MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 2

CONTRACT 2018.17

AUBURN EXIT 75
TOLL SYSTEM UPGRADES
AND STREAM RELOCATION (MM 75.3)

KENNEBUNK EXIT 25
TOLL SYSTEM UPGRADES (MM 25.5)

WELLS EXIT 19
DIRECTIONAL BORE (MM 19.0)

The bid opening date is Tuesday 6/26/18 at 11am.

GENERAL

The invitation to bid for Contract 2018.17 states that only bids from contractors with MDOT prequalification for bridge construction projects will be accepted. Prequalified contractor for highway projects utilizing a subcontractor prequalified for bridge construction projects for the structural portion of the work will also be accepted.

SPECIAL PROVISIONS

- Page SP-71 Section 621 (Tree and Shrub Plantings) (Establishment Period): Delete Second Paragraph and Replace with:

"A two-year Warranty Bonds will be required of the Contractor or the landscape subcontractor for all 621 items. The Bond must name the "Maine Turnpike Authority" as an oblige. The Contractor shall provide a copy of said bond to the Authority before the performance of any affected on-site Work. Should the subcontractor be required to provide the Warranty Bond, the Contractor hereby authorizes the Authority to directly contact landscape subcontractor and/or its Surety in the event of a failure of the bonded item to replace the specified items."

- Page SP-97 Section 655 (Installation of Sensor Loops): Under Measurement of Payment, add the following sentence:

"If required, Loop home run cable (IMSA 50-2 #14), shall be incidental to the loop installation.

- Page SP-72 and SP-73 Section 621 - Landscaping are replaced with the attached page SP-72 and SP-73.

Attached Special Provision Section 203 is added to contract.

PLANS
Sheet EQ-01(2 of 84)
Sheet PL-01 (53 of 84)
Sheet PL-02 (54 of 84)
Sheet B-01 (77 of 84)

QUESTIONS

The following are questions submitted to the Maine Turnpike Authority in writing. Answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

Question 1: On the Estimated Quantities sheet (2 of 84), the quantity of Item 652.41 for the Exit 75 work shows four (4 each) yet the bid quantity is one (1 each). Is the intent to provide 4 ea. PCMS for the duration of the work @ Exit 75?
Answer: No – See attached revised plan Sheet number EQ-01 (2 of 84).

Question 2: Is there a specific spec or gradation for the special fill (item 203.33)?
Answer: See attached Special Provision 203.

Question 3: The quantity sheet does not include the IMSA cable for the sensor loops.
Answer: IMSA cable may be required for the southbound entry ramp loops. If it is required, the IMSA 50-2 cable will be incidental to the loop installation item.

Question 4: Will a quazite box be required for the above sensor lead-in cables to splice to the sensor loop?
Answer: Yes, on the north side of the southbound ramps.

Question 5: Is there a detail for the generator pad?
Answer: See attached plan sheet number B-01(77 of 84).

Question 6: Are workman pads required in front of the P44 and 332D cabinets?
Answer: Yes, a standard 2'X4'X4" workman pad is required, and shall be incidental to the cabinet item.

Question 7: Not seeing the full quantity of 2,150 lf of horizontal directional drilling on the plans (item 830.25). I'm only seeing 210 lf at exit 75 and 160 lf at exit 19. Can you confirm the correct quantity?
Answer: Yes, this is the correct quantity there will be 8 individual conduit runs at Exit 75, and 2 individual runs at Exit 19.

Question 8: In reference to Item 626.332, is the intent to install 4EA 36 inch diameter x 18'-0" drilled shafts per sheet 75 and 76 or is a foundation design required by the contractor?
Answer: No, foundation is to be contractor designed.

ATTACHMENTS

- Specification sheets (8)
- Plan Sheet (4)

Notes: The above items shall be considered as part of the bid submittal.

The total number of pages included with this addendum is Fifteen (15).

All bidders are requested to acknowledge the receipt of the Addendum No. 2 by signing below and faxing this sheet to Nathaniel Carll, Purchasing Department, Maine Turnpike Authority at 207-871-7739. Bidders are also required to acknowledge receipt of this Addendum No. 1 on Page P-12 of the bid package.

_____
Business Name

_____
Print Name and Title

_____
Signature

_____
Date

June 21, 2018

Very truly yours,

MAINE TURNPIKE AUTHORITY

_____
Nathaniel Carll
Purchasing Manager
Maine Turnpike Authority

SPECIAL PROVISION

SECTION 203

EXCAVATIONS AND EMBANKMENTS

203.01 Description Add the following sentence to the end of the first paragraph of this section:

Suitable silt-clay common excavation shall be reused as Silt-Clay Fill where indicated on the Plans.

203.02 Materials Add following after the first paragraph of this section:

Silt-clay common excavation shall be considered suitable for reuse as Silt-Clay Fill if it meets the general requirements set forth in Standard Specification 703.18 and the following additional requirements:

Silt-Clay Fill shall consist of a homogeneous mixture of silt clay material and shall conform to the following gradation requirements:

SIEVE DESIGNATION	% PASSING BY WEIGHT
2-inch	100
No. 200	71-100

203.05 Roadway Excavation Change the first sentence of the fifth paragraph of this section to read as follows:

When excavating results in a subgrade of unsuitable soil, the Contractor shall overexcavate and replace the unsuitable material in accordance with Subsection 203.17 of this Special Provision.

203.09 Preparation of the Embankment Area Add the following sentence to the beginning of the first paragraph of Subsection 203.09:

Preparation of the subgrade in embankment areas of the project shall be in accordance with this Subsection and Subsection 203.17 of this Special Provision, whichever is more stringent.

203.09 Preparation of the Embankment Area In the first sentence of the second paragraph of this section, change the words “against existing embankment, slopes steeper than 1 vertical to 2 horizontal shall be continuously benched” to the following:

"against an existing embankment slope, the existing embankment slope shall be continuously benched"

203.10 Embankment Construction – General Add the following sentence to the beginning of the fourth paragraph of Subsection 203.10:

Silt-Clay Fill placement to the lines and grades depicted on the Plans shall be in accordance with Subsection 203.12a – Placement of Silt-Clay Fill in Layers with Moisture and Density control. Embankment material placement within 4 feet vertical of finish subgrade shall be in accordance with Subsection 203.12 – Construction of Earth Embankment with Moisture and Density control.

203.10 Embankment Construction – General Add the following to the end of the first sentence of the sixth paragraph of Subsection 203.10:

"with the prior approval of the Resident."

203.10 Embankment Construction – General Add the following to the end of the sentence in the seventh paragraph of Subsection 203.10 that reads "The layers so constructed shall not be placed above an elevation 2 feet below the finish subgrade.":

"and shall be compacted sufficiently to achieve a firm and stable surface under the action of construction equipment to the satisfaction of the Resident."

203.10 Embankment Construction – General Add the following sentences to the beginning of the ninth paragraph of Subsection 203.10:

Unsuitable excavated material ("waste" material) shall not be placed in any portion of new embankment, even if it is within the outer portion of the embankment slope in the so called "waste disposal area."

203.10 Embankment Construction – General Replace the first sentence of the thirteenth paragraph of Subsection 203.10 with the following sentence:

The entire embankment, including the area outside the 1.5H:1V line extending downward from the finished shoulder, shall be compacted.

Subsection 203.12a – Placement of Silt-Clay Fill in Layers with Moisture and Density Control Add the following between Sections 203.11 and 203.12 as a new subsection:

> Material: Silt-Clay Fill shall consist of suitable silt-clay common excavation that meets the requirements of Section 203.02
>
> Moisture Control: The workability of silt-clay is acutely sensitive to moisture content. The water content of Silt-Clay Fill shall be controlled by the Contractor to stay in the range of 2 percent dry of the laboratory-determined optimum water content to 4 percent wet of optimum water content.

Placement and Compaction: Silt Clay Fill shall be placed in continuous, approximately horizontal layers, not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers. Silt-Clay Fill material shall not be placed on surfaces that are muddy, frozen, or contain frost or ice. Silt-Clay Fill shall be compacted using a sheeps-foot or other kneading-type compaction equipment. Care shall be taken not to overwork the silt-clay material. Equipment traffic over silt-clay material shall be limited. Any area of Silt-Clay Fill that becomes disturbed, as evidenced by rutting, weaving, etc. shall be removed and replaced at no additional cost to the Owner.

The distribution and gradation of the Silt-Clay Fill throughout earthwork components shall be such that the fills will be free from lenses, pockets, streaks, or layers of material differing substantially in texture, gradation, or moisture from the surrounding material. The combined excavation, separation, and placement operations shall be such that the materials, when compacted, will be blended sufficiently to secure the best practicable distribution of the material.

Compaction Criteria: Silt-Clay Fill shall be compacted to the requirements set forth in Section 203.11. The Contractor shall adjust the moisture content of the Silt-Clay Fill as necessary to achieve the required degree of compaction.

203.17 Preparation and Protection of the Subgrade Add the following paragraphs to the beginning of Subsection 203.17:

The following preparation requirements apply to all earthwork areas, including subgrade in embankment areas, finish subgrade in cut areas, and finish subgrade for structures.

All existing vegetation, unsuitable existing fill materials, asphalt, topsoil and other organic or deleterious material shall be removed from earthwork areas of the project to expose suitable subgrade soils consisting of inorganic granular soils. At the discretion of the Resident, unsuitable soils exposed at embankment or finish subgrade shall be overexcavated and replaced using material that is consistent with the surrounding soils (silt-clay/low permeable versus granular/ higher permeability) or as directed by the Resident. The subgrade shall be prepared up to the limit of fill in embankment areas of the project.

The exposed embankment subgrade in areas where embankment depth does not exceed 5 feet, finish subgrade in cut areas of the project, and finish subgrade for structures shall be proofrolled using a self-propelled static roller. Loose or yielding areas shall also be overexcavated and replaced using material that is consistent with the surrounding soils (silt-clay/low permeable versus granular/ higher permeability) or as directed by the Resident. Fill material shall be placed in loose lifts not to exceed 12 inches and compacted to 95 percent of the material's maximum dry density as determined by AASHTO T-180. Special placement and compaction methods may be warranted in wet areas and at the discretion of the Resident.

203.19 Basis of Payment Modify the beginning of the first sentence of the third paragraph of Subsection 203.19 to read as follows:

"Payment for removal of unsuitable or unstable material at / below subgrade in cut or in embankment areas will be paid …"

SPECIAL PROVISION

SECTION 203

EXCAVATIONS AND EMBANKMENTS

(Special Fill - Streambed Materials)

203.01 Description This work consists of furnishing and placing stone and granular material inside the relocated streambed to form a nature-like streambed.

203.02 Materials Special Fill shall consist of a mixture of stone and aggregate similar in size and shape to those found in natural channels and may be obtained as bank run or screening materials from earth borrow pits. Special Fill shall conform to the following requirements:

- Approximately 50% by volume shall be stones between 4 and 12 inches average dimension, well graded.
- Approximately 50% by volume shall be aggregate meeting the grading requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
4 inch	100
2 ½ inch	70 – 85
1 inch	45 – 60
1/2 inch	20 – 40
No. 4	10 – 25
No. 200	0 – 6.0

Clean, granular material excavated on-site in accordance with Special Provision Section 203, Excavation and Embankment, and approved by the Resident, may be used in the mix at the Contractor's option.

Material from blasting or crushing operations will not be allowed unless approved by the Resident. Quarry materials will be evaluated for suitability by the Resident and may be rejected.

203.03 Testing and Inspection

The Contractor shall identify the source and proposed mix for inspection at least ten (10) working days prior to the start of stream channel construction. The Contractor shall submit documentation demonstrating that the 4-inch minus fraction conforms to the requirements. The grading of stone larger than 4 inches will be inspected for

conformance with these requirements in accordance with the Standard Specifications, Section 601.032.d Inspection.

203.04 Construction Requirements

A. Mix and place Special Fill along the length of the relocated stream bed in a manner that minimizes segregation and as follows:

- Place Special Fill in lifts no thicker than approximately 12 inches. Prior to placement of the next lift, mechanically compact or thoroughly wet the Special Fill by washing-in with water until the surface is sealed.

- Construct a roughly trapezoidal-shaped channel with a streambed surface, rock bands and bank lines as shown on the plans and in accordance with Special Provision 610 – River Stones. Hand shaping of Special Fill may be required.

- Thoroughly wet the Special Fill prior to exposure to normal flow conditions. Fill any remaining voids by washing-in granular borrow until the surface is sealed. After washing-in, the depth shall meet the required thickness.

203.05 Method of Measurement

Except as otherwise provided, Special Fill will be measured in place by the cubic yard.

Special Fill used in locations difficult to measure accurately in place, may be measured in vehicles at 80% of the number of cubic yards accepted and used, at the point of delivery as shown on delivery slips in accordance with Section 108.1.3 (F) Delivery Slips.

203.06 Basis of Payment

The accepted quantity of Special Fill will be paid for at the contract price per cubic yard complete in place and shall be full compensation for furnishing all materials, equipment and labor.

Water and granular borrow added to the Special Fill to fill voids shall be considered incidental to the work.

Pay Item	Pay Unit
203.33 Special Fill	CY

from a mix of potted nursery stock and bare root plantings. At least 70 percent of all plants installed must be potted nursery stock (30 percent may be bare root). Bare root plants may only be installed during dormant plant conditions, and preferably in the early spring.

Ramp Stream Relocation Site

Item	Description	Species Qty	Item Qty
621.7331	Landscaping (Riparian Stream Bank Zone) Shrub, 2'-3' Group A		444
	Common Juniper (Juniperus communis L.)	88	
	Smooth Sumac (Rhus glabra)	112	
	Canadian Serviceberry (Amelanchier canadensis)	92	
	Marsh Elder (Iva L.)	88	
	Gray Birch (Betula populifolia)	64	
621.7341	Landscaping (Riparian Stream Shelf Zone) Tree, 3'-4' Group B		204
	Larch *(Larix Laricina)*	40	
	Red Maple *(Acer Rubrum)*	40	
	Black Willow *(Salix Nigra)*	56	
	Green Ash *(Fraxinus Pennsylvanica)*	28	
	Downy Hawthorn *(Crataegus Mollis)*	20	
621.7342	Landscaping (Riparian Stream Shelf Zone) Shrub – 2'-3' Group C		340
	Common Juniper (Juniperus communis L.)	24	
	Smooth Sumac (Rhus glabra)	64	
	Canadian Serviceberry (Amelanchier canadensis)	80	
	Marsh Elder (Iva L.)	68	
	Gray Birch (Betula populifolia)	40	
	Highbush Blueberry *(Vaccinium Corymbosum)*	24	
621.7351	Landscaping (Riparian Stream Higher Ground Zone) Tree – 3'-4' Group D		60
	Larch *(Larix Laricina)*	12	
	Red Maple *(Acer Rubrum)*	12	
	Black Willow *(Salix Nigra)*	12	
	Green Ash *(Fraxinus Pennsylvanica)*	8	
	Downy Hawthorn *(Crataegus Mollis)*	16	
621.7352	Landscaping (Riparian Stream Higher Ground Zone) Shrub – 2'-3' Group E		84
	Common Juniper (Juniperus communis L.)	8	
	Smooth Sumac (Rhus glabra)	16	
	Canadian Serviceberry (Amelanchier canadensis)	8	
	Marsh Elder (Iva L.)	20	
	Gray Birch (Betula populifolia)	16	
	Highbush Blueberry *(Vaccinium Corymbosum)*	16	
621.7361	Landscaping (Upland Zone) Tree – 3'-4' Group F		164
	Balsam Fir *(Abies Balsamea)*	64	
	Black Cherry *(Prunus Serotina)*	48	

	Eastern White Pine *(Pinus Strobus)*	8	
	Sugar Maple *(Acer Saccharum)*	44	
621.7362	Landscaping (Upland Zone) Shrub – 2'-3' Group G		176
	Beaked Hazelnut *(Corylus Cornuta)*	100	
	Nannyberry *(Viburnum Lentago)*	76	

Possible sources for Riparian Zone and Upland Trees and Shrubs:

Norpine Landscape, Inc.
153 Salem Road
Kingfield, ME 04947
(207) 265-2430

Rosengren Landscaping Inc.
4 Lambert Road,
Freeport, ME 04032
(207) 865-3405

New England Wetland Plants, Inc.
820 West Street
Amherst, MA 01002
(413) 256-1752 or (413) 548-8000

Pierson Nurseries, Inc.
24 Buzzell Road
Biddeford, ME 04005

621.0017 General Construction Requirements

The following paragraph is added:

All wetland trees and shrubs shall be marked with permanent plant identification tags with the species clearly marked, and remain legible for a period of five years. The tags shall be attached to the individual plants. The tags shall be placed at the time of planting.

621.0018 Layout

The following paragraphs are added:

In general, and depending on site conditions, plants will be spaced evenly across the site. Final locations of individual plants will depend on site conditions and hydrology during the time of planting, and upon the direction of Maine Turnpike Authority's Wetland Scientist who will be on-site to provide oversight during planting. Planting concepts are to be followed where appropriate, but adjustments based upon conditions encountered in the field may be necessary. The Wetland Scientist will be on-site to assist the Contractor in determining plant layout and monitoring plant installation. The Contractor shall be assisted by the Resident and Wetland

Item No.	Item Description	Unit	Interchange 19	Interchange 25	Interchange 75 Toll Upgrades	Interchange 75 Slope Repairs	Total Quantity
202.202	REMOVING PAVEMENT SURFACE	SY			2,650		2,650
203.20	COMMON EXCAVATION	CY			2,950	12,800	15,750
203.25	GRANULAR BORROW	CY			2,850	2,100	4,950
203.33	SPECIAL FILL	CY				400	400
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	CY			660	330	990
304.14	AGGREGATE BASE COURSE - TYPE A	CY			600	70	670
403.207	HOT MIX ASPHALT, 19.0 mm NOMINAL MAXIMUM SIZE	TON			190		190
403.208	HOT MIX ASPHALT, 12.5 mm NOMINAL MAXIMUM SIZE	TON			340		340
403.2084	HOT MIX ASPHALT, 12.5 mm NOMINAL MAXIMUM SIZE, (SIDEWALKS, DRIVES, ISLANDS, & INCIDENTALS)	TON			40		40
403.212	HOT MIX ASPHALT, 4.75 mm NOMINAL MAXIMUM SIZE	TON			72		72
403.213	HOT MIX ASPHALT, 12.5 mm NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE BASE)	TON			420		420
409.15	BITUMINOUS TACK COAT, APPLIED	GAL			400		400
419.30	SAWING BITUMINOUS PAVEMENT	LF			3,500		3,500
502.2611	STRUCTURAL CONCRETE, BUILDING FOUNDATION AND GENERATOR PAD	CY		23	23		46
502.262	STRUCTURAL CONCRETE, ROADWAY SLAB ON GRADE	CY			230		230
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB		550	550		1,100
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB		550	550		1,100
503.18	GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCING BARS, FABRICATED AND DELIVERED	LB			24,000		24,000
503.19	GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCING BARS, PLACING	LB			24,000		24,000
503.90	SYNTHETIC FIBER REINFORCEMENT	LB			1,150		1,150
504.61	TOLL GANTRY - SOUTHBOUND	LS			1		1
509.202	CULVERT SLIPLINE (110 LF)	LS			1		1
511.071	COFFERDAM: SLIP LINING	LS			1		1
511.072	COFFERDAM: SLOPE REPAIR	LS				1	1
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES	SY			690		690
515.23	EPOXY OVERLAY	SY			25		25
526.306	TEMPORARY CONCRETE BARRIER TYPE I - SUPPLIED BY THE AUTHORITY (2,600 LF)	LS			1		1
527.341	WORK ZONE CRASH CUSHION - TL-3	EA			2		2
527.342	WORK ZONE CRASH CUSHION - TL-2	EA			4		4
603.2453	54 INCH REINFORCED CONCRETE PIPE - CLASS V	LF			26		26
603.28	CONCRETE COLLAR	EA			1		1
606.13	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (7' STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)	LF			250	363	613
606.1351	TERMINAL END - ANCHORED END 31" W-BEAM GUARDRAIL	EA			1	2	3
606.352	REFLECTORIZED BEAM GUARDRAIL DELINEATOR	EA			50	60	110
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	EA			11	6	17
606.791	GUARDRAIL - FLARED TERMINAL - 31" W-BEAM GUARDRAIL	EA			5	2	7
610.08	PLAIN RIPRAP	CY			81	30	111
610.181	TEMPORARY STONE CHECK DAM	CY			10		10
610.21	RIVER STONES	CY				100	100
613.319	EROSION CONTROL BLANKET	SY			560	2,800	3,360
615.07	LOAM	CY	5	5	520	870	1,400
618.1401	SEEDING METHOD NUMBER 2, PLAN QUANTITY	UN	5	5	43	49	102
618.1402	SEEDING METHOD NUMBER 2 MODIFIED, PLAN QUANTITY	UN				22	22
619.1201	MULCH, PLAN QUANTITY	UN	5	5	43	71	124
619.1202	TEMPORARY MULCH	LS	0.05	0.05	0.35	0.55	1
620.58	EROSION CONTROL GEOTEXTILE	SY			172	75	247
621.7331	LANDSCAPING (RIPARIAN STREAM BANK ZONE) SHRUB, 2'-3' GROUP A	EA				444	444
621.7341	LANDSCAPING (RIPARIAN STREAM SHELF ZONE) TREE, 3'-4' GROUP B	EA				204	204
621.7342	LANDSCAPING (RIPARIAN STREAM SHELF ZONE) SHRUB, 2'-3' GROUP C	EA				340	340
621.7351	LANDSCAPING (RIPARIAN STREAM HIGHER GROUND ZONE) TREE, 3'-4' GROUP D	EA				60	60
621.7352	LANDSCAPING (RIPARIAN STREAM HIGHER GROUND ZONE) SHRUB, 2'-3' GROUP E	EA				84	84
621.7361	LANDSCAPING (UPLAND ZONE) TREE 3'-4' GROUP F	EA				164	164
621.7362	LANDSCAPING (UPLAND ZONE) SHRUB 2'-3' GROUP G	EA				196	196
626.12	36" X 24" X 36" QUAZITE JUNCTION BOX	EA			7		7
626.13	18" X 12" X 18" QUAZITE JUNCTION BOX	EA			2		2
626.332	30-INCH DIAMETER, GREATER THAN 8-FEET LONG, AND ALL 36-INCH AND 42-INCH DIAMETER FOUNDATIONS	CY			20		20

Item No.	Item Description	Unit	Interchange 19	Interchange 25	Interchange 75 Toll Upgrades	Interchange 75 Slope Repairs	Total Quantity
627.18	12 INCH SOLID WHITE PAVEMENT MARKING LINE	LF			240		240
627.681	TEMPORARY 6 INCH PAINTED PAVEMENT MARKING LINE, YELLOW OR WHITE	LF			2,800		2,800
627.712	WHITE OR YELLOW PAVEMENT MARKING LINE	LF			4,100		4,100
627.73	TEMPORARY 6 INCH PAVEMENT MARKING TAPE	LF			5,950		5,950
627.731	TEMPORARY 6 INCH BLACK PAVEMENT MARKING TAPE	LF			3,700		3,700
627.77	REMOVING EXISITNG PAVEMENT MARKINGS	SF			1,400		1,400
629.05	HAND LABOR, STRAIGHT TIME	HR			40		40
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	HR			40		40
631.11	AIR TOOL (INCLUDING OPERATOR)	HR			40		40
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	HR			40		40
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	HR			40		40
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	HR			40		40
631.36	FOREMAN	HR			40		40
631.50	JACKHAMMER (AIR TOOL INCLUDING OPERATOR)	HR			40		40
631.51	BUCKET TRUCK	HR			40		40
631.52	SCISSOR LIFT	HR			40		40
631.53	ELECTRICIAN	HR			40		40
631.54	ELECTRICIAN'S APPRENTICE	HR			40		40
639.19	FIELD OFFICE, TYPE B	EA			0.5	0.5	1
645.1091	REMOVE AND RESET SIGN ON WOODEN POST	EA			4		4
645.1092	REMOVE AND RESET SIGN ON METAL BEAM	EA			2		2
652.33	DRUM	EA		10	40		50
652.34	CONE	EA	25	25	40		90
652.35	CONSTRUCTION SIGNS	SF	48	48	760		856
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	LS	0.05	0.10	0.85		1
652.38	FLAGGERS	HR			80		80
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN	EA			1		1
652.45	TRUCK MOUNTED ATTENUATOR	CD			20		20
655.02	DVAS MOUNT INSTALLATION	EA			4		4
655.04	INSTALLATION OF SENSOR LOOPS	LS			1		1
655.05	INSTALLATION OF AVI ANTENNA	EA			8		8
655.06	INSTALLATION OF AVI READERS	EA			4		4
655.102	#2 AWG WIRE	LF			21,800		21,800
655.110	#10 AWG WIRE	LF			3,200		3,200
655.14	4PR/24 (CATEGORY 5E) CABLE	LF			400		400
655.15	LMR 400 CABLE	LF			400		400
655.16	FIBER OPTIC CABLE	LF			2,500		2,500
655.165	FIBER OPTIC SPLICE PANEL	EA			3		3
655.204	3" SCHEDULE 80 PVC CONDUIT	LF		500	7,100		7,600
655.205	4" SCHEDULE 80 PVC CONDUIT	LF			80		80
655.30	INSTALL COMMUNICATIONS CABINET (PROVIDED BY MTA)	EA			2		2
655.31	INSTALL COMMUNICATIONS CABINET (PROVIDED BY CONTRACTOR)	EA			1		1
655.41	P44 NEMA CABINET	EA			3		3
655.43	60 AMP PANELBOARD CABINET	EA			6		6
655.71	REMOVAL OF EXISTING SELECT TOLL EQUIPMENT	LS			1		1
655.80	LIGHTNING SUPPRESSION SYSTEM	LS			1		1
655.94	GENERATOR AND EQUIPMENT	LS			1		1
655.951	UTILITY BUILDING ELECTRICAL: AUBURN	LS			1		1
655.952	UTILITY BUILDING ELECTRICAL: KENNEBUNK	LS		1			1
656.50	BALED HAY, IN PLACE	EA			50	20	70
656.60	TEMPORARY BERMS	LF				600	600
656.62	TEMPORARY SLOPE DRAINS	LF				110	110
656.632	30 INCH TEMPORARY SILT FENCE	LF			2,250	1,200	3,450
659.10	MOBILIZATION	LS	0.05	0.05	0.45	0.45	1
800.011	UTILITY BUILDING: AUBURN	LS			1		1
800.012	UTILITY BUILDING: KENNEBUNK	LS		1			1
830.25	HORIZONTAL DIRECTIONAL DRILLING, 3 INCH HDPE CONDUIT INSTALLATION	LF	450		1,700		2,150

Date:6/21/2018

Filename: 002_Est Quantities.dgn

Scale:

No.	Revision	By	Date
1	UPDATED ITEM 625.41 QUANTITY	CDH	06/18

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: R. Bruce Munger, P.E., P.T.O.E.

	By	Date		By	Date
Designed	EDD	05\18	Checked	CDH	05\18
Drawn	EDD	05\18	In Charge of	RAL	05\18

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

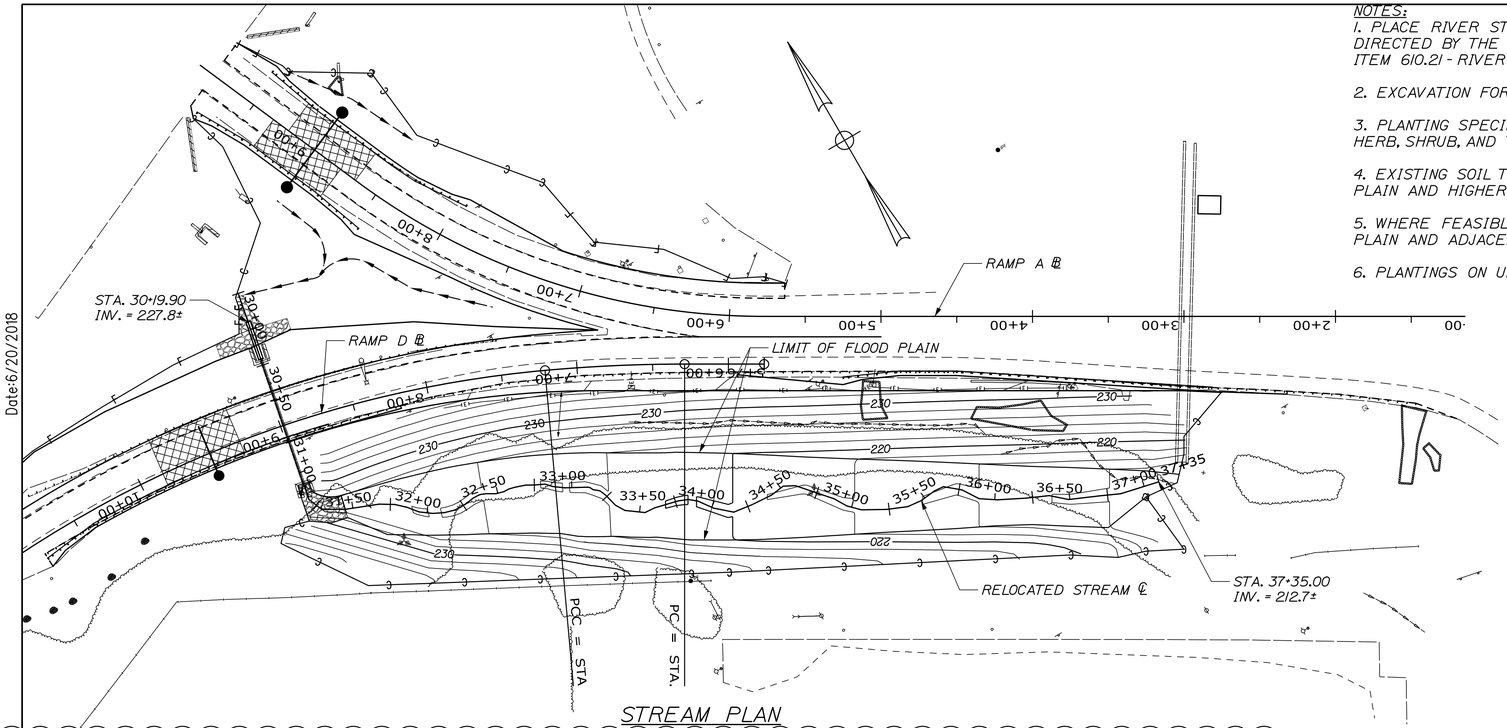
MTA PROJECT MANAGER: William Yates

AUBURN - EXIT 75 TOLL SYSTEM UPGRADES AND STREAM RELOCATION

ESTIMATED QUANTITIES

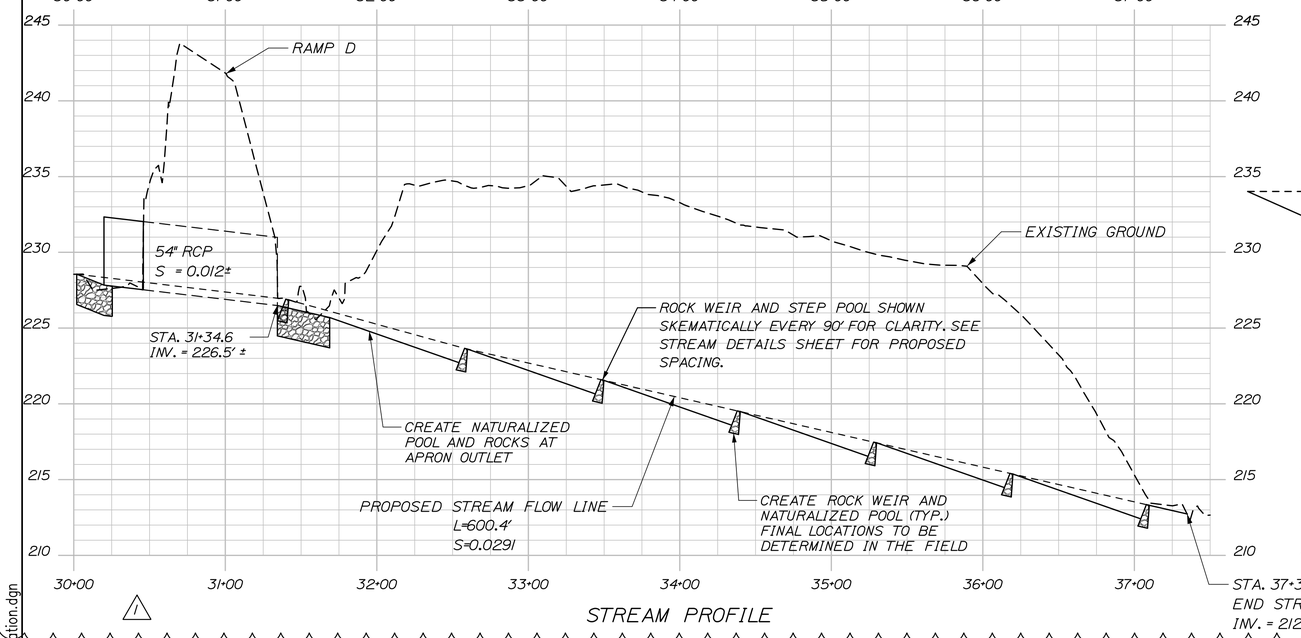
SHEET NUMBER: EQ-01

CONTRACT:2018.17



STREAM PLAN

1" = 100'



STREAM PROFILE

NOTES:

1. PLACE RIVER STONE AND WOODY DEBRIS RANDOMLY WITHIN THE STREAM BED AND BANKS TO CREATE HABITAT AS DIRECTED BY THE RESIDENT AND PER MDIFW STREAM HABITAT IMPROVEMENT GUIDANCE. (PAYMENT SHALL BE MADE UNDER ITEM 610.21 - RIVER STONES)

2. EXCAVATION FOR THE STREAM SHALL BE PAID FOR UNDER ITEM 203.20 COMMON EXCAVATION.

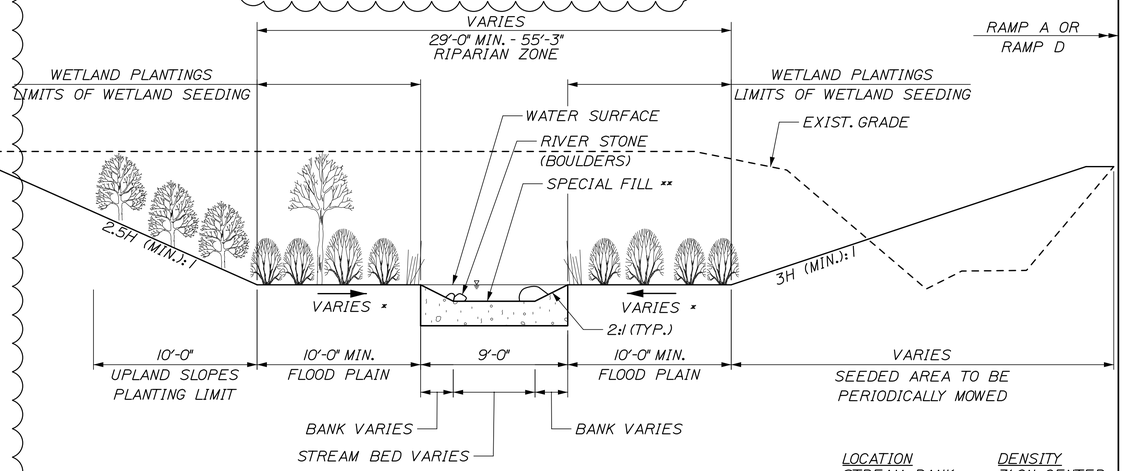
3. PLANTING SPECIES WILL BE NATIVE FOR WETLAND/RIPARIAN/STREAM SPECIES AND UPLAND SPECIES AND WILL INCLUDE HERB, SHRUB, AND TREE COVER FOR FILTRATION AND SHADE.

4. EXISTING SOIL TYPES ARE SILTY/CLAY. SALVAGE EXISTING ORGANIC MATERIAL AND GRAVELLY SOILS TO DEPOSIT ON FLOOD PLAIN AND HIGHER GROUND. MINIMUM 4" LOAM AND SEED/MULCH ON SIDE SLOPE.

5. WHERE FEASIBLE, USE SOIL AND GRAVEL FROM THE EXISTING STREAM CHANNEL AND BANKS TO LINE THE CREATED FLOOD PLAIN AND ADJACENT AREAS OF THE CREATED CHANNEL.

6. PLANTINGS ON UPLAND SLOPES ARE PROVIDED FOR SHADE.

AUBURN EXIT 75 SLOPE REPAIR PLANTINGS	
COMMON NAME	SCIENTIFIC NAME
STREAM/WETLAND ZONE	
TREES	
LARCH	LARIX LARICINA
RED MAPLE	ACER RUBRUM
BLACK WILLOW	SALIX NIGRA
GREEN ASH	FRAXINUS PENNSYLVANICA
DOWNY HAWTHORN	CRATAEGUS MOLLIS
SHRUBS	
COMMON JUNIPER	JUNIPERUS COMMUNIS L.
SMOOTH SUMAC	RHUS GLABRA
CANADIAN SERVICEBERRY	AMELANCHIER CANADENSIS
MARSH ELDER	IVA L.
GRAY BIRCH	BETULA POPULIFOLIA
HIGHBUSH BLUEBERRY	VACCINIUM CORYMBOSUM
SEED MIX	
SEEDING METHOD NO. 2 MODIFIED - SEE SPECIFICATIONS	
UPLAND SLOPES	
TREES	
BALSAM FIR	ABIES BALSAMEA
BLACK CHERRY	PRUNUS SEROTINA
EASTERN WHITE PINE	PINUS STROBUS
SUGAR MAPLE	ACER SACCHARUM
SHRUBS	
BEAKED HAZELNUT	CORYLUS CORNUTA
NANNYBERRY	VIBURNUM LENTAGO
SEED MIX	
SEEDING METHOD NO. 2 MODIFIED - SEE SPECIFICATIONS	



STREAM RESTORATION - LOOKING UPSTREAM
TYPICAL SECTION

N.T.S.

LOCATION	DENSITY
STREAM BANK	3' ON CENTER
STREAM SHELF	5' ON CENTER
SIDE SLOPE	10' ON CENTER

* SLOPE VARIES TO CREATE MICROTOPOGRAPHY

** SEE STREAM DETAILS SHEET FOR LAYOUT OF ROCKBANDS AND SPECIAL FILL

Date:6/20/2018

Filename: 053_stream mitigation.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date
1	ADDENDUM #2		

Designed by: HNTB

CONSULTANT PROJECT MANAGER: R. Bruce Munger, P.E., P.T.O.E.

	By	Date		By	Date
Designed	EDD	05\18	Checked	RWH	05\18
Drawn	PEM	05\18	In Charge of	RAL	05\18

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MAINE TURNPIKE

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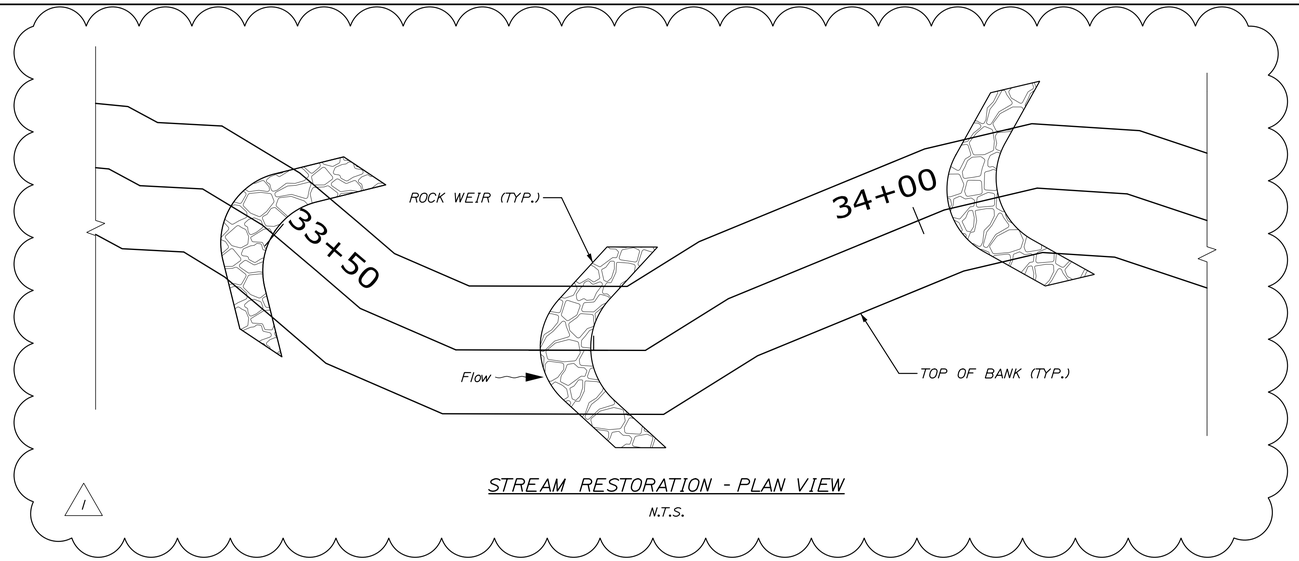
MTA PROJECT MANAGER: William Yates

AUBURN - EXIT 75 TOLL SYSTEM UPGRADES AND STREAM RELOCATION

STREAM RELOCATION

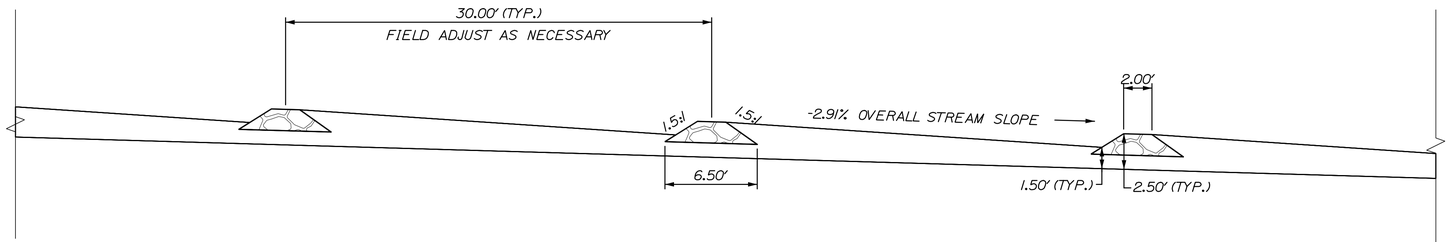
SHEET NUMBER: PL-01

CONTRACT:2018.17



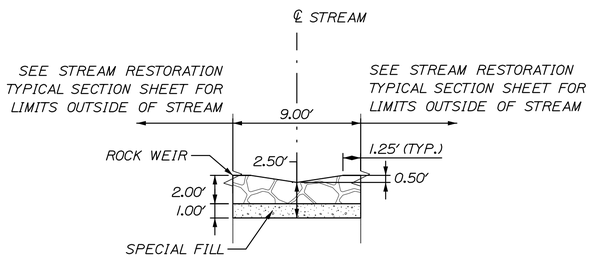
STREAM RESTORATION - PLAN VIEW

N.T.S.



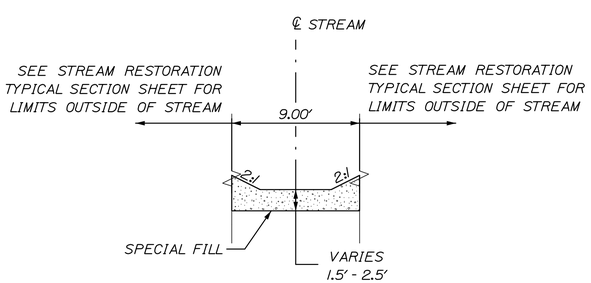
STREAM RESTORATION - PROFILE VIEW

N.T.S.



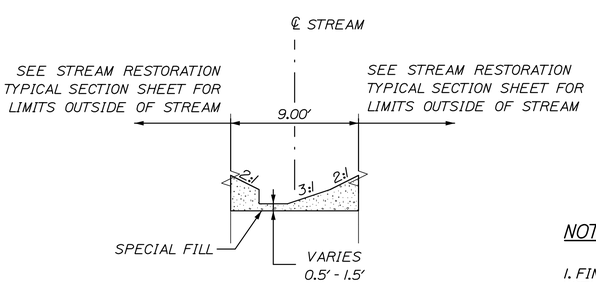
STREAM RESTORATION - LOOKING UPSTREAM THROUGH ROCK WEIR

N.T.S.



STREAM RESTORATION - LOOKING UPSTREAM THROUGH STEP POOL ON TANGENT

N.T.S.



STREAM RESTORATION - LOOKING UPSTREAM THROUGH STEP POOL IN CURVE

N.T.S.

NOTES:

1. FINAL PLACEMENT OF ROCK WEIRS AND WOODY DEBRIS WITHIN THE STREAM BED AND BANKS SHALL BE APPROVED BY THE RESIDENT AND/OR MDIFW.
2. ROCK WEIRS SHALL BE CONSTRUCTED OF WELL GRADED MIX OF 9" TO 18" RIVER STONE.
3. VOIDS IN ROCK WEIRS TO BE INFILLED WITH SPECIAL FILL, WATERED IN AND TAMPED CREATING A SOLID MASS.

No.	Revision	By	Date
1	ADDENDUM #2		

Scale:

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: R. Bruce Munger, P.E., P.T.O.E.

	By	Date		By	Date
Designed	AJS	05\18	Checked	RWH	05\18
Drawn	AJS	05\18	In Charge of	RAL	05\18

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MTA PROJECT MANAGER: William Yates

AUBURN - EXIT 75 TOLL SYSTEM UPGRADES AND STREAM RELOCATION

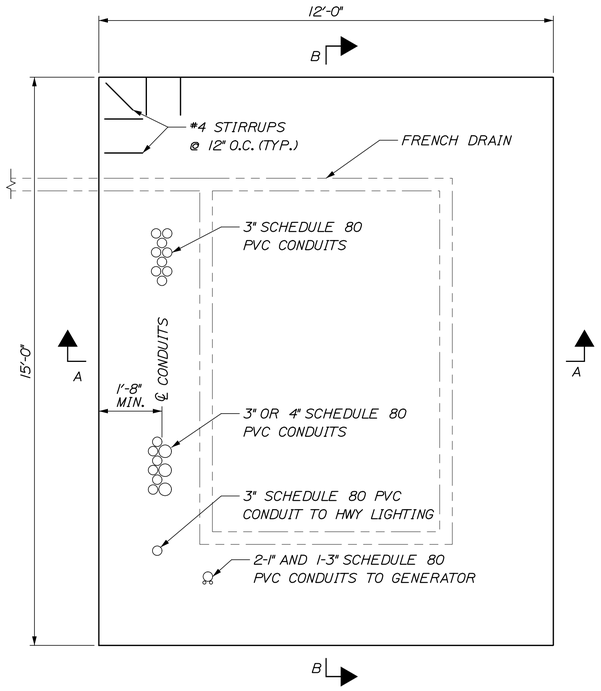
STREAM DETAILS

SHEET NUMBER: PL-02

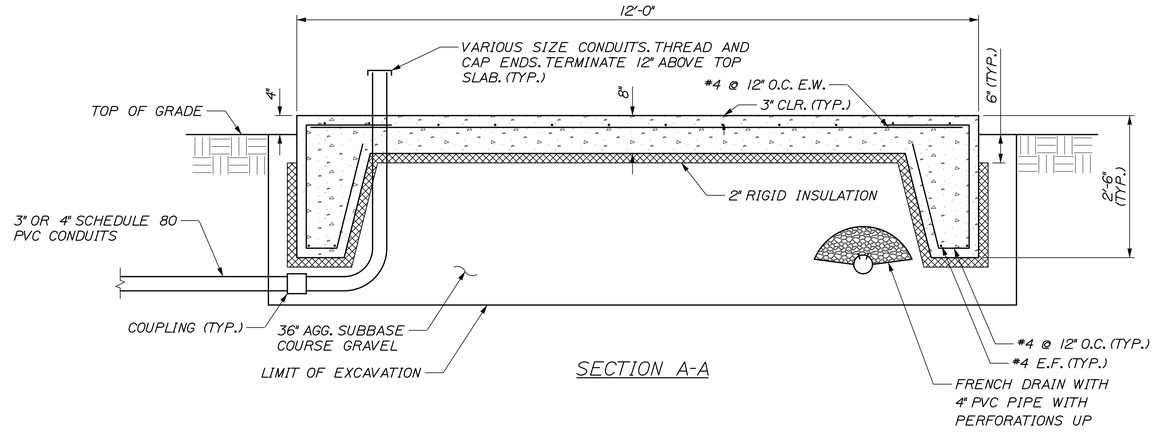
CONTRACT:2018.17

Date:6/18/2018

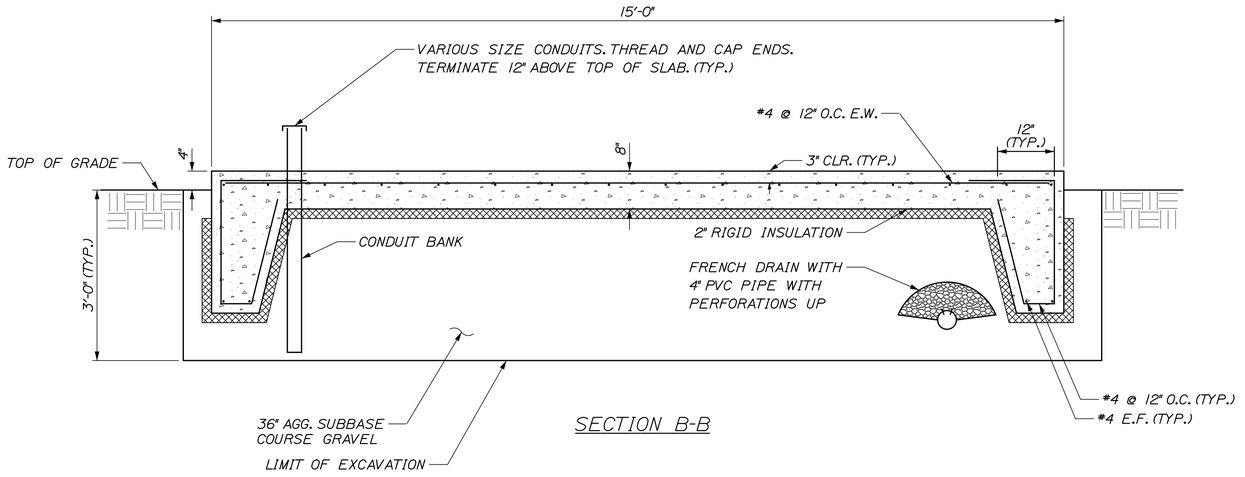
Filename: 054_stream details.dgn



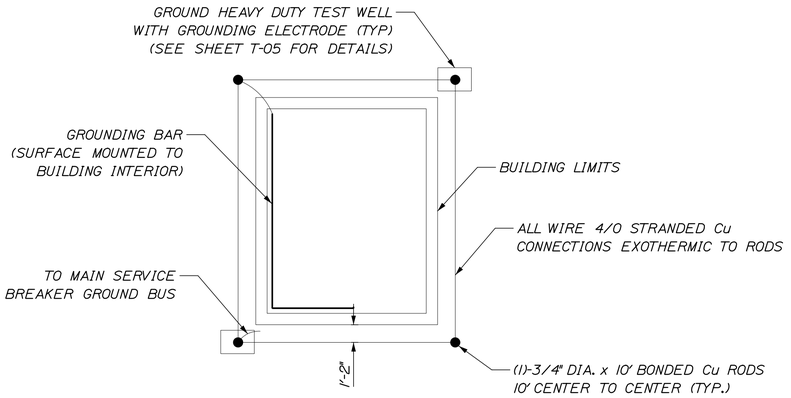
BUILDING SLAB PLAN



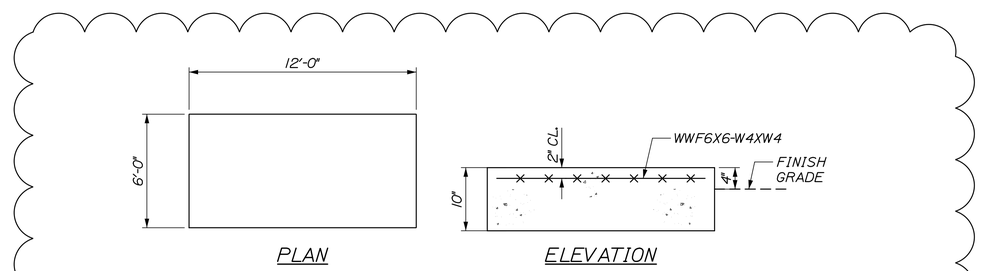
SECTION A-A



SECTION B-B



GROUNDING GRID



PLAN ELEVATION

NOTE:
PADS SHALL BE CLASS "A" CONCRETE (f'c=4,000 PSI).

GENERATOR PAD DETAIL
N.T.S.

1

Date:6/21/2018

Filename: 077_BldgSlabDets_Auburn.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date
1	ADDED GENERATOR PAD DETAIL	CDH	06/18

Designed by: HNTB

CONSULTANT PROJECT MANAGER: R. Bruce Munger, P.E., P.T.O.E.

	By	Date		By	Date
Designed	RBM	05\18	Checked	CDH	05\18
Drawn	EDD	05\18	In Charge of	RAL	05\18

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MTA PROJECT MANAGER: William Yates

AUBURN - EXIT 75 TOLL SYSTEM UPGRADES AND STREAM RELOCATION

AUBURN BUILDING SLAB DETAILS

SHEET NUMBER: B-01

CONTRACT:2018.17