STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MACWAHOC PLANTATION
AROOSTOOK COUNTY
JORDAN MILL BRIDGE
OVER
MACWAHOC STREAM
ROUTE 2A
PROJECT NO. 019321.00
BRIDGE NO. 3097

TRAFFIC DATA

Current (2012) AADT	740
Future (2032) AADT	890
DHV - % of AADT	11
Design Hour Volume	98
Heavy Trucks (% of AADT)	29
Heavy Trucks (% of DHV)	29
Directional Distribution (% of DHV)	61
18 kip Equivalent P 2.0	326
18 kip Equivalent P 2.5	310
Posted Speed (mph)	40

HYDROLOGIC DATA

Drainage Area	57 sq mi
Design Discharge (Q50)	1650 cfs
Check Discharge (Q100)	1850 cfs

MATERIALS

Concrete:	
Fill	"Fill"
All Other	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60

BASIC DESIGN STRESSES

Concrete	f 'c = 4,350 psi
Reinforcing Steel	f y = 60,000 psi

LIST OF DRAWINGS

Title Sheet 1
Estimated Quantities and General Construction Notes 2
General Plan 3
Rehabilitation Locations 4
Rehabilitation Details 5
Cross Sections 6
Right of Way Map 7

UTILITIES

Eastern Maine Electric Cooperative
Fairpoint Communications

MAINTENANCE OF TRAFFIC

Closed shoulder & reduced roadway width

PROJECT LOCATION:	Located on Route 2A over the Macwahoc Stream; 0.54 of a mile Northeast of Route 2. Latitude 45°- 38' - 21.5"N, Longitude 68°- 15' - 10.5"W
PROGRAM AREA:	Bridge
OUTLINE OF WORK:	Bridge Rehabilitation: Downstream wingwalls and concrete tee beam repairs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED	DATE
COMMISSIONER:	1/6/15
CHIEF ENGINEER:	1-6-15

STATE OF MAINE
Richard E. Myers
12670
LICENSED PROFESSIONAL ENGINEER

SIGNATURE	12670
P.E. NUMBER	12670
DATE	12-17-14

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	S. BODGE
DESIGNER	R. MYERS
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

WIN 19321.00

019321.00

MACWAHOC PLANTATION
JORDAN MILL BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 7

Filename:\00\bridge\mnsto\001_Title.dgn Division: BRIDGE Username: David.Shaw Date:12/17/2014

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.25	GRANULAR BORROW	7	CY
206.061	STRUCT. EARTH EXC. - DRAINAGE AND MNR STRUCT., BELOW GRADE	7	CY
403.208	HOT MIX ASPHALT, 12.5 MM HMA NOMINAL MAXIMUM SIZE	8	T
409.15	BITUMINOUS TACK COAT, APPLIED	1	GAL
502.75	PLUGGING EXISTING BRIDGE DRAINS	2	EA
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	2300	LB
503.13	REINFORCING STEEL, PLACING	2300	LB
511.07	COFFERDAM: SOUTHEAST WINGWALL	1	LS
511.07	COFFERDAM: SOUTHWEST WINGWALL	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	1	EA
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (50 SY)	1	LS
518.51	REPAIR OF UPWARD FACING SURFACES - BELOW REINF STEEL < 8 IN	5	SF
518.60	REPAIR OF VERTICAL SURFACES < 8 IN.	850	SF
518.61	REPAIR OF VERTICAL SURFACES > 8 IN.	6	CY
518.70	REPAIR OF OVERHEAD SURFACES <8 INCHES	5	SF
526.301	TEMPORARY CONCRETE BARRIER TYPE I (360 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	2	UN
603.159	12 INCH CULVERT PIPE OPTION III	30	LF
604.249	CATCH BASIN TYPE F6-C	2	EA
606.366	GUARDRAIL, REMOVE & RESET TYPE 3C	212.5	LF
609.31	CURB TYPE 3	210	LF
610.08	PLAIN RIPRAP	20	CY
610.18	STONE DITCH PROTECTION	12	CY
613.319	EROSION CONTROL BLANKET	30	SY
615.07	LOAM	7	CY
618.141	SEEDING METHOD NUMBER 3	1	UN
619.1201	MULCH	1	UN
619.1401	EROSION CONTROL MIX	13	CY
629.05	HAND LABOR, STRAIGHT TIME	50	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	8	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	8	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	8	HR
631.171	TRUCK - SMALL (INCLUDING OPERATOR)	8	HR
639.19	FIELD OFFICE TYPE B	1	EA
652.33	DRUM	10	EA
652.34	CONE	40	EA
652.35	CONSTRUCTION SIGNS	200	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (35 CD)	1	LS
652.38	FLAGGER	50	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. All utility facilities shall be adjusted by the respective utilities unless otherwise noted. No utility work is anticipated.

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. 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.

5. Upon completion of wingwall repairs, place plain riprap behind wingwalls to match into the existing stone protection.

6. Place a 24 inch wide strip of Temporary Erosion Control Blanket behind the riprap at the Southeast and Southwest wingwalls and at the top of any reconstructed sideslopes used for access.

7. Place loam 2 inches deep on all reconstructed sideslopes or as directed by the Resident.

8. 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 Specification Section 619, Mulch. Payment will be made under Item No. 619.1401, Erosion Control Mix.

9. Protective Coating for Concrete Surfaces shall be applied to the following areas:

   Fascia of Exterior Girder

10. When installing curb, remove guardrail beam and offset blocks. Guardrail posts shall remain in place. Payment for removing and reinstalling guardrail will be paid for under Item No. 606.366, Guardrail, Removed and Reset, Type 3c.

11. Project information referred to below may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/contractors/.

12. The existing 1933 bridge plans and 1959 bridge rehabilitation 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.

13. 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.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

019321.00

BRIDGE NO. 3097

WIN 19321.00

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	S. BODGE		
DESIGN-DETAILED	R. MYERS	D. SHAW	JAN 2015
CHECKED-REVIEWED	M. POULIN		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

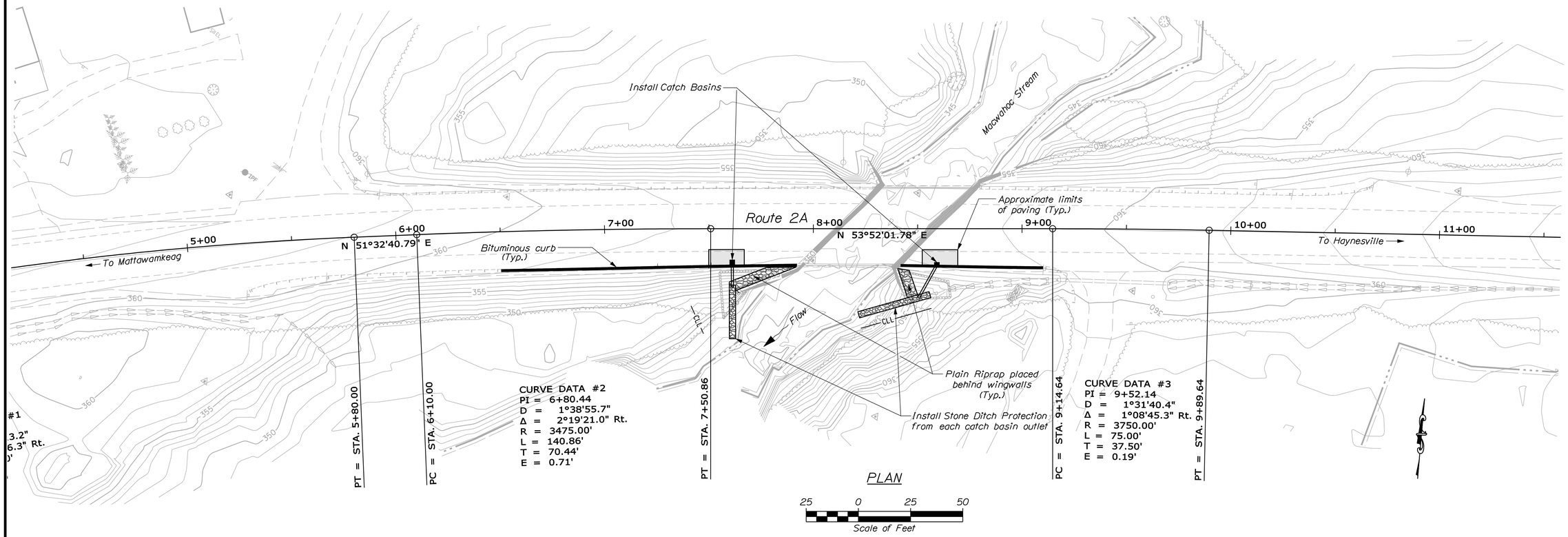
DATE

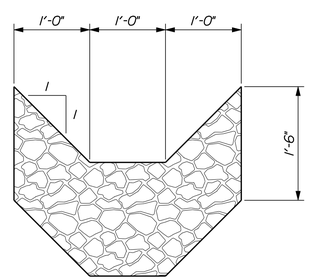
JORDAN MILL BRIDGE
MACWAHOC STREAM
MACWAHOC PLANTATION AROOSTOOK COUNTY

ESTIMATED QUANTITIES

SHEET NUMBER
2
OF 7

Filename: ...\MSTA\002_Estimate_&_GCN.dgn Division: BRIDGE Username: David.Shaw Date:12/18/2014





TYPICAL STONE DITCH PROTECTION SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

019321.00

WIN 19321.00

BRIDGE NO. 3097

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

		BY	DATE
PROJ. MANAGER	S. BOOGE		
DESIGN-DETAILED	R. MYERS	D. SHAW	D. SHAW
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

JORDAN MILL BRIDGE
MACWAHOC STREAM
MACWAHOC PLANTATION AROOSTOOK COUNTY

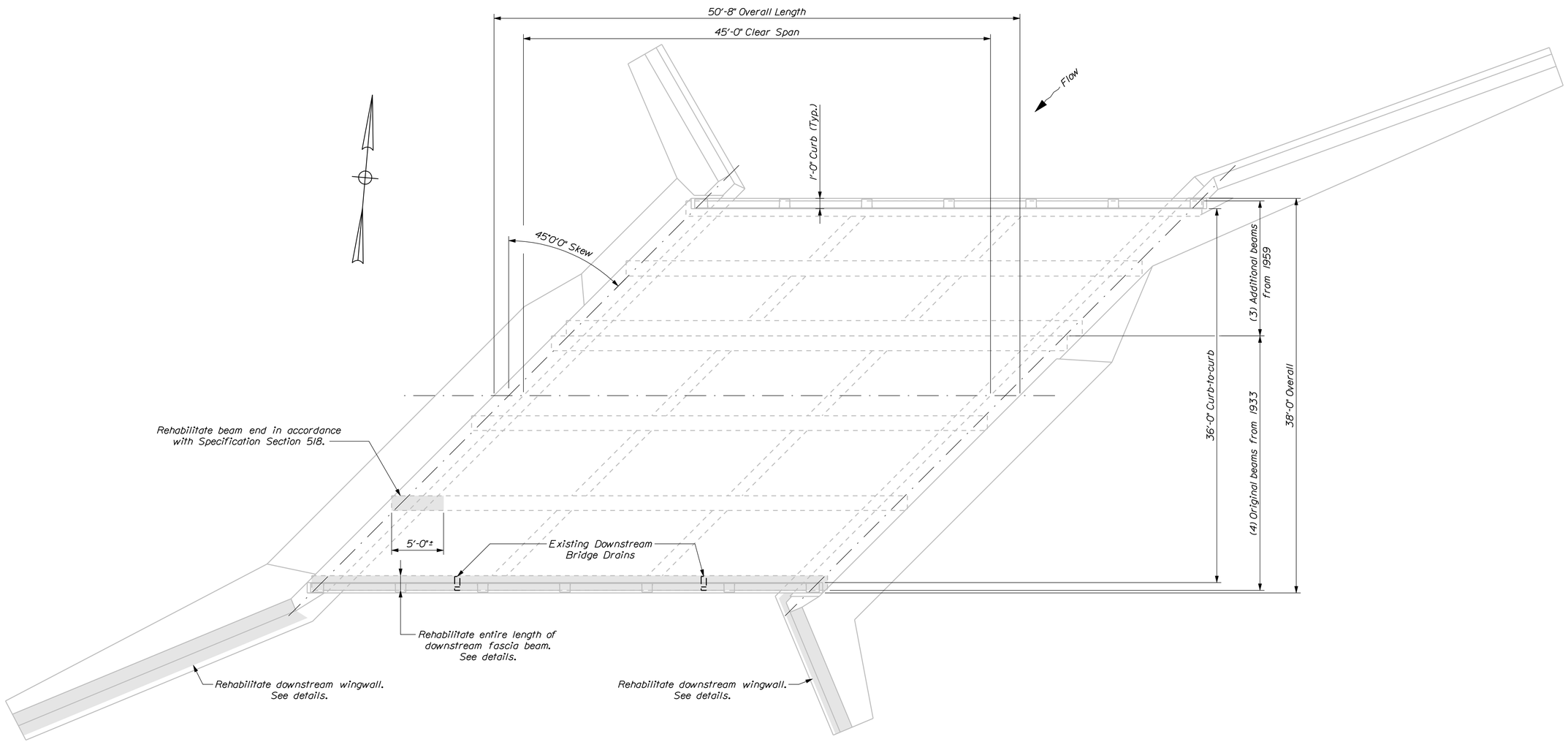
GENERAL PLAN

SHEET NUMBER

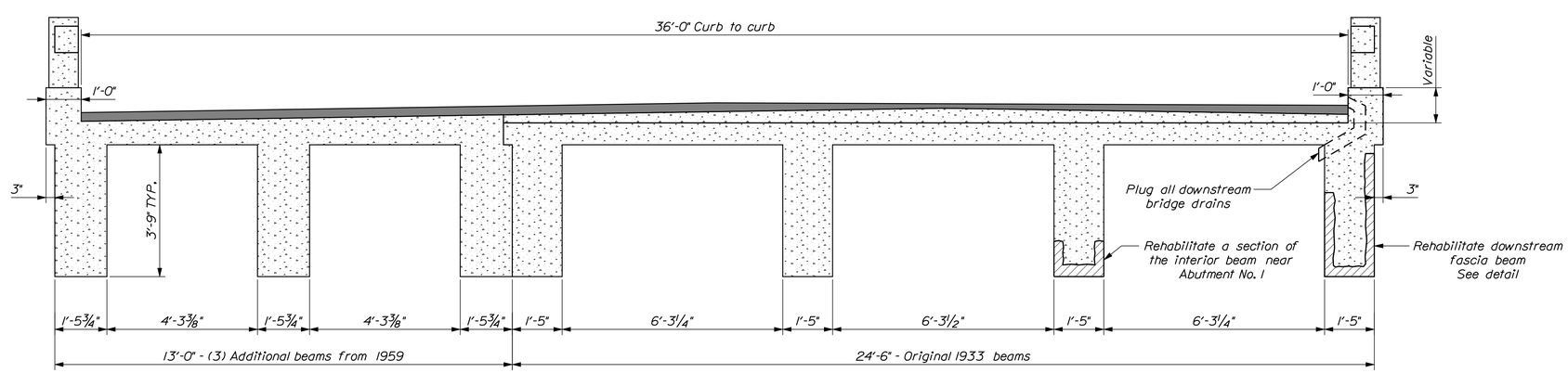
3

OF 7

Filename: ...\msta\003_General_Plan.dgn Division: BRIDGE Username: David.Shaw Date:12/17/2014



BRIDGE PLAN



EXISTING BRIDGE SECTION

Flow

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

019321.00

WIN 19321.00

BRIDGE NO. 3097

BRIDGE PLANS

PROJ. MANAGER	S. BRIDGE	BY	DATE
DESIGN-DETAILED	R. MYERS	D. SHAW	
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

JORDAN MILL BRIDGE
MACWAHOC STREAM
MACWAHOC PLANTATION AROOSTOOK COUNTY

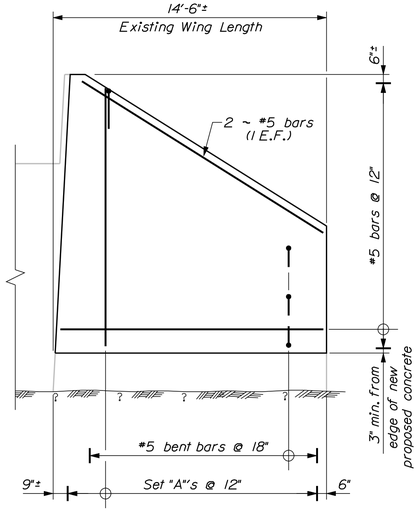
REHABILITATION LOCATIONS

SHEET NUMBER

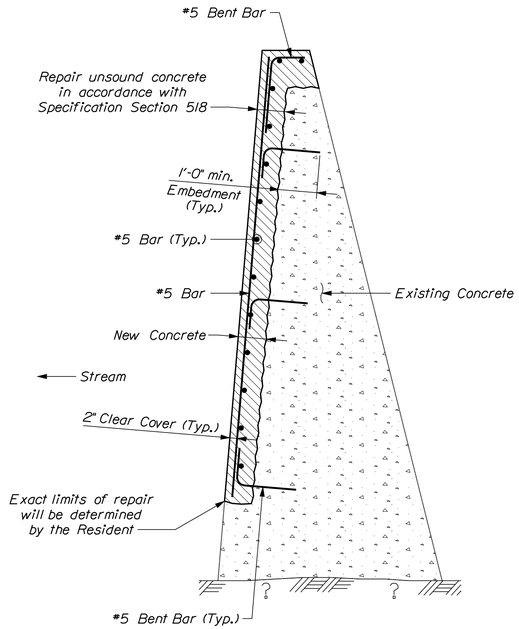
4

OF 7

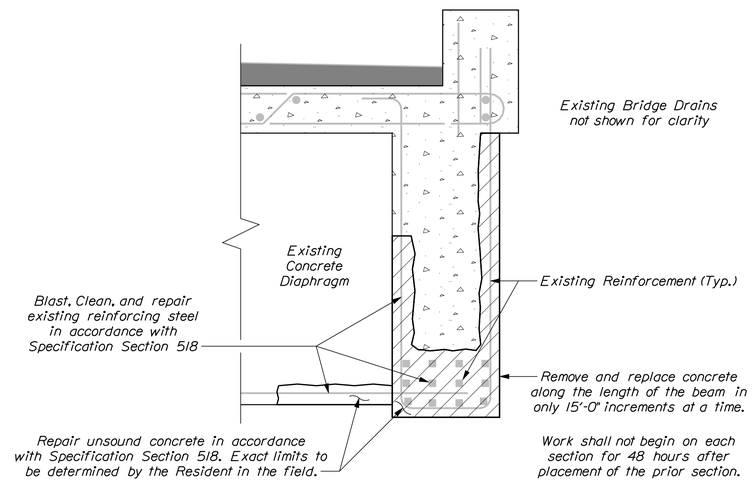
Filename: ...\msta\004_Rehab_Locations.dgn Division: BRIDGE Username: David.Shaw Date:12/17/2014



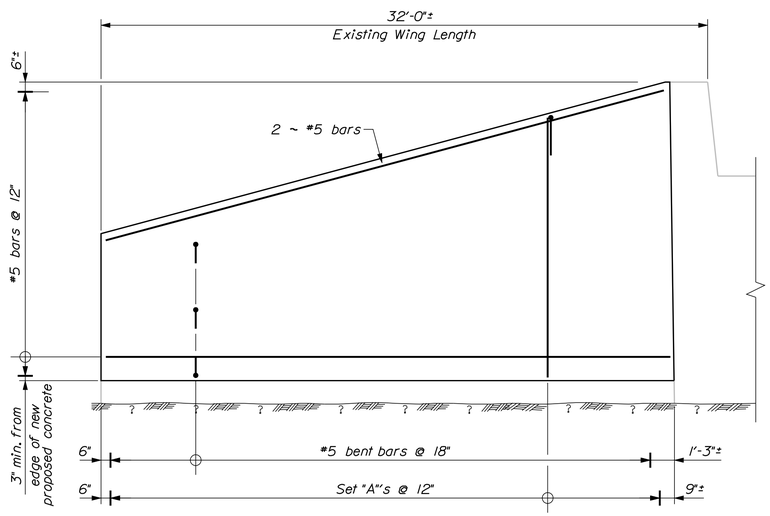
SOUTHEAST WINGWALL ELEVATION
Set "A" = 1 ~ #5 bar and 1 ~ #5 bent bar (Top)



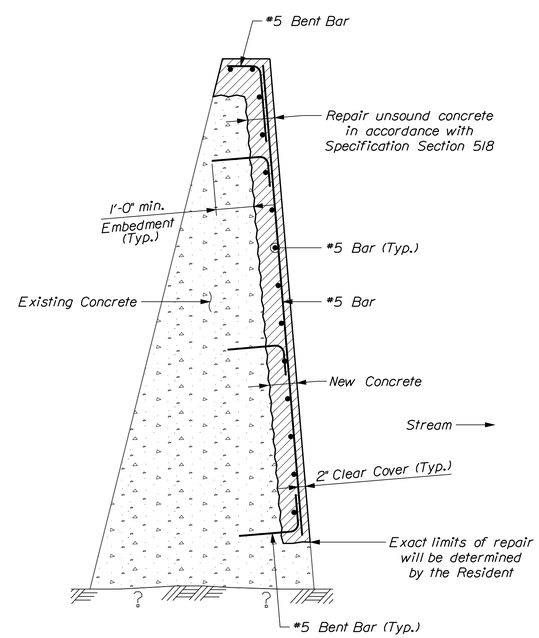
WINGWALL SECTION



TYPICAL EXTERIOR GIRDER SECTION
Showing repaired concrete surfaces
Not all reinforcement shown for clarity



SOUTHWEST WINGWALL ELEVATION
Set "A" = 1 ~ #5 bar and 1 ~ #5 bent bar (Top)



WINGWALL SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

019321.00

WIN 19321.00

BRIDGE NO. 3097

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	S. BODGE		
DESIGN-DETAILED	R. MYERS	D. SHAW	D. SHAW
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

JORDAN MILL BRIDGE
MACWAHOC STREAM
MACWAHOC PLANTATION AROOSTOOK COUNTY

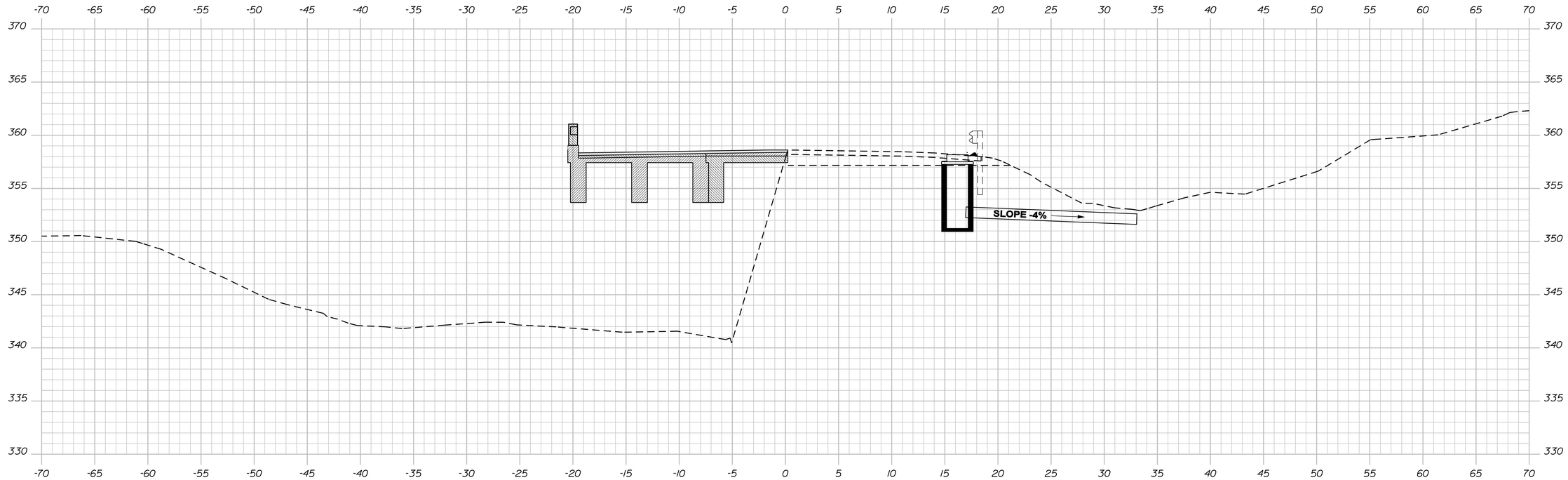
REHABILITATION DETAILS

SHEET NUMBER

5

OF 7

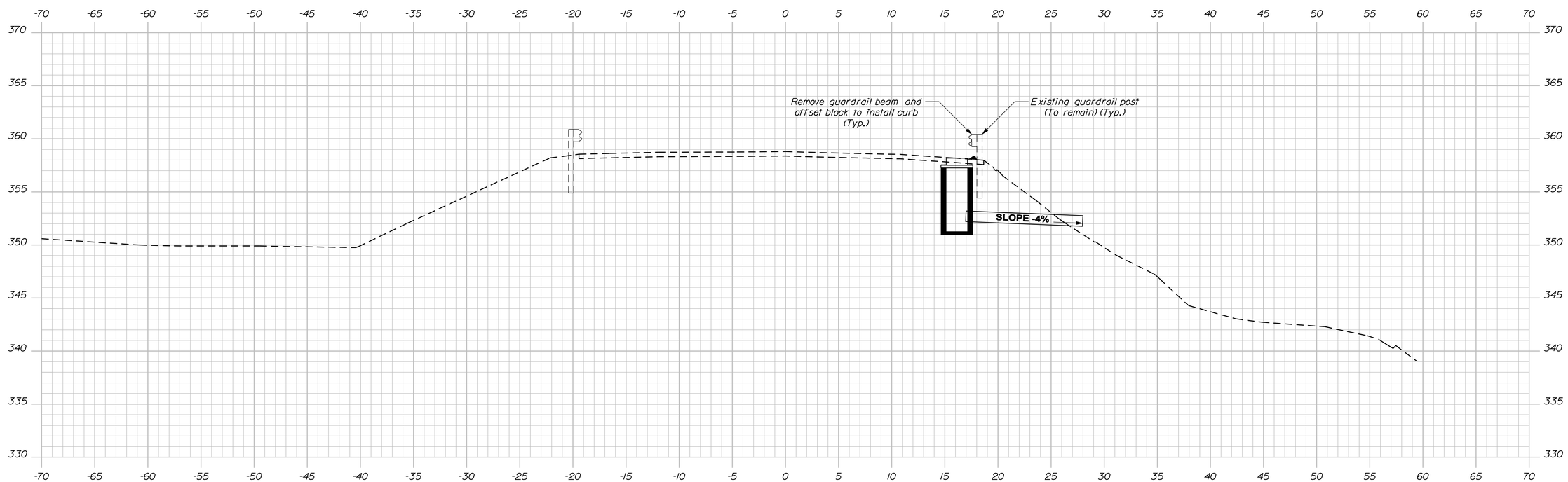
Filename: ...\msta\005_Rehab_Details.dgn Division: BRIDGE Username: David.Shaw Date:12/17/2014



8+59±

Install a F6-C Catch Basin, Sta. 8+59±, 16.2± Ft. Rt.
Install Bituminous Curb Type 3, mold 2 Under Guardrail Rt.
from Abutment No. 2 to Sta. 9+10±

Install 18 L.F. of 12" Culvert Pipe Option III
Catch Basin to Sta. 8+50.4±, 33± Ft. Rt.



7+61±

Install a F6-C Catch Basin, Sta. 7+61±, 16.1± Ft. Rt.
Install Bituminous Curb Type 3, mold 2 Under Guardrail Rt.
from Sta. 6+50± to Abutment No. 1

Install 12 L.F. of 12" Culvert Pipe Option III
Catch Basin to Sta. 7+61.3±, 28± Ft. Rt.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

019321.00

WIN 19321.00

BRIDGE NO. 3097

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED			
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

JORDAN MILL BRIDGE
MACWAHOC STREAM
MACWAHOC PLANTATION AROOSTOOK COUNTY

CROSS SECTIONS

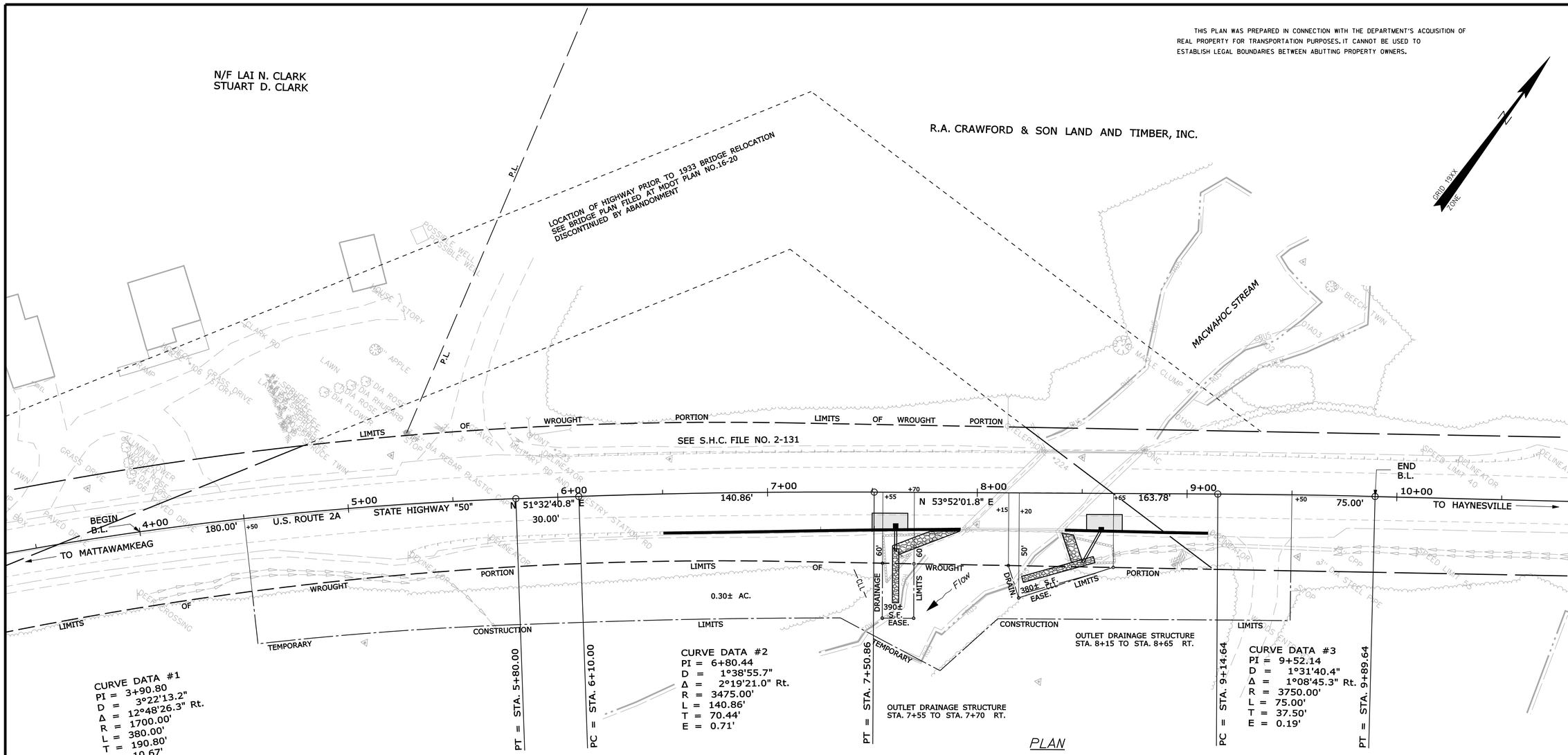
SHEET NUMBER

6

OF 7

Filename: ...\00\bridge\msta\006_XSECT.dgn Division: BRIDGE Username: David.Shaw Date:12/17/2014

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.



NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

R.A. CRAWFORD & SON LAND AND TIMBER, INC.
ITEM NO. (1)
DRAINAGE EASE. = 770± S.F. (2)
TEMP. CONST. RIGHTS = 0.30± AC. (1)
TOTAL AREA = 7693± AC. (PER TOWN)

EXISTING R/W
AROOSTOOK COUNTY COMMISSIONERS RECORDS
VOL. 1 PAGE 409
4 RODS WIDE 1853

SEE ALSO:
S.H.C. FILE NO. 2-131
SHEET NO. 1 OF 13 (1959)
(PLAN NOT RECORDED)

BRIDGE NO. 3097 — JORDAN MILL BRIDGE OVER MACWAHOC STREAM — WIN 19321.00

SYMBOLS

- 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
- WELL (WELL)
- GRADING LIMIT LINE
- CONSTRUCTION LIMIT LINE
- PROPERTY LINE PL
- 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.S.G.	
PROP. LINES	D.S.G.	
AREAS		

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

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
		COND.	2/10/14	5274	254

DAVID BERNHARDT
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE OF MAINE — PETER A. BELANGER 1341 — PROFESSIONAL LAND SURVEYOR

To the best of my knowledge and belief, this map constitutes an accurate graphical representation of the Highway Right of Way lines shown hereon. Other boundary lines, including lines between abutters, are approximate and for general reference only. See sheet X of this plan set for reference coordinates.

STATE HIGHWAY "50"
ROUTE 2A
MACWAHOC PLT. AROOSTOOK COUNTY
STATE PROJECT NO. 19321.00

DECEMBER 2013 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 2-561
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
7
OF 7

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: David.Shaw Date:12/17/2014