

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



ARUNDEL YORK COUNTY HUTCHINS BRIDGE OVER GOFFS MILL BROOK LOG CABIN ROAD PROJECT NO. STP-1786(700)X PROJECT LENGTH 0.028 mi. BRIDGE NO. 3948

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SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Fifth Edition 2010 and Interim Specifications through 2010.

DESIGN LOADING

Live Load HL - 93 Modified

TRAFFIC DATA

Current (2010) AADT	5350
Future (2030) AADT	6960
DHV - % of AADT	12%
Design Hour Volume	835
Heavy Trucks (% of AADT)	6%
Heavy Trucks (% of DHV)	5%
Directional Distribution (% of DHV)	56%
18 kip Equivalent P 2.0	127
18 kip Equivalent P 2.5	121
Design Speed (mph)	45 mph

HYDROLOGIC DATA

Drainage Area	4.75 sq mi
Design Discharge (Q50)	221.6 cfs
Check Discharge (Q100)	255.0 cfs
Headwater Elevation (Q50)	50.44 ft
Headwater Elevation (Q100)	51.31 ft
Discharge Velocity (Q50)	2.12 fps
Discharge Velocity (Q100)	2.13 fps
Headwater Elevation (Q1.1)	46.05 ft
Discharge Velocity (Q1.1)	4.21 fps
Headwater Elevation (Q25)	49.62 ft

MATERIALS

Concrete:	
Precast	Class "P"
Headwall & Toewall	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60
Prestressing Strands	AASHTO 203 (ASTM A 416), Grade 270, Low Relaxation

BASIC DESIGN STRESSES

Concrete (Toewall & Headwall)	f 'c = 4,350 psi
Precast Concrete	f 'c = 6,000 psi
Reinforcing Steel	f y = 60,000 psi
Prestressing Strand	F μ = 270,000 psi

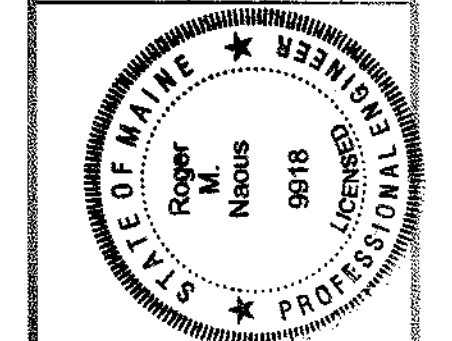
UTILITIES

Central Maine Power Company Time Warner Cable
Northern New England Telephone

MAINTENANCE OF TRAFFIC

Traffic will be maintained utilizing a combination of staged construction and a short bridge closure. Through most of the project traffic will be maintained with signals and alternating 11'-0" lanes. For two days the bridge will be closed to traffic while the existing bridge is removed and back filled.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED: *[Signature]*
COMMISSIONER: *[Signature]*
CHIEF ENGINEER: *[Signature]*
DATE: 11/21/11



SIGNATURE: *[Signature]*
P.E. NUMBER: 9918
DATE: NOV 16 2011

PROGRAM	BRIDGE PROGRAM
PROJECT MANAGER	M. PARLIN
DESIGNER	R. HADDS
CONSULTANT	J. ANKER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	11/23/2012

WIN 17867.00

STP-1786(700)X

ARUNDEL
HUTCHINS BRIDGE
TITLE SHEET

PROJECT LOCATION:	Culvert replacement of Hutchins bridge #3948 in Arundel which carries Log Cabin Rd over Goffs Mill Brook. 43°24'28.00" N, 70°29'29.76" W
PROGRAM AREA:	Urban & Arterial Bridge Program
OUTLINE OF WORK:	Bridge Culvert Replacement

SHEET NUMBER
1
OF 18

Date: 11/16/2011
Username: alan.nadfeu
Division: BRIDGE
Filename: \\00\BRIDGE\MSTA\001_Title.dgn

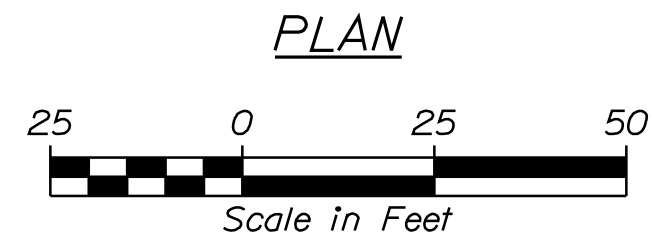
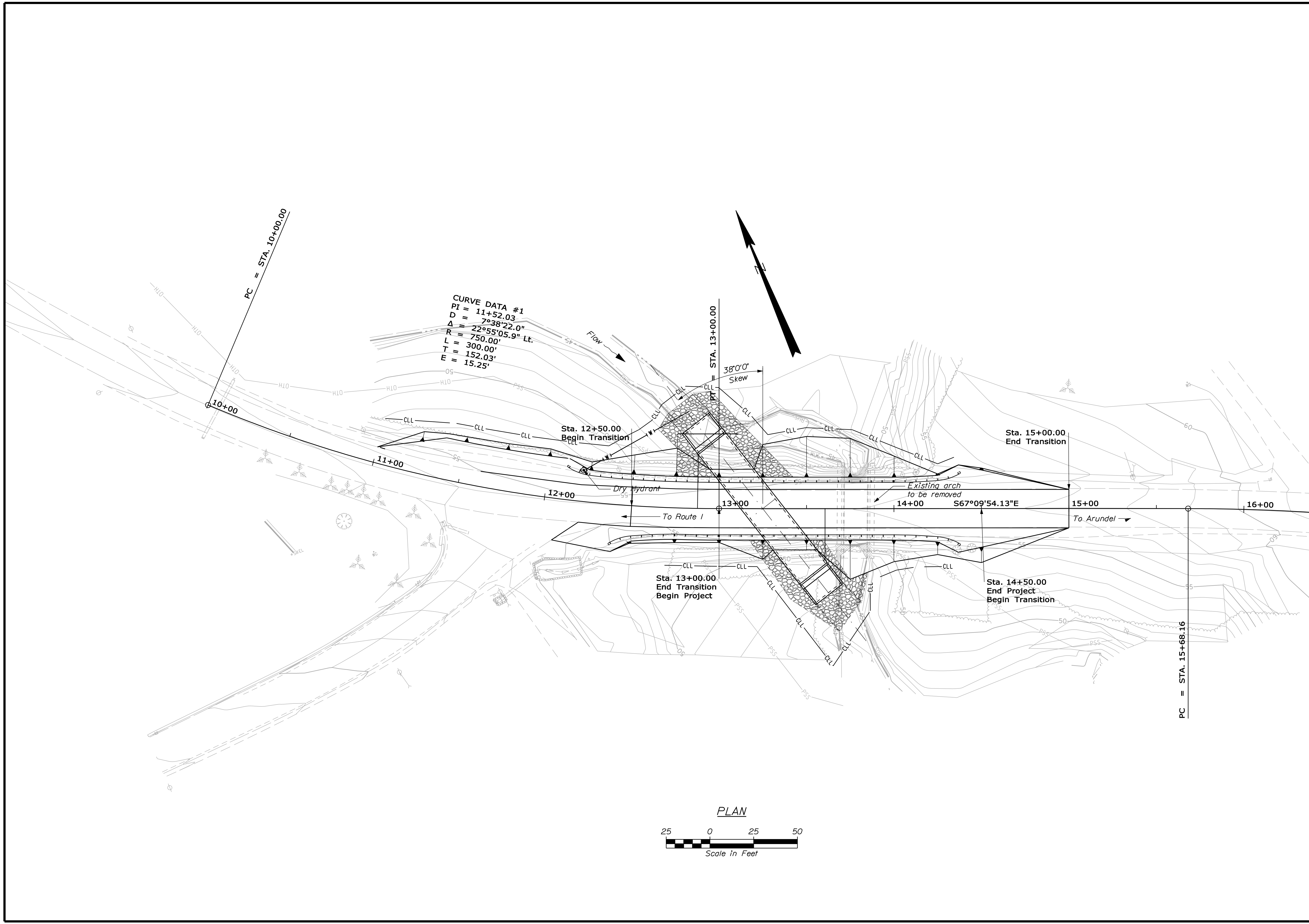
ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE	1	LS
203.20	COMMON EXCAVATION	810	CY
203.21	ROCK EXCAVATION	10	CY
203.25	GRANULAR BORROW	480	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	695	CY
403.210	HOT MIX ASPHALT 9.5 MM HMA	207	T
403.213	HOT MIX ASPHALT 12.5 MM HMA BASE	138	T
409.15	BITUMINOUS TACK COAT - APPLIED	32	G
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
524.301	TEMPORARY STRUCTURAL SUPPORT	1	LS
526.301	TEMPORARY CONCRETE BARRIER - TYPE 1	1	LS
534.71	PRECAST CONCRETE BOX CULVERT (355 CY)	1	LS
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	275	LF
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.79	GUARDRAIL 350 FLARED TERMINAL	4	EA
610.07	STONE FILL	215	CY
610.08	PLAIN RIPRAP	440	CY
615.07	LOAM	45	CY
618.1401	SEEDING METHOD NUMBER 2 - PLAN QUANTITY	7	UN
619.1201	MULCH - PLAN QUANTITY	7	UN
620.54	STABILIZATION GEOTEXTILE	950	SY
620.58	EROSION CONTROL GEOTEXTILE	280	SY
620.65	REINFORCEMENT GEOGRID	180	SY
627.733	W OR Y PAINTED PAVEMENT MARKING LINE (PLAN QUANTITY)	750	LF
629.05	HAND LABOR, STRAIGHT TIME	40	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.14	GRADER (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
639.19	FIELD OFFICE TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.31	TYPE I BARRICADE	1	EA
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	10	EA
652.34	CONE	20	EA
652.35	CONSTRUCTION SIGNS	250	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	30	CD
652.38	FLAGGER	150	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10.	MOBILIZATION	1	LS
834.322	DRY HYDRANT - INSTALL ONLY	1	LS

GENERAL CONSTRUCTION NOTES

- During construction, the road will be closed to traffic for a time period specified in the Special Provisions.
- For easements, construction limits and right of way lines, refer to Right of Way Map.
- The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
- All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
- Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
- In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.
- All embankment material, except as otherwise shown, placed below EL 51.00 shall be Granular Borrow meeting the requirements of Subsection 703.19. Material for Underwater Backfill.
- Place riprap on sideslopes up to edge of berm.
- Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
- Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Loam & Seed Pay items.
- Place a 24-in. wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of the riprap.
- Guardrail posts as shown in the Standard Details shall be modified from the indicated length of 6 feet to a length of 7 feet with an embedment of 4.5 feet. Payment will be considered incidental to the guardrail pay items.
- A NCHRP 350 Compliant Guardrail End Treatment shall be installed concurrently with the placement of each section of beam guardrail.
- Extended-use Erosion Control Blanket, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. Payment will be made under the appropriate Contract items.
- Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php>.
- The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
- The hydrologic report of the bridge site may be accessed at the MaineDOT web address. The hydrologic report is based on MaineDOT's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.
- Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:
 - If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
 - If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
 - If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation.
- The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. No work related to the removal of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.

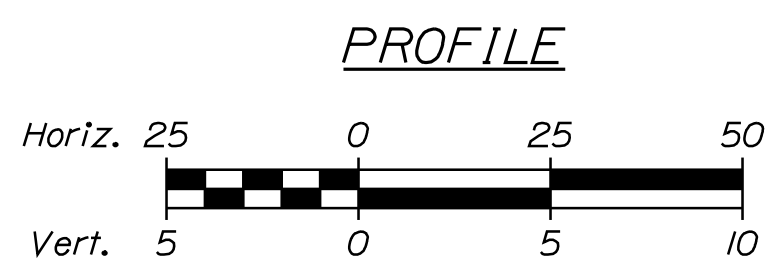
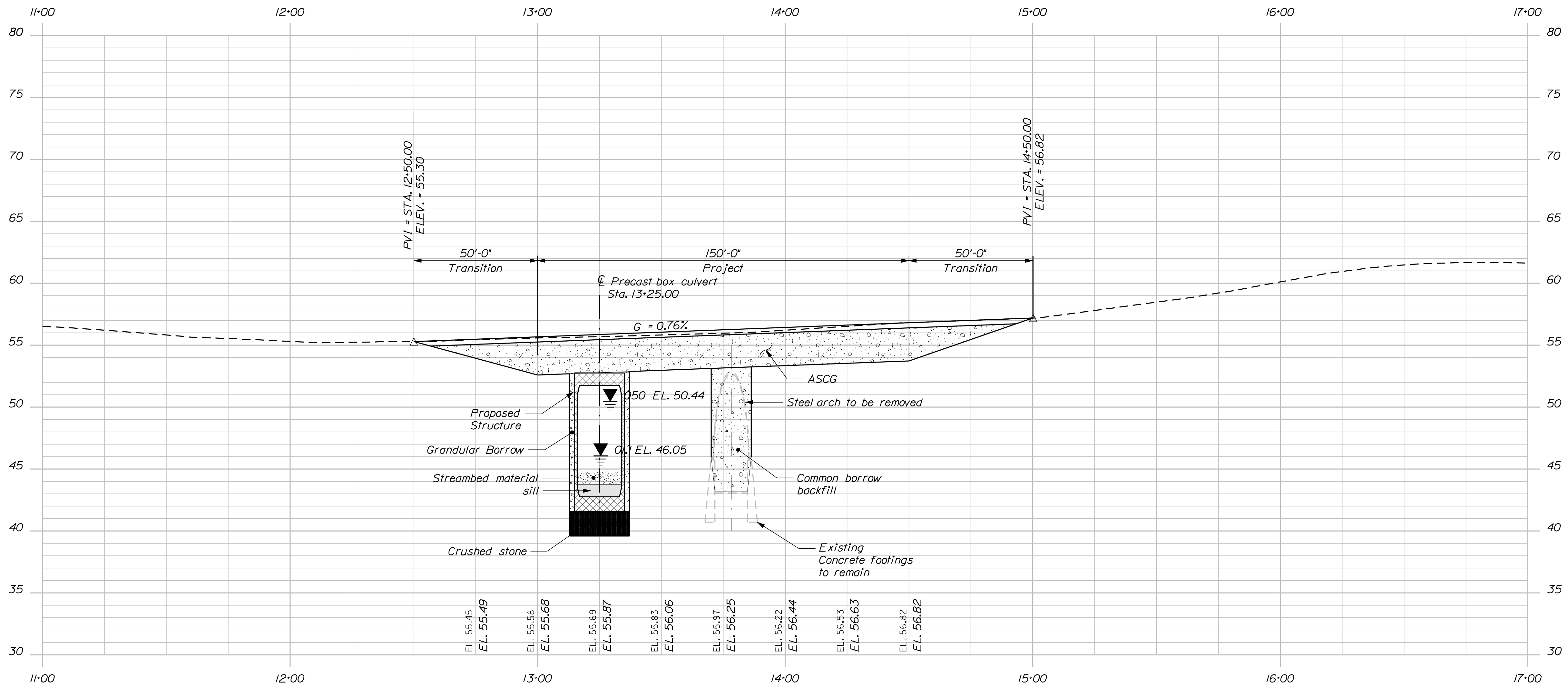
20. The fill inside of the box culvert shall consist of a combination of previously excavated streambed material, Granular Borrow and Plain Riprap. The material shall be placed as directed by the Resident. Payment shall be made under the Granular Borrow and Plain Riprap Pay Items.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-1786(700)X		BRIDGE NO. 3948		BRIDGE PLANS	
HUTCHINS BRIDGE		GOFFS MILL BROOK		YORK COUNTY		QUANTITIES & NOTES		SHEET NUMBER	
ARUNDEL								2	
								OF 18	



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-1786(700)X	
ARUNDEL		YORK COUNTY	
HUTCHINS BRIDGE GOFFS MILL BROOK		GENERAL PLAN	
SHEET NUMBER		BRIDGE NO. 3948	
3		WIN 17867.00	
OF 18		BRIDGE PLANS	

PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN DETAILED: R. NAOLIS	ADN	MAR 2011	
CHECKED/REVIEWED: M. PARLIN	MAP		
DESIGNS DETAILED: K. MAGUIRE	T. WHITE		
REVISIONS 1			P.E. NUMBER
REVISIONS 2			DATE
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-1786(700)X	
BRIDGE NO. 3948		WIN 17867.00	
BRIDGE PLANS			
HUTCHINS BRIDGE GOFFS MILL BROOK YORK COUNTY			
ARUNDEL			
PROFILE			
SHEET NUMBER			
4			
OF 18			

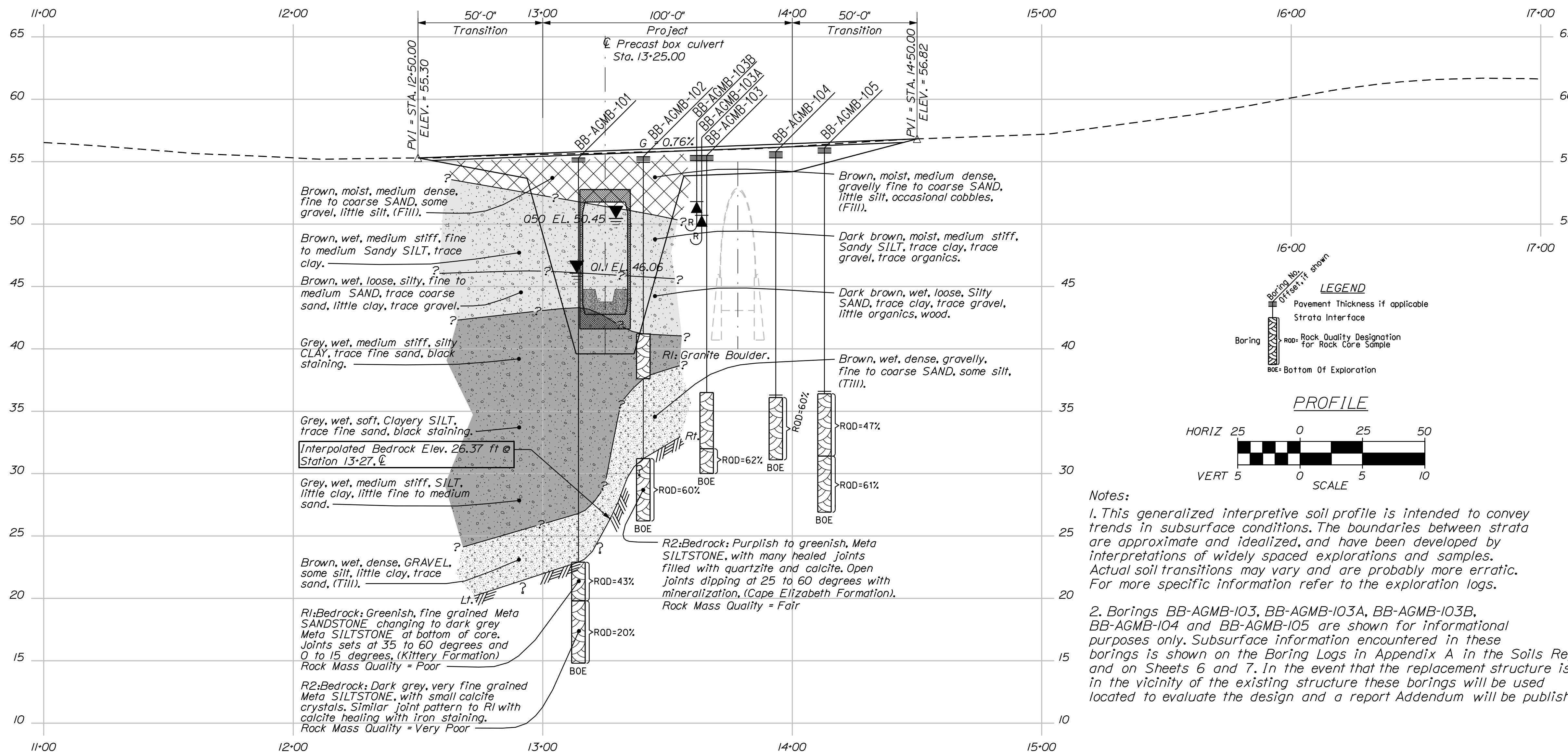
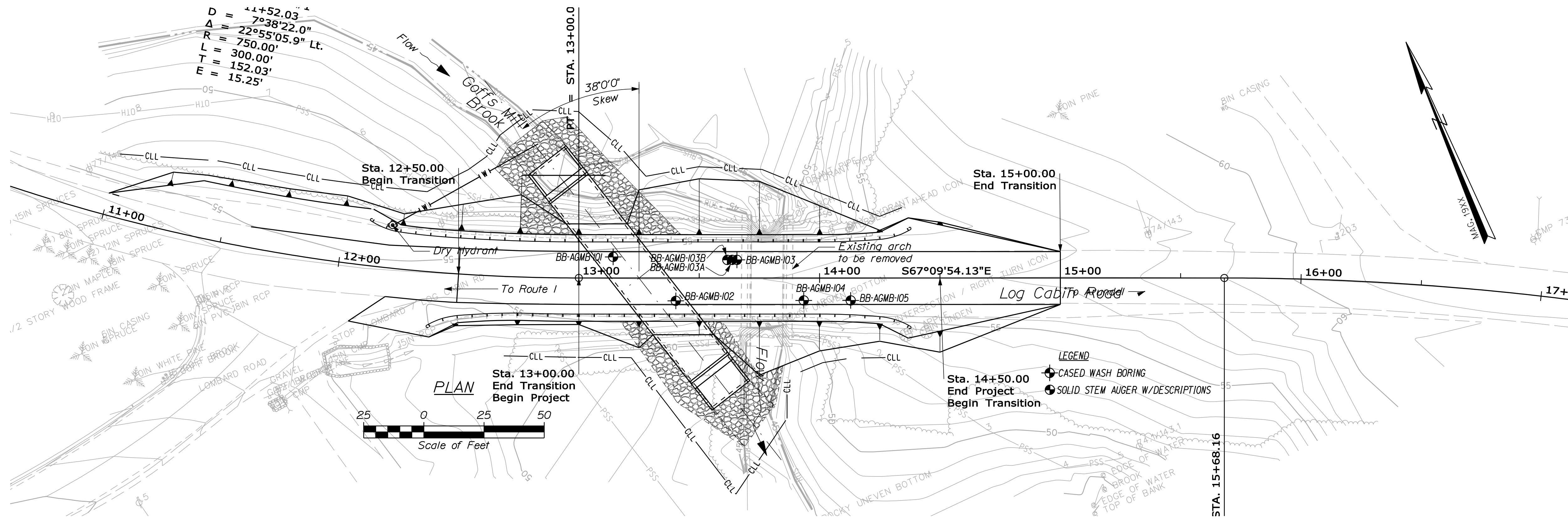
PROJ. MANAGER	BY	DATE
M. PARLIN	ADN	MAR 2011
CHECKED-REVIEWED	R. NAJOS	MAP
DESIGN-DETAILED	K. MAGUIRE	T. WHITE
DESIGN-DETAILED		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE	P.E. NUMBER
DATE	DATE

Date: 12/12/2011

Username: alan.nadeau

Filename: ... \GEO\TECH\MSTA\005_BLP&ISPI.dgn Division: BRIDGE



Notes:

1. This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

2. Borings BB-AGMB-103, BB-AGMB-103A, BB-AGMB-103B, BB-AGMB-104 and BB-AGMB-105 are shown for informational purposes only. Subsurface information encountered in these borings is shown on the Boring Logs in Appendix A in the Soils Report and on Sheets 6 and 7. In the event that the replacement structure is in the vicinity of the existing structure these borings will be used located to evaluate the design and a report Addendum will be published.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
STP-1786(700)X		BRIDGE NO. 3948	
WIN		17867.00	
BRIDGE PLANS			
HUTCHINS BRIDGE GOFF'S MILL BROOK YORK COUNTY			
ARUNDEL			
BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE			
SHEET NUMBER			
5			
OF 18			

Maine Department of Transportation Boring No.: BB-AGMB-101. Includes header information, data table with columns for Depth (ft.), Sample No., Pen./Rec. (in.), Sample Depth (ft.), Blows (lb./ft. in.), and Visual Description and Remarks. Remarks include soil types like 'Brown, moist, medium dense, fine to coarse SAND, some gravel, little silt, (F111)' and 'Brown, wet, medium stiff, fine to medium SANDY SILT, trace clay'.

Maine Department of Transportation Boring No.: BB-AGMB-102. Includes header information, data table with columns for Depth (ft.), Sample No., Pen./Rec. (in.), Sample Depth (ft.), Blows (lb./ft. in.), and Visual Description and Remarks. Remarks include soil types like '3.5' Pavement' and 'Brown, moist, medium dense, gravelly, fine to coarse SAND, little silt, occasional cobbles, (F111)'.

Maine Department of Transportation Boring No.: BB-AGMB-103B. Includes header information, data table with columns for Depth (ft.), Sample No., Pen./Rec. (in.), Sample Depth (ft.), Blows (lb./ft. in.), and Visual Description and Remarks. Remarks include soil types like '3' Pavement' and 'Brown, moist, medium dense, fine to coarse SAND, some gravel, trace silt'.

Maine Department of Transportation Boring No.: BB-AGMB-103A. Includes header information, data table with columns for Depth (ft.), Sample No., Pen./Rec. (in.), Sample Depth (ft.), Blows (lb./ft. in.), and Visual Description and Remarks. Remarks include soil types like '3' Pavement' and 'Brown, moist, medium dense, fine to coarse SAND, some gravel, trace silt'.

Maine Department of Transportation Boring No.: BB-AGMB-103. Includes header information, data table with columns for Depth (ft.), Sample No., Pen./Rec. (in.), Sample Depth (ft.), Blows (lb./ft. in.), and Visual Description and Remarks. Remarks include soil types like '3' Pavement' and 'Brown, moist, medium dense, fine to coarse SAND, some gravel, trace silt'.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1786(700)X BRIDGE NO. 3948 WIN 17867.00 BRIDGE PLANS. Includes project name, location (HUTCHINS BRIDGE GOFFS MILL BROOK YORK COUNTY), sheet number (ARUNDEL), and revision table with columns for BY, DATE, and REVISIONS.

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS		Project: Hutchins Bridge #398 carries Log Cabin Rd. over Goffs Mill Brook Location: Arundel, Maine		Boring No.: <u>BB-ACMB-104</u> PIN: <u>17867.00</u>	
Driller: MoinDOT	Elevation (ft.): 55.8	Auger ID/OD: 5" Solid Stem	Operator: Giguere/Giles	Date: 10/03/11	Sampler: Standard Split Spoon
Logged By: B. Wilber	Rig Type: CME 45C	Water Level: 11.0 ft bgs.	Date Start/Finish: 3/21/11 09:30-14:00	Drilling Method: Coiled Wash Boring	Core Barrels: ND-2"
Boring Location: 13+93.4, 9.3 Rt.	Casing ID/OD: N/A	Water Level: 11.0 ft bgs.	Home Efficiency Factor: 0.84	Home Type: Automatic 00 Hydraulic 00 Rope & Cathead 00	
<p>DEFINITIONS: S = Split Spoon Sample SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test MS = Unsuccessful Split Spoon Sample attempt SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test S = Thin Wall Tube Sample SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test MS = Unsuccessful Thin Wall Tube Sample attempt SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test S = Thin Wall Tube Sample SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test MS = Unsuccessful Thin Wall Tube Sample attempt SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test</p>					
Sample Information		Sample Information		Sample Information	
Depth (ft.)	Sample No.	Pen./Blow (ft./blows)	Sample Depth (ft.)	Blow / 1/2 Strength (blows / 100 lb)	Pen./Blow (ft./blows)
0					
5	10	24/11	5.00 - 7.00	5/11/5/4	16 22
10	20	24/14	10.00 - 12.00	4/5/25/20	30 42 5
15	30	24/14	15.00 - 17.00	15/8/11/11	19 27 41
20	R1	60/60	19.70 - 24.70	R00 = 60%	0105 ND-2 36.70
25					
30					
35					
40					
45					
50					
<p>Visual Description and Remarks</p> <p>0-5.00 6" Pavement</p> <p>5.00-7.00 Brown, damp, medium dense, fine to coarse SAND, some silt, little gravel. (F111).</p> <p>7.00-12.00 Brown, wet, medium dense, fine to coarse SAND, some silt, some gravel.</p> <p>12.00-14.00 Grey, wet, dense, fine to coarse SAND, some silt, little gravel.</p> <p>14.00-19.70 Brown, wet, medium dense, fine to coarse SAND, some gravel, some silt, (F111).</p> <p>19.70-24.70 0105 blows for 0.5 ft. Top of Bedrock at Elev. 36.3 ft. Roller Cored ahead to 19.7 ft bgs. R1: Bedrock: Greenish gray, medium grained GRANITE with quartz, feldspar, traces of amphibole and garnet, iron staining at top of core. With two joint sets: one at 60 to 75 degrees and one at 0 to 5 degrees. Rock Mass Quality = Fair. R1: Core Times (min:sec): 15.7-20.7 ft (12:05) 20.7-23.7 ft (12:15) 23.7-25.7 ft (13:00) 25.7-27.7 ft (13:05) 27.7-29.7 ft (13:00) 100% Recovery Bottom of Exploration at 24.70 feet below ground surface.</p>					
<p>LABORATORY TESTING RESULTS/ASHTO and Unified Class</p> <p>GW236400 A-2-4, SM WC=14.3%</p> <p>GW236419 A-2-4, SM WC=50.5%</p> <p>GW236430 A-1-10, SM WC=13.8%</p>					

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS		Project: Hutchins Bridge #398 carries Log Cabin Rd. over Goffs Mill Brook Location: Arundel, Maine		Boring No.: <u>BB-ACMB-105</u> PIN: <u>17867.00</u>	
Driller: MoinDOT	Elevation (ft.): 56.1	Auger ID/OD: 5" Solid Stem	Operator: Giguere/Giles	Date: 10/03/11	Sampler: Standard Split Spoon
Logged By: B. Wilber	Rig Type: CME 45C	Water Level: 12.0 ft bgs.	Date Start/Finish: 3/16/11-3/17/11	Drilling Method: Coiled Wash Boring	Core Barrels: ND-2"
Boring Location: 14+12.6, 9.3 Rt.	Casing ID/OD: N/A	Water Level: 12.0 ft bgs.	Home Efficiency Factor: 0.84	Home Type: Automatic 00 Hydraulic 00 Rope & Cathead 00	
<p>DEFINITIONS: S = Split Spoon Sample SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test MS = Unsuccessful Split Spoon Sample attempt SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test S = Thin Wall Tube Sample SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test MS = Unsuccessful Thin Wall Tube Sample attempt SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test S = Thin Wall Tube Sample SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test MS = Unsuccessful Thin Wall Tube Sample attempt SA = Solid Stem Auger Su = Thin Wall Tube Shear Strength Test Sw = Thin Wall Tube Shear Test</p>					
Sample Information		Sample Information		Sample Information	
Depth (ft.)	Sample No.	Pen./Blow (ft./blows)	Sample Depth (ft.)	Blow / 1/2 Strength (blows / 100 lb)	Pen./Blow (ft./blows)
0					
5	10	24/11	1.50 - 3.50	8/10/7/4	17 24
5	20	24/24	5.00 - 7.00	2/4/5/5	9 15
10	30	24/24	10.00 - 12.00	WDH/WDH/WDH/WDH	---
15	40	24/14	15.00 - 17.00	20/16/8/15	24 34 53
20	R1	60/60	19.70 - 24.70	R00 = 61%	0105 ND-2 36.60
25	R2	54/54	24.70 - 29.20	R00 = 61%	0105 ND-2 36.60
30					
35					
40					
45					
50					
<p>Visual Description and Remarks</p> <p>0-4.2 5" Pavement</p> <p>4.2-7.00 Brown, damp, medium dense, fine to coarse SAND, some silt, little gravel. (F111).</p> <p>7.00-11.00 Olive, moist, stiff, Clayey SILT, trace fine to medium sand.</p> <p>11.00-14.00 Grey, wet, very soft, Clayey SILT, trace fine to medium sand.</p> <p>14.00-19.70 Grey-brown, wet, dense, GRAVEL, some fine to coarse sand, some silt, (F111).</p> <p>19.70-24.70 0105 blows for 0.5 ft. Top of Bedrock at Elev. 36.6 ft. Roller Cored ahead to 19.7 ft bgs. R1: Bedrock: Purplish to greenish, Meta SILTSTONE, with iron staining and weathering at top of core. With three joint sets: one at approximately 45 degrees, one at approximately 60 degrees and one at 0 to 10 degrees. Some joints are filled with calcite. Rock Mass Quality = Poor. R1: Core Times (min:sec): 19.7-20.7 ft (12:00) 20.7-21.7 ft (12:10) 21.7-22.7 ft (12:00) 22.7-23.7 ft (12:00) 23.7-24.7 ft (12:00) 100% Recovery R2: Bedrock: Similar to R1 above, joints have a higher content of calcite mineralization. With three joint sets: one at 60 to 75 degrees, one at approximately 30 degrees and one at 0 to 5 degrees. Joints tend to be wavy. Rock Mass Quality = Fair. R2: Core Times (min:sec): 24.7-25.7 ft (12:00) 25.7-26.7 ft (12:50) 26.7-27.7 ft (14:00) 27.7-28.7 ft (12:35) 28.7-29.2 ft (11:50) 100% Recovery Core Blocked Bottom of Exploration at 29.20 feet below ground surface.</p>					
<p>LABORATORY TESTING RESULTS/ASHTO and Unified Class</p> <p>GW236421 A-2-4, SM WC=10.1%</p> <p>GW236422 A-6, CL WC=5.3%</p> <p>GW236423 A-6, CL WC=39.5% L=35 PL=20 P=15</p> <p>GW236434 A-1-10, SM WC=11.6%</p>					

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1786(700)X

HUTCHINS BRIDGE
GOFFS MILL BROOK
YORK COUNTY

ARUNDEL

BORING LOGS

SHEET NUMBER

7

OF 18

BRIDGE NO. 3948
WIN
17867.00
BRIDGE PLANS

PROJ. MANAGER	BY	DATE
DESIGN-DETAILED	T. WHITE	JULY 2011
CHECKED-REVIEWED	K. MAGUIRE	
DESIGN-DET. ALD.		
DESIGN-DET. ALD.		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

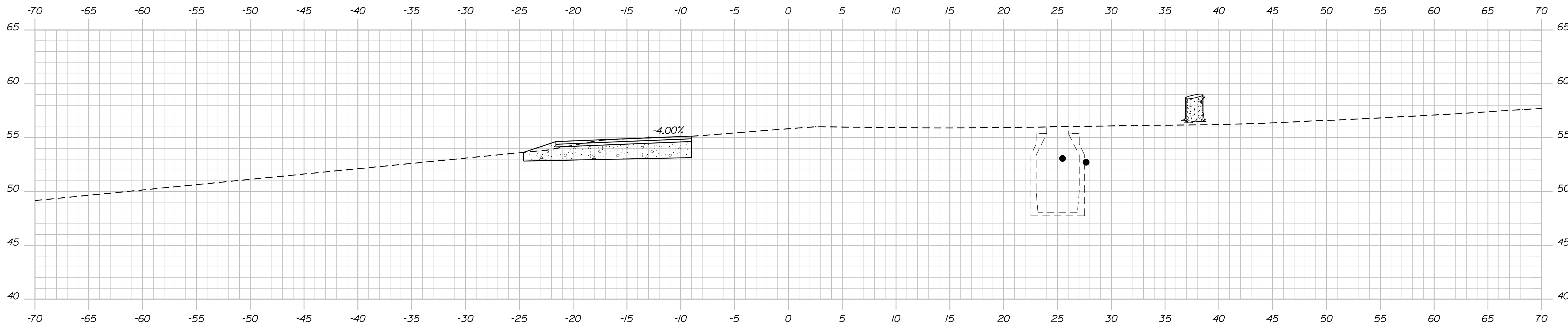
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P.E. NUMBER
DATE

Date: 12/2/2011

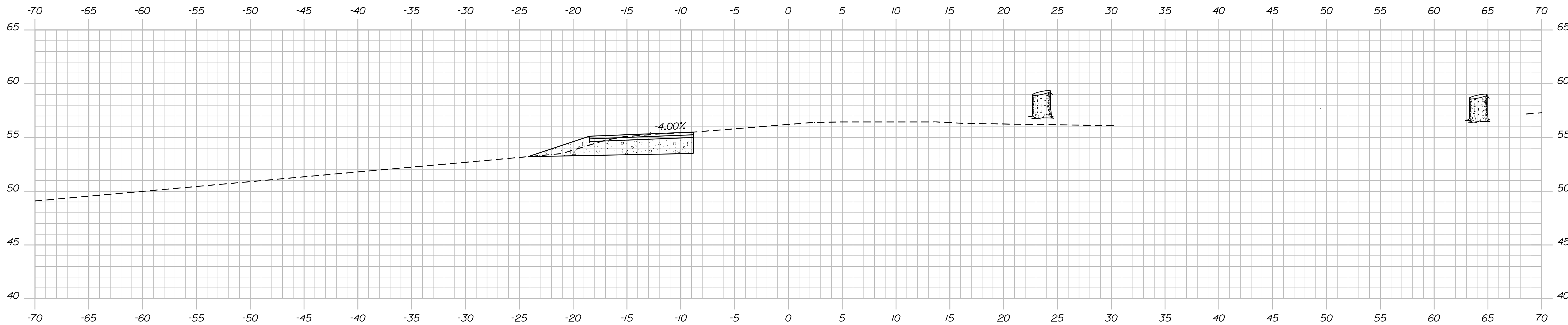
Username: alan.nadeau

Division: BRIDGE

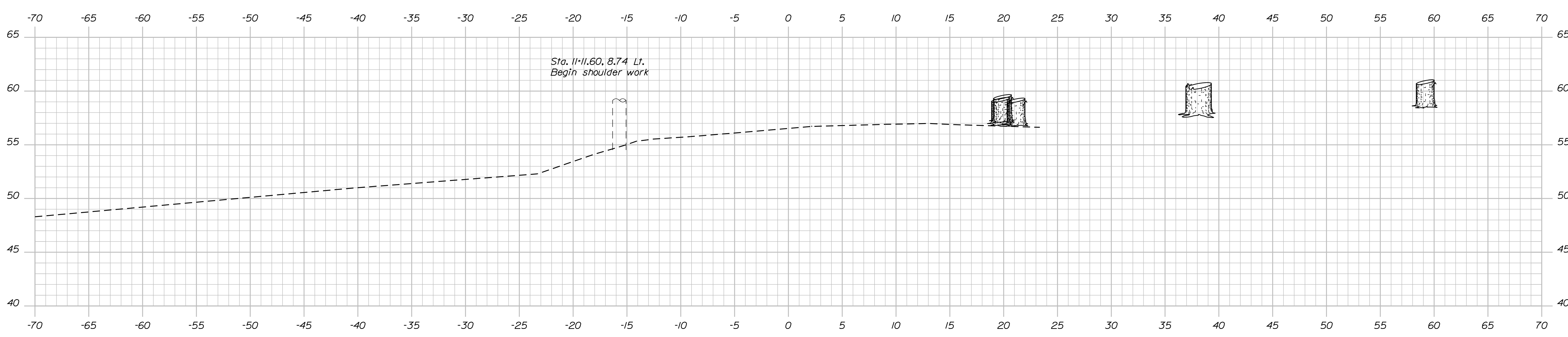
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11+50.00



11+25.00



11+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1786(700)X
BRIDGE NO. 3948
WIN 17867.00
BRIDGE PLANS

PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN DETAILED	M. PARLIN	MAR 2011	
CHECKED-REVIEWED	R. NAJOS		
DESIGN DETAILED	ADN		
DESIGN DETAILED	MAP		
DESIGN DETAILED	T. WHITE		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

HUTCHINS BRIDGE
GOFFS MILL BROOK
YORK COUNTY
ARUNDEL
CROSS SECTIONS

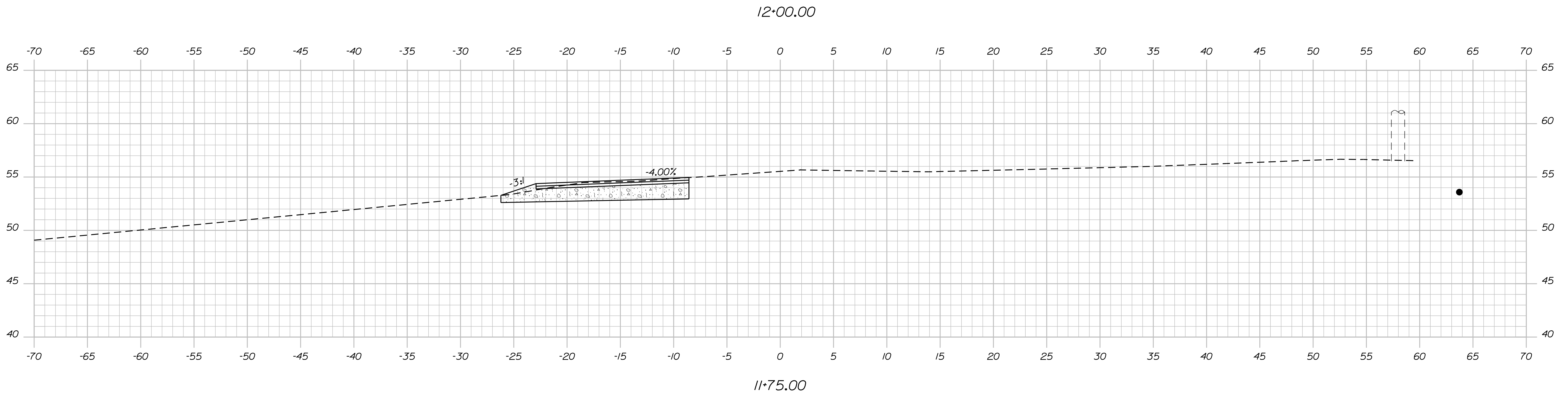
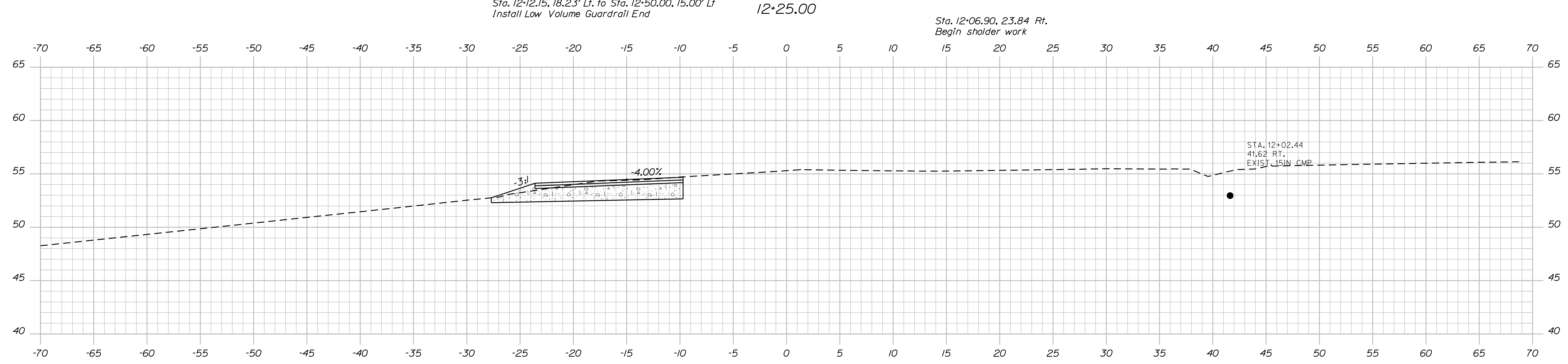
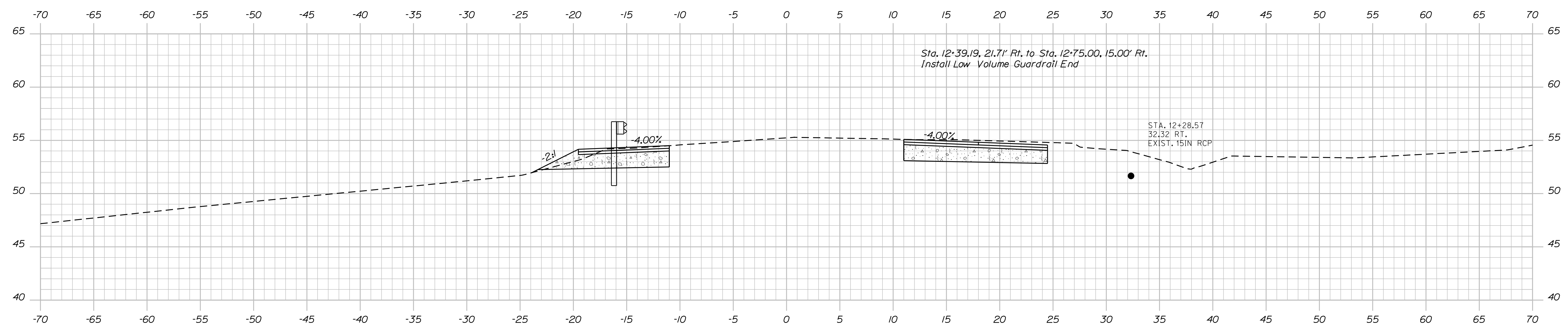
SHEET NUMBER
8
OF 18

Date: 12/12/2011

Username: alan.nadeau

Division: BRIDGE

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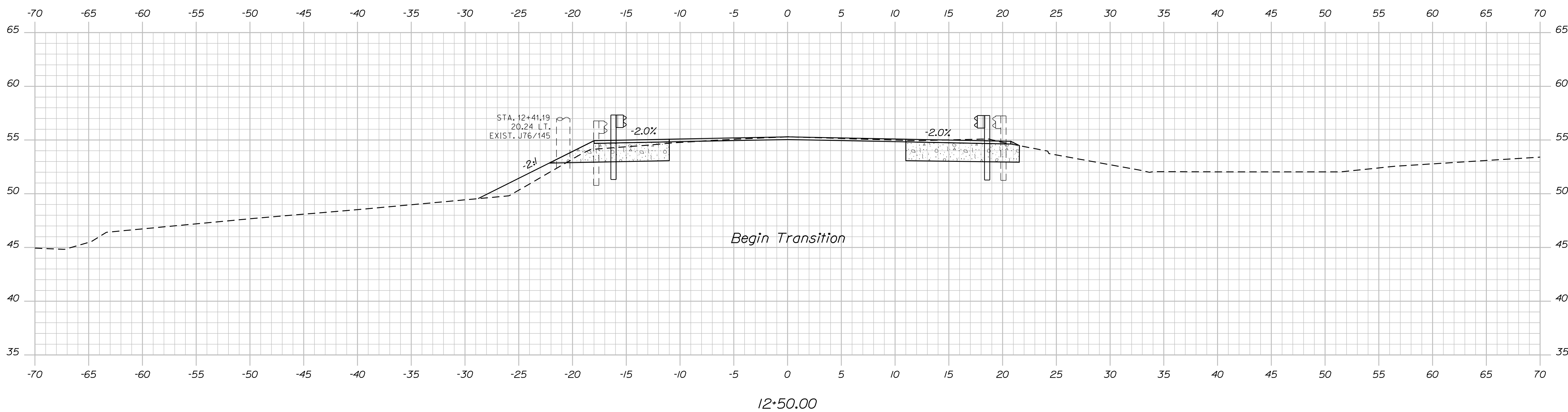
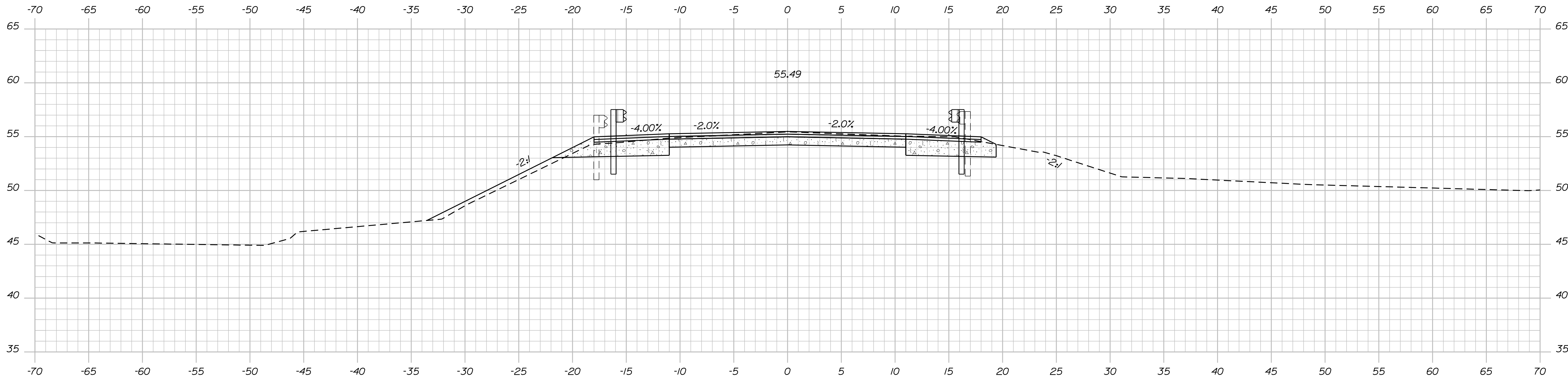
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-1786(700)X	
BRIDGE NO. 3948		WIN 17867.00	
BRIDGE PLANS			
PROJ. MANAGER	M. PARLIN	BY	M. PARLIN
DESIGN-DETAILED	R. NAJOS	DATE	MAR 2011
CHECKED-REVIEWED	MAP	SIGNATURE	
DESIGNS-DETAILED	K. MAGUIRE	P.E. NUMBER	
REVISIONS 1		DATE	
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
HUTCHINS BRIDGE GOFFS MILL BROOK YORK COUNTY		CROSS SECTIONS	
ARUNDEL		SHEET NUMBER	
		9	
		OF 18	

Date: 12/12/2011

Username: alon.nadeau

Division: BRIDGE

Filename: ... \msto\010_Xsect_12+50_002.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1786(700)X
BRIDGE NO. 3948 WIN 17867.00
BRIDGE PLANS

PROJ. MANAGER
CHECKED-REVIEWED
DESIGN DETAILED
DESIGN DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY
AON
MAP
T. WHITE

DATE
MAR 2011

SIGNATURE
P.E. NUMBER
DATE

HUTCHINS BRIDGE
GOFFS MILL BROOK
YORK COUNTY
ARUNDEL

CROSS SECTIONS

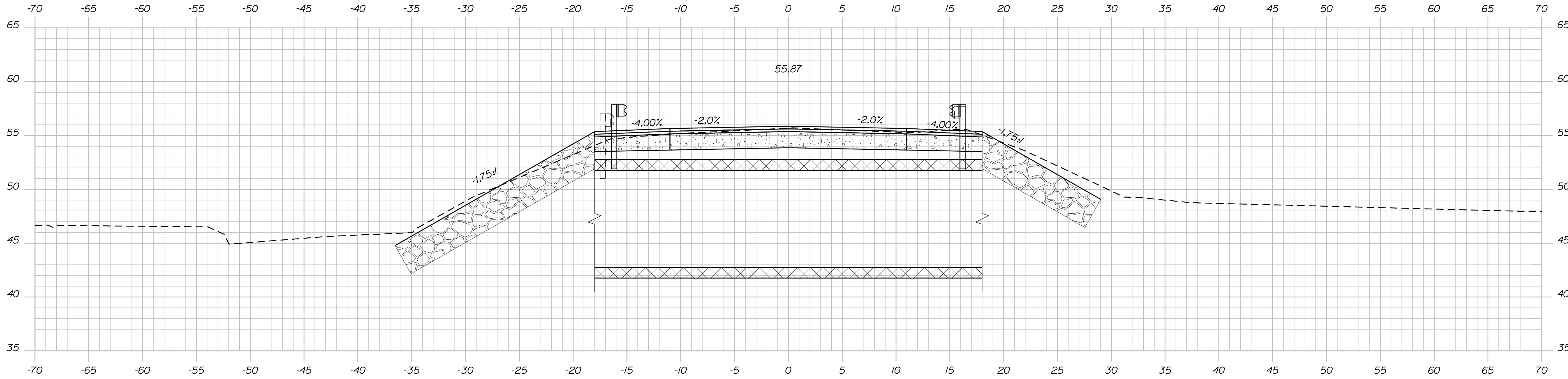
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OF 18

Date: 12/12/2011

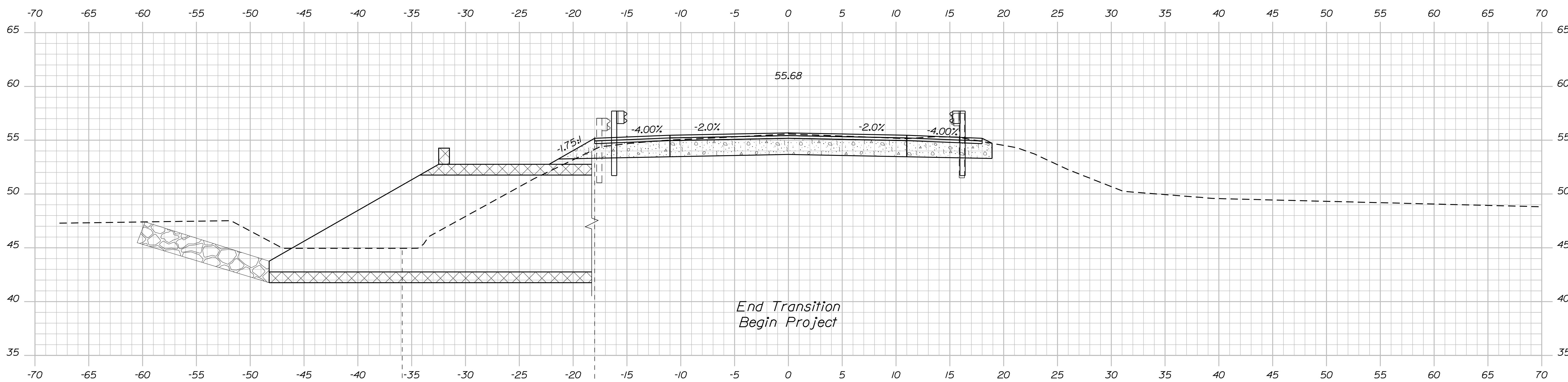
Username: alon.nadeau

Division: BRIDGE

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13+25.00



End Transition
Begin Project

13+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1786(700)X
BRIDGE NO. 3948 WIN 17867.00
BRIDGE PLANS

PROJ. MANAGER	BY	DATE	SIGNATURE
M. PARLIN	ADN	MAR 2011	
CHECKED-REVIEWED	MAP		
DESIGN DETAILED	T. WHITE		
DESIGNS DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

HUTCHINS BRIDGE
GOFFS MILL BROOK
YORK COUNTY
ARUNDEL
CROSS SECTIONS

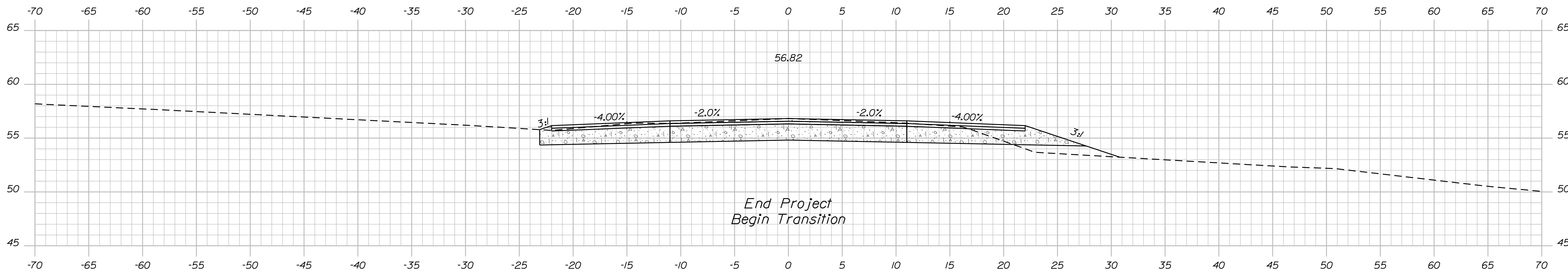
SHEET NUMBER
11
OF 18

Date: 12/2/2011

Username: alan.nadeau

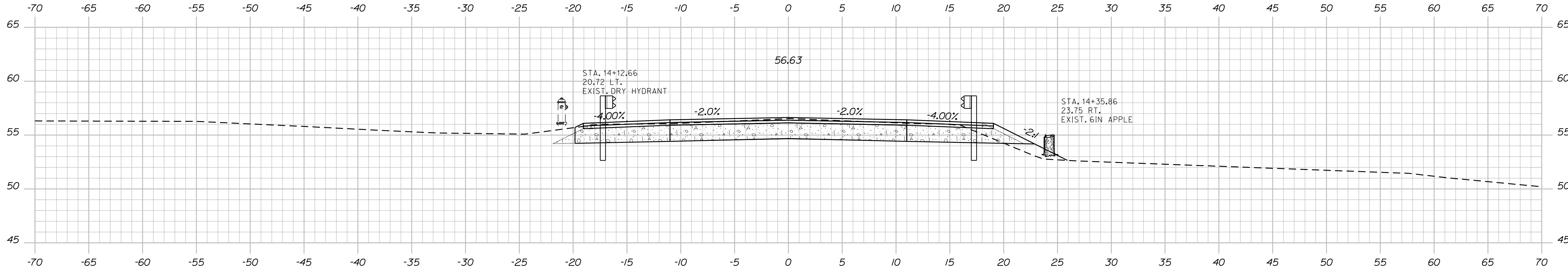
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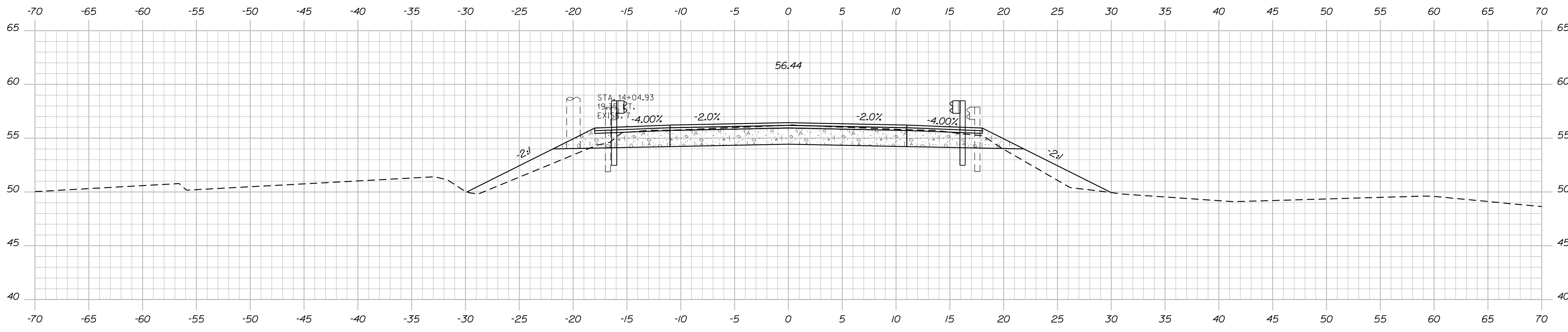


End Project
Begin Transition

14+50.00



14+25.00



14+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1786(700)X
WIN
17867.00
BRIDGE NO. 3948
BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	DATE	MAR 2011
DESIGN DETAILED	R. NAUIG	BY	MAP
CHECKED-REVIEWED	T. WHITE	DATE	
DESIGN DETAILED	K. MAGUIRE	SIGNATURE	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

HUTCHINS BRIDGE
GOFFS MILL BROOK
YORK COUNTY
ARUNDEL

CROSS SECTIONS

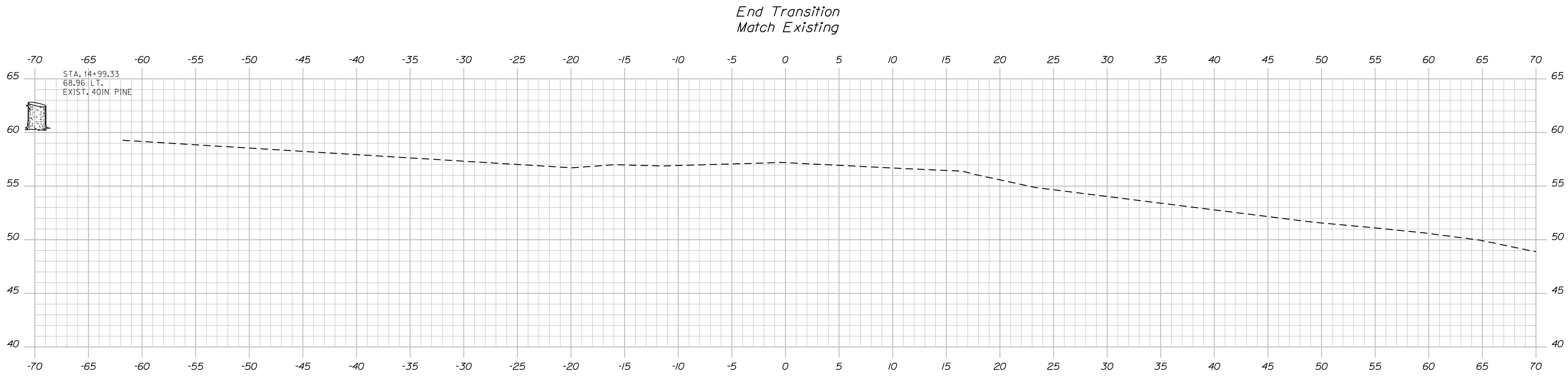
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OF 18

Date: 12/2/2011

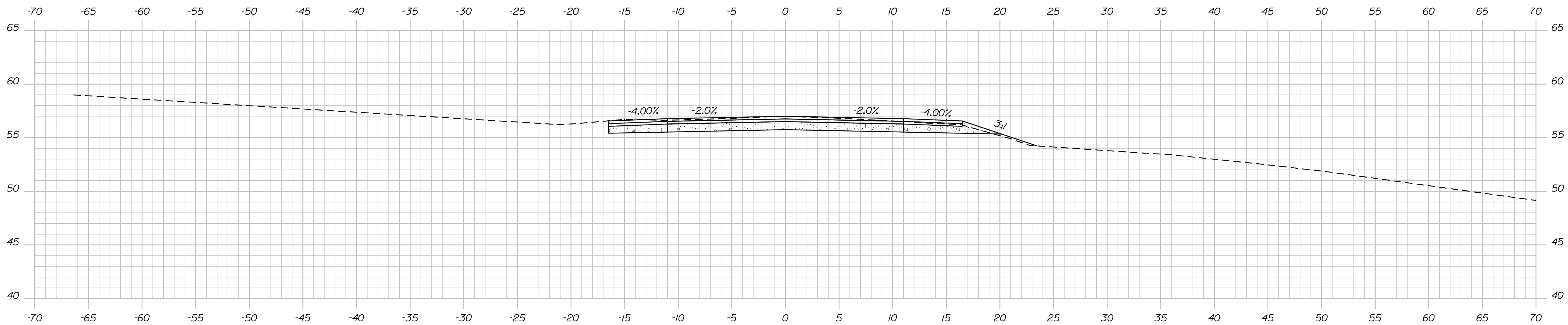
Username: alan.nadeau

Division: BRIDGE

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15+00.00



14+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1786(700)X
BRIDGE NO. 3948 WIN 17867.00 BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	M. PARLIN	DATE	MAR 2011
CHECKED-REVIEWED	R. NAJOS	MAP	T. WHITE	SIGNATURE	
DESIGNS DETAILED	K. MAGUIRE	P.E. NUMBER		DATE	
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

HUTCHINS BRIDGE
GOFFS MILL BROOK
YORK COUNTY
ARUNDEL
CROSS SECTIONS

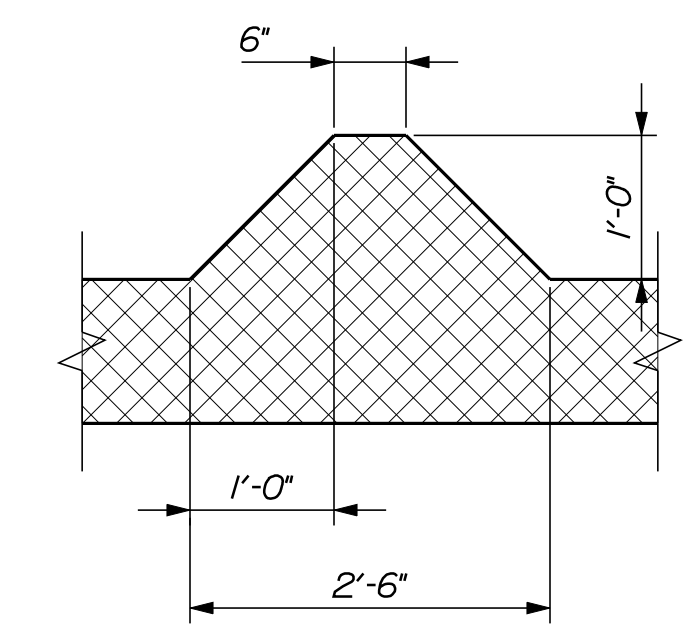
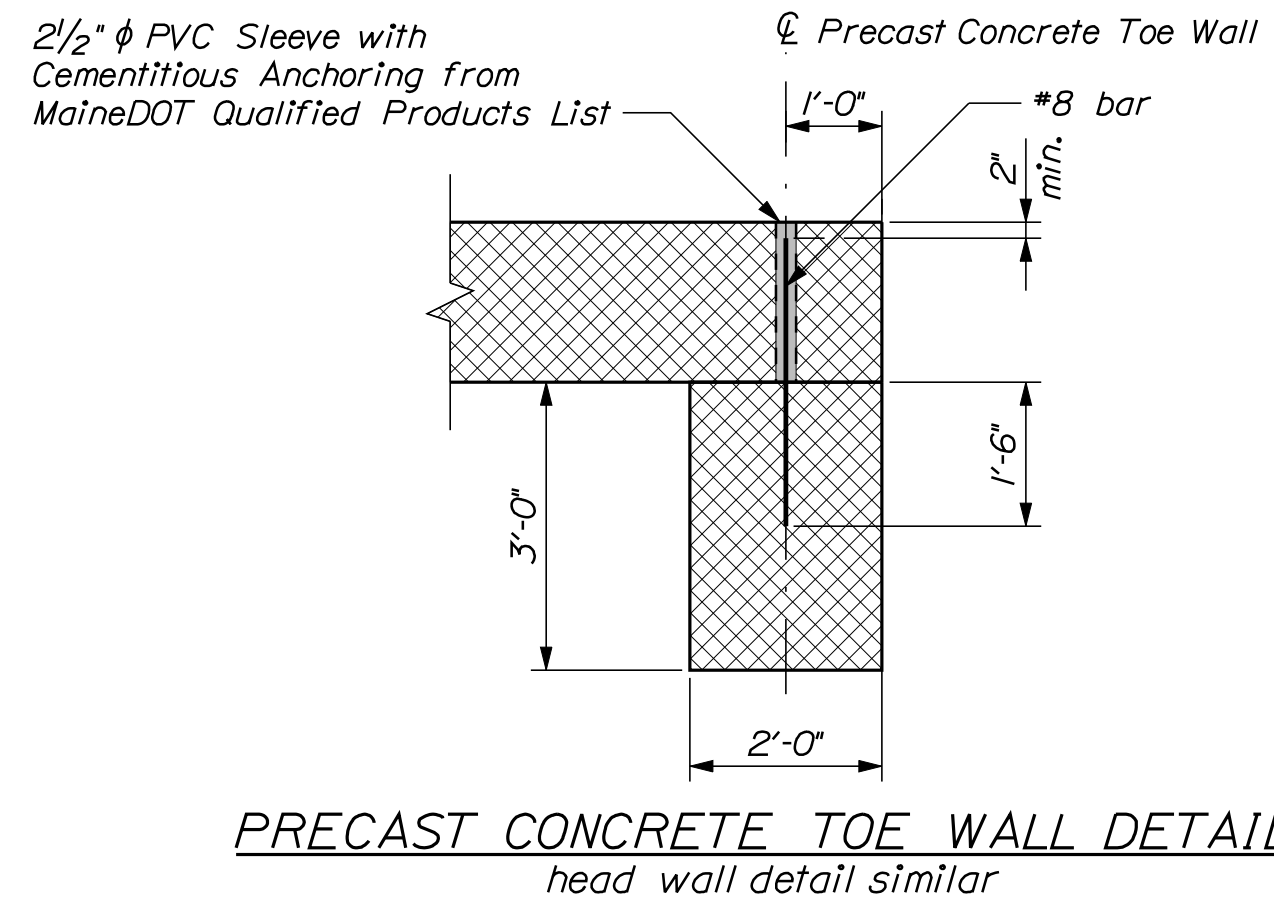
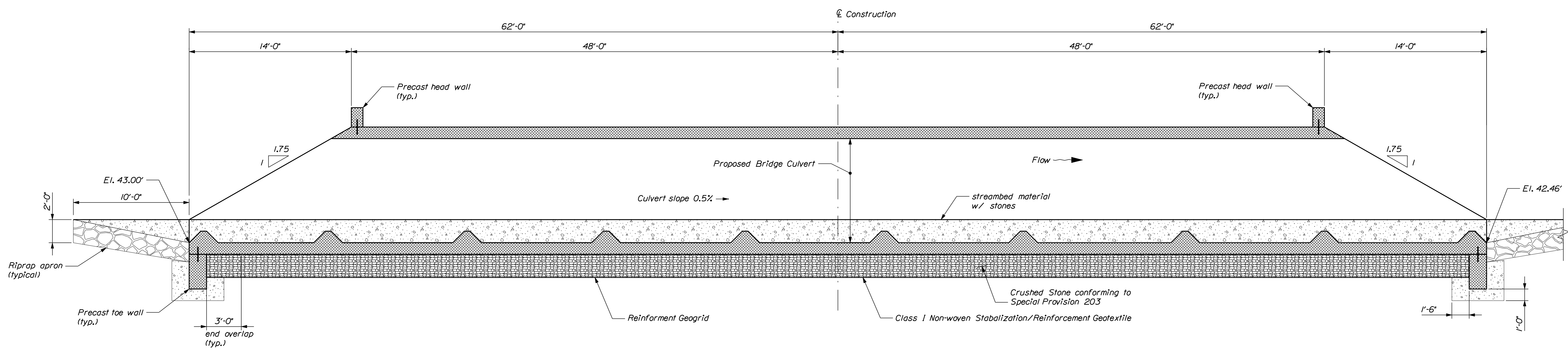
SHEET NUMBER
14
OF 18

Date: 12/12/2011

Username: alan.nadeau

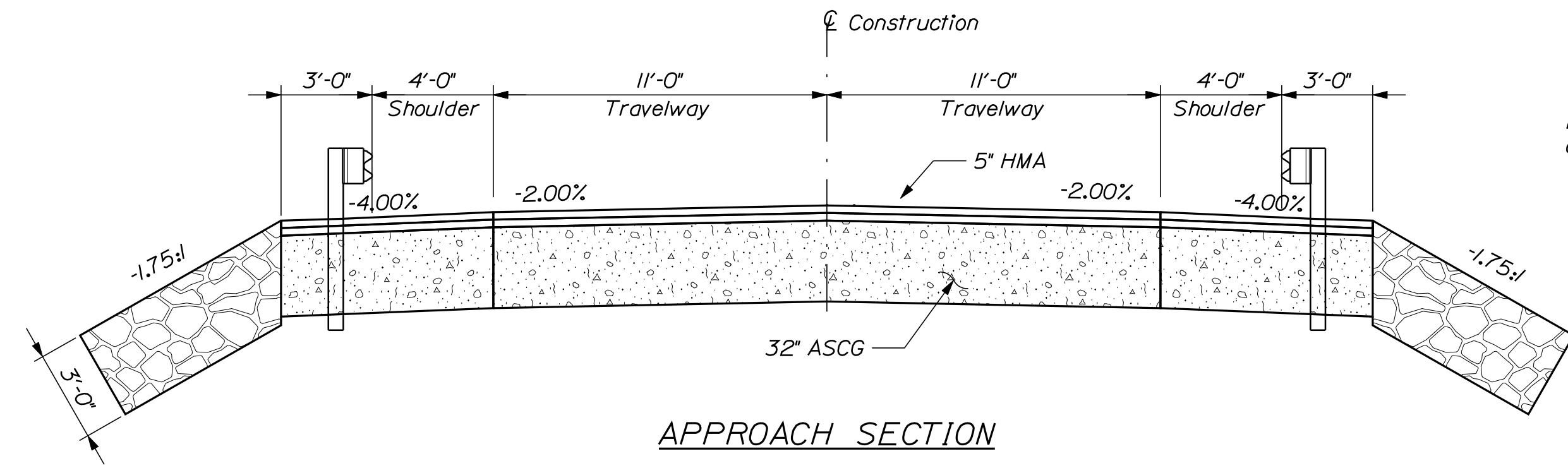
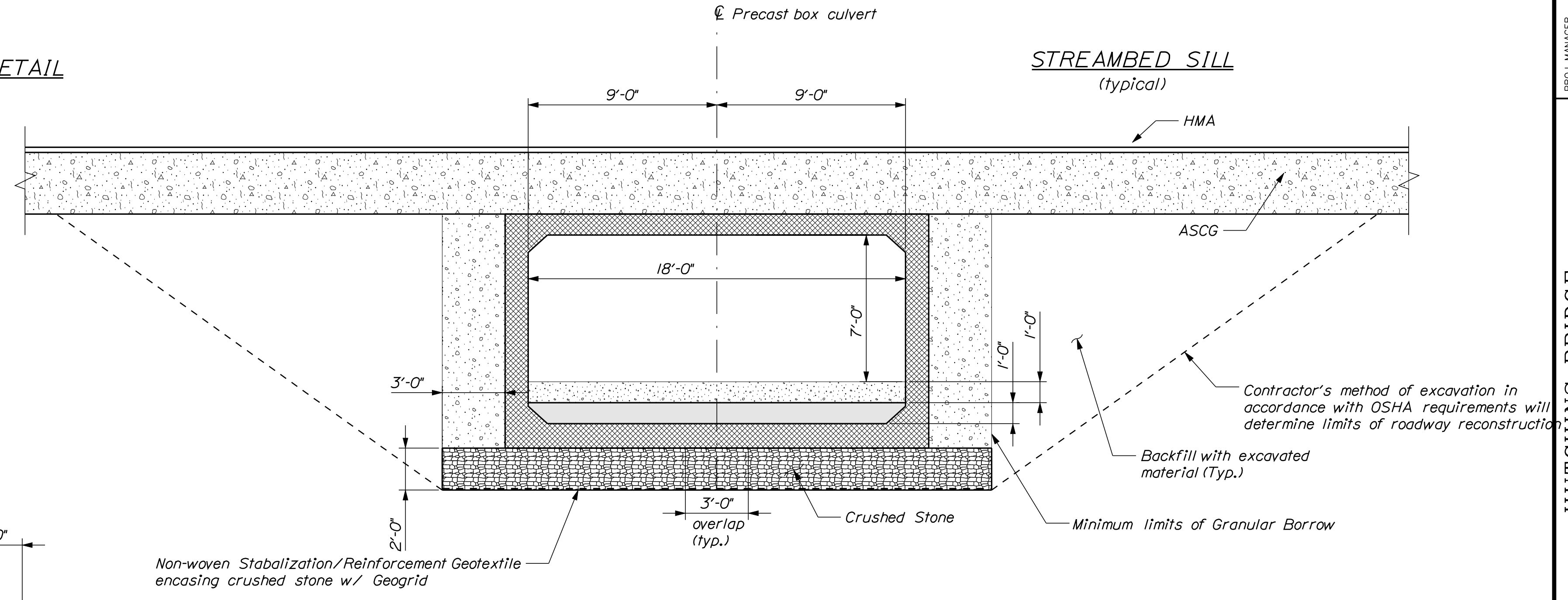
Division: BRIDGE

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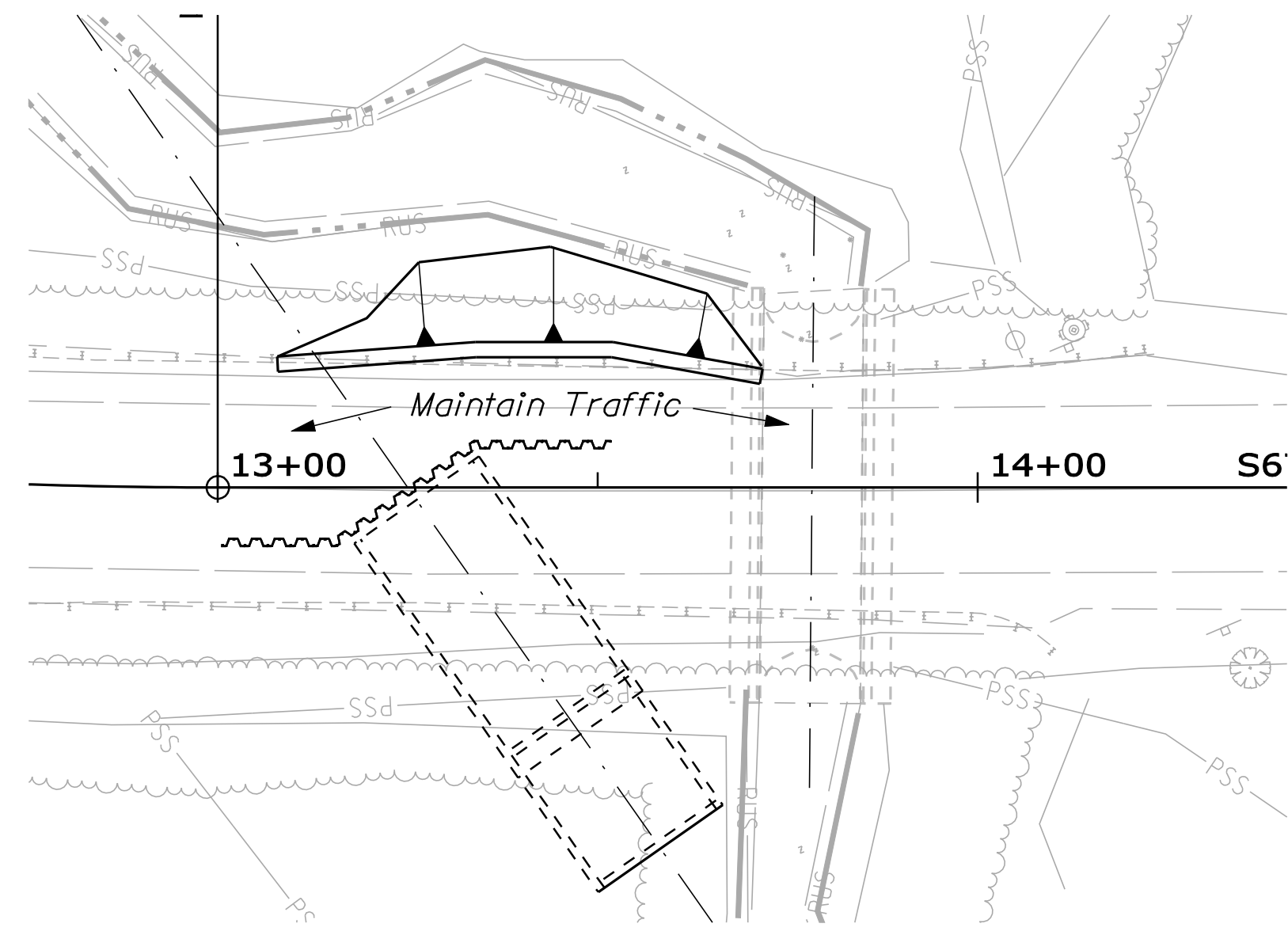


PRECAST CONCRETE BOX NOTES

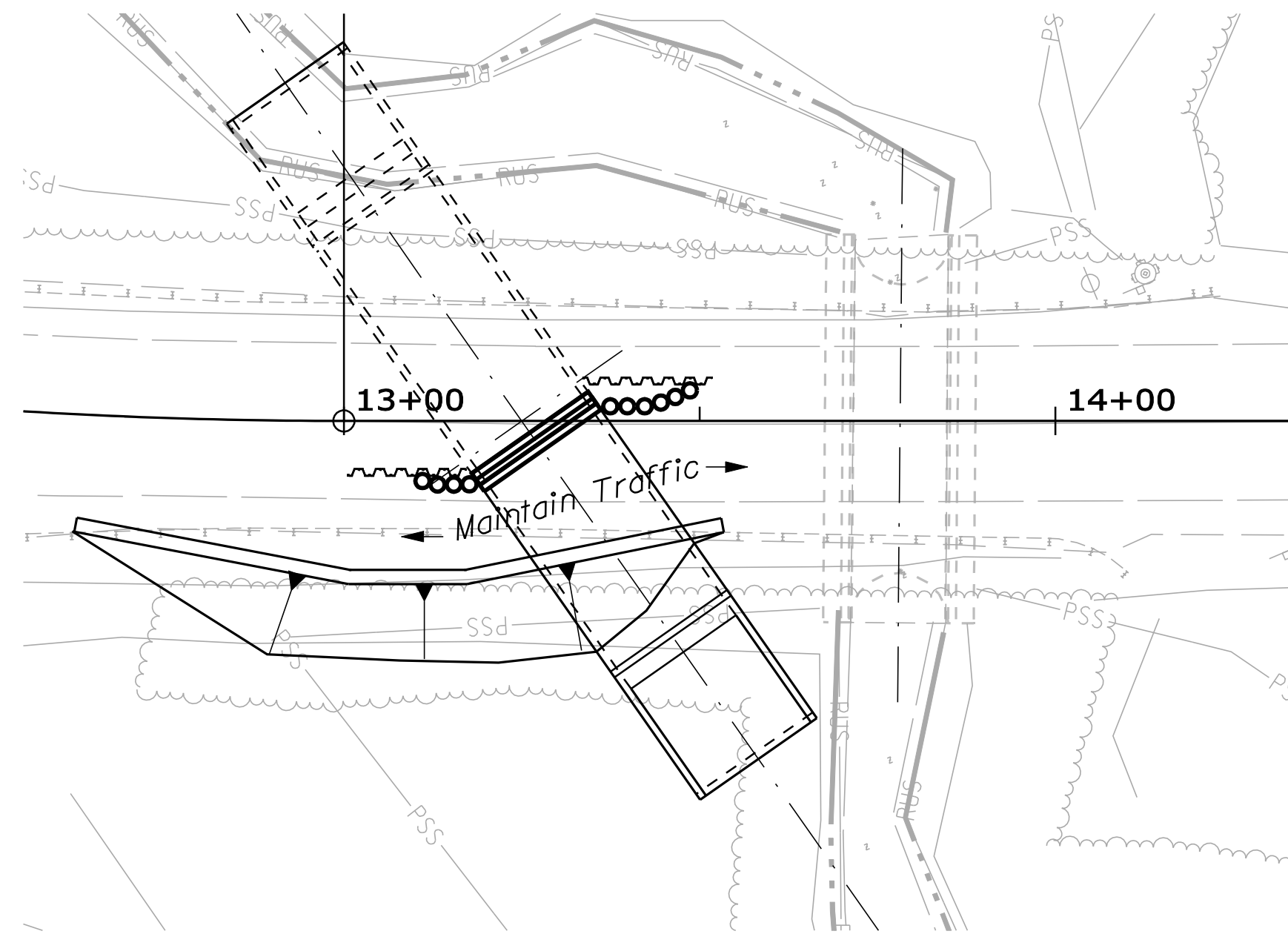
1. The precast units shall be designed to carry construction loadings with a minimum fill cover of 25 inches over the top of the units.
2. The construction, handling, and assembly of the precast units shall be in accordance with Special Provisions Section 534, Precast Structural Concrete, and with the manufacturer's specifications as applicable.
3. Install post-tensioning strands in the corners of culvert units. There shall be a minimum of 4 - 0.6" low relaxation strands post tensioned to 44 Kips each.



PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
M. PARLIN	ADN	MAR 2011			
CHECKED-REVIEWED	MAP				
DESIGN DETAILER	T. WHITE				
DESIGN DETAILER					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					



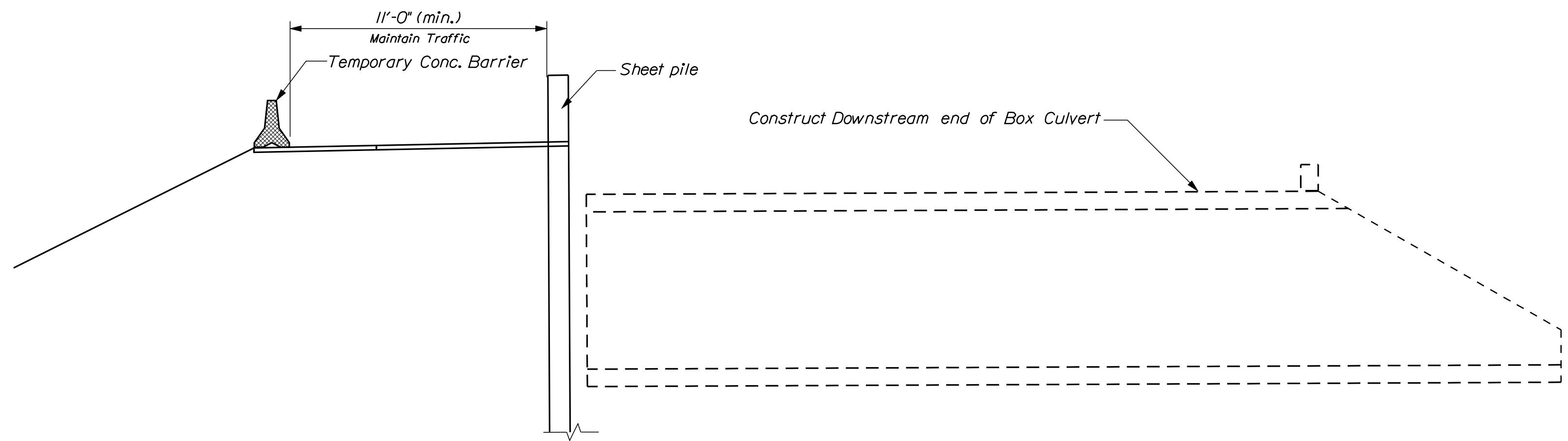
STAGE I PLAN



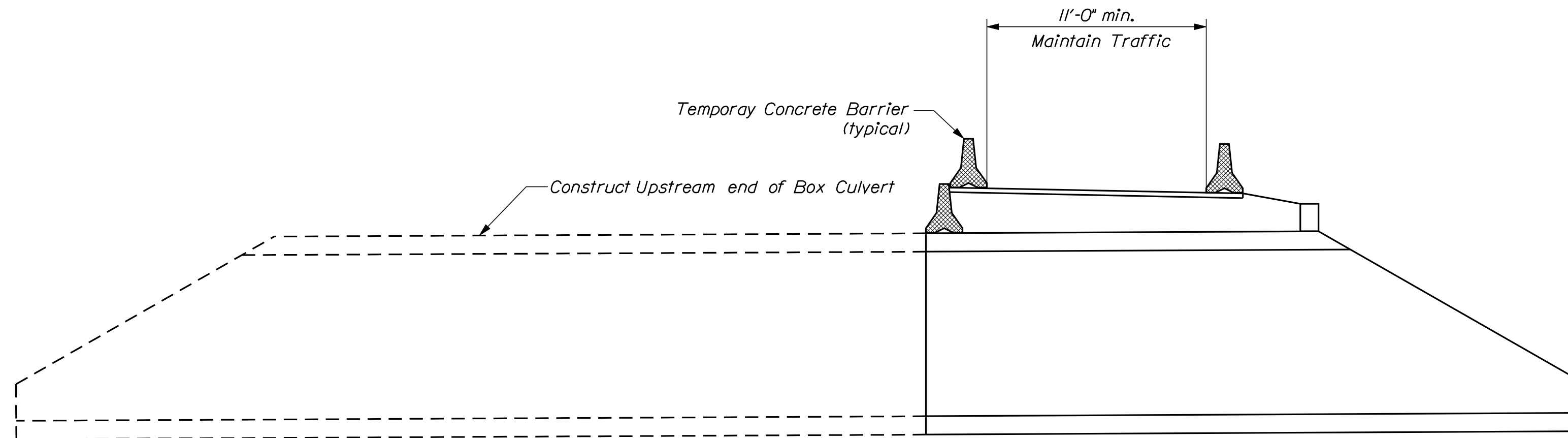
STAGE II PLAN

STAGE III

Close Road to Traffic while removing existing bridge.



STAGE I SECTION



STAGE II SECTION

STAGE IV

Regrade and pave in stages.
Open the road to traffic.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1786(700)X

BRIDGE NO. 3948 WIN 17867.00 BRIDGE PLANS

PROJ. MANAGER	M. PARLIN	BY	DATE
DESIGN DETAILED	R. NAJOS	MAP	MAR 2011
CHECKED/REVIEWED	K. MAGUIRE	SIGNATURE	
DESIGN DETAILED	T. WHITE	P.E. NUMBER	
REVISIONS 1		DATE	
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			




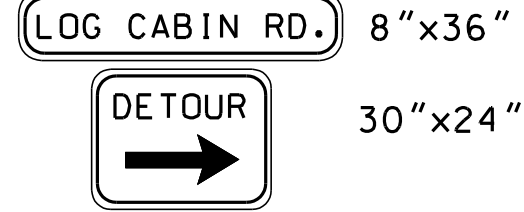
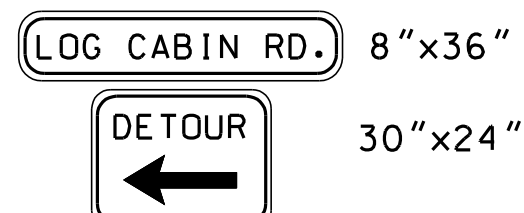
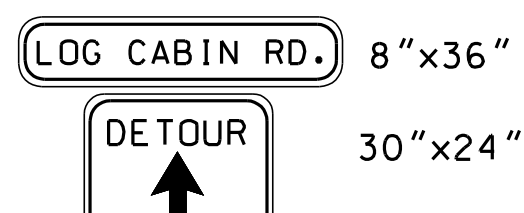
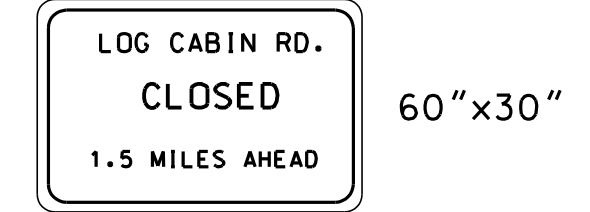
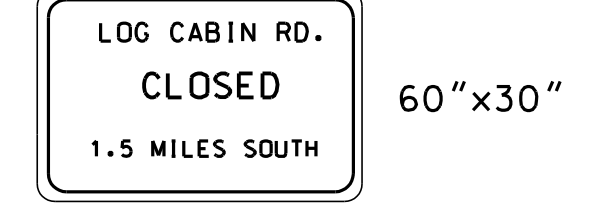
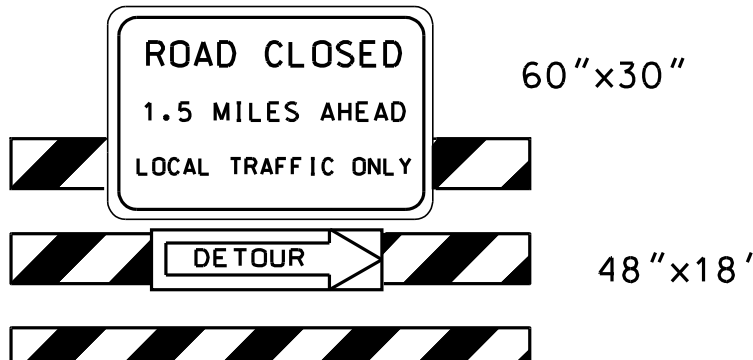
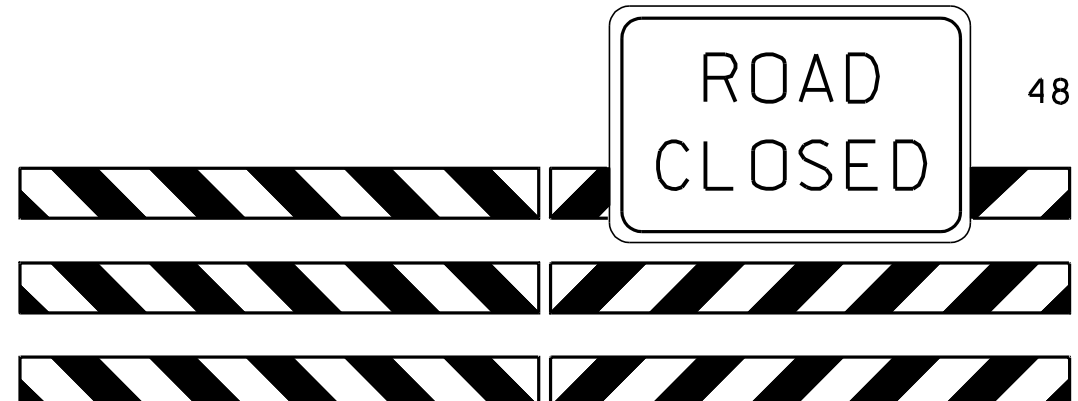
HUTCHINS BRIDGE
GOFFS MILL BROOK
YORK COUNTY

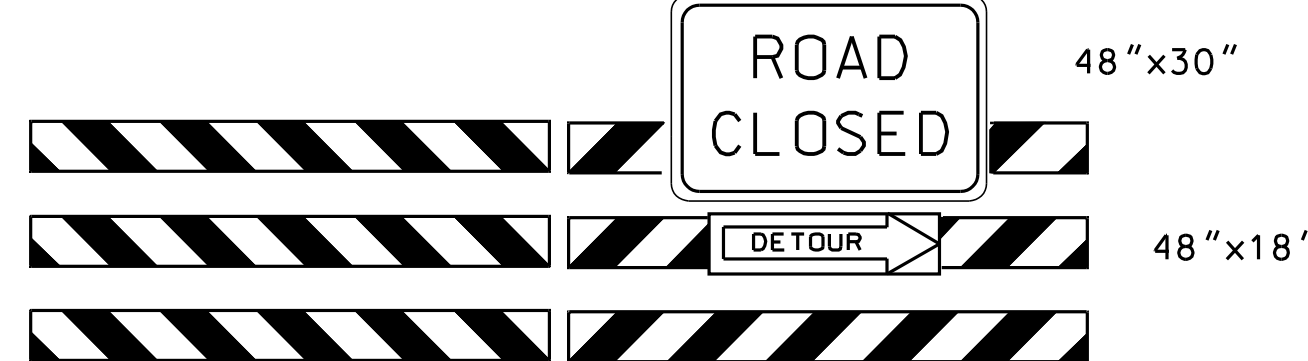

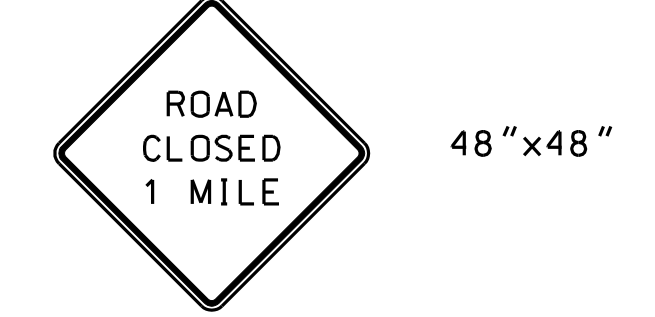


ARUNDEL
STAGE CONSTRUCTION

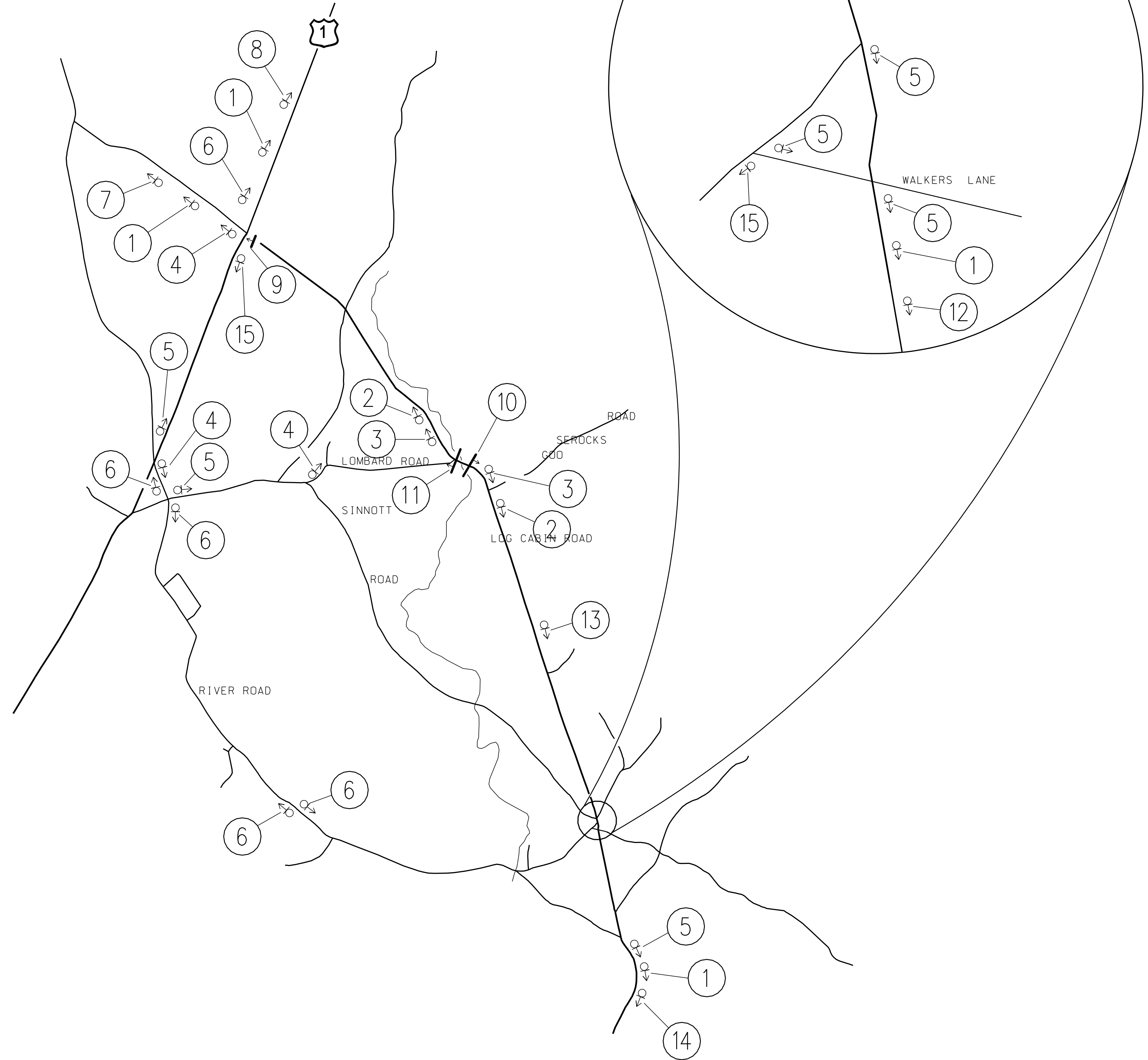
SHEET NUMBER

16

OF 18

- ①  48"x48"
- ②  48"x48"
- ③  48"x48"
- ④  8"x36"
30"x24"
- ⑤  8"x36"
30"x24"
- ⑥  8"x36"
30"x24"
- ⑦  60"x30"
- ⑧  60"x30"
- ⑨  60"x30"
48"x18"
- ⑩  48"x30"

- ⑪  48"x30"
48"x18"
- ⑫  60"x30"
- ⑬  48"x48"
- ⑭  60"x30"
- ⑮  8"x36"
24"x18"



NOT TO SCALE

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
HUTCHINS BRIDGE		STP-1786(700)X	
GOFFS MILL BROOK		WIN	
ARUNDEL		BRIDGE NO. 3948	
YORK COUNTY		17867.00	
DETOUR PLAN		BRIDGE PLANS	
PROJ. MANAGER	M. PARLIN	BY	M. PARLIN
DESIGN-DETAILED	R. NAJOS	DATE	MAR 2011
CHECKED-REVIEWED	MAP	SIGNATURE	
DESIGN-DETAILED	K. MAGUIRE	P.E. NUMBER	
REVISIONS 1		DATE	
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SHEET NUMBER		17	
		OF 18	

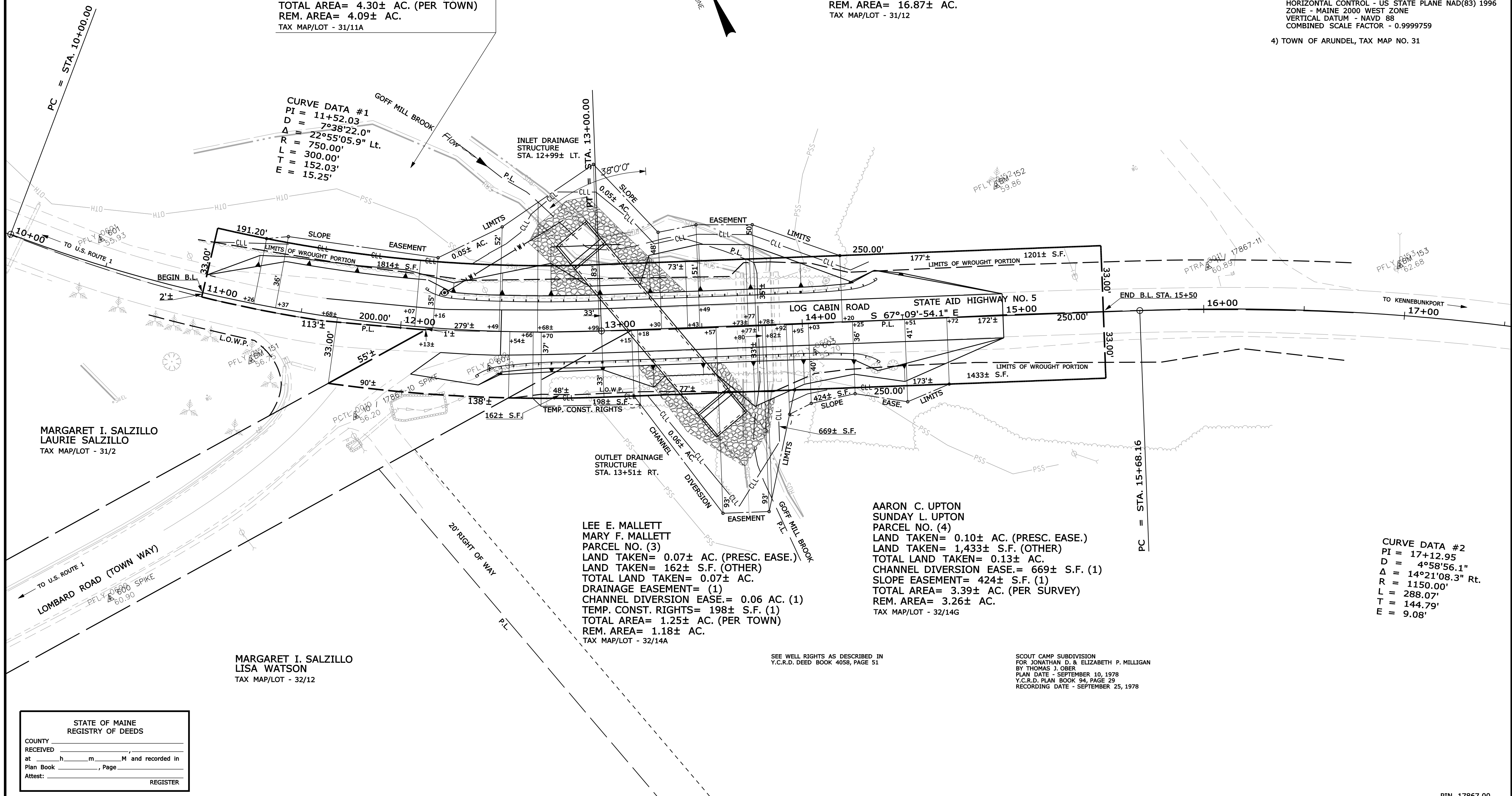
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 Division: BRIDGE
 Username: alan.nadeau
 Date: 12/12/2011

PLAN SHOWING THE ESTATE OF
 CECIL R. MOORE
 BY DOW & COULOMBE INC.
 PLAN DATE - JUNE 28, 1983
 REVISED- AUGUST 5, 1985
 (UNRECORDED)

MICHAEL T. LARIVIERE
 SUSAN G. LARIVIERE
 PARCEL NO. (1)
 LAND TAKEN= 0.17± AC. (PRESC. EASE.)
 LAND TAKEN= 1,814± S.F. (OTHER)
 TOTAL LAND TAKEN= 0.21± AC.
 DRAINAGE EASEMENT= (1)
 SLOPE EASEMENT= 0.05± AC. (1)
 TOTAL AREA= 4.30± AC. (PER TOWN)
 REM. AREA= 4.09± AC.
 TAX MAP/LOT - 31/11A

NEW ENGLAND ELECTRIC RAILWAY
 HISTORICAL SOCIETY
 PARCEL NO. (2)
 LAND TAKEN= 0.10± AC. (PRESC. EASE.)
 LAND TAKEN= 1,201± S.F. (OTHER)
 TOTAL LAND TAKEN= 0.13± AC.
 DRAINAGE EASEMENT= (1)
 SLOPE EASEMENT= 0.05± AC. (1)
 TOTAL AREA= 17.00± AC. (PER TOWN)
 REM. AREA= 16.87± AC.
 TAX MAP/LOT - 31/12

- 1) EXISTING RIGHT OF WAY REFERENCE
 - A) LOG CABIN ROAD
 - 1) PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)
 - B) LOMBARD ROAD
 - 1) YORK COUNTY COMMISSIONERS RECORDS VOLUME 15, PAGE 393 1823 3 RODS WIDE (49.5')
- 2) BRIDGE AS-BUILTS
 - A) STATE HIGHWAY COMMISSION - BRIDGE DIVISION HUTCHINS BRIDGE OVER GOFFS MILL STREAM NORTH KENNEBUNKPORT, YORK COUNTY BRIDGE NO. 3948 PLAN DATE - APRIL 1946 REEL , PLAN 41-161
- 3) CONTROL INFORMATION
 - HORIZONTAL CONTROL - US STATE PLANE NAD(83) 1996 ZONE - MAINE 2000 WEST ZONE VERTICAL DATUM - NAVD 88 COMBINED SCALE FACTOR - 0.9999759
- 4) TOWN OF ARUNDEL, TAX MAP NO. 31



SYMBOLS

PI or PIP (IRON PIPE or PIN FOUND)	WELL (WELL)
ST. (SEPTIC TANK)	CONSTRUCTION LIMIT LINE
ABM (TRAVERSE POINT)	PROPERTY LINE
W (WATER LINE)	LIMITS OF WROUGHT PORTION (L.O.W.P.)
G (GAS LINE)	EXISTING RIGHT OF WAY
E (ELECTRIC LINE)	NEW RIGHT OF WAY
T (TELEPHONE LINE)	NEW ROW WITHIN EXIST. ROW
S (SEWER LINE)	CONTROL OF ACCESS

ITEM	TECH	CHECKED
BASE MAP		
EXIST. R/W	G.L.L.	C.W.K.
PROP. LINES	G.L.L.	N.T.A.
AREAS	N.T.A.	G.L.L.

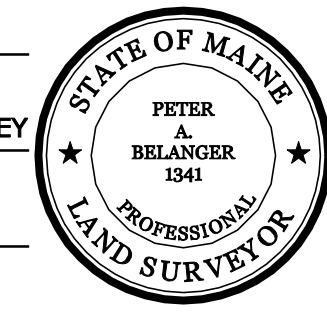
STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 16 STATE HOUSE STATION - AUGUSTA, ME. 04333-0016
 ARUNDEL
 RIGHT OF WAY MAP

STATE OF MAINE
 REGISTRY OF DEEDS

COUNTY RECEIVED _____
 at _____ h _____ m _____ M and recorded in
 Plan Book _____, Page _____
 Attest: _____ REGISTER

NO.	DATE	REVISIONS DESCRIPTION	BY	PLAN FILED IN PLAN BOOK		PAGE		COUNTY RECORD	
				NO.	GRANTOR	INSTRUMENT COND.	DATE	BOOK	PAGE

DAVID BERNHARDT
 COMMISSIONER
 KENNETH L. SWEENEY
 CHIEF ENGINEER
 DATE _____



To the best of my knowledge and belief the Highway Right of Way lines depicted hereon are based upon a survey conforming to the Standards of Practice promulgated by the Maine Board of Licensure for Professional Land Surveyors 02-360 CMR, Chapter 90; Exceptions: (1) No separate survey report, (2) Monumentation only as shown on plan. See sheet X of this plan set for coordinates. (3) Other boundary lines, including lines between abutters are approximate and for general reference purposes only.

STATE AID HIGHWAY NO. 5 LOG CABIN ROAD		SHEET NUMBER 18 OF 18
ARUNDEL YORK COUNTY FEDERAL AID PROJECT NO. STP-1786(700)X		
SEPTEMBER 2011 SCALE 1" = 25'	RIGHT-OF-WAY MAP SHEET 1 OF 1	D.O.T. FILE NO. 16-480

PIN 17867.00