MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 4

CONTRACT 2022.07

INTERCHANGE IMPROVEMENTS
SACO (EXITS 35 & 36)
MM 34.7 TO MM 36.6

The bid opening date has been changed to Tuesday November 22, 2022 at 11:00 am.

The following changes are made to the Proposal, Specifications, and Plans.

GENERAL

All questions regarding Contract 2022.07 shall be submitted by November 15, 2022 at 12:00 pm. Questions received after that time may not be answered.

PROPOSAL

- Proposal Sheets P-18, P-22, and P-23 are deleted and replaced with Sheets P-18, P-22, & P-23 included in this addendum. The revisions to these proposal sheets modify the quantities for the following items:

  Item 626.13 – 4’ X 6’ Splice Box With Access Door

  Item 626.31 – 18 Inch Diameter Foundation

  Item 626.32 – 24 Inch Diameter Foundation

  Item 634.1751 – Replacement LED Fixture – Supplied By The Authority

  Item 634.2312 – Conventional Light Standard with LED Fixture – Supplied By The Authority

  Item 643.92 – Pedestal Pole.

SPECIAL PROVISIONS

- Division 800, Page 075323-5, in pen and ink delete Subsection 2.2.A.3 and replace with the following:

  3. Exposed Face Color: White or black

PLANS

- Plan Sheet 3 of 735, ESTIMATED QUANTITIES 2, has been deleted in its entirety and replaced with Plan Sheet 3 of 735, included in this addendum.

- Plan Sheet 13 of 735, TYPICAL SECTIONS 2, has been deleted in its entirety and replaced with Plan Sheet 13 of 735, included in this addendum.
- Plan Sheet 19 of 735, TYPICAL SECTIONS 8, has been deleted in its entirety and replaced with Plan Sheet 599 of 735, included in this addendum.
- Plan Sheets 252, 255, & 256 of 735, POWER AND COMMUNICATION PLAN 6, 9, & 10, have been deleted in its entirety and replaced with Plan Sheets 252, 255, & 256 of 735, included in this addendum.
- Plan Sheet 268 of 735, SIGNAL PLAN 2, has been deleted in its entirety and replaced with Plan Sheet 268 of 735, included in this addendum.
- Plan Sheet 269 of 735, SIGNAL NOTES, has been deleted in its entirety and replaced with Plan Sheet 269 of 735, included in this addendum.
- Plan Sheet 660 of 735, TOLL PLAZA CASH LANE POWER SCHEDULE, in pen and ink change wire # 46 from AWG #10 to AWG #4.
- Plans Sheet 727 of 735, TOLL ADMINISTRATION BUILDING ELECTRICAL POWER PLAN - NB, has been deleted in its entirety and replaced with Plan Sheet 727 of 735, included in this addendum.

QUESTIONS

1. Question: EPDM spec calls for a membrane color that doesn't exist, white on black reinforced EPDM.

   Answer: The exposed face color has been revised to white or black in Addendum No. 4.

2. Question: Will the MTA accept .060 EPDM "Black" non-reinforced EPDM in 16' wide sheets or does it need to be reinforced? From previous projects we have done for MTA, we have used .060 EPDM LSFR (non-reinforced) black membrane.

   Answer: Non-reinforced EPDM roofing systems are acceptable provided they meet warranty requirements of specification 075323.

3. Question: Addendum #3 states under special provisions that the MTA expects to award within 7 days of bid opening, although the answer to one of the questions states the award will be on 12-22-22. Which is correct?

   Answer: The MTA expects to award the contract within 7 days of the bid opening.

4. Question: We are coming up with much less tonnage on item 403.2072. It appears that it may be as much as ½ of the quantity listed on the schedule of items. Can you please confirm the quantity of item 403.2072.

Answer: The quantities for Item 403.2072 have been reviewed and are unchanged. However, Typical Section Sheets 13 and 19 of 735 have been updated in Addendum No. 4.

5. Question: Please confirm the Maine Turnpike Authority will require the Soil Nail Wall designer to verify the serviceability limit state and estimate wall deformations of the soil nail wall and existing abutment prior to construction. We ask since this will require costly finite element modeling. Please verify that finite element modeling is required. Alternatively, can monitoring of the wall during construction and up to 30 days after completion be used to verify the wall and abutment deformations without performing additional finite element analyses?

   Answer: The soil nail wall designer will be required to estimate the deformations of the soil nail wall and the existing abutment. Per Subsection 636.05 of the Design of Soil Nail Wall Special Provisions, the Contractor shall submit design calculations which shall include calculations of estimated horizontal and vertical deformations of the soil nail wall and the existing abutment. This follows the recommendations in FHWA GEC 7, where walls that are constructed adjacent to a critical structure and resist relatively large surcharge loads, numerical methods such as 2D finite element method or the finite difference method shall be used to calculate the predicted deformations. The numerical analysis of the predicted movements is necessary to be performed during the design process, rather than monitoring the structures during construction, as it will be used to help determine the necessary nail lengths, spacing, etc. and whether supplemental abutment tie-backs are required to meet the specified deflection requirements.

6. Question: We are coming up with different quantities for conduit and light standards. Can you please confirm the quantities for these items?

   Answer: The quantity for item 626.22 was reviewed and is unchanged. The quantities for items 634.1751 and 634.2312 were reviewed and have been revised in Addendum No. 4.

7. Question: NB Admin Toll – Sheet 727: Would you like the generator annunciator in the NB Admin Building or the Utility Building?

   Answer: The generator annunciator shall be located in the NB administration building as shown and noted on revised Plan Sheet 727 of 735 included in Addendum No. 4.

ATTACHMENTS

- Proposal Sheets (3 Pages)
- Plans (9 Pages)

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
	BROUGHT FORWARD:						
626.122	QUAZITE JUNCTION BOX (18X11)	Each	143				
626.123	QUAZITE JUNCTION BOX (48X36)	Each	4				
626.13	4' X 6' SPLICE BOX WITH ACCESS DOOR	Each	6				
626.22	NON-METALLIC CONDUIT	Linear Foot	38,000				
626.223	HORIZONTAL DIRECTIONAL DRILLED CONDUIT	Linear Foot	1,900				
626.31	18 INCH DIAMETER FOUNDATION	Each	16				
626.32	24 INCH DIAMETER FOUNDATION	Each	116				
626.33	30 INCH DIAMETER, LESS THAN 8 FEET OR LESS FOUNDATION	Each	4				
626.332	30-INCH DIAMETER, GREATER THAN 8-FEET LONG, ALL 36 INCH AND 42 INCH DIAMETER FOUNDATIONS	Cubic Yard	113				
626.333	48-INCH DIAMETER, 54-INCH DIAMETER, 60-INCH DIAMETER FOUNDATIONS	Cubic Yard	25				
626.35	CONTROLLER CABINET FOUNDATION	Each	4				
626.36	REMOVE OR MODIFY CONCRETE FOUNDATION	Each	39				
	CARRIED FORWARD:						

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
634.052	REMOVE HIGH MAST LIGHT STANDARD	Each	3				
634.1751	REPLACEMENT LED FIXTURE - SUPPLIED BY THE AUTHORITY	Each	10				
634.2078	HIGH MAST LIGHT STANDARD - SUPPLIED BY THE AUTHORITY	Each	1				
634.208	REMOVE AND RESET LIGHT STANDARD	Each	8				
634.2312	CONVENTIONAL LIGHT STANDARD WITH LED FIXTURE - SUPPLIED BY THE AUTHORITY	Each	70				
636.400	SOIL NAIL WALL DESIGN	Lump Sum	1				
636.401	SOIL NAIL WALL CONSTRUCTION MONITORING - EXISTING BRIDGE	Lump Sum	1				
636.411	SOIL NAIL WALL	Square Foot	3,750				
639.26	INSTRUMENTATION (GEOTECHNICAL)	Lump Sum	1				
643.712	LANE USE SIGNAL	Each	6				
643.713	PREEMPTIVE SYSTEM AT EXIT 35 NB INTERSECTION	Lump Sum	1				
643.714	PREEMPTIVE SYSTEM AT EXIT 35 SB INTERSECTION	Lump Sum	1				
			CARRIED FORWARD:				

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
			BROUGHT FORWARD:				
643.80	TRAFFIC SIGNAL AT ROUTE 112 AND EXIT 35 SB	Lump Sum	1				
643.81	TRAFFIC SIGNAL AT LUND RD AND EXIT 35 NB	Lump Sum	1				
643.82	VEHICLE DETECTION SYSTEM AT LUND RD AND EXIT 35 NB	Lump Sum	1				
643.83	VEHICLE DETECTION SYSTEM AT ROUTE 112 AND EXIT 35 SB	Lump Sum	1				
643.92	PEDESTAL POLE	Each	5				
643.941	DUAL PURPOSE POLE W/15' MAST ARM	Each	2				
643.942	DUAL PURPOSE POLE W/25' MAST ARM	Each	1				
643.943	DUAL PURPOSE POLE W/30' MAST ARM	Each	1				
643.944	DUAL PURPOSE POLE W/35' MAST ARM	Each	2				
643.945	DUAL PURPOSE POLE W/40' MAST ARM	Each	1				
643.946	DUAL PURPOSE POLE W/45' MAST ARM	Each	1				
645.105	REMOVE AND STACK SIGN	Each	1				

CARRIED FORWARD:

Date:11/18/2022

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	TOTAL QUANTITY	UNIT
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	50	EA
606.3561	DELINEATOR POST - REMOVE AND RESET	293	EA
606.36	GUARDRAIL - REMOVE AND RESET	130	LF
606.47	SINGLE WOOD POST	6	EA
606.51	MULTIPLE MAILBOX SUPPORT	1	EA
606.64	GUARDRAIL THRIE BEAM - DOUBLE RAIL	430	LF
606.65	GUARDRAIL THRIE BEAM - SINGLE RAIL	88	LF
606.701	ASYMMETRICAL THRIE BEAM TRANSITION	3	EA
606.83	GUARDRAIL - REMOVE AND RESET EXISITNG CRASH END	1	EA
607.09	WOVEN WIRE FENCE - METAL POSTS	2100	LF
607.32	BRACING ASSEMBLY TYPE I - METAL POSTS	2	EA
607.33	BRACING ASSEMBLY TYPE II - METAL POSTS	25	EA
607.45	STOCKADE FENCE - 6' TALL	140	LF
608.08	REINFORCED CONCRETE SIDEWALK	210	SY
608.26	CURB RAMP DETECTABLE WARNING FIELD	240	SF
609.11	VERTICAL CURB TYPE I	390	LF
609.12	VERTICAL CURB TYPE I - CIRCULAR	130	LF
609.13	VERTICAL BRIDGE CURB TYPE I	520	LF
609.14	VERTICAL BRIDGE CURB TYPE I - CIRCULAR	180	LF
609.15	SLOPED CURB TYPE I	16	LF
609.21	CONCRETE SLIPFORM CURB	2690	LF
609.219	CONCRETE SLIPFORM CURB - TERMINAL END	256	EA
609.2211	TERMINAL CURB TYPE I	95	LF
609.222	TERMINAL CURB TYPE I - CIRCULAR	12	LF
609.26	CURB TRANSITION SECTION B TYPE I	2	EA
609.34	CURB TYPE 5	1450	LF
609.36	CURB TYPE 5 - CIRCULAR	53	LF
610.08	PLAIN RIPRAP	816	CY
610.18	STONE DITCH PROTECTION	72	CY
610.181	TEMPORARY STONE CHECK DAM	510	CY
610.213	VOID-FILLED RIPRAP - TYPE A OR B	120	CY
613.319	EROSION CONTROL BLANKET	37,000	SY
615.07	LOAM	5720	CY
618.13	SEEDING METHOD NUMBER 1	77	UNIT
618.14	SEEDING METHOD NUMBER 2	779	UNIT
618.143	SPECIAL SEEDING	3	UNIT
618.15	TEMPORARY SEEDING	9	LB
619.1201	MULCH - PLAN QUANTITY	859	UNIT
619.1202	TEMPORARY MULCH	1	LS
619.1401	EROSION CONTROL MIX	100	CY
620.56	DRAINAGE GEOTEXTILE	10,900	SY
620.561	IMPERVIOUS LINER	5200	SY
620.58	EROSION CONTROL GEOTEXTILE	3645	SY
621.046	EVERGREEN TREE (8 - 10 FEET) GROUP A	13	EA
621.264	MULTI-STEM DECIDUOUS TREE GROUP A	2	EA
621.273	LARGE DECIDUOUS TREE (2" - 2.5" CALIPER) GROUP A	15	EA
621.389	EVERGREENS (15" - 18") GROUP A	6	EA
621.401	EVERGREENS (2 - 2.5 FEET) GROUP A	4	EA
621.513	HYBRID RHODODENDRON (2.5 - 3 FEET)	5	EA
621.552	DECIDUOUS SHRUBS (3 - 4 FEET) GROUP A	60	EA
625.106	WATER SERVICE SUPPLY LINE (<3 IN)	750	LF
625.107	WATER METER PIT	2	EA
626.121	QUAZITE JUNCTION BOX (36X24)	15	EA
626.122	QUAZITE JUNCTION BOX (18X11)	143	EA
626.123	QUAZITE JUNCTION BOX (48X36)	4	EA
626.13	4' X 6' SPLICE BOX WITH ACCESS DOOR	6 ~~5~~	EA
626.22	NON-METALLIC CONDUIT	38,000 ~~37,700~~	LF
626.223	HORIZONTAL DIRECTIONAL DRILLED CONDUIT	1900	LF
626.31	18 INCH DIAMETER FOUNDATION	16 ~~15~~	EA
626.32	24 INCH DIAMETER FOUNDATION	116 ~~127~~	EA
626.33	30 INCH DIAMETER, LESS THAN 8 FEET OR LESS FOUNDATION	4	EA
626.332	30-INCH DIAMETER, GREATER THAN 8-FEET LONG, ALL 36 INCH AND 42 INCH DIAMETER FOUNDATIONS	113	CY
626.333	48-INCH DIAMETER, 54-INCH DIAMETER, 60-INCH DIAMETER FOUNDATIONS	25	CY
626.35	CONTROLLER CABINET FOUNDATION	4	EA
626.36	REMOVE OR MODIFY CONCRETE FOUNDATION	39	EA
626.38	GROUND MOUNTED CABINET FOUNDATION	1	EA
627.18	12" SOLID WHITE PAVEMENT MARKING LINE	7500	LF
627.712	WHITE OR YELLOW PAVEMENT MARKING LINE	120,650	LF
627.73	TEMPORARY 6 INCH PAVEMENT MARKING TAPE	67,200	LF

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	TOTAL QUANTITY	UNIT
627.731	TEMPORARY 6 INCH BLACK PAVEMENT MARKING TAPE	1400	LF
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	460	LF
627.75	WHITE OR YELLOW PAVEMENT & CURB MARKING	3100	SF
627.77	REMOVING EXISTING PAVEMENT MARKING	20,400	SF
627.78	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	197,000	LF
627.812	TEMPORARY RAISED PAVEMENT MARKERS	7050	EA
627.941	PAVEMENT MARKING TAPE DOTTED WHITE LANE LINE, 6-INCH WIDTH	670	LF
627.942	PAVEMENT MARKING TAPE DOTTED WHITE LANE LINE, 12-INCH WIDTH	860	LF
627.944	PAVEMENT MARKING - RECESSED TAPE - WORDS, ARROWS, STOP BARS	360	SF
629.05	HAND LABOR, STRAIGHT TIME	200	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	70	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	70	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	200	HR
631.13	BULLDOZER (INCLUDING OPERATOR)	200	HR
631.14	GRADER (INCLUDING OPERATOR)	100	HR
631.171	TRUCK - SMALL (INCLUDING OPERATOR)	100	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	100	HR
631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)	30	HR
631.21	ROAD BROOM (INCLUDING OPERATORS AND HAULER)	10	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	100	HR
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	50	HR
631.36	FOREMAN	100	HR
631.51	BUCKET TRUCK	60	HR
631.52	SCISSOR LIFT	60	HR
631.53	ELECTRICIAN	100	HR
631.54	ELECTRICIAN'S APPRENTICE	100	HR
631.55	PLUMBER	60	HR
633.031	NATURAL GAS SERVICE - NORTHBOUND	1	LS
633.0311	NATURAL GAS SERVICE - HOTEL	1	LS
633.032	PROPANE SERVICE - SOUTHBOUND	1	LS
633.21	PROPANE TANK SUPPORTS (12' X 4')	2	EA
633.31	PROPANE TANK PAD	27	SY
634.052	REMOVE HIGH MAST LIGHT STANDARD	3	EA
634.1751	REPLACEMENT LED FIXTURE - SUPPLIED BY THE AUTHORITY	2 10 ~~12~~	EA
634.2078	HIGH MAST LIGHT STANDARD - SUPPLIED BY THE AUTHORITY	1	EA
634.208	REMOVE AND RESET LIGHT STANDARD	~~8~~	EA
634.2312	CONVENTIONAL LIGHT STANDARD WITH LED FIXTURE - SUPPLIED BY THE AUTHORITY	2 70 ~~80~~	EA
636.400	SOIL NAIL WALL DESIGN	1	LS
636.401	SOIL NAIL WALL CONSTRUCTION MONITORING - EXISTING BRIDGE	1	LS
636.411	SOIL NAIL WALL	3750	SF
639.26	INSTRUMENTATION (GEOTECHNICAL)	1	LS
643.712	LANE USE SIGNAL	6	EA
643.713	PREEMPTIVE SYSTEM AT EXIT 35 NB INTERSECTION	1	LS
643.714	PREEMPTIVE SYSTEM AT EXIT 35 SB INTERSECTION	1	LS
643.80	TRAFFIC SIGNAL AT ROUTE 112 AND EXIT 35 SB	1	LS
643.81	TRAFFIC SIGNAL AT LUND RD AND EXIT 35 NB	1	LS
643.82	VEHICLE DETECTION SYSTEM AT LUND RD AND EXIT 35 NB	1	LS
643.83	VEHICLE DETECTION SYSTEM AT ROUTE 112 AND EXIT 35 SB	1	LS
643.92	PEDESTAL POLE	2 5 ~~4~~	EA
643.941	DUAL PURPOSE POLE W/15' MAST ARM	~~2~~	EA
643.942	DUAL PURPOSE POLE W/25' MAST ARM	1	EA
643.943	DUAL PURPOSE POLE W/30' MAST ARM	1	EA
643.944	DUAL PURPOSE POLE W/35' MAST ARM	2	EA
643.945	DUAL PURPOSE POLE W/40' MAST ARM	1	EA
643.946	DUAL PURPOSE POLE W/45' MAST ARM	1	EA
645.105	REMOVE AND STACK SIGN	1	EA
645.109	REMOVE AND RESET SIGN	23	EA
645.1092	CANOPY MOUNTED DYNAMIC MESSAGE SIGN	2	EA
645.1099	REMOVE AND DISPOSE SIGN	30	EA
645.121	OVERHEAD GUIDE SIGN NB 1 (STA. 1670+75)	1	LS
645.14	CANOPY MOUNTED SIGN	4	EA
645.151	CANTILEVER GUIDE SIGN NB 1 (STA. 1718+50)	1	LS
645.152	CANTILEVER GUIDE SIGN NB 2 (STA. 1731+30)	1	LS
645.153	CANTILEVER GUIDE SIGN SB 1 (STA 2728+75)	1	LS
645.154	CANTILEVER GUIDE SIGN SB 2 (STA 2740+50)	1	LS

No.	Revision	By	Date
1	QUANTITY REVISIONS	JRH	10/22
2	QUANTITY REVISIONS	JRH	11/22

Scale:

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	JRH	10\22	Checked	PLP	10\22
Drawn	THG	10\22	In Charge of	LEM	10\22

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35 & 36)

ESTIMATED QUANTITIES 2

SHEET NUMBER: QN-02

CONTRACT:2022.07

Filename: ..._Estimate_A4.dgn

Contract 2022.07
Addendum No. 4
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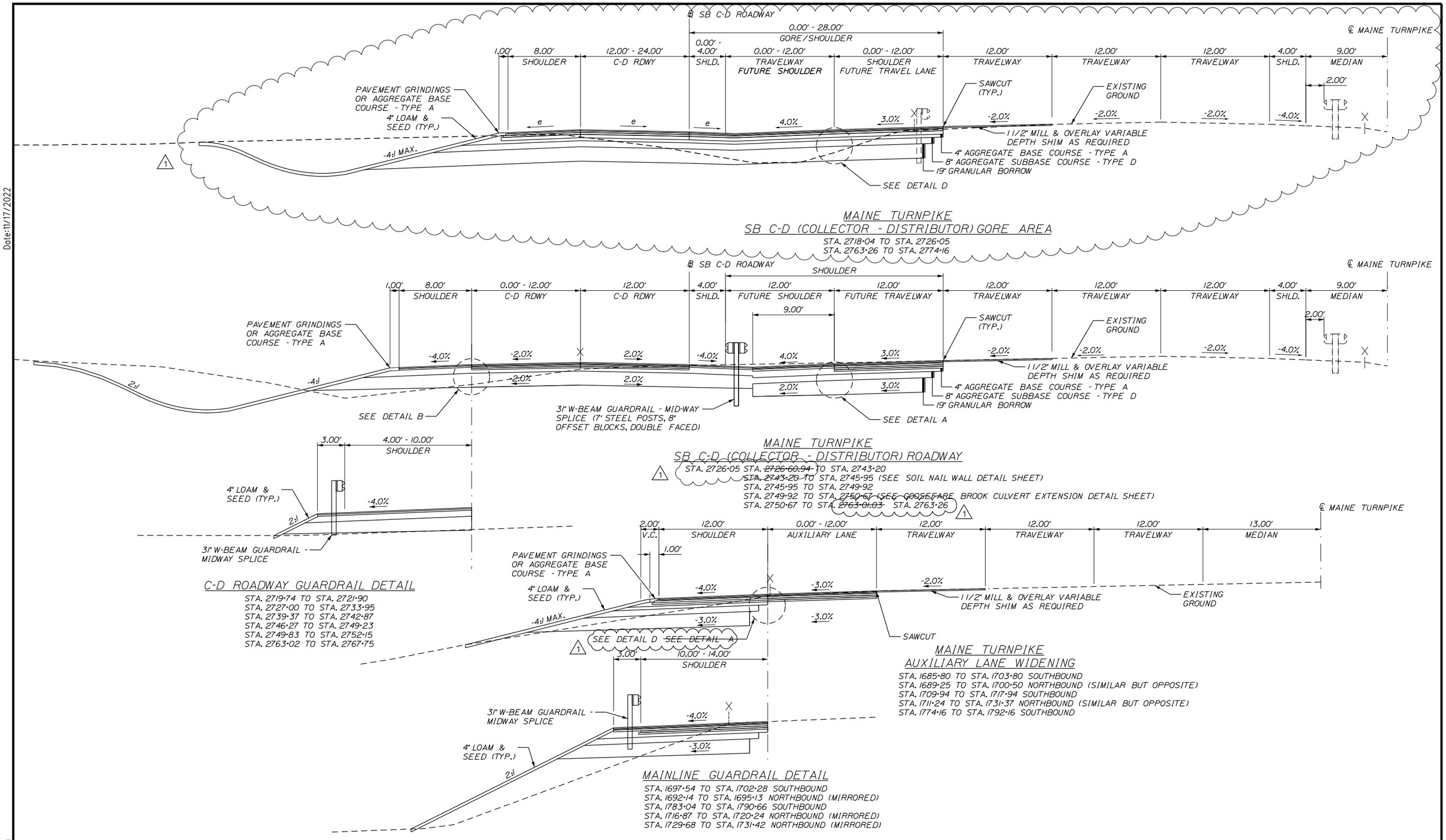

Date:11/17/2022

Scale: 5 0 5 10 Scale of Feet

No.	Revision	By	Date
1	TYPICAL REVISIONS	JRH	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	JRH	10/22	Checked	PLP	10/22
Drawn	THG	10/22	In Charge of	LEM	10/22

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35 & 36)

TYPICAL SECTIONS 2

SHEET NUMBER: TS-2

CONTRACT:2022.07

13 OF 735

Filename: ..._Typ-xx_A4.dgn

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Addendum No. 4
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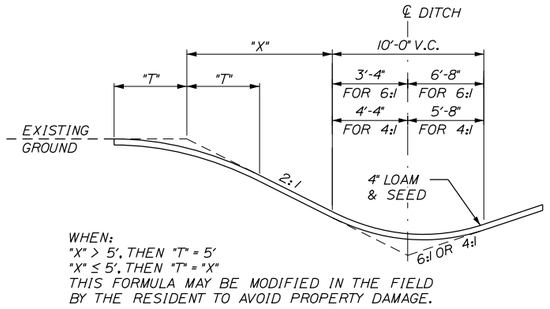
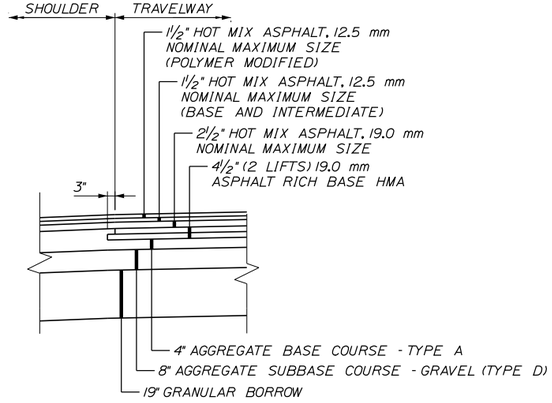
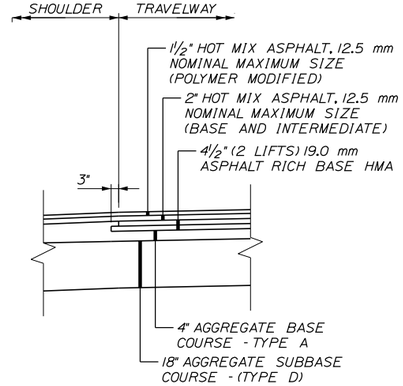


WHEN:
"X" > 5', THEN "T" = 5'
"X" ≤ 5', THEN "T" = "X"
THIS FORMULA MAY BE MODIFIED IN THE FIELD BY THE RESIDENT TO AVOID PROPERTY DAMAGE.

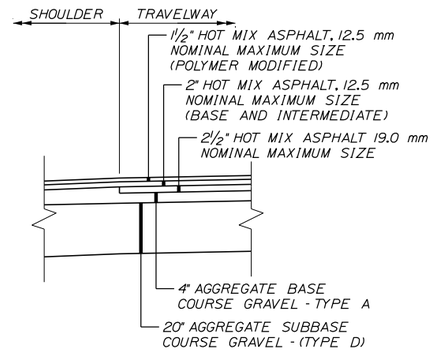
BACKSLOPE ROUNDING DETAIL



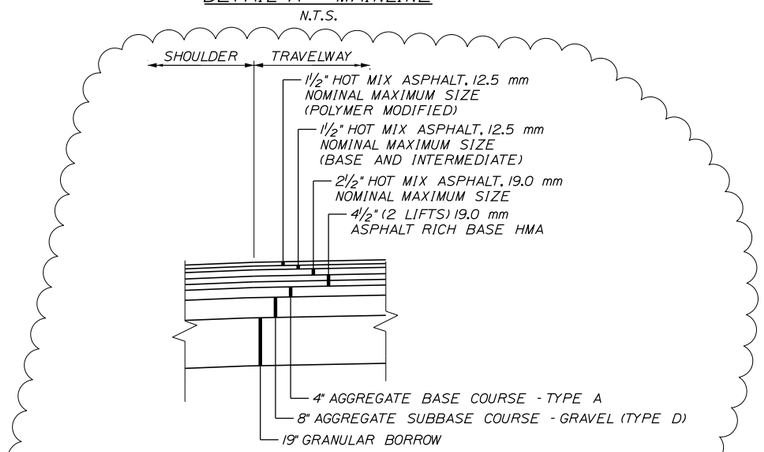
DETAIL A - MAINLINE
N.T.S.



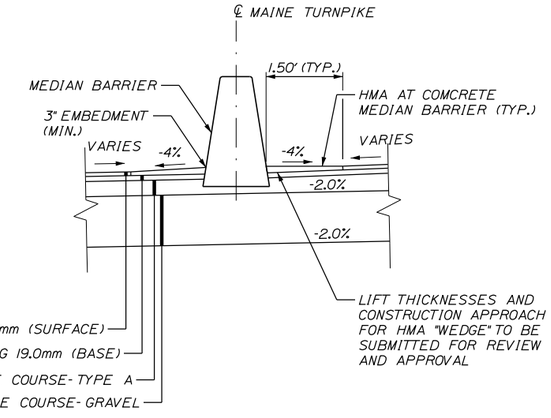
DETAIL B - C-D ROADWAY AND EXIT 36 RAMPS
N.T.S.



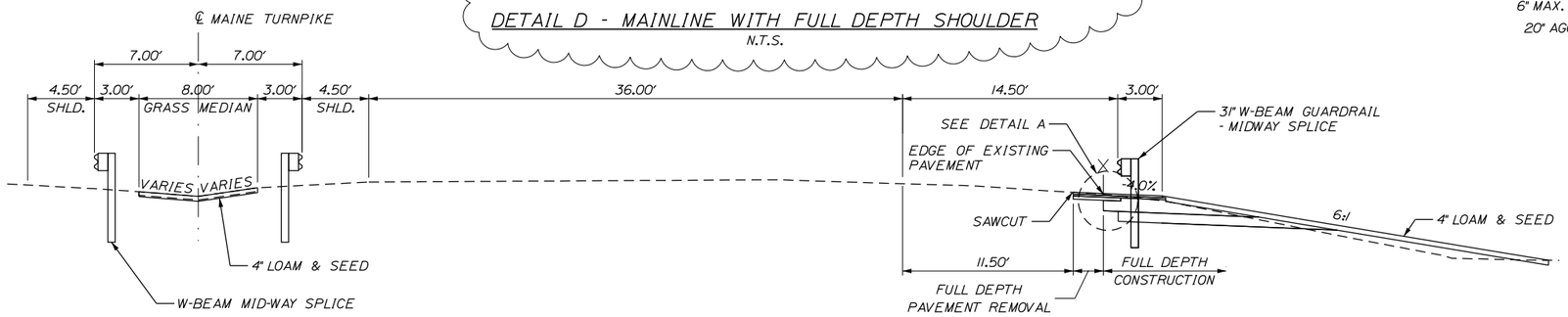
DETAIL C - EXIT 35 RAMPS
N.T.S.



DETAIL D - MAINLINE WITH FULL DEPTH SHOULDER
N.T.S.



MEDIAN BARRIER DETAIL
N.T.S.



STA. 1670+50 TO STA. 1671+00

STA. 1668+76 TO STA. 1670+96

MEDIAN AND NORTHBOUND GUARDRAIL INSTALLATION

Date:11/17/2022

Filename: ..._Typ-xx_A4.dgn

Contract 2022.07
Addendum No. 4
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Scale: 5 0 5 10
Scale of Feet

No.	Revision	By	Date
1	ADDED DETAIL	JRH	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	JRH	10/22	Checked	PLP	10/22
Drawn	THG	10/22	In Charge of	LEM	10/22

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INTERCHANGE IMPROVEMENTS
SACO (EXITS 35 & 36)

TYPICAL SECTIONS 8

SHEET NUMBER: TS-8

CONTRACT:2022.07

Date:11/18/2022

NOTES:
1. SEE ONE-LINE DIAGRAM FOR FEEDER CONDUITS BETWEEN UTILITY AND ADMIN BUILDINGS.
2. SEE BUILDING FACILITY DRAWINGS FOR COMMUNICATIONS SYSTEMS BETWEEN UTILITY AND ADMIN BUILDINGS.
3. SEE GENERAL PLANS FOR POWER AND COMMUNICATION SERVICE TO RAMADA INN.
4. SEE SIGNAL PLANS FOR CONDUIT LAYOUT AT INTERSECTION.

LEGEND

- QUAZITE JUNCTION BOX — TOLLING COMMUNICATIONS - (36"X24") SIGNAL COMMUNICATIONS - (18"X11") ELECTRICAL FROM NB AND SB PLAZAS (18"X11")
- PROPOSED LIGHT STANDARD ON 24" ϕ CONCRETE FOUNDATION
- EP — PRIMARY ELECTRICAL SERVICE (5" SCH. 80 CONDUIT)
- E — BRANCH ELECTRICAL - LIGHTING, TOLLING, AND SIGNAL (3" SCH. 80 CONDUIT)
- OTH — COMMUNICATIONS SERVICE (4" SCH. 80 CONDUIT)
- C — COMMUNICATIONS - TOLLING AND SIGNAL (3" SCH. 80 CONDUIT)

POLE # A1	CKT # 1
STATION XX+XX	OFFSET XX' LT.
ARM LENGTH 8'-0"	DISTRIBUTION III
POLE HEIGHT XX'-X"	LUMINAIRE WATTAGE 177 W
BREAKAWAY COUPLING (BC) REQUIRED Y/N BC REQ'D Y	

(1) 3" SIGNAL COMM CONDUIT
(8) 3" TOLLING COMM CONDUIT
(2) 3" LIGHTING CONDUIT
(1) 3" SIGNAL POWER CONDUIT
(8) 3" TOLLING POWER CONDUIT
(1) 4"C GEN SERVICE
(3) 1"C CONTROLS (SEE ONE-LINE DIAGRAM)
(1) 3"C 4#6, 1#6G - LN-CKT #1,3 & #5,7
(1) 3"C 4#6, 1#6G - LN-CKT #2,4 & #6,8
(2) 48"x36" QUAZITE JUNCTION BOXES
(3)" COMM CONDUITS FOR SIGNAL AND TOLLING BETWEEN NB UTILITY BUILDING AND SB ADMIN BUILDING
(1) 1" FLAG POWER CONDUIT
(1) 3" SIGNAL COMM CONDUIT - NB ADMIN BUILDING TO SIGNAL
(8) 3" TOLLING POWER CONDUIT
(8) 3" TOLLING COMM CONDUIT
EXIT 35 NB ENTRANCE
EXIT 35 NB EXIT
(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LN-CKT #1,3 & #5,7 (2) 3"C SPARES WITH PULL CORD
(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LN-CKT #1, #3, & #5
(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LN-CKT #2,4 & #6,8
(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LN-CKT #1,3 & #5,7
(1) 3"C FOR LIGHTING WITH 2#6, 1#6G LN-CKT #5,7
120V. 20A CIRCUIT FROM ADMIN BLDG. FOR TRAFFIC SIGNAL 3"C, 2#2, 1#2G
FIBER OPTIC ETHERNET SWITCH LOCATED IN EXIT 35 NB SIGNALS CONTROLLER CABINET SPLICED TO MULTI-MODE FIBER OPTIC CABLE TO EXIT 35 NB ADMINISTRATION BUILDING
(1) 3" SIGNAL COMM CONDUIT - NB ADMIN BUILDING TO SIGNAL
LIGHTING CONDUIT (VIA LIGHTING JUNCTION BOXES)
(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LN-CKT #2,4 & #6,8
(1) 3"C FOR LIGHTING WITH 2#6, 1#6G LN-CKT #2,4
~~COLOCATE COBRA HEAD AT UTILITY POLE NEAREST SIDEWALK CROSSING~~
(1) 3"C FOR LIGHTING WITH 2#6, 1#6G LN-CKT #6,8
(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LN-CKT #2,4 & #6,8
VARIABLE MESSAGE SIGN FOR ROUTE 112 NB TO COMMUNICATE WITH MTA VIA ETHERNET RADIO AND ANTENNA, SOLAR (SEE ITS DEVICE PLAN)

143	LN-2,4
626+64.6	66.0' LT.
8'-0"	(2) III
37'-0"	488W
BC REQ'D Y	

142	LN-6,8
627+69.4	66.0' LT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

101	LN-6,8
631+01.1	58.1' LT.
12'-0"	III
28'-0"	124W

102	LN-2,4
164+47.7	37.2' LT.
12'-0"	III
28'-0"	124W

103	LN-6,8
165+65	31.9' LT.
12'-0"	III
28'-0"	124W

104	LN-2,4
631+20.1	49.0' RT.
12'-0"	III
28'-0"	124W

124	LN-1,3
624+87.2	44.2' RT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

123	LN-5,7
626+37	39.0' RT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

122	LN-1,3
627+87	42.7' RT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

121	LN-5,7
629+37	43.0' RT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

141	LN-2,4
629+19.4	50.6' LT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

625+00 626+00 627+00 628+00 629+00 630+00 631+00 EXIT 35 NB PLAZA
163+00 164+00 165+00 166+00 170+00 171+00
NORTH STREET
LUND ROAD
70+00
EXIT 35 NB OFF RAMP

Filename: ..._Lighting_06_A4.dgn

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Scale: 25 0 25 50 Scale of Feet

No.	Revision	By	Date
1	NOTE REMOVAL	JRH	10/22
2	REVISED LIGHT LOCATION	JRH	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	MRC	10\22	Checked	PJV	10\22
Drawn	CHL	10\22	In Charge of	LEM	10\22

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35 & 36)

POWER AND COMMUNICATION PLAN 6

SHEET NUMBER: LP-07

CONTRACT:2022.07

LEGEND

- QUAZITE JUNCTION BOX
  TOLLING COMMUNICATIONS - (36"X24")
  SIGNAL COMMUNICATIONS - (18"XII")
  ELECTRICAL FROM NB AND SB PLAZAS
  (18"XII")
- PROPOSED LIGHT STANDARD ON 24" ϕ CONCRETE FOUNDATION
- EPI — PRIMARY ELECTRICAL SERVICE (5" SCH. 80 CONDUIT)
- E — BRANCH ELECTRICAL - LIGHTING, TOLLING, AND SIGNAL (3" SCH. 80 CONDUIT)
- OTH — COMMUNICATIONS SERVICE (4" SCH. 80 CONDUIT)
- C — COMMUNICATIONS - TOLLING AND SIGNAL (3" SCH. 80 CONDUIT)

POLE #	CKT #
AI	I
STATION	OFFSET
XX+XX	XX' LT.
ARM LENGTH	DISTRIBUTION
8'-0"	III
POLE HEIGHT	LUMINAIRE WATTAGE
XX'-X"	177 W
BREAKAWAY COUPLING (BC) REQUIRED Y/N	
BC REQ'D Y	

NOTES:

1. SEE ONE-LINE DIAGRAM FOR FEEDER CONDUITS BETWEEN TRANSFORMER AND ADMIN BUILDINGS.
2. SEE SIGNAL PLANS FOR CONDUIT LAYOUT AT INTERSECTION.

VARIABLE MESSAGE SIGN FOR ROUTE 112 SB TO COMMUNICATE WITH MTA VIA ETHERNET RADIO AND ANTENNA, SOLAR (SEE ITS DEVICE PLAN)

SB PLAZA ENTRANCE ROAD Ⓑ

220	LS-6,8
145+24.12	44.9' LT.
8'-0"	III
37'-0"	124W
BC REQ'D N	

(1) 3"C FOR LIGHTING WITH 2#6, 1#6G LS-CKT #6,8

(2) 3" TOLLING COMM CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(2) 3" TOLLING POWER CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LS-CKT ~~#2,4 & #6,8~~

(1)3"C SPARE WITH PULLCORD ~~(1)3"C FOR SIGNAL POWER WITH 2#1, 1#16~~

(1) 3"C FOR LIGHTING WITH 4#8, 1#8G LN-CKT #8, #10, & #12

(2)3"C, 4#6, 1#6G - LS-CKT #1,3 & #5,7
(2)3"C, 6#6, 1#6G - LS-CKT #2,4 & #6,8 & #10,12

(2) 48"x36" QUAZITE JUNCTION BOXES

3"C FOR FUTURE LIGHTING

211	LS-10,12
216+34.9	27.5' LT.
8'-0"	III
37'-0"	124W
NO BKWY	

(2) 3" LIGHTING POWER CONDUIT
(1) 3" SIGNAL POWER CONDUIT
(10) 3" TOLLING POWER CONDUIT
(10) 3" TOLLING COMM CONDUIT
(1) 3" SIGNAL COMM CONDUIT
(1) 1" FLAG POWER CONDUIT

201A	LS-2,4
146+53.5	44.1' RT.
12'-0"	III
28'-0"	124W
BC REQ'D N	

221	LS-2,4
218+89.7	15.0' LT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

202	LS-2,4
320+11.3	9.6' LT.
12'-0"	(2) III
28'-0"	266W
BC REQ'D N	

(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LS-CKT #1,3 & #5,7

(6) 3" TOLLING COMM CONDUIT

(6) 3" TOLLING POWER CONDUIT

SB ENTRANCE PLAZA

(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LS-CKT #2,4 & #6,8

(1)3"C FOR SIGNAL POWER WITH 2#2, 1#2G

(1) 3" SIGNAL COMM CONDUIT - SB ADMIN BUILDING TO SIGNAL
(2) 3" TOLLING COMM CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(2) 3" TOLLING POWER CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(1) 3" LIGHTING CONDUIT (VIA LIGHTING JUNCTION BOXES)
(1) 3" SIGNAL POWER CONDUIT (ROUTE DIRECTLY TO SIGNAL CONTROLLER)

223	LS-2,4
216+51.1	15.0' LT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

222	LS-6,8
217+66.4	15.0' LT.
8'-0"	III
37'-0"	233W
BC REQ'D Y	

(3) 3" COMM CONDUITS FOR SIGNAL AND TOLLING BETWEEN NB UTILITY BUILDING AND SB ADMIN BUILDING
~~(1) 3" SPARE CONDUIT WITH PULLCORD~~

(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LS-CKT #2,4 & #6,8

EXIT 35 SB ON RAMP Ⓑ

(1) 3"C FOR LIGHTING WITH 4#6, 1#6G ~~WITH 4#4, 1#4G~~ LS-CKT #2,4 & #6,8

204	LS-2,4
148+22.2	45.6' RT.
12'-0"	III
37'-0" ~~28'-0"~~	124W
BC REQ'D Y	

(1) 3" C FOR LIGHTING WITH 2#6, 1#6G LS-CKT #6,8

201	LS-6,8
219+83.3	9.1' LT
12'-0"	III
28'-0"	124W
BC REQ'D N	

(1) 3"C, 2#6, 1#6G LS-CKT #6

EXIT 35 SB OFF RAMP Ⓑ

(2) 3" TOLLING COMM CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(2) 3" TOLLING POWER CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(1) 3"C FOR LIGHTING WITH 4#6, 1#6G LS-CKT #2,4 & #6,8

ROUTE 112 Ⓑ

1215+00 1216+00 1217+00 1218+00 1219+00 215+00 216+00 217+00 218+00 219+00 220+00 320+00 321+00 46+00 47+00 48+00 44+00 145+00 146+00 147+00 148+00

Scale: 25 0 25 50 Scale of Feet

No.	Revision	By	Date
1	REVISED NOTE	JRH	11/22
2	REVISED NOTE	JRH	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	MRC	10\22	Checked	PJV	10\22
Drawn	CHL	10\22	In Charge of	LEM	10\22

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35 & 36)

POWER AND COMMUNICATION PLAN 9

SHEET NUMBER: LP-10

CONTRACT:2022.07

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Date:11/17/2022

EXIT 35 SB ON RAMP ℄

(1) 3"C FOR LIGHTING WITH 4"#6, 1"#6G LS-CKT #2.4 & #6.8
((1)3"C FOR SIGNAL POWER WITH 2"#2, 1"#2G

1 (1) 3"C FOR LIGHTING WITH 4"#6, 1"#6G ~~WITH 4"#4, 1"#4G~~ LS-CKT #2.4 & #6.8

204	LS-2.4
148+22.2	45.6' RT.
12'-0"	III
~~28'-0"~~	124W
BC REQ'D Y	

2 37'-0" (1) 3" C FOR LIGHTING WITH 2"#6, 1"#6G LS-CKT #6.8

201	LS-6.8
219+83.3	9.1' LT
12'-0"	III
28'-0"	124W
BC REQ'D N	

203	LS-6.8
148+50	33.4' RT.
12'-0"	III
28'-0"	124W
BC REQ'D Y	

(1) 3"C, 2"#6, 1"#6G LS-CKT #6

EXIT 35 SB OFF RAMP ℄

(2) 3" TOLLING COMM CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(2) 3" TOLLING POWER CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(1) 3"C FOR LIGHTING WITH 4"#6, 1"#6G LS-CKT #2.4 & #6.8

(1) 3"C FOR LIGHTING WITH 4"#6, 1"#4G LS-CKT #2.4 & #6.8

(2) 3" TOLLING COMM CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

(2) 3" TOLLING POWER CONDUIT - SB ADMIN BUILDING TO EXIT GANTRY

36"X24" QUAZITE JUNCTION BOX

ROUTE 112 ℄

SB C-D ROADWAY ℄

MAINE TURNPIKE ℄

REMOVE AND RESET LIGHT STANDARD TO STA. 1716+00 (SEE NOTE 1)

((1) TEMPORARY 2" SCHEDULE 80 CONDUIT ON GROUND NEW CONDUCTORS. MATCH EXISTING CONDUCTOR SIZE. INCIDENTAL TO ITEM 634.2083 REMOVE AND STACK LIGHT STANDARD.

NOTES:

1. EXISTING LIGHTING AT HOTEL NORTHBOUND ON RAMP SHALL BE MAINTAINED AND OPERATIONAL UNTIL THE PROPOSED HIGH MAST LIGHT AT EXIT 36 NORTHBOUND OFF RAMP IS INSTALLED AND OPERATIONAL.

LEGEND

QUAZITE JUNCTION BOX
TOLLING COMMUNICATIONS - (36"X24")
SIGNAL COMMUNICATIONS - (18"X11")
ELECTRICAL FROM NB AND SB PLAZAS
(18"X11")

PROPOSED LIGHT STANDARD ON 24" ϕ CONCRETE FOUNDATION

EP — PRIMARY ELECTRICAL SERVICE (5" SCH. 80 CONDUIT)
E — BRANCH ELECTRICAL - LIGHTING, TOLLING, AND SIGNAL (3" SCH. 80 CONDUIT)
OTH — COMMUNICATIONS SERVICE (4" SCH. 80 CONDUIT)
C — COMMUNICATIONS - TOLLING AND SIGNAL (3" SCH. 80 CONDUIT)

POLE #	CKT #
A1	1
STATION	OFFSET
XX+XX	XX' LT.
ARM LENGTH	DISTRIBUTION
8'-0"	III
POLE HEIGHT	LUMINAIRE WATTAGE
XX'-X"	177 W
BREAKAWAY COUPLING (BC) REQUIRED Y/N	
BC REQ'D Y	

Scale: 25 0 25 50 Scale of Feet

No.	Revision	By	Date
1	REVISED NOTE	JRH	11/22
2	REVISED NOTE	JRH	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	MRC	10\22	Checked	PJV	10\22
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35 & 36)

POWER AND COMMUNICATION PLAN 10

SHEET NUMBER: LP-11

CONTRACT:2022.07

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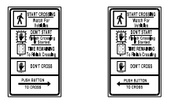
PROPOSED SIGNS



SIGN INFORMATION ON PUSH BUTTON
RIO-R3e
9"x15"

RIO-12
30"x36"

R3-6(L)
30"X36"

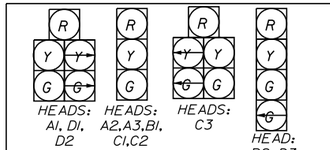
R3-6(R)
30"X36"

RIO-15(L)
30"x30"

RIO-15(R)
30"x30"

R3-5(R)
30"x36"

SIGNAL HEAD DATA



HEADS: A1, D1, D2 | HEADS: A2,A3,B1, C1,C2 | HEADS: C3 | HEAD: B2, D3

1. ALL VEHICLE INDICATIONS SHALL BE 12" LED AND BE EQUIPPED WITH BLACK TUNNEL VISORS.
2. ALL VEHICLE INDICATIONS SHALL BE EQUIPPED WITH 5" LOUVERED BACKPLATES WITH 3" REFLECTORIZED YELLOW BORDER.

HEADS: P1-P4

16"x18" LED PEDESTRIAN SIGNAL WITH VISOR

Date:11/17/2022

LUND ROAD

16' X 25' & 9'x 25' VIDEO DETECTION ZONES

6' X 50' VIDEO DETECTION ZONE (TYP.)

ROUTE 112

MA-5 | MA-6 | MA-7 | MA-4

PC = STA. 70+36.91

N64°30'47.79"E

164+00 | 165+00 | 166+00 | 70+00 | 63+00

ϕ1 ϕ2 ϕ3 ϕ4 ϕ5 ϕ6 ϕ7 ϕ8

C1 C2 C3 V1 V2 V3 V4 PD1 PD2 PD3 PD4 A1 A2 A3 B1 B2 D1 D2 D3 P1 P2 P3 P4

R3-6(R) | R3-6(L) | R3-5(R) | RIO-15(L) | RIO-15(R) | RIO-12

PREEMPTION CONFIRMATION STROBE

ETHERNET RADIO AND ANTENNA

SIGNAL COMMUNICATIONS

SIGNAL & LIGHTING POWER

I-95 NB RAMPS

OTH

LEGEND

- CABINET WITH SIGNAL EQUIPMENT
- POLE
- MAST ARM
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN POLE
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- SIGN
- LED BLANK OUT SIGN
- VEHICLE DETECTION CAMERA
- EMERGENCY PREEMPTION RECEIVER
- PREEMPTION CONFIRMATION STROBE
- ETHERNET RADIO AND ANTENNA SUPPLIED BY MTA
- JUNCTION BOX
- SIGNAL CONDUIT
- VIDEO DETECTION ZONE

EQUIPMENT SCHEDULE

DESIGNATION	ITEM	DESCRIPTION	LOCATION
A	40' MAST ARM ON DUAL PURPOSE POLE AND FOUNDATIONN WITH LUMINAIRE	VEHICULAR SIGNAL HEADS, PEDESTRIAN SIGNAL HEAD, VEHICLE DETECTION, LANE USE SIGNS, CONFIRMATION STROBE, ETHERNET RADIO AND ANTENNA, PREEMPTION RECEIVER, RIO-15(R), LUMINAIRE, PUSH BUTTON AND RIO-3eR SIGN	STA 165+62.83, 49' RT.
B	45' MAST ARM ON DUAL PURPOSE POLE AND FOUNDATION WITH LUMINAIRE	VEHICULAR SIGNAL HEADS, PEDESTRIAN SIGNAL HEAD, VEHICLE DETECTION, PREEMPTION RECEIVER, LUMINAIRE, PUSH BUTTON, AND RIO-3eL SIGN	STA 164+58.55, 42' RT.
C	35' MAST ARM ON DUAL PURPOSE POLE AND FOUNDATION WITH LUMINAIRE	VEHICULAR SIGNAL HEADS, VEHICLE DETECTION, LANE USE SIGNS, PREEMPTION RECEIVER, LUMINAIRE, RIO-15(L), CONFIRMATION STROBE	STA 164+47.49, 36' LT.
D	25' MAST ARM ON DUAL PURPOSE POLE AND FOUNDATION WITH LUMINAIRE	VEHICULAR SIGNAL HEADS, VEHICLE DETECTION, LANE USE SIGNS, PREEMPTION RECEIVER, RIO-15(R), AND LUMINAIRE	STA 165+64.98, 32' LT.
E	CONTROLLER CABINET & CONTROLLER	ECONOLITE ADVANCED TRAFFIC SIGNAL CONTROLLER AND GROUND MOUNTED ADVANCED TRAFFIC CONTROLLER CABINET WITH FOUNDATION AND CONCRETE WORK PAD	STA 164+61.61, 48' RT.
F	8' PEDESTAL POLE AND FOUNDATION	PEDESTRIAN SIGNAL HEAD, PUSH BUTTON, AND RIO-3eL SIGN	STA 165+74.52, 27' LT.
G	POWER SOURCE	SHARED UNDERGROUND SERVICE FOR SIGNALS AND LIGHTING FROM TOLL PLAZA	STA 164+66.89, 61' RT.
H ⚠1	8' PEDESTAL POLE AND FOUNDATION	~~LIGHT POLE WITH~~ PEDESTRIAN SIGNAL HEAD, PUSH BUTTON, AND RIO-3eL SIGN	STA 165+89.77, 34' RT.

Scale: 10 0 10 20 Scale of Feet

No.	Revision	By	Date
⚠1	REVISED NOTE	JRH	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	EGD	10\22	Checked	PJV	10\22
Drawn	KBJ	10\22	In Charge of	LEM	10\22

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35& 36)

SIGNAL PLAN 2

SHEET NUMBER: TS-02

CONTRACT:2022.07

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Date:11/17/2022

TRAFFIC SIGNAL NOTES:

1. THE TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE A MODEL OF THE ECONOLITE ADVANCED TRAFFIC CONTROLLER CABINET (ATCC) PART NUMBER ATCC 1032. THE ATCC SHALL BE COMPLIANT WITH ALL APPLICABLE SECTIONS OF THE ATC 5301V02 STDHLD (MOST CURRENT REVISION) STANDARDS PUBLICATIONS FOR ATCC. THE TRAFFIC SIGNAL CONTROLLER SHALL BE A RACK-MOUNT ECONOLITE COBALT ADVANCED TRAFFIC SIGNAL CONTROLLER (ATC, PART COBRM2113011 0000). ANCHOR BOLTS FOR CABINET SHALL BE SET BY TEMPLATE AND CAST IN FOUNDATION. DRILLING AND GROUTING OF ANCHOR BOLTS SHALL NOT BE PERMITTED.

2. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH LED LENSES 12 INCHES IN DIAMETER WITH 5-INCH LOUVERED BACK PLATES AND 3-INCH RETROREFLECTIVE YELLOW BORDER. THE LED LENSES SHALL BE MANUFACTURED BY LEOTEK OR APPROVED EQUAL AND THE BACKPLATES SHALL BE COMPATIBLE WITH THE PROPOSED SIGNAL HOUSINGS.

3. ALL NEW SIGNAL HEADS SHALL BE FIX MOUNTED TO MAST ARMS WITH PELCO "ASTRO-BRAC" ASTROBRACKETS OR APPROVED EQUAL.

4. FIBER OPTIC CABLE SPLICES SHALL BE MADE IN THE PATCH PANELS MEETING MTA SPECIFICATIONS.

5. THE BOTTOM OF THE HOUSING OF NEW SIGNAL FACES SHALL BE AT LEAST 16 FEET BUT NOT MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.

6. THREE COPIES OF THE AS-BUILT PLANS, WIRING DIAGRAMS, BOX PRINTS, AND EQUIPMENT MANUALS SHALL BE LEFT IN EACH OF THE CONTROLLER CABINETS. ONE DIGITAL COPY OF THE REDLINED CABINET PRINTS TO BE PROVIDED TO MTA.

7. TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE THE MINIMUM DISRUPTION TO TRAFFIC.

8. THE ENGINEER SHALL HAVE THE RIGHT AND AUTHORITY TO DETERMINE THE ACCEPTABILITY OF WORK AND MATERIALS IN PROGRESS OR COMPLETED AND SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIALS WHICH DO NOT CONFORM, IN ITS SOLE OPINION, TO THE PLANS OR SPECIFICATIONS. THIS INCLUDES TRAFFIC SIGNAL CABINET FOUNDATIONS.

9. ALL SIGNING, SIGNAL, AND STRIPING MATERIALS AND PLACEMENT SHALL CONFORM TO THE 2014 MAINEDOT STANDARD SPECIFICATIONS, MTA SPECIAL PROVISIONS, MOST RECENT REVISIONS OF THE MAINEDOT STANDARD DETAILS, AND WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).

10. ANY RELOCATIONS OR ADJUSTMENTS OF THE UTILITY FACILITIES WILL BE MADE BY THE RESPECTIVE UTILITIES IN COORDINATION WITH THE WORK OF THE CONTRACTOR.

11. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY OPENING PERMITS.

12. MAINTENANCE OF TRAFFIC SHALL BE PER MUTCD.

13. DRIVEWAY AND PEDESTRIAN ACCESSES SHALL BE MAINTAINED AT ALL TIMES.

14. THE CONTRACTOR SHALL PROVIDE THE ENGINEER, MAINE TURNPIKE AUTHORITY, AND THE CITY OF SACO WITH A SCHEDULE OF WORK FOR CONSTRUCTING THE TRAFFIC IMPROVEMENTS PRIOR TO THE COMMENCEMENT OF WORK.

15. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

16. ETHERNET RADIOS AND ANTENNAS TO BE PROVIDED BY THE AUTHORITY FOR COMMUNICATION BETWEEN THE GROUND MOUNTED DYNAMIC MESSAGE SIGNS AND THE TRAFFIC SIGNAL AND THEIR FIBER ETHERNET SWITCHES. CONTRACTOR SHALL INSTALL ANTENNA ON THE MAST ARM POLES AS NOTED ON PLANS. CONTRACTOR SHALL ALSO PROVIDE AND INSTALL CABLING BETWEEN RADIO ANTENNA AND FIBER ETHERNET SWITCH IN CONTROLLER CABINET.

17. VEHICLE DETECTION SHALL BE FLIR TRAFISENSE2 DUAL VEHICLE-BASED DETECTION SYSTEM. THE SYSTEM SHALL INTERFACE WITH THE SIGNAL CONTROLLER VIA A BPL2 EDGE CARD AND SDLC. THE VEHICLE DETECTION SYSTEM SHALL BE PROVIDED WITH AN INTERFACE FOR COMPATIBILITY WITH A 48 VDC CABINET. AT LOCATIONS WHERE VEHICLE DETECTORS ARE INSTALLED ON TRAFFIC SIGNAL MAST ARMS, THE RESIDENT RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO FIELD ADJUST THE VEHICLE DETECTOR LOCATION FOR CONDITIONS IDENTIFIED DURING OR AFTER CONSTRUCTION. NO ADDITIONAL COSTS WILL BE ALLOWED FOR FIELD ADJUSTING THE LOCATIONS OR REWIRING. THE CONTRACTOR SHALL NOTIFY THE RESIDENT IF LOCATIONS IDENTIFIED IN THE PLANS NEED TO BE REVISED DUE TO POTENTIAL GLARE OR FOR FIELD-VERIFIED OPTIMAL DETECTION ANGLES OR DISTANCES.

18. PAYMENT FOR THE TRAFFIC SIGNAL WORK SHALL BE AS OUTLINED IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING RED-LINE AS-BUILT DRAWINGS AND A CAD FILE OF THE FINAL WORK TO THE ENGINEER. THOSE DRAWINGS SHALL BE ON A CLEAN SET OF PLANS SHOWING ALL CHANGES OR MODIFICATIONS TO THE BID PLANS. PAYMENT FOR THIS EFFORT WILL BE CONSIDERED INCIDENTAL TO OTHER ITEMS. FINAL PAYMENT FOR THIS PROJECT WILL NOT BE MADE UNTIL THESE PLANS ARE RECEIVED BY THE ENGINEER.

19. EXACT LOCATION OF PROPOSED POLES, CABINET FOUNDATIONS, AND PEDESTAL POLES TO BE VERIFIED WITH THE ENGINEER PRIOR TO INSTALLATION.

20. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT WILL REQUIRE THE LEAST AMOUNT OF DOWNTIME TO THE TRAFFIC SIGNAL OPERATIONS.

21. OPTICAL PREEMPTION EQUIPMENT:
    - THE OPTICAL PREEMPTION EQUIPMENT SHALL BE FULLY COMPATIBLE WITH THE SIGNAL CONTROLLER EQUIPMENT.
    - PREEMPTION RECEIVERS SHALL BE OPTICOM MODEL 700 SERIES, AS REQUIRED.
    - OPTICAL PREEMPTION EQUIPMENT SHALL BE FULLY COMPATIBLE WITH THE EMITTER IN USE IN THE CITY OF SACO.
    - CONTRACTOR TO COORDINATE WITH MTA AND SACO FIRE DEPARTMENT ON FINAL LOCATION OF OPTICAL PREEMPTION EQUIPMENT.
    - OPTICAL DETECTOR CABLE SHALL RUN UNSPLICED FROM THE OPTICAL DETECTOR HEAD TO THE CONTROLLER CABINET.
    - IT IS EXPECTED THAT THE COMPLETE SYSTEM SHALL OPERATE FULLY FUNCTIONAL FOR A PERIOD OF 30 CONSECUTIVE DAYS WITHOUT MALFUNCTION. MINOR MALFUNCTIONS OF INOPERABILITY NOT THE FAULT OF THE CONTRACTOR, AS JUDGED BY THE ENGINEER, ARE NOT INCLUDED IN THE 30-DAY PERIOD. IF THE SYSTEM FAILS TO OPERATE AS INTENDED OR THE SUPPLIER'S CLAIMS, THE MALFUNCTION SHALL BE CORRECTED BY THE CONTRACTOR AT ITS COST AND A NEW 30-DAY TESTING PERIOD SHALL BEGIN. THIS PROCESS SHALL CONTINUE UNTIL A COMPLETELY OPERABLE SYSTEM IS DEMONSTRATED FOR A CONSECUTIVE 30-DAY PERIOD.
    - ACCEPTANCE TESTING MUST DEMONSTRATE TO THE ENGINEER'S REASONABLE SATISFACTION THAT THE HARDWARE AND LICENSED SOFTWARE FUNCTION IN ACCORDANCE WITH THE SPECIFICATIONS, REQUIREMENTS, THROUGH-PUTS, FUNCTIONALITIES, PERFORMANCE CRITERIA OR OTHER BENEFITS STATED IN DOCUMENTATION PROMOTIONAL MATERIALS, PROPOSALS, AND/OR DEMONSTRATIONS GIVEN TO THE MTA.

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL STRUCTURAL DESIGN OF THE SIGNAL SUPPORT STRUCTURES AND THE CONNECTION OF THE SUPPORT STRUCTURES TO THEIR FOUNDATIONS. ALL DESIGNS SHALL BE PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MAINE. DESIGN COMPUTATIONS, INCLUDING DESIGN LOADS (OVERTURNING MOMENT, TORSION, SHEAR FORCE, AND AXIAL LOAD) AT THE TOP OF THE FOUNDATIONS, AND SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BY THE AUTHORITY. NO MATERIALS SHALL BE ORDERED OR FABRICATED UNTIL THE DESIGN HAS BEEN APPROVED. REFER TO TRAFFIC SIGNAL FOUNDATION DETAILS FOR SIGNAL STRUCTURE DESIGN CRITERIA.

23. FOUNDATIONS SHALL CONSIST OF CAST-IN-PLACE REINFORCED CONCRETE DRILLED SHAFTS; ONE NEW DRILLED SHAFT PER MAST ARM OR DUAL PURPOSE POLE AS SET FORTH IN SPECIAL PROVISION 643. ACTUAL DESIGN LOADS AT THE TOP OF THE FOUNDATION THAT ARE PROVIDED BY THE CONTRACTOR AS PART OF THEIR STRUCTURAL SUBMITTAL WILL BE USED BY THE ENGINEER TO CHECK THE SPECIFIED SIZE OF THE DRILLED SHAFTS.

24. 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. THE MTA 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 GEOTECHNICAL ENGINEERING REPORT WITH THIS CONTRACT PRESENT FACTUAL AND INTERPRETIVE SUBSURFACE INFORMATION COLLECTED AT DISCRETE LOCATIONS. DATA PROVIDED MAY NOT BE REPRESENTATIVE OF THE SUBSURFACE CONDITIONS BETWEEN THE BORING LOCATIONS.

25. SIGNAL SHALL BE SET TO FLASHING PRIOR TO BECOMING FULLY OPERATIONAL AS NOTED IN SP 107.4.6.

26. FOUNDATIONS FOR PEDESTAL POLES SHALL BE 18" DIAMETER FOUNDATIONS AND WILL BE PAID FOR UNDER ITEM 626.31 - 18 INCH DIAMETER FOUNDATION. (1)

EMERGENCY VEHICLE PREEMPTION NOTES:

1. EMERGENCY VEHICLE PREEMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (PROVIDED BY OTHERS) MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PREEMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (PD1=HIGHEST, PD4=LOWEST).

3. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD THE EMERGENCY ACTIVE PHASE GREEN FOR A MINIMUM OF 10 SECONDS OR UNTIL THE PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PREEMPTION PHASE CLEARANCE AND SERVICE SUBSEQUENT EMERGENCY ACTIVE PHASES AS NECESSARY. AT THE COMPLETION OF THE PREEMPTION CYCLE THE CONTROLLER SHALL TIME THE PREEMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION.

4. MINIMUM GREEN, NORMAL VEHICLE CLEARANCE AND MINIMUM PEDESTRIAN CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED ONLY WHEN EMERGENCY VEHICLE PREEMPTION GREEN IS ON.

Contract 2022.07
Addendum No. 4
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Filename: ..._Signal_03_A4.dgn

Scale: 10 0 10 20 — Scale of Feet

No.	Revision	By	Date
1	ADDED NOTE	JRH	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	EGD	10/22	Checked	PJV	10/22
Drawn	KBJ	10/22	In Charge of	LEM	10/22

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35& 36)

SIGNAL NOTES

SHEET NUMBER: TS-03

CONTRACT:2022.07

HEAT TRACE NOTES:

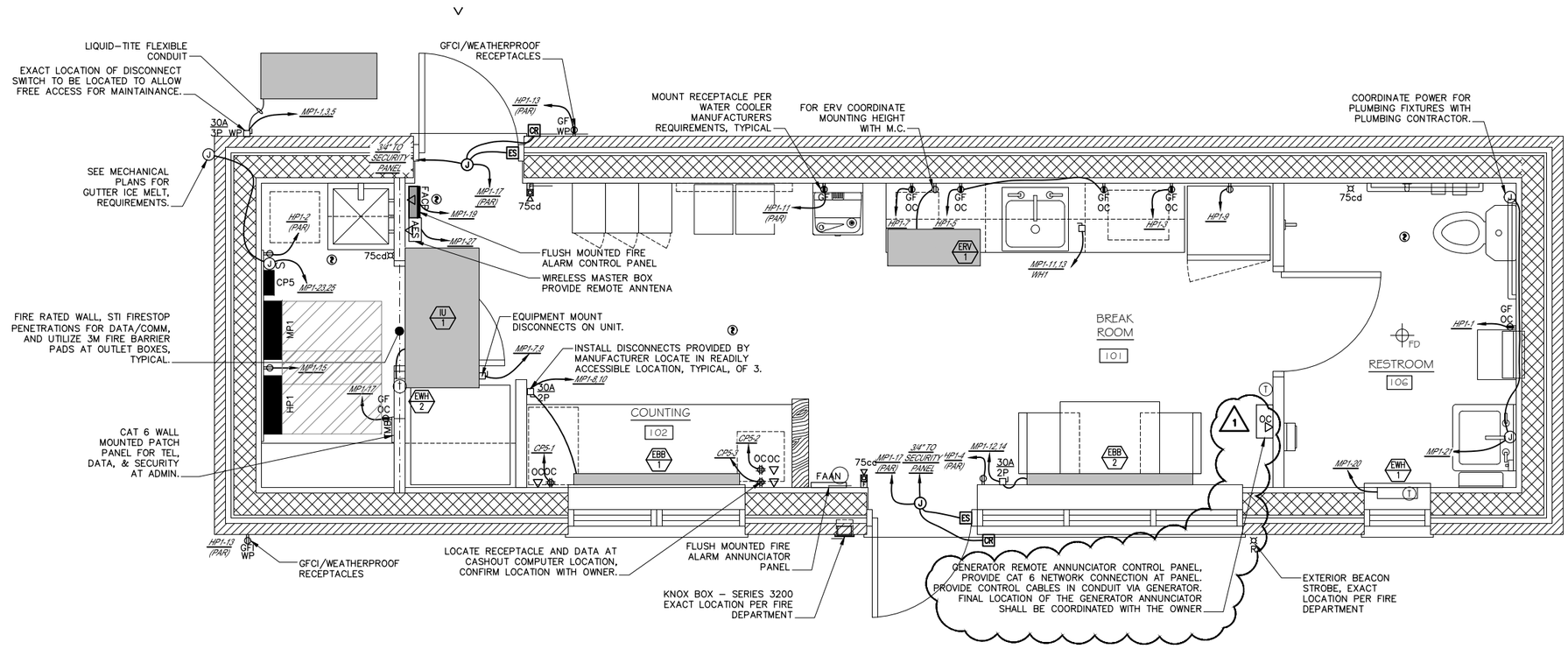
1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PLUMBING CONTRACTOR FOR INSTALLATION OF DE–ICING SYSTEM AT ADMIN BUILDING GUTTERS AND TOLLING ROOF DRAINS. ELECTRICAL CONTRACTOR TO PROVIDE POWER FOR EACH CABLE LENGTH, WIRING BETWEEN AND THE TWO CABLE LENGTHS AND WIRING TO A SPST SWITCH WITH PILOT LIGHT MOUNTED WITHIN THE TOLL UTILITY ROOM. PROVIDE CONTROLLER WITH BUILT–IN GF OR FEED VIA BREAKER WITH GROUND FAULT.

2. HEAT TRACE SHALL BE SELF REGULATING TYPE CONSISTING OF TWO 16 AWG TINNED-COPPER BUS WIRES EMBEDDED IN PARALLEL IN A SELF REGULATING POLYMER CORE THAT VARIES ITS POWER OUTPUT TO RESPOND TO TEMPERATURE ALL ALONG ITS LENGTH, ALLOWING THE HEATER TO BE CROSSED OVER ITSELF WITHOUT OVERHEATING. THE HEATER SHALL BE COVERED BY A RADIATION CROSS-LINKED MODIFIED POLYOLEFIN DIELECTRIC JACKET.

3. THE SYSTEM SHALL ALSO INCLUDE:

   a. TYPE 10BTV2 HEATERS - 120 VAC
   b. POWER CONNECTIONS TYPE PMKG-LP
   c. END SEALS TYPE PMKG-LE
   d. THERMOSTAT IN NEMA 4X ENCLOSURE TYPE AMC-F5
   e. 2" THICK PVC INSULATION WITH WEATHERPROOF ALUMINUM SHIELD.

4. ALL COMPONENTS SHALL BE EQUAL TO RAYCHEM CORP., INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



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No.	Revision	By	Date
1	SHOW GEN ANNUN. ADD NOTE	MLC	11/22

Designed by: Stantec

CONSULTANT PROJECT MANAGER: LAUREN MEEK, P.E.

	By	Date		By	Date
Designed	MLC	10/22	Checked	DPH	10/22
Drawn	MLC	10/22	In Charge of	LEM	10/22

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MTA PROJECT MANAGER: RYAN BARNES, PE, CPESC

INTERCHANGE IMPROVEMENTS SACO (EXITS 35 & 36) TOLL ADMINISTRATION BUILDING ELECTRICAL POWER PLAN – NB

SHEET NUMBER: E201

CONTRACT: 2022.07

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