

R.O.W. PLANS

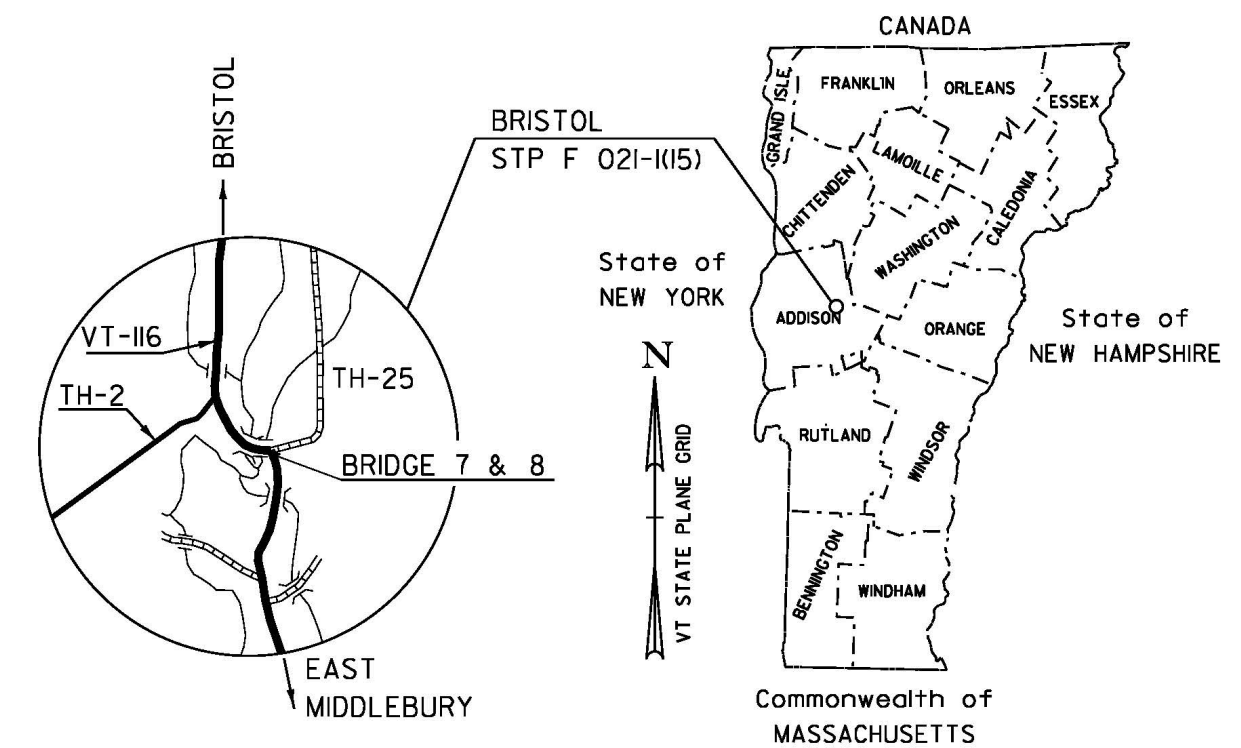
INDEX OF SHEETS

1	TITLE SHEET
2-3	DETAIL SHEETS
4-8	LAYOUT SHEETS
9	PRELIMINARY INFORMATION
10	ROADWAY TYPICALS
11	BRIDGE TYPICAL
12	PUBLIC DRIVE & TH-25 TYPICAL
13	EARTHWORK TYPICALS
14	DETOUR ALIGNMENT
15	TIE SHEET
16	DIVERSIONARY BERM TYPICAL & LAYOUT
17-20	PUBLIC DRIVE DRAINAGE DETAIL
21	VT116 PROFILES
22	PUBLIC DRIVE PROFILE
23	TH-25 PROFILE
24	PRIVATE DRIVE PROFILE
25-29	DIVERSIONARY BERM PROFILE
30-34	EPSC DETOUR CONSTRUCTION CONDITIONS
35	EPSC CONSTRUCTION CONDITIONS
36	UTILITIES LAYOUT
37	PLAN & ELEVATION

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT TOWN OF BRISTOL COUNTY OF ADDISON VT ROUTE 116, MINOR ARTERIAL BRIDGES 7 AND 8



NOT TO SCALE

PROJECT LOCATION: BEGINNING AT A POINT ON VT-116 APPROXIMATELY 2.99 MILES NORTHERLY OF THE BRISTOL-MIDDLEBURY TOWN LINE AND EXTENDING NORTHEASTERLY 0.284 MILES.

LENGTH OF ROADWAY = 1132.40 FT = 0.214 MILES
 LENGTH OF BRIDGE = 367.60 FT = 0.070 MILES
 LENGTH OF PROJECT = 1500.00 FT = 0.284 MILES
 LENGTH OF ROW PROJECT = 1775.00 FT = 0.336 MILES

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE COMPLETE REMOVAL OF EXISTING BRIDGE #7, COMPLETE REMOVAL OF EXISTING BRIDGE #8, CONSTRUCTION OF A NEW TWO SPAN BRIDGE ON AN IMPROVED ALIGNMENT, INCLUDING ALL RELATED CHANNEL AND APPROACH WORK.

BEGIN R.O.W. PROJECT
113+00.00 25.18' LT

END R.O.W. PROJECT
130+75.00 26.00' LT

PROJECT IS SUBJECT TO
STORMWATER PERMIT 5221-INDS

CONVENTIONAL SYMBOLS

COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

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

SURVEYED BY : VSE
SURVEYED DATE : 1998

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (1996)

BEGIN MAINT. AGREE. #1
TH25 200+16.00 CL

SCALE 1" = 100'
50 0 50 100

END MAINT. AGREEMENT #1
LENGTH = 34.23'
BEGIN RELINQUISHMENT
TH25 200+50.23 CL

END RELINQUISHMENT
TH25 201+73.28 CL
LENGTH = 123.05'

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

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

APPROVED RICHARD TETREULT DATE 04-25-12
Director of Program Development

APPROVED ROBERT M. WHITE DATE 04-25-12
Chief of Right of Way

BRISTOL
STP F 021-1 (15)

ROW SHEET 1 OF 37 SHEETS

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE AREA±	REMAINDER AREA±	RIGHT			RECORDING DATA				REMARKS	
							TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK		PAGE
1	STATE OF VERMONT (FORMERLY BAKER)	5, 6								WD	11/20/90	BRISTOL	69	305	
2	STATE OF VERMONT (FORMERLY SARGENT)	4, 5								WD	01/20/11	BRISTOL	135	505	
3A	BARRECA, CHRISTOPHER	4-6, 8	120+24.14 LT 113+87 LT 114+04 LT 115+08 LT 118+02 LT 121+78 LT	124+10.58 LT 116+08 LT 114+61 LT 115+91 LT 124+10.58 LT 121+94 LT	0.26 A		CONST. SLOPE CUL, DIT & DR DETOUR CHANNEL	(T) (P) (P) (T) (P)	2,000 SF 220 SF 1,470 SF 0.93 A 65 SF	WD SLVAG	03/29/13 03/29/13	BRISTOL	141 141	436-437 438-441	11,300 SF± INCL. EC & BF INCL. TEMP BRIDGE, EC & BF; 40,450 SF±
3B		6, 7	121+71.63 RT 123+50 RT 126+90 RT	130+75.00 RT 126+95 RT 127+19 RT	1.40 A		UTILITY CONST.	(P) (T)	0.18 A 40 SF						61,100 SF± 7,760 SF± INCL. EC
3C		4-7	113+00.00 LT	130+75.00 RT	1.15 A		ALL R. T. & I.								VT RTE 116 HWY EASE.; 50,000 SF±
4	STATE OF VERMONT (FORMERLY GAGNON)	6, 8								WD	08/20/98	BRISTOL	88	558	
5	TOWN OF BRISTOL	5	TH25 201+73.28 RT TH25 201+73.28 RT TH25 201+73.28 CL TH25 201+73.28 LT	121+42.40 RT TH25 203+45.00 RT TH25 203+45.00 CL TH25 203.45.00 LT	0.29 A		ALL R. T. & I. INSTALL & MAINT. APPROACH INSTALL & MAINT.	(P) (T) (P)	1,800 SF 1,400 SF	QC	03/25/13	BRISTOL	141	405-406	VT RTE 116 & TH25 HWY EASE: 12,800 SF± STORMWATER TREATMENT SWALE TH25 STORMWATER TREATMENT SWALE
6	MURRAY, CARL E. & KELLEY L.	5	TH25 200+57.51 LT TH25 200+68.33 LT TH25 200+68.33 LT TH25 200+70 LT	TH25 201+73.28 LT TH25 203+06 LT TH25 203+16 LT TH25 203+45 LT	3,300 SF		ALL R. T. & I. UTILITY INSTALL & MAINT. REMOVE	(P) (P) (T)	0.21 A 3,200 SF	WDIF	03/15/13	BRISTOL	141	332-333	TH25 HWY. EASE. 9,240 SF± STORMWATER DRAINAGE SWALE; INCL. TEMP. EC & BF FENCE
7	SAUNDERS, ALAN R. & SAUNDERS, TODD E.	6	122+66 RT	123+18 RT			ALL R. T. & I.		3,830 SF	WDOE	03/15/13	BRISTOL	141	328-329	UNRECORDED R.O.W.

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	1, 3, 5	PARCEL 5, TOWN OF BRISTOL - ADD RELINQUISHMENT FOR TH25; REVISE MAINTENANCE AGREEMENT. COMPLETED BY: MT C.O. #9779 APPROVED BY: HP	09/07/12

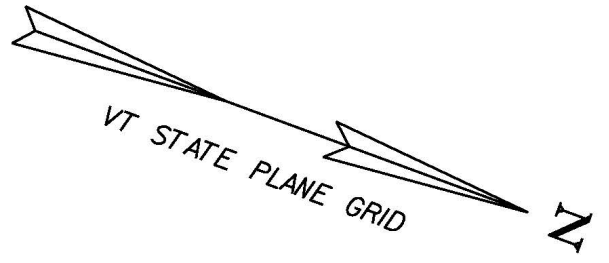
PLAN LEGEND

	EXISTING RIGHT-OF-WAY		TOE OF SLOPE	EC	-EROSION CONTROL
	TAKING WITH ACCESS		TOP OF CUT	(P)	-PERMANENT
	TAKING WITHOUT ACCESS		SLOPE RIGHT	(T)	-TEMPORARY
	CLEAR ZONE		CONSTRUCTION RIGHT	DR.	-DRAINAGE RIGHT
	PROPERTY LINE		PROJECT DEMARCATION FENCE	DIT.	-DITCHING RIGHT
				CH.	-CHANNEL RIGHT
				DRIVE	-DRIVE RIGHT
				CUL.	-CULVERT RIGHT
				C&T	-CLEARING & TRIMMING RIGHT
				SR	-SLOPE RIGHT
				UE	-UTILITY EASEMENT

APPROVED: HARRY PETROVS DATE: 04-25-12
CHIEF, PLANS & TITLES

PROJECT NAME: **BRISTOL**
PROJECT NUMBER: **STP F 021-1 (15)**

FILE NAME: r78f187_detail.xls PLOT DATE: **15-APR-2013**
PROJECT LEADER: **M. EVANS-MONGEON** DRAWN BY: **M. TROTTIER**
DESIGNED BY: **W. PELLETIER** CHECKED BY: **E. PIERCE**
R.O.W. DETAIL SHEET #1 SHEET **2** OF **37**

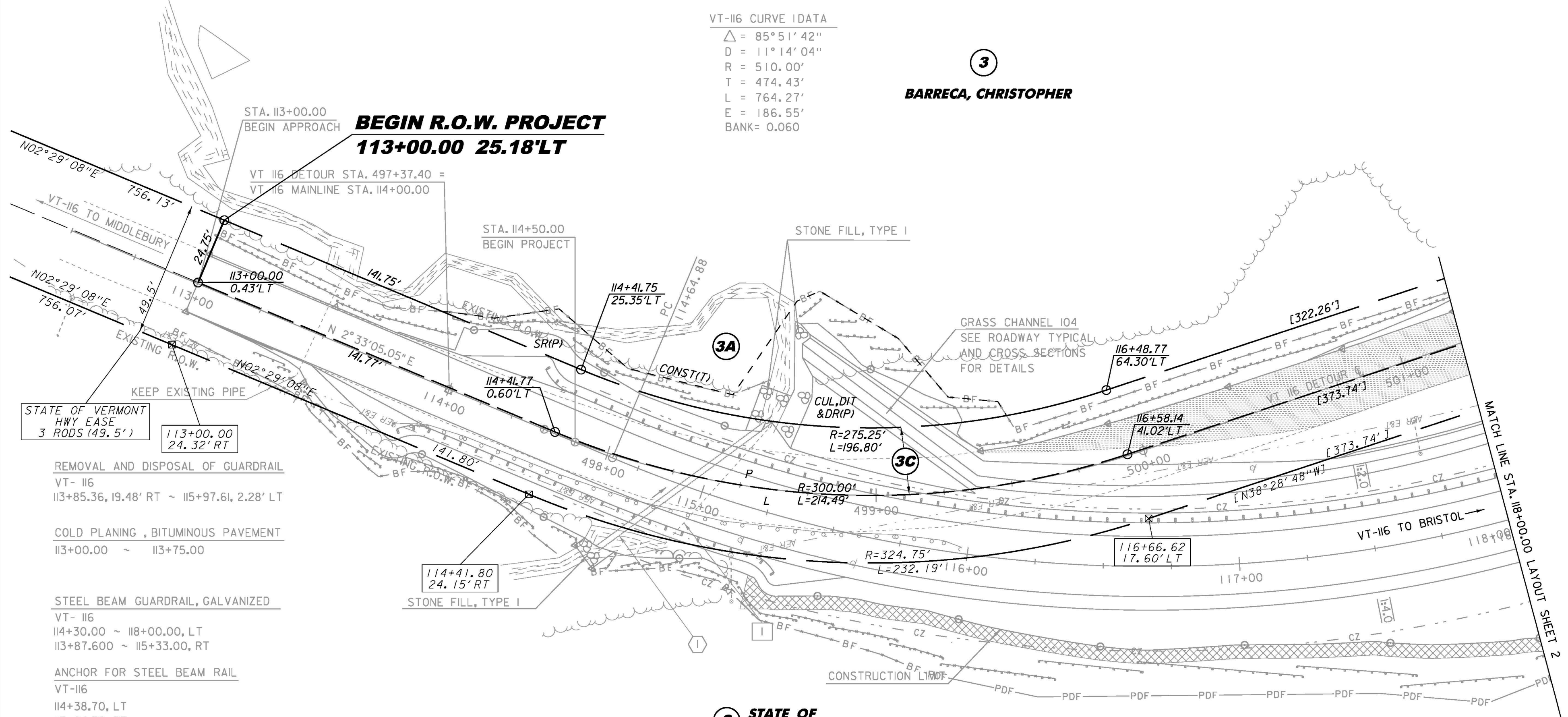


VT-116 CURVE DATA
 $\Delta = 85^{\circ}51'42''$
 $D = 11^{\circ}14'04''$
 $R = 510.00'$
 $T = 474.43'$
 $L = 764.27'$
 $E = 186.55'$
 $BANK = 0.060$

3

BARRECA, CHRISTOPHER

BEGIN R.O.W. PROJECT
113+00.00 25.18'LT



STATE OF VERMONT
 HWY EASE
 3 RODS (49.5')

REMOVAL AND DISPOSAL OF GUARDRAIL
 VT- 116
 113+85.36, 19.48' RT ~ 115+97.61, 2.28' LT

COLD PLANING, BITUMINOUS PAVEMENT
 113+00.00 ~ 113+75.00

STEEL BEAM GUARDRAIL, GALVANIZED
 VT- 116
 114+30.00 ~ 118+00.00, LT
 113+87.600 ~ 115+33.00, RT

ANCHOR FOR STEEL BEAM RAIL
 VT-116
 114+38.70, LT
 113+94.70, RT
 115+26.40, RT

DELINEATOR WITH STEEL POST
 VT-116
 113+87.60, RT BLUE
 114+71.00, RT WHITE
 114+30.00, LT GREEN
 115+12.00, LT WHITE
 115+33.00, RT GREEN

EXCAVATION OF SURFACES AND PAVEMENTS
 VT-116
 116+00.00 ~ 118+00.00, LT

2 STATE OF VERMONT
 (FORMERLY SARGENT)

☒ CALCULATED POINT

- ① NEW 30" CPEP/CAAP/PCCSP
 114+72.10, 32.80' RT ~ 115+16.76, 33.00 LT
 LENGTH 79.5'
- ① REMOVE EXISTING CSP
 114+93.49, 22.57' RT ~ 115+16.28, 29.00 LT
 LENGTH 56.33'

AREA OF EXCAVATION OF SURFACES AND PAVEMENTS

LINES SHOWN ON THIS PLAN AS EXISTING
 PROPERTY LINES P/L ARE BELIEVED TO
 BE ACCURATE BUT SHOULD NOT BE RELIED
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 AND RIGHTS FOR THIS PROJECT.

**FOR R.O.W.
 USE ONLY**

PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1 (15)

FILE NAME: r78f187.lay1.dgn
 PROJECT LEADER: M. EVANS-MONGEON
 DESIGNED BY: W. PELLETIER
 ROW LAYOUT SHEET 1 OF 5

PLOT DATE: 25-APR-2012
 DRAWN BY: E. PIERCE
 CHECKED BY: E. PIERCE
 SHEET 4 OF 37

SCALE 1" = 20'-0"
 20 0 20

STEEL BEAM GUARDRAIL, GALVANIZED
 118+00.00 ~ 121+34.92 LT
 120+35.65 ~ 121+50.00 RT
 TH- 25 200+14.72 ~ 200+58.72 LT
 PRIVATE DRIVE 801+89.00 ~ 802+00.00

CAST-IN-PLACE CONCRETE CURB, TYPE B
 VT- 116
 119+84.50 ~ 121+50.00 LT
 121+48.34 ~ 121+50.00 RT

DELINEATOR WITH STEEL POST
 VT-116
 119+92.80 LT WHITE
 120+25.00 RT BLUE

REMOVAL OF EXISTING FENCE
 TH-25
 200+70.00 ~ 202+37.54 LT

GUARDRAIL APPROACH SECTION,
 GALVANIZED 2 RAIL BOX BEAM
 121+34.92 ~ 121+50.00 LT

ANCHOR FOR STEEL BEAM RAIL
 PRIVATE DRIVE 800+43.50 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
 VT- 116
 121+45.63, 13.62' ~ 121+50.00, 11.54' LT

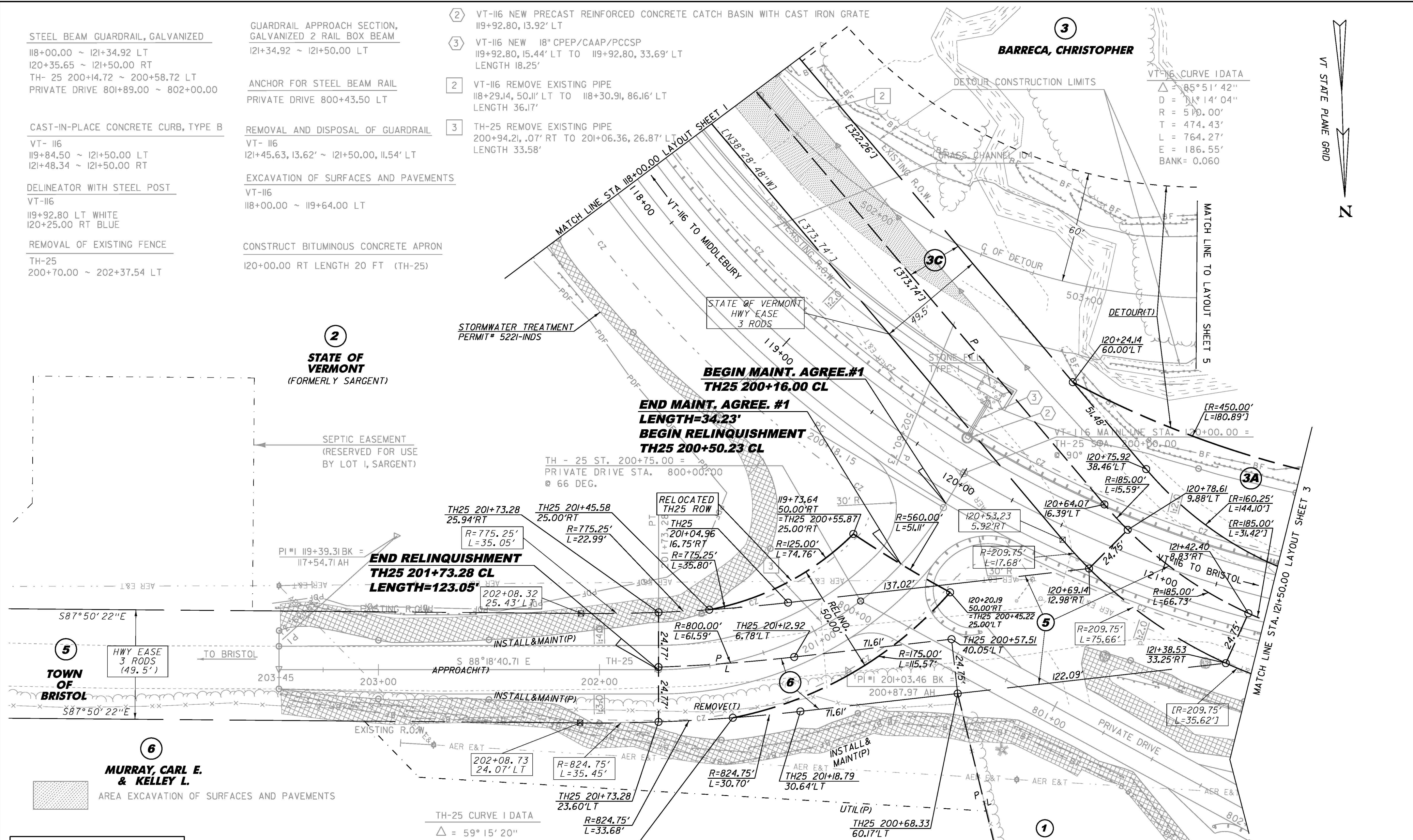
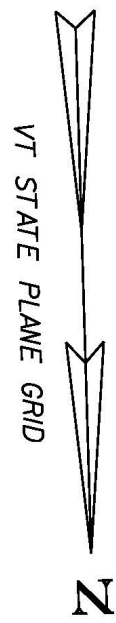
EXCAVATION OF SURFACES AND PAVEMENTS
 VT-116
 118+00.00 ~ 119+64.00 LT

CONSTRUCT BITUMINOUS CONCRETE APRON
 120+00.00 RT LENGTH 20 FT (TH-25)

- ② VT-116 NEW PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE
 119+92.80, 13.92' LT
- ③ VT-116 NEW 18" CPEP/CAAP/PCCSP
 119+92.80, 15.44' LT TO 119+92.80, 33.69' LT
 LENGTH 18.25'
- ② VT-116 REMOVE EXISTING PIPE
 118+29.14, 50.11' LT TO 118+30.91, 86.16' LT
 LENGTH 36.17'
- ③ TH-25 REMOVE EXISTING PIPE
 200+94.21, .07' RT TO 201+06.36, 26.87' LT
 LENGTH 33.58'

BARRECA, CHRISTOPHER

VT-116 CURVE DATA
 $\Delta = 85^\circ 51' 42''$
 $D = 14^\circ 14' 04''$
 $R = 510.00'$
 $T = 474.43'$
 $L = 764.27'$
 $E = 186.55'$
 $BANK = 0.060$



② STATE OF VERMONT
 (FORMERLY SARGENT)

⑤ TOWN OF BRISTOL

⑥ MURRAY, CARL E. & KELLEY L.

AREA EXCAVATION OF SURFACES AND PAVEMENTS

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 USE ONLY

TH-25 CURVE DATA
 $\Delta = 59^\circ 15' 20''$
 $D = 38^\circ 11' 50''$
 $R = 150.00'$
 $T = 85.31'$
 $L = 155.13'$
 $E = 22.56'$

☒ CALCULATED POINT

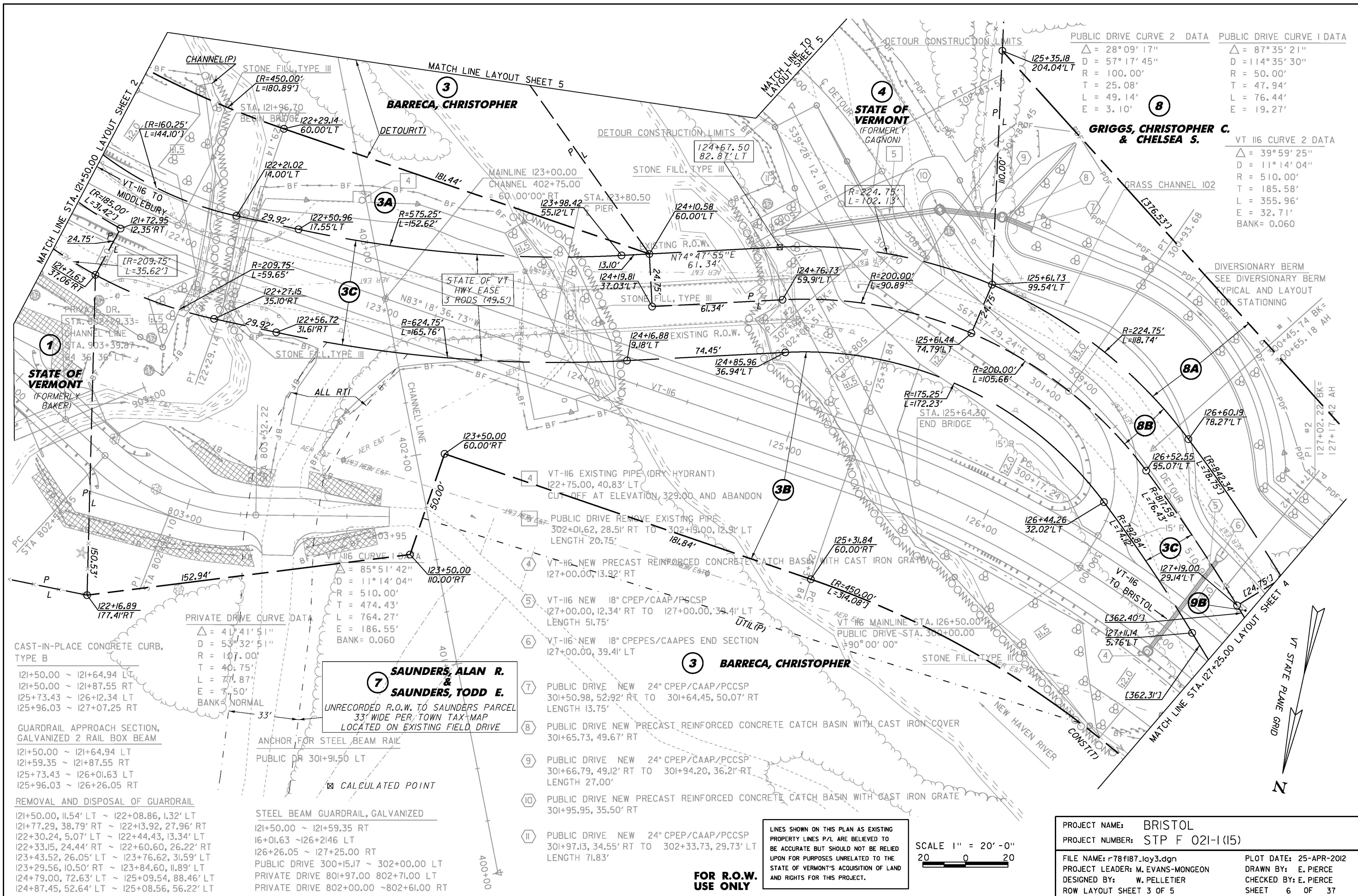
SCALE 1" = 20'-0"
 20 0 20

① STATE OF VERMONT
 (FORMERLY BAKER)

PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1 (15)

FILE NAME: r78f187.lay2.dgn
 PROJECT LEADER: M. EVANS-MONGEON
 DESIGNED BY: W. PELLETIER
 ROW LAYOUT SHEET 2 OF 5

PLOT DATE: 07-SEP-2012
 DRAWN BY: E. PIERCE
 CHECKED BY: E. PIERCE
 SHEET 5 OF 37



PUBLIC DRIVE CURVE 2 DATA		PUBLIC DRIVE CURVE 1 DATA	
Δ = 28° 09' 17"	D = 57° 17' 45"	Δ = 87° 35' 21"	D = 114° 35' 30"
R = 100.00'	T = 25.08'	R = 50.00'	T = 47.94'
L = 49.14'	E = 3.10'	L = 76.44'	E = 19.27'

VT I16 CURVE 2 DATA	
Δ = 39° 59' 25"	D = 11° 14' 04"
R = 510.00'	T = 185.58'
L = 355.96'	E = 32.71'
BANK = 0.060	

PRIVATE DRIVE CURVE DATA	
Δ = 41° 41' 51"	D = 53° 32' 51"
R = 107.00'	T = 40.75'
L = 71.87'	E = 7.50'
BANK = NORMAL	

CAST-IN-PLACE CONCRETE CURB, TYPE B

121+50.00 ~ 121+64.94 LT
 121+50.00 ~ 121+87.55 RT
 125+73.43 ~ 126+12.34 LT
 125+96.03 ~ 127+07.25 RT

GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM

121+50.00 ~ 121+64.94 LT
 121+59.35 ~ 121+87.55 RT
 125+73.43 ~ 126+01.63 LT
 125+96.03 ~ 126+26.05 RT

REMOVAL AND DISPOSAL OF GUARDRAIL

121+50.00, 11.54' LT ~ 122+08.86, 1.32' LT
 121+77.29, 38.79' RT ~ 122+13.92, 27.96' RT
 122+30.24, 5.07' LT ~ 122+44.43, 13.34' LT
 122+33.15, 24.44' RT ~ 122+60.60, 26.22' RT
 123+43.52, 26.05' LT ~ 123+76.62, 31.59' LT
 123+29.56, 10.50' RT ~ 123+84.60, 11.89' LT
 124+79.00, 72.63' LT ~ 125+09.54, 88.46' LT
 124+87.45, 52.64' LT ~ 125+08.56, 56.22' LT

STEEL BEAM GUARDRAIL, GALVANIZED

121+50.00 ~ 121+59.35 RT
 16+01.63 ~ 126+2146 LT
 126+26.05 ~ 127+25.00 RT
 PUBLIC DRIVE 300+15.17 ~ 302+00.00 LT
 PRIVATE DRIVE 801+97.00 802+71.00 LT
 PRIVATE DRIVE 802+00.00 ~ 802+61.00 RT

- 4 VT-I16 EXISTING PIPE (DRY HYDRANT) 122+75.00, 40.83' LT CUT OFF AT ELEVATION 329.00 AND ABANDON
- 4 PUBLIC DRIVE REMOVE EXISTING PIPE 302+01.62, 28.51' RT TO 302+19.00, 12.91' LT LENGTH 20.75'
- 4 VT-I16 NEW PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE 127+00.00, 13.92' RT
- 5 VT-I16 NEW 18" CPEP/CAAP/PCCSP 127+00.00, 12.34' RT TO 127+00.00, 39.41' LT LENGTH 51.75'
- 6 VT-I16 NEW 18" CPEP/CAAP/PCSP 127+00.00, 39.41' LT
- 7 PUBLIC DRIVE NEW 24" CPEP/CAAP/PCCSP 301+50.98, 52.92' RT TO 301+64.45, 50.07' RT LENGTH 13.75'
- 8 PUBLIC DRIVE NEW PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON COVER 301+65.73, 49.67' RT
- 9 PUBLIC DRIVE NEW 24" CPEP/CAAP/PCCSP 301+66.79, 49.12' RT TO 301+94.20, 36.21' RT LENGTH 27.00'
- 10 PUBLIC DRIVE NEW PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE 301+95.95, 35.50' RT
- 11 PUBLIC DRIVE NEW 24" CPEP/CAAP/PCCSP 301+97.13, 34.55' RT TO 302+33.73, 29.73' LT LENGTH 71.83'

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.

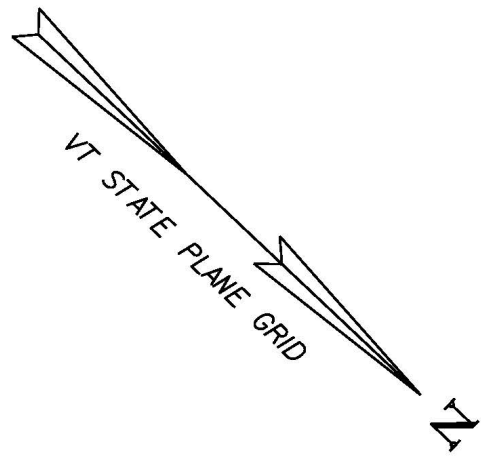
SCALE 1" = 20'-0"
 20 0 20

PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1(15)

FILE NAME: r78f187.lay3.dgn
 PROJECT LEADER: M. EVANS-MONGEON
 DESIGNED BY: W. PELLETIER
 ROW LAYOUT SHEET 3 OF 5

PLOT DATE: 25-APR-2012
 DRAWN BY: E. PIERCE
 CHECKED BY: E. PIERCE
 SHEET 6 OF 37

FOR R.O.W. USE ONLY



VT II6 CURVE 2 DATA

$\Delta = 39^\circ 59' 25''$
 $D = 11^\circ 14' 04''$
 $R = 510.00'$
 $T = 185.58'$
 $L = 355.96'$
 $E = 32.71'$
 $BANK = 0.060$

COLD PLANING, BITUMINOUS PAVEMENT

130+25.00 ~ 130+75.00

ANCHOR FOR STEEL BEAM RAIL

VT-II6
 128+49.00 RT

STEEL BEAM GUARDRAIL, GALVANIZED

VT- II6
 127+25.00 ~ 128+53.00 RT

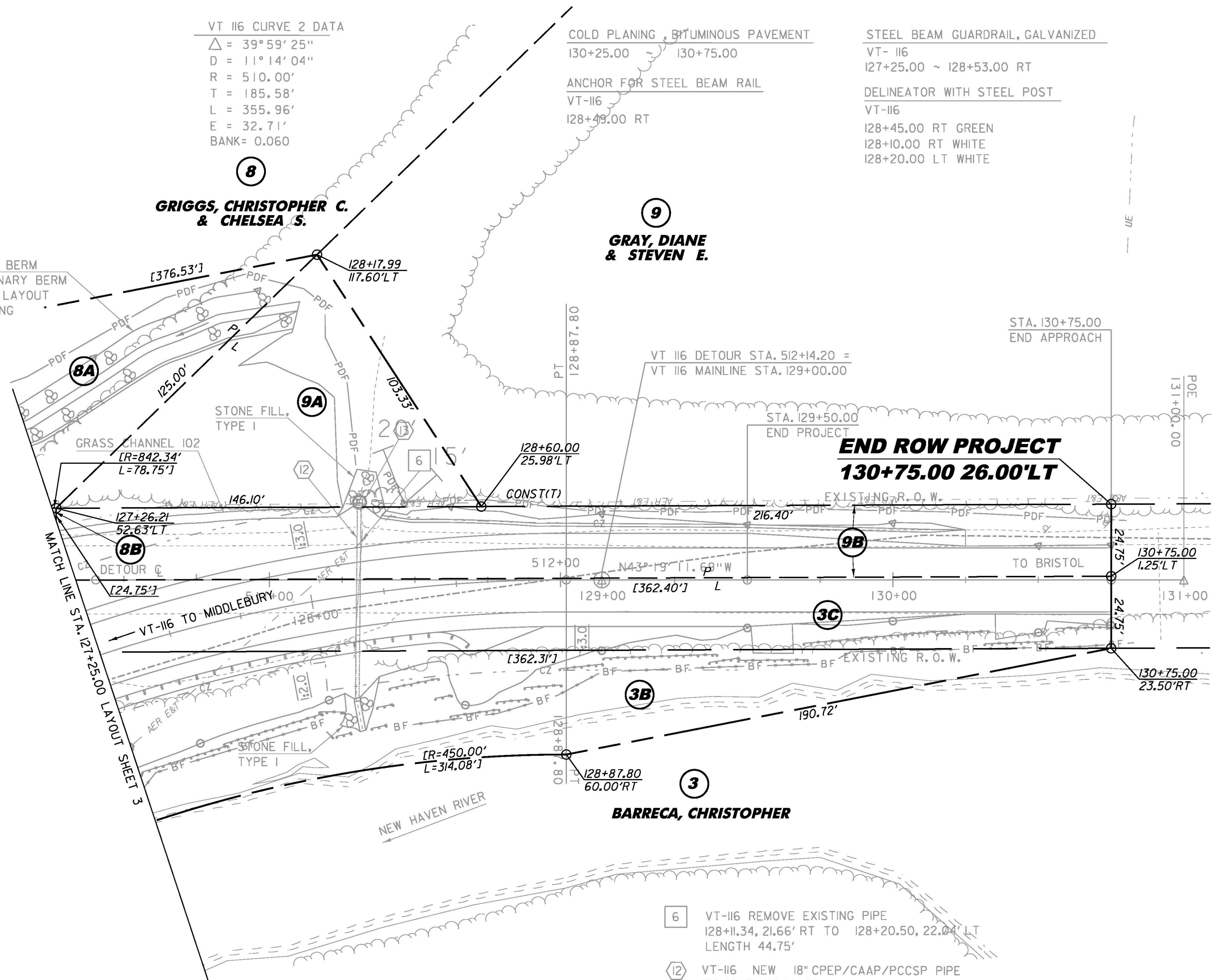
DELINEATOR WITH STEEL POST

VT-II6
 128+45.00 RT GREEN
 128+10.00 RT WHITE
 128+20.00 LT WHITE

8 GRIGGS, CHRISTOPHER C. & CHELSEA S.

9 GRAY, DIANE & STEVEN E.

DIVERSIONARY BERM
SEE DIVERSIONARY BERM
TYPICAL AND LAYOUT
FOR STATIONING



**END ROW PROJECT
130+75.00 26.00'LT**

MATCH LINE STA. 127+25.00 LAYOUT SHEET 3

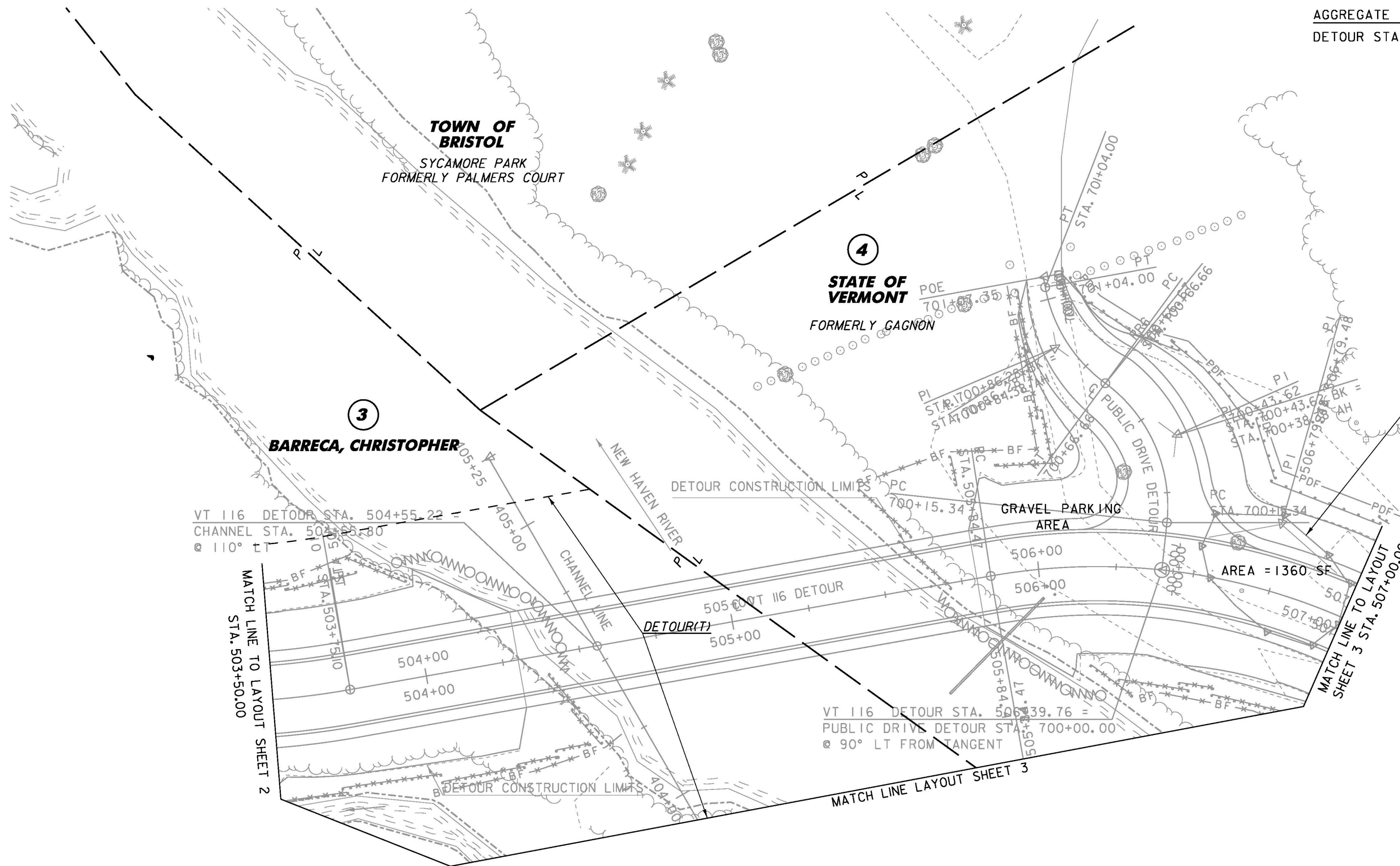
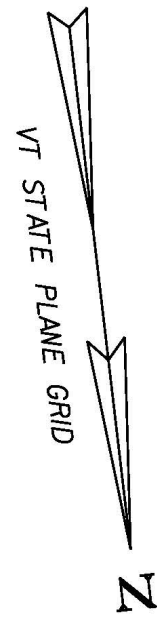
- 6 VT-II6 REMOVE EXISTING PIPE
128+11.34, 21.66' RT TO 128+20.50, 22.04' LT
LENGTH 44.75'
- 12 VT-II6 NEW 18" CPEP/CAAP/PCCSP PIPE
128+10.43, 34.88' RT TO 128+20.40, 29.83' LT
LENGTH 65.92'
- 13 VT-II6 NEW PRECAST REINFORCED CONCRETE DI WITH CAST IRON GRATE (TYPE A)
128+20.69, 31.28' LT

LINES SHOWN ON THIS PLAN AS EXISTING
PROPERTY LINES P/L ARE BELIEVED TO
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SCALE 1" = 20' - 0"
20 0 20

PROJECT NAME: BRISTOL	PLOT DATE: 25-APR-2012
PROJECT NUMBER: STP F 021-1(15)	DRAWN BY: E. PIERCE
FILE NAME: r78f187.lay4.dgn	CHECKED BY: E. PIERCE
PROJECT LEADER: M. EVANS-MONGEON	ROW LAYOUT SHEET 4 OF 5
DESIGNED BY: W. PELLETIER	SHEET 7 OF 37



AGGREGATE SURFACE COURSE
 DETOUR STA. 506+50.00 - 507+00.00

8
**GRIGGS,
 CHRISTOPHER C.
 & CHELSEA S.**

REMOVE EXISTING GROUND
 (6" COMMON EXCAVATION)
 REPLACE WITH 6" OF
 AGGREGATE SURFACE
 COURSE TO MATCH THE
 ADJACENT GRAVEL SURFACE.

3
BARRECA, CHRISTOPHER

4
**STATE OF
 VERMONT**
 FORMERLY GAGNON

VT 116 DETOUR STA. 504+55.22
 CHANNEL STA. 504+55.30
 @ 110° LT

VT 116 DETOUR STA. 506+39.76
 PUBLIC DRIVE DETOUR STA. 700+00.00
 @ 90° LT FROM TANGENT

AREA = 1360 SF

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SCALE 1" = 20' - 0"
 20 0 20

PROJECT NAME: BRISTOL	PLOT DATE: 30-MAY-2013
PROJECT NUMBER: STP F 021-1 (15)	DRAWN BY: E. PIERCE
FILE NAME: r78f187.lay5.dgn	CHECKED BY: E. PIERCE
PROJECT LEADER: M. EVANS-MONGEON	SHEET 8 OF 37
DESIGNED BY: W. PELLETIER	
ROW LAYOUT SHEET 5 OF 5	

PRELIMINARY INFORMATION SHEET

LRFD

INDEX OF SHEETS

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: June 2010

DRAINAGE AREA : 74.5 sq. mi. total for the New Haven River and the Bridge 7 tributary
 CHARACTER OF TERRAIN : Hilly to mountainous with a mixture of forested and open cover
 STREAM CHARACTERISTICS : Perennial, sinuous, semi-alluvial with variable width and bars
 NATURE OF STREAMBED : Sand, gravel, cobbles and some scattered boulders

PEAK FLOW DATA

Q 2.33 = 3,750 cfs	Q 50 = 11,300 cfs
Q 10 = 7,450 cfs	Q 100 = 13,200 cfs
Q 25 = 9,400 cfs	Q 500 = 18,400 cfs

DATE OF FLOOD OF RECORD : 1998
 ESTIMATED DISCHARGE : 12,900 cfs
 WATER SURFACE ELEV. : 336.0'
 NATURAL STREAM VELOCITY : @ Q50 = 7.4 fps
 ICE CONDITIONS : Light to moderate
 DEBRIS : Light to moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
 IS ORDINARY RISE RAPID? Yes
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
 IF YES, DESCRIBE :

WATERSHED STORAGE : 1% HEADWATERS :
 UNIFORM : X
 IMMEDIATELY ABOVE SITE :

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE : Single span steel pony truss bridge
 YEAR BUILT : 1925
 CLEAR SPAN(NORMAL TO STREAM) : 81' (96' along the roadway)
 VERTICAL CLEARANCE ABOVE STREAMBED : 10'
 WATERWAY OF FULL OPENING : 744 sq. ft.
 DISPOSITION OF STRUCTURE : Remove
 TYPE OF MATERIAL UNDER SUBSTRUCTURE : See boring logs

WATER SURFACE ELEVATIONS AT:

Q2.33 = 330.2'	VELOCITY = 7.0 fps
Q10 = 333.0'	" 9.6 fps
Q25 = 334.5'	" 9.2 fps
Q50 = 335.2'	" 9.7 fps
Q100 = 335.8'	" 9.9 fps

LONG TERM STREAMBED CHANGES : Local contraction scour through the bridge area.

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
 FREQUENCY: Below Q25
 RELIEF ELEVATION: 331.3'
 DISCHARGE OVER ROAD @Q100: 5500 cfs

UPSTREAM STRUCTURE

TOWN: Bristol DISTANCE: 2.4 mi.
 HIGHWAY #: T.H. 5 STRUCTURE #: 11
 CLEAR SPAN: 103' CLEAR HEIGHT: 13'
 YEAR BUILT: 1973 FULL WATERWAY: Unknown
 STRUCTURE TYPE: Single span steel beam bridge with concrete deck

DOWNSTREAM STRUCTURE

TOWN: New Haven DISTANCE: 1.2 mi.
 HIGHWAY #: T.H. 4 STRUCTURE #: 11
 CLEAR SPAN: 97' CLEAR HEIGHT: 22'
 YEAR BUILT: 1969 FULL WATERWAY: Unknown
 STRUCTURE TYPE: Two-span concrete T-beam bridge

PROPOSED STRUCTURE

STRUCTURE TYPE: Two span steel plate girder bridge with concrete deck
 CLEAR SPAN(NORMAL TO STREAM): 2 spans at 100.5' = 201' total
 VERTICAL CLEARANCE ABOVE STREAMBED: 19'
 WATERWAY OF FULL OPENING: 3066 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 = 330.4'	VELOCITY = 5.8 fps
Q10 = 332.9'	" 8.0 fps
Q25 = 334.0'	" 8.7 fps
Q50 = 334.5'	" 10.2 fps
Q100 = 335.6'	" 11.3 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: Above Q100
 RELIEF ELEVATION: 334.8'
 DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 341.1' average (338.7' minimum)
 VERTICAL CLEARANCE: @ Q50 = 6.6' average (4.2' minimum)

SCOUR: Proposed bridge contraction scour = 6' at Q100 and 9' at Q500.
 Pier scour = 7' at Q100 and 6' at Q500. No evidence of long term aggradation or degradation.
 REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 150 cfs DEPTH OR ELEVATION:
 ORDINARY LOW WATER: 70 cfs Elev. 323' @ Br. 8, 325' @ Br. 7
 ORDINARY HIGH WATER: 1600 cfs Elev. 326' @ Br. 8 and Br. 7

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single span bridge to span the New Haven River
 CLEAR SPAN (NORMAL TO STREAM): 104' (145' minimum clear span along road)
 VERTICAL CLEARANCE ABOVE STREAMBED: Elevation 333.3' minimum
 WATERWAY AREA OF FULL OPENING: 1000 sq. ft. minimum

ADDITIONAL INFORMATION

Information for the existing bridge is based on the original Bridge 8 pony truss bridge and does not consider the temporary Maybey bridge that has been installed on top of it.
 Temporary bridge requirements for the bridge over the unnamed stream just east of the New Haven River are provided separately.

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TWO-WAY TRAFFIC ON A TEMPORARY BRIDGE.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY
4. THE APPROACHES FOR THE TEMPORARY BRIDGE SHALL BE PAVED.

DESIGN VALUES

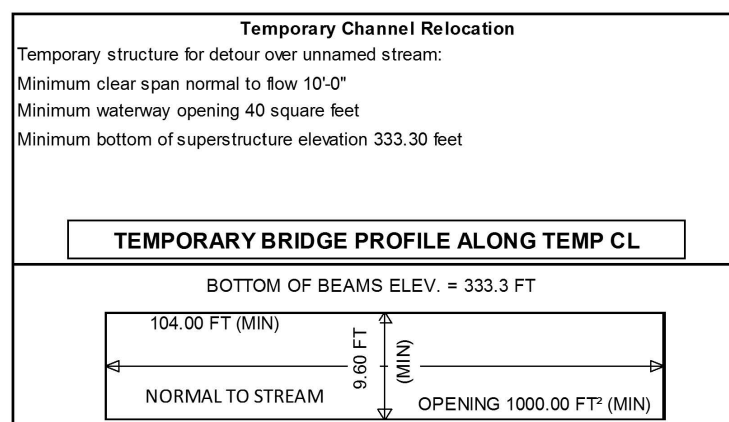
1. DESIGN LIVE LOAD	HL-93
2. FUTURE PAVEMENT	dp: 3.0 INCH
3. ABUTMENT BEARING TO BEARING LENGTH (TWO SPANS)	L: 361.00 FT (180.50 - 180.50) FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ: ---
5. PRESTRESSING STRAND	fy: ---
6. PRESTRESSED CONCRETE STRENGTH	f'c: ---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'ci: ---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'c: 4.0 KSI
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'c: 4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'c: 3.5 KSI
11. CONCRETE, CLASS C	f'c: 3.0 KSI
12. REINFORCING STEEL	fy: 60 KSI
13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	fy: 50 & 70 KSI
14. SOIL UNIT WEIGHT	γ: 0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	qn: 4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
17. NOMINAL BEARING RESISTANCE OF ROCK	qn: ---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
19. NOMINAL AXIAL PILE RESISTANCE	qp: 403.0 KIPS
20. PILE YIELD STRENGTH ASTM A572	fy: 50 KSI
21. PILE SIZE	HP 14X 89
22. EST. PILE LENGTH	Lp: 80 FT
23. PILE RESISTANCE FACTOR	φ: 0.65
24. LATERAL PILE DEFLECTION	Δ: ---
25. BASIC WIND SPEED	V3s: 90 MPH
26. MINIMUM GROUND SNOW LOAD	ps: 0.05 K/FT²
27. SEISMIC DATA	PGA: --- S: --- R: ---

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCKS						
	H-20	HL-93	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY							
POSTING							
OPERATING							
COMMENTS:							

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY $R_{pd} = 0.00$ KIP
2. PILE TEST RESISTANCE FACTOR $\phi = 0$
3. MAXIMUM PILE TIP ELEVATION 0.00 FT
4. 0



TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT	20 year ESAL for flexible pavement from 2012 to 2032 : 1911000
2012	2600	290	53	8.9	270	40 year ESAL for flexible pavement from 2012 to 2052 : 4465000
2032	3000	340	53	12.9	460	Design Speed : 40 mph

PROJECT NAME: **BRISTOL**

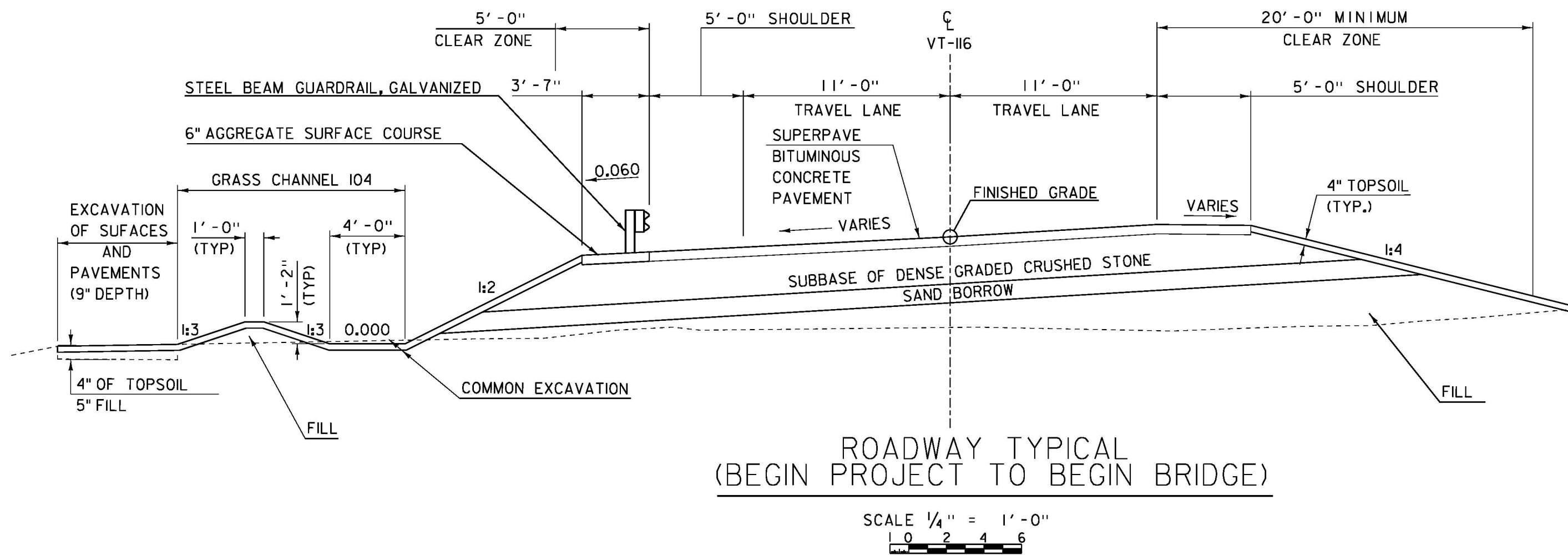
PROJECT NUMBER: **STP F 021-1(15)**

FILE NAME: s78187br8pi.xls PLOT DATE: 25-APR-2012
 PROJECT LEADER: M.EVANS-MONGEON DRAWN BY: G.ROKES
 DESIGNED BY: W.PELLETIER CHECKED BY: W.PELLETIER
PRELIMINARY INFORMATION SHEET 9 OF 37

1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
 1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
 3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IIS
 24" SUBBASE OF DENSE GRADED CRUSHED STONE
 12" SAND BORROW
 TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.025 GAL/SY
 BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

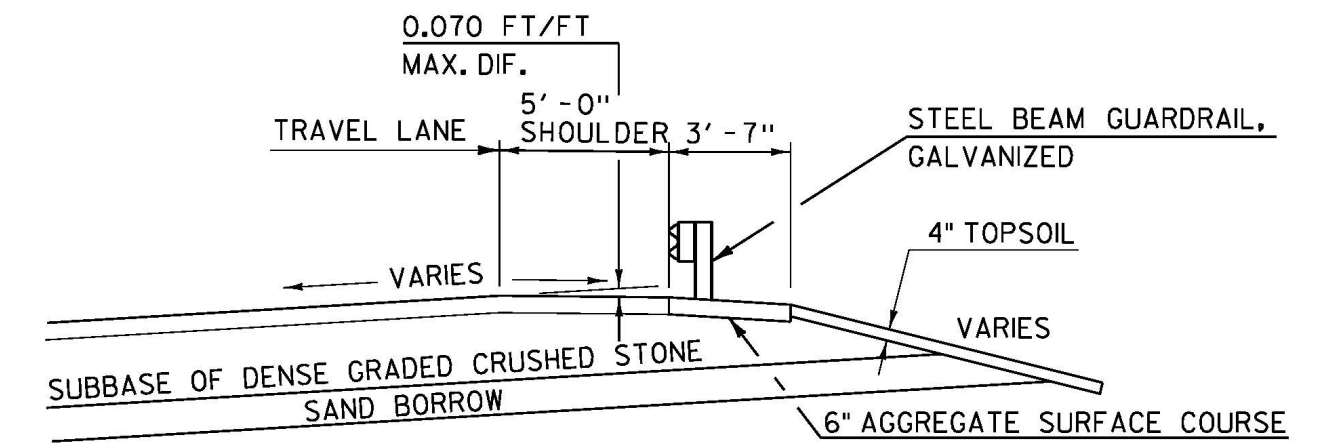
MATERIAL ITEM	THICKNESS TOLERANCES
SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TOTAL DEPTH)	± 1/4"
SUBBASE OF DENSE GRADED CRUSHED STONE	± 1"
SAND BORROW	± 1"
AGGREGATE SURFACE COURSE	± 1/2"
PG BINDER GRADE - SEE GENERAL SPECIAL PROVISIONS SECTION 406	

MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.
 SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH
 STANDARD SHEET B - 5.



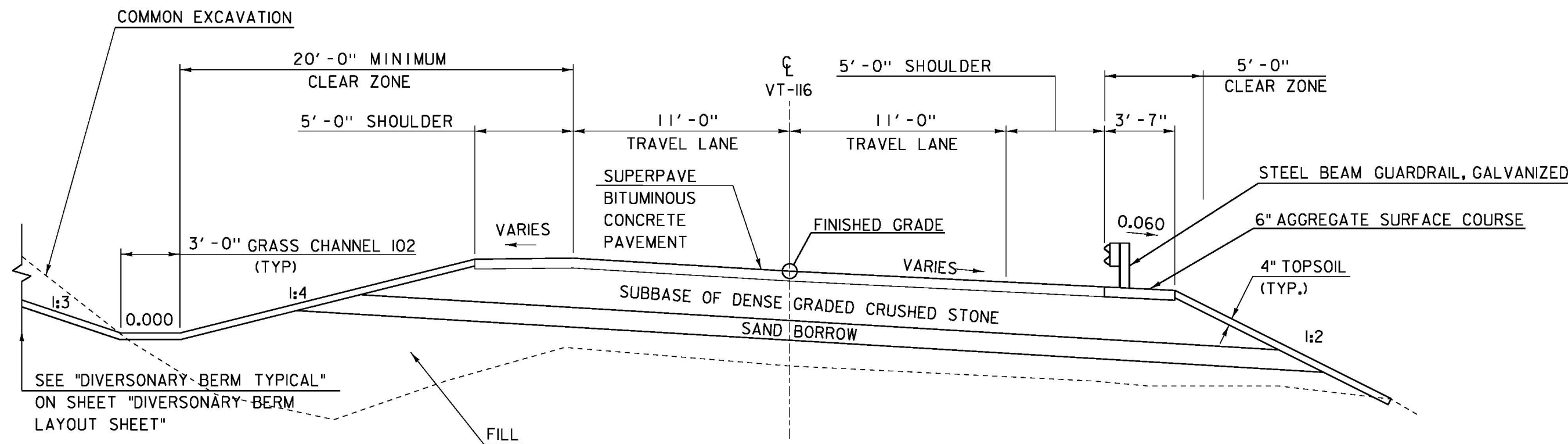
ROADWAY TYPICAL
(BEGIN PROJECT TO BEGIN BRIDGE)

SCALE 1/4" = 1'-0"



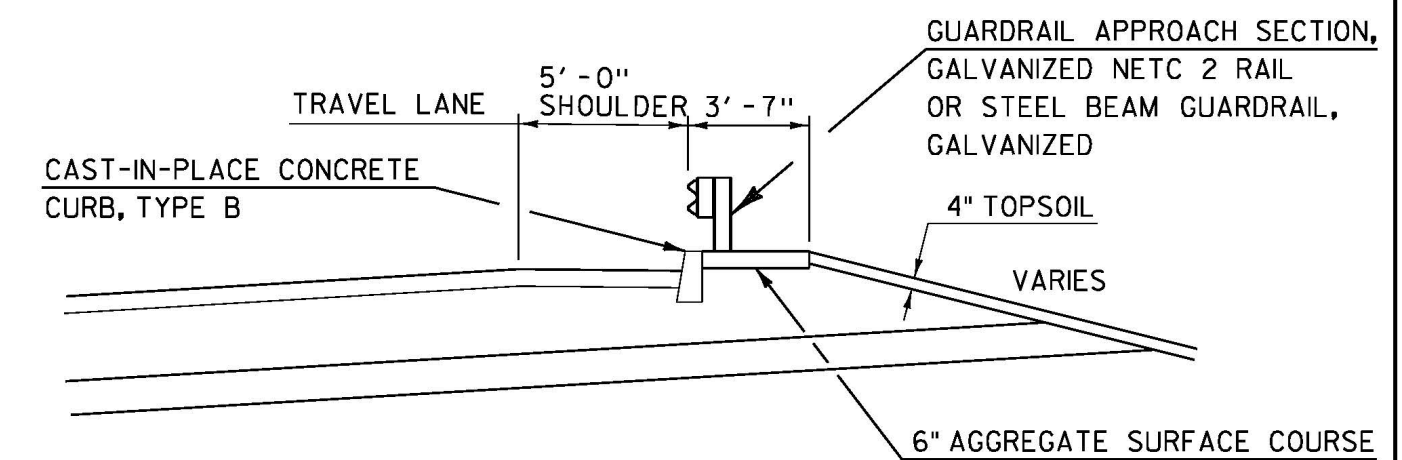
ROADWAY
BANKED WITH GUARDRAIL

NTS



ROADWAY TYPICAL
(END BRIDGE TO END PROJECT)

SCALE 1/4" = 1'-0"

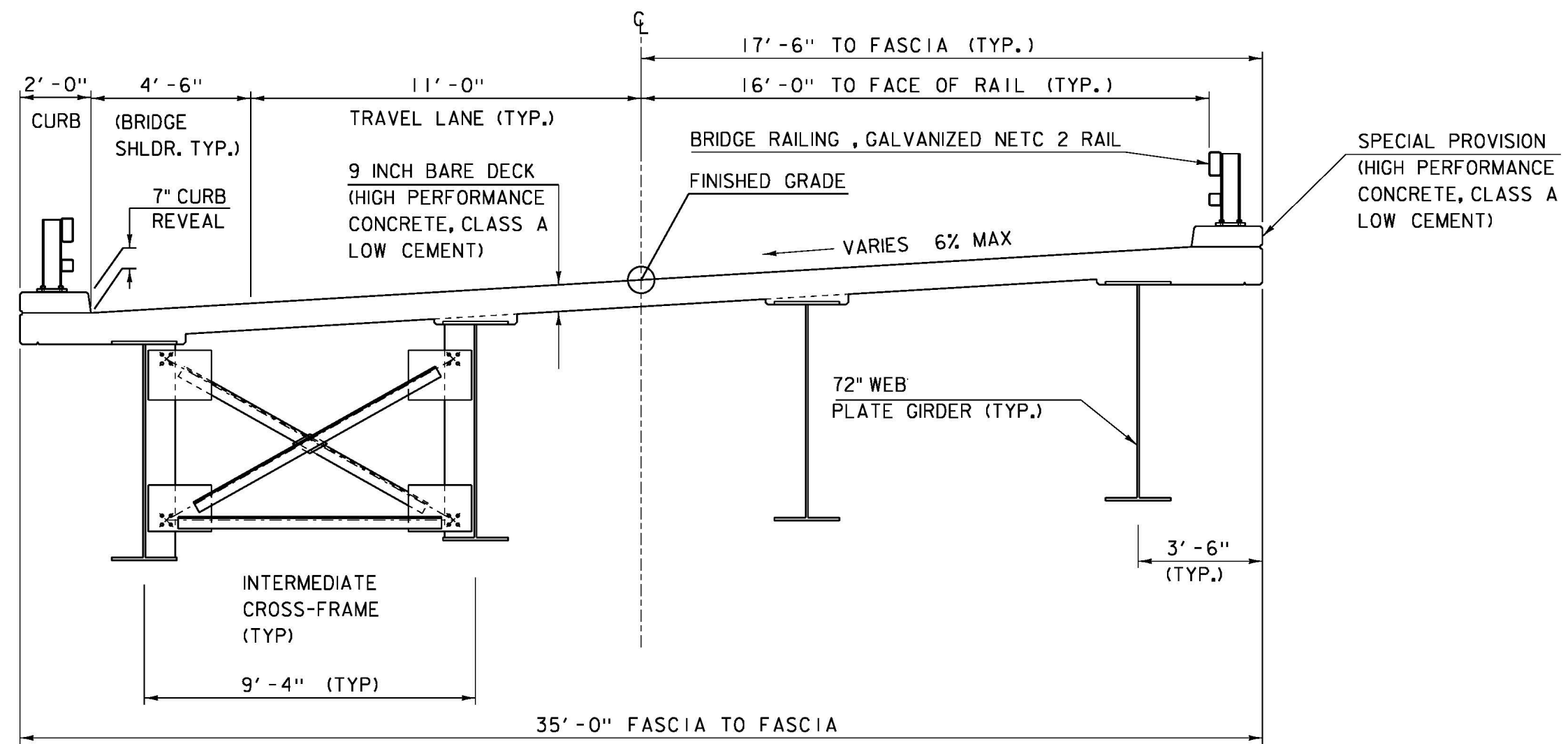


ROADWAY, BANKED WITH
CAST-IN-PLACE CONCRETE CURB, TYPE B

NTS

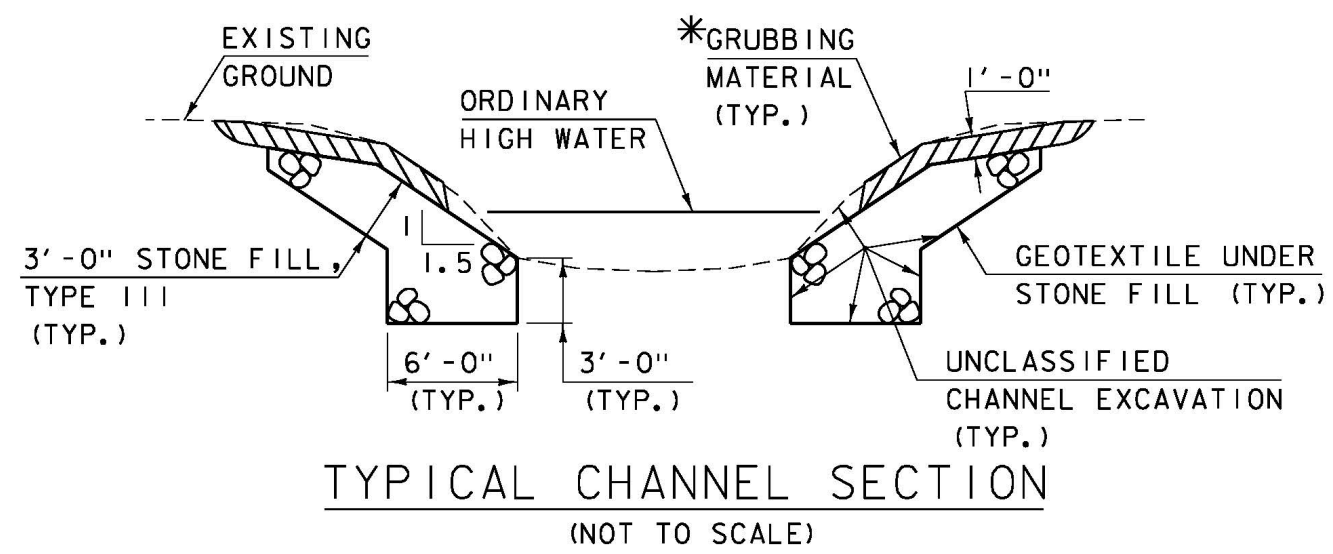
PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1(15)

FILE NAME: /78f187/STR/ s78f187typ.dgn PLOT DATE: 25-APR-2012
 PROJECT LEADER: M.EVANS-MONGEON DRAWN BY: G.ROKES
 DESIGNED BY: W.PELLETIER CHECKED BY: W.PELLETIER
 ROADWAY TYPICALS SHEET 10 OF 37



BRIDGE TYPICAL

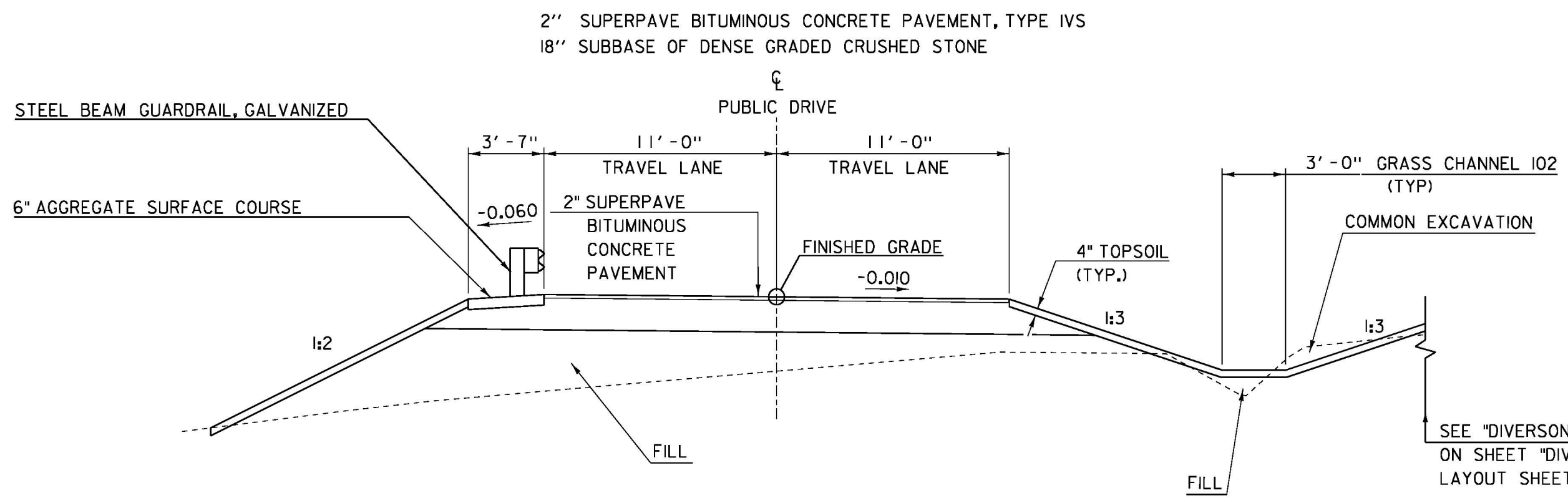
SCALE $\frac{3}{8}$ " = 1'-0"



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

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

FILE NAME: /78f187/STR/ s78f187typ.dgn PLOT DATE: 25-APR-2012
PROJECT LEADER: M.EVANS-MONGEON DRAWN BY: G.ROKES
DESIGNED BY: W.PELLETTIER CHECKED BY: W.PELLETTIER
BRIDGE TYPICAL SHEET 11 OF 37



PUBLIC DRIVE TYPICAL

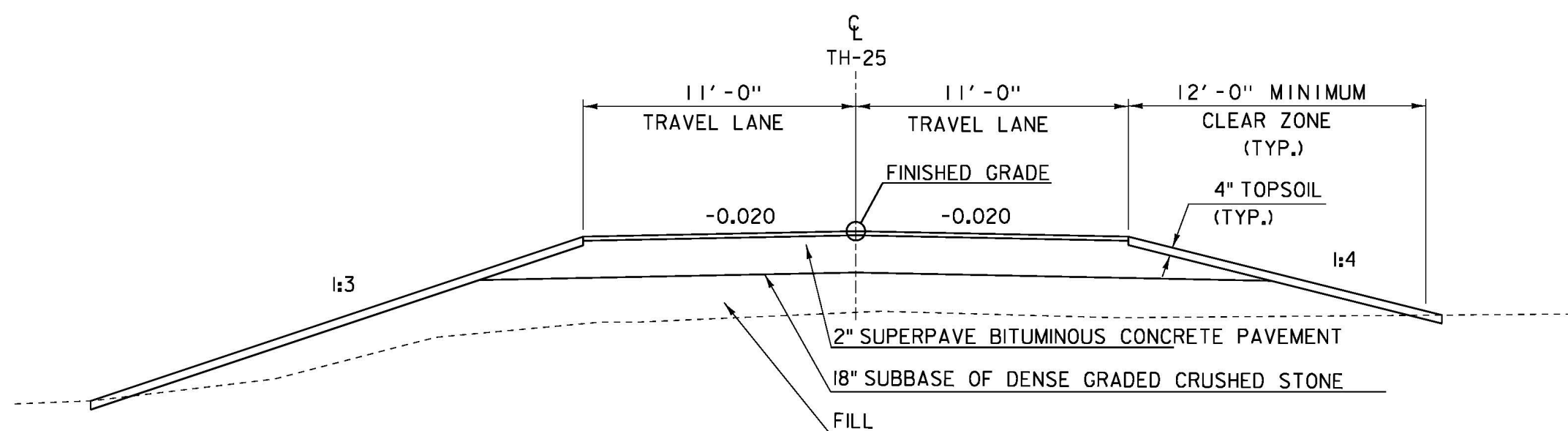
SCALE 1/4" = 1'-0"
 1 0 2 4 6

MATERIAL ITEM

THICKNESS TOLERANCES

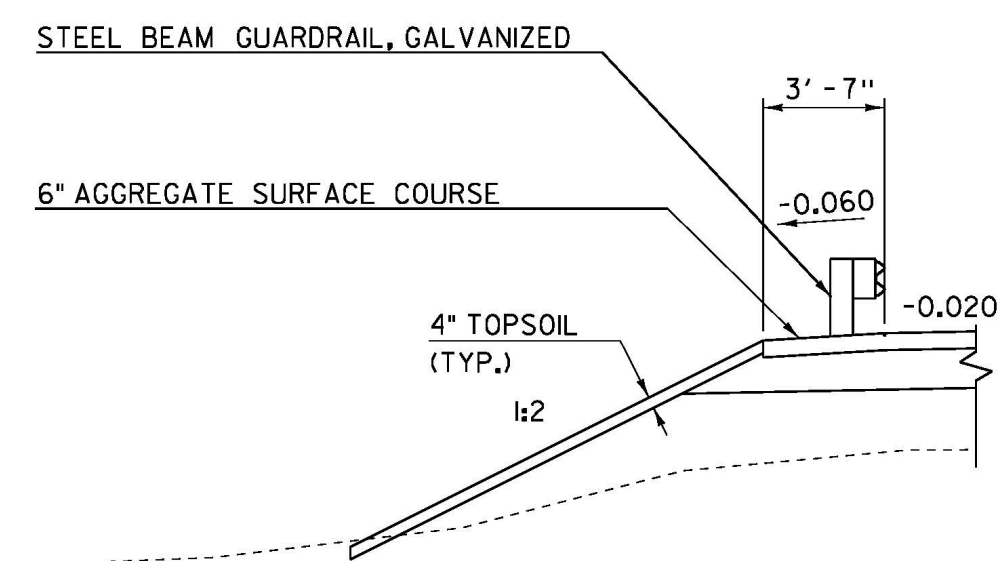
SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TOTAL DEPTH)	± 1/4"
SUBBASE OF DENSE GRADED CRUSHED STONE	± 1"
SAND BORROW	± 1"
AGGREGATE SURFACE COURSE	± 1/2"
PG BINDER GRADE - SEE GENERAL SPECIAL PROVISIONS SECTION 406	

SEE "DIVERSONARY BERM TYPICAL" ON SHEET "DIVERSONARY BERM LAYOUT SHEET"



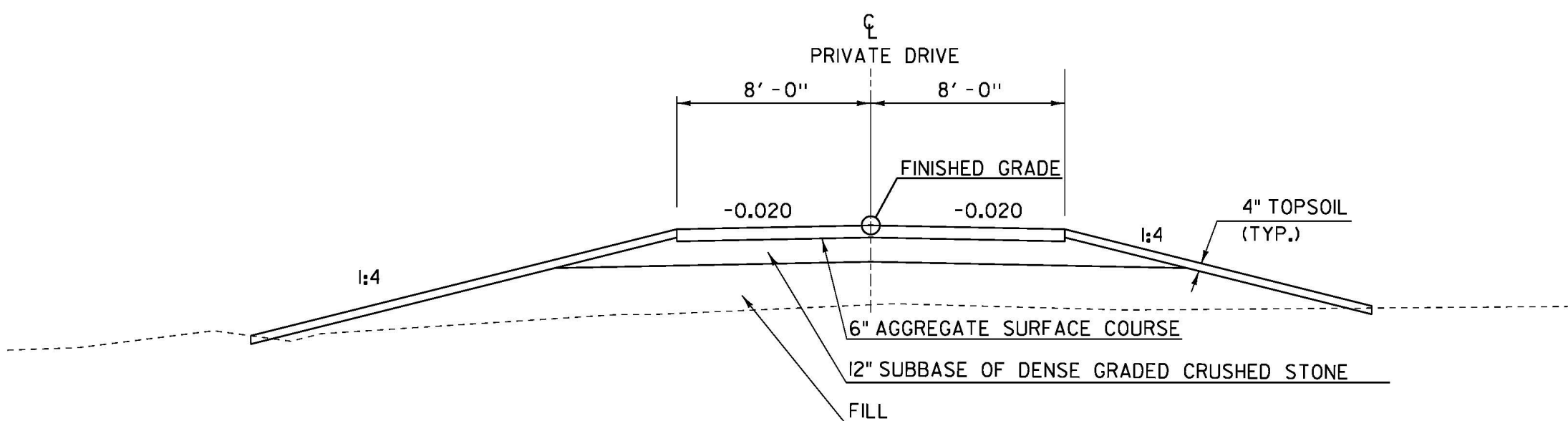
TH-25 TYPICAL

SCALE 1/4" = 1'-0"
 1 0 2 4 6



TH-25 WITH GUARDRAIL

NTS

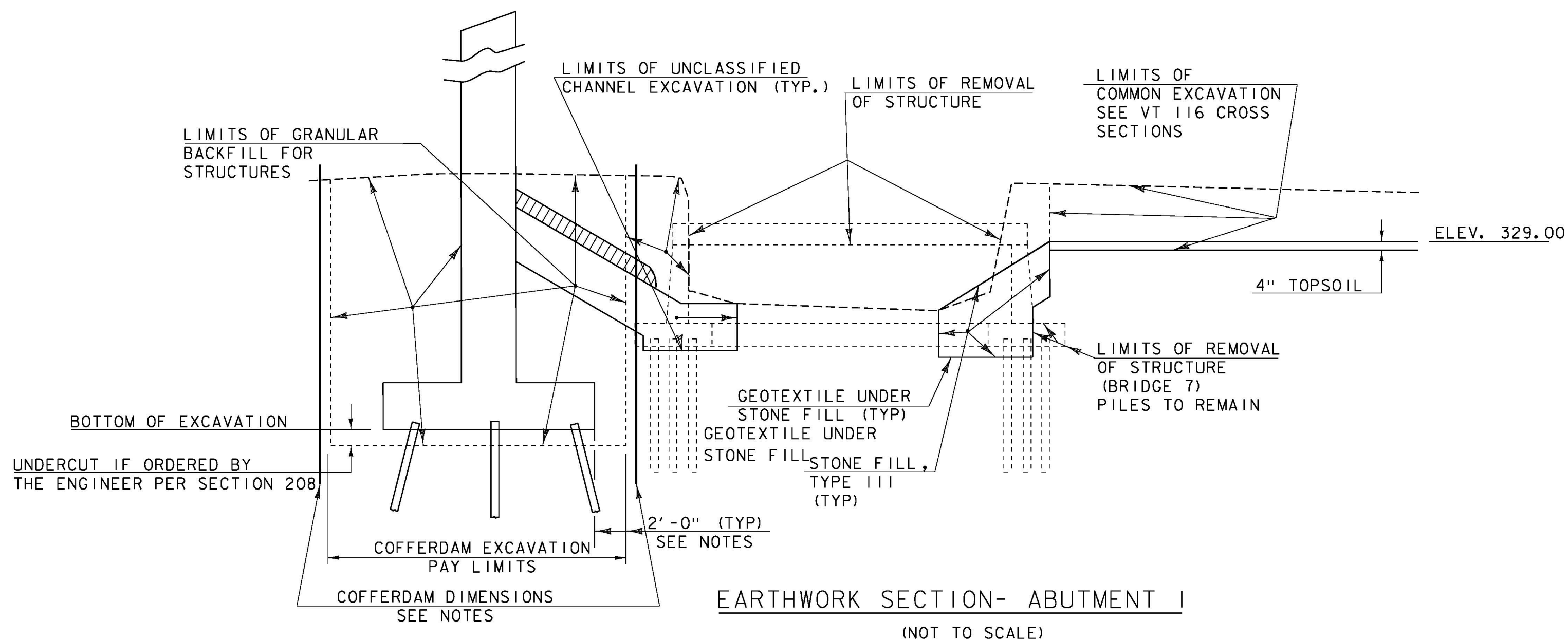


PRIVATE DRIVE TYPICAL

SCALE 1/4" = 1'-0"
 1 0 2 4 6

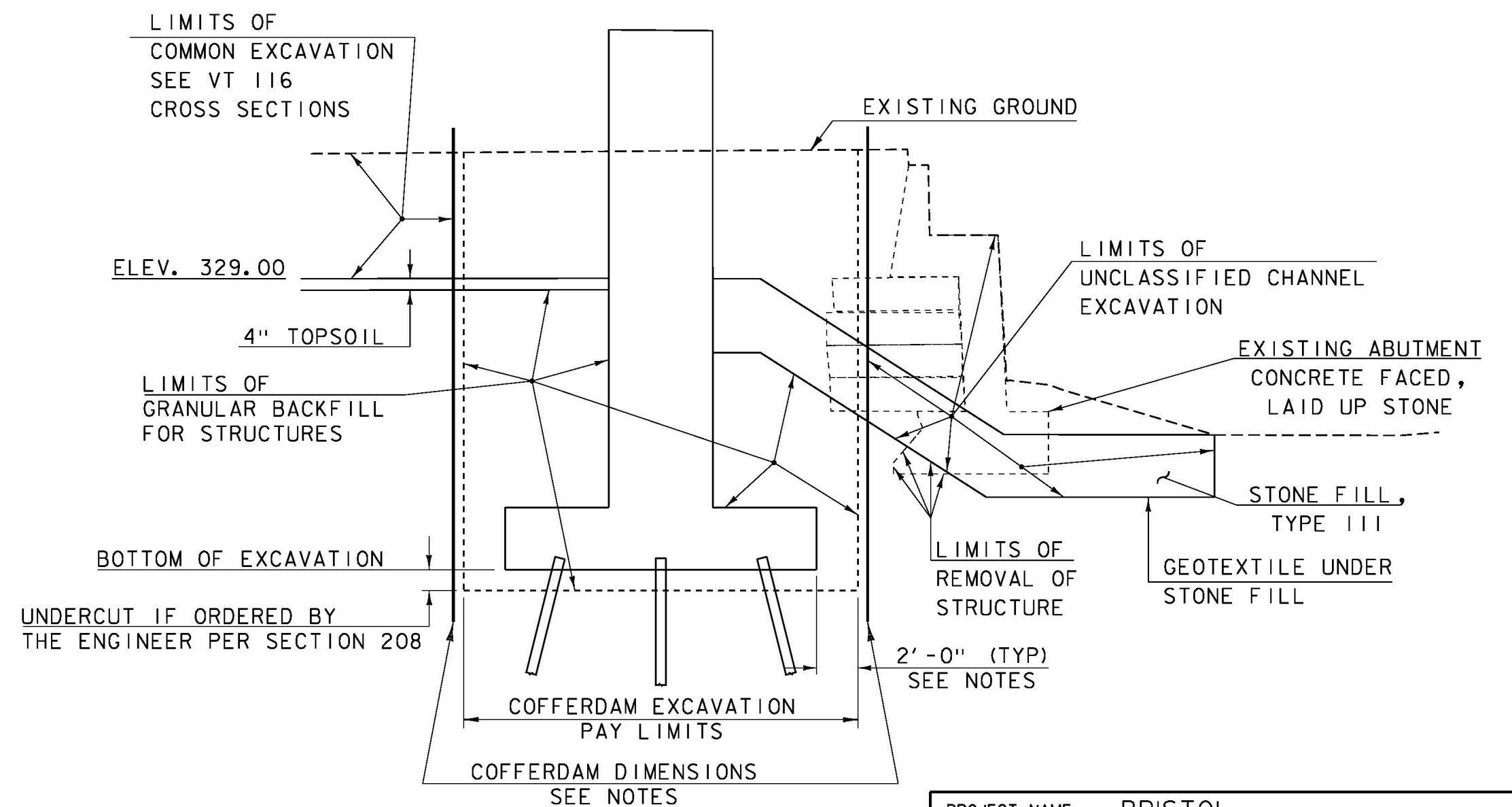
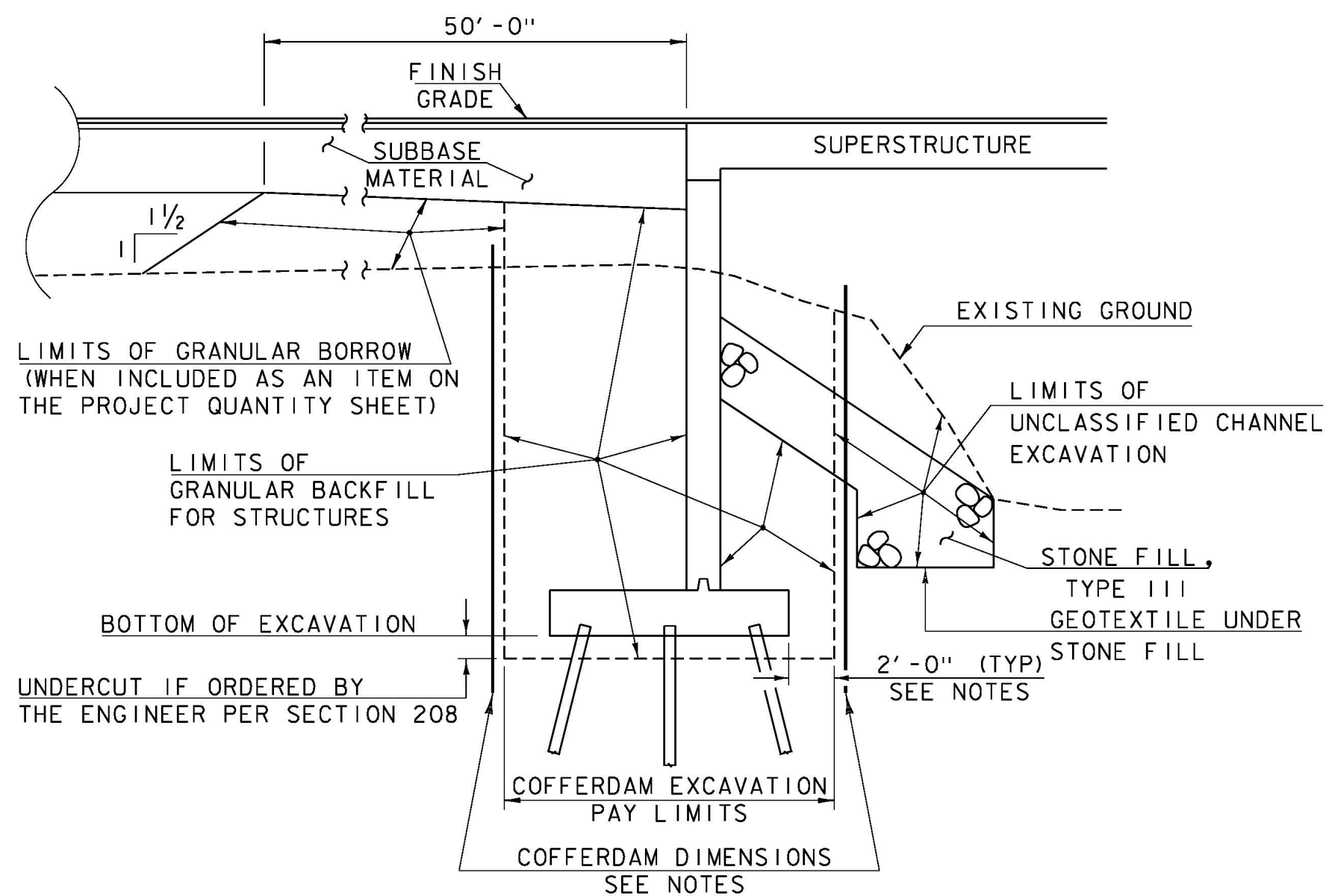
PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1(15)

FILE NAME: /78f187/STR/ s78f187typ.dgn PLOT DATE: 25-APR-2012
 PROJECT LEADER: M.EVANS-MONGEON DRAWN BY: G.ROKES
 DESIGNED BY: W.PELLETIER CHECKED BY: W.PELLETIER
 PUBLIC DRIVE AND TH-25 TYPICAL SHEET 12 OF 37



COFFERDAM NOTES

1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE NO MORE THAN 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. ONE FOOT UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.



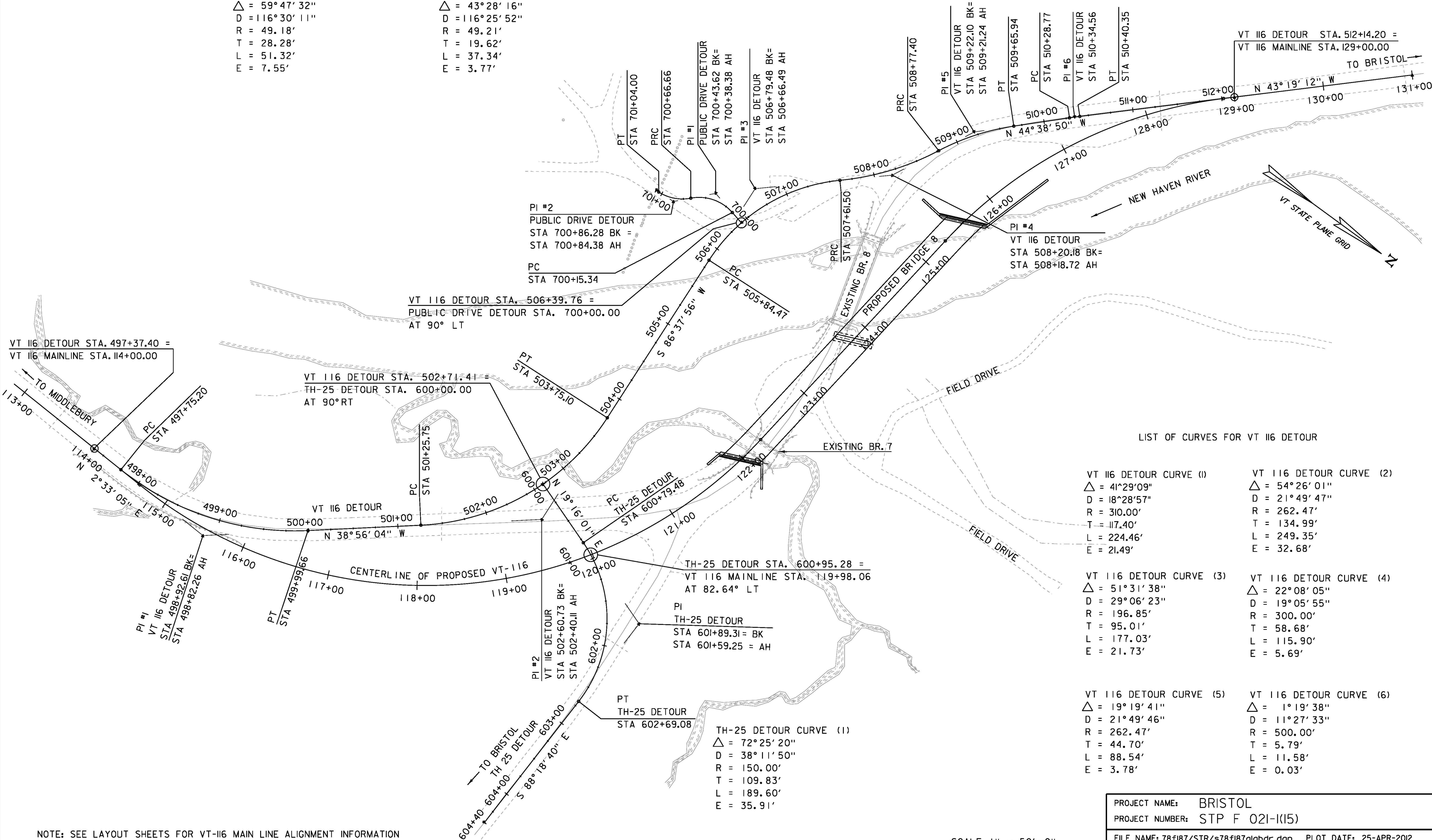
COFFERDAM AND EARTHWORK SECTION- ABUTMENT 2
(NOT TO SCALE)

COFFERDAM AND EARTHWORK SECTION- PIER
(NOT TO SCALE)

PROJECT NAME:	BRISTOL	FILE NAME:	/78f187/STR/ s78f187typ.dgn	PLOT DATE:	25-APR-2012
PROJECT NUMBER:	STP F 021-I(15)	PROJECT LEADER:	M.EVANS-MONGEON	DRAWN BY:	G.ROKES
		DESIGNED BY:	W.PELLETIER	CHECKED BY:	W.PELLETIER
		EARTHWORK TYPICALS		SHEET	13 OF 37

PUBLIC DRIVE DETOUR CURVE (1) PUBLIC DRIVE DETOUR CURVE (2)

$\Delta = 59^{\circ}47'32''$ $\Delta = 43^{\circ}28'16''$
 $D = 116^{\circ}30'11''$ $D = 116^{\circ}25'52''$
 $R = 49.18'$ $R = 49.21'$
 $T = 28.28'$ $T = 19.62'$
 $L = 51.32'$ $L = 37.34'$
 $E = 7.55'$ $E = 3.77'$



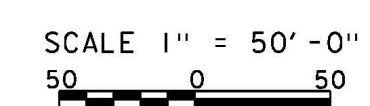
LIST OF CURVES FOR VT 116 DETOUR

VT 116 DETOUR CURVE (1)	VT 116 DETOUR CURVE (2)
$\Delta = 41^{\circ}29'09''$	$\Delta = 54^{\circ}26'01''$
$D = 18^{\circ}28'57''$	$D = 21^{\circ}49'47''$
$R = 310.00'$	$R = 262.47'$
$T = 117.40'$	$T = 134.99'$
$L = 224.46'$	$L = 249.35'$
$E = 21.49'$	$E = 32.68'$
VT 116 DETOUR CURVE (3)	VT 116 DETOUR CURVE (4)
$\Delta = 51^{\circ}31'38''$	$\Delta = 22^{\circ}08'05''$
$D = 29^{\circ}06'23''$	$D = 19^{\circ}05'55''$
$R = 196.85'$	$R = 300.00'$
$T = 95.01'$	$T = 58.68'$
$L = 177.03'$	$L = 115.90'$
$E = 21.73'$	$E = 5.69'$
VT 116 DETOUR CURVE (5)	VT 116 DETOUR CURVE (6)
$\Delta = 19^{\circ}19'41''$	$\Delta = 1^{\circ}19'38''$
$D = 21^{\circ}49'46''$	$D = 11^{\circ}27'33''$
$R = 262.47'$	$R = 500.00'$
$T = 44.70'$	$T = 5.79'$
$L = 88.54'$	$L = 11.58'$
$E = 3.78'$	$E = 0.03'$

TH-25 DETOUR CURVE (1)

$\Delta = 72^{\circ}25'20''$
 $D = 38^{\circ}11'50''$
 $R = 150.00'$
 $T = 109.83'$
 $L = 189.60'$
 $E = 35.91'$

NOTE: SEE LAYOUT SHEETS FOR VT-116 MAIN LINE ALIGNMENT INFORMATION



PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP F 021-1(15)
FILE NAME:	78f187/STR/s78f187algbdr.dgn
PROJECT LEADER:	M.EVANS-MONGEON
DESIGNED BY:	W.PELLETIER
DETOUR ALIGNMENT SHEET	
PLOT DATE:	25-APR-2012
DRAWN BY:	G.ROKES
CHECKED BY:	W.PELLETIER
SHEET	14 OF 37

GPS CONTROL POINTS

HVCTRL #1

CGS TRIANGULATION STATION DISC

"BRISTOL 2 1970"

NORTH = 595643.717
 EAST = 1485447.780
 ELEV. = 577.427

STATION IS LOCATED ABOUT 0.8 KM (0.5 MILE) WEST OF CENTER OF BRISTOL, IN THE WEST ANGLE OF THE T-INTERSECTION OF STATE HIGHWAY 17 AND A MACADAM ROAD RUNNING NORTH, UP ON A LOW CUTBANK, IN SOUTHWEST CORNER OF SCHOOL PLAYGROUND, FORMERLY BRISTOL AIRPORT. TO REACH STATION FROM THE MAIN INTERSECTION IN CENTER OF BRISTOL, GO WEST ON STATE HIGHWAY 17 FOR 0.97 KM (0.6 MILE) TO STATION ON RIGHT, WHERE THE HIGHWAY BEGINS TO CURVE LEFT, DOWNGRADE. STATION MARK IS A STANDARD DISK STAMPED BRISTOL 2 1910, SET IN TOP OF A 0.25 m (10 INCH) DIAMETER, CONCRETE MONUMENT FLUSH WITH THE GROUND. IT IS 21 m (69 FEET) NORTHWEST OF CENTER LINE OF HIGHWAY 17, 13.4 m (44 FEET) WEST-NORTHWEST OF CENTER LINE OF MACAOAM SIOE ROAD, 1.4 m (4.5 FEET) NORTH OF POWER POLE 29, 6.64 m (21.8 FEET) NORTH OF A FIRE HYORANT, AND 0.46 m (1.5 FEET) SOUTHWEST OF A METAL WITNESS POST

HVCTRL #2

STANDARD DISK STAMPED

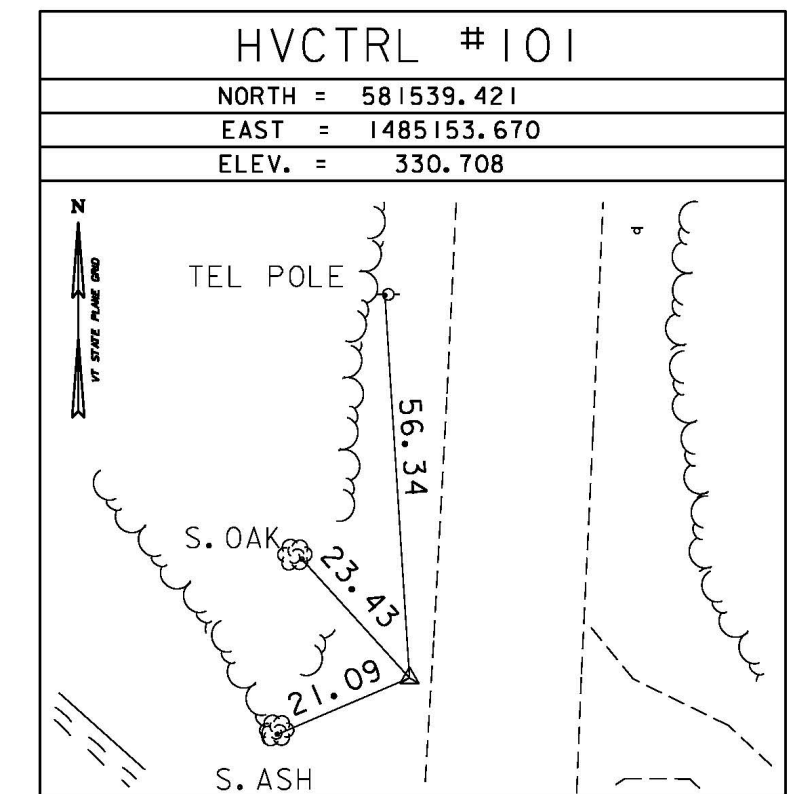
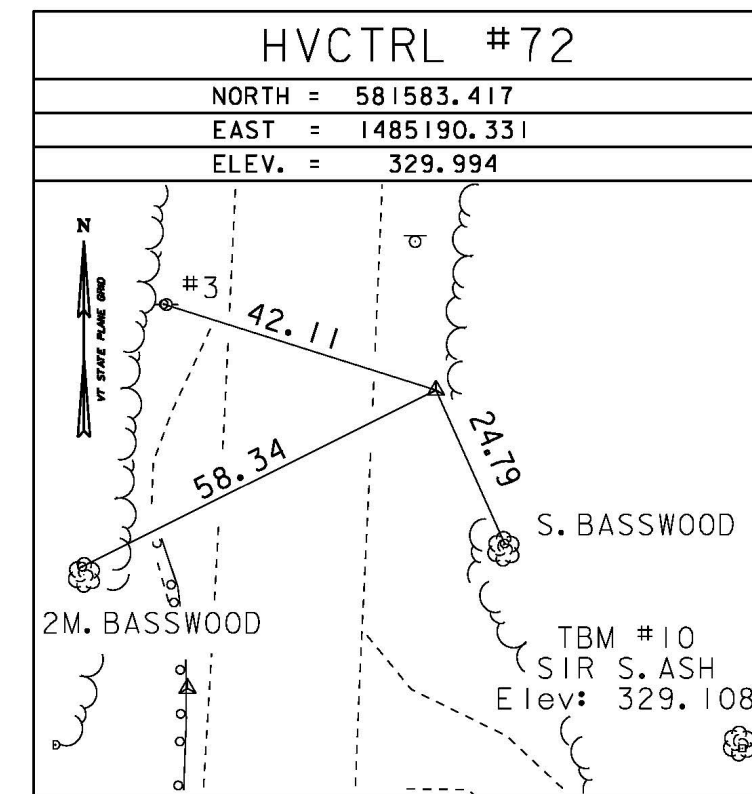
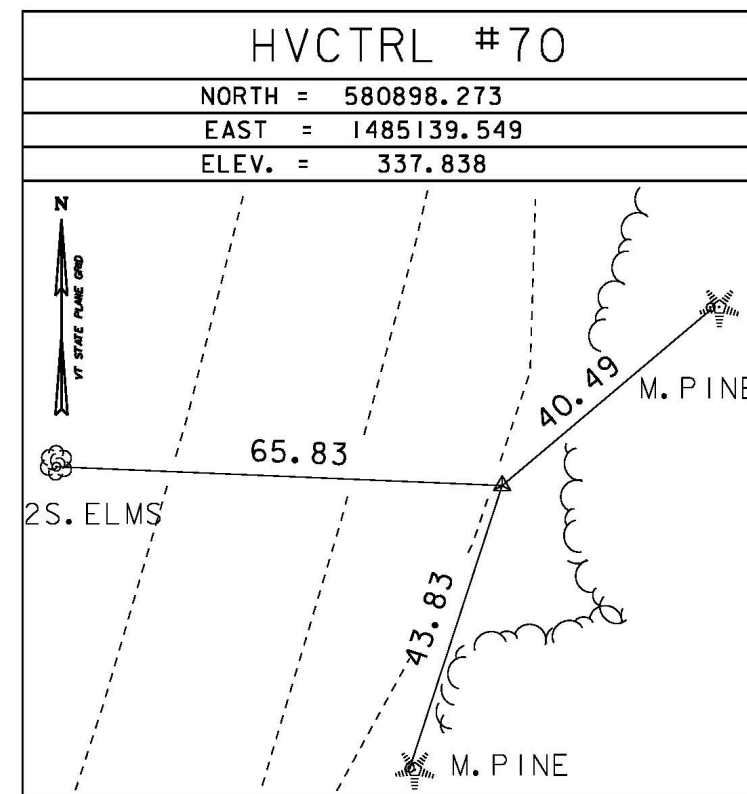
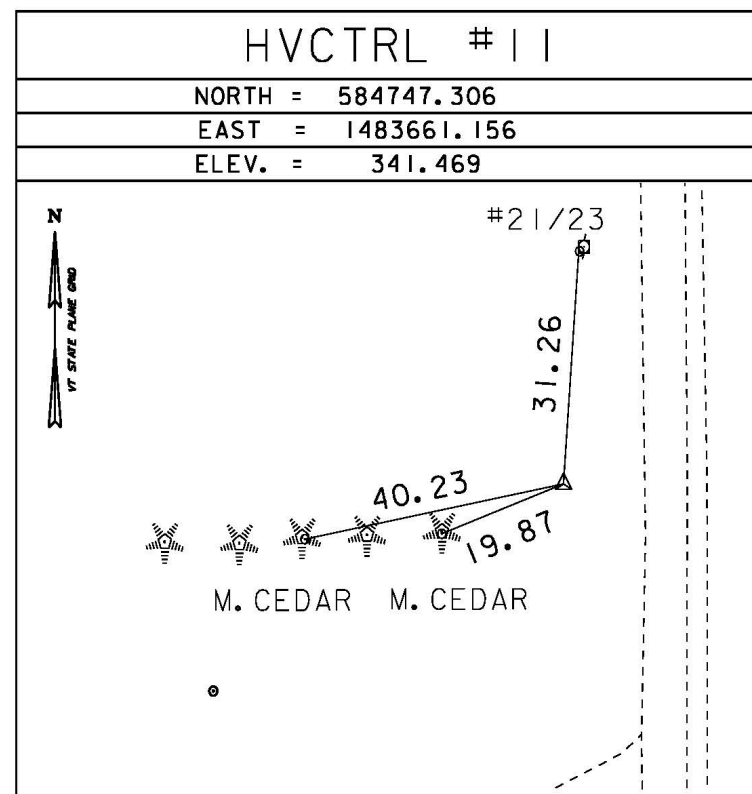
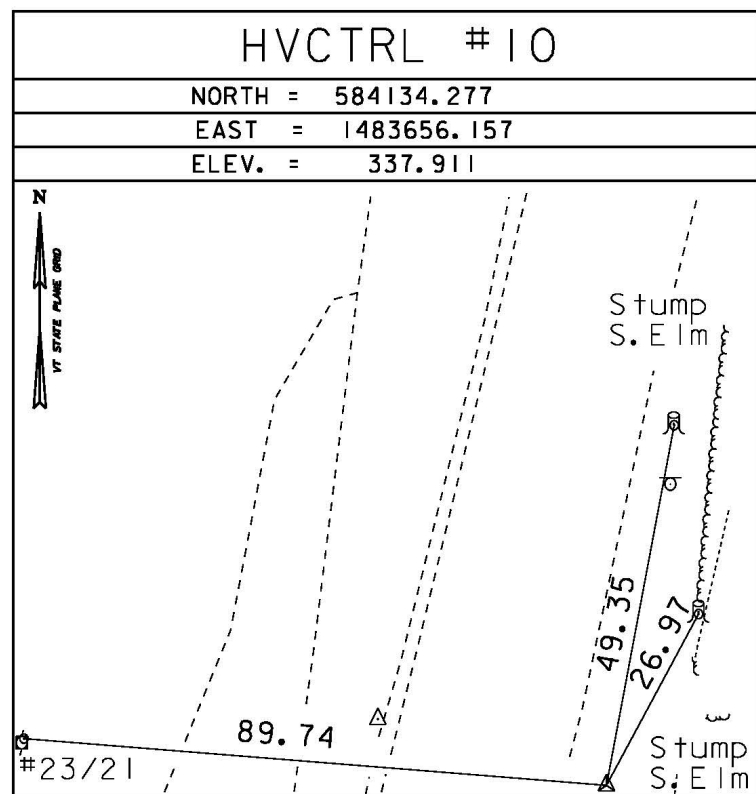
"POWERLINE 1991"

NORTH = 592458.116
 EAST = 1466209.098
 ELEV. = 425.521

GENERAL LOCATION, NEW HAVEN, VT. TO REACH FROM THE INTERSECTION OF VT ROUTE 17 EAST AND US ROUTE 7 IN NEW HAVEN JUNCTION, GO EAST ALONG VT ROUTE 17 FOR 1.4 KM (0.9 MILE) TO A POWERLINE CROSSING AND THE MARK ON THE LEFT. THE MARK IS, SET FLUSH WITH GROUND SURFACE IN THE TOP OF A 25 cm (1 FOOT) DIAMETER CONCRETE MONUMENT. IT IS 12.7 m (41.7 FEET) NORTH OF AND ABOUT LEVEL WITH THE CENTERLINE OF VT ROUTE 17, 3.7 m (12.1 FEET) EAST OF POLE NO.3, 15.3 m (50.2 FEET) WEST OF POLE NO.303, AND 0.8 m (2.6 FEET) NORTH OF A FIBERGLASS WITNESS POST.

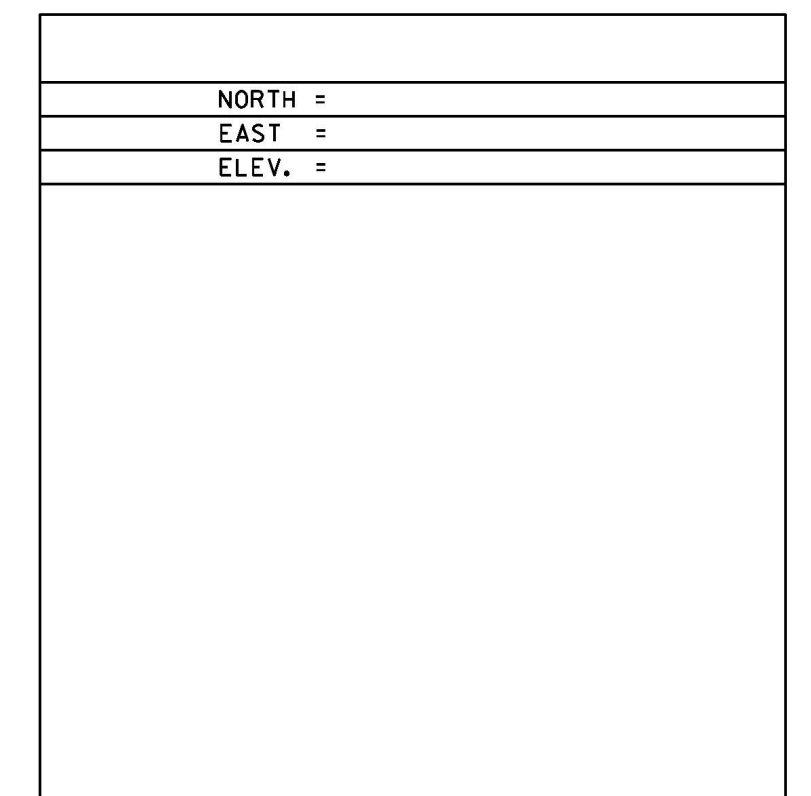
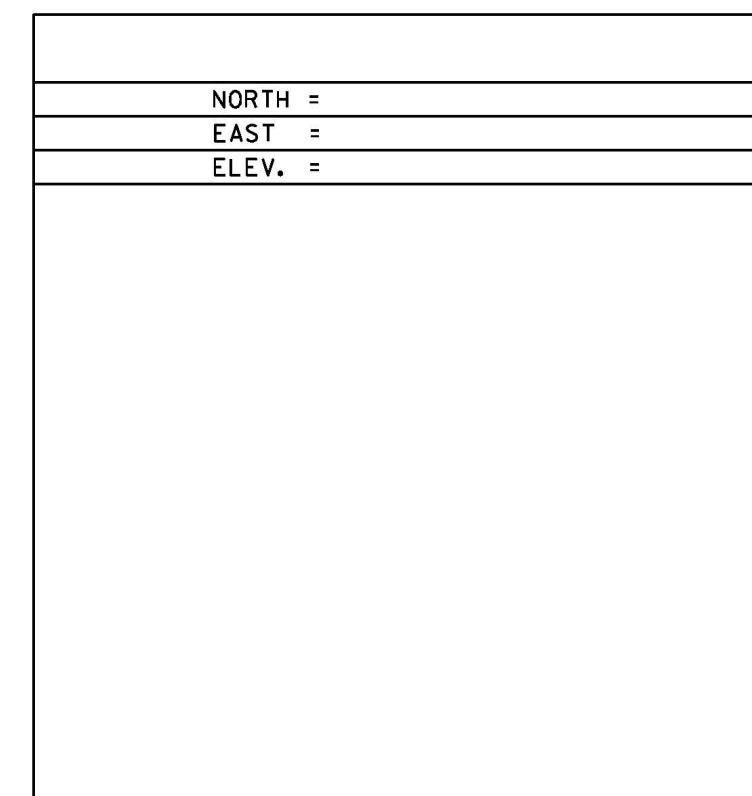
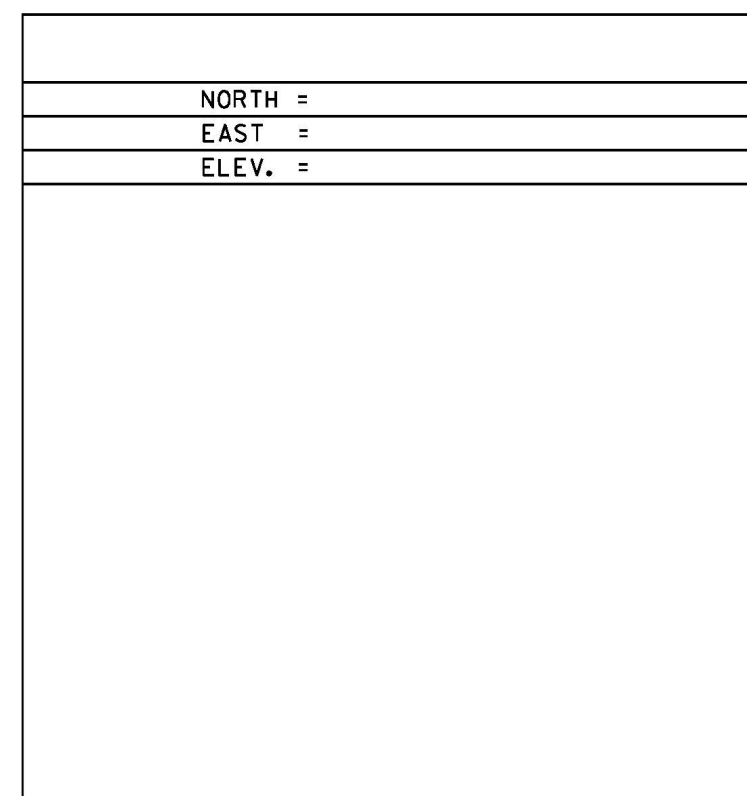
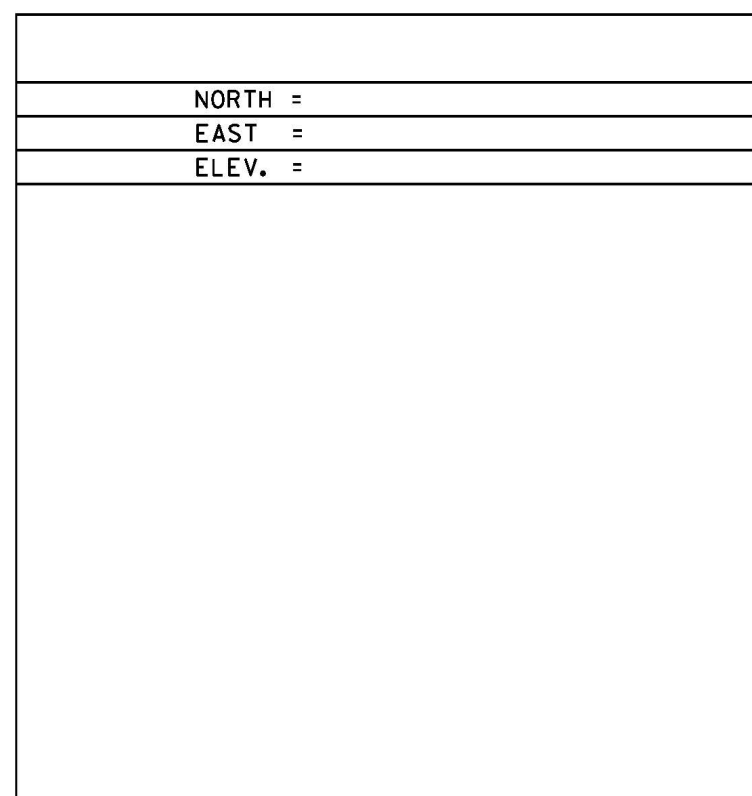
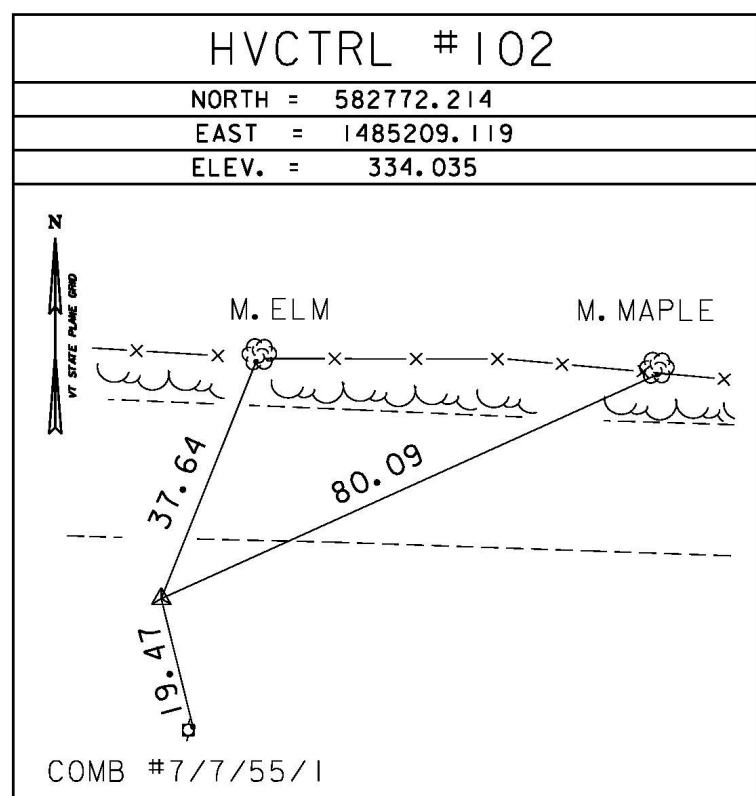
* Description provided by the Vermont Agency of Transportation Geodetic Survey Unit

TRAVERSE TIES



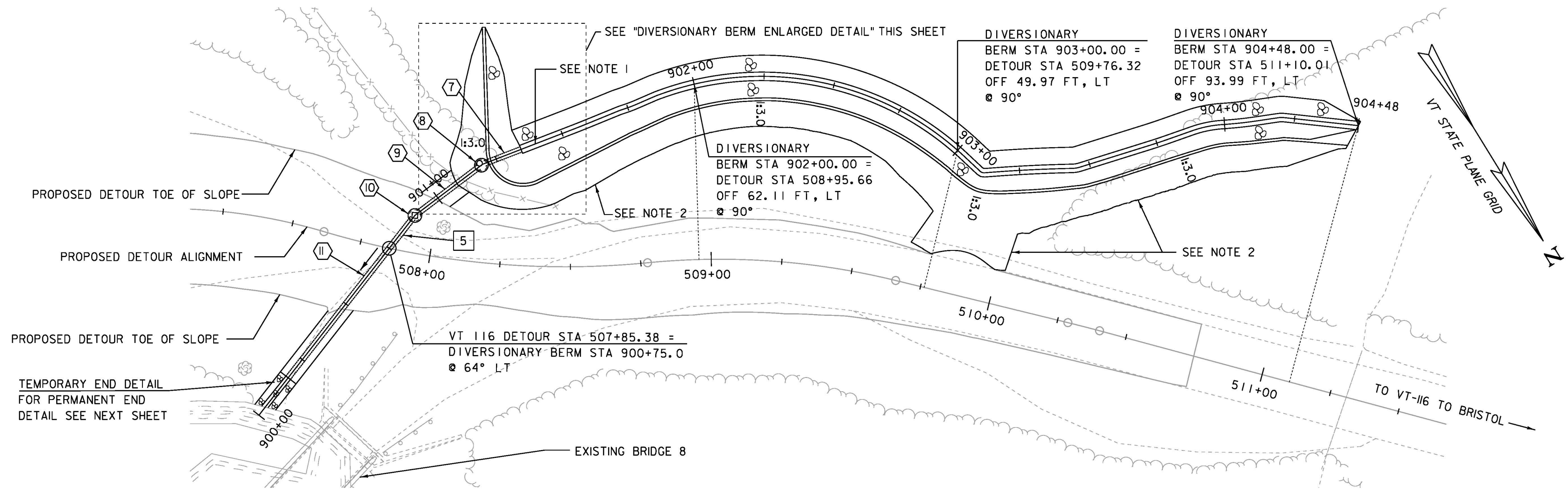
* MAIN TRAVERSE COMPLETED: MAY 10, 1999 BY: CLD

ALIGNMENT TIES



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (96)
ADJUSTMENT	Unknown

PROJECT NAME:	Bristol
PROJECT NUMBER:	BRF 021-1(15)
FILE NAME:	78f187\su.\x78f187.tif.dgn
PROJECT LEADER:	DRAWN BY: R. Bullock
DESIGNED BY:	CHECKED BY:
	SHEET 15 OF 37



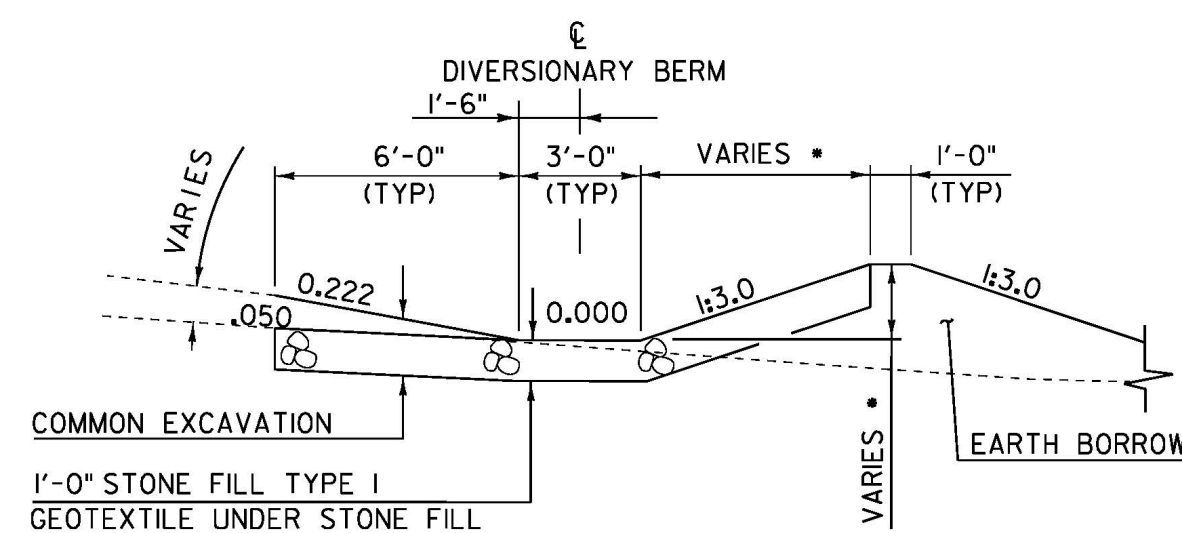
DIVERSIONARY BERM LAYOUT

SCALE 1" = 20'-0"
20 0 20

NOTE 1: THIS DIVERSIONARY BERM WILL BE USED AS A PERMANENT OFF-SITE WATER CONVEYANCE, THIS DIVERSIONARY BERM AND ALL NECESSARY DRAINAGE STRUCTURES, PIPES TO CONVEY DIVERTED WATER TO THE NEW HAVEN RIVER WILL BE IN PLACE PRIOR TO PLACEMENT OF THE VT-116 DETOUR. THE ALIGNMENT FILE WILL BE INCLUDED FOR PROPER LAYOUT.

NOTE 2: THIS SIDE SLOPE WILL INTERSECT EXISTING GROUND AS INDICATED WHILE THE DETOUR IS IN PLACE. SEE "DIVERSIONARY BERM CROSS SECTION SHEETS" FOR SIDE SLOPE INFORMATION. ONCE THE DETOUR IS REMOVED AND FINAL GRADING IS UNDERWAY, THE SIDE SLOPE WILL BE EXTENDED TO MATCH FINAL GRADING AS INDICATED IN PROJECT LAYOUT SHEETS AND VT-116 CROSS SECTIONS SHEETS.

NOTE 3: SEE DIVERSIONARY BERM PROFILE FOR ELEVATIONS.

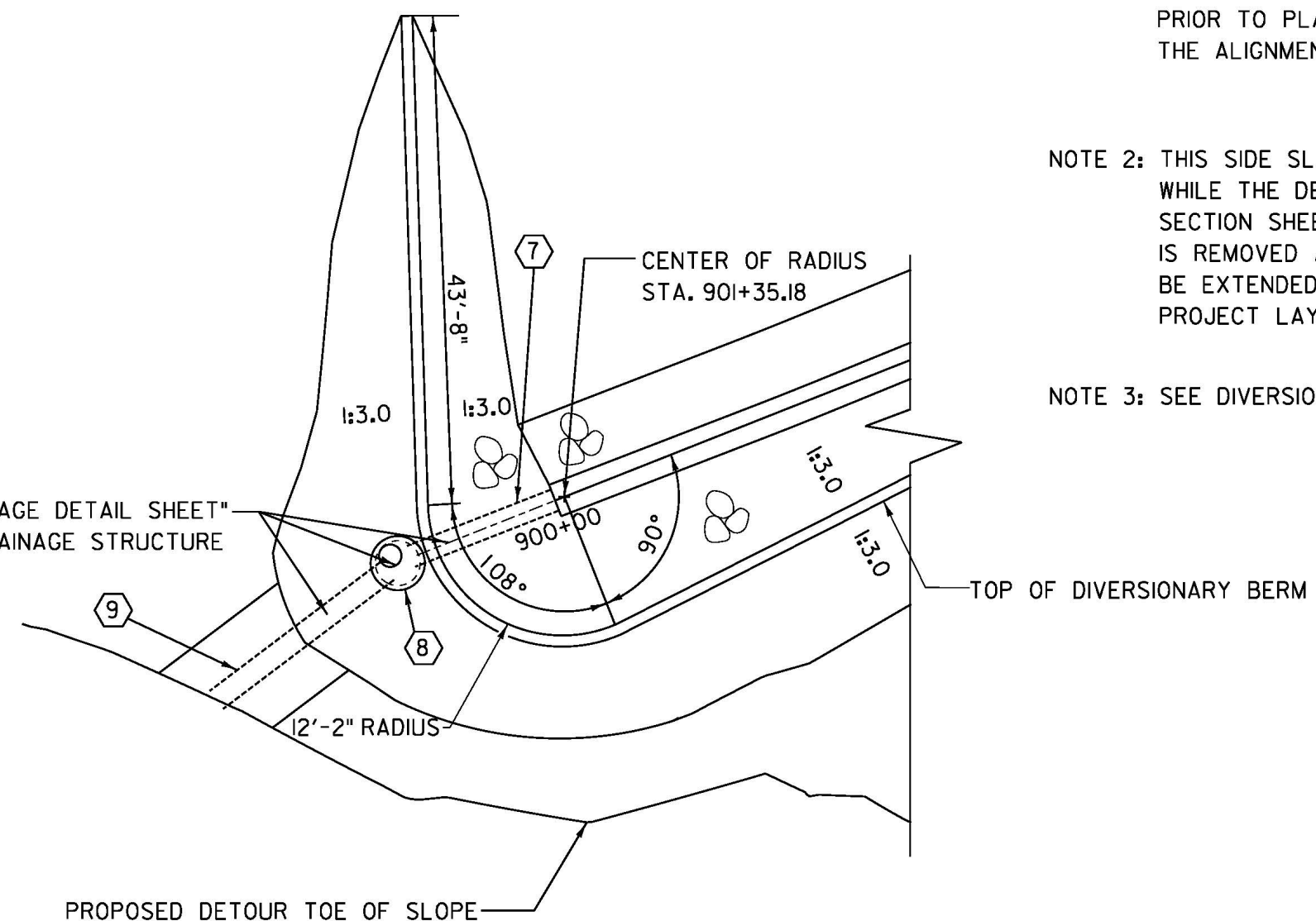


DIVERSIONARY BERM TYPICAL

NTS

• FOR HEIGHT AND WIDTH DIMENSIONS SEE "DIVERSIONARY BERM SECTION SHEETS"

SEE "PUBLIC DRIVE DRAINAGE DETAIL SHEET" FOR INFORMATION ON DRAINAGE STRUCTURE

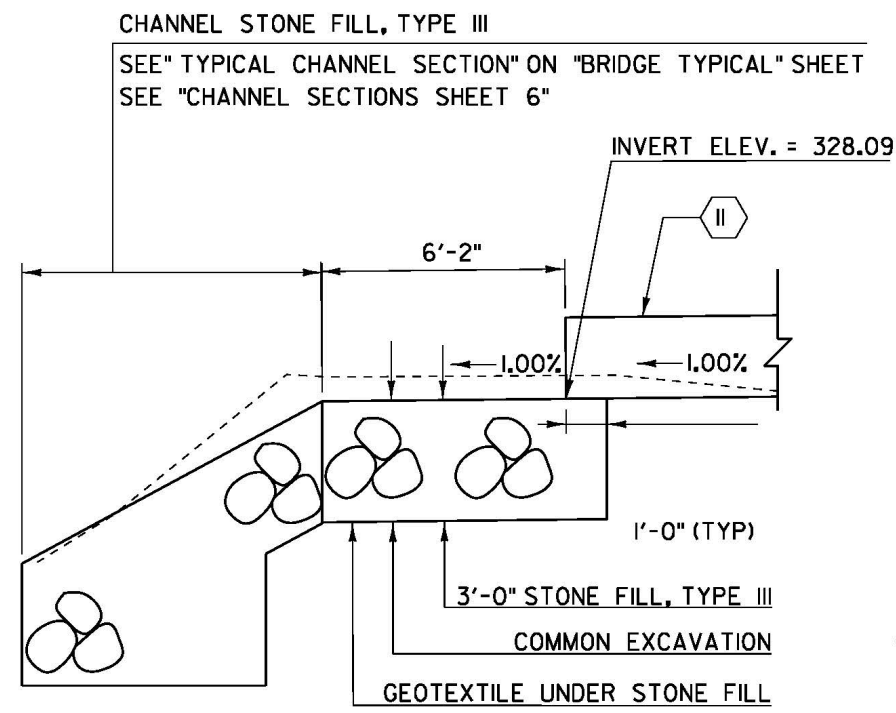


DIVERSIONARY BERM ENLARGED DETAIL

NTS

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

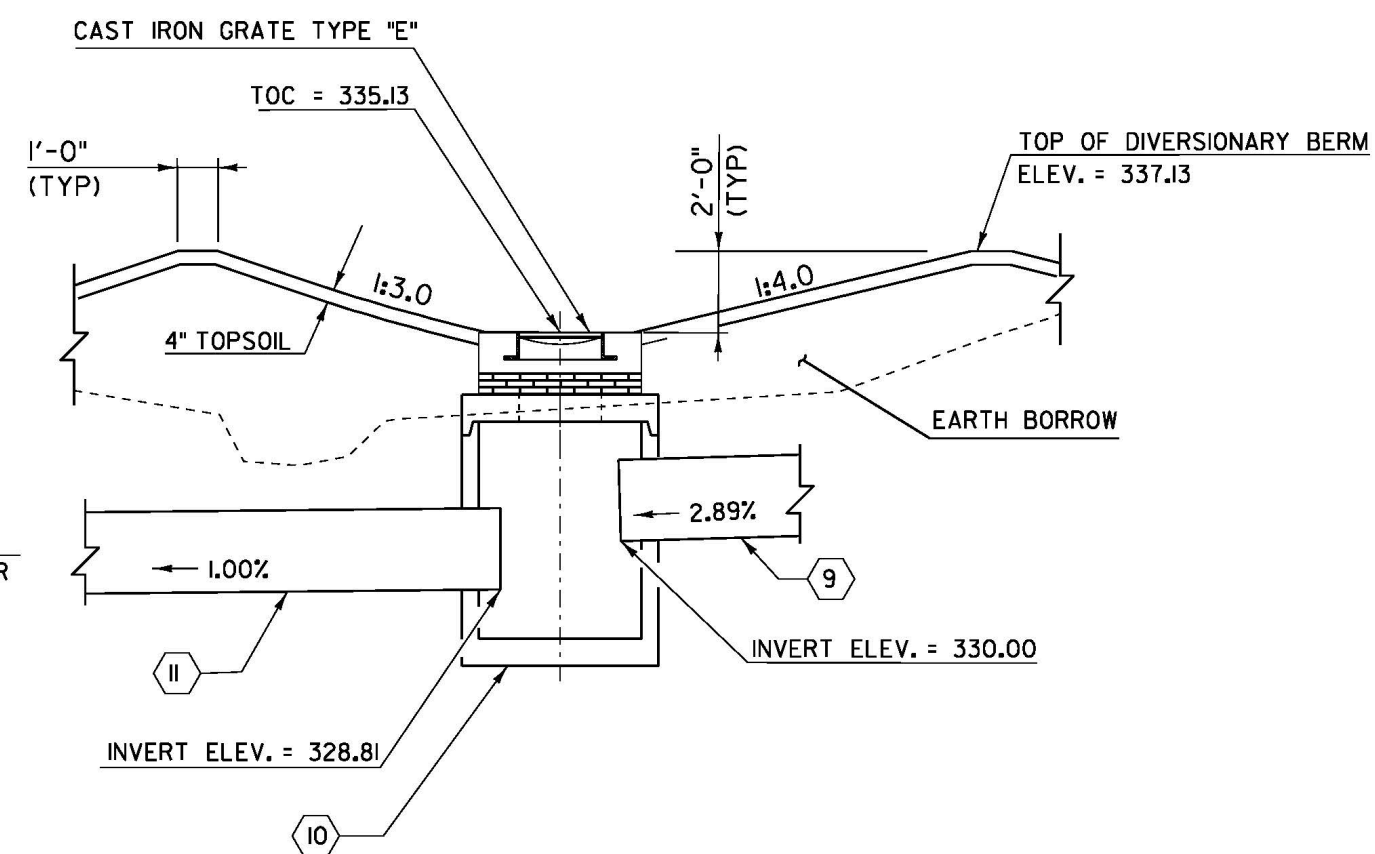
FILE NAME: 78f187/STR/s78f187eorthd.dgn PLOT DATE: 25-APR-2012
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G.ROKES
DESIGNED BY: W.PELLETIER CHECKED BY: W.PELLETIER
DIVERSIONARY BERM TYPICAL AND LAYOUT SHEET 16 OF 37



SEE "PIPE OUTLET ISO VIEW" AND
"PIPE OUTLET CHANNEL VIEW"
THIS SHEET

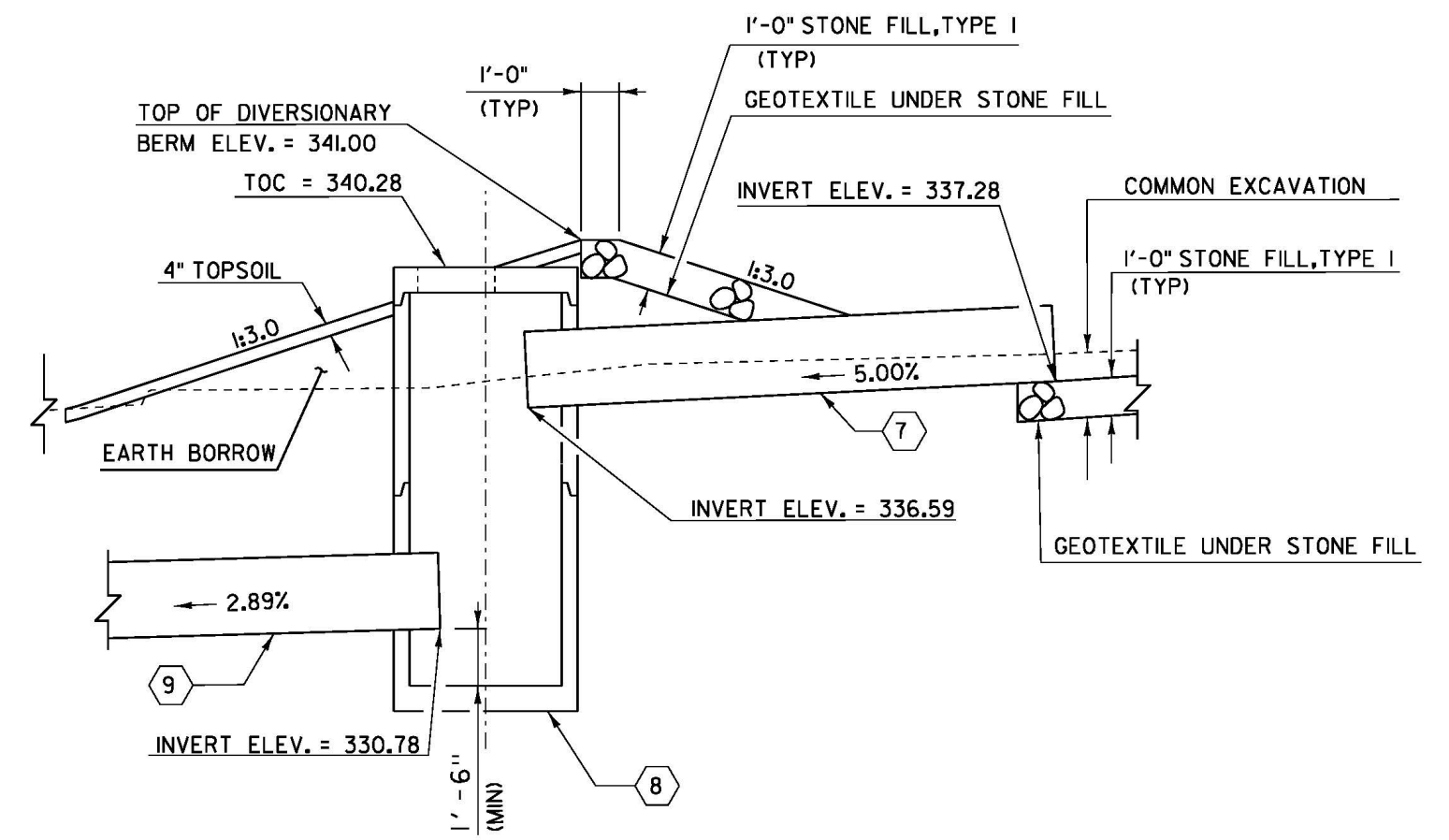
NTS

PUBLIC DRIVE PIPE OUTLET DETAIL



NTS

PUBLIC DRIVE CATCH BASIN DETAIL

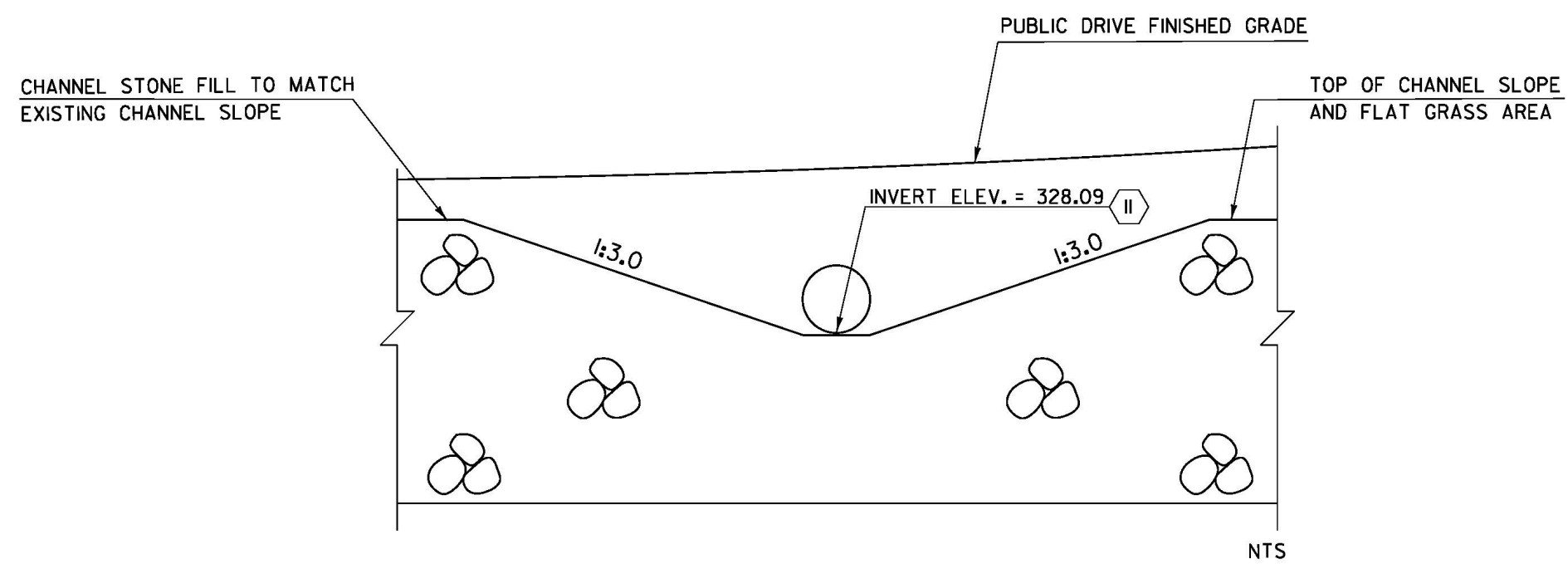


NTS

FIELD CATCH BASIN DETAIL

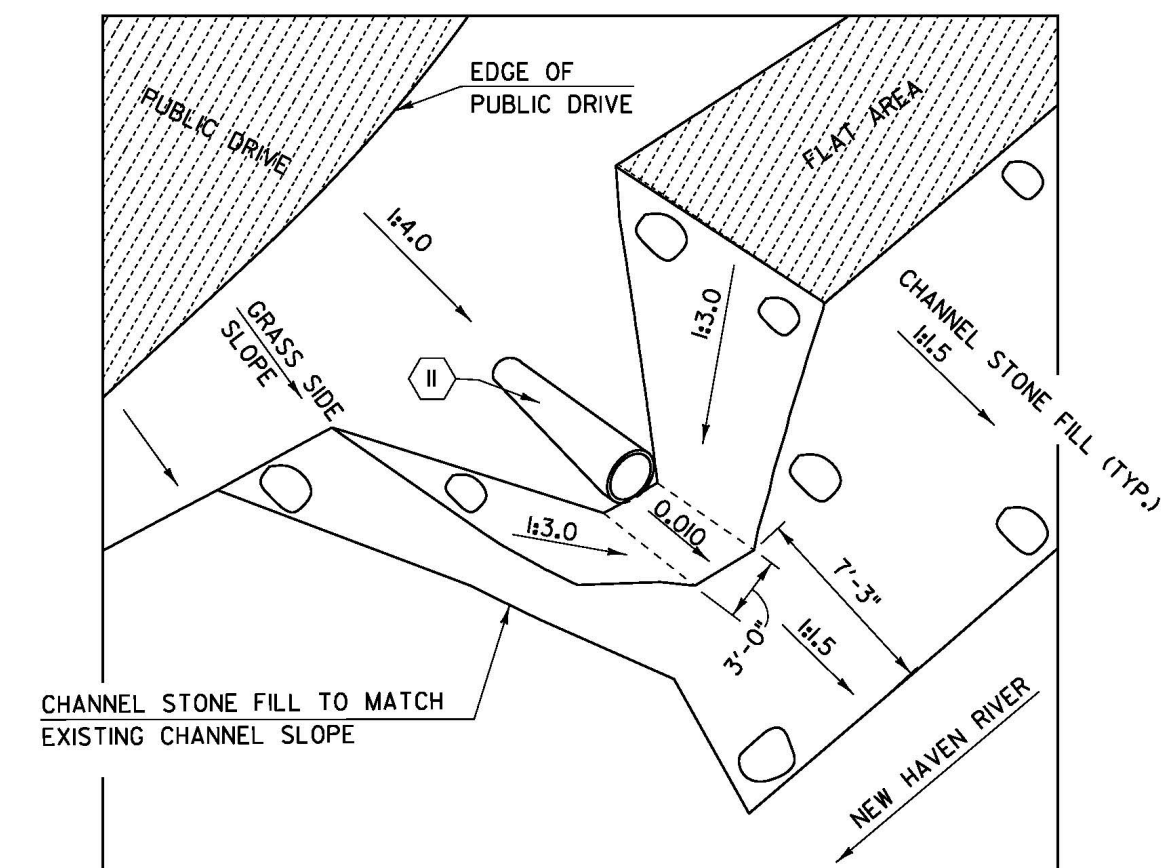
- ⑦ PUBLIC DRIVE NEW 24" CPEP/CAAP/PCCSP
- ⑧ PUBLIC DRIVE NEW 48 INCH DIA. PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON COVER
- ⑨ PUBLIC DRIVE NEW 24" CPEP/CAAP/PCCSP
- ⑩ PUBLIC DRIVE NEW 48 INCH DIA. PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE (TYPE E)
THIS STRUCTURE WILL BE BURIED WHILE THE DETOUR IS IN USE
- ⑪ PUBLIC DRIVE NEW 24" CPEP/CAAP/PCCSP

SEE "LAYOUT SHEETS" FOR PIPE STATIONS, OFFSETS, LENGTHS AND PRECAST REINFORCED CONCRETE CATCH BASIN LOCATIONS



NTS

PIPE OUTLET CHANNEL VIEW



NTS

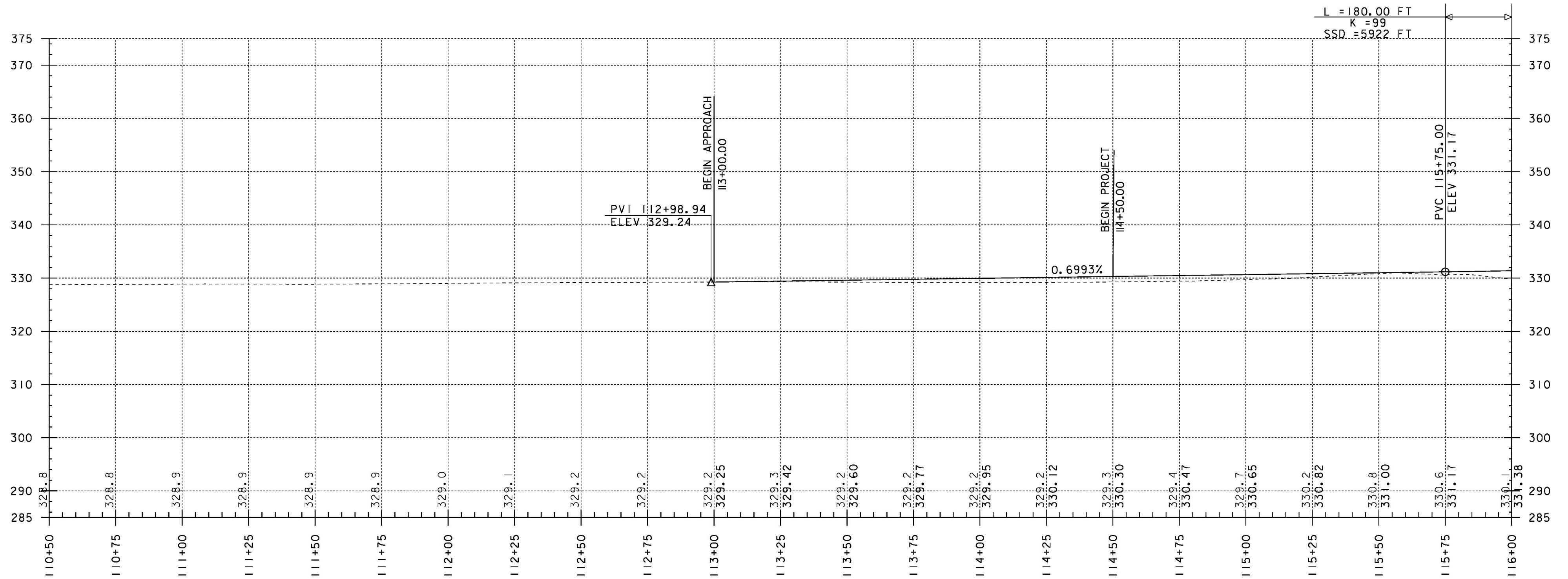
PIPE OUTLET ISO VIEW

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

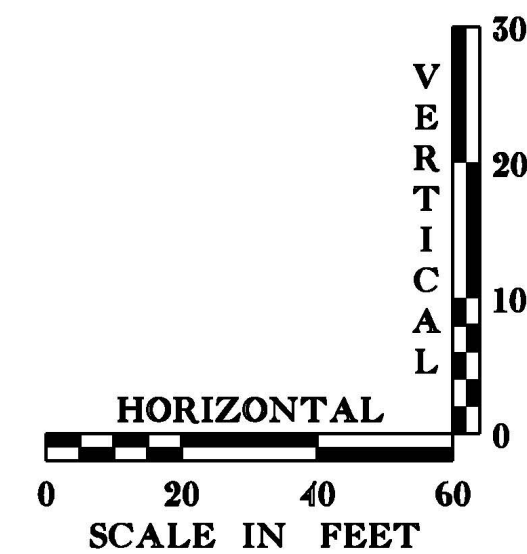
FILE NAME: 78f187/STR/s78f187xs.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: W. PELLETIER
PUBLIC DRIVE DRAINAGE DETAIL SHEET

PLOT DATE: 25-APR-2012
DRAWN BY: G. ROKES
CHECKED BY: W. PELLETIER
SHEET 17 OF 37

VT 116



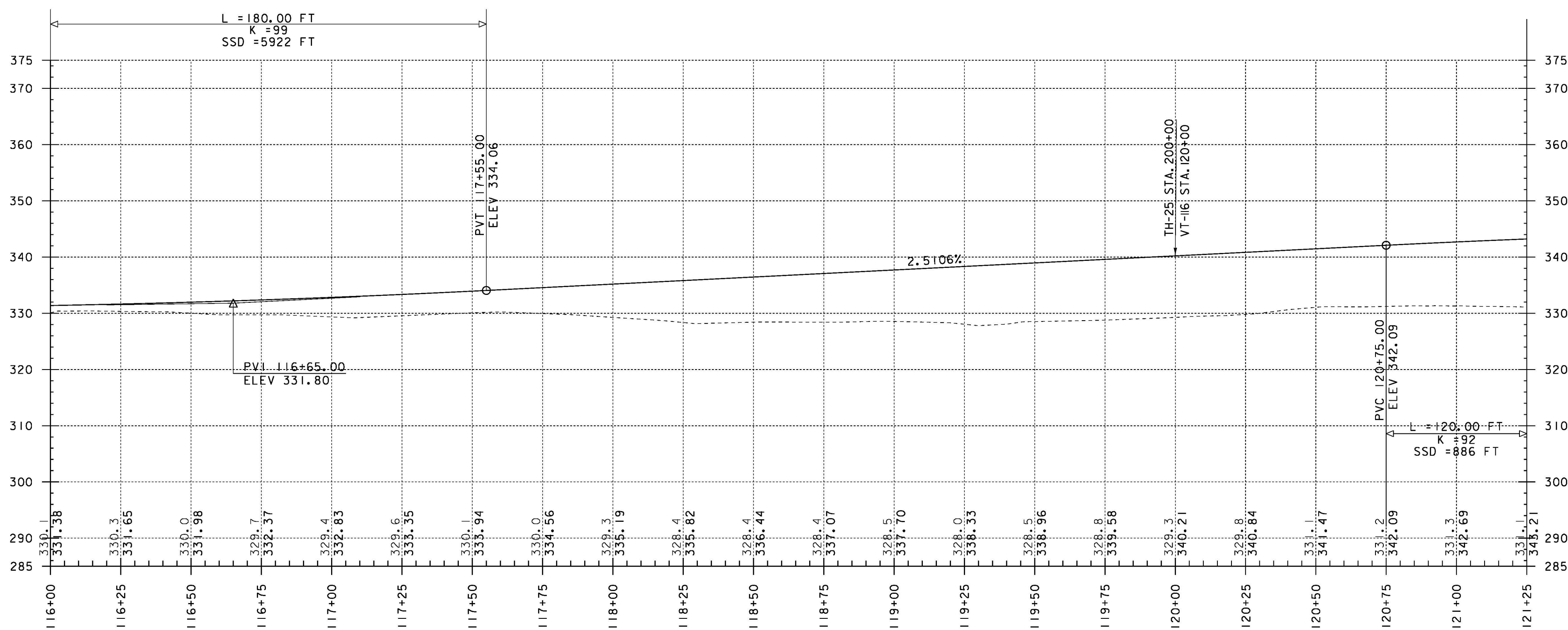
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ELEVATIONS SHOWN TO THE HUNDRETH ARE FINISH GRADE



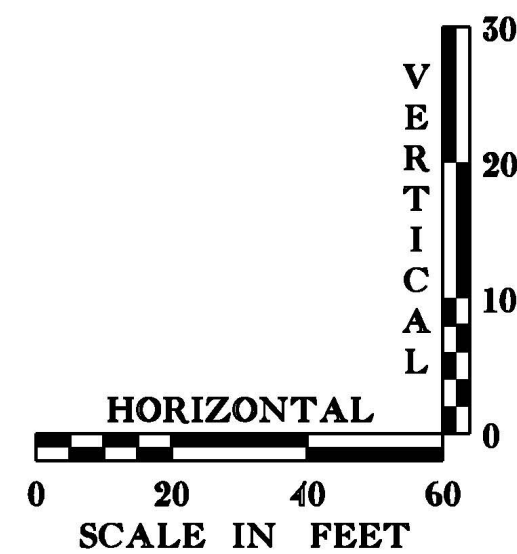
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PROJECT NUMBER: STP F 021-1(15)

FILE NAME: 78f187/STR/s78f187xs.dgn	PLOT DATE: 25-APR-2012
PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: G. ROKES
DESIGNED BY: W. PELLETIER	CHECKED BY: W. PELLETIER
VT 116 PROFILE SHEET 1	SHEET 18 OF 37

VT 116



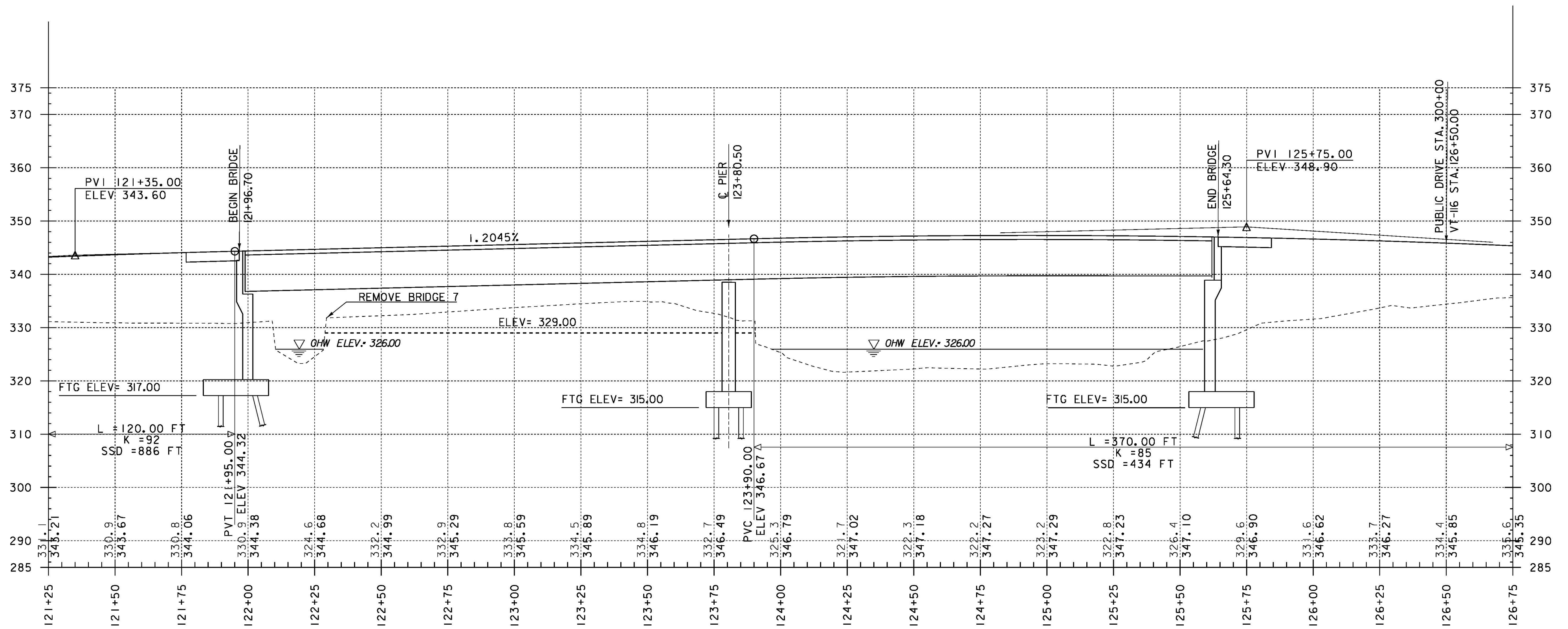
NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDRETH ARE FINISH GRADE



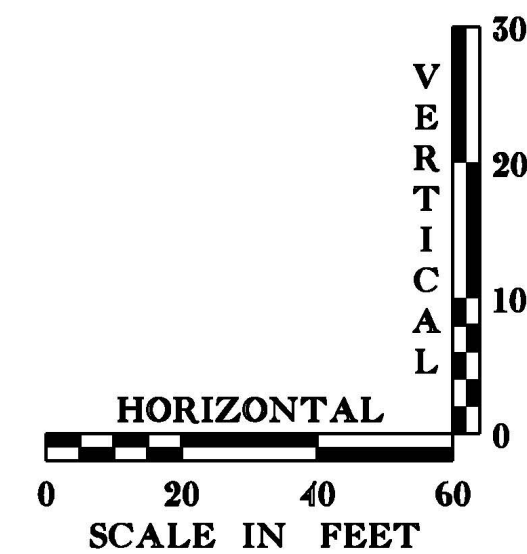
PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

FILE NAME: 78f187/STR/s78f187xs.dgn	PLOT DATE: 25-APR-2012
PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: G. ROKES
DESIGNED BY: W. PELLETIER	CHECKED BY: W. PELLETIER
VT 116 PROFILE SHEET 2	SHEET 19 OF 37

VT 116



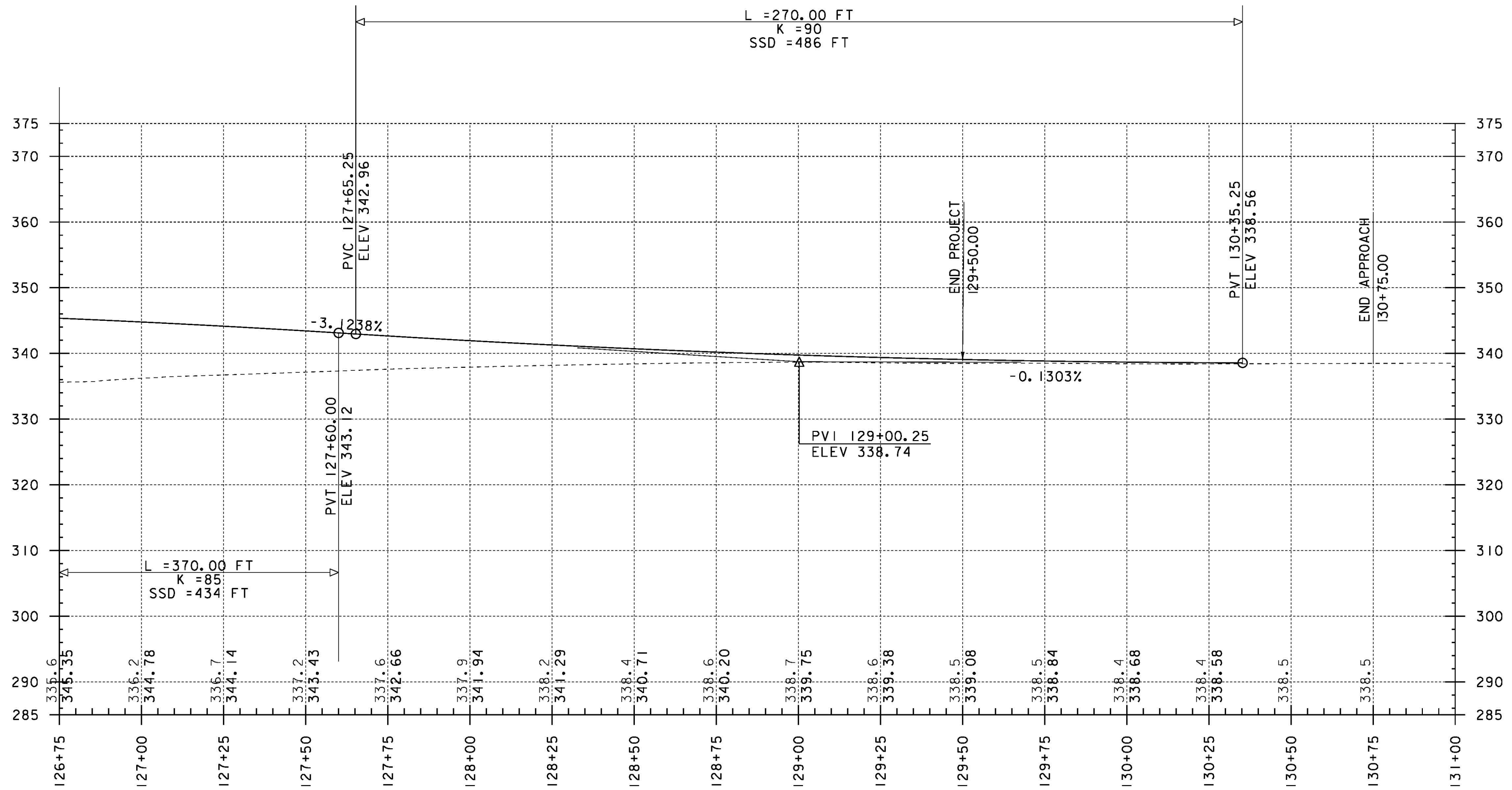
NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDRETH ARE FINISH GRADE



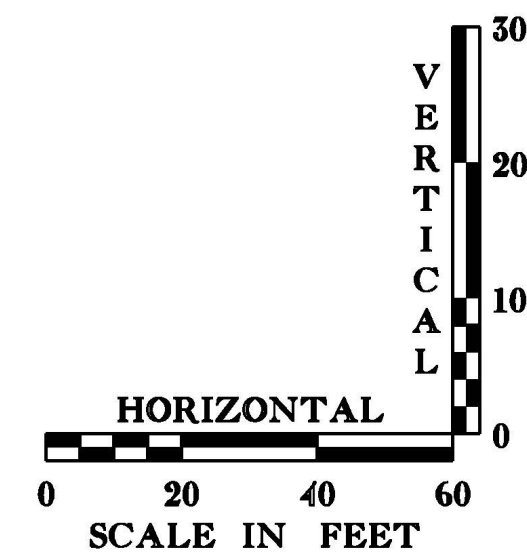
PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

FILE NAME: 78f187/STR/s78f187xs.dgn	PLOT DATE: 25-APR-2012
PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: G. ROKES
DESIGNED BY: W. PELLETIER	CHECKED BY: W. PELLETIER
VT 116 PROFILE SHEET 3	SHEET 20 OF 37

VT 116



NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDRETH ARE FINISH GRADE

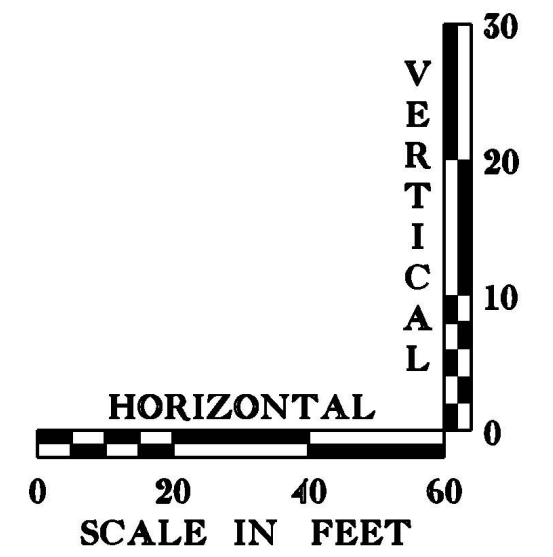
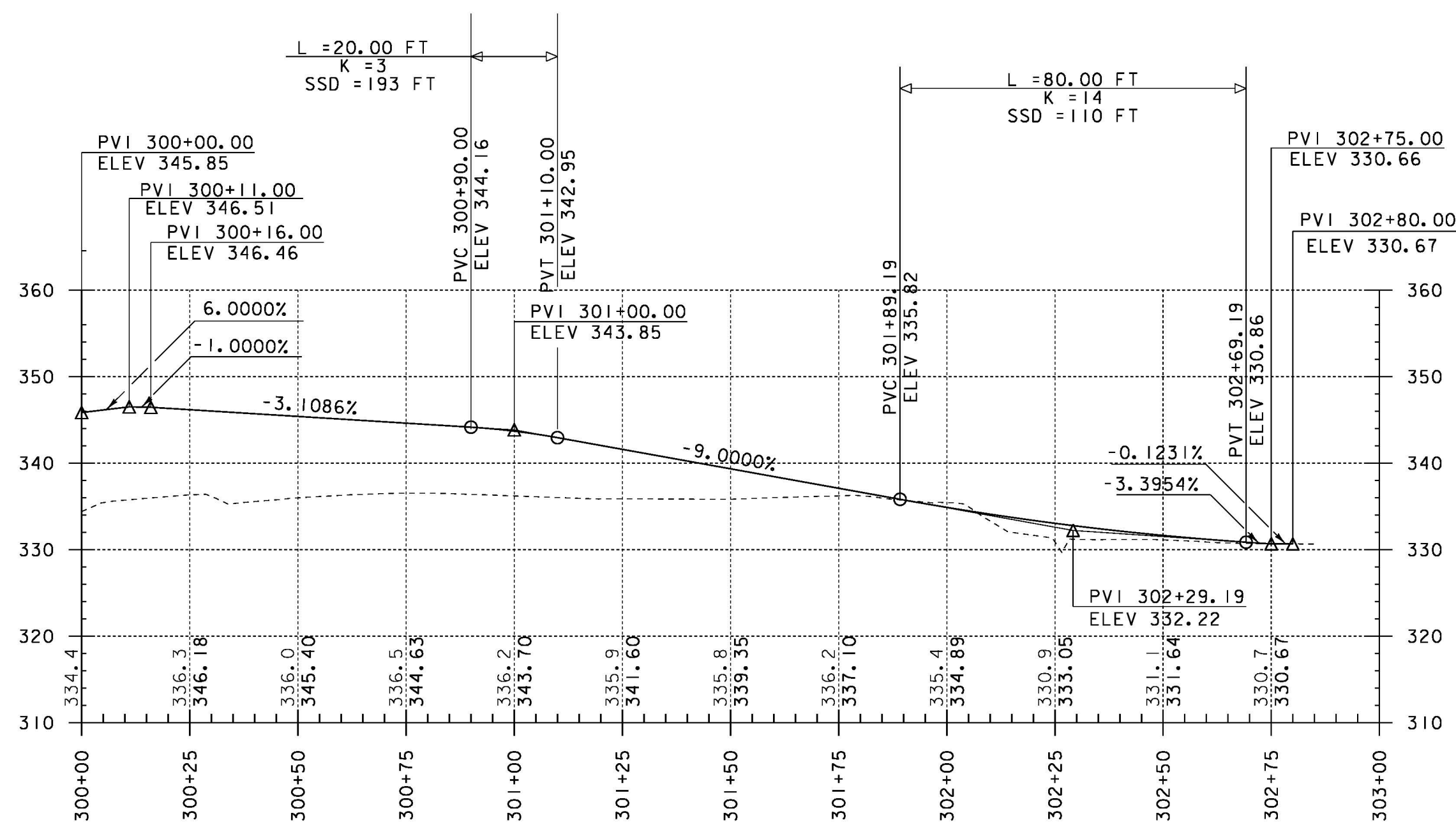


PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

FILE NAME: 78f187/STR/s78f187xs.dgn
PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: W. PELLETIER
VT 116 PROFILE SHEET 4

PLOT DATE: 25-APR-2012
DRAWN BY: G. ROKES
CHECKED BY: W. PELLETIER
SHEET 21 OF 37

PUBLIC DRIVE

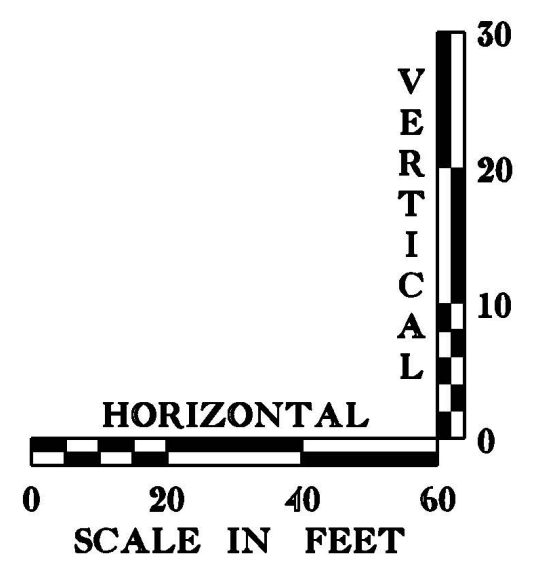
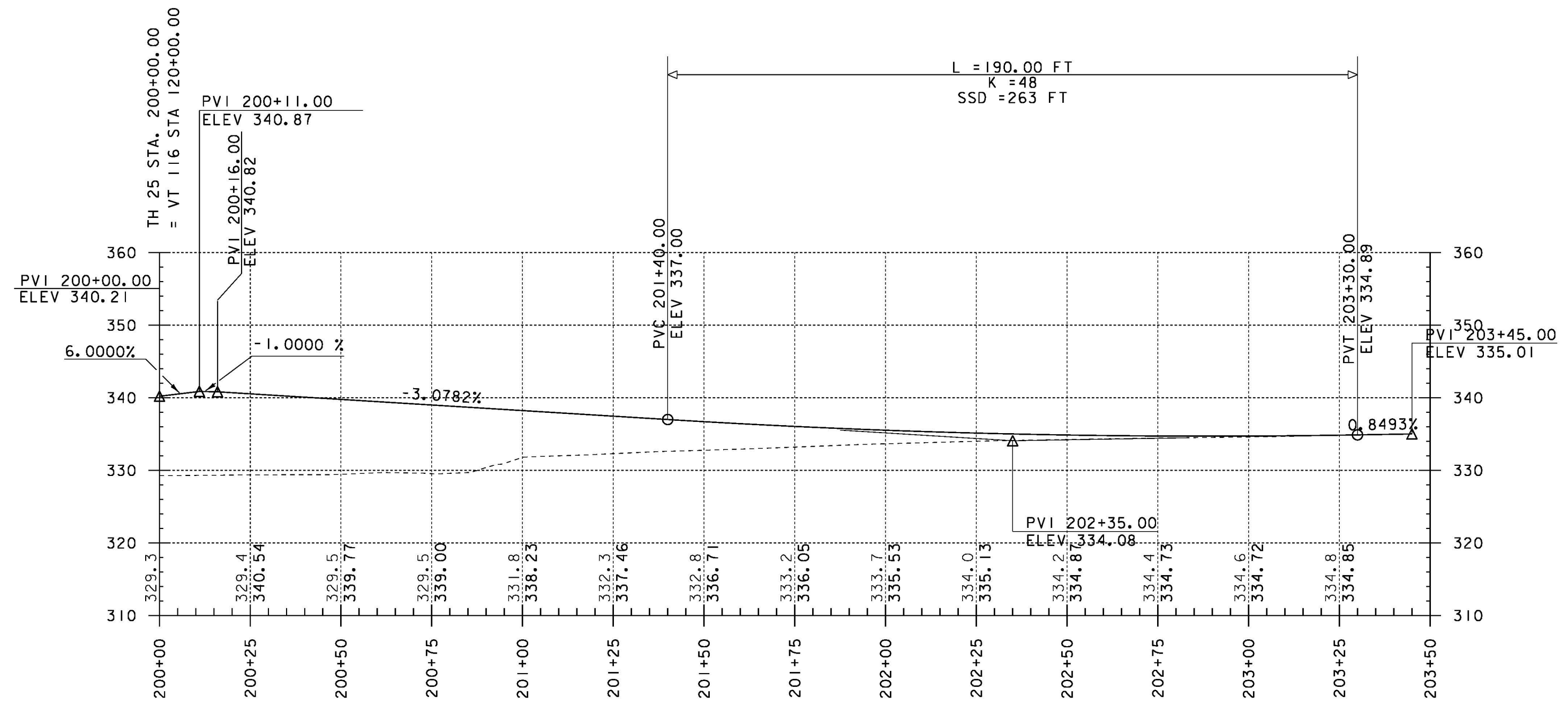


NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDREDTH ARE FINISH GRADE

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

FILE NAME: 78f187/STR/s78f187xs.dgn PLOT DATE: 25-APR-2012
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G. ROKES
DESIGNED BY: W. PELLETIER CHECKED BY: W. PELLETIER
PUBLIC DRIVE PROFILE SHEET SHEET 22 OF 37

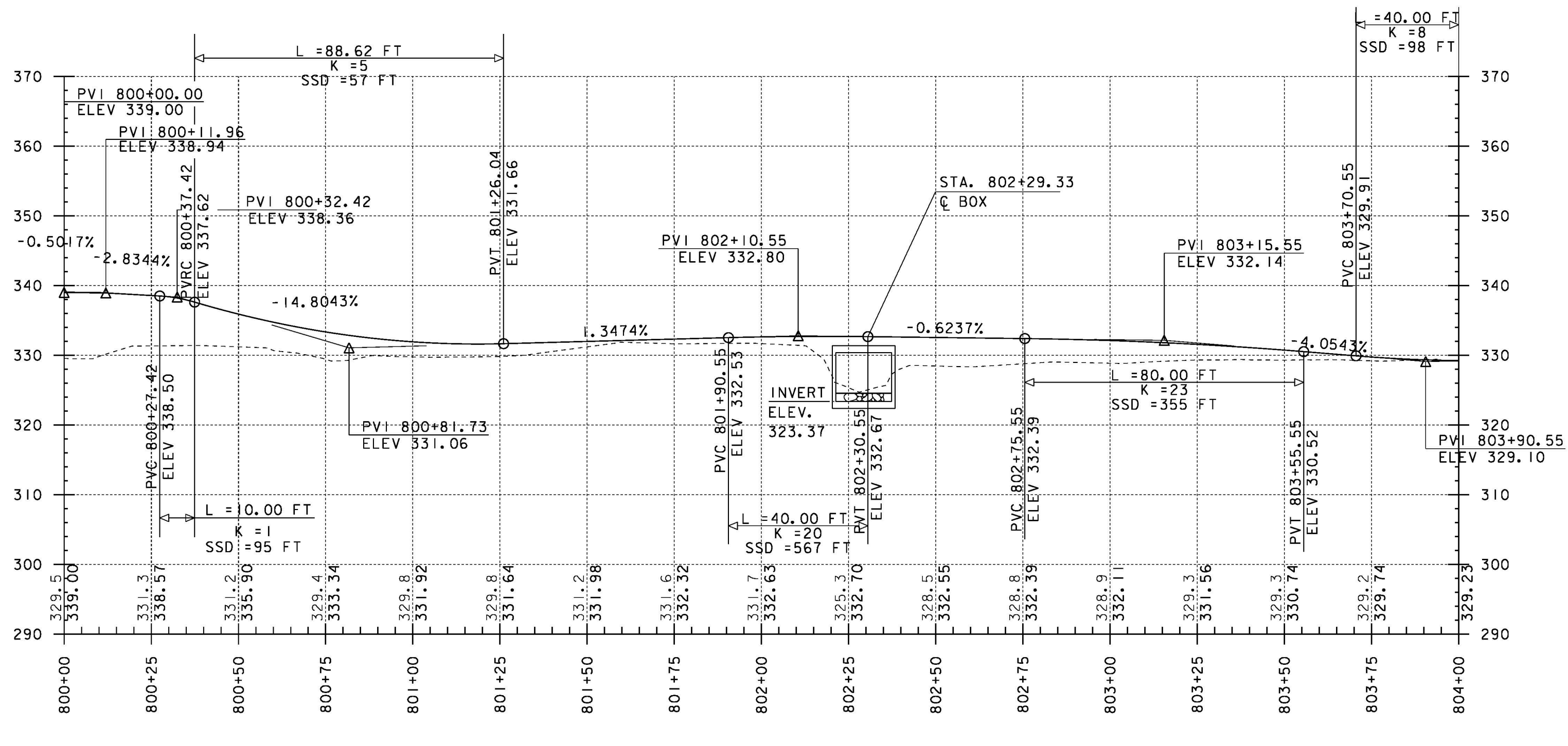
TH-25



NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDRETH ARE FINISH GRADE

PROJECT NAME: BRISTOL	PLOT DATE: 25-APR-2012
PROJECT NUMBER: STP F 021-1(15)	DRAWN BY: G. ROKES
FILE NAME: 78f187/STR/s78f187xs.dgn	CHECKED BY: W. PELLETIER
PROJECT LEADER: M. EVANS-MONGEON	SHEET 23 OF 37
DESIGNED BY: W. PELLETIER	
TH-25 PROFILE SHEET	

PRIVATE DRIVE



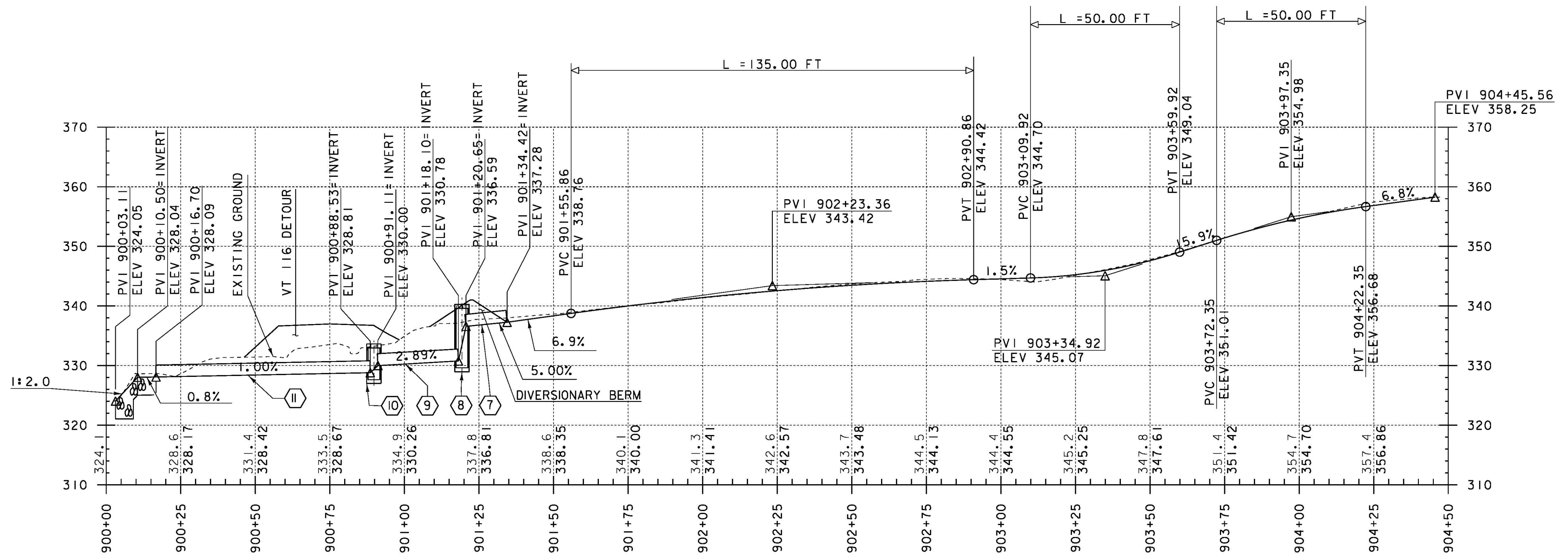
NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDRETH ARE FINISH GRADE

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)

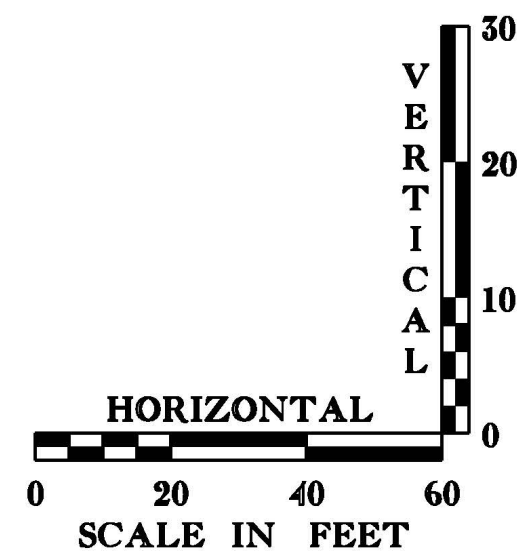
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PROJECT LEADER: M. EVANS-MONGEON
DESIGNED BY: W. PELLETIER
PRIVATE DRIVE PROFILE

PLOT DATE: 25-APR-2012
DRAWN BY: G. ROKES
CHECKED BY: W. PELLETIER
SHEET 24 OF 37

DIVERSIONARY BERM PROFILE

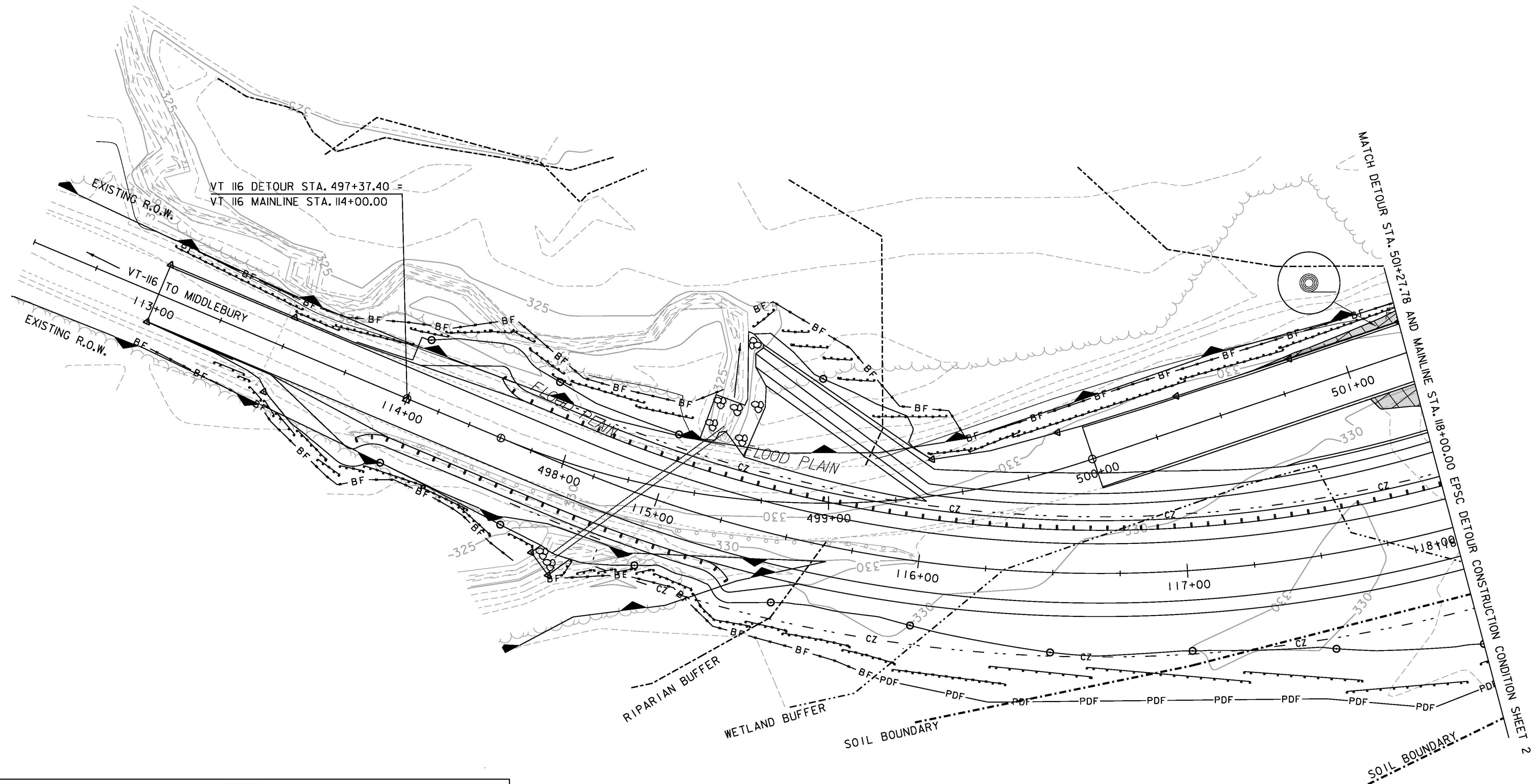
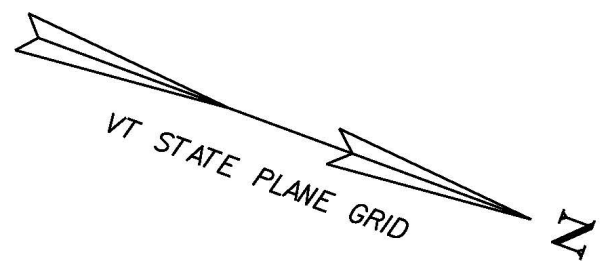


NOTE: ELEVATIONS SHOWN TO THE TENTH ARE EXISTING GROUND
ELEVATIONS SHOWN TO THE HUNDREDTH ARE DRAINAGE PROFILE GRADES



PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-K(15)

FILE NAME: 78f187/STR/s78f187earth.dgn PLOT DATE: 25-APR-2012
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G.ROKES
DESIGNED BY: W.PELLETIER CHECKED BY: W.PELLETIER
DIVERSIONARY BERM PROFILE SHEET 25 OF 37

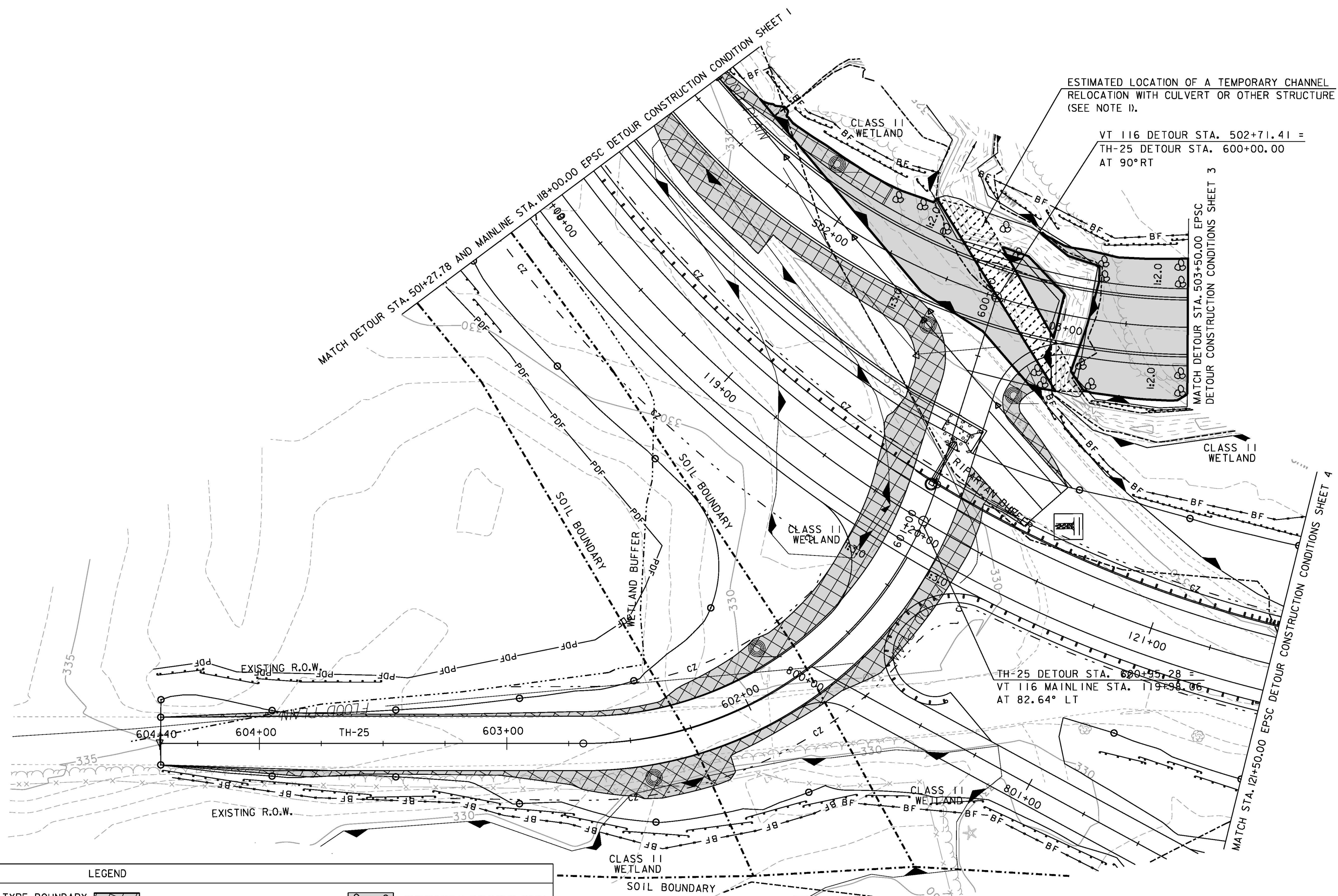
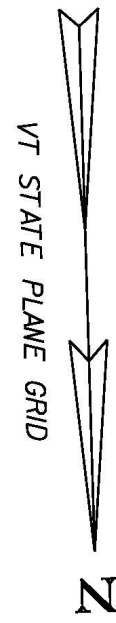


MATCH DETOUR STA. 501+27.18 AND MAINLINE STA. 118+00.00 EPSC DETOUR CONSTRUCTION CONDITION SHEET 2

LEGEND	
----- SOIL TYPE BOUNDARY	EROSION CONTROL MATTING
----- WETLAND BOUNDARY	----- PROJECT DEMARCATION FENCE
----- RIPARIAN BUFFER	----- WOVEN WIRE SILT FENCE
----- WETLAND BUFFER	----- SILT FENCE
----- FLOOD PLAIN	----- BARRIER FENCE

SCALE 1" = 20' - 0"
 20 0 20

PROJECT NAME: BRISTOL	PLLOT DATE: 25-APR-2012
PROJECT NUMBER: STP F 021-1(15)	DRAWN BY: G.ROKES
FILE NAME: 78f187/STR/s78f187ero_det.dgn	CHECKED BY: W.PELLETIER
PROJECT LEADER: M. EVANS-MONGEON	SHEET 26 OF 37
DESIGNED BY: W. PELLETIER	
EPSC DETOUR CONST. COND. SHEET 1	



ESTIMATED LOCATION OF A TEMPORARY CHANNEL RELOCATION WITH CULVERT OR OTHER STRUCTURE (SEE NOTE 1).

VT 116 DETOUR STA. 502+71.41 =
TH-25 DETOUR STA. 600+00.00
AT 90° RT

TH-25 DETOUR STA. 600+95.28 =
VT 116 MAINLINE STA. 119+98.06
AT 82.64° LT

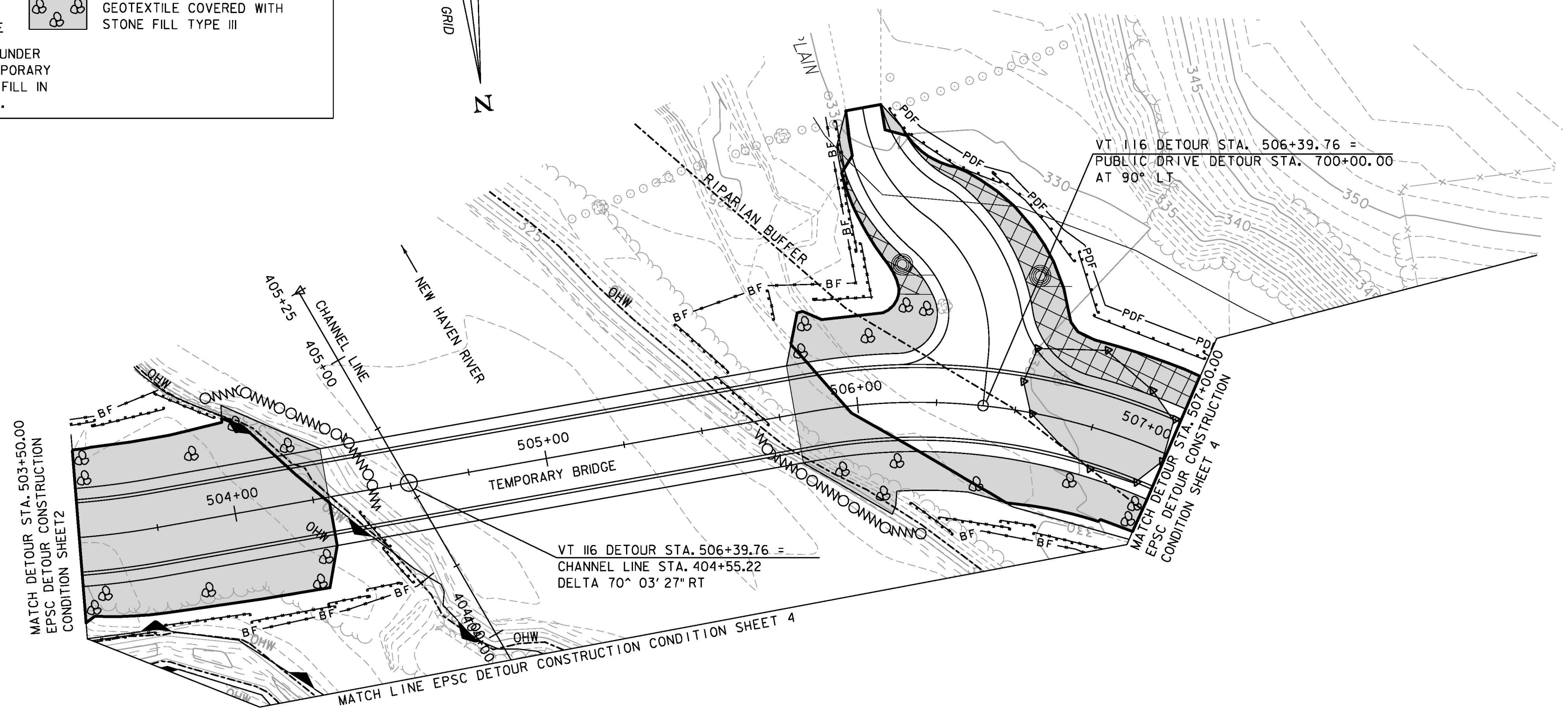
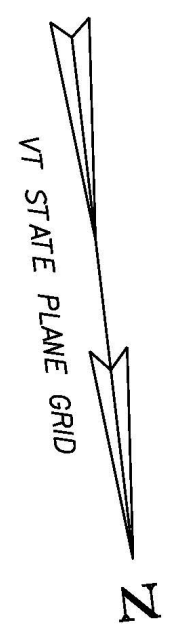
LEGEND		
--- SOIL TYPE BOUNDARY	EROSION CONTROL MATTING	GEOTEXTILE COVERED WITH STONE FILL TYPE III
-WETLAND BOUNDARY-	-PDF- PROJECT DEMARCATION FENCE	ROADBED SEPARATOR UNDER DETOUR WETLAND TEMPORARY FILL
-RIPARIAN BUFFER-	-W-W- WOVEN WIRE SILT FENCE	
-WETLAND BUFFER-	-S- SILT FENCE	
-FLOOD PLAIN- FLOOD PLAIN	-BF- BARRIER FENCE	
	STABILIZED CONSTRUCTION ENTRANCE	

NOTE 1: TEMPORARY CULVERT WILL BE A MINIMUM 10'-0" FT SPAN NORMAL TO STREAM AND A MINIMUM AREA OPENING OF 40 SQ. FT. AS PER HYDRAULICS REPORT FOR THIS TWO SEASON TEMPORARY DETOUR.

SCALE 1" = 20'-0"
20 0 20

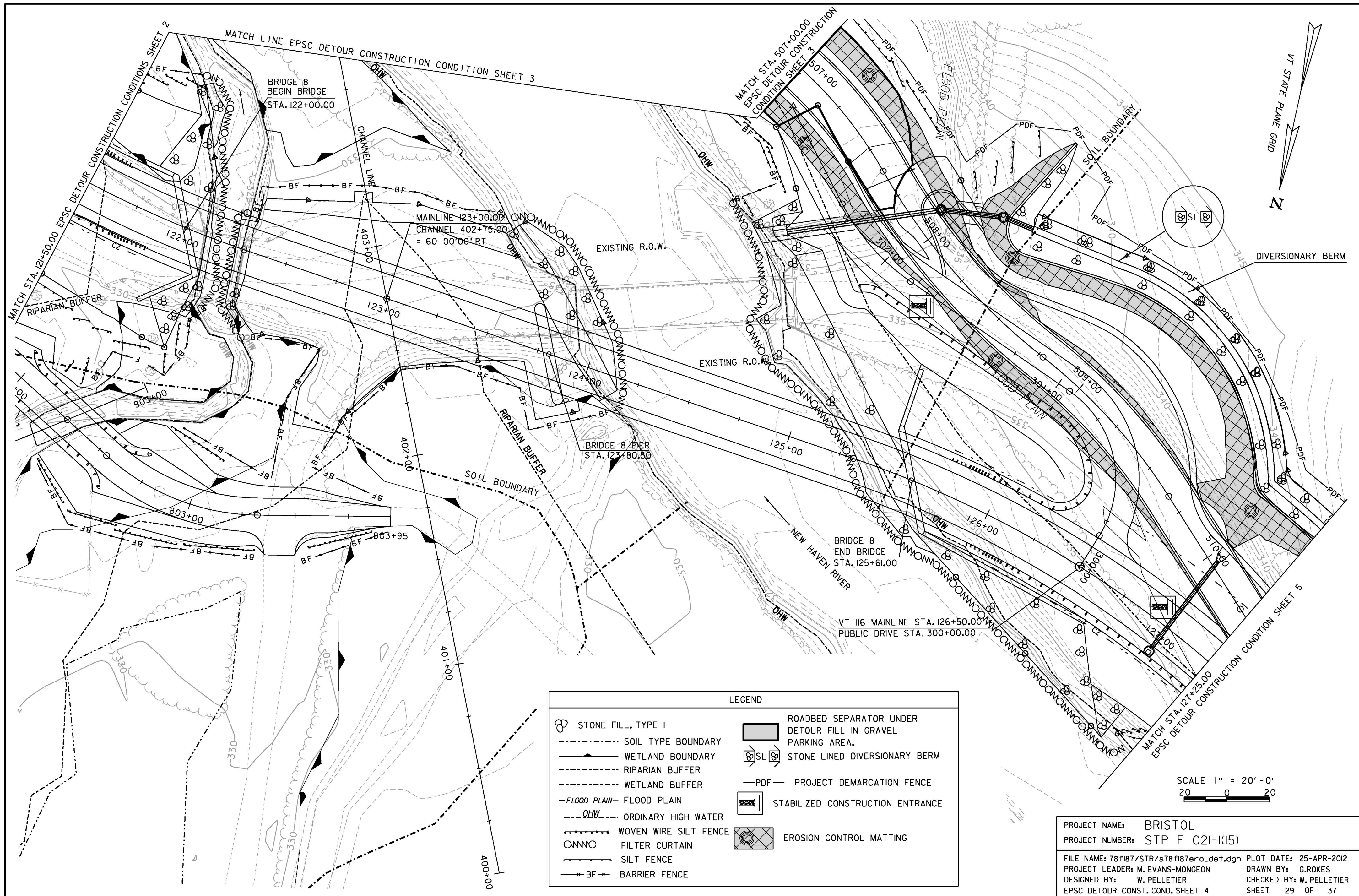
PROJECT NAME: BRISTOL	FILE NAME: 78f187/STR/s78f187ero_det.dgn	PLOT DATE: 25-APR-2012
PROJECT NUMBER: STP F 021-1(15)	PROJECT LEADER: M. EVANS-MONGEON	DRAWN BY: G. ROKES
	DESIGNED BY: W. PELLETIER	CHECKED BY: W. PELLETIER
	EPSC DETOUR CONST. COND. SHEET 2	SHEET 27 OF 37

LEGEND			
	WETLAND BOUNDARY		PROJECT DEMARCATION FENCE
	RIPARIAN BUFFER		FILTER CURTAIN
	SILT FENCE		EROSION CONTROL MATTING
	BARRIER FENCE		GEOTEXTILE COVERED WITH STONE FILL TYPE III
	FLOOD PLAIN		
	ORDINARY HIGH WATER		
	WOVEN WIRE SILT FENCE		
	ROADBED SEPARATOR UNDER DETOUR WETLAND TEMPORARY FILL AND TEMPORARY FILL IN GRAVEL PARKING AREA.		



SCALE 1" = 20' - 0"

PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP F 021-1(15)
FILE NAME:	78f187/STR/s78f187ero_det.dgn
PROJECT LEADER:	M. EVANS-MONGEON
DESIGNED BY:	W. PELLETIER
EPSC DETOUR CONST. COND. SHEET 3	
PLOT DATE:	25-APR-2012
DRAWN BY:	G. ROKES
CHECKED BY:	W. PELLETIER
SHEET 28 OF 37	

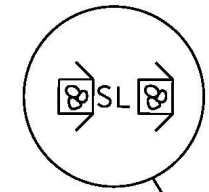
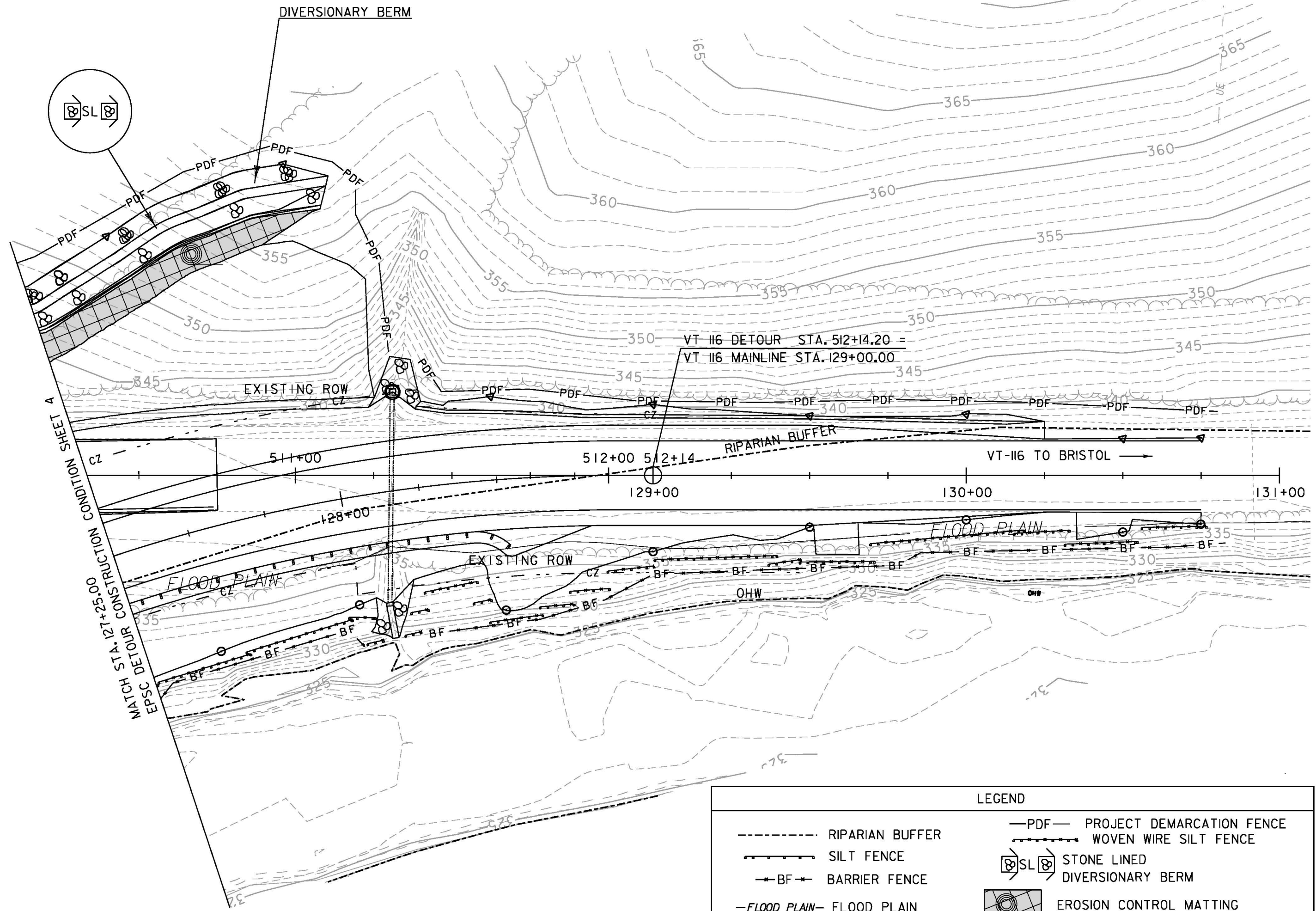
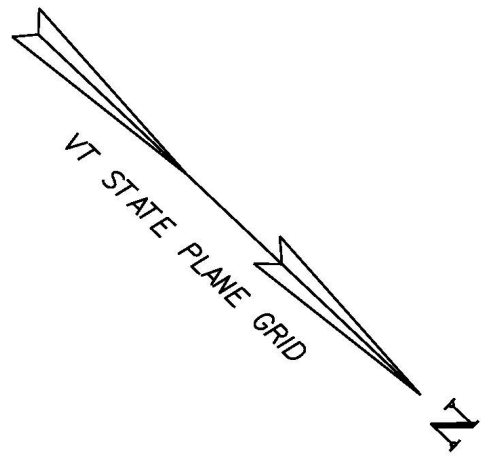


LEGEND

STONE FILL, TYPE I	ROADBED SEPARATOR UNDER DETOUR FILL IN GRAVEL PARKING AREA.
SOIL TYPE BOUNDARY	STONE LINED DIVERSIONARY BERM
WETLAND BOUNDARY	PROJECT DEMARCATION FENCE
RIPARIAN BUFFER	STABILIZED CONSTRUCTION ENTRANCE
WETLAND BUFFER	EROSION CONTROL MATTING
FLOOD PLAIN	
ORDINARY HIGH WATER	
WOVEN WIRE SILT FENCE	
FILTER CURTAIN	
SILT FENCE	
BARRIER FENCE	

SCALE 1" = 20'-0"
 20 0 20

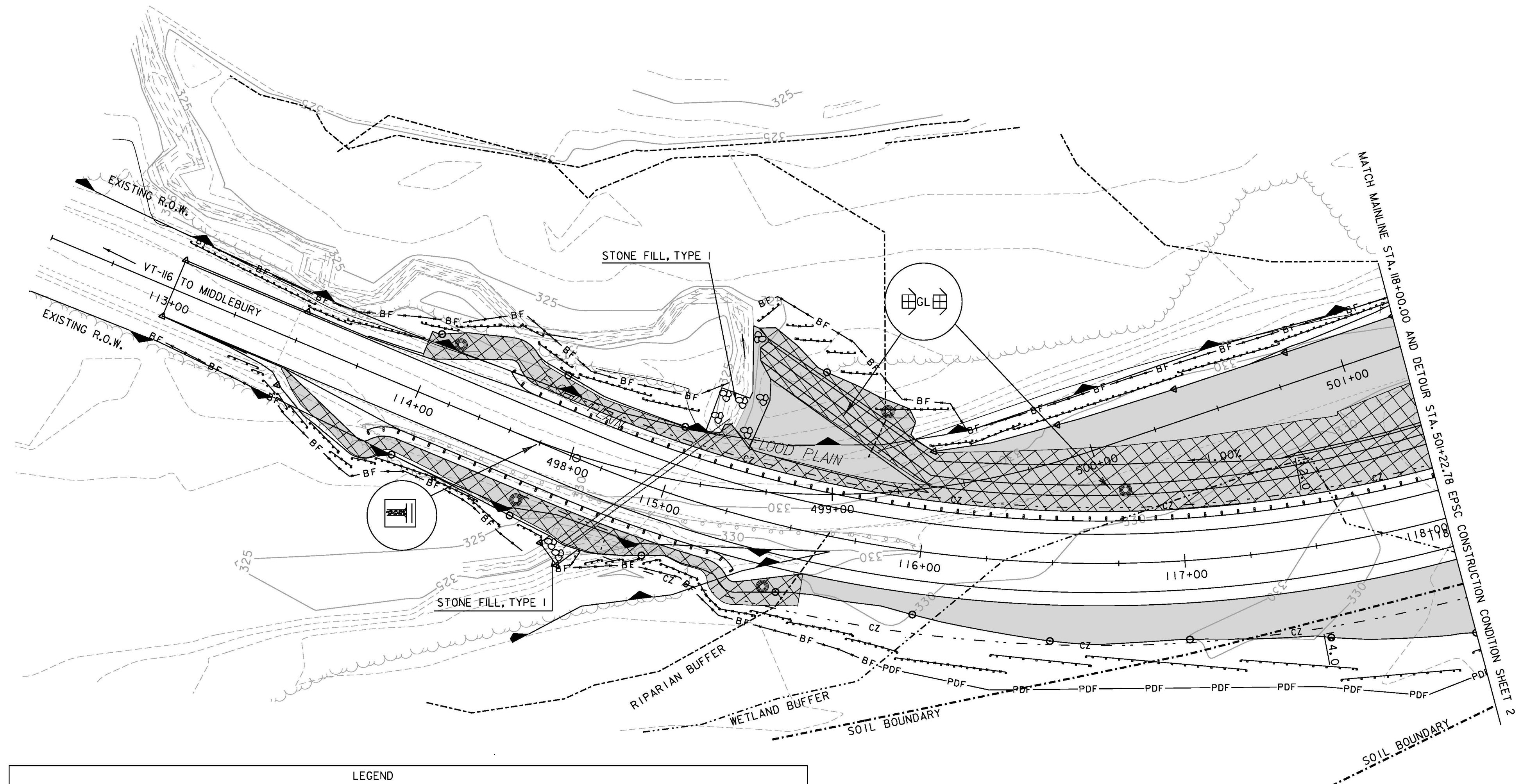
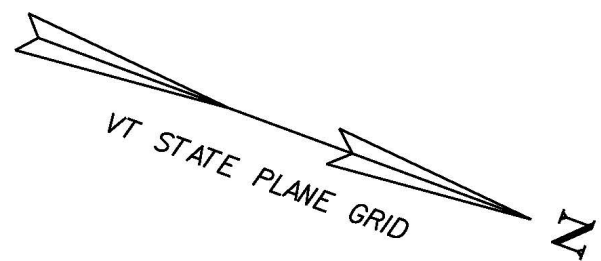
PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1(15)
 FILE NAME: 78f187/STR/s78f187ero_det.dgn PLOT DATE: 25-APR-2012
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G.ROKES
 DESIGNED BY: W. PELLETIER CHECKED BY: W. PELLETIER
 EPSC DETOUR CONST. COND. SHEET 4 SHEET 29 OF 37



LEGEND	
----- RIPARIAN BUFFER	---PDF--- PROJECT DEMARCATION FENCE
----- SILT FENCE	----- WOVEN WIRE SILT FENCE
---BF--- BARRIER FENCE	[SL] STONE LINED DIVERSIONARY BERM
---FLOOD PLAIN--- FLOOD PLAIN	[EOM] EROSION CONTROL MATTING
---OHW--- ORDINARY HIGH WATER	[SFF] STONE FILL, TYPE 1

SCALE 1" = 20' - 0"
 20 0 20

PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1(15)
 FILE NAME: 78f187/STR/s78f187ero_det.dgn PLOT DATE: 25-APR-2012
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G.ROKES
 DESIGNED BY: W. PELLETIER CHECKED BY: W. PELLETIER
 EPSC DETOUR CONST COND SHEET 5 SHEET 30 OF 37

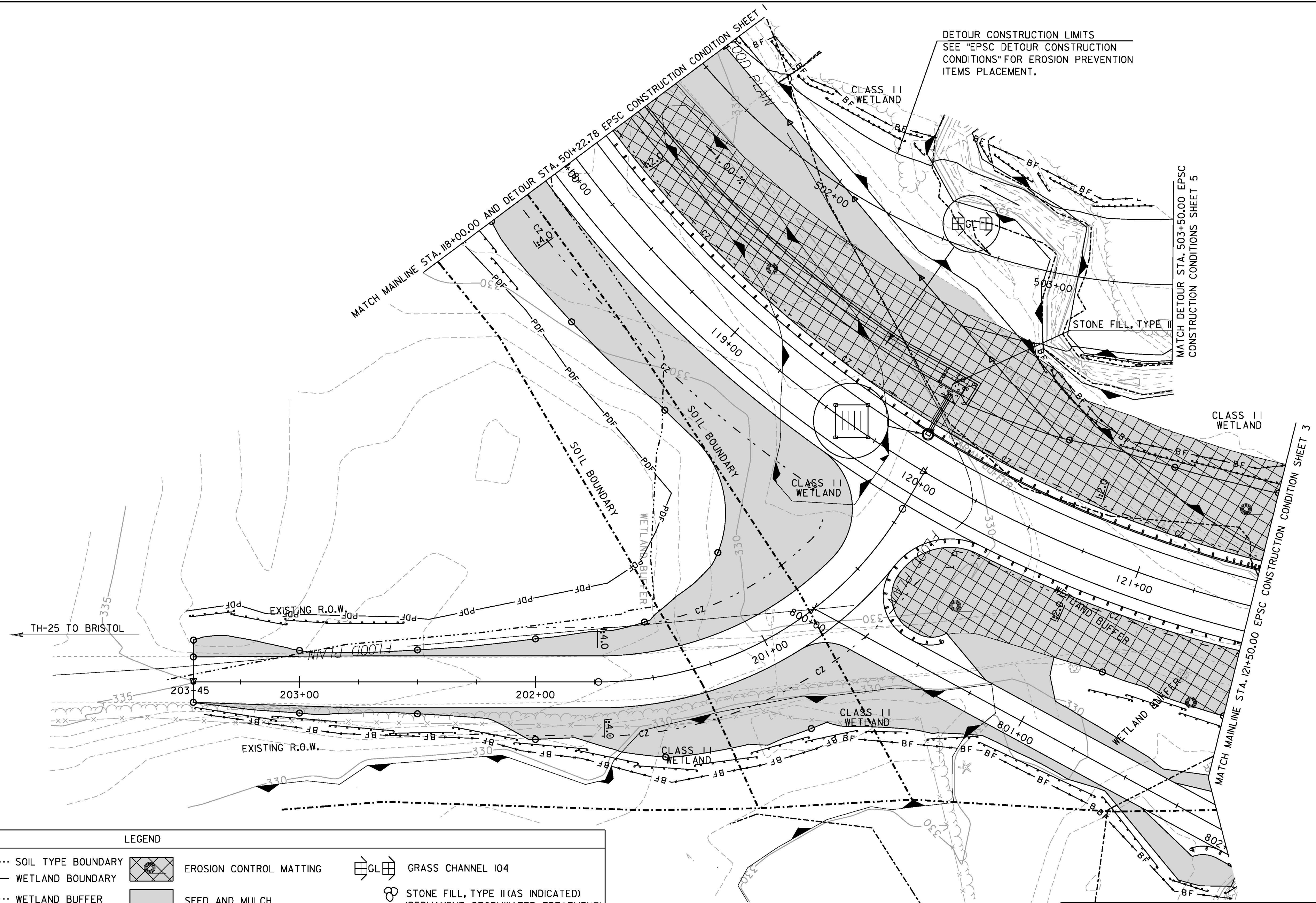
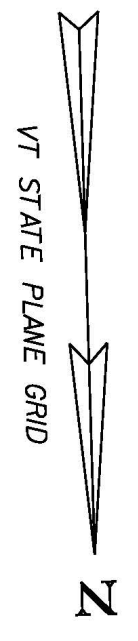


LEGEND

--- SOIL TYPE BOUNDARY	EROSION CONTROL MATTING	STABILIZED CONSTRUCTION ENTRANCE
-▲- WETLAND BOUNDARY	SEED AND MULCH	GRASS CHANNEL IO4
- - - RIPARIAN BUFFER	-PDF- PROJECT DEMARCATION FENCE	STONE FILL, TYPE I
- - - WETLAND BUFFER	- - - SILT FENCE	
-FLOOD PLAIN- FLOOD PLAIN	- - - WOVEN WIRE SILT FENCE	
-BF- BARRIER FENCE		

SCALE 1" = 20'-0"
 20 0 20

PROJECT NAME: BRISTOL	PLOT DATE: 25-APR-2012
PROJECT NUMBER: STP F 021-1(15)	DRAWN BY: G.ROKES
FILE NAME: 78f187/STR/s78f187erocon.dgn	CHECKED BY: W.PELLETIER
PROJECT LEADER: M. EVANS-MONGEON	SHEET 31 OF 37
DESIGNED BY: W. PELLETIER	
EPSC CONSTRUCTION CONDITION SHEET 1	



DETOUR CONSTRUCTION LIMITS
SEE "EPSC DETOUR CONSTRUCTION
CONDITIONS" FOR EROSION PREVENTION
ITEMS PLACEMENT.

MATCH DETOUR STA. 503+50.00 EPSC
CONSTRUCTION CONDITIONS SHEET 5

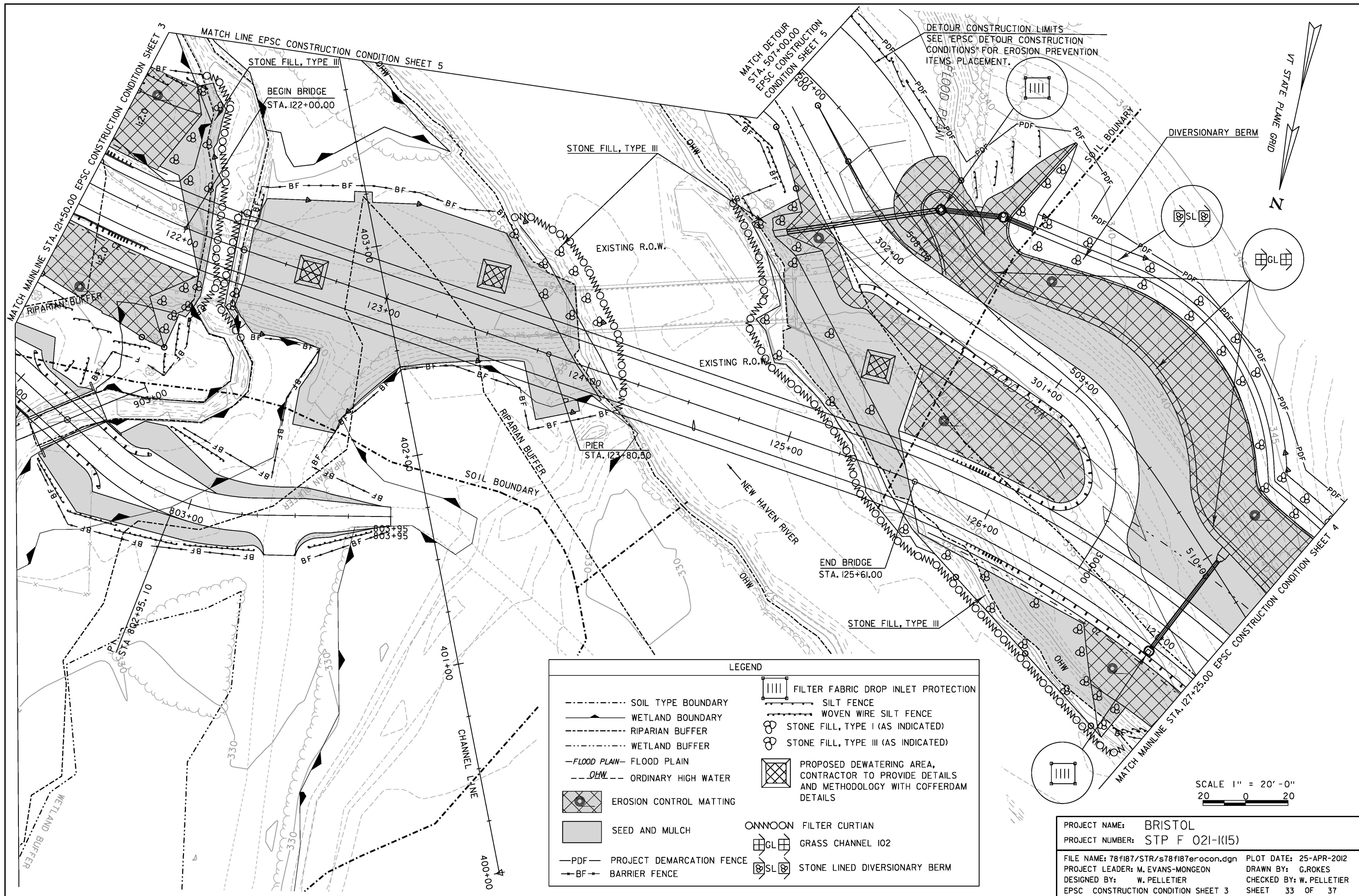
CLASS II
WETLAND

MATCH MAINLINE STA. 121+50.00 EPSC CONSTRUCTION CONDITION SHEET 3

LEGEND		
--- SOIL TYPE BOUNDARY	EROSION CONTROL MATTING	GRASS CHANNEL 104
--- WETLAND BOUNDARY	SEED AND MULCH	STONE FILL, TYPE II (AS INDICATED) (PERMANENT, STORMWATER TREATMENT)
--- WETLAND BUFFER	---PDF--- PROJECT DEMARCATION FENCE	FILTER FABRIC INLET PROTECTION
---FLOOD PLAIN--- FLOOD PLAIN	---BF--- BARRIER FENCE	
--- SILT FENCE		
--- WOVEN WIRE SILT FENCE		

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: BRISTOL
PROJECT NUMBER: STP F 021-1(15)
FILE NAME: 78f187/STR/s78f187erocon.dgn PLOT DATE: 25-APR-2012
PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G.ROKES
DESIGNED BY: W. PELLETTIER CHECKED BY: W. PELLETTIER
EPSC CONSTRUCTION CONDITION SHEET 2 SHEET 32 OF 37

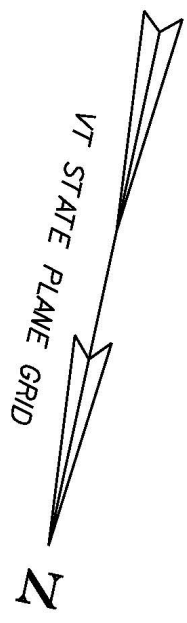


LEGEND

---	SOIL TYPE BOUNDARY		FILTER FABRIC DROP INLET PROTECTION
-▲-	WETLAND BOUNDARY	— —	SILT FENCE
- - -	RIPARIAN BUFFER	- - - - - -	WOVEN WIRE SILT FENCE
- - -	WETLAND BUFFER	⊗	STONE FILL, TYPE I (AS INDICATED)
-FLOOD PLAIN-	FLOOD PLAIN	⊗	STONE FILL, TYPE III (AS INDICATED)
-OHW-	ORDINARY HIGH WATER		PROPOSED DEWATERING AREA, CONTRACTOR TO PROVIDE DETAILS AND METHODOLOGY WITH COFFERDAM DETAILS
	EROSION CONTROL MATTING	ONNOON	FILTER CURTIAN
	SEED AND MULCH		GRASS CHANNEL 102
-PDF-	PROJECT DEMARCATION FENCE		STONE LINED DIVERSIONARY BERM
-BF-	BARRIER FENCE		

PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1(15)
 FILE NAME: 78f187/STR/s78f187erocon.dgn PLOT DATE: 25-APR-2012
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G.ROKES
 DESIGNED BY: W. PELLETTIER CHECKED BY: W. PELLETTIER
 EPSC CONSTRUCTION CONDITION SHEET 3 SHEET 33 OF 37

SCALE 1" = 20'-0"



DETOUR CONSTRUCTION LIMITS
 SEE 'EPSC DETOUR CONSTRUCTION
 CONDITIONS' FOR EROSION PREVENTION
 ITEMS PLACEMENT.

MATCH LINE EPSC CONSTRUCTION CONDITION SHEET 3
 MATCH LINE EPSC CONSTRUCTION CONDITION SHEET 5

DIVERSIONARY BERM

STONE FILL, TYPE III

EXISTING R.O.W.

EXISTING R.O.W.

NEW HAVEN RIVER

END BRIDGE
STA. 125+61.00

STONE FILL, TYPE III

CHANNEL LINE

BEGIN BRIDGE
STA. 122+00.00

PIER
STA. 123+80.50

STONE FILL, TYPE III

RIPARIAN BUFFER

SOIL BOUNDARY

RIPARIAN BUFFER

RIPARIAN BUFFER

RIPARIAN BUFFER

RIPARIAN BUFFER

RIPARIAN BUFFER

RIPARIAN BUFFER

RIPARIAN BUFFER

PA
STA. 802+95.10

803+00

903+00

122+00

122+00

122+00

122+00

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122+00

403+00

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MATCH MAINLINE STA. 121+25.00 EPSC CONSTRUCTION CONDITION SHEET 4

MATCH DETOUR STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00

MATCH MAINLINE STA. 121+50.00 EPSC CONSTRUCTION CONDITION SHEET 3

MATCH DETOUR STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00

MATCH MAINLINE STA. 121+50.00 EPSC CONSTRUCTION CONDITION SHEET 3

MATCH DETOUR STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00

MATCH MAINLINE STA. 121+50.00 EPSC CONSTRUCTION CONDITION SHEET 3

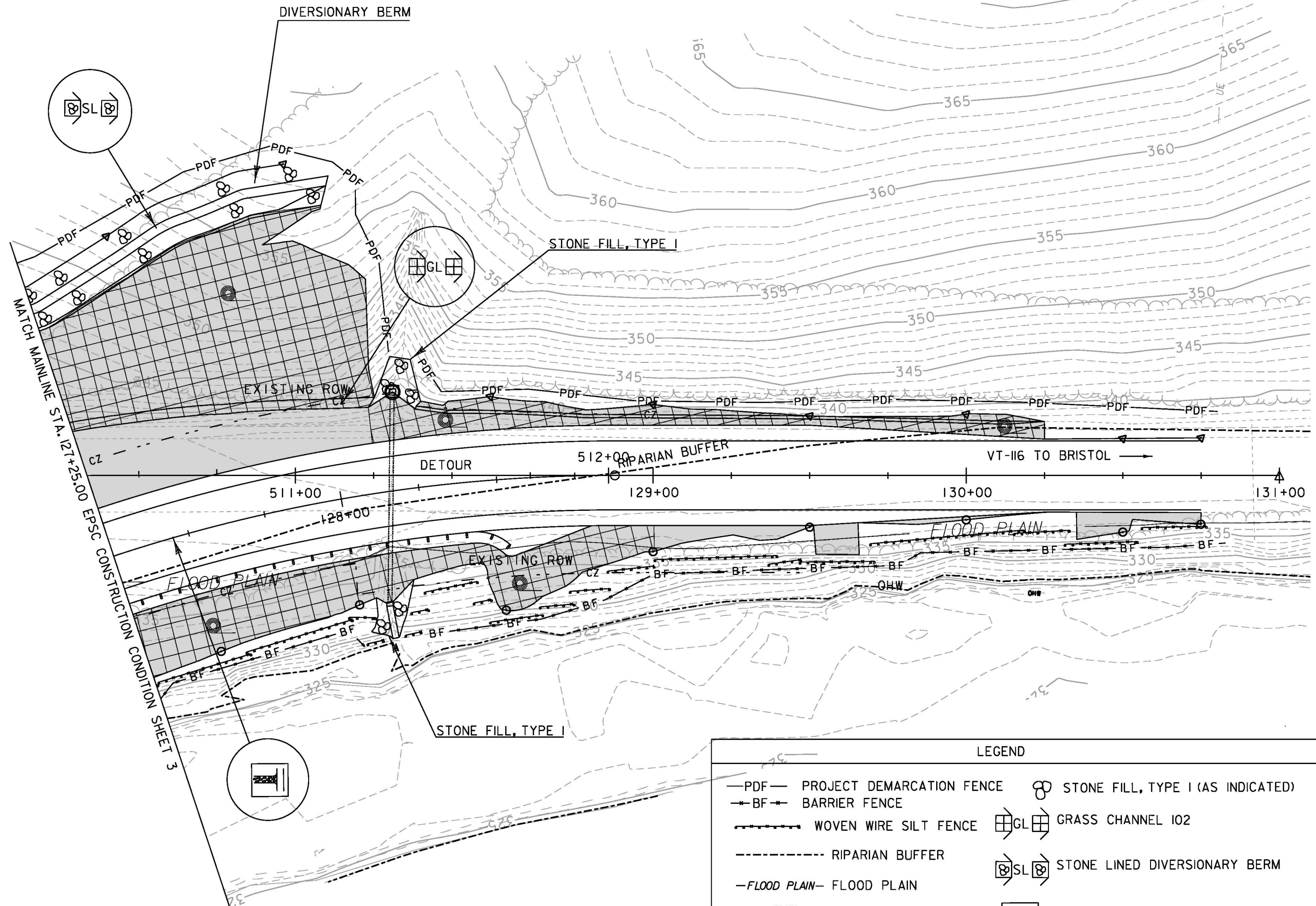
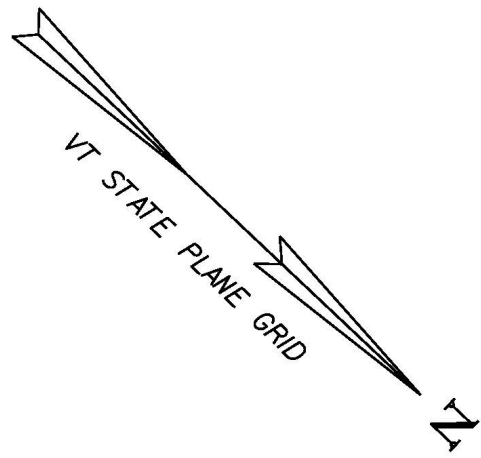
MATCH DETOUR STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00

MATCH MAINLINE STA. 121+50.00 EPSC CONSTRUCTION CONDITION SHEET 3

MATCH DETOUR STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00

MATCH MAINLINE STA. 121+50.00 EPSC CONSTRUCTION CONDITION SHEET 3

MATCH DETOUR STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00 EPSC CONSTRUCTION STA. 507+00.00



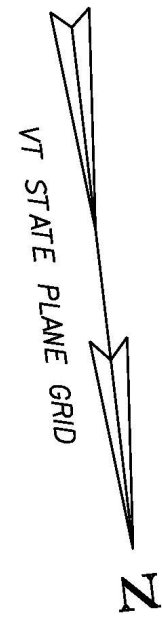
MATCH MAINLINE STA. 127+25.00
EPSC CONSTRUCTION CONDITION SHEET 3

LEGEND			
—PDF—	PROJECT DEMARCATION FENCE	⊗	STONE FILL, TYPE I (AS INDICATED)
—BF—	BARRIER FENCE	⊠GL⊠	GRASS CHANNEL 102
—WWS—	WOVEN WIRE SILT FENCE	⊠SL⊠	STONE LINED DIVERSIONARY BERM
—RIP—	RIPARIAN BUFFER	▨	STABILIZED CONSTRUCTION ENTRANCE
—FP—	FLOOD PLAIN		
—OHW—	ORDINARY HIGH WATER		
⊗	EROSION CONTROL MATTING		
▨	SEED AND MULCHING		

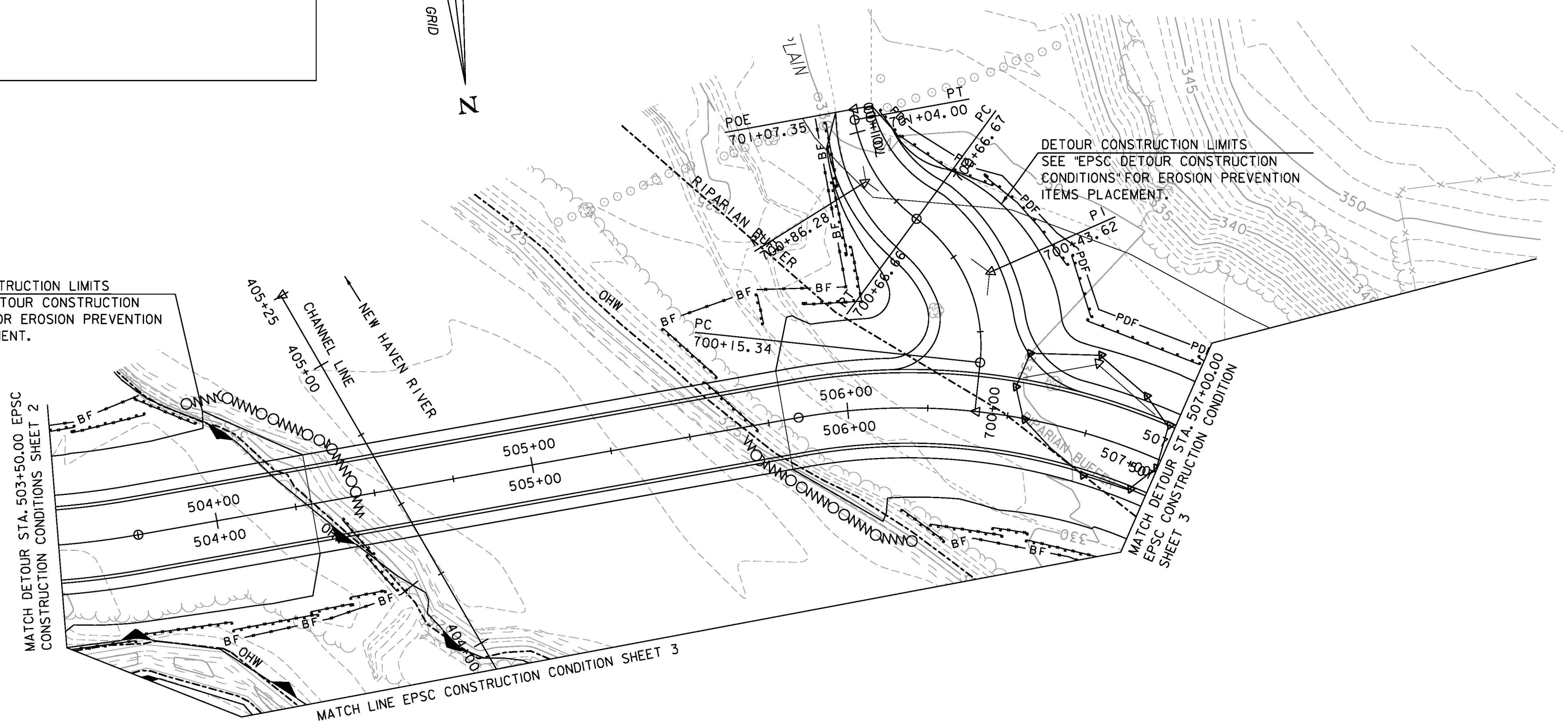
SCALE 1" = 20' - 0"
20 0 20

PROJECT NAME: BRISTOL
 PROJECT NUMBER: STP F 021-1(15)
 FILE NAME: 78f187/STR/s78f187erocon.dgn PLOT DATE: 25-APR-2012
 PROJECT LEADER: M. EVANS-MONGEON DRAWN BY: G.ROKES
 DESIGNED BY: W. PELLETIER CHECKED BY: W. PELLETIER
 EPSC CONSTRUCTION CONDITION SHEET 4 SHEET 34 OF 37

LEGEND	
	WETLAND BOUNDARY
	RIPARIAN BUFFER
	FLOOD PLAIN
	ORDINARY HIGH WATER
	PROJECT DEMARCATION FENCE
	BARRIER FENCE
	SILT FENCE
	WOVEN WIRE SILT FENCE
	ONNOCON FILTER CURTAIN



DETOUR CONSTRUCTION LIMITS
SEE "EPSC DETOUR CONSTRUCTION
CONDITIONS" FOR EROSION PREVENTION
ITEMS PLACEMENT.



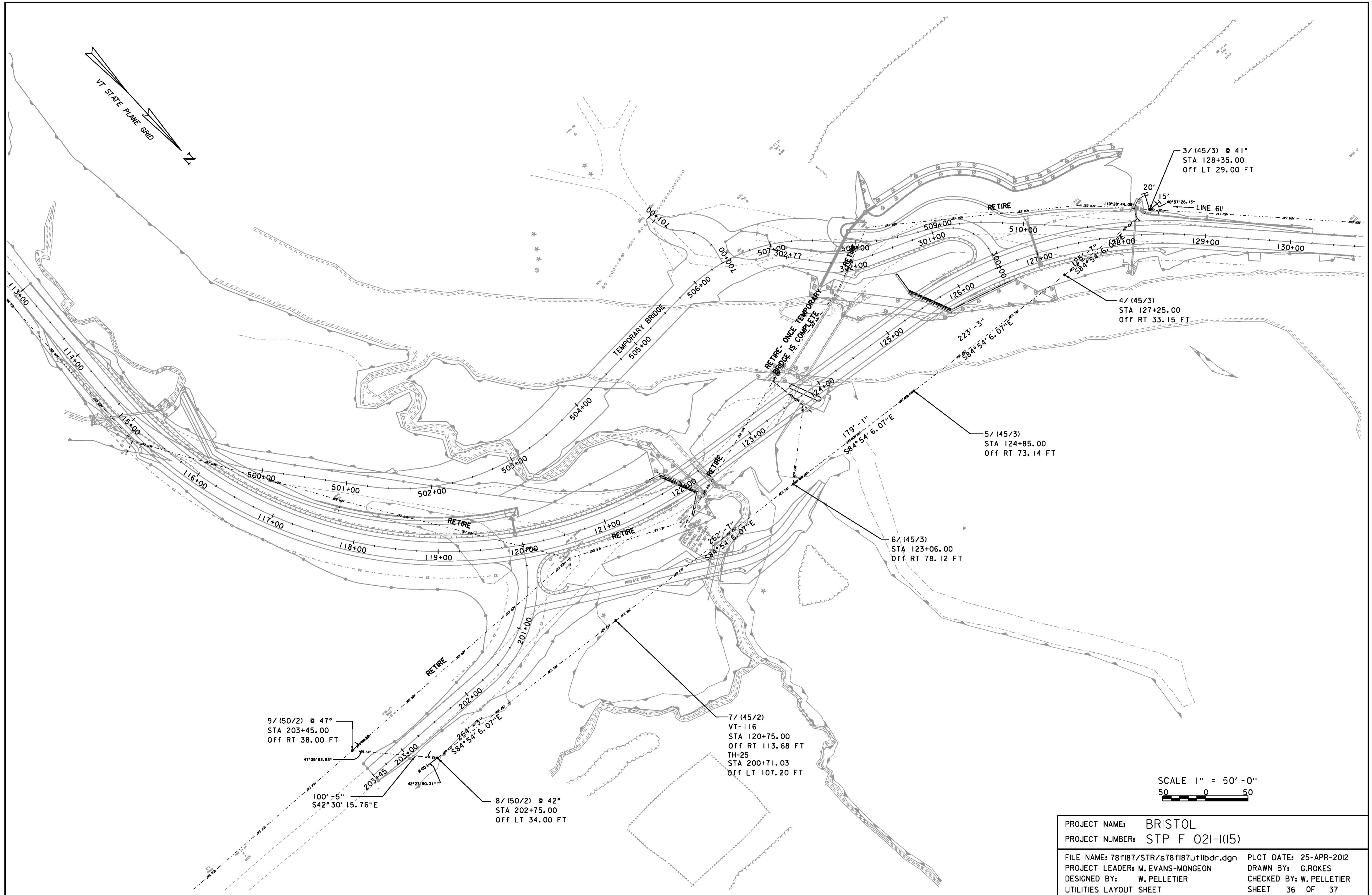
MATCH DETOUR STA. 503+50.00 EPSC
CONSTRUCTION CONDITIONS SHEET 2

MATCH LINE EPSC CONSTRUCTION CONDITION SHEET 3

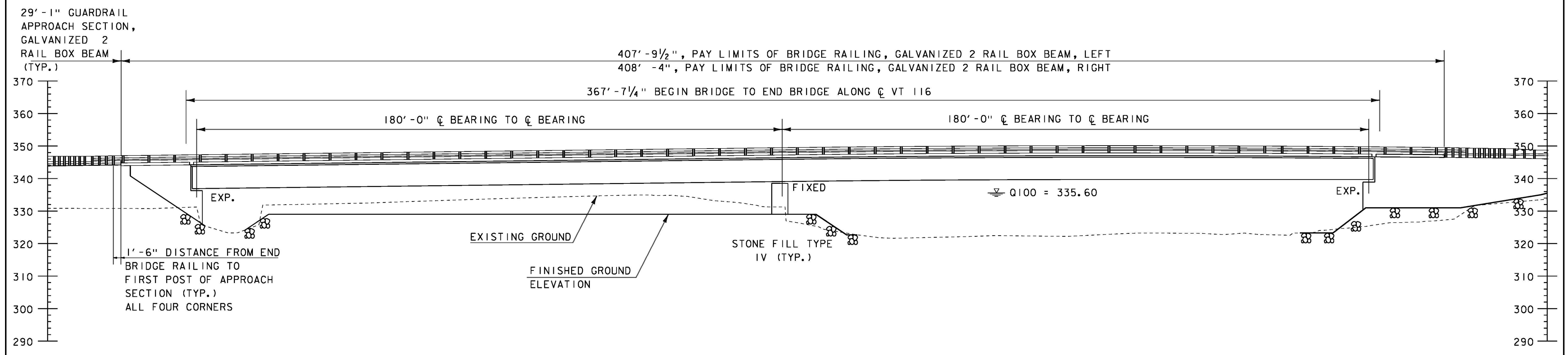
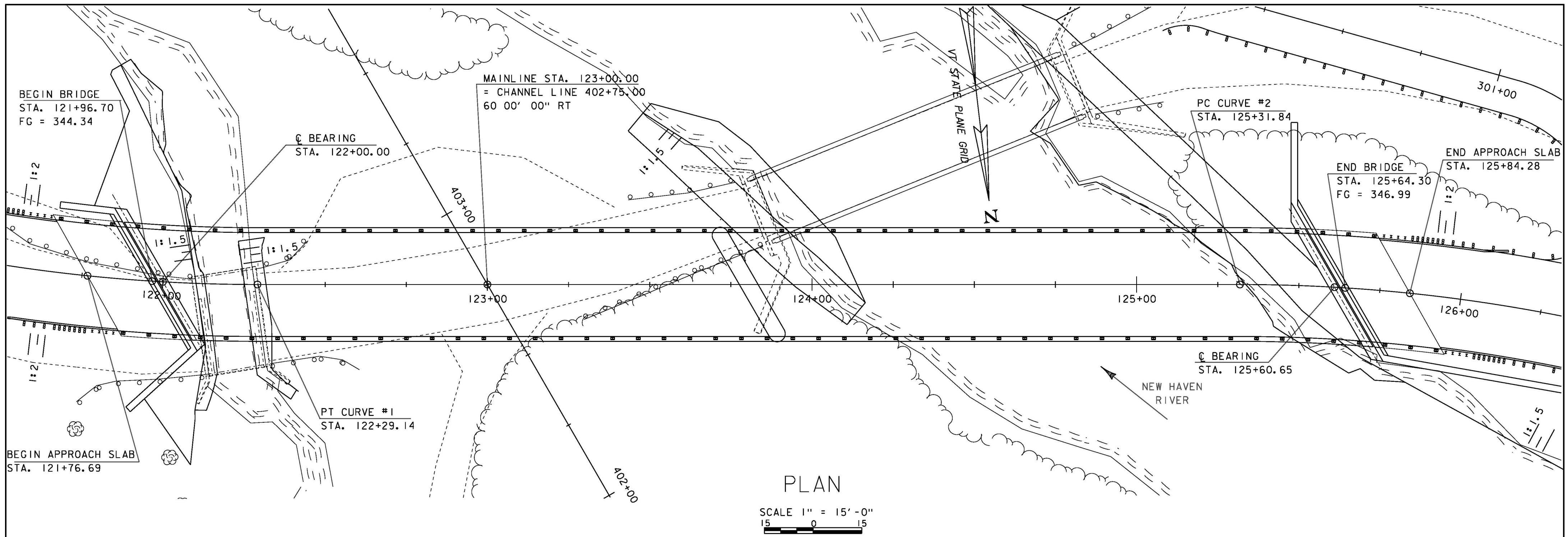
MATCH DETOUR STA. 507+00.00
EPSC CONSTRUCTION CONDITION
SHEET 3

SCALE 1" = 20' - 0"
20 0 20

PROJECT NAME: BRISTOL	PLOT DATE: 25-APR-2012
PROJECT NUMBER: STP F 021-1(15)	DRAWN BY: G.ROKES
FILE NAME: 78f187/STR/s78f187erocon.dgn	CHECKED BY: W.PELLETIER
PROJECT LEADER: M. EVANS-MONGEON	SHEET 35 OF 37
DESIGNED BY: W. PELLETIER	
EPSC CONSTRUCTION CONDITION SHEET 5	



PROJECT NAME:	BRISTOL
PROJECT NUMBER:	STP F 021-I(15)
FILE NAME:	78f187/STR/s78f187utilbdr.dgn
PROJECT LEADER:	M. EVANS-MONGEON
DESIGNED BY:	W. PELLETIER
UTILITIES LAYOUT SHEET	
PLOT DATE:	25-APR-2012
DRAWN BY:	G.ROKES
CHECKED BY:	W. PELLETIER
SHEET	36 OF 37



ELEVATION ALONG UPSTREAM FASCIA

PROJECT NAME: BRISTOL	PROJECT NUMBER: STP F 021-I(15)
FILE NAME: S78F187PE2.DGN	PLOT DATE: 25-APR-2012
PROJECT LEADER: M.EVANS-MONGEON	DRAWN BY: EVANS-MONGEON
DESIGNED BY: W.PELLETIER	CHECKED BY: PELLETIER
PLAN AND ELEVATION	SHEET 37 OF 37