

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Seventh Edition 2014 with 2016 Interim Revisions.

DESIGN LOADING

Live Load HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2018) AADT	140
Future (2038) AADT	170
DHV - % of AADT	16
Design Hour Volume	27
Heavy Trucks (% of AADT)	27
Heavy Trucks (% of DHV)	27
Directional Distribution (% of DHV)	50
18 kip Equivalent P 2.0	39
18 kip Equivalent P 2.5	37
Posted Speed Limit (mph)	45

HYDROLOGIC DATA

Drainage Area	493 sq mi
Design Discharge (Q1.1)	4,438 cfs
Design Discharge (Q25)	13,978 cfs
Design Discharge (Q50)	15,785 cfs
Check Discharge (Q100)	17,628 cfs
Headwater Elevation (Q1.1)	627.8 ft
Headwater Elevation (Q25)	631.1 ft
Headwater Elevation (Q50)	631.9 ft
Headwater Elevation (Q100)	632.6 ft
Discharge Velocity (Q1.1)	9.9 fps
Discharge Velocity (Q25)	16.7 cfs
Discharge Velocity (Q50)	17.4fps
Discharge Velocity (Q100)	18.1fps

MATERIALS

Concrete:

Structural Wearing Surface	Class "LP"
Barriers, Curbs, Sidewalks & Transition Barriers	Class "LP"
All Other	Class "A"

Reinforcing Steel ASTM A 615/A 615M, Grade 60

BASIC DESIGN STRESSES

Concrete	f 'c = 4,000 psi
Reinforcing Steel	fy = 60,000 psi

LIST OF DRAWINGS

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TWP06 R08 PENOBSCOT COUNTY E. BR. PENOBSCOT RIVER BRIDGE OVER E. BRANCH PENOBSCOT RIVER GRAND LAKE ROAD PROJECT LENGTH 0.04 mi. BRIDGE NO. 6042

UTILITIES

NONE

MAINTENANCE OF TRAFFIC

Maintain one 11'-0" wide lane of alternating two - way traffic using flagger.

<u>PROJECT LOCATION</u>	JUST SOUTH OF MATAGAMON LAKE OUTLET Lat./Long. 46°08'02" N 68°47'38" W
<u>PROGRAM AREA</u>	BRIDGE PROGRAM
<u>OUTLINE OF WORK</u>	Replace Wearing Surface, Replace Seal in Expansion Joint Unit over Pier, Rehabilitate Both Abutments and Pier, Grout Bag Scour Repair, Replace Guard Rail Ends.

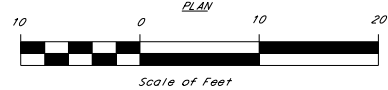
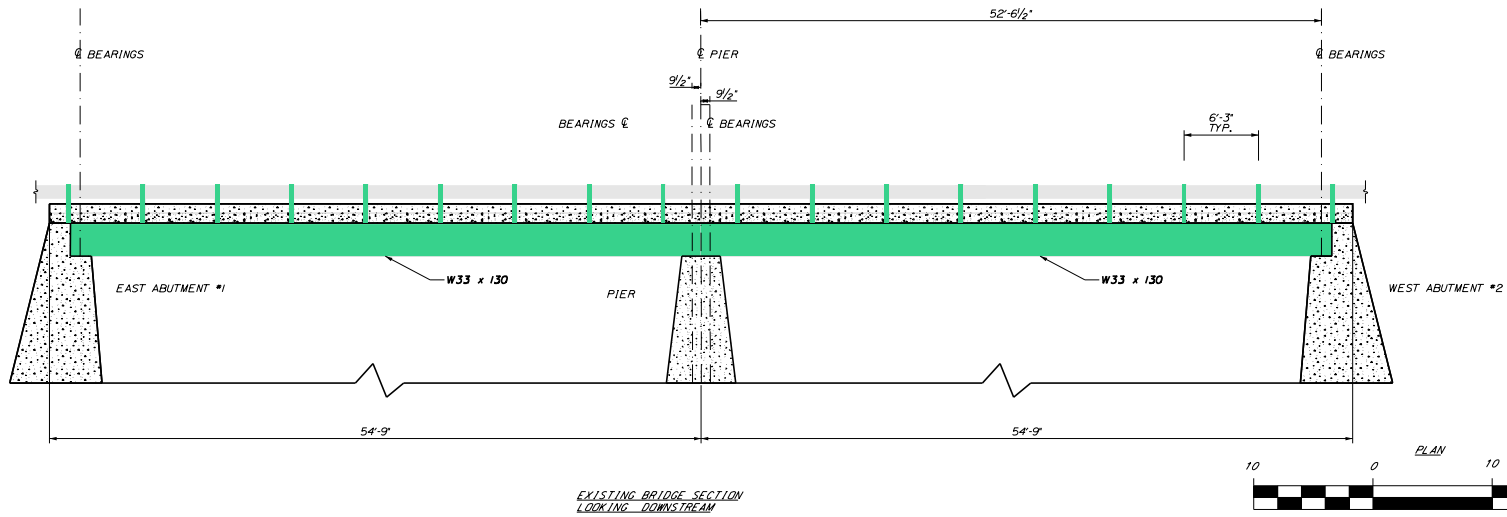
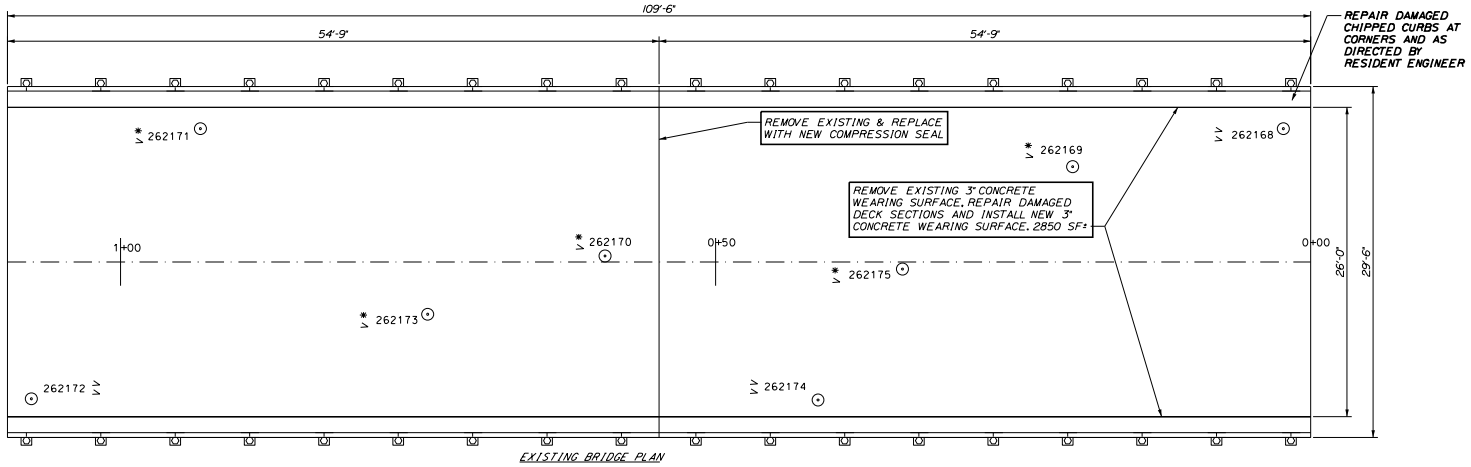
Filename: \\00\BRIDGE\WSTA\001_Title.dgn Division: BRIDGE Username: James.L.Leavitt Date: 5/9/2017

WIN 21755.00

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED _____ COMMISSIONER: CHIEF ENGINEER:	DATE _____
PROJECT INFORMATION PROGRAM: W. FRANKHAUSER PROJECT MANAGER: M. BOONE DESIGNER: M. GRAY CONSULTANT: PROJECT RESIDENT CONTRACTOR: PROJECT COMPLETION DATE:	SIGNATURE _____ P. E. NUMBER _____ DATE _____	
TWP06 R08 E. BRANCH, PENOBSCOT RIVER, BRIDGE	TITLE SHEET	
SHEET NUMBER 001 OF 8		

LEGEND: DECK CORE LOCATIONS

- * CONTAMINATED TOP MAT STEEL
- ∨ GOOD CHLORIDE LEVELS
- GOOD STRENGTH LEVELS (BOTTOM CHECK)
- CORE SAMPLE LOCATION



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
21755
WIN 21755
BRIDGE PLANS

PROJECT MANAGER	M. BOOTH	BY	DATE
DESIGNER/REVIEWED	M. GRAY	SIGNATURE	
CHECKER/REVIEWED		P.E. NUMBER	
DESIGNER/DATE		DATE	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
OTHER COMMENTS			

EAST BRANCH PENOBSCOT RIVER BRIDGE
Grand Lake Road
Penobscot County
TW06 R08

DECK PLAN

SHEET NUMBER

004

OF 8



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262168** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Station: **0 + 2.3'** Offset, ft: **11.2, R**

Contractor: Resident: Dbfg, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
3.25-3.75	1.13
7.25-7.75	0.34

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	3.75" - 7.25"	7700.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. Core #1, bridge #6042 TWP6-R8.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262169** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Station: **0 + 20** Offset, ft: **8, RT**

Contractor: Resident: Dbfg, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
3.25-3.75	2.37
7.5-8.0	0.36

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	3.75" - 7.5"	8320.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. TWP 6 - R 8, Bridge # 6042, Bridge Core #2.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262170** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Contractor: Resident: Station: **0 + 59.3** Offset, ft: **0.5, RT**
Dbfg, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
3.0-3.5	2.81
4.0-4.5	2.06
7.75-8.25	0.38

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	4.5" - 7.75"	5970.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. TWP 6 - R 8, Bridge # 6042, Bridge Core #3. Wear surface of core has cracks running parallel to the bridge deck.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**

Paper Copy: Structure File Electronic: Customer —



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262171** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Station: **0 + 93.3** Offset, ft: **11.2, R**

Contractor: Resident: Dbfg, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
3.5-4.0	1.5
7.75-8.0	0.35

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	4.0" - 7.75"	7070.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. TWP 6 - R 8, Bridge # 6042, Bridge Core #4.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**

Paper Copy: Structure File Electronic: Customer —



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262172** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Station: **1 + 7.5** Offset, ft: **11.5, L**

Contractor: Resident: Dbf, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
2.75-3.25	1.9
4.25-4.75	1.33
8.0-8.5	0.6

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	4.75" - 8.0"	6370.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. TWP 6 - R 8, Bridge # 6042, Bridge Core #5.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262173** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Station: **0 + 74.2** Offset, ft: **4.4, LT**

Contractor: Resident: Dbf, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
3.25-3.75	2.16
8.25-8.75	0.35

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	3.75" - 8.25"	6200.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. TWP 6 - R 8, Bridge # 6042, Bridge Core #6.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262174** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Station: **0 + 41.4** Offset, ft: **11.6, L**

Contractor: Resident: Dbfg, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
3.0-3.5	2.12
4.25-4.75	1.16
8.25-8.75	0.36

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	4.75" - 8.25"	7750.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. TWP 6 - R 8, Bridge # 6042, Bridge Core #7.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**

Paper Copy: Structure File Electronic: Customer —



BRIDGE CORE TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **262175** Boring No./Sample No. Sample Description **BRIDGE CORE** Sampled **10/25/2016** Received **10/25/2016**

Sample Type: **OTHER** Sampler: **LAMONT DUTRA** Sample Location: **ROADWAY**

WIN/Town - Station: **0 + 34.3** Offset, ft: **.6, LT**

Contractor: Resident: Dbf, ft:

TEST RESULTS

Shear Bond (MeDOT)

	Location, inch	Strength, psi
Specimen 1		
Specimen 2		

Chloride Content (T 260)

Location, inch	Chloride Level, lb/yd ³
2.75-3.0	3.51
4.0-4.5	1.57
5.0-5.5	0.92
8.5-9.0	0.37

Compressive Strength (T 22)

	Location, inch	Strength, psi
Specimen 1	5.5" - 8.5"	7830.00
Specimen 2		
Specimen 3		

Rebar Corrosion (MeDOT)

	Location, inch	Corrosion Level
Specimen 1		
Specimen 2		
Specimen 3		
Specimen 4		

Comments:

Final report. TWP 6 - R 8, Bridge # 6042, Bridge Core #8. Wear surface of core has cracks running parallel to the bridge deck.

AUTHORIZATION AND DISTRIBUTION

Reported by: **ROBERT HARADON**

Date Reported: **12/14/2016**