

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



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TRAFFIC DATA

Current (2010) AADT	960
Future (2030) AADT	1150
DHV - % of AADT	11
Design Hour Volume	127
Heavy Trucks (% of AADT)	8
Heavy Trucks (% of DHV)	6
Directional Distribution (% of DHV)	55
18 kip Equivalent P 2.0	48
18 kip Equivalent P 2.5	46
Design Speed (mph)	50

HYDROLOGIC DATA

Drainage Area	120 sq mi
Design Discharge (Q50)	7,576 cfs
Check Discharge (Q100)	8,630 cfs
Headwater Elevation (Q50)	138.29 ft
Headwater Elevation (Q100)	139.25 ft
Discharge Velocity (Q50)	18.87 fps
Discharge Velocity (Q100)	20.28 fps
Headwater Elevation (Q1.1)	131.46 ft
Discharge Velocity (Q1.1)	9.88 fps
Headwater Elevation (Q25)	137.34 ft

MATERIALS

Concrete:	
Fill	"Fill"
All Other	Class "A"
Structural Steel:	
All Material (except as noted)	ASTM A 36, Grade 36

BASIC DESIGN STRESSES

Concrete	f 'c = 4,350 psi
Structural Steel:	
ASTM A 36, Grade 36	F y = 36,000 psi

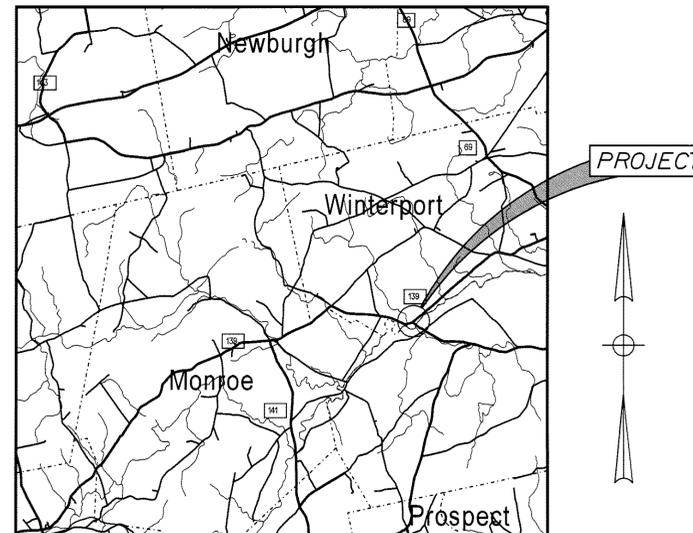
UTILITIES

Central Maine Power Company Lincolnville Communications
Fairpoint Communications

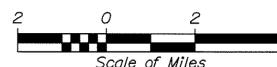
MAINTENANCE OF TRAFFIC

Close bridge to traffic during construction. Detour traffic on to Stream Road (S.R. 139), Lebanon Road (S.R. 69), and U.S. Route 1A.

WINTERPORT-FRANKFORT WALDO COUNTY TIBBETTS BRIDGE OVER MARSH STREAM LOGGIN ROAD FEDERAL AID PROJECT NO. BR-1676(300)X PROJECT LENGTH 0.048 mi. BRIDGE REHABILITATION BRIDGE NO. 3344



LOCATION MAP



SCOPE OF WORK

Bridge Rehabilitation including: Abutment stabilization, deck patching and wearing surface replacement

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER:	<i>[Signature]</i>	5/12/11
CHIEF ENGINEER:	<i>[Signature]</i>	5/12/2011

STATE OF MAINE DEPARTMENT OF TRANSPORTATION Professional Engineer	
SIGNATURE 8089	DATE 5/10/2011

PROJECT INFORMATION					
PROGRAM: BRIDGE	PROJECT MANAGER: STEVE BODGE	DESIGNER: RICHARD MYERS	CONSULTANT: RICH GIBERT	PROJECT RESIDENT CONTRACTOR: []	PROJECT COMPLETION DATE: []

WINTERPORT-FRANKFORT TIBBETTS BRIDGE
TITLE SHEET

SHEET NUMBER
1
OF 11

Date: 5/9/2011

Username: brion_j_nichols

Division: BRIDGE

Filename: \\00\BRIDGE\MSTA\001_Title.dgn

BR-1676(300)X PIN 16763.00

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.127	REMOVE EXISTING BITUMINOUS PAVEMENT (200 SY)	1	LS
203.20	COMMON EXCAVATION	350	CY
203.24	COMMON BORROW	20	CY
203.25	GRANULAR BORROW	20	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	300	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	80	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	80	T
409.15	BITUMINOUS TACK COAT - APPLIED	30	G
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	500	LB
503.13	REINFORCING STEEL, PLACING	500	LB
504.709	BRIDGE HARDWARE (3700 LBS)	1	LS
508.13	MEMBRANE WATERPROOFING (210 SY)	1	LS
511.07	COFFERDAM: ABUTMENT NO. 1	1	LS
511.07	COFFERDAM: ABUTMENT NO. 2	1	LS
518.50	REPAIR OF UPWARD FACING SURF - TO REINF STL < 7.9 IN.	200	SF
518.51	REPAIR OF UPWARD FACING SURF - BEL REINF STL < 7.9 IN.	50	SF
526.301	TEMPORARY CONCRETE BARRIER TYPE I (60 LF)	1	LS
602.30	FLOWABLE CONCRETE FILL	20	CY
606.1722	BRIDGE TRANSITION - TYPE 2	2	EA
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	50	LF
606.25	TERMINAL CONNECTOR	1	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	4	EA
606.79	GUARDRAIL 350 FLARED TERMINAL	2	EA
610.16	HEAVY RIPRAP	470	CY
613.319	EROSION CONTROL BLANKET	50	SY
615.07	LOAM	5	CY
618.1401	SEEDING METHOD NUMBER 2 - PLAN QUANTITY	1	UN
619.1201	MULCH - PLAN QUANTITY	1	UN
619.1401	EROSION CONTROL MIX	70	CY
620.58	EROSION CONTROL GEOTEXTILE	520	SY
627.733	4 INCH WHITE OR YELLOW PAINTED PAVE MRK LINE	750	LF
629.05	HAND LABOR, STRAIGHT TIME	40	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
652.31	TYPE I BARRICADE	10	EA
652.312	TYPE III BARRICADE	8	EA
652.33	DRUM	10	EA
652.34	CONE	20	EA
652.35	CONSTRUCTION SIGNS	300	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (120 CD)	1	LS
652.38	FLAGGER	40	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	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. 138.29 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.
- Stones which cannot be rolled or compacted into the surface of the shoulder shall be removed by hand raking. Payment for hand raking will be considered incidental to Item No. 304.10, Aggregate Subbase Course - Gravel.
- 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 Item No. 619.1401, Erosion Control Mix.
- Place a 24-in. wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
- An NCHRP350 compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
- Extended-use Erosion Control Blanket, seeded gutters, and riprap downspouts 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/contractors/>
- 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.
- The bridge deck evaluation report of the existing bridge may be accessed at the MaineDOT web address. The report contains visual inspection information and deck core data of the bridge. There is no assurance that the information or data is a true representation of the conditions of the entire deck.
- The project geotechnical report titled: Geotechnical Data Report for the Rehabilitation of Tibbetts Bridge, Soils Report No. 2011-08, Dated April 13, 2011 may be accessed at the MaineDOT web address.
- Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between the boring locations.

20. 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.

21. Any areas disturbed within the Clearing Limit Lines shall be rehabilitated with loam, mulch, and seed as directed by the Resident. Payment shall be considered incidental to Item No. 610.16, Heavy Riprap.

22. The Contractor shall beneficially reuse all Dredge Material on site. Dredge Material may be placed under the riprap along the wingwalls as long as a 4 foot riprap thickness is maintained.

23. Guardrail on the downstream side of the bridge shall be anchored to the bridge rail end post in accordance with Standard Detail 606(27). Payment for this work on the Frankfort side shall be paid for under Item No. 606.25, Terminal Connector. This work on the Winterport side shall be considered incidental to Item No. 606.1722, Bridge Transition-Type 11.

SUPERSTRUCTURE NOTES

- The Contractor shall take care not to damage the existing concrete or reinforcing steel to remain. Any damaged concrete or reinforcing steel to remain shall be repaired or replaced as directed by the Resident at no expense to the Department.
- After the existing wearing surface and membrane have been removed, the Contractor may be directed by the Resident to rehabilitate areas of the deck. Payment will be made under the appropriate rehabilitation items.
- All reinforcing steel that is exposed and to be reused shall be cleaned by a method approved by the Resident. Payment shall be incidental to related Contract Items.
- Care shall be taken when placing the membrane waterproofing not to cover the drains in the deck.
- Depress the bituminous wearing surface around the existing bridge drains as directed by the Resident.

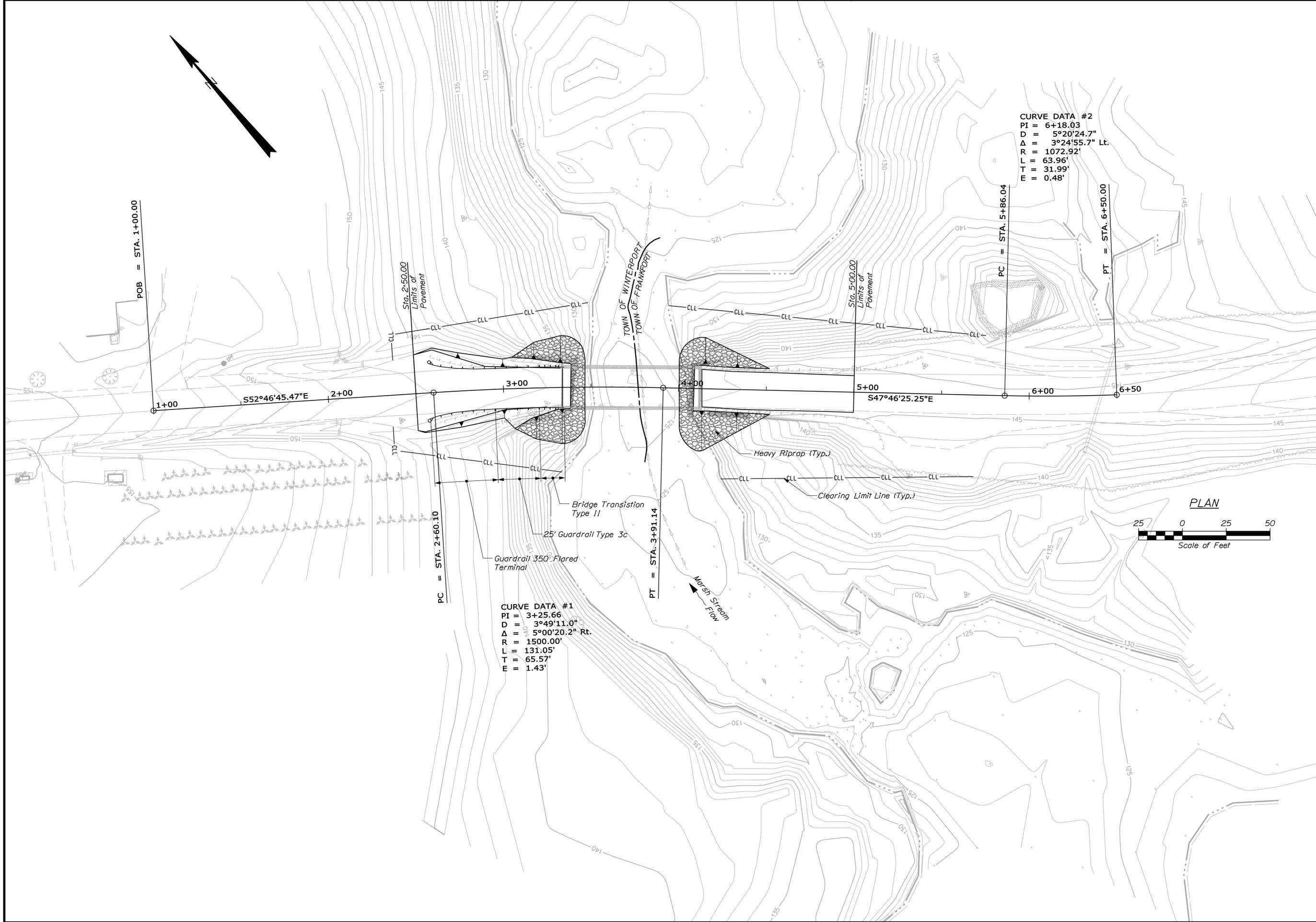
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BR-1676(300)X
PIN 16763.00
BRIDGE NO. 3344
BRIDGE PLANS

DATE: APR 2011
BY: B. NICHOLS
SIGNED: [Signature]
P.E. NUMBER: [Blank]
DATE: [Blank]

PROJ. MANAGER: [Blank]
DESIGN-DETAILED: [Blank]
CHECKED-REVIEWED: [Blank]
DESIGNS DET. TALED: [Blank]
REVISIONS 1: [Blank]
REVISIONS 2: [Blank]
REVISIONS 3: [Blank]
REVISIONS 4: [Blank]
FIELD CHANGES: [Blank]

TIBBETTS BRIDGE
MARCH STREAM
WINTERPORT-FRANKFORT WALDO COUNTY
ESTIMATED QUANTITIES

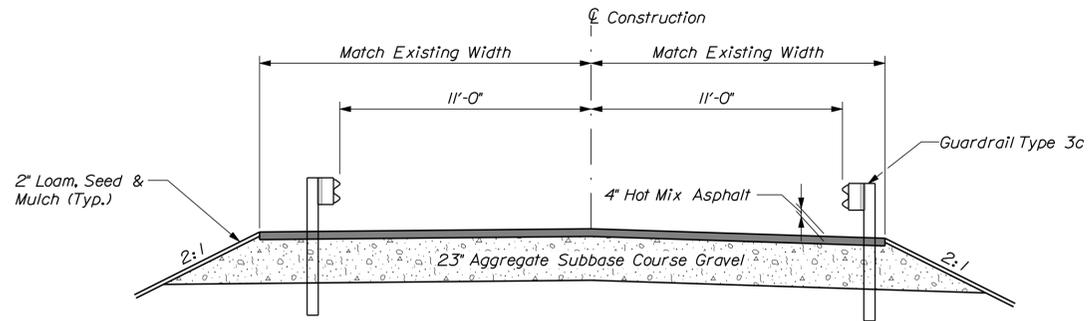
SHEET NUMBER
2
OF 11



PROJ. MANAGER	BY	DATE
DESIGN-DETAILED	B. NICHOLS	APR 2011
CHECKED-REVIEWED	R. MYERS	
DESIGNS DET ALOD		
DESIGNS DET ALOD		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

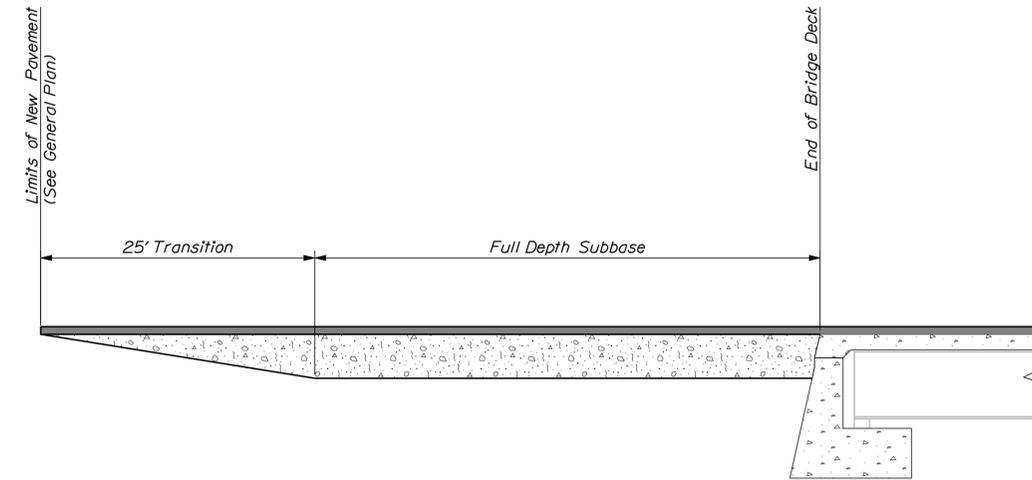
STATE OF MAINE	DEPARTMENT OF TRANSPORTATION
BR-1676(300)X	
BRIDGE NO. 3344	PIN 16763.00

STATE OF MAINE	DEPARTMENT OF TRANSPORTATION
BR-1676(300)X	
BRIDGE NO. 3344	PIN 16763.00

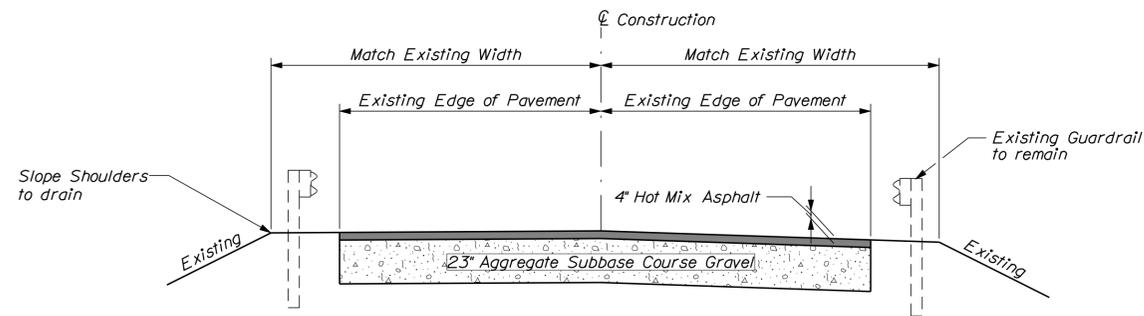


APPROACH DESIGN SECTION - WEST APPROACH

Cross-slope shall transition from the bridge to match existing cross-slope at end of new pavement limits

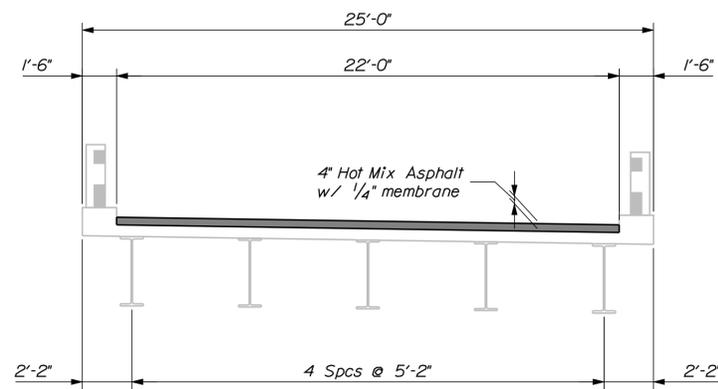


LONGITUDINAL APPROACH SECTION

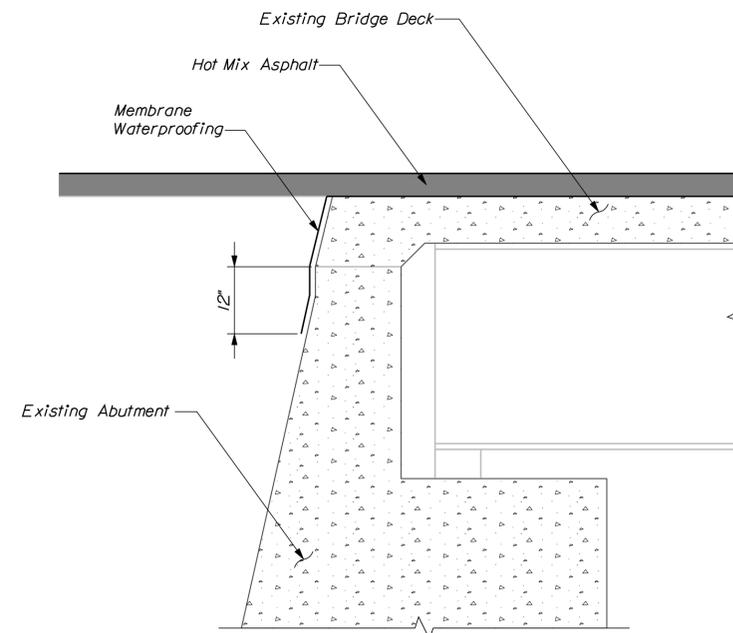


APPROACH DESIGN SECTION - EAST APPROACH

Cross-slope shall transition from the bridge to match existing cross-slope at end of new pavement limits



EXISTING BRIDGE SECTION



END OF SUPERSTRUCTURE SECTION

Filename: ... \bridge\msta\004_Btypical.dgn

Division: BRIDGE

Username: brian.j.nichols

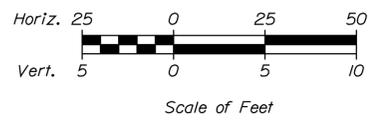
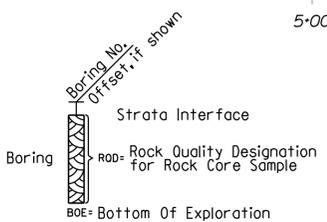
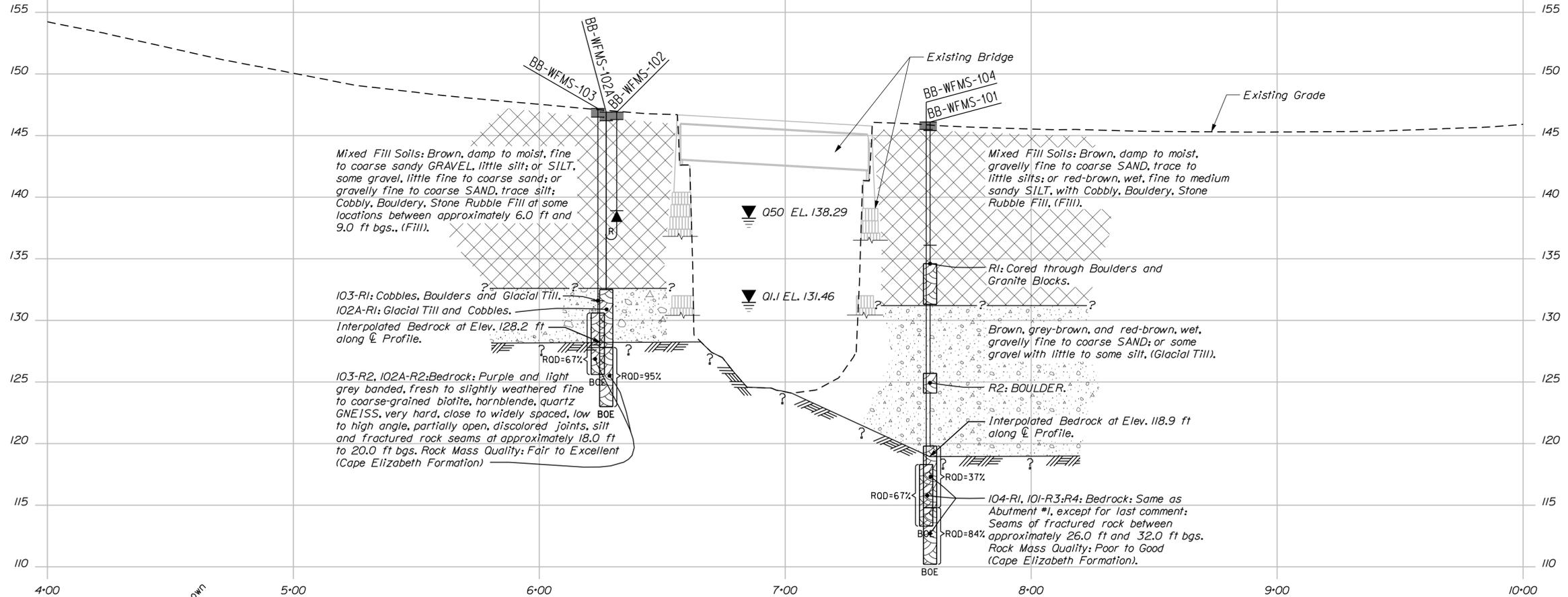
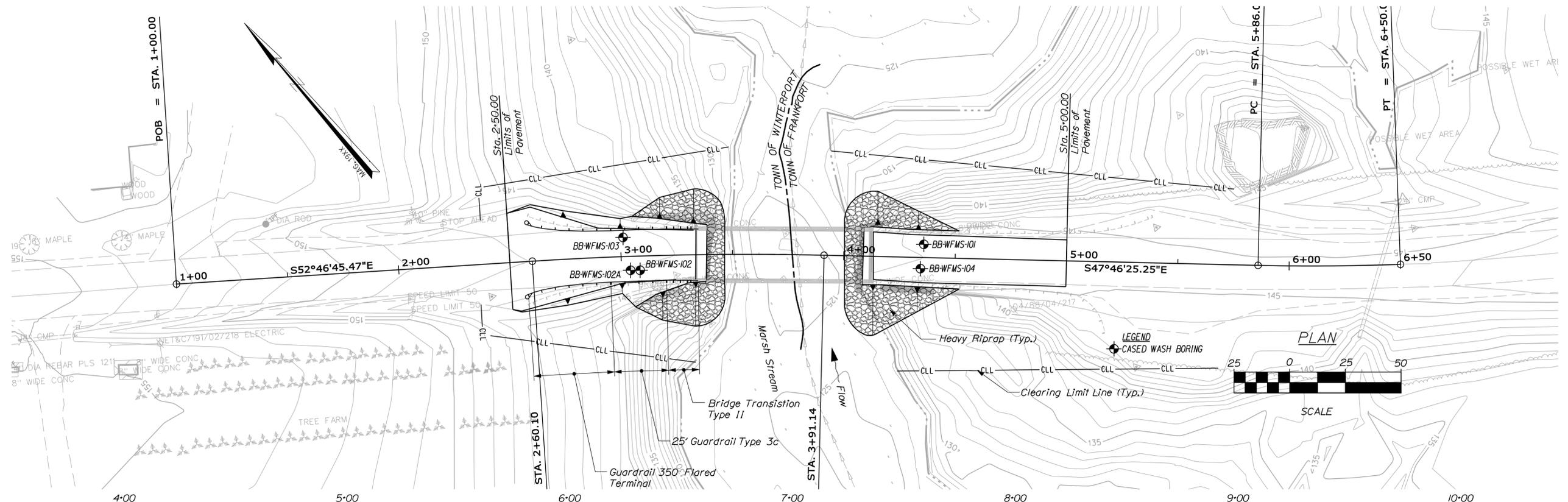
Date: 5/10/2011

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BR-1676(300)X
BRIDGE NO. 3344
PIN 16763.00
BRIDGE PLANS

PROJ. MANAGER	SUBODGE	BY	DATE
CHECKED-REVIEWED	R. MYERS	B. NICHOLS	APR 2011
DESIGN-REVIEWED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TIBBETTS BRIDGE
MARSH STREAM
WINTERPORT-FRANKFORT WALDO COUNTY
TYPICAL SECTIONS

SHEET NUMBER
4
OF 11



Note: 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.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
BR-1676(300)X		PIN 16763.00	
BRIDGE NO. 3344		BRIDGE PLANS	
PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN-DETAILED	B. NICHOLS	APR 2011	
CHECKED-REVIEWED	R. MYERS		
DESIGN DET AILED			
DESIGN DET AILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
TIBBETTS BRIDGES			
MARSH STREAM			
WINTERPORT-FRANKFORT WALDO COUNTY			
BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE			
SHEET NUMBER			
5			
OF 11			

Username: brian_jnichols

Date: 5/13/2011

Division: BRIDGE

Filename: ... \msto\006_BORING LOGS1.dgn

Project: Tibbetts Bridge #3344, Loggin Rd. over Marsh Stream
Location: Winterport-Frankfort, Maine
US CUSTOMER UNITS

Boring No.: BB-WFMS-103
PIN: 16763.00

Driller: MoinDOT Elevation (ft.): 147.2 Auger ID/OD: 3.5" Solid Stem
Operator: Giguere/Giles Datum: NAD 1983 Sampler: Standard Split Spoon
Logged By: Be Schoneveld Rig Type: CME 45C Hammer Wt./Fall: 140W/30"
Date Start/Finish: 4/5/10 08:15-11:00 Drilling Method: Coated Wash Boring Core Barrels: ND-2
Boring Location: 6+23.8, 12.8 Lt. Casing ID/OD: NW Water Level: 12.0' plus

Header Efficiency Factor: 0.84 Hammer Type: Automatic Hydraulic
 Definitions: R = Rock Core Sample S = Solid Shear Strength Test T = Pocket Torque Shear Strength Test U = Unconfined Compressive Strength Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test

Depth (ft.)	Sample No.	Pen./Rct. (in)	Sample Depth (ft.)	Blow (1/6 in. or 15')	Unconfined	NGD	Coring	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ASHTO and Unified Class
0	10	24/9	0.70 - 2.70	7/6/7/7	13	18	SEA	46.50		Brown, med. dense, gravelly fine to coarse SAND, trace silt, (F111).	4-1-0, SM WC=15.1%
5	20	24/6	5.00 - 7.00	4/2/2/5	4	6		42.00		Brown, moist, loose, gravelly fine to coarse SAND, little silt. Piece of granite in tip of spoon. Drop through hole. Heavy ground granite block, at approximately 5.7' bgs. Drilling becomes difficult at 5.0'. Granite blocks and boulders based on drilling behavior, auger cuttings and prior borings. (F111)	4-1-0, SM WC=4.8%
10	30	24/13	10.70 - 12.70	3/3/16/17	19	27		38.70		Brown, moist, medium dense, silty fine to medium SAND, trace coarse sand, trace gravel, (F111)	4-1-0, SM WC=15.1%
15	40	24/24	14.60 - 16.60	ROD = N/A	NK			32.40		R1: Boulder top 12"	4-1-0, SM WC=12.1%
20	50	60/49	16.60 - 21.60	ROD = 61%				30.60		Ribbottom 12" Brown, silty SAND, little gravel, of Mud seam. (Sample Not Saved). Failed split spoon attempt at 16.6' bgs, spoon bounce no penetration. Top of Bedrock at Elev. 130.6'. R2: Bedrock Purple to light grey, fine to coarse-grained, biotite, hornblende, quartz, GNEISS, very hard, slightly weathered to fresh, with close to moderately open, low angle, partially open, discontinuous joints and seams of highly fractured rock at 11.8' and out at 18.2' and 19.8' bgs. Quartzite and muscovite rich zones. Foliation varies from low to vertical, vertical, quartzite moderately weathered, pegmatite layer in top 15' of core. Rock Mass Quality is Fair. (Cape Elizabeth Formation) R2: Core Times (min:sec) 11.8-18.2' (2:42) 18.2-20.2' (2:22) 20.2-21.6' (3:10) 82% Recovery	4-1-0, SM WC=10.0%
25								27.60		Bottom of Exploration at 21.60 feet below ground surface.	

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-WFMS-103

Project: Tibbetts Bridge #3344, Loggin Rd. over Marsh Stream
Location: Winterport-Frankfort, Maine
US CUSTOMER UNITS

Boring No.: BB-WFMS-102
PIN: 16763.00

Driller: MoinDOT Elevation (ft.): 146.9 Auger ID/OD: 3.5" Solid Stem
Operator: Giguere/Giles Datum: NAD 1983 Sampler: Standard Split Spoon
Logged By: Be Schoneveld Rig Type: CME 45C Hammer Wt./Fall: 140W/30"
Date Start/Finish: 4/1/10 13:30-13:50 Drilling Method: Coated Wash Boring Core Barrels: N/A
Boring Location: 6+13.5, 2.0 Rt. Casing ID/OD: N/A Water Level: None Observed

Header Efficiency Factor: 0.84 Hammer Type: Automatic Hydraulic
 Definitions: R = Rock Core Sample S = Solid Shear Strength Test T = Pocket Torque Shear Strength Test U = Unconfined Compressive Strength Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test

Depth (ft.)	Sample No.	Pen./Rct. (in)	Sample Depth (ft.)	Blow (1/6 in. or 15')	Unconfined	NGD	Coring	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ASHTO and Unified Class
0	10	24/3	0.60 - 2.60	7/6/6/7	12	17	SEA	46.30		Brown, moist, medium dense, fine to coarse sandy GRAVEL, little silt, (F111).	4-1-0, SM WC=7%
5	20	24/17	5.00 - 7.00	4/3/7/11	10	14		42.00		Brown, moist, silty, SILT, some gravel, little fine to coarse sand. (Reworked and Mixed F111). Difficult drilling at 5.0' bgs., auger's kick-off plumb.	4-1-0, SM WC=15.8%
10								38.00		Bottom of Exploration at 3.00 feet below ground surface. AUGER REFUSED, moved back 4.3' to BB-WFMS-102A.	
15								34.00		Remarks: Stratification lines represent approximate boundaries between soil types; transitions may be gradual. * Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.	
20								30.00		Failed split spoon attempt at 16.6' bgs, spoon bounce no penetration.	
25								26.00		Top of Bedrock at Elev. 130.6'. R2: Bedrock Purple to light grey, fine to coarse-grained, biotite, hornblende, quartz, GNEISS, very hard, slightly weathered to fresh, with close to moderately open, low angle, partially open, discontinuous joints and seams of highly fractured rock at 11.8' and out at 18.2' and 19.8' bgs. Quartzite and muscovite rich zones. Foliation varies from low to vertical, vertical, quartzite moderately weathered, pegmatite layer in top 15' of core. Rock Mass Quality is Fair. (Cape Elizabeth Formation) R2: Core Times (min:sec) 11.8-18.2' (2:42) 18.2-20.2' (2:22) 20.2-21.6' (3:10) 82% Recovery	4-1-0, SM WC=10.0%
30								22.00		Bottom of Exploration at 21.60 feet below ground surface.	

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-WFMS-102A

Project: Tibbetts Bridge #3344, Loggin Rd. over Marsh Stream
Location: Winterport-Frankfort, Maine
US CUSTOMER UNITS

Boring No.: BB-WFMS-104
PIN: 16763.00

Driller: MoinDOT Elevation (ft.): 146.1 Auger ID/OD: 3.5" Solid Stem
Operator: Giguere/Giles Datum: NAD 1983 Sampler: Standard Split Spoon
Logged By: Be Schoneveld Rig Type: CME 45C Hammer Wt./Fall: 140W/30"
Date Start/Finish: 4/5/10 11:10-14:35 Drilling Method: Coated Wash Boring Core Barrels: ND-2
Boring Location: 7+57.3, 1.0 Rt. Casing ID/OD: NW Water Level: None Observed

Header Efficiency Factor: 0.84 Hammer Type: Automatic Hydraulic
 Definitions: R = Rock Core Sample S = Solid Shear Strength Test T = Pocket Torque Shear Strength Test U = Unconfined Compressive Strength Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test

Depth (ft.)	Sample No.	Pen./Rct. (in)	Sample Depth (ft.)	Blow (1/6 in. or 15')	Unconfined	NGD	Coring	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ASHTO and Unified Class
0	10	24/3	0.60 - 2.60	17/22/20/20	42	59	SEA	46.50		Brown, med. very dense, gravelly fine to coarse SAND, trace to little silt, (F111).	4-1-0, SM WC=15.1%
5	20	24/2	5.00 - 7.00	6/5/15/11	20	28		42.00		Difficult drilling from approximately 3.0'. Drilling behavior suggests granite blocks and boulders.	4-1-0, SM WC=4.8%
10								38.00		Roller Cased ahead through obstruction from 10.0-11.5' bgs.	
15	30	24/11	11.50 - 13.50	NDR/NDR/NDR/NDR	---	---		34.00		Red-brown, wet, very soft, fine to medium sandy SILT, trace gravel, (F111).	4-1-0, SM WC=22.8%
20	40	24/10	15.00 - 17.00	17/15/18/20	35	46		31.00		Red-brown, wet, dense, gravelly fine to coarse SAND, trace to little silt, (F111).	4-1-0, SM WC=12.1%
25	50	24/11	20.00 - 22.00	6/17/24/31	41	57		26.00		Grey changing to red-brown, wet, very dense, gravelly fine to coarse SAND, little silt, (F111).	4-1-0, SM WC=10.0%
30	60	24/14	25.00 - 27.00	22/34/26/24	60	84		22.00		Grey, wet, very dense, gravelly fine to coarse SAND, little to some silt with pockets of decomposed and highly fractured rock, (F111).	4-1-0, SM WC=10.0%
35	R1	60/47	27.80 - 32.80	ROD = 61%	NK			18.30		Top of Bedrock at Elev. 118.3'. R1: Bedrock Fine-grained, purple and light grey banded biotite, hornblende GNEISS, very hard, fresh, with moderate quartz veins, with moderate quartz veins, with very close to close, low angle, partially open, moderately dipping, partially open, some discordance joints and seams of highly fractured rock in upper 3.5'. Quartzite rich zones, limited foliation (quartzite) typically moderately dipping. Rock Mass Quality is Fair. (Cape Elizabeth Formation) R1: Core Times (min:sec) 27.8-28.8' (2:37) 28.8-30.8' (1:38) 30.8-32.8' (2:13) 31.8-32.8' (2:52) 78% Recovery	4-1-0, SM WC=10.0%
40								14.30		Bottom of Exploration at 32.80 feet below ground surface.	

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-WFMS-104

Project: Tibbetts Bridge #3344, Loggin Rd. over Marsh Stream
Location: Winterport-Frankfort, Maine
US CUSTOMER UNITS

Boring No.: BB-WFMS-101
PIN: 16763.00

Driller: MoinDOT Elevation (ft.): 146.1 Auger ID/OD: 3.5" Solid Stem
Operator: Giguere/Giles Datum: NAD 1983 Sampler: Standard Split Spoon
Logged By: Be Schoneveld Rig Type: CME 45C Hammer Wt./Fall: 140W/30"
Date Start/Finish: 4/1/10 08:15-13:15 Drilling Method: Coated Wash Boring Core Barrels: ND-2
Boring Location: 7+58.9, 10.0 Lt. Casing ID/OD: NW Water Level: None Observed

Header Efficiency Factor: 0.84 Hammer Type: Automatic Hydraulic
 Definitions: R = Rock Core Sample S = Solid Shear Strength Test T = Pocket Torque Shear Strength Test U = Unconfined Compressive Strength Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test
 W = Unconfined Thin Wall Shear Test
 M = Unconfined Thin Wall Shear Test
 N = In Situ Vane Shear Test
 PP = Pocket Penetration Test

Depth (ft.)	Sample No.	Pen./Rct. (in)	Sample Depth (ft.)	Blow (1/6 in. or 15')	Unconfined	NGD	Coring	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ASHTO and Unified Class
0	10	24/17	2.60	12/12/7/6	19	27	SEA	46.40		PAVEMENT.	4-1-0, SM WC=15.1%
5	20	12/5	5.00 - 6.00	33/10	---	---		42.00		Brown, moist, medium dense, gravelly fine to medium SAND, trace coarse sand, little silt, bag-graded, road grade to be crushed rock, (F111).	4-1-0, SM WC=4.8%
10	30	18/0	10.00 - 11.50	8/3/3	6	8		36.10		Failed spoon attempt, no recovery, highly fractured rock in tip of spoon. Boulder/gravel blocks encountered at approximately 10.0' bgs. (F111)	4-1-0, SM WC=22.8%
15	40	24/10	14.80 - 16.80	2/9/13/23	22	31		31.30		Terminated 20' at 6.0' due to sampler drop from 5.8-6.0'. Then travel back down. Difficult drilling from 5.0-10.0' bgs, drilling behavior suggests cobbly material.	4-1-0, SM WC=12.1%
20	50	24/14	22.00 - 24.00	17/19/21/32	40	56		27.10		R2: Boulder. Grey-brown, wet, very dense, fine to coarse SAND, some silt, pockets and lenses of rust staining throughout, (F111).	4-1-0, SM WC=10.0%
25	60	15.6/10	25.00 - 26.30	16/21/21/6"	---	---		23.30		Grey-brown, wet, very dense, gravelly fine to coarse SAND, some silt, (F111). Spoon fettered up at 26.3' bgs.	4-1-0, SM WC=10.0%
30	70	60/42	31.30	ROD = 37%	NK			19.30		Top of Bedrock at Elev. 119.3'. R3: Bedrock Fine-grained, purple and light grey banded biotite, hornblende GNEISS, very hard, fresh, with moderate quartz veins, with moderate quartz veins, with very close to close, low angle, partially open, moderately dipping, partially open, some discordance joints and seams of highly fractured rock in upper 3.5'. Quartzite rich zones, limited foliation (quartzite) typically moderately dipping. Rock Mass Quality is Fair. (Cape Elizabeth Formation) R3: Core Times (min:sec) 26.3-27.3' (2:48) 27.3-28.3' (1:36) 28.3-29.3' (1:11) 29.3-30.3' (2:03) 30.3-31.3' (2:16) 10% Recovery	4-1-0, SM WC=10.0%
35	80	55.2/54	31.30 - 35.90	ROD = 84%				10.30		R4: Bedrock Fine-grained, purple and light grey banded biotite, hornblende GNEISS, very hard, fresh, with moderate quartz veins, with moderate quartz veins, with very close to close, low angle, partially open, moderately dipping, partially open, some discordance joints and seams of highly fractured rock at top of run. Quartzite rich zones, limited foliation (quartzite) typically high angle. Rock Mass Quality is Good. (Cape Elizabeth Formation) R4: Core Times (min:sec) 31.3-32.3' (2:01) 32.3-33.3' (2:24) 33.3-34.3' (2:08) 34.3-35.3' (2:40) 35.3-35.9' (2:40) 95% Recovery	4-1-0, SM WC=10.0%
40								6.30		Bottom of Exploration at 35.90 feet below ground surface.	

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-WFMS-101

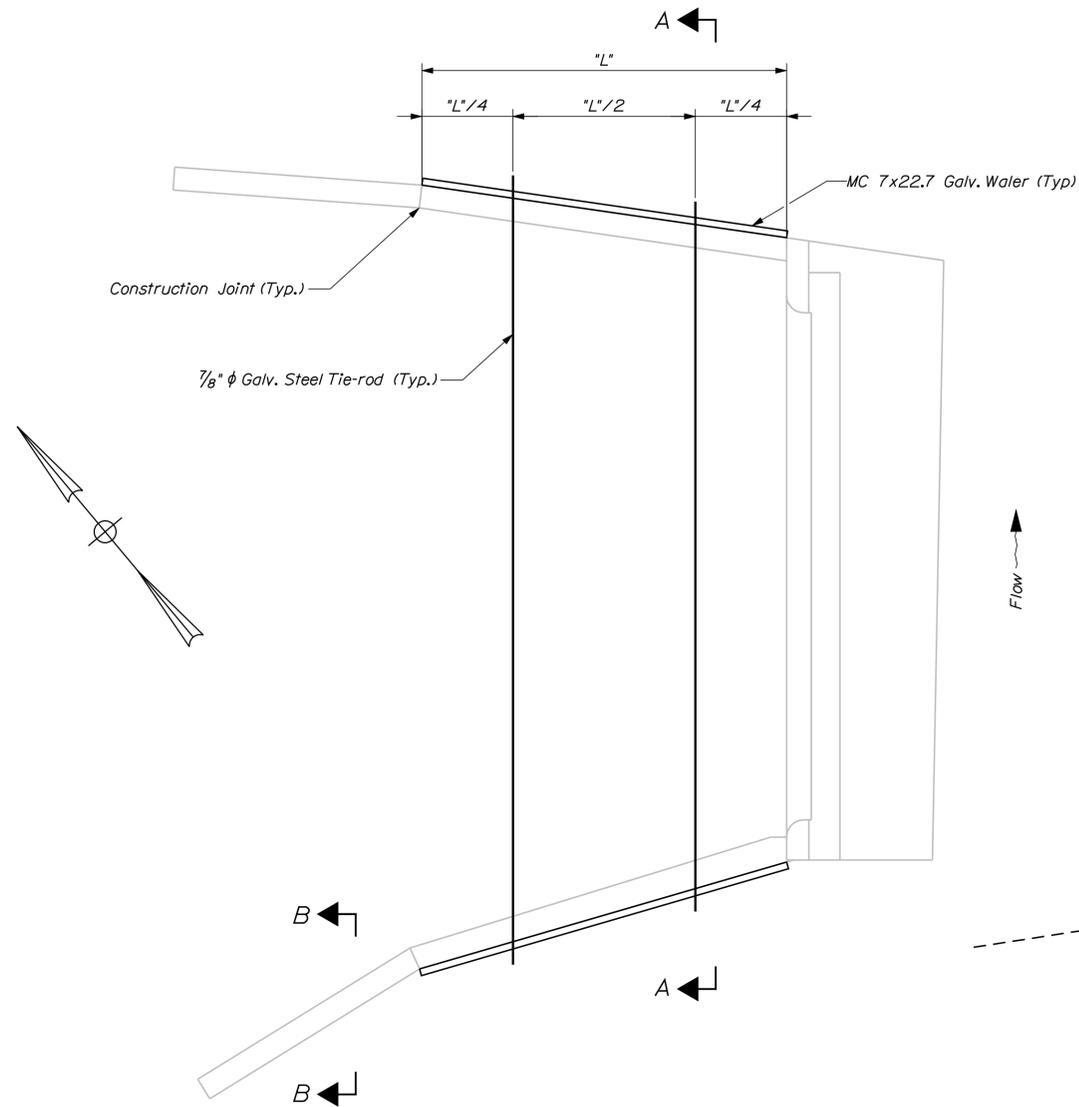
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BRIDGE NO. 3344
PIN 16763.00

TIBBETTS BRIDGE
MARSH STREAM
WINTERPORT-FRANKFORT WALDO COUNTY
BORING LOGS

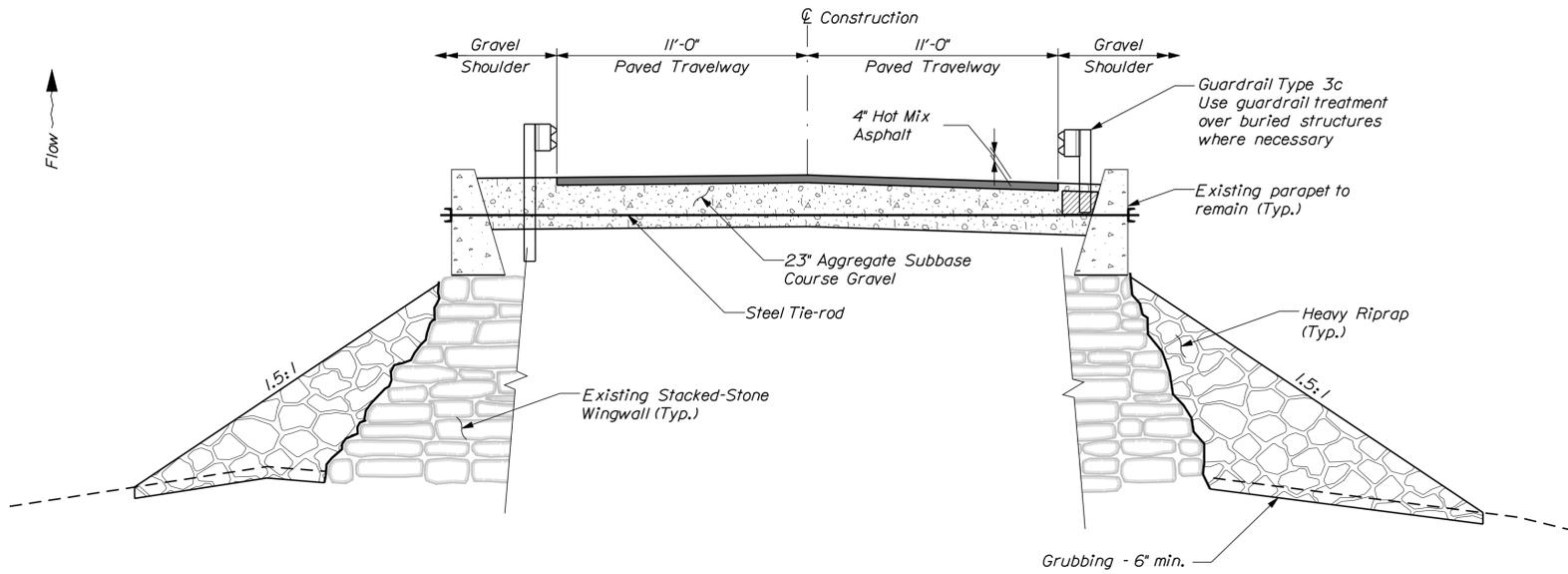
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6
OF 11

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DESIGN-DETAILED: R. MEYERS
CHECKED-REVIEWED: B. NICHOLS
DESIGN-DET. ALD: B. NICHOLS
DESIGN-DET. FIELDS: B. NICHOLS
REVISIONS 1: B. NICHOLS
REVISIONS 2: B. NICHOLS
REVISIONS 3: B. NICHOLS
REVISIONS 4: B. NICHOLS

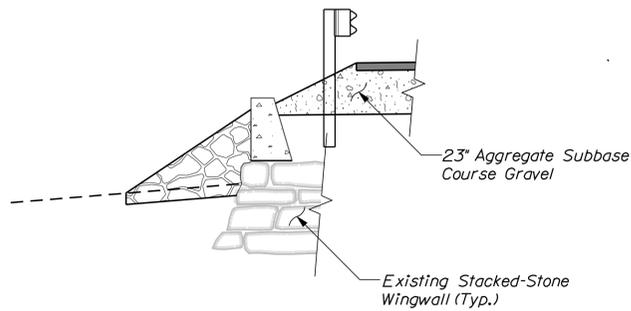
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P.E. NUMBER: B. NICHOLS
DATE: APR 2011



ABUTMENT NO. 1 PLAN



SECTION "A-A"



SECTION "B-B"

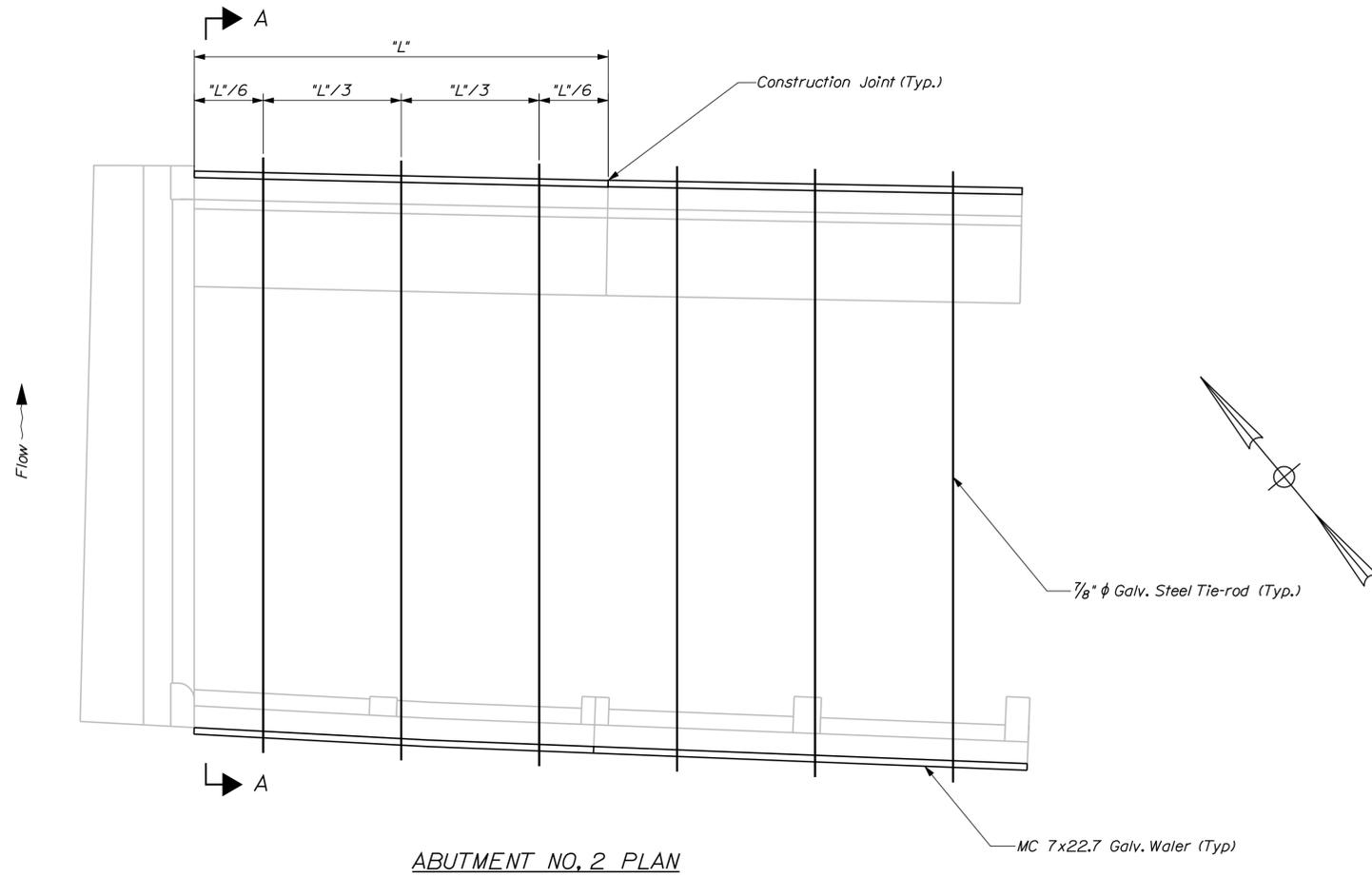
Upstream wing shown - Downstream wing similar

STATE OF MAINE	BRIDGE NO. 3344	PIN	16763.00
DEPARTMENT OF TRANSPORTATION	BR-1676(300)X		
BRIDGE PLANS			

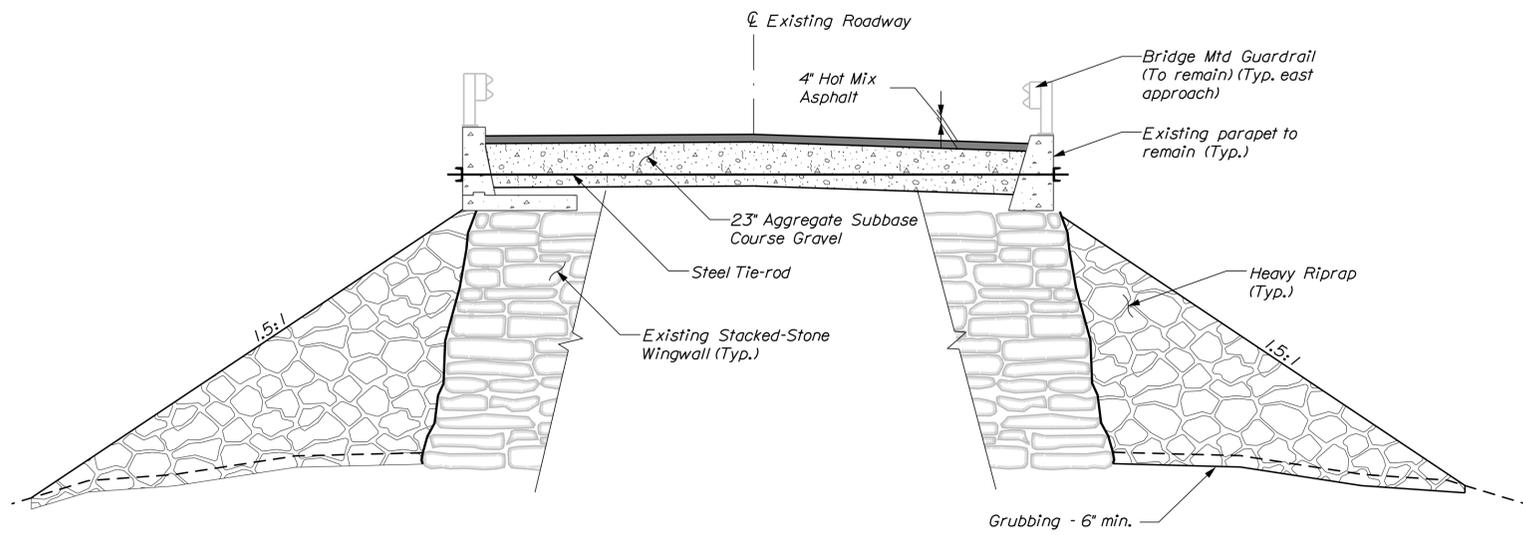
PROJ. MANAGER	SUBODGE	BY	DATE
CHECKED-REVIEWED	R. MYERS	B. NICHOLS	APR 2011
DESIGNS DET AILED			
DESIGNS DET AILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TIBBETTS BRIDGE	WINTERPORT-FRANKFORT WALDO COUNTY
MARSH STREAM	
ABUTMENT NO. 1	

SHEET NUMBER	8
OF 11	



ABUTMENT NO. 2 PLAN



SECTION "A-A"

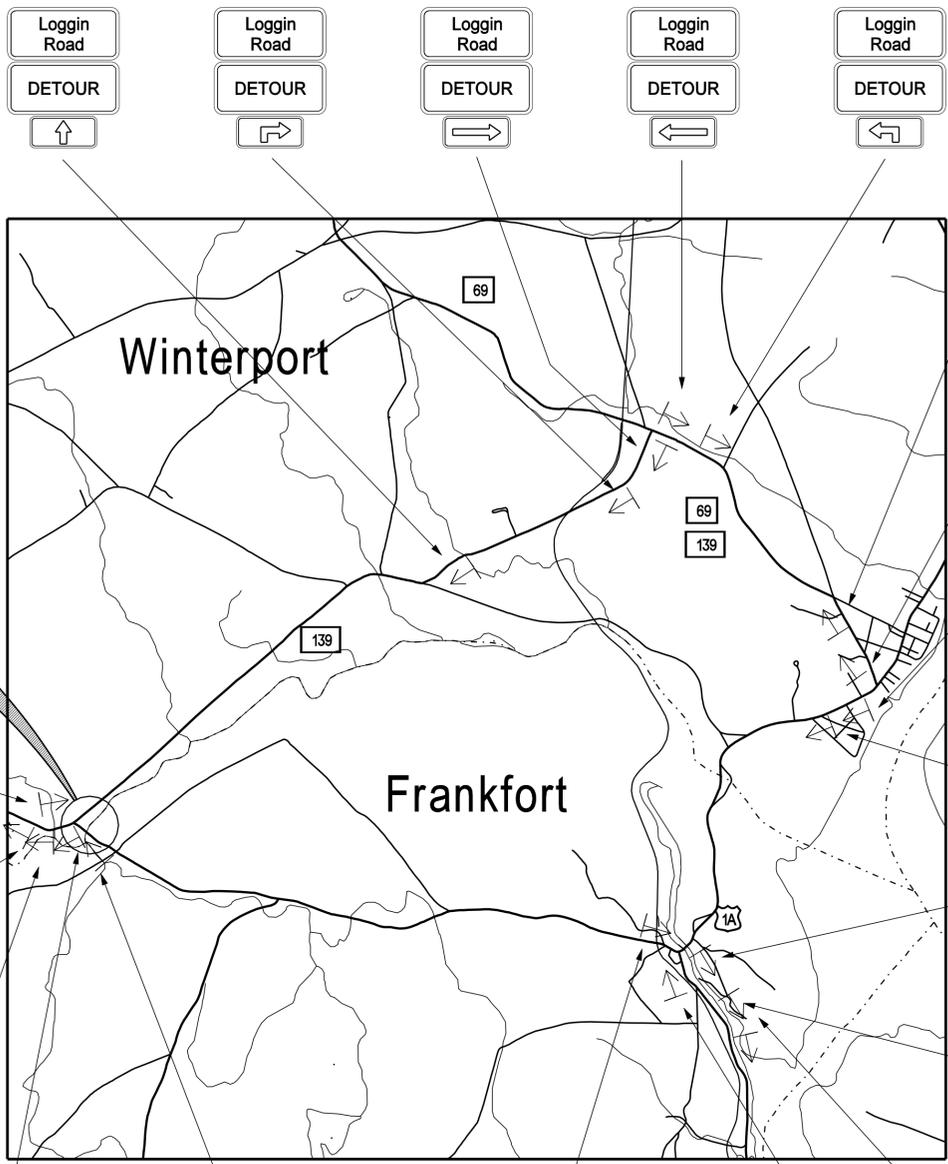
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BR-1676(300)X
BRIDGE NO. 3344
PIN 16763.00
BRIDGE PLANS

PROJ. MANAGER	SUBDGE	BY	DATE
DESIGN-DETAILED	R. MYERS	B. NICHOLS	APR 2011
CHECKED-REVIEWED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TIBBETTS BRIDGE
MARSH STREAM
WINTERPORT-FRANKFORT WALDO COUNTY
ABUTMENT NO. 2

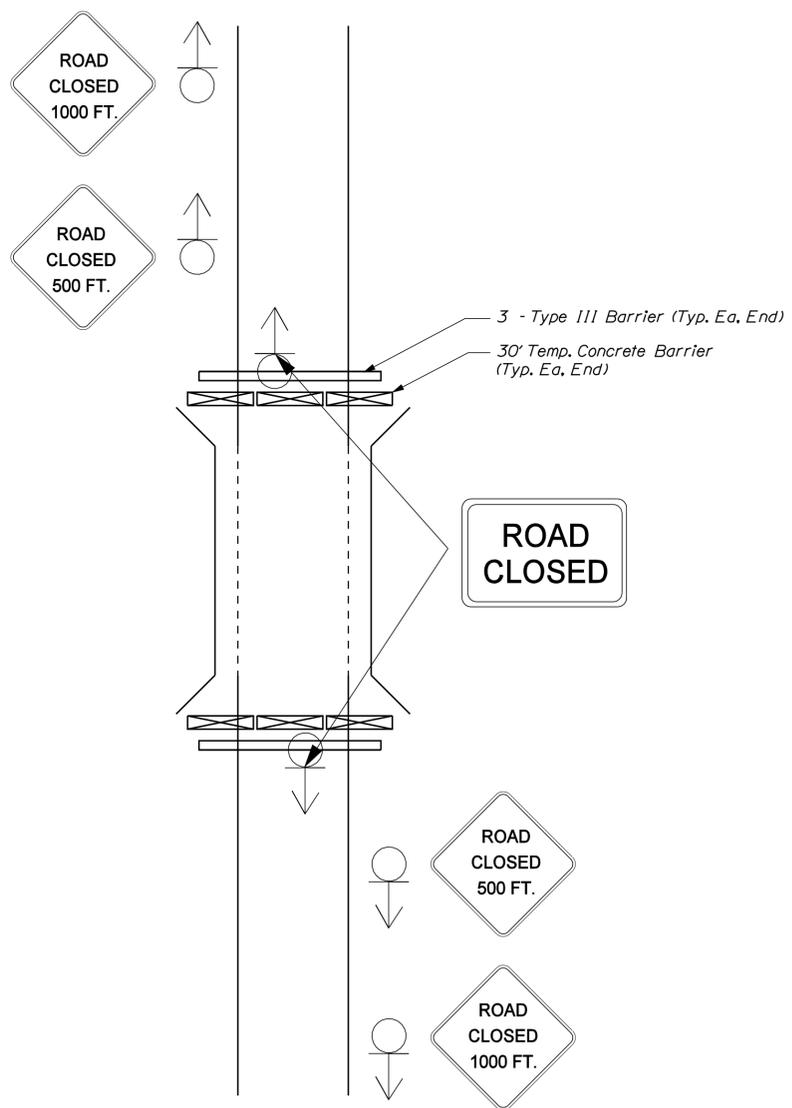
SHEET NUMBER
9
OF 11

PROJECT

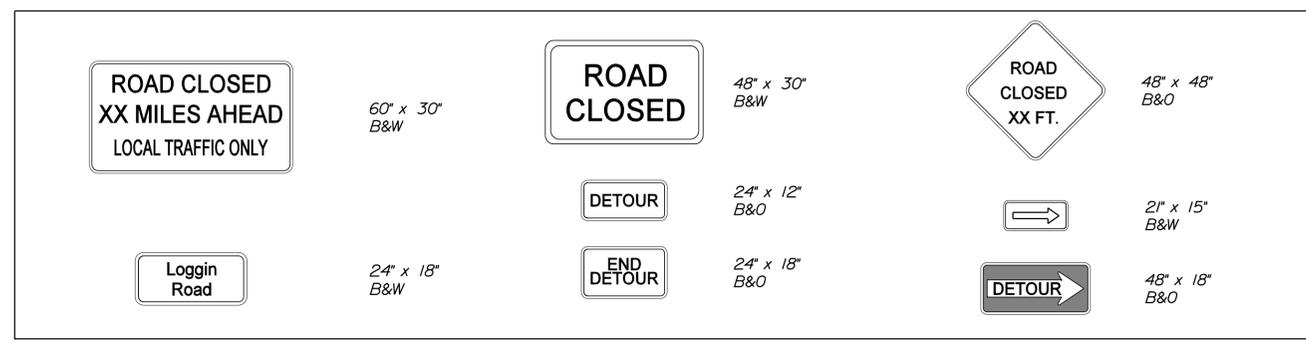


DETOUR NOTES

1. Spacing to be determined by the Resident in accordance with MUTCD
2. Install 30' Temporary Concrete Barrier at each end of project (60' feet total) Payment shall be made under Item No. 526.301-Temporary Concrete Barrier
3. Install 3 Type III Barricades at each end of project and one at each end of detour (8 total) Payment shall be made under Item No. 652.312-Type III Barricade.
4. Cover or remove all conflicting route signs.

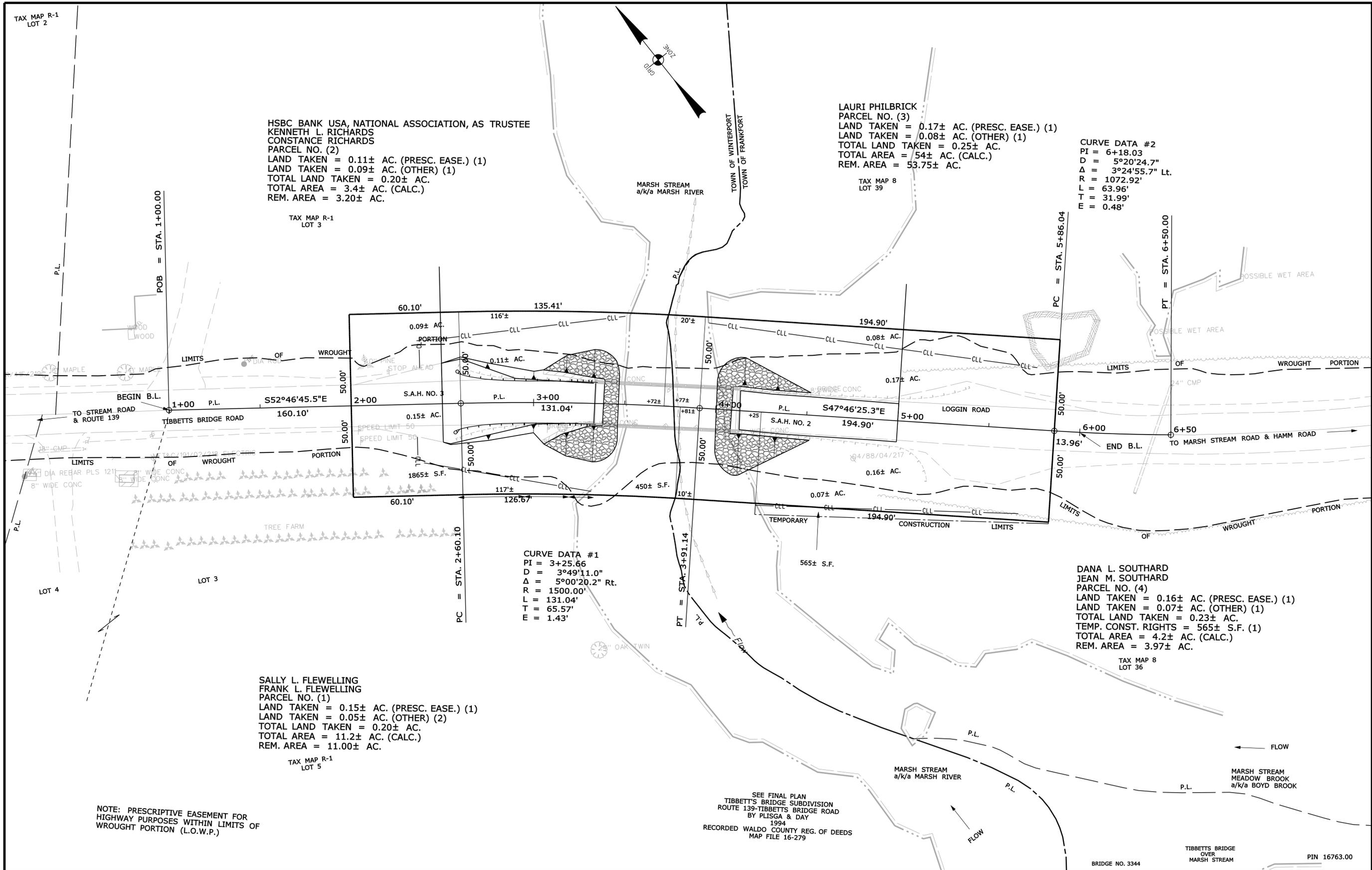


SIGNAGE AT PROJECT LOCATION



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
BR-1676(300)X		PIN 16763.00	
BRIDGE NO. 3344		BRIDGE PLANS	
PROJ. MANAGER	SUBOODE	BY	DATE
CHECKED-REVIEWED	R. MYERS	B. NICHOLS	APR 2011
DESIGN DETAILER			SIGNATURE
DESIGN DETAILER			P.E. NUMBER
REVISIONS 1			DATE
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
TIBBETTS BRIDGE			
MARSH STREAM			
WINTERPORT-FRANKFORT WALDO COUNTY			
DETOUR PLAN			
SHEET NUMBER			
10			
OF 11			

Filename: ...\\001\ROW\MSTA001_RWP\PLAN1.dgn Division: BRIDGE Username: briani.jnichols Date: 5/10/2011



SYMBOLS

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

ITEM	TECH	CHECKED
BASE MAP		
EXIST. R/W	D.W.B.	
PROP. LINES	D.W.B.	
AREAS	D.W.B.	P.N.S.

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

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

DAVID A. COLE
 COMMISSIONER
 KENNETH L. SWEENEY
 CHIEF ENGINEER
 DATE

STATE OF MAINE
 PETER A. BELANGER
 1341
 PROFESSIONAL
 LAND SURVEYOR

S.A.H. NO. 3- S.A.H. NO.2
 LOGGIN ROAD
 WINTERPORT-FRANKFORT WALDO COUNTY
 FEDERAL AID PROJECT NO. BR-1676(300)X

JANUARY 2011
 SCALE 1" = 25'

RIGHT-OF-WAY MAP
 SHEET 1 OF 1

D.O.T. FILE NO. 14-194

SHEET NUMBER
11
 OF 11