33°37'02" LT
D = 11°27'33"
R = 500.00'
T = 151.04'
L = 293.36'
E = 22.32'
BANK = 0.080
AT 40 MPH



VT RTE 100A
CURVE 1
△ = 18°10'27" RT
D = 4°14'39"
R = 1350.00'
T = 215.92'
L = 428.22'
E = 17.16'
BANK = 0.066

DURABLE LETTER AND SYMBOL, POLYUREA
STA 9+86, LT (AHEAD)
STA 10+26, LT (STOP)

DURABLE 4" YELLOW LINE, POLYUREA
(ALL LINES SHALL INCLUDE ℄ BREAKS FOR SIDEROADS)
STA 5+25, LT TO STA 10+75, LT (SOLID)
STA 5+25, RT TO STA 10+75, RT (SOLID)

DURABLE 4" WHITE LINE, POLYUREA
(ALL LINES SHALL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDEROADS)
STA 5+25, LT TO STA 10+75, LT (SOLID)
STA 5+25, RT TO STA 10+75, RT (SOLID)

SIGN LEGEND
R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING - ------
NEW - ——————

0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)
FILE NAME: zl3c318bdr.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
PLAN SHEET 2
PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 23 OF 68

VT RTE 100A
CURVE 2A

△ = 33°37'02" LT
D = 11°27'33"
R = 500.00'
T = 151.04'
L = 293.36'
E = 22.32'
BANK = 0.080
AT 40 MPH

VT RTE 100A
CURVE 2B

△ = 09°58'09" LT
D = 3°16'27"
R = 1750.00'
T = 152.63'
L = 304.49'
E = 6.64'
BANK = 0.040
AT 40 MPH

VT RTE 100A
CURVE 2C

△ = 20°52'47" LT
D = 11°27'33"
R = 500.00'
T = 92.13
L = 182.21'
E = 8.42'
BANK = 0.080
AT 40 MPH

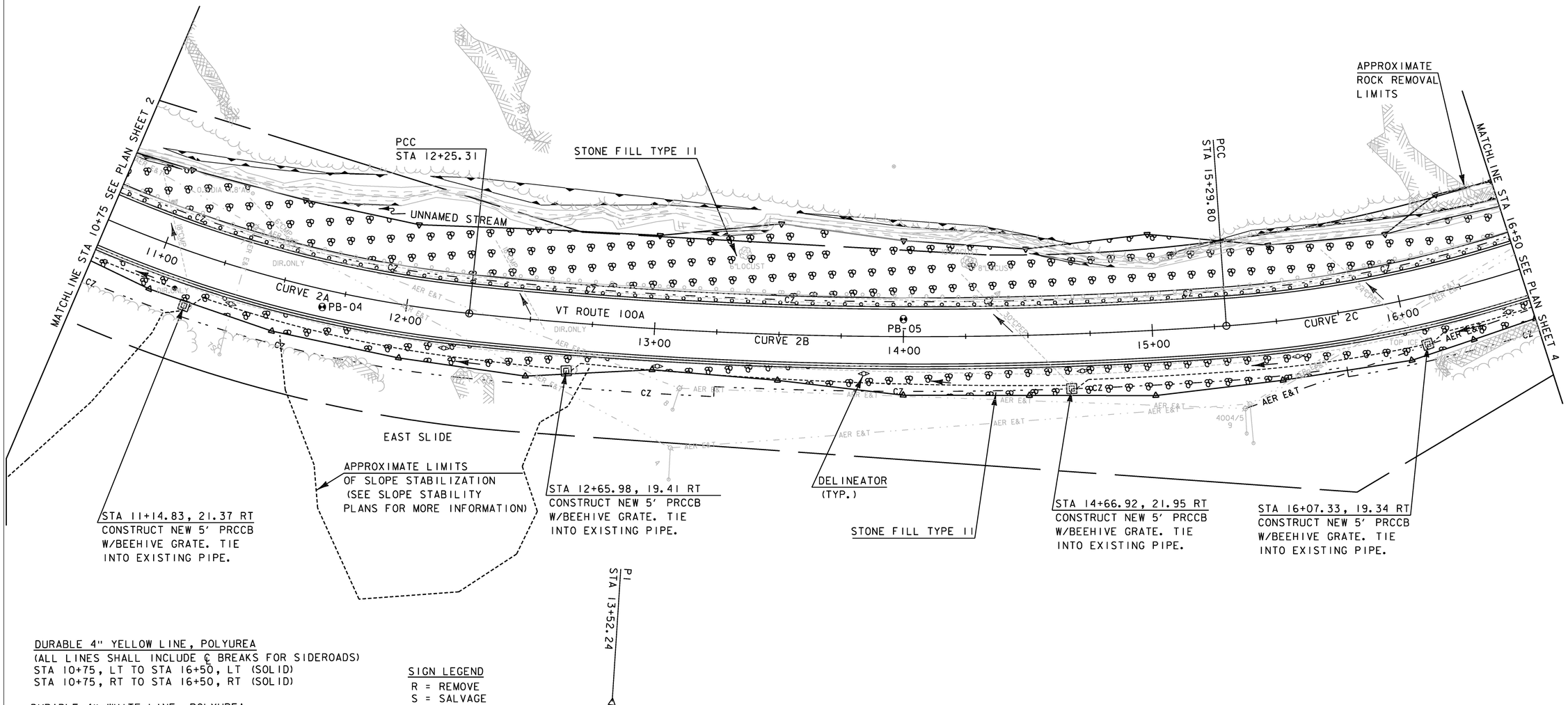
STEEL BEAM GUARDRAIL, GALVANIZED
STA 10+75 TO STA 16+50, LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 10+75 TO STA 16+50, LT

6 INCH UNDERDRAIN PIPE
STA 10+75.0, RT TO STA 11+14.8, RT
STA 11+14.8, RT TO STA 12+65.9, RT
STA 12+66.0, RT TO STA 14+66.9, RT
STA 14+66.9, RT TO STA 16+07.3, RT
STA 16+07.3, RT TO STA 16+50.0, RT

N

VT STATE PLANE GRID



DURABLE 4" YELLOW LINE, POLYUREA
(ALL LINES SHALL INCLUDE ℄ BREAKS FOR SIDEROADS)
STA 10+75, LT TO STA 16+50, LT (SOLID)
STA 10+75, RT TO STA 16+50, RT (SOLID)

DURABLE 4" WHITE LINE, POLYUREA
(ALL LINES SHALL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDEROADS)
STA 10+75, LT TO STA 16+50, LT (SOLID)
STA 10+75, RT TO STA 16+50, RT (SOLID)

SIGN LEGEND
R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING - ------
NEW - ——————

0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318bdr.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
PLAN SHEET 3

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 24 OF 68

VT RTE 100A
CURVE 3
△ = 20°02'21" RT
D = 9°32'57"
R = 600.00'
T = 106.01'
L = 209.85'
E = 9.29'
BANK = 0.076
AT 40 MPH

STEEL BEAM GUARDRAIL, GALVANIZED
STA 16+50 TO STA ~~20+15~~ 20+11, LT

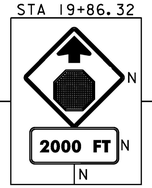
REMOVAL AND DISPOSAL OF GUARDRAIL
STA 16+50 TO STA 19+53, LT

6 INCH UNDERDRAIN PIPE
STA 16+50.0, RT TO STA 17+50.0, RT
STA 17+50.0, RT TO STA 18+98.4, RT

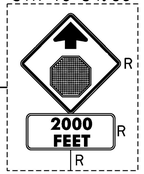
GRUBBING MATERIAL
STA 17+75.0, LT TO STA 18+50.0, LT

REMOVE SIGNS: 2

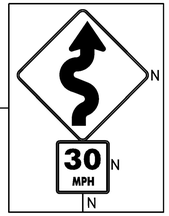
STA 19+86.32

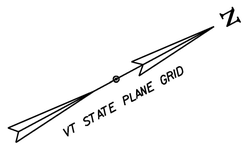


STA 19+34.86



STA 21+25.0





APPROXIMATE
ROCK REMOVAL
LIMITS

STONE FILL TYPE II

APPROXIMATE
ROCK REMOVAL
LIMITS

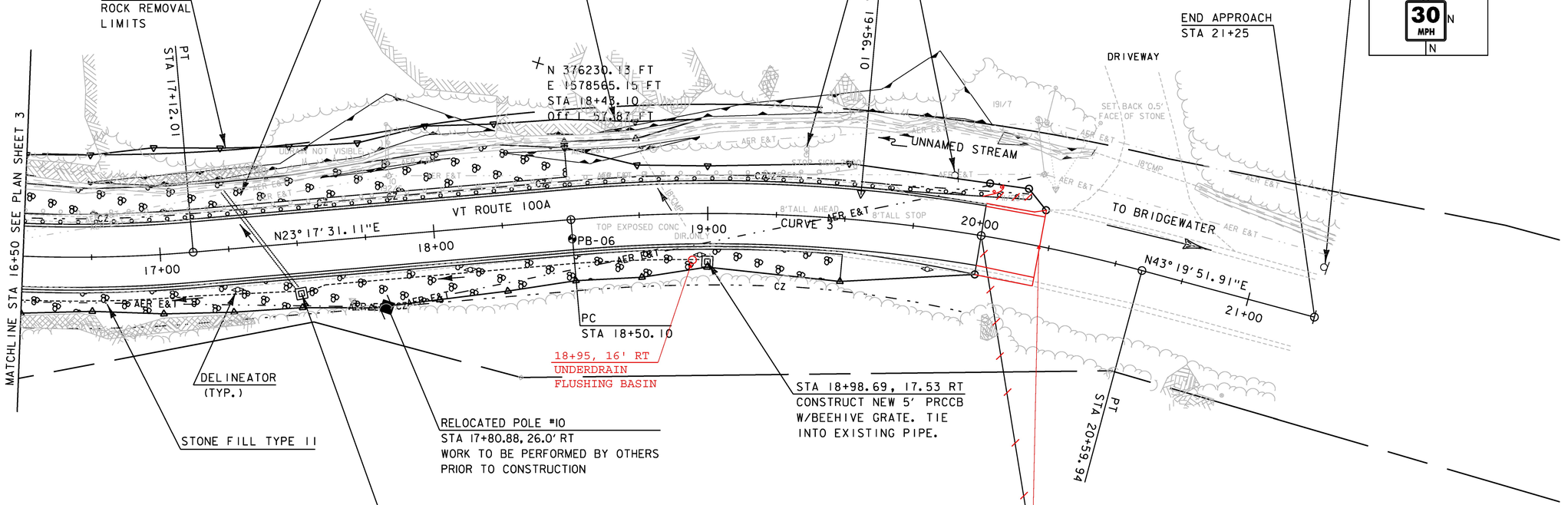
PT
STA 17+12.01

PI
STA 19+56.10

N 376230.13 FT
E 1578565.15 FT
STA 18+43.10
Off L 57.87 FT

END APPROACH
STA 21+25

DRIVEWAY



PI
STA 20+59.94

18+95, 16' RT
UNDERDRAIN
FLUSHING BASIN

DELINEATOR
(TYP.)

STONE FILL TYPE II

RELOCATED POLE #10
STA 17+80.88, 26.0' RT
WORK TO BE PERFORMED BY OTHERS
PRIOR TO CONSTRUCTION

STA 18+98.69, 17.53 RT
CONSTRUCT NEW 5' PRCCB
W/BEEHIVE GRATE. TIE
INTO EXISTING PIPE.

STA 17+24.54, 18.41 LT TO STA 17+50.04 21.08 RT
CONSTRUCT NEW 18" X 44.5' PCCSP, CAAP, OR CPEP(SL)
CONSTRUCT NEW 5' PRCCB W/BEEHIVE GRATE AT 17+50.04 RT

END PROJECT
BEGIN APPROACH
STA ~~20+00~~ 20+20

DURABLE 4" YELLOW LINE, POLYUREA
(ALL LINES SHALL INCLUDE ℄ BREAKS FOR SIDEROADS)
STA 16+50, LT TO STA 20+00, LT (SOLID)
STA 16+50, RT TO STA 20+00, RT (SOLID)

DURABLE 4" WHITE LINE, POLYUREA
(ALL LINES SHALL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDEROADS)
STA 16+50, LT TO STA 20+00, LT (SOLID)
STA 16+50, RT TO STA 20+00, RT (SOLID)

SIGN LEGEND
R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING - ------
NEW - ——————

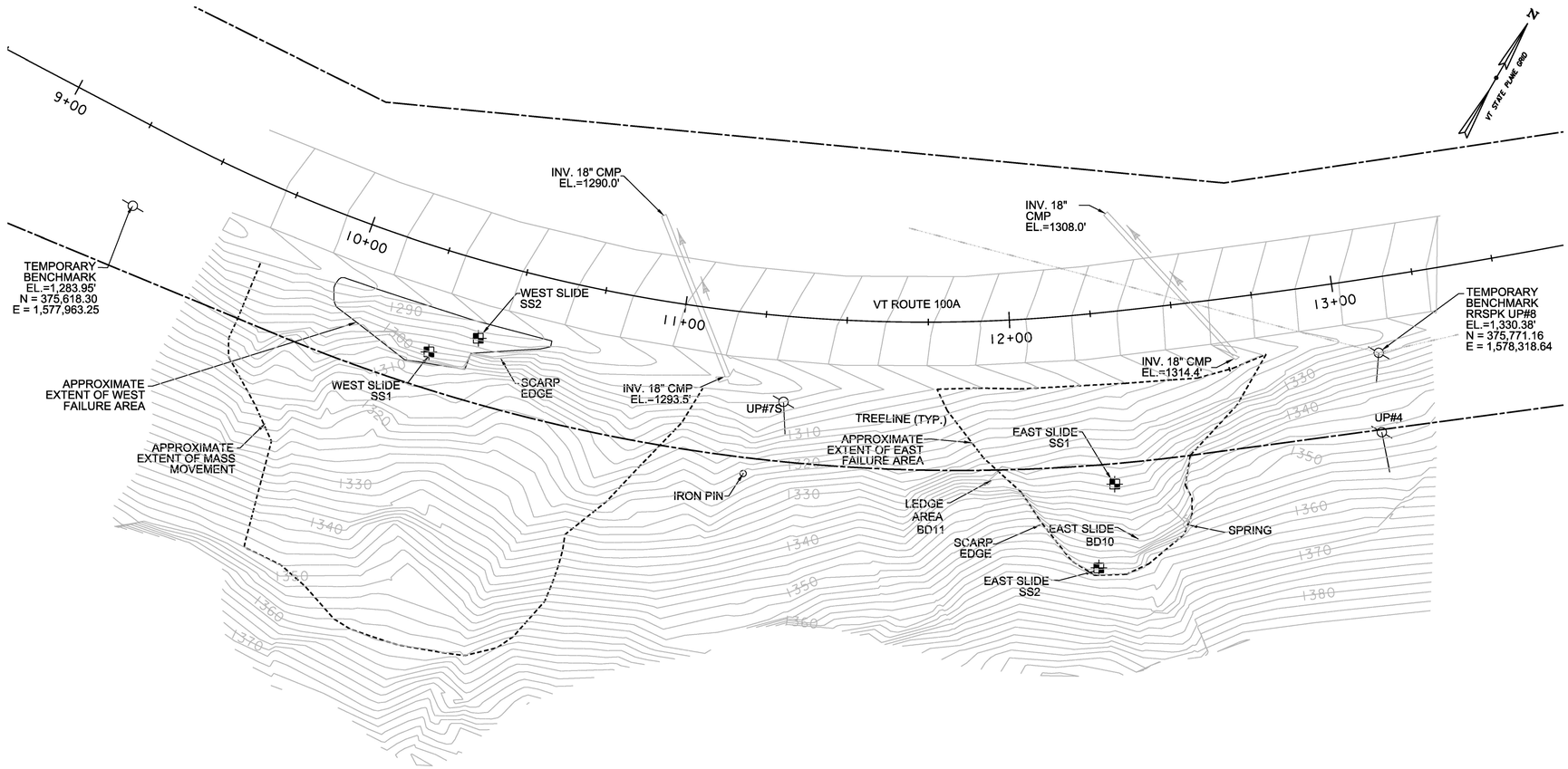
0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318bdr.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
PLAN SHEET 4

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 25 OF 68



NOTES

1.) ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.

2.) ALL DIMENSIONS SHALL BE CONFIRMED ON SITE BY CONTRACTOR. ALL DISCREPENCIES SHALL BE REPORTED TO ENGINEER IMMEDIATELY.

3.) ALL DRAWINGS SHOULD BE REVIEWED IN CONJUNCTION WITH CONTRACT DOCUMENTS.

4.) ELEVATIONS ARE IN FEET AND ARE REFERENCED TO MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

5.) BASIS OF BEARING IS VT GRID NORTH. HORIZONTAL DATUM IS NORTH AMERICAN DATUM (NAD) 1983/1992 STATE PLANE COORDINATES (VT GRID NORTH).

6.) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION (VAOT) "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DATED 2011, WITH CURRENT MODIFICATIONS, THE SPECIAL PROVISIONS, AND THESE DRAWINGS.

7.) CONTRACTOR SHALL CLEAR ALL UNDERGROUND UTILITIES PRIOR TO DRILLING OR OTHER SUBSURFACE ACTIVITIES.

REFERENCES

1.) DRAWING FROM "EXISTING CONDITIONS SURVEY OF SLOPE ON ROUTE 100A, PLYMOUTH NOTCH, VERMONT", CLD CONSULTING ENGINEERS, INC., MANCHESTER, NH, DECEMBER 2011, ORIGINAL SCALE 1"=20', FILE NO. 11032PWS, SURVEY DATE NOVEMBER 29 – DECEMBER 1, 2011.

LEGEND

11+00	LOCAL STATIONING (IN FEET)
1350	2' CONTOUR AND ELEVATION (FEET MEAN SEA LEVEL)
	TREE LINE
	MAPPED BEDROCK EXPOSURE
AER E&T	OVERHEAD WIRE
	CULVERT
	CATCH BASIN
UP#75	UTILITY POLE AND DESIGNATION
SS1	SOIL SAMPLE LOCATION AND DESIGNATION
	SPRING
	GUY WIRE
	IRON PIN FOUND

SOIL GRAB SAMPLE CHARACTERISTICS				
SAMPLE	% GRAVEL	% SAND	% SILT/CLAY	AASHTO
WEST SS-1	47.4	35.4	17.2	A-1-b (0)
WEST SS-2	42.0	41.3	16.7	A-1-b (0)
EAST SS-1	53.0	34.1	12.9	A-1-a (0)
EAST SS-2	28.6	49.7	21.7	A-1-b (0)

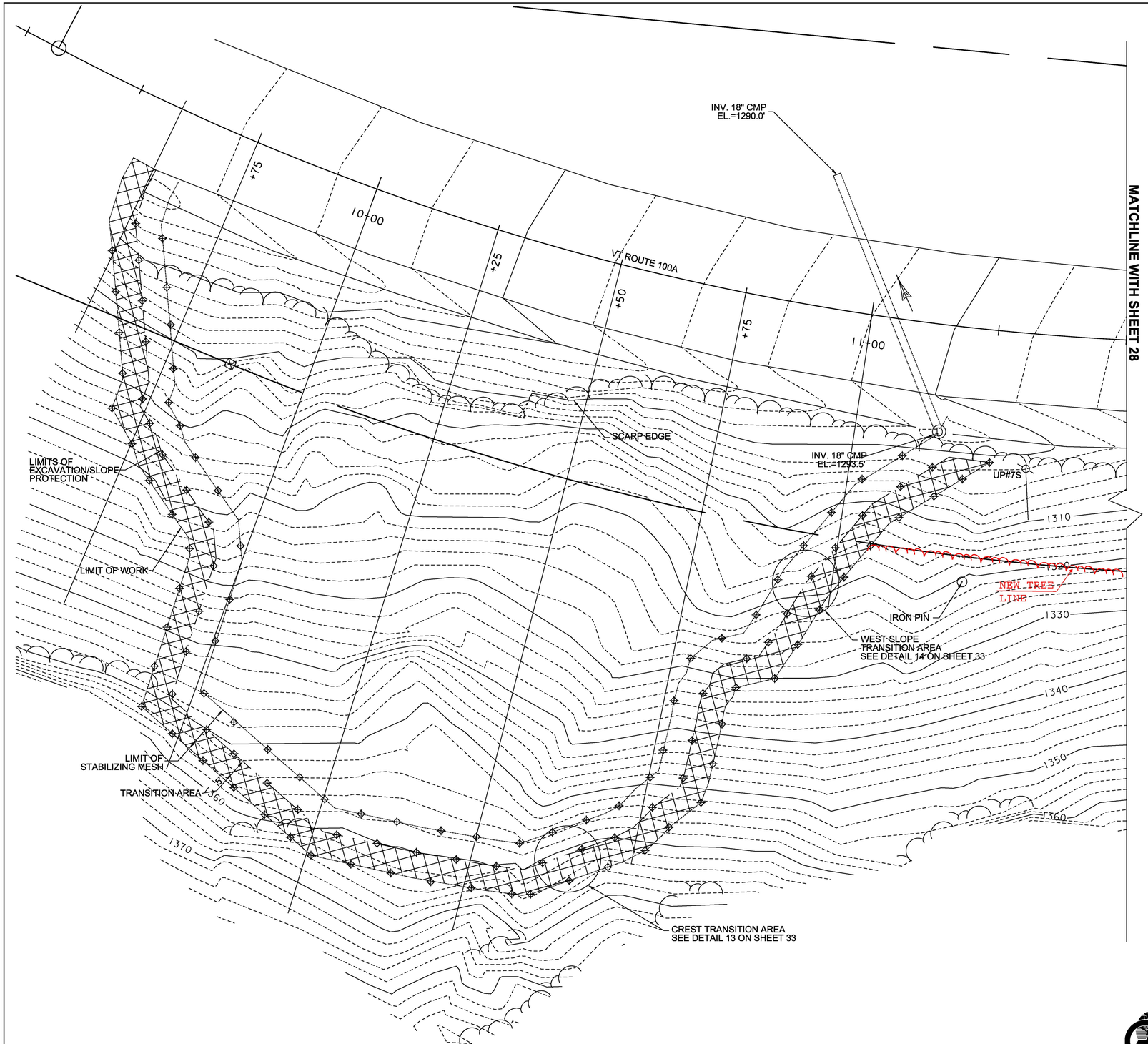
20 0 20 40
SCALE FEET

Golder Associates
Manchester, New Hampshire

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: 113874IIA002.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: GOLDER ASSOCIATES
SLOPE STABILITY EXISTING CONDITIONS

PLOT DATE: 5/17/2016
DRAWN BY: GOLDER ASSOC.
CHECKED BY: GOLDER ASSOC.
SHEET 26 OF 68



LEGEND

+25	SURFACE PROFILE, SEE SHEETS 62 – 64
11+00	LOCAL STATIONING (IN FEET)
1350	PROPOSED GRADE CONTOURS (FEET MEAN SEA LEVEL)
1350	EXISTING GRADE CONTOURS (FEET MEAN SEA LEVEL)
	TREE LINE
	CULVERT
D	CATCH BASIN
UP#75	UTILITY POLE AND DESIGNATION
S	SPRING
	GUY WIRE
	IRON PIN FOUND
	APPROXIMATE ROCK ANCHOR LOCATION

NOTES

1.) ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.

2.) ALL DIMENSIONS SHALL BE CONFIRMED ON SITE BY CONTRACTOR. ALL DISCREPENCIES SHALL BE REPORTED TO ENGINEER IMMEDIATELY.

3.) ALL DRAWINGS SHOULD BE REVIEWED IN CONJUNCTION WITH CONTRACT DOCUMENTS.

4.) ELEVATIONS ARE IN FEET AND ARE REFERENCED TO MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

5.) BASIS OF BEARING IS VT GRID NORTH. HORIZONTAL DATUM IS NORTH AMERICAN DATUM (NAD) 1983/1992 STATE PLANE COORDINATES (VT GRID NORTH).

6.) ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIAL PROVISIONS VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2011, WITH CURRENT MODIFICATIONS, AND THESE DRAWINGS.

7.) CONTRACTOR SHALL CLEAR ALL UNDERGROUND UTILITIES PRIOR TO DRILLING OR OTHER SUBSURFACE ACTIVITIES.

8.) SEE SHEETS 32 AND 33 FOR SLOPE STABILITY DETAILS.

GENERAL NOTES

1.) ROCK ANCHORS LOCATIONS ARE FOR ESTIMATION PURPOSES ONLY. EXACT LOCATIONS WILL BE FIELD DETERMINED.

REFERENCES

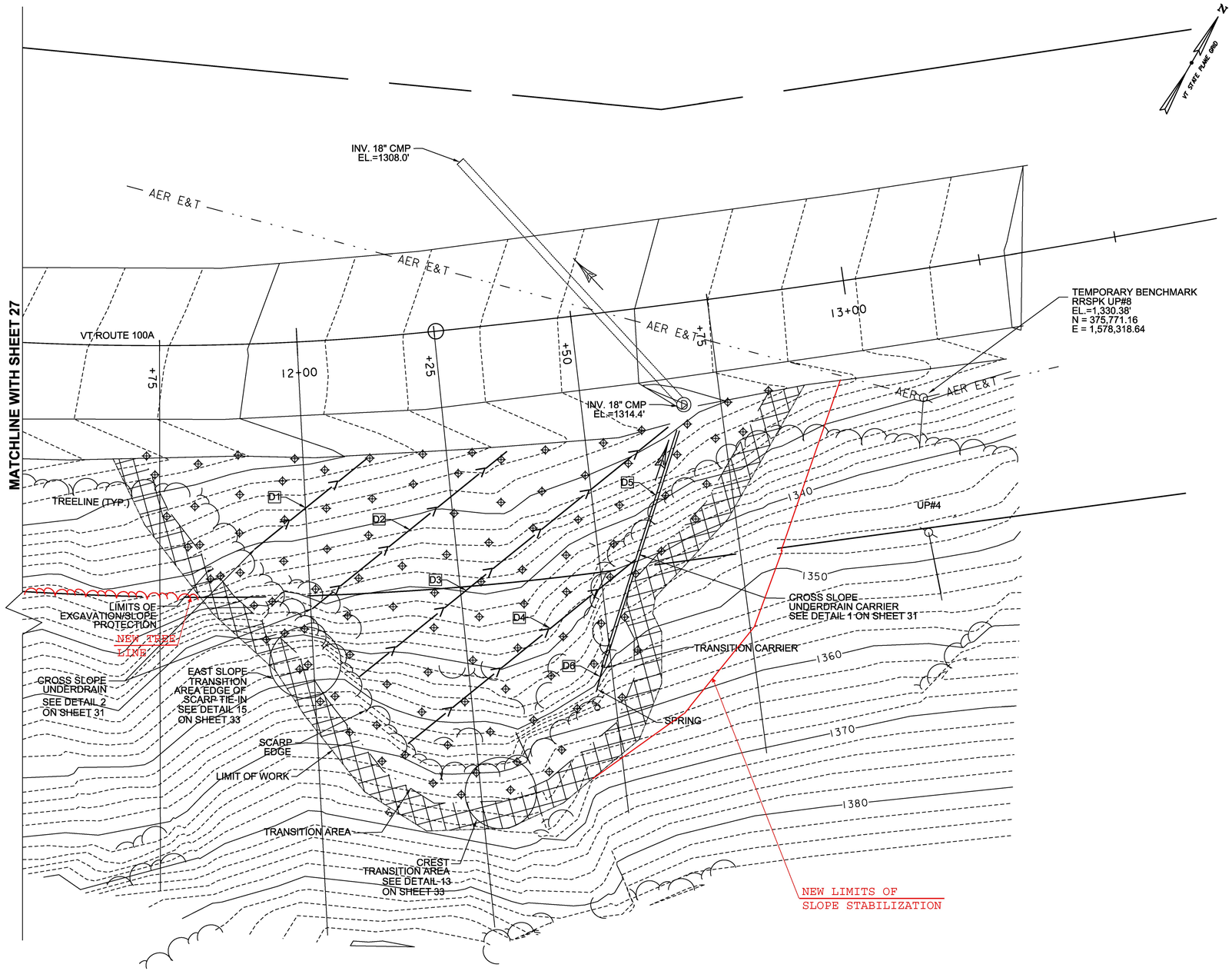
1.) DRAWING FROM "EXISTING CONDITIONS SURVEY OF SLOPE ON ROUTE 100A, PLYMOUTH NOTCH, VERMONT", CLD CONSULTING ENGINEERS, INC., MANCHESTER, NH, DECEMBER 2011, ORIGINAL SCALE 1"=20', FILE NO. 11032PWS, SURVEY DATE NOVEMBER 29 – DECEMBER 1, 2011.

10 0 10 20
SCALE FEET

Golder Associate
Manchester, New Hampshire

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: 11a003a.dgn PLOT DATE: 5/17/2016
PROJECT LEADER: J. SANTACRUSE DRAWN BY: GOLDER ASSOC.
DESIGNED BY: GOLDER ASSOCIATES CHECKED BY: GOLDER ASSOC.
SLOPE STABILITY GRADING PLAN WEST AREA SHEET 27 OF 68



LEGEND

+75	SURFACE PROFILE, SEE SHEETS 65 & 66
11+00	LOCAL STATIONING (IN FEET)
1350	PROPOSED GRADE CONTOURS (FEET MEAN SEA LEVEL)
1350	EXISTING GRADE CONTOURS (FEET MEAN SEA LEVEL)
	OVERHEAD WIRE
	TREE LINE
	MAPPED BEDROCK EXPOSURE
	UNDERDRAIN AND FLOW DIRECTION
	UNDERDRAIN CARRIER
	CULVERT
	CATCH BASIN
UP#75	UTILITY POLE AND DESIGNATION
	SPRING
	GUY WIRE
	IRON PIN FOUND
	APPROXIMATE SOIL ANCHOR LOCATION
D1	UNDERDRAIN DESIGNATION

NOTES

1.) ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.

2.) ALL DIMENSIONS SHALL BE CONFIRMED ON SITE BY CONTRACTOR. ALL DISCREPENCIES SHALL BE REPORTED TO ENGINEER IMMEDIATELY.

3.) ALL DRAWINGS SHOULD BE REVIEWED IN CONJUNCTION WITH CONTRACT DOCUMENTS.

4.) ELEVATIONS ARE IN FEET AND ARE REFERENCED TO MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

5.) BASIS OF BEARING IS VT GRID NORTH. HORIZONTAL DATUM IS NORTH AMERICAN DATUM (NAD) 1983/1992 STATE PLANE COORDINATES (VT GRID NORTH).

6.) ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIAL PROVISION VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2011, WITH CURRENT MODIFICATIONS, AND THESE DRAWINGS.

7.) CONTRACTOR SHALL CLEAR ALL UNDERGROUND UTILITIES PRIOR TO DRILLING OR OTHER SUBSURFACE ACTIVITIES.

8.) SEE SHEETS 31, 32 AND 33 FOR SLOPE STABILITY DETAILS.

GENERAL NOTES

1.) ROCK ANCHOR LOCATIONS ARE FOR ESTIMATION PURPOSES ONLY. EXACT LOCATIONS WILL BE FIELD DETERMINED.

2.) THE EXACT GRADE OF ALL UNDERDRAIN AND UNDERDRAIN CARRIERS SHALL BE FIELD DETERMINED.

3.) REFER TO DETAIL 3 FOR OUTLET CONSTRUCTION OF D1 AND D2.

4.) D3 AND D4 SHALL CONNECT TO D5.

5.) D5 SHALL CONNECT TO D.I. AT ST 12+70, 19.0 RT

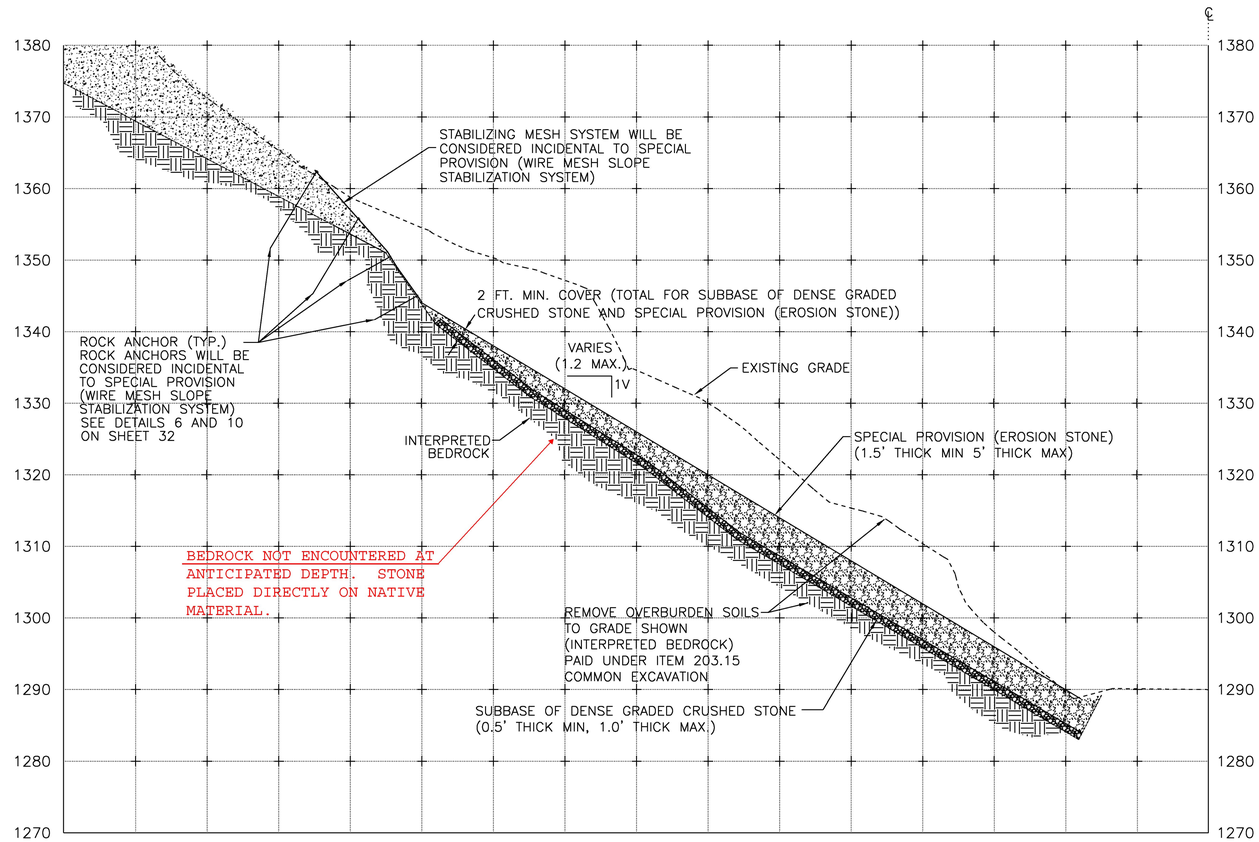
6.) D6 SHALL BEGIN AT EXISTING SPRING, FIELD LOCATION SHALL BE VERIFIED, AND CONNECT TO D5.

REFERENCES

1.) DRAWING FROM "EXISTING CONDITIONS SURVEY OF SLOPE ON ROUTE 100A, PLYMOUTH NOTCH, VERMONT", CLD CONSULTING ENGINEERS, INC., MANCHESTER, NH, DECEMBER 2011, ORIGINAL SCALE 1"=20', FILE NO. 11032PWS, SURVEY DATE NOVEMBER 29 – DECEMBER 1, 2011.

Golder Associates
Manchester, New Hampshire

PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: 11a003b.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J. SANTACRUCE	DRAWN BY: GOLDER ASSOC.
DESIGNED BY: GOLDER ASSOCIATES	CHECKED BY: GOLDER ASSOC.
SLOPE STABILITY GRADING PLAN EAST AREA	SHEET 28 OF 68



TYPICAL SECTION - WEST AREA

10 0 10 20
SCALE FEET

NOTES

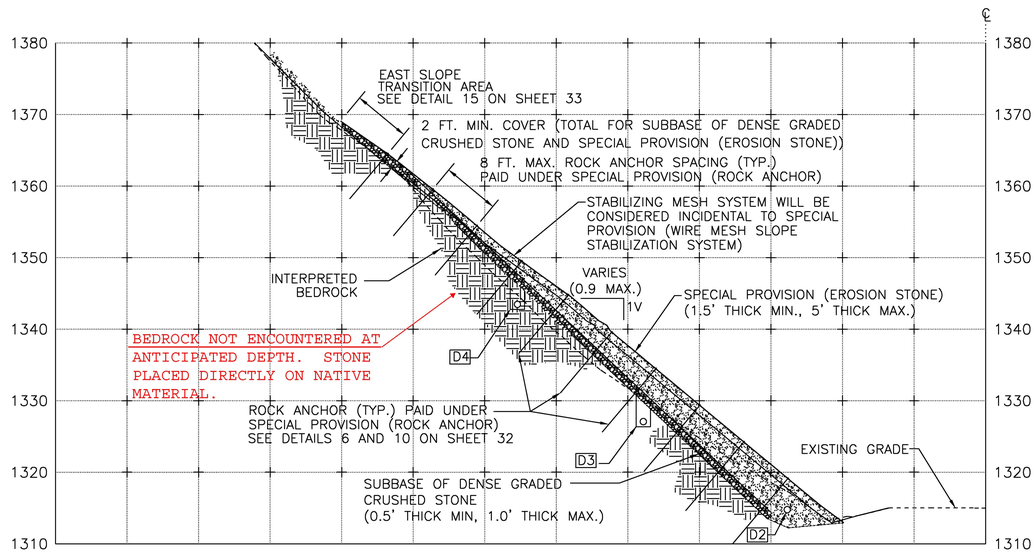
1.) STABILIZATION AREA SHALL BE EXCAVATED TO BEDROCK OR AS DETERMINED BY THE ENGINEER.
2.) BEDROCK SHOWN WAS INTERPRETED FROM SOIL SAMPLE LOCATIONS AND FIELD SURVEY.

Golder Associate
Manchester, New Hampshire

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: 113874IIA004.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: GOLDER ASSOCIATES
SLOPE STABILITY TYPICAL SECTION SHEET 1

PLOT DATE: 5/17/2016
DRAWN BY: GOLDER ASSOC.
CHECKED BY: GOLDER ASSOC.
SHEET 29 OF 68



TYPICAL SECTION - EAST AREA

10 0 10 20
SCALE FEET

NOTES

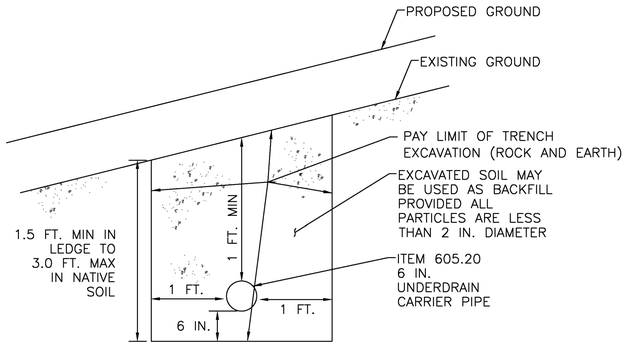
1.) STABILIZATION AREA SHALL BE EXCAVATED TO BEDROCK OR AS DETERMINED BY THE ENGINEER.
2.) BEDROCK SHOWN WAS INTERPRETED FROM SOIL SAMPLE LOCATIONS AND FIELD SURVEY.

Golder Associate
Manchester, New Hampshire

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

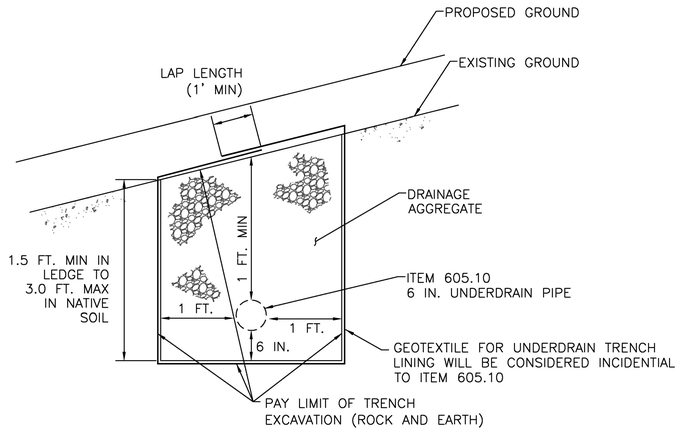
FILE NAME: 113874IIA004.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: GOLDER ASSOCIATES
SLOPE STABILITY TYPICAL SECTION SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: GOLDER ASSOC.
CHECKED BY: GOLDER ASSOC.
SHEET 30 OF 68



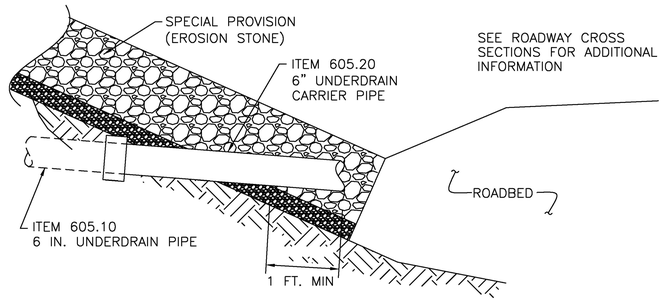
1 CROSS SLOPE UNDERDRAIN CARRIER

N.T.S.



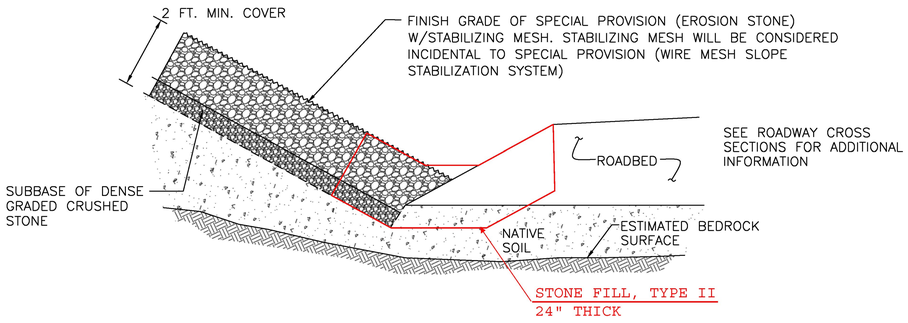
2 CROSS SLOPE UNDERDRAIN

N.T.S.



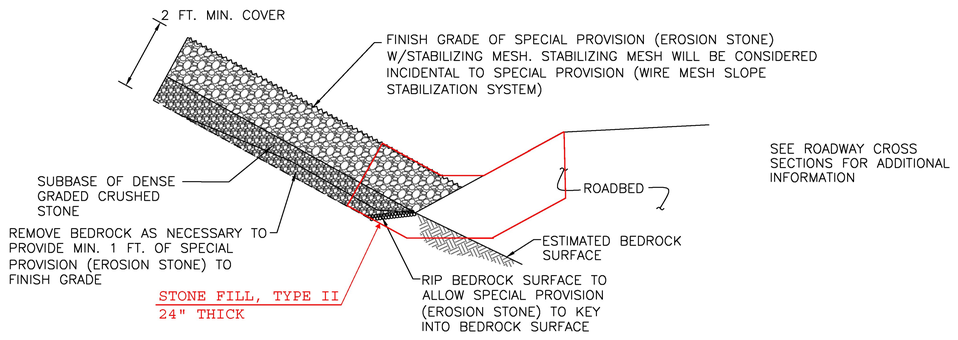
3 UNDERDRAIN DITCH OUTLET

N.T.S.



4 DITCH DETAIL NATIVE SOIL AS BEARING SURFACE

N.T.S.

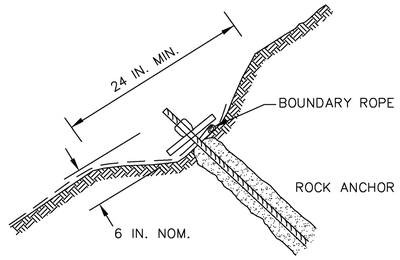


5 DITCH DETAIL BEDROCK AS BEARING SURFACE

N.T.S.

Golder Associate
Manchester, New Hampshire

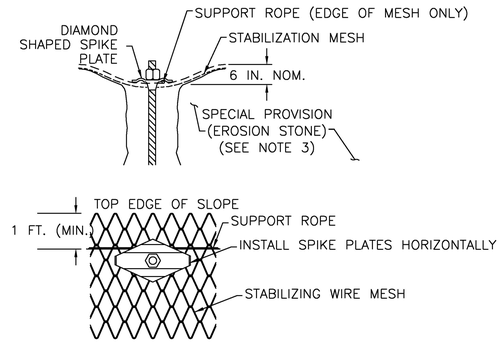
PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: 113874IIA006.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J. SANTACRUCE	DRAWN BY: GOLDER ASSOC.
DESIGNED BY: GOLDER ASSOCIATES	CHECKED BY: GOLDER ASSOC.
SLOPE STABILITY DETAILS 1	SHEET 31 OF 68



SLIGHTLY BURY EDGE OF MESH, RECESS ROCK ANCHORS ACCORDINGLY

6 ROCK ANCHOR AT STABILIZATION MESH BOUNDARY DETAIL

N.T.S.



7 ROCK ANCHOR HEAD DETAIL

N.T.S.

GENERAL NOTES

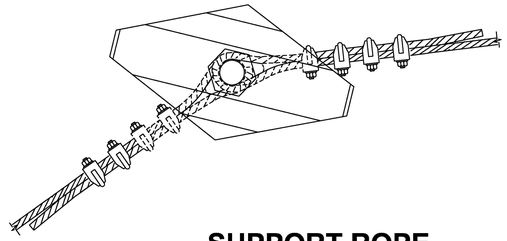
1) STABILIZING MESH SHALL BE INSTALLED PER MANUFACTURER'S PROCEDURES. SEE ITEM 900.670 SPECIAL PROVISION (WIRE MESH SLOPE STABILIZATION SYSTEM).

2) FOR DETAILS ON STABILIZING MESH, WIRE ROPE, SPIKE PLATE ASSEMBLIES, AND ROCK ANCHORS, SEE ITEM 900.670 SPECIAL PROVISION (WIRE MESH SLOPE STABILIZATION SYSTEM) AND SPECIAL PROVISION (ROCK ANCHOR) FOR ADDITIONAL INFORMATION.

3) ROCK ANCHOR DRILL HOLE SHALL BE COMPLETELY FILLED WITH GROUT AND ALLOWED TO CURE AT LEAST 48 HOURS PRIOR TO TORQUING ANCHOR NUT.

4) ENGINEER MAY ADD ANCHORS IN TRANSITION AREAS AND AREAS WITH AN IRREGULAR SURFACE TO ENSURE INTIMATE STABILIZATION MESH / GROUND CONTACT.

5) SUPPORT ROPE SHALL BE PLACED UNDER SPIKE PLATES AND ON TOP, SIDE AND BOTTOM EDGES OF OUTER PERIMETER SLOPE ROCK ANCHOR AS SHOWN IN DETAIL 7.



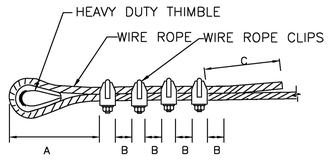
8 SUPPORT ROPE TERMINATION DETAIL

N.T.S.

NOTES

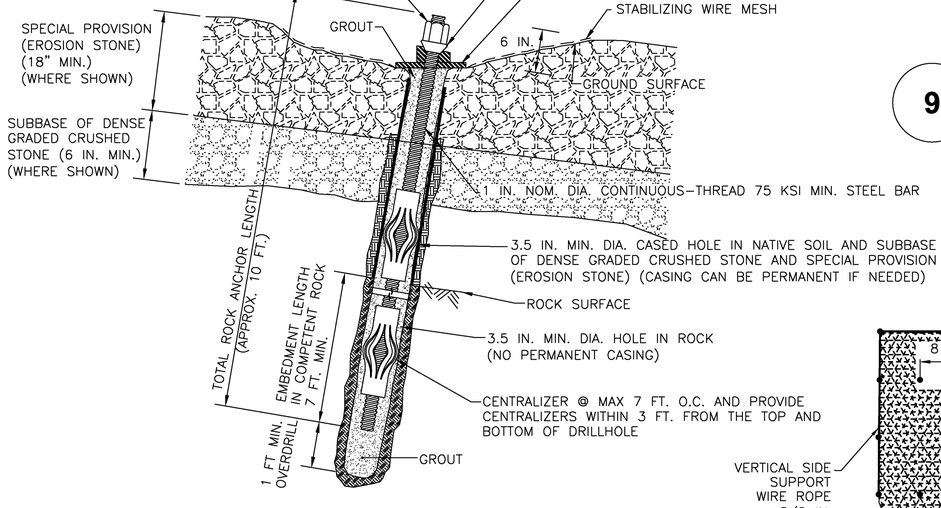
1.) LOOPS SHALL BE PLACED UNDER SPIKE PLATE PRIOR TO PRE-TENSIONING.

2.) REFER TO DETAIL 9 FOR WIRE ROPE ANCHOR LOOP.



9 WIRE ROPE ANCHOR LOOP DETAIL

N.T.S.



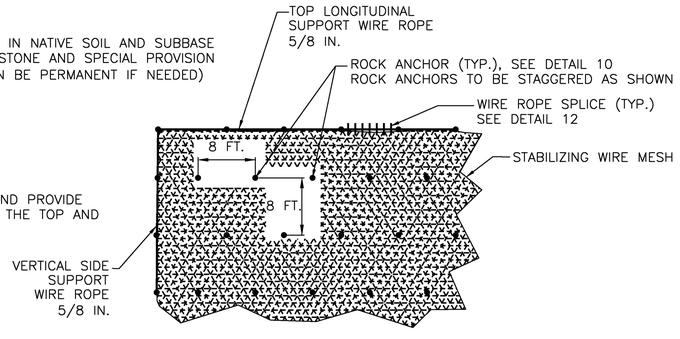
MINIMUM OF 12 FT OF BOND BELOW THE UNDISTURBED GROUND SURFACE, IF BEDROCK NOT REACHED

10 TYPICAL ROCK ANCHOR DETAIL FOR ANCHORING IN ROCK

N.T.S.

NOTES

1.) DESIGN LOAD OF ROCK ANCHORS IS 11 KIPS (50 kN). TORQUE TENSION ANCHORS AS DIRECTED BY ENGINEER (TYP. 369 FT-LBS.) WHERE PLATES BEAR DIRECTLY ON ROCK, TORQUE NUT TO 150 FT.-LBS.

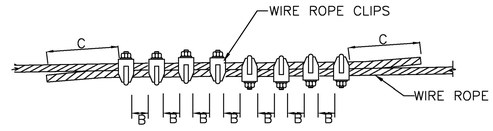


11 TYPICAL ROCK ANCHOR PATTERN

N.T.S.

NOTES

1.) FOR CONNECTION BETWEEN ROCK ANCHOR, ROPE NET/WIRE MESH, AND SUPPORT ROPE, SEE DETAIL 7.



ROPE DIAMETER IN.	ROPE DIAMETER mm	MINIMUM WIRE ROPE CLIP SIZE IN.	MINIMUM WIRE ROPE CLIP SIZE mm	MINIMUM WIRE ROPE CLIP QUAN.	A IN.	A mm	B IN.	B mm	C IN.	C mm	TORQUE REQUIRED FT-LBS.	TORQUE REQUIRED N*m
5/8	16	5/8	16	4	9	229	4	102	6	152	95	128.8

12 WIRE ROPE SPLICING DETAIL

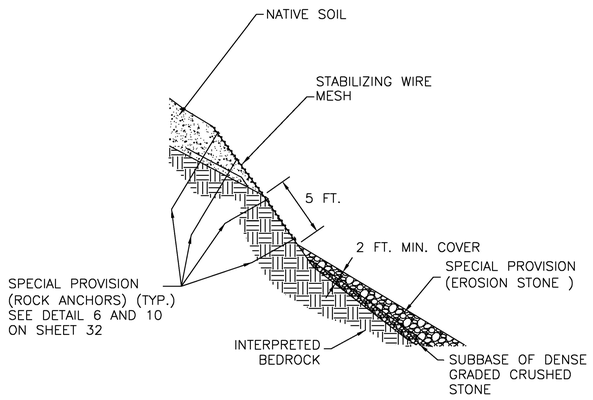
N.T.S.

Golder Associate
Manchester, New Hampshire

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

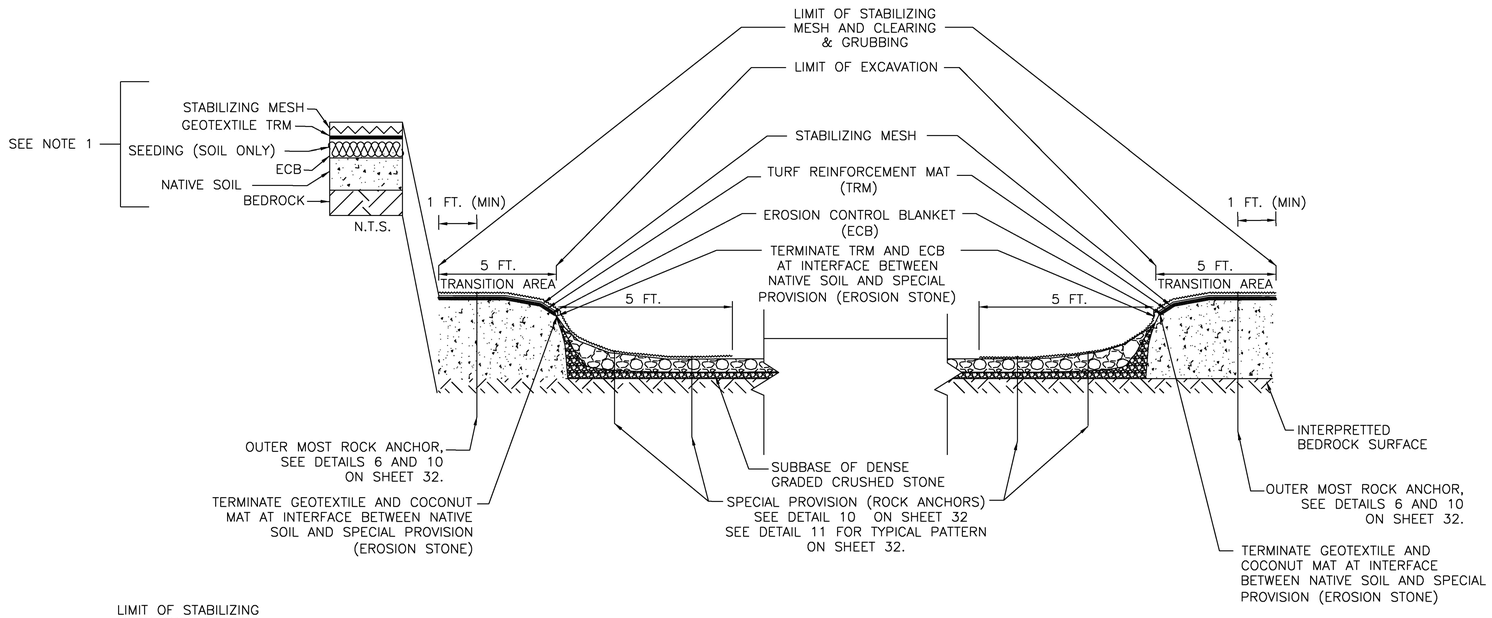
FILE NAME: 113874IIA007.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: GOLDER ASSOCIATES
SLOPE STABILITY DETAILS 2

PLOT DATE: 5/17/2016
DRAWN BY: GOLDER ASSOC.
CHECKED BY: GOLDER ASSOC.
SHEET 32 OF 68



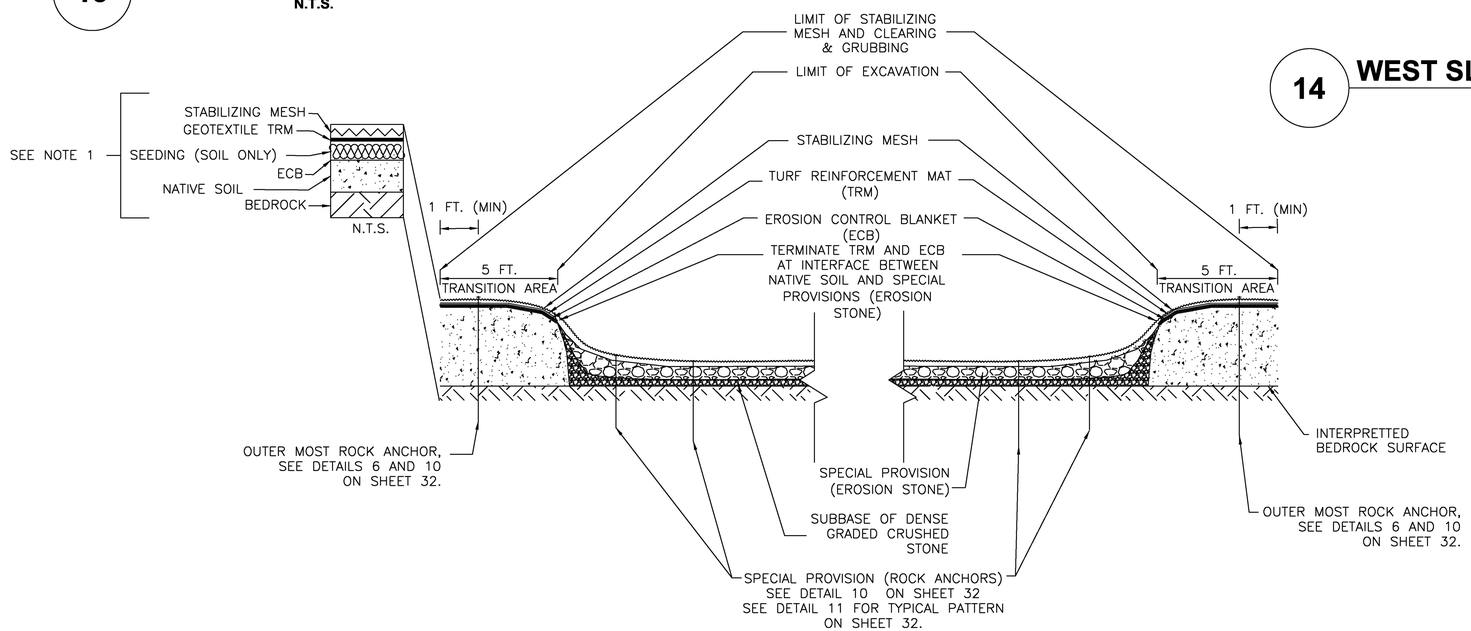
13 CREST TRANSITION AREA

N.T.S.



14 WEST SLOPE TRANSITION AREA DETAIL

N.T.S.



15 EAST SLOPE TRANSITION AREA DETAIL

N.T.S.

NOTES

1.) SEE ITEM 900.670 SPECIAL PROVISION (WIRE MESH SLOPE STABILIZATION SYSTEM) FOR CONSTRUCTION METHOD AND SEQUENCE OF SEEDING, EROSION CONTROL BLANKET (ECB). GEOTEXTILE TURF REINFORCEMENT MAT (TRM) AND STABILIZATION MESH.

2.) TURF REINFORCEMENT MAT (TRM), EROSION CONTROL BLANKET (ECB), AND STABILIZATION MESH SEEDING WILL BE CONSIDERED INCIDENTAL TO ITEM 900.670 SPECIAL PROVISION (WIRE MESH SLOPE STABILIZATION SYSTEM)

Golder Associate
Manchester, New Hampshire

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: 113874IIA008.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: GOLDER ASSOCIATES
SLOPE STABILITY DETAILS 3

PLOT DATE: 5/17/2016
DRAWN BY: GOLDER ASSOC.
CHECKED BY: GOLDER ASSOC.
SHEET 33 OF 68

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES COLD PLANING THE EXISTING ROADWAY TO A DEPTH OF 2 INCHES, APPLYING A 1/2 INCH BITUMINOUS PAVEMENT SHIM, AND PAVING A 1 1/2 INCH WEARING COURSE. THE WORK ALSO INCLUDES STONE SLOPE WORK ALONG AN UNNAMED STREAM, INSTALLING NEW DRAINAGE STRUCTURES, SLOPE RESTORATION, AND DRAINAGE DITCH IMPROVEMENTS. THE PROJECT IS LOCATED IN THE TOWN OF PLYMOUTH, ON VT ROUTE 100A, APPROXIMATELY 400 FEET EAST OF THE INTERSECTION OF VT 100A AND VT 100.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE AND PAVEMENT DISTURBANCE WITHIN THE PROJECT AREA AS SHOWN ON THE ATTACHED EPSC PLAN. TOTAL AREA OF DISTRUBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.55 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL BE COMPLETED IN TWO CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS VERY HILLY WITH STEEP VEGETATED SLOPES, FORESTED UPLANDS, AND OCCASIONAL LEDGE OUTCROPS. ROADWAY SIDE SLOPES CONSIST OF VEGETATED UNDERGROWTH, EXISTING STONE SLOPE ADAJCENT TO THE UNNAMED STREAM, AND EXPOSED LEDGE FACES.

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

THE UNNAMED STREAM IS THE ONLY MAJOR WATERBODY ON THE PROJECT SITE. THE UNNAMED STREAM WOULD BE CLASSIFIED AS STEEP, WITH A NARROW, STONE OR LEDGE LINED CHANNEL. THE STREAM BED CONSISTS OF GRAVEL, ROCK AND LEDGE.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF MIXED HARDWOOD AND SOFTWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY RESTORATION OF THE SLOPE FAILURE AREAS, LEDGE REMOVAL AREAS, AND SIDE SLOPE RESTORATION WITHIN THE PROJECT LIMITS. UPON PROJECT COMPLETION, THE CHANNEL SIDE SLOPES ADJACENT TO THE UNNAMED STREAM WILL BE ARMORED WITH STONE FILL TYPE II AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES. CLEARING SHALL BE KEPT TO A MINIMUM.

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:
LYMAN ROCK OUTCROP COMPLEX, VERY STONY, 35% TO 70% SLOPES, "K FACTOR" = 0.32. THIS SOIL IS CONSIDERED HIGHLY ERODIBLE,
MARLOW FINE SANDY LOAM, 35% TO 70% SLOPES, "K FACTOR" = 0.20. THIS SOIL IS CONSIDERED HIGHLY ERODIBLE,
TURNBRIDGE LYMAN COMPLEX, 15% TO 35% SLOPES, "K FACTOR" = 0.20. THIS SOIL IS CONSIDERED HIGHLY ERODIBLE,
COLTON FINE SANDY LOAM, 3% TO 8% SLOPES, "K FACTOR" = 0.15. THIS SOIL IS CONSIDERED POTENTIALLY HIGHLY ERODIBLE.

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: POSSIBILITY OF GREEN SPLEENWORT ON LEDGE FACE THAT WILL NEED TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION BY VTRANS.
WATER RESOURCE: UNNAMED STREAM
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 PLACED 5 FEET FROM THE TOE OF SLOPE TO PHYSICALLY MARK SITE BOUNDARIES. PDF CAN BE LOCATED CLOSER TO THE PROPOSED SLOPE LIMITS IN SENSITIVE AREAS OR AS DIRECTED BY THE ENGINEER. PDF SHALL BE INSTALLED PRIOR TO THE BEGINNING OF ANY EARTHWORK ON THE PROJECT.

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 CONSTRUCTION CHANGES.

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.

FOR THIS PROJECT IT IS ASSUMED THAT MOST OF THE WORK OUTSIDE THE PAVED SURFACE CAN BE COMPLETED WITHOUT EQUIPMENT LEAVING THE PAVED SURFACES. FOR OTHER WORK LOCATED ALONG THE STREAM CHANNEL, THE EQUIPMENT WILL NEED TO CROSS AN EXISTING STONE SLOPE WHICH WILL ACT AS A STABILIZED CONSTRUCTION ACCESS IN THOSE AREAS.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS (EROSION LOGS) SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE EARTHWORK IN ACCORDANCE WITH THE EROSION PREVENTION AND CONTROL PLANS.

EROSION LOGS WILL BE INSTALLED AT THE TOE OF SLOPE AS PROPOSED ON THE EPSC PLAN.

AT LOCATIONS WHERE CONSTRUCTION IS IN OR NEAR WATERCOURSES OF THE STATE OF VERMONT, THE CONTRACTOR SHALL INSTALL EROSION LOGS ALONG THE TOE OF SLOPE DIRECTLY ADJACENT TO THE WATERCOURSE OR AS SHOWN ON THE PLANS AND PER THE SPECIFICATIONS. THE CONTRACTOR SHALL REMOVE THE LEDGE BY MECHANICAL MEANS WITHOUT BLASTING. PRIOR TO BEGINNING ANY WORK ADJACENT TO THE STREAM OR LEDGE REMOVAL THE CONTRACTOR SHALL INSTALL PREFABRICATED CHECK DAMS IMMEDIATELY DOWNSTREAM OF THE PROPOSED WORK AREA TO REDUCE SEDIMENT TRANSFER. IT IS ANTICIPATED THAT DURING LEDGE REMOVAL THE CONTRACTOR WILL BREAK THE LEDGE AND LET IT DROP INTO THE STREAM CHANNEL. THE LEDGE ROCK DROPPED INTO THE CHANNEL SHALL BE REMOVED AT THE END OF EACH WORK DAY OR AS DIRECTED BY THE ENGINEER. IN ADDITION, ANY SEDIMENT COLLECTED IN FRONT OF THE PREFABRICATED CHECK DAMS SHALL BE REMOVED AT THE END OF EACH WORK DAY OR MORE FREQUENTLY IF SEDIMENT BUILDS UP AS DIRECTED BY THE ENGINEER. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD FOR CONTAINING AND REMOVING SEDIMENT FROM THE WATERCOURSE, THE CONTRACTOR SHALL SUBMIT THE ALTERNATE METHOD TO THE ENGINEER FOR APPROVAL AT LEAST 14 DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING.

1.4.5 DIVERT UPLAND RUNOFF

THE PROJECT AREA HAS STEEP SLOPES ADJACENT TO THE PROPOSED DITCHLINE WORK AND SLOPE RESTORATION AREAS THAT MAY MAKE THE CONSTRUCTION OF DIVERSION STRUCTURES DIFFICULT. THEREFORE ALTERNATE SEDIMENT CONTROL MEASURES INCLUDING INLET PROTECTION, EROSION LOGS ALONG THE BOTTOM OF THE SLOPE RESTORATION AREAS AND DITCHLINE CHECK DAMS WILL USED TO LIMIT SEDIMENT TRANSPORT WHERE 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.

TEMPORARY STONE CHECK DAMS, TYPE I WILL BE INSTALLED WITHIN THE PROPOSED CHANNEL AS SHOWN ON THE EPSC PLAN, AT A MINIMUM.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES, SUCH AS STONE SLOPES, SHALL BE INSTALLED AS SHOWN ON THE PLANS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE.

TEMPORARY MULCHING SHALL BE UTILIZED ON A REGULAR BASIS ON EXPOSED SOIL AREAS.

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. SEEDING AND MULCHING SHALL BE USED TO STABILIZE SOIL. SEE THE EROSION CONTROL DETAILS FOR SEED TYPES AND APPLICATION RATES.

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 MATERIAL REMOVED FROM BEHIND PREFABRICATED CHECK DAMS IN THE WATERCOURSE SHALL BE TREATED THE SAME WAY AS DISCHARGE FROM DEWATERING ACTIVITIES AND MUST NOT CAUSE OR CONTRIBUTE TO A VIOLAION OF THE VERMONT WATER QUALITY STANDARDS.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR AFTER ANY RAINFALL EVENT THAT RESULTS IN DISCHARGE FROM THE SITE.

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 OFFSITE ACTIVITIES

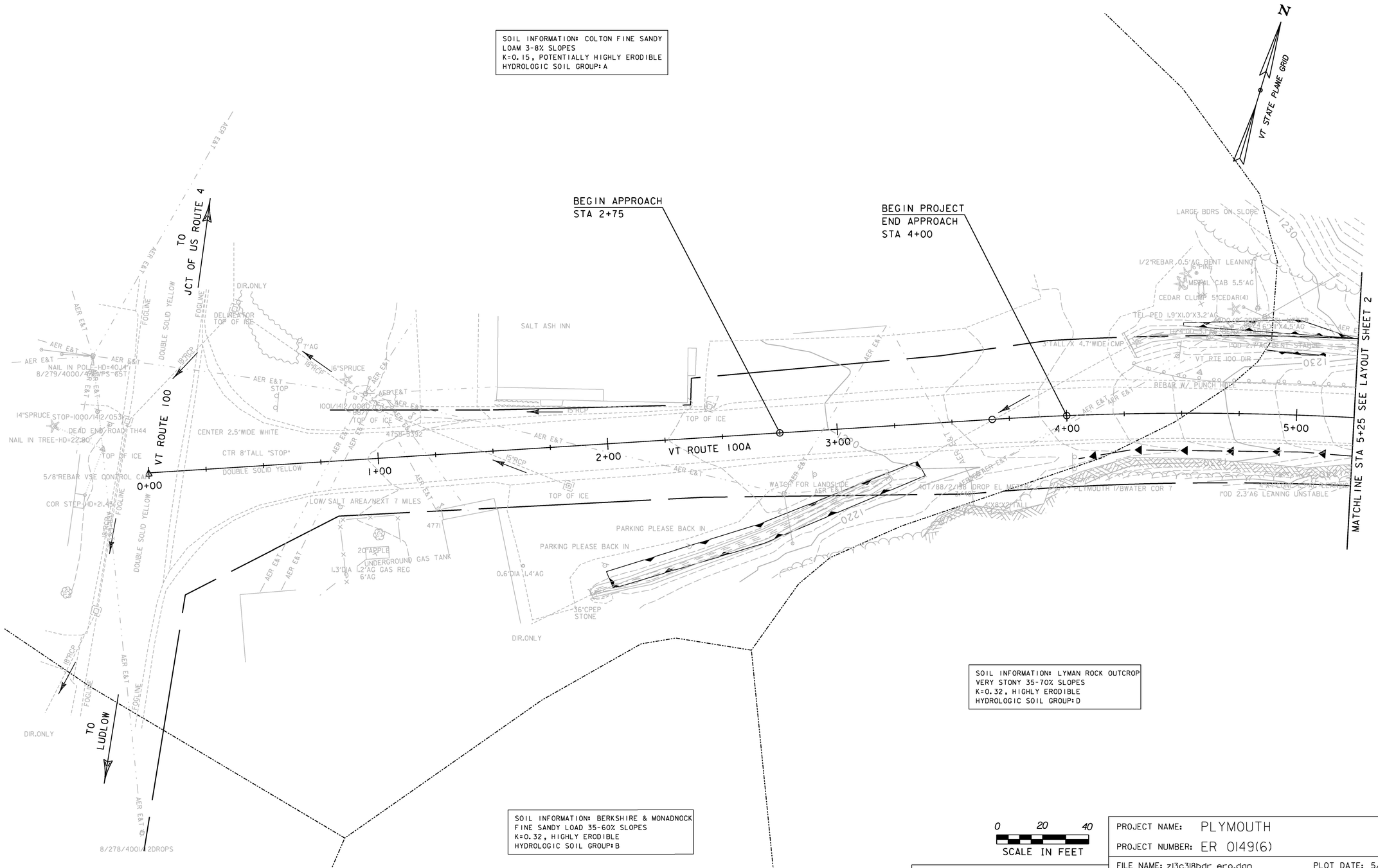
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS INCLUDING, BUT NOT LIMITED TO, STAGING AREAS SHALL FOLLOW SUBSECTIONS 105.25-105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13C318ero_nar.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
EPSC NARRATIVE

PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET 34 OF 68



McFarland Johnson

PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: z13c318bdr_ero.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J.SANTACRUCE	DRAWN BY: M. LOVETT
DESIGNED BY: M. HASKINS	CHECKED BY: B. COLBURN
EPSC EXISTING LAYOUT SHEET 1	SHEET 35 OF 68

SOIL INFORMATION: TURNBRIDGE-LYMAN
COMPLEX, VERY ROCKY 15-35% SLOPES
K=0.20, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: D

N

VT STATE PLANE GRID

MATCHLINE STA 5+25 SEE LAYOUT SHEET 1

MATCHLINE STA 10+75 SEE LAYOUT SHEET 3

VT ROUTE 100A

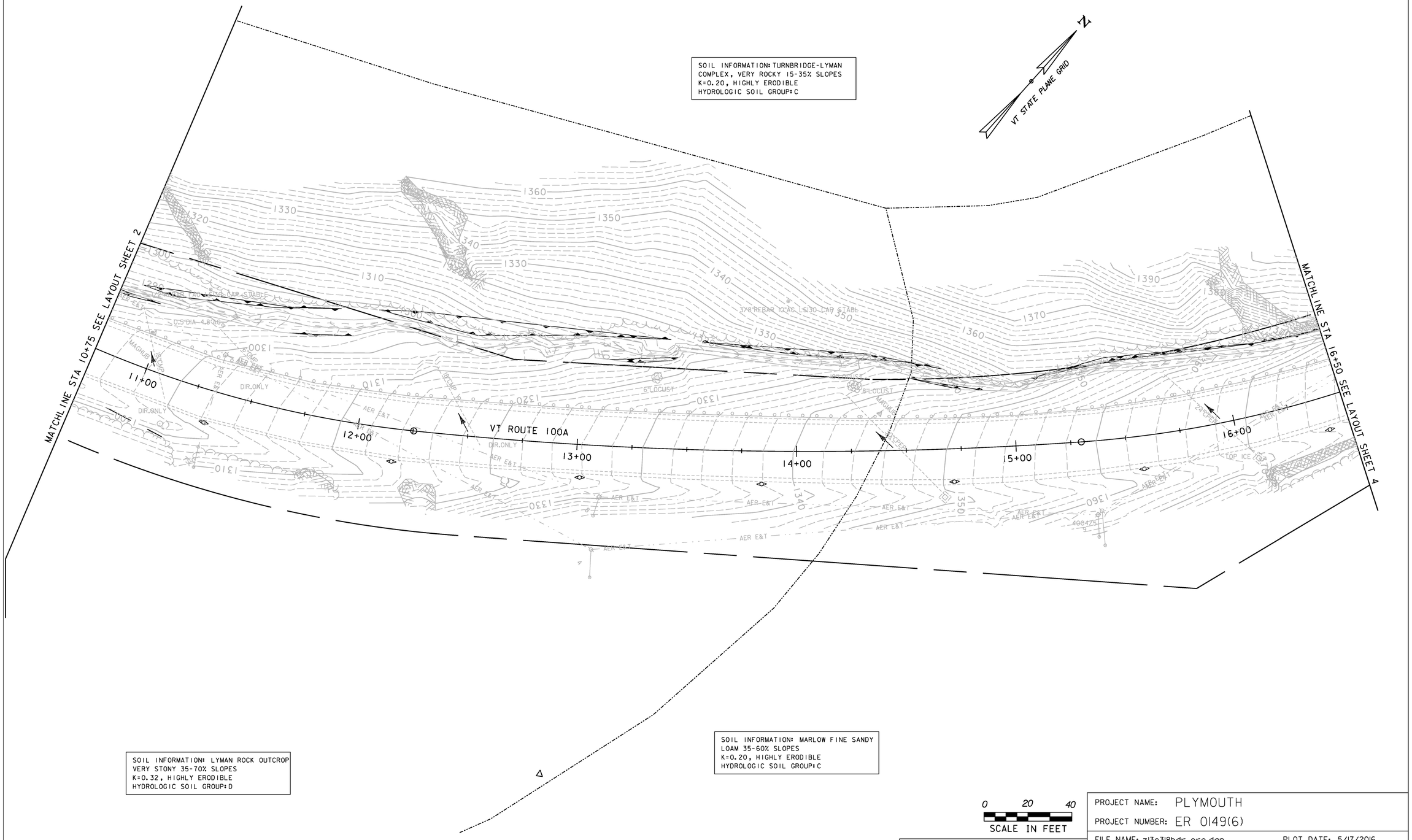
6+00 7+00 8+00 9+00 10+00

SOIL INFORMATION: LYMAN ROCK OUTCROP
VERY STONY 35-70% SLOPES
K=0.32, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: D

0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: z13c318bdr_ero.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J.SANTACRUCE	DRAWN BY: M. LOVETT
DESIGNED BY: M. HASKINS	CHECKED BY: B. COLBURN
EPSC EXISTING LAYOUT SHEET 2	SHEET 36 OF 68



McFarland Johnson

PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: zl3c318bdr_ero.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J.SANTACRUCE	DRAWN BY: M. LOVETT
DESIGNED BY: M. HASKINS	CHECKED BY: B. COLBURN
EPSC EXISTING LAYOUT SHEET 3	SHEET 37 OF 68

SOIL INFORMATION: TURNBRIDGE-LYMAN
COMPLEX, VERY ROCKY 15-35% SLOPES
K=0.20, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: C

VT STATE PLANE GRID

MATCHLINE STA 16+50 SEE LAYOUT SHEET 3

VT ROUTE 100A

17+00 18+00 19+00 20+00 21+00

END APPROACH
STA 21+25

DRIVEWAY

TO BRIDGEWATER

END PROJECT
BEGIN APPROACH
STA 20+00

SOIL INFORMATION: PERU SKERRY + COLONEL
SOILS, VERY STONY 35-60% SLOPES
K=0.20, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: C

SOIL INFORMATION: MARLOW FINE SANDY
LOAM 35-60% SLOPES
K=0.20, HIGHLY ERODIBLE
HYDROLOGIC SOIL GROUP: C

0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

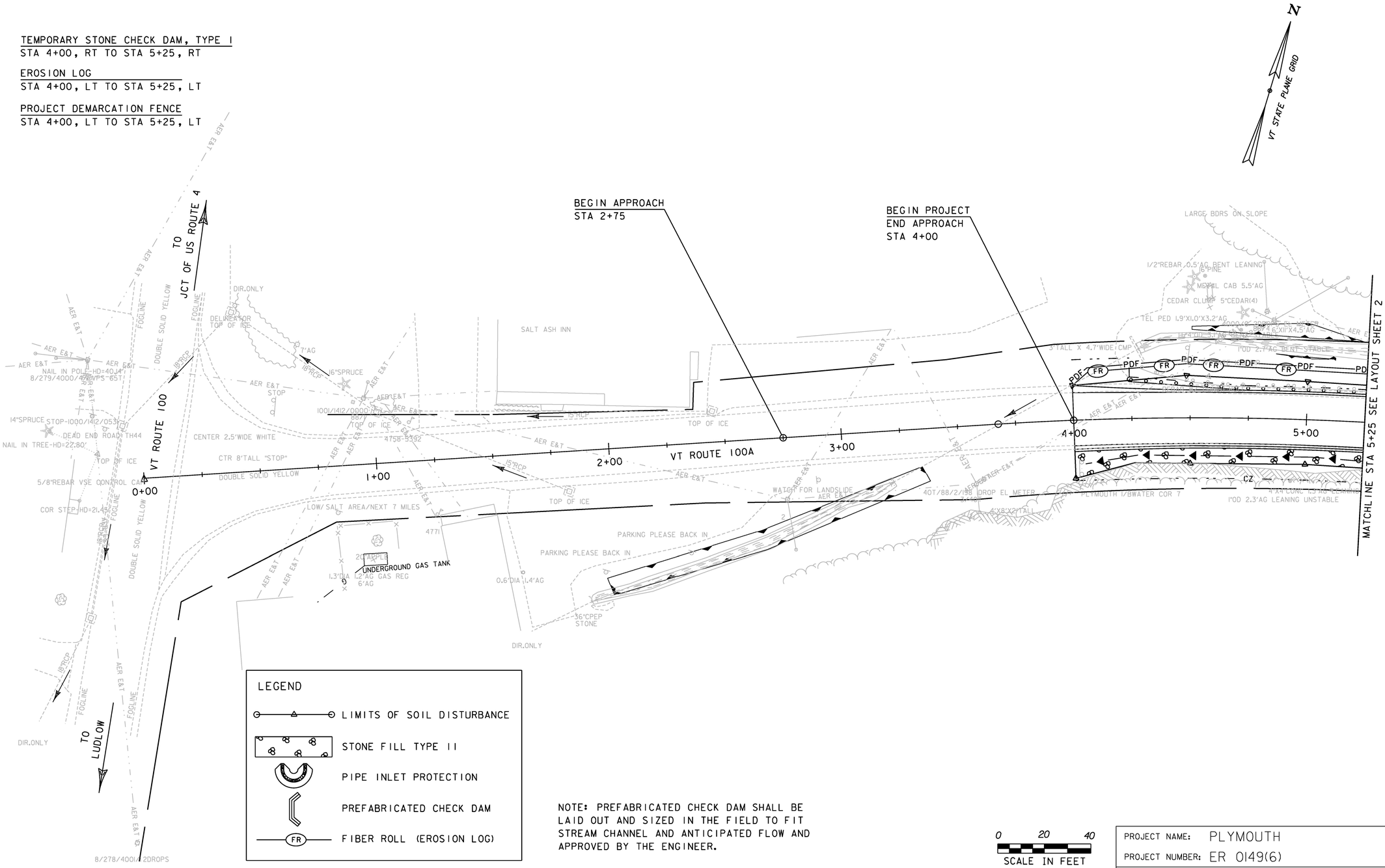
FILE NAME: z13c318bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC EXISTING LAYOUT SHEET 4

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 38 OF 68

TEMPORARY STONE CHECK DAM, TYPE I
STA 4+00, RT TO STA 5+25, RT

EROSION LOG
STA 4+00, LT TO STA 5+25, LT

PROJECT DEMARCATION FENCE
STA 4+00, LT TO STA 5+25, LT



LEGEND

- LIMITS OF SOIL DISTURBANCE
- STONE FILL TYPE II
- PIPE INLET PROTECTION
- PREFABRICATED CHECK DAM
- FIBER ROLL (EROSION LOG)

NOTE: PREFABRICATED CHECK DAM SHALL BE LAID OUT AND SIZED IN THE FIELD TO FIT STREAM CHANNEL AND ANTICIPATED FLOW AND APPROVED BY THE ENGINEER.

0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC CONSTRUCTION LAYOUT SHEET 1

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 39 OF 68

TEMPORARY STONE CHECK DAM, TYPE I
STA 5+25, RT TO STA 10+75, RT

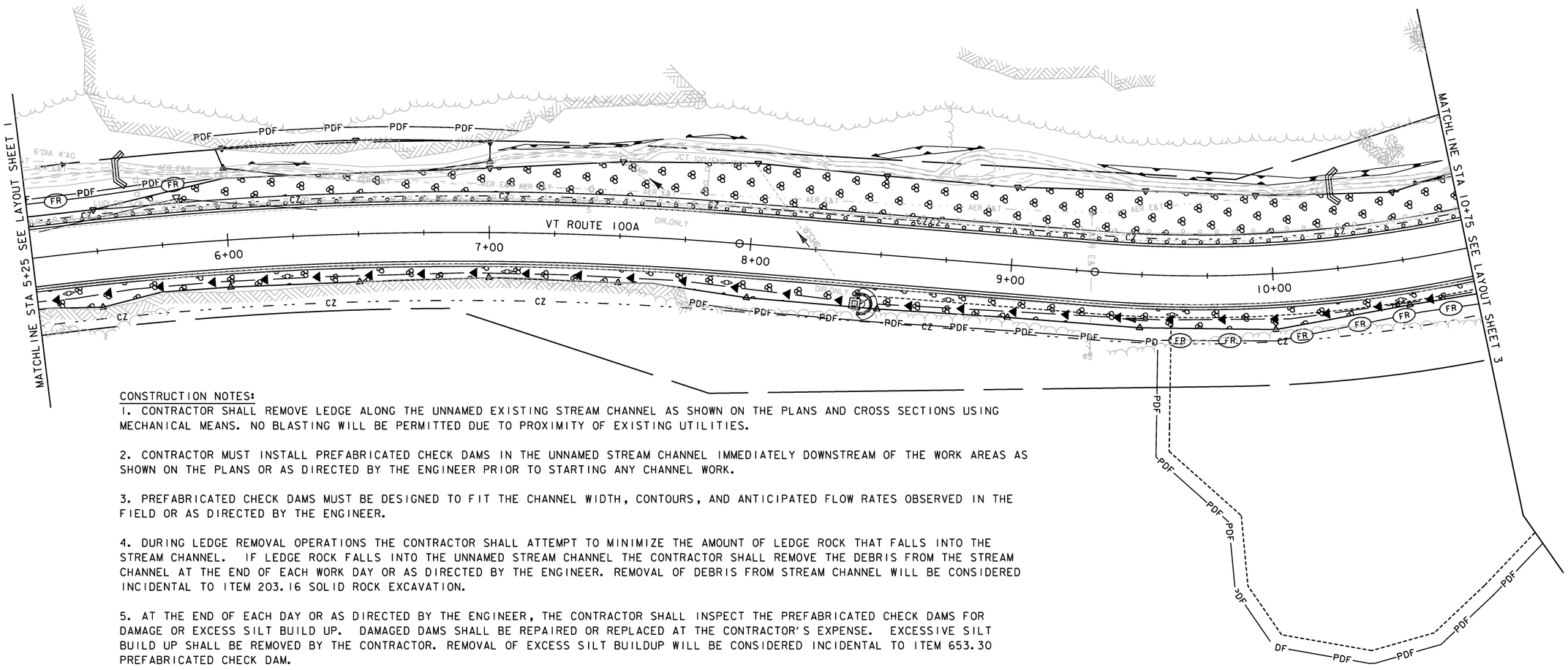
EROSION LOG
STA 5+25, LT TO STA 5+96, LT
STA 9+58, RT TO STA 10+75, RT

PROJECT DEMARCATION FENCE
STA 5+90, LT TO STA 7+00, LT
STA 7+75, RT TO STA 10+75, RT

INLET PROTECTION DEVICE, TYPE I
STA 8+41, RT

PREFABRICATED CHECK DAM
STA 5+60.0, LT
STA 10+25.0, LT

N
VT STATE PLANE GRID



CONSTRUCTION NOTES:

1. CONTRACTOR SHALL REMOVE LEDGE ALONG THE UNNAMED EXISTING STREAM CHANNEL AS SHOWN ON THE PLANS AND CROSS SECTIONS USING MECHANICAL MEANS. NO BLASTING WILL BE PERMITTED DUE TO PROXIMITY OF EXISTING UTILITIES.

2. CONTRACTOR MUST INSTALL PREFABRICATED CHECK DAMS IN THE UNNAMED STREAM CHANNEL IMMEDIATELY DOWNSTREAM OF THE WORK AREAS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER PRIOR TO STARTING ANY CHANNEL WORK.

3. PREFABRICATED CHECK DAMS MUST BE DESIGNED TO FIT THE CHANNEL WIDTH, CONTOURS, AND ANTICIPATED FLOW RATES OBSERVED IN THE FIELD OR AS DIRECTED BY THE ENGINEER.

4. DURING LEDGE REMOVAL OPERATIONS THE CONTRACTOR SHALL ATTEMPT TO MINIMIZE THE AMOUNT OF LEDGE ROCK THAT FALLS INTO THE STREAM CHANNEL. IF LEDGE ROCK FALLS INTO THE UNNAMED STREAM CHANNEL THE CONTRACTOR SHALL REMOVE THE DEBRIS FROM THE STREAM CHANNEL AT THE END OF EACH WORK DAY OR AS DIRECTED BY THE ENGINEER. REMOVAL OF DEBRIS FROM STREAM CHANNEL WILL BE CONSIDERED INCIDENTAL TO ITEM 203.16 SOLID ROCK EXCAVATION.

5. AT THE END OF EACH DAY OR AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL INSPECT THE PREFABRICATED CHECK DAMS FOR DAMAGE OR EXCESS SILT BUILD UP. DAMAGED DAMS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. EXCESSIVE SILT BUILD UP SHALL BE REMOVED BY THE CONTRACTOR. REMOVAL OF EXCESS SILT BUILDUP WILL BE CONSIDERED INCIDENTAL TO ITEM 653.30 PREFABRICATED CHECK DAM.

6. CONTRACTOR SHALL PROPERLY DISPOSE OF ALL ACCUMULATED SILT MATERIAL REMOVED FROM BEHIND THE PREFABRICATED CHECK DAMS IN CONFORMANCE WITH VERMONT WATER QUALITY STANDARDS. COST TO DISPOSE OF SILT MATERIAL WILL BE CONSIDERED INCIDENTAL TO ITEM 653.30 PREFABRICATED CHECK DAM.

7. CONTRACTOR MAY PROPOSE AN ALTERNATE LEDGE REMOVAL PROCEDURE TO THE RESIDENT ENGINEER. ALL WORK PROPOSED WILL BE PAID UNDER ITEM 203.16 SOLID ROCK EXCAVATION OR APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL ITEMS.

0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC CONSTRUCTION LAYOUT SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 40 OF 68

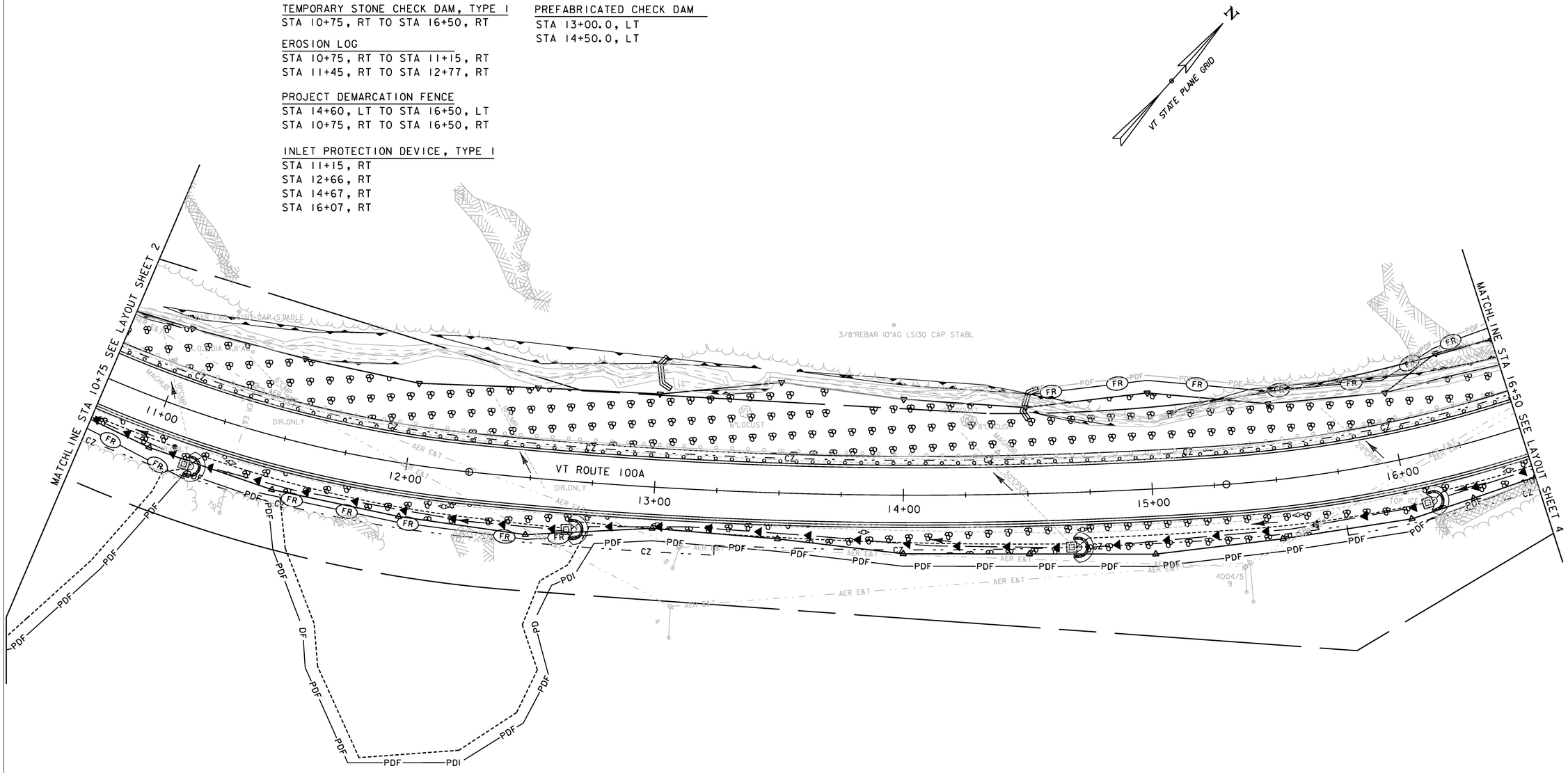
TEMPORARY STONE CHECK DAM, TYPE I
STA 10+75, RT TO STA 16+50, RT

EROSION LOG
STA 10+75, RT TO STA 11+15, RT
STA 11+45, RT TO STA 12+77, RT

PROJECT DEMARCATION FENCE
STA 14+60, LT TO STA 16+50, LT
STA 10+75, RT TO STA 16+50, RT

INLET PROTECTION DEVICE, TYPE I
STA 11+15, RT
STA 12+66, RT
STA 14+67, RT
STA 16+07, RT

PREFABRICATED CHECK DAM
STA 13+00.0, LT
STA 14+50.0, LT



0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3l8bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC CONSTRUCTION LAYOUT SHEET 3

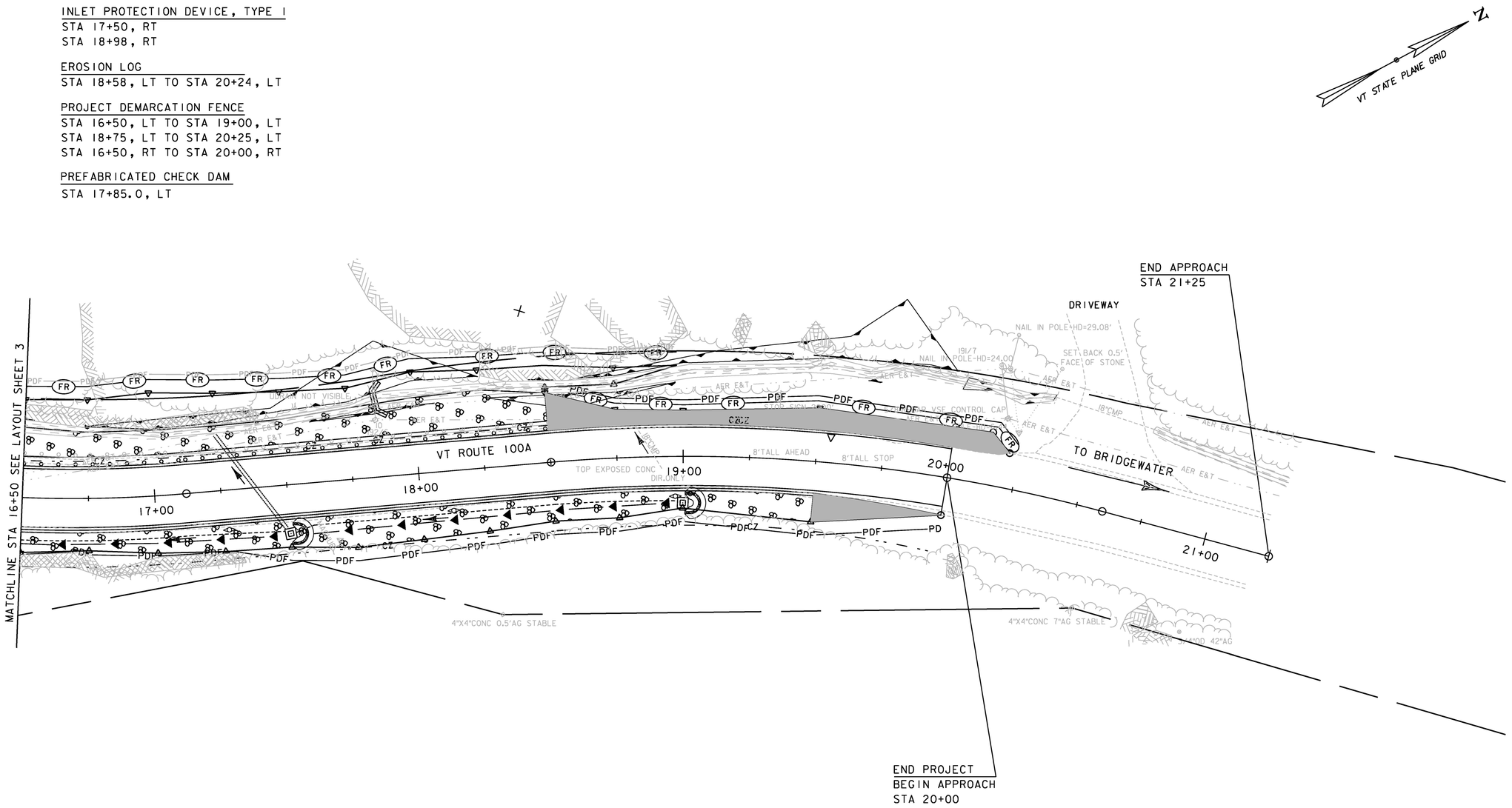
PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 41 OF 68

INLET PROTECTION DEVICE, TYPE I
STA 17+50, RT
STA 18+98, RT

EROSION LOG
STA 18+58, LT TO STA 20+24, LT

PROJECT DEMARCATION FENCE
STA 16+50, LT TO STA 19+00, LT
STA 18+75, LT TO STA 20+25, LT
STA 16+50, RT TO STA 20+00, RT

PREFABRICATED CHECK DAM
STA 17+85.0, LT



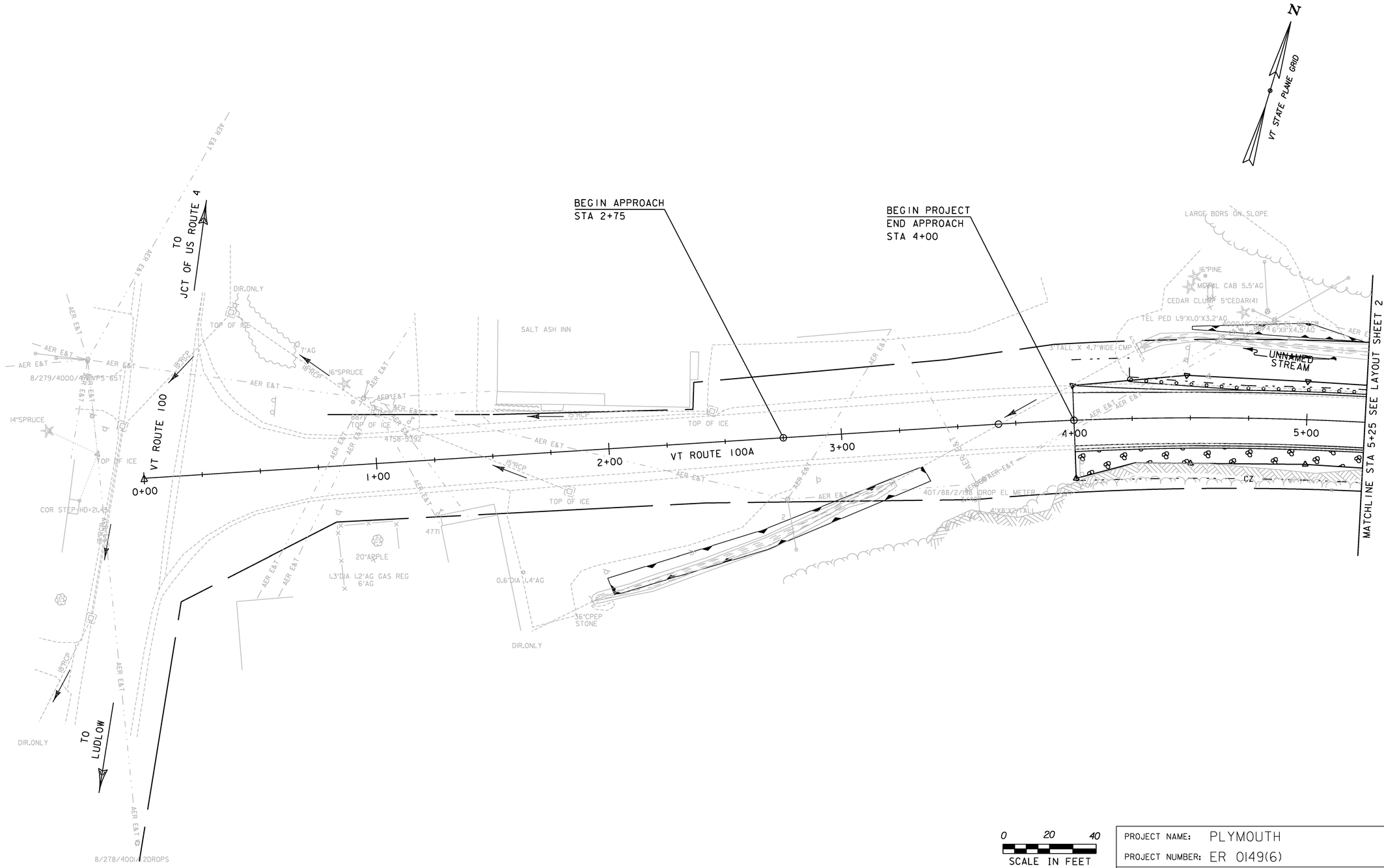
0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zi3c318bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC CONSTRUCTION LAYOUT SHEET 4

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 42 OF 68



0 20 40
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC FINAL LAYOUT SHEET 1

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 43 OF 68

N

VT STATE PLANE GRID

MATCHLINE STA 5+25 SEE LAYOUT SHEET 1

MATCHLINE STA 10+75 SEE LAYOUT SHEET 3

UNNAMED STREAM

VT ROUTE 100A

6+00

7+00

8+00

9+00

10+00

6"DIA 4"AG

AER E&T

CZ

DIR.ONLY

0 20 40

SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH

PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC FINAL LAYOUT SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 44 OF 68

N

VT STATE PLANE GRID

MATCHLINE STA 10+75 SEE LAYOUT SHEET 2

MATCHLINE STA 16+50 SEE LAYOUT SHEET 4

UNNAMED STREAM

VT ROUTE 100A

11+00

12+00

13+00

14+00

15+00

16+00

CZ

AER E&T

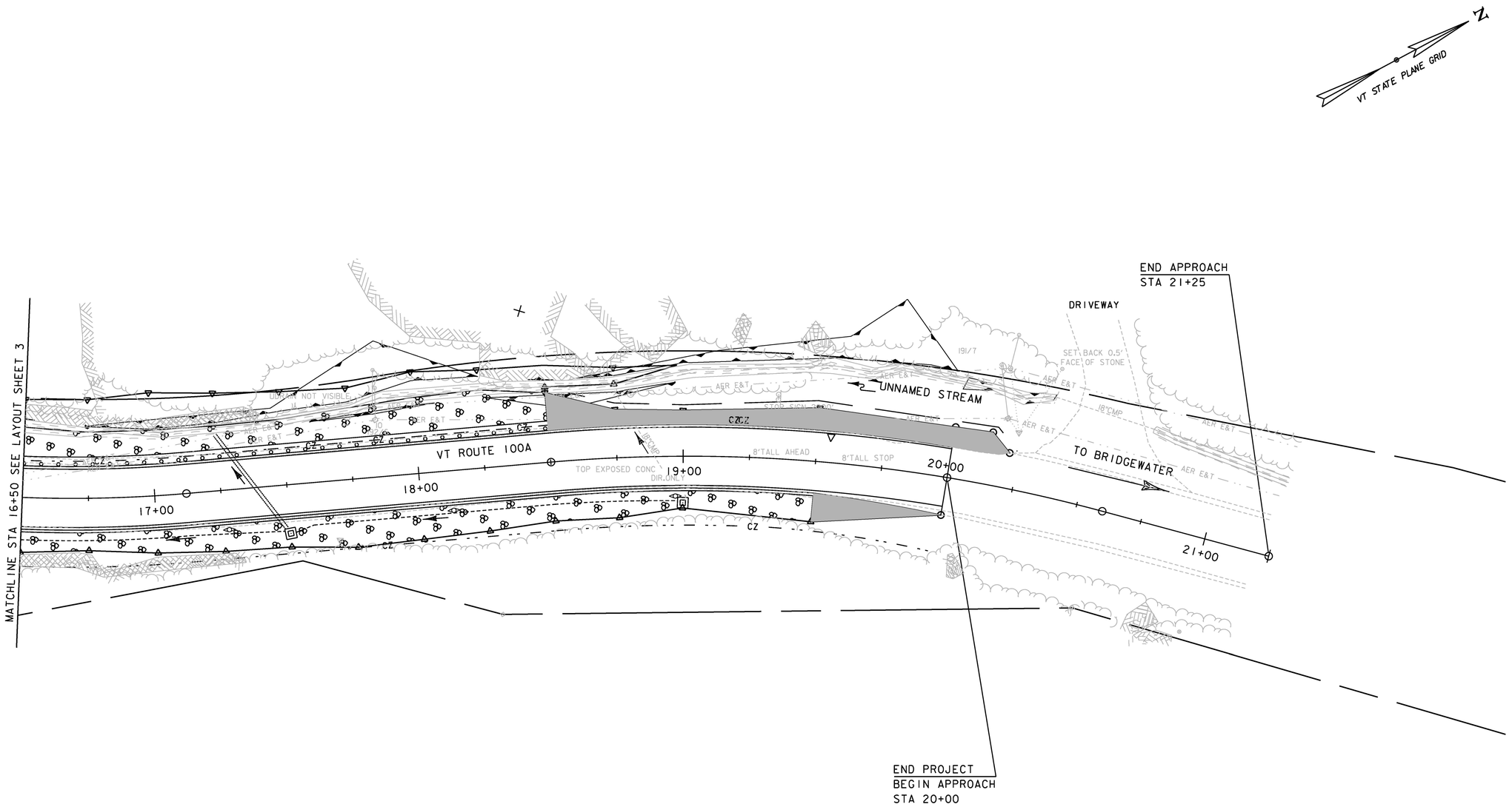
DIR.ONLY

0 20 40

SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: zl3c318bdr_ero.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J.SANTACRUCE	DRAWN BY: M. LOVETT
DESIGNED BY: M. HASKINS	CHECKED BY: B. COLBURN
EPSC FINAL LAYOUT SHEET 3	SHEET 45 OF 68



0 20 40
SCALE IN FEET

McFarland Johnson

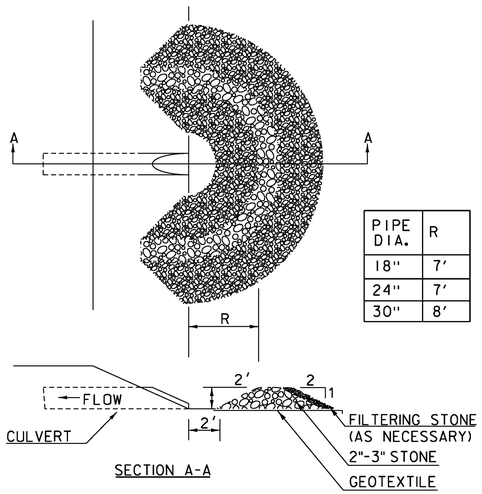
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zi3c318bdr_ero.dgn
PROJECT LEADER: J.SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC FINAL LAYOUT SHEET 4

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 46 OF 68

SYMBOL

NOT TO SCALE



PIPE DIA.	R
18"	7'
24"	7'
30"	8'

CONSTRUCTION SPECIFICATIONS

1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE . (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS

PIPE INLET PROTECTION

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

VAOT LOW GROW/FINE FESCUE MIX

	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
38%	57	95	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

VAOT RURAL AREA MIX

	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
37.5%	22.5	45	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

GENERAL AMENDMENT GUIDANCE

FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

CONSTRUCTION GUIDANCE

1. 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.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

REVISIONS	
JANUARY 12, 2015	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(16)

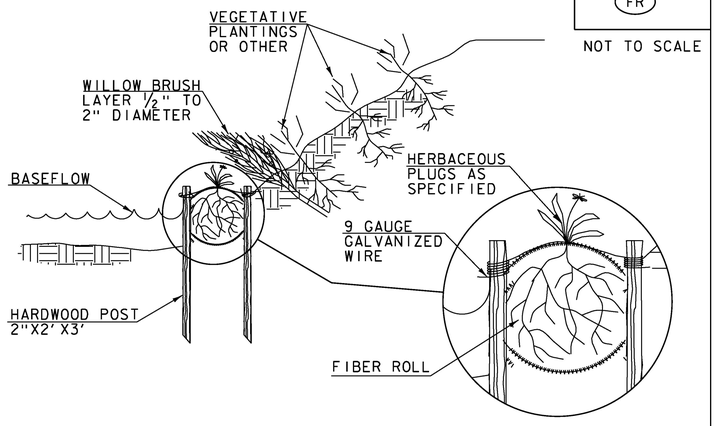
FILE NAME: z13c318esdl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC DETAIL SHEET 1

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 47 OF 68

SYMBOL

FR

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. EXCAVATE A SHALLOW TRENCH SLIGHTLY BELOW BASEFLOW OR A 4" TRENCH ON SLOPE CONTOURS
2. PLACE THE ROLL IN THE TRENCH AND ANCHOR WITH 2"X2" POSTS PLACED ON BOTH SIDES FO THE ROLL AND SPACED LATERALLY ON 2' TO 4' CENTERS. TRIM THE TOP OF THE POSTS EVEN WITH THE EDGE OF THE ROLL, IF NECESSARY.
3. NOTCH THE POSTS AND TIE TOGETHER, ACROSS THE ROLL, WITH 9 GAUGE GALVANIZED WIRE OR ⅛" DIAMETER BRAIDED NYLON ROPE.
4. PLACE SOIL EXCAVATED FROM THE TRENCH BEHIND THE ROLL AND HAND TAMP. PLANTWITH SUITABLE HERBACEOUS OR WOODY VEGETATION AS SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS. VEGETATION SHALL BE PLACED IMMEDIATELY ADJACENT TO THE ROLL TO PROMOTE ROOT GROWTH INTO THE FIBER. HERBACEOUS VEGETATION, IF SPECIFIED, SHALL BE PLANTED INTO THE FIBER ROLL.

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

FIBER ROLL (EROSION LOG)

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

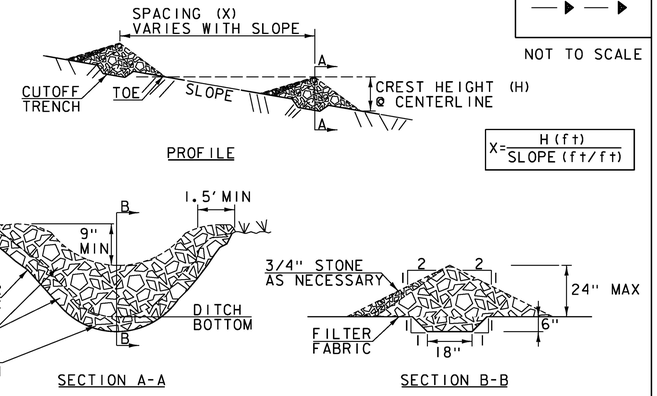
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR EROSION LOG (PAY ITEM 653.60)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 13, 2009	WHF

NOTE: THIS DETAIL IS ONE EXAMPLE OF HOW FIBER ROLLS CAN BE INSTALLED. THE CONTRACTOR SHALL INSTALL ALL FIBER ROLLS PER THE MANUFACTURERS INSTALLATION GUIDELINES.

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OFTHE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

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

CHECK DAM

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 TEMPORARY STONE CHECK DAM, TYPE I(PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

McFarland Johnson

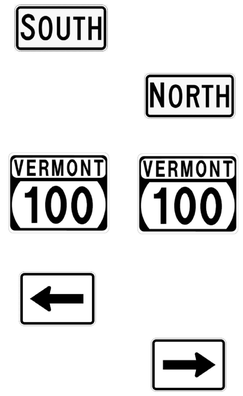
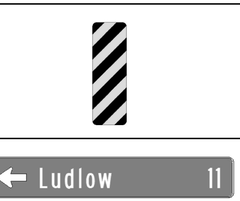
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3l8esd2.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
EPSC DETAIL SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 48 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 1

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	NEW & SALVAGED SIGNS SALV SIGN	NEW & SALVAGED SIGNS SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POST	FLANGED CHANNEL (LB / FT) 1.12	FLANGED CHANNEL (LB / FT) 2.00	FLANGED CHANNEL (LB / FT) 3.00	SQUARE STEEL (in) 1.75 (LB / FT) 1.88	SQUARE STEEL (in) 2.00 (LB / FT) 2.42	SQUARE STEEL (in) 2.50 (LB / FT) 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) 3.00 (LB / FT) 1.30	TUBULAR ALUMINUM Ø (IN) 4.00 (LB / FT) 1.70	TUBULAR ALUMINUM Ø (IN) 4.0 MOD (LB / FT) 1.70	FOUNDATION	TUBULAR STEEL Ø (IN) 3.00 (LB / FT) 7.60	TUBULAR STEEL Ø (IN) 3.50 (LB / FT) 9.00	TUBULAR STEEL Ø (IN) 4.00 (LB / FT) 10.80	TUBULAR STEEL Ø (IN) 5.00 (LB / FT) 14.60	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN FRAME REQUIRED	REMARKS	STANDARD HIGHWAY SIGNS MANUAL (SHSM)	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STANDARD SHEET NUMBER
OPTION ITEMS																																					
2+75.79, RT		1	30.0	30.0	6.3						1					15.0		1														VW-285		51	
		1	24.0	12.0	2.0																											W7-3a	X		
4+01.36, RT		1	72.0	12.0	6.0						2					28.0		2														VD2-1		51	
		1	72.0	12.0	6.0																											VD2-1		51	
4+58.77, LT		1	24.0	12.0	2.0																									#2B	M3-3 GREEN ON WHITE	X		
		1	24.0	12.0	2.0																											M3-1 GREEN ON WHITE	X		
		2	30.0	24.0	10.0						2					30.0		2														M1-5(100) x 2 GREEN ON WHITE			E-136B
		1	21.0	15.0	2.2																											M6-1L GREEN ON WHITE	X		
		1	21.0	15.0	2.2																											M6-1R GREEN ON WHITE	X		
5+38.69, RT		1	12.0	36.0	3.0						1					9.5		1														OM3-R	x		
5+46.60, LT		1	72.0	12.0	6.0						2					28.0		2														VD2-1		51	
		1	72.0	12.0	6.0																											VD2-1		51	
												FT .	FT .	FT .	FT .	FT 110.5	FT .	XXXXX XXXXX XXXXX XXXXX	EA .	LB .	LB .	LB .		LB .	LB .	LB .	LB .									
	TOTALS				SF 53.7	SF .	EA. .	SF .	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX			FT .				FT 110.5				LB .			EA.		LB .			EA. .	EA. .	LB .							

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

McFarland Johnson

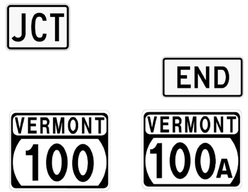
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318tsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
TRAFFIC SIGN SUMMARY SHEET 1

PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET 49 OF 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 2

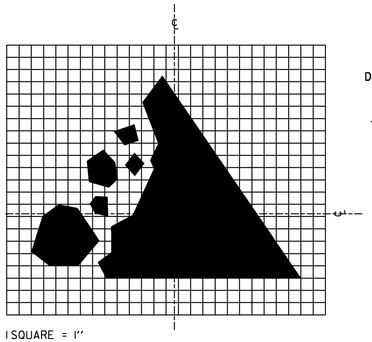
MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EACH	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	NEW & SALVAGED SIGNS SALV SIGN	NEW & SALVAGED SIGNS SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POST	FLANGED CHANNEL (LB / FT) 1.12	FLANGED CHANNEL (LB / FT) 2.00	FLANGED CHANNEL (LB / FT) 3.00	SQUARE STEEL (in) (LB / FT) 1.88	SQUARE STEEL (in) (LB / FT) 2.42	SQUARE STEEL (in) (LB / FT) 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT) 1.30	TUBULAR ALUMINUM Ø (IN) (LB / FT) 1.70	TUBULAR ALUMINUM Ø (IN) (LB / FT) 1.70	FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT) 7.60	TUBULAR STEEL Ø (IN) (LB / FT) 9.00	TUBULAR STEEL Ø (IN) (LB / FT) 10.80	TUBULAR STEEL Ø (IN) (LB / FT) 14.60	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN FRAME REQUIRED	REMARKS	STANDARD HIGHWAY SGN AND MARKING BOOK SHSM	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STANDARD SHEET NUMBER
															1.75	2.00	2.50			3.00	4.00	4.0 MOD															
OPTION ITEMS																																				
7+48.37, LT		1 1 2	21.0 24.0 30.0	15.0 12.0 24.0	2.2 2.0 10.0						2					28.0		2														#1B	M2-1 GREEN ON WHITE M4-6 GREEN ON WHITE M1-5(100) & M1-5(100A) GREEN ON WHITE	X X		E-136B
10+01.68, LT		1 1	30.0 30.0	30.0 12.0	6.3 2.5						1					15.0		1														W3-1 SHEETING SHALL BE FLUORESCENT YELLOW ASTM TYPE VII, VIII, OR IX W16-2aP SHEETING SHALL BE FLUORESCENT YELLOW ASTM TYPE VII, VIII, OR IX	X	51	
19+86.32, LT		1 1	30.0 30.0	30.0 12.0	6.3 2.5						1					15.0		1														W3-1 SHEETING SHALL BE FLUORESCENT YELLOW ASTM TYPE VII, VIII, OR IX W16-2aP SHEETING SHALL BE FLUORESCENT YELLOW ASTM TYPE VII, VIII, OR IX	X	51	
21+25.00, LT		1 1	30.0 24.0	30.0 24.0	6.3 4.0						1					15.0		2														W1-5L SHEETING SHALL BE FLUORESCENT YELLOW ASTM TYPE VII, VIII, OR IX W13-1P SHEETING SHALL BE FLUORESCENT YELLOW ASTM TYPE VII, VIII, OR IX	X X		
	SUBTOTAL THIS SHEET				42.1	0.0	0.0	0.0				0.0	0.0	0.0	0.0	73.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
	SUBTOTAL SHEET 1				53.7	0.0	0.0	0.0				0.0			110.5					0.0				0.0													
												FT	FT	FT	FT	FT	FT	XXXXX	EA	LB	LB	LB		LB	LB	LB	LB									
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."	ROUNDING											.	.	.	.	183.5 16.5	.	XXXXX XXXXX XXXXX	.	.	.	.	.	.	.	.	.									
	PROJECT TOTALS				SF 95.8	SF .	EA. .	SF .	XXXXXXXXXXX XXXXXXXXXXX XXXXXXXXXXX			FT .			FT 200.0					LB .			EA. .	LB .				EA. .	EA. .	LB .							

McFarland Johnson

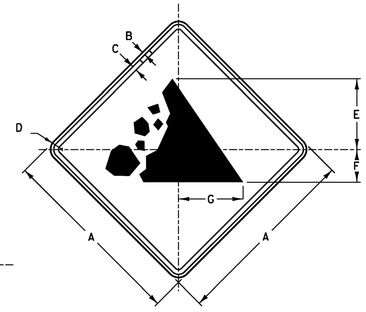
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318ts2.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE
TRAFFIC SIGN SUMMARY SHEET 2

PLOT DATE: 5/17/2016
DRAWN BY: J. SANTACRUCE
CHECKED BY: B. COLBURN
SHEET 50 OF 68

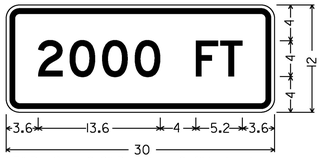


1 SQUARE = 1"



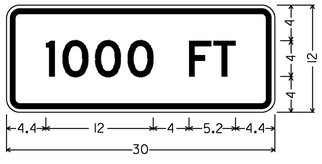
VW-285
COLORS
TEXT AND BORDER - BLACK (NON-REFL.)
BACKGROUND - YELLOW (REFL.)

SIGN	DIMENSIONS (INCHES)						
	A	B	C	D	E	F	G
STD.	30	½	¾	1½	11¼	5¼	10⅜
SPECIAL	48	¾	1¼	3	18	8⅜	16½



1.5" Radius, 0.6" Border, 0.4" Indent,
Black on Yellow:
"2000 FT" D 2K

W16-2aP



1.5" Radius, 0.6" Border, 0.4" Indent,
Black on Yellow:
"1000 FT" D 2K

W16-2aP

NOTES:

DESIGN

LETTERS, DIGITS, ARROWS, SYMBOLS, SPACING, AND TEXT DIMENSIONS SHALL CONFORM WITH THE STANDARD HIGHWAY SIGN BOOK AND DESIGNS PRESCRIBED IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) ADOPTED BY THE U.S DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION (FHWA).

MATERIALS

THE SIGN BASE MATERIALS USED FOR THESE WARNING SIGNS SHALL BE 0.080" FLAT SHEET ALUMINUM.

REFLECTORIZATION

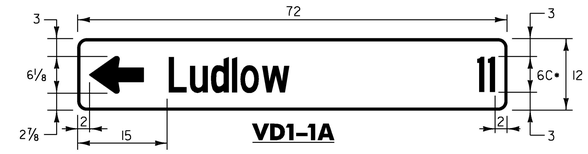
THE BACKGROUND RETROREFLECTIVE SHEETING MATERIAL SHALL BE APPLIED TO THE ENTIRE SIGN. THE TEXT, BORDERS, AND SYMBOLS SHALL BE LETTERING FILM OR SILK SCREENED. SEE STANDARD SHEET T-2.

COLORS

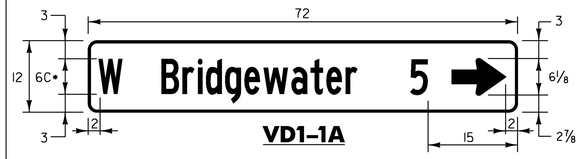
WARNING SIGNS SHALL HAVE BLACK TEXT, BORDERS, AND SYMBOLS ON RETROREFLECTIVE YELLOW BACKGROUND. COLOR SHALL CONFORM TO THE COLORS ADOPTED BY AASHTO AND APPROVED BY FHWA SPECIFICATIONS. WARNING SIGNS SHALL MEET THE VERMONT STANDARD SPECIFICATIONS.

SPECIFICATIONS

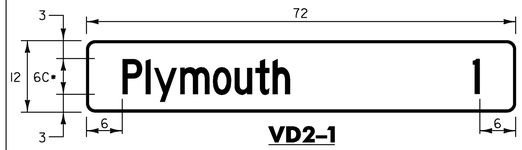
WARNING SIGNS SHALL MEET THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION "TRAFFIC SIGNS" AND STANDARD SHEET T-2



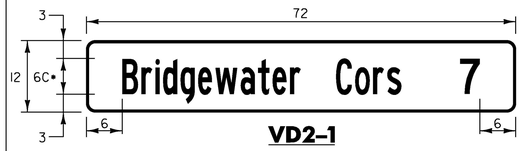
VD1-1A



VD1-1A



VD2-1



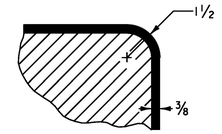
VD2-1

• SEE NOTE 2 BELOW:

STANDARD DESTINATION SIGN NOTES
VD1-1, VD1-1A, VD2-1

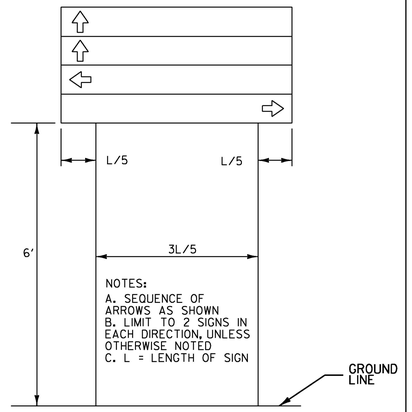
1.) THE DESTINATION SIGNS SHOWN ON THIS SHEET SHALL HAVE WHITE RETROREFLECTIVE ASTM TYPE III OR IV TEXT, ARROWS AND BORDERS ON A GREEN RETROREFLECTIVE ASTM TYPE III OR IV BACKGROUND.

2.) USE THE LARGEST LETTER / THICKEST FONT AVAILABLE THAT WILL SATISFY THE MINIMUM SPACING REQUIREMENTS, AS SHOWN IN THE DETAILS ABOVE; i.e. IF A 6" SERIES C LETTER DOES NOT WORK, DUE TO THE LENGTH OF THE WORD, USE A 6" SERIES B LETTER. IF A 6" SERIES B LETTER DOES NOT WORK, USE A 5" SERIES C. USE NO LESS THAN 80% KERNING.

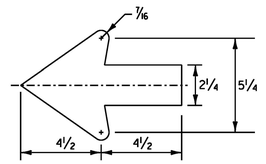


BORDER DETAIL

TRIM CORNERS



DESTINATION ASSEMBLY

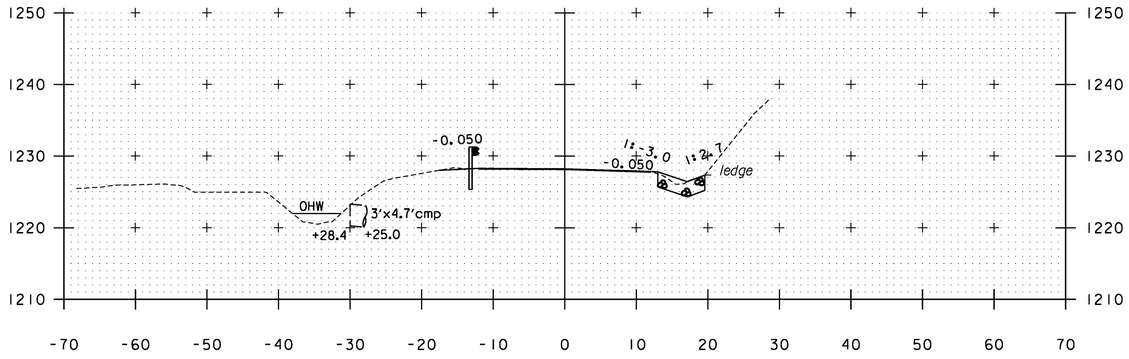


STANDARD SHSM 2.25" ARROW

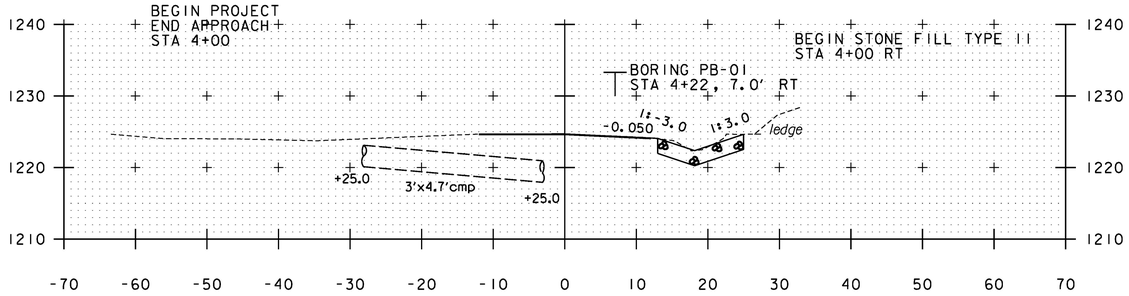
McFarland Johnson

PROJECT NAME:	PLYMOUTH
PROJECT NUMBER:	ER 0149(6)

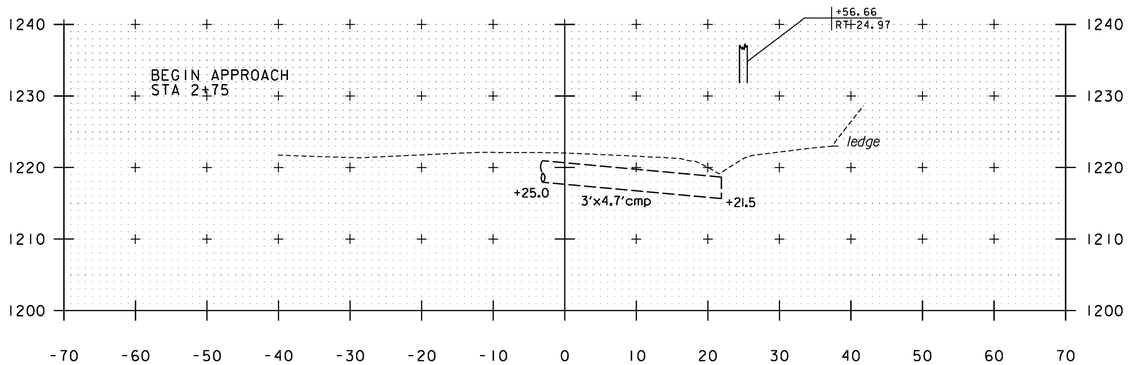
FILE NAME: zl3c318sdt.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J. SANTACRUCE	DRAWN BY: J. SANTACRUCE
DESIGNED BY: J. SANTACRUCE	CHECKED BY: B. COLBURN
SIGN DETAIL SHEET	SHEET 51 OF 68



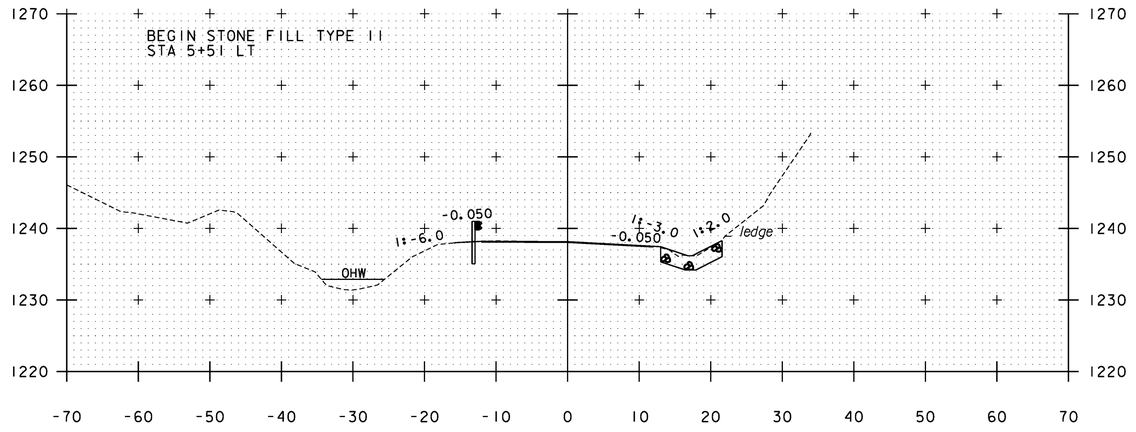
4+50



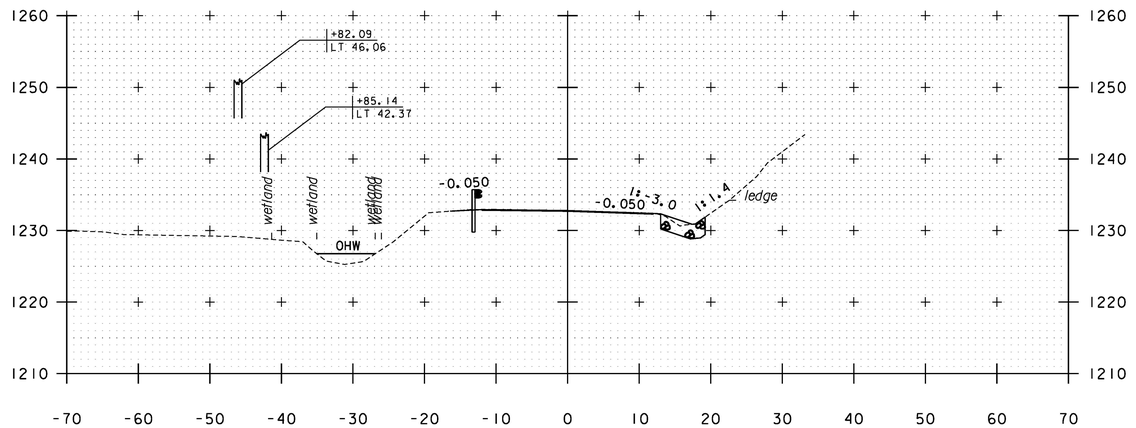
4+00



3+50



5+50

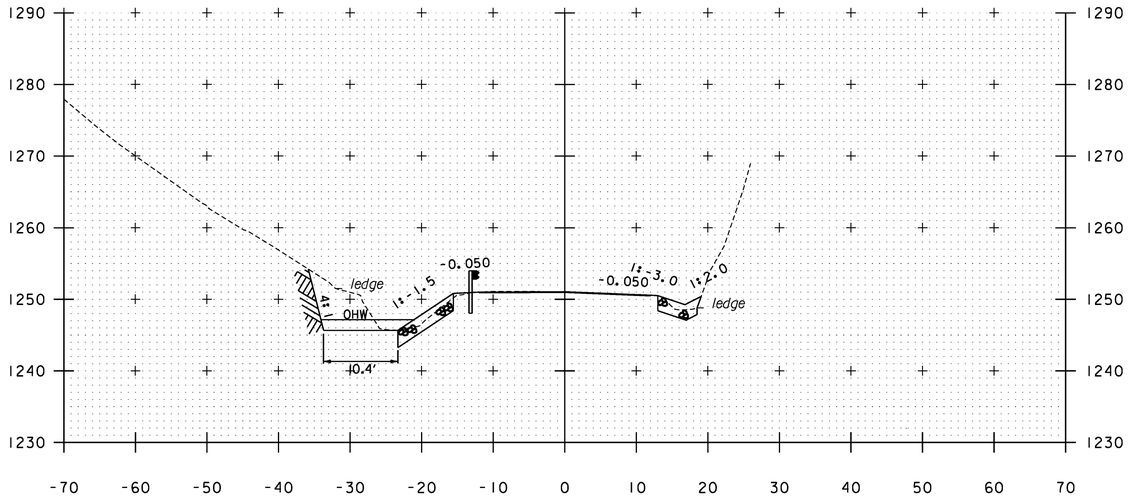


5+00

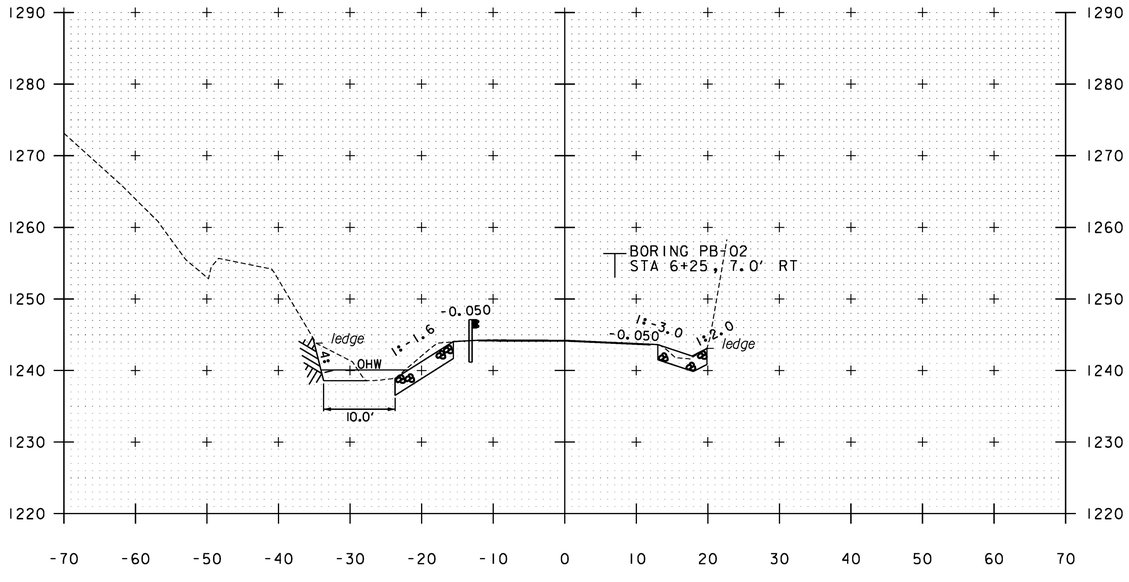
SCALE IN FEET

McFarland Johnson

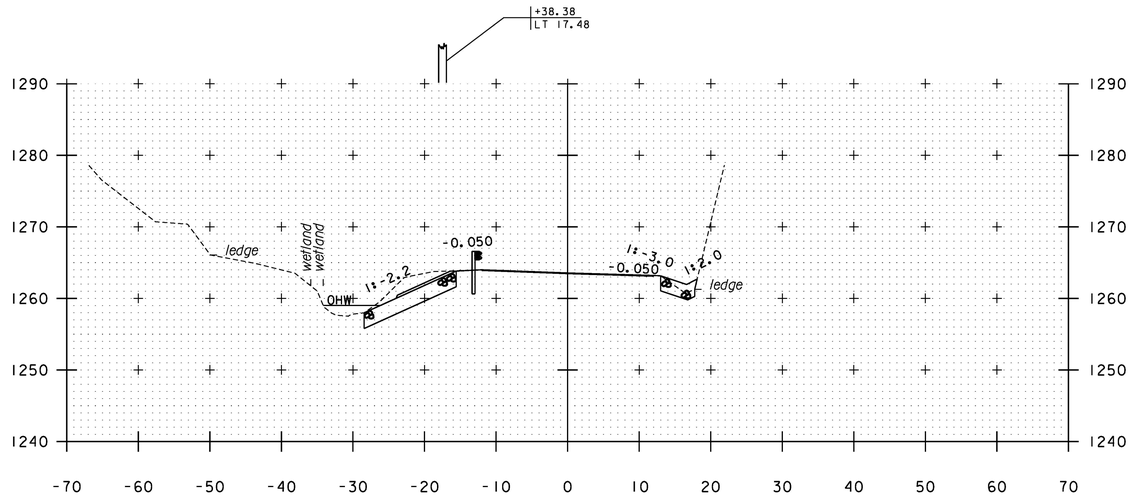
PROJECT NAME:	PLYMOUTH
PROJECT NUMBER:	ER 0149(6)
FILE NAME: z13c318xsl.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J. SANTACRUCE	DRAWN BY: M. LOVETT
DESIGNED BY: M. HASKINS	CHECKED BY: B. COLBURN
VT ROUTE 100A CROSS SECTIONS I	SHEET 52 OF 68



6+50



6+00



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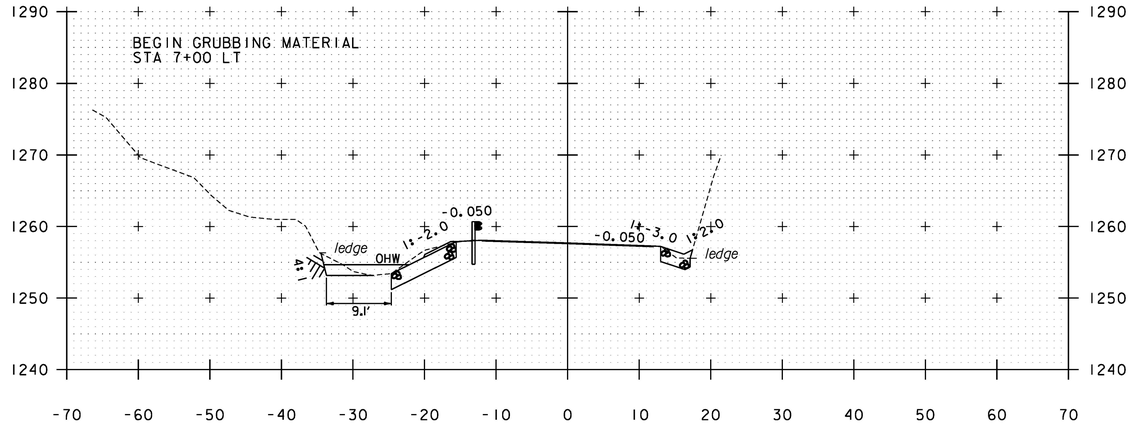


7+00

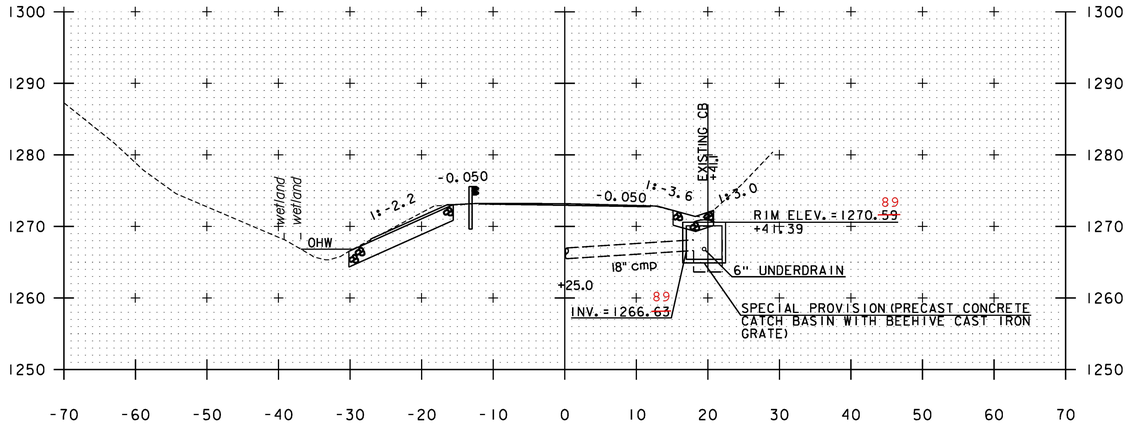
SCALE IN FEET

McFarland Johnson

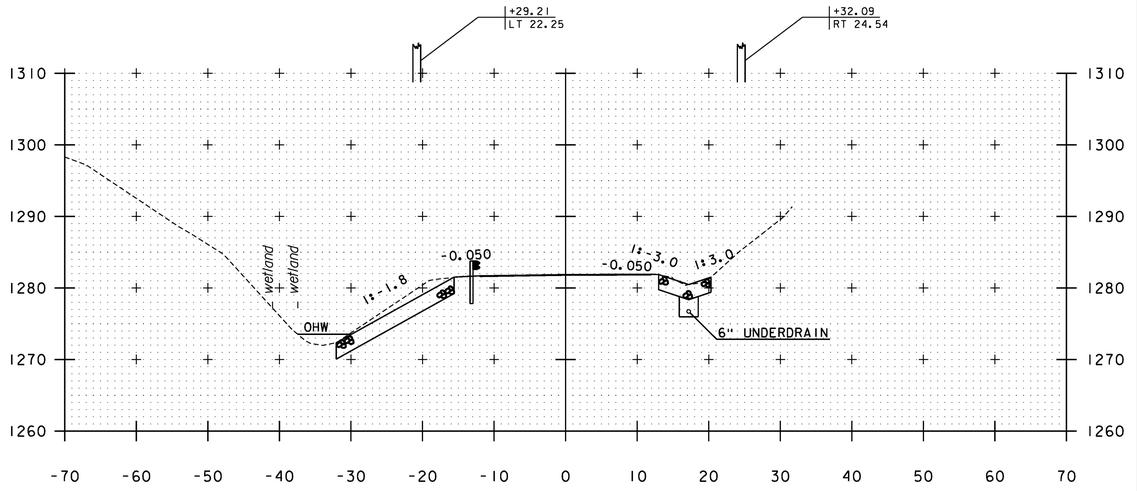
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3l8xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 2

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 53 OF 68



8+50



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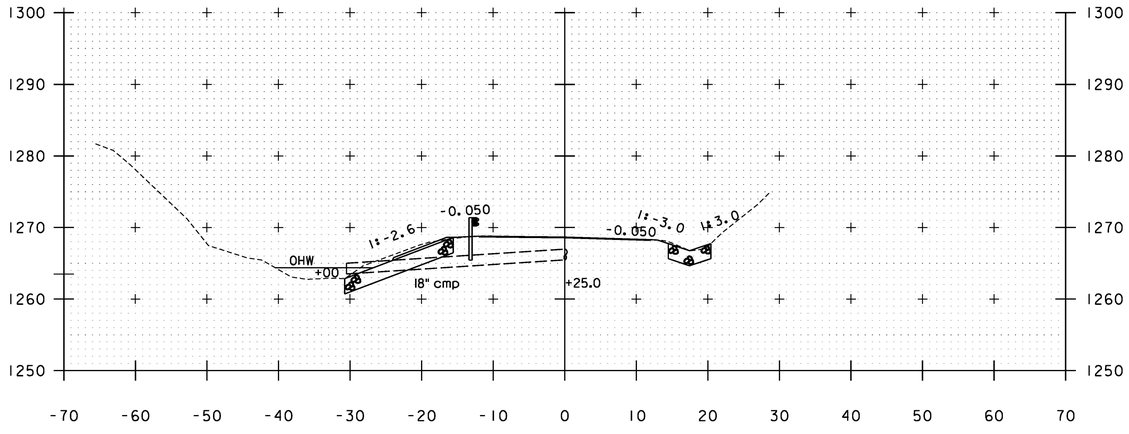
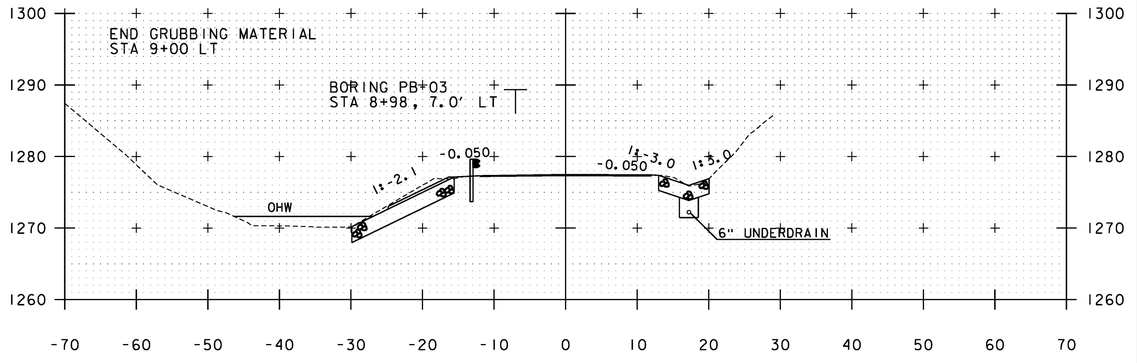


8+00



9+00

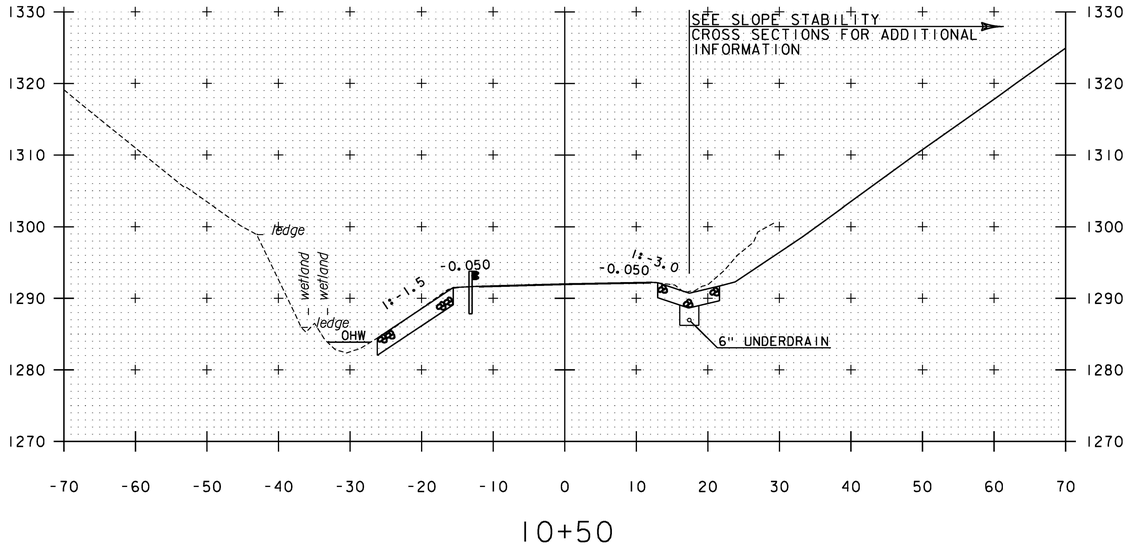
SCALE IN FEET

McFarland Johnson

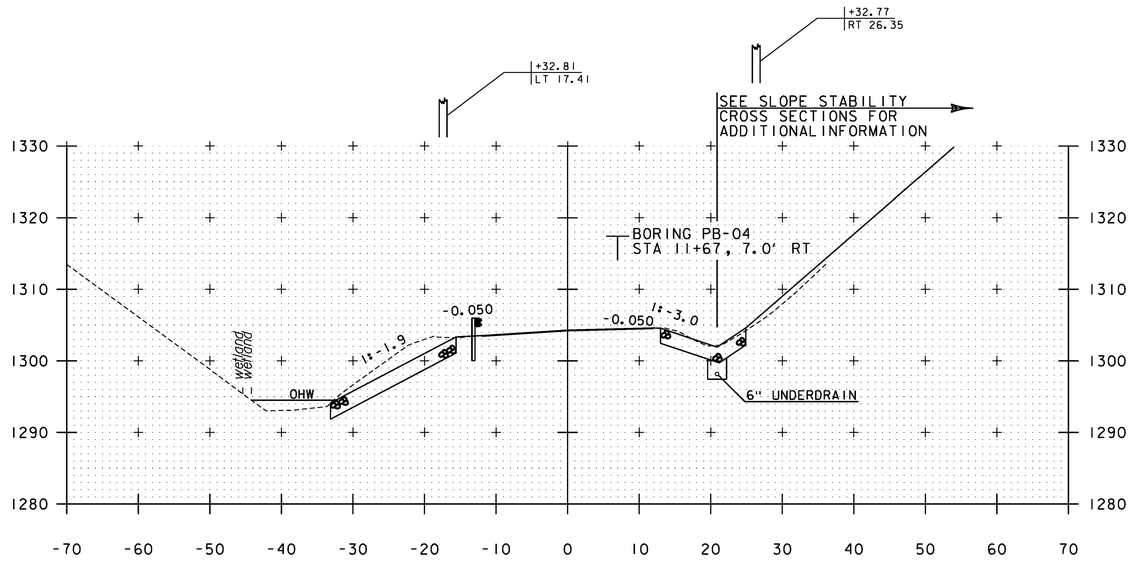
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3l8xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 3

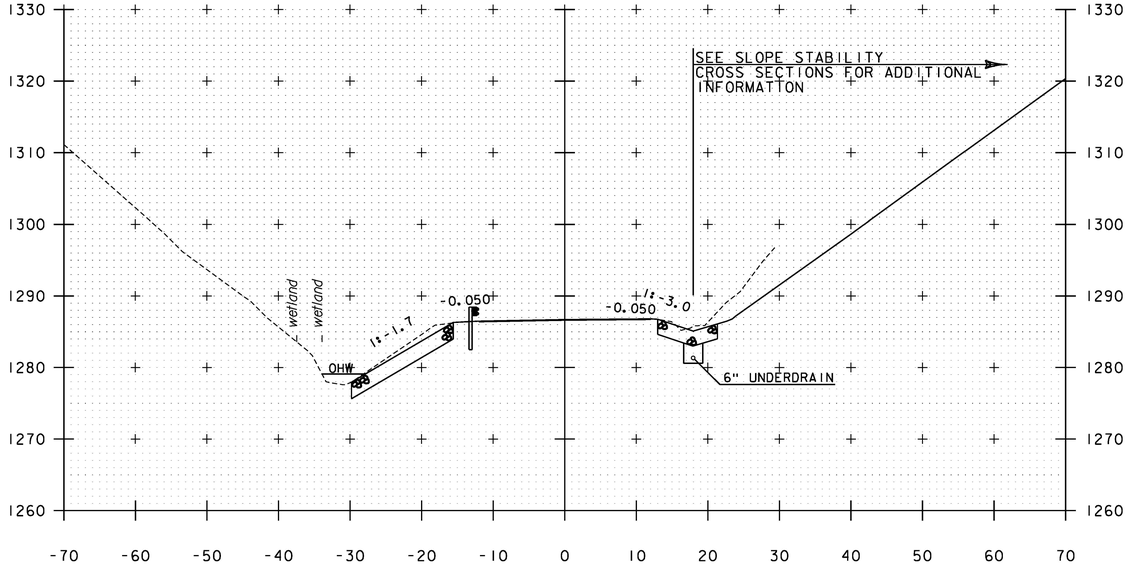
PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 54 OF 68



10+50



11+50



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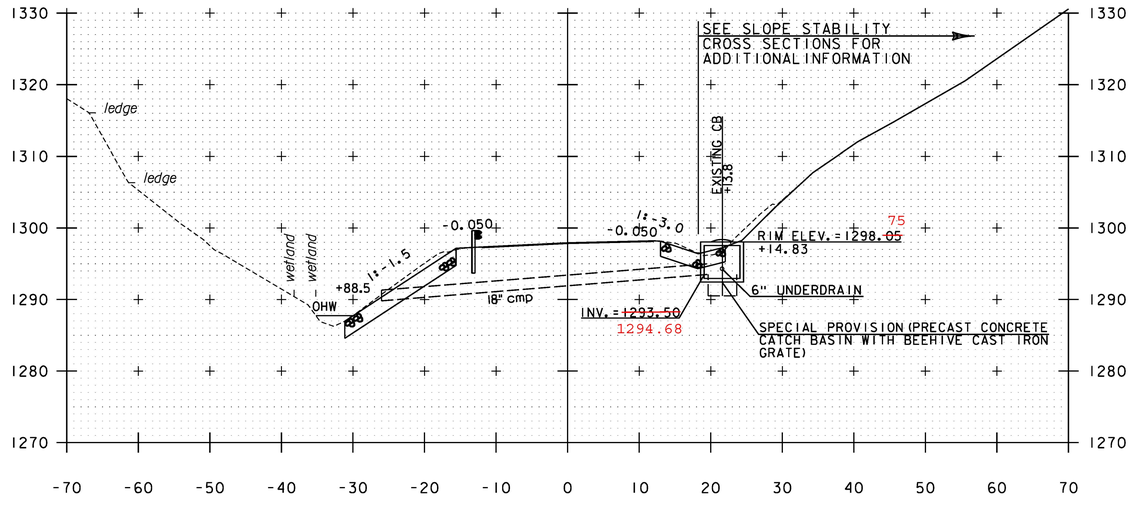


11+00

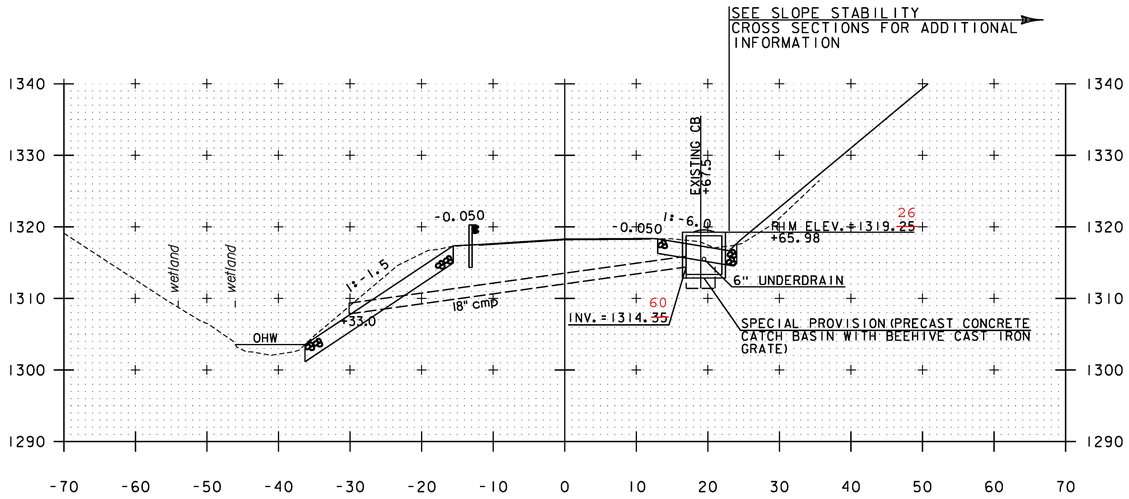
SCALE IN FEET

McFarland Johnson

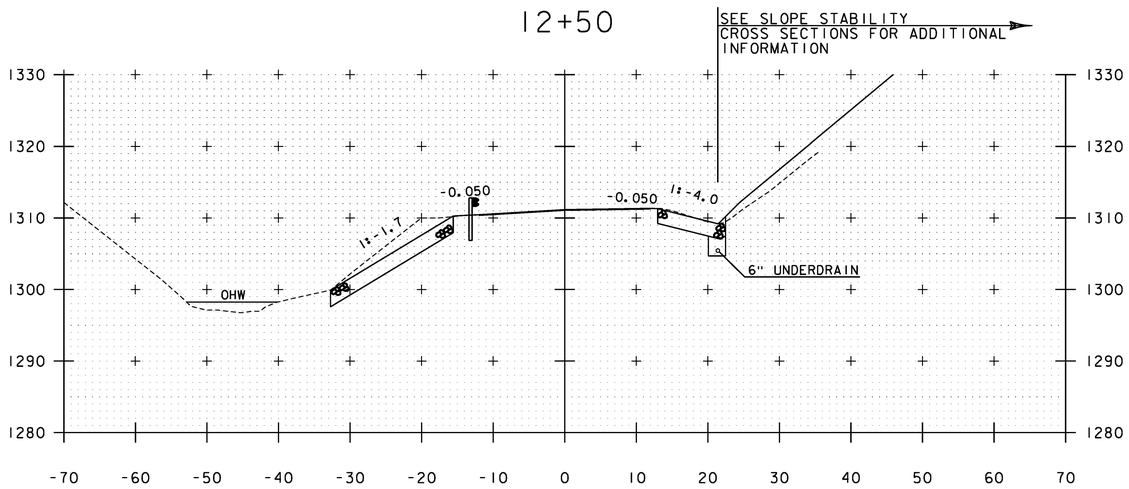
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zi3c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 4

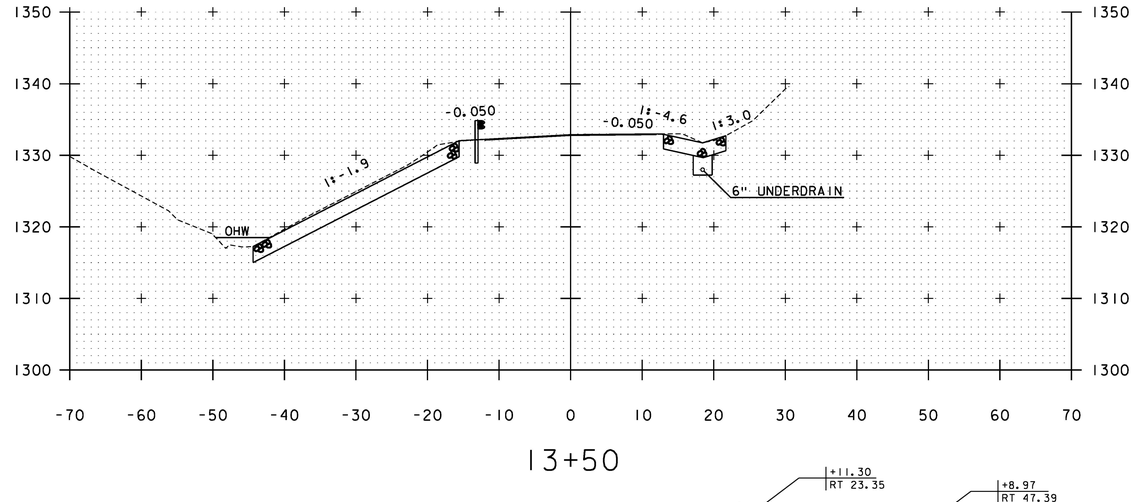
PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 55 OF 68



12+50



12+00



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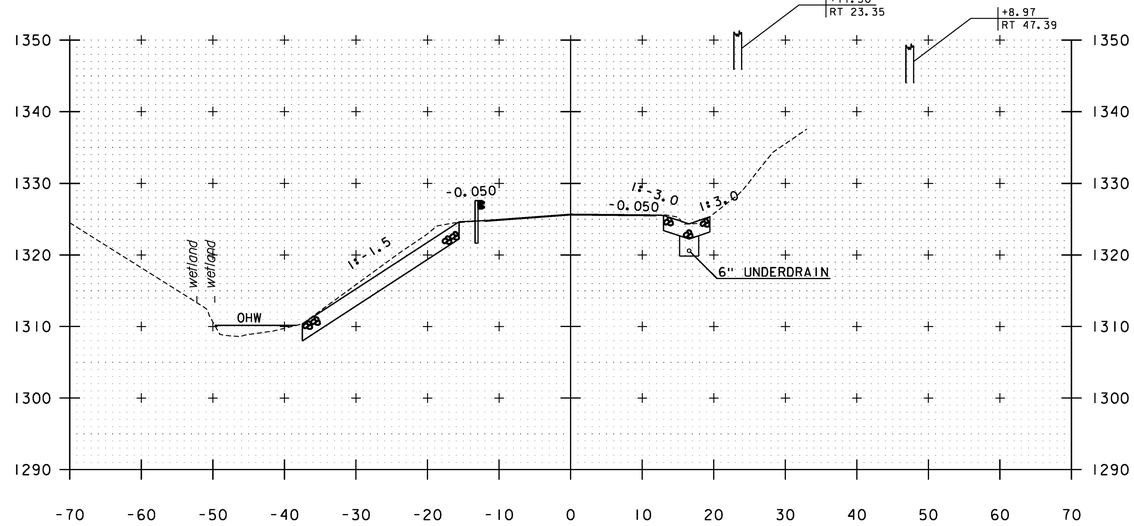


13+00

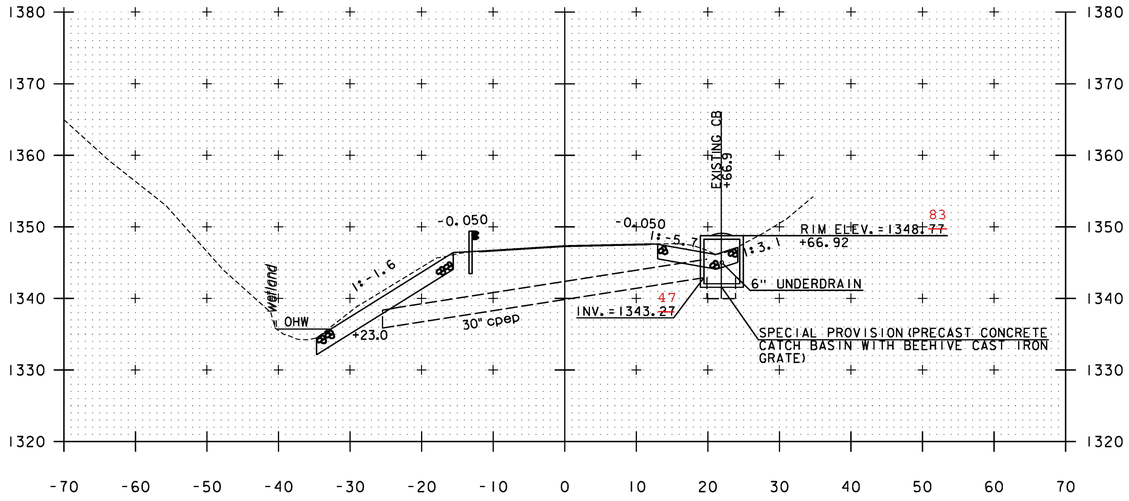
SCALE IN FEET

McFarland Johnson

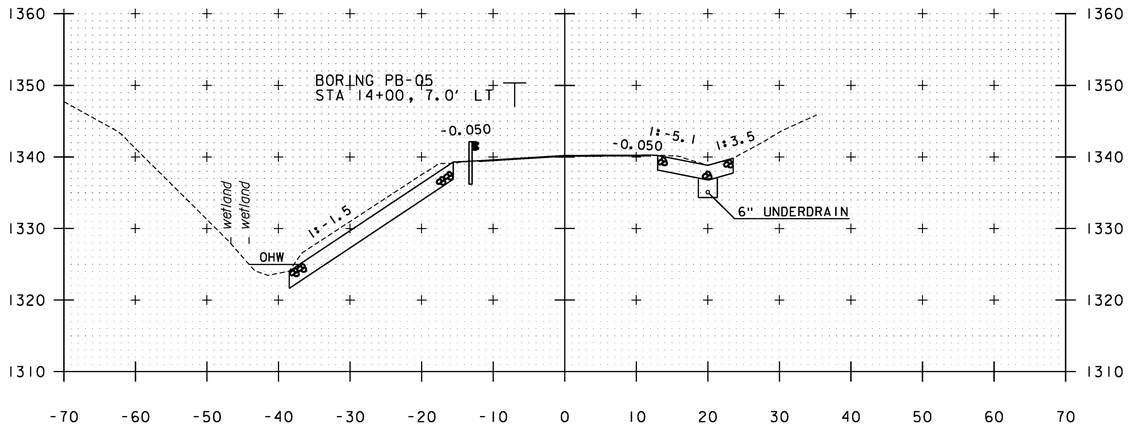
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zi3c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 5

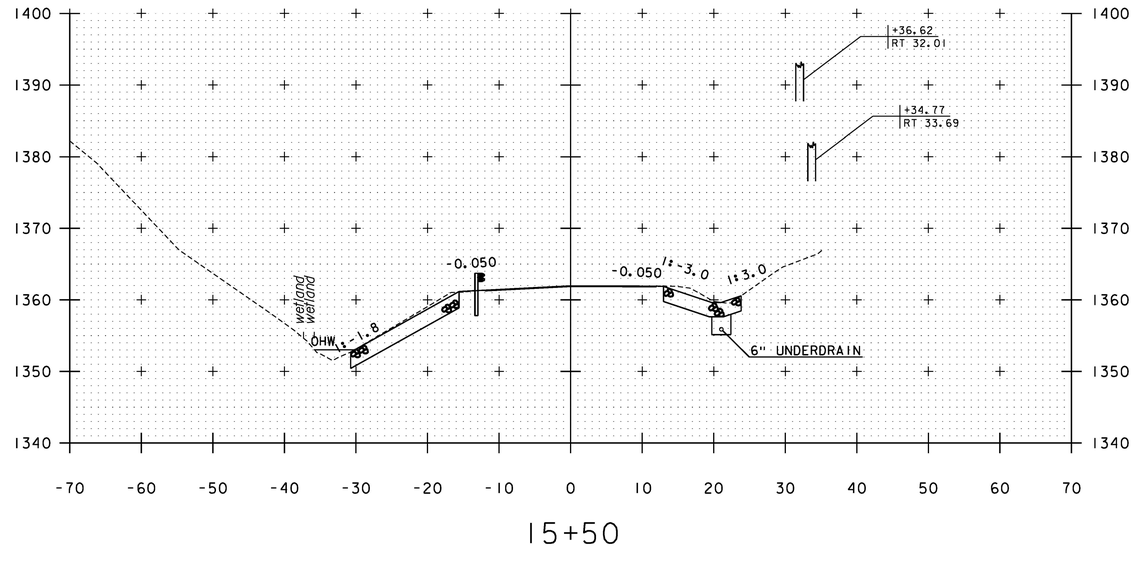
PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 56 OF 68



14+50



14+00



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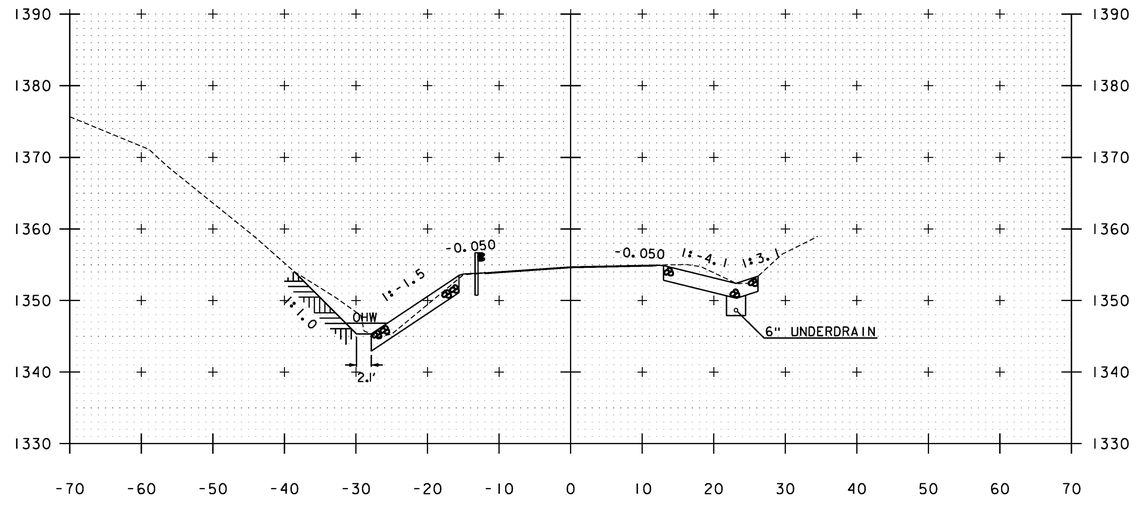

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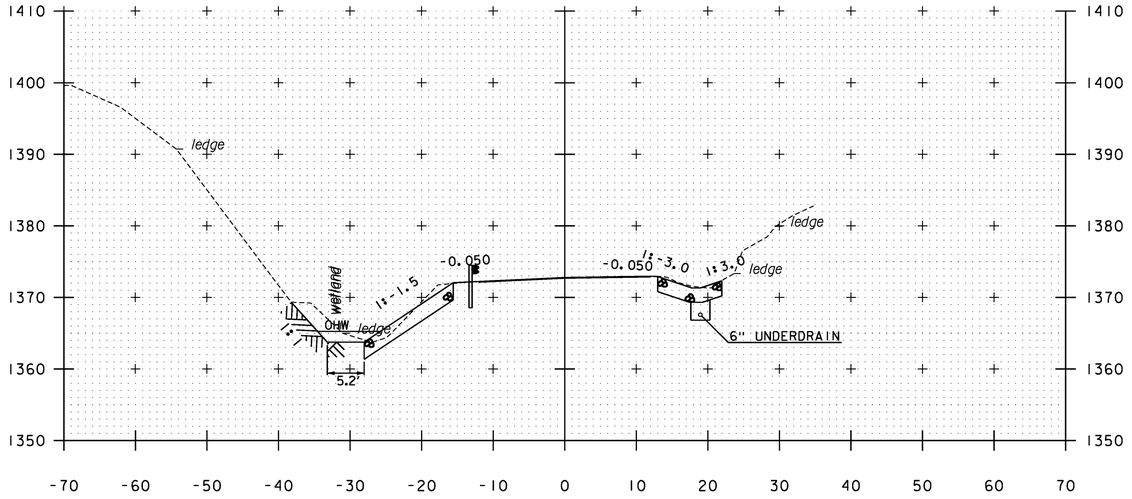
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 6

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 57 OF 68



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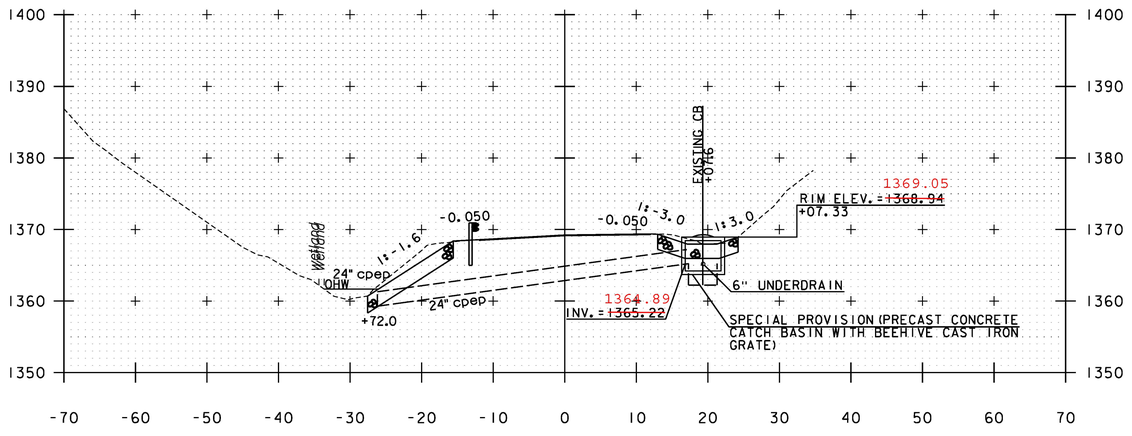

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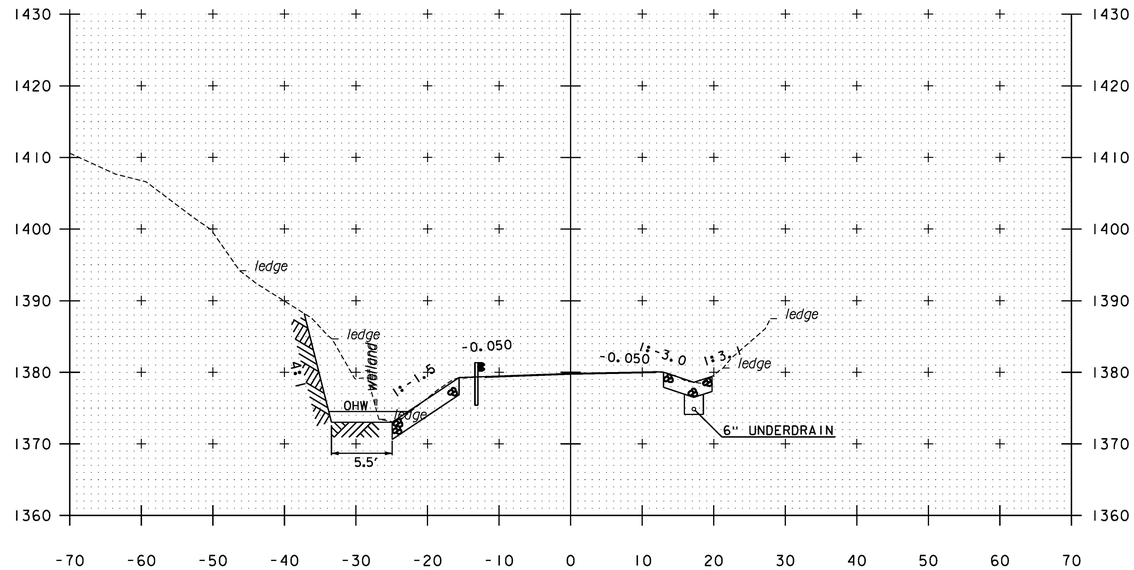

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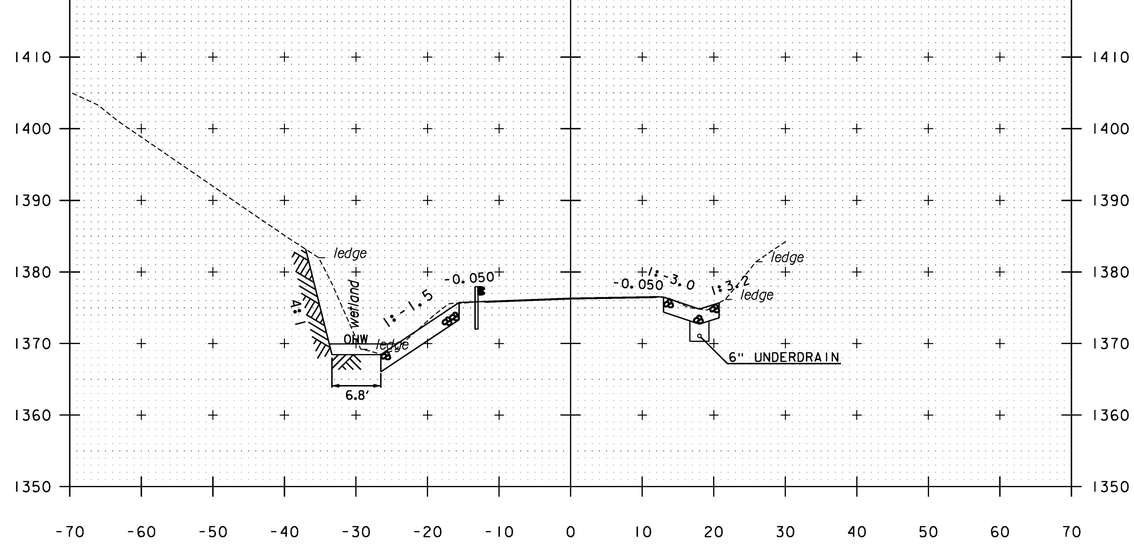


16+50

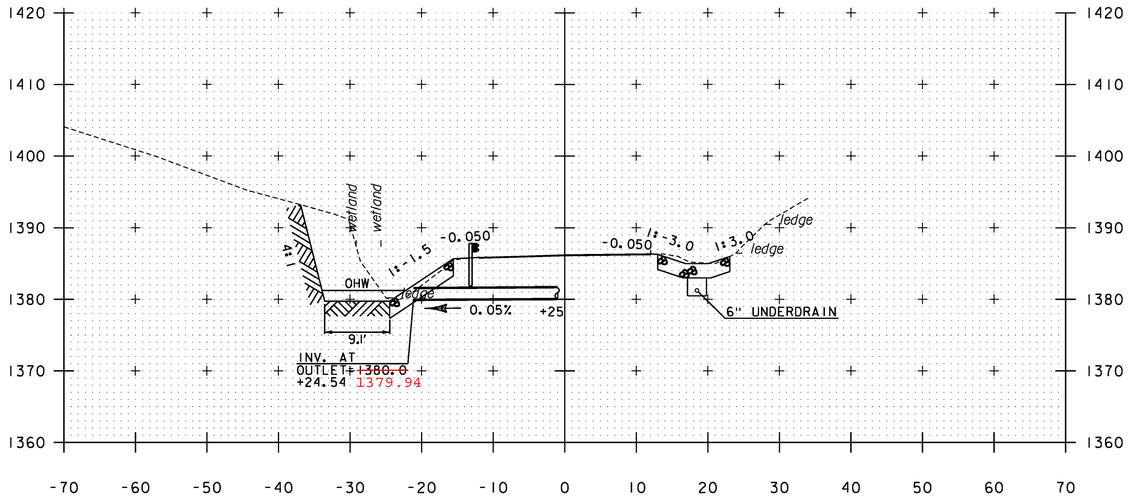
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 7

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 58 OF 68



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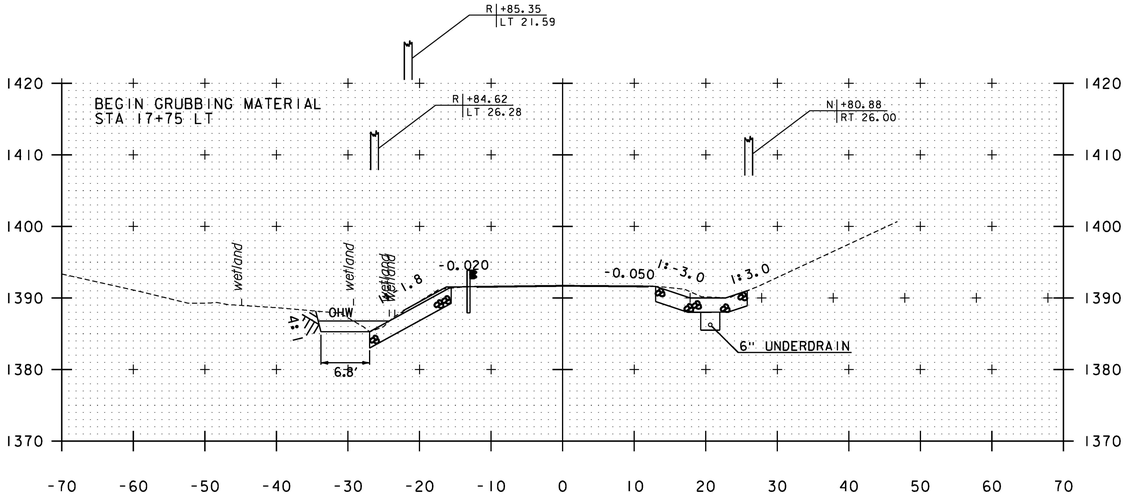

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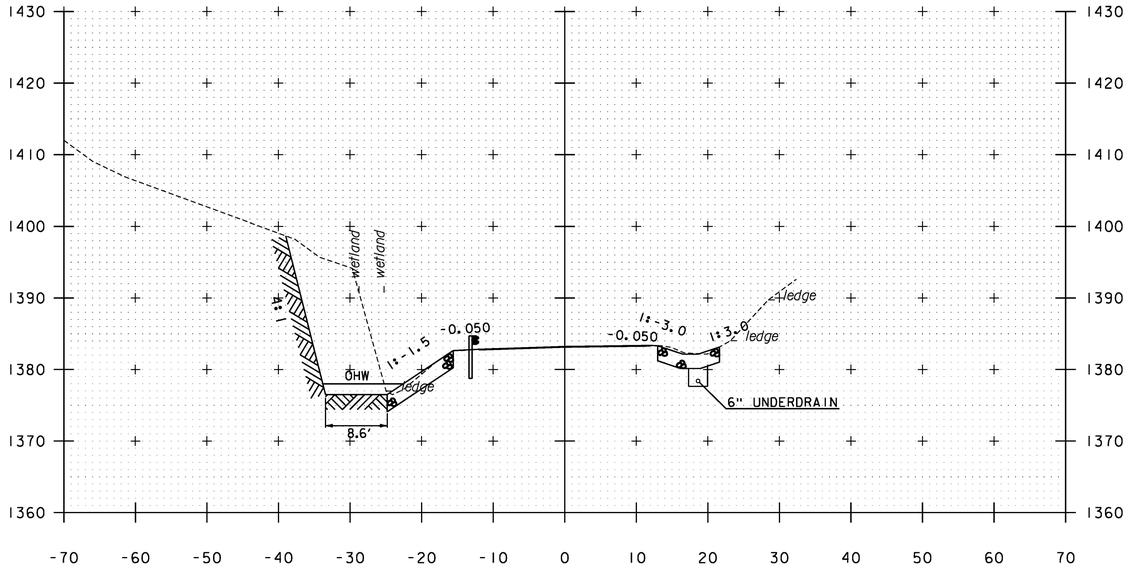

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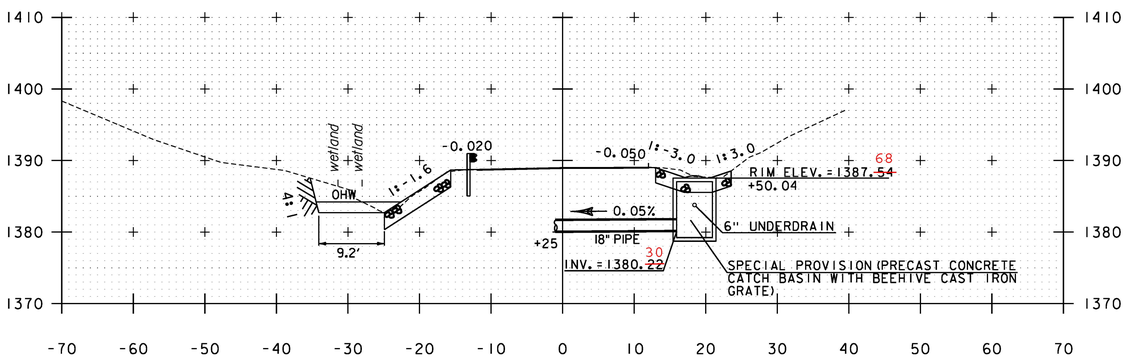

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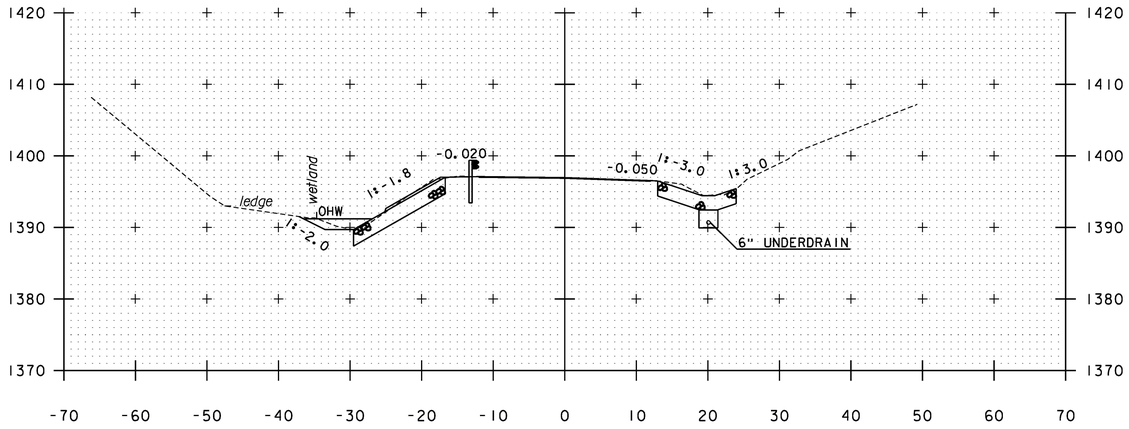
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 8

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 59 OF 68



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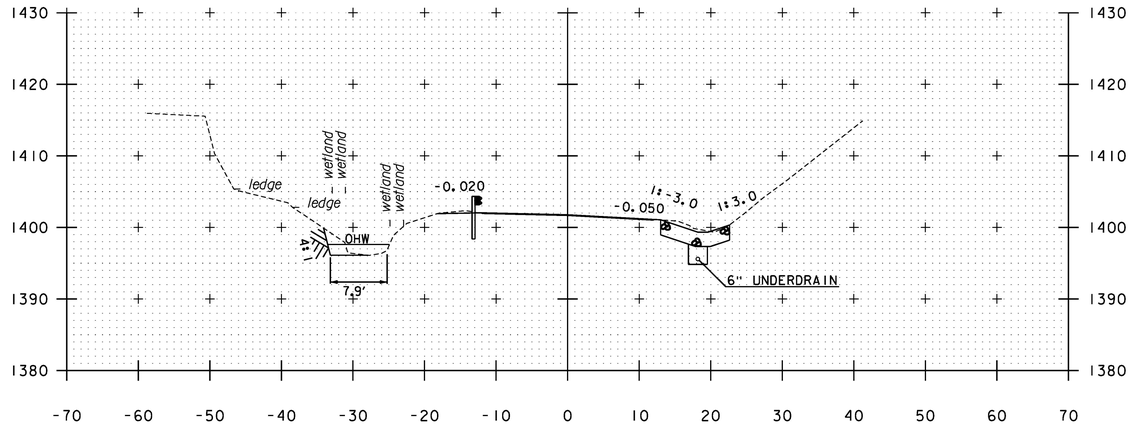

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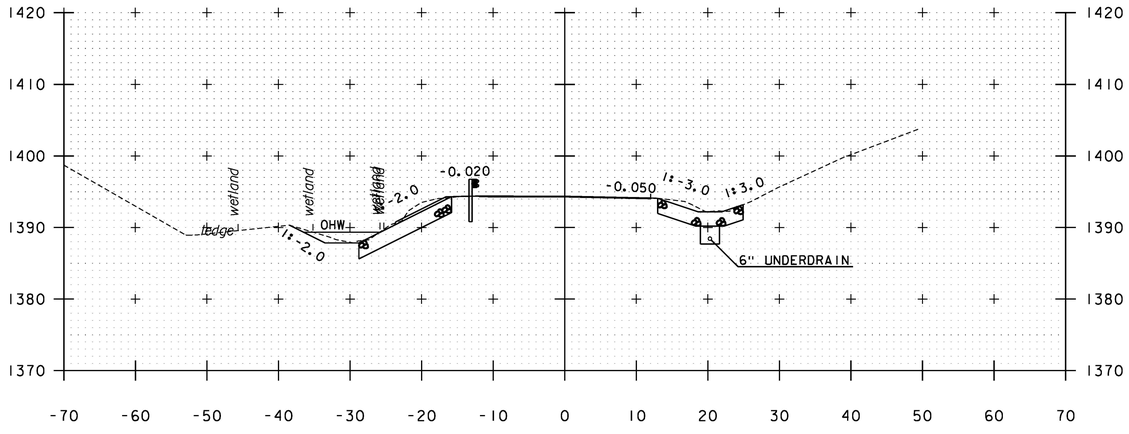

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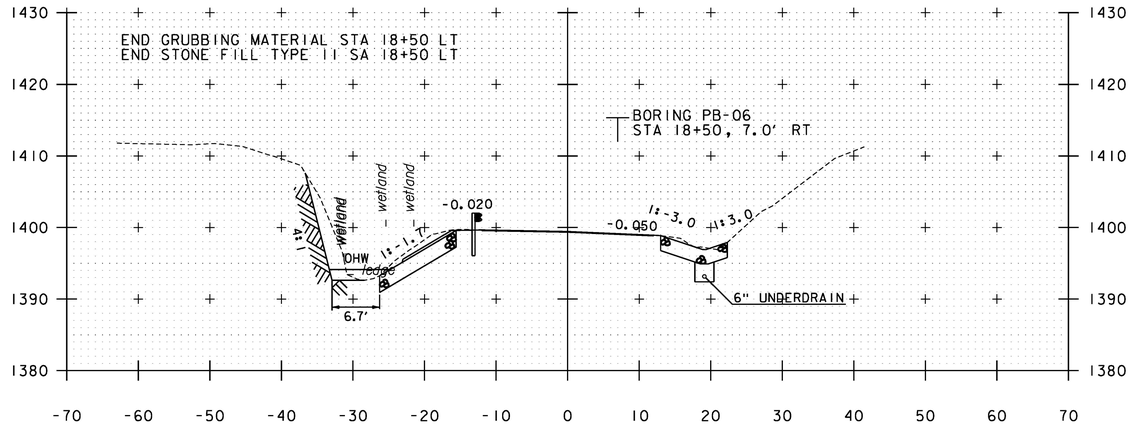

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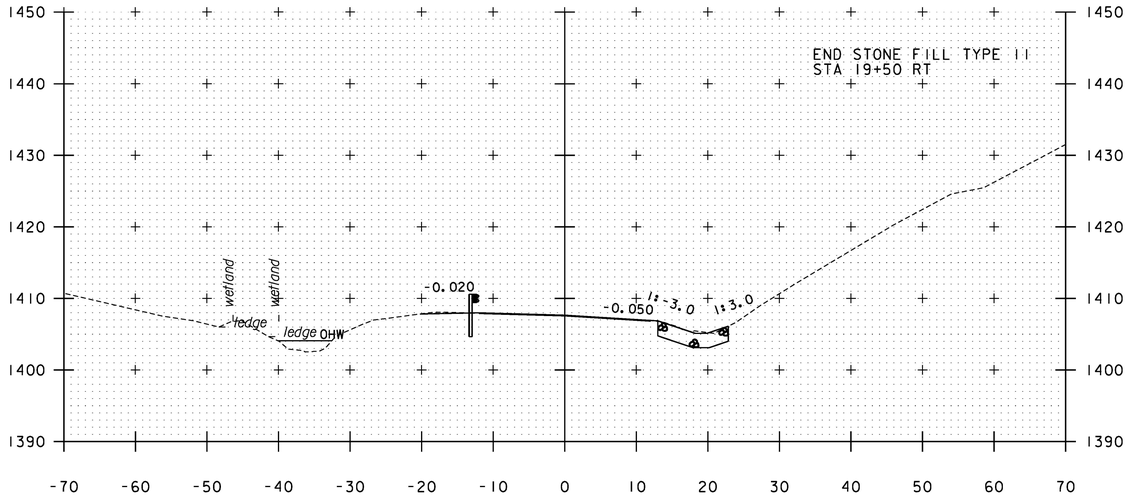
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 9

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 60 OF 68



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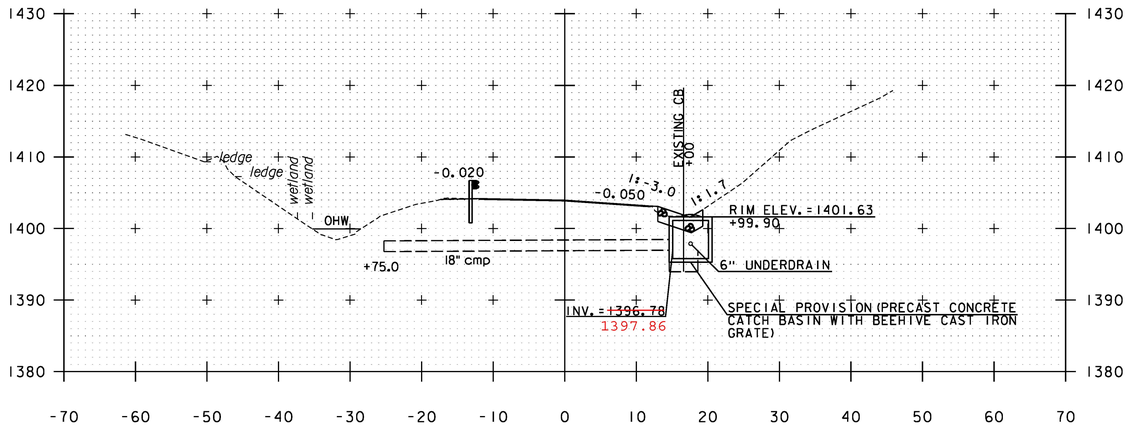

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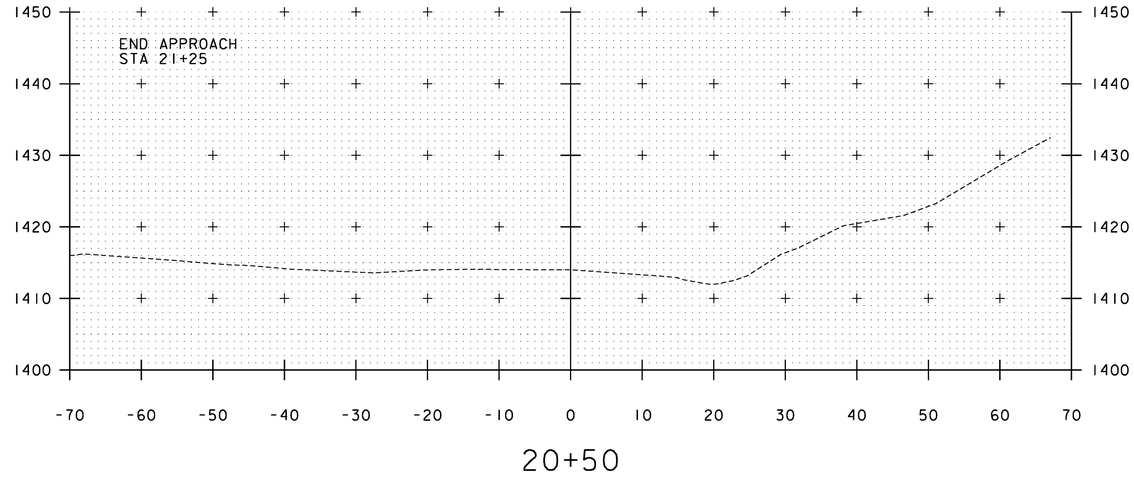

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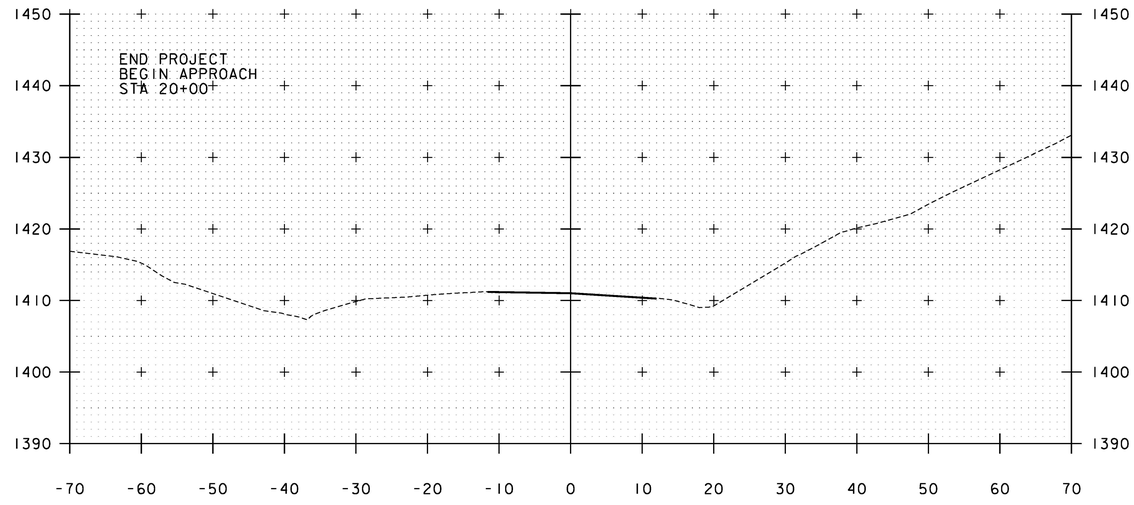

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SCALE IN FEET

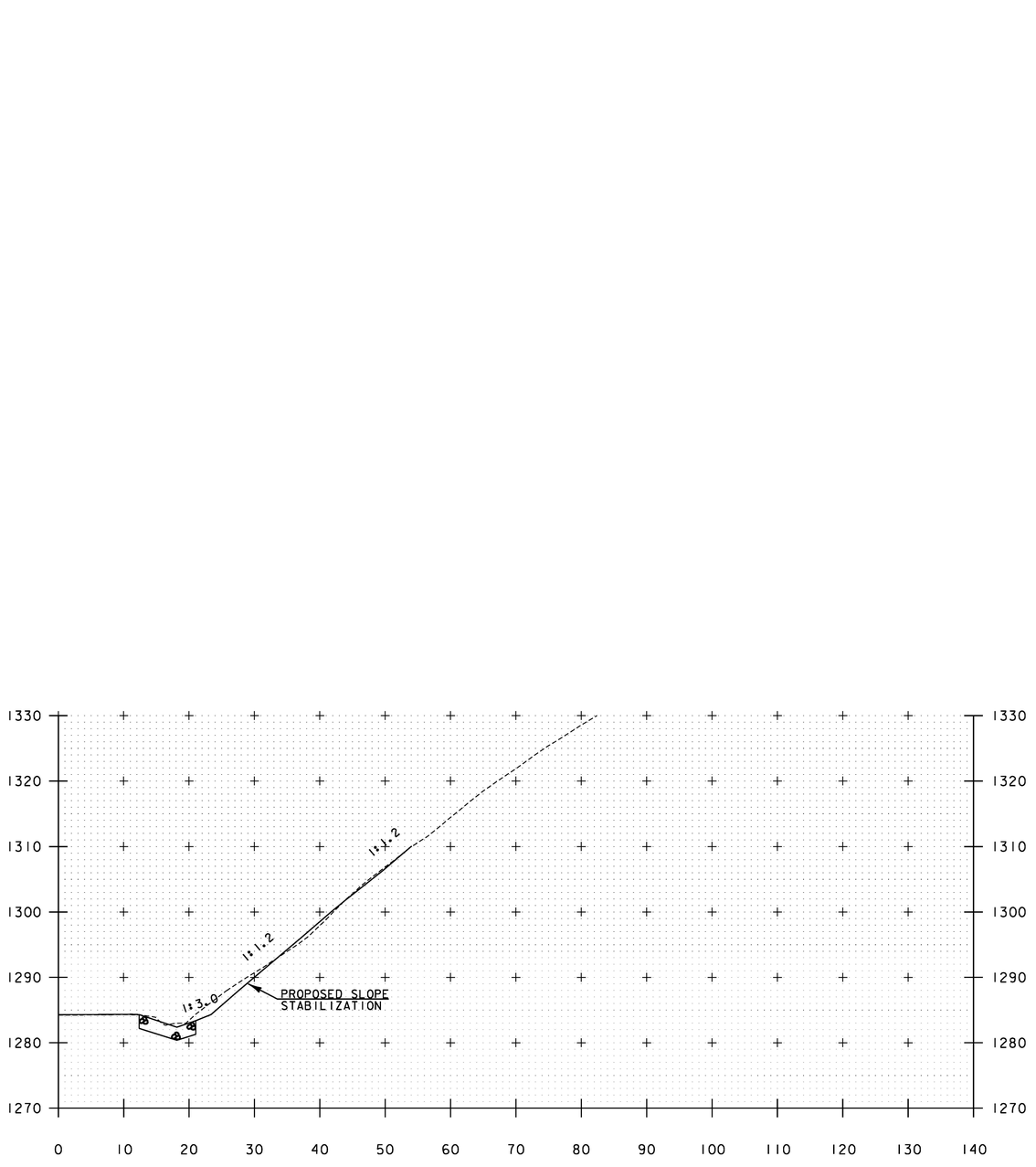
McFarland Johnson

PROJECT NAME: PLYMOUTH

PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
VT ROUTE 100A CROSS SECTIONS 10

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 61 OF 68



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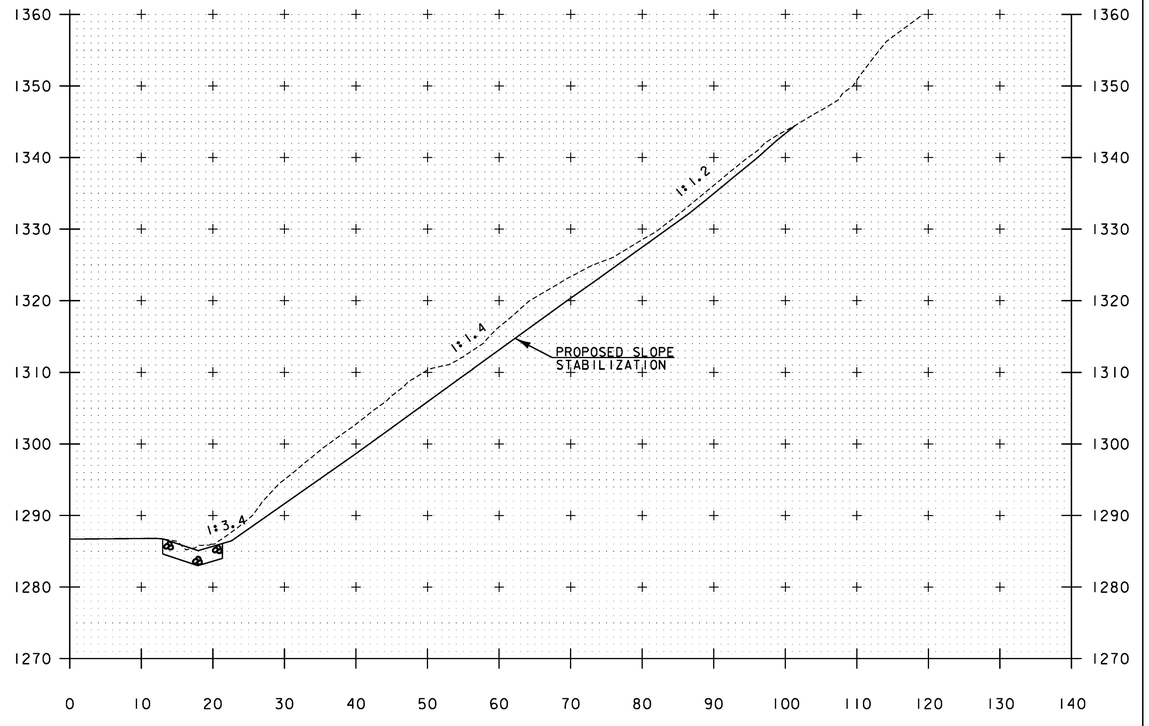

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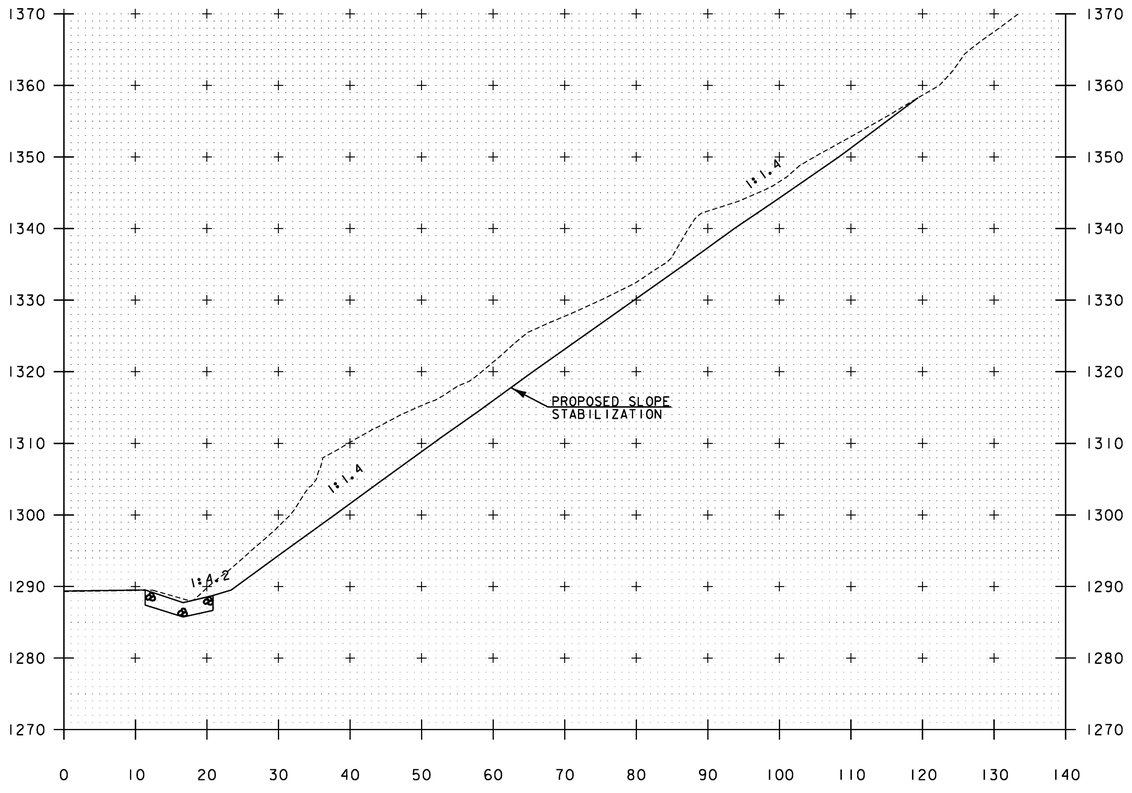
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
SLOPE STABILITY CROSS SECTIONS I

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 62 OF 68



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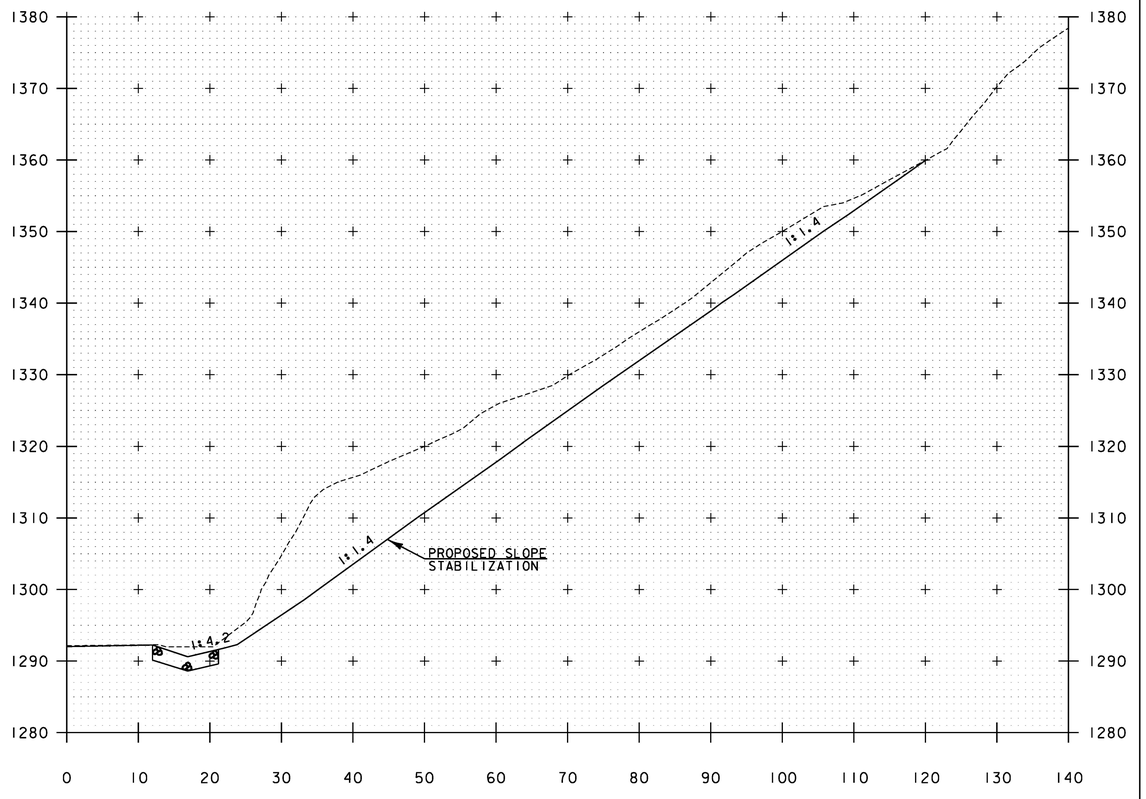

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SCALE IN FEET

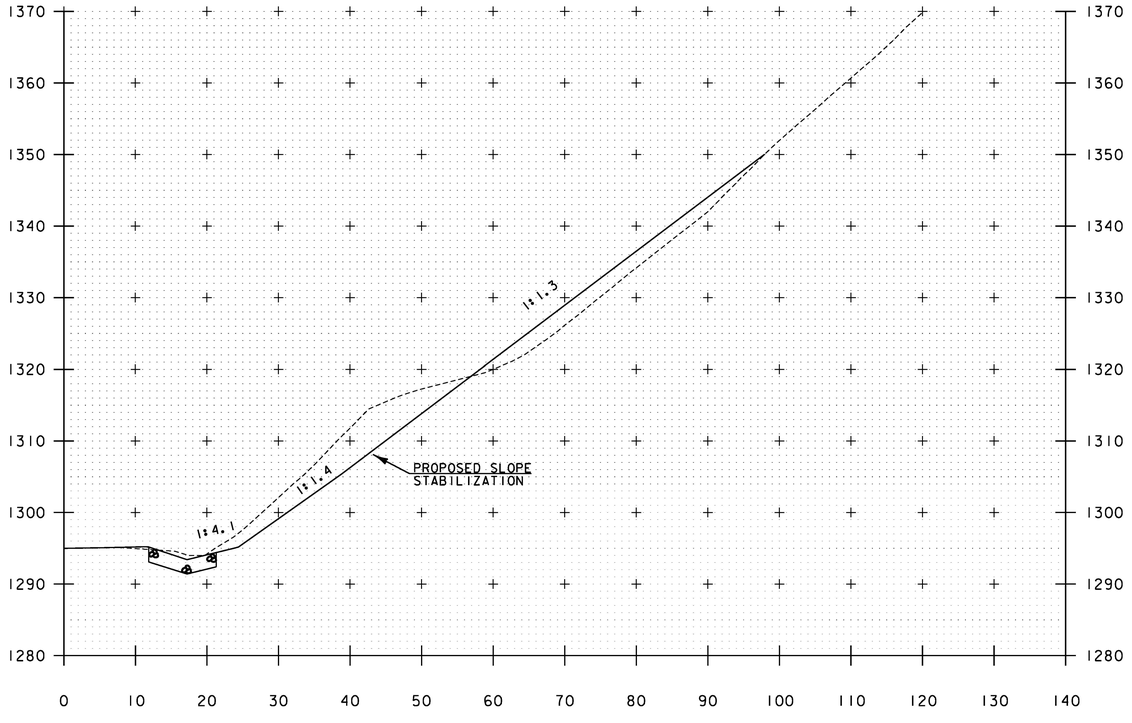
McFarland Johnson

PROJECT NAME: PLYMOUTH

PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
SLOPE STABILITY CROSS SECTIONS 2

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 63 OF 68



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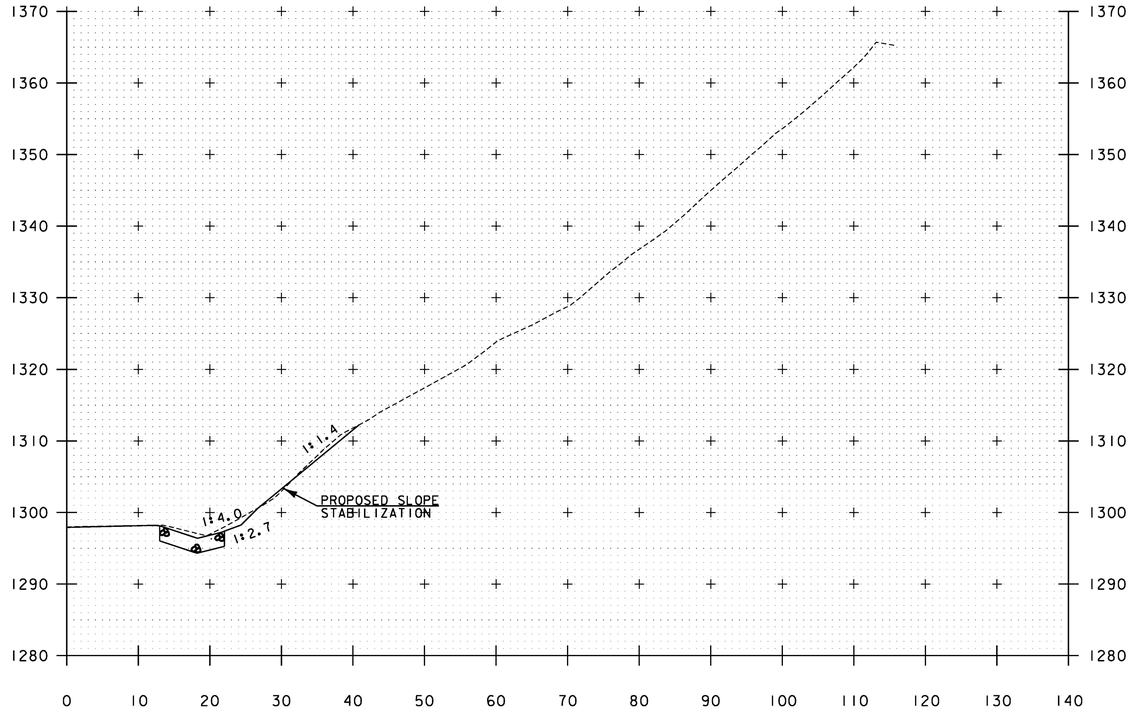

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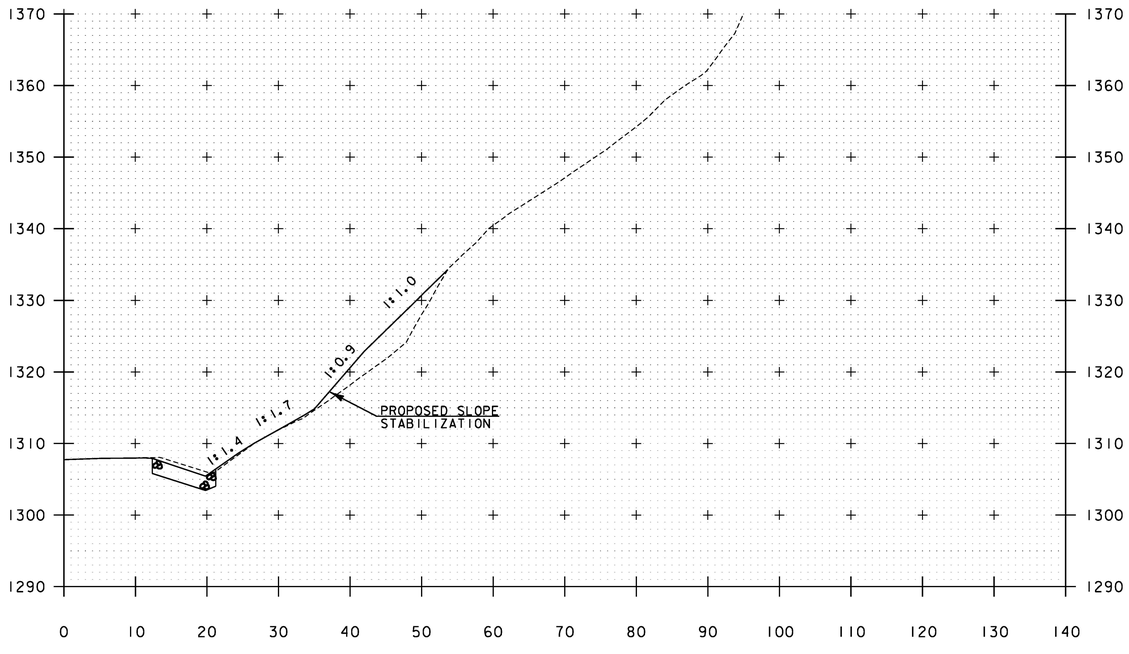
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH	
PROJECT NUMBER: ER 0149(6)	
FILE NAME: zl3c3l8xsl.dgn	PLOT DATE: 5/17/2016
PROJECT LEADER: J. SANTACRUCE	DRAWN BY: M. LOVETT
DESIGNED BY: M. HASKINS	CHECKED BY: B. COLBURN
SLOPE STABILITY CROSS SECTIONS 3	SHEET 64 OF 68



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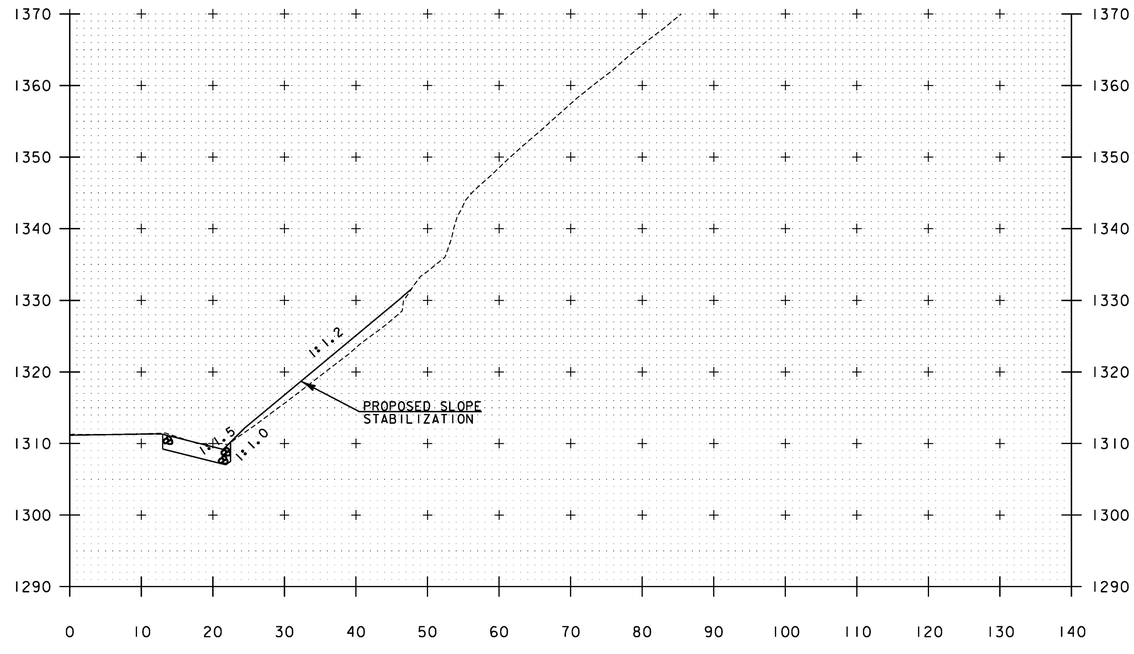

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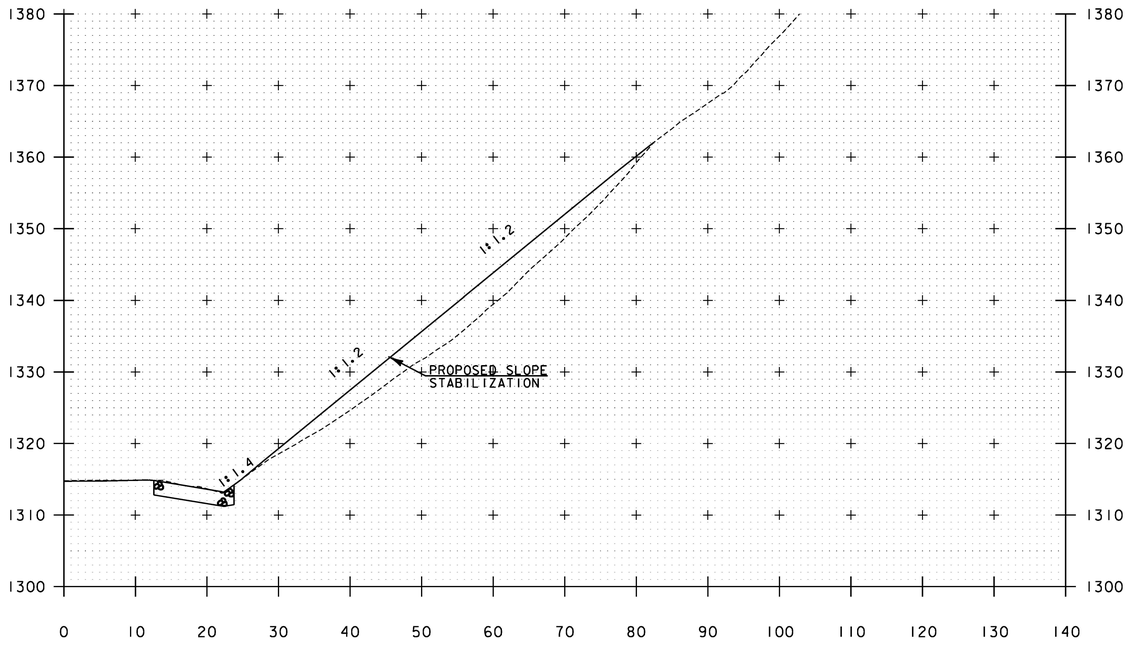
SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c3l8xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
SLOPE STABILITY CROSS SECTIONS 4

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 65 OF 68



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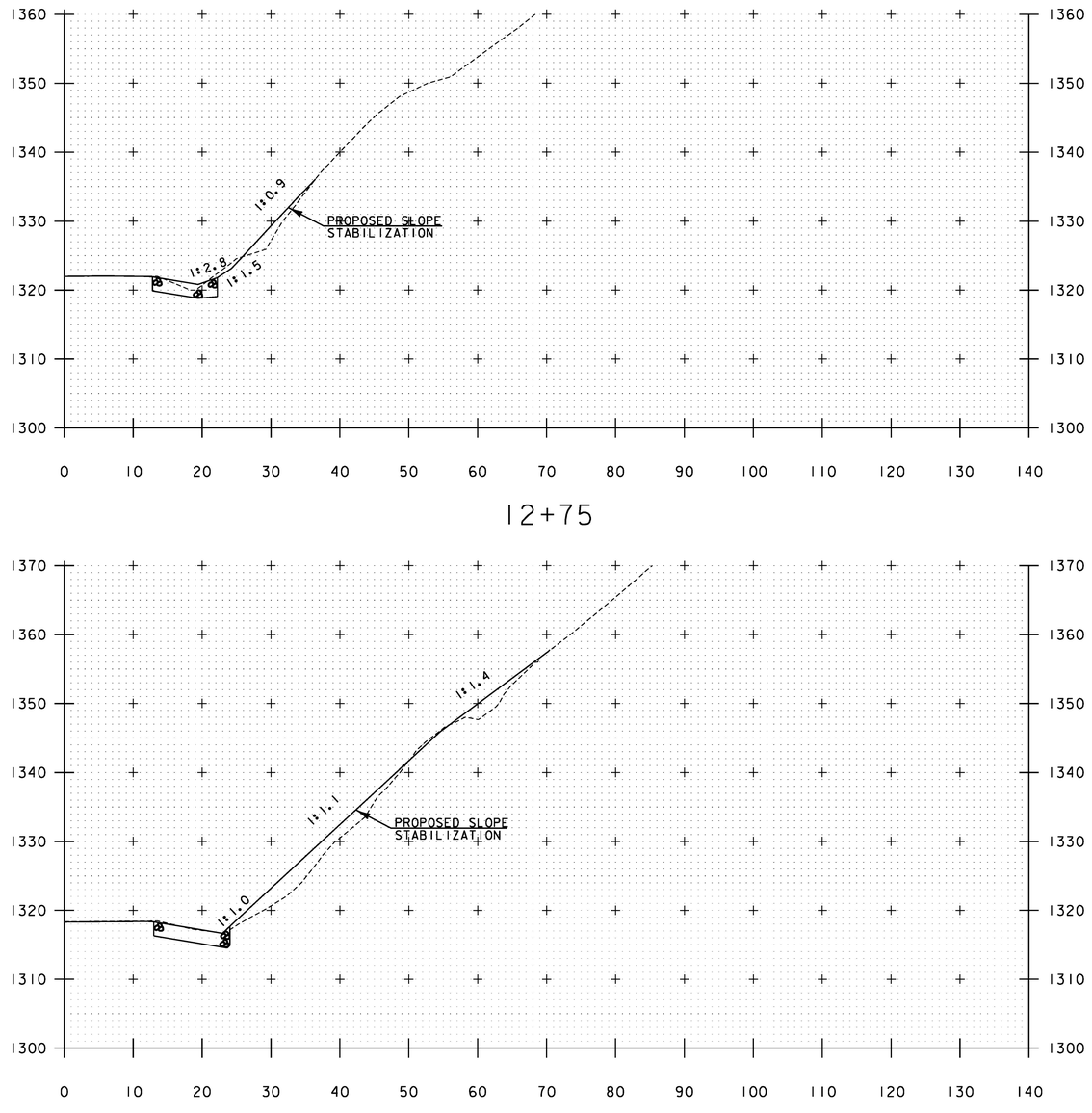


12+75

12+50

SCALE IN FEET

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

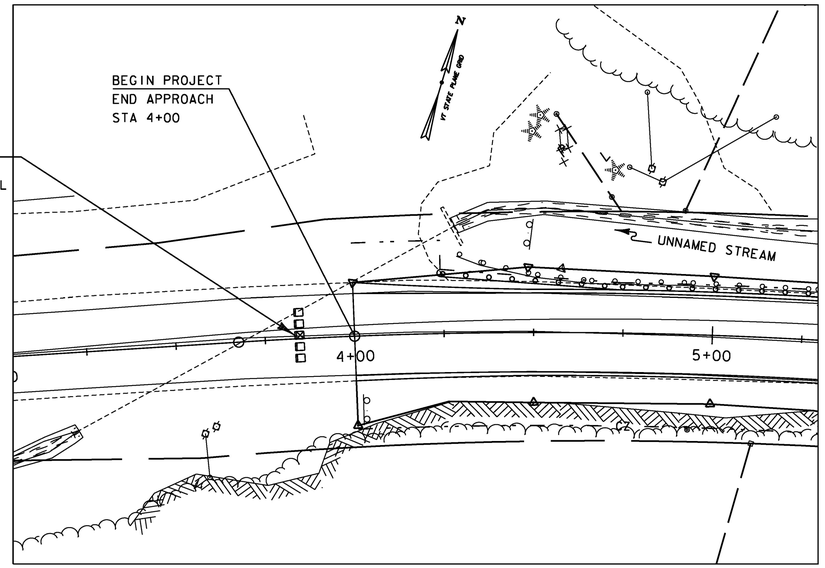
FILE NAME: zl3c318xsl.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
SLOPE STABILITY CROSS SECTIONS 5

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 66 OF 68

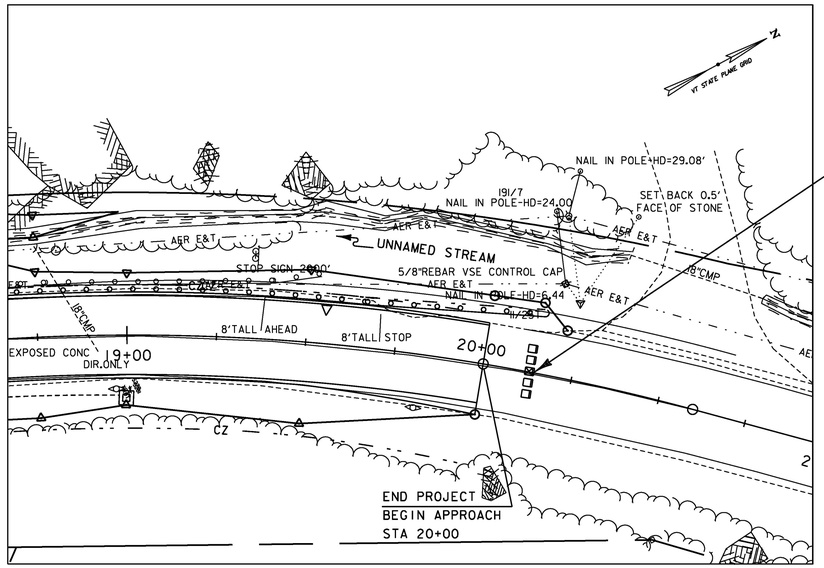
PROPOSED SIGNAGE FOR ROAD CLOSURE (SEE DETOUR PLAN FOR OFFSITE SIGN PACKAGE REQUIREMENTS)

ROAD CLOSED
R11-2

MOUNTED ON TYPE III MODIFIED BARRICADE WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE)



0 10 20
SCALE IN FEET



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SCALE IN FEET

ROAD CLOSED
R11-2

MOUNTED ON TYPE III MODIFIED BARRICADE WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE)

LEGEND

- ☐ TYPE III BARRICADE
- ⊠ TYPE III (MOD) BARRICADE

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR THE PROPOSED WORK ON THIS PROJECT THAT INCLUDES A SCHEDULE OF OVERALL ON SITE WORK HOURS, AN ANTICIPATED SCHEDULE OF ONE LANE ALTERNATING TRAFFIC (OLAT), AND ANTICIPATED ROAD CLOSURES IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 105.03 OF VTRAN'S "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DATED 2011, VTRAN'S, STANDARD PLANS, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) WITH LATEST REVISIONS, AND THE FOLLOWING SITE SPECIFIC CRITERIA. THIS PLAN MUST BE SUBMITTED AT LEAST TWO WEEKS IN ADVANCE OF THE START OF CONSTRUCTION AND WORK SHALL NOT COMMENCE UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN ACCEPTED.

2. THE CONTRACTOR MAY BEGIN CONSTRUCTION DURING THE SUMMER OF 2016 PROVIDED THAT ALL WORK WITHIN THE ROADWAY THAT AFFECTS TRAFFIC OPERATIONS ENDS AT LEAST ONE WEEK PRIOR TO THE START OF SCHOOL. NO WORK THAT IMPACTS TRAFFIC OPERATIONS OR SCHOOL BUS TRAFFIC ALONG VT ROUTE 100A WILL BE PERMITTED DURING THE SCHOOL CALENDAR YEAR (SEPTEMBER 2016-JUNE 2017) UNLESS OTHERWISE APPROVED IN WRITING BY THE RESIDENT ENGINEER AND THE TOWN.

3. FOR WORK DAYS OUTSIDE THE SCHOOL CALENDAR YEAR, THE CONTRACTOR MAY UTILIZE AN OLAT PATTERN WITH FLAGGERS AND/OR UNIFORMED OFFICERS AS REQUIRED OR FULL ROADWAY CLOSURES WITH THE PRESCRIBED DETOUR ROUTE PROVIDED THAT THESE CLOSURES ARE LIMITED TO WEEKDAY DAYLIGHT HOURS BETWEEN THE HOURS OF 8:00AM TO 4:00PM SO AS NOT TO IMPACT COMMUTER TRAFFIC.

   FOR WORK DAYS WITHIN THE SCHOOL CALENDAR YEAR WHILE SCHOOL IS IN SESSION, THE CONTRACTOR MAY UTILIZE OLAT PATTERN WITH FLAGGERS AND/OR UNIFORMED OFFICERS AS REQUIRED, PROVIDED THAT THESE CLOSURES ARE LIMITED TO WEEKDAY DAYLIGHT HOURS BETWEEN THE HOURS OF 9:00 AM AND 2:00 PM SO AS NOT TO IMPACT SCHOOL BUS TRAFFIC.

   THE CONTRACTOR SHALL MAKE PROVISIONS FOR THE PASSAGE OF EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.

4. ALL SIDESLOPES, DITCHES, GUARDRAILS ETC. MUST BE MAINTAINED IN A SAFE MANNER IN ACCORDANCE WITH THE VTRANS STANDARD PLANS AND MUTCD STANDARDS AT ALL TIMES WHEN TRAFFIC IS OPERATING ON THE ROADWAY. WHEN CONSTRUCTION OPERATIONS CEASE FOR THE DAY THE ROADWAY SHALL BE RETURNED TO TWO-WAY OPERATION FOR THE ENTIRE PROJECT LENGTH.

5. NO WORK SHALL BE PERMITTED ON WEEKENDS, HOLIDAYS, OR THE FRIDAY BEFORE OR TUESDAY AFTER HOLIDAY WEEKENDS (LABOR DAY, MEMORIAL DAY, INDEPENDENCE DAY).

6. AT ANY TIME, IF THE RESIDENT ENGINEER DETERMINES THAT THE PROPOSED WORK CANNOT BE CONSTRUCTED IN ACCORDANCE WITH THE ACCEPTED TRAFFIC CONTROL PLAN AND THESE TIME FRAMES WITHOUT ADVERSELY IMPACTING TRAFFIC OPERATIONS OR SAFETY, THEN THE RESIDENT ENGINEER MAY FURTHER RESTRICT THE WORK.

7. THE CONTRACTOR SHALL COORDINATE PUBLISHING AND DISSEMINATING PUBLIC OUTREACH MATERIALS OF LANE CLOSURE AND DETOUR INFORMATION TO THE PUBLIC, INCLUDING, BUT NOT LIMITED TO: TRAFFIC DELAYS FOR THE PUBLIC WITH THE TOWN AND ENGINEER.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, ERECTING AND MAINTAINING (AS WELL AS REMOVING AND RESETTING) ALL DETOUR AND ON-PROJECT TEMPORARY TRAFFIC CONTROL ZONE DEVICES, INCLUDING (BUT NOT LIMITED TO) CONSTRUCTION SIGNS, BARRICADES, TEMPORARY TRAFFIC BARRIERS, PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AND OTHER REQUIRED DEVICES (AS PER ACCEPTED TRAFFIC CONTROL PLAN) USED TO REGULATE, WARN AND GUIDE TRAFFIC DURING CONSTRUCTION. TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF LATEST EDITION OF THE MUTCD AND PERTINENT VTRANS E-SERIES AND T-SERIES STANDARDS. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN. EXACT LOCATIONS OF DEVICES SHALL BE COORDINATED WITH THE ENGINEER. ADDITIONAL PROJECT CONSTRUCTION SIGNS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEER. THE COST OF ALL DETOUR AND ON-PROJECT TEMPORARY TRAFFIC CONTROL ZONE DEVICES INCLUDING TRAFFIC CONTROL SIGNING (WITH THE EXCEPTION OF FLAGGERS, UNIFORMED OFFICERS AND PCMS) WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE).

9. PORTABLE CHANGEABLE MESSAGE SIGNS "PCMS" SHALL BE PLACED AT THE APPROXIMATE LOCATIONS SHOWN ON THE PLANS OR WHERE DESIGNATED BY THE ENGINEER, AND ACTIVATED A MINUMUM OF 14 DAYS PRIOR TO THE START OF CONSTRUCTION TO WARN OF THE IMPENDING ROADWORK AND DETOURS (IF REQUIRED). SIGN MESSAGE SHALL BE DETERMINED BY THE ENGINEER. PAYMENT FOR THESE SIGNS WILL BE INCLUDED IN ITEM 641.15 "PORTABLE CHANGEABLE MESSAGE SIGN".

10. THE STATE ROUTE MARKERS USED FOR THE DETOUR AS SHOWN ON THE PLANS SHALL FOLLOW STANDARDS E-127 AND E-136B. THESE SIGNS SHALL BE REMOVED AT THE END OF THE ROAD CLOSURE. THESE SIGNS AND THEIR REMOVAL WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE).

11. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.

12. ALL SIGNS SHALL BE PLACED WITHIN EXISTING STATE OR TOWN RIGHTS-OF-WAY.

13. INSTALLATION OF DETOUR AND ON-SITE SIGNS SHALL NOT BLOCK ANY EXISTING TRAFFIC CONTROL SIGN ASSEMBLIES. DETOUR SIGNS SHALL MODIFY OR BE PLACED ADJACENT TO EXISTING ROUTE MARKER SIGN ASSEMBLIES WHEN POSSIBLE. THE CONTRACTOR SHALL MAINTAIN AT LEAST 200 FEET BETWEEN SIGN ASSEMBLIES WHENEVER POSSIBLE.

14. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE TRAFFIC FLOW OF THE DETOUR SHALL BE REMOVED OR COVERED BY THE CONTRACTOR. ALL SIGNS REMOVED OR COVERED SHALL BE REPLACED OR UNCOVERED WHEN THE TRAFFIC CONTROL PLAN IS DISASSEMBLED. PAYMENT FOR THIS WORK WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL INCLUSIVE).

15. NO CONSTRUCTION SIGNS SHALL BE INSTALLED AS TO INTERFERE WITH STOPPING SIGHT DISTANCE AND CORNER SIGHT DISTANCE FROM DRIVES AND TOWN HIGHWAYS.

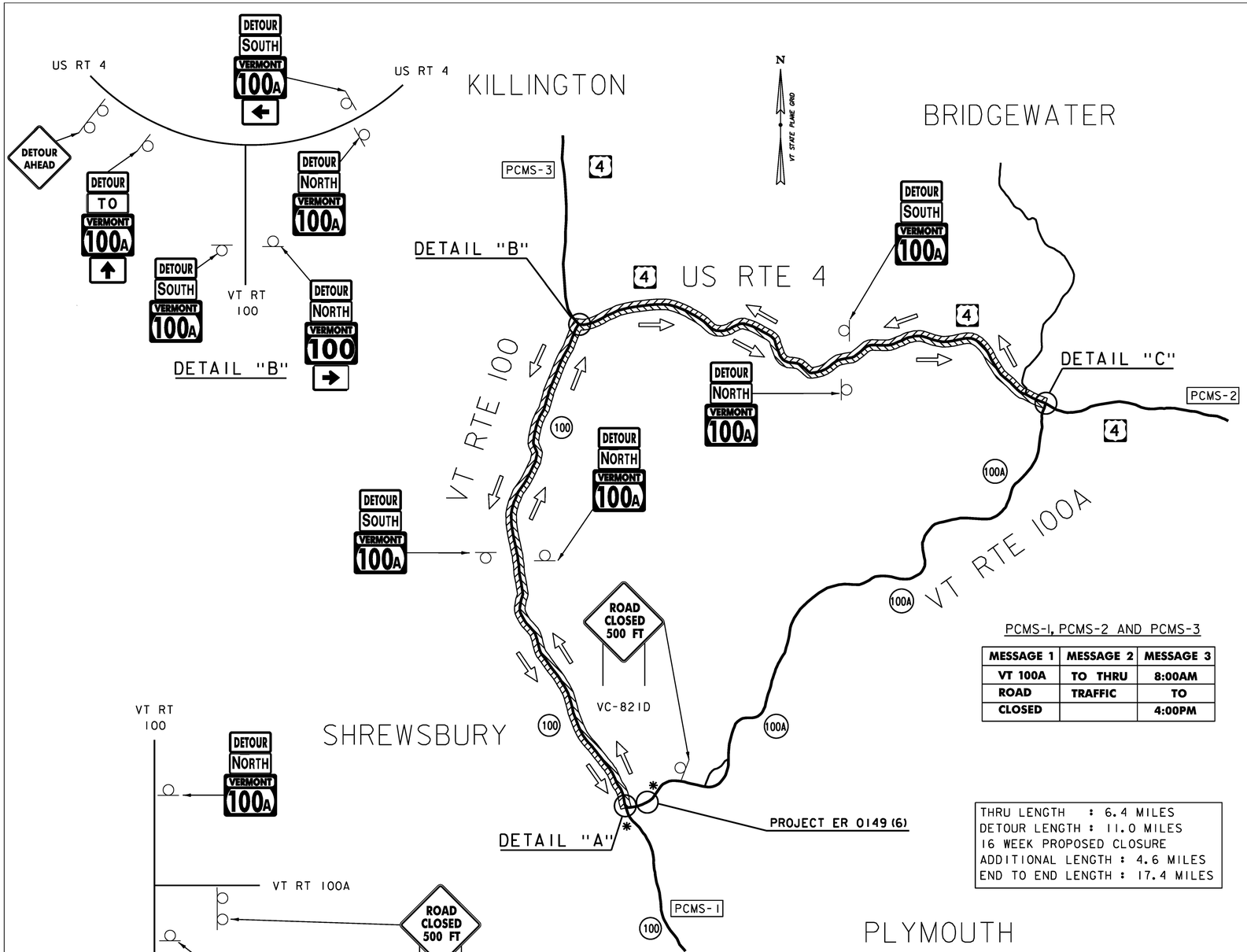
16. CONTACT DIG-SAFE AT 1-888-344-7233 PRIOR TO BREAKING GROUND TO INSTALL ANY SIGN POSTS.

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: zl3c318bdr_tcp.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: M. HASKINS
TRAFFIC CONTROL PLAN AND NOTES

PLOT DATE: 5/17/2016
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 67 OF 68



PCMS-1, PCMS-2 AND PCMS-3

MESSAGE 1	MESSAGE 2	MESSAGE 3
VT 100A	TO THRU	8:00AM
ROAD	TRAFFIC	TO
CLOSED		4:00PM

THRU LENGTH : 6.4 MILES
DETOUR LENGTH : 11.0 MILES
16 WEEK PROPOSED CLOSURE
ADDITIONAL LENGTH : 4.6 MILES
END TO END LENGTH : 17.4 MILES

DETOUR SIGNING PLAN

NOT TO SCALE

* SEE STANDARD T-10 FOR CONSTRUCTION APPROACH SIGNING.

ID NUMBER	SIGN TEXT	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	NUMBER OF SIGNS REQ'D	AREA OF EACH SIGN (SF)	COLOR	REMARKS
W20-2	DETOUR AHEAD	48	48	3	16.0	BLACK AND FLOURESCENT ORANGE	INSTALL ON 2 POSTS
W20-3	ROAD CLOSED 500 FT	48	48	2	16.0	BLACK AND FLOURESCENT ORANGE	INSTALL ON 2 POSTS
M6-3	↑	21	15	5	2.19	BLACK AND FLOURESCENT ORANGE	MOUNT BELOW M1-6A
M6-1L	←	21	15	2	2.19	BLACK AND FLOURESCENT ORANGE	MOUNT BELOW M1-6A
M6-1R	→	21	15	1	2.19	BLACK AND FLOURESCENT ORANGE	MOUNT BELOW M1-6A
M4-8	DETOUR	24	12	15	2.0	BLACK AND FLOURESCENT ORANGE	MOUNT ABOVE M3-1, M3-2, OR M3-3
M4-8a	END DETOUR	24	18	2	3.0	BLACK AND FLOURESCENT ORANGE	
M3-1	NORTH	24	12	6	2.0	GREEN AND WHITE	MOUNT ABOVE M1-6A
M3-2	EAST	24	12	1	2.0	BLACK AND WHITE	MOUNT ABOVE M1-6A
M3-3	SOUTH	24	12	8	2.0	GREEN AND WHITE	MOUNT ABOVE M1-6A
M4-5	TO	24	12	2	2.0	GREEN AND WHITE	MOUNT ABOVE M3-3,OR M1-6A
M4-5	TO	24	12	1	2.0	BLACK AND WHITE	MOUNT ABOVE M3-2
M1-5	VERMONT 100A	30	24	13	5.0	GREEN AND WHITE	
M1-5	VERMONT 100	30	24	2	5.0	GREEN AND WHITE	
M1-4	4	24	24	1	4.0	BLACK AND WHITE	
R11-3B	ROAD CLOSED 6.5 MILES AHEAD NO THRU TRAFFIC	60	30	1	12.5	BLACK AND WHITE	INSTALL ON 2 POSTS

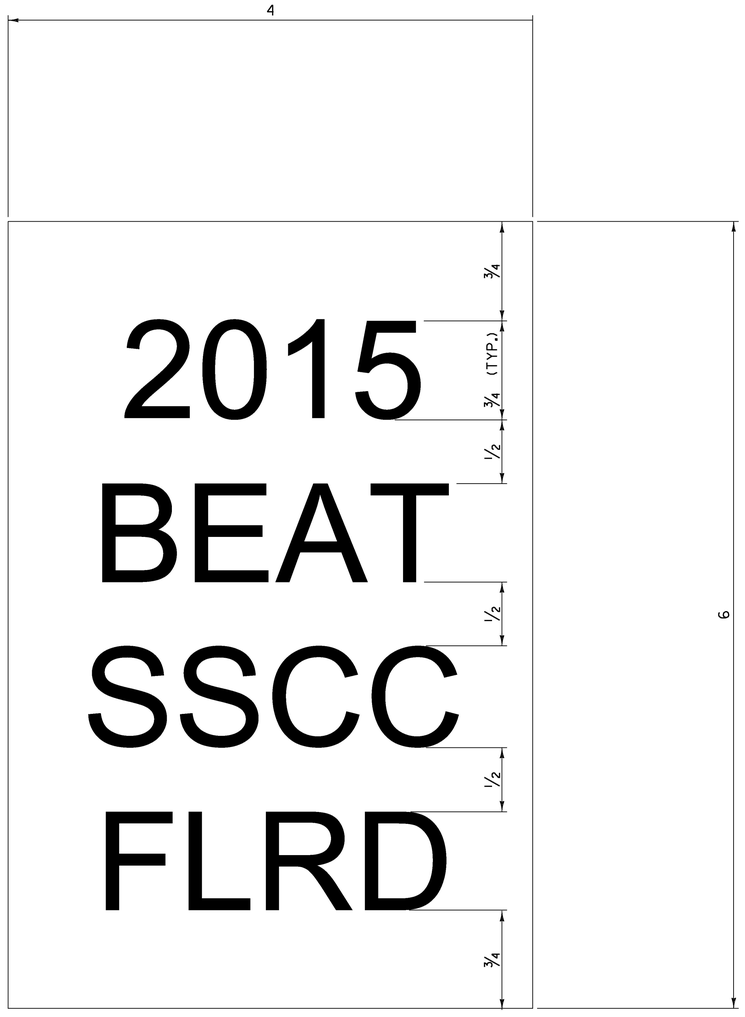
THE ESTIMATED QUANTITIES OF "PERMANENT CONTROLS" ARE HEREBY LISTED. ADDITIONAL SIGNS REQUIRED FOR THE CONSTRUCTION APPROACHES ARE SHOWN ON STANDARD DETAIL T-10. THE CONTRACTOR IS RESPONSIBLE FOR ALL "OPERATIONAL CONTROLS" REQUIRED UNDER SECTION 641 OF THE 2011 VTRANS SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART VI LATEST REVISION.

McFarland Johnson

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: ER 0149(6)

FILE NAME: z13c318dtr.dgn
PROJECT LEADER: J. SANTACRUCE
DESIGNED BY: R. LUCHINI
DETOUR PLAN

PLOT DATE: 5/17/2016
DRAWN BY: R. LUCHINI
CHECKED BY: B. COLBURN
SHEET 68 OF 68



GENERAL NOTES:

1. LINE ONE SHALL INDICATE THE INSTALLATION YEAR (YYYY).
2. LINE TWO SHALL INDICATE THE MODEL AS IDENTIFIED ON THE APPROVED PRODUCTS LIST. FOR GENERIC INSTALLATIONS THE STANDARD DRAWING DESIGNATION OR NAME AS IDENTIFIED IN THE FHWA ELIGIBILITY LETTER SHALL BE USED.
3. LINE THREE SHALL SHALL INDICATE ADDITIONIAL MODEL INFORMATION IF NECESSARY.
4. LINE FOUR SHALL INDICATE FLARED (FLRD) OR TANGENT (TANG).
5. LEGEND SHALL BE ONE ARIEL FONT.
6. LEGEND SHALL BE BLACK ON A WHITE BACKGROUND, LENGEND AND BACKGROUND SHALL NOT BE REFLECTIVE.
7. SUITABLE MATERIAL SHALL BE USED SO AS TO NOT DETERIORATE DURING EXPOSURE TO WEATHER.
8. LABELS SHALL BE APPLIED IN SUCH A WAY THAT THEY REMAIN INTACT DURING THE LIFE OF THE TERMINAL.
9. FOR W-BEAM GUARDRAIL, LABEL SHALL BE PLACED ON THE TOP OF POST ONE FACING AWAY FROM TRAFFIC.
10. FOR BOX BEAM GUARDRAIL, LABEL SHALL BE PLACED ON THE BOX BEAM ADJACENT TO POST ONE FACING AWAY FROM TRAFFIC.
11. PAYMENT SHALL BE INCIDENTAL TO OTHER TRAFFIC BARRIER ITEMS.
12. ALL DIMENSIONS IN INCHES.

REV.	DATE	DESCRIPTION
0	NOV. 3, 2015	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: NONE

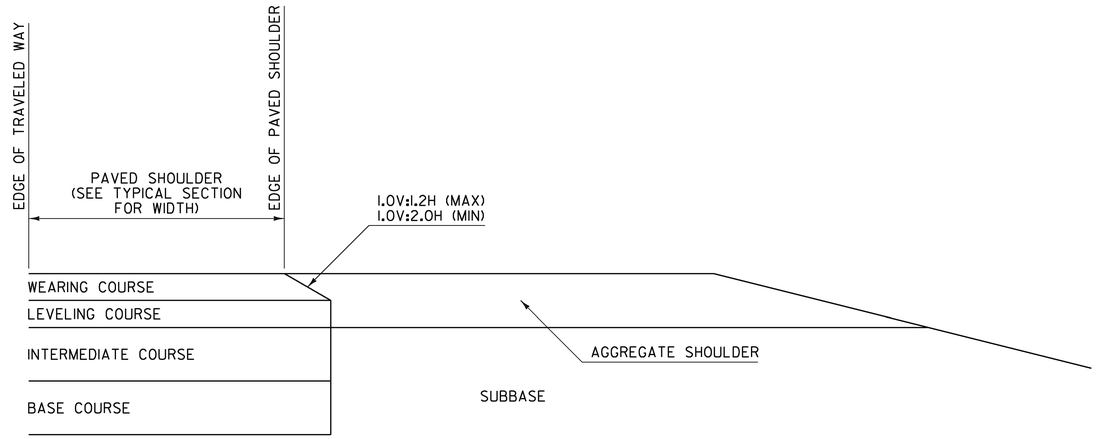
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

GUARDRAIL TERMINAL LABEL DETAIL

VTrans Working to Get You There — VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL

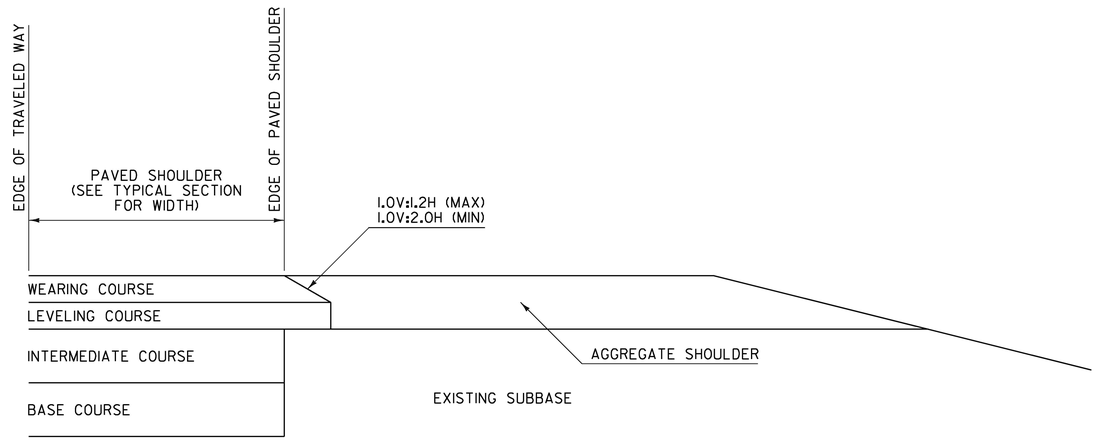
HSD-621.06



SAFETY EDGE DETAIL
FOR PAVING BELOW WEARING COURSE

NOTES:

1. THIS DETAIL IS INTENDED FOR WHEN PAVING EXTENDS BELOW THE WEARING COURSE.
2. PRIOR TO PLACEMENT OF THE LEVELING AND/OR WEARING COURSE, THE SUBBASE LOCATED BENEATH THE AGGREGATE SHOULDER SHALL BE PREPARED FLUSH WITH THE BOTTOM OF THE LEVELING COURSE.
3. BASE COURSE LIMITS MAY VARY, SEE TYPICAL SECTIONS FOR WIDTH.



SAFETY EDGE DETAIL
FOR PAVING WEARING COURSE ONLY

NOTES:

1. THIS DETAIL IS INTENDED FOR WHEN ONLY THE LEVELING AND/OR WEARING COURSE IS TO BE PLACED.
2. PAVEMENT COURSES MAY VARY, SEE TYPICAL SECTIONS FOR ACTUAL PAVEMENT COURSES REQUIRED.

SAFETY EDGE WIDTH BASED ON WEARING COURSE THICKNESS AND A 1V:1.6H SLOPE	
WEARING COURSE THICKNESS (INCHES)	NOMINAL SAFETY EDGE WIDTH (INCHES)
1.25	2.000
1.50	2.375
1.75	2.750
2.00	3.125
2.25	3.500
2.50	4.000

GENERAL NOTES:

1. PLACEMENT OF THE WEARING COURSE SHALL INCLUDE THE SAFETY EDGE, UNLESS THE FOLLOWING APPLIES:
   - A. THE ADJACENT SLOPE IS STEEPER THAN THE SAFETY EDGE.
   - B. THE EDGE OF PAVEMENT BEING PLACED ABUTS BOUND MATERIAL.
   - C. VEHICLES ARE RESTRICTED FROM LEAVING THE PAVED SURFACE (EXAMPLE: GUARDRAIL).
2. THE SAFETY EDGE SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE SLOPE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
3. THE SAFETY EDGE SHALL NOT BE CONSIDERED PART OF THE PAVED SHOULDER.
4. THIS WORK SHALL BE INCIDENTAL TO THE RESPECTIVE BITUMINOUS CONCRETE PAVEMENT ITEM.

REV.	DATE	DESCRIPTION
0	MAR. 29, 2016	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: NONE

DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

SAFETY EDGE DETAILS

VTrans Working to Get You There — VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL

HSD-400.01