STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EMBDEN
SOMERSET COUNTY
MOORE BRIDGE
OVER
JACKIN BROOK
U.S. ROUTE 201A
PROJECT NUMBER 16699.00
PROJECT LENGTH 0.114 mi.
BRIDGE REPLACEMENT
BRIDGE NO. 2579

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Fourth Edition 2007 and Interim Specifications through 2009.

DESIGN LOADING

Live Load ..... HL - 93 Modified for STR I (Truck only increased 25%)

MATERIALS

Concrete:
Precast ..... Class "P"
Reinforcing Steel ..... ASTM A 615/A 615M, Grade 60
Welded Wire Fabric ..... ASTM A 185 (WWF), Grade 60

BASIC DESIGN STRESSES

Precast Concrete ..... f 'c = 5,000 psi min.
Reinforcing Steel ..... f y = 60,000 psi
Welded Wire Fabric ..... f y = 60,000 psi

TRAFFIC DATA

Current (2010) AADT 1870
Future (2030) AADT 2240
DHV - % of AADT 11%
Design Hour Volume 246
Heavy Trucks (% of AADT) 26%
Heavy Trucks (% of DHV) 23%
Directional Distribution (% of DHV) 56%
18 kip Equivalent P 2.0 828
18 kip Equivalent P 2.5 779
Design Speed (mph) 60

HYDROLOGIC DATA

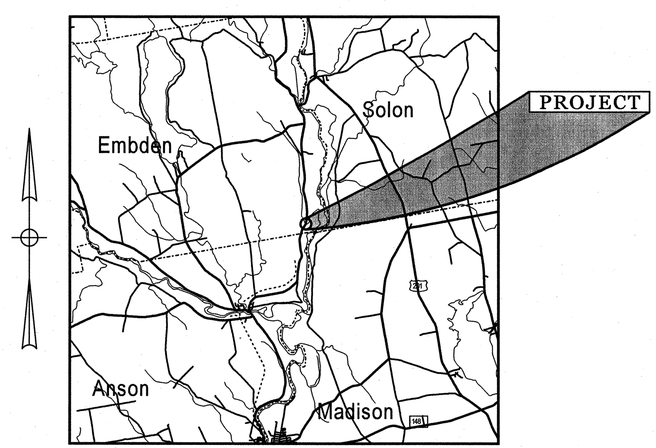
Drainage Area ..... 4.06 sq mi
Design Discharge (Q50) ..... 522.9 cfs
Check Discharge (Q100) ..... 613.6 cfs
Headwater Elevation (Q50) ..... 289.99 ft
Headwater Elevation (Q100) ..... 290.77 ft
Discharge Velocity (Q50) ..... 11.55 fps
Discharge Velocity (Q100) ..... 12.18 fps
Headwater Elevation (Q1.1) ..... 285.08 ft
Discharge Velocity (Q1.1) ..... 4.05 fps

UTILITIES

Central Maine Power Company
Somerset Telephone Company
Time Warner Cable

MAINTENANCE OF TRAFFIC

Close bridge to traffic for maximum of 5 weeks and detour traffic on to state routes.



LOCATION MAP

2 0 2 4
Scale of Miles

LIST OF DRAWINGS

Title Sheet 1
Estimated Quantities & General Construction Notes 2
General Plan and Profile 3
Boring Location Plan and Interpretive Subsurface Profile 4
Boring Logs 5
Highway Approach Cross - Sections 6-18
Precast Concrete Box Plan 19
Precast Concrete Box Details 20
Traffic Control Plan 21
Right of Way Map 22

SCOPE OF WORK

Install State Supplied Concrete Box Culvert and construct 700 feet of approach work.

PIN 16699.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED
COMMISSIONER: DATE 4/21/10
CHIEF ENGINEER: DATE 4/12/10

STATE OF MAINE · Michael Harry Wight · 8089 · LICENSED PROFESSIONAL ENGINEER
SIGNATURE 8089
P.E. NUMBER
DATE 4/21/2010

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	S. BODGE
DESIGNER	M. WIGHT
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

EMBDEN
MOORE BRIDGE
TITLE SHEET

SHEET NUMBER
1
OF 22

Filename:\00\BRIDGE\MSTA\001_Title.dgn Division: BRIDGE Username: david.shaw Date:4/21/2010

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE	1	LS
203.20	COMMON EXCAVATION	3090	CY
203.2318	DISPOSAL OF SPECIAL WASTE	120	CY
203.24	COMMON BORROW	5	CY
203.25	GRANULAR BORROW	600	CY
206.061	STRUCT EARTH EXC. - DRAINAGE AND MNR STRUCT. BELOW GRADE	10	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	1890	CY
403.207	HOT MIX ASPHALT 19.0 MM HMA	630	T
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	315	T
403.209	HOT MIX ASPHALT 9.5 MM HMA (SIDEWALKS, DRIVES, INCIDENTALS)	5	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	315	T
409.15	BITUMINOUS TACK COAT - APPLIED	225	G
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (200 SY)	1	LS
511.07	COFFERDAM: Upstream	1	LS
511.07	COFFERDAM: Downstream	1	LS
526.30	TEMPORARY CONCRETE BARRIER - TYPE I	60	LF
534.7101	PRECAST CONCRETE BOX CULVERT - STATE SUPPLIED (230 CY)	1	LS
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	600	LF
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.369	GUARDRAIL REMOVED AND STACKED	200	LF
606.79	GUARDRAIL 350 FLARED TERMINAL	4	EA
610.08	PLAIN RIPRAP	375	CY
610.18	STONE DITCH PROTECTION	100	CY
613.319	EROSION CONTROL BLANKET	205	SY
615.07	LOAM	6	CY
618.1301	SEEDING METHOD NUMBER 1 - PLAN QUANTITY	1	UN
619.1401	EROSION CONTROL MIX	170	CY
620.58	EROSION CONTROL GEOTEXTILE	580	SY
627.733	4 INCH WHITE OR YELLOW PAINTED PAVE MRK LINE	2100	LF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.13	BULLDOZER (INCLUDING OPERATOR)	20	HR
631.14	GRADER (INCLUDING OPERATOR)	20	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	20	HR
631.16	ROLLER, PAVEMENT (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
639.18	FIELD OFFICE TYPE A	1	EA
652.312	TYPE III BARRICADE	6	EA
652.33	DRUM	12	EA
652.34	CONE	24	EA
652.35	CONSTRUCTION SIGNS	607	SF
652.38	FLAGGER	100	HR
652.39	WORK ZONE TRAFFIC CONTROL	1	LS
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. During construction, the road will be closed to traffic for a time period specified in the Special Provisions.

2. For easements, construction limits and right of way lines, refer to Right of Way Map.

3. 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.

4. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.

5. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.

6. 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.

7. All embankment material, except as otherwise shown, placed below EL. 295.0 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

8. Place riprap on sideslopes up to EL. 298.0.

9. Place loam 2 inches deep and Seeding Method No. 1 on all new or reconstructed sideslopes from Sta. 11+00 Rt. to Sta. 13+00 Rt. or as directed by the Resident.

10. Place Erosion Control Mix on all new or reconstructed sideslopes from Sta. 6+00 Lt. to Sta. 13+00 Lt. and Sta. 6+00 Rt. to Sta. 11+00 Rt. or 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.

11. Place a 24-in. wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.

12. An NCHRP350 compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.

13. 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.

14. 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.

15. 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.

16. 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.

17. The project geotechnical report titled: Moore Bridge, Routes 8/16/201A Over Jackin Brook, Embden, Maine dated April 12, 2010 may be accessed at the MaineDOT web address.

18. 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.

19. 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:

a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

c. 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.

20. Bench existing fill slope soils in accordance with MaineDOT Standard Specification 203.09, Preparation of Embankment Area, where new fill slope extensions are constructed over existing slopes with grades greater than 2:1 (H:V).

21. Riprap adjacent to the box culvert shall be placed so as not to damage the culvert. Any damage to the box culvert during construction shall be repaired or replaced as determined by the Resident at the Contractor's expense.

22. The Contractor shall construct the culvert in the dry.

23. To identify weak zones and densify the box culvert subgrade, the Contractor shall compact the excavated subgrade with a minimum of 4 passes with a vibratory compactor that has a minimum static weight of 500 lbs. The Contractor shall remove and replace weak or unsuitable soils found at the subgrade level with compacted Granular Borrow.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

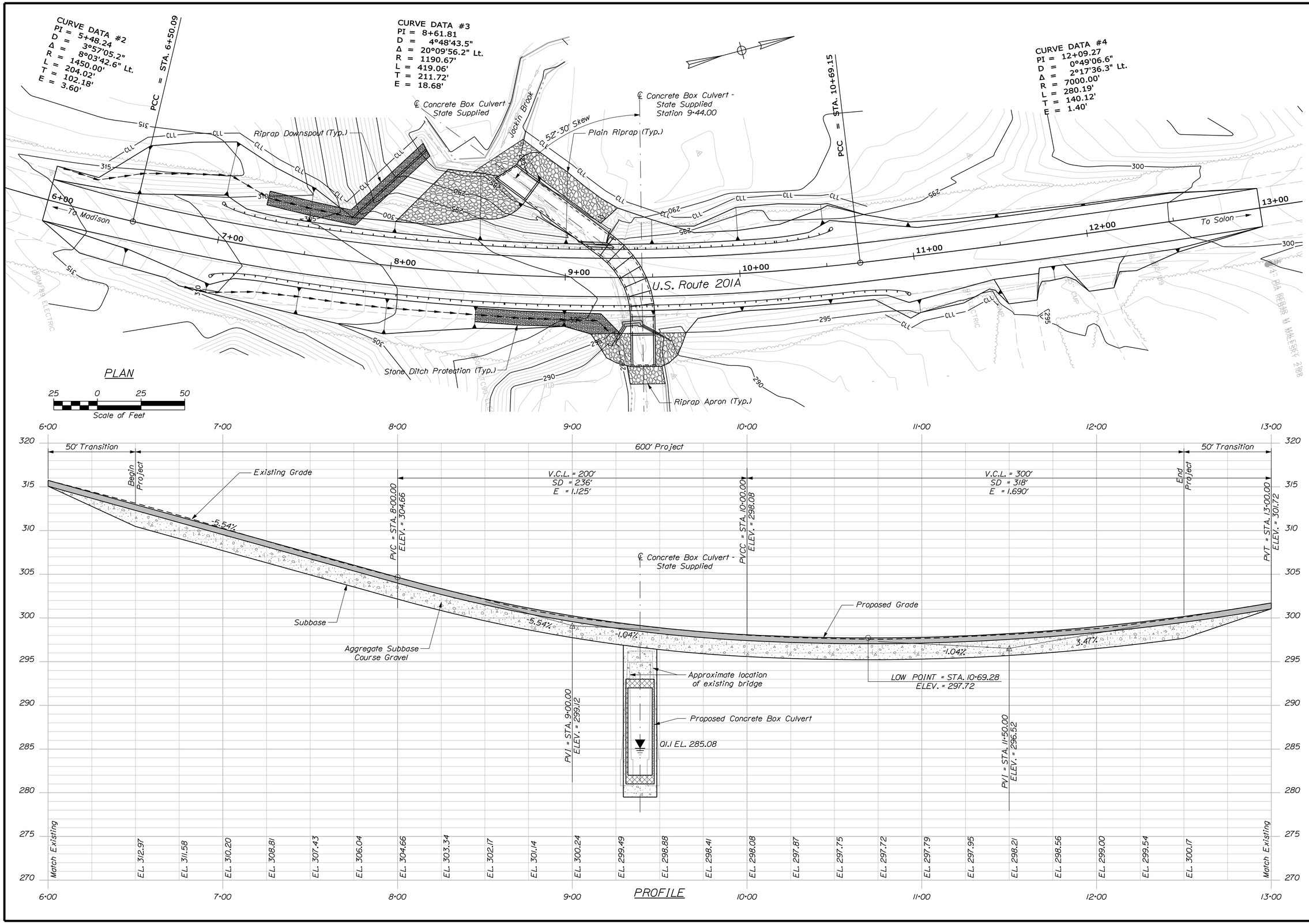
ESTIMATED QUANTITIES AND
GENERAL CONSTRUCTION NOTES

SHEET NUMBER

2

OF 22

Filename: ...\BRIDGE\MSTA\002_Estimate.dgn Division: BRIDGE Username: david.show Date:4/26/2010



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	S. BIDGE		
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

GENERAL PLAN & PROFILE

SHEET NUMBER

3

OF 22

STA. 6+00.00 TO STA. 13+00.00

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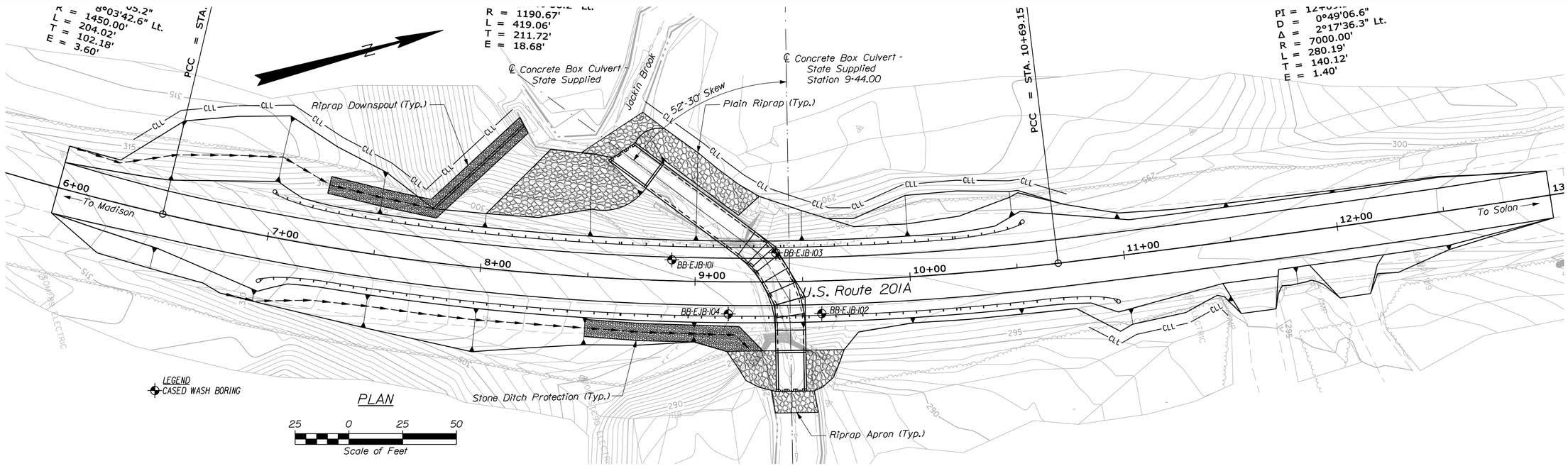

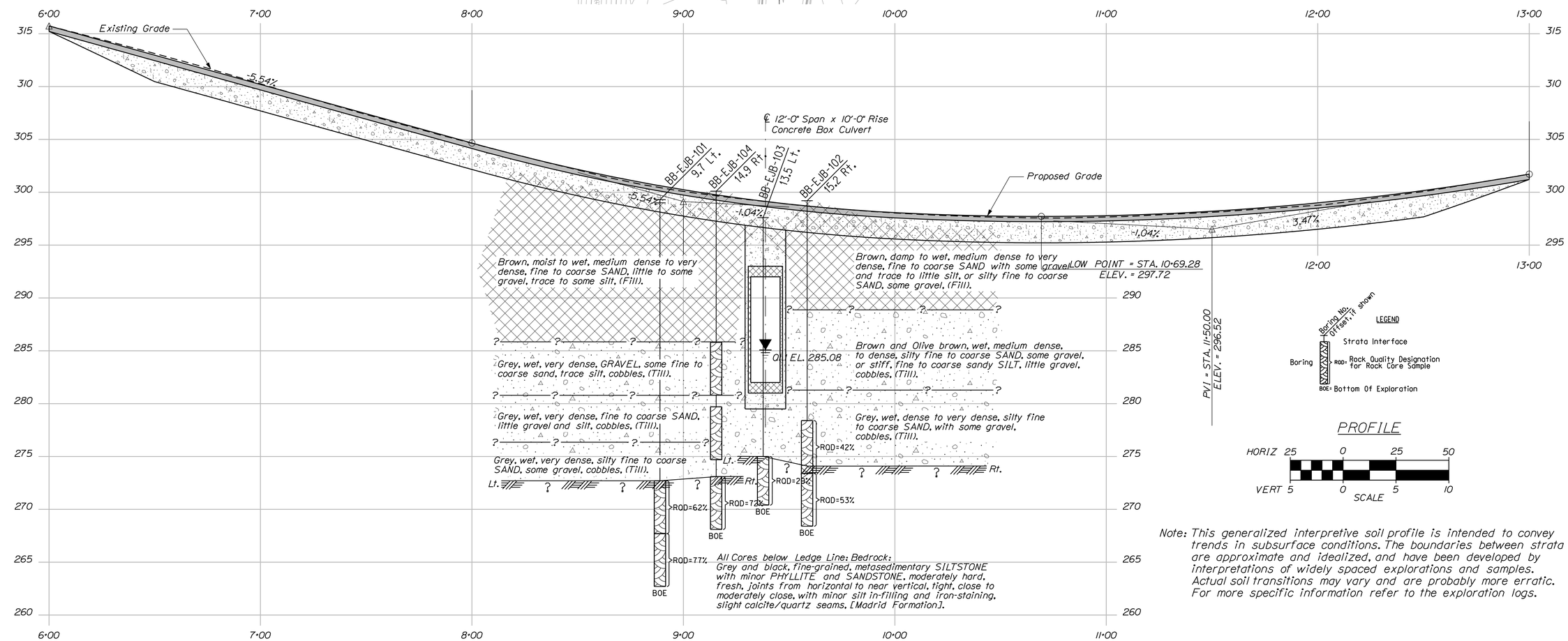

Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably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

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE PLANS

BRIDGE NO. 2579

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.MOREAU	T.WHITE	NOV 2009
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
SOMERSET COUNTY
EMBDEN

BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

4

OF 22

Filename: ...\GEOTECH\MSTA\004_BLP&ISP1.dgn Division: BRIDGE Username: david.show Date:4/21/2010

Filename: ...\MSTA\005_BORING LOGS1.dgn   Division: BRIDGE   Username: david.show   Date:4/21/2010

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Moore Bridge #2579 carrying Routes 201A/8/16 over Jackin
Location: Embden, Maine

Boring No.: BB-EJB-101
PIN: 16699.00

Driller:	MaineDOT	Elevation (ft.)	299.3	Auger ID/OD:	5" Solid Stem
Operator:	Giguere/Giles/Wright	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/9/09; 08:30-13:00	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	8+88.9, 9.7 Lt.	Casing ID/OD:	NW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.84		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test,   PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)
0							SSA	299.00
	1D	24/13	1.50 - 3.50	4/4/5/7	9	13		
								295.30
5	2D	24/12	5.00 - 7.00	2/4/8/8	12	17		
								291.80
10	3D	24/13	10.00 - 12.00	4/4/18/12	22	31	9	
							63	
							57	
							118	286.30
							54	
15	4D	24/10	15.00 - 17.00	14/20/27/27	47	66	21	
							120	
							116	
							103	280.80
							123	
20	5D	15.6/14	20.00 - 21.30	25/31/40(3.6")	---		22	
							36	
							59	
							170	276.30
							184	
25	6D	14.4/10	25.00 - 26.20	15/17/30(2.2")	---		56	
	R1	60/54	26.60 - 31.60	RQD = 62%			a105 NQ-2	272.70
30	R2	60/60	31.60 - 36.60	RQD = 77%				267.70
35								262.70

Visual Description and Remarks / Laboratory Testing Results/AASHTO and Unified Class:

- PAVEMENT. (0.30)
- Brown, wet, medium dense, fine to coarse SAND, some gravel and silt, (Fill). — G#236882, A-2-4, SM, WC=9.9%
- (4.00) Dark brown, wet, medium dense, silty, fine to coarse SAND, little to some gravel, (Fill).
- (7.50) Olive, wet, dense, fine to coarse SAND, some gravel and silt, (Fill). — G#236883, A-1-b, SM, WC=8.7%
- (13.00) Grey, wet, very dense, GRAVEL, some fine to coarse sand, trace silt, occasional cobbles, (Till). — G#236884, A-1-a, GW-GM, WC=8.2%
- (18.50) Grey, wet, very dense, fine to coarse SAND, little gravel and silt, (Till). — G#236885, A-1-b, SM, WC=10.9%
- (23.00) Roller Coned ahead to 25.0' bgs.
- Grey, wet, very dense, silty, fine to coarse SAND, some gravel, occasional cobbles, (Till).
- a105 blows for 0.6'.
- Roller Coned ahead to 26.6' bgs.
- (26.60) Top of Bedrock at Elev. 272.7'.
- R1 and R2 Bedrock: Dark Grey, metasedimentary SILTSTONE, moderately hard, fresh, joints from horizontal to near vertical, tight, close to moderately close, with minor silt in-filling, slight calcite/quartz seams. [Madrid Formation]
- R1:Core Times (min:sec) 26.6-27.6' (3:38) 27.6-28.6' (3:11) 28.6-29.6' (3:22) 29.6-30.6' (3:12) 30.6-31.6' (3:29) 90% Recovery
- (31.60) R2:Core Times (min:sec) 31.6-32.6' (3:09) 32.6-33.6' (3:29) 33.6-34.6' (3:12) 34.6-35.6' (3:32) 35.6-36.6' (3:11) 100% Recovery
- (36.60) Bottom of Exploration at 36.60 feet below ground surface.

Remarks:
500# down pressure on Care Barrel.

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-EJB-101

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Moore Bridge #2579 carrying Routes 201A/8/16 over Jackin
Location: Embden, Maine

Boring No.: BB-EJB-104
PIN: 16699.00

Driller:	MaineDOT	Elevation (ft.)	300.1	Auger ID/OD:	5" Solid Stem
Operator:	Giguere/Giles/Wright	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/10/09; 10:00-14:30	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	9+15.5, 14.9 Rt.	Casing ID/OD:	NW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.84		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
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SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)
0	1D	18/13	0.50 - 2.00	6/15/50	65	91	SSA	
5	2D	24/17	5.00 - 7.00	4/6/8/8	14	20		
10	3D	24/18	10.00 - 12.00	2/4/4/6	8	11	20	
							22	
							22	
							89	
	R1	60/27	14.30 - 19.30				a462 NQ-2	285.80
15							200	
							150	
							173	
							125	
							136	
20	4D R2	3.6/3.6 60/12	20.00 - 20.30 20.40 - 25.40	50(3.6")			23 NQ-2	
							23	
							88	
							63	
							42	
25								274.70
	5D	12/12	26.00 - 27.00	21/73	---			273.10
	R3	60/57	27.00 - 32.00	RQD = 72%			NQ-2	
30								268.10

Visual Description and Remarks:

- Brown, moist to wet, very dense to medium dense, fine to coarse SAND, some gravel, trace to little silt, (Fill).
- a462 blows for 0.3'.
- (14.30) R1: COBBLES and TILL.
- R1:Core Times (min:sec) 14.3-15.3' (3:00) 15.3-16.3' (1:10) 16.3-17.3' (0:45) 17.3-18.3' (0:50) 18.3-19.3' (0:45)
- Grey, wet, very dense, silty, fine to coarse SAND, some gravel, cobbles, (Till).
- R2: COBBLES and TILL.
- R2: Core Times (min:sec) 20.4-21.4' (1:30) 21.4-22.4' (1:20) 22.4-23.4' (2:00) 23.4-24.4' (3:31) 24.4-25.4' (1:15)
- (25.40) Same but little gravel.
- (27.00) Top of Bedrock at Elev. 273.1'.
- R3:Bedrock: Grey, metasedimentary SILTSTONE, moderately hard, fresh, joints at 20 to 45 degrees, tight, moderately close, with minor silt in-filling, slight calcite/quartz seams. [Madrid Formation]
- R3:Core Times (min:sec) 27.0-28.0' (2:48) 28.0-29.0' (3:06) 29.0-30.0' (3:06) 30.0-31.0' (2:31) 31.0-32.0' (2:15) 93% Recovery
- (32.00) Bottom of Exploration at 32.00 feet below ground surface.

Remarks:
500# down pressure on Care Barrel.

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-EJB-104

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Moore Bridge #2579 carrying Routes 201A/8/16 over Jackin
Location: Embden, Maine

Boring No.: BB-EJB-103
PIN: 16699.00

Driller:	MaineDOT	Elevation (ft.)	297.6	Auger ID/OD:	5" Solid Stem
Operator:	Giguere/Wright	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	M. Moreau	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/12/09-11/12/09	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	9+37.7, 13.5 Lt.	Casing ID/OD:	NW	Water Level*:	4.0' bgs.
Hammer Efficiency Factor: 0.84		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test,   PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)
0							SSA	
	1D	24/14	1.00 - 3.00	8/7/6/7	13	18		
								293.60
5	2D	24/12	5.00 - 7.00	9/27/17/11	44	62		
10	3D	24/14	10.00 - 12.00	11/10/9/10	19	27	13	287.60
							16	
							24	
							24	
							12	
15	4D	24/4	15.00 - 17.00	23/20/11/7	31	43	12	
							19	
							25	
							36	279.10
							87	
20	5D	24/3	20.00 - 22.00	29/40/35/26	75	105	61	
							92	
	R1	55.2/50	22.60 - 27.20	RQD = 29%			a108 NQ-2"	275.00
25								270.40

Visual Description and Remarks:

- Brown, damp, medium dense, fine to coarse SAND, some gravel, trace silt, (Fill).
- (4.00) Brown, wet, very dense, silty fine to coarse SAND, some gravel, occasional cobbles, mottled, (Fill). Looks like recompacted Till.
- (10.00) Brown, wet, medium dense to dense, silty fine to coarse SAND, some gravel, occasional cobbles, (Glacial Till).
- (18.50) 5D same, but grey and very dense.
- a108 blows for 0.6'.
- (22.60) Top of Bedrock at Elev. 275.0'.
- R1:Bedrock: Black, fine-grained PHYLLITE in top 12" of core, then grey, fine to very fine grained, metasedimentary, calcareous SANDSTONE, moderately hard, fresh, joints dipping at 20 to 30 degrees, fractures from horizontal to near vertical, close to moderately close, tight with minor silt in-filling and iron staining. [Madrid Formation]
- R1:Core Times (min:sec) 22.6-23.6' (3:54) 23.6-24.6' (3:23) 24.6-25.6' (2:29) 25.6-26.6' (2:10) 26.6-27.2' (4:47) 91% Recovery
- Core Blocked
- (27.20) Bottom of Exploration at 27.20 feet below ground surface.

Remarks:
Boring in gravel shoulder.

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-EJB-103

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Moore Bridge #2579 carrying Routes 201A/8/16 over Jackin
Location: Embden, Maine

Boring No.: BB-EJB-102
PIN: 16699.00

Driller:	MaineDOT	Elevation (ft.)	299.2	Auger ID/OD:	5" Solid Stem
Operator:	Giguere/Giles/Wright	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/9/09-11/10/09	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	9+58.5, 15.2 Rt.	Casing ID/OD:	NW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.84		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test,   PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)
0	1D	24/18	0.00 - 2.00	5/10/7/7	17	24	SSA	
5	2D	24/18	5.00 - 7.00	12/11/6/6	17	24		
								289.70
10	3D	24/15	10.00 - 12.00	3/4/3/3	7	10	15	
							11	
							12	
							30	
							96	
15							45	283.60
	4D	24/17	16.00 - 18.00	8/17/12/16	29	41	84	
							91	
							120	
							a55	
20	5D R1	4.8/3 60/46	20.00 - 20.40 20.80 - 25.80	40(4.8") RQD = 42%	---		NQ-2	278.80
25	R2	60/48	25.80 - 30.80	RQD = 53%				274.10
30								268.40

Visual Description and Remarks / Laboratory Testing Results/AASHTO and Unified Class:

- Brown, wet, medium dense, fine to coarse SAND, some gravel, little silt, (Fill). — G#236887, A-1-b, SW-SM, WC=4.2%
- Similar to above.
- (9.50) Olive brown, wet, stiff, fine to coarse sandy SILT, little gravel, (Till). — G#236888, A-4, SM, WC=16.4%
- Roller Coned through cobble from 15.0-15.6' bgs.
- (15.60) Grey, wet, dense, silty fine to coarse SAND, some gravel, occasional cobbles, (Till). — G#236889, A-2-4, SM, WC=9.8%
- a55 blows for 0.4'.
- Roller Coned through cobble from 19.5-20.0' bgs.
- 5D Similar to above, except very dense. Roller Coned to 20.8'bgs.
- (20.40) Fractured, very weathered, jointed and iron-stained bedrock with glacial till layers 2" to 5" thick.
- R1:Core Times (min:sec) 20.8-21.8' (2:13) 21.8-22.8' (2:15) 22.8-23.8' (2:08) 23.8-24.8' (2:15) 24.8-25.8' (2:00) 76% Recovery
- (25.10) Top of Competent Bedrock at Elev. 274.1'.
- R2 Bedrock: Dark Grey, metasedimentary SILTSTONE, moderately hard, fresh, joints near horizontal, tight, moderately close, with minor silt in-filling and iron-staining, slight calcite seams. [Madrid Formation]
- R2:Core Times (min:sec) 25.8-26.8' (1:50) 26.8-27.8' (2:33) 27.8-28.8' (4:46) 28.8-29.8' (2:13) 29.8-30.8' (3:01) 80% Recovery
- (30.80) Bottom of Exploration at 30.80 feet below ground surface.

Remarks:
500# down pressure on Care Barrel.

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-EJB-102

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16699.00

PIN 16699.00
BRIDGE NO. 2579
BRIDGE PLANS

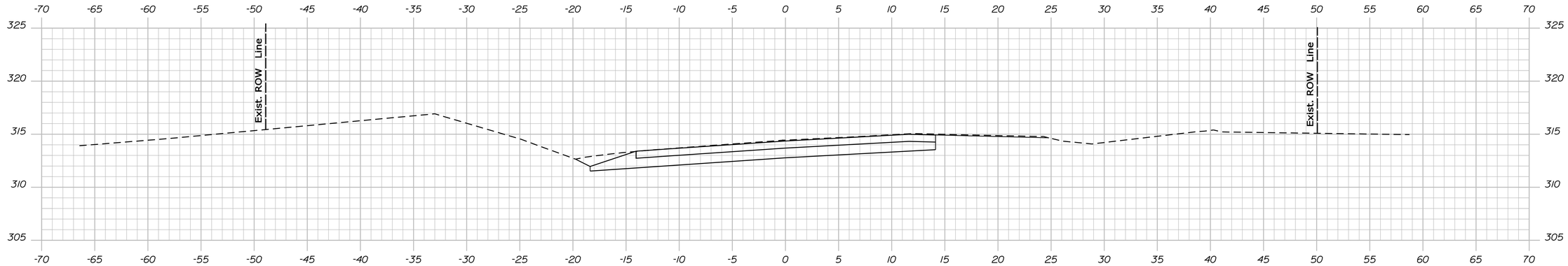
	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.MOREAU T.WHITE	APR 2010
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE
P.E. NUMBER
DATE

EMBDEN
MOORE BRIDGE
JACKIN BROOK
SOMERSET COUNTY

BORING LOGS

SHEET NUMBER
5
OF 22



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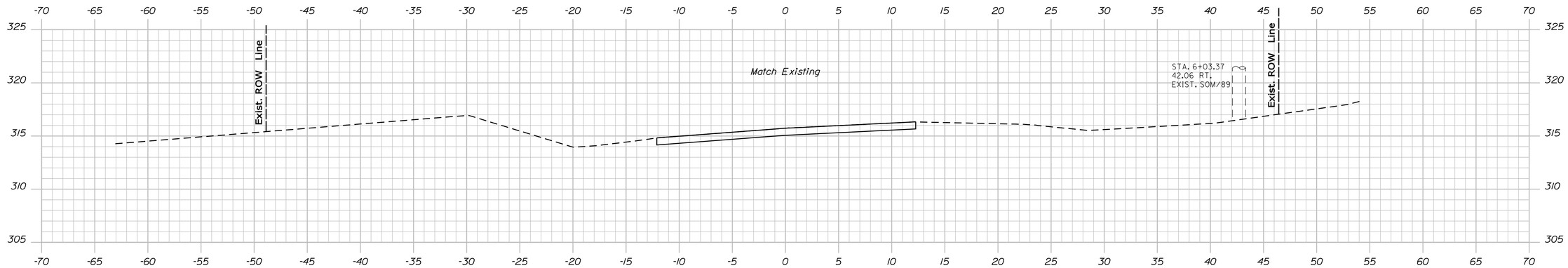
Transitioning



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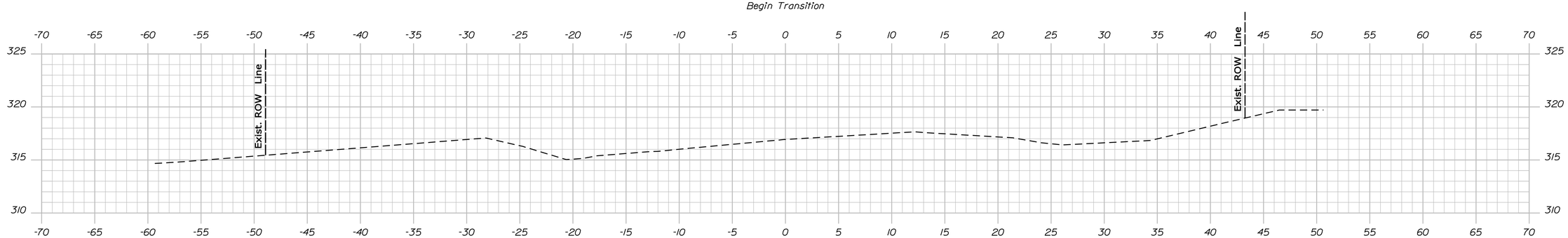
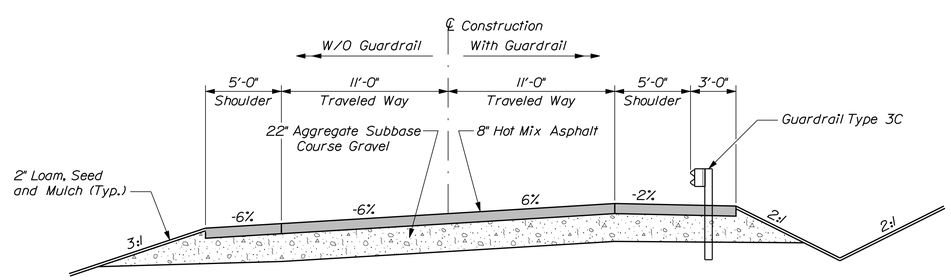


5+75.00



TYPICAL SUPERELEVATED APPROACH SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE PLANS

BRIDGE NO. 2579

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

SHEET NUMBER
6
OF 22

Sta. 5+75.00 to Sta. 6+25.00

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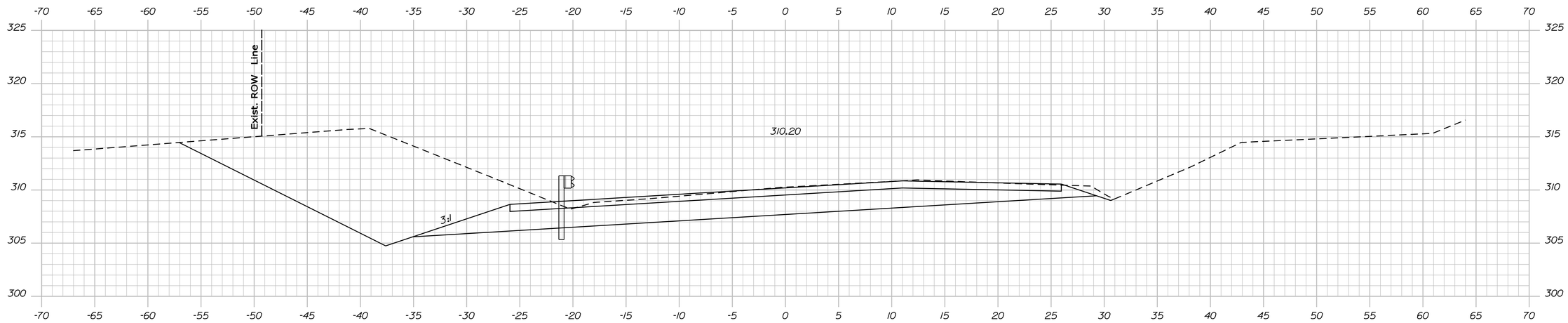
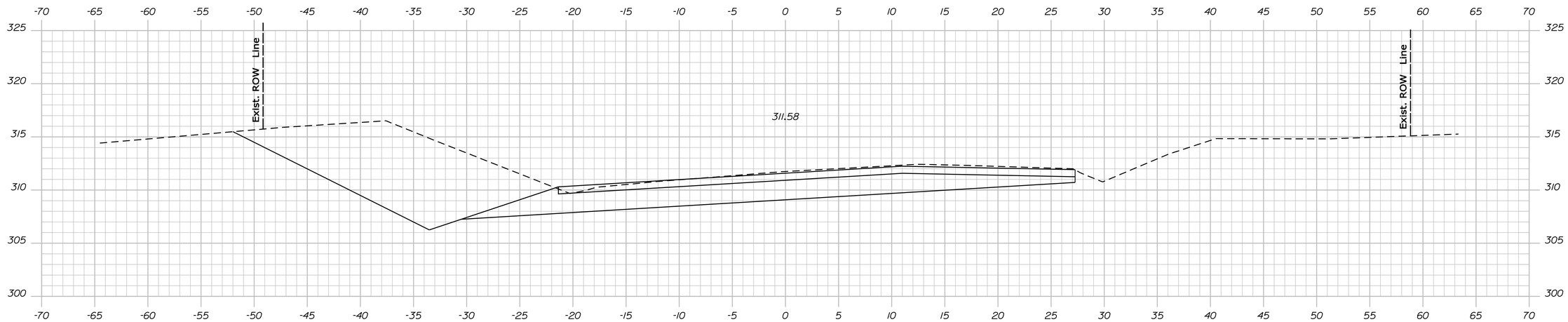


7+00.00

Sta. 7+00±, 20.0 Ft. Lt. to Sta. 7+37.6±, 16.0 Ft. Lt.
Install Guardrail 350 Flared Terminal

Sta. 7+00±, 20.0 Ft. Rt. to Sta. 7+36.6±, 16.0 Ft. Rt.
Install Guardrail 350 Flared Terminal



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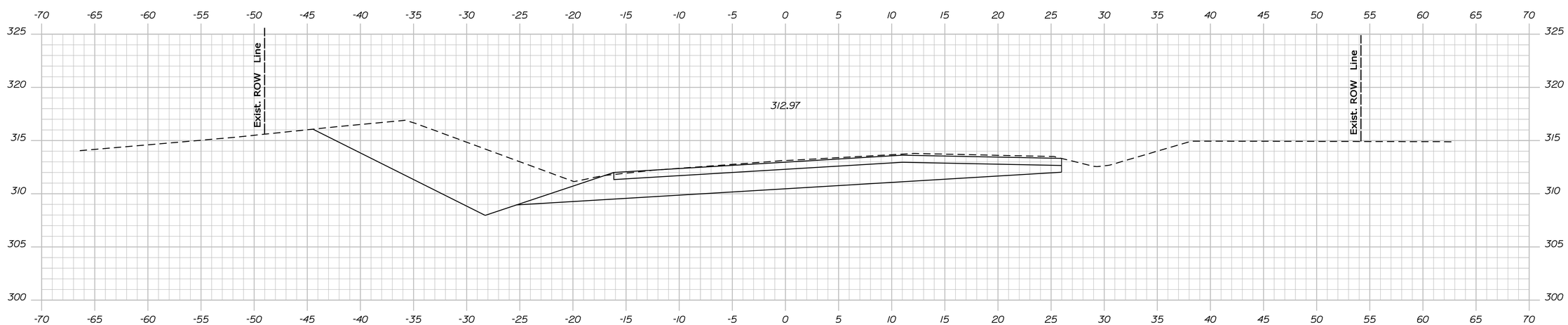

6+50.00
End Transition / Begin Project

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN
16699.00

BRIDGE PLANS

BRIDGE NO. 2579

PROJ. MANAGER			
DESIGN-DETAILED	S. BODGE	BY	DATE
CHECKED-REVIEWED	M. WIGHT	Team North	DEC 2009
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

SHEET NUMBER
7
OF 22

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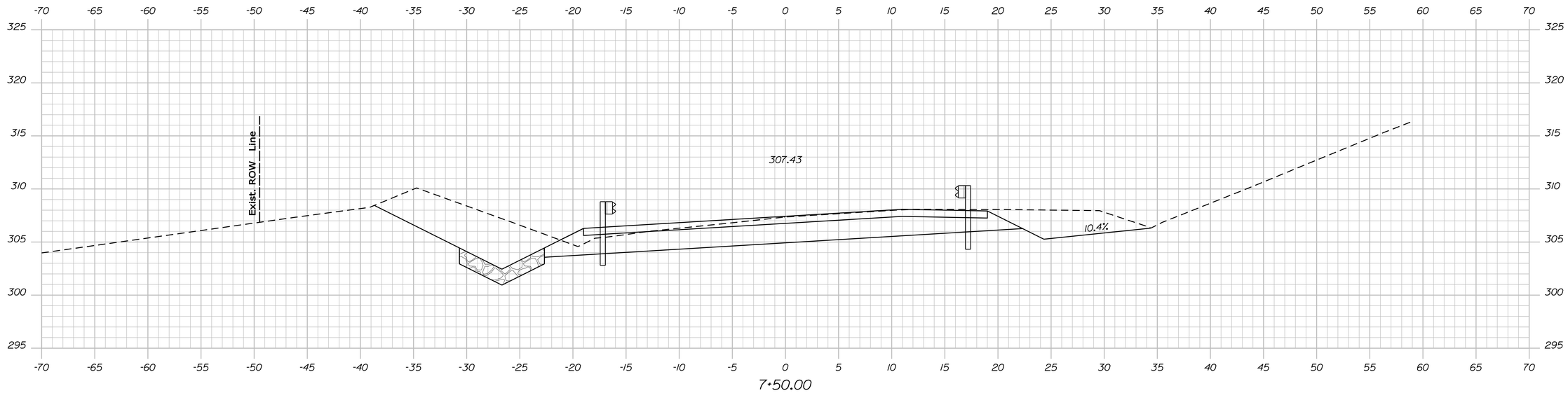
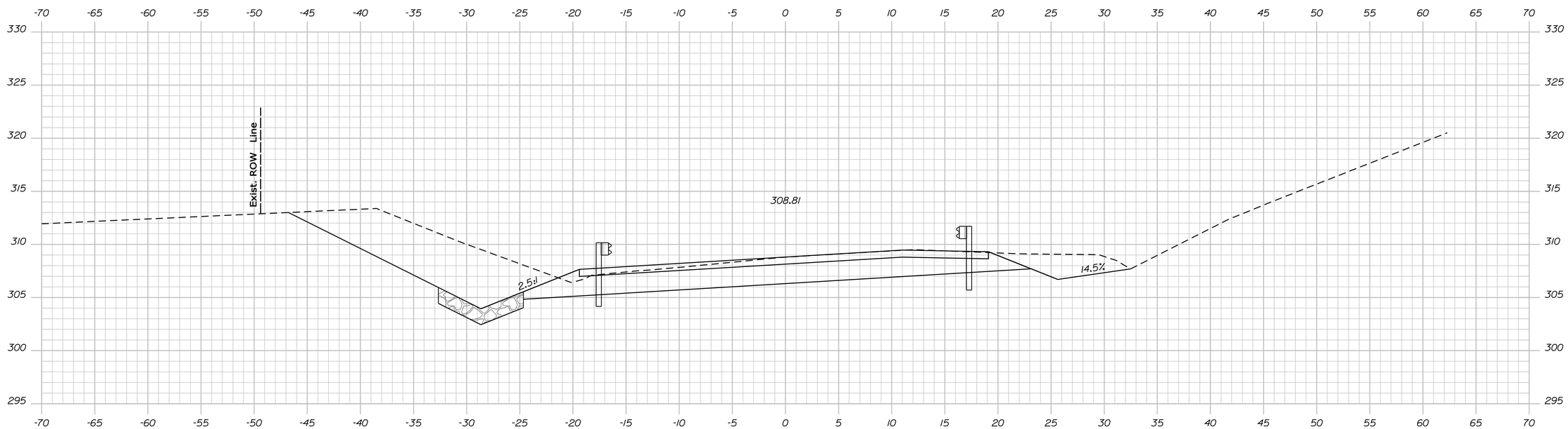
Sta. 6+50.00 to Sta. 7+00.00





Sta. 7+25±, 28.6± Ft. Lt. to Sta. 7+75±, 24.8± Ft. Lt. to Sta. 8+14±, 68.1± Ft. Lt.
Install 107± L.F. Stone Ditch Protection

Sta. 7+37.6±, 16.0 Ft. Lt. to Sta. 10+16.4±, 16.0 Ft. Lt.
Install 275 L.F. Guardrail, Type 3c

Sta. 7+36.6±, 16.0 Ft. Rt. to Sta. 10+57.3±, 16.0 Ft. Rt. to
Install 325 L.F. Guardrail, Type 3c

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

SHEET NUMBER

8

OF 22

Sta. 7+25.00 to Sta. 7+50.00

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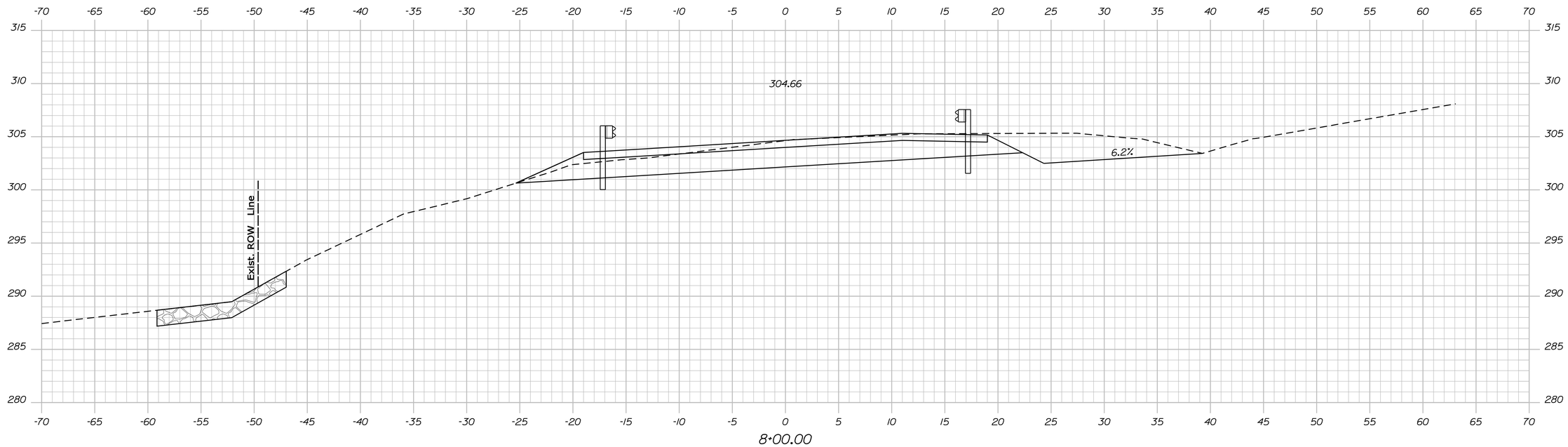

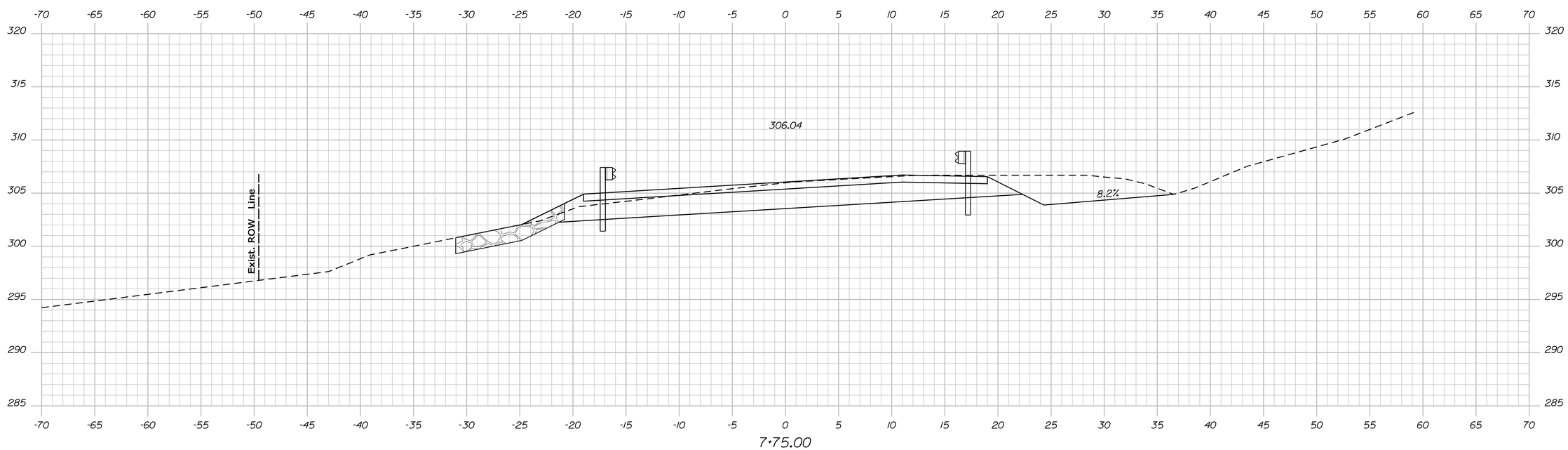

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

SHEET NUMBER

9

OF 22

Sta. 7+75.00 to Sta. 8+00.00

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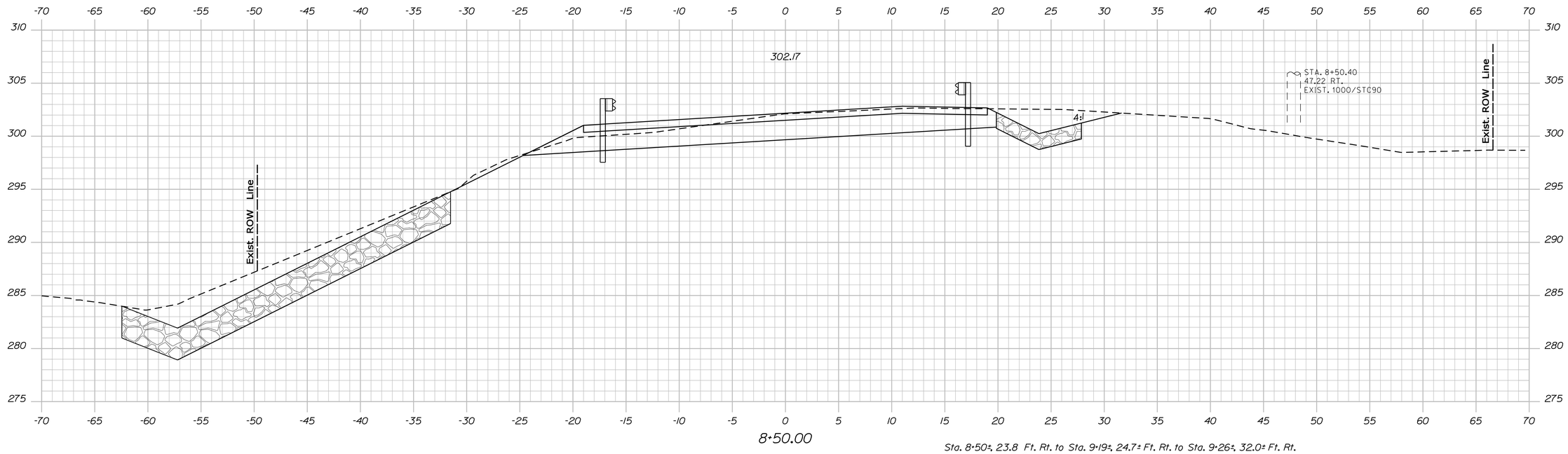
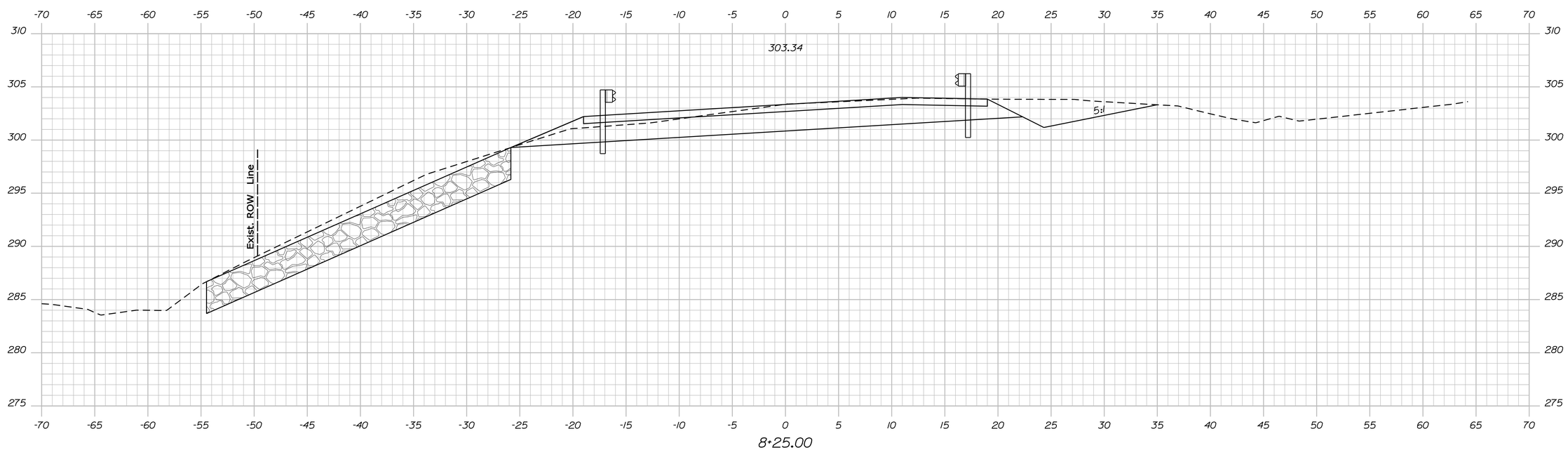


Sta. 8+50±, 23.8 Ft. Rt. to Sta. 9+19±, 24.7± Ft. Rt. to Sta. 9+26±, 32.0± Ft. Rt.
Install 81.0± L.F. Stone Ditch Protection



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

SHEET NUMBER

10

OF 22

Sta. 8+25.00 to Sta. 8+50.00

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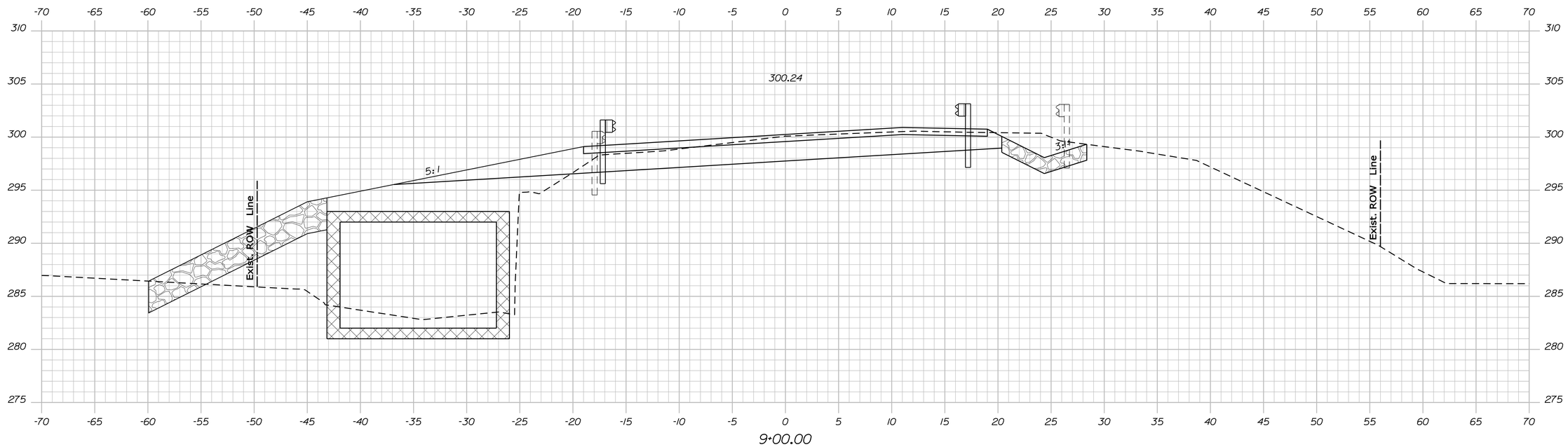

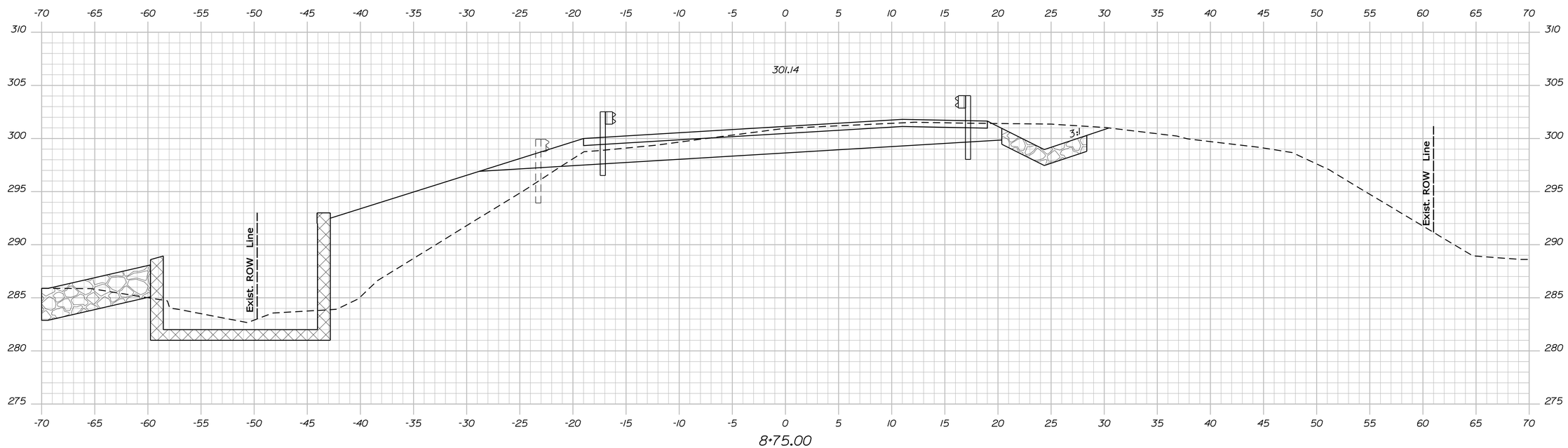

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

SHEET NUMBER

11

OF 22

Sta. 8+75.00 to Sta. 9+00.00

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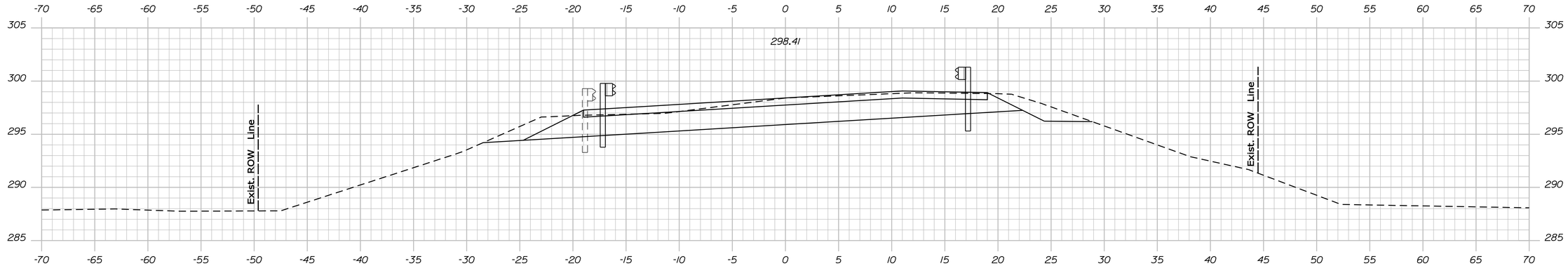
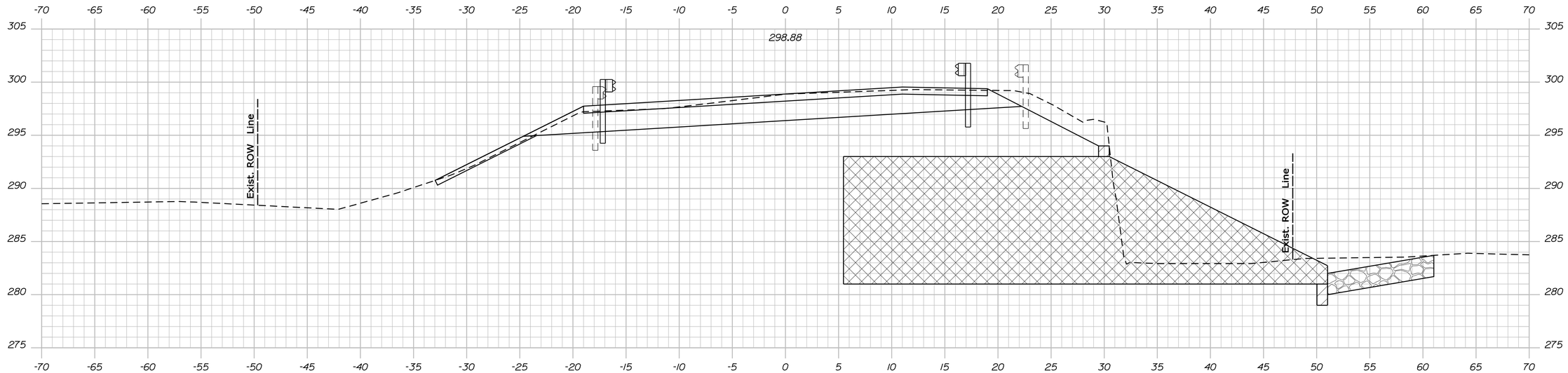
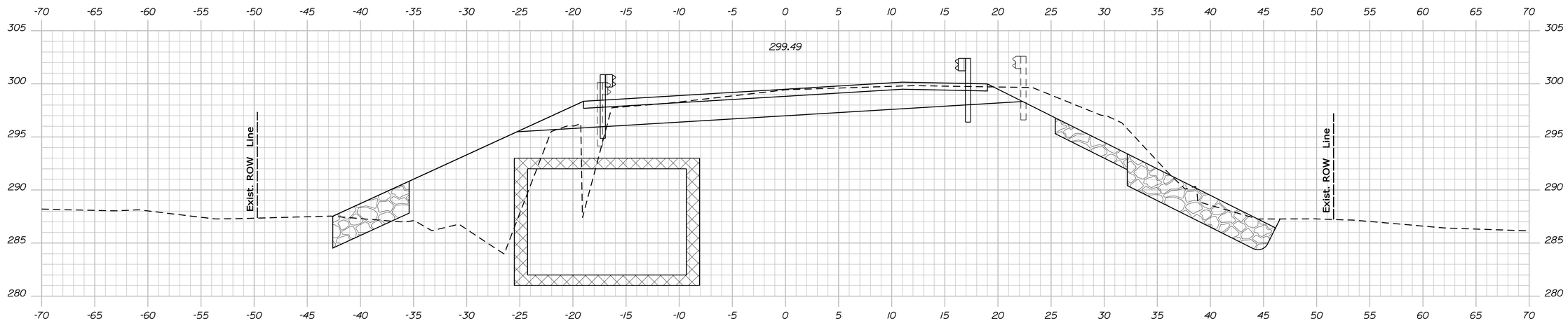


9+75.00



9+50.00



9+25.00

Sta. 9+25.00 to Sta. 9+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

SHEET NUMBER

12

OF 22

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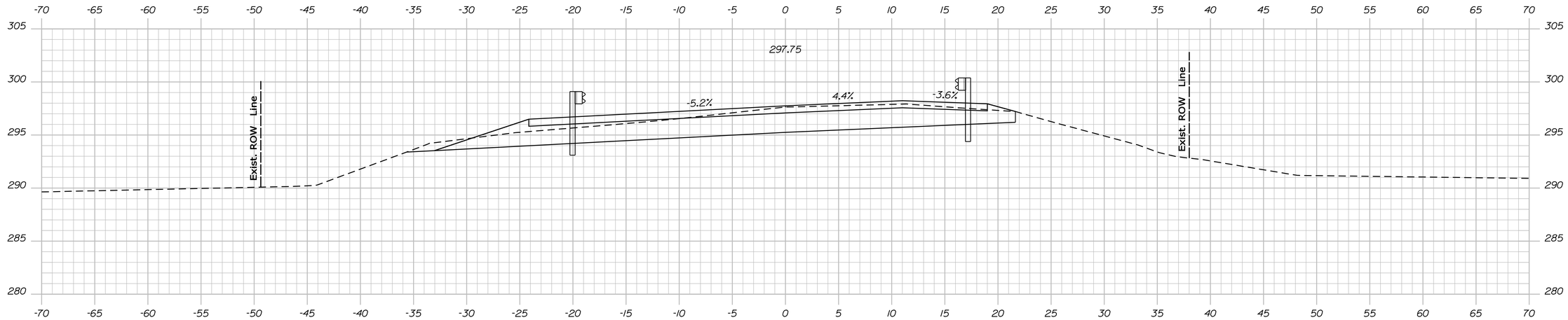
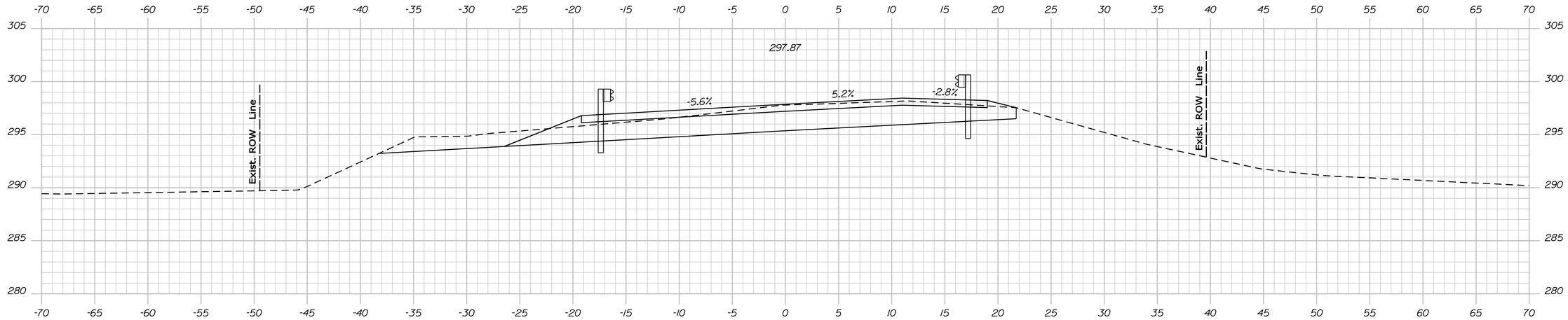
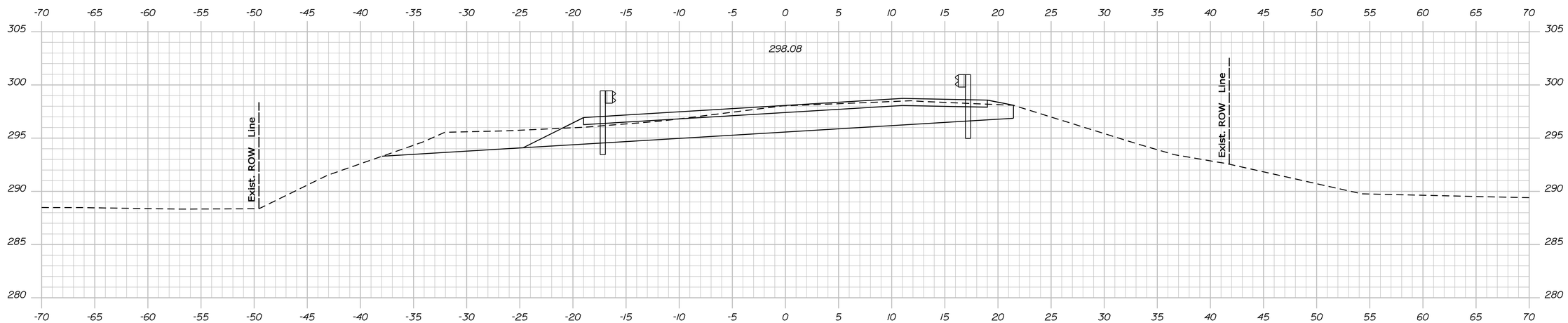


10+50.00



10+25.00

Sta. 10+57.3±, 16.0 Ft. Rt. to Sta. 10+94.2±, 20.0 Ft. Rt.
Install Guardrail 350 Flared Terminal



10+00.00

Sta. 10+16.4±, 16.0 Ft. Lt. to Sta. 10+54.0±, 20 Ft. Lt.
Install Guardrail 350 Flared Terminal

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BODGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

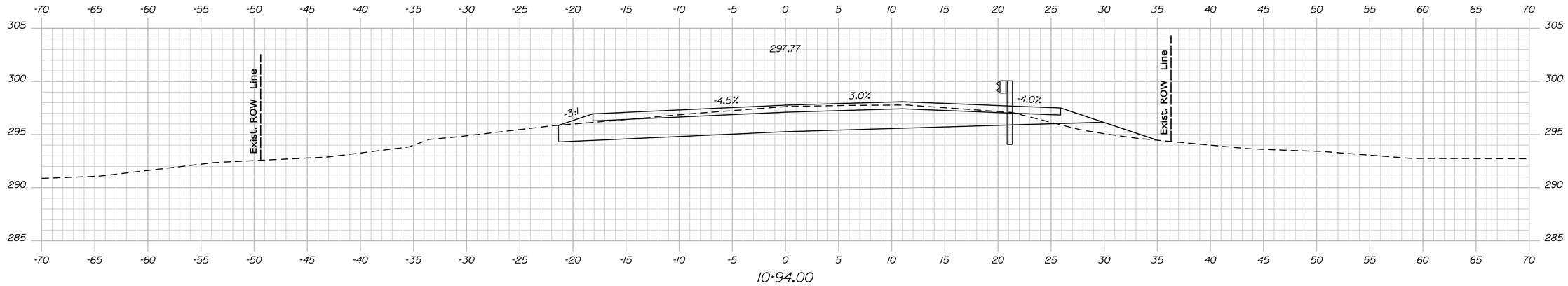
SHEET NUMBER

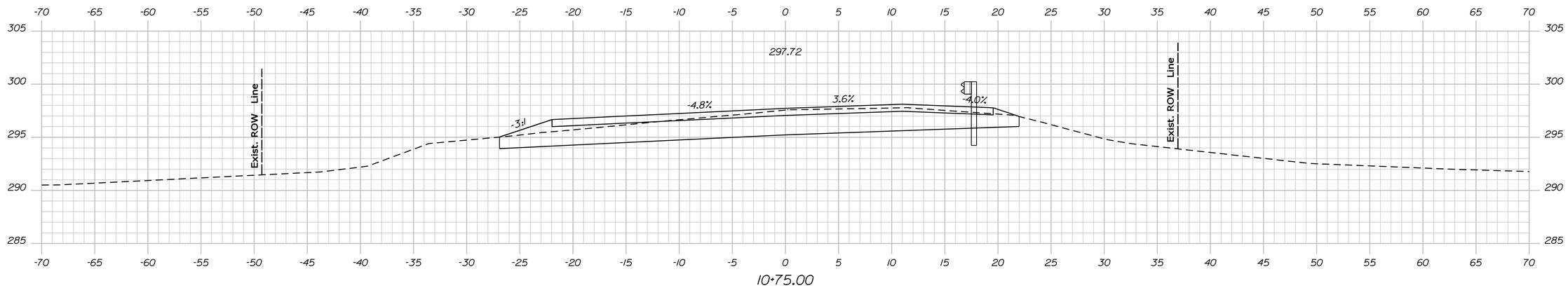
13

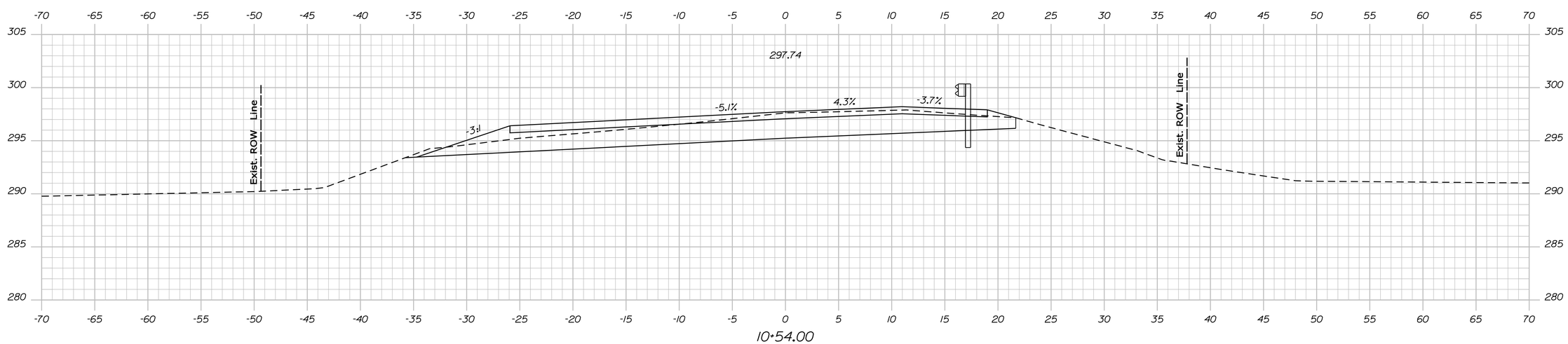
OF 22

Filename: ...\013_xsect_MainLine_10+00_009.dgn Division: BRIDGE Username: dovid.show Date:4/21/2010

Sta. 10+00.00 to Sta. 10+50.00







STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY		DATE
DESIGN-DETAILED	M. WIGHT	Team North		DEC 2009
CHECKED-REVIEWED				
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

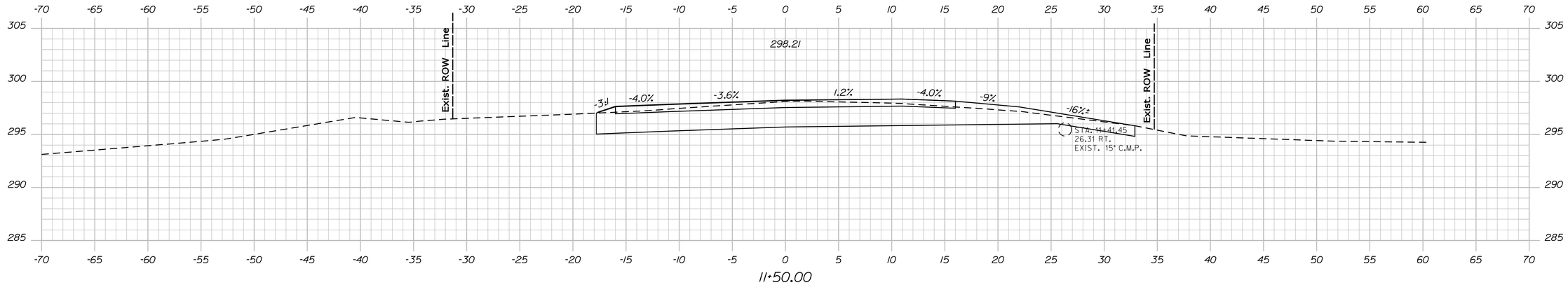
SHEET NUMBER

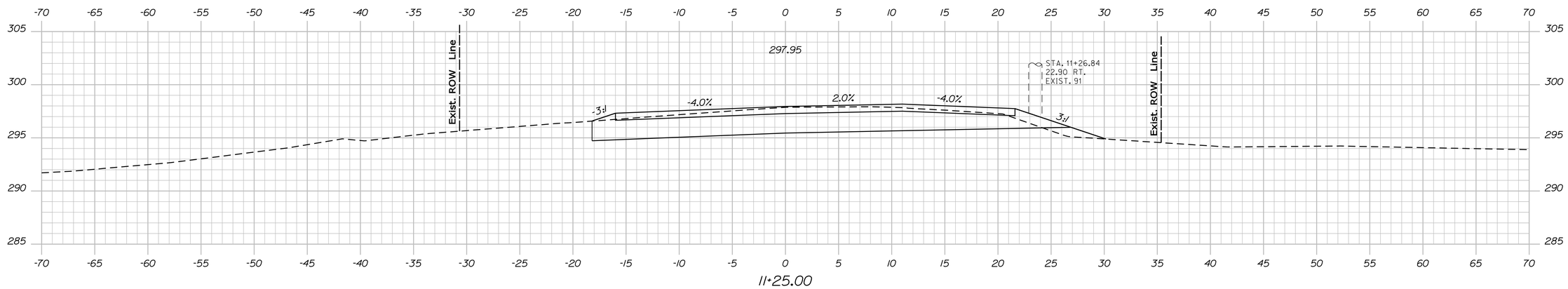
14

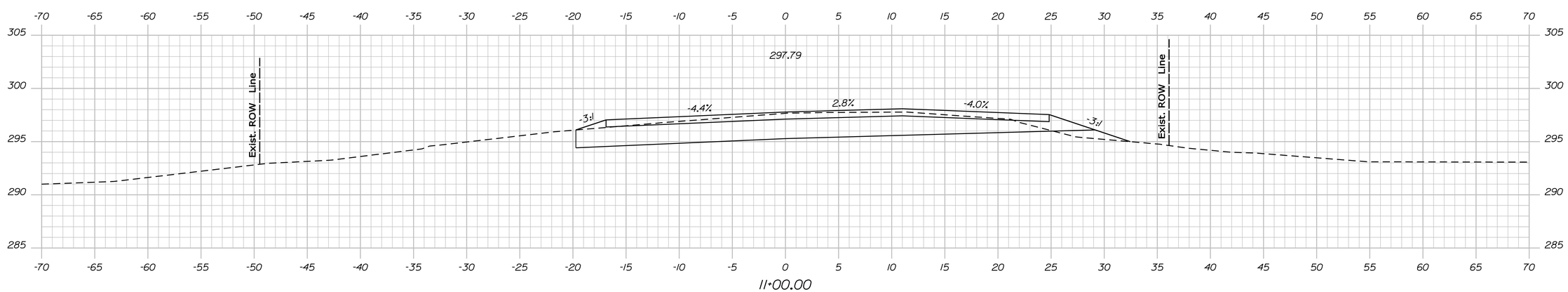
OF 22

Sta. 10+54.00 to Sta. 10+94.00

Filename: ...\014_xsect_MainLine_10+54_010.dgn Division: BRIDGE Username: dovid.show Date:4/21/2010







STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

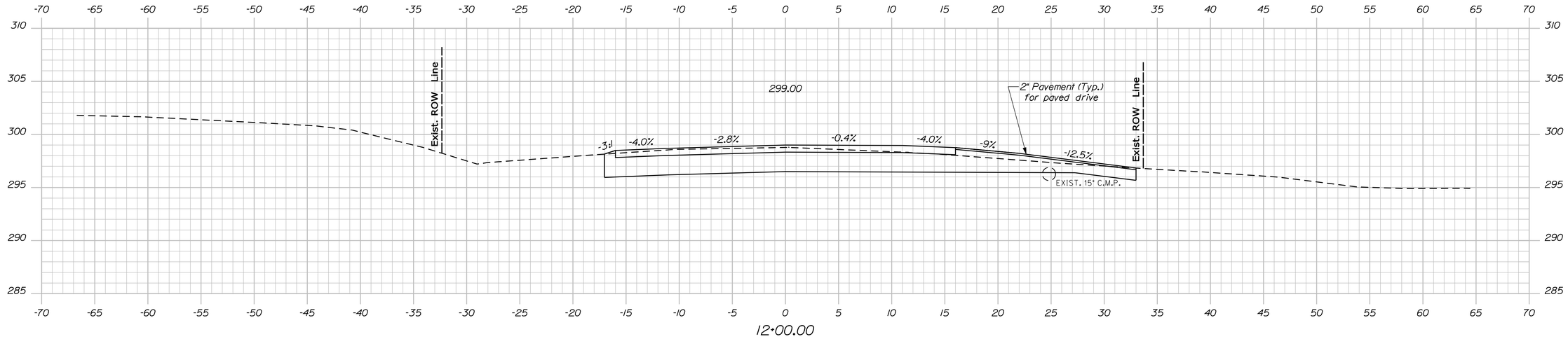
SHEET NUMBER

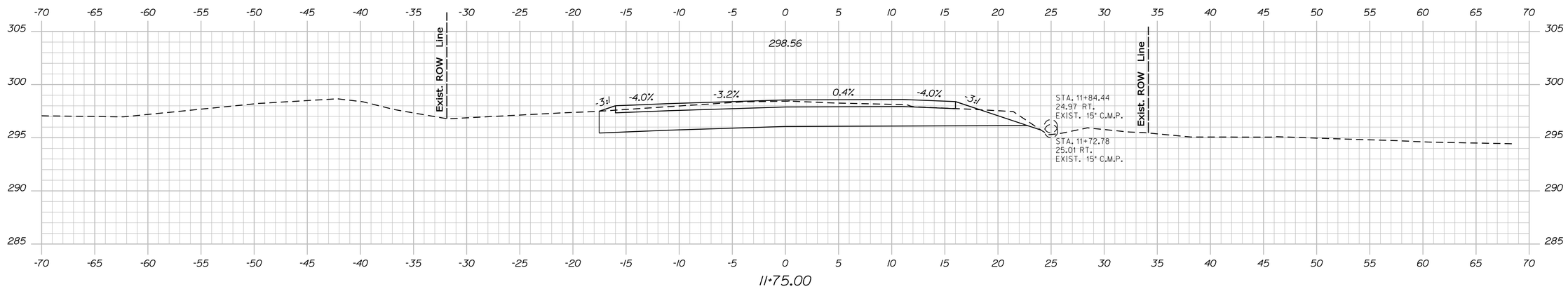
15

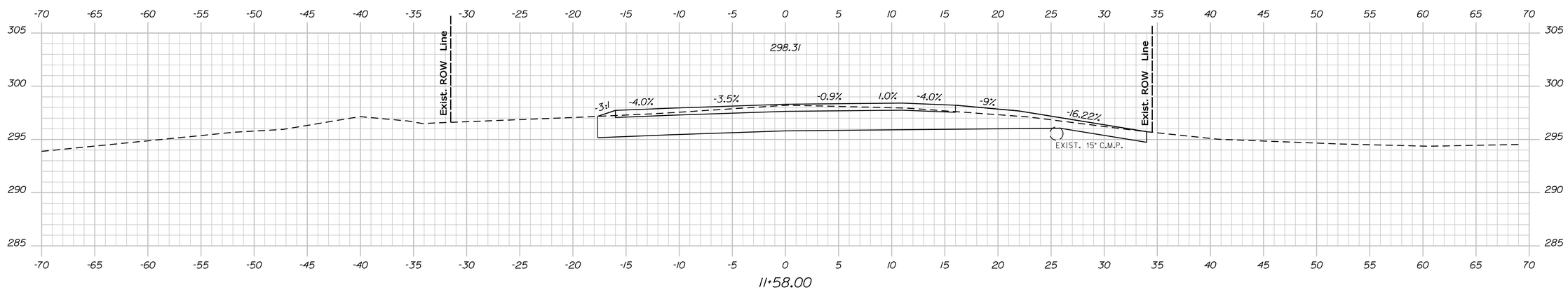
OF 22

Sta. 11+00.00 to Sta. 11+50.00

Filename: ...\015_xsect_MainLine_11+00_011.dgn Division: BRIDGE Username: dovid.show Date:4/21/2010







STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	S. BOGGE	
DESIGN-DETAILED	M. WIGHT	Team North DEC 2009
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

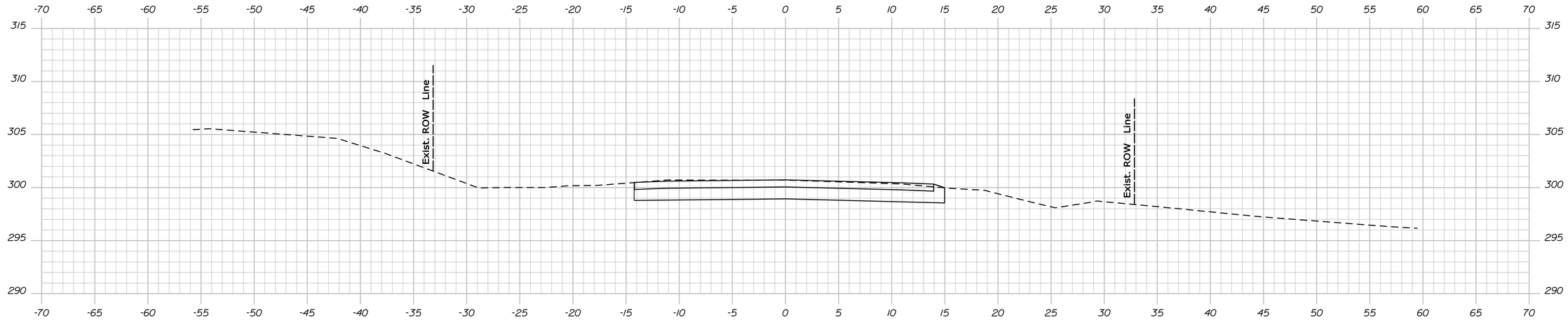
SHEET NUMBER

16

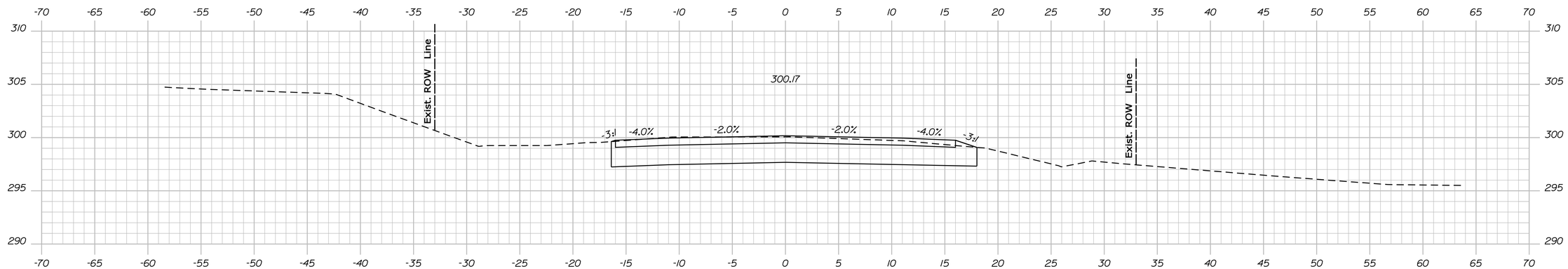
OF 22

Filename: ...\016_xsect_MainLine_11+58_012.dgn Division: BRIDGE Username: dovid.show Date:4/21/2010

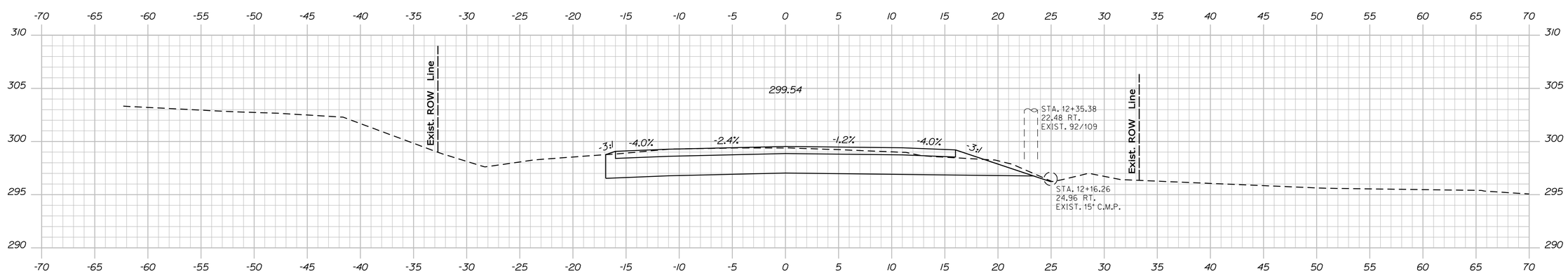
Sta. 11+58.00 to Sta. 12+00.00



12+69.34
Transitioning



12+50.00
End Project / Begin Transition



12+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BRIDGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

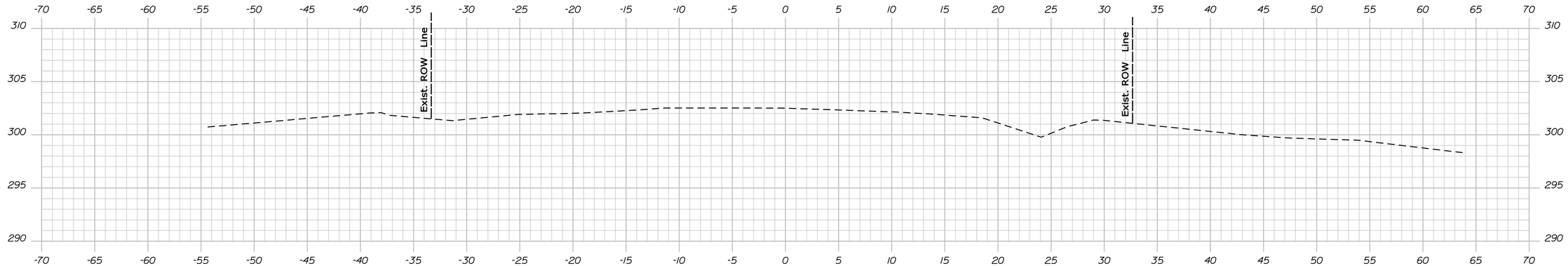
MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

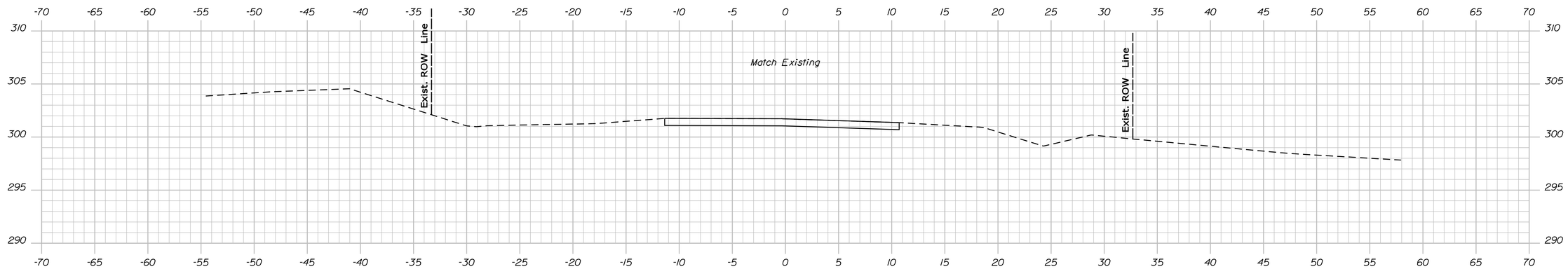
SHEET NUMBER
17
OF 22

Sta. 12+25.00 to Sta. 12+69.34

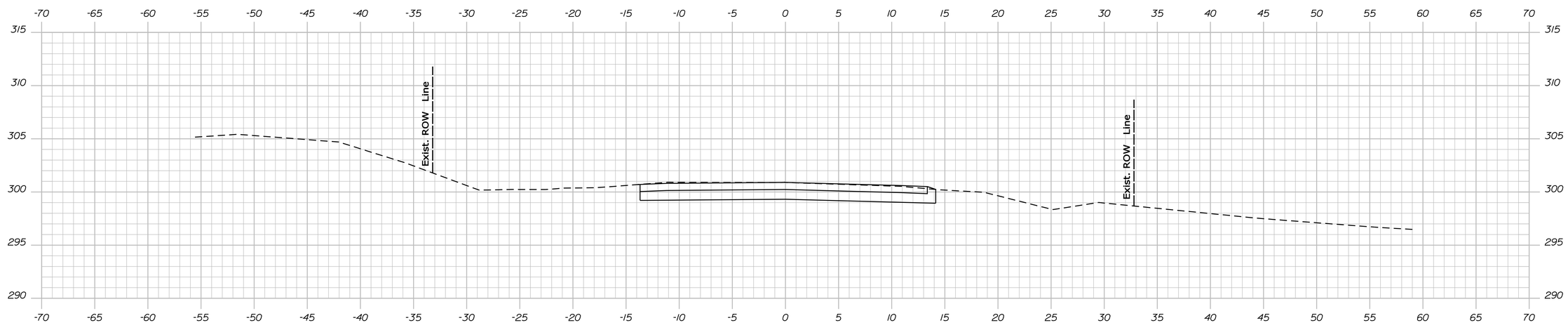
Filename: ...\017_xsect_MainLine_12+25_013.dgn Division: BRIDGE Username: david.show Date:4/21/2010



13+25.00



13+00.00
End Transition



12+75.00
Transitioning

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	S. BOOGE	
DESIGN-DETAILED	M. WIGHT	Team North DEC 2009
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

CROSS SECTIONS

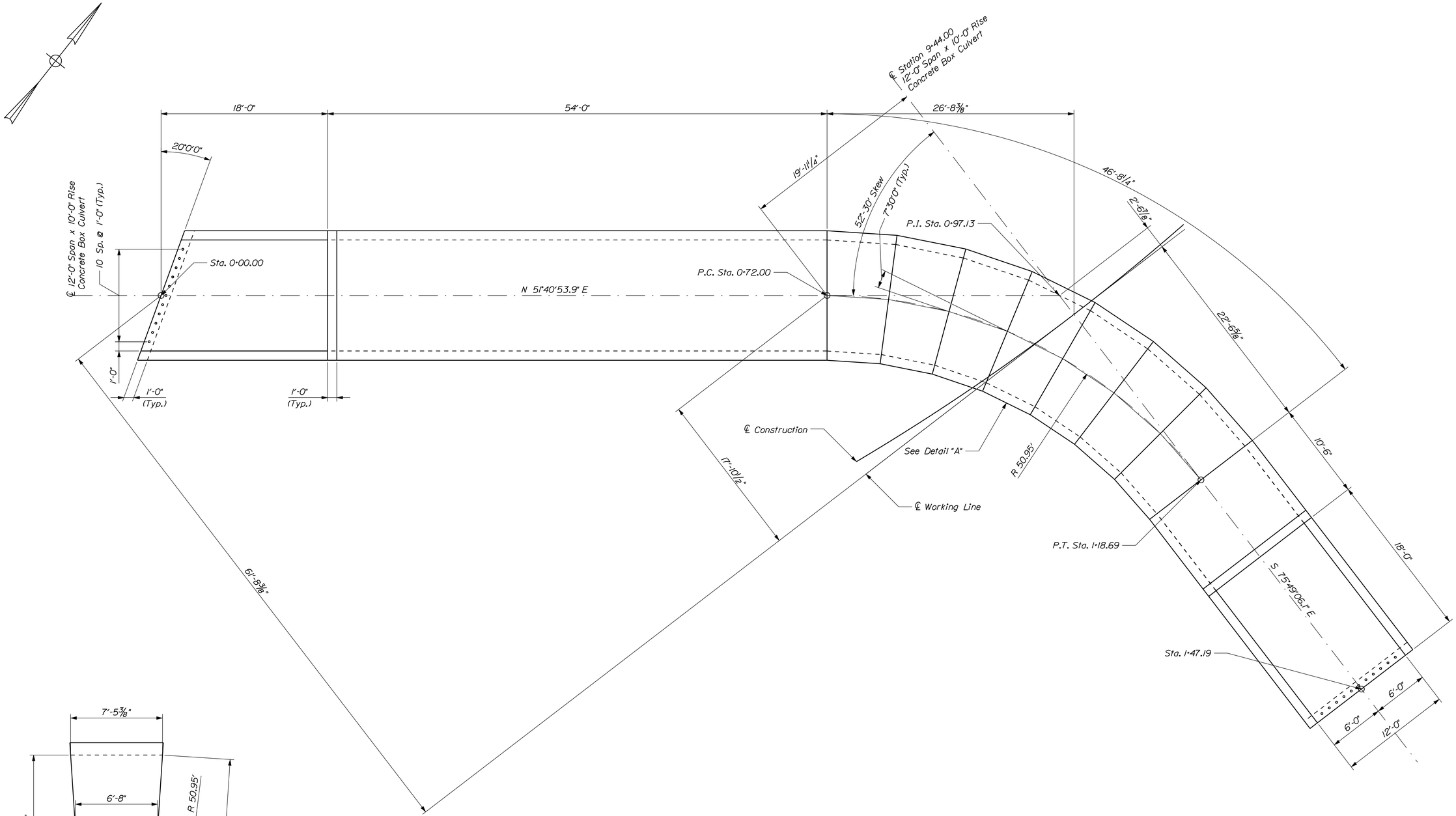
SHEET NUMBER

18

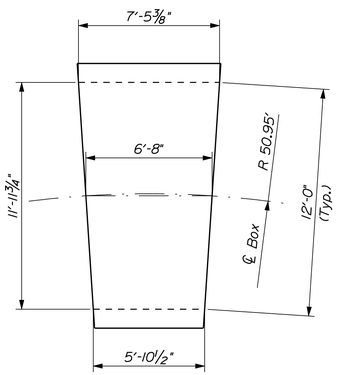
OF 22

Sta. 12+75.00 to Sta. 13+25.00

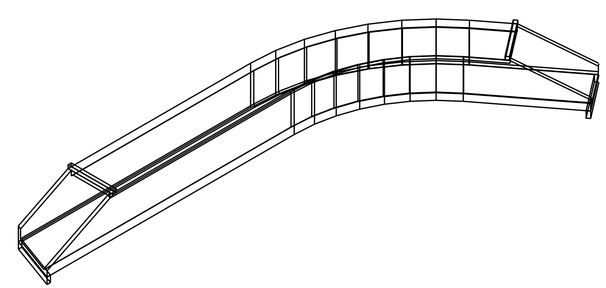
Filename: ...\018_xsect_MainLine_12+75_014.dgn Division: BRIDGE Username: david.show Date:4/21/2010



PRECAST CONCRETE BOX CULVERT PLAN



DETAIL "A"
(7 Wedge Shapes Needed)



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

PRECST CONCRETE BOX PLAN

SHEET NUMBER

19

OF 22

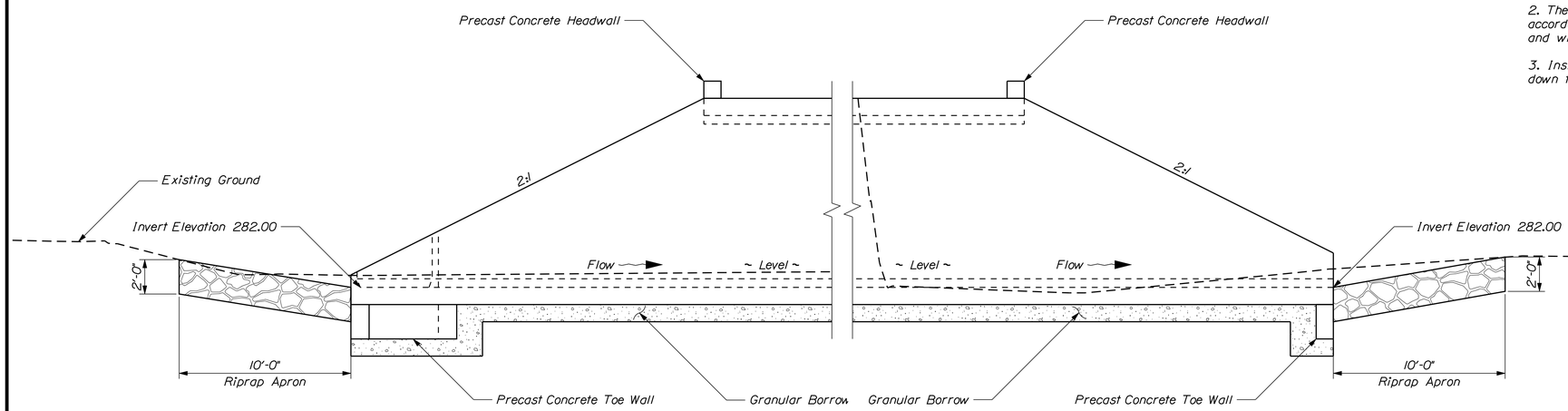
Filename: ...\MSTA\019_Precast_Box.dgn Division: BRIDGE Username: david.show Date:4/21/2010

PRECAST CONCRETE ARCHES OR BOXES NOTES

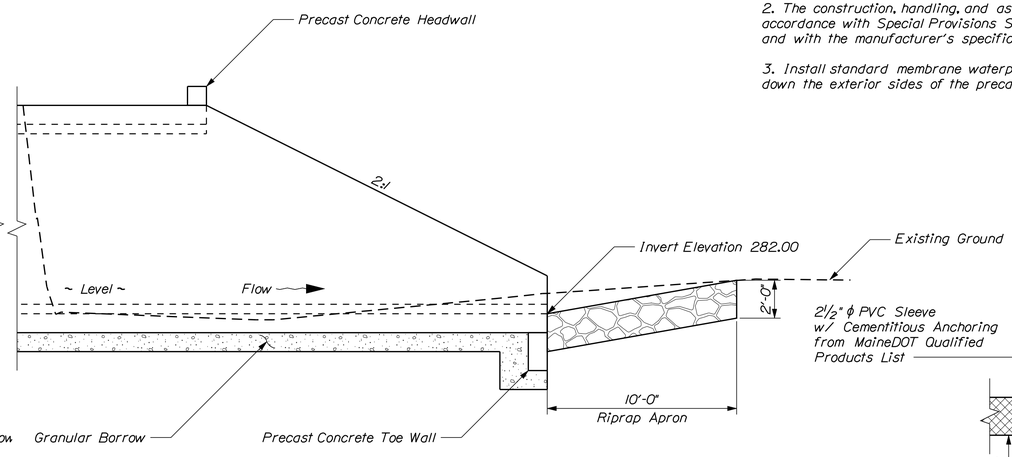
1. The precast units shall be designed to carry construction loadings with a minimum fill cover of 18 inches over the top of the units.

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.

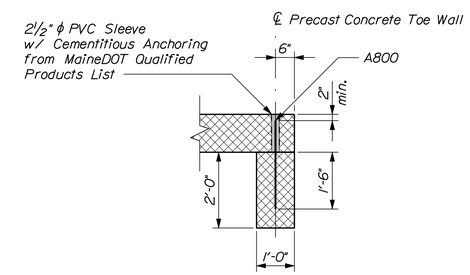
3. Install standard membrane waterproofing over the top and to 12 inches down the exterior sides of the precast units.



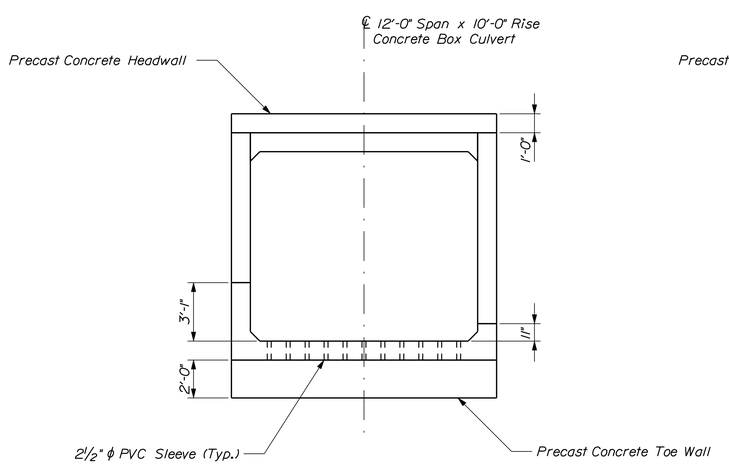
UPSTREAM ELEVATION



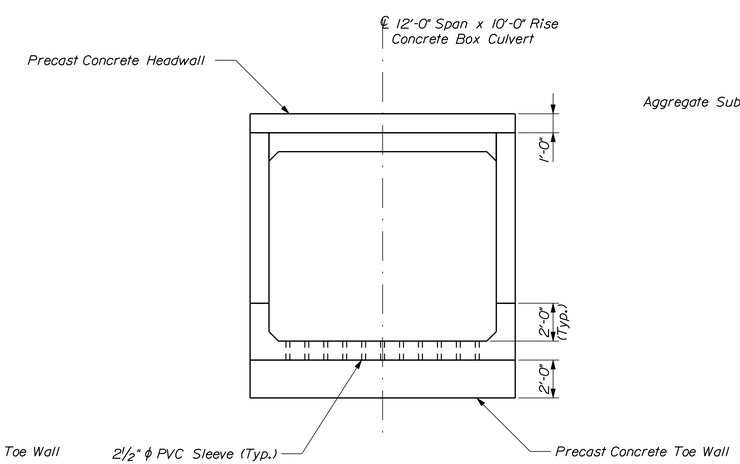
DOWNSTREAM ELEVATION



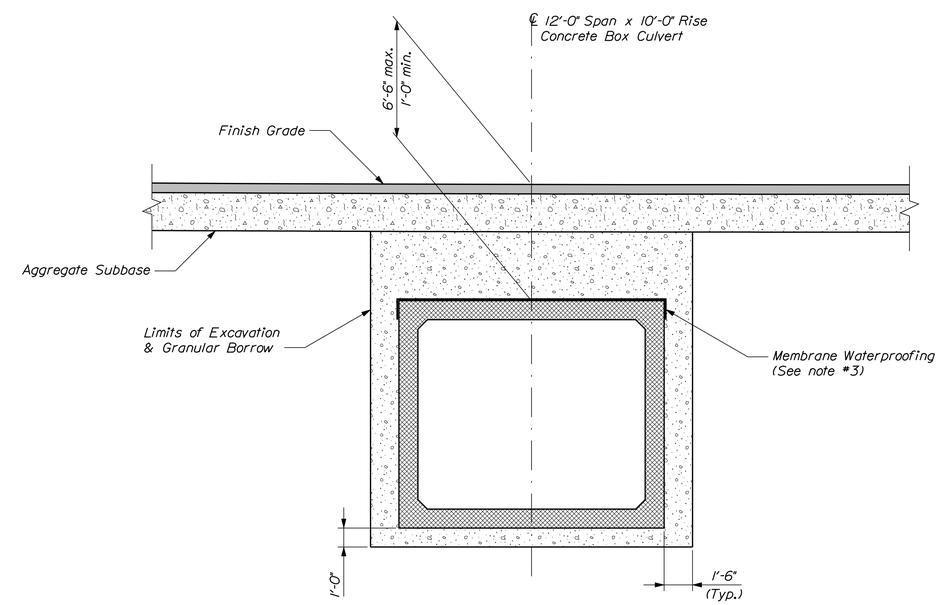
PRECAST CONCRETE TOE WALL DETAIL



UPSTREAM END VIEW



DOWNSTREAM END VIEW



TYPICAL SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

PRECAST CONCRETE BOX DETAILS

SHEET NUMBER

20

OF 22

Filename: ...\020_Precast_Box_Details.dgn Division: BRIDGE Username: david.shaw Date:4/21/2010

1	DETOUR SOUTH 201A
2	DETOUR SOUTH 201A
3	DETOUR NORTH 201A
4	DETOUR 201A
5	DETOUR SOUTH 201A
6	ROAD CLOSED TYPE III BARRICADES
7	ROAD CLOSED 500 FT
8	ROAD CLOSED 1000 FT
9	ROAD CLOSED 1/2 MILE AHEAD
10	ROAD CLOSED 1 MILE AHEAD
11	END DETOUR SOUTH 201A
12	ROAD CLOSED X.X MILES AHEAD LOCAL TRAFFIC ONLY TYPE III BARRICADE
13	DETOUR AHEAD
14	END DETOUR NORTH 201A

15	DETOUR SOUTH 201A
16	DETOUR NORTH 201A
17	DETOUR NORTH 201A
18	DETOUR NORTH 201A
19	ROAD CLOSED 2 MILES AHEAD
20	ROAD CLOSED 4.5 MILES AHEAD LOCAL TRAFFIC ONLY DETOUR
21	NORTH 201A ROAD CLOSED XX MILES AHEAD
22	DETOUR NORTH 201A
23	ROAD CLOSED X.X MILES AHEAD LOCAL TRAFFIC ONLY DETOUR TYPE III BARRICADE
24	DETOUR NORTH 201A
25	SOUTH 201A ROAD CLOSED XX MILES AHEAD
26	DETOUR NORTH 201A

Note: Cover all conflicting route and directional signs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

16699.00

PIN 16699.00

BRIDGE NO. 2579

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	M. WIGHT	Team North	DEC 2009
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MOORE BRIDGE
JACKIN BROOK
EMBDEN SOMERSET COUNTY

TRAFFIC CONTROL PLAN

SHEET NUMBER

21

OF 22

Filename: ...\021_Traffic_Control_Plan.dgn Division: BRIDGE Username: david.show Date:4/21/2010

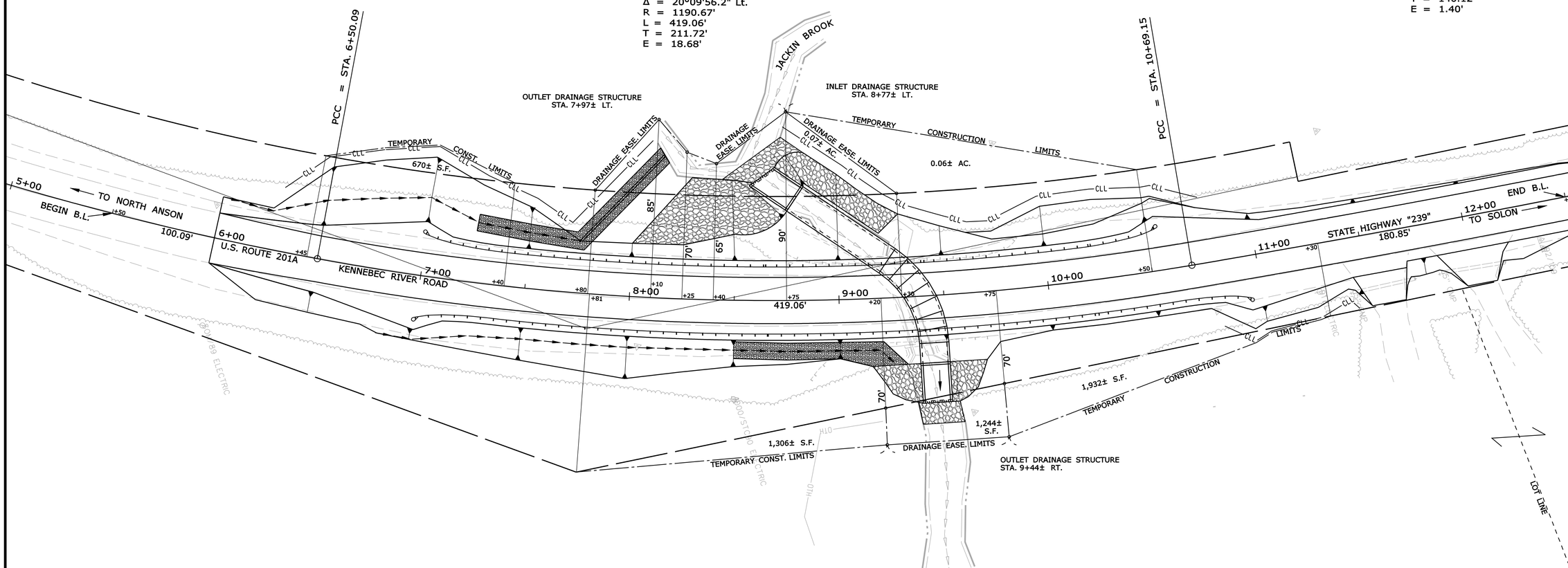
SEE SURVEY PLAN
PREPARED FOR ROBERT G. BUTLER
BY SLF, INC., JULY 1976

CURVE DATA
PI = 5+48.24
D = 3°57'05.2"
Δ = 8°03'42.6" Lt.
R = 1450.00'
L = 204.02'
T = 102.18'
E = 3.60'

ROGER L. CHAMPION
LORRAINE I. CHAMPION
ITEM NO. (1)
DRAINAGE EASE. = 0.07± AC. (2)
TEMP. CONST. RIGHTS = 0.08± AC. (2)
TOTAL AREA = 82± AC. (PER SURVEY PLAN)

CURVE DATA
PI = 8+61.81
D = 4°48'43.5"
Δ = 20°09'56.2" Lt.
R = 1190.67'
L = 419.06'
T = 211.72'
E = 18.68'

CURVE DATA
PI = 12+09.27
D = 0°49'06.6"
Δ = 2°17'36.3" Lt.
R = 7000.00'
L = 280.19'
T = 140.12'
E = 1.40'



JEFFREY L. MORIN
ITEM NO. (2)
DRAINAGE EASE. = 1,244± S.F. (1)
TEMP. CONST. RIGHTS = 0.07± AC. (2)
TOTAL AREA = 32± AC. (PER TOWN)

EXISTING RIGHT-OF-WAY REFERENCES:

SOMERSET COUNTY
VOL. 4, PAGE 311
1852, 4 RODS WIDE

SEE ALSO:
SOMERSET COUNTY R.O.D.
WARRANTY DEED TO STATE OF MAINE
BOOK 560, PAGE 506

D.O.T. FILE NO. 13-362A

BRIDGE NO. 2579 — MOORE BRIDGE OVER JACKIN BROOK — PIN 16699.00

SYMBOLS
WELL — GROUNDING UNIT LINE — CONSTRUCTION LIMIT LINE — PROPERTY LINE — LIMITS OF "MRO" RIGHT PORTION (L.O.W.P.) — EXISTING RIGHT OF WAY — NEW RIGHT OF WAY — NEW ROW WITHIN EXIST. ROW — CONTROL OF ACCESS
IP or IPF (IRON PIPE or PIN FOUND) — S.T. (SEPTIC TANK) — (ROW MONUMENT) — BM (TRAVERSE POINT)
WATER LINE — GAS LINE — ELECTRIC LINE — TELEPHONE LINE — SEWER LINE

ITEM	TECH	CHECKED
BASE MAP		
EXIST. R/W	PNS	
PROP. LINES	PNS	
AREAS	PNS	

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

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK		PAGE	COUNTY RECORD			
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
		COND.	4/5/10	4256	28

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

STATE HIGHWAY "239"
U.S. ROUTE 201A KENNEBEC RIVER ROAD
EMBDEN SOMERSET COUNTY
STATE PROJECT NO. 16699.00

DECEMBER 2009 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 13-362
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
22
OF 22

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: dovid.show Date:4/21/2010