STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PLAN LEGEND

Town, County, State		Centerline-Existing	
Property Lines		Centerline-Proposed	10+00
R/W Lines-Existing		Travelway-Existing	
R/W Lines-Proposed		Travelway-Proposed	
Culvert-Existing		Railroad	
Culvert Proposed		Catch Basins	Existing ■ Proposed
Curbing	Existing Proposed	Manholes	Existing ● Proposed
Type 1		Proposed Underdrain	
Type 3		Proposed Ditch	
Type 5		Existing Ditch	
Outline of Bodies of Water		Utlity Poles	Existing ♦ Proposed
Ledge		Fire Hydrants	Existing ◉ Proposed
Buildings		Existing Water Line	
Trees	Conifer Deciduous	Existing San. Sewer	
Tree Line		Existing San. Sewer Manhole	
Clearing Limit Line	CLL	Guardrail-Existing	
		Guardrail-Proposed	
		Guardrail-Cable, Other	

GARDINER

KENNEBEC COUNTY

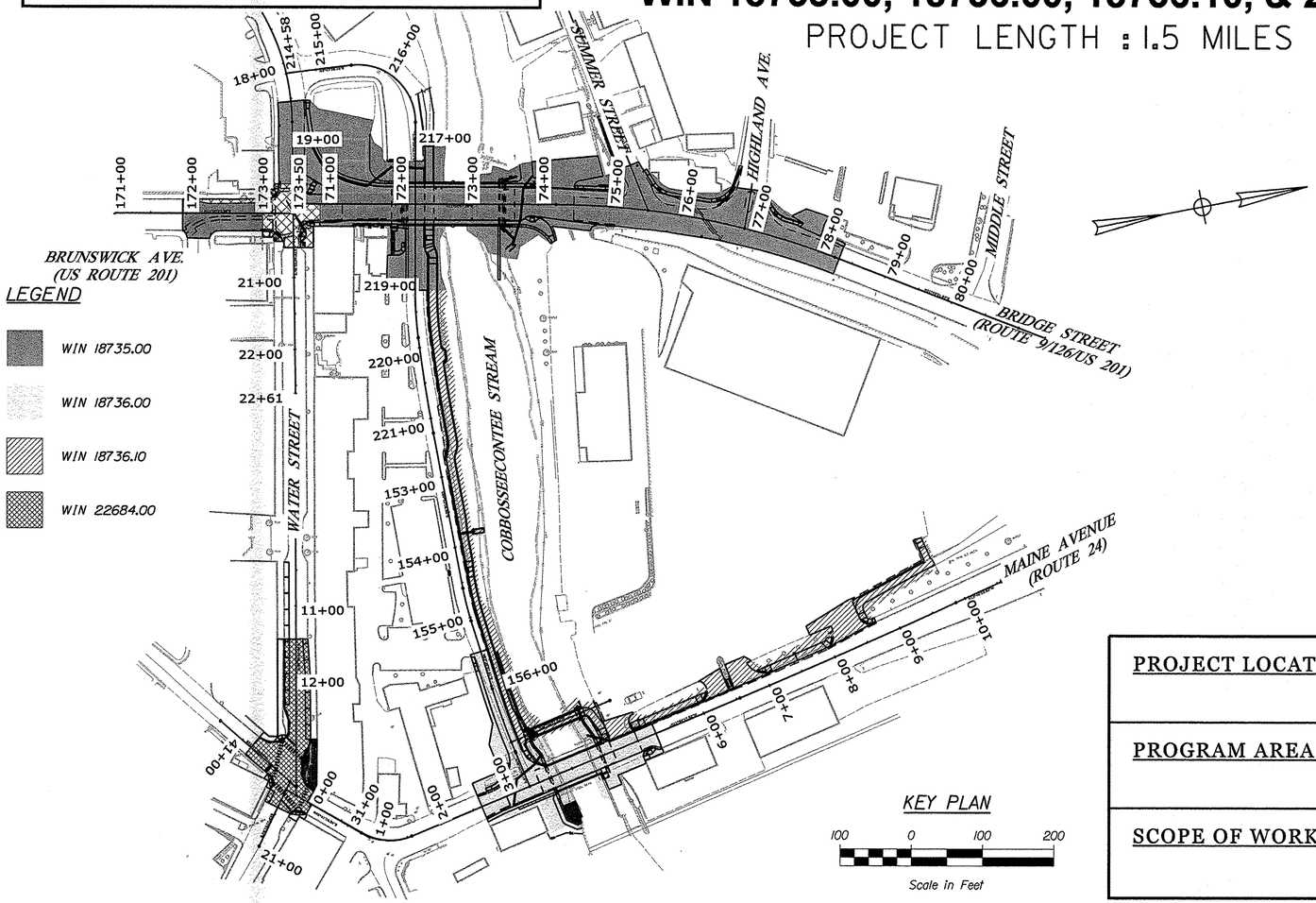
ROUTE 9\126\US 201 & ROUTE 24

WIN 18735.00, 18736.00, 18736.10, & 22684.00

PROJECT LENGTH : 1.5 MILES

INDEX OF SHEETS

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PROJECT LOCATION:	Gardiner, Maine
PROGRAM AREA:	Bridge / Multimodal
SCOPE OF WORK:	Bridge Replacements, Multi-Use Trail and Bridge Construction, Traffic Signal Improvements

WIN 18735.00, 18736.00, 18736.10, & 22684.00 STP-1873(500), STP-1873(600), 1873610, & STP-2268(400)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED — DATE 11/14/18

COMMISSIONER:

CHIEF ENGINEER: Bruce Van Sayler — DATE 11-13-18

STATE OF MAINE — TIMOTHY W. MERRITT No. 9294 — REGISTERED PROFESSIONAL ENGINEER

P.E. NUMBER 9294 — SIGNATURE — DATE 10-30-18

PROJECT INFORMATION	
PROGRAM	BRIDGE / MULTIMODAL
PROJECT MANAGER	L. TIMBERLAKE / B. KEEZER
DESIGNER	T. MERRITT / L. WEEK
CONSULTANT	STANTEC
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

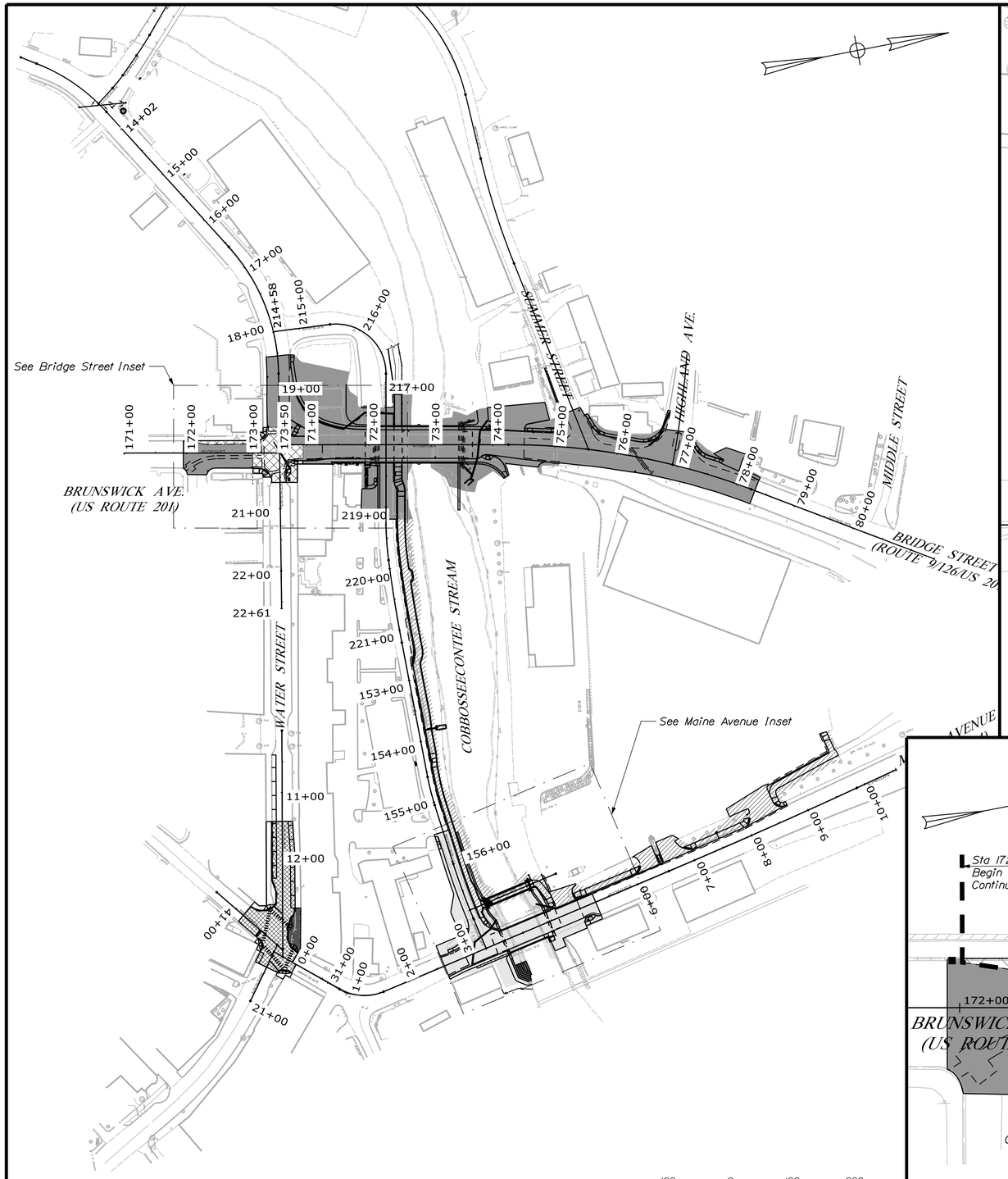
GARDINER
RTE 9\126\US 201 & RTE 24

TITLE SHEET

SHEET NUMBER 1 OF 7

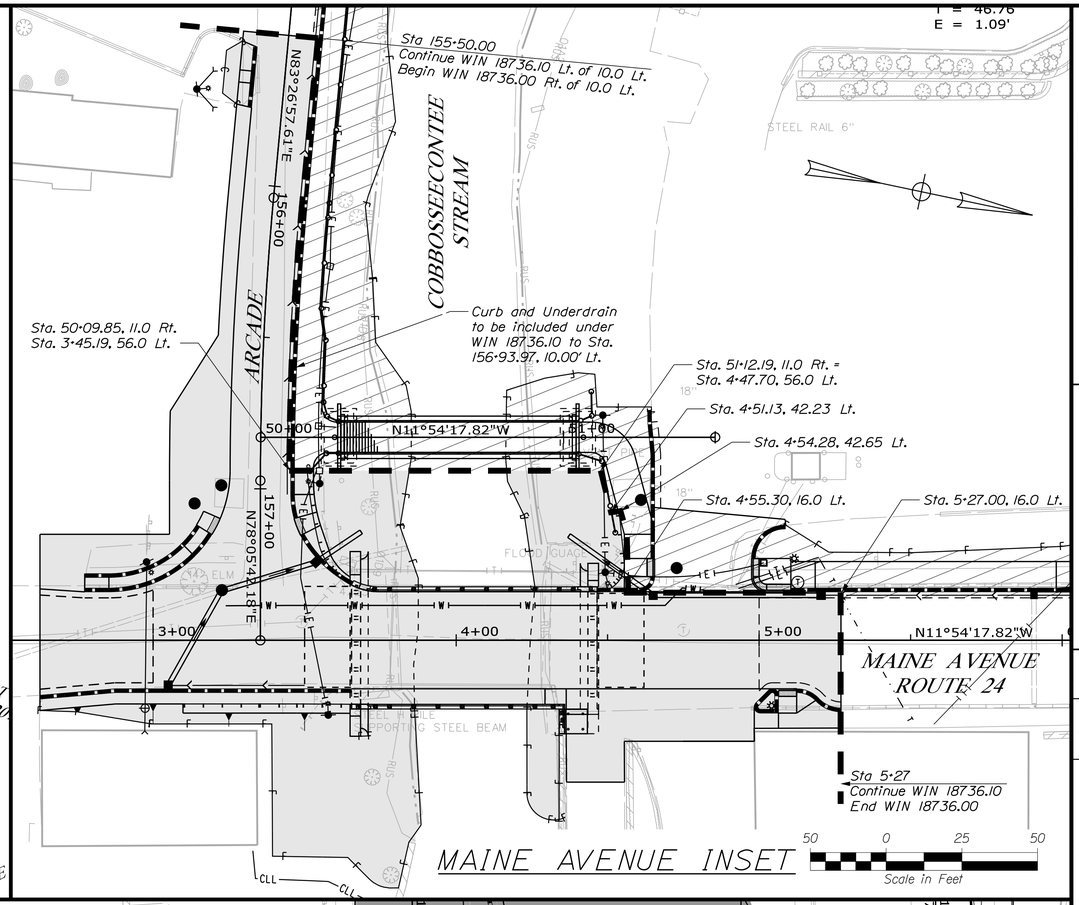
Filename: ...\MSTA\001_Title_multi_win.dgn Division: BRIDGE Username: dataylor Date:10/30/2018

Filename: ...\002_multi_win_limits_plan.dgn Division: BRIDGE Username: dataylor Date:10/30/2018



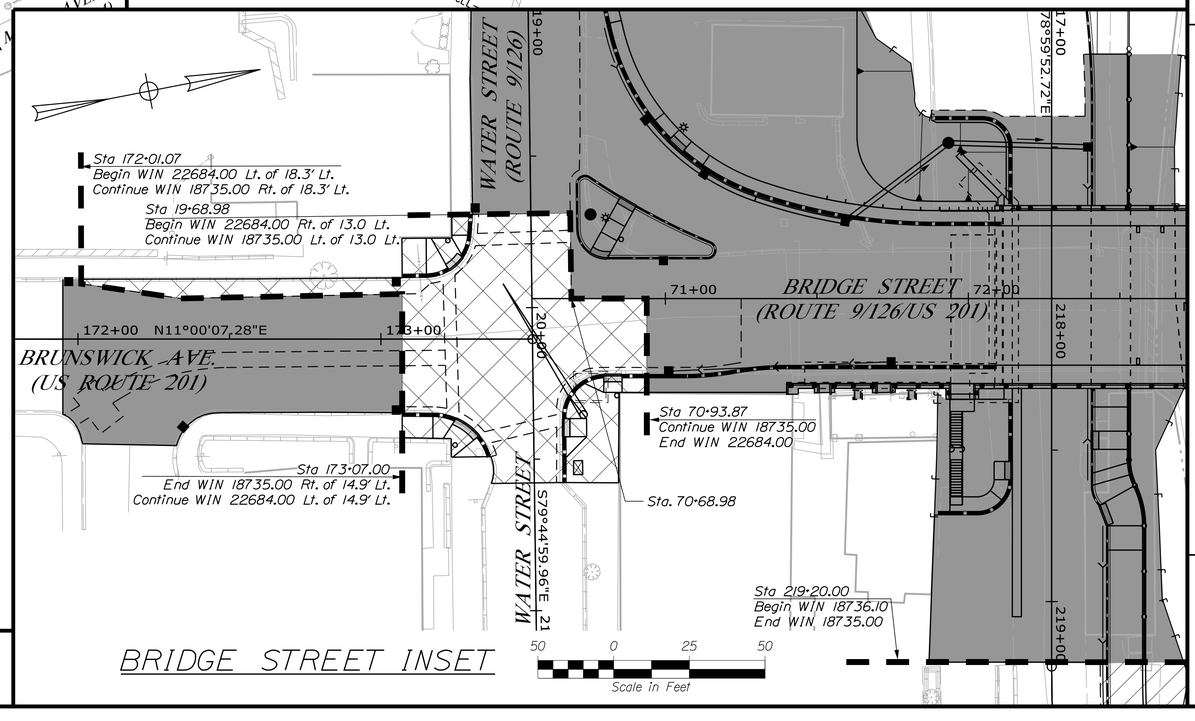
OVERALL LOCATION MAP

100 0 100 200
Scale in Feet



MAINE AVENUE INSET

50 0 25 50
Scale in Feet



BRIDGE STREET INSET

50 0 25 50
Scale in Feet

LEGEND

WIN 18735.00 | WIN 18736.00 | WIN 18736.10 | WIN 22684.00 | Quantity Match Line

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MULTIWIN BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

BY	DATE
E.JB	SEPT 2018
TWM	SEPT 2018

PROJ. MANAGER	
DESIGN-DETAILED	PLP
CHECKED-REVIEWED	LEM
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	1
REVISIONS 2	2
REVISIONS 3	3
REVISIONS 4	4
FIELD CHANGES	

GARDINER
RTE 9\126\US 201 & RTE 24

WIN LIMITS PLAN

SHEET NUMBER
2
OF 7

ESTIMATED QUANTITIES							
ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
201.23	REMOVING SINGLE TREE TOP ONLY	1	1			2	EA
201.24	REMOVING STUMP	3	1			4	EA
202.08	REMOVING BUILDING NO. 1	1				1	LS
202.08	REMOVING BUILDING NO. 2	1				1	LS
202.08	REMOVING BUILDING NO. 3		1			1	LS
202.15	REMOVING EXISTING MANHOLE OR CATCH BASIN	1	1	2		4	EA
202.19	REMOVING EXISTING BRIDGE	0.62	0.38			1	LS
202.202	REMOVING PAVEMENT SURFACE	3100	220		1660	4980	SY
203.20	COMMON EXCAVATION	2800	1050	760	410	5020	CY
203.2312	HEALTH AND SAFETY PLAN (HASP)	0.5	0.5			1	LS
203.2318	DISPOSAL OF SPECIAL WASTE	50	50	50		150	T
203.2333	DISPOSAL/TREATMENT OF SPECIAL EXCAVATION	700	360			1060	T
203.24	COMMON BORROW		77			77	CY
203.25	GRANULAR BORROW	1470	540	70	25	2105	CY
203.33	SPECIAL FILL	150				150	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY	940	920	270		2130	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	2450	800	780	110	4140	CY
304.14	AGGREGATE BASE COURSE - TYPE A				120	120	CY
403.2081	HOT MIX ASPHALT - 12.5 MM (POLYMER MODIFIED)	610	130	70	147	957	T
403.209	HOT MIX ASPHALT - 9.5 MM (SIDEWALKS, DRIVES, & INCIDENTALS)	67	20	150	49	286	T
403.213	HOT MIX ASPHALT - 12.5 MM (BASE AND INTERMEDIATE COURSE)	280	80	39	26	425	T
403.2131	HOT MIX ASPHALT - 12.5 MM (BASE AND INTERMEDIATE COURSE POLYMER MODIFIED)	670	160	52	39	921	T
409.15	BITUMINOUS TACK COAT, APPLIED	500	110	80	49	739	G
461.131	TEMPORARY PAVEMENT		90			90	T
501.222	MICROPILES (MAINE AVENUE NE RETAINING WALL - 9 5/8" DIAMETER)		260			260	LF
501.222	MICROPILES (BRIDGE STREET ABUTMENTS - 9 5/8" DIAMETER)	3900				3900	LF
501.222	MICROPILES (BRIDGE STREET A1 RETAINING WALL - 7 5/8" DIAMETER)	1100				1100	LF
501.231	DYNAMIC LOADING TEST		4			4	EA
501.2331	PILE VERIFICATION LOAD TEST	2				2	EA
501.2341	PILE PROOF LOAD TEST	6				6	EA
501.54	STEEL H-BEAM PILES 117 LB/FT, DELIVERED		710			710	LF
501.541	STEEL H-BEAM PILES 117 LB/FT, IN PLACE		710			710	LF
501.804	DRILLING EQUIPMENT MOBILIZATION	1				1	LS
501.807	REMOVAL OF OBSTRUCTIONS, PENETRATION	75	5			80	HR
501.90	PILE TIPS		10			10	EA
501.91	PILE SPLICES		20			20	EA
501.92	PILE DRIVING EQUIPMENT MOBILIZATION		1			1	LS
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	(636 CY)	(20 CY)	(63 CY)		1	LS
502.26	STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES	(294 CY)				1	LS
502.48	LOW PERMEABILITY CONCRETE	7				7	CY
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS	(80 CY)				1	LS
502.565	CONCRETE FILL			66		66	CY
502.77	FRP BRIDGE DRAIN - TYPE D	5				5	EA
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	300	2300	5000		7600	LB
503.13	REINFORCING STEEL, PLACING	300	2300	5000		7600	LB
503.17	MECHANICAL/WELDED SPLICE	207				207	EA
503.26	STAINLESS STEEL REINFORCEMENT, FABRICATED AND DELIVERED	127300				127300	LB
503.27	STAINLESS STEEL REINFORCEMENT, PLACING	127300				127300	LB
504.702	STRUCTURAL STEEL FABRICATED AND DELIVERED, WELDED	(336100 LB)				1	LS
504.71	STRUCTURAL STEEL ERECTION	(336100 LB)				1	LS
504.96	METAL STAIRS	1				1	LS
505.08	SHEAR CONNECTORS	(2100 EA)				1	LS
506.9104	THERMAL SPRAY COATING (SHOP APPLIED)	(336100 LB)				1	LS
507.0834	WYOMING STEEL BRIDGE RAILING, MODIFIED	(350 LF)	(150 LF)			1	LS
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE	(730 SY)				1	LS
511.07	COFFERDAM: EXISTING PIER 2	1				1	LS
511.07	COFFERDAM: EXISTING PIER 3	1				1	LS
511.07	COFFERDAM: MAINE AVENUE ABUTMENT 1		1			1	LS
511.07	COFFERDAM: MAINE AVENUE ABUTMENT 2		1			1	LS
511.07	COFFERDAM: COBBOSSEE TRAIL BRIDGE ABUTMENT 1			1		1	LS
511.07	COFFERDAM: COBBOSSEE TRAIL BRIDGE ABUTMENT 2			1		1	LS
512.081	FRENCH DRAINS	(270 LF)		(34 LF)		1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	0.5	0.5			1	EA
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES	(360 SY)	(150 SY)			1	LS

ESTIMATED QUANTITIES							
ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
518.60	REPAIR OF VERTICAL SURFACES < 8 INCHES		10			10	SF
518.61	REPAIR OF VERTICAL SURFACES ≥ 8 INCHES		4			4	CY
520.232	EXPANSION DEVICE - ASPHALTIC PLUG JOINT	92	85			177	LF
523.52	BEARING INSTALLATION	14				14	EA
523.5402	LAMINATED ELASTOMERIC BEARINGS, EXPANSION	14				14	EA
524.301	TEMPORARY STRUCTURAL SUPPORT - AND HORIZONTAL SLIDE	1				1	LS
524.301	TEMPORARY STRUCTURAL SUPPORT - A1 DINER	1				1	LS
526.301	TEMPORARY CONCRETE BARRIER, TYPE 1	(170 LF)	(90 LF)			1	LS
526.304	TEMPORARY CONCRETE BARRIER, ANCHORED	(30 LF)				1	LS
526.3401	PERMANENT CONCRETE TRANSITION BARRIER, MODIFIED	3	4			7	EA
527.34	WORK ZONE CRASH CUSHIONS	1	2			3	UN
530.01	STEEL PEDESTRIAN BRIDGE			1		1	LS
534.76	PRECAST ABUTMENT	(36 CY)	(130 CY)			1	LS
534.7601	PRECAST APPROACH SLAB	(33 CY)	(25 CY)			1	LS
603.155	12 INCH REINFORCED CONCRETE PIPE CLASS III		32			32	LF
603.159	12 INCH CULVERT PIPE OPTION III	85		17		102	LF
603.175	18 INCH REINFORCED CONCRETE PIPE CLASS III	40				40	LF
603.179	18 INCH CULVERT PIPE OPTION III	120	52	20		192	LF
603.195	24 INCH REINFORCED CONCRETE PIPE CLASS III		77			77	LF
603.199	24" CULVERT PIPE OPTION III	72				72	LF
604.072	CATCH BASIN TYPE A1-C	5	5.125	1		11.125	EA
604.092	CATCH BASIN TYPE B1-C	2		3		5	EA
604.15	MANHOLE	1		1.125		2.125	EA
604.154	72" MANHOLE	1				1	EA
604.16	ALTERING CATCH BASIN TO MANHOLE	2	1	1	1	5	EA
604.18	ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	14		1	7	22	EA
604.245	CATCH BASIN TYPE F4-C			1		1	EA
604.247	CATCH BASIN TYPE F5-C	1				1	EA
604.252	CATCH BASIN TYPE A5-C	2.625				2.625	EA
604.2521	60" CATCH BASIN A5-C	1				1	EA
604.30	SPECIAL CATCH BASIN			1		1	EA
605.09	6 INCH UNDERDRAIN TYPE B	140	43	540		723	LF
605.11	12 INCH UNDERDRAIN TYPE C	160		120		280	LF
605.12	15 INCH UNDERDRAIN TYPE C			54		54	LF
605.13	18 INCH UNDERDRAIN TYPE C	41		66		107	LF
606.1301	31" W-BEAM GR - MID-WAY SPLICE (STL POST, 8" OFFSET BLOCKS, SINGLE FACED)	106.25	12.50			118.75	LF
606.1304	31" W-BEAM GR - MID-WAY SPLICE (STL POST, 8" OFFSET BLOCKS, OVER 15' RAD)	31.25				31.25	LF
606.1306	31" W-BEAM GUARDRAIL - MID-WAY SPLICE TANGENT TERMINAL (31" HEIGHT)	1	1			2	EA
606.1307	BRIDGE TRANSITION (ASYMMETRICAL) – TYPE 1	3	1			4	EA
606.1721	BRIDGE TRANSITION TYPE 1		2			2	EA
606.259	ANCHORAGE ASSEMBLY	3				3	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	10	6			16	EA
606.65	GUARDRAIL THRIE BEAM - SINGLE RAIL		37.5			37.5	LF
606.66	TERMINAL END THRIE BEAM		2			2	EA
607.22	CEDAR RAIL FENCE	200		350		550	LF
608.15	BRICK SIDEWALK WITH BITUMINOUS BASE	99			422	521	SY
608.171	CONCRETE SIDEWALK WITH BRICK BORDER	98			76	174	SY
608.26	CURB RAMP DETECTABLE WARNING FIELD	220	36	210	130	596	SF
609.11	VERTICAL CURB TYPE 1	570	140	760	188	1658	LF
609.12	VERTICAL CURB TYPE 1 - CIRCULAR	220	94	110	123	547	LF
609.234	TERMINAL CURB TYPE 1 - 4 FOOT	1		3		4	EA
609.2341	TERMINAL CURB TYPE 1 - 4 FOOT - CIRCULAR			2		2	EA
609.238	TERMINAL CURB TYPE 1 - 8 FOOT	17	5	6	9	37	EA
609.2381	TERMINAL CURB TYPE 1 - 8 FOOT - CIRCULAR	15	5	6	9	35	EA
609.26	CURB TRANSITION SECTION B-TYPE 1			1		1	EA
609.31	CURB TYPE 3	27				27	LF
609.34	CURB TYPE 5	150		490		640	LF
609.35	CURB TYPE 5 - CIRCULAR	43		52		95	LF
610.08	PLAIN RIPRAP	36		13		49	CY
610.16	HEAVY RIPRAP	670	630	610		1910	CY
613.319	EROSION CONTROL BLANKET	58	45	23		126	SY
615.07	LOAM	210	42	190		442	CY
615.085	LOAM WOODWASTE MULCH MIX	17	13	40		70	CY

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MULTIWIN BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

	BY	DATE
DESIGN-DETAILED	PLP	SEPT 2018
CHECKED-REVIEWED	LEM	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

PROJ. MANAGER

GARDINER
RTE 9\126\US 201 & RTE 24

ESTIMATED QUANTITIES
(1 OF 2)

SHEET NUMBER
3
OF 7

Filename: ...\003_Quantities_multi_win.dgn Division: BRIDGE Username: dataylor Date:10/30/2018

Filename: ...\004_Quantities_multi_win.dgn Username: dataylor Division: BRIDGE Date:10/30/2018

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
618.13	SEEDING METHOD NUMBER 1	11	2	4		17	UN
618.14	SEEDING METHOD NUMBER 2	4				4	UN
618.143	SPECIAL SEED MIX	2	2	7		11	UN
618.146	SEEDING HYDROMULCH MEDIUM	2	2	7		11	UN
619.12	MULCH	15	2	4		21	UN
619.14	EROSION CONTROL MIX	50	10	10		70	CY
620.58	EROSION CONTROL GEOTEXTILE	540	470	470		1480	SY
620.66	DRAINAGE GEOCOMPOSITE		87			87	SY
621.178	SMALL DECIDUOUS TREES GR. A 6'-8' CONT.			6		6	EA
621.388	EVERGREEN SHRUB GR. A 12" - 15" CONT.		24	24		48	EA
621.5351	DECIDUOUS SHRUB GR. A 15" - 18" CONT.		24	36		60	EA
621.54	DECIDUOUS SHRUB GR. A 18" - 24" CONT.		12			12	EA
621.71	HERBACEOUS PERENNIALS 1 GALLON CONT. GROUP A	60	12	42		114	EA
621.713	HERBACEOUS PERENNIALS 1 QUART CONT.		12	48		60	EA
626.11	PRECAST CONCRETE JUNCTION BOX	6	2	9	1	18	EA
626.21	METALLIC CONDUIT	270		50	70	390	LF
626.22	NON-METALLIC CONDUIT	1000	140	820	500	2460	LF
626.32	24 INCH DIAMETER FOUNDATION	6	3	3	5	17	EA
626.332	30" DIAMETER, > 8' LONG, AND ALL 36" DIAMETER & 42" DIAMETER FOUNDATIONS				5	5	CY
626.36	REMOVE OR MODIFY CONCRETE FOUNDATION	2	1	1	8	12	EA
626.38	GROUND-MOUNTED CABINET FOUNDATION				1	1	EA
627.513	TEMPORARY PAVEMENT MARKING TAPE, YELLOW OR WHITE		75			75	SF
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	2850	270		200	3320	LF
627.75	WHITE OR YELLOW PAVEMENT & CURB MARKING	3700	390	1400	1460	6950	SF
627.77	REMOVING EXISTING PAVEMENT MARKING	800			40	840	SF
627.78	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	1600				1600	LF
629.05	HAND LABOR, STRAIGHT TIME	10	40	40	10	100	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	40	40	5	95	HR
631.171	TRUCK - SMALL (INCLUDING OPERATOR)				5	5	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	10	40	40		90	HR
631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)				5	5	HR
631.20	STUMP CHIPPER RENTAL (INCLUDING OPERATOR)				5	5	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	10	40	40	5	95	HR
631.32	CULVERT CLEANER (INCLUDING OPERATORS)	10	10	10		30	HR
634.160	HIGHWAY LIGHTING	0.54	0.23	0.23		1	LS
634.2101	TYPE A LIGHT STANDARD	1	2	2		5	EA
634.2102	TYPE B LIGHT STANDARD	5				5	EA
634.2103	TYPE C LIGHT STANDARD	1				1	EA
639.18	FIELD OFFICE, TYPE A	0.5	0.5			1	EA
643.62	RECTANGULAR RAPID FLASHING BEACON	1	1			2	EA
643.64	FLASHING SIGN ASSEMBLY	1				1	EA
643.71	TRAFFIC SIGNAL MODIFICATION:				1	1	LS
643.80	TRAFFIC SIGNALS AT: BRIDGE & WATER STREETS				1	1	LS
643.83	VIDEO DETECTION SYSTEM				1	1	LS
643.91	MAST ARM POLE				1	1	EA
643.92	PEDESTAL POLE				4	4	EA
645.103	DEMOUNT GUIDE SIGN	1	1			2	EA
645.106	DEMOUNT REGULATORY, WARNING, CONF. AND ROUTE MARKER ASSEMBLY SIGN	28	9	1	1	39	EA
645.1061	RELOCATE EXISTING SIGN ASSEMBLY AND POST	1				1	EA
645.108	DEMOUNT POLE	11	7	1		19	EA
645.113	REINSTALL GUIDE SIGN	1	1			2	EA
645.116	REINSTALL REGULATORY, WARNING, CONF. AND ROUTE MARKER ASSEMBLY SIGN	26	9	1	1	37	EA
645.118	REINSTALL POLE	9	7	1		17	EA
645.271	REGULATORY, WARNING, CONFIRMATION AND ROUTE ASSEMBLY SIGN, TYPE 1	85		38	30	153	SF
645.292	REGULATORY, WARNING, CONF. AND ROUTE MARKER ASSEMBLY SIGNS TYPE II				97	97	SF
645.51	SPECIAL SIGNING	0.67		0.33		1	LS
652.311	TYPE II BARRICADE				4	4	EA
652.312	TYPE III BARRICADES	26	15			41	EA
652.313	TEMPORARY PEDESTRIAN BARRICADE - ADA COMPLIANT	210	160			370	LF
652.33	DRUM	50	50	25		125	EA
652.34	CONE	100	50	25	40	215	EA
652.35	CONSTRUCTION SIGNS	1200	1100	200		2500	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	(340 CD)	(310 CD)	(150 CD)	(30 CD)	1	LS
652.38	FLAGGERS	1800	1200	1200	420	4620	HR
652.381	TRAFFIC OFFICERS		120		100	220	HR
652.41	PORTABLE - CHANGEABLE MESSAGE SIGN	3	4			7	EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	0.32	0.32	0.32	0.04	1	LS
659.10	MOBILIZATION	0.65	0.24	0.06	0.05	1	LS
660.21	ON-THE-JOB TRAINING	650	240	60	50	1000	HR

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
803.01	TEST PITS	2	2			4	EA
841.49	BOLLARDS - COLLAPSIBLE			2		2	EA
910.301	SPECIAL WORK - SKEHAN'S TAX SIGN REMOVAL	1					LS

ITEMS SPECIFIC TO THE PRECAST BRIDGE UNIT - ALTERNATE 1

ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
403.2081	HOT MIX ASPHALT - 12.5 MM (POLYMER MODIFIED)		25			25	T
403.2131	HOT MIX ASPHALT-12.5 MM (BASE AND INTERMEDIATE COURSE POLYMER MODIFIED)		25			25	T
409.15	BITUMINOUS TACK COAT, APPLIED		18			18	G
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS		(23 CY)			1	LS
506.9104	THERMAL SPRAY COATING (SHOP APPLIED)		(81900 LB)			1	LS
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE		(300 SY)			1	LS
530.04	PREFABRICATED BRIDGE STRUCTURE AND ASSEMBLY		1			1	LS

ITEMS SPECIFIC TO THE NEXT BEAM - ALTERNATE 2

ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
531.51	BRIDGE STRUCTURE - DETAIL BUILD		1			1	LS

ESTIMATED QUANTITIES - CONSOLIDATED COMMUNICATIONS

ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
202.15	REMOVING EXISTING MANHOLE OR CATCH BASIN		2			2	EA
203.3333	DISPOSAL/TREATMENT OF SPECIAL EXCAVATION	40				40	T
524.301	TEMPORARY STRUCTURAL SUPPORT - CONSOLIDATED COMMUNICATIONS	1				1	LS
604.158	UTILITY VAULT	3				3	EA
604.18	ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	1		1	3	5	EA
629.05	HAND LABOR, STRAIGHT TIME	8				8	HR
652.38	FLAGGERS	954				954	HR
652.381	TRAFFIC OFFICERS	264				264	HR
803.01	TEST PITS	6				6	EA
845.10	STRUCTURAL UTILITY SUPPORT CONSOLIDATED COMMUNICATIONS	(980 LB)				1	LS
910.301	SPECIAL WORK - UTILITY CONDUIT (APPROACHES)	1				1	LS

ESTIMATED QUANTITIES - CITY OF GARDINER WATER DISTRICT

ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
403.213	HOT MIX ASPHALT-12.5 MM (BASE AND INTER. COURSE)	30	30			60	T
403.2131	HOT MIX ASPHALT-12.5 MM (BASE AND INTER. COURSE POLY. MOD.)		10			10	T
501.25	24-INCH SCHEDULE 40 GALVANIZED STEEL CASING PIPE	40	12			52	LF
802.10	12-INCH DUCTILE IRON PIPE	90	80			170	LF
803.01	TEST PITS	3	3			6	EA
822.302	12-INCH PREINSULATED DUCTILE IRON PIPE	1	1			1	LS
822.322	6-INCH DUCTILE IRON WATER PIPE		30			30	LF
823.311	12-INCH GATE VALVE WITH BOX	1	1			2	EA
823.33	6-INCH GATE VALVE WITH BOX		1			1	EA
824.32	REMOVE/RESET HYDRANT			1		1	EA
825.321	1-INCH CORPORATIONS	1				1	EA
825.331	1-INCH CURB STOPS	1				1	EA
825.90	1-INCH PREINSULATED HEAT TRACED WATER SERVICE	1				1	LS

ESTIMATED QUANTITIES - CENTRAL MAINE POWER

ITEM NO.	DESCRIPTION	QUANTITY WIN 18735.00	QUANTITY WIN 18736.00	QUANTITY WIN 18736.10	QUANTITY WIN 22684.00	TOTAL	UNIT
604.18	ADJUSTING MANHOLE OR CATCH BASIN TO GRADE				1	1	EA

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DEPARTMENT OF TRANSPORTATION

MULTIWIN

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

PROJ. MANAGER		BY	DATE
DESIGN-DETAILED	PLP	EJB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

GARDINER
RTE 9\126\US 201 & RTE 24

ESTIMATED QUANTITIES
(2 OF 2)

SHEET NUMBER

4

OF 7

Filename: ...\MSTA\005_Notes_multi_win_2.dgn Division: BRIDGE Username: dataylor Date:10/30/2018

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. Existing utilities shown on the plans and cross sections are approximate. It is the Contractor's responsibility to verify all utility locations.

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

6. Place loam 4 inches deep on all new or reconstructed sideslopes or as shown on Plans unless directed by the Resident. Loam has been estimated for disturbed lawn areas. Actual placement of loam shall be as noted on the Plans or designated by the Resident.

7. Seeding Method No. 1 shall be utilized on all areas unless otherwise noted.

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

9. 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 fewer thick will be made under appropriate equipment rental items.

10. 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. 619.14, 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. Guardrail posts as shown in the Standard Details shall be modified from the indicated length of 6 feet to a length of 7 feet with an embedment of 4.5 feet. In areas where the distance from the face of rail to the top of slope is less than 3 feet, guardrail posts shall have a length of 8 feet with 5.5 feet of embedment. Payment will be considered incidental to the guardrail pay items.

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

14. 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.

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

    All exposed surfaces of concrete curbs and sidewalks.
    Fascias down to the drip notch.
    All exposed surfaces of Concrete Transition Barriers.

16. If foundation material is required under culverts it shall meet requirement for Granular Borrow material for underwater backfill as specified in Standard Specification 703.19 and will be paid for as Granular Borrow.

17. Granular Borrow used to backfill muck excavation or in low wet areas to 1 foot above water level or old ground shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Under Water Backfill.

18. Commercial paved enterances shall be constructed with 3" Hot Mix Asphalt and 11" Aggregate Subbase Course Gravel.

19. Existing culvert and catch basins will be cleaned as directed by the Resident under Item 631.32 Culvert Cleaner.

20. No existing drainage shall be abandoned, removed, or plugged without prior approval of the Resident.

21. Inlets and outlets of all culverts shall be riprapped unless otherwise noted on the Plans or directed by the Resident.

22. The culvert sizes shown on the Plans and cross sections are for smoothlined pipes.

23. A1-C and B1-C catch basins shall be shape 1 with haunched cone, as per Standard Detail 604(02), unless otherwise noted on the Plans or directed by the Resident.

24. Flat tops for catch basins are not allowed unless noted on the Plans or directed by the Resident.

25. Plastic end caps used on all dead-end underdrain shall be considered incidental.

26. Any necessary cutting of existing pipes to fit in areas of proposed catch basins will not be paid for separately and will be considered incidental to related Contract items.

27. Any necessary cutting of catch basins to allow for proposed pipe connections will not be paid for separately and will be considered incidental to related Contract items.

28. Existing abandoned water mains broken by the Contractor during construction shall have the ends plugged with brick and mortar. Cost for all labor and materials will be considered incidental to the Contract.

29. All catch basins Type A placed on circular curb Type 1 shall have the curb inlet cut to the same radius as adjacent circular curb. Payment will be incidental to related Contract items.

30. Any base pavement not surfaced before winter will require temporary pavement markings. Both yellow centerline and white edge lines will be paid for under Item 627.78 Temporary Pavement Marking White or Yellow.

31. Any damage to the slopes caused by the Contractor's equipment, personnel, or operations shall be repaired to the satisfaction of the Resident. All work, equipment, and materials required to make repairs shall be at no cost to the Department.

32. No separate payment for superintendent or foreman will be made for the supervision of equipment and layout of work being paid for under the equipment rental items.

33. Final striping for the project shall be done by the Contractor per the Striping Plan. Payment will be made under the appropriate Contract Items.

34. The Contractor shall conduct their work without disturbance to existing landscaped planting areas, unless otherwise noted in the Plans or directed by the Resident.

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

36. 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.

37. 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.

38. 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.

39. 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.

40. All waste material not used on the project shall be disposed of off the project in acceptable waste areas reviewed by the Resident at the cost of the Contractor. Grading, seeding, and mulching of waste areas will be considered incidental.

41. Place riprap on sideslopes as shown on Plans.

42. Two reflectorized flexible G.R. markers (Item 606.353) shall be installed at each guardrail end.

43. Catch basin and rim elevations (including "Behind Curb Catch Basins") noted on the cross sections are the top of the grate elevations at the center of grate. Catch basin offset locations are measured to the center of grate.

44. The location or proposed plantings are not shown on the Plans. The MaineDOT Landscape Architect or Designee will stake the locations of the proposed plantings in the field at the time of the planting. Contractor shall coordinate work with the Resident and MaineDOT Landscape Architect.

45. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 30 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge and to protect adjacent structures. No work related to the removal of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.

46. The existing bridges shall be removed by and become the property of the Contractor.

47. The Contractor shall take additional precautions to avoid damage to adjacent existing structures during their operations, including but not limited to bridge demolition, micropile construction, and excavation. The southeast corner of the existing Bridge Street Bridge directly interfaces with the Frosty's stone masonry basement foundation and the east bridge fascia interfaces with the Al Diner. The proposed southeast retaining wall will be constructed immediately adjacent to the Al Diner existing foundations. The proposed northeast retaining wall at the Maine Avenue bridge will be constructed immediately adjacent to the existing concrete channel retaining wall that is privately owned and in a state of disrepair. The Contractor shall limit work to not exceed vibrations that will cause potential damage to these structures. No payment shall be made for any pre-construction structure survey or vibration monitoring performed by the Contractor.

48. The new Bridge Street and Maine Avenue flood gauge signs shall be mounted to the new bridges by the Contractor as shown in the Plans. The flood gauge signs will be supplied by the City of Gardiner. The City will provide the elevation to mount the Bridge Street sign at and the Contractor shall take note of what elevation the existing Maine Avenue sign is mounted at prior to its removal as part of the bridge demolition. The Maine Avenue sign shall be mounted on the salvaged existing steel sign support and anchored to the bridge. The sign mounts and bridge connection/mounting details shall be determined by the Contractor and shall be submitted to the Resident for approval. Payment for all work and materials required for the mounting of the flood gauge signs shall be incidental to the Contract.

49. Precast substructure and precast approach slab fabrication tolerances shall be as follows:
    Length: ± 1/4"
    Width: ± 1/4"
    Depth: ± 1/4"
    Variation from Specified end squareness or skew: ± 1/2"
    Sweep over member lengths: 1/4"
    Location of blockout for voids: ± 1/2"

50. Any necessary cleaning of existing pavement prior to paving shall be incidental to the related paving items.

51. Pavement cut lines shall be neat, clean and straight as directed by the Resident. Payment for cutting of existing pavement shall be incidental to the related Contract items as specified in the Standard Specifications Section 401.17 - Joints.

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DEPARTMENT OF TRANSPORTATION

MULTIWIN

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	PLP	
CHECKED-REVIEWED	LEM	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	E.JB	SEPT 2018
REVISIONS 2	TWM	SEPT 2018
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

GARDINER
RTE 9\126\US 201 & RTE 24

GENERAL NOTES (1 OF 2)

SHEET NUMBER

5

OF 7

WIN 18735.00 GENERAL CONSTRUCTION NOTES

1. Subsurface explorations at the project encountered fill material in some areas on the project. This material can be identified in the field visually as it contains pieces of brick, glass, ceramics, wood, and coal ash. The fill material was located roughly between MaineDOT stations 73+00 to roughly MaineDOT station 74+00 right and left of center. The depth ranged from 3 feet to 10 feet below ground surface, in particular along the river banks. This material, if encountered, may be reused on-site as fill material if deemed suitable as backfill material by the Resident. If the material cannot be reused on site, the Contractor is responsible for obtaining all approvals or permits and any required analytical results for the proper disposal at a licensed Maine Department of Environmental Protection (MDEP) facility.

2. The project geotechnical report titled: Geotechnical Design Report Bridge Street Bridge, September 2018 may be accessed at the MaineDOT web address.

3. All embankment material, except as otherwise shown, placed below EL. 12.0 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

4. Construct the riprap shelf at Abutment 2 at EL. 13.0.

5. The steel portions of the existing bridge are coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of demolishing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge is removed, the Contractor is solely responsible for the care, custody and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment and other costs required to remove and dispose of the existing bridge will be considered incidental to the bridge removal pay item.

WIN 18736.00 GENERAL CONSTRUCTION NOTES

1. This project includes two superstructure alternates: A prefabricated bridge unit alternate and a detail-build NEXT beam alternate. Only one superstructure alternate shall be constructed.

2. The project geotechnical report titled: Geotechnical Design Report Maine Avenue Bridge, September 2018 may be accessed at the MaineDOT web address.

3. Subsurface explorations at the project encountered fill material in some areas on the project. This material can be identified in the field visually as it contains pieces of brick, glass, ceramics, wood, and coal ash. The fill material was located roughly from MaineDOT stations 3+00 to roughly MaineDOT station 4+00 right of center, and roughly between MaineDOT stations 4+50 to roughly MaineDOT station 5+00 right of center. The depth ranged from 3 feet to 10 feet below ground surface, in particular along the river banks and in the vicinity of the railroad tracks. This material, if encountered, may be reused on-site if deemed suitable for backfill material by the Resident. If the material cannot be reused on-site, the Contractor is responsible for obtaining all approvals or permits and any required analytical results for the proper disposal at a licensed Maine Department of Environmental Protection (MDEP) Facility.

4. The existing stacked granite abutments shall be removed and stockpiled on site as directed by the Resident and reset as granite revetment. The cost associated with removing and stockpiling the stacked granite will be considered incidental to the bridge removal pay item. The cost associated with resetting the granite pieces as revetment will be paid for under the hand labor and equipment pay items.

5. Payment for excavation of the existing embankment material located between the existing abutments and the proposed abutments, which is not included under other pay items, will be considered incidental to the bridge removal pay item.

6. All embankment material, except as otherwise shown, placed below EL. 8.0 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

7. Construct the riprap shelf at each abutment at EL. 8.0.

8. The upstream end of the existing stacked granite retaining wall extending from the south railroad bridge abutment shall be re-set and stabilized under Contract labor and equipment items.

WIN 18736.10 GENERAL CONSTRUCTION NOTES

1. The project geotechnical report titled: Geotechnical Design Report Multi-Use Trail Bridge, September 2018 may be accessed at the MaineDOT web address.

2. All embankment material, except as otherwise shown, placed below EL. 9.0 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

3. Construct the riprap shelf at EL. 9.0 at Abutment 1 and EL. 10.0 at Abutment 2.

WIN 22684.00 GENERAL CONSTRUCTION NOTES

1. The Maine Department of Environmental Protection (MDEP) has reported spills and releases involving petroleum products adjacent to the project, in particular at a former retail gasoline station located at the corner of Brunswick Avenue and Water Street. Based on the scope of work presented, available data suggests that this contamination may be adjacent to the immediate areas of any excavation proposed by the Department. However, in light of MDEP's findings, the Contractor shall employ appropriate health and safety measures to protect its workers against hazards associated with working near petroleum-impacted soils. Furthermore, the Contractor shall remain alert for any additional evidence of contamination. If the Contractor encounters evidence of soil or groundwater contamination, the Contarctor shall secure the excavation, stop work in the contaminated area, and immediately notify the Resident. The Resident shall contact the Department's Office of Safety and Compliance at 207-624-3004 and the MDEP at 800-482-0777. Work may only continue with authorization from the Resident.

ABBREVIATION LEGEND

Abut. = Abutment
Alt. = Alternating
Bot. = Bottom
Brg. = Bearing
ea. = Each
E.F. = Each Face
EL. = Elevation
eq. sp. = Equally Spaced
F.F. = Far Face
HMA = Hot Mix Asphalt
H.P.W.M. = High Performance Waterproofing Membrane
L.P.C. = Low Permeability Concrete
Max. = Maximum
M.C. = Mechanically Coupled
Mid. = Middle
Min. = Minimum
N.F. = Near Face
No. = Number
P.E.J.F. = Preformed Expansion Joint Filler
Sp. = Space
Spl. = Splice
Sta. = Station
Typ. = Typical
W.S. = Wearing Surface

PATTERN LEGEND

Removal Outline
Precast Concrete
Cast-in-Place Concrete
Existing Concrete
Interpretive Panel
Cut to Fit

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MULTIWIN BRIDGE PLANS

		BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	PLP	EJB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

GARDINER
RTE 9\126\US 201 & RTE 24

GENERAL NOTES (2 OF 2)

SHEET NUMBER
6
OF 7

Filename: ...\MSTA\006_Notes_multi_win_2.dgn Division: BRIDGE Username: lflanders Date:10/31/2018

STATION	CULVERT PIPE											CATCH BASIN								MH	UNDERDRAIN						ELBOWS, TEES, WYES AND INLET GRATE UNITS	REMARKS
	RCP			CMP		OPTION I		OPTION III													TYPE B		TYPE C					
								SMOOTHLINED		CORRUGATED											TYPE B	OUTLET	SMOOTHLINED		CORRUGATED		DESCRIPTIONS	
	SIZE	LENGTH	CLASS	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	A1-C	A5-C	B1-C	F4	F4-C	F5	F5-C	SPECIAL		LENGTH	LENGTH	SIZE	LENGTH	SIZE	LENGTH		
WIN: 18735.00																												
CULVERTS																												
CB-3 TO CB-4	18"	40'	III																									
CB-3 TO STA. 73+64.12, 57.11' RT.								18"	36'																			
CB-4A TO CB-4								12"	17'																			
CB-7 TO CB-8								12"	22'																			
CB-8 TO CB-9								12"	46'																			
CB-9 TO MH-1								18"	39'																			
MH-1 TO CB-10								18"	42'																			
CB-11 TO STA. 217+95.00, 33.87' LT.								24"	20'																			
MH-3 TO CB-25								24"	12'																			
STA. 76+68.34, 79.83' LT. TO CB-25								24"	40'																			
CATCH BASINS																												
CB-3 STA. 73+74.98, 20.69' RT.												1																
CB-4 STA. 73+79.00, 22.87' LT.													1															5 FOOT DIAMETER
CB-4A STA. 73+91.06, 39.28' LT.																		1										
CB-5 STA. 74+64.32, 20.87' LT.													1															2 FOOT CONE
CB-6 STA. 71+74.50, 20.87' RT.												1																
CB-7 STA. 19+38.51, 38.37' LT.												1																
CB-8 STA. 71+12.83, 41.09' LT.												1																
CB-9 STA. 71+59.35, 25.39' LT.													1 5/8															
CB-10 STA. 217+50.00, 11.87' LT.														1														FLAT TOP
CB-11 STA. 217+95.00, 11.87' LT														1														FLAT TOP
CB-25 STA. 76+59.90, 36.40' LT												1																
MANHOLE																												
MH-1 STA. 217+48.63, 34.09' RT.																				1								FLAT TOP
MH-3 STA. 76+49.14, 23.31' LT.																				1								6 FOOT DIAMETER FLAT TOP
UNDERDRAIN																												
CB-5 TO CB-4																							12"	82'				
CB-6 TO STA. 71+01.13, 23.87' RT.																							12"	69'				
CB-10 TO CB-11																							18"	41'				
CB-5 TO STA. 75+06.65 26.49' LT.																					43'							
STA. 19+08.00, 25.10' LT. TO CB-7																					32'							
CB-11 TO STA. 218+60.00, 11.87' LT.																					63'							
WIN: 18736.00																												
CULVERTS																												
CB-19 TO STA. 3+22.55, 16.31' LT.	12"	32'	III																									
STA. 3+22.55, 16.31' LT. TO CB-20	24"	29'	III																									
CB-20 TO STA. 3+68.66, 35.77' LT.	24"	16'	III																									
CB-21 TO STA. 4+37.26, 34.53' LT.	24"	32'	III																									
CB-22 TO CB-21								18"	52'																			
CATCH BASINS																												
CB-19 STA. 3+05.00, 14.87' RT.												1																
CB-20 STA. 3+53.70, 25.76' LT.												1 3/4																
CB-21 STA. 4+65.00, 14.87' LT.												1 1/4																
CB-22 STA. 5+20.50, 14.87' LT.												1 1/8																
UNDERDRAIN																												
STA. 3+50.00, 14.87' RT. TO CB-19																					43'							
WIN: 18736.10																												
CB-12 TO MH-12								12"	8'																			
MH-12 TO CB-13								12"	9'																			
CB-14 TO STA. 153+83.10, 30.87' LT.								18"	20'																			
CATCH BASINS																												
CB-12 STA. 152+54.10, 16.87' LT.														1														
CB-13 STA. 152+77.15, 8.87' LT.														1														
CB-14 STA. 153+83.10, 8.87' LT.														1														
CB-15 STA. 155+02.56, 8.87' LT.												1																
CB-23 STA. 5+90.70, 14.87' LT.																			1									INSTALL "CASCADE" GRATE
CB-24 STA. 6+49.00, 14.87' LT.																1												
MANHOLE																												
MH-12 STA. 152+65.84, 14.72' LT.																				1 1/8								
UNDERDRAIN																												
CB-14 TO CB-15																							12"	114'				
CB-23 TO CB-22																							18"	67'				
CB-24 TO CB-23																							15"	55'				
STA. 218+75.00, 16.87' LT. TO CB-12																					257'							
STA. 153+00.00, 8.87' LT. TO CB-14																					81'							
CB-15 TO 157+01.90, 8.88' LT.																					197'							

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MULTI-WIN HIGHWAY PLANS

BY	DATE
EJB	SEPT 2018
TWM	SEPT 2018

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	PLP
DESIGN-DETAILED	
CHECKED-REVIEWED	LEM
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

GARDINER
RTE 9\125\US 201 & RTE 24

DRAINAGE SUMMARY

SHEET NUMBER
7
OF 7

Filename: ...\BRIDGE\MSTA\007_Drainage.dgn Division: BRIDGE Username: dataylor Date:10/30/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Seventh Edition 2014 with 2015-2016 Interim Revisions.

DESIGN LOADING

Live Load ..... HL - 93 Modified

TRAFFIC DATA

Current (2018) AADT	14430
Future (2038) AADT	15870
DHV - % of AADT	9%
Design Hour Volume	1428
Heavy Trucks (% of AADT)	6%
Heavy Trucks (% of DHV)	4%
Directional Distribution (% of DHV)	55%
18 kip Equivalent P 2.0	354
18 kip Equivalent P 2.5	337
Design Speed (mph)	25

HYDROLOGIC DATA

Drainage Area	219 sq mi
Design Discharge (Q50)	5290 cfs
Check Discharge (Q100)	5910 cfs
Headwater Elevation (Q1.1)	7.0 ft
Headwater Elevation (Q25)	10.0 ft
Headwater Elevation (Q50)	11.1 ft
Headwater Elevation (Q100)	11.6 ft
Discharge Velocity (Q1.1)	5.7 fps
Discharge Velocity (Q50)	9.1 fps
Discharge Velocity (Q100)	9.3 fps

MATERIALS

Concrete:	
Barriers, Curbs, Sidewalks & Transition Barriers	Class "LP"
Precast	Class "P"
All Other	Class "A"
Reinforcing Steel:	
Plain	ASTM A 615/A 615M, Grade 60
Micropile	ASTM A 615/A 615M, Grade 75 (All-thread)(Galvanized)
Stainless Steel	ASTM A 995/A 995M, Grade 75
Structural Steel:	ASTM A 709, Grade 50
All Material (except as noted)	(Galvanized or Metalized)
High Strength Bolts	ASTM F3125, Grade A325, Type 1 (Galvanized)
Micropile Casing	API 5 CT, Grade N80

BASIC DESIGN STRESSES

Concrete, Class "A"	f 'c = 4,000 psi
Concrete, Fill	f 'c = 3,000 psi
Concrete, Class "LP"	f 'c = 5,000 psi
Concrete, Class "P"	f 'c = 4,000 psi
Micropile Grout	f 'c = 5,000 psi
Reinforcing Steel:	
ASTM A615, Grade 60	f y = 60,000 psi
ASTM A615, Grade 75	f y = 75,000 psi
ASTM A995, Grade 75	f y = 75,000 psi
Structural Steel:	
ASTM A709, Grade 50	F y = 50,000 psi
ASTM F3125, Grade A325	F μ = 120,000 psi
API 5 CT, Grade N80	F y = 80,000 psi

GARDINER
KENNEBEC COUNTY
BRIDGE STREET BRIDGE
OVER
COBBOSSEECONTEE STREAM
ROUTE 9\126\US 201
FEDERAL AID PROJECT NO. STP-1873(500)
PROJECT LENGTH 0.15 mi.
BRIDGE NO. 2101

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UTILITIES

Central Maine Power Company
City of Gardiner (Sewer)
Consolidated Communications
FirstLight
Gardiner Water District
Summit Natural Gas
Spectrum

MAINTENANCE OF TRAFFIC

Short-term full bridge closure with detour to Maine Avenue and Summer/Winter Street.

PROJECT LOCATION	Located in the City of Gardiner 0.04 of a mile north of Water Street, carrying Route 201 over the Cobbosseecontee Stream. Lat./Long. 44°13'50" N 69°46'28" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Bridge Replacement with Intersection Improvements and 600' of Approach Work

WIN 18735.00

STP-1873(500)

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED — DATE 11/14/18

COMMISSIONER: [signature] — DATE 11-13-18

CHIEF ENGINEER: Jay Neal Taylor

STATE OF MAINE — REGISTERED PROFESSIONAL ENGINEER — TIMOTHY W. WRIGHT — No. 12294

Timothy W. Wright — SIGNATURE — 12294 — P.E. NUMBER — 9-26-18 — DATE

PROJECT INFORMATION

PROGRAM	BRIDGE		
PROJECT MANAGER	L. TIMBERLAKE		
DESIGNER	T. MERRITT		
CONSULTANT	STANTEC		
PROJECT RESIDENT			
CONTRACTOR			
PROJECT COMPLETION DATE			

GARDINER
BRIDGE STREET BRIDGE

TITLE SHEET

SHEET NUMBER
A1
OF A78

Filename: \00\BRIDGE\MSTA\0A1_Title.dgn Division: BRIDGE Username: kwight Date:9/26/2018

CURVE DATA #1
PI = 17+75.66
D = 18°28'57.0"
Δ = 41°25'47.9" Rt.
R = 310.00'
L = 224.16'
T = 117.23'
E = 21.43'

To West Gardiner

215+00 N3°43'38.26"E

216+00

WATER STREET (ROUTE 9/126)

SUMMER STREET

PC = STA. 3

Remove Concrete Decks

Anchorage Assembly 31" W-Beam Guardrail - Mid-Way Splice - Single Faced

Adjust CB to Grade

Alter CB to MH

Adjust CB to Grade

Slope to Drain

℄ Brg., Abut. No. 1 Sta. 72+13.00

135'-0"

℄ Brg., Abut. No. 2 Sta. 73+48.00

Sta. 29+02.21 Limit of Work

31" W-Beam Guardrail - Mid-Way Splice Tangent Terminal (TL-2)

31" W-Beam Guardrail - Mid-Way Splice - Single Faced (8" Posts)

29+00

N79°08'42.85"E

~Removing Building No. 1~

2:1

S78°59'52.72"E

217+00

Sta. 217+19.33 Begin WIN 18735.00

Bridge Transition (Asymmetrical) Type IA

18" Opt. III

Heavy Riprap (Typ.)

Stream Restoration (Special Fill)

Warp

1.75:1

2

Plain Riprap

Bridge Transition (Asymmetrical) Type IA

31" W-Beam Guardrail - Mid-Way Splice Tangent Terminal (TL-2)

12" Opt. III

Adjust CB to Grade

Sta. 171+95.00 Limit of Work

Sta 19+68.98 Begin WIN 22684.00 Rt of 13.0 Lt Continue WIN 18735.00 Lt or 13.0 Lt

12" Opt. III

18" Opt. III

CB-7

CB-8

CB-9

MH-1

18" UD

CB-8A

CB-4

12" UD

CB-5

6" UD

30+00

71+00

72+00

73+00

74+00 BRIDGE STREET (ROUTE 9/126/US 201)

75+00

76+00

To Richmond

172+00 N11°00'07.28"E

173+00

BRUNSWICK AVE. (US ROUTE 201)

Reconstruct Railing Access

N11°00'07.28"E

12" UD

CB-6

CB-13

18" RCP Class III

Adjust CB to Grade

Sta 70+93.87 Continue WIN 18735.00 End WIN 22684.00

Remove Building No. 2 Foundations

Bridge Transition (Asymmetrical) Type IA

Temporary Support (Contractor Designed) (Typ.)

Staging Area for Bridge Lateral Slide In

Plain Riprap Downspout

31" W-Beam Guardrail - Mid-Way Splice - Single Faced

Curb Ramp Detectable Warning Field (Typ.)

W-Beam Guardrail - Mid-Way Splice (Over 15' Radius)

Anchorage Assembly

Adjust CB to Grade

Remove Pavement, Loam & Seed

Adjust CB to Grade

Sta 173+07.00 End WIN 18735.00 Rt. of 14.9' Lt. Continue WIN 22684.00 Lt. of 14.9 Lt.

Shading Denotes Mill & 3" Pave (Typ.)

WATER STREET

S79°44'55.96"E

21+00

Relocate Diner Sign

Replace Metal Stairs

1

ARCADE

6" UD Type B

Sta. 72+27.50 Bridge St. = Sta. 218+00 Arcade

219+00

Sta. 219+20 Begin WIN 18736.10 End WIN 18735.00

220+00

22+00

COBBOSSEECONTEE STREAM

Flow

PLAN

25 0 25 50

Scale of Feet

LEGEND

- - - - = Match Line with WIN 18736.10 & 22684.00

◇# = Interpretive Panel

NOTES

1. See WIN 22684.00 Intersection Plans for Bridge Street and Water Street Intersection details. This includes removal of existing signal equipment and installation of proposed signal equipment.

2. Reference Utility Plans for proposed relocations of existing utilities (water, gas, aerial electric and cable, and underground communications) and street lighting.

3. See WIN 18736.10 plans for trail details.

4. Upper 6' of Heavy Riprap slopes shall have 6" layer of Loam Woodwaste Mulch Mix with Special Seed Mix and Seeding Hydromulch Medium. Fill slopes without riprap adjacent to Cobbosseecontee Stream shall have 12" loam with Special Seed Mix and Seeding Hydromulch Medium. See Typical Sections and Special Provisions Sections 615, 618, and 621.

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

P.E. NUMBER

DATE

BY	DATE
DOT	SEPT 2018
LEM\TWM	SEPT 2018
PLP	SEPT 2018

SIGNATURE

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	LSF
CHECKED-REVIEWED	DOT
DESIGN2-DETAILED2	PLP
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

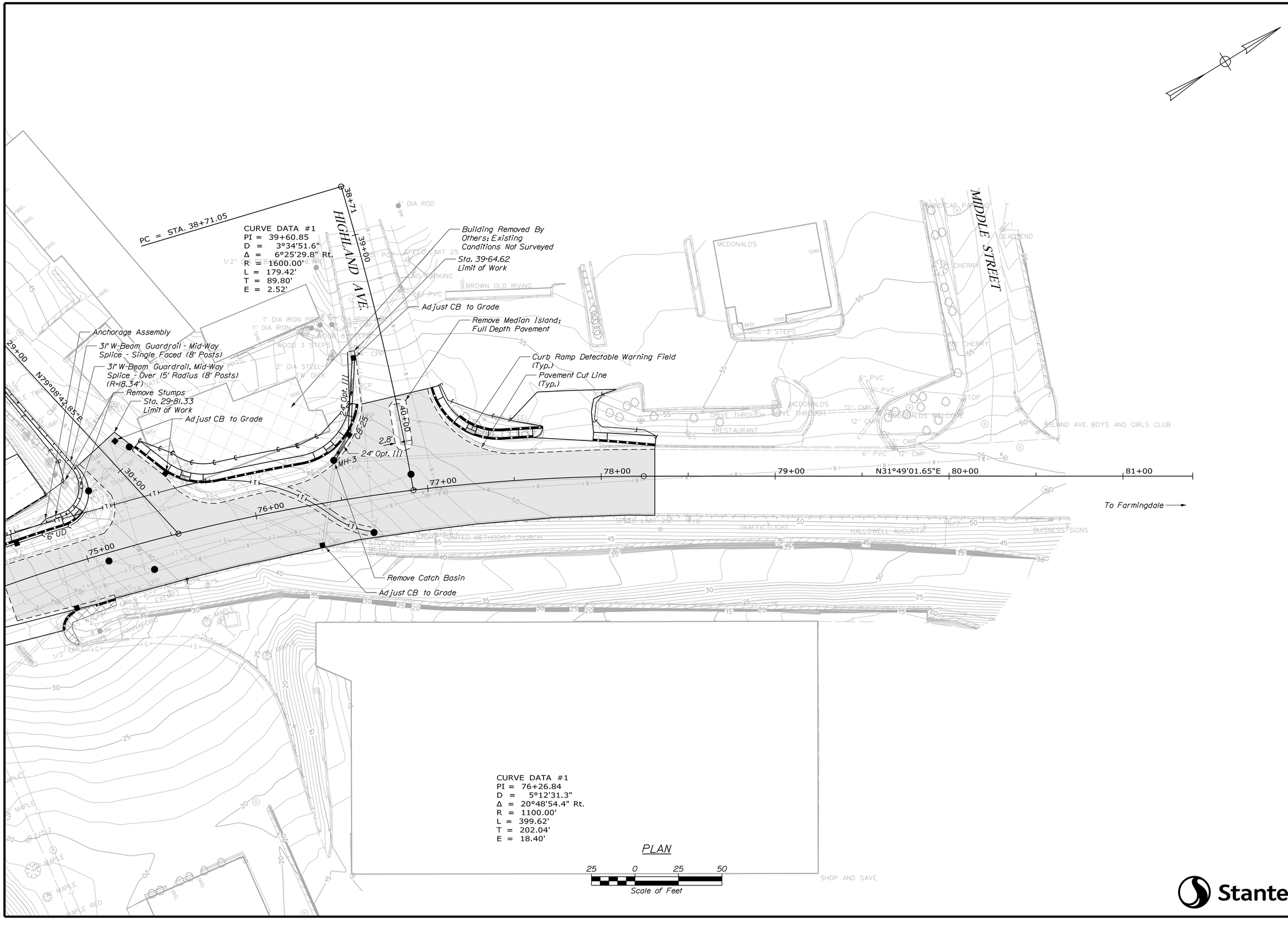
GENERAL PLAN

SHEET NUMBER

A2

OF A78

Filename: ...\00\BRIDGE\MSTA\0A2_Plan1.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101 — BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	LSF	SEPT 2018
CHECKED-REVIEWED	DDT	SEPT 2018
DESIGN2-DETAILED2	PLP	SEPT 2018
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER — KENNEBEC COUNTY

GENERAL PLAN

SHEET NUMBER

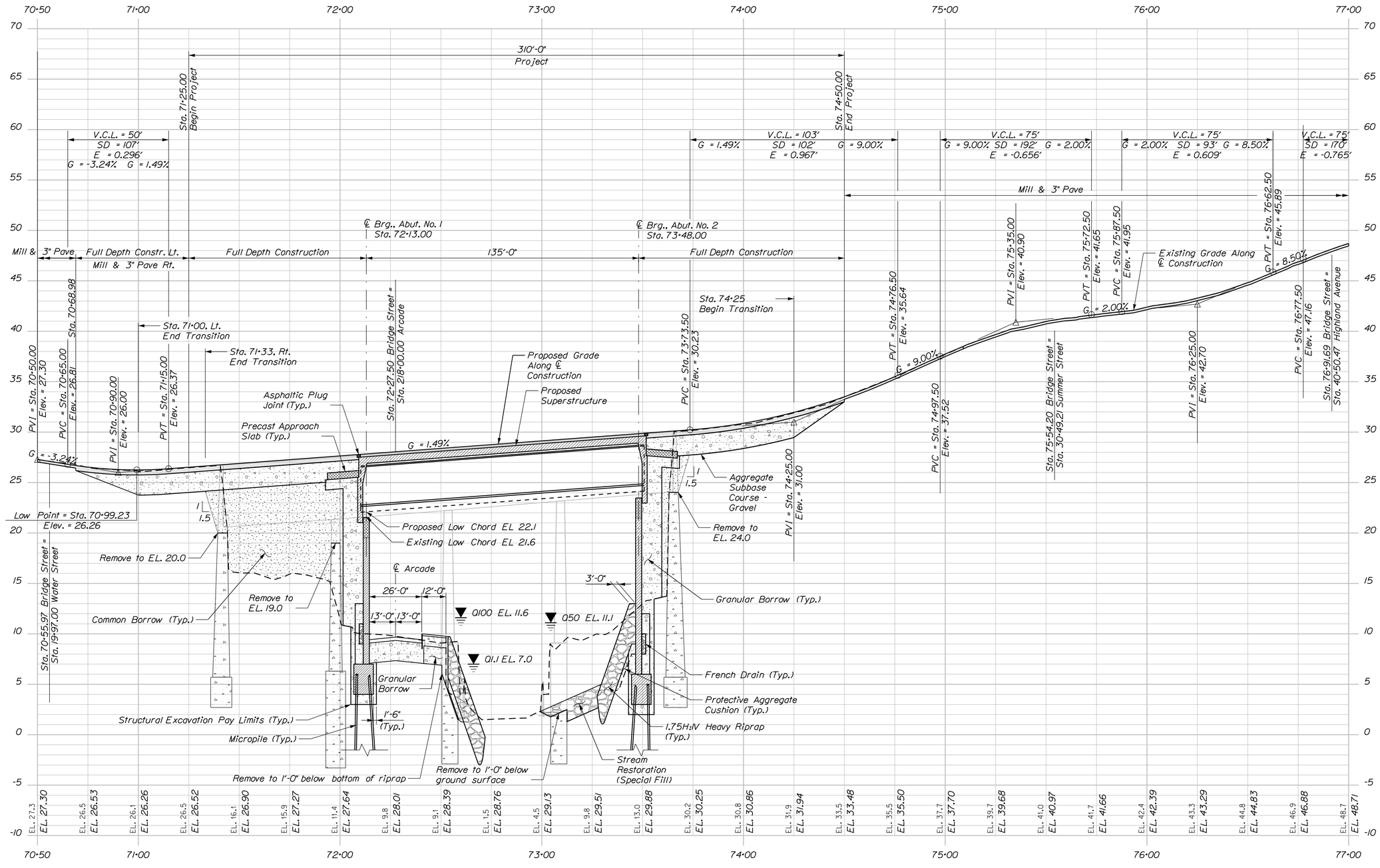
A3

OF A78

Stantec

Filename: ...\00\BRIDGE\MSTA\0A3_Plan2.dgn Username: dataylor Date:9/27/2018 Division: BRIDGE

Filename: ...\00\BRIDGE\MSTA\0A4_Profile.dgn Division: BRIDGE Username: datoylor Date:9/27/2018



NOTE:

1. Existing substructure and foundation dimensions shown are based on a combination of existing plans and field observations. Actual conditions may differ from these Plans.

2. Existing vertical clearance at Arcade is 11'-1"
Proposed vertical clearance at Arcade is 12'-0"

BRIDGE STREET PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	LSF
CHECKED-REVIEWED	DDT
DESIGN2-DETAILED2	PLP
DESIGN3-DETAILED3	

	BY	DATE
REVISIONS 1	DDT	SEPT 2018
REVISIONS 2	LEMTWM	SEPT 2018
REVISIONS 3	PLP	SEPT 2018
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

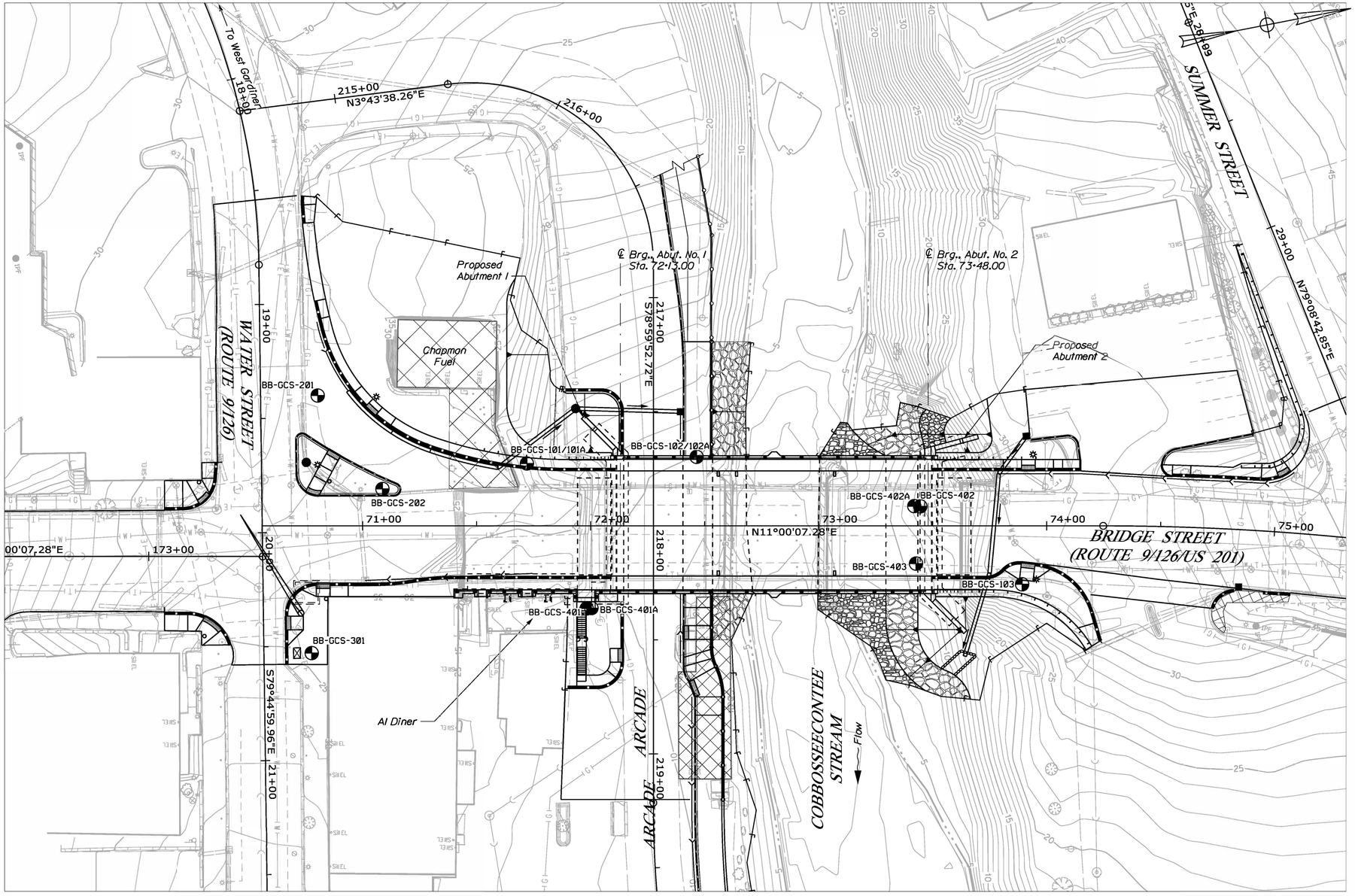
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

PROFILE

SHEET NUMBER

A4

OF A78



LEGEND

BB-GCS-101 BB-GCS-201	DESIGNATION AND LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS FROM 9 NOVEMBER TO 1 DECEMBER 2015.
BB-GCS-301	DESIGNATION AND LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS FROM 24 TO 30 NOVEMBER 2016.
BB-GCS-401	DESIGNATION AND LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS FROM 10 TO 18 APRIL 2017.

NOTES:

1. EXISTING AND PROPOSED SITE CONDITIONS ARE TAKEN FROM ELECTRONIC MICTROSTATION FILES PROVIDED BY STANTEC ON 12 MAY 2017.
2. AS-DRILLED LOCATIONS OF TEST BORINGS WERE DETERMINED IN THE FIELD BY MAINEDOT USING GPS SURVEY EQUIPMENT.
3. SUBSURFACE EXPLORATIONS SHOWN WERE MONITORED BY HALEY & ALDRICH PERSONNEL.
4. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

PLAN

25 0 25 50

SCALE

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

STATE OF MAINE
WAYNE A. CHABOURNE
No. 10620
PROFESSIONAL ENGINEER
LICENSED

SIGNATURE

10620
P.E. NUMBER

9/26/2018
DATE

		BY	DATE
PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	K/FP	EAF	SEPT 2018
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

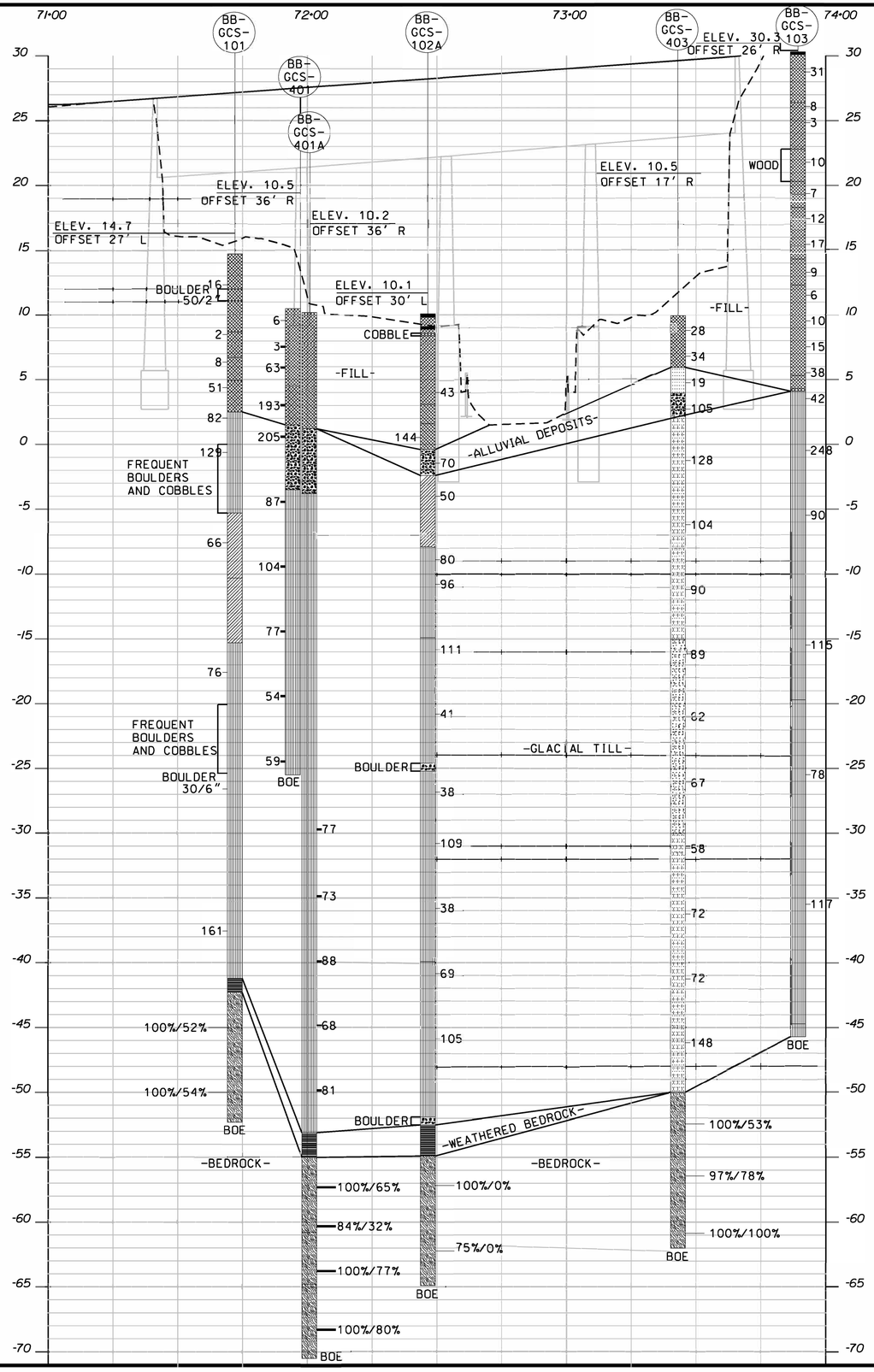
BORING LOCATION PLAN

SHEET NUMBER

A5

OF A78

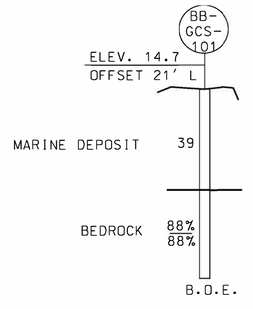
Filename: ...\0A5_Gardiner 1873-6 Bridge Street_Existing_BRIDGE Username: dotaylor Date:9/25/2018



NOTES

1. THE SUBSURFACE PROFILE IS LOCATED ALONG THE CENTERLINE OF THE PROPOSED BRIDGE.
2. EXISTING GROUND SURFACE/MUDLINE ELEVATIONS AND BRIDGE STRUCTURE GEOMETRY WERE TAKEN FROM THE ELECTRONIC FILES PROVIDED BY STANTEC ON 12 MAY 2017.
3. THE "AS-DRILLED" TEST BORING LOCATIONS AND GROUND SURFACE ELEVATIONS WERE DETERMINED BY MAINEDOT USING GPS SURVEY EQUIPMENT.
4. LINES REPRESENTING CHANGES IN STATA ARE BASED ON LINEAR INTERPOLATION BETWEEN SUBSURFACE EXPLORATIONS. THESE INTERPRETED STRATA LINES DO NOT REPRESENT ACTUAL FIELD CONDITIONS OTHER THAN AT SPECIFIC EXPLORATION LOCATIONS. ACUTAL FIELD CONDITIONS ALONG THE SUBSURFACE PROFILE WILL VARY FROM THOSE SHOWN.
5. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERITCAL DATUM OF 1988 (NAVD88).

LEGEND



TEST BORING DESIGNATION

GROUND SURFACE ELEVATION AT TEST BORING APPROXIMATE PERPENDICULAR OFFSET DISTANCE AND DIRECTION MEASURED FROM PROPOSED CENTERLINE

CORRECTED STANDARD PENETRATION TEST (SPT) N-VALUE (N60 BLOWS PER FOOT)

STRATA INTERFACE

PERCENT RECOVERY
PERCENT ROCK QUALITY DESIGNATION (RQD)

DENOTES BOTTOM OF EXPLORATION AT APPROXIMATE DEPTH SHOWN

STRATA SYMBOLS

- FILL
- POORLY GRADED SAND
- SILTY SAND
- SILTY SAND AND GRAVEL
- WEATHERED BEDROCK
- BEDROCK
- LOW PLASTICITY ORGANIC SILTS
- LOW PLASTICITY CLAY
- FINE GRAVEL
- WELL GRADED GRAVEL WITH SILT
- PAVING
- WELL GRADED SAND
- WELL GRADED GRAVEL
- WELL GRADED GRAVEL AND SAND

PROFILE

Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

HIGHWAY PLANS

STATE OF MAINE · WAYNE A CHADBOURNE · No. 10620 · LICENSED PROFESSIONAL ENGINEER

SIGNATURE			
P.E. NUMBER	10620		
DATE	9/26/2018		

			DATE
PROJ. MANAGER	L. TIMBERLAKE	BY	
DESIGN-DETAILED	KAR	PHK	SEPT 2018
CHECKED-REVIEWED	EAF	EAF	SEPT 2018
DESIGN2-DETAILED2	EAF	KFP	
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

A6

OF A78

Filename: ...\0A6_Gardiner 18735-6 Bridge Street ISV.dgn Date:9/25/2018
Username: dotaylor

Filename: ...\0A7-0A11_18765-6_Bridge Street Boring Logs.dgn Username: datoylor Date:9/25/2018

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-101
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	14.7	**Auger ID/OD:**	--
Operator:	M. Porter	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in. ID
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30-HWNW300#/
Date Start/Finish:	11-12-2015/11-17-2015	**Drilling Method:**	HWNW drive	**Core Barrel:**	NQ-2.0 in. ID
Boring Location:	El 141624; N509739	**Casing ID/OD:**	HW-4.0 in. IDNW-3.0 in. ID	**Water Level*/*:**	6.0
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒		

Definitions:
D = Split Spoon Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
WOP = Weight of one person
R = Rock Core Sample
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
Hammer Efficiency Factor/60%/*/N-uncorrected
Su = Insitu Field Vane Shear Strength (psf)
Su(rem) = 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
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test
MV = Unsuccessful Insitu Vane Shear Test attempt

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/8	0.0 - 2.0	2/7/9/12	16	16	HW			Brown, dry, medium dense, fine to coarse SAND, some gravel, little silt, contains trace concrete, wood chips and roots -FILL-(SW-SM) PID=0.2ppm	GF365344 A-1-b, SW-SM
	2D	8/2	2.0 - 2.7	10/50(2.0")						Same as 1D, except light brown, very dense due to cobble/boulder PID=0.3ppm	
5	3D	24/6	4.0 - 6.0	5/1/1/2	2	2				-BOULDER-	GF365345 A-1-a, SW-SM
	4D	24/1	6.0 - 8.0	4/5/3/12	8	8				Dark brown, moist, very loose, fine to coarse SAND, some gravel, little silt, well graded, trace clayey SILT nodules and wood chips -FILL-(SW-SM) PID=0.0ppm	
10	5D	24/10	8.0 - 10.0	30/40/11/15	51	51				Brown, wet, loose, GRAVEL, trace fine to coarse sand, trace silt, poorly graded -FILL-(GP) PID=0.2ppm	
	6D	24/7	10.4 - 12.4	15/15/67/74	82	82				Brown, wet, very dense, silty fine to medium SAND, little gravel, trace coarse sand, contains trace wood chips, strong petroleum-like oder at 9.8 ft. -FILL-(SM) PID=0.6ppm	
15										PID=64ppm (9.8-10.0 ft) Similar to 6D -FILL-(GP) PID=16.0ppm (10.4-12.4 ft)	
	7D	24/14	13.0 - 15.0	29/69/60/68	129	129				Olive-gray, dry, hard, SILT, little fine to coarse sand and gravel, well bonded -GLACIAL TILL-(ML) PID=0.0ppm	
20	8D	24/21	20.0 - 22.0	23/30/36/50	66	66				Note: frequent boulders and cobbles based on drill action and driller observations.	GF365346 A-4, CL #365357 WC=9% LL=21, PL=12 PI=8
25							HW			Olive-gray, dry, hard, CLAY, some fine to medium sand, trace coarse sand, trace gravel, well bonded -GLACIAL TILL-(CL) PID=0.0ppm	
30	9D	24/16	30.0 - 32.0	19/31/45/46	76	76				Olive-gray, dry, hard, SILT, little fine to coarse gravel, trace fine to coarse sand, well bonded -GLACIAL TILL-(ML) PID=0.0ppm	
35										Note: Numerous boulders/cobbles encountered from 35.0-40.0 ft based on drill action and driller observations.	
40	10D	6/6	40.0 - 40.5	30(6.0")						Olive-gray, dry, hard, SILT, little fine gravel, trace coarse to fine sand, well bonded Note: Split Spoon refusal on cobble/boulder at 40.5 ft. -GLACIAL TILL-(ML) PID=0.0ppm	
45							NW				
50											

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.

Page 1 of 2

Boring No.: BB-GCS-101

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-101
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	14.7	**Auger ID/OD:**	--
Operator:	M. Porter	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in. ID
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30-HWNW300#/
Date Start/Finish:	11-12-2015/11-17-2015	**Drilling Method:**	HWNW drive	**Core Barrel:**	NQ-2.0 in. ID
Boring Location:	El 141624; N509739	**Casing ID/OD:**	HW-4.0 in. IDNW-3.0 in. ID	**Water Level*/*:**	6.0
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒		

Definitions:
D = Split Spoon Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
WOP = Weight of one person
R = Rock Core Sample
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
Hammer Efficiency Factor/60%/*/N-uncorrected
Su = Insitu Field Vane Shear Strength (psf)
Su(rem) = 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
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test
MV = Unsuccessful Insitu Vane Shear Test attempt

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
50	11D	24/24	50.0 - 52.0	29/86/75/163	161	161	NW			Olive-gray, dry, hard, SILT, some gravel, trace fine to coarse sand, well bonded -GLACIAL TILL-(ML) PID=0.0ppm	
55								-41.2		Note: Strata change at 55.9 ft based on drill action.	
	R1	60/60	57.0 - 62.0	RQD = 52%		NQ		-42.3		-WEATHERED BEDROCK-	UC qp=6,343psi
60										Top of Bedrock at El. 42.3 Light gray to gray, fine to medium grained SCHIST with calc-silicate zone from approximately 57.0-57.5 ft and quartz, plagioclase, biotite zone from approximately 57.7-59.6 ft, hard to very hard, slightly weathered. Joints horizontal to low angle. Secondary high angle joint set. Joints very close to close, tight to open, occasional silt infilling. Recovery=100% Rock Mass Quality=Fair R1 Core Times(min/sec): 57.0-58.0'(1:30), 58.0-59.0'(2:00), 59.0-60.0'(2:00), 60.0-61.0'(1:30), 61.0-62.0'(1:30)	
65	R2	60/60	62.0 - 67.0	RQD = 53%						Grey to dark gray, fine to medium grained SCHIST, hard, slightly weathered. Primary joints dipping at horizontal to low angles, parallel to foliation. High angle secondary joints. Joints very close to close, tight to open, occasional silt infilling. Recovery=100% Rock Mass Quality=Fair R2 Core Times(min:sec): 62.0-63.0'(2:00), 63.0-64.0'(1:30), 64.0-65.0'(2:00), 65.0-66.0'(1:30), 66.0-67.0'(1:30)	
70								-52.3		-VASSALBORO FORMATION-	
75								-67.0		Bottom of Exploration at 67.0 feet below ground surface.	

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Page 2 of 2

Boring No.: BB-GCS-101

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-101A
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	14.7	**Auger ID/OD:**	HSA-2-1/4 in. ID
Operator:	M. Porter	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in. ID
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30
Date Start/Finish:	12-1-2015/12-1-2015	**Drilling Method:**	Auger	**Core Barrel:**	--
Boring Location:	E1141624, N509739	**Casing ID/OD:**	--	**Water Level*/*:**	8.0
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒		

Definitions:
D = Split Spoon Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
WOP = Weight of one person
R = Rock Core Sample
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
Hammer Efficiency Factor/60%/*/N-uncorrected
Su = Insitu Field Vane Shear Strength (psf)
Su(rem) = 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
MD = Unsuccessful Split/Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test
MV = Unsuccessful Insitu Vane Shear Test attempt

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							HSA			Note: See BB-GCS-101 for soil descriptions from 0-8.0 ft.	
5											
10	1D	24/12	8.5 - 10.5	17/10/22/34	32	32		6.7		Note: Cobbles from 8.0-8.5 ft. PID reading on auger bit at 8.0 ft=10.6ppm	
								6.2		PID=142ppm(soil sample) PID=305ppm(water in sample)	
15								4.2		Bottom of Exploration at 10.5 feet below ground surface.	
20											

Remarks:

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Page 1 of 1

Boring No.: BB-GCS-101A

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-102
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	10.1	**Auger ID/OD:**	--
Operator:	M. Porter	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in. ID
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30-HW-300#/24
Date Start/Finish:	11-09-2015/11-10-2015	**Drilling Method:**	HW Drive	**Core Barrel:**	--
Boring Location:	El 141635; N509813	**Casing ID/OD:**	HW-4 in. ID	**Water Level*/*:**	4.2
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒		

Definitions:
D = Split Spoon Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
WOP = Weight of one person
R = Rock Core Sample
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
Hammer Efficiency Factor/60%/*/N-uncorrected
Su = Insitu Field Vane Shear Strength (psf)
Su(rem) = 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
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test
MV = Unsuccessful Insitu Vane Shear Test attempt

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							HW	9.6		-BITUMINOUS CONCRETE- 0.5	GF365347 A-1-b, SP
	1D	24/12	1.0 - 3.0	24/16/6/5	22	22				Dark brown, dry, medium dense, fine to coarse SAND, little fine gravel, trace silt -FILL-(SP) PID=0.0ppm	
	2D	7/5	3.0 - 3.6	6/50(1.0")				6.5		Dark brown, moist, very dense, gravelly SAND, little silt, contains brick and concrete fragments, roots	
5	3D	24/9	4.2 - 6.2	15/19/1/18	30	30		5.9		-FILL-(SP) PID=0.3ppm	GF365348 (4.2'-6.2') A-1-a, GW
								-3.6		-BOULDER- -4.2	
	4D	8/7	6.2 - 6.9	30/50(2.0")				4.1		Brown, wet, medium dense, sandy GRAVEL, trace silt, trace roots -FILL-(GW) PID=0.9ppm	
10								3.2		Black, wet, medium dense, sandy GRAVEL, little silt, strong petroleum-like oder -FILL-(GP-GM) Similar to above -FILL-(GP-GM) PID=49.9ppm	
15								-6.9		Bottom of Exploration at 6.9 feet below ground surface.	
20										Note: Could not seat casing and contain water; terminated boring at 6.9 ft. See Test Boring Report BB-GCS-102A.	

Remarks:

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Page 1 of 1

Boring No.: BB-GCS-102

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(500)
WIN 18735.00
BRIDGE PLANS
BRIDGE NO. 2101

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — LICENSED PROFESSIONAL ENGINEER

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	MLS	SEPT 2018
CHECKED-REVIEWED	KCP	
DESIGN2-DETAILED2		SIGNATURE
DESIGN3-DETAILED3		10620
REVISIONS 1		
REVISIONS 2		P.E. NUMBER
REVISIONS 3		9/26/2018
REVISIONS 4		DATE
FIELD CHANGES		

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (1 OF 5)

SHEET NUMBER
A7
OF A78

Filename: ...\0A7-0A11_18765-6_Bridge Street Boring Logs.dgn
Usernamе: datoylor
Date:9/25/2018

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-102A
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	10.1
Operator:	M. Porter	**Datum:**	NAD 88
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	11-10-2015/11-12-2015	**Drilling Method:**	HW/NW Drive
Boring Location:	E1141635; N509813	**Casing ID/OD:**	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒
Auger ID/OD:	--		
Sampler:	Split Spoon-1.375 in. ID		
Hammer Wt./Fall:	SS-140#/30-IW/NW3008/		
Core Barrel:	NQ-2.0 in. ID		
Water Level*:	4.4		

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; 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 = weight of rods; WOSP = Weight of one person; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = Hammer Efficiency Factor/60%*N-uncorrected; Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							HW SPT/N	9.8		-BITUMINOUS CONCRETE-	
								9.1		-FILL-	
								8.8			
								8.6		-BITUMINOUS CONCRETE-	
								8.4		-FILL-	
										-COBBLE-(Based on drill action)	
										Note: Begin sampling at 5.0 ft. See Test Boring Report BB-GCS-102 for soil descriptions 0-5.0 ft.	
5	1D	24/3	5.0 - 7.0	36/33/10/12	43	43				Brown, wet, dense, sandy GRAVEL, trace silt, contains glass, roots -FILL-(GP) PID=0.7ppm	
								3.1			
	2D	24/8	8.5 - 10.5	30/55/89/22	144	144				Note: Observed wood, ceramics and probable boulder fragments in drill wash water from approximately 7.0-8.5 ft.	
								1.6			
10	3D	24/4	10.5 - 12.5	96/51/19/30	70	70				Gray, wet, very dense, fine GRAVEL, some coarse sand, little fine to medium sand, little silt, contains ash, roots and paint chips -FILL-(GM) PID=0.8ppm	
								-0.4			
								2.4		Light gray, wet, very dense, fine GRAVEL, some coarse sand, little medium sand and coarse gravel -ALLUVIAL DEPOSIT-(GW) PID=0.4ppm	
	4D	24/24	13.0 - 15.0	19/25/25/32	50	50					G#365349 A-6, CL #365358 WC=20%, LL=30, PI=15 PI=15
15							NW				
								-7.9		Olive-gray, dry, hard, clayey SILT, some coarse gravel, trace fine to coarse sand, trace fine gravel, well bonded -GLACIAL TILL-(ML)	
20	MD	24/0	20.0 - 22.0	25/40/56/68	96	96					
25	6D	24/5	25.0 - 27.0	21/45/66/94	111	111	NW				
										Olive-gray, dry, hard, gravelly SILT, trace fine to coarse sand, well bonded -GLACIAL TILL-(ML)	
30	7D	24/4	30.0 - 32.0	6/30/11/16	41	41				Olive-gray, hard, clayey SILT, some coarse gravel, trace fine to coarse sand and fine gravel, loosely bonded -GLACIAL TILL-(ML)	
								-24.6		-BOULDER- (Based on drill action)	
								-25.2			
35	8D	24/24	36.0 - 38.0	6/19/19/34	38	38				Olive-gray, dry, hard, SILT, little clay, little fine gravel, trace fine to coarse sand, moderately bonded -GLACIAL TILL-(ML)	
40	9D	24/2	40.0 - 42.0	30/53/56/60	109	109				Olive gray, dry, hard sandy SILT, well bonded -GLACIAL TILL-(ML)	
45	10D	24/24	45.0 - 47.0	15/18/20/25	38	38				Olive-gray, dry, hard SILT, little clay, little fine sand, trace medium to coarse sand, trace gravel -GLACIAL TILL-(ML)	
50											

Remarks:

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Page 1 of 2
Boring No.: BB-GCS-102A

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-102A
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	10.1
Operator:	M. Porter	**Datum:**	NAD 88
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	11-10-2015/11-12-2015	**Drilling Method:**	HW/NW Drive
Boring Location:	E1141635; N509813	**Casing ID/OD:**	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒
Auger ID/OD:	--		
Sampler:	Split Spoon-1.375 in. ID		
Hammer Wt./Fall:	SS-140#/30-IW/NW3008/		
Core Barrel:	NQ-2.0 in. ID		
Water Level*:	4.4		

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; 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 = weight of rods; WOSP = Weight of one person; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = Hammer Efficiency Factor/60%*N-uncorrected; Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
50	11D	24/4	50.0 - 52.0	17/32/37/62	69	69	NW	-51.9		Olive-gray, dry, hard, SILT, some gravel, little coarse sand, trace fine to medium sand, well bonded -GLACIAL TILL-(ML)	
55	12D	24/9	55.0 - 57.0	29/49/56/76	105	105		-52.5		Olive-gray, dry, hard, SILT, some fine gravel, little coarse sand, trace fine to medium sand, well bonded -GLACIAL TILL-(ML)	
60											
								-62.0		-BOULDER/COBBLE- (Based on drill action and drill cuttings)	
								-62.6		Probable weathered bedrock at 62.6 ft based on drill action. Advanced roller bit to 65.0 ft. Begin NQ rock core. -WEATHERED BEDROCK-	
65	R1	60/60	65.0 - 70.0	RQD = 0%			NQ	-54.9		Top of Bedrock at El. -54.9 Gray to light green/ch-gray, aphanitic to coarse grained SCHIST with calc-silicate granofel zone from 66.0-67.0 ft. Hard to moderately hard, moderately weathered. Joints dipping at low angles parallel to foliation, extremely close to close, occasional chlorite infilling on joint surfaces, pyrite and garnet mineralization. Quartz intrusion from approximately 68.8-69.0 ft. Recovery=100% Rock Mass Quality=Very Poor R1 Core Times(min:sec): 65.0-66.0'(2:00), 66.0-67.0'(2:30), 67.0-68.0'(2:00), 68.0-69.0'(3:30), 69.0-70.0'(2:00)	
70	R2	60/45	70.0 - 75.0	RQD = 0%						Similar to R1 except moderately to highly weathered Recovery=75% Rock Mass Quality=Very Poor R2 Core times(min:sec): 70.0-71.0'(2:00), 71.0-72.0'(1:30), 72.0-73.0'(2:00), 73.0-74.0'(3:00), 74.0-75.0'(2:30)	
75								-64.9		-VASSALBORO FORMATION-	
								-75.0		Bottom of Exploration at 75.0 feet below ground surface.	
80											
85											
90											
95											
100											

Remarks:

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Page 2 of 2
Boring No.: BB-GCS-102A

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-103
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	30.3
Operator:	M. Porter	**Datum:**	NAD 88
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	11-17-2015/11-20-2015	**Drilling Method:**	HW/NW Drive
Boring Location:	E1141717; N509942	**Casing ID/OD:**	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒
Auger ID/OD:	--		
Sampler:	Split Spoon-1.375 in. ID		
Hammer Wt./Fall:	SS-140#/30-IW/NW3008/		
Core Barrel:	--		
Water Level*:	14.0		

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; 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 = weight of rods; WOSP = Weight of one person; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = Hammer Efficiency Factor/60%*N-uncorrected; Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/8	0.5 - 2.5	14/13/18/18	31	31	HW	30.1		-BITUMINOUS CONCRETE-	
								29.9		Brown, dry, dense, gravelly fine SAND, little medium to coarse sand, trace silt -FILL-(SW) PID=0.0ppm	
	2D	24/17	2.5 - 4.5	13/5/3/2	8	8				Brown, dry, loose, fine to coarse SAND, some gravel, little silt -FILL-(SM) PID=0.0ppm	G#365350 A-1-b, SM
								26.4			
5	3D	24/18	4.5 - 6.5	1/2/1/2	3	3				Olive, reddish-brown, moist, soft SILT, little fine gravel, trace fine to coarse sand, contains brick fragments -FILL-(ML)	G#365351 (4.5'-6.5') A-4, ML
										Olive, reddish-brown, moist, very loose, sandy SILT, trace fine gravel, contains brick fragments -FILL-(ML)	
	4D	24/4	7.5 - 9.5	9/6/4/5	10	10		22.8		PID=1.4ppm -WOOD- PID=0.7ppm	
10	5D	24/18	10.0 - 12.0	7/4/3/3	7	7		20.3		Olive-gray, moist, medium stiff, silty CLAY, contains wood and brick fragments -FILL-(CL) PID=0.0ppm	
	6D	24/11	12.0 - 14.0	4/7/5/5	12	12		18.3		Olive-brown, moist, medium dense, sandy SILT, trace gravel, contains wood fragments -FILL-(ML) PID=0.0ppm	G#365352 A-4, ML
	7D	24/8	14.0 - 16.0	8/9/8/7	17	17				Olive-gray, wet, medium dense, silty fine SAND, little coarse gravel, trace clay, trace coarse sand and fine gravel, contains wood fragments -FILL-(SM) PID=0.1ppm	
15	8D	24/5	16.0 - 18.0	3/3/6/9	9	9		14.3			
								12.3		Olive-gray, wet, loose, silty GRAVEL, trace fine to coarse sand, trace clay, contains wood fragments -FILL-(GM)	
	9D	24/12	18.0 - 20.0	4/3/3/3	6	6					
20	10D	24/3	20.0 - 22.0	4/6/4/7	10	10				Olive-gray, wet, medium stiff, clayey SILT, little fine sand and fine gravel, contains wood fragments -FILL-(ML)	
	11D	24/12	22.0 - 24.0	9/6/9/9	15	15				Olive-gray, wet, stiff, clayey SILT, contains wood fragments -FILL-(ML)	
	12D	24/8	24.0 - 26.0	73/29/9/12	38	38				Olive-gray, wet, stiff, fine sandy SILT, little clayey, trace medium to coarse sand, contains wood fragments -FILL-(ML)	
25	13D	24/10	26.0 - 28.0	26/20/22/19	42	42	HW	4.1		Olive-gray, wet, hard, fine, sandy SILT, little gravel, trace medium to coarse sand, contains wood fragments -FILL-(ML)	
										Olive-brown, wet, dense, coarse GRAVEL, little fine to coarse sand and fine gravel, trace silt, contains roots and wood fragments -FILL-(GW)	
30	14D	18/18	30.0 - 31.5	33/48/200	248	248				Olive-gray, dry, hard, fine sandy SILT, little fine gravel, trace medium to coarse sand, well bonded -GLACIAL TILL-(ML)	
										Olive-gray, dry, hard, clayey SILT, little fine gravel and coarse sand, trace fine to medium sand -GLACIAL TILL-(ML)	
35	15D	24/24	35.0 - 37.0	28/44/46/52	90	90				Olive-gray, dry, hard, fine sandy SILT, little medium sand, trace coarse sand and gravel, well bonded -GLACIAL TILL-(ML)	
40											
45	16D	24/24	45.0 - 47.0	19/60/55/70	115	115				Olive-gray, dry, hard, fine sandy SILT, little coarse gravel, trace medium to coarse sand, trace fine gravel, well bonded -GLACIAL TILL-(ML)	
50											

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.

Page 1 of 2
Boring No.: BB-GCS-103

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-103
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	30.3
Operator:	M. Porter	**Datum:**	NAD 88
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	11-17-2015/11-20-2015	**Drilling Method:**	HW/NW Drive
Boring Location:	E1141717; N509942	**Casing ID/OD:**	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☒
Auger ID/OD:	--		
Sampler:	Split Spoon-1.375 in. ID		
Hammer Wt./Fall:	SS-140#/30-IW/NW3008/		
Core Barrel:	--		
Water Level*:	14.0		

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; 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 = weight of rods; WOSP = Weight of one person; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = Hammer Efficiency Factor/60%*N-uncorrected; Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
50							HW			Note: Losing water at 50.0 ft.	
55	17D	24/24	55.0 - 57.0	14/33/45/59	78	78				Olive-gray, dry, hard, fine sandy SILT, little coarse sand, trace medium sand and fine to coarse gravel, well bonded -GLACIAL TILL-(ML)	
60											
65	18D	24/24	65.0 - 67.0	26/61/56/108	117	117				Olive-gray, dry, hard, fine sandy SILT, little coarse gravel, trace medium to coarse sand and fine gravel, well bonded -GLACIAL TILL-(ML)	
70											
75								-45.7		Note: Advanced roller bit to probable Top of Bedrock at El.-45.7.	
								-76.0		Bottom of Exploration at 76.0 feet below ground surface.	
80											
85											
90											
95											
100											

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.

Page 2 of 2
Boring No.: BB-GCS-103

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(500)
WIN 18735.00
BRIDGE PLANS
BRIDGE NO. 2101

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — REGISTERED PROFESSIONAL ENGINEER

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	MLS
DESIGN-DETAILED	MLS	SEPT 2018
CHECKED-REVIEWED	KFP	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE
10620
P.E. NUMBER
9/26/2018
DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER — KENNEBEC COUNTY

BORING LOGS (2 OF 5)

SHEET NUMBER
A8
OF A78

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

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-201
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	27.8
Operator:	M. Porter	**Datum:**	NAVD 88
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	12-1-2015/12-1-2015	**Drilling Method:**	Auger
Boring Location:	E1141577; N509655	**Casing ID/OD:**	--
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☐
Auger ID/OD:	HSA-2-1/4 in. ID		
Sampler:	Split Spoon-1.375 in. ID		
Hammer Wt./Fall:	SS-1400/30		
Core Barrel:			
Water Level*:	None observed		

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; AP = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N1(60) = Weight of one person; R = Rock Core Sample; WOH = weight of 140lb. hammer; WOR = weight of rods; MV = Unsuccessful Insitu Vane Shear Test attempt; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); IC = Roller Cone; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test; Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit

Depth (ft)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/20	0.5 - 2.5	25/17/7/5	24	24	HSA	27.4		-BITUMINOUS CONCRETE-	
										0.4	
										Olive-brown, dry, medium dense, fine to medium SAND, some gravel, trace coarse sand, trace silt -FILL-(SW) PID=0.6ppm	
	2D	24/9	2.5 - 4.5	6/5/10/8	15	15		25.7		2.1	
										Olive-gray, wet, very stiff, CLAY, trace fine sand, little gravel -FILL-(CL)	
	3D	24/17	4.5 - 6.5	6/7/7/6	14	14		23.3		Olive-brown, wet, stiff, silty CLAY, little fine sand, trace coarse sand, trace gravel, contains brick fragments -FILL-(CL) PID=0.0ppm	
5								22.7		4.5	
	4D	24/8	6.5 - 8.5	8/18/10/13	28	28				Olive-gray, dry, medium dense, silty fine to medium SAND, trace coarse sand and fine gravel -FILL-(SM) PID=0.0ppm	
										5.1	
	5D	24/15	8.5 - 10.5	19/37/36/16	73	73		19.3		Dark brown, dry, stiff, SILT, some fine sand, trace medium sand and coarse gravel, contains wood -FILL-(ML) PID=0.1ppm	
								18.8		Dark brown, dry, very stiff, SILT, some fine sand, contains wood -FILL-(ML) PID=0.0ppm	
10	6D	24/24	10.5 - 12.5	6/7/8/10	15	15		17.3		8.5	
								17.1		Olive-gray, dry, hard, SILT, trace fine to medium sand, trace coarse gravel, contains wood -FILL-(ML) PID=0.0ppm	
								15.3		9.0	
										Olive-brown, dry, very dense, fine to coarse SAND, some silt, little gravel, well graded -FILL-(SW-SM) PID=0.0ppm	
										10.5	
										Olive, moist, medium dense, silty fine SAND -FILL-(SM) PID=0.0ppm	
15										10.7	
										Olive, moist, medium dense, silty fine SAND -MARINE DEPOSIT-(SM) PID=0.0ppm	
										12.5	
20										Bottom of Exploration at 12.5 feet below ground surface.	
25											

Remarks:

No water observed in borehole.

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-GCS-201

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

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-202
PIN: 18735

Driller:	New England Boring Contractors	**Elevation (ft.)**	26.8
Operator:	M. Porter	**Datum:**	NAVD 88
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	12-1-2015/12-1-2015	**Drilling Method:**	Auger
Boring Location:	E1141623; N509675	**Casing ID/OD:**	--
Hammer Efficiency Factor: 0.6		**Hammer Type:**	Automatic☐ Hydraulic☐ Rope & Cathead☐
Auger ID/OD:	HSA-2-1/4 in. ID		
Sampler:	Split Spoon-1.375 in. ID		
Hammer Wt./Fall:	SS-1400/30		
Core Barrel:	--		
Water Level*:	16.8		

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; AP = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N1(60) = Weight of one person; R = Rock Core Sample; WOH = weight of 140lb. hammer; WOR = weight of rods; MV = Unsuccessful Insitu Vane Shear Test attempt; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); IC = Roller Cone; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test; Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit

Depth (ft)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/15	0.5 - 2.5	10/12/9/18	21	21	HSA	26.5		-BITUMINOUS CONCRETE-	
										0.3	
										Gray-brown, dry, medium dense, fine to coarse SAND, little silt, little gravel, well graded -FILL-(SW) PID=0.0ppm	
	2D	24/17	2.5 - 4.5	9/4/3/3	7	7		24.8		2.0	
								24.3		Black and olive-brown, dry, very stiff, SILT, little coarse sand and gravel, trace fine to medium sand, contains asphalt, asphalt-like odor -FILL-(ML) PID=0.8ppm	
	3D	24/8	4.5 - 6.5	4/6/5/7	11	11		22.3		2.5	
5										Olive-brown, moist, medium stiff, clayey SILT, trace fine to coarse sand, asphalt-like odor -FILL-(ML) PID=1.2ppm	
	4D	24/2	6.5 - 8.5	5/6/12/9	18	18				4.5	
										Olive-brown, dry, stiff, SILT and fine to coarse SAND, little gravel, asphalt like odor -FILL-(ML/SM) PID=0.6ppm	
	5D	24/5	8.5 - 10.5	7/9/10/10	19	19				8.0	
										Olive-gray, dry, very stiff, SILT, little fine sand and coarse gravel, trace medium to coarse sand and fine gravel, slight asphalt-like odor, gravel in spoon tip -FILL-(ML) PID=0.4ppm	
	6D	24/10	10.5 - 12.5	4/4/12/9	16	16				9.5	
10										Olive-brown, dry, very stiff, clayey SILT, little coarse gravel, trace fine and coarse sand, slight asphalt-like odor -FILL-(ML) PID=0.9ppm	
	7D	24/8	12.5 - 14.5	7/7/22/52	29	29		12.3		10.5	
										Olive-brown, dry, very stiff, SILT, trace fine and coarse sand, trace coarse gravel, slight asphalt-like odor, contains brick and concrete fragments. -FILL-(ML) PID=1.6ppm	
	8D	24/7	14.5 - 16.5	13/13/4/10	14	14				12.3	
								10.3		Olive-brown, moist, very stiff, SILT, little fine to coarse sand, trace coarse gravel, asphalt-like odor, contains brick fragments -FILL-(ML) PID=1.0ppm	
15	9D	24/10	16.5 - 18.5	21/6/12/14	18	18		10.0		14.5	
								8.6		Olive-brown, dry, medium dense, coarse GRAVEL, some fine to medium sand, little silt, trace fine gravel, slight asphalt-like odor -FILL-(GM) PID=1.7ppm	
	10D	24/4	18.5 - 20.5	5/9/15/13	24	24	--	6.6		16.5	
								6.3		Olive-brown, moist, medium dense, fine SAND, some silt, little gravel, trace medium to coarse sand -FILL-(SM) PID=0.8ppm	
										16.8	
										Olive-gray, wet, very stiff, gravelly CLAY -FILL-(CL) PID=2.5ppm	
										18.2	
20										Gray, wet, very stiff, fine sandy SILT -FILL-(ML) PID=200ppm	
										20.2	
										Gray, wet, medium dense, silty fine SAND, little medium sand -MARINE DEPOSIT-(SM) PID=1.6ppm	
										20.5	
25										Bottom of Exploration at 20.5 feet below ground surface.	
30											
35											
40											
45											
50											

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.

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Boring No.: BB-GCS-202

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

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-301
PIN: 18735.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	25.3
Operator:	C. Dupuis	**Datum:**	NAVD 88
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	11-29-16/11-30-16	**Drilling Method:**	HW/NW Drive
Boring Location:	E1141687; N509631	**Casing ID/OD:**	HW-4.0 in.DNW-3.0 in.ID
Hammer Efficiency Factor: 0.569		**Hammer Type:**	Automatic☒ Hydraulic☐ Rope & Cathead☐
Auger ID/OD:	--		
Sampler:	Split Spoon-1.375 in.ID		
Hammer Wt./Fall:	SS-1400/30,HW-3000/		
Core Barrel:	NQ-2.0 in.ID		
Water Level*:	19.0		

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; AP = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N1(60) = Weight of one person; R = Rock Core Sample; WOH = weight of 140lb. hammer; WOR = weight of rods; MV = Unsuccessful Insitu Vane Shear Test attempt; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); IC = Roller Cone; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test; Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit

Depth (ft)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/5	0.5 - 2.5	4/7/7/3	14	13	SSA			Brown, dry to moist, medium dense, fine to medium SAND, some fine gravel, little coarse sand, trace silt, contains brick pieces -FILL-(SW) PID=1.5 ppm	
										7.5	
										Brown, dry, medium dense, fine to medium SAND, some fine gravel, little coarse sand -FILL-(SW) PID=0.2 ppm	
5	2D	24/24	5.0 - 7.0	10/8/4/4	12	11	21			8	
							10(6.0)	17.8		Note: Encountered obstruction at 7.5 ft. Move boring location 1.5 ft west, continue boring.	
							SSA	17.3		9.5	
								15.8		Note: Probable soil based on drill action.	
10	3D	18/16	10.0 - 11.5	33/35/60	95	90	NW/ Drive	15.3		10.0	
								14.8		Note: Concrete and 0.5 in. diameter drill generated in auger cuttings. -CONCRETE-(Probable Foundation) PID=0.0 ppm	
	4D	18/16	12.0 - 13.5	33/35/50	85	81				10.5	
								12.1		Brown, dry, very dense, GRAVEL, some fine to coarse sand, trace silt -FILL-(GW) PID=0.0 ppm	
	5D	5/2	14.0 - 14.4	60(5.0)						13.2	
15	6D	11/5	15.0 - 15.9	45/70(5.0)			Open Hole	9.3		Brown, dry, very dense, GRAVEL, some fine to coarse sand, trace silt -FILL-(GW) PID=0.0 ppm	
								9.0		Bonded with weathered rock pieces from 13.2 to 13.5 ft. -GLACIAL TILL-(GM) PID=0.0 ppm	
								8.1		Similar to above with weathered rock pieces, slightly bonded.	
								7.7		Brown, moist, very dense GRAVEL, some fine to coarse sand, little silt, well bonded (wet class) -GLACIAL TILL-(GM) PID=0.0 ppm	
								7.4		Note: Advanced roller bit ahead of casing to 20.0 ft.	
								6.3		16.0	
20	7D	24/12	20.0 - 22.0	9/18/21/28						-COBBLE-	
										16.3	
										-GLACIAL TILL-	
										17.2	
										Note: Granite chips in wash water from 17.2 to 17.6 ft.	
										-COBBLE-	
										17.6	
										-GLACIAL TILL-	
										17.9	
										-COBBLE-	
25										19.0	
										Gray, wet, dense, fine to medium SAND, some gravel, little coarse sand, little silt, well bonded -GLACIAL TILL-(SM) PID=0.0 ppm	
										22.0	
										Bottom of Exploration at 22.0 feet below ground surface.	
30											
35											
40											
45											
50											

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.

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Boring No.: BB-GCS-301

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

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-401
PIN: 18735.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	10.5
Operator:	B. Enos	**Datum:**	NAVD 88
Logged By:	K.Russ/M.Snow	**Rig Type:**	Mobile B53 Truck
Date Start/Finish:	04-14-2017/04-15-2017	**Drilling Method:**	HW Drive
Boring Location:	E1141691, N509753	**Casing ID/OD:**	HW-4.0 in. ID
Hammer Efficiency Factor: 0.677		**Hammer Type:**	Automatic☒ Hydraulic☐ Rope & Cathead☐
Auger ID/OD:	--		
Sampler:	Split Spoon 1.375 in. ID		
Hammer Wt./Fall:	SS-1400/30,HW-3000/24		
Core Barrel:	NQ-1.875 in. ID		
Water Level*:	Approx. 2.0 ft		

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; AP = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N1(60) = Weight of one person; R = Rock Core Sample; WOH = weight of 140lb. hammer; WOR = weight of rods; MV = Unsuccessful Insitu Vane Shear Test attempt; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); IC = Roller Cone; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test; Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit

Depth (ft)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/6	0.0 - 2.0	3/2/3/3	5	6	11w Push			Brown, dry, loose, fine to coarse SAND, trace silt, trace gravel -FILL-(SW) PID=0.0 ppm	(0-8.2'): WC=7.0% ER=992 ohm-cm pH=6.15.9 Sulfate=1,616 mg/kg Chloride=320 mg/kg OC=1.5% GH41992 (A-1-a(1)), SW-SM WC=11.2%
	MD	24/0	2.0 - 4.0	1/2/1/1	3	3				No Recovery (very loose soil) Note: Water encountered at approximately 2.0 ft.	
	2D	16/7	4.0 - 5.3	4/6/50(4.0)	56	63				Brown, wet, very dense, gravelly fine to coarse SAND, trace silt -FILL-(SW-SM) PID=0.0 ppm	
										42	
	3D	6/6	6.0 - 6.5	75						Brown to gray, wet, very dense, fine to coarse SAND, little gravel, trace silt, strong petroleum-like odor (gray color approximately 6.3 to 6.5 ft) -FILL-(SW) PID=38 ppm	
										115	
	4D	14/7	7.0 - 8.2	27/51/120(2.0)	171	193				Gray, wet, very dense, GRAVEL, some fine to coarse sand, trace silt, strong petroleum-like odor -FILL-(GW) PID=241 ppm	
										307	
	5D	24/10	9.0 - 11.0	34/108/74/32	182	205				9.0	(12.5 21.0'): WC=7.0% ER=3,306 ohm-cm pH=6.16.2 Sulfate=1,616 mg/kg Chloride=320 mg/kg OC=1.5% GH43702 (A-1-a(3)), GW
										Gray, wet, very dense, GRAVEL, some fine to coarse sand, trace silt, well bonded, slight petroleum-like odor -GLACIAL TILL-(GW) PID=5.6 ppm Note: Wash ahead of casing through boulders from 12 to 14 ft.	
										175	
										435	
										172+	
										147	
	6D	24/24	14.0 - 16.0	31/35/42/41	77	87				14.0	GH41993 (A-4(0)), ML WC=8.7%
										Gray, wet, very dense, SILT, little fine to medium sand, little gravel, trace coarse sand, well bonded -GLACIAL TILL-(ML) PID=0.0 ppm Note: Wash ahead of casing due to high density of glacial till.	
										63	
										69	
										76	
										79	
	7D	24/11	19.0 - 21.0	16/41/51/56	92	104				Gray, wet, very dense, SILT, little fine sand, little gravel, trace medium to coarse sand, well bonded -GLACIAL TILL-(ML)	
										70	
										87	
										80	
										99	
	8D	24/24	24.0 - 26.0	10/25/43/52	68	77				Gray, wet, very dense, SILT, little fine sand, little gravel, trace medium to coarse sand, well bonded -GLACIAL TILL-(ML)	
										70	
										100	
										215	
										155	
										100	
	9D	24/24	29.0 - 31.0	9/20/28/31	48	54				Gray, wet, dense, SILT, little fine sand, little gravel, trace medium to coarse sand, well bonded -GLACIAL TILL-(ML)	
										71	
										200+	
										Note: Cobbles encountered based on drill action from 31 to 34 ft. Advance casing to 32.5 ft - cobbles. Washed ahead of casing to 34 ft.	
										200+	
										200+	
	10D	24/24	34.0 - 36.0	12/25/27/29	52	59				Gray, wet, very dense, sandy SILT, little gravel, trace coarse sand, well bonded -GLACIAL TILL-(ML)	GH439703 (A-4(0)), ML
								-25.5		36.0	
										Bottom of Exploration at 36.0 feet below ground surface. Note: Casing broke off (bottom 5 ft) in borehole. Abandon borehole at 36 ft due to broken casing. Move location 2.0 ft north to 401A, see plan.	

Remarks:

Notes:
1. ER = Electrical Resistivity
2. OC = Organic Content

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-GCS-401

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(500)
WIN 18735.00
BRIDGE PLANS
BRIDGE NO. 2101

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — PROFESSIONAL ENGINEER — LICENSED

PROJ. MANAGER	L. TIMBERLAKE	DATE
DESIGN-DETAILED	MLS	SEPT 2018
CHECKED-REVIEWED	KFP	BY
DESIGN2-DETAILED2		SIGNATURE
DESIGN3-DETAILED3		10620
REVISIONS 1		P.E. NUMBER
REVISIONS 2		9/26/2018
REVISIONS 3		DATE
REVISIONS 4		
FIELD CHANGES		

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER — KENNEBEC COUNTY

BORING LOGS (3 OF 5)

SHEET NUMBER
A9
OF A78

HALEY ALDRICH

Filename: ...\0A7-0A11_18765-6_Bridge Street Boring Logs.dgn Usernome: datoylor Date:9/25/2018

Filename: ...\0A7-0A11_18765-6_Bridge Street Boring Logs.dgn
Username: dotaylor
Date:9/25/2018

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

Project: Routes 201 & 9 over the Cobbosseecontee Stream
Location: Bridge Street Bridge #2102, Gardiner, Maine

Boring No.: BB-GCS-401A
PIN: 18735.00

Driller: New England Boring Contractors	**Elevation (ft.)** 10.2	**Auger ID/OD:** --
Operator: B. Enos	**Datum:** NAVD 88	**Sampler:** Split Spoon 1.375 in. ID
Logged By: K.Russ/M.Snow	**Rig Type:** Mobile B53 Track	**Hammer Wt./Fall:** SS-140#/30;NW-140#/30
Date Start/Finish: 04-17-2017\04-18-2017	**Drilling Method:** HSA/NW Drive	**Core Barrel:** NQ-1.875 in. ID
Boring Location: E1141691, N509755	**Casing ID/OD:** HSA-4.25 in. ID/NW-3.0 in. ID	**Water Level*:**
Hammer Efficiency Factor: 0.677	**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; 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 = weight of rods; WOTP = Weight of one person
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (tsf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = (Hammer Efficiency Factor/85)*N-uncorrected
Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							HSA			Note: Advance 4.25 in. ID hollow stem augers to 15 ft. Telescope with NW casing. See Test Boring Report BB-GCS-401 for overburden descriptions from 0 to 36 ft.	
5											
10								1.2			
								9.0			
15								3.8			
								14.0			
							61				
20							70				
							41				
							24				
25							28				
							53				
							35				
30							49				
							59				
							72				
							37				
35							33				
							38				
							61				
							38				
40							29				
							33				
							38				
							32				
							120				
45							415				
							126				
							94				
							95				
	11D	24/8	39.0 - 41.0	16/28/40/49	68	77	180			Gray, wet, very dense, SH.T, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
							62				
							90				
							105				
							90				
	12D	24/24	44.0 - 46.0	21/30/35/55	65	73	162			Gray, wet, very dense, SILT, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
							133				
							98				
							100				
							117				
50	13D	24/24	49.0 - 51.0	23/33/45/66	78	88	102			Gray, wet, very dense, SH.T, little fine to coarse sand, little gravel, well bonded	

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.

Page 1 of 2
Boring No.: BB-GCS-401A

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

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-401A
PIN: 18735.00

Driller: New England Boring Contractors	**Elevation (ft.)** 10.2	**Auger ID/OD:** --
Operator: B. Enos	**Datum:** NAVD 88	**Sampler:** Split Spoon 1.375 in. ID
Logged By: K.Russ/M.Snow	**Rig Type:** Mobile B53 Track	**Hammer Wt./Fall:** SS-140#/30;NW-140#/30
Date Start/Finish: 04-17-2017\04-18-2017	**Drilling Method:** HSA/NW Drive	**Core Barrel:** NQ-1.875 in. ID
Boring Location: E1141691, N509755	**Casing ID/OD:** HSA-4.25 in. ID/NW-3.0 in. ID	**Water Level*:**
Hammer Efficiency Factor: 0.677	**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; 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 = weight of rods; WOTP = Weight of one person
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (tsf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = (Hammer Efficiency Factor/85)*N-uncorrected
Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
50							118			-GLACIAL TILL-(ML)	
							130				
							183				
							267				
55	14D	24/24	54.0 - 56.0	16/25/35/57	60	68	218			Gray, wet, very dense, SILT, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
							142				
							145				
							165				
							119				
60	15D	24/24	59.0 - 61.0	25/31/41/76	72	81	-			Gray, wet, very dense, SILT, little fine sand, trace medium to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	G#439704 (A-4(0)), ML
							-				
							-	-53.1			
65	16D	2/2	64.0 - 64.2	75(2.0)			-			Top of weathered rock at 63.3 ft Note: Advanced roller bit to 64.0 ft. -WEATHERED ROCK-	
	R1	54/54	65.2 - 69.7	RQD = 65%			NQ Core	-55.0		Top of Bedrock El.-55.0 Gray, fine to medium grained GRANOFELS with pegmatite intrusion from 66.8 to 77.4 ft. Moderately hard to hard, fresh to slightly weathered. Joints dipping at moderate angles, moderately close, tight to open, occasional oxidized joint surfaces. Rock is highly fractured due to drill breaks. Rock Mass Quality=Fair Recovery=100% R1 Core Times (min:sec): 65.2-66.2' (2: 06); 66.2-67.2' (2:28); 67.2-68.2' (1:37); 68.2-69.2' (2:22); 69.2-69.7' (1:36)	
70								-60.8		Gray, fine to medium grained GRANOFELS. Moderately hard to hard, moderately weathered. Joints dipping at moderate angles, very close, open, weathered joint surfaces. Rock Mass Quality=Poor Recovery=84% R2 Core Times (min:sec): 69.7-70.7' (1:53); 70.7-71.3' (2:14)	
	R2	19/16	69.7 - 71.3	RQD = 32%							
								-63.3			
	R3	53/53	71.3 - 75.7	RQD = 77%				-64.8		Light gray to gray, medium grained QUARTZITE. Very hard to hard, slightly weathered. Joints dipping at low to moderate angles, close to moderately close, tight to open, oxidized joint surfaces. Rock Mass Quality=Good Recovery=100% R3 Core Times (min:sec): 71.3-72.3' (2:01); 72.3-73.3' (1:26); 73.3-74.3' (1:56)	
								-71.0			
80	R4	60/60	75.7 - 80.7	RQD = 80%			NQ Core	-70.5		Light gray to gray, medium to coarse grained GRANOFELS. Moderately hard to hard, fresh to slightly weathered. Joints dipping at low to moderate angles, close to moderately close, tight to open, occasional <1/16 in. silt infillings. Frequent bands of pegmatite throughout run. Rock Mass Quality=Good Recovery=100% -VASSALBORO FORMATION-	UC; qp=3,043psi
								-75.0			
								-80.7		Bottom of Exploration at 80.7 feet below ground surface.	
85											
90											
95											
100											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
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Page 2 of 2
Boring No.: BB-GCS-401A

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

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-402
PIN: 18735.00

Driller: New England Boring Contractors	**Elevation (ft.)** 13.0	**Auger ID/OD:** --
Operator: B. Enos	**Datum:** NAVD 88	**Sampler:** Split Spoon 1.375 in. ID
Logged By: K.Russ/M.Snow	**Rig Type:** Mobile B53 Track	**Hammer Wt./Fall:** SS-140#/30;HW-300#/24
Date Start/Finish: 04-11-2017\04-12-2017	**Drilling Method:** HW Drive	**Core Barrel:** NQ-1.875 in. ID
Boring Location: E1141675, N509905	**Casing ID/OD:** HW-4.0 in. ID	**Water Level*:** 5.0 ft
Hammer Efficiency Factor: 0.677	**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; 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 = weight of rods; WOTP = Weight of one person
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (tsf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = (Hammer Efficiency Factor/85)*N-uncorrected
Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/5	0.0 - 2.0	1/1/1/2	2	2	HW Push			Brown, dry, very loose, fine to medium SAND, some gravel and silt, trace coarse sand -FILL-(SM) PID=0.0 ppm	G#411994 A-2-4(0), SM WC=10.5%
							5				
	2D	24/7	2.0 - 4.0	4/4/12/4	16	18	12			Brown, moist, medium dense, fine to medium SAND, little coarse sand and gravel, some silt -FILL-(SM) PID=0.0 ppm	
							15	3.8			
5	3D	24/7	4.0 - 6.0	5/8/6/5	14	16	23			*Dark brown, moist, medium dense, fine SAND, some silt, trace organics, rootlets -ALLUVIAL DEPOSIT-(SM)	G#411995 A-1-b(0), SM WC=18.6%
							65				
	4D	24/8	6.0 - 8.0	3/18/20/15	38	43	87			Dark brown, wet, dense, silty fine to medium SAND, trace coarse sand, little gravel -ALLUVIAL DEPOSIT-(SM)	
							83	6.5			
	5D	20/10	8.0 - 9.7	13/22/31/50(2.0)	53	60	105			Dark brown, wet, dense, fine to coarse GRAVEL, some silt, little fine to coarse sand -ALLUVIAL DEPOSIT-(GW-GM)	
							120	3.5		Dark gray brown, wet, very dense, fine to coarse GRAVEL, little silt, little fine to coarse sand -ALLUVIAL DEPOSIT-(GW-GM)	
10							64				
							52	9.5		COBBLE/GRAVEL layer; washed ahead of casing -GLACIAL TILL-	
							105	1.0			
	6D	24/10	13.0 - 15.0	18/22/28/30	50	56	107			Gray, wet, very dense, SILT, little fine to medium sand, trace coarse sand, trace gravel, well bonded -GLACIAL TILL-(ML)	G#439705 (A-4(0), ML
15							101				
							152			Note: Wash ahead of casing through cobbles from 15 to 18 ft.	
							173				
							171				
	7D	14/20	18.0 - 19.2	18/40/75(2.0)						Dark gray, wet, very dense, SILT, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
20											
	8D	24/22	23.0 - 25.0	24/31/45/59	76	86				Dark gray, wet, very dense, SILT, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
25								-12.0		Bottom of Exploration at 25.0 feet below ground surface.	
								-25.0		Note: Bottom 10 ft of casing broke off in boring. Abandoned borehole at 25 ft. Move 2 ft south to BB-GCS-402A location.	
30											
35											
40											
45											
50											

Remarks:
*Lab test results do not reflect field observations. Description reported here is based on field observations.

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-GCS-402

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

Project: Routes 201 & 9 over the Cobbosseecontee Stream
Location: Bridge Street Bridge #2102, Gardiner, Maine

Boring No.: BB-GCS-402A
PIN: 18735.00

Driller: New England Boring Contractors	**Elevation (ft.)** 13.0	**Auger ID/OD:** --
Operator: B. Enos	**Datum:** NAVD 88	**Sampler:** Split Spoon 1.375 in. ID
Logged By: K.Russ/M.Snow	**Rig Type:** Mobile B53 Track	**Hammer Wt./Fall:** SS-140#/30;HW-300#/24
Date Start/Finish: 04-12-2017\04-12-2017	**Drilling Method:** HW/NW Drive	**Core Barrel:** NQ-1.875 in. ID
Boring Location: E1141674, N509903	**Casing ID/OD:** HW-4.0 in. ID/NW-3.0 in. ID	**Water Level*:**
Hammer Efficiency Factor: 0.677	**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; 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 = weight of rods; WOTP = Weight of one person
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (tsf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = (Hammer Efficiency Factor/85)*N-uncorrected
Su(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	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							HSA			Note: See Test Boring Report BB-GCS-402 for overburden descriptions from 0 to 25 ft. Advanced HSA to 18.0 ft; advanced HW driven casing to 23.0 ft. Telescope with NW spun casing to 63. 5 ft.	
5											
10											
15											
							140				
20							165				
							117				
							110				
							169			Note: Wash ahead of casing to 28.5 ft.	
25							30W Spun				
							NW Spun	-12.0			
	9D	24/1	28.5 - 30.5	53/33/54/67	87	98				Dark gray, wet, very dense, SH.T, some to little gravel, little fine to coarse sand, well bonded -GLACIAL TILL-(ML)	
30											
	10D	17/4	33.0 - 34.4	17/36/65(5.0)	101	114				Dark gray, wet, very dense, SILT, some to little gravel, little fine to coarse sand, well bonded, rock piece in sp of sampler -GLACIAL TILL-(ML)	
35											
	11D	24/24	38.0 - 40.0	15/24/33/48	57	64				Dark gray, wet, very dense, SILT, some to little gravel, little to trace fine to coarse sand, well bonded -GLACIAL TILL-(ML)	
40											
	12D	24/24	43.0 - 45.0	18/30/40/54	70	79				Dark gray, wet, very dense, SILT, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
45											
	13D	24/24	48.0 - 50.0	8/13/20/23	33	37				Dark gray, wet, dense, SH.T, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
50											

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.

Page 1 of 2
Boring No.: BB-GCS-402A

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(500)
WIN 18735.00
BRIDGE PLANS
BRIDGE NO. 2101

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — LICENSED PROFESSIONAL ENGINEER

SIGNATURE			
P.E. NUMBER	10620		
DATE	9/26/2018		

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	MLS	KCP	SEPT 2018
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (4 OF 5)

SHEET NUMBER
A10
OF A78

Filename: ...\0A7-0A11_18765-6_Bridge Street Boring Logs.dgn Design: dgnBRIDGE Username: dotaylor Date:9/25/2018

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Routes 201 & 9 over the Cobbosseecontee Stream
Location: Bridge Street Bridge #2102, Gardiner, Maine

Boring No.: BB-GCS-402A
PIN: 18735.00

Driller: New England Boring Contractors	**Elevation (ft.)** 13.0		**Auger ID/OD:** --
Operator: B. Enos	**Datum:** NAVD 88		**Sampler:** Split Spoon 1.375 in. ID
Logged By: K.Russ/M.Snow	**Rig Type:** Mobile B53 Track		**Hammer Wt./Fall:** SS-140#/30;HW-300#/24
Date Start/Finish: 04-12-2017/04-12-2017	**Drilling Method:** HW/NW Drive		**Core Barrel:** NQ-1.875 in. ID
Boring Location: E1141674, N509903	**Casing ID/OD:** HW-4.0 in. ID/NW-3.0 in. ID		**Water Level*:** 5 ft
Hammer Efficiency Factor: 0.677	**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; 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 = weight of rods; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = Hammer Efficiency Factor*85%/N-uncorrected
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; WOH = weight of 140lb. hammer; WOR = weight of rods; WOP = Weight of one person
Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; D = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#) to Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
50							NW Sshm				
	14D	24/24	53.0 - 55.0	15/25/26/26	51	58				Dark gray, wet, very dense, SILT, little fine to coarse sand, little gravel, well bonded -GLACIAL TILL-(ML)	
55											
	15D	24/24	58.0 - 60.0	20/32/45/64	77	87				Dark gray, wet, very dense, SILT, little fine to coarse sand, little gravel, well bonded, silty fine sand layer in spoon tip -GLACIAL TILL-(ML)	
60											
								-48.5		61.5	
	16D	10/6	63.0 - 63.8	30/85(4.0)				-50.5		Gray, wet, very dense, fine to medium SAND, some silt, little coarse sand and gravel, well bonded -GLACIAL TILL-(SM)	
65	R1	12/6	64.1 - 65.1	RQD = 0%			NQ Core			63.5 Top of Bedrock El. -50.5 Note: Advance NW-casing to top of bedrock. Advance roller bit to 64.1 ft. Begin NQ rock coring at 64.1 ft.	
	R2	50/50	65.1 - 69.3	RQD = 22%						Highly fractured, low recovery; gray, fine grained quartzitic SCHIST. Hard, fresh to slightly weathered, oxidized joint surfaces. Rock Mass Quality=Very Poor Recovery=50%	
70	R3	62/62	69.3 - 74.5	RQD = 66%						R1 Core Times (min:sec): 64.1-65.1 (4:05) Gray, aphanitic to fine grained QUARTZITE. Soft to moderately hard, fresh to moderately weathered. Joints dipping at low to moderate angles, very close, tight to open, calcite infilling on some joint surfaces, occasional oxidized joints, occasional calcite veins. -VASSALBORO FORMATION- Rock Mass Quality=Very Poor Recovery=100% R2 Core Times (min:sec): 65.1-66.1' (2:58); 66.1-67.1' (2:38); 67.1-68.1' (2:55); 68.1-69.1' (2:28);	
								-60.0		Gray, aphanitic to fine grained QUARTZITE. Soft to moderately hard, fresh to moderately weathered. Joints dipping at low to moderate angles, very close, tight to open, calcite infilling on some joint surfaces, occasional oxidized joints, occasional calcite veins Rock Mass Quality=Very Poor Recovery=100%	
75	R4	60/60	74.5 - 79.5	RQD = 75%			NQ Core			R3 Core Times (min:sec): 69.3-70.3' (0:54); 70.3-71.3' (3:24); 71.3-72.3' (2:44); 72.3-73.3' (2:16); 73.3-74.3' (2:30) 73.0	UC; qp=20,003psi
										White, gray, black, medium to coarse grained GRANOFELS. Very hard, fresh. Joints dipping at high angles, moderately close, tight to open, slight oxidation on joint surfaces. Rock Mass Quality=Fair	
80								-66.5		Gray, fine to medium grained QUARTZITE. Hard, fresh to slightly weathered. Joints dipping at low to moderate angles, close to moderately close, tight to open, slight oxidation on few joint surfaces, occasional to frequent quartz banding. Rock Mass Quality=Fair Recovery=100% R4 Core Times (min:sec): 74.5-75.5' (0:50); 75.5-76.5' (3:33); 76.5-77.5' (1:21); 77.5-78.5' (4.02); 78.5-79.5' (2:24) -VASSALBORO FORMATION-	
85										79.5 Bottom of Exploration at 79.5 feet below ground surface.	
90											
95											
100											

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.

Page 2 of 2

Boring No.: BB-GCS-402A

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-403
PIN: 18735.00

Driller: New England Boring Contractors	**Elevation (ft.)** 10.5		**Auger ID/OD:** --
Operator: B. Enos	**Datum:** NAVD 88		**Sampler:** Split Spoon 1.375 in. ID
Logged By: K.Russ/M.Snow	**Rig Type:** Mobile B53 Track		**Hammer Wt./Fall:** SS-140#/30;HW-300#/24
Date Start/Finish: 04-10-2017/04-11-2017	**Drilling Method:** HW Drive		**Core Barrel:** NQ-1.875 in. ID
Boring Location: E1141699, N509899	**Casing ID/OD:** HW-4.0 in. ID/NW-3.0 in. ID		**Water Level*:** 5 ft
Hammer Efficiency Factor: 0.677	**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; 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 = weight of rods; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = Hammer Efficiency Factor*85%/N-uncorrected
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; WOH = weight of 140lb. hammer; WOR = weight of rods; WOP = Weight of one person
Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; D = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#) to Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	24/7	0.0 - 2.0	3/14/11/12	25	28	17			Brown, dry, medium dense, fine to coarse SAND, some gravel, trace silt, well graded, contains trace concrete fragments -FILL-(SW) PID=0.0 ppm	
	2D	24/9	2.0 - 4.0	8/13/17/15	30	34	50			Dark brown, moist, medium dense, fine to coarse SAND, little gravel and silt, well graded, contains trace brick fragments -FILL-(SW-SM) PID=0.0 ppm	
5	3D	24/6	4.0 - 6.0	18/7/10/16	17	19	125	6.5		4.0 Brown, wet, medium dense, GRAVEL, some fine to coarse sand, trace silt, well graded, contains trace wood fragments -ALLUVIAL DEPOSITS-(GW-GM) PID=0.0 ppm	G#411996 A-1-a(l), GW-GM WC=11.8%
							151	4.5		6.0 Brown, wet, very dense, sandy GRAVEL, well graded -ALLUVIAL DEPOSIT-(GW)	
	4D	24/12	6.0 - 8.0	24/40/53/61	93	105	200+	2.7		PID=0.0 ppm 7.8	
							200+				
10							200+				
	5D	24/0	10.0 - 12.0	28/38/75(5.0)	113	128	51			No Recovery, rock it spoon tip	
							47				
							66				
							79			Note: Advanced rollerbit ahead of casing to 15 ft, gravelly based on drill action.	
							114				
15	6D	24/24	15.0 - 17.0	24/37/55/51	92	104	34			Olive-gray, moist, very dense, sandy SILT, trace gravel, well bonded -GLACIAL TILL-(ML)	G#411997 A-4(0), ML WC=9.8%
							47				
							37			Note: Advanced rollerbit ahead of casing to 20 ft, gravelly based on drill action.	
							52				
20							83	-9.5		20.0	
	7D	24/13	20.0 - 22.0	22/30/50(4.0)	80	90	118			Olive-gray, moist, very dense, fine to coarse SAND, some gravel, little silt, well graded, well bonded -GLACIAL TILL-(SW-SM)	
							75				
							45			Note: Advanced rollerbit ahead of casing to 25 ft, gravelly based on drill action.	
							62				
25							66	-14.5		25.0	
	8D	24/19	25.0 - 27.0	16/26/53/40	79	89	110			Olive-gray, moist, very dense, fine to coarse SAND, little gravel and silt, poorly graded, well bonded, trace clay -GLACIAL TILL-(SP-SM)	
							55				
							85			Note: Advanced rollerbit ahead of casing to 30 ft.	
							97				
30							112				
	9D	19/19	30.0 - 31.6	10/25/30/50(1.0)	55	62	127			Olive-gray, moist, very dense, fine to coarse SAND, little gravel and silt, poorly graded, well bonded -GLACIAL TILL-(SP-SM)	
							159				
							195			Note: Advanced rollerbit ahead of casing to 35 ft, frequent cobbles and gravel.	
							90				
35							78				
	10D	22/21	35.0 - 36.8	20/26/33/65(4.0)	59	67	121			Olive-gray, moist, very dense, fine to coarse sandy SILT, trace gravel, well bonded -GLACIAL TILL-(ML)	G#439706 (A-4(0), ML
							130				
							226			Note: Advanced rollerbit ahead of casing to 40 ft, frequent cobbles and gravel.	
							216				
40							176	-29.5		40.0	
	11D	24/24	40.0 - 42.0	17/23/28/39	51	58	160			Olive-gray, moist, very dense, fine to coarse SAND, little gravel and silt, well graded, well bonded -GLACIAL TILL-(SW-SM)	
							Open				
										Note: Advanced rollerbit ahead of casing to 45 ft, occasional gravel.	
45											
	12D	24/24	45.0 - 47.0	23/31/33/58	64	72				Olive-gray, moist, very dense, fine to coarse sand, some gravel, little silt, trace clay, well graded, well bonded -GLACIAL TILL-(SW-SM)	
										Note: Advanced rollerbit ahead of casing to 50 ft, occasional gravel and cobbles.	
50											

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.

Page 1 of 2

Boring No.: BB-GCS-403

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-403
PIN: 18735.00

Driller: New England Boring Contractors	**Elevation (ft.)** 10.5		**Auger ID/OD:** --
Operator: B. Enos	**Datum:** NAVD 88		**Sampler:** Split Spoon 1.375 in. ID
Logged By: K.Russ/M.Snow	**Rig Type:** Mobile B53 Track		**Hammer Wt./Fall:** SS-140#/30;HW-300#/24
Date Start/Finish: 04-10-2017/04-11-2017	**Drilling Method:** HW Drive		**Core Barrel:** NQ-1.875 in. ID
Boring Location: E1141699, N509899	**Casing ID/OD:** HW-4.0 in. ID/NW-3.0 in. ID		**Water Level*:** 5 ft
Hammer Efficiency Factor: 0.677	**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; 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 = weight of rods; N60 = SPT N-uncorrected corrected for hammer efficiency; N60 = Hammer Efficiency Factor*85%/N-uncorrected
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; WOH = weight of 140lb. hammer; WOR = weight of rods; WOP = Weight of one person
Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; D = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#) to Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
50	13D	24/18	50.0 - 52.0	15/30/34/57	64	72	Open			Olive-gray, moist, very dense, fine to coarse SAND, little gravel and silt, trace clay, well graded, well bonded -GLACIAL TILL-(SW-SM)	
										Note: Advanced rollerbit ahead of casing to 55 ft, occasional gravel.	
55	14D	24/23	55.0 - 57.0	18/65/66/49	131	148				Olive-gray, moist, very dense, SILT, little fine sand, trace medium to coarse sand, trace gravel, well bonded -GLACIAL TILL-(ML)	G#439707 (A-4(0), ML
										Note: Advanced rollerbit to probable bedrock at 58.9 ft. Spun N casing to 60.2 ft. Cleaned out to 60 ft.	
							khf 50m				
60	R1	60/60	60.0 - 65.0	RQD = 88%				-49.5		60.0 Top of Bedrock El. -49.5 Light gray to gray, fine to medium grained SCHIST. Very hard to moderately hard, slightly weathered to fresh. Joints dipping at low angles, parallel with foliation, very close to moderately close, open, weathered joint surfaces, planar and smooth. Rock Mass Quality=Good Recovery=100% -VASSALBORO FORMATION- R1 Core Times (min:sec): 60.0-61.0' (1:55); 61.0-62.0' (2:08); 62.0-63.0' (1:35); 63.0-64.0' (1:29); 64.0-65.0' (1:24) Note: Two attempts for R1	UC; qp=10,719psi
65	R2	60/58	65.0 - 70.0	RQD = 78%						Greenish-gray to gray, fine to coarse grained SCHIST. Very hard to moderately hard, slightly weathered. Joints dipping low angle parallel with foliation, very close to moderately close, open, weathered joint surfaces, planar and rough. Rock Mass Quality=Good Recovery=97% R2 Core Times (min:sec): 65.0-66.0' (1:40); 66.0-67.0' (1:47); 67.0-68.0' (1:38); 68.0-69.0' (1:34); 69.0-70.0' (2:01)	
70	R3	24/24	70.0 - 72.0	RQD = 100%				-59.4 -61.5		69.9 Yellowish-gray to greenish-gray, coarse grained GRANITE. Very hard, fresh. Joints dipping at low angles, moderately close, open, slight oxidation on joint surfaces, rough and undulating. Rock Mass Quality=Excellent? Recovery=100% R3 Core Times (min:sec): 70.0-71.0' (2:18); 71.0-72.0' (2:32) 72.0 Bottom of Exploration at 72.0 feet below ground surface.	
75											

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.

Page 2 of 2

Boring No.: BB-GCS-403

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00
BRIDGE NO. 2101

BRIDGE PLANS

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — LICENSED PROFESSIONAL ENGINEER

PROJ. MANAGER	L. TIMBERLAKE	BY
DESIGN-DETAILED	M.S	SEPT 2018
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

P.E. NUMBER 10620
9/26/2018
DATE
SIGNATURE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (5 OF 5)

SHEET NUMBER
A11
OF A78

HALEY ALDRICH

Filename: ...\MSTA\A12_Utility_Plan1.dgn Username: lflanders Division: BRIDGE Date:9/27/2018

Utilize Exist. Conduit; Remove and Reinstall Exist. Conductors; Provide New Conductors for Receptacle Circuit

New Electrical Panel "LP". Provide Additional Breakers for Receptacles: See Lighting Details

Utilize Exist. Conduit; Remove and Reinstall Exist. Conductors as Required; Provide New Conductors for Receptacle Circuit

Proposed gas line (by others)

Proposed Street Lighting Conduit (Typ.)

Temporary dead end (additional guy may be required by others) CMP will backfeed to Maine Ave from this pole

Intercept Exist. Lighting Conduit and Install Junction Box JBB-1

Additional Conduit for New Feed for Lights and Receptacles

Box Light and Junction Box (UP-1 & JBB-4) Mounted to Underside of Bridge

Proposed Consolidated Communications duct bank

Utility pole and cobra head light (by others)

Consolidated Communications Vault

Remove gas main (by others)

Remove pole, push brace, & guy (by others)

Adjust Sewer Manhole to Grade (By Others)

Adjust Electrical Manhole to Grade

Adjust Telephone Manhole to Grade

Pedestal Pole and Foundation (Typ.)

Relocate Ornamental Lights

FairPoint Vault

JBB-1A

JBB-3

BR-2

WS-B

WS-A

Approximate face of retaining wall

JBB-2

BR-4

Remove pole & relocate cobra head light to pole 10/4 (by others)

Remove Signal Pole and Foundation

Remove existing water line

Adjust Sewer Manhole to Grade (By Others)

Consolidated Communications Vault

Adjust Sewer Manhole to Grade (By Others)

BR-1

Abandon Underground Conduit (See Notes)

JBB-2A

BR-5

SL-1

Proposed water line

BR-7

Remove pole & guys (by others)

Remove aerial lines prior to construction (by others)

Remove Signal Pole and Foundation

Proposed Signal Pole, Light and Foundation

BR-3

Ornamental Light (Typ.)

Remove Abandoned Utility Pole (By Others)

Existing Street Light to be Removed

Approximate limits of superstructure construction on temporary foundations

Existing Street Light to be Removed

BR-9

Pave Around Hydrant

Conduit penetration through Consolidated Communications central office basement. See Special Provisions Section 910.301.

Remove pole & guy; Remove & Stockpike City Flood Gauge (by others)

Adjust Telephone Manhole to Grade

Remove existing gas (by others)

Junction Box (Typ.)

Remove existing Consolidated Communications duct bank on bridge

CMP to power street lighting and commercial service from Arcade across the Stream

Dead end pole with guy (By Others)

Relocate Pole 2/4 (By Others)

New Temporary Stub Pole and Aerial Electrical Service (By Others)

LEGEND

▨ = utility removal

(##-#) — Light Fixture #

NOTES

1. Existing underground utilities are approximate.
2. See Consolidated Communications plans for their relocation details.
3. Bridge conduit not shown for clarity. See Bridge Plans.
4. See Water Plans for relocation details.
5. See Multi-Use Path General Plans for additional modifications to the lighting system along Arcade and Maine Ave.
6. See WIN 22684.00 Intersection Plans for additional traffic signal details.
7. See Sheet A75 for street lighting details.

PLAN

25 0 25 50

Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

BY	DATE
DOT	SEPT 2018
LEM\TWM	SEPT 2018
PLP	SEPT 2018

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	LSF
CHECKED-REVIEWED	DDT
DESIGN2-DETAILED2	PLP
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

UTILITY PLAN (1 OF 2)

SHEET NUMBER

A12

OF A78

Filename: ...\MSTA\A13_Utility_Plan2.dgn Division: BRIDGE Username: lflanders Date:9/27/2018

Abandoned Pole and Foundation to be Removed

Adjust Sewer Manhole to Grade (By Others)

38+71
39+00
40+00
29+00
30+00
N79°08'42.85"E
76+00
75+00
77+00
78+00
79+00
N31°49'01.65"E
80+00
81+00

1/2" DIA REBAR PLS THESE
1" DIA ROD
SPEED LIMIT 25
NO PARKING
6" PVC
BROWN OLD IRVING
1" DIA IRON PIPE
DIA IRON PIPE
WOOD 8 STEPS
WOOD 3 STEPS
2" DIA STEEL
TW DICK
STEEL GATE
BLUE APRTS
OLD T.W. DICK
MCDONALDS
LONG
LONG 3 STEPS
HANDICAP PARKING
D/1
DEAD END
CHERRY
DRIVE THROUGH
RESTAURANT
MCDONALDS WELCOME
STOP
ISLAND AVE. BOYS AND GIRLS CLUB
12" CMP
6" PVC
14" CPP
STOP LIMITED
METHODIST CHURCH
UNITED METHODIST CHURCH
TRAFFIC LIGHT
HALLOWELL AUGUSTA
BUISNESS SIGNS
SHOP AND SAVE
MAPLE
HANNAFORD
SAY RETURNS

LEGEND

= utility removal

##-# Light Fixture #

NOTES

1. See Sheet A12 for notes.

PLAN

25 0 25 50

Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	L. TIMBERLAKE	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	LSF	DDT	SEPT 2018
CHECKED-REVIEWED	DDT	LEM/MW	SEPT 2018
DESIGN2-DETAILED2	PLP	PLP	SEPT 2018
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

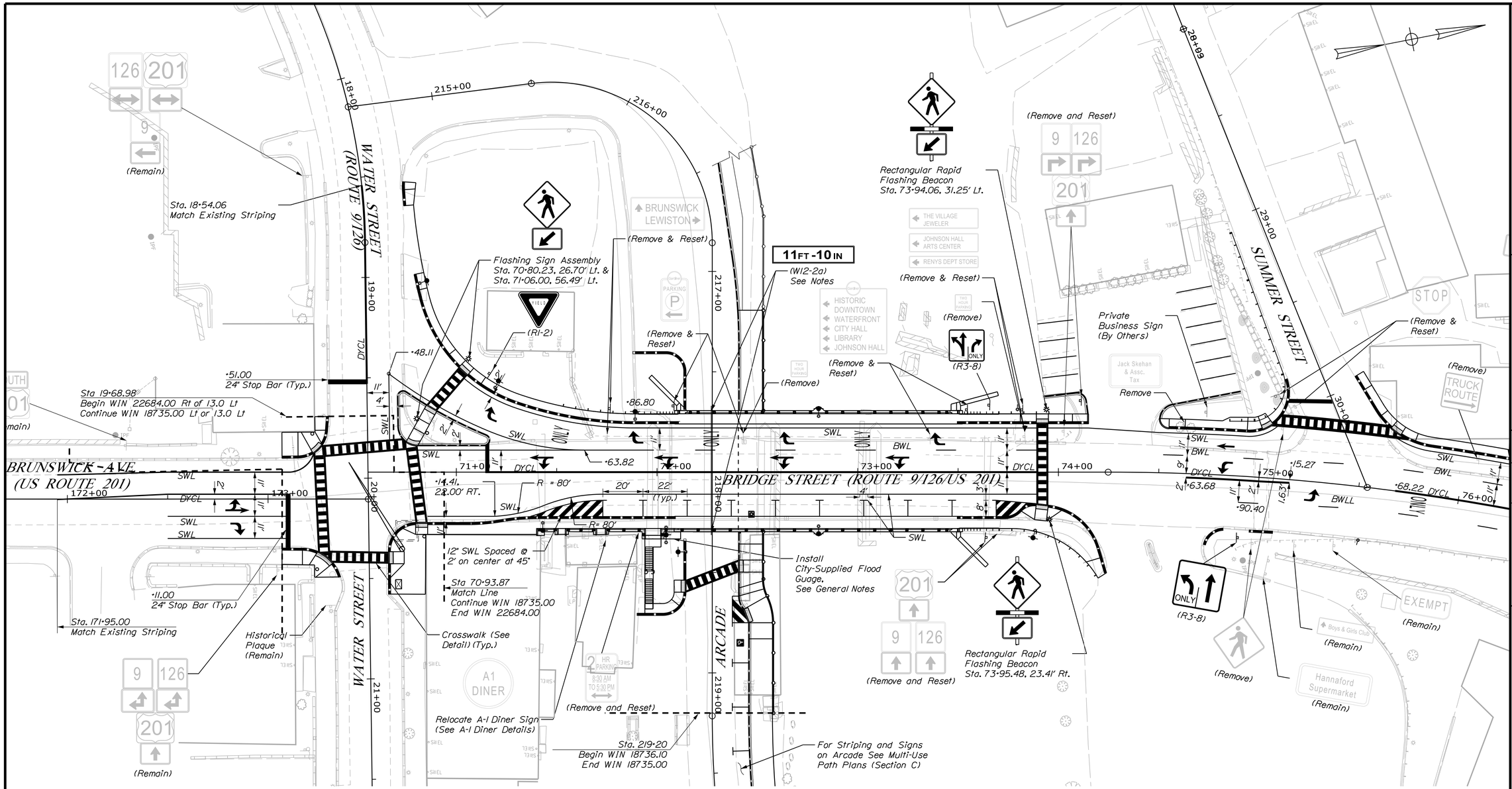
UTILITY PLAN (2 OF 2)

SHEET NUMBER

A13

OF A78

Filename: ...\MSTA\A14_StripingPlan1.dgn Division: BRIDGE Username: lflanders Date:10/25/2018



Notes:
1. The Contractor shall remove all existing pavement markings that conflict with proposed markings. Payment will be considered incidental to related Contract items.
2. Proposed sign locations, offset and height shall be in accordance with the Manual For Uniform Traffic Control Devices For Streets And Highways (MUTCD), latest edition.
3. The Contractor shall confirm final bridge vertical clearance over Arcade after final paving and prior to ordering signage. Clearance shall be signed for actual clearance minus 2".
4. See Special Provision Section 910 for further details on the Skehan's Tax sign removal.

LEGEND

SWL	4" Solid White Line		Shared Straight & Right/Left Arrow Pavement Marking
DYCL	4" Double Yellow Center Line		
BWL	4" Broken White Line		Shared Straight & Right & Left Arrow Pavement Marking
	Right Arrow Pavement Marking		Rectangular Rapid Flashing Beacon (See Notes)*
	Left Arrow Pavement Marking		

PLAN

25 0 25 50
Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

		DATE	BY
PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	SEPT 2018	E.JB
CHECKED-REVIEWED	LEM	SEPT 2018	TWM
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

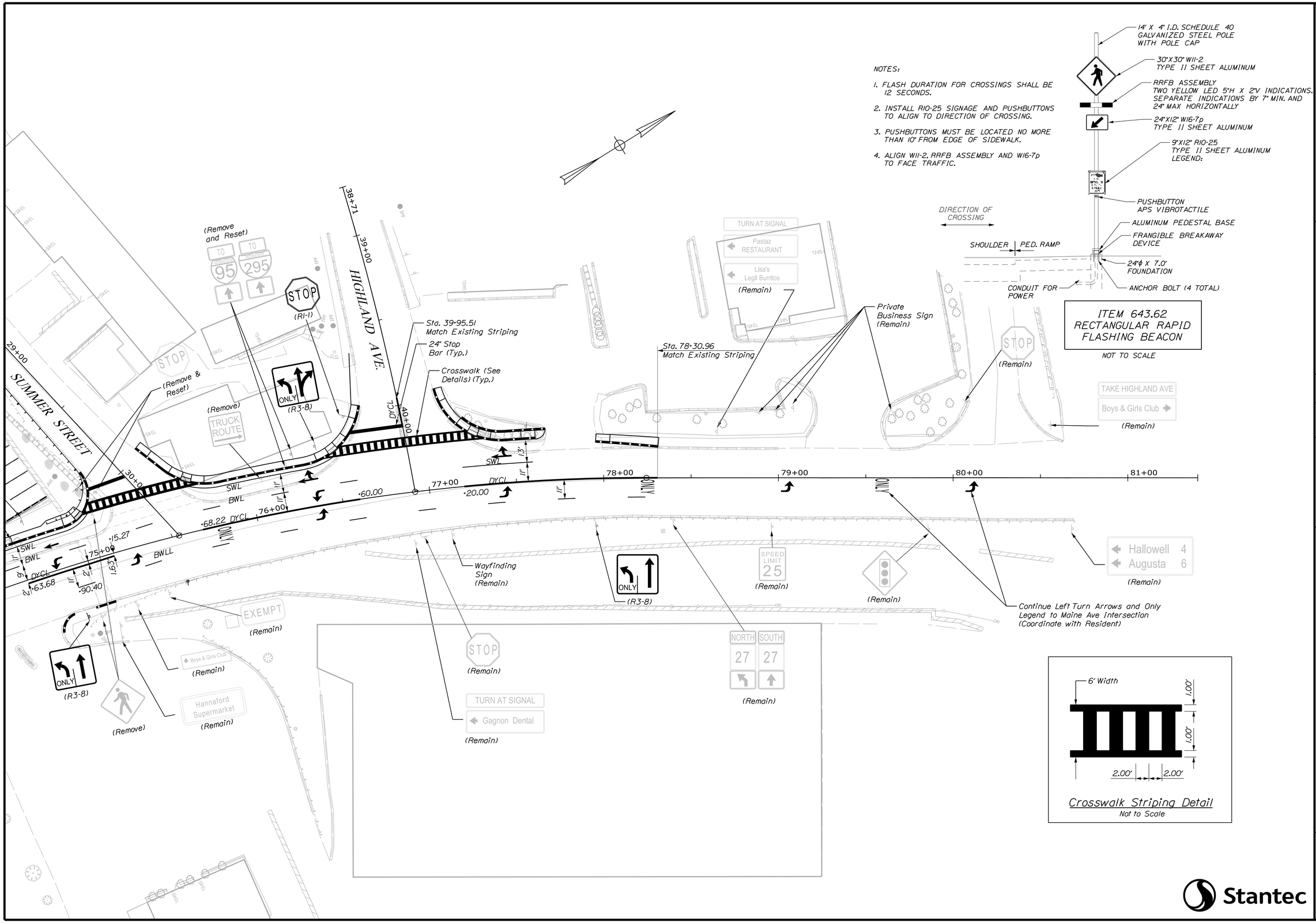
SIGNING & STRIPING PLAN

SHEET NUMBER

A14

OF A78

Filename: ...\MSTA\A15_StripingPlan2.dgn Division: BRIDGE Username: dtaylor Date:9/27/2018



NOTES:

1. FLASH DURATION FOR CROSSINGS SHALL BE 12 SECONDS.
2. INSTALL RIO-25 SIGNAGE AND PUSHBUTTONS TO ALIGN TO DIRECTION OF CROSSING.
3. PUSHBUTTONS MUST BE LOCATED NO MORE THAN 10" FROM EDGE OF SIDEWALK.
4. ALIGN WII-2, RRFB ASSEMBLY AND WI6-7p TO FACE TRAFFIC.

ITEM 643.62
RECTANGULAR RAPID FLASHING BEACON

NOT TO SCALE

Crosswalk Striping Detail
Not to Scale

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	E.JB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

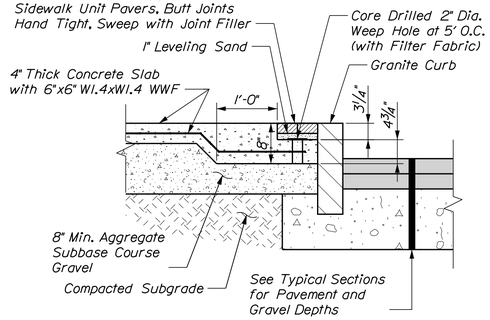
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SIGNING & STRIPING PLAN

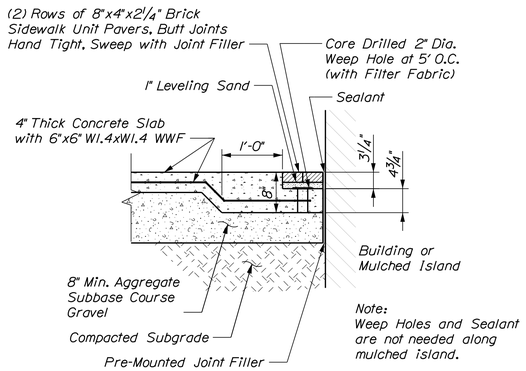
SHEET NUMBER

A15

OF A78

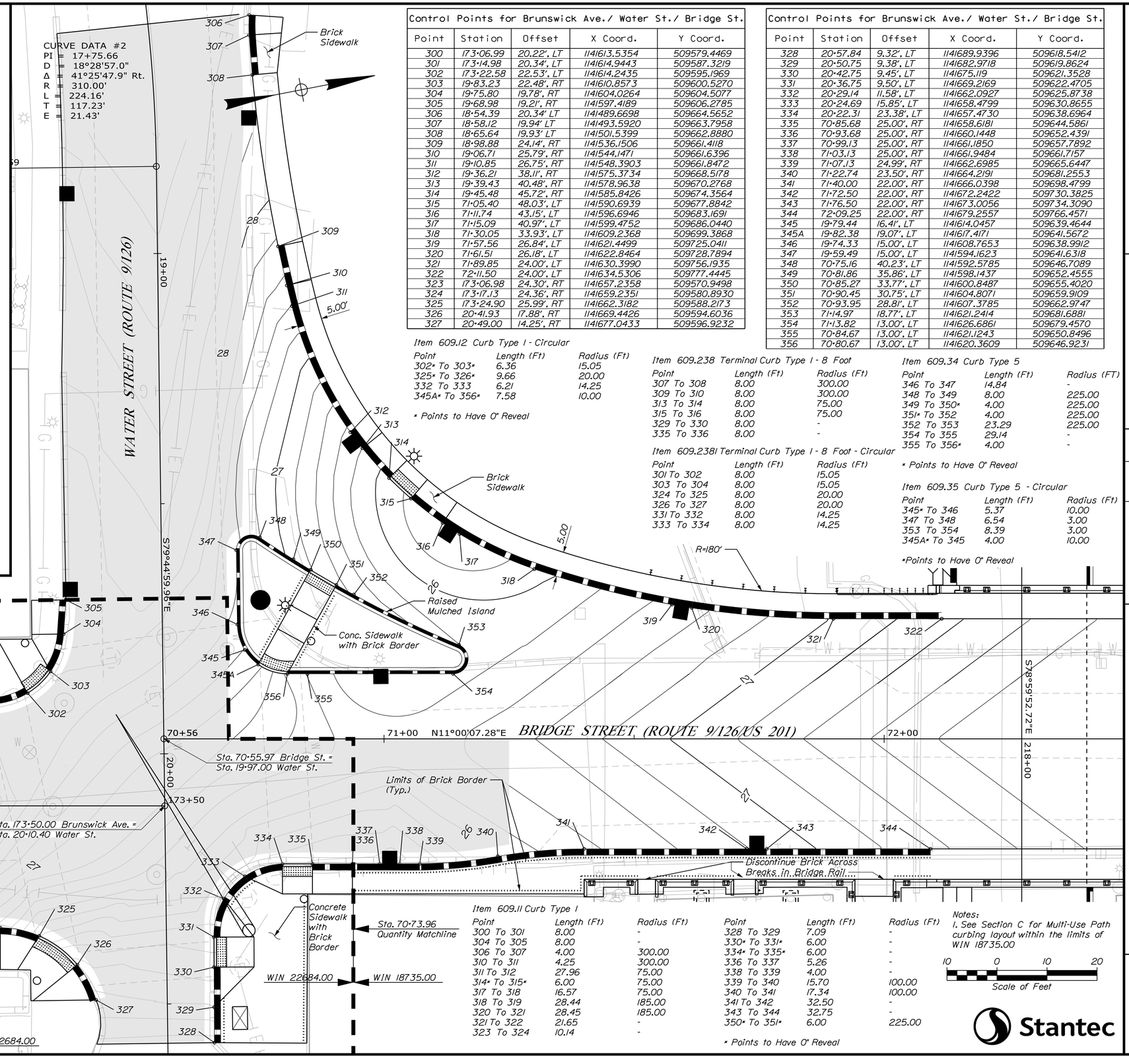


AT STREET



AT BUILDING OR MULCHED ISLAND

CONCRETE SIDEWALK WITH BRICK BORDER



Control Points for Brunswick Ave./ Water St./ Bridge St.				
Point	Station	Offset	X Coord.	Y Coord.
300	173+06.99	20.22', LT	1141613.5354	509579.4469
301	173+14.98	20.34', LT	1141614.9443	509587.3219
302	173+22.58	22.53', LT	1141614.2435	509595.1969
303	19+83.23	22.48', RT	1141610.8573	509600.5270
304	19+75.80	19.78', RT	1141604.0264	509604.5077
305	19+68.98	19.21', RT	1141597.4189	509606.2785
306	18+54.39	20.34' LT	1141489.6698	509664.5652
307	18+58.12	19.94' LT	1141493.5920	509663.7958
308	18+65.64	19.93' LT	1141501.5399	509662.8880
309	18+98.88	24.14', RT	1141536.1506	509661.4118
310	19+06.71	25.79', RT	1141544.1471	509661.6396
311	19+10.85	26.75', RT	1141548.3903	509661.8472
312	19+36.21	38.11', RT	1141575.3734	509668.5178
313	19+39.43	40.48', RT	1141578.9638	509670.2768
314	19+45.48	45.72', RT	1141585.8426	509674.3564
315	71+05.40	48.03', LT	1141590.6939	509677.8842
316	71+11.74	43.15', LT	1141596.6946	509683.1691
317	71+15.09	40.97', LT	1141599.4752	509686.0440
318	71+30.05	33.93', LT	1141609.2368	509699.3868
319	71+57.56	26.84', LT	1141621.4499	509725.0411
320	71+61.51	26.18', LT	1141622.8464	509728.7894
321	71+89.85	24.00', LT	1141630.3990	509756.1935
322	72+11.50	24.00', LT	1141634.5306	509777.4445
323	173+06.98	24.30', RT	1141657.2358	509570.9498
324	173+17.13	24.36', RT	1141659.2351	509580.8930
325	173+24.90	25.99', RT	1141662.3182	509588.2173
326	20+41.93	17.88', RT	1141669.4426	509594.6036
327	20+49.00	14.25', RT	1141677.0433	509596.9232

Control Points for Brunswick Ave./ Water St./ Bridge St.				
Point	Station	Offset	X Coord.	Y Coord.
328	20+57.84	9.32', LT	1141689.9396	509618.5412
329	20+50.75	9.38', LT	1141682.9718	509619.8624
330	20+42.75	9.45', LT	1141675.119	509621.3528
331	20+36.75	9.50', LT	1141669.2169	509622.4705
332	20+29.14	11.58', LT	1141662.0927	509625.8738
333	20+24.69	15.85', LT	1141658.4799	509630.8655
334	20+22.31	23.38', LT	1141657.4730	509638.6964
335	70+85.68	25.00', RT	1141658.6181	509644.5861
336	70+93.68	25.00', RT	1141660.1448	509652.4391
337	70+99.13	25.00', RT	1141661.1850	509657.7892
338	71+03.13	25.00', RT	1141661.9484	509661.7157
339	71+07.13	24.99', RT	1141662.6985	509665.6447
340	71+22.74	23.50', RT	1141664.2191	509681.2553
341	71+40.00	22.00', RT	1141666.0398	509698.4799
342	71+72.50	22.00', RT	1141672.2422	509730.3825
343	71+76.50	22.00', RT	1141673.0056	509734.3090
344	72+09.25	22.00', RT	1141679.2557	509766.4571
345	19+79.44	16.41', LT	1141614.0457	509639.4644
345A	19+82.38	19.07', LT	1141617.4171	509641.5672
346	19+74.33	15.00', LT	1141608.7653	509638.9912
347	19+59.49	15.00', LT	1141594.1623	509641.6318
348	70+75.16	40.23', LT	1141592.5785	509646.7089
349	70+81.86	35.86', LT	1141598.1437	509652.4555
350	70+85.27	33.77', LT	1141600.8487	509655.4020
351	70+90.45	30.75', LT	1141604.8071	509659.9109
352	70+93.95	28.81', LT	1141607.3785	509662.9747
353	71+14.97	18.77', LT	1141621.2414	509681.6881
354	71+13.82	13.00', LT	1141626.6861	509679.4570
355	70+84.67	13.00', LT	1141621.1243	509650.8496
356	70+80.67	13.00', LT	1141620.3609	509646.9231

Item 609.12 Curb Type 1 - Circular

Point	Length (Ft)	Radius (Ft)
302* To 303*	6.36	15.05
325* To 326*	9.66	20.00
332 To 333	6.21	14.25
345A* To 356*	7.58	10.00

* Points to Have 0" Reveal

Item 609.238 Terminal Curb Type 1 - 8 Foot

Point	Length (Ft)	Radius (Ft)
307 To 308	8.00	300.00
309 To 310	8.00	300.00
313 To 314	8.00	75.00
315 To 316	8.00	75.00
329 To 330	8.00	-
335 To 336	8.00	-

Item 609.2381 Terminal Curb Type 1 - 8 Foot - Circular

Point	Length (Ft)	Radius (Ft)
301 To 302	8.00	15.05
303 To 304	8.00	15.05
324 To 325	8.00	20.00
326 To 327	8.00	20.00
331 To 332	8.00	14.25
333 To 334	8.00	14.25

Item 609.34 Curb Type 5

Point	Length (Ft)	Radius (Ft)
346 To 347	14.84	-
348 To 349	8.00	225.00
349 To 350*	4.00	225.00
351* To 352	4.00	225.00
352 To 353	23.29	225.00
354 To 355	29.14	-
355 To 356*	4.00	-

* Points to Have 0" Reveal

Item 609.35 Curb Type 5 - Circular

Point	Length (Ft)	Radius (Ft)
345* To 346	5.37	10.00
347 To 348	6.54	3.00
353 To 354	8.39	3.00
345A* To 345	4.00	10.00

*Points to Have 0" Reveal

Item 609.11 Curb Type 1

Point	Length (Ft)	Radius (Ft)
300 To 301	8.00	-
304 To 305	8.00	-
306 To 307	4.00	300.00
310 To 311	4.25	300.00
311 To 312	27.96	75.00
314* To 315*	6.00	75.00
317 To 318	16.57	75.00
318 To 319	28.44	185.00
320 To 321	28.45	185.00
321 To 322	21.65	-
323 To 324	10.14	-
328 To 329	7.09	-
330* To 331*	6.00	-
334* To 335*	6.00	-
336 To 337	5.26	-
338 To 339	4.00	-
339 To 340	15.70	100.00
340 To 341	17.34	100.00
341 To 342	32.50	-
343 To 344	32.75	-
350* To 351*	6.00	225.00

* Points to Have 0" Reveal

Notes:
1. See Section C for Multi-Use Path curbing layout within the limits of WIN 18735.00

10 0 10 20
Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(500)
WIN 18735.00
BRIDGE NO. 2101
BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	PLP
CHECKED-REVIEWED	LEM
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BY	DATE
EJB	SEPT 2018
TWM	SEPT 2018

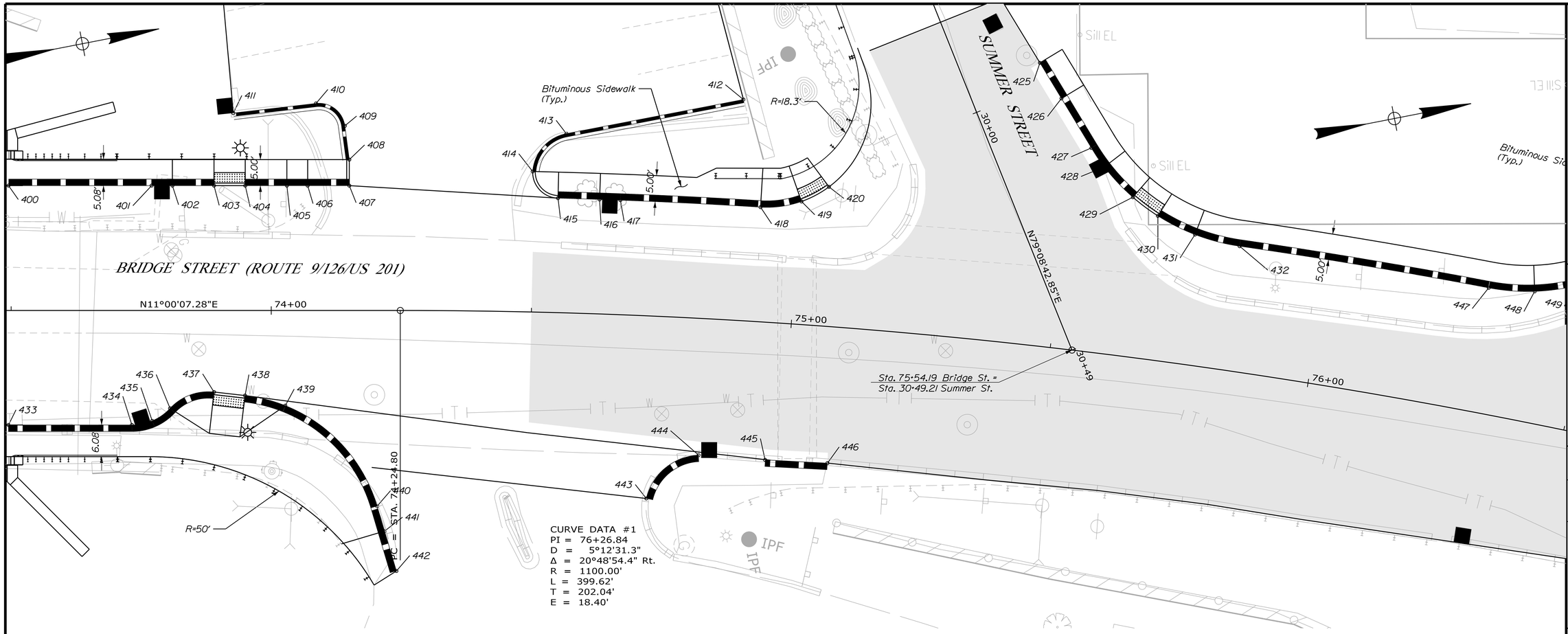
P.E. NUMBER
DATE
SIGNATURE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

GEOMETRY & CURB PLAN

SHEET NUMBER
A16
OF A78

Filename: ...\BRIDGE\MSTA\A16_Geometry1.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018



CONTROL POINTS FOR HIGLAND AVE./SUMMER ST./BRIDGE ST.				
Point	Station	Offset	X Coord.	Y Coord.
400	73+49.50	24.00', LT	1141660.8670	509912.9081
401	73+77.00	24.00', LT	1141666.1152	509939.9027
402	73+81.00	24.00', LT	1141666.8785	509943.8292
403	73+89.00	24.00', LT	1141668.4053	509951.6822
404	73+95.00	24.00', LT	1141669.5504	509957.5719
405	74+03.00	24.00', LT	1141671.0771	509965.4248
406	74+07.00	24.00', LT	1141671.8405	509969.3513
407	74+15.00	24.00', LT	1141673.3672	509977.2043
408	74+15.00	29.00', LT	1141668.4591	509978.1585
409	74+14.14	35.48', LT	1141661.9303	509978.5478
410	74+08.60	39.79', LT	1141656.6472	509973.9364
411	73+92.71	37.94', LT	1141655.4318	509957.9827
412	74+88.33	42.45', LT	1141671.5850	510054.7085
413	74+55.75	34.43', LT	1141671.5253	510020.0556
414	74+49.64	27.00', LT	1141677.4310	510012.3208
415	74+54.52	22.00', LT	1141683.3872	510016.1173
416	74+62.36	22.00', LT	1141685.1534	510023.9199
417	74+66.28	22.00', LT	1141686.0573	510027.8164
418	74+92.73	22.00', LT	1141692.5143	510054.0030
419	75+00.35	23.61', LT	1141692.9415	510061.9383
420	30+02.72	31.68', RT	1141691.1965	510067.6554

CONTROL POINTS FOR HIGLAND AVE./SUMMER ST./BRIDGE ST.				
Point	Station	Offset	X Coord.	Y Coord.
425	29+95.69	14.83', LT	1141675.5363	510112.0095
426	30+03.58	16.13', LT	1141683.0456	510114.7680
427	30+14.55	17.93', LT	1141693.4766	510118.5998
428	30+18.87	18.89', LT	1141697.5415	510120.3540
429	30+26.31	21.80', LT	1141704.2965	510124.6151
430	75+67.24	27.63', LT	1141708.7321	510128.6472
431	75+74.61	25.02', LT	1141713.6164	510134.9663
432	75+83.22	24.00', LT	1141717.4469	510142.9565
433	73+49.50	22.00', RT	1141706.0215	509904.1293
434	73+73.22	22.00', RT	1141710.5483	509927.4134
435	73+77.11	21.21', RT	1141710.5166	509931.3867
436	73+80.55	18.80', RT	1141708.8094	509935.2175
437	73+89.00	15.67', RT	1141707.3466	509944.1113
438	73+94.96	16.34', RT	1141709.1456	509949.8353
439	74+02.70	18.28', RT	1141712.5274	509957.0592
440	74+20.35	37.60', RT	1141734.8595	509970.6996
441	74+21.77	42.39', RT	1141739.8294	509971.1833
442	74+24.05	50.06', RT	1141747.7918	509971.9582
443	74+73.67	35.07', RT	1141743.2768	510021.7756
444	74+83.57	26.26', RT	1141737.0180	510033.2234
445	74+96.69	26.42', RT	1141740.3565	510045.5900
446	75+08.98	26.19', RT	1141743.2550	510057.2347

Item 609.11 Curb Type 1

Point	Length (Ft)	Radius (Ft)
400 To 401	27.50	-
403* To 404*	6.00	-
405 To 406	4.00	-
407* To 408*	5.00	-
417 To 418	26.97	-
426 To 427	11.11	-
433 To 434	23.72	-
437* To 438*	6.00	-
440 To 441	4.99	-
445 To 446	12.00	-

* Points to Have 0" Reveal

Item 609.12 Curb Type 1 - Circular

Point	Length (Ft)	Radius (FT)
414* To 415*	7.84	5.00
419 To 420	6.00	20.00
427 To 428	4.43	40.00
429* To 430*	6.00	40.00
431 To 432	8.88	40.00
435 To 436	4.23	10.00
439 To 440	27.08	30.00
443 To 444	14.00	10.84

* Points to Have 0" Reveal

Item 609.238 Terminal Curb Type 1 - 8 Foot

Point	Length (Ft)	Radius (Ft)
402 To 403	8.00	-
404 To 405	8.00	-
406 To 407	8.00	-
415 To 416	8.00	1122.00
425 To 426	8.00	-
441 To 442	8.00	-

Item 609.2381 Terminal Curb Type 1 - 8 Foot - Circular

Point	Length (Ft)	Radius (Ft)
418 To 419	8.00	20.00
428 To 429	8.00	40.00
430 To 431	8.00	40.00
436 To 437	8.00	10.00
438 To 439	8.00	30.00

Item 609.34 Curb Type 5

Point	Length (Ft)	Radius (Ft)
408* To 409	6.54	-
410 To 411	16.00	-
412 To 413	34.65	-

* Points to Have 0" Reveal

Item 609.35 Curb Type 5 - Circular

Point	Length (Ft)	Radius (Ft)
409 To 410	7.77	5.00
413 to 414*	10.46	8.00

* Points to Have 0" Reveal

10 0 10 20
Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	EJB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

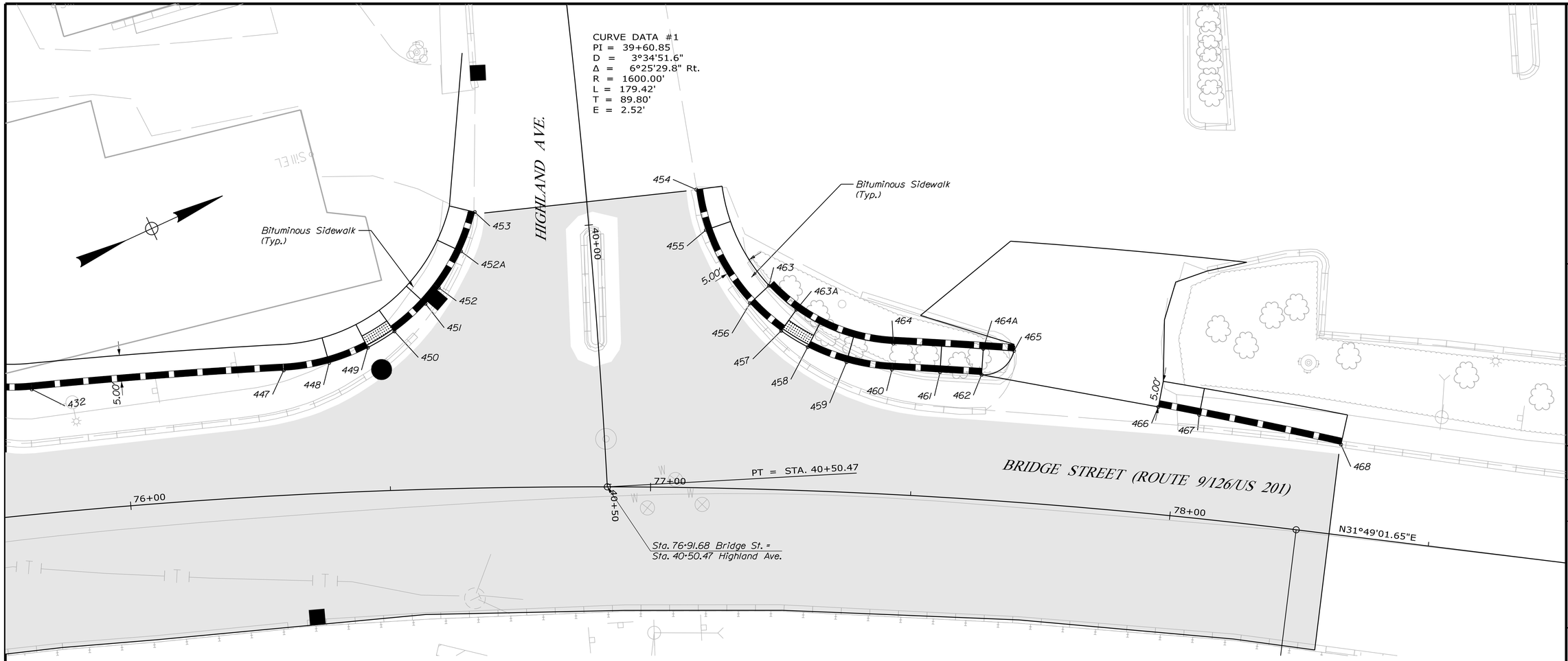
GEOMETRY & CURB PLAN

SHEET NUMBER

A17

OF A78

Filename: ...\BRIDGE\MSTA\A17_Geometry2.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



CONTROL POINTS FOR HIGLAND AVE./SUMMER ST./BRIDGE ST.				
Point	Station	Offset	X Coord.	Y Coord.
447	76+30.73	24.00', LT	1141734.4404	510188.4292
448	76+39.34	25.02', LT	1141736.7889	510196.9732
449	76+46.71	27.63', LT	1141737.2459	510204.9468
450	40+17.55	38.89', RT	1141736.5417	510210.8997
451	40+12.61	32.52', RT	1141734.2369	510218.5466
452	40+09.70	29.72', RT	1141732.5239	510222.1594
452A	40+02.93	24.92', RT	1141727.9215	510228.9523
453	39+95.55	21.61', RT	1141722.2020	510234.5268
454	39+95.06	21.20', LT	1141736.1378	510275.0103
455	40+02.85	22.37', LT	1141743.9676	510273.4352
456	40+17.34	29.68', LT	1141760.3139	510275.2157
457	40+22.94	35.26', LT	1141767.6210	510278.4395
458	77+29.24	27.63', LT	1141772.6003	510281.7771
459	77+36.61	25.02', LT	1141778.3589	510287.3111
460	77+45.22	24.00', LT	1141783.3204	510294.6527
461	77+54.26	24.00', LT	1141787.6494	510302.8193
462	77+62.09	24.00', LT	1141791.4503	510309.8587
463	77+21.64	39.18', LT	1141758.7624	510279.9689
463A	77+26.85	34.73', LT	1141765.1561	510282.7897
464	77+45.22	29.00', LT	1141778.8931	510296.9763
464A	77+62.09	29.00', LT	1141787.0591	510312.2499
465	77+67.85	29.00', LT	1141789.9008	510317.4358
466	77+95.78	20.60', LT	1141811.3107	510338.1132
467	78+03.60	19.86', LT	1141815.9887	510344.6029
468	78+30.96	17.33', LT	1141832.5951	510366.9402

Item 609.11 Curb Type 1

Point	Length (Ft)	Radius (Ft)
432 To 447	48.55	1124.00
460 To 461	9.24	1124.00
464 To 464A	17.32	1129.00
467 To 468	27.83	1217.46

Item 609.12 Curb Type 1 - Circular

Point	Length (Ft)	Radius (Ft)
447 To 448	8.88	40.00
449* To 450*	6.00	40.00
452 To 452A	8.22	40.00
455 To 456	16.56	40.00
457* To 458*	6.00	40.00
459 To 460	8.88	40.00
463* To 463A	7.00	35.00
463A To 464	20.02	35.00

* Points to Have 0" Reveal

Item 609.238 Terminal Curb Type 1, 8 Foot

Point	Length (Ft)	Radius (Ft)
461 To 462	8.00	1124.00
464A To 465	5.91	1129.00
466 To 467	8.00	1217.46

Item 609.2381 Terminal Curb Type 1 - 8 Foot - Circular

Point	Length (Ft)	Radius (Ft)
448 To 449	8.00	40.00
450 To 451	8.00	40.00
452A To 453	8.00	40.00
454 To 455	8.00	40.00
456 To 457	8.00	40.00
458 To 459	8.00	40.00

Notes:
1. Curb reveal from pts 463 to 465 shall have reveal on back of sidewalk side.

10 0 10 20
Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	E.JB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

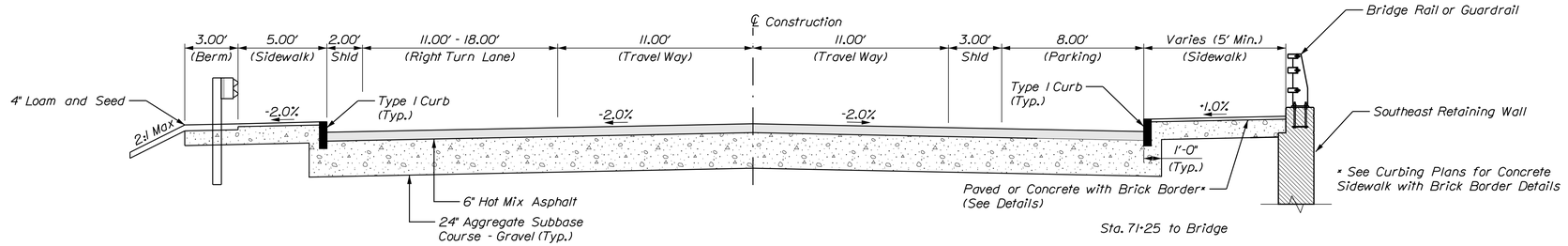
GEOMETRY & CURB PLAN

SHEET NUMBER

A18

OF A78

Filename: ...\BRIDGE\MSTA\A18_Geometry3.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

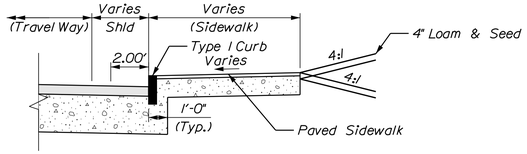


Sta. 71+25 to Bridge

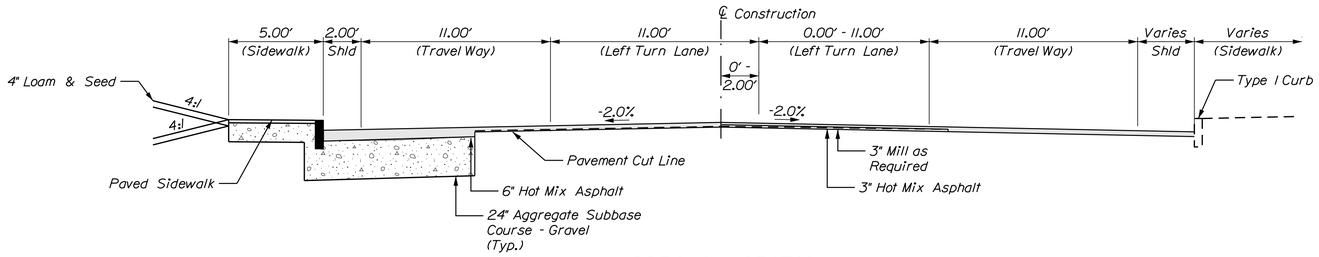
APPROACH SECTION

Full Depth Construction

Sta. 71+25 to Bridge
Bridge to Sta. 74+50



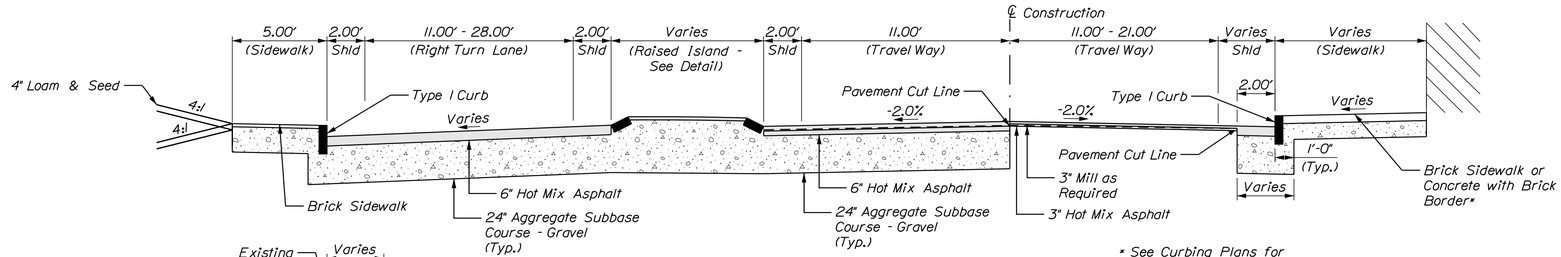
Bridge to Sta. 74+50



APPROACH SECTION

Mill & Pave

Sta. 74+50 to Sta. 78+30.78



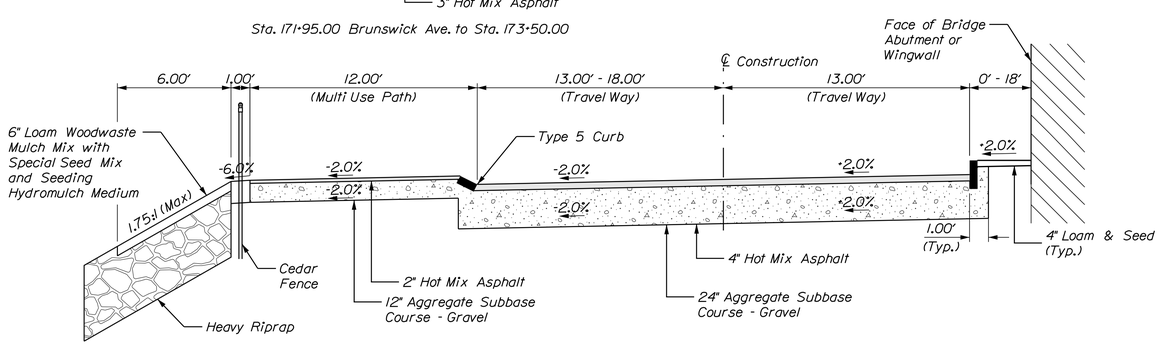
Sta. 171+95.00 Brunswick Ave. to Sta. 173+50.00

APPROACH SECTION

Mill & Pave

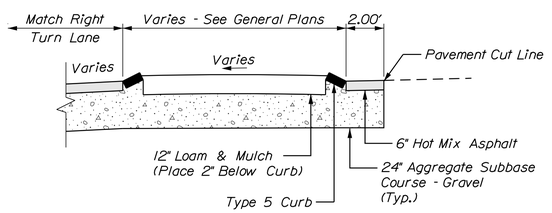
Sta. 171+95.00 Brunswick Ave. to Sta. 71+25 Bridge St.
Sta. 18+54.06 Water St. to Sta. 20+57.84 Water St.

* See Curbing Plans for Concrete Sidewalk with Brick Border Details



APPROACH SECTION

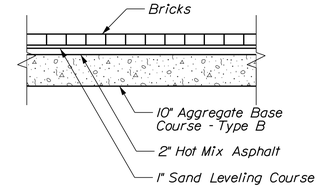
Arcade



RAISED ISLAND

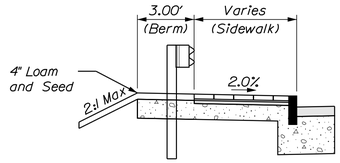
Bridge Street

Note: Mulch shall be incidental to the 621 Items.



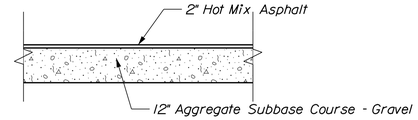
BRICK SIDEWALK DETAIL

Sta. 18+54.06 Lt. Water St. to 72+10 Lt. Bridge St.
Sta. 19+68.98 Rt. Water St. to 173+06.86 Lt. Brunswick Ave.
Sta. 173+06.86 Rt. Brunswick Ave. to 20+57.84 Rt. Water St.



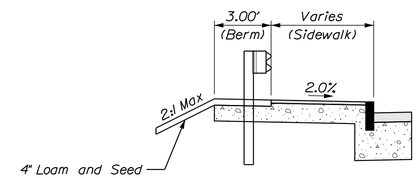
BRICK SIDEWALK GUARDRAIL DETAIL

Sta. 71+23.67 Lt. Bridge St. to 71+91.10 Lt. Bridge St.

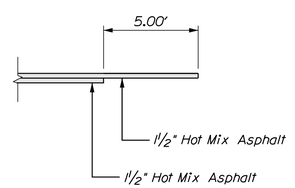


PAVED SIDEWALK DETAIL

Sta. 73+49.50 Rt. to 74+24.00 Rt. Bridge St.
Sta. 73+49.50 Lt. to 78+30.78 Lt. Bridge St.



PAVED SIDEWALK GUARDRAIL DETAIL



LONGITUDINAL MILLING DETAIL

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	LSF
CHECKED-REVIEWED	DDT
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

REVISIONS	BY	DATE
REVISIONS 1	DDT	SEPT 2018
REVISIONS 2	LEM\TWM	SEPT 2018
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

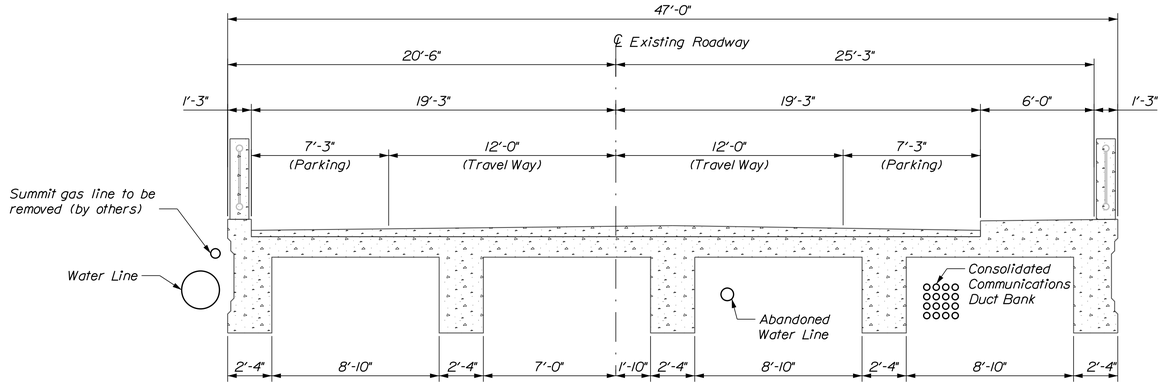
APPROACH TYPICAL SECTIONS

SHEET NUMBER

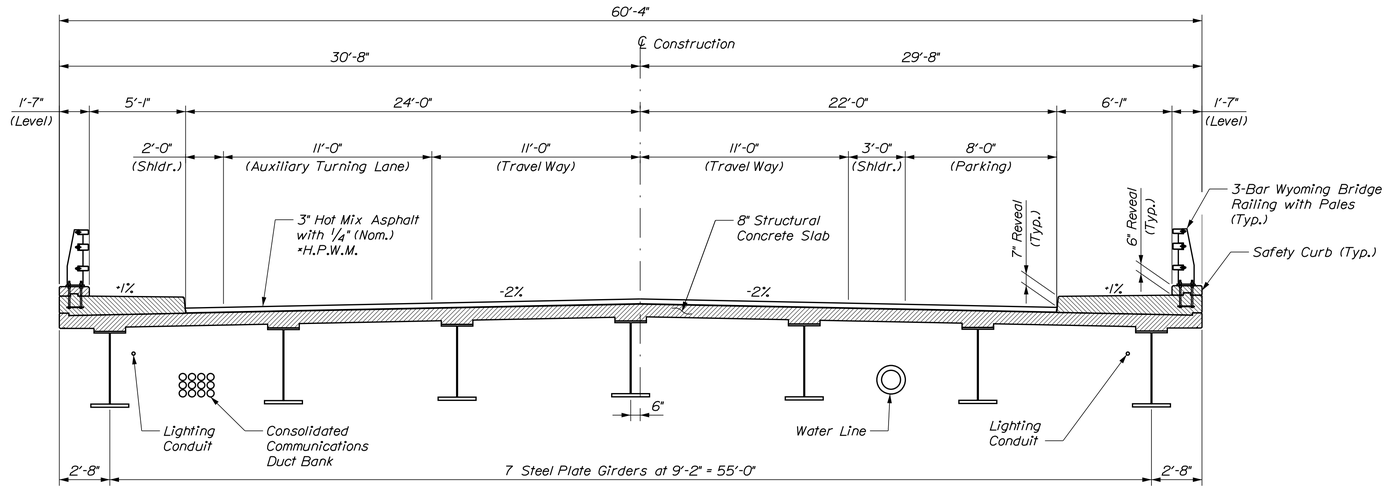
A19

OF A78

Filename: ...\MSTA\A19_Approach_typ.dgn Username: datoylor Division: BRIDGE Date:9/27/2018



SECTION - EXISTING STRUCTURE



SECTION - PROPOSED STRUCTURE

* High Performance Waterproofing Membrane

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	LSF/KLW	KLW	SEPT 2018
CHECKED-REVIEWED	DOT	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BRIDGE
TYPICAL SECTIONS

SHEET NUMBER

A20

OF A78

Username: dataylor Date:9/27/2018
Division: BRIDGE
Filename: ...\00\BRIDGE\MSTA\A20_BTyp.dgn

STAGE I NOTES

1. Install micropiles and cast the footings, wingwalls, and abutment stems to the limits shown, including a blockout for Consolidated Communications' duct bank. Micropiles, footings, and stem shall also be constructed for the southeast retaining wall.

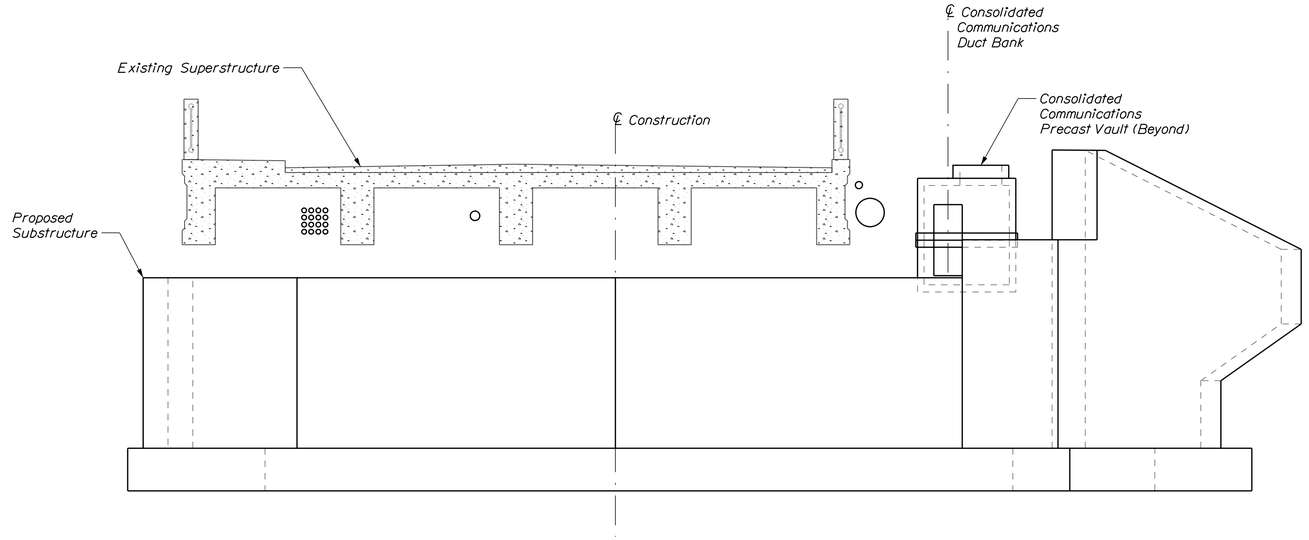
2. Install Consolidated Communications' duct bank relocation from downstream to upstream in the the bridge approaches. Install Consolidated Communications' precast concrete vaults behind each abutment. See Consolidated Communications' Plans for additional details.

STAGE II NOTES

1. Construct temporary access and staging area.

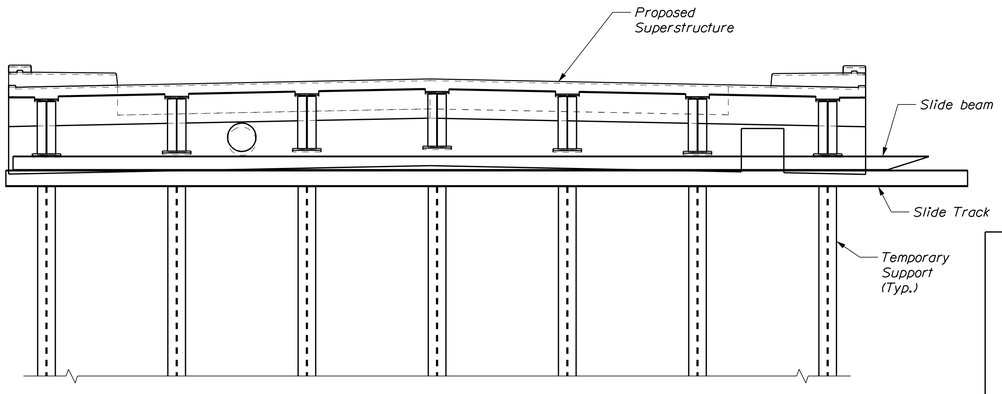
2. Construct proposed superstructure on temporary supports downstream of the existing bridge with provisions for lateral bridge slide-in. See Special Provision Section 524 for additional details.

3. Install Consolidated Communications' temporary support system between proposed abutments upstream of existing bridge as shown on Consolidated Communications' Plans. Relocate conduit duct bank to temporary supports between vaults.

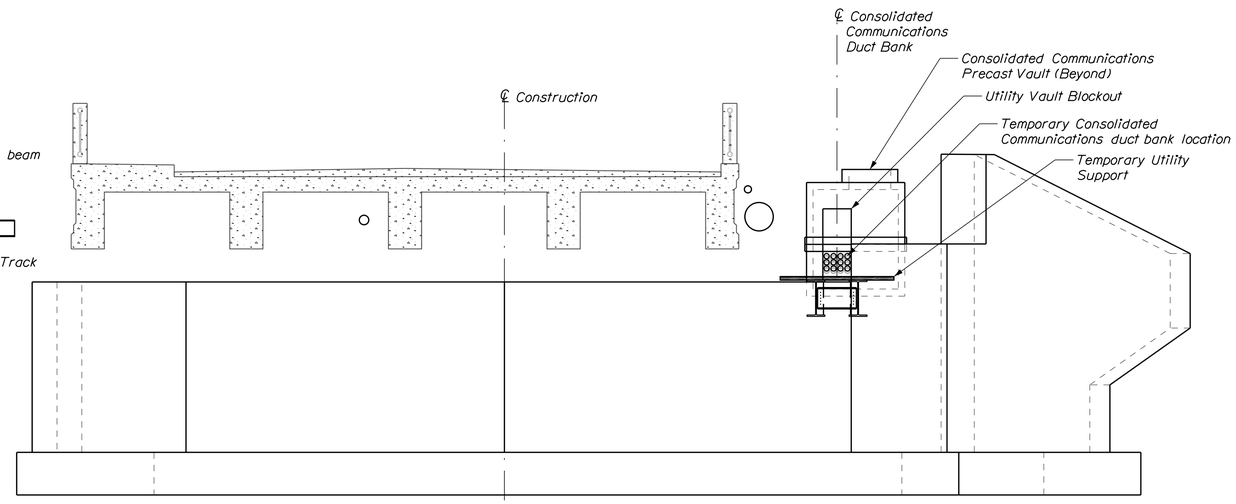


~ ABUTMENT NO. 1 ELEVATION ~

STAGE I
(Looking South)



~ CONCEPTUAL TEMPORARY WORKS ELEVATION ~



~ ABUTMENT NO. 1 ELEVATION ~

* The duct bank shall be installed below the superstructure ahead of the lateral slide-in and raised into the girder bay above after the Bridge Closure Period. The temporary lowered duct bank location is shown.

STAGE II
(Looking South)

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STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	KLW	KLW	SEPT 2018
CHECKED-REVIEWED	DOT	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

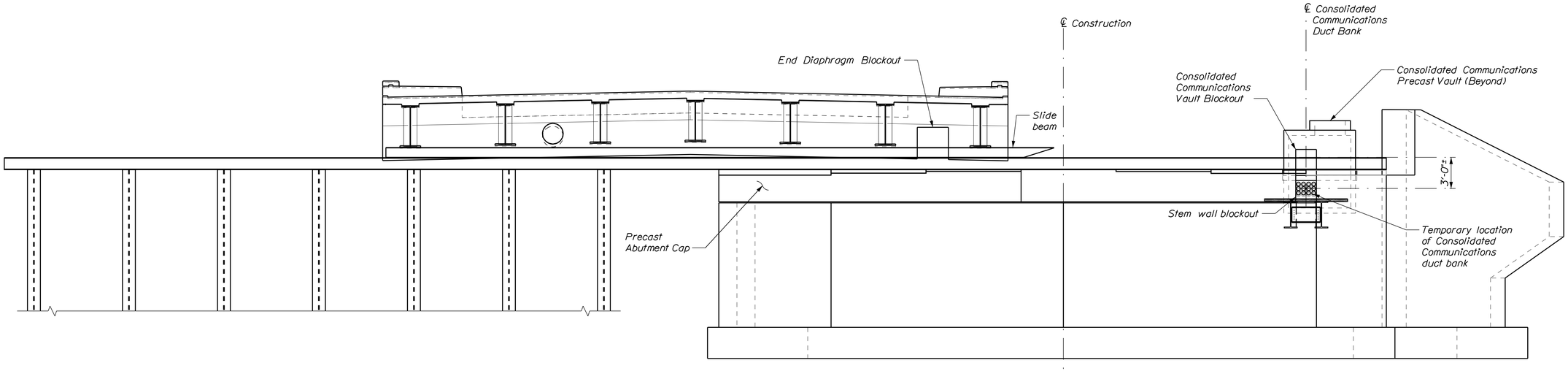
STAGED CONSTRUCTION 1

SHEET NUMBER

A21

OF A78

Filename: ...\MSTA\A21_Staged_Constr1.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



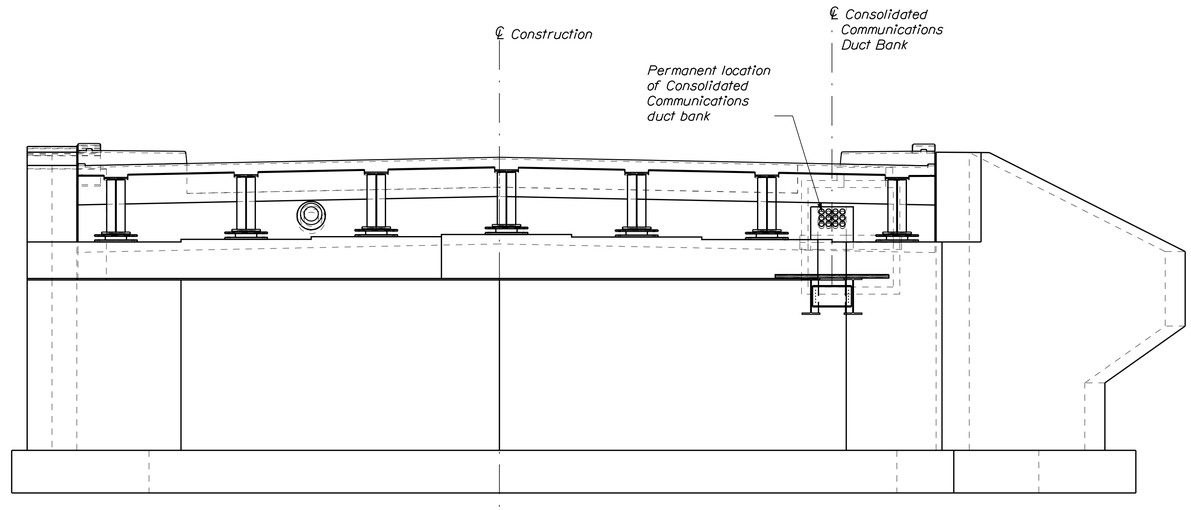
~ ABUTMENT NO. 1 ELEVATION ~

STAGE III NOTES

1. Detour traffic, close existing bridge to traffic, and begin Bridge Closure Period.

2. Demolish the existing bridge, complete the southeast retaining wall in front of the Al Diner, backfill, place precast abutment caps, slide in proposed superstructure, and complete as much approach work as permitted.

STAGE III
(Looking South)



~ ABUTMENT NO. 1 ELEVATION ~

STAGE IV NOTES

1. Finish casting top of east wingwalls and southeast retaining wall.

2. Finish approach work and place base pavement, open bridge to traffic, with intermittent single lane closures for finish work and final utility relocation.

3. Arcade under Bridge Street will remain closed until Consolidated Communications' duct bank is raised into the proposed bridge girder bay and the temporary utility supports are removed.

4. Remove slide-in temporary structural supports and restore the disturbed staging and access areas in accordance with Special Provision 524.

STAGE IV
(Looking South)

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STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

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CHECKED-REVIEWED	DOT	KLW	SEPT 2018
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DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

STAGED CONSTRUCTION 2

SHEET NUMBER

A22

OF A78

Filename: ...\MSTA\A22_Staged_Constr2.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

			Row 1		Row 2	
			Factored Design Load		Factored Design Load	
Item	Location	Micropile Casing	Compression	Tension	Compression	Tension
501.222	Abut No. 1	9 5/8" O.D. x 0.545" Wall	148 kips	-91 kips	340 kips	0 kips
501.222	Abut No. 2	9 5/8" O.D. x 0.545" Wall	110 kips	-138 kips	330 kips	-30 kips
501.222	SE Retaining Wall	7 5/8" O.D. x 0.5" Wall	35 kips	-68 kips	254 kips	0 kips

MICROPILE NOTES

1. Construct micropiles in accordance with Special Provision Section 501.

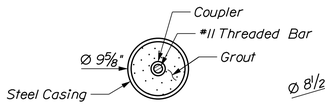
2. Rock socket lengths shall be confirmed by Contractor verification load tests on test piles in accordance with Special Provision 501, Micropiles.

3. Micropiles shall be constructed as plumb or battered as shown on the Plans.

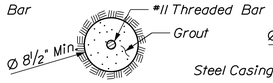
4. Grout shall be placed in accordance with Special Provision Section 501, Micropiles.

5. Wood debris, cobbles, and boulders within the fill soils were encountered during drilling some of the test borings near the proposed abutments and southeast retaining wall. These materials may be determined by the Resident to be obstructions per Special Provision Section 501. Cobbles and boulders within the naturally deposited soils that underlie the fill were also encountered in some of the test borings. These materials will not be classified as obstructions per Special Provision Section 501.

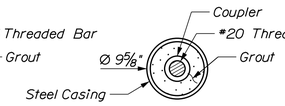
6. Open or unsupported drill holes shall not be permitted. The Contractor shall not drill or flush ahead of the drill casing by more than one foot. The drill casing shall be extended to top of rock and seated prior to drilling of the rock socket.



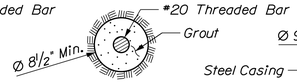
SECTION A-A
Cased Zone



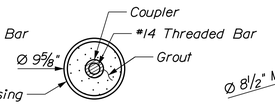
SECTION B-B
Rock Socket



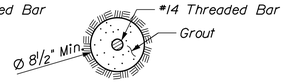
SECTION C-C
Cased Zone



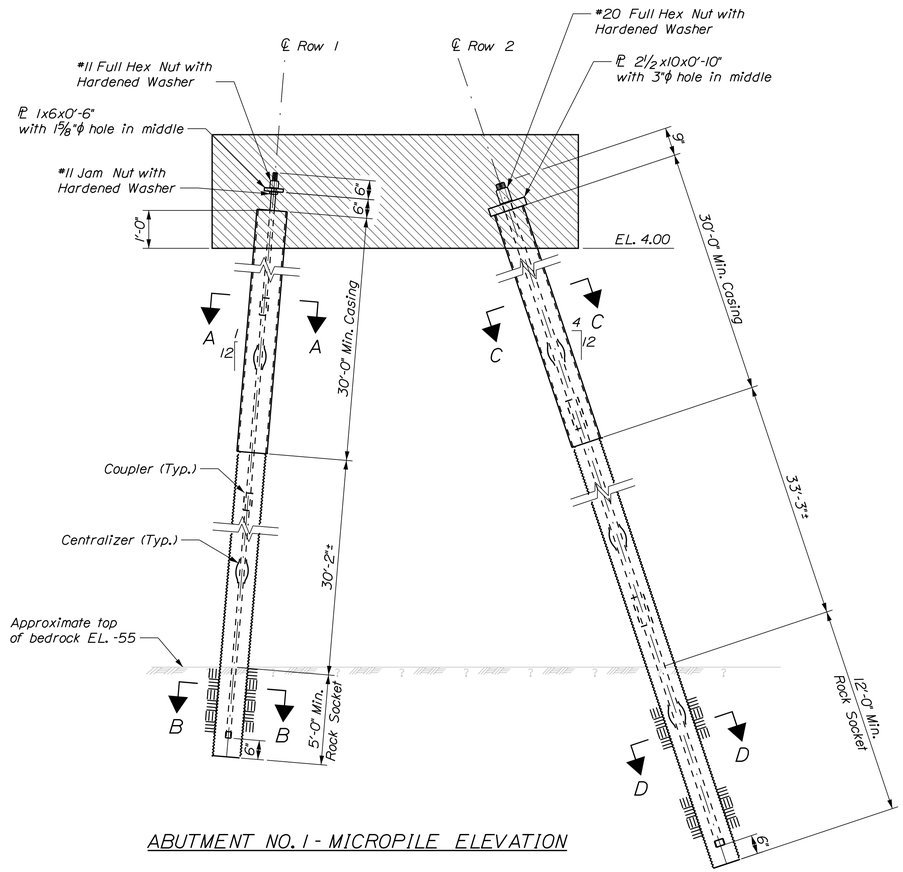
SECTION D-D
Rock Socket



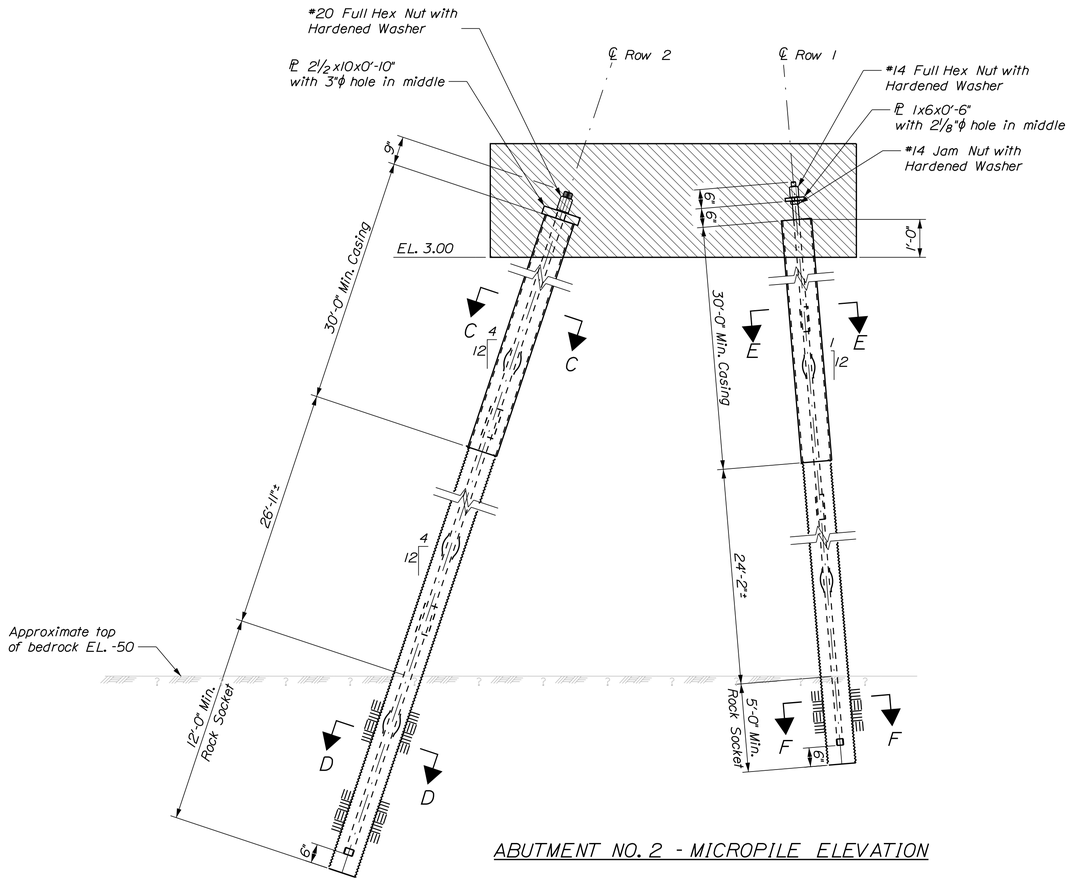
SECTION E-E
Cased Zone



SECTION F-F
Rock Socket



ABUTMENT NO. 1 - MICROPILE ELEVATION



ABUTMENT NO. 2 - MICROPILE ELEVATION

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	DDT	SEPT 2018
CHECKED-REVIEWED	LSF	SEPT 2018
DESIGN2-DETAILED2	TWM	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

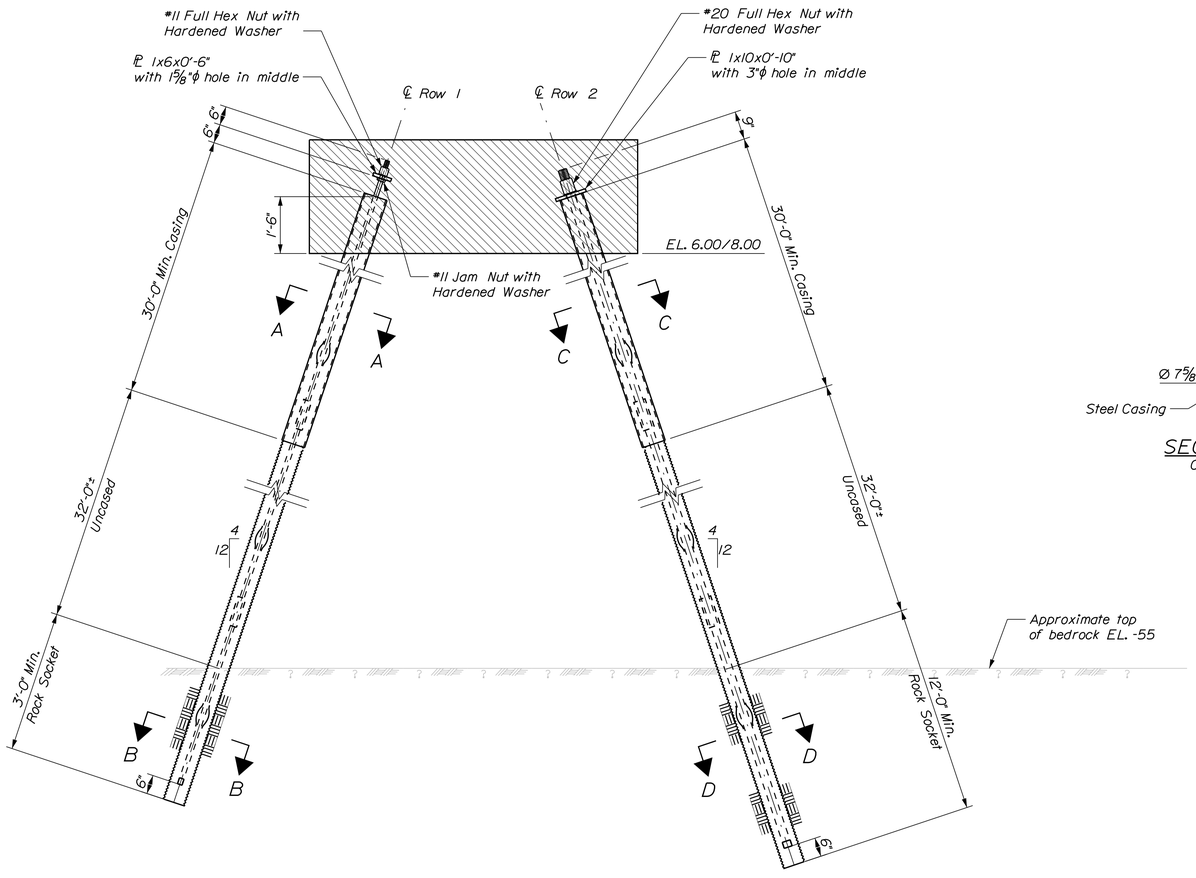
MICROPILE DETAILS
ABUTMENTS

SHEET NUMBER

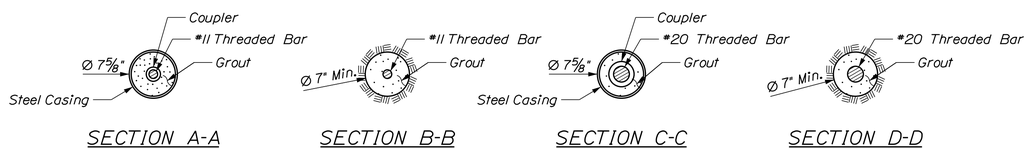
A23

OF A78

Filename: ...\BRIDGE\MSTA\A23_Micropiles.dgn Division: BRIDGE Username: lflanders Date:10/24/2018



SOUTHEAST RETAINING WALL - MICROPILE ELEVATION



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BRIDGE NO. 2101

BRIDGE PLANS

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DESIGN-DETAILED	DDT	SEPT 2018	
CHECKED-REVIEWED	TEK	SEPT 2018	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
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REVISIONS 4			
FIELD CHANGES			

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DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

MICROPILE DETAILS
SOUTHEAST RET. WALL

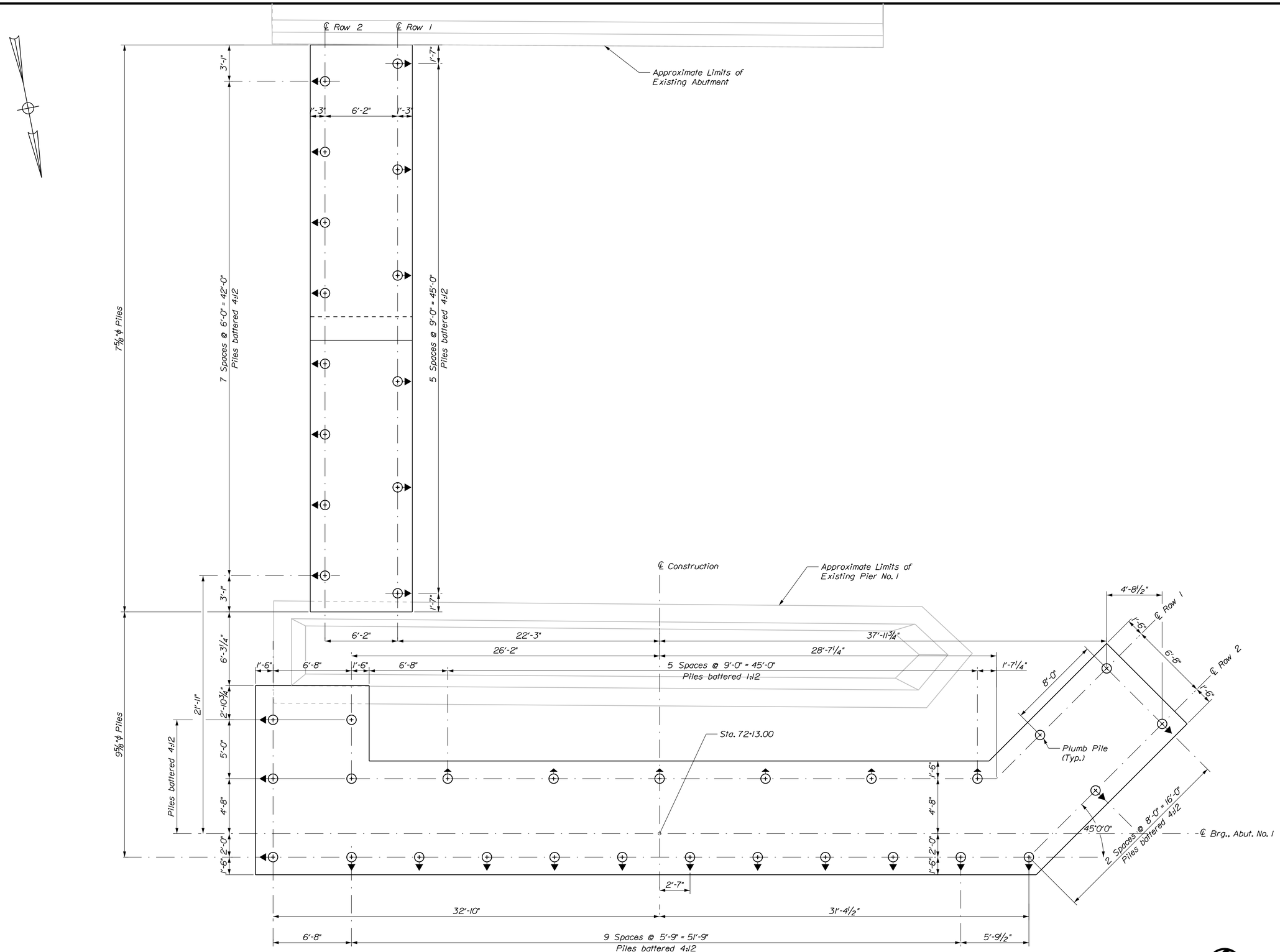
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A24

OF A78

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Username: dataylor Date:9/28/2018
Division: BRIDGE
Filename: ...\MSTA\A25_abut_1_pile.dgn



PLAN - ABUTMENT NO. 1 AND SOUTHEAST RETAINING WALL PILES

Flow

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101 BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	DOT	LSF/DOT	SEPT 2018
CHECKED-REVIEWED	LSF	TWM	SEPT 2018
DESIGN2-DETAILED2			
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FIELD CHANGES			

SIGNATURE

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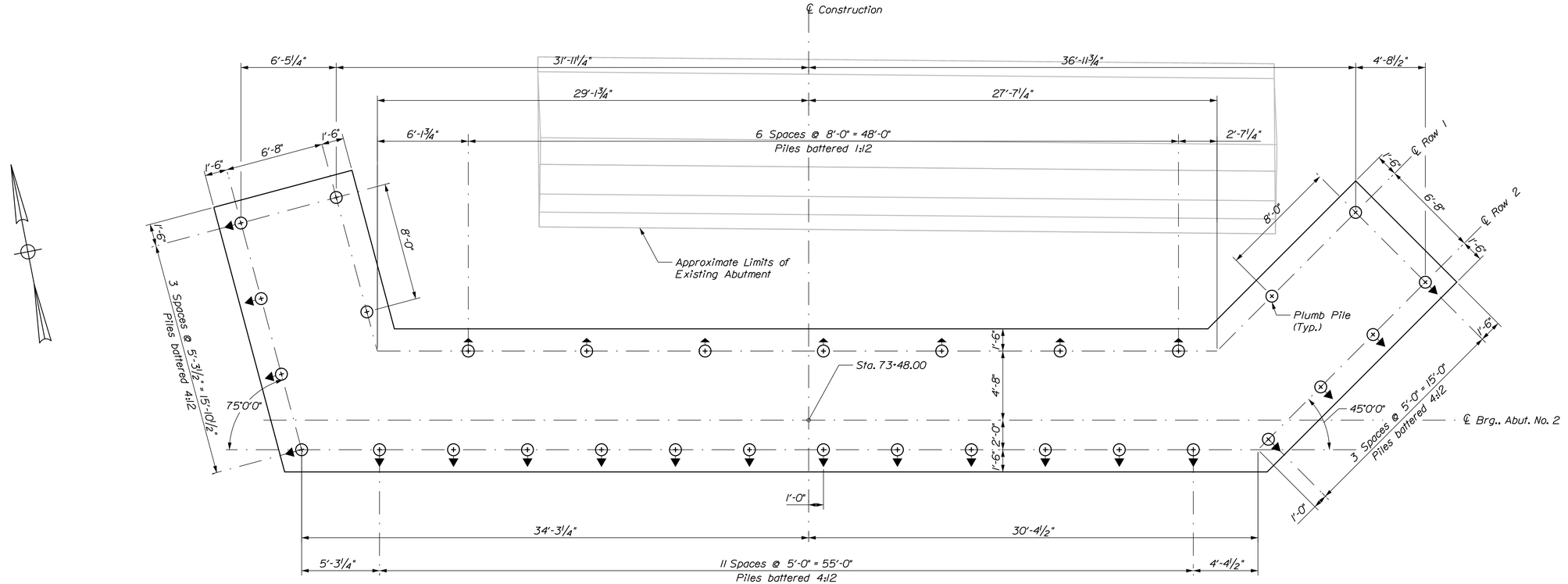
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 1 PILE LAYOUT

SHEET NUMBER

A25

OF A78



PLAN - ABUTMENT NO. 2 PILES

Flow →

Stantec

Username: dataylor Date:9/27/2018

Division: BRIDGE

Filename: ...\MSTA\A26_abut_2_pile.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101 BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	LSF	LSF/DOT	SEPT 2018
CHECKED-REVIEWED	LSF	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
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REVISIONS 4			
FIELD CHANGES			

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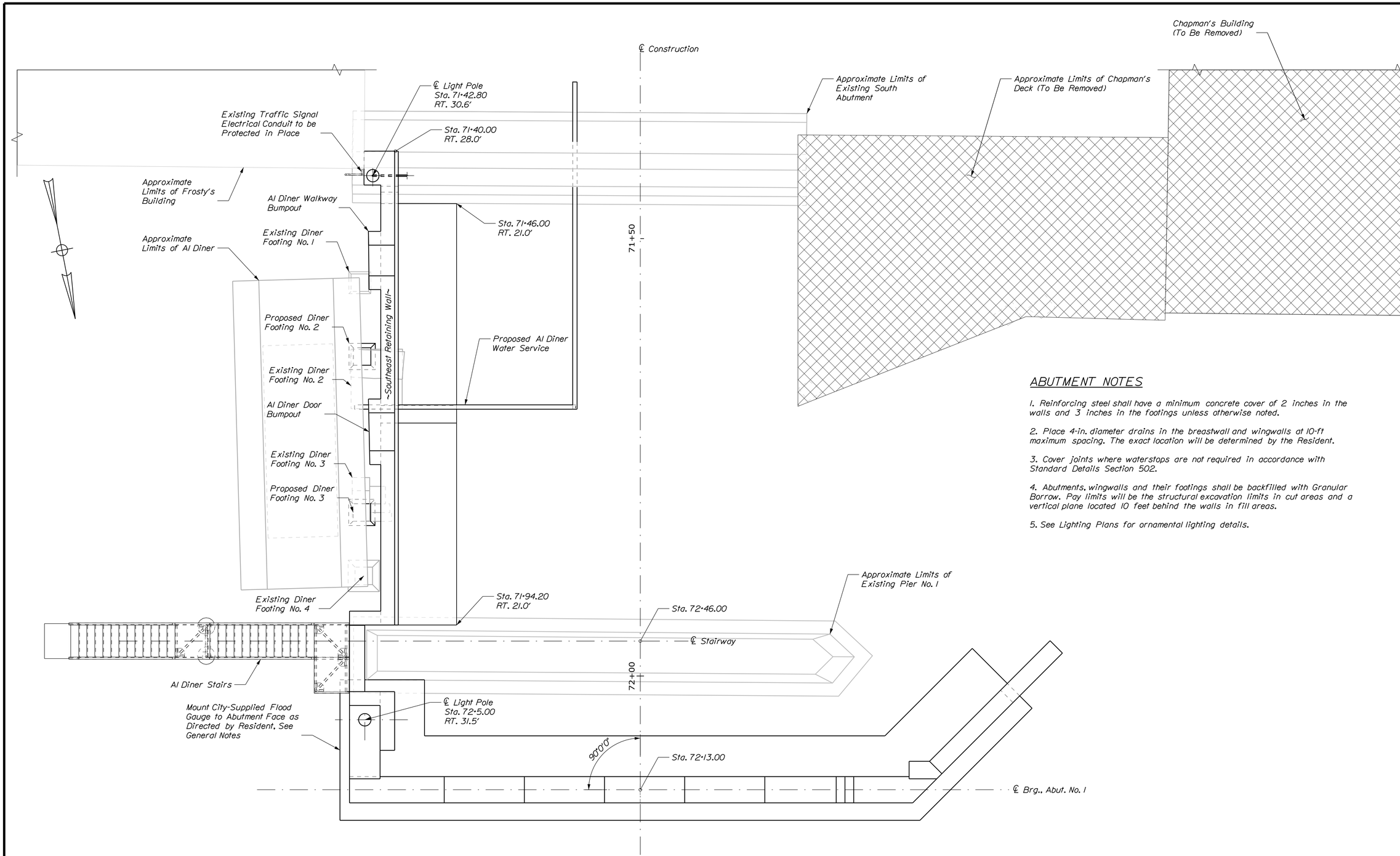
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 2
PILE LAYOUT

SHEET NUMBER

A26

OF A78



PLAN - ABUTMENT NO. 1 & SOUTHEAST RETAINING WALL

(Existing superstructure not shown for clarity)

ABUTMENT NOTES

1. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.

2. Place 4-in. diameter drains in the breastwall and wingwalls at 10-ft maximum spacing. The exact location will be determined by the Resident.

3. Cover joints where waterstops are not required in accordance with Standard Details Section 502.

4. Abutments, wingwalls and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.

5. See Lighting Plans for ornamental lighting details.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

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DATE

SIGNATURE

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
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DESIGN3-DETAILED3		
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REVISIONS 4		
FIELD CHANGES		

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 1 & SE RETAINING WALL PLAN

SHEET NUMBER

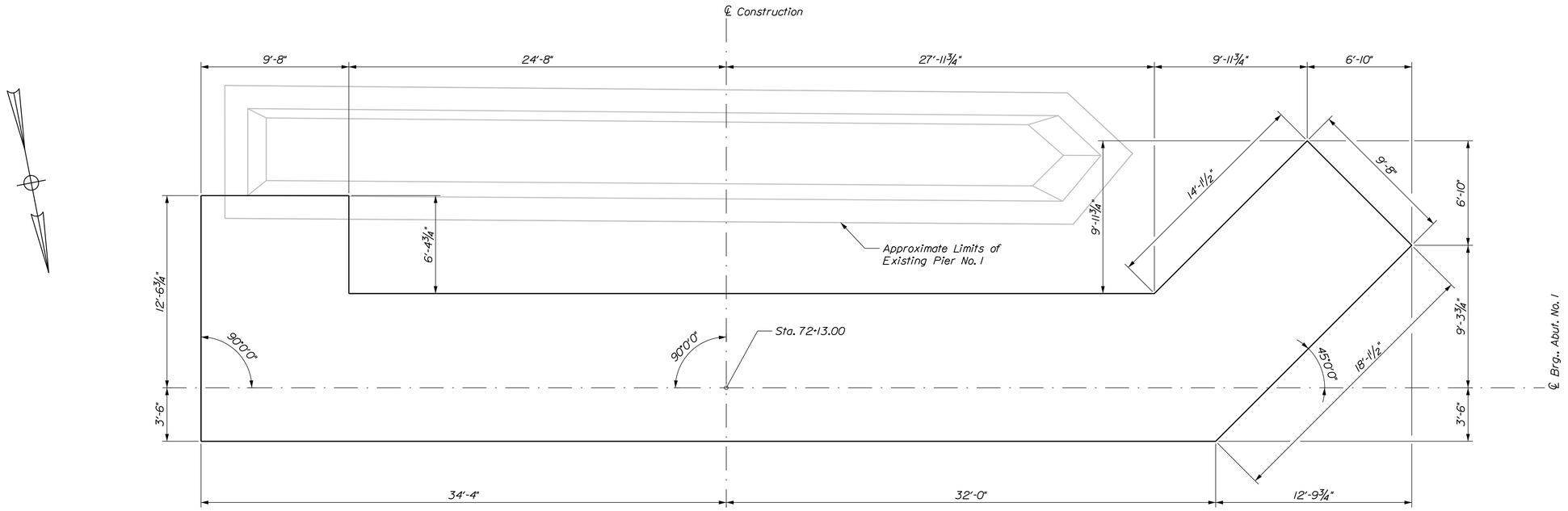
A27

OF A78

Stantec

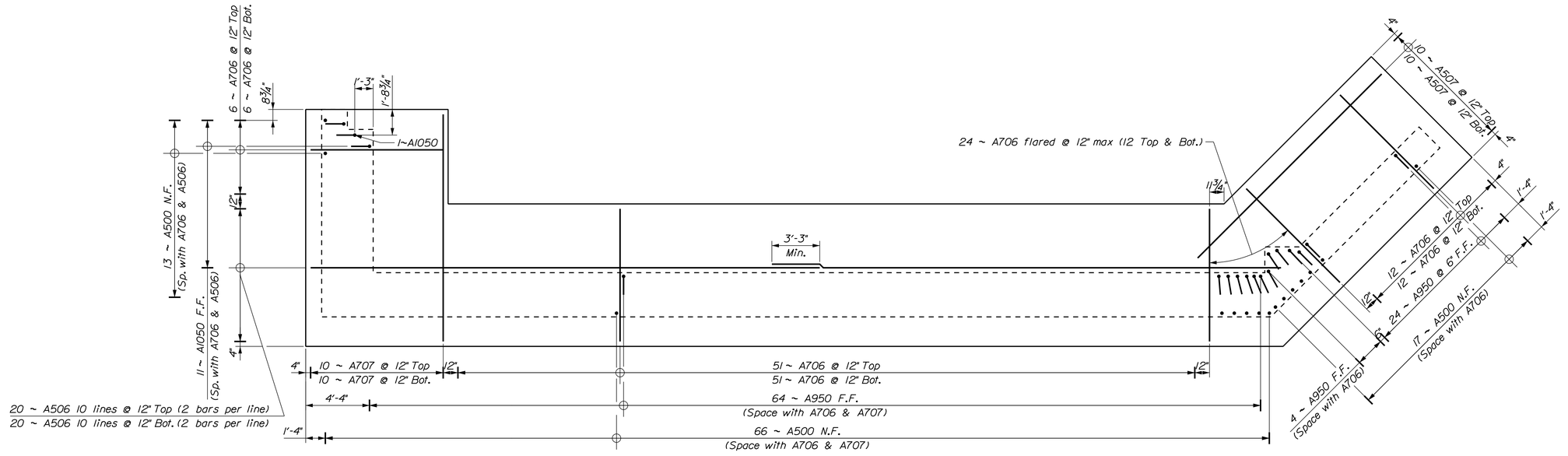
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Filename: ...\MST\A\A28_abut_1_footing.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



PLAN - ABUTMENT NO. 1 FOOTING

Flow



PLAN - ABUTMENT NO. 1 FOOTING REINFORCING

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

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GARDINER KENNEBEC COUNTY

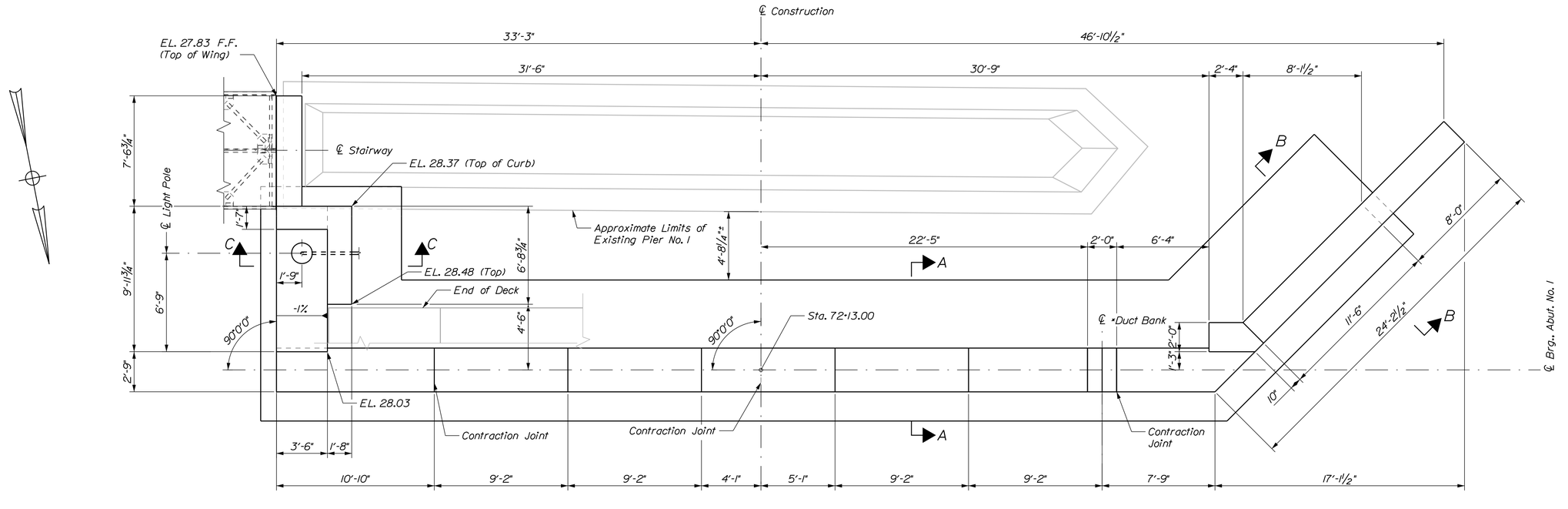
ABUTMENT NO. 1 FOOTING PLAN & REINFORCING

SHEET NUMBER

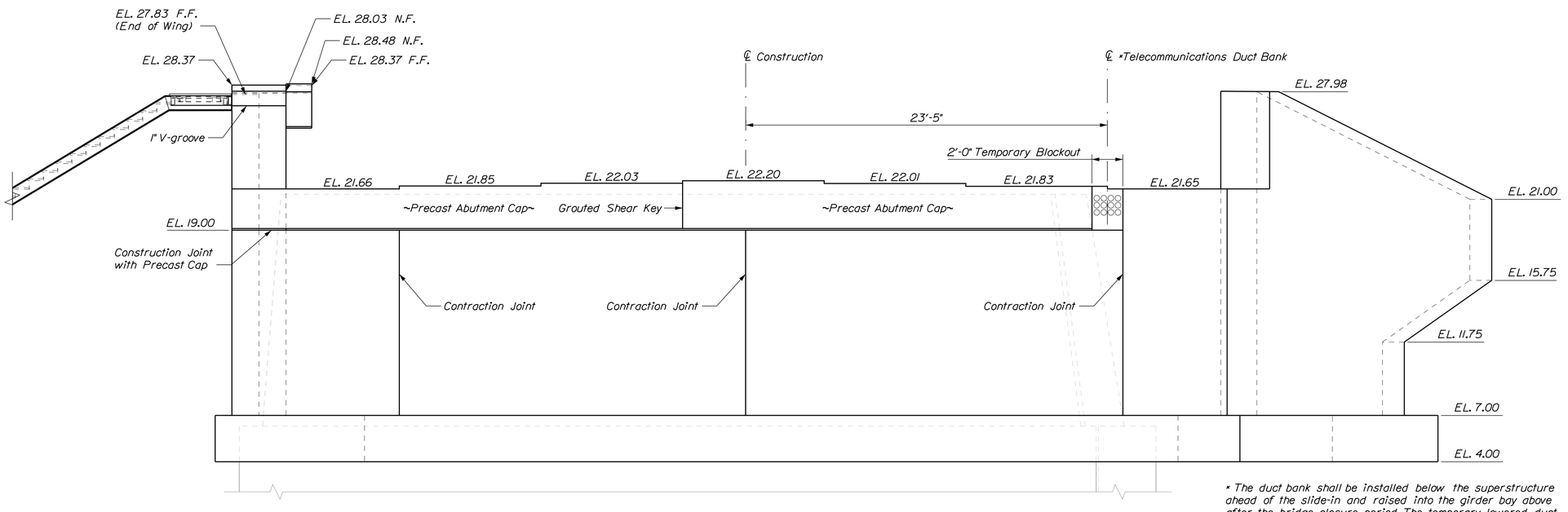
A28

OF A78

Filename: ...\A29_abut_1_plan_elevation.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



PLAN - ABUTMENT NO. 1
Flow



ELEVATION - ABUTMENT NO. 1

* The duct bank shall be installed below the superstructure ahead of the slide-in and raised into the girder bay above after the bridge closure period. The temporary lowered duct bank location is shown.

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED	DDT	SEPT 2018
CHECKED-REVIEWED	LSF	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

P.E. NUMBER

SIGNATURE

DATE

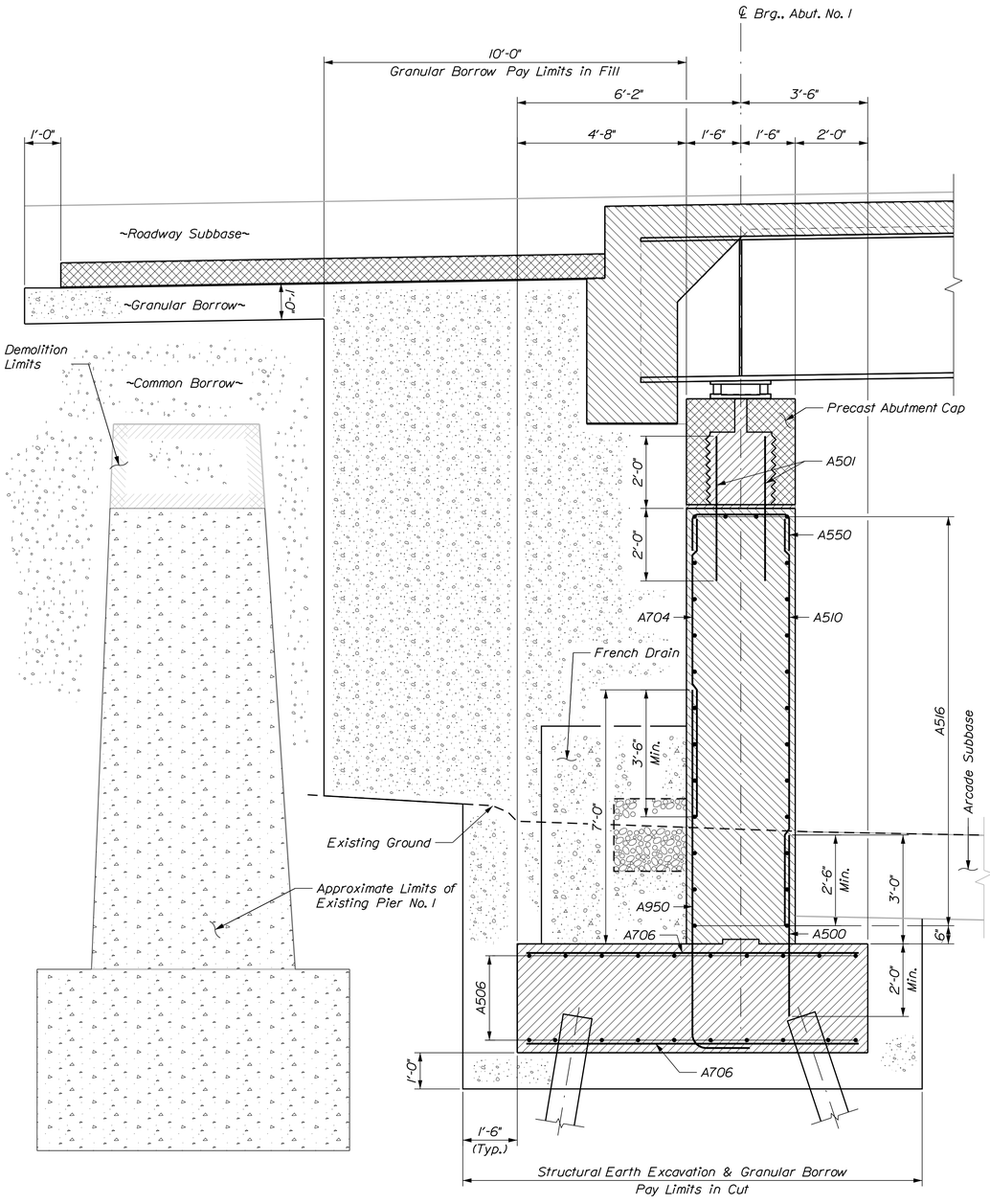
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 1
PLAN & ELEVATION

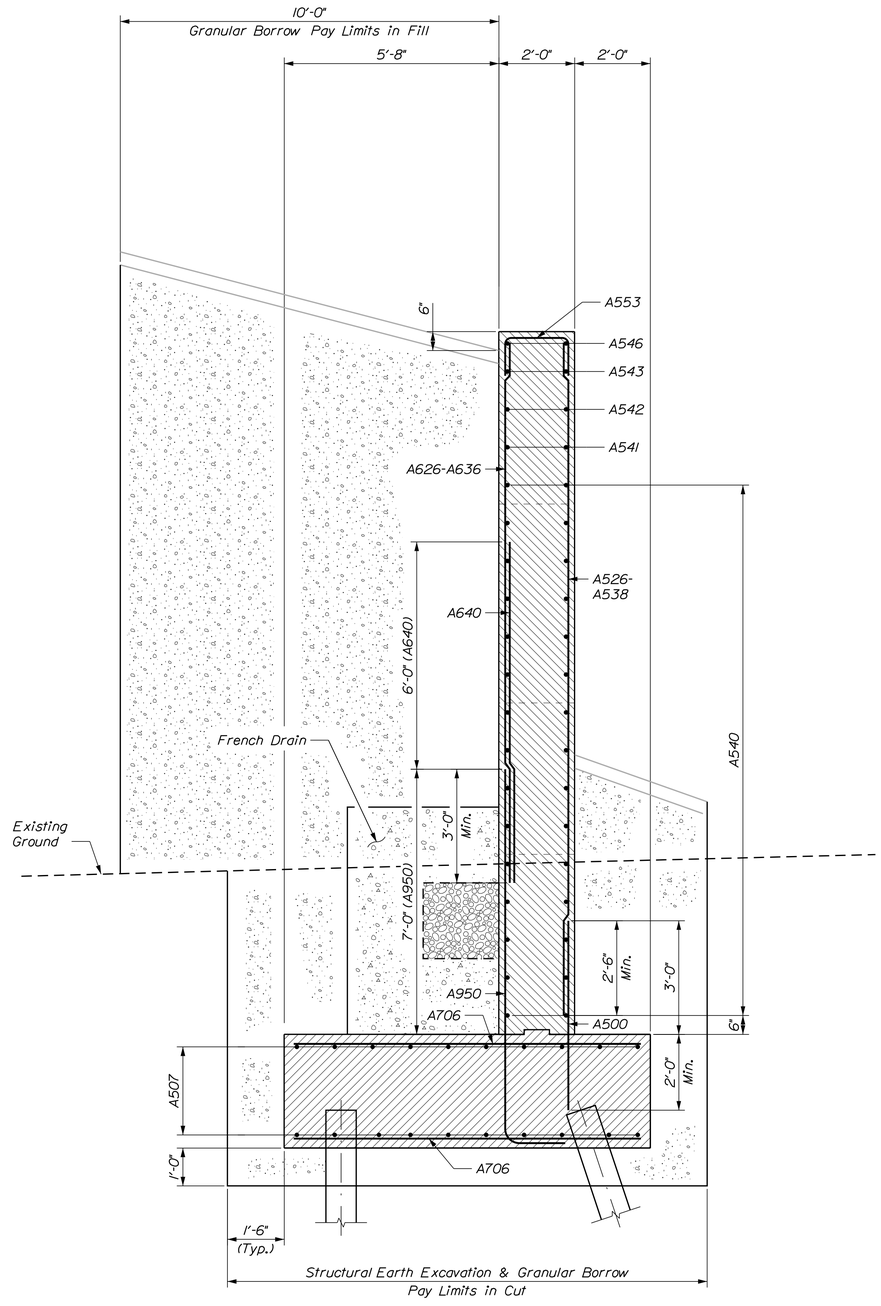
SHEET NUMBER

A29

OF A78



SECTION A-A



SECTION B-B

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	DDT	SEPT 2018
CHECKED-REVIEWED	DDT	JGS	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

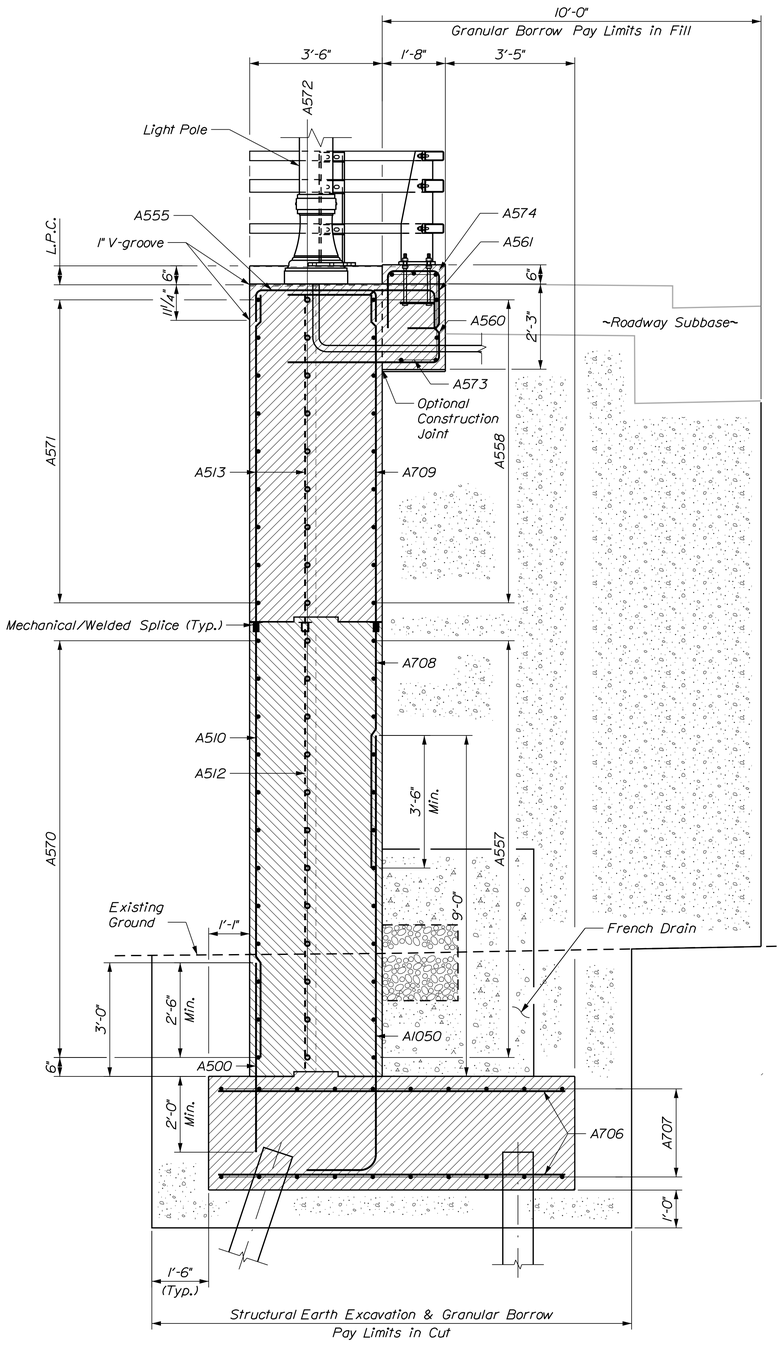
ABUTMENT NO. 1 SECTIONS

SHEET NUMBER

A30

OF A78

Filename: ...\MSTA\A30_abut_1_sections.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018



SECTION C-C

Filename: ...\MSTA\A31_abut_1_sections2.dgn Username: dotaylor Division: BRIDGE Date:9/27/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED	DDT	SEPT 2018
CHECKED-REVIEWED	DDT	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
KENNEBEC COUNTY
GARDINER

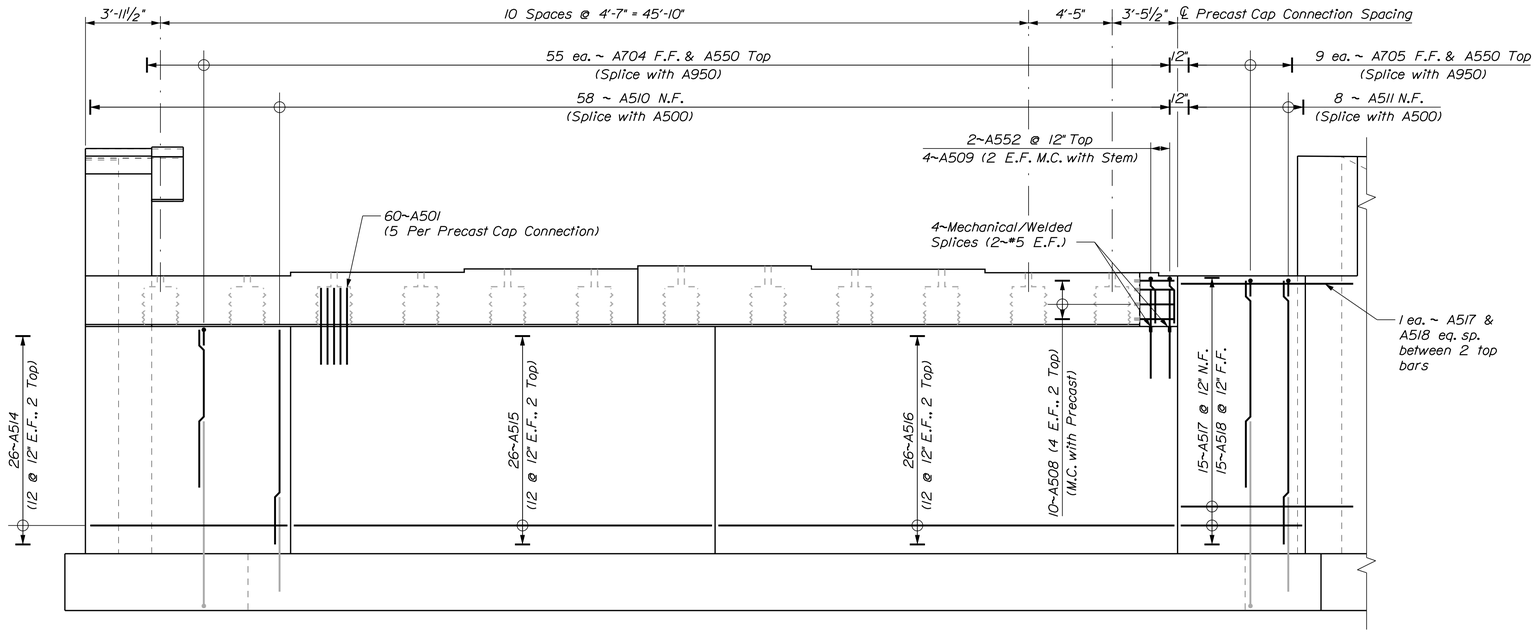
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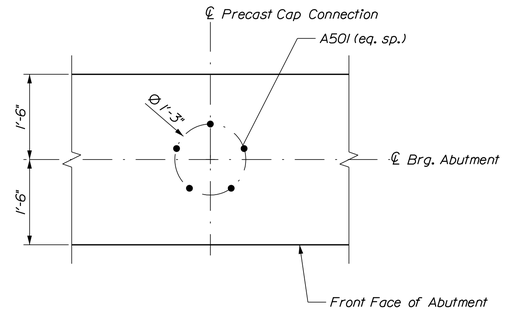
A31

OF A78

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ELEVATION - ABUTMENT NO. 1 REINFORCING



PLAN - PRECAST CAP DOWEL CONNECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	DDT	SEPT 2018
CHECKED-REVIEWED	DDT	JGS	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 1
REINFORCING

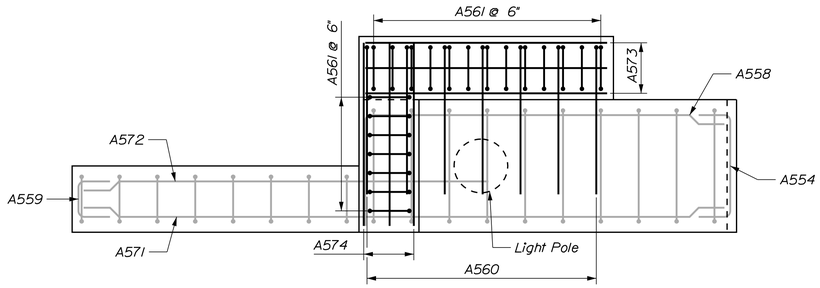
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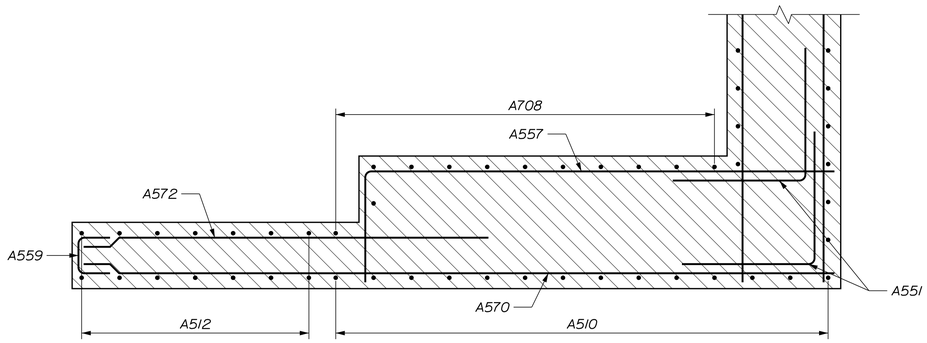
OF A78

Stantec

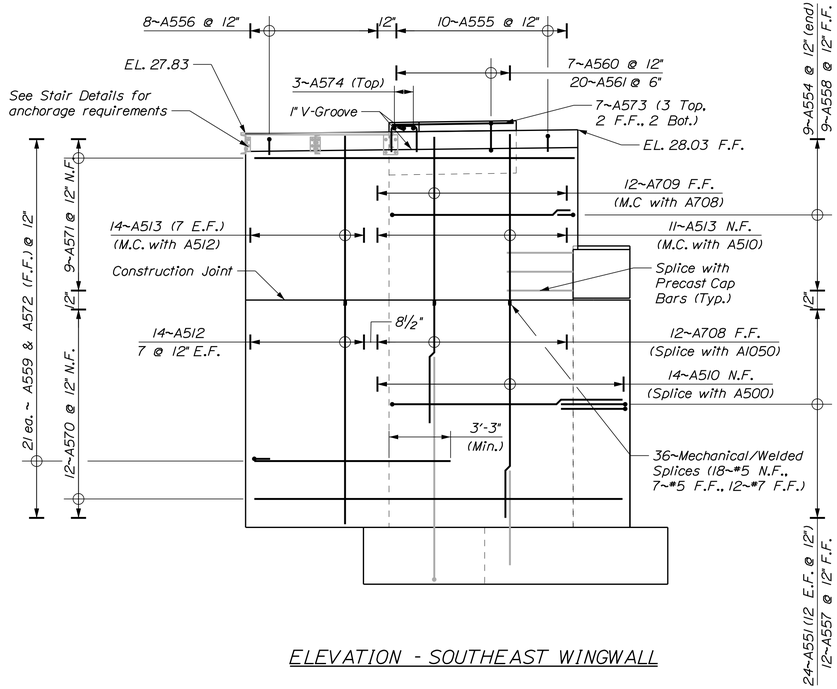
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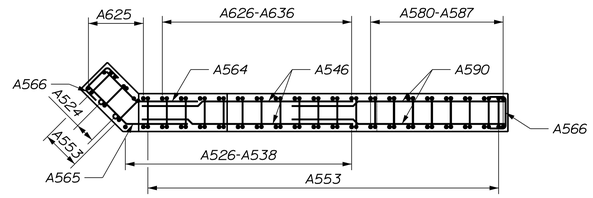
SECTION - SE CORNER REINFORCING
(Upper Section Through Top Curb)



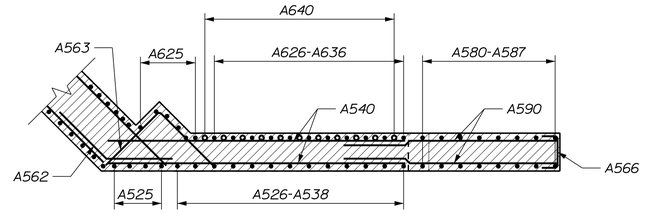
SECTION - SE CORNER REINFORCING
(Lower Section Through Abutment Stem)



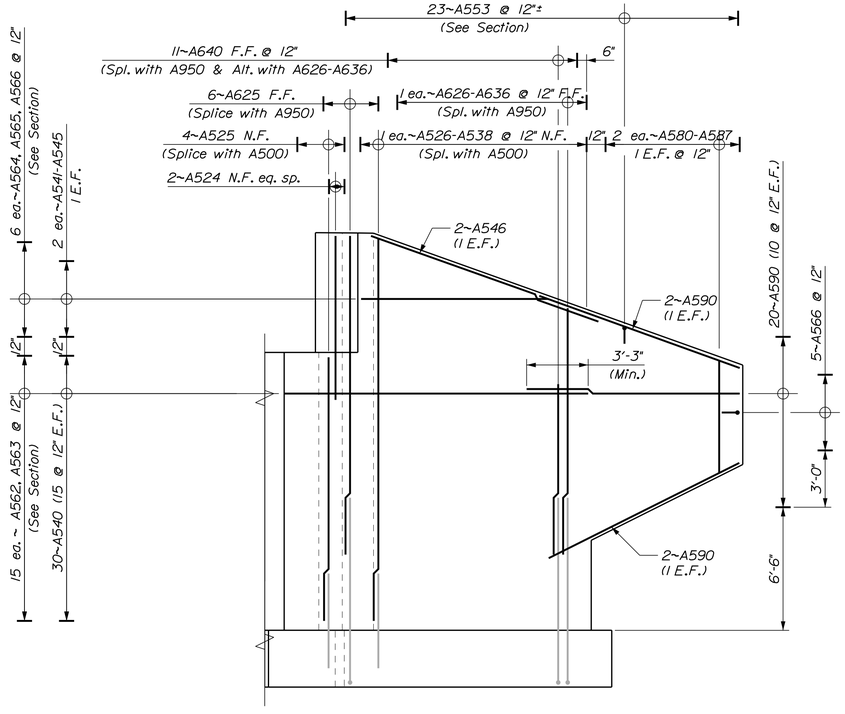
ELEVATION - SOUTHEAST WINGWALL



SECTION - SW WING REINFORCING
(Upper Section Through Top of Wing)



SECTION - SW WING REINFORCING
(Lower Section Through Wing Stem)



ELEVATION - SOUTHWEST WINGWALL

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED	DDT	SEPT 2018
CHECKED-REVIEWED	LSF	SEPT 2018
DESIGN2-DETAILED2	DDT	JGS
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO.1
WING REINFORCING

SHEET NUMBER

A33

OF A78

Filename: ...\MSTA\A33_abut_1_wing_rebar.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018

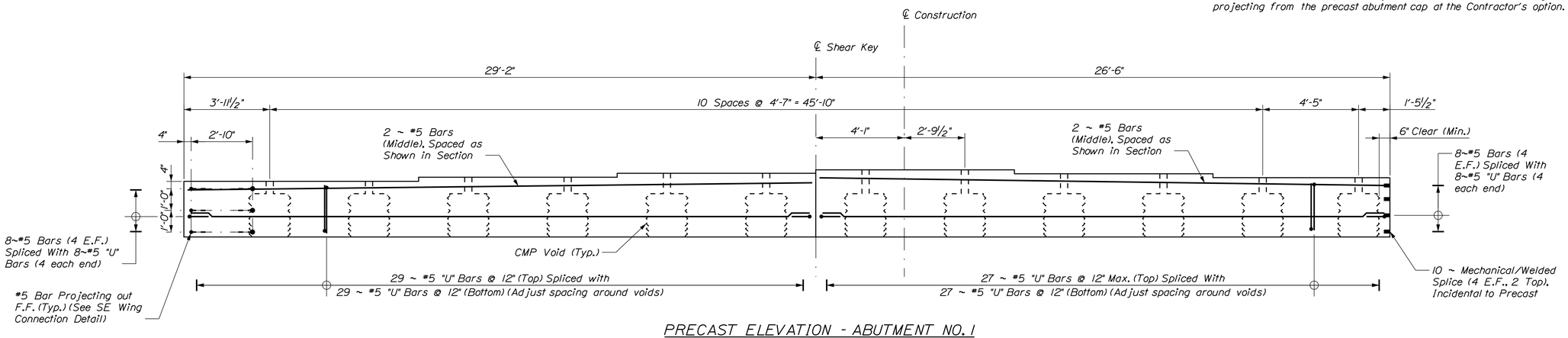
PRECAST BEARING SEAT NOTES

1. The construction, handling, and assembly of the Precast Bearing Seats shall be in accordance with Special Provision Section 534, Precast Structural Concrete - Precast Abutment & Approach Slab.

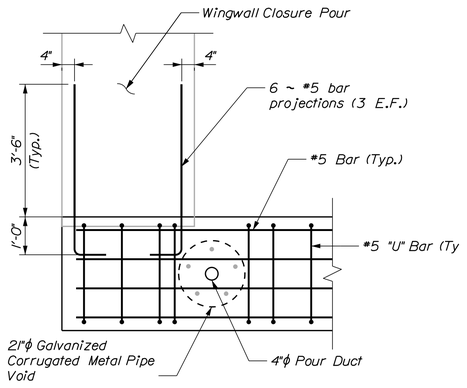
2. Payment for the concrete to fill the voids after precast bearing seat placement shall be incidental to the precast bearing seat.

3. Pre-bed precast cap with non-shrink grout with thickness more than shim stack. After setting precast cap fill remainder of CMP void and pour duct with Class A Concrete in accordance with Section 502. Bedding grout and void concrete shall be incidental to Item 534.76, Precast Abutment.

4. Mechanical/Welded Splices may be substituted for reinforcing bars projecting from the precast abutment cap at the Contractor's option.

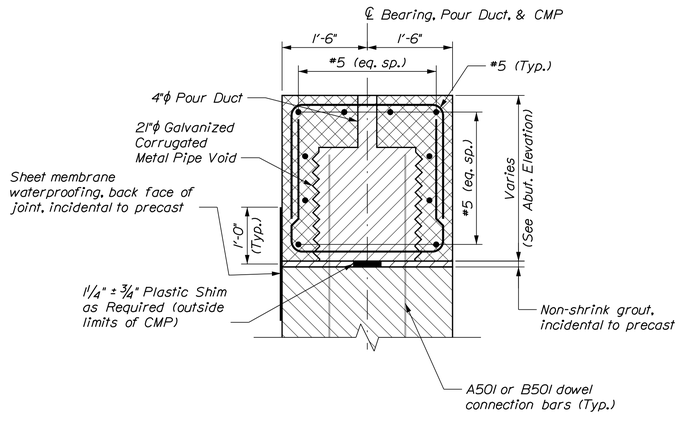


PRECAST ELEVATION - ABUTMENT NO. 1



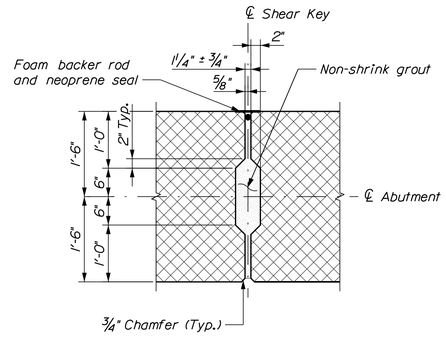
PLAN - SOUTHEAST WING CONNECTION DETAIL

Wing reinforcing not shown for clarity



PRECAST ABUTMENT CAP SECTION

(Typical Both Abutments)



SHEAR KEY DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	SEPT 2018	
CHECKED-REVIEWED	DDT	SEPT 2018	SIGNATURE
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			P.E. NUMBER
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			DATE
REVISIONS 4			
FIELD CHANGES			

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 1
PRECAST CAP DETAILS

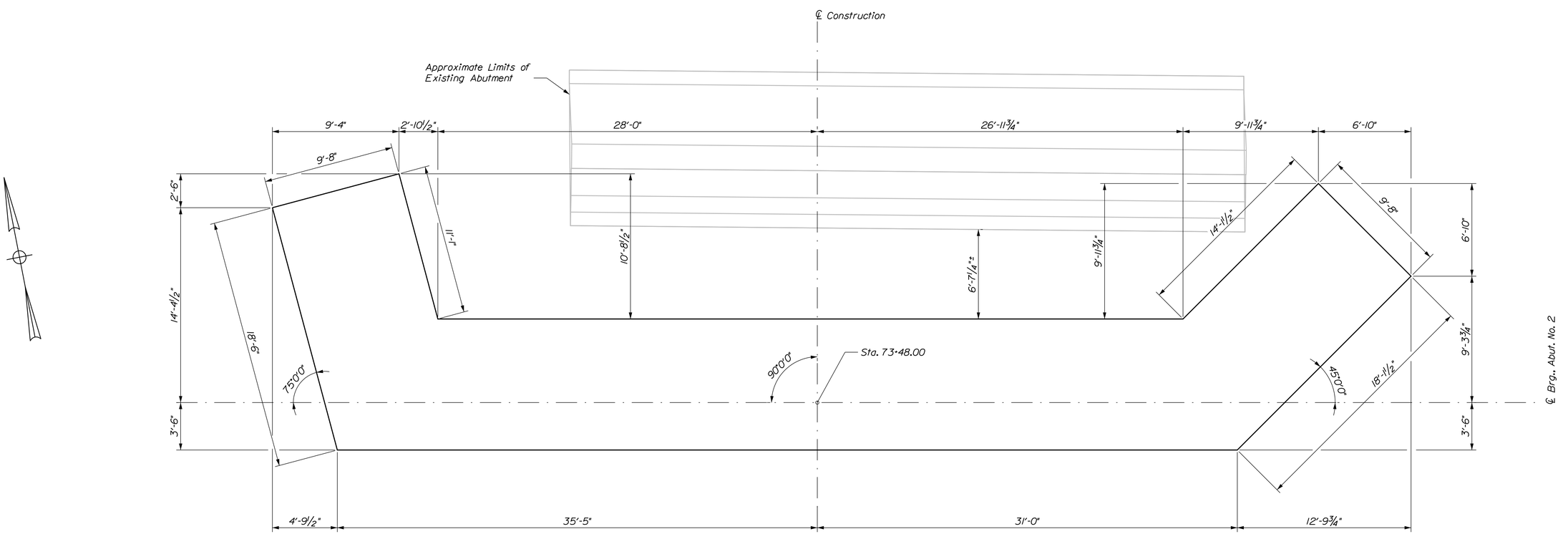
SHEET NUMBER

A34

OF A78

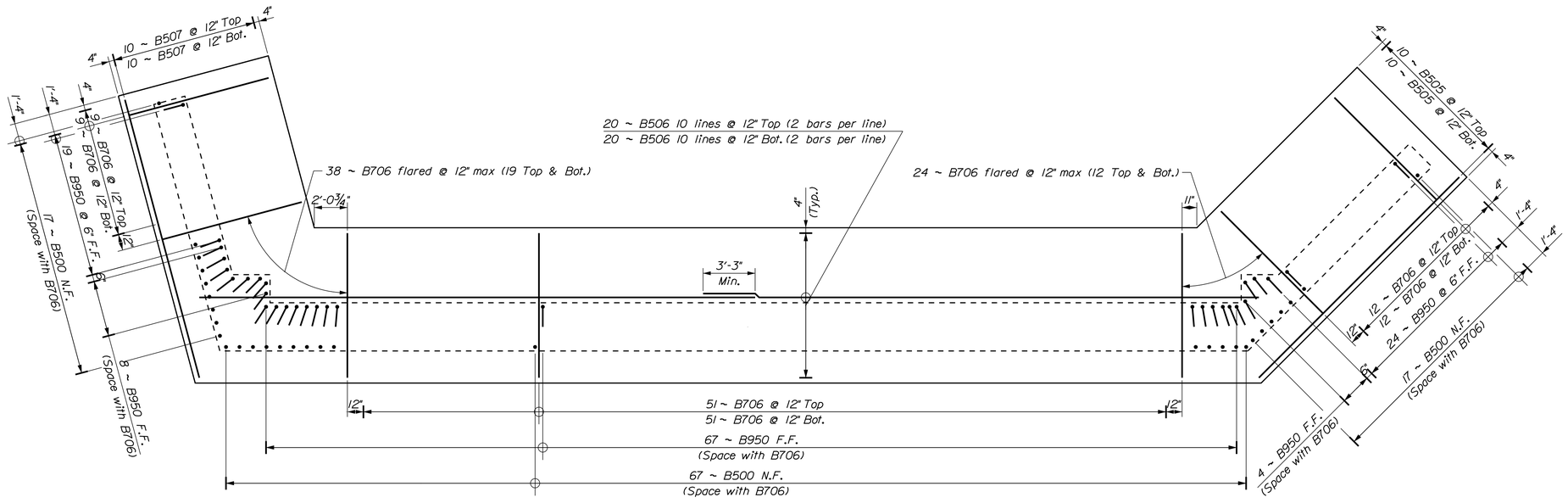
Stantec

Filename: ...\MSTA\A34_Abut 1 Precast.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



PLAN - ABUTMENT NO. 2 FOOTING

Flow →



PLAN - ABUTMENT NO. 2 FOOTING REINFORCING

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED	LSF	SEPT 2018
CHECKED-REVIEWED	DDT	SEPT 2018
DESIGN2-DETAILED2	DDT	JGS
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 2 FOOTING
PLAN & REINFORCING

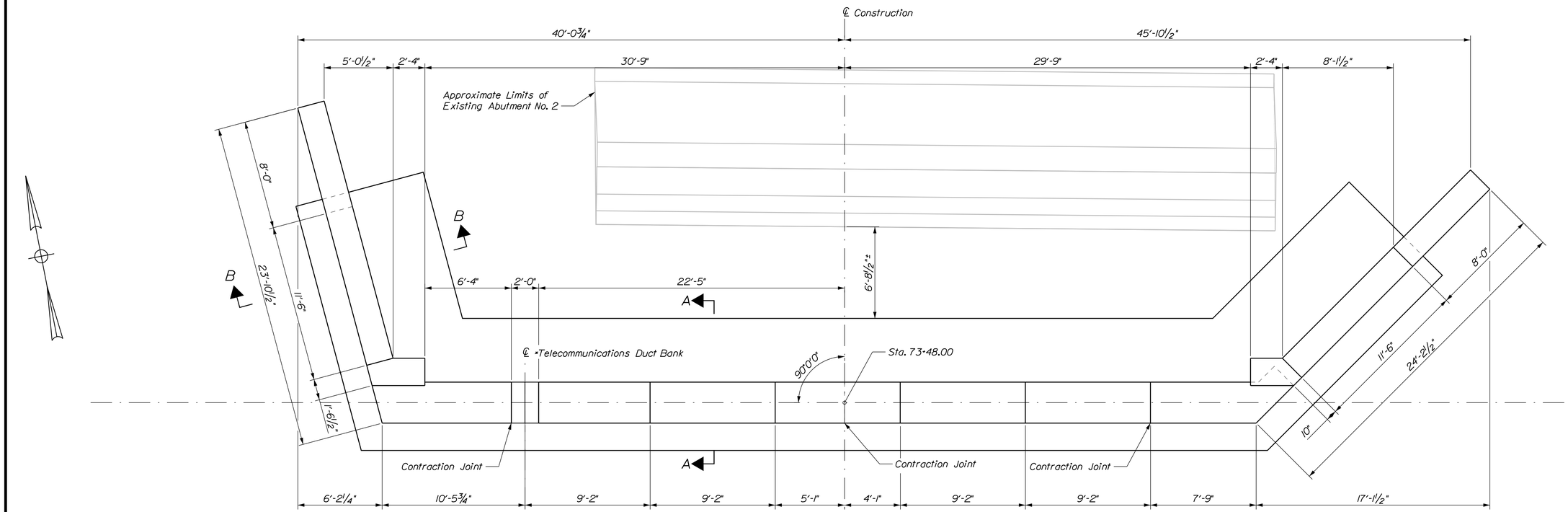
SHEET NUMBER

A35

OF A78

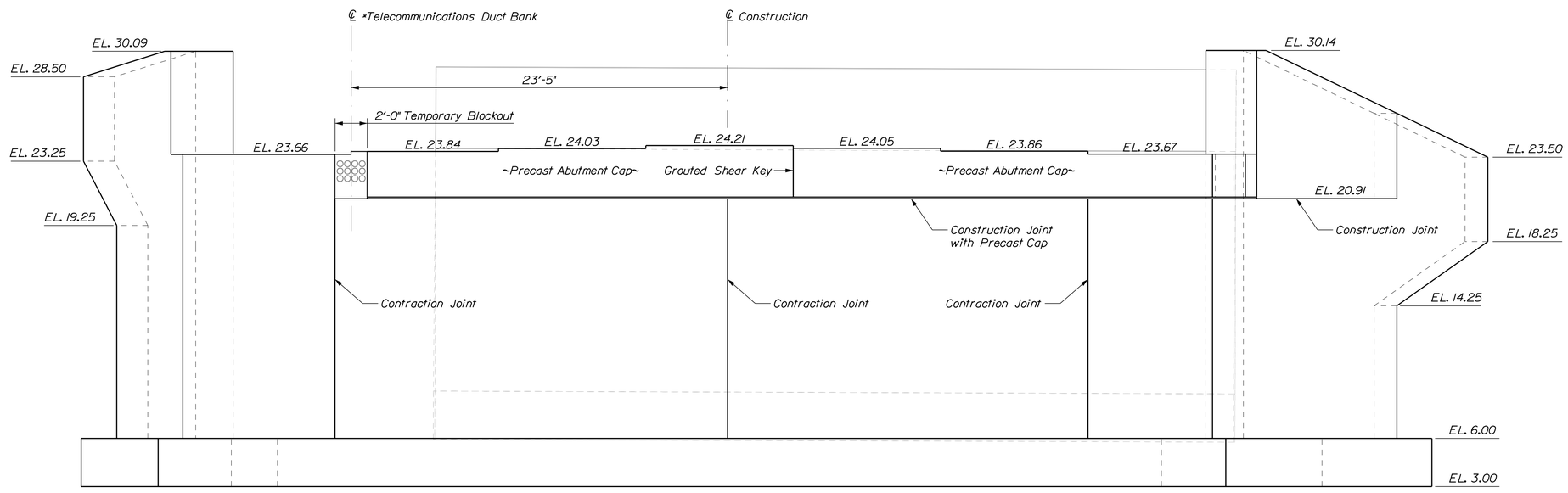
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Filename: ...\A36_abut_2_plan_elevation.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



PLAN - ABUTMENT NO. 2

Flow →



ELEVATION - ABUTMENT NO. 2

* The duct bank shall be installed below the superstructure ahead of the slide-in and raised into the girder bay above after the bridge closure period. The temporary lowered duct bank location is shown.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED	DDT	SEPT 2018
CHECKED-REVIEWED	LSF	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
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FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

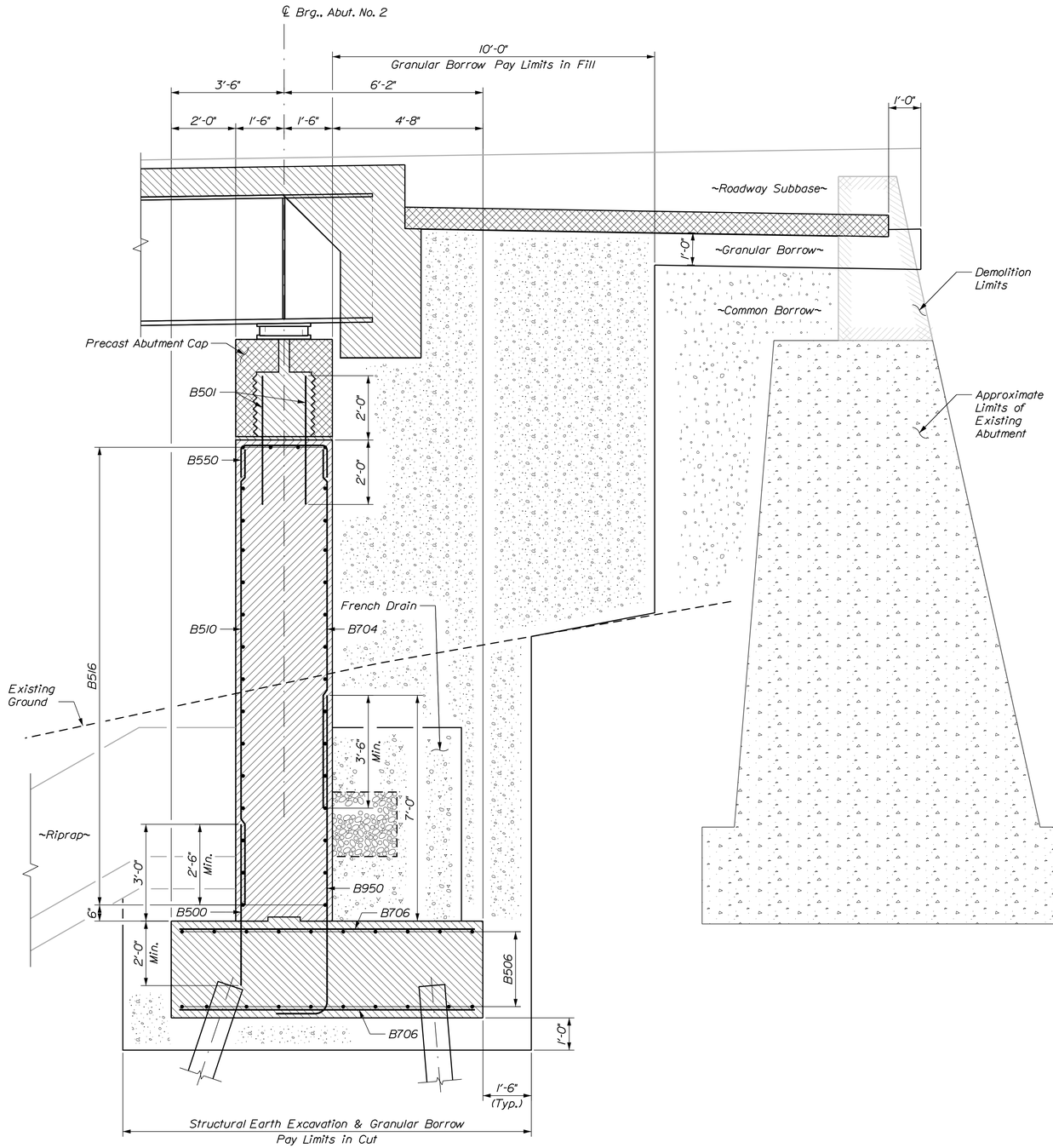
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 2 PLAN & ELEVATION

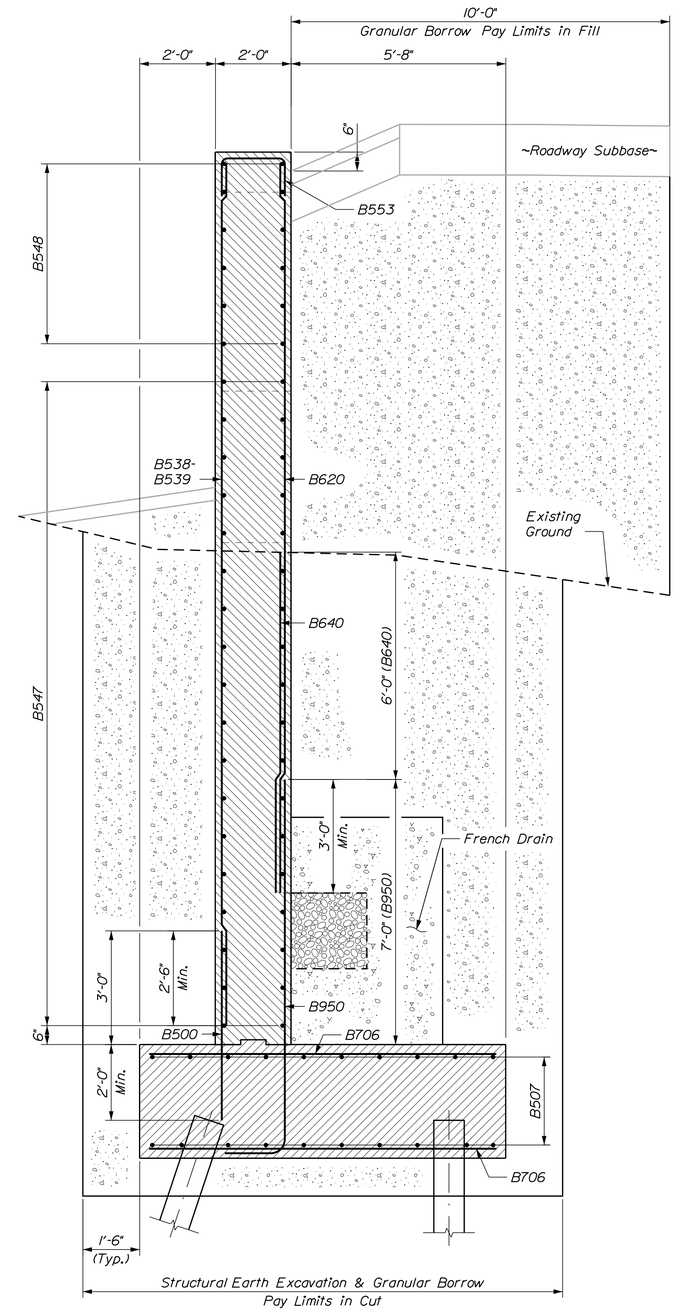
SHEET NUMBER

A36

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SECTION A-A



SECTION B-B

Filename: ...\MSTA\A37_abut_2_sections.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	DDT	SEPT 2018
CHECKED-REVIEWED	DDT	JGS	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
KENNEBEC COUNTY
GARDINER

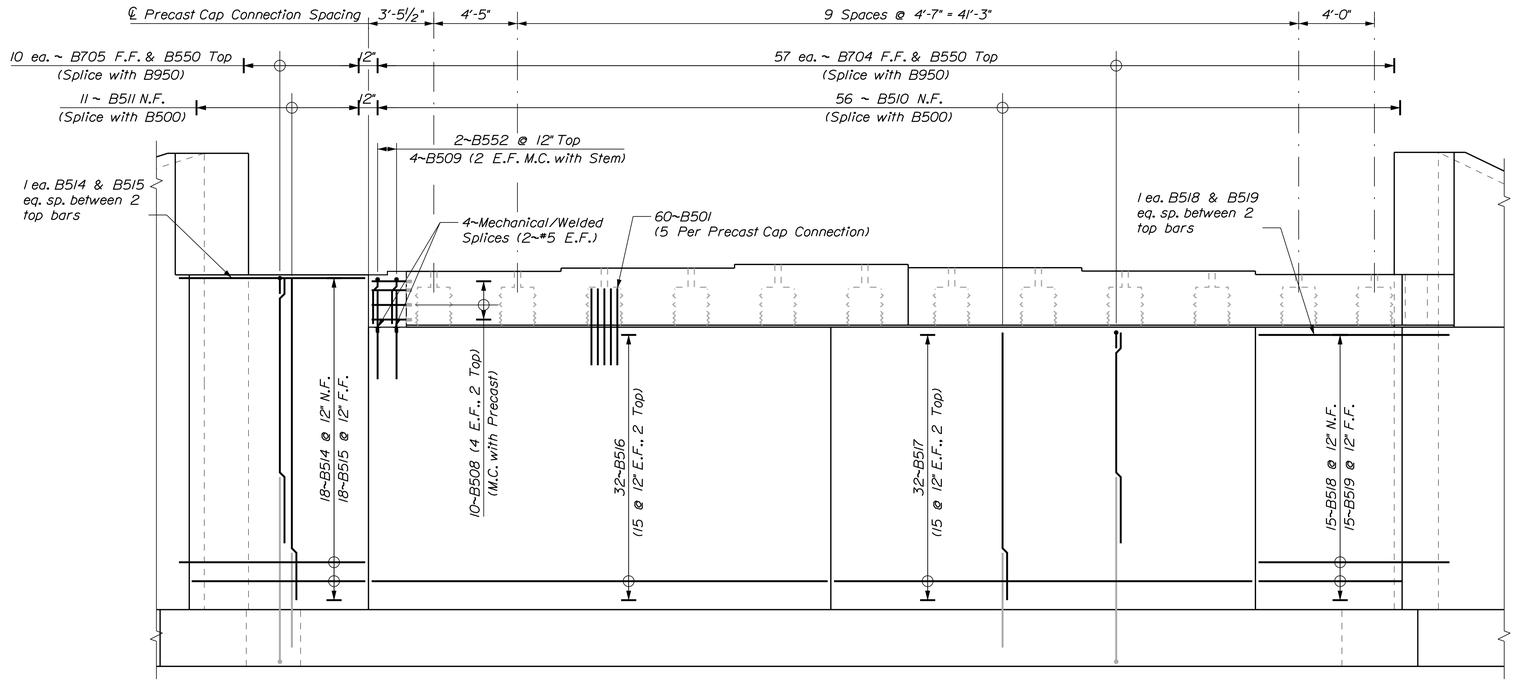
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SHEET NUMBER

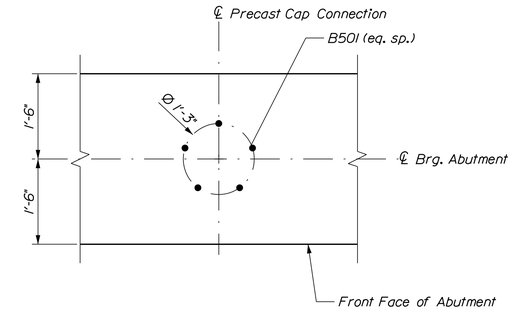
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ELEVATION - ABUTMENT NO. 2 REINFORCING



PLAN - PRECAST CAP DOWEL CONNECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	DDT	SEPT 2018
CHECKED-REVIEWED	DDT	JGS	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
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FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 2 REINFORCING

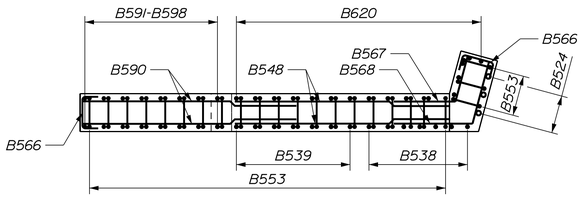
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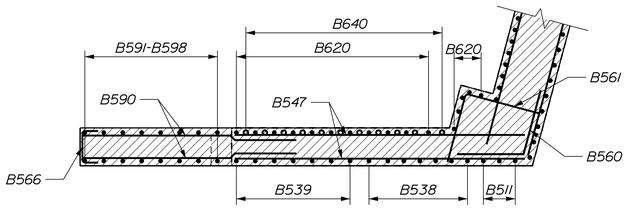
OF A78

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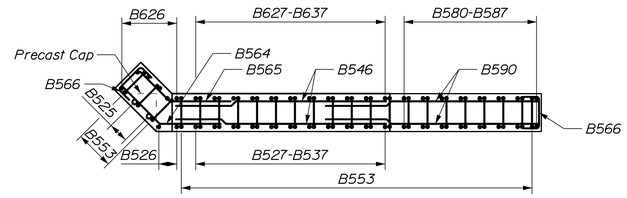
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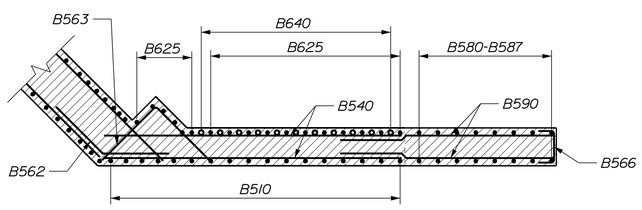
SECTION - NW WING REINFORCING
(Upper Section Through Top of Wing)



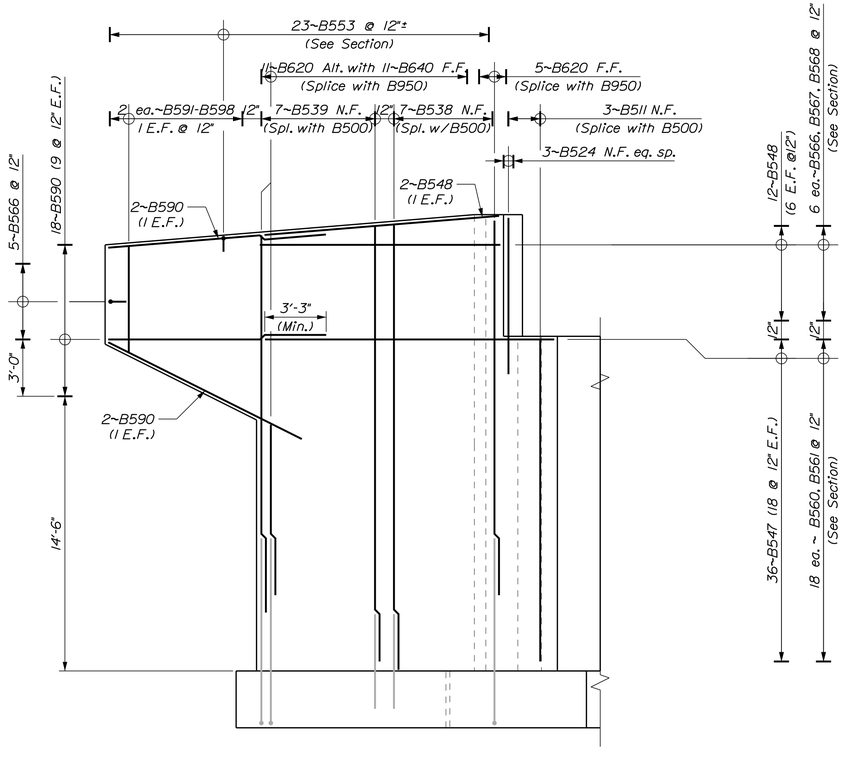
SECTION - NW WING REINFORCING
(Lower Section Through Wing Stem)



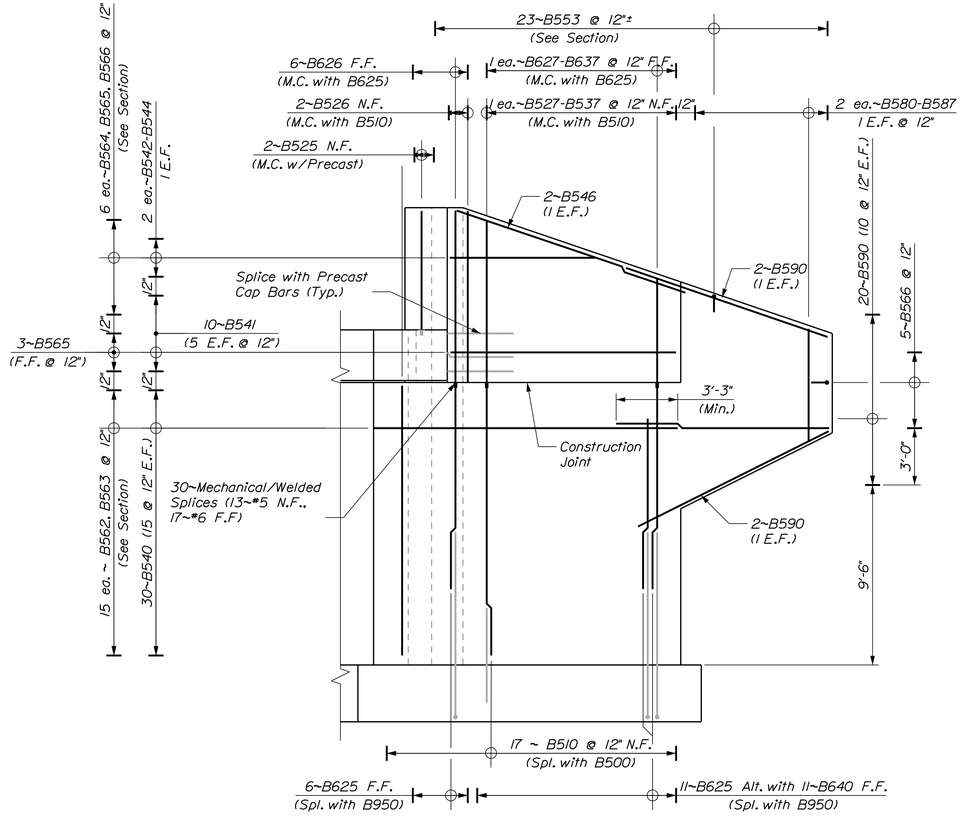
SECTION - NE WING REINFORCING
(Upper Section Through Top of Wing)



SECTION - NE WING REINFORCING
(Lower Section Through Wing Stem)



ELEVATION - NORTHWEST WINGWALL



ELEVATION - NORTHEAST WINGWALL

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	LSF
CHECKED-REVIEWED	DDT
DESIGN2-DETAILED2	DDT
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BY	DATE
DDT	SEPT 2018
JGS	SEPT 2018

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ABUTMENT NO. 2
WING REINFORCING

SHEET NUMBER

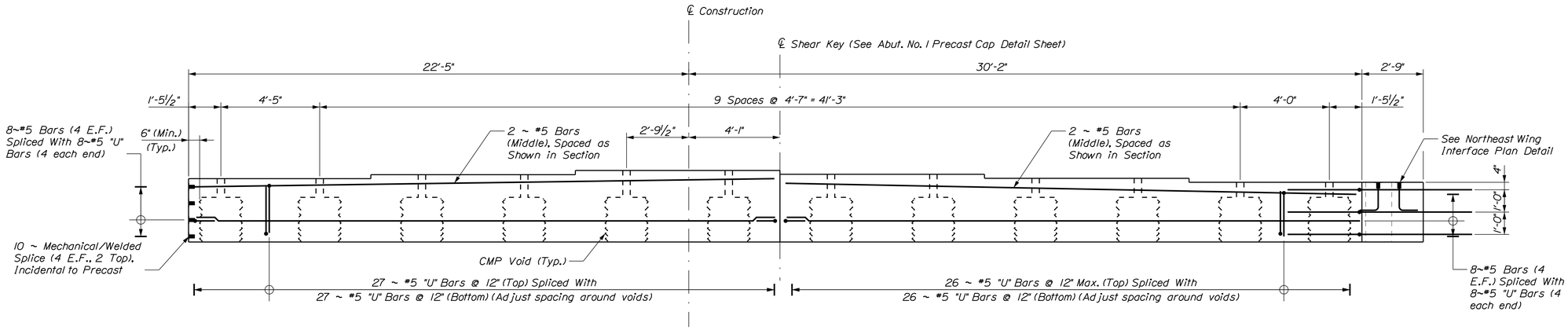
A39

OF A78

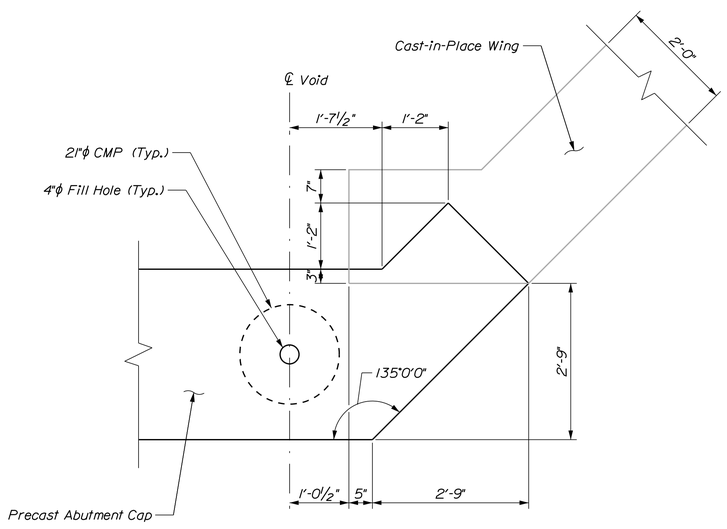
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PRECAST ABUTMENT CAP NOTES

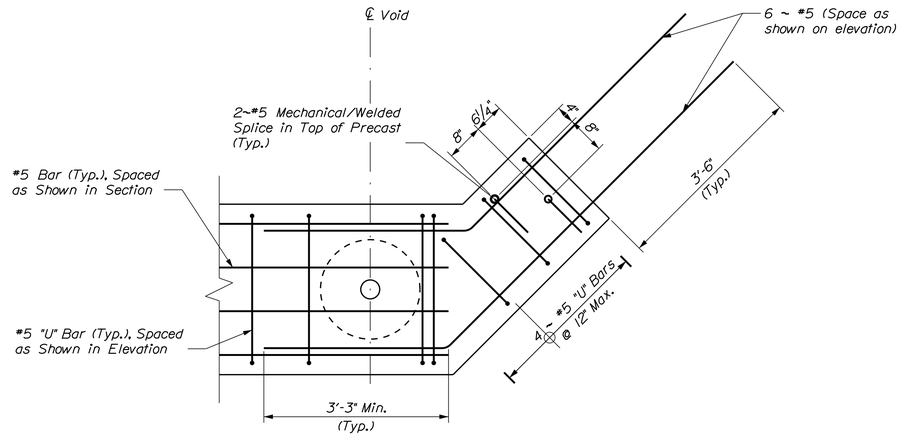
1. See Abutment No. 1 Precast Bearing Seat for notes, section view, and shear key detail.



PRECAST ELEVATION - ABUTMENT NO. 2



PRECAST PLAN AT NORTHEAST WING INTERFACE



PRECAST REINFORCING PLAN AT NORTHEAST WING

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	BY	LSF
CHECKED-REVIEWED	DOT		JGS
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1		DATE	SEPT 2018
REVISIONS 2			SEPT 2018
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

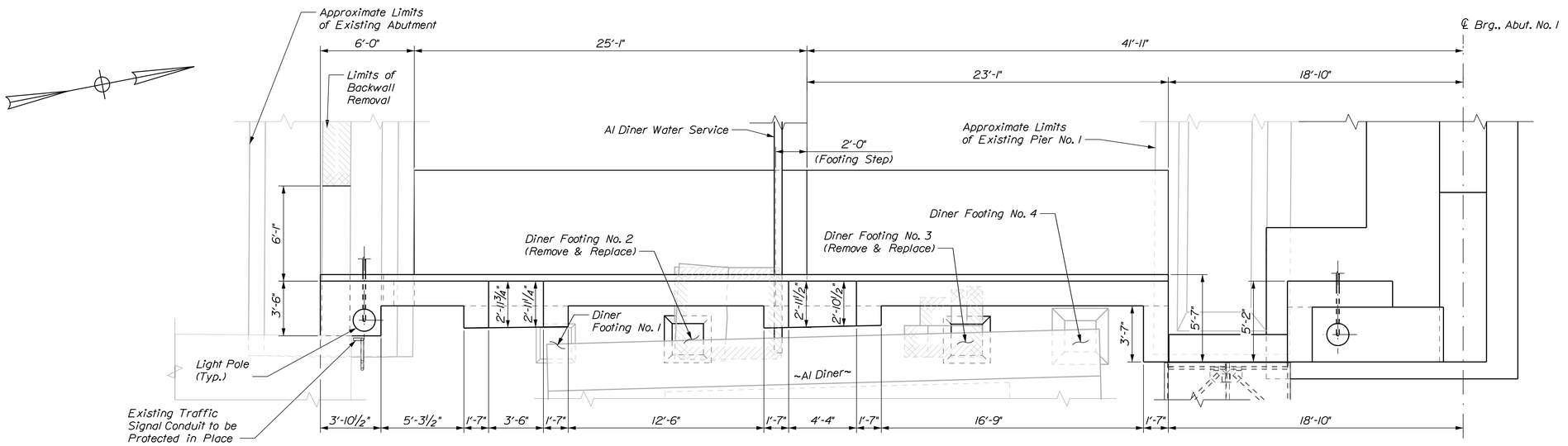
ABUTMENT NO. 2
PRECAST ABUTMENT CAP

SHEET NUMBER

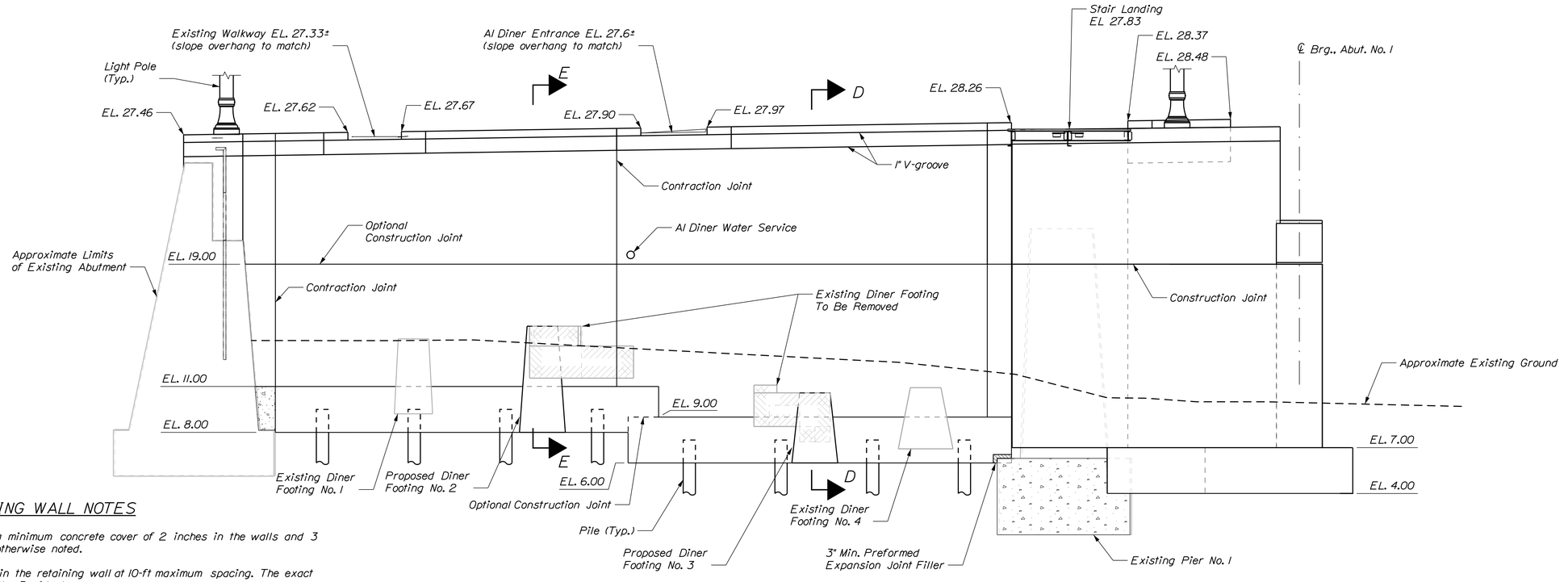
A40

OF A78

Filename: ...\MSTA\A40_Abut_No2_Precast.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018



PLAN - SOUTHEAST RETAINING WALL



ELEVATION - SOUTHEAST RETAINING WALL

SOUTHEAST RETAINING WALL NOTES

1. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.

2. Place 4-in. diameter drains in the retaining wall at 10-ft maximum spacing. The exact location will be determined by the Resident.

3. Cover joints where waterstops are not required in accordance with Standard Details Section 502.

4. The Contractor shall have the option of eliminating the horizontal construction joint shown at EL. 19.0 and to construct the full height of the wall during the Closure Period. If the Contractor elects to do so, mechanical/welded splices shall be omitted at this joint and vertical reinforcing bar lengths shall be revised and submitted to the Resident for approval.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	DDT	SEPT 2018
CHECKED-REVIEWED	TEK	SEPT 2018
DESIGN2-DETAILED2	JGS	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SOUTHEAST RETAINING WALL
PLAN & ELEVATION

SHEET NUMBER

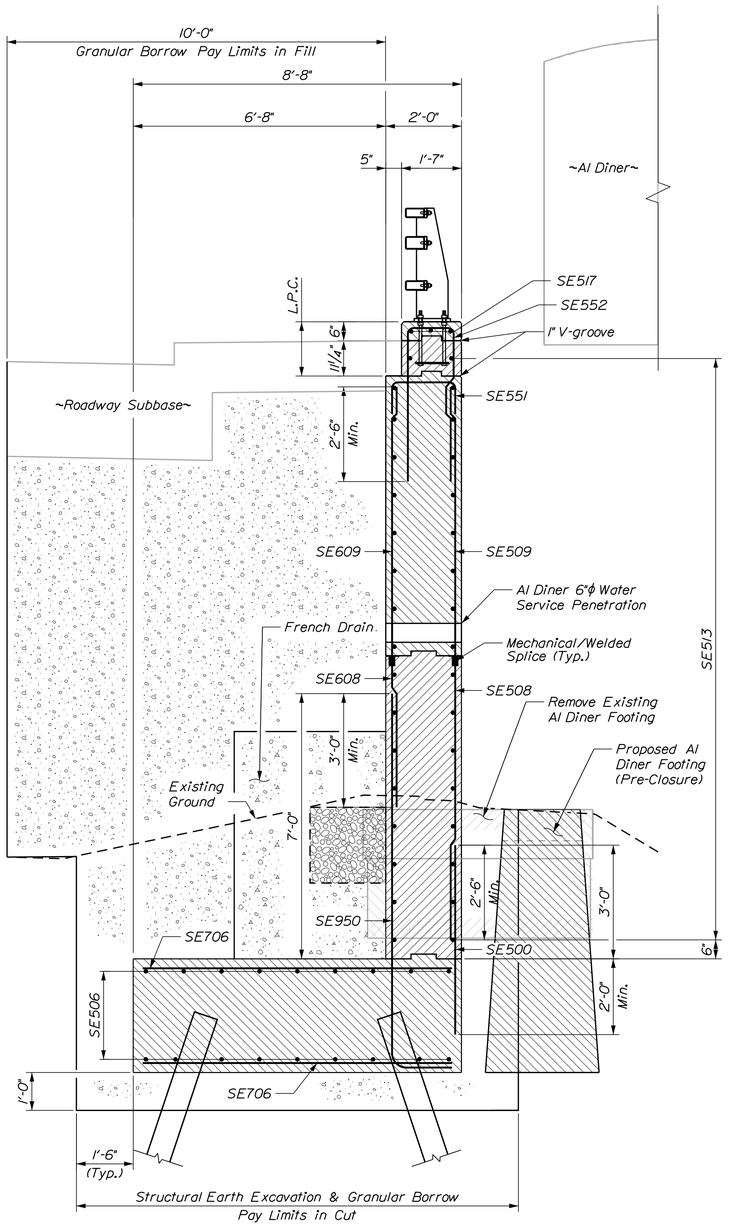
A41

OF A78

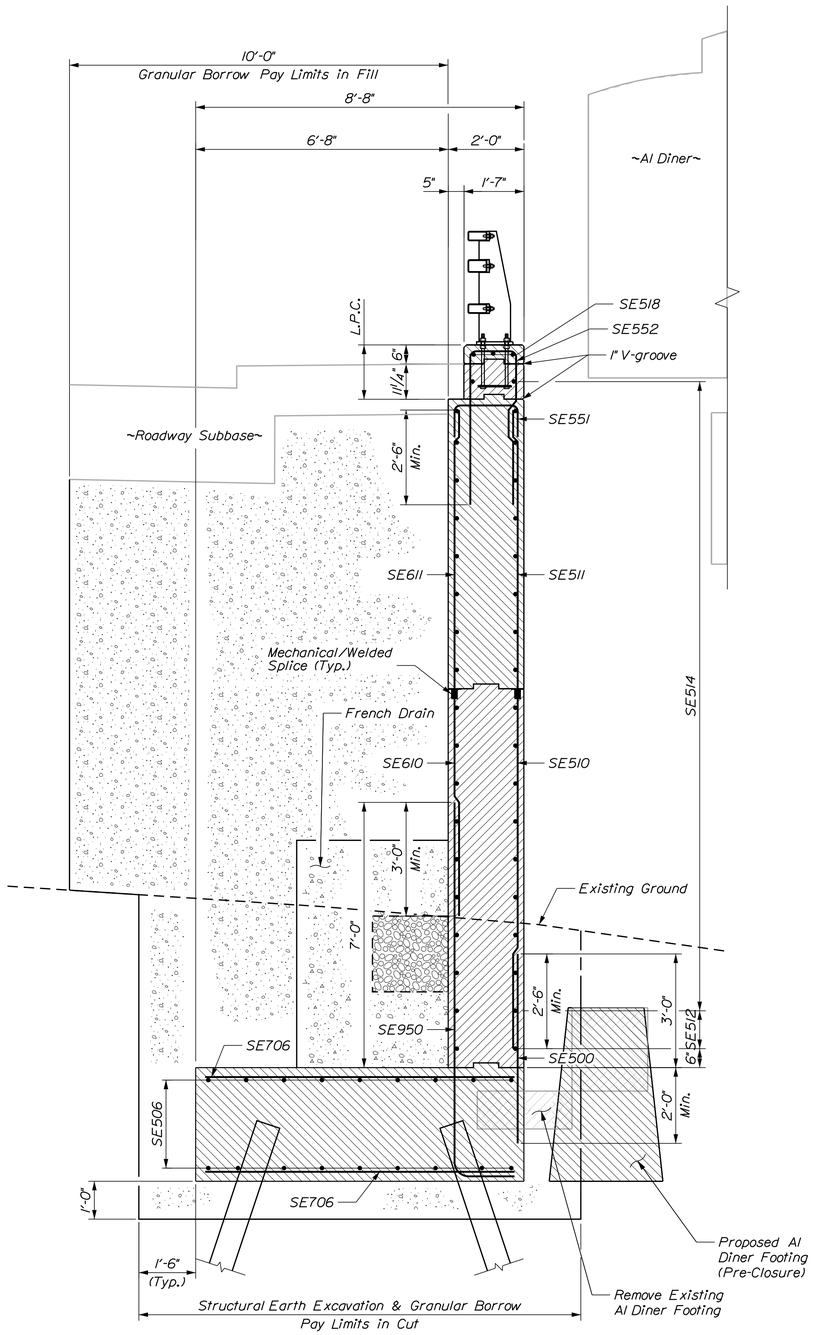
Username: dtaylor Date:9/27/2018

Division: BRIDGE

Filename: ...\A41_se_ret_wall_plan_elev.dgn



SECTION E-E



SECTION D-D

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	DDT	DDT	SEPT 2018
CHECKED-REVIEWED	TEK	JGS	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SOUTHEAST RETAINING WALL SECTIONS

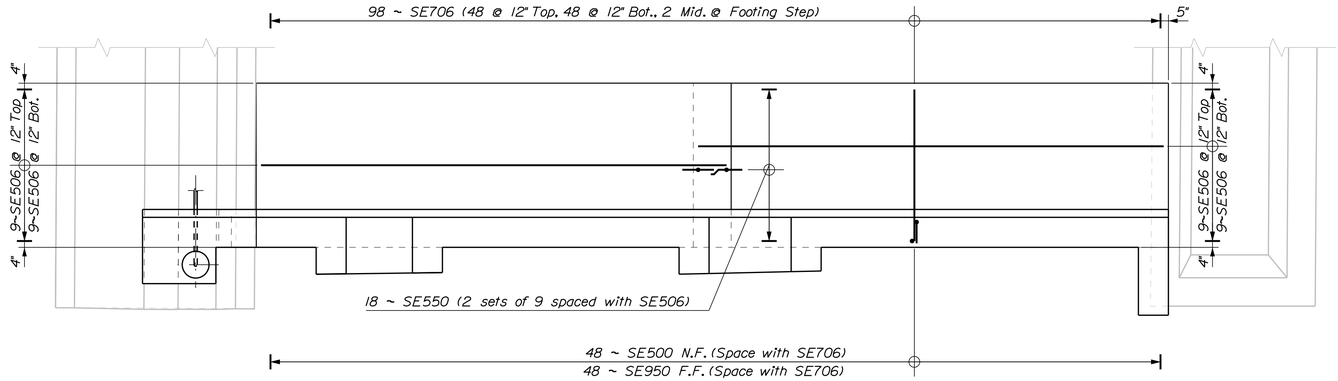
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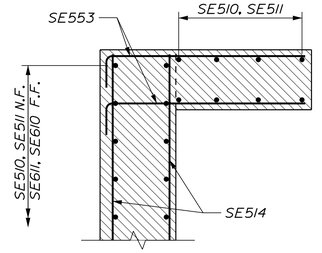
OF A78

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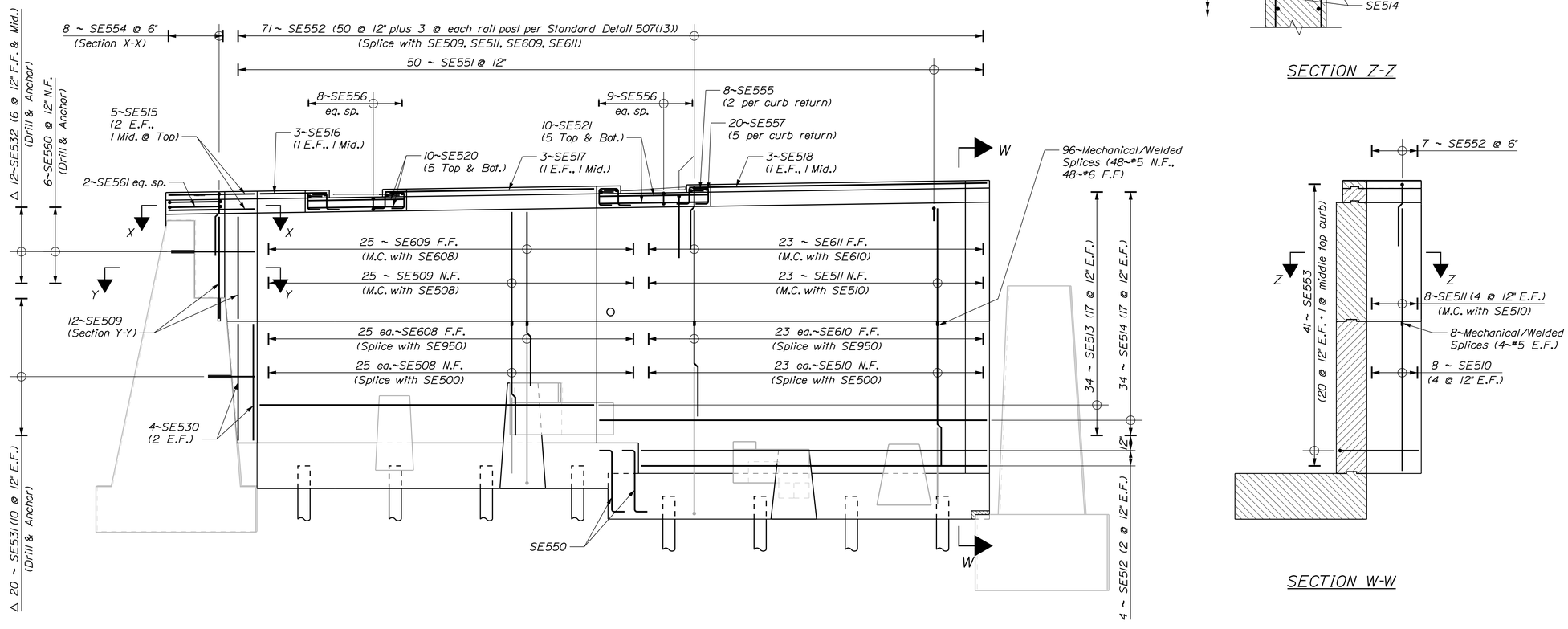
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PLAN - SOUTHEAST RETAINING WALL REINFORCING



SECTION Z-Z



ELEVATION - SOUTHEAST RETAINING WALL REINFORCING

SECTION W-W

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
DESIGNED	DOT	SEPT 2018
DETAILED	DOT	SEPT 2018
CHECKED	TEK	
QUALITY CONTROL	LEM/TWM	
APPROVED		

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	DOT
CHECKED-REVIEWED	TEK
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SOUTHEAST RETAINING WALL REINFORCING

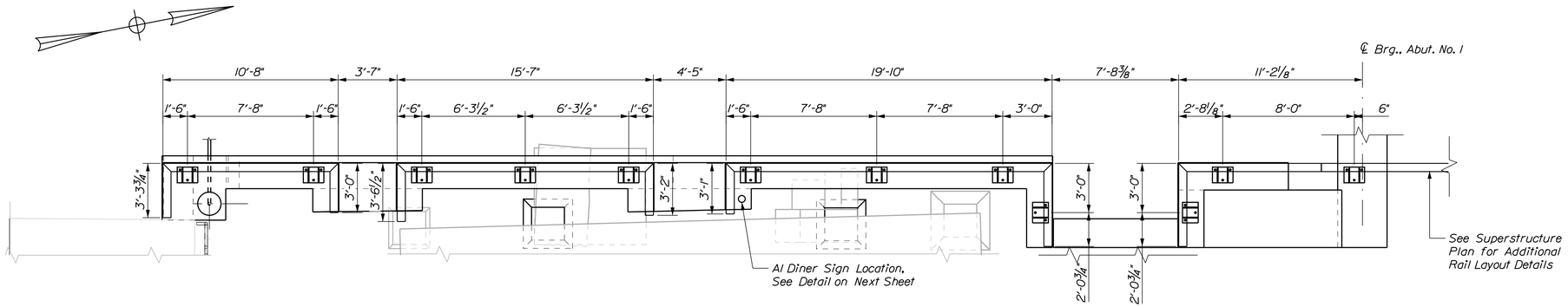
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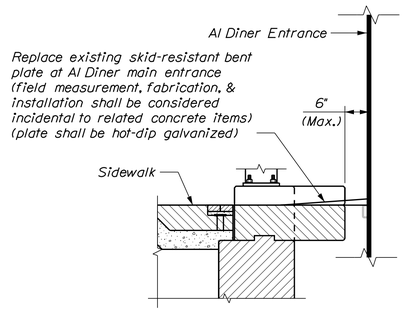
OF A78

Stantec

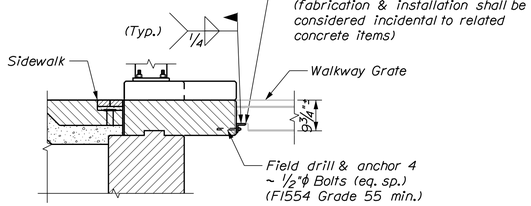
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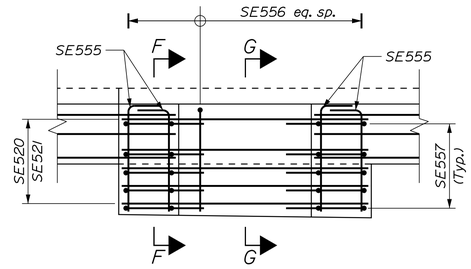
RAILING PLAN - SOUTHEAST RETAINING WALL



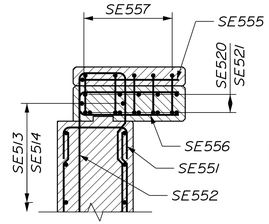
SECTION AT AI DINER MAIN ENTRANCE



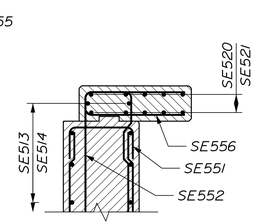
SECTION AT AI DINER SOUTH ENTRANCE



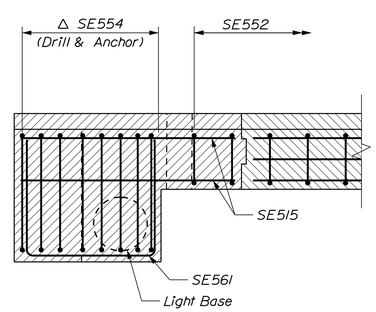
REINFORCING PLAN AT AI DINER BUMPOUTS



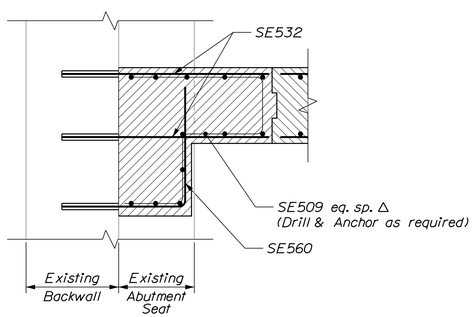
SECTION F-F



SECTION G-G



SECTION X-X



SECTION Y-Y

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

BY	DATE
JTB/DOT	SEPT 2018
KLW/TWM	SEPT 2018

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	DOT
CHECKED-REVIEWED	TEK
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SOUTHEAST RETAINING WALL DETAILS

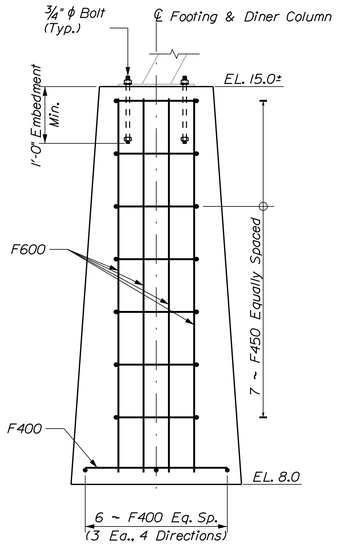
SHEET NUMBER

A44

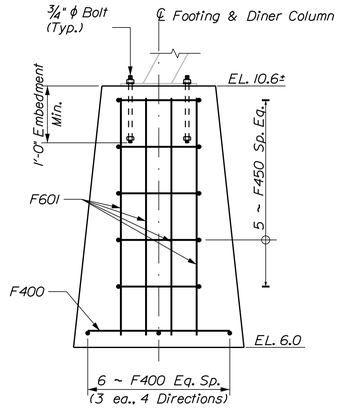
OF A78

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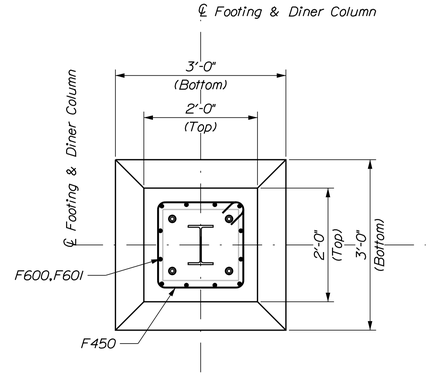
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DINER FOOTING NO. 2 ELEVATION



DINER FOOTING NO. 3 ELEVATION



DINER FOOTING PLAN

AI DINER FOOTING NOTES

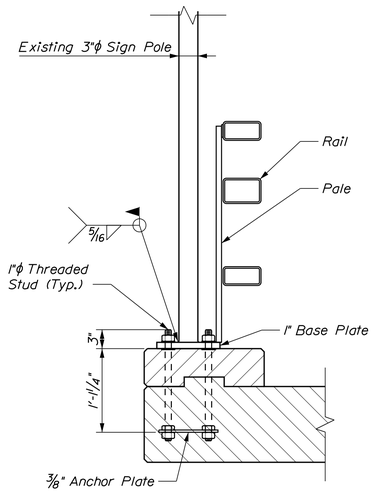
1. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

2. The quantities of reinforcing bars shown are for both diner footings.

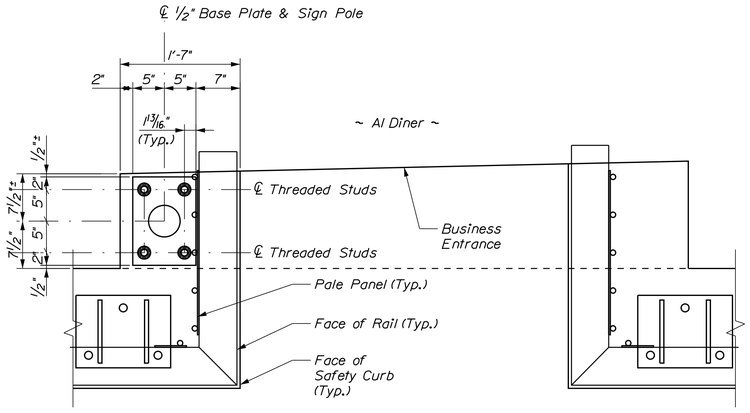
3. Diner footings shall be paid for under Item 502.219 Structural Concrete, Abutments and Retaining Walls.

MATERIALS

Concrete.....Class A
Reinforcing Steel.....ASTM A 615, Grade 60 (uncoated)
Anchor Bolts (720.07).....ASTM F1554, Grade 55



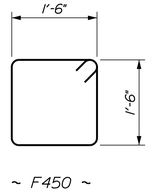
SECTION - AI DINER SIGN POLE ATTACHMENT
See Standard Details 507(08) and 507(09) for Details Not Shown



PLAN - AI DINER SIGN POLE ATTACHMENT
See Standard Details 507(08) and 507(09) for Details Not Shown

REINFORCING STEEL SCHEDULE

Mark	Qty.	Length
F400	12	2'-6"
F450	12	6'-6"
F600	12	4'-0"
F601	12	7'-0"



~ F450 ~

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(500)
WIN 18735.00
BRIDGE NO. 2101
BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	KLW/LSF	KLW/LSF	SEPT 2018
CHECKED-REVIEWED	DOT	LEM/TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

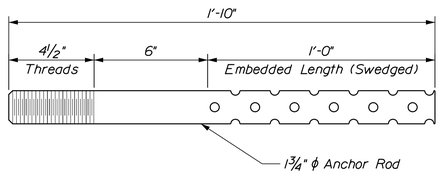
SIGNATURE
P.E. NUMBER
DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

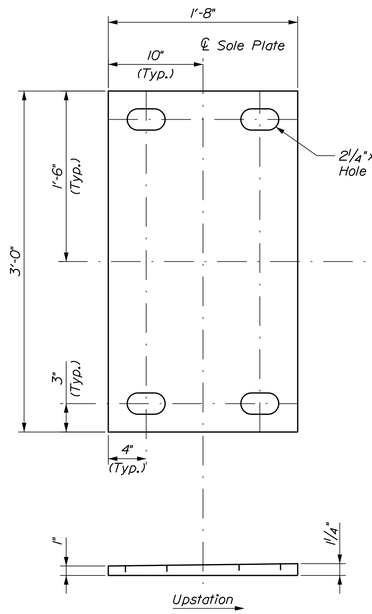
A1 DINER
FOOTING DETAILS

SHEET NUMBER
A45
OF A78

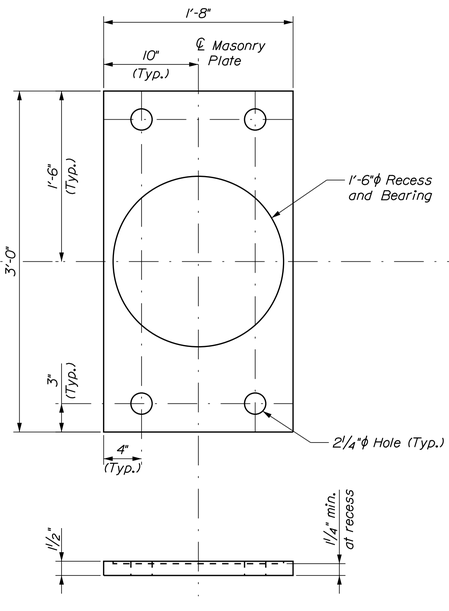
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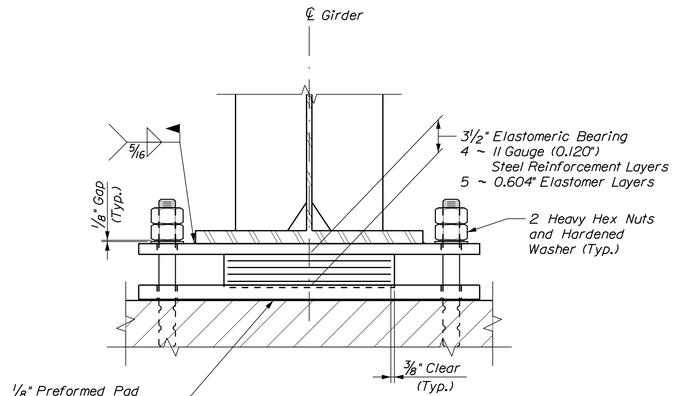
ANCHOR ROD DETAIL
(4 per bearing assembly)



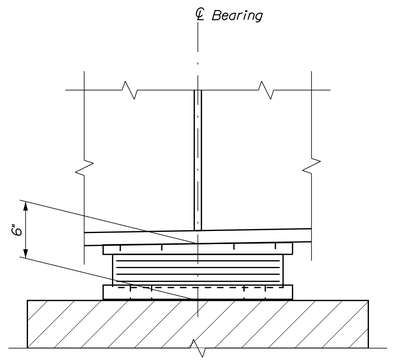
BEVELED SOLE PLATE



MASONRY PLATE



BEARING ELEVATION
(14 Assemblies Required)



SIDE VIEW
(Anchor Rods Not Shown for Clarity)

ELASTOMERIC BEARING NOTES

1. The shear modulus of the elastomer shall be within the range of 150 psi ±15% at 73 degrees Fahrenheit.

2. Vulcanization of the elastomer to the masonry and sole plates shall be done during the primary mold process.

3. Masonry and sole plates shall meet the requirements of ASTM A 709, Grade 50. Anchor rods shall meet the requirements of ASTM F 1554, Grade 55 and shall be swedged on the embedded portion of the rod.

4. Masonry and sole plates shall be galvanized in accordance with Section 506. Anchor rods, washers, and nuts shall be galvanized to ASTM A 153 or ASTM B 695, Class 50, Type I.

5. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge and a direction arrow that points upstation. All marks shall be permanent and shall be visible after the bearing is installed.

6. Bearings shall be covered during transit.

7. The bearings are designed so that the superstructure may be erected when the ambient air temperature is within the range of 65 °F and 90 °F. If the ambient air temperature is outside this range, the bearings shall be reset as directed by the Resident.

8. After the sole plate assembly is in its final position, weld it to the beam bottom flange. Welds shall terminate ¼" from the edge of plate. Touch-up shall be performed in accordance with Section 506.

9. All necessary precautions shall be taken to protect bearing components from field weld flash and spatter. Heat from welding operations shall be controlled such that steel adjacent to the elastomer does not exceed 200 °F. The temperature shall be verified by the use of temperature indicating crayons or other suitable means.

10. Upset the threads on the anchor rods after assembly of the bearing.

11. The "Bearing Design Load" for each bearing, as noted in Standard Specifications Subsection 523.23, is 278 kips. This is the total load for the Service I load combinations, without impact.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	LSF	SEPT 2018
CHECKED-REVIEWED	DOT	DOT/TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BEARING DETAILS

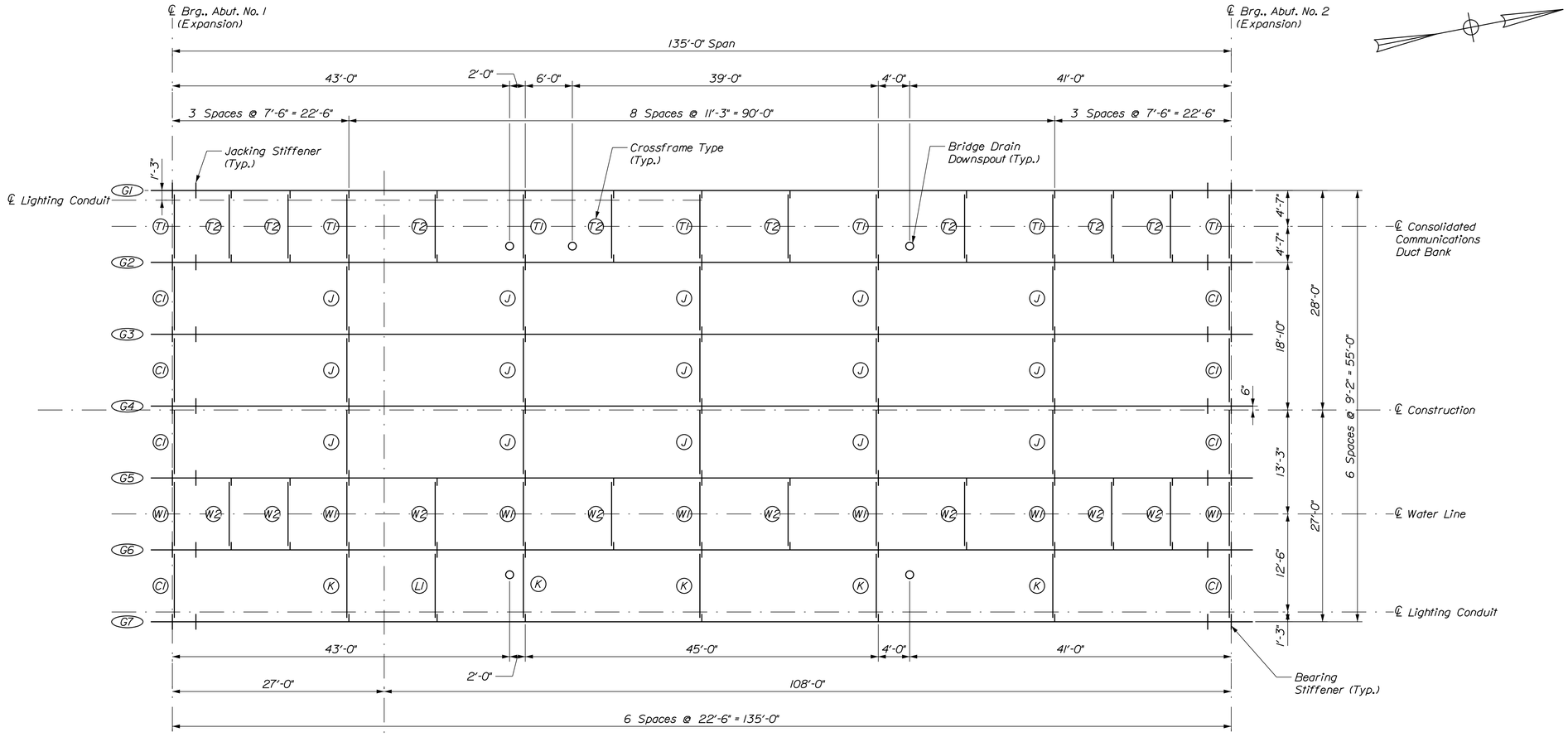
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A46

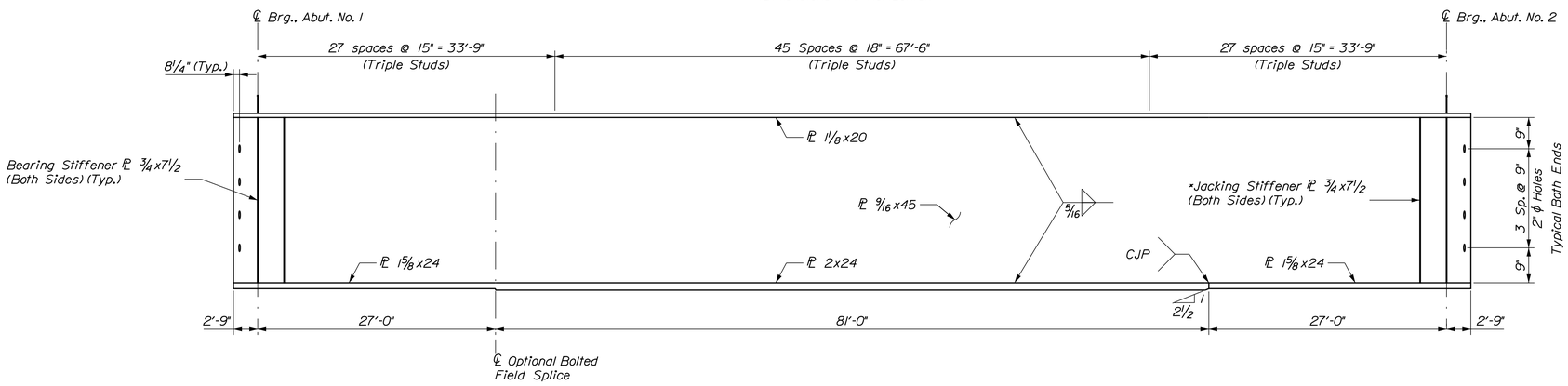
OF A78

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Filename: ...\BRIDGE\MSTA\A46_Bearings.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



FRAMING PLAN
(Dimensions Are Horizontal)



GIRDER ELEVATION AND STUD LAYOUT
300 Studs per Girder x 7 Girders = 2100 Studs
Adjust spacing to clear field splice bolts
* Location to be determined by Contractor for bridge lateral slide.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED LSF	KLW	SEPT 2018
CHECKED-REVIEWED DOT	TWM	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

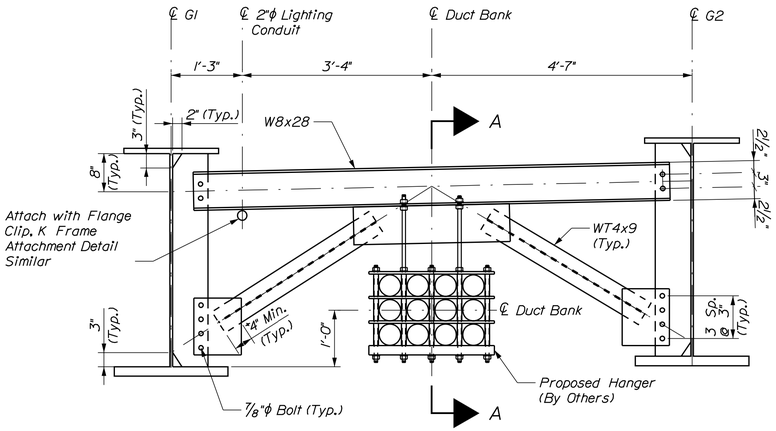
FRAMING PLAN

SHEET NUMBER

A47

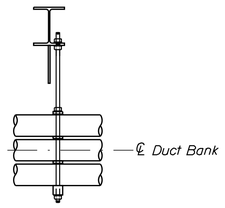
OF A78

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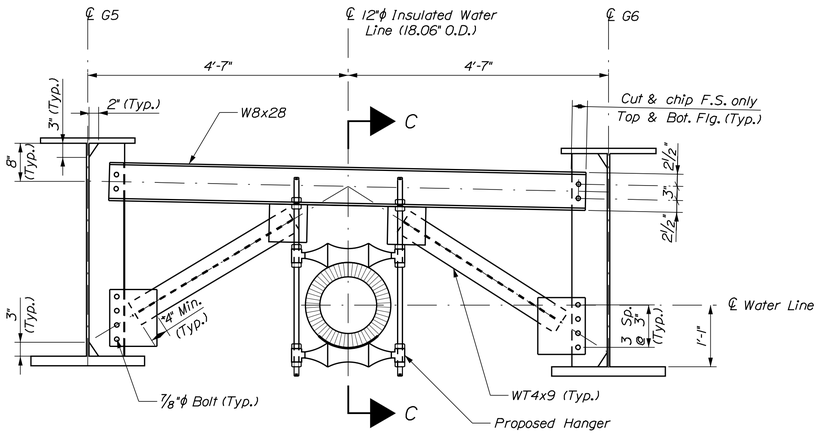


CROSSFRAME TYPE TI

*See "Typical Weld Details" & Notes on Standard Detail 504(07)

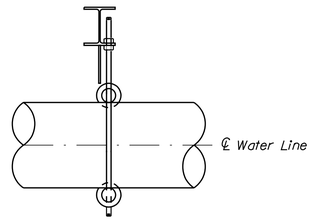


SECTION A-A



CROSSFRAME TYPE WI

*See "Typical Weld Details" & Notes on Standard Detail 504(07)



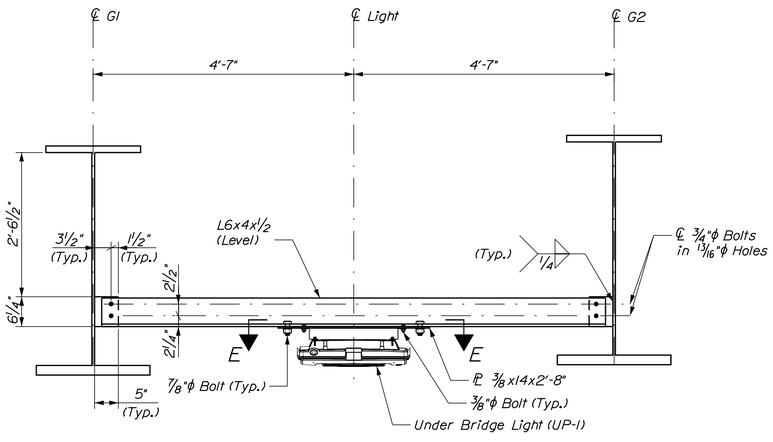
SECTION C-C

UTILITY SUPPORT TYPE T2

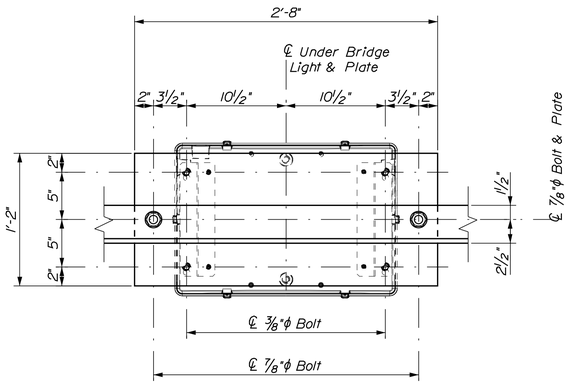
SECTION B-B

UTILITY SUPPORT TYPE W2

SECTION D-D



UTILITY SUPPORT TYPE LI



SECTION E-E

STATE OF MAINE
BARRIN D. LARY
No. 10749
LICENSED PROFESSIONAL ENGINEER
9/19/2018

WATER MAIN DETAILS ONLY

NOTES

1. See water plans for water main details.

2. Under Bridge Light UP-1 shall be equal to a Holophane Infrastructure TunnelPass LED Fixture, with 3 LED modules. Color temperature shall be 3000K to match street lighting and drive current shall be 700mA with auto-sensing voltage. Light shall have ceiling mounted long and narrow optics and latched door closures. Finish color shall match bridge. (Type F = TNLED 3 4K 7 AS CLN DGRA L). Light shall be considered incidental to Highway Lighting.

3. Contractor shall provide a NEMA 4x Junction Box for connection to the conduit system. Exact location and mounting shall be coordinated with the Resident. Payment for the junction box shall be incidental to Highway Lighting.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	LSF/KLW	SEPT 2018
CHECKED-REVIEWED	DDT	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

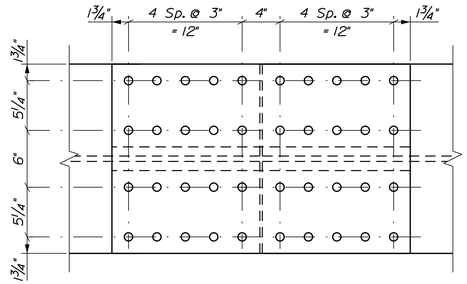
CROSS-FRAME DETAILS

SHEET NUMBER

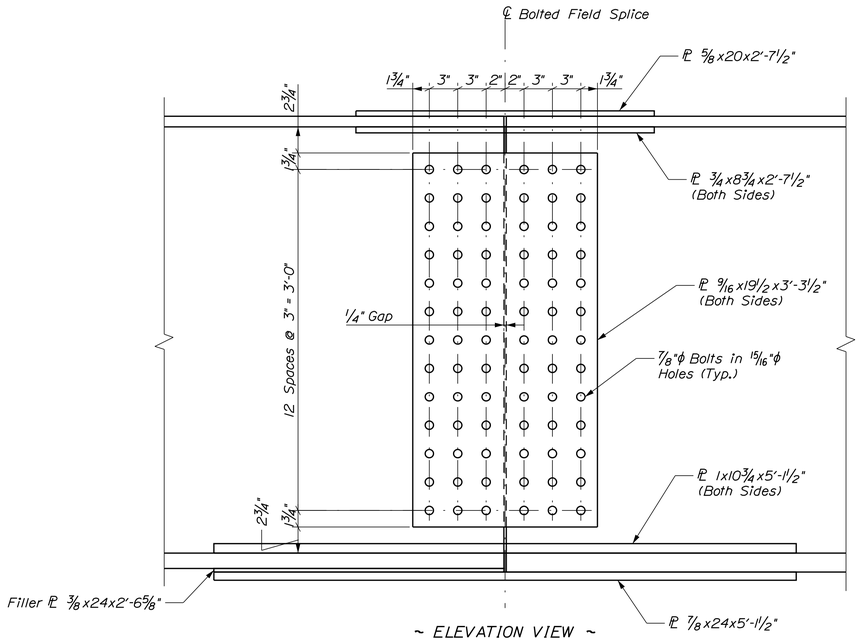
A48

OF A78

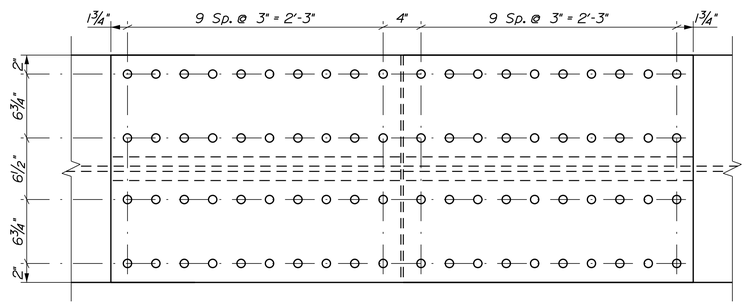
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~ TOP VIEW ~

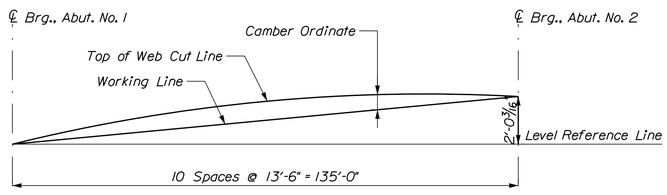


~ ELEVATION VIEW ~



~ BOTTOM VIEW ~

OPTIONAL BOLTED FIELD SPLICE



CAMBER DIAGRAM

STRUCTURAL STEEL NOTES

1. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.

2. No transverse butt weld splices will be allowed in the flange plates or web plates within 10 feet or 10 percent of the span length (whichever is greater) from the points of maximum positive moment. Butt weld splices in flanges shall be not less than one foot from transverse butt welds in the web plates and no transverse web or flange butt welds shall be located within one foot of other transverse welds (e.g. connection plates to web welds) on either flange or web. No transverse butt weld splices will be allowed in areas of stress reversal.

3. Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be not less than 20 feet in length unless otherwise shown on the plans.

4. Bearing stiffeners shall be plumb after erection and dead loading of the structure.

5. Intermediate crossframe or diaphragm connection plates may be either plumb or normal to the top flange.

6. Connection plates and gussets shall be ½" minimum thickness. Connection plates shall be 7½" minimum width.

7. Filler plates may be steel conforming to the requirements of ASTM A 709, Grade 36.

8. Optional bolted field splice connections shall be made using ⅞" ASTM F1325, Grade A 325 H.S. bolts. Hole size shall be 15/16" diameter. Bolt threads shall be excluded from the shear planes of the field splice connections.

9. Girders, diaphragms, and cross frames shall be thermal spray coated and seal coated in accordance with Standard Specifications Subsections 506.30 thru 506.39.

10. At the Contractor's option, the Diaphragms and Cross Frames may be Hot-Dipped Galvanized in accordance with Standard Specifications Section 506, Shop Applied Protective Coating, as approved by the Resident. Payment will be considered incidental to Item 506.9104, Thermal Spray Coating (Shop Applied). No separate payment will be made.

11. At the Contractor's option, all Structural Steel may be Hot Dipped Galvanized in accordance with Standard Specifications Section 506, Shop Applied Protective Coating, as approved by the Resident. Double Hot Dipped galvanizing shall be approved by the Resident. Payment will be considered incidental to Item 506.9104, Thermal Spray Coating (Shop Applied). No separate payment will be made.

TABLE OF CAMBER ORDINATES "CO"										
Abut. No. 1	13.5'	27'	40.5'	54'	67.5'	81'	94.5'	108'	121.5'	Abut. No. 2
0"	3 5/8"	6 13/16"	9 5/16"	10 7/8"	11 7/16"	10 7/8"	9 5/16"	6 13/16"	3 5/8"	0"

TABLE OF DEFLECTIONS (INCHES)											
	Abut. No. 1	13.5'	27'	40.5'	54'	67.5'	81'	94.5'	108'	121.5'	Abut. No. 2
Steel Dead Load	0.00	0.70	1.31	1.79	2.10	2.20	2.10	1.79	1.31	0.70	0.00
Fluid Dead Load	0.00	2.23	4.20	5.72	6.69	7.03	6.69	5.72	4.20	2.23	0.00
Superimposed Dead Load	0.00	0.71	1.33	1.81	2.12	2.22	2.12	1.81	1.33	0.71	0.00

BOTTOM OF SLAB ELEVATIONS											
Girder	Abut. No. 1	13.5'	27'	40.5'	54'	67.5'	81'	94.5'	108'	121.5'	Abut. No. 2	Girder
G1	26.34	26.78	27.20	27.57	27.87	28.11	28.28	28.37	28.40	28.39	28.35	G1
G2	26.52	26.96	27.38	27.75	28.06	28.29	28.46	28.55	28.59	28.57	28.53	G2
G3	26.70	27.15	27.56	27.93	28.24	28.48	28.64	28.74	28.77	28.76	28.71	G3
G4	26.89	27.33	27.75	28.12	28.42	28.66	28.83	28.92	28.95	28.94	28.90	G4
G5	26.72	27.17	27.58	27.95	28.26	28.50	28.66	28.76	28.79	28.78	28.73	G5
G6	26.54	26.98	27.40	27.77	28.08	28.31	28.48	28.57	28.61	28.59	28.55	G6
G7	26.35	26.79	27.21	27.58	27.88	28.12	28.29	28.38	28.41	28.40	28.36	G7

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	L. TIMBERLAKE	DATE
PROJ. MANAGER	LSF	SEPT 2018
DESIGN-DETAILED	LSF	SEPT 2018
CHECKED-REVIEWED	DDT	
DESIGN2-DETAILED2	TWM	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

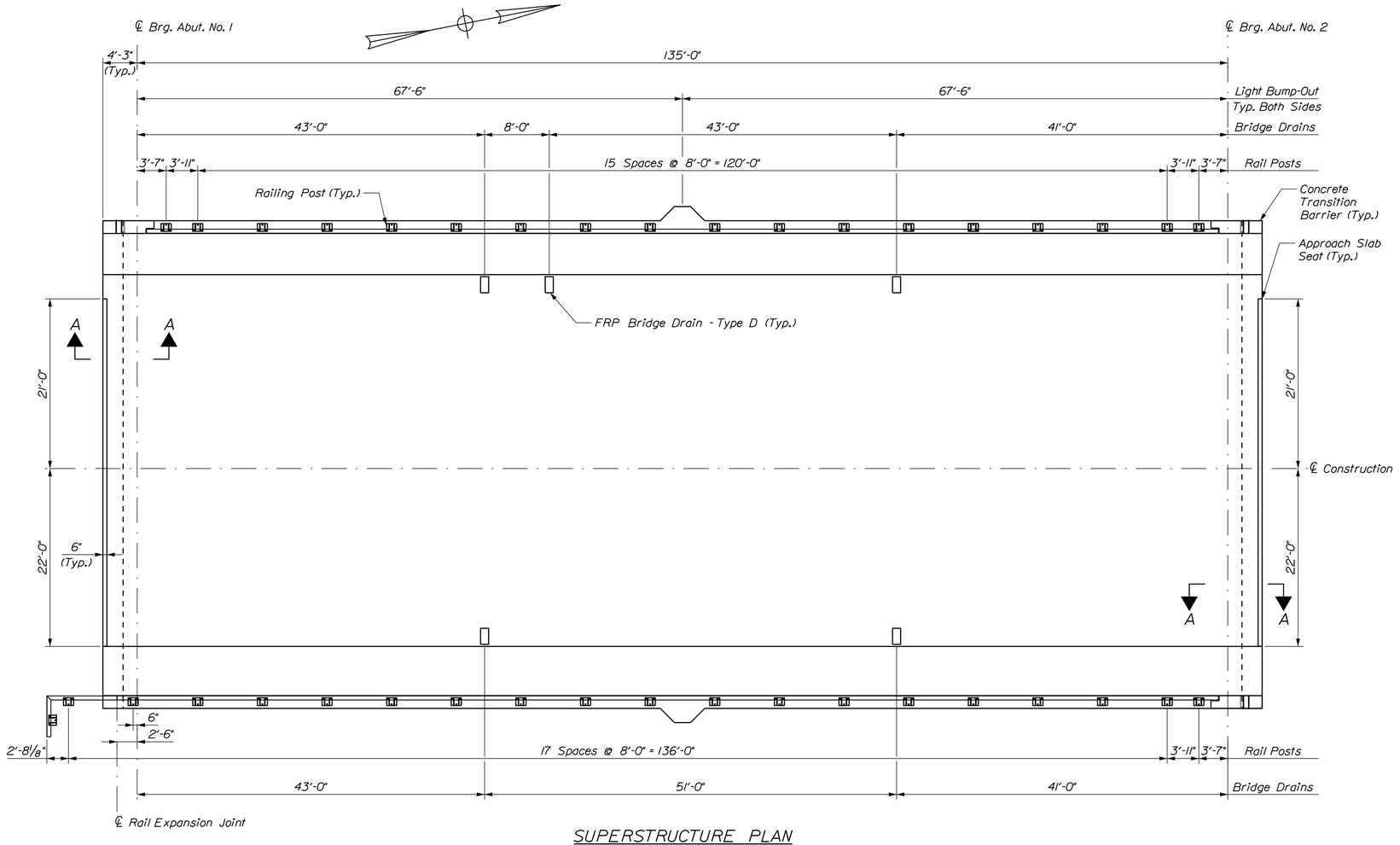
STRUCTURAL STEEL DETAILS

SHEET NUMBER

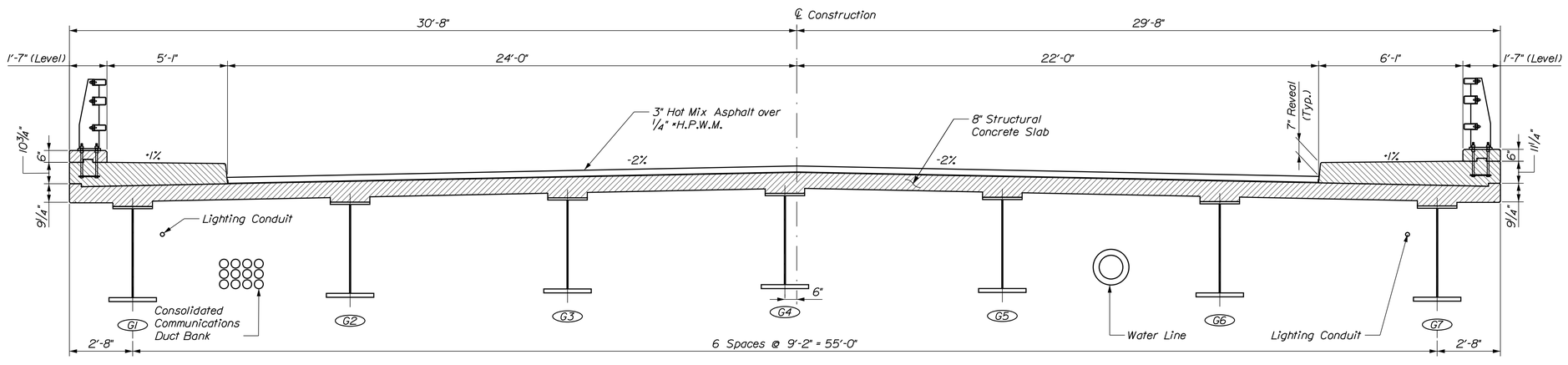
A49

OF A78

Filename: ...\MSTA\A49_framing_details2.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



SUPERSTRUCTURE PLAN



TRANSVERSE SECTION

* High Performance Waterproofing Membrane

SUPERSTRUCTURE NOTES

1. The theoretical blocking used for design of the structure is 3 5/8" inch at the centerline of bearing of the abutments. Refer to Standard Detail 502(03) for blocking details.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

3. Adjust reinforcing steel to fit around the bridge drains in a manner approved by the Resident. Do not cut transverse reinforcing bars.

4. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab. Refer to Standard Detail 502(03) for details.

5. The superstructure slab concrete shall be placed continuously and shall be kept plastic until the entire placement has been made.

6. The Contractor shall install Transition Barrier vertical closed stirrups, as shown in Standard Details Section 526, prior to the placement of the curb or sidewalk concrete.

7. Payment for Sheet Waterproofing Membrane used for covering approach slab joints will not be made directly and shall be considered incidental to related Contract Items. Alternate methods of sealing the joint between the approach slab and the end diaphragm may be submitted to the Resident for approval.

8. The use of Precast Concrete Deck Panels will not be allowed on this project.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	SEPT 2018	
CHECKED-REVIEWED	DOT	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SUPERSTRUCTURE PLAN

SHEET NUMBER

A50

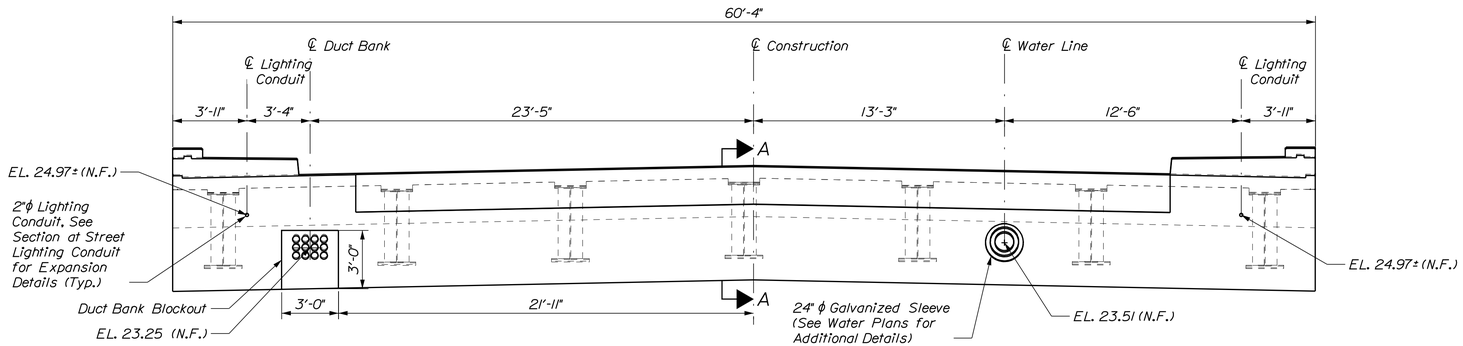
OF A78

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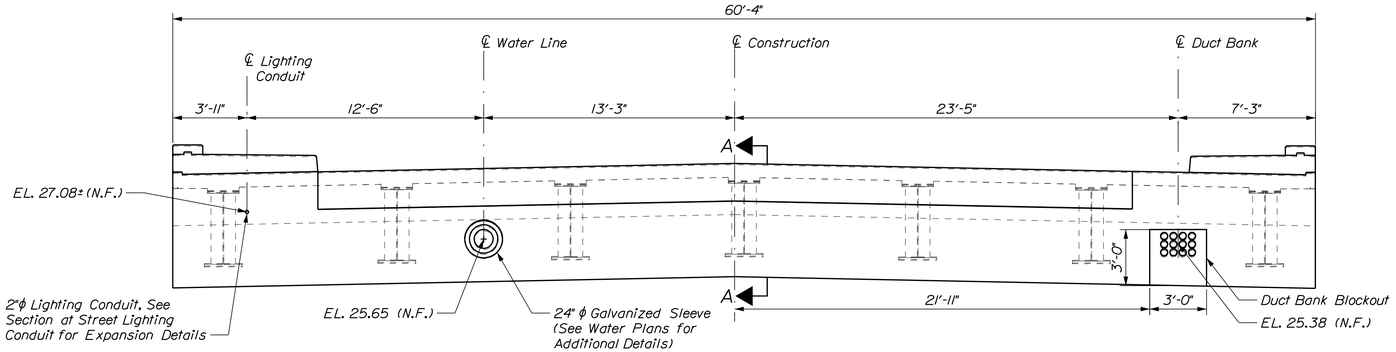
Username: dataylor Date:9/27/2018

Division: BRIDGE

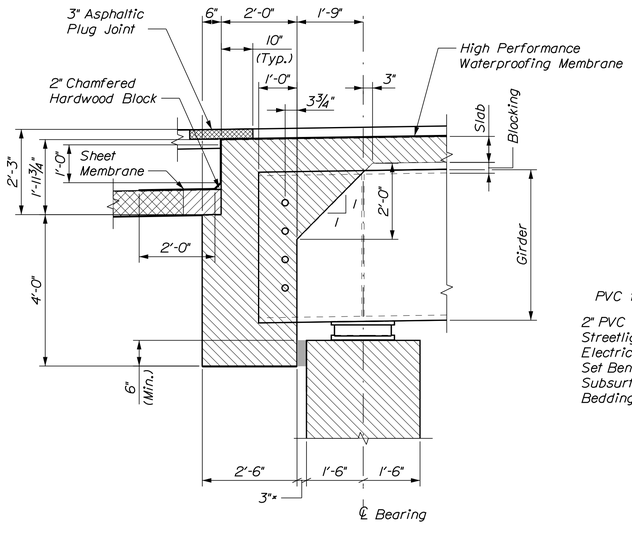
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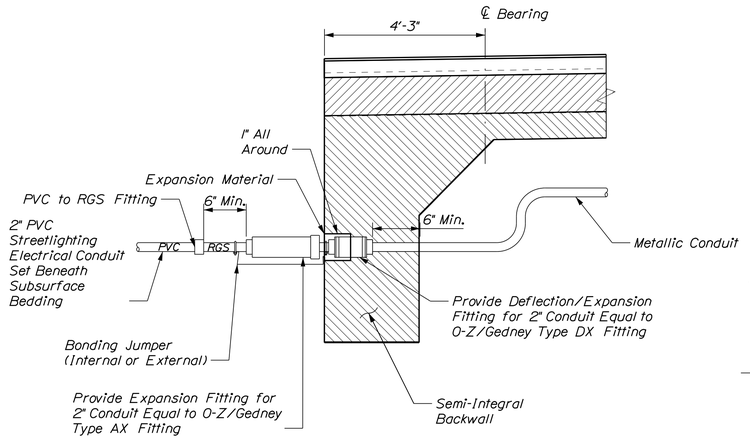
ABUTMENT NO. 1 END DIAPHRAGM ELEVATION
(Looking North)



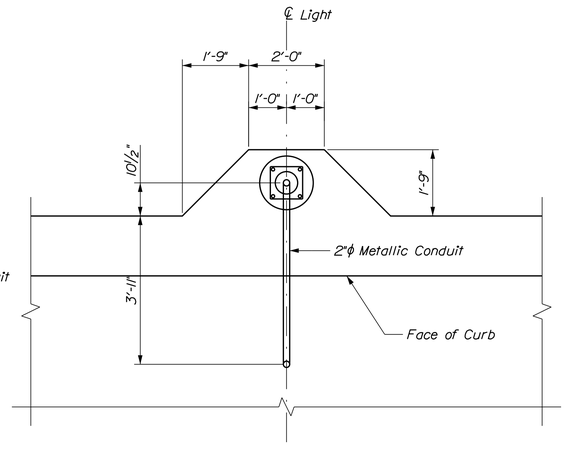
ABUTMENT NO. 2 END DIAPHRAGM ELEVATION
(Looking South)



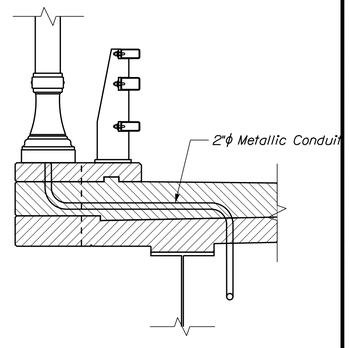
SECTION A-A
*Refer to Special Provision Section 620 - Synthetic Compressible Inclusion



SECTION AT STREET LIGHTING CONDUIT
Note: Payment for the expansion fitting, all hardware, and installation shall be incidental to Pay Item 626.21 Metallic Conduit.



LIGHT BUMP-OUT PLAN



SECTION AT LIGHT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	KLW/LSF	KLW/ODT	SEPT 2018
CHECKED-REVIEWED	TEK	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

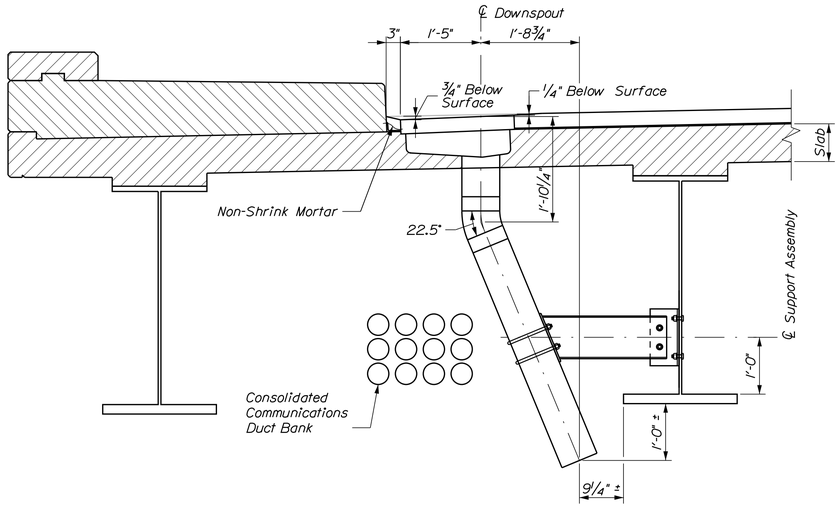
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SUPERSTRUCTURE DETAILS

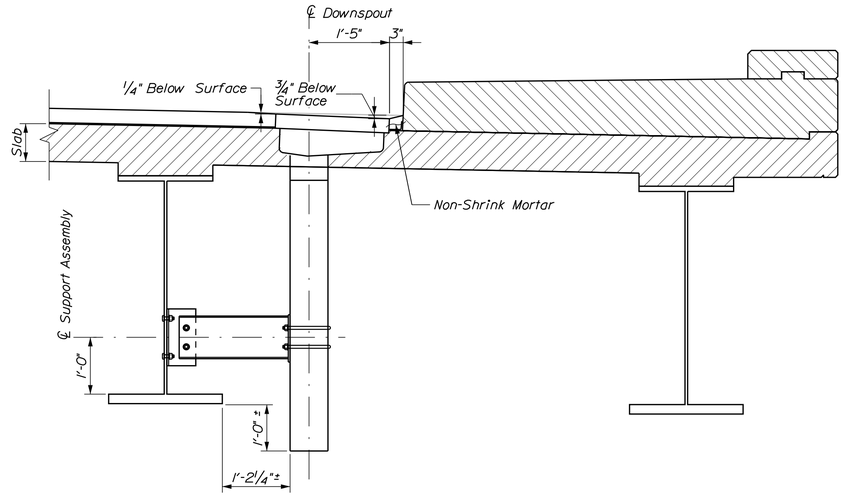
SHEET NUMBER
A51
OF A78

Stantec

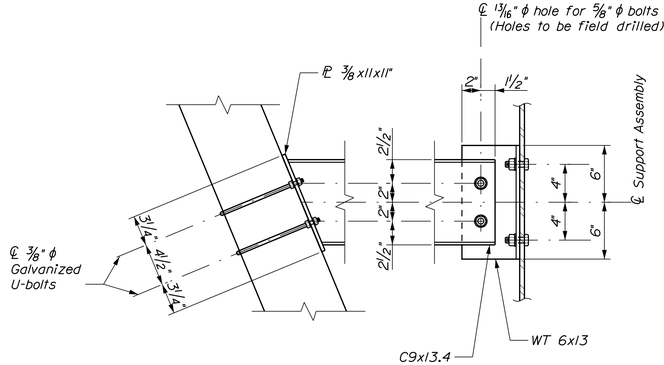
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Division: BRIDGE
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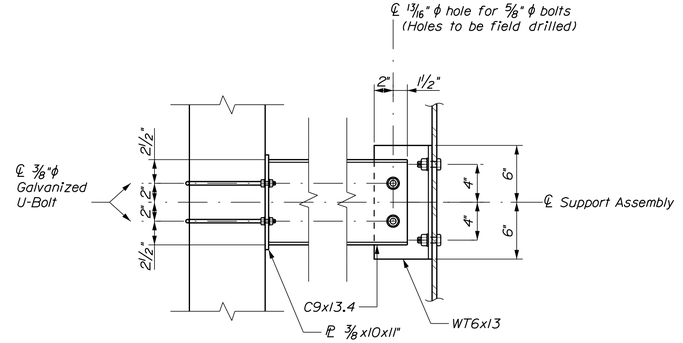
BRIDGE DRAIN - TYPE D - ELEVATION AT UPSTREAM SIDEWALK



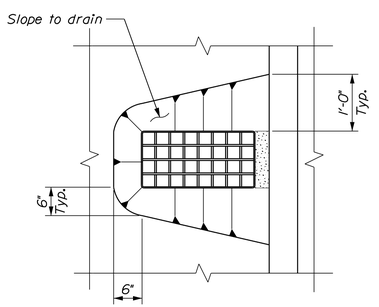
BRIDGE DRAIN - TYPE D - ELEVATION AT DOWNSTREAM SIDEWALK



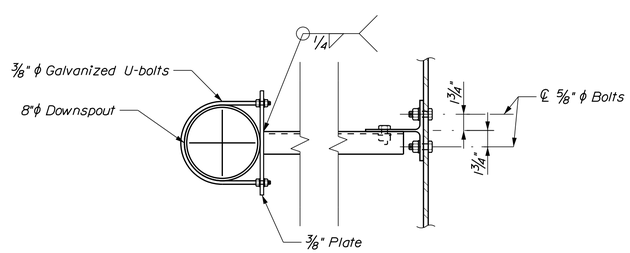
SUPPORT ASSEMBLY DETAIL - UPSTREAM DRAIN



SUPPORT ASSEMBLY DETAIL - DOWNSTREAM DRAIN



BRIDGE DRAIN PLAN



SUPPORT ASSEMBLY TOP VIEW

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED	KLW	SEPT 2018
CHECKED-REVIEWED	TWM	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

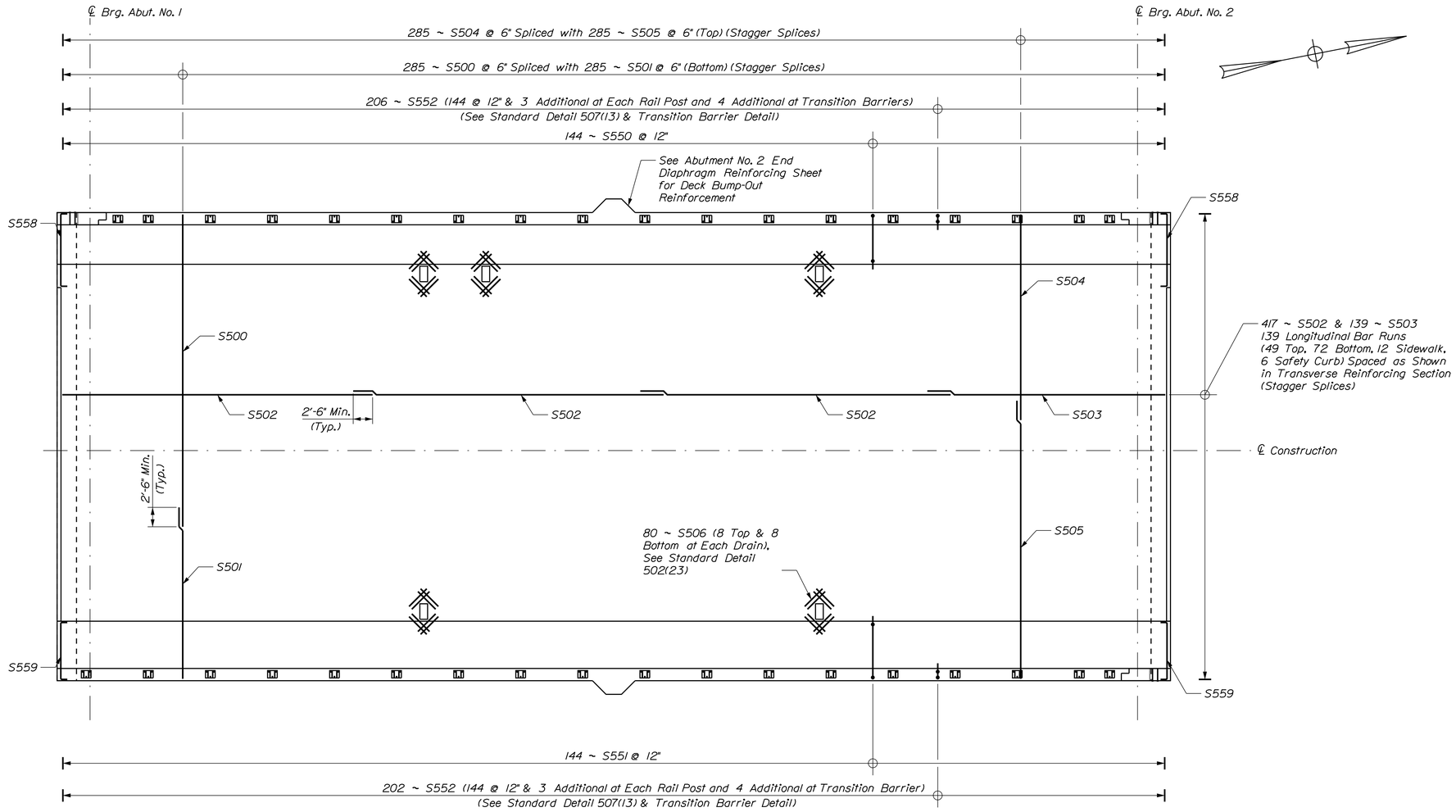
DRAIN DETAILS

SHEET NUMBER

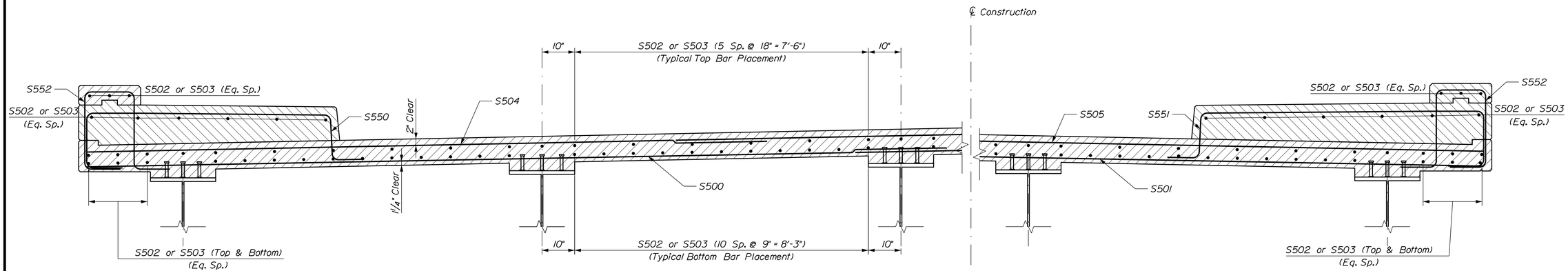
A52

OF A78

Filename: ...\MSTA\A52_Drain_Details.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018



SUPERSTRUCTURE REINFORCING PLAN



TRANSVERSE REINFORCING SECTION

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	L. TIMBERLAKE	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	KLW	KLW	SEPT 2018
CHECKED-REVIEWED	TEK	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

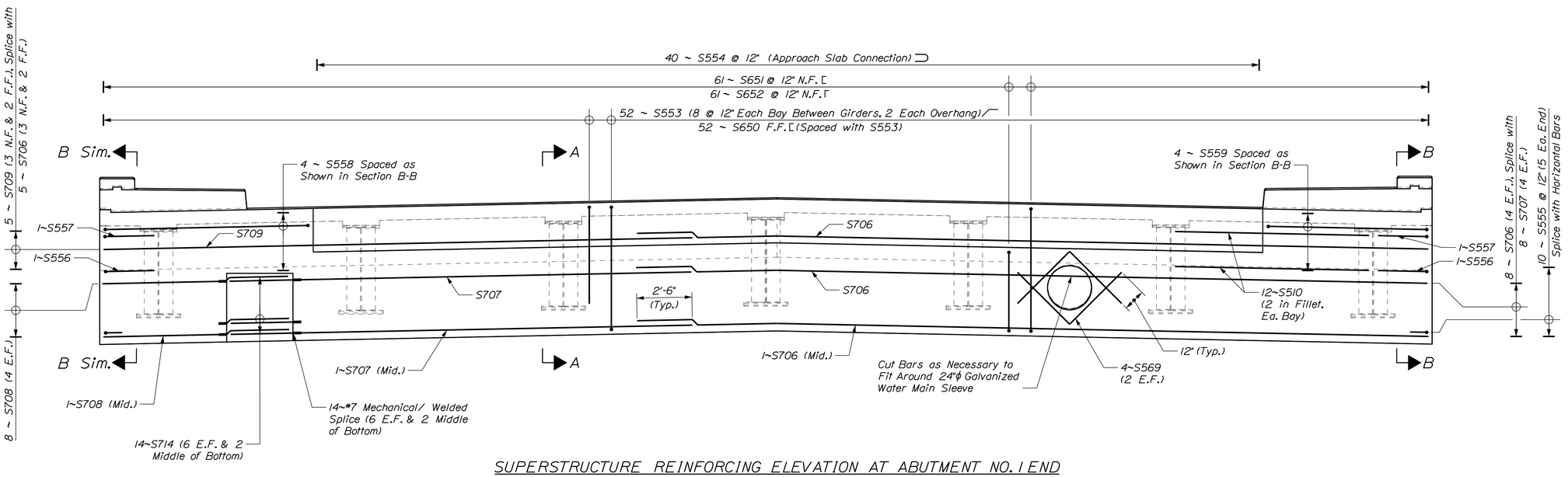
SUPERSTRUCTURE REINFORCING PLAN

SHEET NUMBER

A53

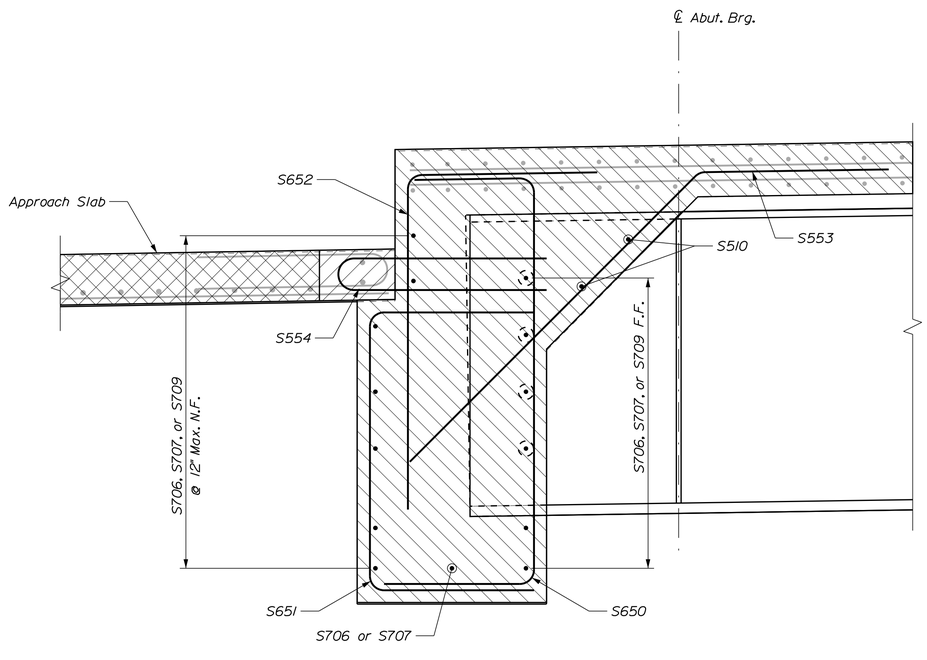
OF A78

Filename: ...\A53_SuperstructureRein.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

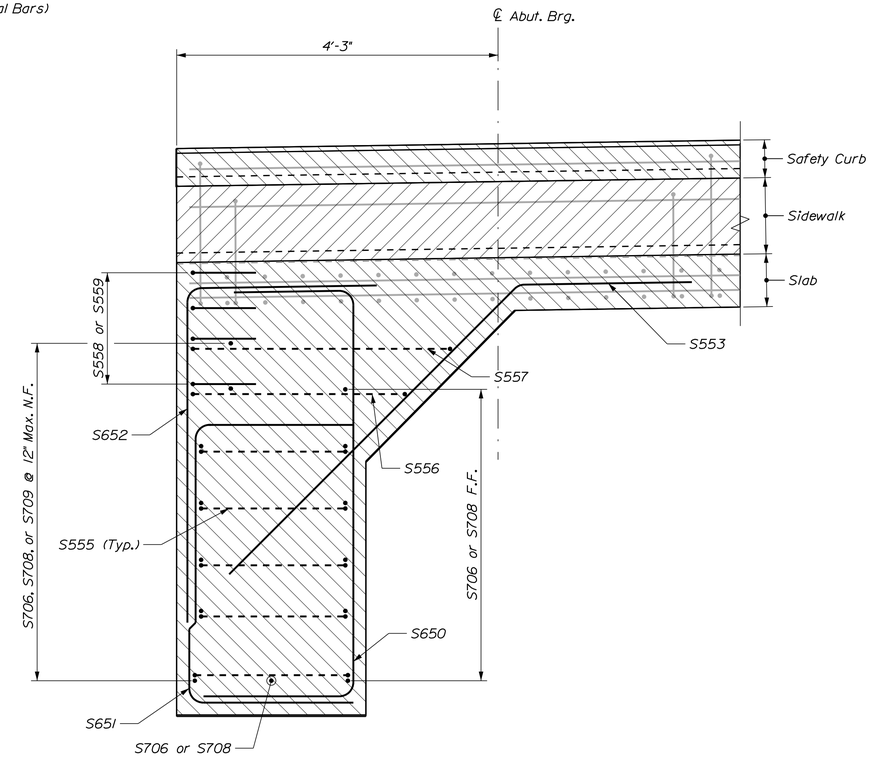


SUPERSTRUCTURE REINFORCING ELEVATION AT ABUTMENT NO. 1 END

(Looking North)
(See Sections A-A and B-B for Spacing of Horizontal Bars)



SECTION A-A



SECTION B-B

Filename: ...\MSTA\A54_SuperDetail1.dgn Username: dataylor Division: BRIDGE Date:9/27/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	KLW	JTB/LSF	SEPT 2018
CHECKED-REVIEWED	TEK	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

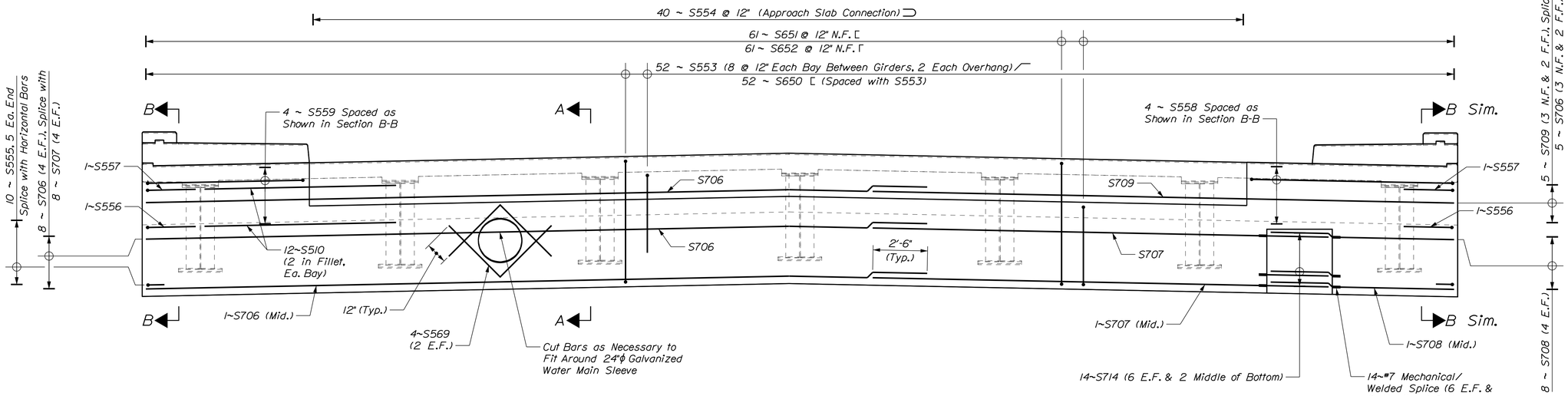
SUPERSTRUCTURE DETAILS ABUTMENT NO. 1 END

SHEET NUMBER

A54

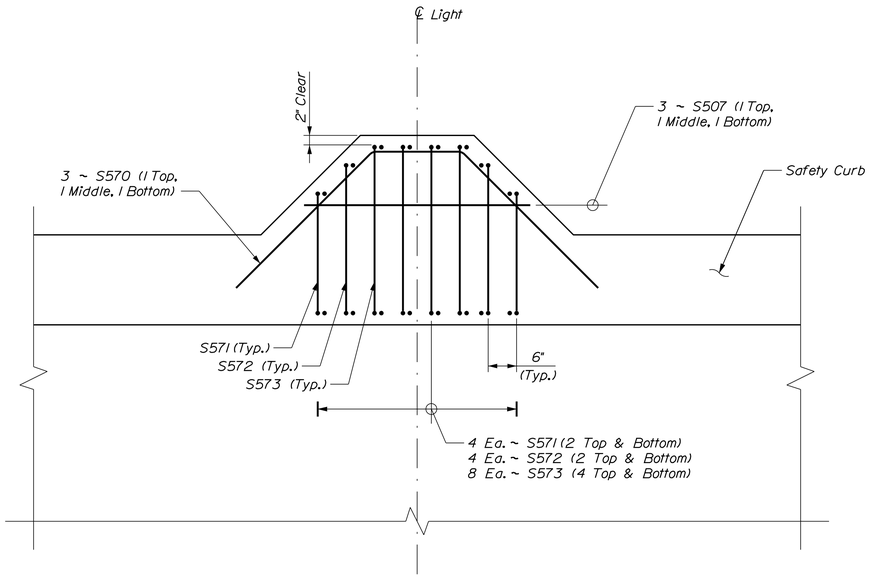
OF A78

Stantec



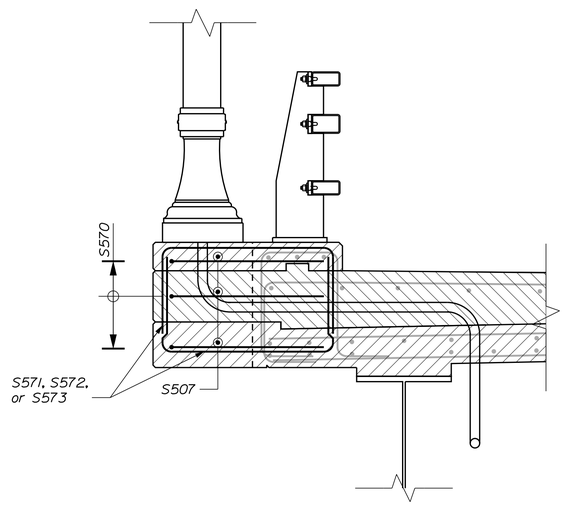
SUPERSTRUCTURE REINFORCING ELEVATION AT ABUTMENT NO. 2 END

(Looking South)
(See Abutment No. 1 End for Sections A-A and B-B)
(See Sections A-A and B-B for Spacing of Horizontal Bars)



LIGHT BUMP-OUT REINFORCING PLAN

Deck Reinforcing Not Shown for Clarity



REINFORCING SECTION AT LIGHT BUMP-OUT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	KLW	JTB/LSF	SEPT 2018
CHECKED-REVIEWED	TEK	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SUPERSTRUCTURE DETAILS ABUTMENT NO. 2 END

SHEET NUMBER

A55

OF A78

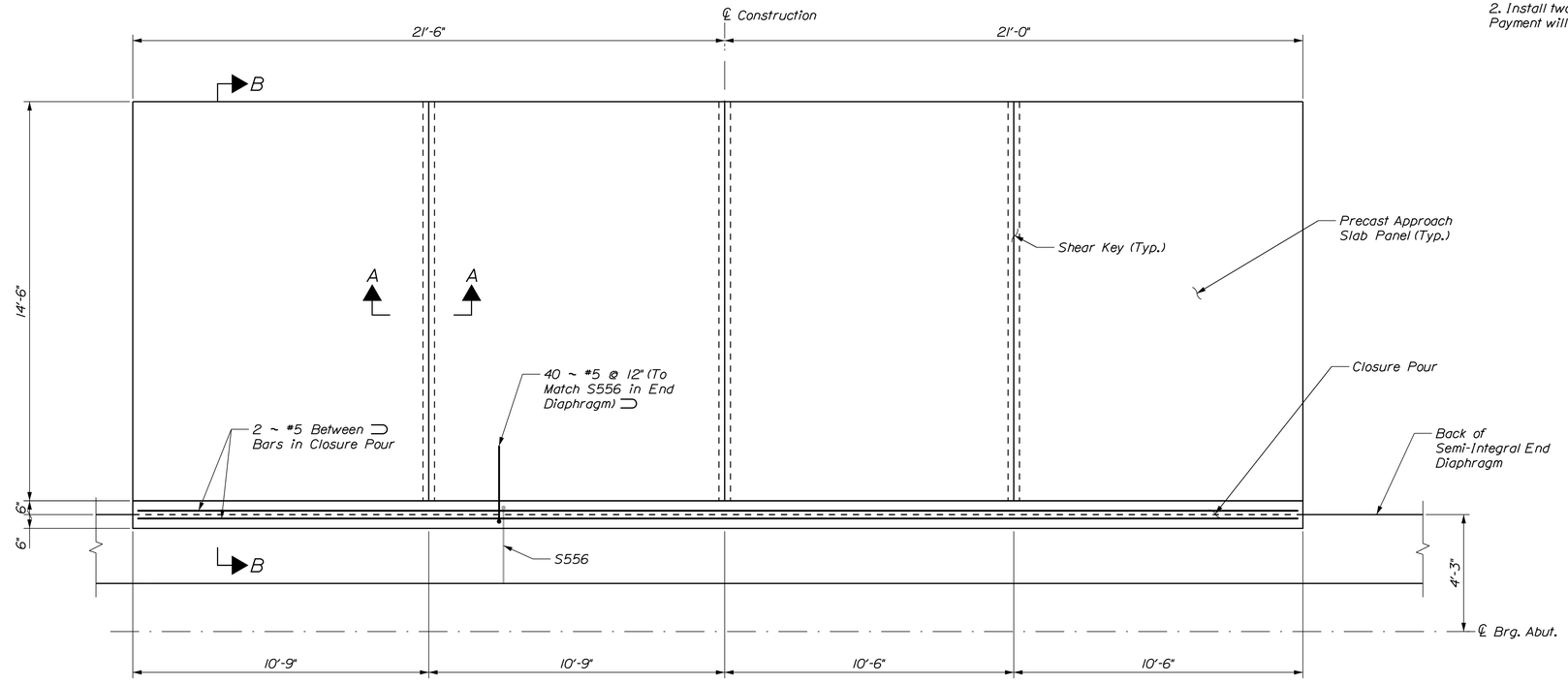
Stantec

Filename: ...\MSTA\A55_SuperDetail2.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

APPROACH SLAB NOTES

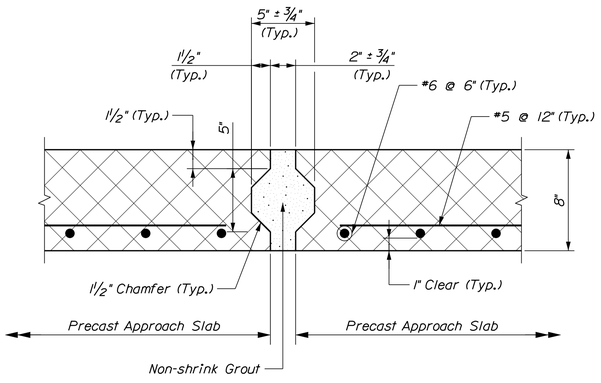
1. The approach slabs may be precast or cast-in-place at the Contractor's option.

2. Install two layers of 6 mil polyethylene sheeting under approach slabs. Payment will be considered incidental to Item 534.7601 Precast Approach Slab.

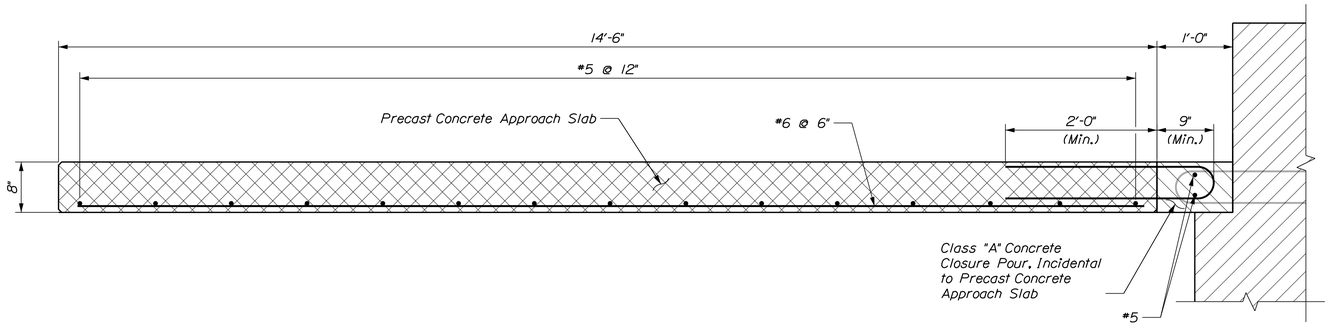


APPROACH SLAB PLAN

Abutment 1 Shown, Abutment 2 is opposite
8 Approach Slab Segments as shown are required (4 at each abutment)
Refer to Standard Detail 502(02) for information and reinforcing not shown



SECTION A-A



SECTION B-B

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	LSF	SEPT 2018
CHECKED-REVIEWED	DOT	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

PRECAST APPROACH SLAB

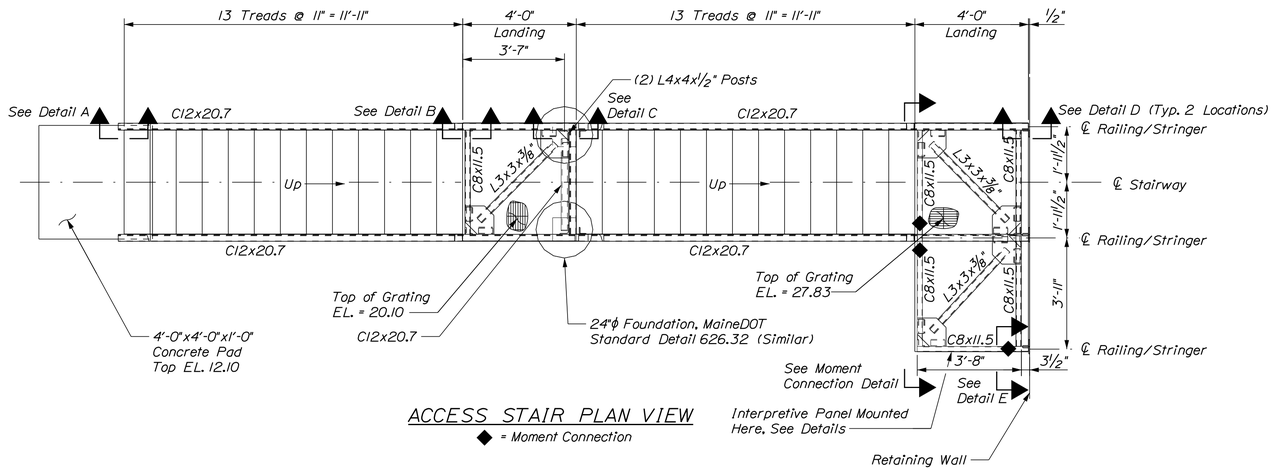
SHEET NUMBER

A56

OF A78

Stantec

Filename: ...\MSTA\A56_approach_slab.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

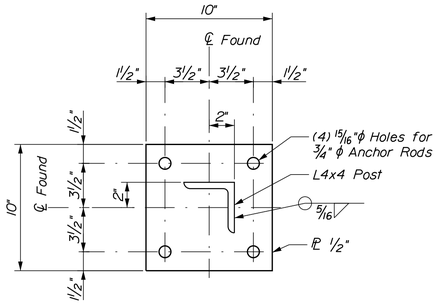


ACCESS STAIR PLAN VIEW

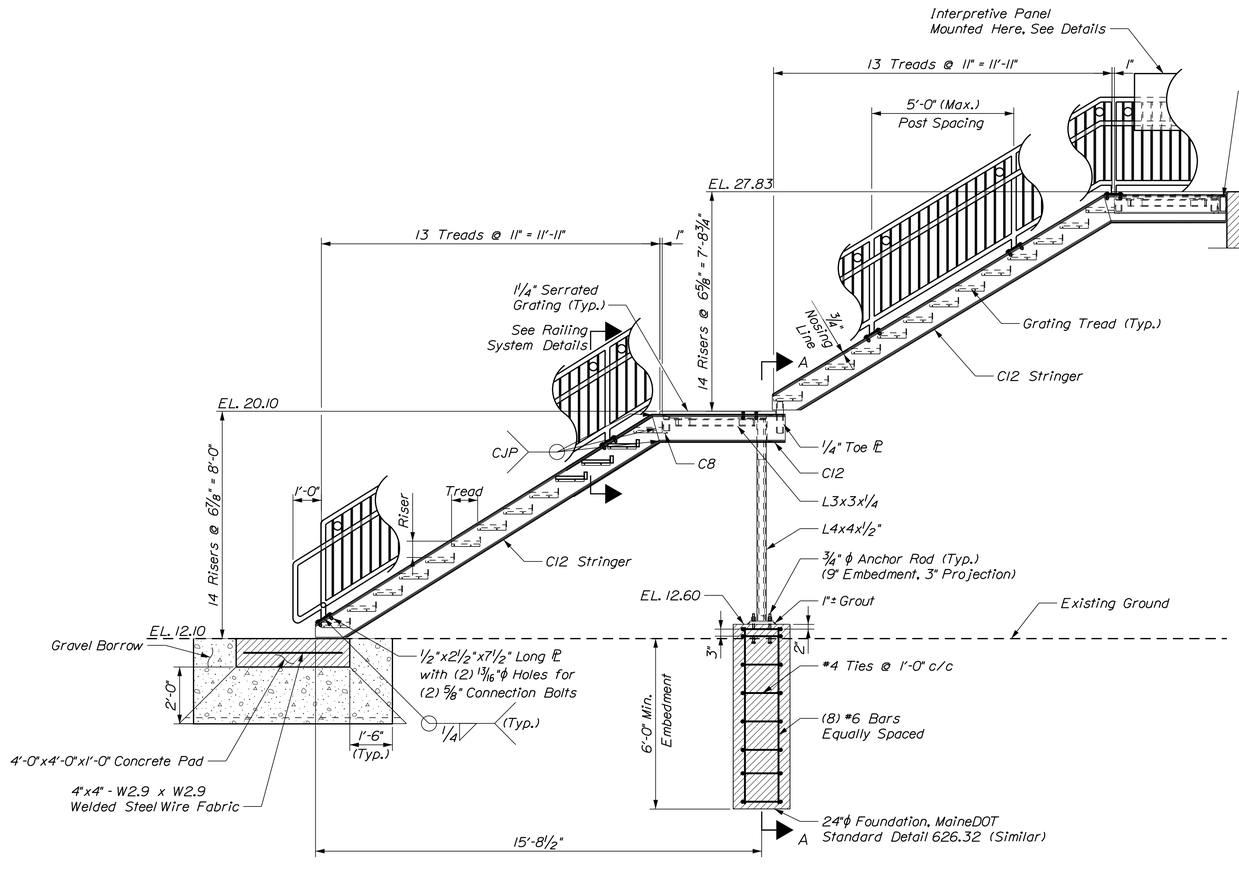
◆ = Moment Connection

STAIR NOTES

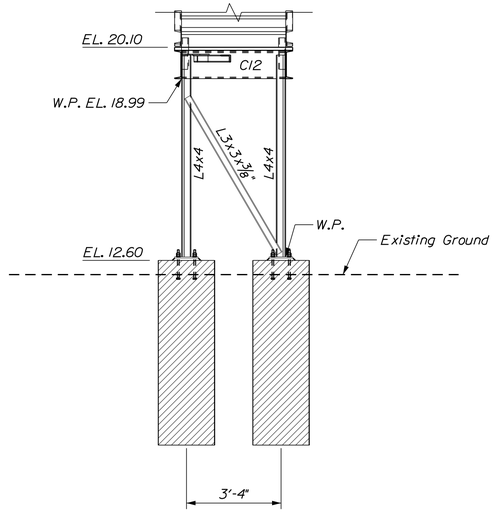
1. Two railings are required for all stairs.
2. Post spacing shall not exceed 5'-0".
3. All railing system component rails shall be capable of withstanding the following loads:
   A. Concentrated loads of 200 lbs/ft applied at any point in any direction.
   B. Uniform loads of 50 lbs/linear ft applied simutaneously in both vertical and horizontal directions.
4. Provisions shall be made to drain entrapped water.
5. All steel, except treads and grating, shall be color galvanized in accordance with the Specifications. The color shall match Duncan "Rain Forest Green" (SW 4071, LRV 8%, Semi-Gloss). A sample and/or color chip to be used shall be provided to MaineDOT for approval prior to fabrication.
6. Connections not shown shall be detailed by the Fabricator and submitted to the Engineer for approval.



TYPICAL BASE PLATE



ACCESS STAIR ELEVATION



SECTION A-A

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(500)
WIN 18735.00
BRIDGE NO. 2101
BRIDGE PLANS

	BY	DATE
PROJ. MANAGER L. TIMBERLAKE		
DESIGN-DETAILED	JTB	SEPT 2018
CHECKED-REVIEWED	KAM	SEPT 2018
DESIGN2-DETAILED2	TEK	
DESIGN3-DETAILED3	TWM	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

P.E. NUMBER
SIGNATURE
DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

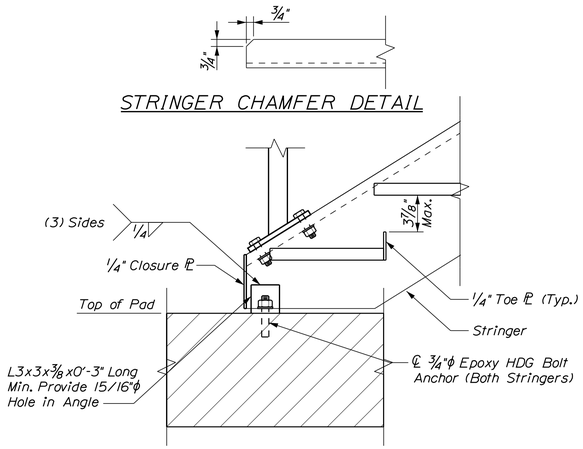
STAIR DETAILS 1

SHEET NUMBER
A57
OF A78

Stantec

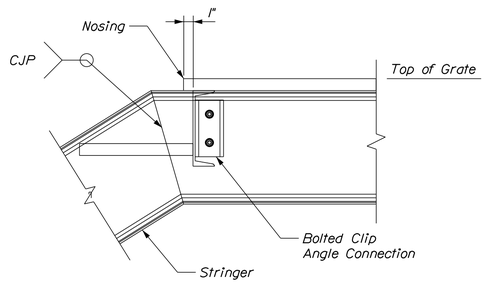
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Filename: ...\BRIDGE\MSTA\A58_StairDet_2.dgn Username: datoylor
Division: BRIDGE Date:9/27/2018

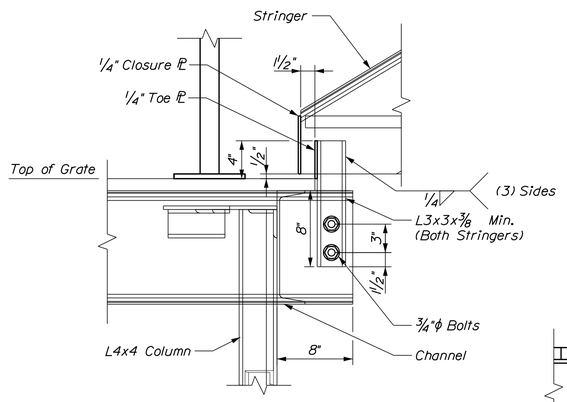


STRINGER CHAMFER DETAIL

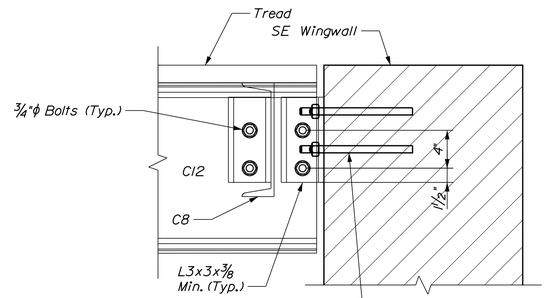
DETAIL 'A'



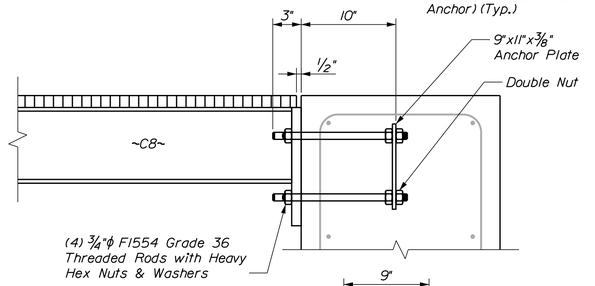
DETAIL 'B'

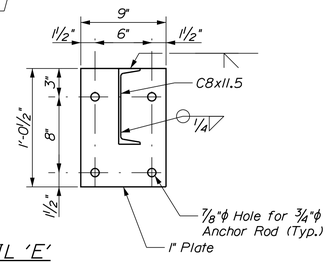


DETAIL 'C'

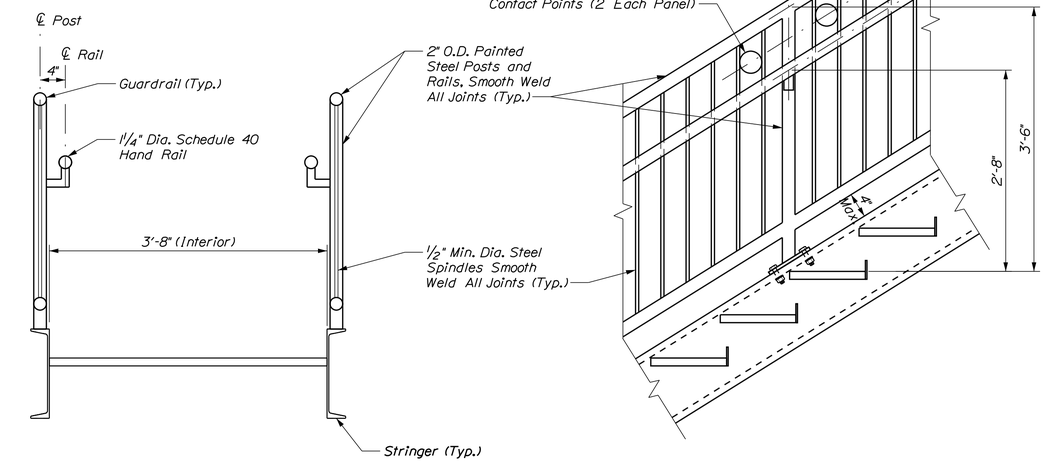


DETAIL 'D'

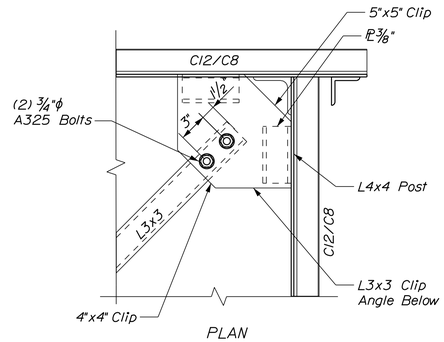


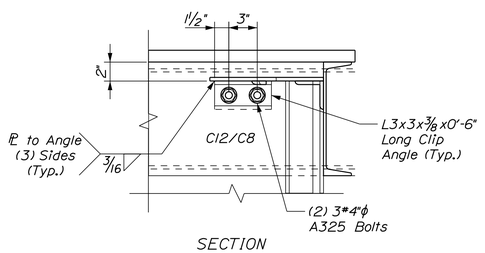


DETAIL 'E'

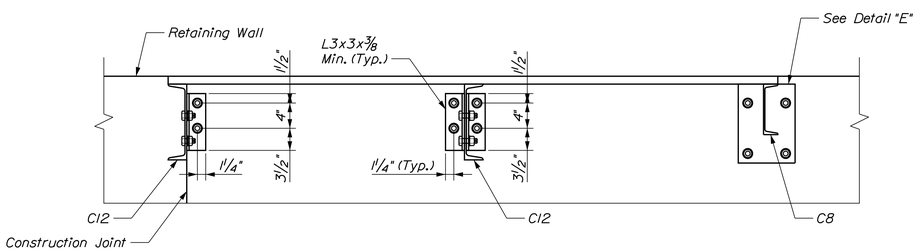


RAILING SYSTEM DETAILS

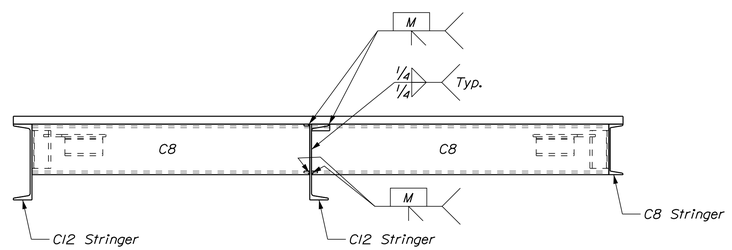




TYPICAL LATERAL BRACING DETAIL



STAIR CONNECTION TO RETAINING WALL ELEVATION



MOMENT CONNECTION DETAIL

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE PLANS

BRIDGE NO. 2101

PROJ. MANAGER	L. TIMBERLAKE	BY	
DESIGN-DETAILED	KAM	JTB	SEPT 2018
CHECKED-REVIEWED	TEK	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

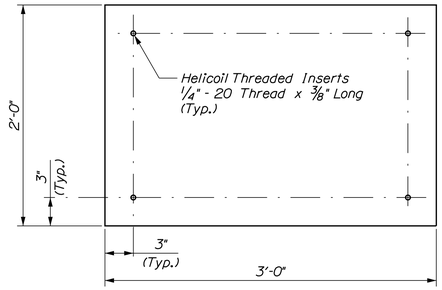
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

STAIR DETAILS 2

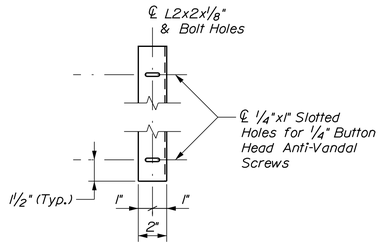
SHEET NUMBER

A58

OF A78

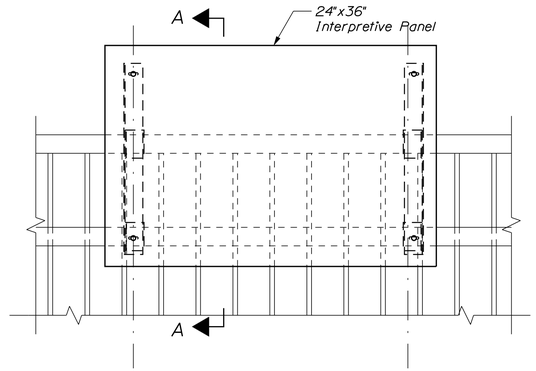


PLAN

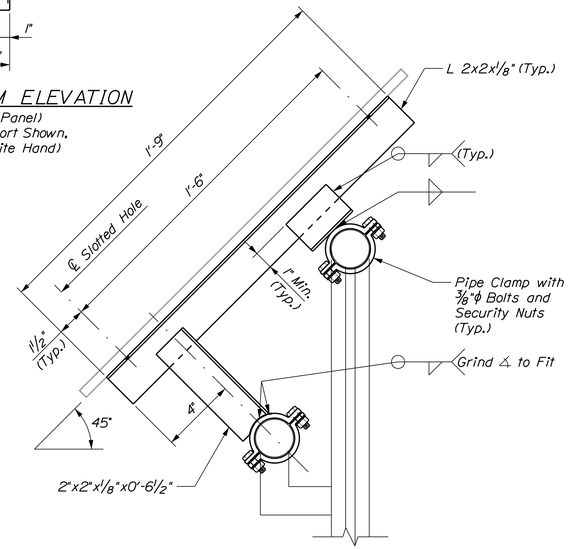


SUPPORT ARM ELEVATION

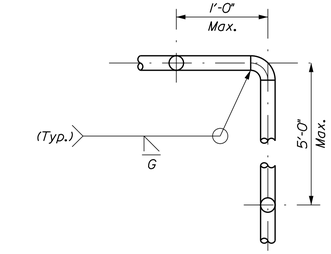
(2 per Panel)
(Right Support Shown,
Left Opposite Hand)



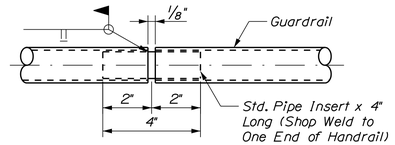
ELEVATION



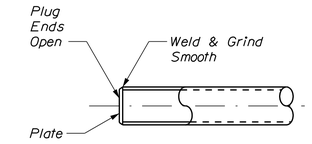
SECTION A-A



TYPICAL CORNER GUARDRAIL DETAIL

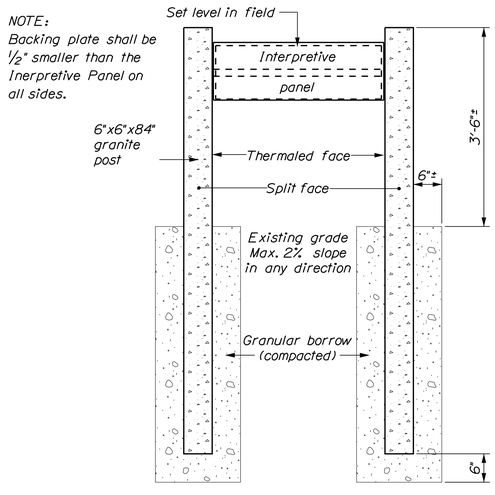


TYPICAL GUARDRAIL FIELD SPLICE

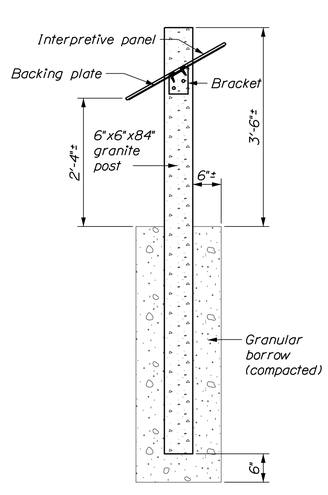


TYPICAL GUARDRAIL END CAP

1 INTERPRETIVE PANEL ASSEMBLY



2 INTERPRETIVE PANEL HOLDER
front elevation



2 INTERPRETIVE PANEL HOLDER
side elevation

INTERPRETIVE PANEL NOTES

1. See General Plan for interperative panel locations.

2. See Special Provision Section 645 for additional details.

3. All hardware shall be color galvanized in accordance with the Specifications. The color shall match Duncan "Rain Forest Green" (SW 4071, LRV 8%, Semi-Gloss). A sample and/or color chip to be used shall be provided to MaineDOT for approval prior to fabrication.

4. All sharp edges shall be ground smooth.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	TEK	JTB	SEPT 2018
CHECKED-REVIEWED	LSF	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

INTERPRETIVE PANEL DETAILS

SHEET NUMBER

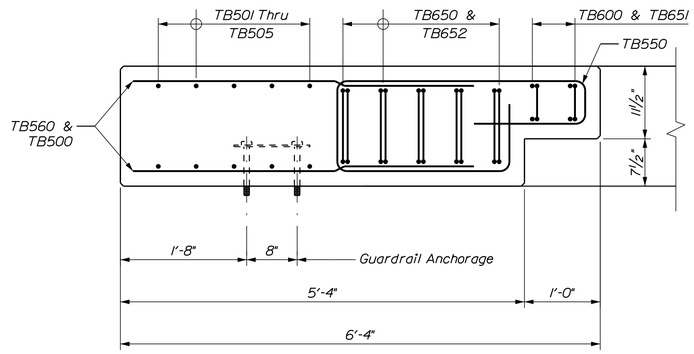
A59

OF A78

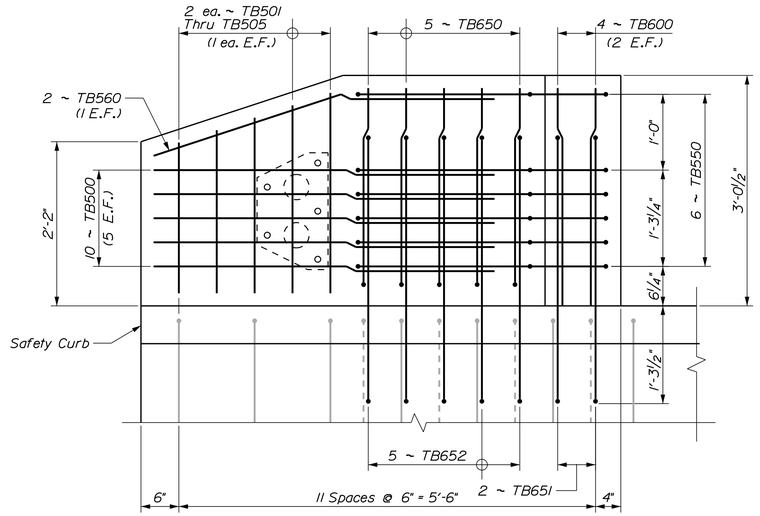
Username: dataylor Date:9/27/2018

Division: BRIDGE

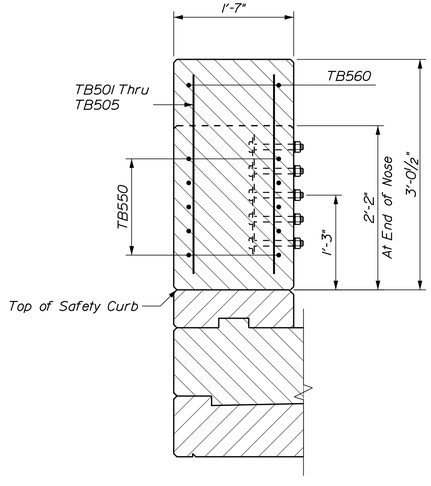
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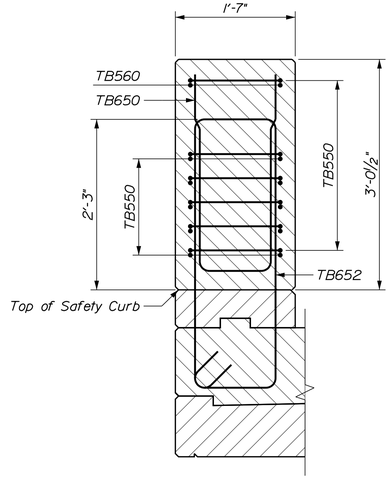
PLAN - CONCRETE TRANSITION BARRIER ON SIDEWALK



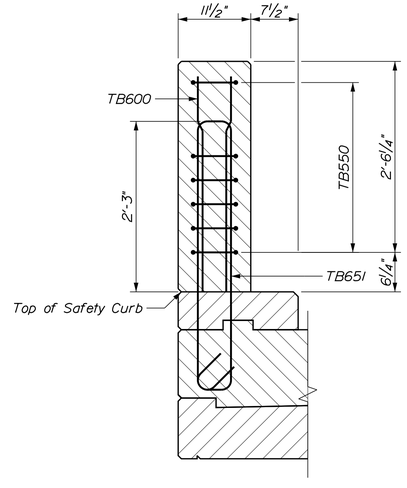
ELEVATION - CONCRETE TRANSITION BARRIER ON SIDEWALK



BARRIER SECTION AT NOSE



BARRIER SECTION AT STEM



BARRIER SECTION AT RECESS

TRANSITION BARRIER NOTES

1. All work and materials shall conform to the requirements of Standard Detail Section 526, Permanent Concrete Barrier.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches.

3. The quantities of reinforcing bars shown are for one transition barrier only.

4. Payment for the guardrail anchorage is considered incidental to the transition barrier pay item.

5. After installation of the guardrail is complete, upset the threads on the anchor bolts in 3 places around each bolt, at the junction of the nut and exposed thread, with a center punch or similiar tool. Payment for nuts will be considered incidental to the guardrail pay item.

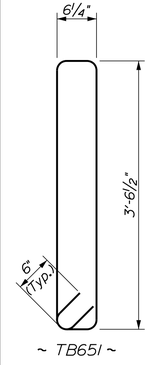
6. The height of transition barriers shall be measured from the top of curb or top of safety curb.

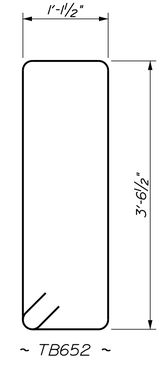
MATERIALS

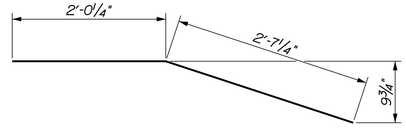
Concrete	Class "LP"
Stainless Reinforcing Steel	ASTM A 995/A 995M, Grade 75
Spacer Plate	ASTM A 709/A 709 M, Grade 50
Anchor Bolts	ASTM A 325M, Type 1

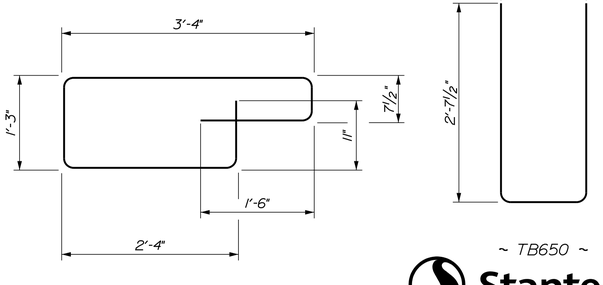
REINFORCING STEEL SCHEDULE

Mark	Qty.	Length
TB500	10	4'-6"
TB501	2	1'-10"
TB502	2	2'-0"
TB503	2	2'-2"
TB504	2	2'-4"
TB505	2	2'-6"
TB550	6	9'-11½"
TB560	2	4'-7½"
TB600	4	2'-10"
TB650	5	6'-4½"
TB651	2	9'-1½"
TB652	5	10'-4"









Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

BY	DATE	SIGNATURE
KLW	SEPT 2018	
TWM	SEPT 2018	

P.E. NUMBER

DATE

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	KLW
CHECKED-REVIEWED	DDT
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

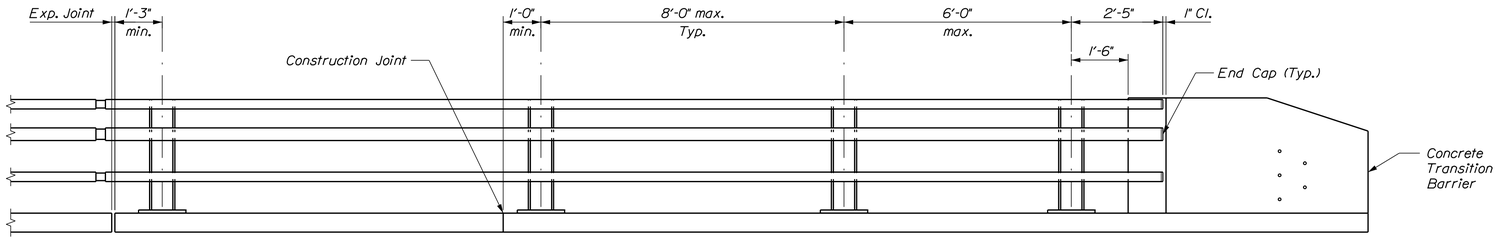
BRIDGE TRANSITION BARRIER

SHEET NUMBER

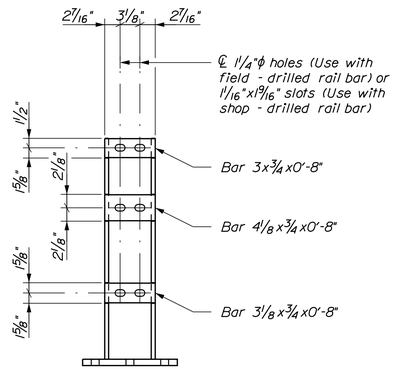
A60

OF A78

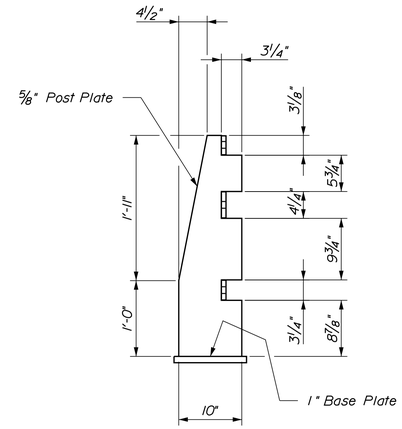
Filename: ...\A60_Transition_Barrier.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



WYOMING BRIDGE RAILING ELEVATION



RAIL POST FRONT ELEVATION



RAIL POST SIDE ELEVATION

BRIDGE RAILING NOTES

1. All work and materials shall conform to the provisions of Section 507 - Railings of the Standard Specifications.

2. Tubing shall meet the longitudinal CVN requirements of 15 ft. lb. at 0 °F. or proportional values of sub - size specimens. Testing shall be done in accordance with ASTM A 673. The "H" frequency shall be used and the material shall be as - rolled.

3. Twenty - five percent of the post - to - base welds in a production lot shall be tested by the Magnetic Particle Method. If rejectable discontinuities are found, another twenty - five percent of that production lot shall be tested. If rejectable discontinuities are found in the second twenty - five percent, all post - to - base welds in that lot shall be tested. Acceptance criteria shall be in accordance with the latest edition of the AWS D1.5 Bridge Welding Code.

4. All exposed cut or sheared edges shall be broken and free of burrs.

5. Rail posts shall be set normal to grade unless otherwise shown.

6. Post base plates shall be flat after fabrication.

7. Lengths of rail bar shall be attached to a minimum of 2 rail posts and to at least 4 posts whenever possible.

8. Rail bars shall not be shop spliced.

9. Rail bar expansion joints shall be provided in any bay spanning a super-structure expansion joint. Expansion joint width shall be one inch at 45 °F.

10. All parts except the post anchorage, the reinforcement assembly and the anchor plate shall be galvanized after fabrication in accordance with ASTM A 123, except that hardware shall meet the requirements of either ASTM A 153 or ASTM B 695, Class 50, Type 1. Parts except hardware to be galvanized shall be blast cleaned prior to galvanizing in accordance with SSPC - SP6.

11. Venting and pick - up holes shall be shown on the shop drawings.

12. Anchor bolts may be tack welded to anchorage.

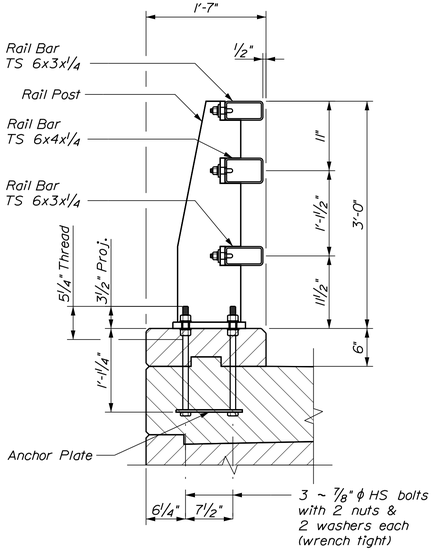
13. Rail posts shall be in place and in proper alignment prior to placing the curb concrete.

14. After installation of the rail bars, the exposed rail bolt threads shall receive two coats of zinc - rich paint.

15. Bridge Railing shall be color galvanized in accordance with the Specifications. The railing color shall match Duncan "Rain Forest Green" (SW 4071, LRV 8%, Semi-Gloss). A sample and/or color chip to be used shall be provided to MaineDOT for approval prior to fabrication.

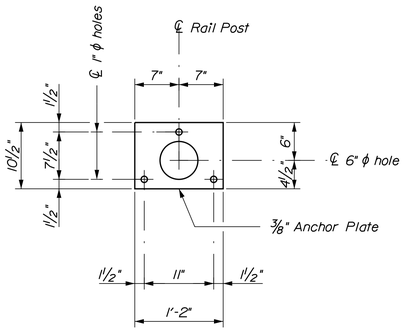
MATERIALS

Rail Bars	ASTM A 500, Grade B
Rail Post Plates & Bases	ASTM A 572, Grade 50
Rail Bar Splice Sleeves	ASTM A 572, Grade 50
Anchor & Reinforcement Assemblies	ASTM A 36
Plate Washers	ASTM A 36
Anchor Bolts	ASTM F 1325, Grade A 325, ASTM A 449, or ASTM F 1554, Grade 105
Rail Bolts	ASTM A 36
Nuts for Rail Bolts	ASTM A 563
Splice Bolts	ASTM F1325, Grade A 325
Lock Washers	ANSI/ASME B18.21.1-1994

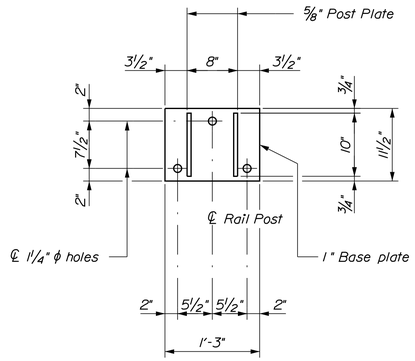


TYPICAL RAILING SECTION AT SIDEWALK

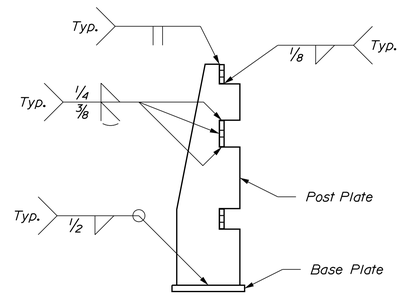
Pale Panel Not Shown for Clarity



ANCHOR PLATE PLAN



RAIL POST PLAN



RAIL POST WELD DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	KLW	BY	DATE
CHECKED-REVIEWED	TEK	KLW	SEPT 2018
DESIGN2-DETAILED2		TWM	SEPT 2018
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BRIDGE RAILING DETAILS

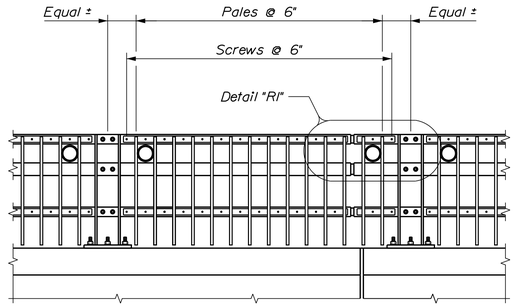
SHEET NUMBER

A61

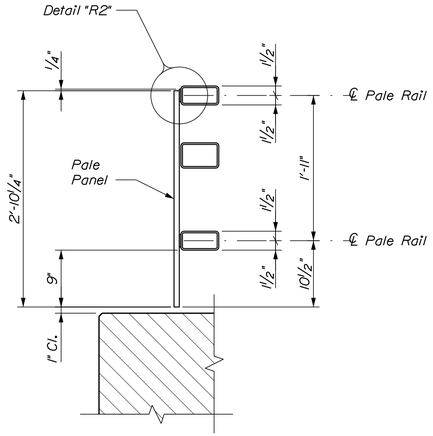
OF A78

Stantec

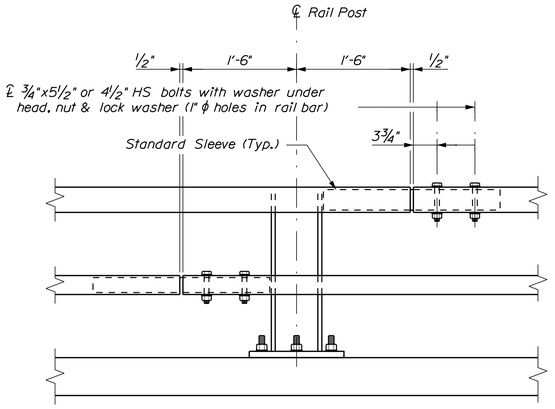
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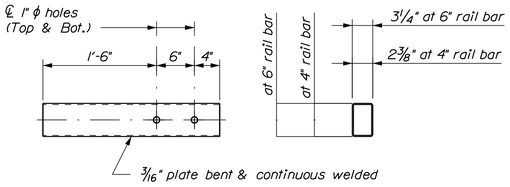
PALE PANEL REAR ELEVATION



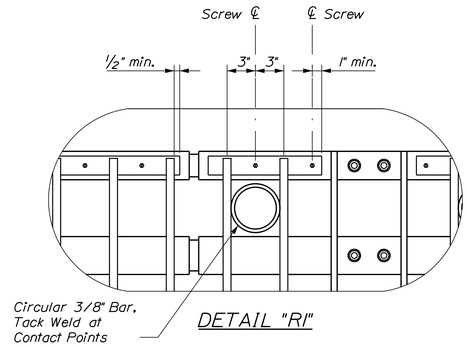
PALE PANEL SECTION



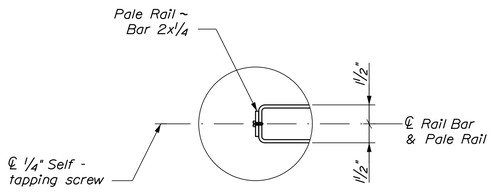
STANDARD SPLICE ELEVATION



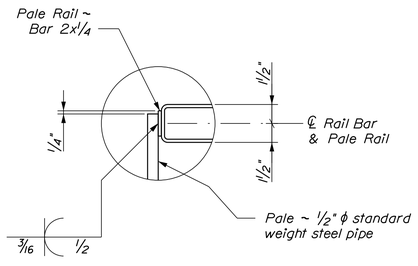
STANDARD SLEEVE DETAILS



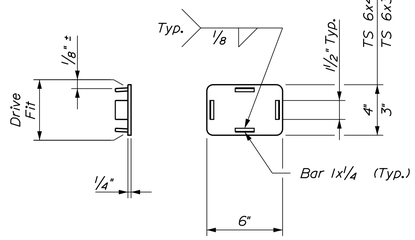
DETAIL "R1"



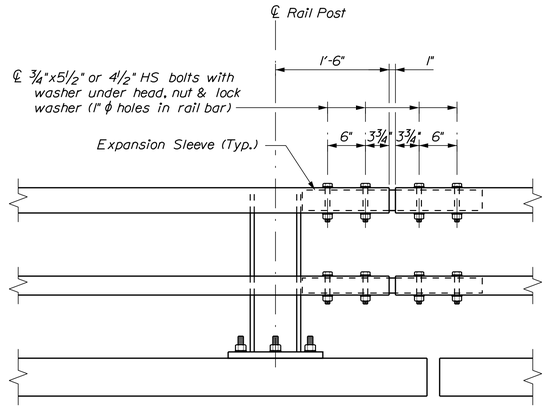
DETAIL "R2"
Between Pales



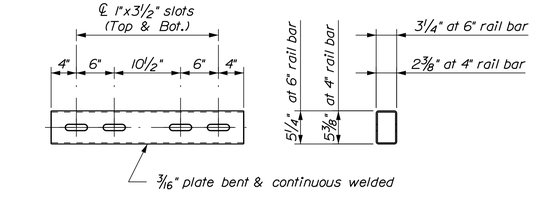
DETAIL "R2"
At Pale



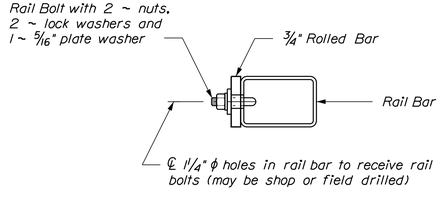
RAIL BAR END CAP



EXPANSION SPLICE ELEVATION



EXPANSION SLEEVE DETAILS



RAIL BAR CONNECTION DETAIL

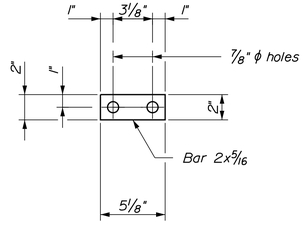
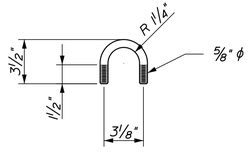


PLATE WASHER



RAIL BOLT DETAIL

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

		DATE	SIGNATURE
PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	KLW	SEPT 2018	
CHECKED-REVIEWED	TEK	SEPT 2018	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BRIDGE RAILING DETAILS

SHEET NUMBER

A62

OF A78

Filename: ...\MSTA\A62_Rail_Details2.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

Filename: ...\00\BRIDGE\MSTA\A63_Rebar1.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

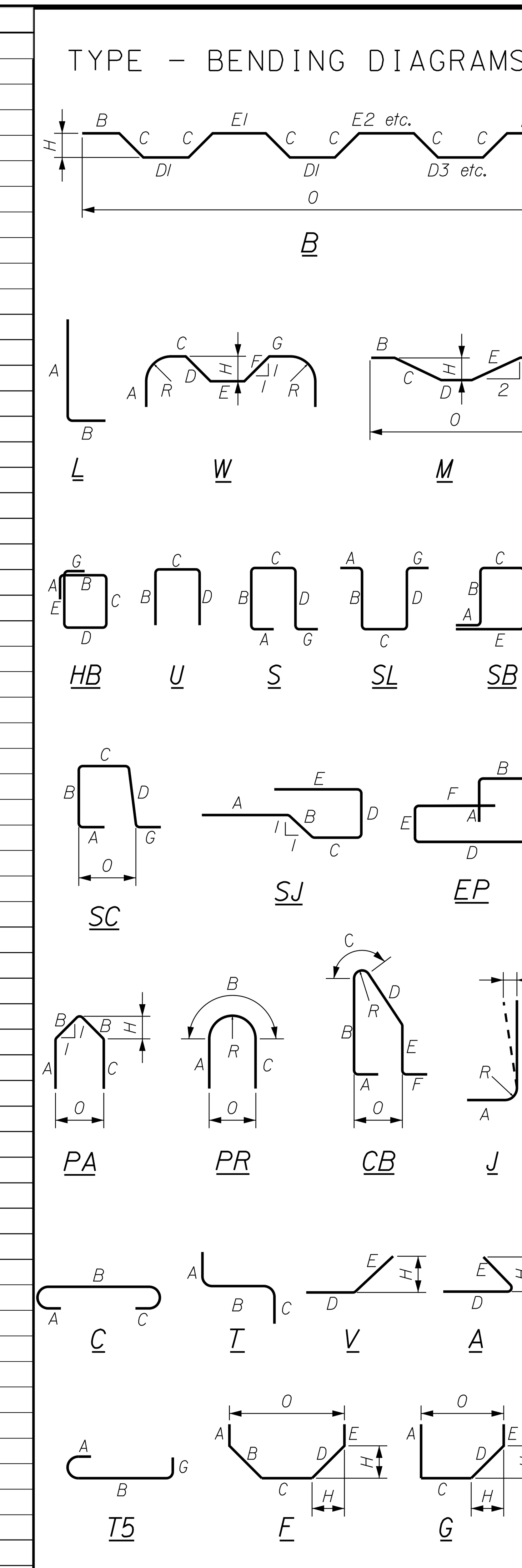
STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION
Abutment No. 1				**Abutment No. 2**			
A500	96	5'-0"	NF Footing Dowel	B500	101	5'-0"	NF Footing Dowel
A501	60	4'-0"	Precast Dowel	B501	60	4'-0"	Precast Dowel
				B505	20	17'-7"	Footing
A506	40	34'-6"	Footing	B506	40	34'-8"	Footing
A507	20	17'-8"	Footing	B507	20	18'-0"	Footing
A508	10	1'-10"	Stem Closure Pour	B508	10	1'-10"	Stem Closure Pour
A509	4	2'-7"	Stem Closure Pour	B509	4	2'-7"	Stem Closure Pour
A510	72	11'-6"	NF Stem & SE Wing	B510	73	14'-3"	NF Stem + NE Wing
A511	8	14'-0"	NF Stem	B511	14	17'-0"	NF Stem + NE Wing
A512	14	11'-8"	Vertical SE Wing	B514	19	9'-2"	Horizontal Stem
A513	25	8'-5"	Vertical SE Wing	B515	19	9'-10"	Horizontal Stem
A514	26	10'-6"	Horizontal Stem	B516	32	24'-1"	Horizontal Stem
A515	26	22'-1"	Horizontal Stem	B517	32	22'-1"	Horizontal Stem
A516	26	24'-1"	Horizontal Stem	B518	16	7'-7"	Horizontal Stem
A517	16	6'-5"	Horizontal Stem	B519	16	10'-1"	Horizontal Stem
A518	16	8'-9"	Horizontal Stem	B524	3	8'-9"	Vertical Stem NF NW Wing
				B525	2	6'-3"	Vertical Stem NF NE Wing
A524	2	8'-8"	Vertical Stem NF SW Wing	B526	2	9'-0"	Vertical Stem NF NE Wing
A525	4	14'-0"	Vertical Stem NF SW Wing	B527	1	8'-7"	Vertical Stem NF NE Wing
A526	1	20'-4"	Vertical Stem NF SW Wing	B528	1	8'-3"	Vertical Stem NF NE Wing
A527	1	20'-3"	Vertical Stem NF SW Wing	B529	1	7'-11"	Vertical Stem NF NE Wing
A528	1	19'-10"	Vertical Stem NF SW Wing	B530	1	7'-7"	Vertical Stem NF NE Wing
A529	1	19'-6"	Vertical Stem NF SW Wing	B531	1	7'-3"	Vertical Stem NF NE Wing
A530	1	19'-2"	Vertical Stem NF SW Wing	B532	1	6'-11"	Vertical Stem NF NE Wing
A531	1	18'-10"	Vertical Stem NF SW Wing	B533	1	6'-7"	Vertical Stem NF NE Wing
A532	1	18'-6"	Vertical Stem NF SW Wing	B534	1	6'-3"	Vertical Stem NF NE Wing
A533	1	18'-2"	Vertical Stem NF SW Wing	B535	1	5'-10"	Vertical Stem NF NE Wing
A534	1	17'-10"	Vertical Stem NF SW Wing	B536	1	5'-6"	Vertical Stem NF NE Wing
A535	1	17'-6"	Vertical Stem NF SW Wing	B537	1	5'-2"	Vertical Stem NF NE Wing
A536	1	17'-2"	Vertical Stem NF SW Wing	B538	7	23'-4"	Vertical Stem NF NW Wing
A537	1	16'-10"	Vertical Stem NF SW Wing	B539	7	22'-10"	Vertical Stem NF NW Wing
A538	1	16'-6"	Vertical Stem NF SW Wing	B540	30	15'-10"	Horizontal Stem NE Wing
A540	30	16'-0"	Horizontal Stem SW Wing	B541	10	11'-11"	Horizontal Stem NE Wing
A541	2	12'-0"	Horizontal Stem SW Wing	B542	2	10'-7"	Horizontal Stem NE Wing
A542	2	12'-8"	Horizontal Stem SW Wing	B543	2	7'-8"	Horizontal Stem NE Wing
A543	2	9'-10"	Horizontal Stem SW Wing	B544	2	4'-8"	Horizontal Stem NE Wing
A544	2	7'-0"	Horizontal Stem SW Wing	B546	2	12'-10"	Horizontal Stem NE Wing
A545	2	4'-3"	Horizontal Stem SW Wing	B547	36	15'-6"	Horizontal Stem NW Wing
A546	2	13'-0"	Horizontal Stem SW Wing	B548	14	12'-8"	Horizontal Stem NW Wing
A570	12	19'-11"	Horizontal Stem SE Wing	B580	2	10'-11"	Vertical Butterfly NE
A571	9	17'-2"	Horizontal Stem SE Wing	B581	2	10'-0"	Vertical Butterfly NE
A572	21	10'-8"	Horizontal Stem SE Wing	B582	2	9'-2"	Vertical Butterfly NE
A573	7	6'-4"	Horizontal Stem SE Wing Top	B583	2	8'-4"	Vertical Butterfly NE
A574	3	4'-10"	Horizontal Stem SE Wing Top	B584	2	7'-6"	Vertical Butterfly NE
				B585	2	6'-8"	Vertical Butterfly NE
A580	2	11'-1"	Vertical Butterfly	B586	2	5'-10"	Vertical Butterfly NE
A581	2	10'-3"	Vertical Butterfly	B587	2	5'-0"	Vertical Butterfly NE
A582	2	9'-4"	Vertical Butterfly				
A583	2	8'-6"	Vertical Butterfly	B590	46	11'-6"	Horizontal Butterfly
A584	2	7'-8"	Vertical Butterfly	B591	2	5'-0"	Vertical Butterfly NW
A585	2	6'-10"	Vertical Butterfly	B592	2	5'-7"	Vertical Butterfly NW
A586	2	5'-11"	Vertical Butterfly	B593	2	6'-2"	Vertical Butterfly NW
A587	2	5'-0"	Vertical Butterfly	B594	2	6'-9"	Vertical Butterfly NW
				B595	2	7'-4"	Vertical Butterfly NW
A590	24	11'-6"	Horizontal Butterfly	B596	2	7'-11"	Vertical Butterfly NW
				B597	2	8'-6"	Vertical Butterfly NW
A625	6	16'-9"	Vertical Stem FF SW Wing	B598	2	9'-1"	Vertical Butterfly NW
A626	1	16'-4"	Vertical Stem FF SW Wing				
A627	1	16'-0"	Vertical Stem FF SW Wing	B620	16	20'-0"	Vertical Stem FF NW Wing
A628	1	15'-8"	Vertical Stem FF SW Wing	B625	17	10'-11"	Vertical Stem FF NW Wing
A629	1	15'-4"	Vertical Stem FF SW Wing	B626	6	9'-0"	Vertical Stem FF NW Wing
A630	1	15'-0"	Vertical Stem FF SW Wing	B627	1	8'-7"	Vertical Stem FF NW Wing
A631	1	14'-8"	Vertical Stem FF SW Wing	B628	1	8'-3"	Vertical Stem FF NE Wing
A632	1	14'-4"	Vertical Stem FF SW Wing	B629	1	7'-11"	Vertical Stem FF NE Wing
A633	1	14'-0"	Vertical Stem FF SW Wing	B630	1	7'-7"	Vertical Stem FF NE Wing
A634	1	13'-8"	Vertical Stem FF SW Wing	B631	1	7'-3"	Vertical Stem FF NE Wing
A635	1	13'-4"	Vertical Stem FF SW Wing	B632	1	6'-11"	Vertical Stem FF NE Wing
A636	1	13'-0"	Vertical Stem FF SW Wing	B633	1	6'-7"	Vertical Stem FF NE Wing
				B634	1	6'-3"	Vertical Stem FF NE Wing
A640	11	9'-0"	Vertical Stem FF SW Wing	B635	1	5'-10"	Vertical Stem FF NE Wing
				B636	1	5'-6"	Vertical Stem FF NE Wing
A704	55	8'-6"	Vertical Stem FF	B637	1	5'-2"	Vertical Stem FF NE Wing
A705	9	11'-2"	Vertical Stem FF	B640	22	9'-0"	Vertical Stem FF NE Wing
A706	162	9'-2"	Transverse Footing				
A707	20	15'-6"	Transverse Footing	B704	57	11'-4"	Vertical Stem
A708	12	6'-6"	SE Wing FF	B705	10	14'-0"	Vertical Stem
A709	12	8'-9"	SE Wing FF	B706	206	9'-2"	Transverse Footing
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
Abutment No. 1														
A550	64	4'-8"	U		1'-0"	2'-8"	1'-0"							Top Stem
A551	24	7'-0"	L	3'-6"	3'-6"									SE Corner Bar
A552	2	7'-2"	U		2'-3"	2'-8"	2'-3"							Stem Closure Pour
A553	23	3'-4"	U		10"	1'-8"	10"							Top Wing
A554	9	4'-8"	U		10"	3'-0"	10"							Horizontal SE Wing
A555	10	4'-10"	U		10"	3'-2"	10"							Top SE Wing
A556	8	3'-1"	U		10"	1'-5"	10"							Top Wing
A557	12	15'-4"	L	12'-4"	3'-0"									Horizontal SE Wing
A558	9	12'-4"	L	9'-4"	3'-0"									Horizontal SE Wing
A559	21	2'-11"	U		10"	1'-3"	10"							Horizontal SE Wing
A560	7	9'-11"	U		4'-0"	1'-11"	4'-0"							SE Wing Curb
A561	20	5'-1"	S	10"	1'-6"	1'-3"	1'-6"			0"				SE Wing Curb
A562	15	7'-0"	V				3'-6"	3'-6"			2'-5 11/16			SW Corner Bar
A563	15	8'-4"	L	4'-4"	4'-0"									SW Corner Bar
A564	6	5'-7"	V				3'-4"	2'-3"			1'-7 1/16"			SW Corner Bar
A565	6	6'-9"	V				3'-11"	2'-10"			2'-0"			SW Corner Bar
A566	11	3'-2"	U		10"	1'-6"	10"							SW Horizontal Ends
A950	92	11'-4"	L	9'-9"	1'-7"									Vertical Footing Hook
A1050	12	13'-6"	L	11'-8"	1'-10"									SE Wing Footing Hook
Abutment No. 2														
B550	67	4'-8"	U		1'-0"	2'-8"	1'-0"							Top Stem
B552	2	7'-2"	U		2'-3"	2'-8"	2'-3"							Stem Closure Pour
B553	46	3'-4"	U		10"	1'-8"	10"							Top Wing
B560	18	7'-0"	V				3'-6"	3'-6"			3'-4 9/16"			NW Corner
B561	18	7'-10"	L	3'-10"	4'-0"									NW Corner
B562	15	7'-0"	V				3'-6"	3'-6"			2'-5 11/16			NE Corner
B563	15	8'-4"	L	4'-4"	4'-0"									NE Corner
B564	6	5'-7"	V				3'-4"	2'-3"			1'-7 1/16"			NE Corner Bar
B565	9	6'-9"	V				3'-11"	2'-10"			2'-0"			NE Corner Bar
B566	22	3'-2"	U		10"	1'-6"	10"							Wing ends
B567	6	5'-8"	V				3'-5"	2'-3"			2'-2 1/16"			NW Corner Bar
B568	6	8'-0"	V				4'-7"	3'-5"			3'-3 9/16"			NW Corner Bar
B950	122	11'-4"	L	9'-9"	1'-7"									Vertical Footing Hook
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

TYPE - BENDING DIAGRAMS



All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A995/995M, Grade 75

GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size of the bar:

   Mark "A502" = bar size #5
   Mark "P805" = bar size #8
   Mark "S650" = bar size #6

2. All reinforcing bars shall be stainless steel.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE PLANS

BRIDGE NO. 2101

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	DDT	SEPT 2018
CHECKED-REVIEWED	KLW	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

REINFORCING STEEL SCHEDULE (1 OF 2)

SHEET NUMBER
A63
OF A78

Filename: ...\00\BRIDGE\MSTA\A64_Rebar2.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION
			Southeast Retaining Wall
SE500	48	5'-0"	N.F. Dowel
SE506	36	24'-7"	Longit. Footing
SE508	25	7'-6"	N.F. Vertical Stem
SE509	37	6'-11"	N.F. Vertical Stem
SE510	31	9'-6"	N.F. Vertical Stem
SE511	31	7'-3"	N.F. Vertical Stem
SE512	4	22'-9"	Horizontal Stem
SE513	34	22'-0"	Horizontal Stem
SE514	34	25'-6"	Horizontal Stem
SE515	5	5'-8"	Horizontal Curb
SE516	3	4'-5"	Horizontal Curb
SE517	3	13'-9"	Horizontal Curb
SE518	3	19'-7"	Horizontal Curb
SE520	10	6'-4"	Wall Bumpout
SE521	10	7'-2"	Wall Bumpout
SE530	4	7'-8"	Vertical @ Existing
SE531	20	3'-0"	Horizontal @ Existing
SE532	12	5'-6"	Horizontal @ Existing
SE608	25	4'-3"	F.F. Vertical Stem
SE609	25	6'-11"	F.F. Vertical Stem
SE610	23	6'-10"	F.F. Vertical Stem
SE611	23	7'-3"	F.F. Vertical Stem
SE706	98	8'-2"	Transverse Footing

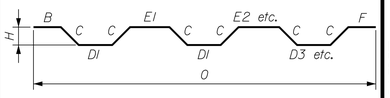
MARK	QTY.	LENGTH	LOCATION
			Superstructure
S500	285	40'-0"	Transverse, Bottom
S501	285	22'-6"	Transverse, Bottom
S502	417	40'-0"	Long.T&B, Curb & Sidewalk
S503	139	30'-8"	Long.T&B, Curb & Sidewalk
S504	285	26'-6"	Transverse, Top
S505	285	36'-0"	Transverse, Top
S506	80	3'-0"	Drains
S507	6	4'-0"	Light Bumpout
S510	24	8'-9"	End Diaphragm, Fillet
S706	28	35'-10"	End Diaphragm E.F. & Mid.
S707	18	18'-4"	End Diaphragm E.F. & Mid.
S708	18	5'-5"	End Diaphragm E.F. & Mid.
S709	10	26'-10"	End Diaphragm E.F. & Mid.
S714	28	2'-10"	End Diaphragm, Utility Blockout

BENT BARS

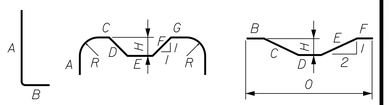
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
														Southeast Retaining Wall
SE550	18	6'-0"	T	10"	4'-4"	10"								Footing Step
SE551	50	3'-8"	U		1'-0"	1'-8"	1'-0"							Top Stem
SE552	85	10'-3"	U		4'-6"	1'-3"	4'-6"							Top Curb
SE553	41	6'-1"	L	5'-3"	10"									Horizontal Cantilever
SE554	8	12'-2"	U		4'-6"	3'-2"	4'-6"							Top Curb @ Existing
SE555	8	3'-4"	L	2'-6"	10"									Wall Bumpout
SE556	17	5'-7"	U		2'-6"	7"	2'-6"							Wall Bumpout
SE557	20	5'-1"	S	10"	1'-1"	1'-3"	1'-1"			10"				Wall Bumpout
SE560	6	8'-6"	L	5'-6"	3'-0"									Horizontal @ Existing
SE561	2	9'-4"	U		3'-0"	3'-4"	3'-0"							Horizontal @ Existing
SE950	48	11'-4"	L	9'-9"	1'-7"									Vertical Footing Hook
														Superstructure
S550	144	10'-6"	SC	10"	1'-4"	6'-3"	1'-3"			10"		6'-4"		U.S. Sidewalk Transverse
S551	144	11'-7"	SC	10"	1'-5"	7'-3"	1'-3"			10"		7'-4"		D.S. Sidewalk Transverse
S552	408	6'-7"	SC	10"	1'-10"	1'-3"	1'-10"			10"		1'-3"		Safety Curb
S553	104	5'-6"	V				5'-6"	2'-6"			1'-9"			Fillet, F.F. (Ea. Bay & Overhang)
S554	80	5'-8 7/8"	PR	2'-6 1/2"	7 7/8"	2'-6 1/2"						5"	2 1/2"	Approach Slab Connection
S555	20	3'-8 1/2"	U		10"	2'-0 1/2"	10"							Ends of End Diaphragm
S556	4	7'-6"	U		2'-4"	2'-10"	2'-4"							Ends of End Diaphragm
S557	4	8'-1"	U		2'-4"	3'-5"	2'-4"							Ends of End Diaphragm
S558	8	11'-0"	U		10"	9'-4"	10"							End Diaphragm Transverse
S559	8	9'-0"	U		10"	7'-4"	10"							End Diaphragm Transverse
S569	8	6'-8"	L	3'-4"	3'-4"									End Diaphragm Utility Blockout
S570	6	8'-9"	F		3'-6"	1'-9"	3'-6"				2'-5 1/2"	6'-8 3/4"		Light Bumpout
S571	8	5'-11 1/2"	U		1'-10 3/4"	2'-2"	1'-10 3/4"							#REF!
S572	8	6'-5 1/2"	U		1'-10 3/4"	2'-8"	1'-10 3/4"							Light Bumpout
S573	16	6'-9 1/2"	U		1'-10 3/4"	3'-0"	1'-10 3/4"							Light Bumpout
S650	104	9'-10"	U		1'-8"	5'-7 3/4"	2'-2"							End Diaphragm Vertical F.F.
S651	122	7'-8"	U		2'-2"	3'-8"	2'-2"							End Diaphragm Vertical N.F.
S652	122	7'-0"	L	5'-0"	2'-3"									End Diaphragm Vertical N.F.

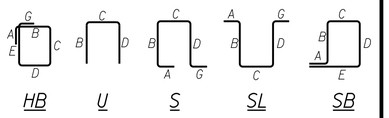
MARK | QTY. | LENGTH | LOCATION | MARK | QTY. | LENGTH | LOCATION | MARK | QTY. | LENGTH | TYPE | A | B | C | D | E | F | G | H | O | R | LOCATION

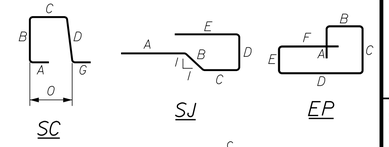
TYPE - BENDING DIAGRAMS

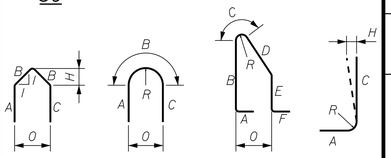


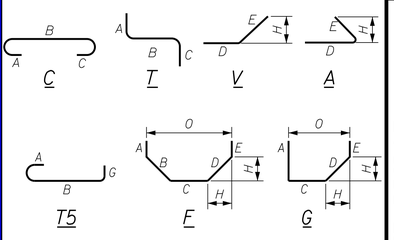
B











All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A995/995M, Grade 75

GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size ofthe bar:

   Mark "A502" = bar size #5
   Mark "P805" = bar size #8
   Mark "S650" = bar size #6

2. All reinforcing bars shall be stainless steel.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE			
DESIGN-DETAILED	DOT/LSF	SEPT 2018	P.E. NUMBER	
CHECKED-REVIEWED	KLW	JGS/SJW	SIGNATURE	
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES			DATE	

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

REINFORCING STEEL SCHEDULE (2 OF 2)

SHEET NUMBER

A64

OF A78

Legend:

- Work Zone
- Type 3 Barricades
- Temporary Pedestrian Barricade, ADA Compliant (See Notes)

WATER STREET (ROUTE 9/126)

SIDEWALK CLOSED

ROAD CLOSED

DETOUR

SIDEWALK CLOSED

Maintain Entrance

Temporarily Remove 8 Parking Spaces

Work Zone

SIDEWALK CLOSED

Pre-Closure Temporary Curb Line

BRIDGE CLOSED

Maintain Drive

DETOUR

BRIDGE CLOSED

Proposed Crosswalk

ROAD CLOSED AHEAD

W20-3

SUMMER STREET

Temporary Crosswalk

BRIDGE STREET (ROUTE 9/126/US 201)

Work Zone Crash Cushion (Typ.)

BRUNSWICK AVE. (US ROUTE 201)

Al Diner

Temporary Pedestrian Access Route (See Note 2)

Temporary Pedestrian Barricades, ADA Compliant (See Notes)

Maintain Building Access

Maintain Parking Stalls

Staging Area

Temporary Support (Contractor Designed) (Typ.)

ROAD CLOSED AHEAD

W20-3

DETOUR

SIDEWALK CLOSED

WATER STREET

SIDEWALK AND STAIRS CLOSED

ROAD CLOSED

Temporarily Remove 8 Parking Spaces

Maintain Drives

SIDEWALK CLOSED

See Notes

10'

Temporary Concrete Barrier

Temporarily Remove 6 Parking Spaces

Drums (Typ.)

PLAN

25 0 25 50

Scale of Feet

Notes:

1. Contractor shall provide pedestrian access to the Al Diner as noted in Special Provisions Section 105 and 107. Location to be coordinated with the Resident. Access shall be a 5-foot minimum wide path with Item 652.313 Temporary Pedestrian Barricade, ADA Compliant.
2. The northeast curb bumpout and curbing south of Hannaford drive shall be constructed in the Post-Closure Period to maximize width for shifting 2 lanes of traffic. The roadway widening north of bridge on left shall be constructed in the Pre-Closure Period.
3. See Roadway Detour Signing Plans for additional vehicular, pedestrian and bike signing.
4. Multi-Use Path is not shown. See Bridge Street General Plan and the Multi-Use Path General Plan for information.

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

	BY	DATE
L: TIMBERLAKE		
PROJ. MANAGER	PLP	
DESIGN-DETAILED	E.JB	SEPT 2018
CHECKED-REVIEWED	TWM	SEPT 2018
DESIGN2-DETAILED2	LEM	
DESIGN3-DETAILED3	ED2	
REVISIONS 1	ED3	
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

TEMPORARY ROADWAY CLOSURE PLAN

SHEET NUMBER

A65

OF A78

Filename: ...\A65_Temp_Roadway_Closure_Plan.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

Filename: ...\A66_Roadway_Detour_Overoll_Plan.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

Site 1

Site 2

Site 3

Site 4

Site 5

Site 6

Bridge Street
Bridge Closure

Arcade Roadway
Closure

BRIDGE CLOSED
BRIDGE STREET
0.5 MILES AHEAD

BRIDGE CLOSED
BRIDGE STREET
0.4 MILES
ALL DOWNTOWN
BUSINESSES
OPEN & ACCESSIBLE

BRIDGE CLOSED
BRIDGE STREET
0.4 MILES
ALL DOWNTOWN
BUSINESSES
OPEN & ACCESSIBLE

SR 126, 27, 9

Maine Ave. (US Rte. 201 & SR 27)

Maine Ave. (SR 24)

Bridge St. (SR 9 & 126, US Rte 201)

Spring St.

Middle St.

Highland Ave.

Harrison Ave.

Winter St.

Summer St.

Cobbosseecontee Stream

Arcade

Water St.

Mechanic St.

Brunswick Ave. (US Rte. 201)

Church St.

State Route 24

Water St. (SR 9 & 126)

N

LAYOUT SCALE
200 0 200 400
Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	E.JB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

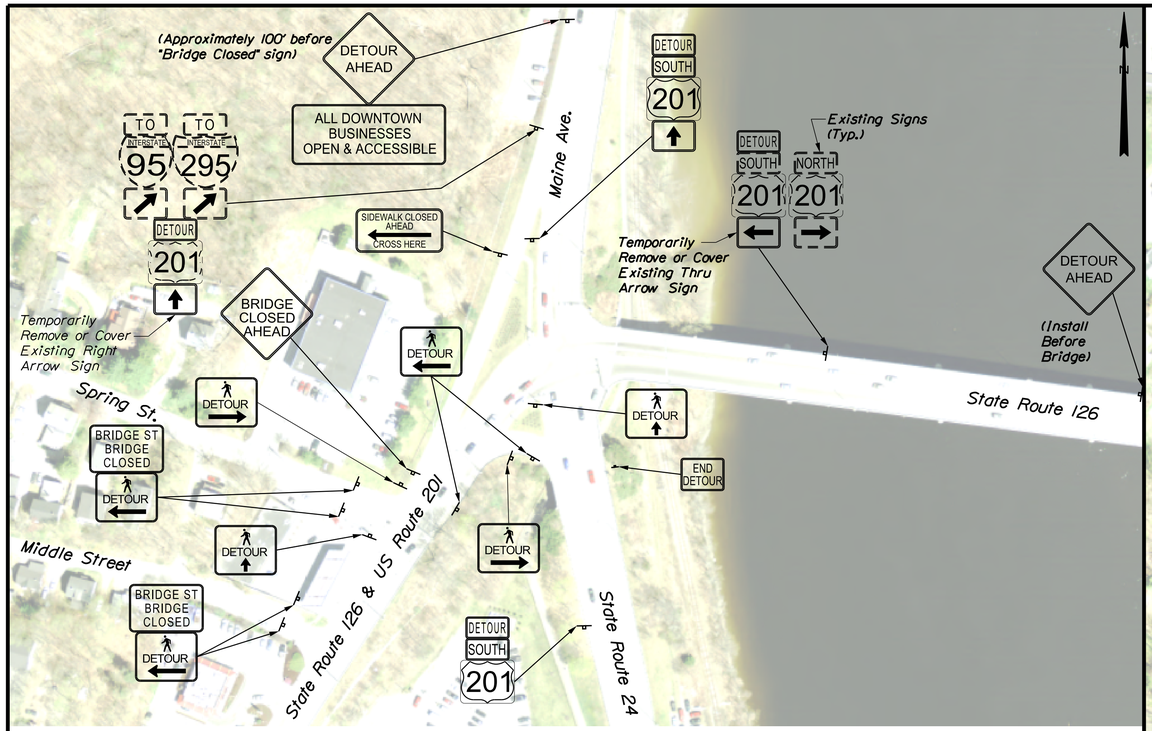
BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ROADWAY DETOUR
OVERALL PLAN

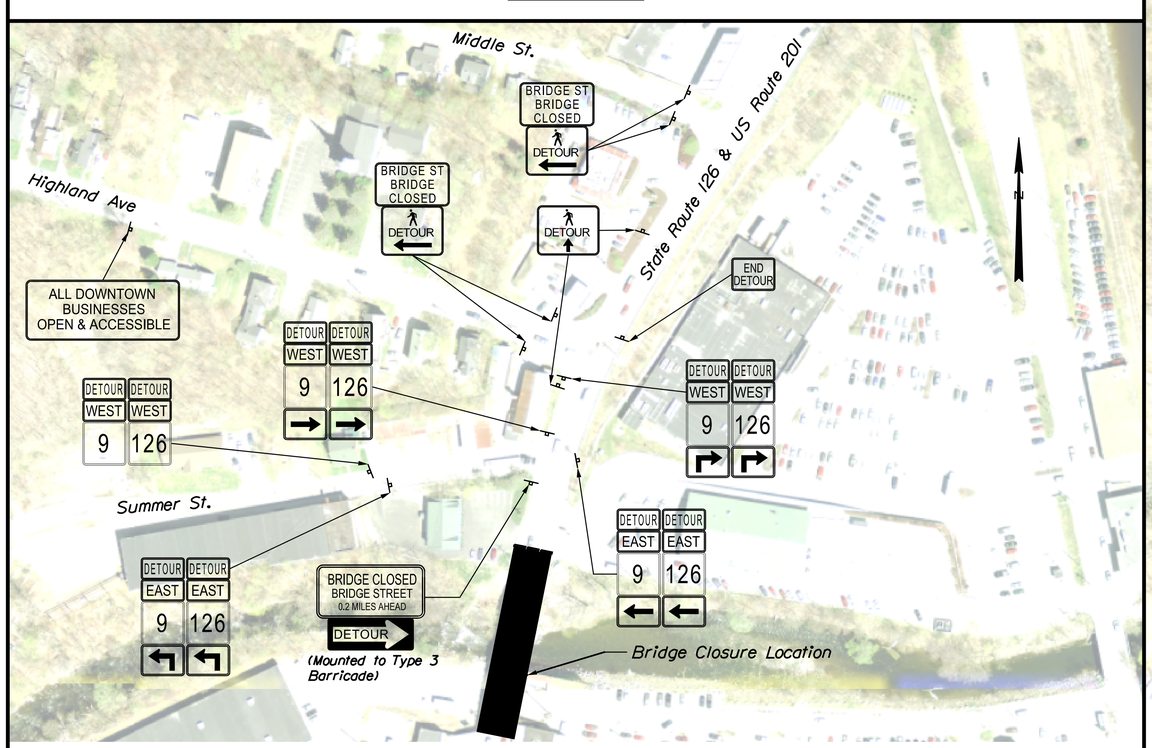
SHEET NUMBER

A66

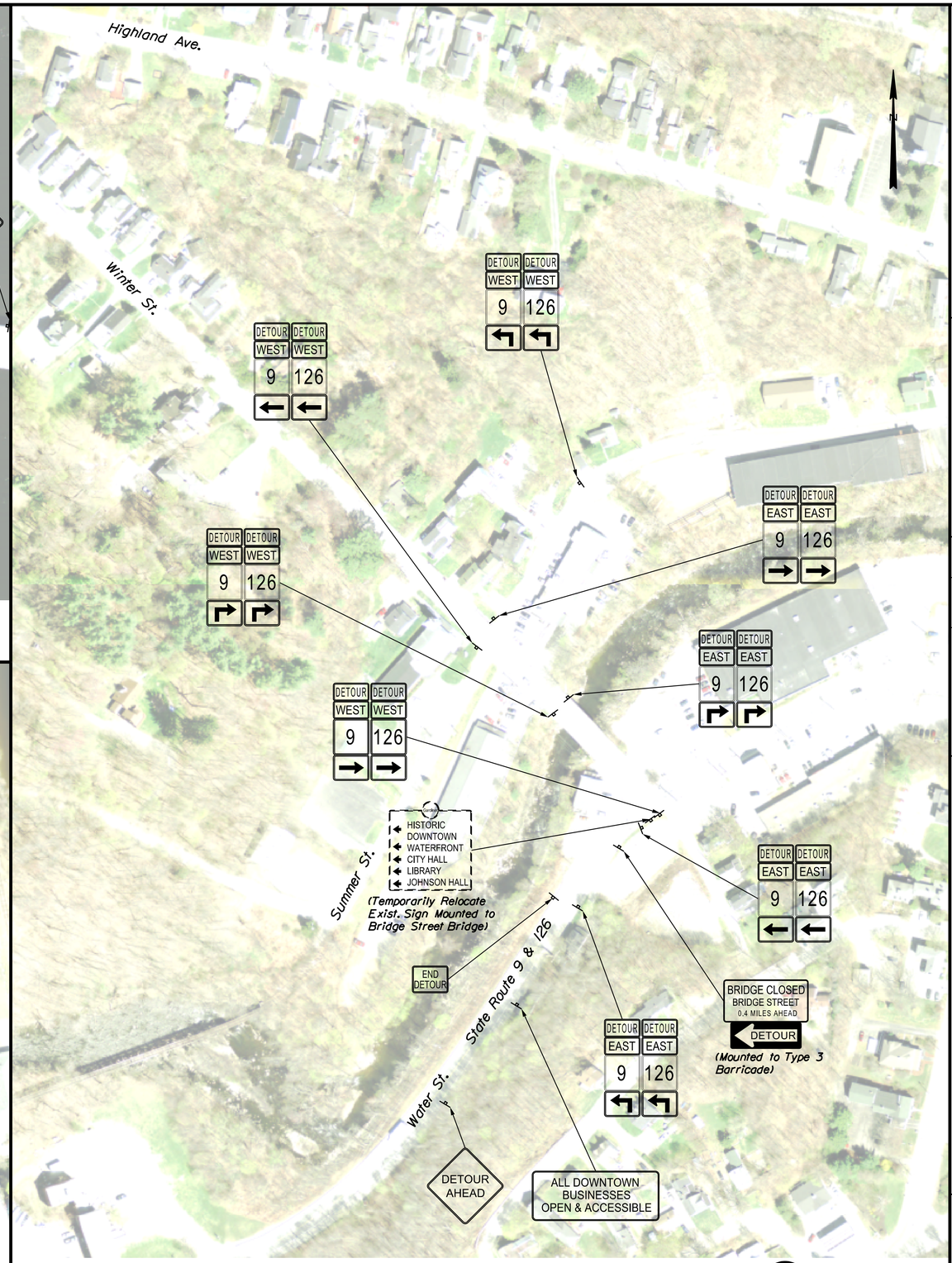
OF A78



SITE 1



SITE 2



SITE 3

100 0 100 200
Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	E.JB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

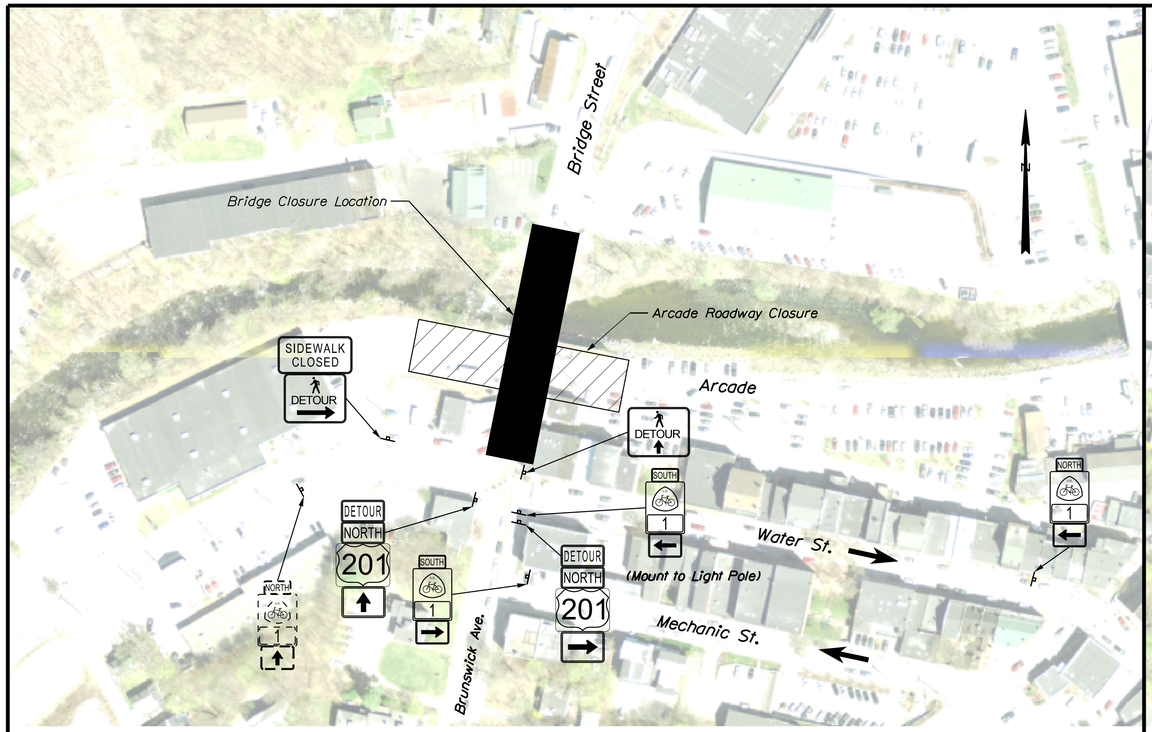
ROADWAY DETOUR
SIGNING PLAN 1 OF 2

SHEET NUMBER

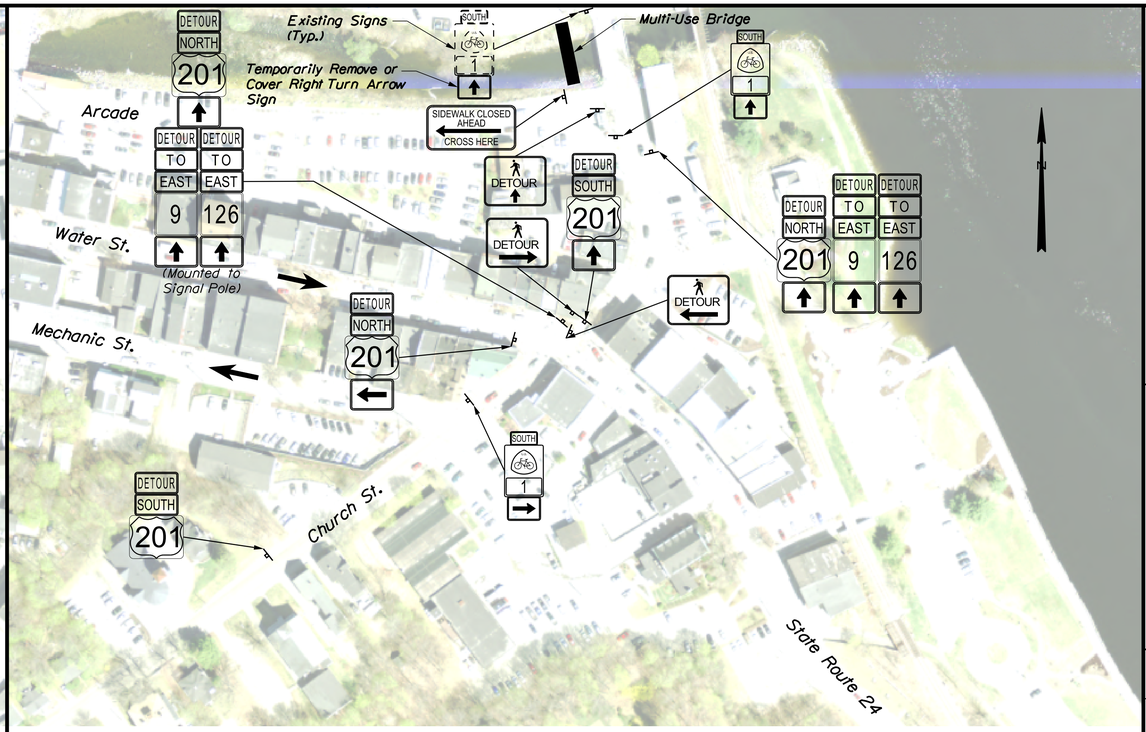
A67

OF A78

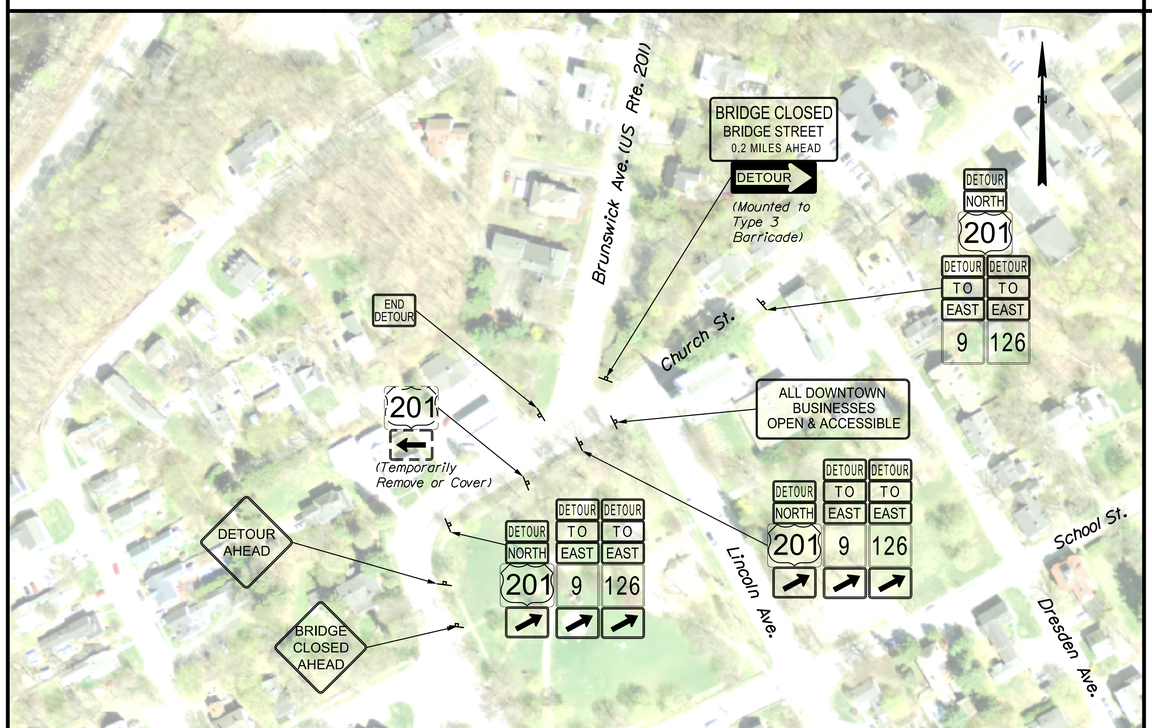
Filename: ...\A67_Roadway_Detour_Signing_Plan.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



SITE 4



SITE 5



SITE 6

100 0 100 200
Scale of Feet

Notes:

1. *Temporary removal and reinstallation of existing signs shall be considered incidental to Item 652.35 Construction Signs*

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	E.JB	SEPT 2018
CHECKED-REVIEWED	LEM	T.WM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

ROADWAY DETOUR
SIGNING PLAN 2 OF 2

SHEET NUMBER

A68

OF A78

Filename: ...\A68_Roadway_Detour_Signing_Plan.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

CONTROL POINTS				
Point	Station	Offset	X Coord.	Y Coord.
100	11+61.17	17.33, Rt	1140733.5640	509387.3930
101	11+69.16	17.59, Rt	1140727.7348	509392.8722
102	11+78.82	17.91, Rt	1140832.1520	509659.9883
103	11+86.57	19.68, Rt	1140827.4954	509666.4327
104	12+08.05	28.05, Rt	1140823.1088	509682.2588
105	12+24.66	29.70, Rt	1140822.3478	509688.3492
108	12+13.56	31.59, Rt	1140825.2675	509685.6151
109	11+68.71	31.59, Rt	1140848.7732	509663.6037
110	11+60.71	31.33, Rt	1140854.6126	509658.1355
111	44+25.73	19.66, Lt	1140666.9765	509458.1096
112	44+27.42	27.48, Lt	1140660.9316	509463.3520
203	12+07.04	17.82, Rt	1140814.8683	509676.1732
204	12+18.91	15.04, Rt	1140826.2932	509353.1323
205	12+49.44	13.51, Rt	1140807.6681	509702.0957
206	12+49.54	20.64, Rt	1140813.5076	509696.6275

Item 609.12 Curb Type 1 - Circular

Point	Length (Ft)	Radius (Ft)
204 To 205	22.56	77.33

Item 609.234 Terminal Curb Type 1 - 4 Foot

Point	Length (Ft)
105 To 108	4.00

Item 609.238 Terminal Curb Type 1, 8 Foot

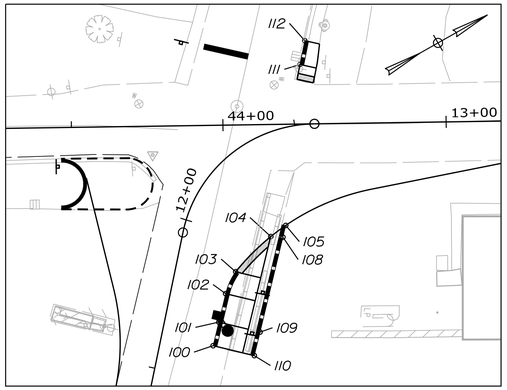
Point	Length (Ft)
100 To 101	8.00
109 To 110	8.00
111 To 112	8.00
203 To 204	8.00
205 To 206	8.00

Item 609.238I Terminal Curb Type 1 - 8 Foot Circular

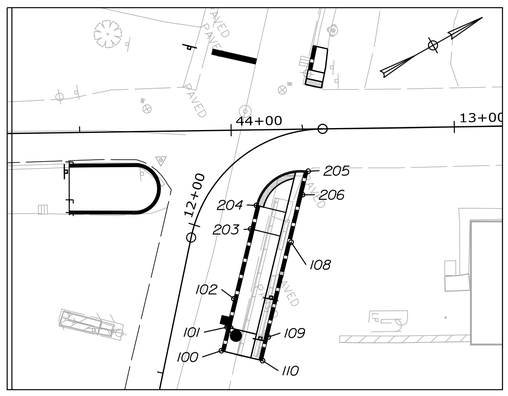
Point	Length (Ft)	Radius (Ft)
102 To 103	8.00	20.78

Item 609.11 Curb Type 1

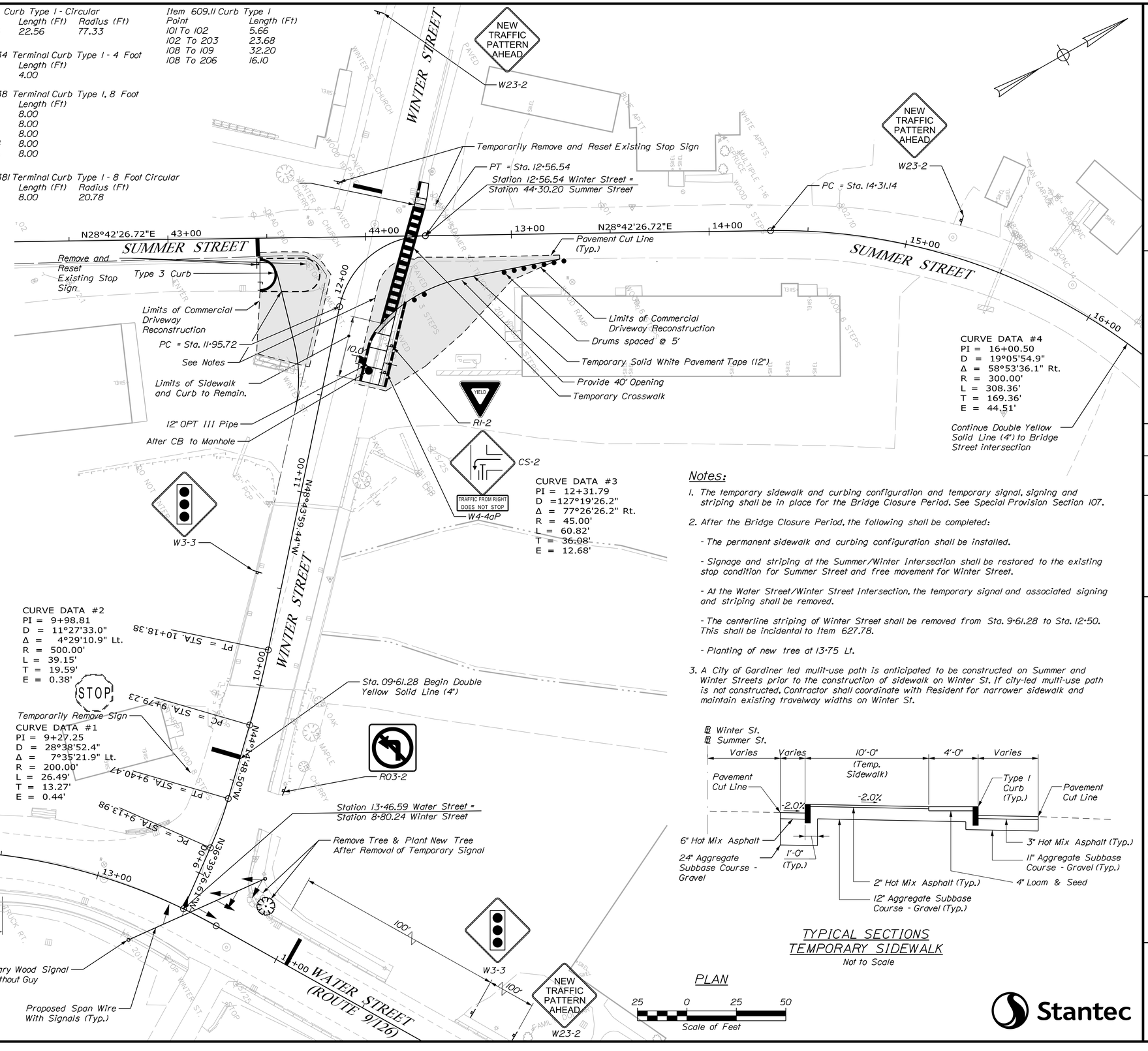
Point	Length (Ft)
101 To 102	5.66
102 To 203	23.68
108 To 109	32.20
108 To 206	16.10



Temporary Curbing Layout
Scale: 1"=25'



Permanent Curbing Layout
Scale: 1"=25'



PLAN
Scale of Feet

Notes:

1. The temporary sidewalk and curbing configuration and temporary signal, signing and striping shall be in place for the Bridge Closure Period. See Special Provision Section 107.
2. After the Bridge Closure Period, the following shall be completed:
   - The permanent sidewalk and curbing configuration shall be installed.
   - Signage and striping at the Summer/Winter Intersection shall be restored to the existing stop condition for Summer Street and free movement for Winter Street.
   - At the Water Street/Winter Street Intersection, the temporary signal and associated signing and striping shall be removed.
   - The centerline striping of Winter Street shall be removed from Sta. 9+61.28 to Sta. 12+50. This shall be incidental to Item 627.78.
   - Planting of new tree at 13+75 Lt.
3. A City of Gardiner led mulit-use path is anticipated to be constructed on Summer and Winter Streets prior to the construction of sidewalk on Winter St. If city-led multi-use path is not constructed, Contractor shall coordinate with Resident for narrower sidewalk and maintain existing travelway widths on Winter St.

TYPICAL SECTIONS TEMPORARY SIDEWALK
Not to Scale

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	E.JB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

DATE

SIGNATURE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

WINTER STREET DETOUR
INTERSECTION IMPROVEMENTS

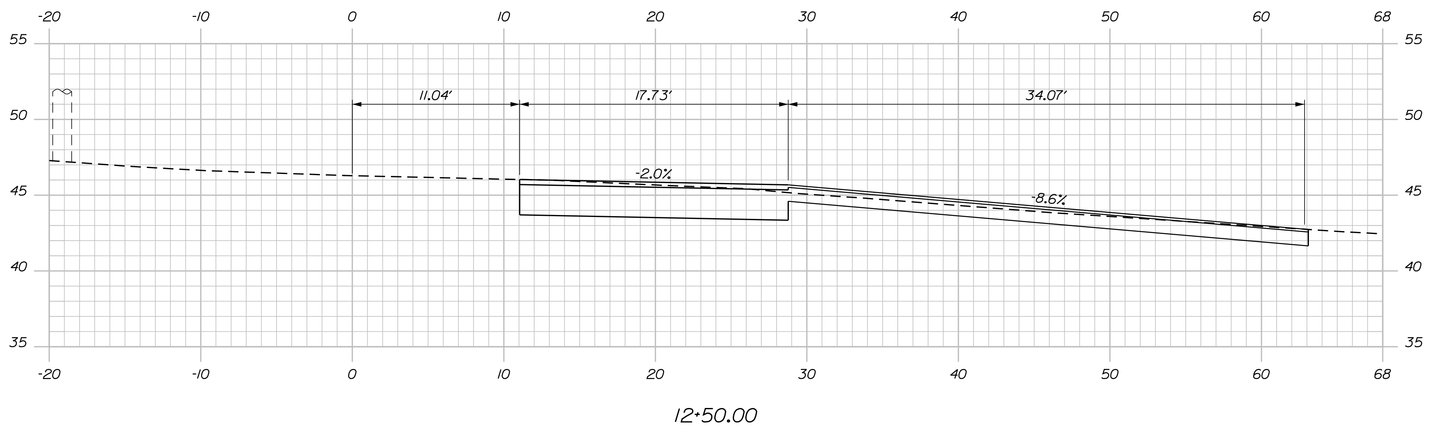
SHEET NUMBER

A69

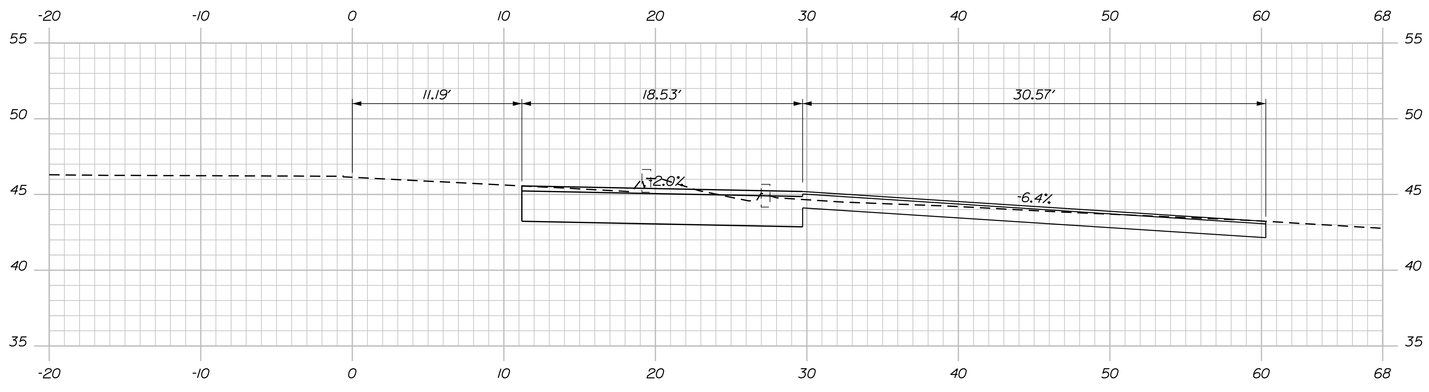
OF A78

Stantec

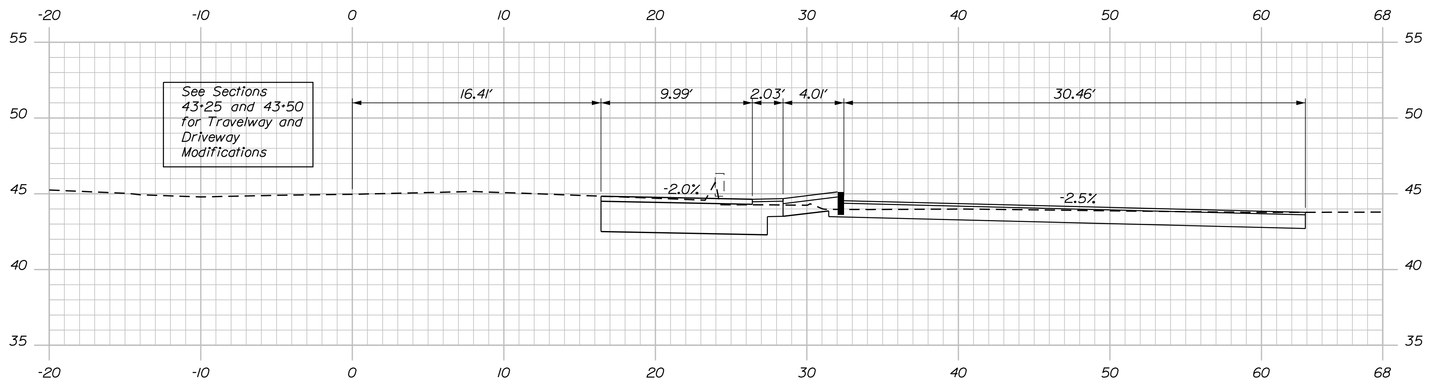
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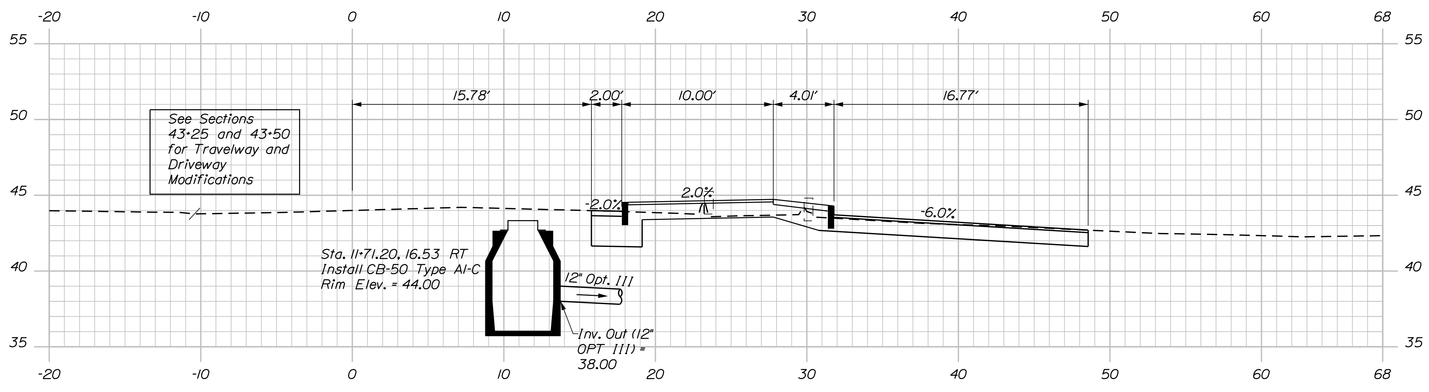
12+50.00



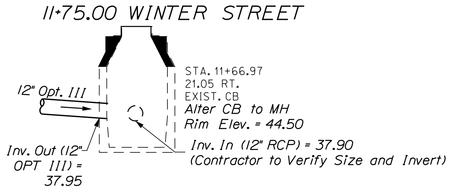
12+25.00



12+00.00



11+75.00 WINTER STREET



Sta. 11+75.00 to Sta. 12+50.00

Stantec

SHEET NUMBER A70 OF A78

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

CROSS SECTIONS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	PLP	EJB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

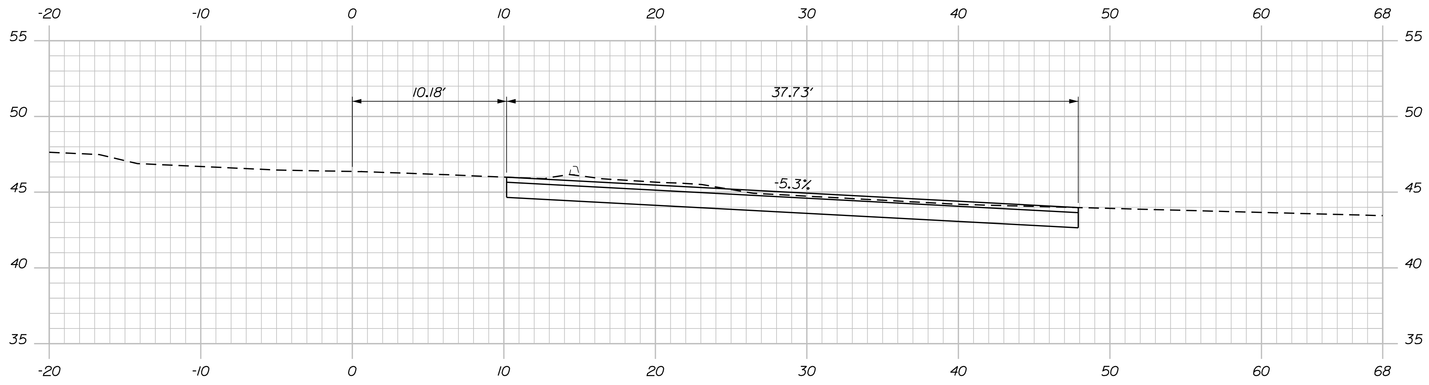
P.E. NUMBER

DATE

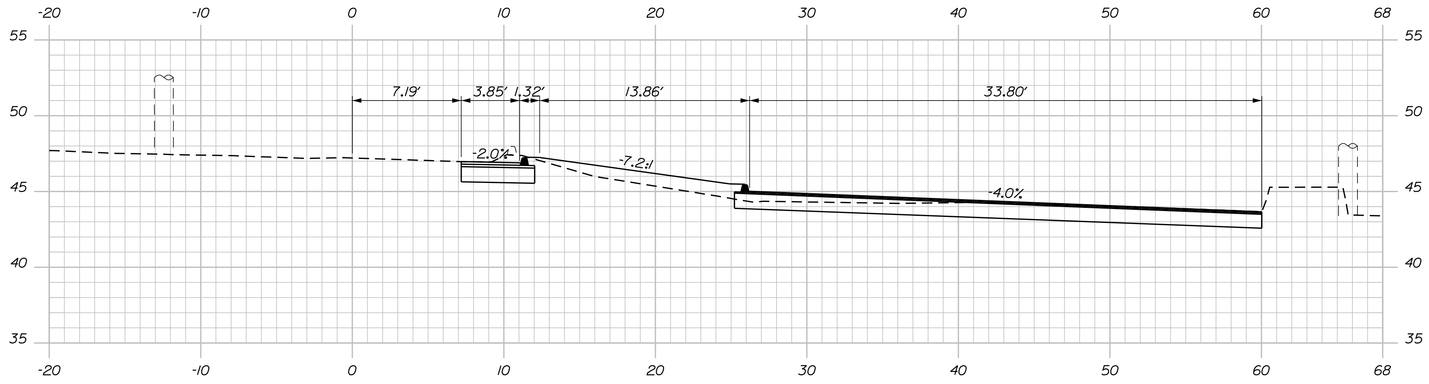
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

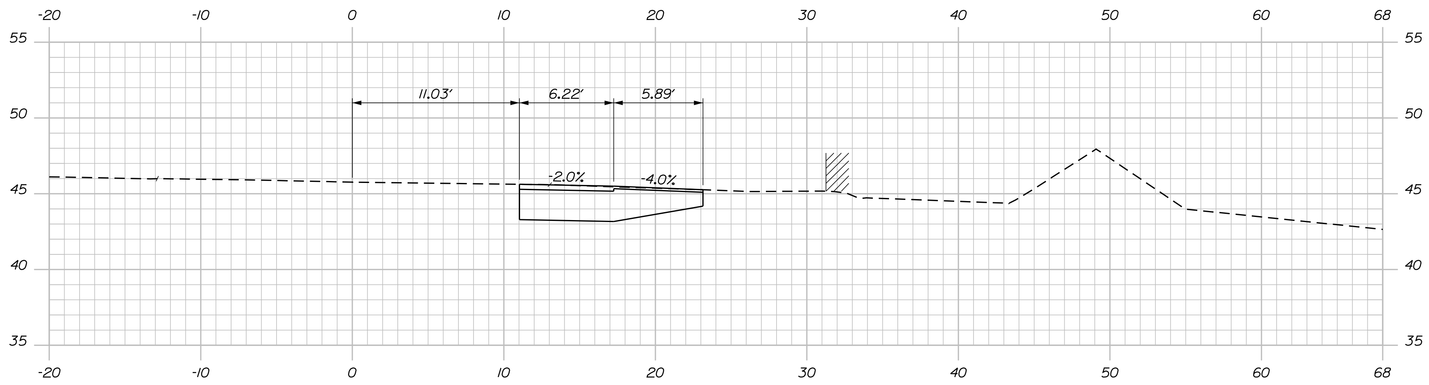
BRIDGE NO. 2101 WIN 18735.00 BRIDGE PLANS



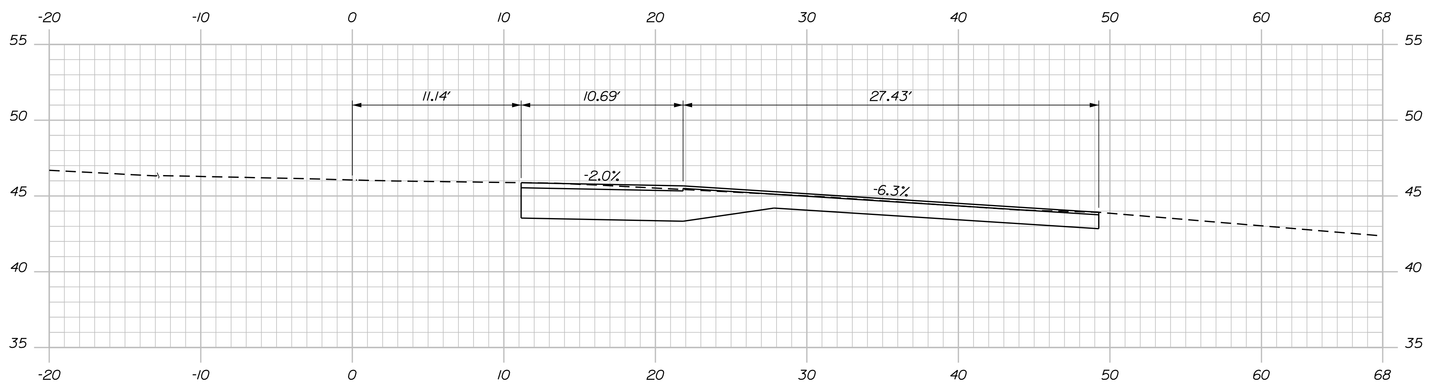
43+75.00



43+50.00



13+00.00



12+75.00 SUMMER STREET

Sta. 12+75.00 to Sta. 13+25.00

Stantec

SHEET NUMBER A71 OF A78

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

CROSS SECTIONS

		BY	DATE
PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP	EJB	SEPT 2018
CHECKED-REVIEWED	LEM	TWM	SEPT 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

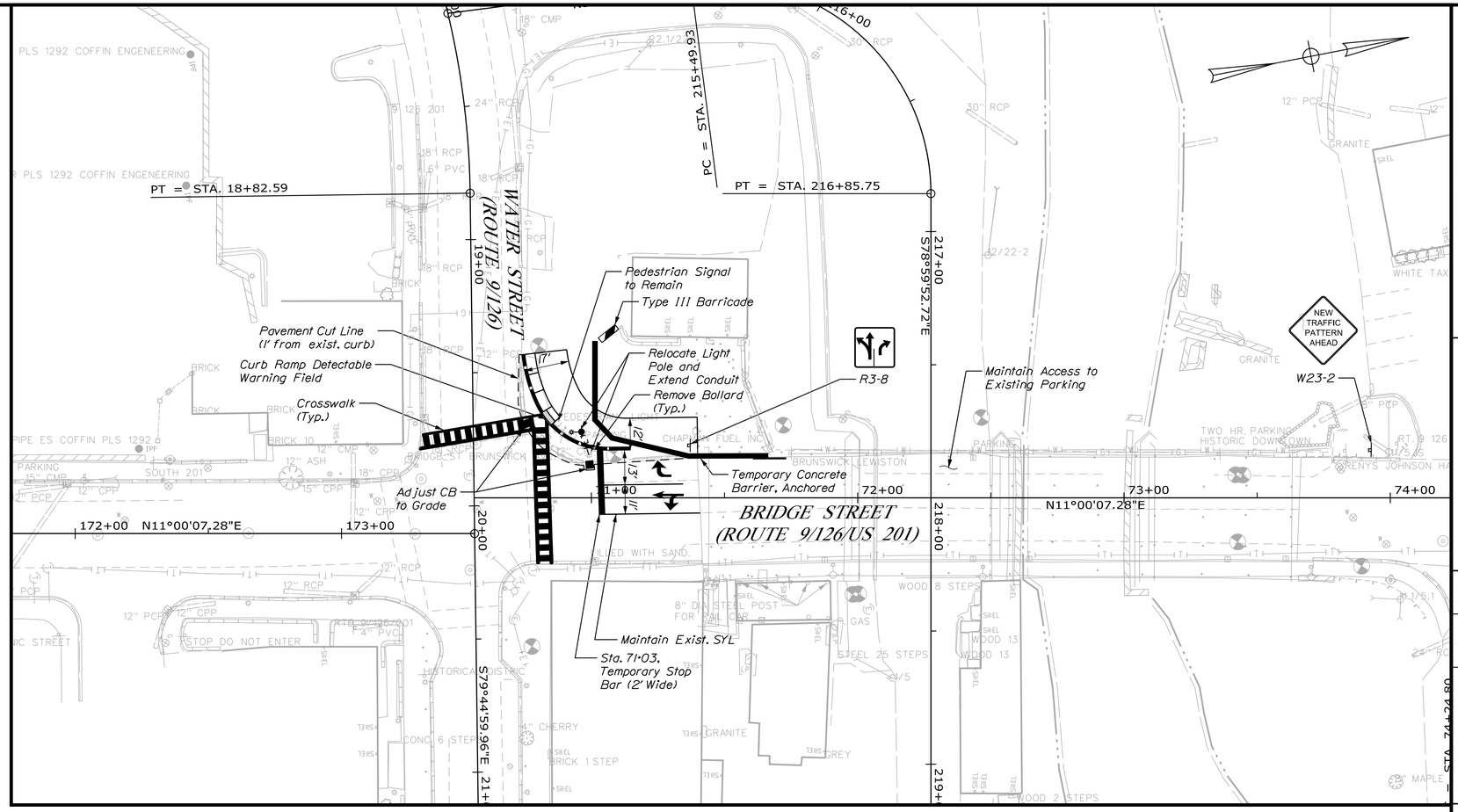
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

BRIDGE NO. 2101 WIN 18735.00 BRIDGE PLANS

Filename: ...\A72_Chopmans_Intersection.dgn Division: BRIDGE Username: dataylor Date:9/27/2018



Control Points				
Point	Station	Offset	X Coord.	Y Coord.
200	19+43.48	18.57, LT.	1141579.051	509647.997
201	19+51.37	19.89, LT.	1141587.045	509647.888
202	19+58.38	22.00, LT.	1141594.316	509648.721
203	19+62.08	23.51, LT.	1141598.229	509649.548
204	19+65.61	25.39, LT.	1141602.037	509650.761
205	70+84.65	27.01, LT.	1141607.364	509653.501
206	70+90.90	22.06, LT.	1141613.421	509658.691
207	71+06.66	17.84, LT.	1141620.572	509673.357
208	71+10.66	17.89, LT.	1141863.611	5095I5.659
209	71+14.66	17.95, LT.	1141867.319	5095I9.595

Item 609.11 Curb Type 1

Point	Length (Ft)	Radius (Ft)
207 TO 208	4.00	-

Item 609.12 Curb Type 1 - Circular

Point	Length (Ft)	Radius (Ft)
201 TO 202	7.32	60.00
205 TO 206	16.52	30.00

Item 609.2381 Terminal Curb Type 1, 8 Foot Circular

Point	Length (Ft)	Radius (Ft)
200 TO 201	8.00	60.00
*202 TO 203	4.00	60.00
*203 TO 204	4.00	30.00
206 TO 207	8.00	60.00

Item 609.234 Terminal Curb Type 1, 4 Foot

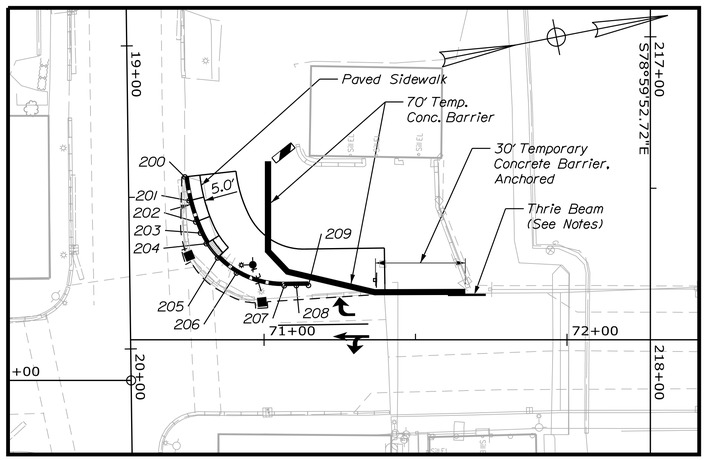
Point	Length (Ft)	Radius (Ft)
208 TO 209	4.00	-

* Terminal curb from points 202 to 204 shall be considered one each item.

PLAN

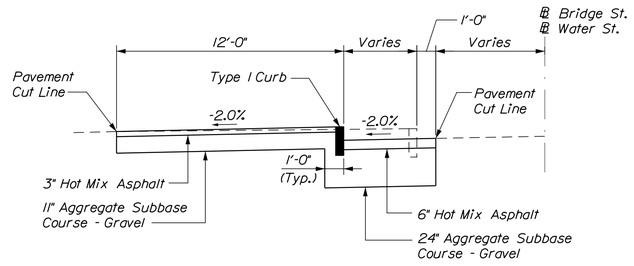
25 0 25 50

Scale of Feet



CURBING AND TEMPORARY BARRIER LAYOUT

Scale: 1"=25'



TYPICAL SECTIONS
TEMPORARY IMPROVEMENTS

Not to Scale

Notes:

1. Improvements shown are temporary and shall be in place prior to either Bridge Closure Period.
2. Thrie Beam shall connect existing bridge rail to Temporary Concrete Barrier, Anchored. Beam shall be incidental to barrier.
3. Contractor shall layout anchored barrier in line with traffic face of bridge railing.

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	PLP
CHECKED-REVIEWED	LEM
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

	BY	DATE
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES	EJB	SEPT 2018
	TWM	SEPT 2018

P.E. NUMBER

SIGNATURE

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BRIDGE/WATER STREET
INTERSECTION IMPROVEMENTS

SHEET NUMBER

A72

OF A78

ID NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		NOMINAL AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
MI-4	30"	24"	201	TEXT DIMENSIONS SHALL CONFORM TO 2004 EDITION-STANDARD HIGHWAY SIGNS-2012 SUPPLEMENT			12	WHITE	BLACK	5.00	60.00
MI-5	24"	24"	9				18	WHITE	BLACK	4.00	72.00
MI-5	30"	24"	126				18	WHITE	BLACK	5.00	90.00
M3-1	24"	12"	NORTH				9	WHITE	BLACK	2.00	18.00
M3-2	24"	12"	EAST				22	WHITE	BLACK	2.00	44.00
M3-3	24"	12"	SOUTH				4	WHITE	BLACK	2.00	8.00
M3-4	24"	12"	WEST				14	WHITE	BLACK	2.00	28.00
M4-5	24"	12"	TO				10	WHITE	BLACK	2.00	20.00
M4-10 R	48"	18"	DETOUR				2	ORANGE	BLACK	6.00	12.00
M4-10 L	48"	18"	DETOUR				1	ORANGE	BLACK	6.00	6.00
M4-8	24"	12"	DETOUR				50	ORANGE	BLACK	2.00	100.00
M4-8a	24"	18"	END DETOUR				4	ORANGE	BLACK	3.00	12.00
M4-9b	30"	24"	DETOUR				5	ORANGE	BLACK	5.00	25.00

ID NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		NOMINAL AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
M4-9b	30"	24"	DETOUR	TEXT DIMENSIONS SHALL CONFORM TO 2004 EDITION-STANDARD HIGHWAY SIGNS-2012 SUPPLEMENT			7	ORANGE	BLACK	5.00	35.00
M4-9b	30"	24"	DETOUR				6	ORANGE	BLACK	5.00	30.00
M5-1 L	21"	15"					6	WHITE	BLACK	2.19	13.13
M5-1 R	21"	15"					6	WHITE	BLACK	2.19	13.13
M6-1 L	21"	15"					8	WHITE	BLACK	2.19	17.50
M6-1 R	21"	15"					7	WHITE	BLACK	2.19	15.31
M6-2 R	21"	15"					6	WHITE	BLACK	2.19	13.13
M6-3	21"	15"					10	WHITE	BLACK	2.19	21.88
R3-2	24"	24"					1	WHITE	BLACK RED	4.00	4.00
R3-8	30"	30"					1	WHITE	BLACK	6.25	6.25
R9-9	24"	12"	SIDEWALK CLOSED				6	WHITE	BLACK	2.00	12.00
R9-11	24"	18"	SIDEWALK CLOSED AHEAD CROSS HERE				2	WHITE	BLACK	3.00	6.00
R9-9a	24"	18"	SIDEWALK AND STAIRS CLOSED				1	WHITE	BLACK	3.00	3.00

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	PLP		
CHECKED-REVIEWED	LEM		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

DATE

SIGNATURE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

MOT SIGN SUMMARY

SHEET NUMBER

A73

OF A78

Filename: ...\MSTA\A73_Sign_summary1.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018

ID NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		NOMINAL AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
R11-2	48"	30"	ROAD CLOSED	TEXT DIMENSIONS SHALL CONFORM TO 2004 EDITION-STANDARD HIGHWAY SIGNS-2012 SUPPLEMENT			2	WHITE	BLACK	10.00	20.00
R11-2	48"	30"	BRIDGE CLOSED				2	WHITE	BLACK	10.00	20.00
R11-3	60"	30"	BRIDGE CLOSED BRIDGE STREET XX MILES AHEAD				6	WHITE	BLACK	12.50	75.00
CS-3	60"	30"	ALL DOWNTOWN BUSINESSES OPEN & ACCESSIBLE				5	BLUE	WHITE	12.50	62.50
W3-3	36"	36"					3	ORANGE	BLACK	9.00	27.00
W20-2	36"	36"	DETOUR AHEAD				4	ORANGE	BLACK	9.00	36.00
W20-3	36"	36"	BRIDGE CLOSED AHEAD				2	ORANGE	BLACK	9.00	18.00
W20-3	36"	36"	ROAD CLOSED AHEAD				2	ORANGE	BLACK	9.00	18.00
W23-2	36"	36"	NEW TRAFFIC PATTERN AHEAD				5	ORANGE	BLACK	9.00	45.00
CS-2	24"	12"	TRAFFIC FROM RIGHT DOES NOT STOP				1	ORANGE	BLACK	2.00	2.00
R1-2	36"	36"	YIELD				1	WHITE	RED	3.90	3.90
CS-4	30"	24"	BRIDGE ST BRIDGE CLOSED				4	ORANGE	BLACK	5.00	20.00
CS-1	36"	36"					1	ORANGE	BLACK	9.00	9.00

ID NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		NOMINAL AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
M6-3 (BIKE)	12"	9"		TEXT DIMENSIONS SHALL CONFORM TO 2004 EDITION-STANDARD HIGHWAY SIGNS-2012 SUPPLEMENT			2	GREEN	WHITE	0.75	1.50
M6-1 R (BIKE)	12"	9"					2	GREEN	WHITE	0.75	1.50
CS-5	18"	24"	1				5	GREEN	WHITE	3.00	15.00
M3-1 (BIKE)	12"	9"	NORTH				1	GREEN	WHITE	0.75	0.75
M3-3 (BIKE)	12"	9"	SOUTH				4	GREEN	WHITE	0.75	3.00
M6-1 L (BIKE)	12"	9"					2	GREEN	WHITE	0.75	1.50
CS-5	60"	30"	BRIDGE CLOSED BRIDGE STREET XX MILES AHEAD →				1	WHITE	BLACK	12.50	12.50
CS-6	60"	30"	BRIDGE CLOSED BRIDGE STREET XX MILES AHEAD ←				1	WHITE	BLACK	12.50	12.50

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	L. TIMBERLAKE	DATE
PROJ. MANAGER		
DESIGN-DETAILED	PLP	SEPT 2018
CHECKED-REVIEWED	LEM	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY: E.JB, TWM

SIGNATURE

P.E. NUMBER

DATE

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

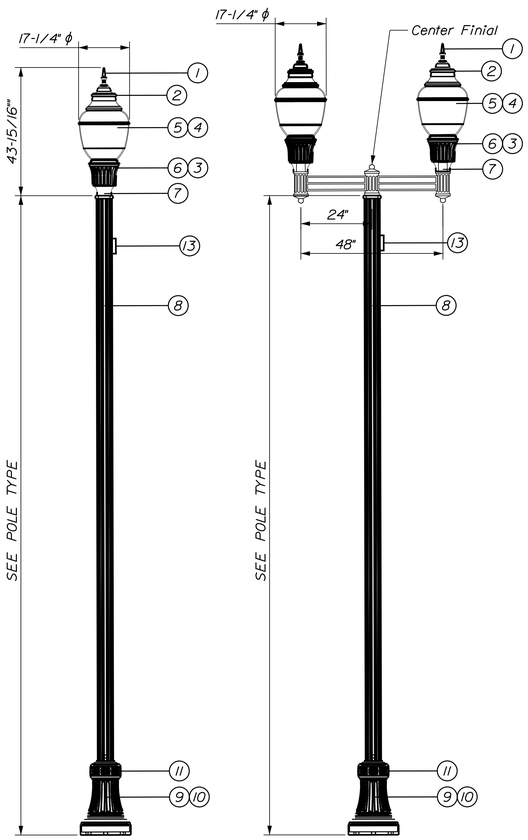
MOT SIGN SUMMARY

SHEET NUMBER

A74

OF A78

Filename: ...\MSTA\A74_Sign_summary2.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018



TYPE A/B SINGLE LUMINAIRES DETAIL

NOT TO SCALE

TYPE C DOUBLE LUMINAIRE DETAIL

NOT TO SCALE

Description of Components:

Type 'A' Luminaire: WAUE2-P10-40K-AS-GN-3-GN-4-S
Type 'AL' Luminaire: WAUE2-P20-40K-AS-GN-3-GN-4-S
Type 'A' Series Pole: NYA-14-L5J-17_I-P07-ABG-GN

Type 'B' Luminaire: WAUE2-P20-40K-AS-GN-3-GN-4-S
Type 'B' Pole: NYA-18-L5J-17_I-P07-ABG-GN

Type 'C' Luminaire: (2)WAUE2-P20-40K-AS-GN-3-GN-4-S
Type 'C' Arm: PCP48-CA/DG (Color to Match Pole)
Type 'C' Pole: NYA-18-L5J-17_I-P07-ABG-GN

1. Finial: Spike, made of cast aluminum.
2. Hood: made of cast aluminum, acorn shape with shorewood style cover.
3. Lumen package: P10 = 26W LED, 3433LMNS, 132IPW
   P20 = 39W led, 5171LMNS, 133IPW
   P30 = 60W led, 7281LMNS, 121IPW
   4000 CCT, 70 CRI
4. Lens and optics: borosilicate glass reflector and refractor. upper system incorporates reflecting prisms and lower system uses molded refracting prisms to control distribution. Type 3 (asymmetrical) distribution.
5. Driver: auto-sensing voltage, 120-277V, programmable dimmable driver, with 0-10V control leads.
6. Housing: made of cast aluminum, with tool-less swing door.
7. Fitter: made of cast aluminum, mechanically secured.
8. Pole: made of fluted aluminum with channels, 5" O.D., .25" wall thickness, welded to the base.
9. Base: made of aluminum, welded to the anchor plate.
10. Access Door: made of aluminum, covering an opening of 4"x 9", giving access to a ground lug.
11. Base Cover: made of a two-piece cast aluminum components, mechanically secured c/w four (4) decorative medallions.
12. Wiring: included, from luminaire to the base.
    gasketing: neoprene and/or silicone gasketing is applied.
    hardware: all exposed screws will be stainless steel.
    Finish: an application of a thermosetting polyester powder coat paint, color to be green (GN) that matches Duncan "Rain Forest Green" (SW 4071, LRV 8%, Semi-Gloss) specified for other project components.
13. WRGFCI DWPLEX receptacle with WP In-Use cover

General Notes:

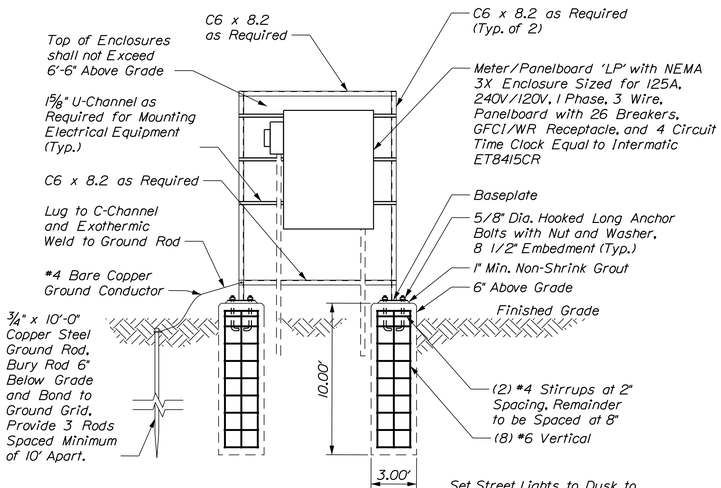
1. Maximum of 270 degrees in total bends permitted in single run of conduit.
2. Lights shall be fused at base with Y-Type fuse kit with waterproof insulated seal "Flood Seal". Size of seal shall match wire and have a 10 AMP fuse.
3. Circuit conductors including neutral conductor shall be clearly identified by corrosion resistant tags indicating circuit number and panel sources at every pole base and handhole.
4. Utilize approved dual-rated parallel tap connector with insulated watertight cover for taps at pole base.
5. Utilize approved dual-rated parallel tap connector with watertight connector, suitable for direct burial in junction boxes and handholes.
6. For the under bridge box light. See Bridge Crossframe details.
7. The new power service, control cabinets, and meter disconnects and enclosures shall be paid for under Item 634.160

Lighting Schedule

WIN	Light No.	Station	Offset	Break-Away	Fixture Type	IES Dist. Type	Mounting	Panel/ Circuit	Luminaire Watts	Luminaire Lumens	Luminaire Type	Remarks Type
18735.00	SL-1	218+39.72	17.00 Rt.	Y	AI	III	Foundation	LP/8	39W	5171	LED	New
18736.10	SL-3	221+22.50	33.00 Lt.	N	A	III	Foundation	LP/8	26W	3433	LED	New
18736.10	SL-5	154+40.58	21.07 Lt.	Y	A	III	Foundation	LP/8	26W	3433	LED	New
18736.00	SL-8	156+68.27	19.57 Lt.	N	A	III	Foundation	LP/8	26W	3433	LED	New
18736.00	MA-1	3+57.81	24.66 Rt.	N	AI	III	Foundation	LP/8	39W	5171	LED	New
18736.00	MA-2	4+49.20	22.45 Lt.	N	Existing	III	Foundation	LA/1,3	Exist.	Exist.	HID	Relocated
18736.10	MA-3	4+48.42	74.28 Lt.	Y	Existing	III	Foundation	LA/1,3	26W	3433	LED	Relocated
18735.00	WS-A	71+20.97	45.47 Lt.	Y	Existing	III	Foundation	Match Ex.	Exist.	Exist.	HID	Relocated
18735.00	WS-B	19+02.00	30.52 Lt.	Y	Existing	III	Foundation	Match Ex.	Exist.	Exist.	HID	Relocated
22684.00	BR-1	-	-	N	(See Signal)	III	12' Arm On Traffic Pole	See Traf.	133W	13221	LED	New
18735.00	BR-2	71+89.07	30.19 Lt.	N	B	III	Foundation	LP/9	39W	5171	LED	New
18735.00	BR-3	71+43.08	29.02 Rt.	N	C	III	Foundation	LP/9	(2)39W	(2)5171	LED	New
18735.00	BR-4	72+80.50	31.67 Lt.	N	B	III	Bridge	LP/9	39W	5171	LED	New
18735.00	BR-5	72+04.50	31.25 Rt.	N	B	III	Retaining Wall	LP/9	39W	5171	LED	New
18735.00	BR-7	72+80.50	30.67 Rt.	N	B	III	Bridge	LP/9	39W	5171	LED	New
18735.00	BR-9	73+87.34	32.68 Rt.	N	B	III	Foundation	LP/9	39W	5171	LED	New
18735.00	UP-1	72+47.05	20.96 Rt.	N	U	NA	Under Bridge	LP/9	79W	9040	LED	New

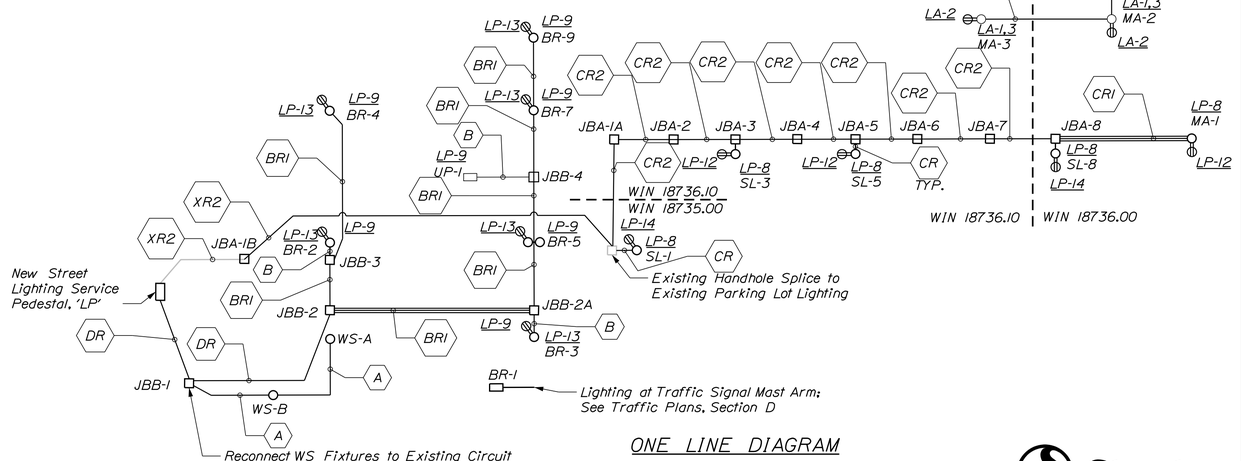
Conduit & Conductor Schedule

KEY	Conduit Size	Conductors: For Fixtures	For Receptacles	For Equipment	For Ground
A	2"	3#6AWG CU (Exist.)			1#6G
AR	2"	2#8	2#8		1#8G
R	Existing	Existing	2#8		1#8G
B	1" RGS	2#10			1#10G
BR	1"	2#10	2#10		1#10G
BR1	2"	2#6	2#6		1#6G
CR	1"	2#10	2#10		1#6G
CR1	2"	2#10	2#2		1#2G
CR2	2"	2#10	4#2		1#2G
DR	2"	3#2, 3#6	3#6	2#1/0	1#2G
F	3"				1#6G
XR2	(2) 2"C Existing	3#6AWG CU (Exist.)	4#2		1#2G & 1#6G (EX)
X	Existing	3#6AWG CU & 3#2AWG CU (Spare) in (2)2" conduits			



ARCADE SERVICE PANEL "LP"

Set Street Lights to Dusk to Dawn Operation. Set Receptacles to Dusk to Owner Defined Time, for Holiday Schedule.



ONE LINE DIAGRAM

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(500)

WIN 18735.00

BRIDGE NO. 2101

BRIDGE PLANS

	BY	DATE
L. TIMBERLAKE	PLP	
LSF	PLP	
DDT	LEM	
	TWM	

SIGNATURE

P.E. NUMBER

DATE

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

BRIDGE STREET BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

LIGHTING DETAILS

SHEET NUMBER

A75

OF A78

Filename: ...\MSTA\A75_Lighting_Plan.dgn Division: BRIDGE Username: dataylor Date:9/28/2018

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: ROW Username: Don.Burns Date:10/31/2018

PLAN LEGEND

Town, County, State	Existing Right of Way	New R/W Along Existing R/W	Sanitary Sewer	Traveled Way	Cut Line
Approx. Property Lines P.L.	Limits of Wrought Portion L.O.W.P.	Building	Telephone Line	Ditch	Stonewall
Existing Right of Way	Control Of Access C.O.A.	Trees Conifer / Deciduous	Electric Line	Catch Basin	Baseline 10+00 11+00 12+00
Limits of Wrought Portion L.O.W.P.	New Right of Way	Tree Line Bush Line	Water Line	Manhole	Monument
Control Of Access C.O.A.	New Easement	Water Edge	Underdrain Line	Sewer Manhole	Iron Rod Found IRF
New Right of Way	New Temporary Rights	Ledge Rock/Boulder Flag Pole	Gas Line	Utility Pole	Replacement Pin Set
New Easement	New R/W Within Existing R/W	Fence CHAIN LINK BARB WIRE STOCKADE	Guardrail	Fire Hydrant	Fill Line
New Temporary Rights		Sign Well Mailbox	Culvert	Curbing	Retaining Wall
New R/W Within Existing R/W		Clearing Limit Line CLL			Traverse Point
					Pipe Found IPF

Existing / Proposed

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and recorded in
Plan Book _____, Page _____
Attest: _____
REGISTER

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.

25 0 25 50 75 100
Scale of Feet

R = 310.00'
L = 224.16'
T = 117.23'
E = 21.43'

CITY OF GARDINER

215+00 N3°43'38.3"E 216+00

18+00 19+00 20+00 21+00 22+00

ROUTE 9/ROUTE 126 WATER STREET S.H. "153"

TEMPORARY P.L. CONSTRUCTION

DANIEL B. CHAPMAN
PARCEL NO. (2)
LAND TAKEN = 108± S.F. (1) (PRESC. EASE.)
LAND TAKEN = 0.07± AC. (OTHER)
TOTAL LAND TAKEN = 0.07± AC.
BUILDINGS = (1)
SLOPE EASE. = 1550± S.F. (1)
DRAINAGE EASE. = (1)
CONST. & MAINT. EASE. = 368± S.F. (1)
TEMP. CONST. RIGHTS = 0.24± AC. (1)
TOTAL AREA = 0.34± AC. (TAX RECORD)
REM. AREA = 0.27± AC.

0.24± AC.

OWNERSHIP OF THIS AREA PER TAX RECORDS

WINTER STREET
GARDINER BOOK OF STREETS
VOL. 3, PAGE 85
3 RODS
1815
ALSO
D.O.T. FILE NO. 6-304 (1989)
D.O.T. FILE NO. 6-306 (1989)
D.O.T. FILE NO. 6-288 (1987)

PT = STA. 18+82.59

SUMMER STREET
GARDINER BOOK OF STREETS
VOL. 3, PAGE 34
2 RODS
1844
ALSO
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 8, PAGE 177
2 RODS
1844
ALSO
RECORDS OF STREETS BOOK
PAGE 181
ALTERATION
1899

KEY BANK OF CENTRAL MAINE

PT = STA. 216+85.75

DRAINAGE STRUCTURE STA. 71+73± LT. TO STA. 72+89± LT.

NOTE: RIGHTS TAKEN TO RAZE OR REMOVE BUILDING AT STA. 71+40 LT.

APPROXIMATE LOCATION OF REMAINING WALL

GARAGE

TEMP. CONST. LIMITS FOR CRANE PAD 1108± S.F.

16± S.F. SLOPE

0.07± AC.

CONST. & MAINT. EASEMENT LIMITS 368± S.F.

EASEMENT LIMITS 1550± S.F.

32.02' 25.96' 43'± 101'± 69'± 84'± 110' 90' 85' 70' 43' 46'± 108'± 114'± 122'± 146'± 115'± 534± S.F. 851± S.F. 462'± (TOTAL) 112'± 415± S.F. 391± S.F. 274.80' 245± S.F. 275± S.F. 504± S.F. 750± S.F. 17± S.F. 72.55' 0.07± AC. 0.11± AC. 0.07± AC.

STA. 70+55.97 BRIDGE STREET = STA. 19+97.00 WATER STREET

CITY OF GARDINER
PARCEL NO. (6)
LAND TAKEN = 534± S.F. (1) (SUBMERGED)
LAND TAKEN = 666± S.F. (3) (PRESC. EASE.)
LAND TAKEN = 851± S.F. (1) (OTHER)
TOTAL LAND TAKEN = 0.05± AC.
SLOPE EASE. = 0.08± AC. (3)
DRAINAGE EASE. = (1)
CONST. & MAINT. EASE. = 622± S.F. (1)
TEMP. CONST. RIGHTS = 1108± S.F. (1)
TOTAL AREA = UNKNOWN AREA
REM. AREA = UNKNOWN AREA

HORIZONTAL DATUM-US STATE PLANE NAD83 (2011)
ZONE-MAINE 2000 WEST
VERTICAL DATUM-NAVD 88
COMBINED FACTOR-1.0000010
GRID

JAY PROPERTIES, LLC
PARCEL NO. (8)
LAND TAKEN = 432± S.F. (2) (PRESC. EASE.)
LAND TAKEN = 0.07± AC. (2) (OTHER)
LAND TAKEN = 0.08± AC. (4)
TOTAL LAND TAKEN = 504± S.F. (1)
SLOPE EASE. = (1)
DRAINAGE EASE. = 750± S.F. (1)
CONST. & MAINT. EASE. = 0.11± AC. (1)
TEMP. CONST. RIGHTS = 0.11± AC. (1)
TOTAL AREA = 0.69± AC. (TAX RECORD)
REM. AREA = 0.61± AC.

BEGIN B.L.-SECT. II SUMMER STREET

Utility pole (by others)

CITY OF GARDINER
PARCEL NO. (10)
LAND TAKEN = 166± S.F. (1)
CONST. & MAINT. EASE. = 186± S.F. (1)
TEMP. CONST. RIGHTS = 917± S.F. (1)
TOTAL AREA = 0.5± AC. (TAX RECORD)
REM. AREA = 0.5± AC.

N29°08'42.9"E 199.21'

INLET DRAINAGE STRUCTURE STA. 73+89± LT.

SUMMER END B.L.

TEMPORARY CONSTRUCTION LIMITS 186± S.F. 166± S.F. 917± S.F. 20'± 26'± 22'± 35'± 30'± 56'± 54'± 40'± 35'± 25'± 28'± 31'± 37'± 55'± 45'± 209± S.F. 224± S.F. 1552± S.F. 1505± S.F. 1349± S.F. 199± S.F. 1510± S.F. 1286± S.F. 0.27± AC.

N11°00'07.3"E 368.83'

BEGIN B.L.

BRUNSWICK AVE.

STA. 173+50.00 BRUNSWICK STREET = STA. 20+10.40 WATER STREET

BRIDGE STREET

U.S. ROUTE 201

ROUTES 9 & 126

BRIDGE STREET

STATE HIGHWAY "1"

STA. 75+54.19 STATE HIGHWAY "1" = STA. 30+49.21 SUMMER STREET

END C.O.A.

LIMITS OF WROUGHT 1552± S.F.

NOTE: L.O.W.P. IS AT THE BACK EDGE OF SIDEWALK

CONST. & MAINT. 26± S.F.

FRED M. KNEE
MERCEDES R. KNEE
ITEM NO. (3)
CONST. & MAINT. EASE. = 26± S.F. (1)
TOTAL AREA = 0.06± AC. (CALC.)

MICHAEL H. GIBERSON
NEIL J. ANDERSEN
ITEM NO. (4)
CONST. & MAINT. EASE. = 1552± S.F. (1)
TEMP. CONST. RIGHTS = 239± S.F. (1)
TOTAL AREA = 0.12± AC. (CALC.)

NOTE: U.G. ELECTRICAL EASE. TO CITY OF GARDINER BOOK 7040, PAGE 16

SHOP 1980± S.F. 1796± S.F. 239± S.F. 96± S.F. 240± S.F. 45± S.F. 1349± S.F. 199± S.F. 1510± S.F. 1286± S.F. 0.27± AC.

COBBOSSEECONTEE STREAM

CULVERT PIPE & DITCH SEE D.O.T. FILE NO. 6-190 (1976)

EXISTING DRAINAGE

CONST. & MAINT. EASE LIMITS

OUTLET DRAINAGE STRUCTURE STA. 73+68± RT.

TEMP. STRUCTURE FOR CONST.

LIMIT LINE

R/W IN COMMON WITH OTHERS

EXISTING CONST. & MAINT. EASE. LIMITS SEE D.O.T. FILE NO. 6-190 (1976)

PERPETUAL RIGHTS TO ENTER & MAINTAIN ALL CURBING INSTALLED-PROJ. NO. M-1021(1) D.O.T. FILE NO. 6-190 (1976) SEE SHEET NO. 6

NOTE: U.G. NATURAL GAS PIPELINE EASE. TO SUMMIT NATURAL GAS OF MAINE, INC. BOOK 11907, PAGE 73

APPROX. LOCATION GAS LINE

COBBOSSEE LEASING, L.L.C.
ITEM NO. (9)
CONST. & MAINT. EASE. = 209± S.F. (1)
TEMP. CONST. RIGHTS = 1286± S.F. (1)
TOTAL AREA = 2.0± AC. (TAX RECORD)

PC = STA. 74+24.80

BRIDGE STREET OVER COBBOSSEECONTEE STREAM

BRIDGE NO. 2101 WIN 018735.00

CONTROLLED ACCESS LIMIT

CONTROLLED ACCESS LIMIT LINE ALONG R/W LINE

CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE

NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "1" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

CURVE DATA #1
D = 76°26.84"
R = 5°17'31.3"
L = 20°48'54.4" Rt.
T = 1100.00'
E = 399.62'
R = 202.04'
18.40'

CURVE DATA #2
D = 219°55'0"
R = 73°24'35.4" Lt.
A = 500.00'
T = 64.66'
E = 17.05'

WATER STREET (WEST OF BRUNSWICK STREET)

KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 17, PAGE 73
3 RODS
1909

WATER STREET (EAST OF BRUNSWICK STREET)

KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 6, PAGE 96
WIDTH VARIES
1829
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 10, PAGE 206
NORTH LINE DOWNTOWN
1850
ALTERATION

BRIDGE STREET
GARDINER BOOK OF STREETS
VOL. 1, PAGES 68 & 136
3 RODS
D.O.T. FILE NO. 6-190 (1976)

BRUNSWICK AVENUE
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 1, PAGE 286
1804
4 RODS

S79°44'60.0"E

BEGIN WIN 018735.00
END WIN 018736.10

BOUNDARY SURVEY
CITY OF GARDINER TAX MAP 37
LOTS 103, 104, 106, 136 & 138
BY CAPITAL SUVEYING SERVICES, INC.
DATED OCTOBER 30, 2001

CITY OF GARDINER (OCCUPIED BY)
OWNER UNKNOWN
ITEM NO. (7)
CONST. & MAINT. EASE. = 402± S.F. (1)
TEMP. CONST. RIGHTS = 1796± S.F. (1)
TOTAL AREA = 0.05± AC. (CALC.)

CITY OF GARDINER
ITEM NO. (5)
SLOPE EASE. = 2017± S.F. (3)
CONST. & MAINT. EASE. = 340± S.F. (3)
TEMP. CONST. RIGHTS = 0.27± AC. (1)
TOTAL AREA = 2.85± AC. (TAX RECORD + CALC.)

ALSO SEE WIN 18736.00 + 18736.10

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

ANDREW T. WALLER
KARA A. WALLER
PARCEL NO. (1)
LAND TAKEN = 1980± S.F. (ENTIRE LOT)
BUILDINGS = (1)

TEMP. CONST. LIMITS

PCC = STA. 219+86.08

SURVEY PLAN OF LAND OF JOSEPH BUCCHIERE, JR. ET. AL. BY J.R. CURTIS DATED JUNE 1973 KENNEBEC COUNTY REGISTRY OF DEEDS PLAN BOOK 44, PAGE 52

PC = STA. 219+21.41

CITY OF GARDINER
ITEM NO. (15)
SLOPE EASE. = 1349± S.F. (1)
DRAINAGE EASE. = (1)
CONST. & MAINT. EASE. = 505± S.F. (1)
TEMP. CONST. RIGHTS = 1510± S.F. (1)
TOTAL AREA = 3360± S.F. (D.O.T. PROJ.)

TEMPORARY

TECH	CHECKED
D.W.B.	D.W.B.
D.W.B.	D.W.B.
P.N.S.	

ITEM
EXISTING CONDITION PLAN
FINAL RIGHT OF WAY
AREAS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
GARDINER
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK ____ PAGE ____ COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
	PCL. NO.1	COND.	1-11-17	12515	73

DAVID BERNHARDT
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "1"
U.S. ROUTE 201, ROUTES 9 & 126, BRIDGE STREET
GARDINER KENNEBEC COUNTY
FEDERAL AID PROJECT NO. STP-1873(500)-PART I + PART II

JULY 2018	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-466
SCALE 1" = 25'	SHEET 1 OF 3	

SHEET NUMBER
1
OF _

Filename: ...\00\ROW\MSTA\002_RWPLAN2.dgn Division: ROW Username: Don.Burns Date:10/31/2018

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Existing	Proposed	Existing	Proposed	Cut Line	Fill Line
Approx. Property Lines P.L.	Building / Clearing Limit Line CLL	Sanitary Sewer		Traveled Way		Stonewall	Retaining Wall
Existing Right of Way	Trees Conifer / Deciduous	Telephone Line	T	Ditch		Baseline 10+00 11+00 12+00	
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Electric Line	E	Catch Basin		Monument	Traverse Point
Control Of Access C.O.A.	Water Edge	Water Line	W	Manhole		Iron Rod Found IRF	Pipe Found IPF
New Right of Way	Ledge / Rock/Boulder	Underdrain Line		Sewer Manhole		Replacement Pin Set	
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Gas Line	G	Utility Pole			
New Temporary Rights	Sign / Well / Mailbox	Guardrail		Fire Hydrant			
New R/W Within Existing R/W		Culvert		Curbing			

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and recorded in
Plan Book _____, Page _____
Attest: _____
REGISTER

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.

25 0 25 50 75 100
Scale of Feet

OPERTIES, LLC
L NO. (8)
TAKEN = 432± S.F. (2) (PRESC. EASE.)
TAKEN = 0.07± AC. (2) (OTHER)
D TAKEN = 0.08± AC. (4)
AL LAND TAKEN = 504± S.F. (1)
DPE EASE. = (1)
AINAGE EASE. = 750± S.F. (1)
ONST. & MAINT. EASE. = 0.11± AC. (1)
EMP. CONST. RIGHTS = 0.69± AC. (TAX RECORD)
TOTAL AREA = 0.61± AC.
REM. AREA = 0.61± AC.

BEGIN B.L. SECT. II
SUMMER STREET
+50
17'±
29+00
N79°08'42.9"E
199.21'
80'±
LIMITS
TEMPORARY CONSTRUCTION
0.11± AC.
INLET DRAINAGE STRUCTURE
STA. 73+89± LT.
72.55'
750± S.F.
415± S.F.
0.07± AC.
MAINT. SLOPE
112±
462± (TOTAL)
37'
U.S. ROUTE 201
ROUTES 9 & 126
BRIDGE STREET
74+00
75+00
399.62'
STATE HIGHWAY "1"
STA. 75+54.19 STATE HIGHWAY "1" =
STA. 30+49.21 SUMMER STREET
END C.O.A.
P.L.
LIMIT LINE
EXISTING CONST. & MAINT. EASE. LIMITS
SEE D.O.T. FILE NO. 6-190 (1976)
R/W IN COMMON WITH OTHERS
PERPETUAL RIGHTS TO ENTER & MAINTAIN ALL CURBING INSTALLED-PROJ. NO. M-1021(1)
D.O.T. FILE NO. 6-190 (1976)
SEE SHEET NO. 6
APPROX. LOCATION GAS LINE
NOTE: U.G. NATURAL GAS PIPELINE EASE. TO SUMMIT NATURAL GAS OF MAINE, 11907, PAGE 73
BOOK
PC = STA. 74+24.80
PL
EASEMENT
LIMITS
1349± S.F.
199± S.F.
CONST. & MAINT. EASE.
OUTLET DRAINAGE STRUCTURE
STA. 73+68± RT.
TEMP. STRUCTURE FOR CONST. LINE
LOT LINE
1510± S.F.
CITY OF GARDINER
ITEM NO. (15)
SLOPE EASE. = 1349± S.F. (1)
DRAINAGE EASE. = (1)
CONST. & MAINT. EASE. = 505± S.F. (1)
TEMP. CONST. RIGHTS = 1510± S.F. (1)
TOTAL AREA = 3360± S.F. (D.O.T. PROJ.)
TEMP. CONST. LIMITS
980± S.F. (ENTIRE LOT)
0.27± AC.
419+86.08
EY PLAN OF LAND OF
PH BUCCHIERE, JR. ET. AL.
R. CURTIS
UNE 1973
UNTY REGISTRY OF DEEDS
TEMPORARY

CONTROLLED ACCESS LIMIT
CONTROLLED ACCESS LIMIT LINE
ALONG R/W LINE
R/W LINE
CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE
NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "1" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

CURVE DATA #2
I = 19°35'54"
D = 11°27'33"
R = 500.00'
L = 170.97'
T = 86.36'
E = 7.35'

CITY OF GARDINER
PARCEL NO. (10)
LAND TAKEN = 166± S.F. (1)
CONST. & MAINT. EASE. = 186± S.F. (1)
TEMP. CONST. RIGHTS = 917± S.F. (1)
TOTAL AREA = 0.5± AC. (TAX RECORD)
REM. AREA = 0.5± AC.

Utility pole (by others)
1/2" DIA REBAR PLS THEROUX
12" PCP
GRANITE
WHITE TAX BUILDING
STEEL GATE
OLD T.W. DISK
BLUESTONE
2" DIA STEEL
1" DIA IRON PIPE
6" PVC
BROWN OLD IRVING
SPEED LIMIT 25
NO PARKING
MCDONALDS
HANDICAP PARKING
MIDDLE STREET
DEADEND
CHERRY
DRIVE THROUGH
RESTAURANT
ISLAND AVE. BOYS
12" CMP
6" PVC
TEMPORARY CONSTRUCTION EASEMENT
TEMPORARY CONSTRUCTION LIMITS
186± S.F.
166± S.F.
917± S.F.
20'±
22'±
26'±
25'
35'±
54'
56'±
35'
25'±
31'
28'±
40'
C.B.
M.H.
S.A.H. NO. 4
HIGHLAND STREET
38+71
39+00
40+00
30+00
END B.L.
SUMMER STREET
76+00
77+00
399.62'
+56±
+23
+36
+43
+55
+01±
+05±
+15
78+00
END B.L.
79+00
80+00
PT = STA. 78+24.42
MAINE D.O.T.
HANNAFORD BROS. COMPANY, LLC

LINE AGREEMENT LOCATION
MADELINE BROWN, HEIRS
BY E. S. COFFIN
DATED JUNE 23, 1982
KENNEBEC COUNTY REGISTRY OF DEEDS
PLAN BOOK A-82036

SURVEY OF PROPOSED PURCHASE FOR
McDONALD'S CORPORATION
BY COFFIN ENGINEERING
DATED SEPTEMBER 5, 1979
KENNEBEC COUNTY REGISTRY OF DEEDS
PLAN BOOK D-80027

GRID
HORIZONTAL DATUM-US STATE PLANE NAD83 (2011)
ZONE-MAINE 2000 WEST
VERTICAL DATUM-NAVD 88
COMBINED FACTOR-1.000010

IRVING OIL PROPERTIES LLC
ITEM NO. (11)
CONST. & MAINT. EASE. = 299± S.F. (1)
TEMP. CONST. RIGHTS = 1478± S.F. (1)
TOTAL AREA = 0.27± AC. (TAX RECORD)
299± S.F.
232± S.F.
1478± S.F.
L.O.W.P.
CONST. & MAINT. EASE. LIMIT
TEMPORARY CONSTRUCTION
SLIMIT

MCDONALD'S CORPORATION
ITEM NO. (12)
TEMP. CONST. RIGHTS = 232± S.F. (1)
TOTAL AREA = 0.86± AC. (TAX RECORD)

COBBOSSEE LEASING, L.L.C.
ITEM NO. (9)
CONST. & MAINT. EASE. = 209± S.F. (1)
CONST. & MAINT. RIGHTS = 1286± S.F. (1)
TEMP. CONST. RIGHTS = 1286± S.F. (1)
TOTAL AREA = 2.0± AC. (TAX RECORD)

CURVE DATA #1
PI = 76+26.84
D = 5°17'31.3"
Δ = 20°48'54.4" Rt.
R = 1100.00'
L = 399.62'
T = 202.04'
E = 18.40'

WINTER STREET
GARDINER BOOK OF STREETS
VOL. 3, PAGE 85
3 RODS
1815
ALSO
D.O.T. FILE NO. 6-304 (1989)
D.O.T. FILE NO. 6-306 (1989)
D.O.T. FILE NO. 6-288 (1987)

SUMMER STREET
GARDINER BOOK OF STREETS
VOL. 3, PAGE 34
2 RODS
1844
ALSO
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 8, PAGE 177
2 RODS
1844
ALSO
RECORDS OF STREETS BOOK
PAGE 181
ALTERATION
1899

BRUNSWICK AVENUE
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 1, PAGE 286
1804
4 RODS

BRIDGE STREET
GARDINER BOOK OF STREETS
VOL. 1, PAGES 68 & 136
3 RODS
D.O.T. FILE NO. 6-190 (1976)

WATER STREET (WEST OF BRUNSWICK STREET)
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 17, PAGE 73
3 RODS
1909

WATER STREET (EAST OF BRUNSWICK STREET)
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 6, PAGE 96
WIDTH VARIES
1829
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 10, PAGE 206
NORTH LINE DOWNTOWN
1850
ALTERATION

BRIDGE STREET
OVER
COBBOSSEECONTEE STREAM
BRIDGE NO. 2101
WIN 018735.00

ITEM	CHECKED
EXISTING CONDITION PLAN	D.W.B.
FINAL RIGHT OF WAY	D.W.B.
AREAS	D.W.B.
TECH	P.N.S.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
GARDINER
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE		COUNTY RECORD			
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

DAVID BERNHARDT
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "1"
U.S. ROUTE 201, ROUTES 9 & 126, BRIDGE STREET
GARDINER KENNEBEC COUNTY
FEDERAL AID PROJECT NO. STP-1873(500) PART II

JULY 2018	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-466
SCALE 1" = 25'	SHEET 2 OF 3	

SHEET NUMBER
2
OF _

Filename: ...\00\ROW\MSTA\003_RWPLAN3.dgn Division: ROW Username: Don.Burns Date:10/31/2018

PLAN LEGEND

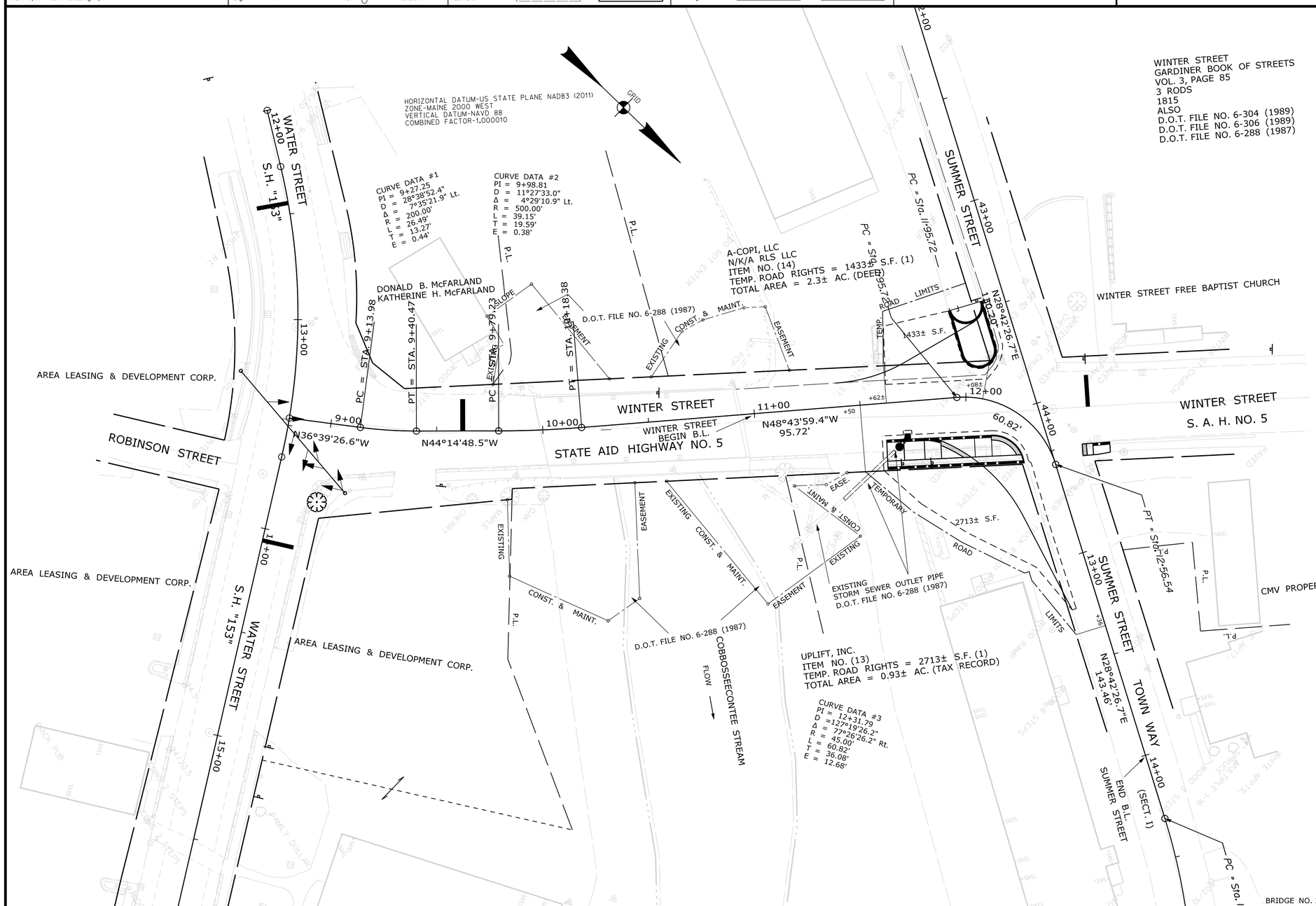
Town, County, State		New R/W Along Existing R/W		Existing	Proposed	Existing	Proposed
Approx. Property Lines	P.L.	Building	Clearing Limit Line CLL	Sanitary Sewer		Traveled Way	
Existing Right of Way		Trees Conifer	Deciduous	Telephone Line T	T	Ditch	
Limits of Wrought Portion	L.O.W.P.	Tree Line	Bush Line	Electric Line E	E	Catch Basin	
Control Of Access	C.O.A.	Water Edge		Water Line W	W	Manhole	
New Right of Way		Ledge	Rock/Boulder Flag Pole	Underdrain Line		Sewer Manhole	
New Easement		Fence CHAIN LINK	BARB WIRE STOCKADE	Gas Line G	G	Utility Pole	
New Temporary Rights		Sign	Well WELL Mailbox	Guardrail		Fire Hydrant	
New R/W Within Existing R/W				Culvert		Curbing	

Cut Line C C C	Fill Line F F F		
Stonewall	Retaining Wall		
Baseline 10+00	11+00	12+00	
Monument	Traverse Point		
Iron Rod Found IRF	Pipe Found IPF		
Replacement Pin Set			

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and recorded in
Plan Book _____, Page _____
Attest: _____
REGISTER

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.

25 0 25 50 75 100
Scale of Feet



R/W REFERENCES

WINTER STREET
GARDINER BOOK OF STREETS
VOL. 3, PAGE 85
3 RODS
1815
ALSO
D.O.T. FILE NO. 6-304 (1989)
D.O.T. FILE NO. 6-306 (1989)
D.O.T. FILE NO. 6-288 (1987)

BRIDGE STREET
GARDINER BOOK OF STREETS
VOL. 1, PAGE 68 & 136
3 RODS
D.O.T. FILE NO.6-190 (1976)

SUMMER STREET
GARDINER BOOK OF STREETS
VOL. 3, PAGE 34
2 RODS
1844
ALSO
KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 8, PAGE 177
2 RODS
1844
ALSO
RECORDS OF STREETS BOOK
PAGE 181
ALTERATION
1899

WATER STREET (WEST OF BRUNSWICK STREET)

KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 17, PAGE 73
3 RODS
1909

WATER STREET (EAST OF BRUNSWICK STREET)

KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 6, PAGE 96
WIDTH VARIES
1829

KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 10, PAGE 206
NORTH LINE DOWNTOWN
1850
ALTERATION

BRUNSWICK AVENUE

KENNEBEC COUNTY COMMISSIONERS RECORDS
VOL. 1, PAGE 286
1804
4 RODS

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	D.W.B.	P.N.S.
FINAL RIGHT OF WAY	D.W.B.	
AREAS	D.W.B.	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
GARDINER
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

DAVID BERNHARDT
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "1"
U.S. ROUTE 201, ROUTES 9 & 126, BRIDGE STREET
GARDINER KENNEBEC COUNTY
FEDERAL AID PROJECT NO. STP-1873(500) PART II

JULY 2018	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-466
SCALE 1" = 25'	SHEET 3 OF 3	

SHEET NUMBER
3
OF _

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Seventh Edition 2014 with 2015-2016 Interim Revisions.

DESIGN LOADING

Live Load ..... HL - 93 Modified

TRAFFIC DATA

Current (2018) AADT	9070
Future (2038) AADT	9980
DHV - % of AADT	12%
Design Hour Volume	1198
Heavy Trucks (% of AADT)	5%
Heavy Trucks (% of DHV)	4%
Directional Distribution (% of DHV)	55%
18 kip Equivalent P 2.0	186
18 kip Equivalent P 2.5	177
Design Speed (mph)	25

HYDROLOGIC DATA

Drainage Area	219 sq mi
Design Discharge (Q50)	5290 cfs
Check Discharge (Q100)	5910 cfs
Headwater Elevation (Q1.1)	3.8 ft
Headwater Elevation (Q25)	5.1 ft
Headwater Elevation (Q50)	6.7 ft
Headwater Elevation (Q100)	7.6 ft
Discharge Velocity (Q1.1)	4.5 fps
Discharge Velocity (Q50)	11.6 fps
Discharge Velocity (Q100)	11.6 fps
Mean Lower Low Water (MLLW)	-2.3 ft
Mean Low Water (MLW)	-2.1 ft
Mean Tide Level (MTL)	0.9 ft
Mean High Water (MHW)	3.9 ft
Mean Higher High Water (MHHW)	4.2 ft
2018 Predicted High Tide	5.3 ft

MATERIALS

Concrete:	
Curbs, Sidewalks, Transition Barriers, Closure Pours, & End Diaphragms	Class "LP"
Precast	Class "P"
All Other	Class "A"
Reinforcing Steel	
Plain	ASTM A 615/A 615M, Grade 60
Stainless Steel	ASTM A 995/A 995M, Grade 75
Micropile	ASTM A 615/A 615M, Grade 75 (All-thread)(Galvanized)
Structural Steel:	ASTM A 709, Grade 50
All Material (except as noted)	(Galvanized or Metalized)
High Strength Bolts	ASTM F3125, Grade A325, Type 1 (Galvanized)
Micropile Casing	API 5 CT, Grade N80

BASIC DESIGN STRESSES

Concrete, Class "A"	f 'c = 4,000 psi
Concrete, Class "LP"	f 'c = 5,000 psi
Precast Concrete, Class "P"	f 'c = 4,000 psi
Micropile Grout	f 'c = 5,000 psi
Reinforcing Steel	
ASTM A615, Grade 60	f y = 60,000 psi
ASTM A615, Grade 75	f y = 75,000 psi
ASTM A995, Grade 75	f y = 75,000 psi
Structural Steel:	
ASTM A 709, Grade 50	F y = 50,000 psi
ASTM F3125, Grade A325	F μ = 120,000 psi

GARDINER
KENNEBEC COUNTY
MAINE AVENUE BRIDGE
OVER
COBBOSSEECONTEE STREAM
ROUTE 24
FEDERAL AID PROJECT NO. STP-1873(600)
PROJECT LENGTH 0.05 mi.
BRIDGE NO. 3098

LIST OF DRAWINGS

Title Sheet	B1
General Plan	B2
Profile	B3
Boring Plans & Logs	B4-B11
Utility Plan	B12
Signing & Striping Plan	B13
Goemetry & Curb Plan	B14
Typical Sections	B15-B16
Abutment No. 1	B17-B18
Abutment No. 2	B19-B20
Northeast Retaining Wall	B21-B23
Precast Approach Slab	B24
Framing Plan & Structural Steel Details	B25-B26
Precast Bridge Units	B27-B30
Superstructure Plan & Details	B31-B32
End Diaphragm Details	B33-B34
Bridge Transition Barrier Details	B35-B38
Bridge Railing Details	B39-B40
Reinforcing Schedule	B41
Closure & Detour Plans	B42-B46
MOT Sign Summary	B47-B48
Lighting Details	B49
Right-of-Way Plan	B50-B52

UTILITIES

Central Maine Power Company
City of Gardiner (Sewer)
Gardiner Water District
Consolidated Communications
Summit Natural Gas
Spectrum

MAINTENANCE OF TRAFFIC

Short-term full bridge closure with detour to Bridge Street

PROJECT LOCATION	Located in the City of Gardiner 0.20 of a mile south of Route 27, carrying Route 24 over the Cobbosseecontee Stream. Lat./Long. 44°13'49.8" N 69°46'17.3" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Bridge Replacement and 170' of Approach Work

STP-1873(600) WIN 18736.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED — DATE 11/7/18
COMMISSIONER: [signature]
CHIEF ENGINEER: Angela Hall Taylor — 11-13-18

STATE OF MAINE — TIMOTHY W. MURPHY — No. 12941 — REGISTERED PROFESSIONAL ENGINEER

SIGNATURE [signature] — P.E. NUMBER 12941 — DATE 9-26-18

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	L. TIMBERLAKE
DESIGNER	T. MERRITT
CONSULTANT	STANTEC
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

GARDINER
MAINE AVENUE BRIDGE

TITLE SHEET

SHEET NUMBER
B1
OF B52

Filename:\MSTA\0B1_Title.dgn Username: kwight Division: BRIDGE Date:9/26/2018

Filename: ...\MSTA\0B2_GeneralPlan.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

CURVE DATA #5
PI = a 156+50.59
D = 5°43'46.5"
Δ = 5°21'15.4" Lt.
R = 1000.00'
L = 93.45'
T = 46.76'
E = 1.09'

Sta. 155+50
Continue WIN 18736.10 Lt. of 10.00' Lt.
Begin WIN 18736.00 Rt. of 10.00' Lt.

COBBOSSEECONTEE STREAM

ARCADE

ROUTE 24

To Richmond

To Farmingdale

N40°41'26.54"E

N83°26'57.61"E

N11°54'17.82"W

N78°05'42.18"E

Multi-use Bridge (WIN 18736.10)

Granite Revetment (Typ.)

Terminal Thrie Beam

Guardrail Thrie Beam - Single Rail

Bridge Transition Type I, R-21'

Terminal Thrie Beam

Guardrail Thrie Beam - Single Rail

Bridge Transition Type I, R=9'

Connect to Existing Pipe

Multi-Use Path

Curb Ramp Detectable Warning Field (Typ.)

Alter Catch Basin to Manhole

Remove Tree

12" RCP Class III

Pavement Cut Line (Typ.)

24" RCP Class III Remove

18" Opt. III Remove Catch Basin

18" UD Type 'C'

15" UD

6" UD

CB-20

CB-21

CB-22

CB-23

CB-24

MH-2

CBYS

Slope to Drain

1 STY WF BUILDING

CONC 4 STEPS

1 STEPS BEAM

TRESPASSING WELLNESS CONECTION

Proposed Retaining Wall

Repair Existing Channel Wall

1.5H:1V Heavy Riprap (Typ.)

Remove Tree

Sta. 5+27.00
Continue WIN 18736.10
End WIN 18736.00

31" W-Beam Guardrail - Mid-Way Splice Tangent Terminal (TL-2)

31" W-Beam Guardrail - Mid-Way Splice - Single Faced

Bridge Transition (Asymmmetrical) Type 1A

Remove Building No. 3 Foundation

Terraced Granite Revetment

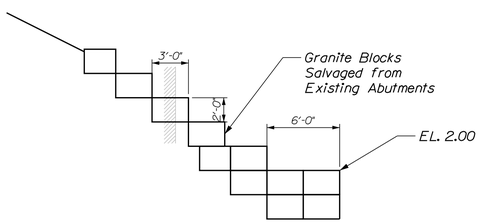
See WIN 18736 General Notes

78'-0"

℄ Brg., Abut. No. 1
Sta. 3+67.00

℄ Brg., Abut. No. 2
Sta. 4+45.00

Flow



TERRACED GRANITE REVETMENT
SECTION A-A

PLAN

25 0 25 50
Scale of Feet

NOTES

1. Reference Utility Plan for Proposed Relocations of Existing Utilities (Water, Street Lighting, Aerial Electric, Cable and Telecommunications).

2. See WIN 18736.10 plans for Multi-Use Path details.

3. Upper 6' of Heavy Riprap slopes shall have 6" layer of Loam Woodwaste Mulch Mix with Special Seed Mix and Seeding Hydromulch Medium. Fill slopes without riprap adjacent to Cobbosseecontee Stream shall have 12" loam with Special Seed Mix and Seeding Hydromulch Medium. See Typical Sections and Special Provisions Sections 615, 618, and 621.

LEGEND

– – – – – = Project Match Line

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BRIDGE NO. 3098

BRIDGE PLANS

		DATE	SIGNATURE
PROJ. MANAGER	L. TIMBERLAKE		
DESIGN-DETAILED	LSF	SEPT 2018	
CHECKED-REVIEWED	DDT\TEK	SEPT 2018	
DESIGN2-DETAILED2	PLP	SEPT 2018	
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

DATE

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

GENERAL PLAN

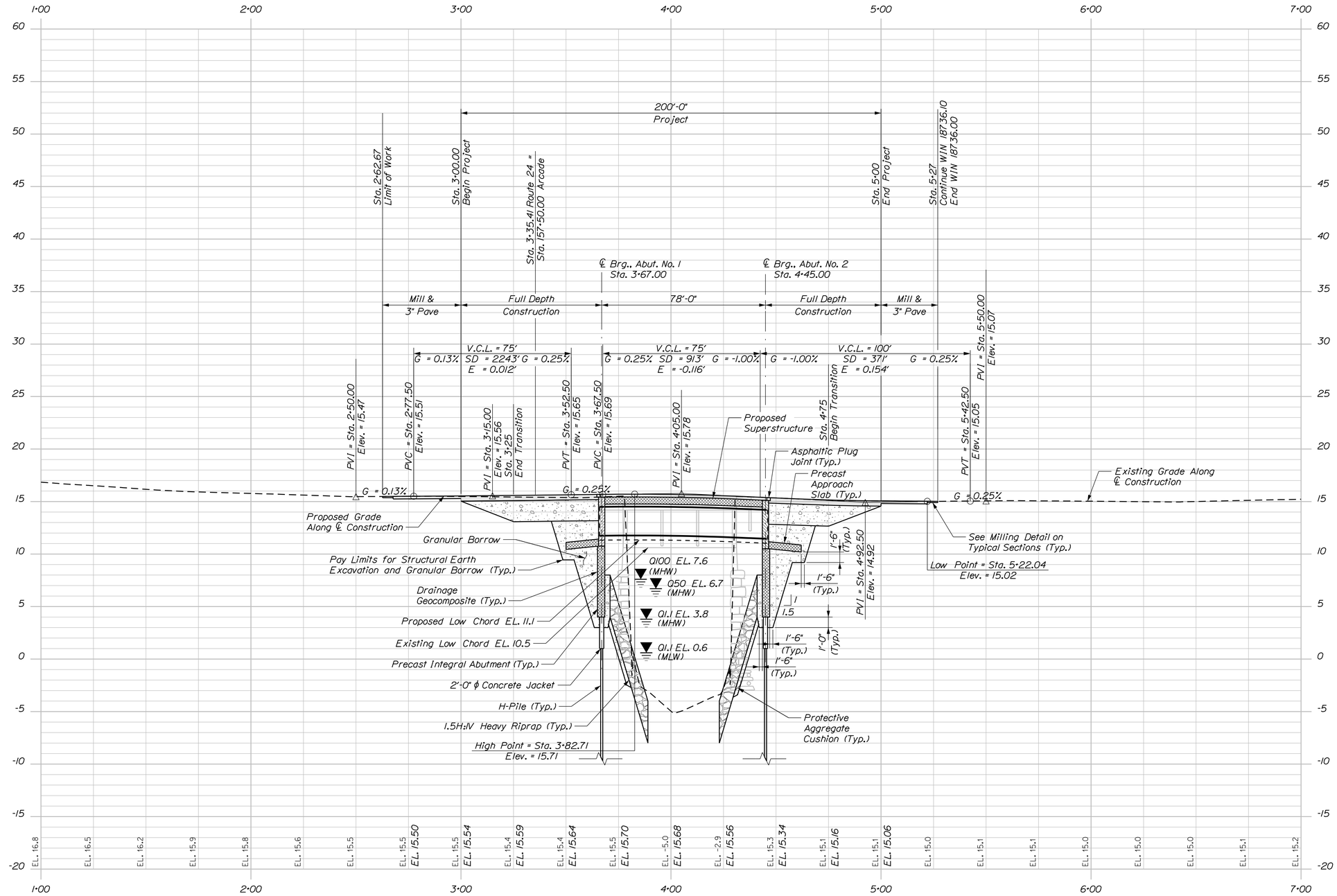
SHEET NUMBER

B2

OF B52

Stantec

Username: dataylor
Date:9/27/2018
Division: BRIDGE
Filename: ...\MSTA\0B3_Profile.dgn



MAINE AVENUE PROFILE

Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00
BRIDGE NO. 3098

BRIDGE PLANS

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	LSF	DDT/LSF	SEPT 2018
CHECKED-REVIEWED	DDT/TEK	LEM/TWM	SEPT 2018
DESIGN2-DETAILED2	PLP	PLP	SEPT 2018
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

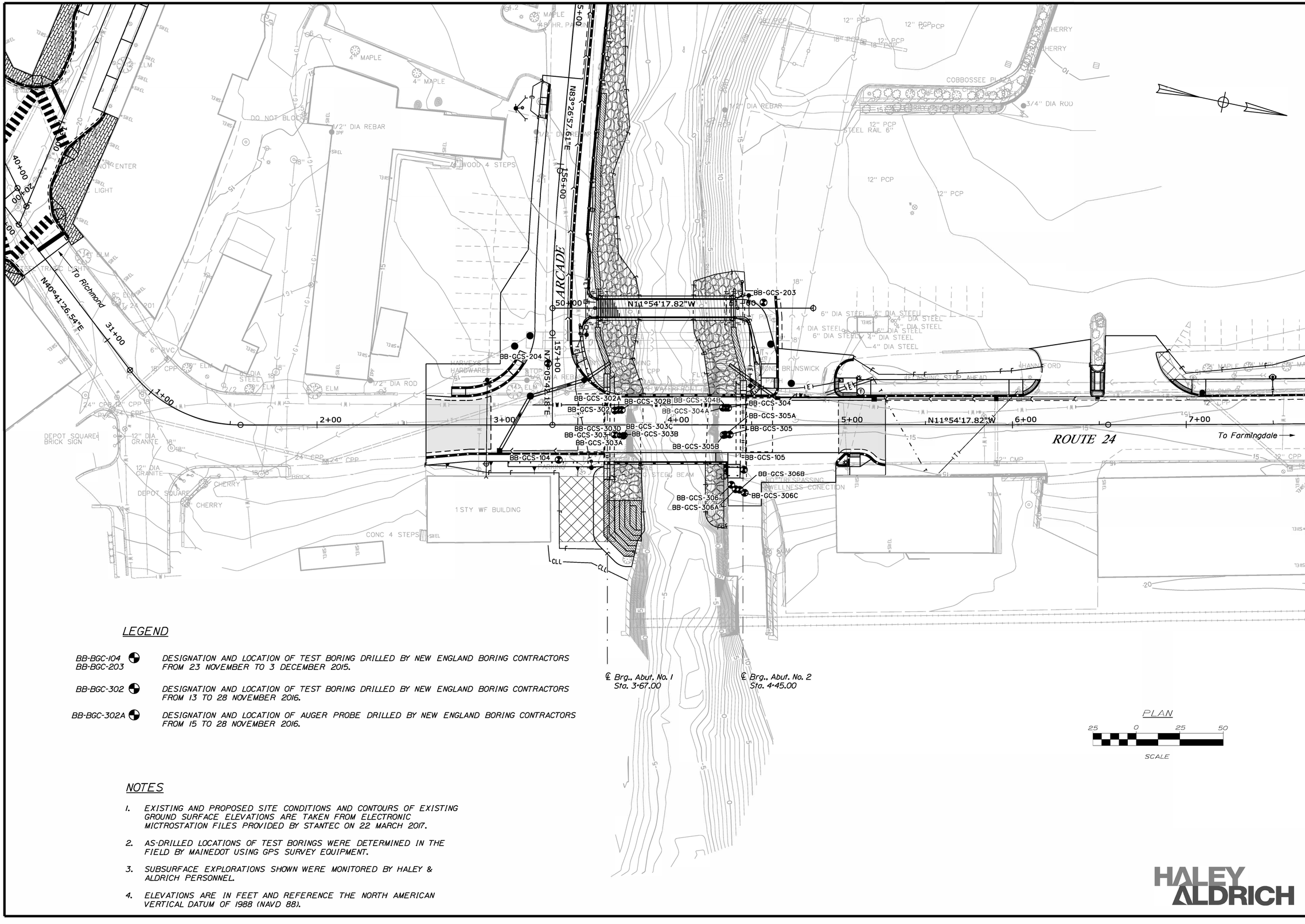
PROFILE

SHEET NUMBER

B3

OF B52

Filename: ...\0B4_Maine Ave Site and Expo Plan.dgn Division: BRIDGE Username: dataylor Date:9/25/2018



LEGEND

BB-BGC-104 BB-BGC-203	DESIGNATION AND LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS FROM 23 NOVEMBER TO 3 DECEMBER 2015.
BB-BGC-302	DESIGNATION AND LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS FROM 13 TO 28 NOVEMBER 2016.
BB-BGC-302A	DESIGNATION AND LOCATION OF AUGER PROBE DRILLED BY NEW ENGLAND BORING CONTRACTORS FROM 15 TO 28 NOVEMBER 2016.

PLAN

25 0 25 50

SCALE

NOTES

1. EXISTING AND PROPOSED SITE CONDITIONS AND CONTOURS OF EXISTING GROUND SURFACE ELEVATIONS ARE TAKEN FROM ELECTRONIC MICTROSTATION FILES PROVIDED BY STANTEC ON 22 MARCH 2017.
2. AS-DRILLED LOCATIONS OF TEST BORINGS WERE DETERMINED IN THE FIELD BY MAINEDOT USING GPS SURVEY EQUIPMENT.
3. SUBSURFACE EXPLORATIONS SHOWN WERE MONITORED BY HALEY & ALDRICH PERSONNEL.
4. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BRIDGE NO. 3098

BRIDGE PLANS

STATE OF MAINE · WAYNE A. CHADBOURNE · No. 10620 · LICENSED PROFESSIONAL ENGINEER

	DATE	BY
SIGNATURE	JUN 2018	KFP
P.E. NUMBER 10620	JUN 2018	KFP
DATE 9/26/2018		

PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	EAF	KFP
CHECKED-REVIEWED	EAF	KFP
DESIGN2-DETAILED2	EAF	KFP
DESIGN3-DETAILED3	EAF	KFP
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

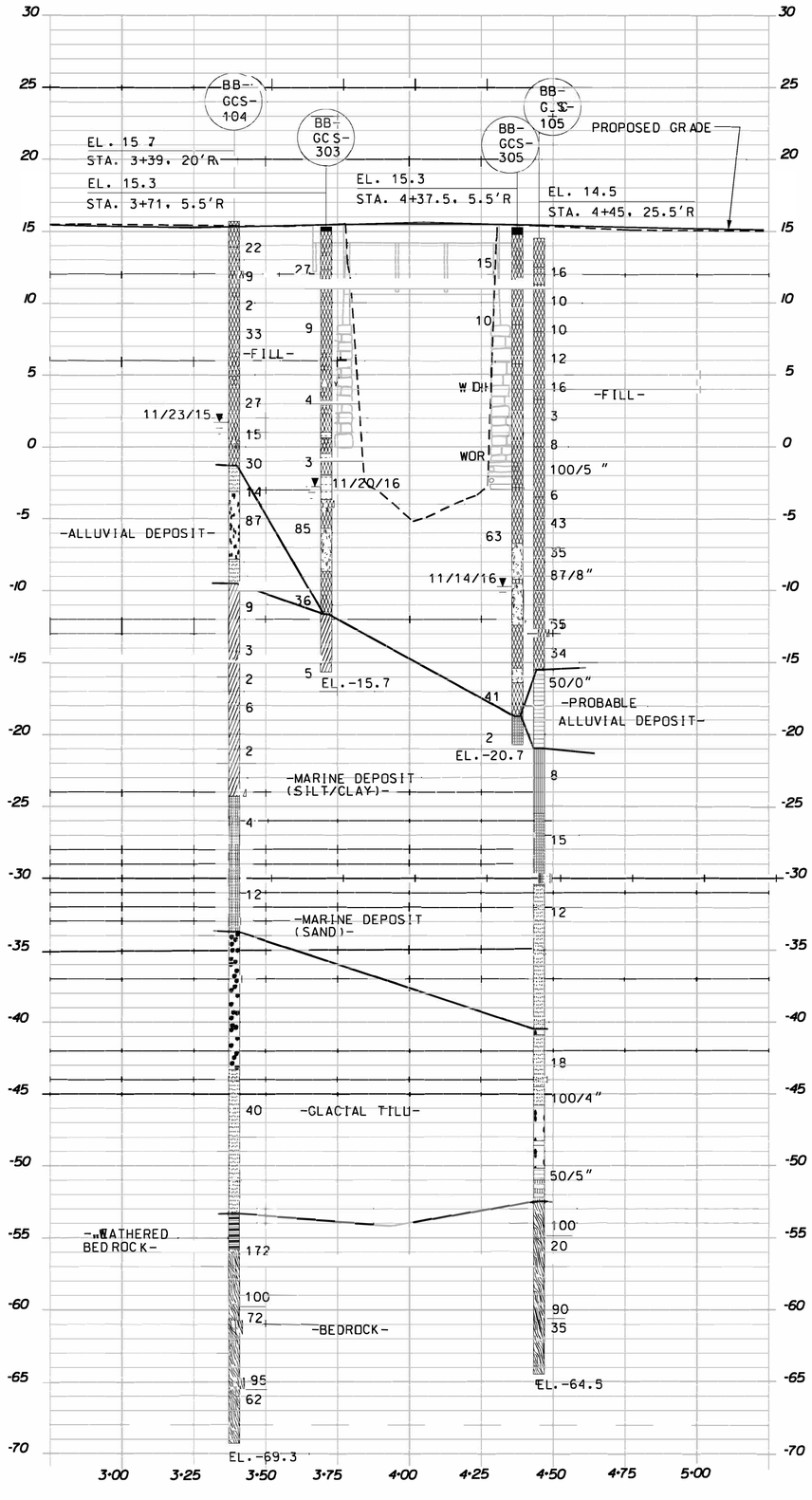
MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOCATION PLAN

SHEET NUMBER

B4

OF B52

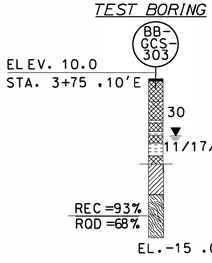


NOTES

1. THE SUBSURFACE PROFILE IS LOCATED ALONG THE EAST SIDE OF THE PROPOSED BRIDGE. STATION AND OFFSET REFERENCE BASELINE STATIONING ALONG THE CENTERLINE OF THE MAINE AVENUE BRIDGE.
2. EXISTING AND PROPOSED GROUND SURFACE ELEVATIONS AND BRIDGE STRUCTURE/SUBSTRUCTURE GEOMETRY WERE TAKEN FROM THE ELECTRONIC FILES PROVIDED BY STANTEC, INC. ON 10 JANUARY 2017.
3. THE "AS DRILLED" TEST BORING LOCATIONS AND ELEVATIONS WERE DETERMINED BY MAINEDOT USING GPS SURVEY EQUIPMENT.
4. LINES REPRESENTING CHANGES IN STRATA ARE BASED ON LINEAR INTERPOLATION BETWEEN SUBSURFACE EXPLORATIONS. THESE INTERPRETED STRATA LINES DO NOT REPRESENT ACTUAL FIELD CONDITIONS OTHER THAN AT SPECIFIC EXPLORATION LOCATIONS. ACTUAL FIELD CONDITIONS ALONG THE SUBSURFACE PROFILE WILL VARY FROM THOSE SHOWN.
5. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
6. TEST BORINGS WERE ADVANCED USING CASED WASH METHODS BY A COMBINATION OF DRIVING AND SPINNING CASING.

LEGEND

TEST BORING



- TEST BORING DESIGNATION
- GROUND SURFACE ELEVATION, STATION, OFFSET DISTANCE AND DIRECTION FROM CENTERLINE
- CORRECTED SPT N-VALUE (N60)
- WATER LEVEL MEASUREMENT DURING DRILLING, DATE MEASURED
- STRATA INTERFACE
- PERCENT RECOVERY
  PERCENT ROCK QUALITY DESIGNATION
- ELEVATION (FT)
  BOTTOM OF EXPLORATION

STRATA SYMBOLS

- BITUMINOUS CONCRETE
- FILL
- SILTY SAND
- POORLY GRADED SAND
- WOOD
- GRANITE
- SILTY CLAY
- GRAVEL
- WELL GRADED SAND WITH SILT
- WELL GRADED SAND
- SILT
- COBBLES BOULDERS
- WEATHERED BEDROCK
- BEDROCK

PROFILE

Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BRIDGE NO. 3098

BRIDGE PLANS

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — LICENSED PROFESSIONAL ENGINEER

SIGNATURE	
P.E. NUMBER	10620
DATE	9/26/2018

PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	MLS	JUN 2018
CHECKED-REVIEWED	KFP	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

B5

OF B52

Filename: ...\0B5_Maine Ave ISP 2017.dgn Division: BRIDGE Username: dotaylor Date:9/25/2018

Filename: ...\086_18765-6_Maine Ave Boring Logs.dgn Division: BRIDGE Username: dotaylor Date:9/25/2018

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-104
PIN: 18736

Driller:	New England Boring Contractors	Elevation (ft.)	15.7
Operator:	M. Porter	Datum:	NAVD 88
Logged By:	K. Russ/H. Hollauer	Rig Type:	Mobile B53 Track
Date Start/Finish:	11-23-2015/11-23-2015	Drilling Method:	HW/NW Drive
Boring Location:	El 142507; N509800	Casing ID/OD:	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		Hammer Type:	Automatic☐ Hydraulic☐ Rope & Cathead☒

Auger ID/OD: --
Sampler: Split Spoon-1.375 in. ID
Hammer Wt./Fall: SS-1400/30-HW/NW3008/
Core Barrel: NQ-2.0 in. ID
Water Level ▽: 14.0

Definitions:
D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; MU = Unsuccessful Thin Wall Tube Sample attempt; V = Vane Shear Test; MV = Unsuccessful Vane Shear Test
R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; MW = 3 inch casing advanced with 3 inch drive hammer
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; Hammer Efficiency Factor=60%/%-uncorrected
Su(ave) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log
0	1D	24/15	0.0 - 2.0	4/12/10/6	22	22	HW	13.9	
	2D	24/9	2.0 - 4.0	6/6/3/2	9	9			
5	3D	24/14	4.0 - 6.0	1/1/1/3	2	2			
	4D	24/12	6.0 - 8.0	21/24/9/9	33	33			
10	MD	1/0	10.0 - 10.1	66(1.0")	97	97		4.9	
	5D	24/1	10.1 - 12.1	15/17/50/9					
	6D	24/8	13.0 - 15.0	9/9/6/9	15	15			
15	7D	24/5	15.0 - 17.0	7/12/18/8	30	30		-1.3	
	8D	24/10	17.0 - 19.0	11/4/10/26	14	14		-3.1	
	9D	24/12	19.0 - 21.0	18/35/52/60	87	87			
20								7.8	
25	10D	24/10	25.0 - 27.0	17/5/4/5	9	9	HW	-9.5	
	MU	0/0	28.0 - 28.0						
	11D	24/24	28.0 - 30.0	1/1/2/3	3	3			
	MU	0/0	30.0 - 30.0						
30	12D	24/24	30.0 - 32.0	1/1/1/2	2	2			
	MU	0/0	32.0 - 32.0						
	13D	24/24	32.0 - 34.0	2/3/3/4	6	6			
35	14D	24/24	35.0 - 37.0	2/WOH/2/2	2	2			
							NW	-24.3	
40	15D	24/24	40.0 - 42.0	4/2/2/2	4	4			
45	16D	24/12	45.0 - 47.0	5/7/5/5	12	12			
50								-33.7	

Visual Description and Remarks

- Dark brown, moist, medium dense, fine SAND, little medium sand, trace coarse sand and gravel, poorly graded -FILL-(SP) PID=0.4ppm — 1.8
- Dark brown, moist, medium dense, silty fine to coarse SAND, little gravel, contains brick, shells and plastic -FILL-(SM) PID=0.0ppm
- Dark brown, wet, loose, silty fine to coarse SAND, little gravel, contains brick, shells and plastic -FILL-(SM) PID=0.0ppm
- Dark brown, wet, soft, fine sand SILT, trace fine gravel, contains brick, coal, ash and roots -FILL-(ML) PID=0.3ppm
- Brown, wet, hard, fine sandy SILT, trace medium to coarse sand and gravel, contains brick, concrete, wood, roots -FILL-(ML) PID=0.3ppm
- Note: Split spoon refusal at 10.0 ft. Advanced roller bit to 10.8 ft. PID=0.3ppm — 10.8
- Dark brown, wet, medium dense, fine sandy GRAVEL, little silt, trace medium to coarse sand, loosely bonded -FILL-(GP-GM) PID=0.0ppm
- Dark brown, wet, medium dense, silty GRAVEL, trace fine to coarse sand, loosely bonded -FILL-(GM) PID=0.0ppm
- Dark brown, wet, medium dense, coarse GRAVEL, little silt, trace fine to coarse sand and fine gravel, loosely bonded -FILL-(GM) PID=0.0ppm — 17.0
- Gray, wet, medium dense, medium to fine SAND, little coarse sand, silt and fine gravel, layers of wood chips throughout sample -ALLUVIAL DEPOSIT-(SP) PID=0.0ppm
- Note: Rock in tip of split spoon sampler. — 18.8
- Gray, wet, very dense, coarse GRAVEL, little fine sand, trace silt, trace medium to coarse sand, loosely bonded -ALLUVIAL DEPOSIT-(GP) PID=0.0ppm — 23.5
- Grayish brown, wet, loose, fine SAND, little medium sand, trace silt, coarse sand and fine to coarse gravel, loosely bonded — 25.2
- Olive-gray, wet, stiff silty CLAY, trace coarse gravel -MARINE DEPOSIT-(CL)
- Note: Attempted 3 in. diameter tube sample at 28.0 ft, no penetration or recovery.
- Olive-gray, wet, soft, silty CLAY -MARINE DEPOSIT-(CL)
- Note: Attempted 3 in. diameter tube sample at 30.0 ft, no penetration or recovery. Vane shear test attempted at 31.0 ft, no penetration, vane refusal.
- Gray, wet, very soft, silty CLAY, trace organic seams -MARINE DEPOSIT-(CL)
- Note: Attempted 3 in. diameter tube sample at 32.0 ft, no penetration.
- Gray, wet, medium stiff, silty CLAY -MARINE DEPOSIT-(CL)
- Gray, wet, very soft to soft, silty CLAY, little fine sand at approximately 36.5 ft. -MARINE DEPOSIT-(CL)
- Gray, wet, very loose, fine SAND, little silt and clay -MARINE DEPOSIT-(SP-SM) — 40.0
- Gray-brown, wet, medium dense, fine SAND, trace silt, poorly graded -MARINE DEPOSIT-(SP)
- Note: Casing refusal at 49.4 ft. Advanced roller bit to 50.0 ft. — 49.4

Laboratory Testing Results/ AASHTO and Unified Class

- G#365358 (2.0'-4.0') A-4, SM
- G#365329 (4.0'-6.0') A-4, SM
- (10.8-17.0'); WC=6.4%; ER=3,306 ohm-cm; pH=6.1/5.8 Sulfate=250 mg/kg Chloride=<100 mg/kg OC=.3%
- #365355 (28.0'-30.0') WC=33% LL=38, PL=1 PI=20
- #365356 (32.0'-34.0') WC=29% LL=36, PL=1 PI=19
- G#365340 A-2-4, SP-SM

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.

Page 1 of 2
Boring No.: BB-GCS-104

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-104
PIN: 18736

Driller:	New England Boring Contractors	Elevation (ft.)	15.7
Operator:	M. Porter	Datum:	NAVD 88
Logged By:	K. Russ/H. Hollauer	Rig Type:	Mobile B53 Track
Date Start/Finish:	11-23-2015/11-23-2015	Drilling Method:	HW/NW Drive
Boring Location:	El 142507; N509800	Casing ID/OD:	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		Hammer Type:	Automatic☐ Hydraulic☐ Rope & Cathead☒

Auger ID/OD: --
Sampler: Split Spoon-1.375 in. ID
Hammer Wt./Fall: SS-1400/30-HW/NW3008/
Core Barrel: NQ-2.0 in. ID
Water Level ▽: 14.0

Definitions:
D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; MU = Unsuccessful Thin Wall Tube Sample attempt; V = Vane Shear Test; MV = Unsuccessful Vane Shear Test
R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; MW = 3 inch casing advanced with 3 inch drive hammer
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; Hammer Efficiency Factor=60%/%-uncorrected
Su(ave) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log
50	R1	60/36	50.0 - 55.0				NW		
55	R2	24/14	55.0 - 57.0					-43.3	
60	17D	24/10	60.0 - 62.0	26/22/16/17	40	40	NW SPT-N		
65	R3	18/18	65.0 - 66.5						
	R4	6/6	67.0 - 67.5						
	R5	12/12	68.0 - 69.0					-53.3	
70	18D	18/12	70.0 - 71.5	26/54/118	172	172			
							NQ	-55.8	
75	R6	60/60	75.0 - 80.0	RQD = 72%					
80	R7	60/57	80.0 - 85.0	RQD = 62%					
85								-69.3	
90									
95									
100									

Visual Description and Remarks

- Cored through boulders from 50.0 to 57.0 ft.
- Note: Gray fine SAND in core barrel at 56.5 ft. Advanced roller bit to 60.0 ft. Encountered boulders to 59.0 ft. Strata change to sand at approximately 59.0 ft based on drill action. — 59.0
- Gray, wet, dense, fine to coarse SAND, little gravel, trace silt -GLACIAL TILL-(SW) Note: Bent casing at depth, removed NW casing and advanced boring using NW spun casing to 70.0 ft through interlayered soil and boulders (R3 through R5).
- Note: Drill action indicates Top of Weathered Bedrock at El. -53.3. — 69.0
- -WEATHERED BEDROCK- Note: Sample consists of weathered bedrock. Increased resistance at 71.5 ft during sampling. Advanced borehole with roller bit. Drill action indicates Top of Bedrock at El. -55.8. Advanced NW spun casing to 75.0 ft, begin NQ rock core. — 71.4
- Gray to light gray, fine to medium grained, very hard, slightly weathered SCHIST. Joints dipping at low angles, very close to moderately close, tight to open. Occasional silt infillings and chlorite deposits on joint surfaces, occasional plagioclase/quartz veins. Recovery=100% Rock Mass Quality=Fair R6 Core Times (min:sec): 75.0-76.0' (2:00); 76.0-77.0' (2:15); 77.0-78.0' (2:00); 78.0-79.0'(3:00); 79.0-80.0'(2:30)
- Similar to R7 Recovery=95% Rock Mass Quality=Fair R7 Core Times (min:sec): 80.0-81.0' (3:00); 81.0-82.0' (3:30); 82.0-83.0' (2:45); 83.0-84.0' (2:30); 84.0-85.0' (2:30)
- Bottom of Exploration at 85 0 feet below ground surface. — 85.0
- Note: 20.0 ft of HW casing abandoned in borehole from approximately 20.0 to 40.0 ft depth.

UC qp=4,721psi

Laboratory Testing Results/ AASHTO and Unified Class

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.

Page 2 of 2
Boring No.: BB-GCS-104

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-105
PIN: 18736

Driller:	New England Boring Contractors	Elevation (ft.)	14.5
Operator:	M. Porter	Datum:	NAVD 88
Logged By:	K. Russ/H. Hollauer	Rig Type:	Mobile B53 Track
Date Start/Finish:	12-01-2015/12-01-2015	Drilling Method:	HW/NW Drive
Boring Location:	El 142490; N509905	Casing ID/OD:	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		Hammer Type:	Automatic☐ Hydraulic☐ Rope & Cathead☒

Auger ID/OD: --
Sampler: Split Spoon-1.375 in. ID
Hammer Wt./Fall: SS-1400/30-HW/NW3008/
Core Barrel: NQ-2.0 in. ID
Water Level ▽: Not Observed

Definitions:
D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; MU = Unsuccessful Thin Wall Tube Sample attempt; V = Vane Shear Test; MV = Unsuccessful Vane Shear Test
R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; MW = 3 inch casing advanced with 3 inch drive hammer
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; Hammer Efficiency Factor=60%/%-uncorrected
Su(ave) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log
0	1D	24/21	0.5 - 2.5	10/8/8/5	16	16	H	14.5	
	2D	24/18	2.5 - 4.5	7/6/4/4	10	10		12.5	
	3D	24/10	4.5 - 6.5	5/6/4/5	10	10		12.0	
5	4D	24/5	6.5 - 8.5	5/6/6/8	12	12		11.3	
	5D	24/10	8.5 - 10.5	12/10/6/9	16	16			
10	6D	24/16	10.5 - 12.5	2/1/2/2	3	3		4.0	
	7D	24/20	12.5 - 14.5	2/3/5/7	8	8		3.3	
	8D	5/1	14.5 - 14.9	100(5.0")				0.0	
15	9D	24/5	16.0 - 18.0	3/4/2/4	6	6		-1.5	
	10D	24/9	18.0 - 20.0	10/12/31/19	43	43		-3.5	
20	11D	24/7	20.0 - 22.0	36/20/15/22	35	35			
	12D	14/7	22.0 - 23.2	46/37/50(2.0")	87	87			
25	MD	24/0	25.0 - 27.0	27/23/32/19	55	55	HW	-15.5	
	13D	24/8	27.0 - 29.0	15/13/21/44	34	34			
30	MD	0/0	30.0 - 30.0	50(0")					
35	14D	24/24	35.5 - 37.5	5/5/3/4	8	8		-21.0	
40	15D	24/9	40.0 - 42.0	9/6/9/7	15	15		-25.5	
45	16D	24/8	45.0 - 47.0	14/9/3/3	12	12		-30.5	
50									

Visual Description and Remarks

- -BITUMINOUS CONCRETE- — 0.2
- Dark brown, dry, medium dense, fine to medium SAND, little coarse sand and gravel, little silt, contains brick fragments -FILL-(SP) PID=0.0ppm — 0.6
- Light brown dry, medium dense, fine S AND, medium S trace coarse sand, little silt -FILL-(SP-SM) PID=0.0ppm — 2.5
- Brown to dark brown, dry, loose, silty SAND, little fine gravel -FILL-(SM) PID=0.3ppm — 3.2
- Light brown, dry, loose, poorly graded SAND, little silt, little fine gravel -FILL-(SP-SM) PID=0.6ppm
- Light brown, dry, loose, well graded SAND, some fine to coarse gravel, little silt -FILL-(SW-SM) PID=0.3ppm — 6.5
- Light brown, dry, medium dense, fine to coarse SAND, little silt, trace fine gravel -FILL-(SM) PID=0.8ppm — 10.5
- Olive-gray, wet, soft, silty CLAY -FILL-(CL) PID=48.0 ppm — 11.2
- Gray, wet, soft, fine sandy SILT -FILL-(ML) PID=53.2ppm
- Gray, wet, soft, fine sandy SILT -FILL-(ML) PID=47.0ppm — 14.5
- Wood, 1 in. recovery of gray silty CLAY, some gravel -FILL-(CL) PID=9.7ppm — 16.0
- Note: Advanced roller bit through wood 14.5 to 16.0 ft.
- Olive-gray, wet, medium stiff, silty CLAY, petroleum-like odor, contains saw dust -FILL-(CL) PID=5.6ppm — 18.0
- Brownish-gray, wet, dense, gravelly fine to coarse SAND, trace silt -FILL-(SW) PID=3.3ppm
- Brownish-gray, wet, dense, fine to coarse SAND, some gravel, trace silt -FILL-(SW) PID=1.6ppm
- Brownish-gray, wet, very dense, coarse GRAVEL, little medium to coarse sand and fine gravel, trace silt, poorly graded -FILL-(GP) No recovery, probable cobbles
- -FILL- Brownish-gray, wet, dense, fine to coarse SAND and GRAVEL, trace silt, well graded -FILL-(SW/GW) Note: Drill action and driller observations indicate strata change at 30.0 ft. — 30.0
- -PROBABLE ALLUVIAL DEPOSIT- (Based on drill action)
- Gray, wet, loose, sandy SILT -MARINE DEPOSIT-(ML) — 35.5
- Gray, wet, medium dense, silty fine SAND -MARINE DEPOSIT-(SM) — 40.0
- Gray, wet, medium dense, fine SAND, trace silt -MARINE DEPOSIT-(SP) — 45.0

Laboratory Testing Results/ AASHTO and Unified Class

- (20.0-29.0'); WC=2.7% ER=3,822 pH=6.3/6.1 Sulfate=912 mg/kg Chloride=<100 mg/kg OC=.3%
- G#365341 A-2-4, SM
- G#365342 A-4, SM
- G#365343 A-4, ML

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 tha time measurements were made.

Page 1 of 2
Boring No.: BB-GCS-105

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-105
PIN: 18736

Driller:	New England Boring Contractors	Elevation (ft.)	14.5
Operator:	M. Porter	Datum:	NAVD 88
Logged By:	K. Russ/H. Hollauer	Rig Type:	Mobile B53 Track
Date Start/Finish:	12-01-2015/12-03-2015	Drilling Method:	HW/NW Drive
Boring Location:	El 142490; N509905	Casing ID/OD:	HW-4 in. ID/NW-3 in. ID
Hammer Efficiency Factor: 0.6		Hammer Type:	Automatic☐ Hydraulic☐ Rope & Cathead☒

Auger ID/OD: --
Sampler: Split Spoon-1.375 in. ID
Hammer Wt./Fall: SS-1400/30-HW/NW3008/
Core Barrel: NQ-2.0 in. ID
Water Level ▽: Not Observed

Definitions:
D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; MU = Unsuccessful Thin Wall Tube Sample attempt; V = Vane Shear Test; MV = Unsuccessful Vane Shear Test
R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; MW = 3 inch casing advanced with 3 inch drive hammer
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); N-uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-uncorrected corrected for hammer efficiency; Hammer Efficiency Factor=60%/%-uncorrected
Su(ave) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log
50							HW		
55	MD	24/0	55.5 - 57.5	15/9/9/4	18	18		-40.5	
								-44.5	
60	17D	4/4	60.0 - 60.3	100(4.0")			NW SPT-N	-45.8	
								-48.1	
								-48.6	
65	18D	5/2	65.5 - 65.9	50(5.0")				-50.2	
								-51.0	
							NQ	-52.5	
70	R1	60/60	69.0 - 74.0	RQD = 20%					
75	R2	60/54	74.0 - 79.0	RQD = 35%			NQ		
80									
85									
90									
95									
100									

Visual Description and Remarks

- -COBBLE- — 55.0
- Note: Drill action indicates cobble. — 55.4
- No recovery — 59.0
- Note: Drill action indicates strata change at 59.0 ft.
- Gray, wet, very dense, gravelly fine SAND, little medium to coarse sand, trace silt, moderately bonded -GLACIAL TILL-(SP) — 60.3
- -BOULDER- Note: Drill action indicates boulders from approximately 60.3 to 62.8 ft and 63.1 to 64.7 ft. — 62.8
- -GLACIAL TILL- — 63.1
- -BOULDER- — 64.7
- -GLACIAL TILL- — 65.5
- Gray, wet, very dense, fine to coarse SAND, some gravel, little silt, moderately bonded -GLACIAL TILL-(SW-SM) Advanced roller bit to 69.0 ft, begin NQ rock core — 67.0
- Top of Bedrock at El. -52.5
- Gray, fine to coarse grained SCHIST, soft to hard, fresh to severely weathered. Joints very close, horizontal to moderately dipping, tight. Light gray-white gran. quartz veins 1 to 3 in. thickness. Highly weathered zone at approximately 71.3 to 71.8 ft. Recovery=100% Rock Mass Quality=Very Poor R1 Core Times (min:sec): 69.0-70.0' (1:30); 70-71.0' (1:30); 71.0-72.0' (1:40); 72.0-73.0'(1:50); 73.0-74.0' (1:40)
- Dark gray, fine to coarse grained SCHIST, soft to hard, fresh to moderately severely weathered. Joints very close to close, dipping at horizontal to low angles, tight, trace garnet, occasional quartz veins 1 to 2 in. thickness. Recovery=96% Rock Mass Quality=Poor R2 Core Times (min:sec): 74.0-75.0' (1:30); 75.0-76.0' (1:30); 76.0-77.0' (1:40); 77.0-78.0' (1:40); 78.0-79.0' (1:50) — 79.0
- Bottom of Exploration at 79.0 feet below ground surface.

Laboratory Testing Results/ AASHTO and Unified Class

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.

Page 2 of 2
Boring No.: BB-GCS-105

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BR DGE NO. 3098

BR DGE PLANS

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — PROFESSIONAL ENGINEER

PROJ. MANAGER	L. TIMBERLAKE	DATE
DESIGN-DETAILED	M.LS	SEPT 2018
CHECKED-REVIEWED	KFP	
DESIGN2-DETAILED2		SIGNATURE
DESIGN3-DETAILED3		10620
REVISIONS 1		P.E. NUMBER
REVISIONS 2		9/20/2018
REVISIONS 3		DATE
REVISIONS 4		
FIELD CHANGES		

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (1 OF 6)

SHEET NUMBER

B6

OF B52

Filename: ...\086_18765-6_Maine Ave Boring Logs.dgn Division: BRIDGE Username: dotaylor Date:9/25/2018

Maine Department of Transportation

Soil/Rock Exploration Log
UB CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-203
PIN: 18736

Driller:	New England Boring Contractors	**Elevation (ft.)**	14.3	**Auger ID/OD:**	HSA-2-1/4 in. ID
Operator:	M. Porter	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in. ID
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30
Date Start/Finish:	11-30-2015/11-30-2015	**Drilling Method:**	Auger	**Core Barrel:**	--
Boring Location:	E1142394; N509896	**Casing ID/OD:**	--	**Water Level *:**	13.5
Hammer Efficiency Factor:	0.6	**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 = Vane Shear Test; MV = Unsuccessful Vane Shear Test; My = Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
R = Rock Core Sample; BSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; N = Number of blows per foot; N = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); Su = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su(ult) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)
0	1D	24/12	0.0 - 2.0	5/6/8/6	14	14	HSA	
	2D	24/13	2.0 - 4.0	3/8/6/4	14	14		
5	3D	24/13	4.0 - 6.0	10/8/6/4	14	14		
	4D	24/2	6.0 - 8.0	5/4/3/5	7	7		
	5D	24/9	8.0 - 10.0	9/11/3/3	14	14		
10	6D	24/6	10.0 - 12.0	1/2/6/9/43	71	71		
	MD	24/0	12.0 - 14.0	4/4/5/4	9	9		
	7D	24/16	14.0 - 16.0	3/5/5/6	10	10		
15	8D	24/10	16.0 - 18.0	11/17/10/33	27	27		
20								
25								

Visual Description and Remarks

- Olive-brown, moist, medium dense, fine SAND, little silt, trace medium sand, trace fine gravel, poorly graded -FILL-(SP-SM) PID=0.1ppm — 1.8
- Olive-brown, dry, medium dense, fine SAND, some medium to coarse sand and gravel, little silt -FILL-(SW-SM) PID=0.1ppm — 3.6
- Olive-brown, dry, stiff, fine sandy SILT -FILL-(ML) PID=0.1ppm — 4.0
- Olive-brown, dry,medium dense, silty fine SAND, little medium to coarse sand, trace fine gravel -FILL-(SM) PID=0.1ppm
- Olive-brown, dry, loose, silty fine SAND, little medium sand, trace coarse sand, trace fine gravel -FILL-(SM) PID=0.4ppm — 5.8
- Olive-brown, dry, medium dense, silty fine SAND, little medium to coarse sand, trace coarse gravel -FILL-(SM) PID=0.5ppm — 8.5
- Olive-brown, dry, medium dense, fine to coarse sandy GRAVEL, trace silt -FILL-(GW) PID=2.6ppm — 10.6
- Black, moist, very dense, gravelly fine to coarse SAND, little silt, contains cardboard fabric -FILL-(SW-SM) PID=0.1ppm — 12.0
- No recovery, wet(split spoon sampler), wood fragment in spoon tip -FILL- Recovered 16 in. wood, strong gasoline-like odor PID=382.0ppm Similar to above PID=8.0ppm — 18.0
- Bottom of Exploration at 18.0 feet below ground surface.

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.

Page 1 of 1
Boring No.: BB-GCS-203

Laboratory Testing Results/ AASHTO and Unified Class

Maine Department of Transportation

Soil/Rock Exploration Log
UB CUSTOMARY UNITS

Project: Bridges Over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-204
PIN: 18736

Driller:	New England Boring Contractors	**Elevation (ft.)**	14.1	**Auger ID/OD:**	HSA-2-1/4 in. ID
Operator:	M. Porter	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in. ID
Logged By:	K. Russ	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30
Date Start/Finish:	11-30-2015/11-30-2015	**Drilling Method:**	Auger	**Core Barrel:**	--
Boring Location:	E1142456; N509782	**Casing ID/OD:**	--	**Water Level *:**	12.0
Hammer Efficiency Factor:	0.6	**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 = Vane Shear Test; MV = Unsuccessful Vane Shear Test; My = Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
R = Rock Core Sample; BSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; N = Number of blows per foot; N = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); Su = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su(ult) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)
0	1D	24/12	0.5 - 2.5	17/13/15/10	28	28	HSA	13.9
	2D	24/7	2.5 - 4.5	11/1/1/7/3	18	18		
5	3D	24/2	4.5 - 6.5	4/2/2/2	4	4		
	4D	24/3	6.5 - 8.5	2/3/11/16	14	14		
	5D	24/9	8.5 - 10.5	64/92/44/32	136	136		
10	6D	24/16	10.5 - 12.5	8/4/4/4	8	8		
	7D	24/24	12.5 - 14.5	5/5/4/5	9	9		
15								
20								
25								

Visual Description and Remarks

- -BITUMINOUS CONCRETE- — 0.2
- Brown, dry, medium dense, fine to coarse SAND, trace silt, little gravel, well graded -FILL-(SW) PID=0.0ppm Similar to 1D, except contains bituminous concrete pieces PID=0.3ppm — 3.6
- Brown, dry, medium dense, fine to coarse SAND, trace silt, trace fine gravel, well graded -FILL-(SW) PID=0.2ppm — 6.5
- Brown, dry, medium dense, sandy GRAVEL, trace silt, poorly graded, rock piece in tip of split spoon -FILL-(GP) PID=0.1ppm
- Light brown, dry, very dense, sandy GRAVEL, strong cement-like odor, poorly graded, contains concrete -FILL-(GP) PID=0.0ppm — 10.5
- Dark olive-brown, wet, medium stiff, SILT, little fine sand, trace gravel, contains roots, wood, glass, slight orgame odor -FILL-(ML) PID=0.0ppm
- Dark olive-brown, wet, stiff, fine sandy SILT, contains wood and organics -FILL-(ML) PID=0.0ppm — 13.9
- Gray, wet, loose, silty fine SAND -MARINE DEPOSIT-(SM) PID=0.0ppm — 14.5
- Bottom of Exploration at 14.5 feet below ground surface.

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.

Page 1 of 1
Boring No.: BB-GCS-204

Laboratory Testing Results/ AASHTO and Unified Class

Maine Department of Transportation

Soil/Rock Exploration Log
UB CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-302
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	15.4	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	SS-140#/30,IHWN/W-3008/
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30,IHWN/W-3008/
Date Start/Finish:	11-17-16/11-17-16	**Drilling Method:**	NW Drive	**Core Barrel:**	NQ-2.0 in.ID
Boring Location:	E1142472; N509826	**Casing ID/OD:**	NW-3.0 in.ID	**Water Level *:**	14.0
Hammer Efficiency Factor:	0.569	**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 = Vane Shear Test; MV = Unsuccessful Vane Shear Test; My = Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
R = Rock Core Sample; BSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; N = Number of blows per foot; N = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); Su = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su(ult) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)
0							SSA	14.8
	1D	24/14	1.0 - 3.0	24/16/18/12	34	32		
	2D	24/15	3.0 - 5.0	4/4/4/5	8	8		
5							NW Sdrv	
	3D	24/16	9.0 - 11.0	4/2/2/5	4	4		
10								
	4D	24/7	14.0 - 16.0	43/12/4/5	16	15		
15								
	5D	24/12	19.5 - 21.5	40/28/29/29	57	54		
20								
	6D	24/4	24.0 - 26.0	49/16/9/10	25	24		
25							NW Sdrv	
	7D	24/10	29.0 - 31.0	2/4/16/14	20	19		
30								
35								
40								
45								
50								

Visual Description and Remarks

- -BITUMINOUS CONCRETE- — 0.6
- Brown, dry, dense, fine to coarse SAND and GRAVEL, trace silt, well graded -FILL-(SW/GW) PID=0.0 ppm — 3.0
- Brown, dry to moist, medium stiff, SILT, little fine to coarse sand, trace gravel, contains ash, coal -FILL-(ML) PID=0.0 ppm
- Brown, moist, soft, SILT, some fine to coarse sand, trace gravel -FILL-(ML) PID=0.6 ppm — G#406888 (9.0'-11.0') A-4(0) ML
- Note: Wood in wash water and high resistance at approximately 13.8 ft. — 13.8
- -WOOD- PID=37 ppm
- Light brown, wet, medium dense, WOOD (5 in.) — 15.0
- Dark brown SILT (2 in.), trace organics in spoon tip -FILL-(ML) — 16.0
- -WOOD- Note: Increased resistance remains constant to approximately 17.5 ft. — 17.5
- Note: Less resistance from 17.5 to 18.0 ft - probable soil. — 18.0
- Note: Increased resistance from 18.0 to 19.5 ft. Wood observed in wash water — 19.5
- Gray-brown, wet, very dense, GRAVEL, some fine to coarse sand, trace silt, granite pieces, well graded -FILL-(GW) PID=0.0 ppm — 21.5
- Note: High resistance on drill head from 21. 5 to 24.5 ft.
- -PROBABLE GRANITE- — 24.5
- Gray, wet, medium dense, fine to coarse GRAVEL, trace medium to coarse sand, well graded -FILL-(GW) PID=0.0 ppm
- Note: First attempt, no recovery. Second attempt recovery 10 in. — 30.0
- Gray, wet, medium dense, fine SAND, little silt and gravel, trace organic layers -MARINE DEPOSIT-(SM) PID=0.0 ppm Note: Overdrove sampler on second attempt to 32.0 ft. — 32.0
- Bottom of Exploration at 32.0 feet below ground surface. No Refusal

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.

Page 1 of 1
Boring No.: BB-GCS-302

Laboratory Testing Results/ AASHTO and Unified Class

Maine Department of Transportation

Soil/Rock Exploration Log
UB CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-302A
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	15.5	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	--
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	--
Date Start/Finish:	11-17-16/11-17-16	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	--
Boring Location:	E1142472; N509828	**Casing ID/OD:**	--	**Water Level *:**	Not observed
Hammer Efficiency Factor:	--	**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 = Vane Shear Test; MV = Unsuccessful Vane Shear Test; My = Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
R = Rock Core Sample; BSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = weight of 140lb. hammer; WOR = weight of rods; N = Number of blows per foot; N = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); qp = Unconfined Compressive Strength (tsf); Su = Uncorrected = Raw field SPT N-value; Hammer Efficiency Factor = Annual Calibration Value; N60 = SPT N-value corrected for hammer efficiency
Su(ult) = 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

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)
0							SSA	14.9
5								13.5
10								10.0
15								-1.5
20								-4.6
25								

Visual Description and Remarks

- -BITUMINOUS CONCRETE- — 0.6
- Note: Observations below based on auger cuttings and drill action. -GRANULAR FILL- Note: Increased resistance at 2.0 ft. — 2.0
- Brown, fine to coarse GRAVEL, some fine to coarse sand, trace silt -PROBABLE FILL-(GW) — 5.5
- Note: Less resistance at 5.5 ft.
- -PROBABLE COHESIVE FILL- — 17.0
- Note: Drill action indicates change at 17.0 ft. Increased resistance on drill head. -PROBABLE GRANULAR FILL-
- Note: Augered into probable granite from 20.0 to 20.1 ft. — 20.1
- Bottom of Exploration at 20.1 feet below ground surface. Auger refusal at 20.1 ft

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.

Page 1 of 1
Boring No.: BB-GCS-302A

Laboratory Testing Results/ AASHTO and Unified Class

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BR DGE NO. 3098

BR DGE PLANS

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — PROFESSIONAL ENGINEER — LICENSED

P.E. NUMBER 10620

SIGNATURE

DATE 9/26/2018

PROJ. MANAGER	L. TIMBERLAKE	DATE	
DESIGN-DETAILED	MLS	BY	SEPT 2018
CHECKED-REVIEWED	KFP		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (2 OF 6)

SHEET NUMBER

B7

OF B52

HALEY ALDRICH

Filename: ...\OB6_18765-6_Maine Ave Boring Logs.dgn Division: BRIDGE Username: dotaylor Date:9/25/2018

Maine Department of Transportation — BB-GCS-302B

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-302B
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.5	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	--
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	--
Date Start/Finish:	11-17-16/11-17-16	Drilling Method:	Solid Stem Auger	Core Barrel:	--
Boring Location:	E1142471; N509829	Casing ID/OD:	--	Water Level*:	Dry
Hammer Efficiency Factor:	--	Hammer Type:	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; Su = Insitu Field Vane Shear Strength (psf); R = Rock Core Sample; Su(ave) = Lab Vane Shear Strength (psf)
MD = Unsuccessful Split Spoon Sample attempt; HSA = Hollow Stem Auger; Tv = Pocket Torvane Shear Strength (psf); MU = Unsuccessful Thin Wall Tube Sample attempt; WC = water content, percent
U = Thin Wall Tube Sample; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); V = Vane Shear Test; WOH = weight of 140lb. hammer; LL = Liquid Limit
N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MV = Unsuccessful Insitu Vane Shear Test attempt; WOR = weight of rods; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index
N60 = SPT N-uncorrected corrected for hammer efficiency; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	14.9		-BITUMINOUS CONCRETE- 0.6	
										Note: Observations below based on auger cuttings and drill action. Brown, fine to coarse SAND and GRAVEL -FILL-(SW)	
								12.8		2.7	
										Note: Probable cobble at 2.7 ft. -PROBABLE GRANULAR FILL-(SW)	
5								10.5		5.0	
										-PROBABLE BOULDER-	
								9.3		6.2	
										Bottom of Exploration at 6.2 feet below ground surface. Auger refusal at 6.2 ft	
10											
15											
20											
25											

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.

Page 1 of 1
Boring No.: BB-GCS-302B

Maine Department of Transportation — BB-GCS-303

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-303
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.3	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	Split Spoon-1.375 in.ID
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	SS-140#/30;NW-300#/24
Date Start/Finish:	11-20-16/11-20-16	Drilling Method:	NW Drive	Core Barrel:	NQ-2.0 in.ID
Boring Location:	E1142486; N509828	Casing ID/OD:	NW-3.0 in.ID	Water Level*:	18.1 ft
Hammer Efficiency Factor:	0.569	Hammer Type:	Automatic☑ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; Su = Insitu Field Vane Shear Strength (psf); R = Rock Core Sample; Su(ave) = Lab Vane Shear Strength (psf)
MD = Unsuccessful Split Spoon Sample attempt; HSA = Hollow Stem Auger; Tv = Pocket Torvane Shear Strength (psf); MU = Unsuccessful Thin Wall Tube Sample attempt; WC = water content, percent
U = Thin Wall Tube Sample; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); V = Vane Shear Test; WOH = weight of 140lb. hammer; LL = Liquid Limit
N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MV = Unsuccessful Insitu Vane Shear Test attempt; WOR = weight of rods; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index
N60 = SPT N-uncorrected corrected for hammer efficiency; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	15.0		-BITUMINOUS CONCRETE- 0.3	
	1D	24/18	1.0 - 3.0	19/19/9/8	28	27				Note: Brown, dry, fine to medium SAND, little coarse sand and gravel (SW) observed in auger cuttings from 0.5 to 1.0 ft. Brown, dry, medium dense, fine to coarse SAND, little silt, little gravel -FILL-(SW-SM) PID=0.0 ppm	
								12.3		3.0	
	2D	24/22	5.0 - 7.0	4/5/4/7	9	9				Note: Dark gray-brown sandy SILT (ML) observed in auger cuttings from 3.0 to 4.0 ft. Brown-gray, dry to moist, stiff, SILT, little clay, trace fine sand -FILL-(ML) (reworked native soil) PID=0.0 ppm	(5-12'); WC=22.0% ER=744 ohm-cm pH=7.39;9 Sulfate=115 mg/kg Chloride=100 mg/kg OC=1.2%
5											
	3D	24/22	10.0 - 12.0	WOH/2/2/2	4	4				Brown, moist, soft, silty CLAY, little fine sand -FILL-(CL) (reworked native soil) PID=0.0 ppm	
10											
	4D	24/22	14.3 - 16.3	4/1/2/5	3	3		1.0		-WOOD- 14.3	
								0.6		-WOOD- 14.7	
								-0.5		Dark brown, wet, soft, SILT, trace organics, organic odor -FILL-(ML)	
								-1.0		PID=0.0 ppm 15.8	
15								-2.0		-WOOD- 16.3	
										Note: Drill action indicates easy penetration from 16.3 to 17.3 ft. 17.3	
	5D	24/12	19.0 - 21.0	18/50/40/37	90	85		-3.7		Note: Increased resistance from 17.3 to 18.5 ft. Washed ahead of casing from 18.5 to 19.0 ft. Wood in wash water from 18.5 to 19.0 ft. -WOOD- 19.0	G#406889 (19.0'-21.0') A-1-a(1) GW-GM
								-5.7		Gray, wet, very dense, GRAVEL, some fine to coarse sand, trace silt, granite pieces -FILL-(GW-GM) PID=0.0 ppm 21.0	
20								-8.7		Note: High resistance from 21.0 to 24.0 ft, granite chips in wash water. -GRANITE- 24.0	
	6D	24/7	24.0 - 26.0	25/29/9/8	38	36		-11.7		Gray, wet, dense, GRAVEL, little fine to coarse sand, little silt, trace clay in spoon tip -FILL-(GW-GM) PID=0.0 ppm	
							SSA			Note: Drill action indicates less resistance at 27.0 ft. 27.0	
25											
	7D	24/24	29.0 - 31.0	4/2/3/2	5	5		-15.7		Gray, wet, medium stiff, silty CLAY -MARINE DEPOSIT-(CL)	
										31.0	
30										Bottom of Exploration at 31.0 feet below ground surface. No Refusal	
35											
40											
45											
50											

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.

Page 1 of 1
Boring No.: BB-GCS-303

Maine Department of Transportation — BB-GCS-303A

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-303A
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.3	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	--
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	--
Date Start/Finish:	11-21-16/11-21-16	Drilling Method:	Solid Stem Auger	Core Barrel:	--
Boring Location:	E1142485; N509834	Casing ID/OD:	--	Water Level*:	Dry
Hammer Efficiency Factor:	--	Hammer Type:	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; Su = Insitu Field Vane Shear Strength (psf); R = Rock Core Sample; Su(ave) = Lab Vane Shear Strength (psf)
MD = Unsuccessful Split Spoon Sample attempt; HSA = Hollow Stem Auger; Tv = Pocket Torvane Shear Strength (psf); MU = Unsuccessful Thin Wall Tube Sample attempt; WC = water content, percent
U = Thin Wall Tube Sample; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); V = Vane Shear Test; WOH = weight of 140lb. hammer; LL = Liquid Limit
N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MV = Unsuccessful Insitu Vane Shear Test attempt; WOR = weight of rods; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index
N60 = SPT N-uncorrected corrected for hammer efficiency; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	15.0		-BITUMINOUS CONCRETE- 0.3	
										Note: Observations below based on auger cuttings and drill action. Brown, dry, fine to medium SAND, some gravel, little coarse sand, trace silt -FILL-(SW) Note: Less resistance at 1.8 ft.	
								13.5		1.8	
										-PROBABLE COHESIVE FILL- 4.0	
								11.3		Dark brown -PROBABLE GRANULAR FILL-	
5											
								7.3		8.0	
										Note: Increased resistance at 8.0 ft.	
10											
								0.3		Note: Auger advancing at angle along possible back face of abutment. Increasing angle with depth. Terminate boring at 15.0 ft. Move boring 6 in. toward abutment face.	
										15.0	
15										Bottom of Exploration at 15.0 feet below ground surface. No Refusal	
20											
25											

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.

Page 1 of 1
Boring No.: BB-GCS-303A

Maine Department of Transportation — BB-GCS-303B

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine
Boring No.: BB-GCS-303B
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.4	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	--
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	--
Date Start/Finish:	11-21-16/11-21-16	Drilling Method:	Solid Stem Auger	Core Barrel:	--
Boring Location:	E1142485; N509834	Casing ID/OD:	--	Water Level*:	Dry
Hammer Efficiency Factor:	--	Hammer Type:	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; Su = Insitu Field Vane Shear Strength (psf); R = Rock Core Sample; Su(ave) = Lab Vane Shear Strength (psf)
MD = Unsuccessful Split Spoon Sample attempt; HSA = Hollow Stem Auger; Tv = Pocket Torvane Shear Strength (psf); MU = Unsuccessful Thin Wall Tube Sample attempt; WC = water content, percent
U = Thin Wall Tube Sample; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); V = Vane Shear Test; WOH = weight of 140lb. hammer; LL = Liquid Limit
N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MV = Unsuccessful Insitu Vane Shear Test attempt; WOR = weight of rods; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index
N60 = SPT N-uncorrected corrected for hammer efficiency; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	15.1		-BITUMINOUS CONCRETE- 0.3	SSA
										-CONCRETE- 1.5	
								13.9		Bottom of Exploration at 1.5 feet below ground surface. Auger refusal at 1.5 ft	
5											
10											
15											
20											
25											

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.

Page 1 of 1
Boring No.: BB-GCS-303B

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BRIDGE NO. 3098

BRIDGE PLANS

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — PROFESSIONAL ENGINEER — LICENSED

SIGNATURE
10620
P.E. NUMBER
9/26/2018
DATE

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	MLS	SEPT 2018
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (3 OF 6)

SHEET NUMBER
B8
OF B52

HALEY ALDRICH

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-303C
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	15.4	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	--
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	--
Date Start/Finish:	11-21-16/11-21-16	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	--
Boring Location:	E1142485; N509833	**Casing ID/OD:**	--	**Water Level*:**	Dry
Hammer Efficiency Factor:	--	**Hammer Type:**	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(ab) = Lab Vane Shear Strength (psf); MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); WC = water content, percent; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; LL = Liquid Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; PL = Plastic Limit; V = Insitu Vane Shear Test; WOR = weight of rods; PI = Plasticity Index; N_{60} = SPT N-uncorrected; corrected for hammer efficiency; G = Grain Size Analysis; $N_{60} = (N_{field} \times Hammer\ Efficiency\ Factor)/60$; N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	15.1		-BITUMINOUS CONCRETE- 0.3	
								12.9		Note: Observations below based on auger cuttings and drill action. Brown, dry, fine to coarse SAND, some gravel, trace silt -FILL-(SW) 2.5	
										-PROBABLE COHESIVE FILL- 4.0	
								11.4		-PROBABLE GRANULAR FILL-	
5											
								7.5		7.9	
								6.1		Note: Increased resistance on drill head from 7.0 to 9.3 ft. -PROBABLE GRANITE- 9.3	
10										Bottom of Exploration at 9.3 feet below ground surface. Auger refusal at 9.3 ft	
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Page 1 of 1

Boring No.: BB-GCS-303C

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-303D
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	15.3	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	--
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	--
Date Start/Finish:	11-21-16/11-21-16	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	--
Boring Location:	E1142486; E509831	**Casing ID/OD:**	--	**Water Level*:**	13.0
Hammer Efficiency Factor:	--	**Hammer Type:**	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(ab) = Lab Vane Shear Strength (psf); MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); WC = water content, percent; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; LL = Liquid Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; PL = Plastic Limit; V = Insitu Vane Shear Test; WOR = weight of rods; PI = Plasticity Index; N_{60} = SPT N-uncorrected; corrected for hammer efficiency; G = Grain Size Analysis; $N_{60} = (N_{field} \times Hammer\ Efficiency\ Factor)/60$; N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	15.3		Note: Observations below based on auger cuttings and drill action. Brown, dry, fine to coarse SAND, some gravel, trace silt -FILL-(SW) 3.5	
								11.8		Dark brown, dry, fine to medium SAND, little coarse sand, some gravel, little silt -PROBABLE FILL-(SW-SM) 7.5	
5								7.8		Dark brown SILT -PROBABLE FILL-(ML)	
								3.8		Note: Probable CLAY based on drill action. -PROBABLE COHESIVE FILL-(CL) 11.5	
10								-0.3		Note: Increased resistance from 15.6 ft to 16.4. -PROBABLE BOULDER- 16.4	
								-1.1		-PROBABLE GRANULAR FILL- 17.4	
15								-2.2		Note: Lower resistance from 17.5 to 21.0 ft. -PROBABLE COHESIVE FILL-	
								-5.7		21.0	
20										Note: Increased resistance from 21.0 to 23.7 ft. -PROBABLE GRANULAR FILL-	
								-8.4		23.7	
25										Bottom of Exploration at 23.7 feet below ground surface. Auger refusal at 23.7 ft	

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.

Page 1 of 1

Boring No.: BB-GCS-303D

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-304
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	15.3	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in.ID
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-1406/2O1H/W/W-3008/
Date Start/Finish:	11-15-16/11-16-16	**Drilling Method:**	HW/NW Drive	**Core Barrel:**	NQ-2.0 in.ID
Boring Location:	E1142457; N509889	**Casing ID/OD:**	HW-4.0 in.ID/NW-3.0 in.ID	**Water Level*:**	Not observed
Hammer Efficiency Factor:	0.569	**Hammer Type:**	Automatic☒ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(ab) = Lab Vane Shear Strength (psf); MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); WC = water content, percent; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; LL = Liquid Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; PL = Plastic Limit; V = Insitu Vane Shear Test; WOR = weight of rods; PI = Plasticity Index; N_{60} = SPT N-uncorrected; corrected for hammer efficiency; G = Grain Size Analysis; $N_{60} = (N_{field} \times Hammer\ Efficiency\ Factor)/60$; N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	14.8		-BITUMINOUS CONCRETE- 0.5	
	1D	24/12	1.0 - 3.0	4/11/10/13	21	20				Brown, dry, medium dense, fine to coarse SAND, some gravel, trace silt, well graded. -FILL-(SW-SM) PID=51.9 ppm	
5											
	2D	24/12	5.0 - 7.0	7/2/2/2	4	4					
								8.7		Brown, dry, loose, fine to coarse SAND, some gravel, trace silt, well graded. -FILL-(SW) PID=4.1 ppm 6.6	
										Light brown, moist, soft, sandy SILT, trace clay, strong petroleum-like odor -FILL-(ML)	
10	3D	24/0	10.0 - 12.0	2/1/2/8	3	3	HW Drive			No Recovery	
								2.8		12.5	
	4D	24/14	12.5 - 14.5	10/5/5/5	10	9				Brown-gray, wet, stiff, mottled, silty CLAY, little coarse sand and gravel, slight petroleum-like odor -FILL-(CL) (reworked native soil) PID=2.3 ppm	(12.5-21.0'); WC=16.1% ER=3,306 ohm-cm pH 6.6/6.2 Sulfate=173 mg/kg Chloride=500 mg/kg OC=1.25%
15	5D	24/10	15.0 - 17.0	7/6/5/8	11	10	NW Sam.			Note: 5 ft of casingbroke off in hole (10.0 to 15.0 ft). Relocate boring 1.0 ft north. Gray-brown, wet, stiff, silty CLAY, consists 3-in. brick and granite pieces -FILL-(CL) (reworked native soil) PID=0.0 ppm	
										Note: Spin NW casing from 15.0 to 35.0 ft.	
20	6D	24/5	19.0 - 21.0	3/6/11/17	17	16				Gray, wet, very stiff, silty CLAY, little fine to coarse sand, little gravel, consists brick pieces, wood fragments, granite pieces -FILL-(CL) (reworked native soil) PID=0.0 ppm	
								-6.7		22.0	
										Note: Spin NW casing through probable granite (based on contents of water return) from 22.0 to 23.8 ft -PROBABLE GRANITE-	
								-8.5		23.8	
								-8.7		Note: Wood in wash water at approximately 23.8 to 24.0 ft. 24.0	G#406890 (24.0'-26.0') A-1-a(0) GW GM
25	7D	24/10	24.0 - 26.0	45/39/35/26	74	70	NW Sam.			Gray, wet, very dense, sandy GRAVEL, little silt, granite pieces, wood fragments -FILL-(GW-GM) PID=0.0 ppm	
								-10.7			
								-11.7		Note: Granite chips in wash water. -PROBABLE GRANITE- 26.0	
										Note: Probable granular fill based on drill action from 27.0 to 29.0 ft. -PROBABLE GRANITE- 27.0	
30	8D	24/0	29.0 - 31.0	9/3/1/2	4	4		-14.2		Trace gray, wet, very loose, silty fine SAND, in spoon tip -FILL-(SM) PID=0.0 ppm 29.5	
										Note: Change at 29.5 ft based on driller observations.	
	9D	24/18	33.0 - 35.0	2/3/9/11	12	11				Gray, wet, medium dense, silty fine SAND with clayey sand layers, occasional silt lenses -MARINE DEPOSIT-(SM/SC) PID=0.0 ppm	
35								-19.7		35.0	
										Bottom of Exploration at 35.0 feet below ground surface. No Refusal	
40											
45											
50											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Page 1 of 1

Boring No.: BB-GCS-304

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-304A
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	15.3	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	--
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	--
Date Start/Finish:	11-15-16/11-15-16	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	--
Boring Location:	E1142458; N509886	**Casing ID/OD:**	--	**Water Level*:**	Dry
Hammer Efficiency Factor:	--	**Hammer Type:**	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(ab) = Lab Vane Shear Strength (psf); MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); WC = water content, percent; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; LL = Liquid Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; PL = Plastic Limit; V = Insitu Vane Shear Test; WOR = weight of rods; PI = Plasticity Index; N_{60} = SPT N-uncorrected; corrected for hammer efficiency; G = Grain Size Analysis; $N_{60} = (N_{field} \times Hammer\ Efficiency\ Factor)/60$; N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	14.7		-BITUMINOUS CONCRETE- 0.6	
										Note: Observations below based on auger cuttings and drill action. Brown, SILT with sand -FILL-(ML), petroleum-like odor 3.0	
								12.3		Brown -PROBABLE GRANULAR FILL-(SW), petroleum-like odor 6.6	
5								8.7		Bottom of Exploration at 6.6 feet below ground surface. Auger refusal at 6.6 ft	
10											
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Page 1 of 1

Boring No.: BB-GCS-304A

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BR DGE NO. 3098

BR DGE PLANS

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — PROFESSIONAL ENGINEER

P.E. NUMBER

SIGNATURE

10620

DATE

9/26/2018

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	KFP	SEPT 2018
CHECKED-REVIEWED	MLS	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (4 OF 6)

SHEET NUMBER

B9

OF B52

HALEY ALDRICH

Filename: ...\0B6_18765-6_Maine Ave Boring Logs.dgn Username: dotaylor Date:9/25/2018 Division: BRIDGE

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

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-304B
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.3	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	--
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	--
Date Start/Finish:	11-15-16/11-15-16	Drilling Method:	Solid Stem Auger	Core Barrel:	--
Boring Location:	E1 142458; N509888	Casing ID/OD:	--	Water Level*:	Not Observed
Hammer Efficiency Factor:	--	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
MV = Unsuccessful Insitu Vane Shear Test (no data)
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
MWOH = Weight of WOH plus weight of rods
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = SPT N or N60 corrected for hammer efficiency
Su = Insitu Field Vane Shear Strength (psf)
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = Hammer Efficiency Factor/60%*N-uncorrected
Su(ks) = 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

Sample Information: Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows (ft.) Shear Strength (psf) or RQD (%) | N-uncorrected | N 60 | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N 60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							S	14.8		-BITUMINOUS CONCRETE- 0.5	
							A			Note: Observations below based on auger cuttings and drill action.	
										Brown -GRANULAR FILL-(SW)	
5										6.6	
										Brown, sandy SILT -PROBABLE FILL-(ML)	
10										12.5	
										Brown to gray, silty CLAY, little sand -PROBABLE FILL-(CL)	
15											
20								-5.2		20.5	
										Bottom of Exploration at 20.5 feet below ground surface. Auger refusal at 20.5 ft	
25											

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.

Page 1 of 1
Boring No.: BB-GCS-304B

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

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-305
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.3	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	Split Spoon-1.375 in.ID
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	SS-140#/30;HW/NW-300#/
Date Start/Finish:	11-13/16/11-14/16	Drilling Method:	HW/NW Drive	Core Barrel:	NQ-2.0 in.ID
Boring Location:	E1142472; N509893	Casing ID/OD:	HW-4.0 in.ID/NW-3.0 in.ID	Water Level*:	25.0
Hammer Efficiency Factor:	0.569	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
MV = Unsuccessful Insitu Vane Shear Test (no data)
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
MWOH = Weight of WOH plus weight of rods
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = Hammer Efficiency Factor/60%*N-uncorrected
Su = Insitu Field Vane Shear Strength (psf)
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = Hammer Efficiency Factor/60%*N-uncorrected
Su(ks) = 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 (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0								14.8		-BITUMINOUS CONCRETE- 0.5	
	1D	24/10	1.0 - 3.0	16/8/8/8	16	15				Brown, dry, medium dense, fine to coarse SAND, some gravel, trace silt, well graded -FILL-(SW) PID=0.9 ppm	
5								8.5		6.8	
	2D	24/12	5.0 - 7.0	6/6/5/3	11	10				Brown, dry, loose, fine to coarse SAND, some gravel, trace silt, well graded -FILL-(SW) PID=0.5 ppm	
										Brown, dry, stiff SILT, trace fine sand (reworked) -FILL-(ML)	
10								5.8		9.5	
	3D	24/18	10.0 - 12.0	WOH/WOH/WOH/2						Note: Brown silty CLAY with sand and gravel observed in wash water at 9.5 ft. Olive-brown, wet, very soft, silty CLAY, trace fine sand -FILL-(CL) PID=0.0 ppm	
15	4D	24/18	15.0 - 17.0	WOR/WOR/WOR/ WOH						Gray, wet, very soft, silty CLAY, trace fine sand -FILL-(CL) PID=0.0 ppm	
								-2.8		18.1	
										Note: Drill action indicates change at 18.1 ft - clay with gravel in wash water, wood pieces.	
20	5D	24/16	20.0 - 22.0	30/27/39/33	66	63				Brown-gray, very dense, GRAVEL, some fine to coarse sand, trace silt, well graded, contains 2 to 3 in wood pieces -FILL-(GW) PID=2.7 ppm	
								-6.7		22.0	
										Note: Granular chips observed in wash water from 22.0 to 24.5 ft. Advanced roller bit ahead of casing to 25.0 ft. Drill action indicates probable granular fill from 24.5 to 24.8 ft. Probable granite from 24.8 to 25.1 ft.	
								-9.2		24.8	
25	R1	35/18	25.1 - 28.0					-9.5		Note: Advanced core barrel from 25.1 to 28.0 ft. R1 Core Times (min/sec): 25.1-26.5' (3:02); 26.7-27.7' (2:20); 27.7-28.0' (3:20) Recovered 18 in. of grani/quartzite. Observations of drill action during coring indicates intermittent granular soil.	16(6.0) N.W. Spun
	R2	56/0	26.0 - 30.7					-12.4		27.7	
										Note: Continue core from 28.0 to 30.7 ft. Drill action indicates gravel, no recovery. Losing water during R1 and R2.	
30								-15.4		30.7	
								-16.4		Note: Attempt split spoon sample at 30.7 ft. Could not advance sampler, probable granite(based on wash water contents) from 30.7 to 31.7 ft. Note: Advance roller bit to 32.0 ft.	
										31.7	
	6D	24/6	32.0 - 34.0	16/17/26/17	43	41				Brown-gray, wet, dense, GRAVEL, some fine to coarse sand -FILL-(GW) Note: Telescope NW casing to 34.0 ft.	
								-18.7		34.0	
35	7D	24/19	34.0 - 36.0	4/1/1/1	2	2				Gray, wet, very loose, fine SAND, some silt, trace clay -MARINE DEPOSIT-(SM)	G#406891 (34.0'-36.0') A 2-4(0) SM
								-20.7		36.0	
										Bottom of Exploration at 36.0 feet below ground surface. No Refusal	
40											
45											
50											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
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Page 1 of 1
Boring No.: BB-GCS-305

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

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-305A
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.4	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	--
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	--
Date Start/Finish:	11-15-16/11-15-16	Drilling Method:	Solid Stem Auger	Core Barrel:	--
Boring Location:	E1142473; N509891	Casing ID/OD:	--	Water Level*:	Not observed
Hammer Efficiency Factor:	--	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
MV = Unsuccessful Insitu Vane Shear Test (no data)
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
MWOH = Weight of WOH plus weight of rods
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = Hammer Efficiency Factor/60%*N-uncorrected
Su = Insitu Field Vane Shear Strength (psf)
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = Hammer Efficiency Factor/60%*N-uncorrected
Su(ks) = 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 (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							S	15.0		-BITUMINOUS CONCRETE- 0.4	
							A			Note: Observations below based on auger cuttings and drill action.	
										Brown fine to coarse SAND and GRAVEL -FILL-(SW)	
5								12		3.0	
										Brown -PROBABLE COHESIVE FILL-(ML)	
								10.4		5.0	
										Brown -PROBABLE GRANULAR FILL-(SW)	
10								5.9		9.5	
								5.6		Brown, clayey SILT with sand and gravel -PROBABLE FILL-(ML) 10.0	
										-PROBABLE COHESIVE FILL-	
15								-2.6		18.0	
										-PROBABLE WOOD-	
								-4.1		19.5	
20								-4.6		-PROBABLE GRANULAR FILL- 20.0	
										Bottom of Exploration at 20.0 feet below ground surface. Auger refusal at 20.0 ft	
25											

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.

Page 1 of 1
Boring No.: BB-GCS-305A

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

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-305B
PIN: 18736.00

Driller:	New England Boring Contractors	Elevation (ft.)	15.4	Auger ID/OD:	--
Operator:	C. Dupuis	Datum:	NAVD 88	Sampler:	--
Logged By:	M. Snow	Rig Type:	Mobile B53 Truck	Hammer Wt./Fall:	--
Date Start/Finish:	11-15-16/11-15-16	Drilling Method:	Solid Stem Auger	Core Barrel:	--
Boring Location:	E1142473; N509890	Casing ID/OD:	--	Water Level*:	Dry
Hammer Efficiency Factor:	--	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
MV = Unsuccessful Insitu Vane Shear Test (no data)
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR = weight of rods
MWOH = Weight of WOH plus weight of rods
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = Hammer Efficiency Factor/60%*N-uncorrected
Su = Insitu Field Vane Shear Strength (psf)
Tv = Pocket Torvane Shear Strength (psf)
qp = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N60 = SPT N-uncorrected corrected for hammer efficiency
N60 or N = Hammer Efficiency Factor/60%*N-uncorrected
Su(ks) = 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 (ft.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							S	15.0		-BITUMINOUS CONCRETE- 0.6	
							A			Note: Observations below based on auger cuttings and drill action.	
										Brown, granular -FILL-(SW)	
5								10.9		4.5	
								9.9		Brown -PROBABLE COHESIVE FILL-(ML) 5.5	
								9.4		Brown -PROBABLE GRANULAR FILL-(SW) 6.0	
10										Bottom of Exploration at 6.0 feet below ground surface. Auger refusal at 6.0 ft. Square granite corner piece in auger tip. Refusal on granite.	
15											
20											
25											

Remarks:

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Page 1 of 1
Boring No.: BB-GCS-305B

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1873(600)
WIN 18736.00
BRIDGE NO. 3098
BRIDGE PLANS

STATE OF MAINE · WAYNE A CHADBOURNE · No. 10620 · PROFESSIONAL ENGINEER · LICENSED

	DATE	BY
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	M.S	KFP
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	SEPT 2018	
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE
10620
P.E. NUMBER
9/26/2018
DATE

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (5 OF 6)

SHEET NUMBER
B10
OF B52

HALEY ALDRICH

Filename: ...\DB6_18765-6_Maine Ave Boring Logs.dgn Division: BRIDGE Username: dotaylor Date:9/25/2018

Filename: ...\0B6_18765-6_Maine Ave Boring Logs.dgn Division: BRIDGE Username: dotaylor Date:9/25/2018

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-306
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	13.8	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in.ID
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30;NW-300#/24
Date Start/Finish:	11-21-16/11-21-16	**Drilling Method:**	NW Spun	**Core Barrel:**	NQ-2.0 in.ID
Boring Location:	E1142501; N509900	**Casing ID/OD:**	NW-3.0 in.ID	**Water Level*:**	16.4
Hammer Efficiency Factor:	0.569	**Hammer Type:**	Automatic☒ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); LL = Liquid Limit; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index; V = Insitu Vane Shear Test; WOR = weight of rods; N60 = SPT N-uncorrected, corrected for hammer efficiency; G = Grain Size Analysis; MV = Unsuccessful Insitu Vane Shear Test attempt; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	13.6		0.2 -Dark brown, dry, very loose, firm to medium SAND, some gravel, trace coarse sand, trace silt, contains coal and ash -FILL-(SW) PID=0.0 ppm	
	1D	24/8	1.0 - 3.0	3/2/1/1	3	3					
5	2D	24/7	5.0 - 7.0	9/10 4 4/17	24	23	7/8" ID Split Spoon	8.8		5.0 -Dark brown, dry, medium dense, fine to coarse SAND, some gravel, trace silt, contains wood pieces (1 to 3-in. thick) -FILL-(SW)-WOOD- PID=0.0 ppm Note: Split NW casing through wood from 5.0 to 6.5 ft.	
								7.3		6.5 -GRANULAR FILL-	
10	R1	55/55	10.0 - 14.6				NQ Core	3.8		10.0 -CONCRETE-(Granite Aggregate 0.25 to 1 -in. diameter)	
15	R2	22/22	14.6 - 16.4							-CONCRETE-	
	3D	24/6	16.4 - 18.4	WOH(10.0)/1(9.0) -300(5.0)-				-2.6		16.4 Gray, wet, very dense, GRAVEL, some silt, little fine to coarse sand -FILL (GM) PID=0.00 ppm	
20								-4.6		18.4 Bottom of Exploration at 18.4 feet below ground surface. Refusal at 18.4 ft	
25											

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.

Page 1 of 1
Boring No.: BB-GCS-306

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-306A
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	13.7	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	--
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	--
Date Start/Finish:	11-28-16/11-28-16	**Drilling Method:**	NW Drive	**Core Barrel:**	--
Boring Location:	E1142503; N509903	**Casing ID/OD:**	NW-3.0 in.ID	**Water Level*:**	Dry
Hammer Efficiency Factor:	--	**Hammer Type:**	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); LL = Liquid Limit; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index; V = Insitu Vane Shear Test; WOR = weight of rods; N60 = SPT N-uncorrected, corrected for hammer efficiency; G = Grain Size Analysis; MV = Unsuccessful Insitu Vane Shear Test attempt; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	13.5		-BITUMINOUS CONCRETE- 0.2 Note: Observations below based on auger cuttings and drill action. Dark brown, dry, fine to coarse SAND, some gravel, trace silt, contains coal pieces	
5							NW Spun	8.0		5.7 Note: Increased resistance at 5.7 ft. Advance rollerbit ahead of casing. Losing water at 6.4 ft. Water returned at 6.9 ft. Granite and concrete chips observed in wash water -CONCRETE-(Granite Aggregate)	
								6.8		6.9 Bottom of Exploration at 6.9 feet below ground surface. Boring terminated in concrete	
10											
15											
20											
25											

Remarks:

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Page 1 of 1
Boring No.: BB-GCS-306A

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-306B
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	13.6	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	Split Spoon-1.375 in.ID
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	SS-140#/30;NW-300#/24
Date Start/Finish:	11-28-16/11-28-16	**Drilling Method:**	NW Drive/NW Spun	**Core Barrel:**	NQ-2.0 in.ID
Boring Location:	E1142502; N509905	**Casing ID/OD:**	NW-3.0 in.ID	**Water Level*:**	10.1
Hammer Efficiency Factor:	0.569	**Hammer Type:**	Automatic☒ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); LL = Liquid Limit; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index; V = Insitu Vane Shear Test; WOR = weight of rods; N60 = SPT N-uncorrected, corrected for hammer efficiency; G = Grain Size Analysis; MV = Unsuccessful Insitu Vane Shear Test attempt; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	13.4		-BITUMINOUS CONCRETE- 0.2 Note: Observed from auger cuttings from 0 to 5.0 ft. Dark brown, dry, fine to coarse SAND, some gravel, trace silt, contains coal and brick pieces	
								10.1		3.5 Note: Increased resistance at 3.5 ft. Spin NW casing to 4.0 ft. Advance roller bit to 5.0 ft. Observed granite chips and sand in wash water. -CONCRETE-(Granite Aggregate)	
5							NW Spun	6.8		6.8 Note: Advanced through concrete at 6.8 ft. Soil encountered from 6.8 to 7.0 ft. -CONCRETE-(Granite Aggregate)	
								6.6		7.0 Note: Probable soil from 10.0 to 11.6 ft based on drill action.	
10								3.6		10.0 -CONCRETE-(Granite Aggregate)	
								2.0		11.6 Note: Drill action indicates change at 13.5 ft to soil.	
15	1D	24/5	14.0 - 16.0	41/33/18/14	51	48		0.1 -0.4		13.5 Brown, wet, very dense -WOOD- 14.0	
	2D	24/10	16.0 - 18.0	6/5/46/14	51	48		-2.4		16.0 Gray-brown, wet, very dense, weathered rock pieces, some fine to medium sand, trace coarse sand, trace silt -FILL-(GW)	
20	3D	24/10	19.0 - 21.0	33/25/32/32	57	54		-7.9		Gray-brown, wet, very dense, GRAVEL, little fine to coarse sand, trace silt -FILL-(GW) 21.5 Note: Increased resistance from 21.5 to 24.0 ft. Granite chips observed in wash water.	
25	4D	24/13	24.0 - 26.0	29/18/3/4	21	20		-10.4		24.0 Gray, wet, dense, silty GRAVEL, little fine to coarse sand -FILL-(GM)	
								-11.4		25.0 Gray, wet, medium stiff, silty CLAY -MARINE DEPOSIT-(CL)	
30								-12.4		26.0 Bottom of Exploration at 26.0 feet below ground surface. No Refusal	
35											
40											
45											
50											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
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Page 1 of 1
Boring No.: BB-GCS-306B

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridges over Cobbosseecontee Stream
Location: Gardiner, Maine

Boring No.: BB-GCS-306C
PIN: 18736.00

Driller:	New England Boring Contractors	**Elevation (ft.)**	13.5	**Auger ID/OD:**	--
Operator:	C. Dupuis	**Datum:**	NAVD 88	**Sampler:**	--
Logged By:	M. Snow	**Rig Type:**	Mobile B53 Truck	**Hammer Wt./Fall:**	--
Date Start/Finish:	11-28-16/11-28-16	**Drilling Method:**	Solid Stem Auger	**Core Barrel:**	--
Boring Location:	E1142504; N509908	**Casing ID/OD:**	--	**Water Level*:**	Not observed
Hammer Efficiency Factor:	--	**Hammer Type:**	Automatic☐ Hydraulic☐		Rope & Cathead☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; Su = Insitu Field Vane Shear Strength (psf); Tv = Pocket Torvane Shear Strength (psf); Su(lab) = Lab Vane Shear Strength (psf); WC = water content, percent; MD = Unsuccessful Split Spoon Sample attempt; RC = Roller Cone; qp = Unconfined Compressive Strength (tsf); LL = Liquid Limit; U = Thin Wall Tube Sample; N-uncorrected = Raw field SPT N-value; PL = Plastic Limit; MU = Unsuccessful Thin Wall Tube Sample attempt; WOH = weight of 140lb. hammer; Hammer Efficiency Factor = Annual Calibration Value; PI = Plasticity Index; V = Insitu Vane Shear Test; WOR = weight of rods; N60 = SPT N-uncorrected, corrected for hammer efficiency; G = Grain Size Analysis; MV = Unsuccessful Insitu Vane Shear Test attempt; WOP = Weight of one person; N60 = (Hammer Efficiency Factor/60)*N-uncorrected; C = Consolidation Test

Sample Information

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	13.3		-BITUMINOUS CONCRETE- 0.2 Note: Descriptions below based on auger cuttings and drill action. Brown -GRANULAR FILL-(SW)	
5								3.5		10.0 Brown, SILT, little clay -PROBABLE FILL-(ML)	
10								-2.5		16.0 -PROBABLE WOOD-	
15								-3.0		16.5 Bottom of Exploration at 16.5 feet below ground surface. Auger refusal at 16.5 ft on wood	
20											
25											

Remarks:

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Page 1 of 1
Boring No.: BB-GCS-306C

HALEY ALDRICH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00
BRIDGE NO. 3098

BRIDGE PLANS

STATE OF MAINE — WAYNE A. CHADBOURNE — No. 10620 — REGISTERED PROFESSIONAL ENGINEER

PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	MLS	SIGNATURE
CHECKED-REVIEWED		10620
DESIGN2-DETAILED2		P.E. NUMBER
DESIGN3-DETAILED3		9/26/2018
REVISIONS 1		DATE
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

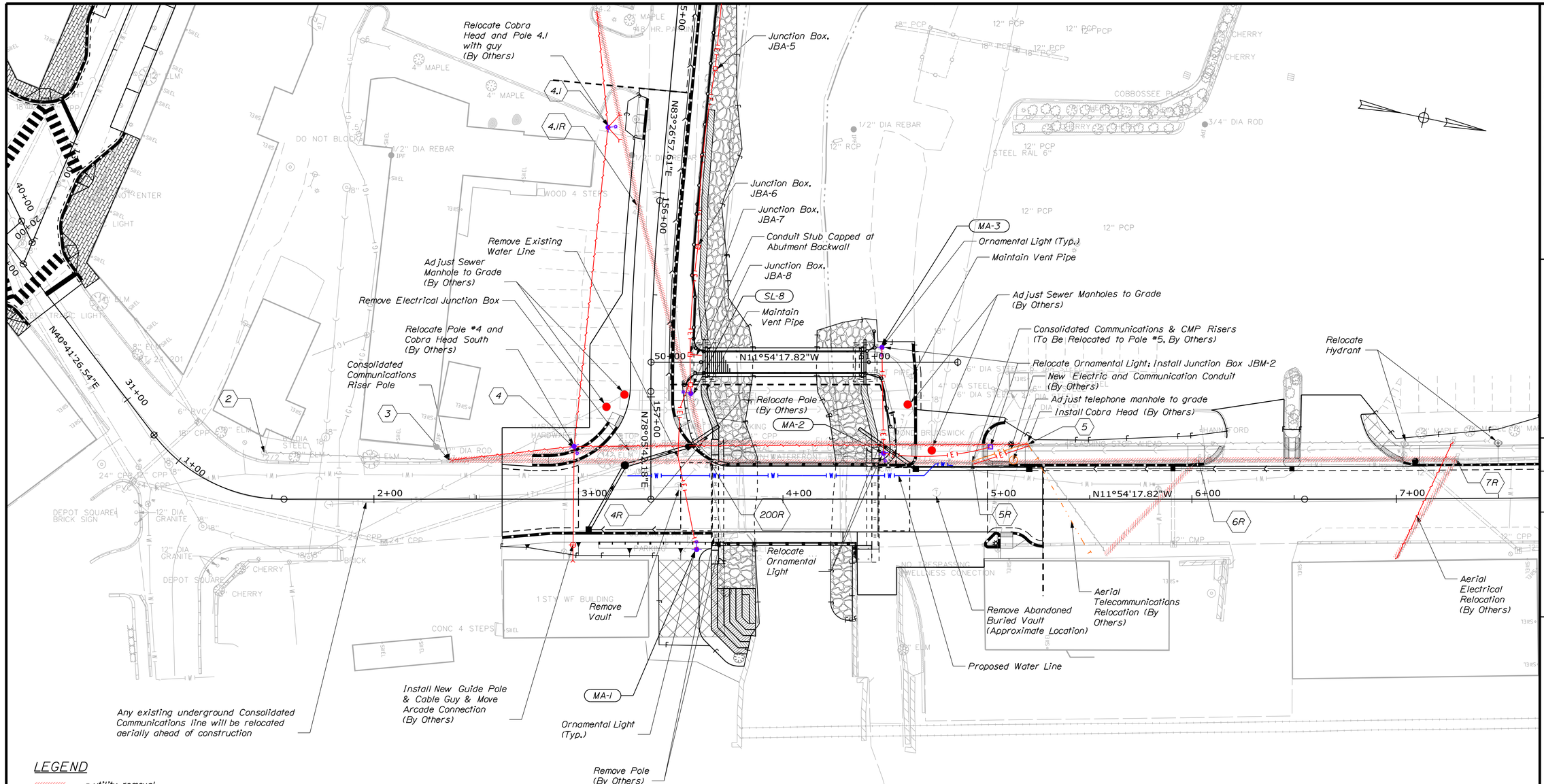
MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

BORING LOGS (6 OF 6)

SHEET NUMBER

B11

OF B52



LEGEND

- = utility removal
- ##-# — Light Fixture #
- # — Proposed Utility Pole
- #R — Existing Utility Pole to be Removed or Relocated

NOTES

1. Existing underground utilities are approximate.
2. The existing underground Consolidated Communications line below the bridge will be aerially relocated by others.
3. The existing street lighting conduit along the upstream existing fascia shall be removed after new ornamental lighting is installed. Electrical will be dead-ended at each end of the multi-use bridge with handholes and conduit stubs.
4. See Multi-Use Path General Plans for additional modifications to the lighting system along Arcade and Maine Ave.
5. See Water Plans for their relocation details.
6. See Sheet B49 for street lighting details.

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18735.00

BRIDGE PLANS

BRIDGE NO. 3098

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	LSF
CHECKED-REVIEWED	DDT\TEK
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

BY	DATE
DDT\LSF	SEPT 2018
LEM\TWM	SEPT 2018
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

UTILITY PLAN

SHEET NUMBER

B12

OF B52

Filename: ...\MSTA\B12_Utility_Plan.dgn Division: BRIDGE Username: dotaylor Date:9/27/2018

Filename: ...\B13_StripingPlan_Maine.dgn Username: dataylor Division: BRIDGE Date:9/27/2018

Sta. 155+50.00 10.00' Lt.
Continue WIN 18736.10 Lt. of 10.00' Lt.
Begin WIN 18736.00 Rt. of 10.00' Lt.

(Remove and Reset)

(Remove and Reset)

(Remove and Reset)

(Remove and Reset)

Brunswick 25
Richmond 11
Left at signal

DOWNTOWN
WATERFRONT PARK
LIBRARY

SOUTH

18'
6'

4" Single White Solid Line (Typ.)

Install City-Supplied Flood Gauge. See General Notes

Rectangular Rapid Flashing Beacon
Sta. 5+11.58, 26.98' Lt.
Sta. 5+04.10, 21.60' Rt.

4" Double Yellow Centerline

10'

Crosswalk (See Detail)

DYCL

6'

Sta. 2+62.67
Match Existing Striping

Sta. 5+27.00
Match Existing Striping

Sta. 5+27.00
Continue WIN 18736.10
End WIN 18736.00

(Remove & Reset)

(Remove & Reset)

NORTH

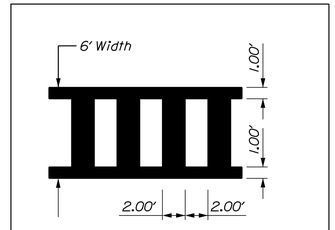
0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00
20+00 40+00 31+00 50+00 51+00 156+00 155+00

Notes:

1. The Contractor shall remove all existing pavement markings that conflict with proposed markings. Payment will be considered incidental to related Contract items.
2. Proposed sign locations, offset and height shall be in accordance with the Manual For Uniform Traffic Control Devices For Streets And Highways (MUTCD), latest edition.
3. Refer to Details for signs to be included with the Rectangular Rapid Flashing Beacon.

LEGEND

SWL	4" Solid White Line		Shared Straight & Right/Left Arrow Pavement Marking
DYCL	4" Double Yellow Center Line		Shared Straight & Right & Left Arrow Pavement Marking
BWL	4" Broken White Line		Rectangular Rapid Flashing Beacon (See Notes)*
	Right Arrow Pavement Marking		
	Left Arrow Pavement Marking		



Crosswalk Striping Detail
Not to Scale

Stantec

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BRIDGE NO. 3098 BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	L. TIMBERLAKE	
DESIGN-DETAILED	PLP	SEPT 2018
CHECKED-REVIEWED	LEM	SEPT 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

P.E. NUMBER

DATE

SIGNATURE

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

SIGNING AND STRIPING

SHEET NUMBER

B13

OF B52

Filename: ...\MSTA\B14_Geometry4.dgn Division: BRIDGE Username: dataylor Date:9/27/2018

PT = STA. 155+04.61

Sta. 155+50
Continue WIN 18736.10 Lt. of 10.00' Lt.
Begin WIN 18736.00 Rt. of 10.00' Lt.

N83°26'57.61"E

PC = STA. 156+03.83

CURVE DATA #1
PI = 1+22.10
D = 71°37'11.0"
Δ = 52°35'44.3" Lt.
R = 80.00'
L = 73.44'
T = 39.53'
E = 9.24'

CURVE DATA #5
PI = a 156+50.59
D = 5°43'46.5"
Δ = 5°21'15.4" Lt.
R = 1000.00'
L = 93.45'
T = 46.76'
E = 1.09'

8.00'
39.35
10.00'

Sta. 156+83.00 Arcade =
Sta. 50+00.00 Multi-Use Path Bridge

Sta. 4+85.51, 67.00' Lt. Maine Ave =
Sta. 51+50.00 Multi-Use Path Bridge

PC = STA. 6+55.13

N11°54'17.82"W

PT = STA. 156+97.28

N78°05'42.18"E

PT = STA. 1+56.00

PC = STA. 31+21.57
PC = STA. 0+82.56

N40°41'26.54"E

10.00'

5.00'

MAINE AVE.

Sta. 3+35.41 Route 24 =
Sta. 157+50.00 Arcade

Sta. 5+27.00
Continue WIN 18736.10
End WIN 18736.00

Notes:
1. See Section C Plans for curbing layout within the limits of the Multi-Use Path Project WIN 18736.10

PLAN

25 0 25 50
Scale of Feet

Item 609.11 Curb Type 1

Point	Length (Ft)	Radius (Ft)
709 To 710	4.00	-
712 To 713	7.90	-
719 To 720	9.00	-
722 To 723	16.85	-
723 To 724	15.56	-
725 To 726	58.50	-
842* To 843	6.00	-
842* To 846	6.00	-
844 To 845	5.66	-
845 To 847*	8.00	-

* Pt. 842 shall have a 0" reveal.
* No Curb Reveal, Flush with Pavement

Item 609.12 Curb Type 1 - Circular

Point	Length (Ft)	Radius (Ft)
701 To 702	31.46	40.00
705 To 706	26.74	34.00
714 To 715*	6.00	30.00
717 To 718	11.84	40.00
843 To 844	4.71	2.00
845 To 846	4.71	2.00
848 To 849	8.20	10.00

* No Curb Reveal, Flush with Pavement

Item 609.238I Terminal Curb Type 1 - 8 Foot - Circular

Point	Length (Ft)	Radius (Ft)
702 To 703	9.14	10.00
706 To 707	7.77	40.00
713 To 714	8.00	34.00
715 To 716	8.00	30.00
847 To 848	8.13	40.00

Item 609.238 Terminal Curb Type 1 - 8 Foot

Point	Length (Ft)	Radius (Ft)
700 To 701	8.00	-
704 To 705	8.00	-
708 To 709	8.00	-
710 To 711	8.00	-
721 To 722	8.00	-

CONTROL POINTS FOR MAINE AVE.

Point	Station	Offset	X Coord.	Y Coord.
700	2+77.41	16.00, Lt.	1142484.2359	509732.0540
701	2+85.41	16.00, Lt.	1142482.5855	509739.8819
702	3+13.73	27.75, Lt.	1142465.2518	509765.1640
703	3+19.39	34.90, Lt.	1142457.0864	509769.2327
704	2+77.41	22.00, Lt.	1142478.3649	509730.8163
705	2+85.41	22.00, Lt.	1142476.7146	509738.6442
706	3+09.48	31.98, Lt.	1142461.9809	509760.1339
707	3+14.30	38.06, Lt.	1142455.0404	509763.5924
708	155+74.86	10.00, Rt.	1142316.4965	509753.0072
709	155+66.86	10.00, Rt.	1142308.5487	509752.0946
710	155+62.86	10.00, Rt.	1142304.5748	509751.6382
711	155+54.86	10.00, Rt.	1142296.6270	509750.7256
712	3+45.41	56.00, Lt.	1142431.0692	509790.3403
713	3+45.42	48.10, Lt.	1142438.7947	509791.8744
714	3+46.52	40.20, Lt.	1142446.2990	509794.6778
715	3+48.69	34.62, Lt.	1142451.3123	509797.9560
716	3+53.20	28.03, Lt.	1142456.8332	509803.7272
717	3+55.92	25.10, Lt.	1142459.1344	509806.9970
718	3+65.50	18.22, Lt.	1142463.8923	509817.7880
719	4+46.50	16.00, Lt.	1142449.3552	509897.5038
720	4+55.50	16.00, Lt.	1142447.4986	509906.3102
721	2+62.67	18.13, Rt.	1142520.6745	509724.6696
722	2+70.64	17.45, Rt.	1142518.3589	509732.3271
723	2+87.43	16.00, Rt.	1142513.4810	509748.4575
724	3+03.00	16.00, Rt.	1142510.2693	509763.6915
725	3+07.00	16.00, Rt.	1142509.4442	509767.6055
726	3+65.50	16.00, Rt.	1142497.3763	509824.8472
842	5+06.39	24.00, Rt.	1142476.1409	509964.3537
843	5+00.39	24.00, Rt.	1142477.3787	509958.4828
844	4+98.97	20.59, Rt.	1142474.3296	509956.3947
845	5+02.97	16.59, Rt.	1142469.5905	509959.4835
846	5+06.39	18.00, Rt.	1142470.2700	509963.1160
847	5+12.39	16.00, Rt.	1142467.0753	509968.5744
848	5+19.69	19.17, Rt.	1142468.6671	509976.3708
849	5+27.00	22.33, Rt.	1142470.2563	509984.1797

Stantec

Acrade

Terminal Thrie Beam
Sta. 156+93.13, 15.38 Lt.
Guardrail Thrie Beam - Single Rail
Sta. 157+17.87, 19.21 Lt.
R 21.00'
Sta. 157+13.03, 39.73 Lt.
Pay Limits of Bridge Transition Type 1

Terminal Thrie Beam
Guardrail Thrie Beam - Single Rail
Sta. 4+55.15, 28.99 Lt.
Sta. 4+55.46, 25.88 Lt.
Sta. 4+53.96, 41.43 Lt.
Sta. 4+46.50, 25.00 Lt.
R 9.00'
Pay Limits of Bridge Transition Type 1

157+00
N78°05'42.18"E
157+50
N11°54'17.82"W
4+00
N11°54'17.82"W
Maine Avenue

Notes:
At the northwest and southwest corners of the bridge, the Bridge Transition Type 1 shall be modified to transition to Thrie Beam - Single Rail rather than W-beam as noted on the General Plan, at no additional payment.

Guardrail Layout

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1873(600)

WIN 18736.00

BRIDGE NO. 3098

BRIDGE PLANS

BY	DATE
E.JB	SEPT 2018
LEM/TWM	SEPT 2018

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	L. TIMBERLAKE
DESIGN-DETAILED	PLP
CHECKED-REVIEWED	LEM
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

MAINE AVENUE BRIDGE
COBBOSSEECONTEE STREAM
GARDINER KENNEBEC COUNTY

GEOMETRY & CURB PLAN

SHEET NUMBER

B14

OF B52