

Date: 5/17/2013

Username: jolund

Division: HIGHWAY

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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	Removing Existing Bridge (80 CY)	1	LS
203.20	Common Excavation	61	CY
203.26	Gravel Borrow	180	CY
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	290	CY
304.10	Aggregate Subbase Course - Gravel	110	CY
403.208	Hot Mix Asphalt - 12.5 mm Nominal Maximum Size, Surface	39	TON
403.213	Hot Mix Asphalt - 12.5 mm Nominal Maximum Size, Base	24	TON
409.150	Bituminous Tack Coat, Applied	12	G
502.83	Concrete Cable Mat	1330	SF
508.14	High Performance Waterproofing Membrane (151 SY)	1	LS
510.11	Special Detour - Pedestrian Traffic Only	1	LS
511.07	Cofferdam	1	LS
515.20	Protective Coating for Concrete Surface	128	SY
534.76	Precast Abutment (25 CY)	1	LS
535.62	Prestressed Structural Concrete Box Beams (92 CY)	1	LS
606.232	Guardrail Type 3c -Over 15' Radius	140	LF
606.234	Guardrail Type 3c - Single Rail, 7' Posts	35	LF
606.265	Terminal End - Single Rail - Galvanized Steel	4	EA
606.353	Reflectorized Flexible Guardrail Marker	8	EA
606.74	Guardrail Type 3 - Single Rail Bridge Mounted	150	LF
606.753	Widen Shoulder for Low Volume Guardrail End - Type 3	3	EA
609.247	Terminal Curb Type 2 - 7 Ft	4	EA
610.08	Plain Riprap	55	CY
610.16	Heavy Riprap	95	CY
615.07	Loam	9	CY
618.141	Seeding Method Number 3, Plan Quantity	2.0	UN
619.1201	Mulch, Plan Quantity	2	UN
620.55	Stabilization / Reinforcement Geotextile (Sewn Seams)	120	SY
629.05	Hand Labor - Straight Time	10	HR
631.10	Air Compressor (Including Operator)	10	HR
631.11	Air Tool (Including Operator)	10	HR
631.12	All Purpose Excavator (Including Operator)	10	HR
631.14	Grader (Including Operator)	5	HR
631.172	Truck - Large (Including Operator)	5	HR
631.18	Chain Saw Rental (Including Operator)	5	HR
631.20	Stump Chipper Rental (Including Operator)	5	HR
639.19	Field Office Type B	1	EA
652.31	Type I Barricade	4	EA
652.312	Type III Barricade	2	EA
652.33	Drum	4	EA
652.34	Cone	10	EA
652.35	Construction Signs	92	SF
652.36	Maintenance of Traffic Control Devices	35	CD
652.38	Flaggers	40	HR
656.75	Temporary Soil Erosion and Water Pollution Control	1	LS
659.1	Mobilization	1	LS

GENERAL NOTES

- During construction, the road will be closed to traffic for a time period specified in the Special Provisions.
- There are no utilities located within the project limits.
- All embankment material, except as otherwise shown, placed below Elevation 170.4 at abutment 1 and 171.8 at abutment 2, shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.
- Clearing limits will be established in the field by the Resident. Payment for clearing will be considered incidental to related Contract items.
- Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
- Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
- 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 less thick will be made under appropriate equipment rental items.
- Where pavement under this contract joins an existing pavement, the existing pavement shall be saw cut along a smooth line to a neat, even, vertical joint, as directed by the resident. Broken or raveled edges will not be permitted. All work necessary for the preparation of this joint will be considered incidental to the related contract items.
- Any damage to the slopes caused by the Contractor's Equipment, Personnel, or Operation shall be repaired to the satisfaction of the resident. All work, Equipment, and Materials required to make repairs shall be at the Contractor's expense.
- All waste material not used on the project shall be disposed of off the project in waste areas approved by the Resident.
- Existing inslopes steeper than 2:1 in proposed fill areas shall be benched as directed by the Resident.
- No separate payment for superintendent or foreman will be made for the supervision of equipment being paid for under the equipment rental items.
- All work shall be done in accordance with the Maine Department of Transportation's (Maine DOT's) Best Management Practices for Erosion Control & Sediment Control, February, 2008.
- 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 Specification 619, Mulch. Payment will be made under Item 619.1401, Erosion Control Mix.
- Temporary Erosion control measures shall be maintained as specified in the Soil Erosion and Water Pollution Control Plan. Payment will be made under 656.75 'Temporary Soil Erosion and Water Pollution Control, Lump Sum.
- Guardrail posts as shown in the Standard Details shall be modified from the indicated length of 6 feet to a length of 7 feet. Payment will be considered incidental to the guardrail pay items.
- Two Reflectorized Flexible G.R. Markers (Item 606.353) will be installed at each of the four guardrail ends.
- Riverbed excavation materials consisting of alluvial deposits and Presumpscot formation clay shall be used to construct the approach embankments as designated by the Resident.
- The existing bridge superstructure, steel portions of the pier, portions of granite masonry necessary to complete the proposed work, and any other portions noted in the plan set shall be removed by, and become the property of, the Contractor. Granite masonry abutments and walls shall be removed to the elevations noted shown in the plans. Removal of the granite masonry walls shall be incidental to Item 202.19 - Removing Existing Bridge.
- Existing granite masonry wall limits below grade and individual granite block sizes shown in section view throughout this plan set are schematic in nature. No assurance is made regarding granite block widths or wall extents below grade.
- The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 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. No work related to the removal of the bridge shall be undertaken by the Contractor until the Resident 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.
- 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.
- Riprap installed for slope protection shall be placed on Class A Erosion Control Geotextile. Payment for Erosion Control Geotextile shall be incidental to Riprap.
- Protective Coating for Concrete Surfaces shall be applied to the following areas:
 - Exposed surfaces of the curbs;
 - Vertical faces of the fascia girders extending beneath the girders to the drip notch;
 - Exposed surfaces of abutments and wingwalls.
- Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by the City of Auburn 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 provided estimated quantities, except as follows:
 - If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
 - If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
 - 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.
- Project information referred to below may also be accessed at the following City of Auburn web address: <http://www.auburnmaine.gov/Pages/Government/Bid-Notices>. Project information, as well as answers to questions and clarifications, may also be obtained by faxing a request to the Bid Contact Person (Auburn City Engineer), Dan Goyette, at: 207-333-6601, ext. 1134.
- The hydrologic report of the bridge site may be accessed at the City of Auburn web address. The hydrologic report is based on 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.
- The project geotechnical reports titled "Preliminary Geotechnical Report, Helm Bridge, Browns Crossing Road, Auburn, Maine", dated October 2012 and "Supplemental Geotechnical Report, Helm Bridge, Browns Crossing Road, Auburn, Maine" dated January 2013 by Summit Geoengineering Services, may be accessed at the City of Auburn web address.
- 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 City of Auburn will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information.

CITY OF AUBURN 60 COURT STREET AUBURN, ME 04210		BR-1819(000)X		BRIDGE NO. 0074		BRIDGE PLANS	
WON		018190.00					
DATE	4/5/2013	SIGNATURE		P.E. NUMBER		DATE	
BY	TSK	DATE	4/5/2013				
PROJ. MANAGER	JKO	CHECKED-REVIEWED	KSD	DESIGNS-DETAILED		REVISIONS 1	
						REVISIONS 2	
						REVISIONS 3	
						REVISIONS 4	
						FIELD CHANGES	
HELM BRIDGE ROYAL RIVER ANDROSCOGGIN COUNTY				ESTIMATED QUANTITIES & GENERAL NOTES			
AUBURN				SHEET NUMBER			
				2			
				OF 8			

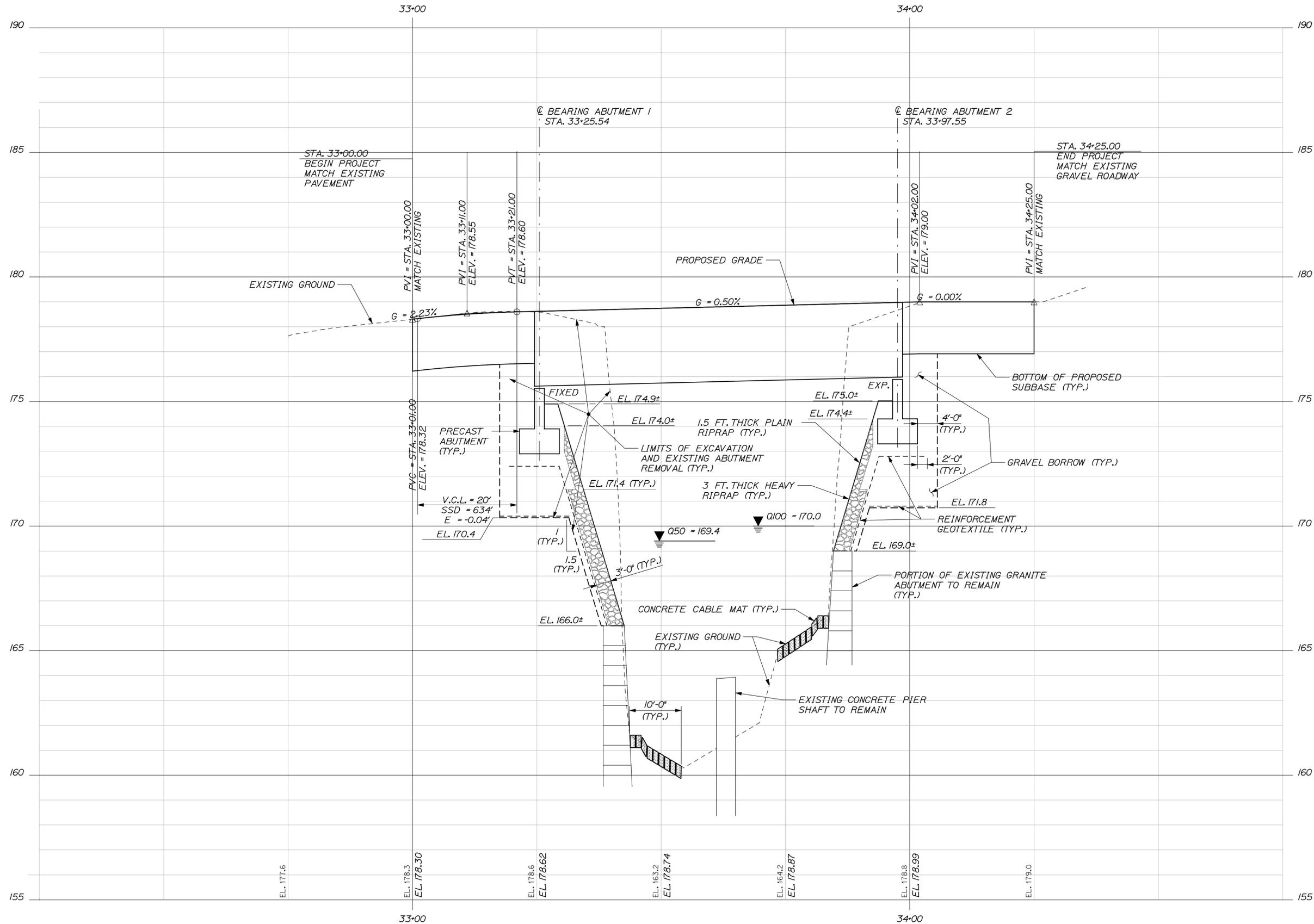


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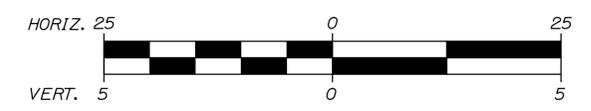
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PROFILE



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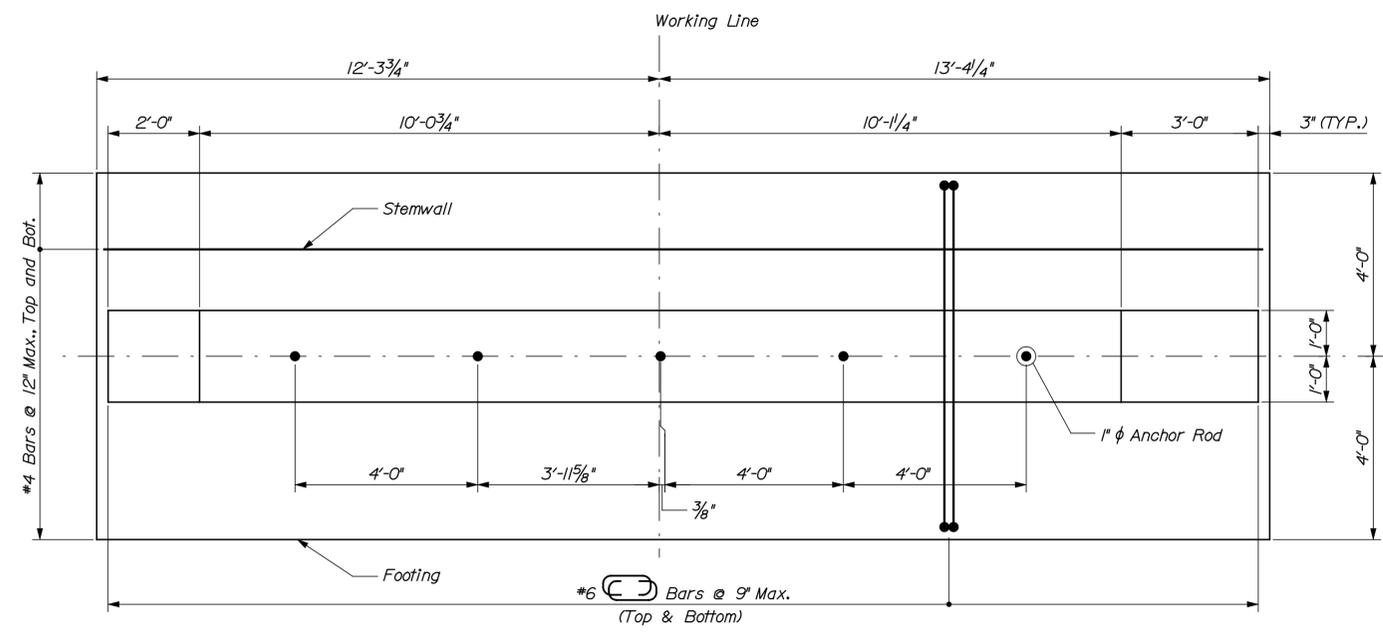
CITY OF AUBURN 60 COURT STREET AUBURN, ME 04210		BR-1819(000)X	
AUBURN		ANDROSCOGGIN COUNTY	
HELM BRIDGE ROYAL RIVER		PROFILE	
PROJ. MANAGER	DATE	BY	DATE
DESIGN-DETAILED	4/5/2013	TSK	4/5/2013
CHECKED-REVIEWED	KSD	KSD	KSD
DESIGN-DETAILED			
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REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SHEET NUMBER		BRIDGE NO. 0074	
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OF 8		018190.00	
		BRIDGE PLANS	

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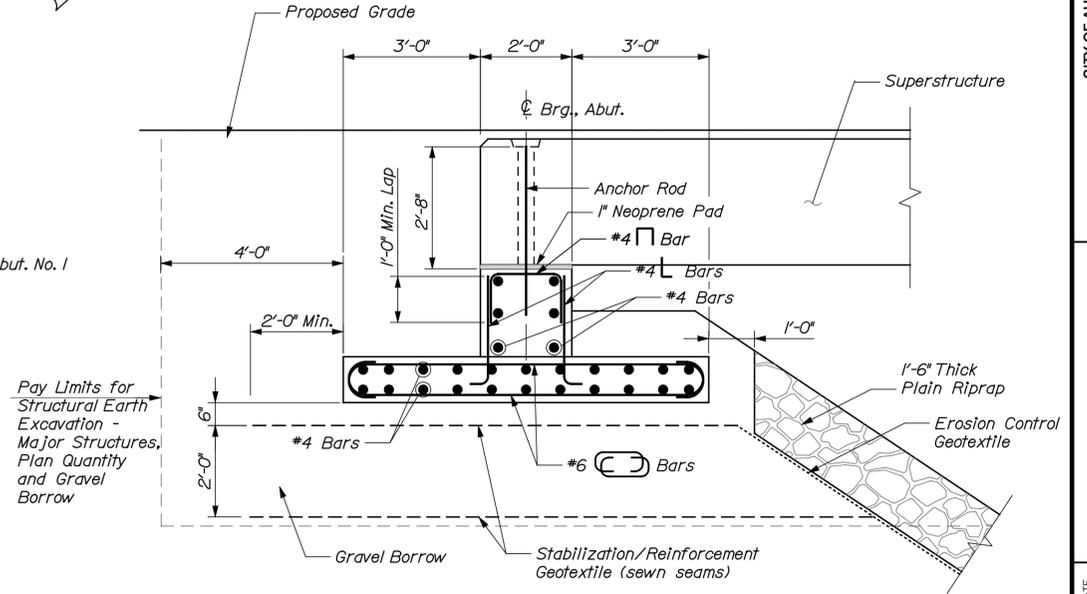
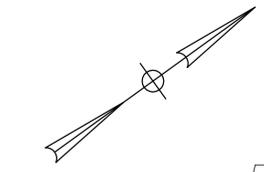
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Division: HIGHWAY

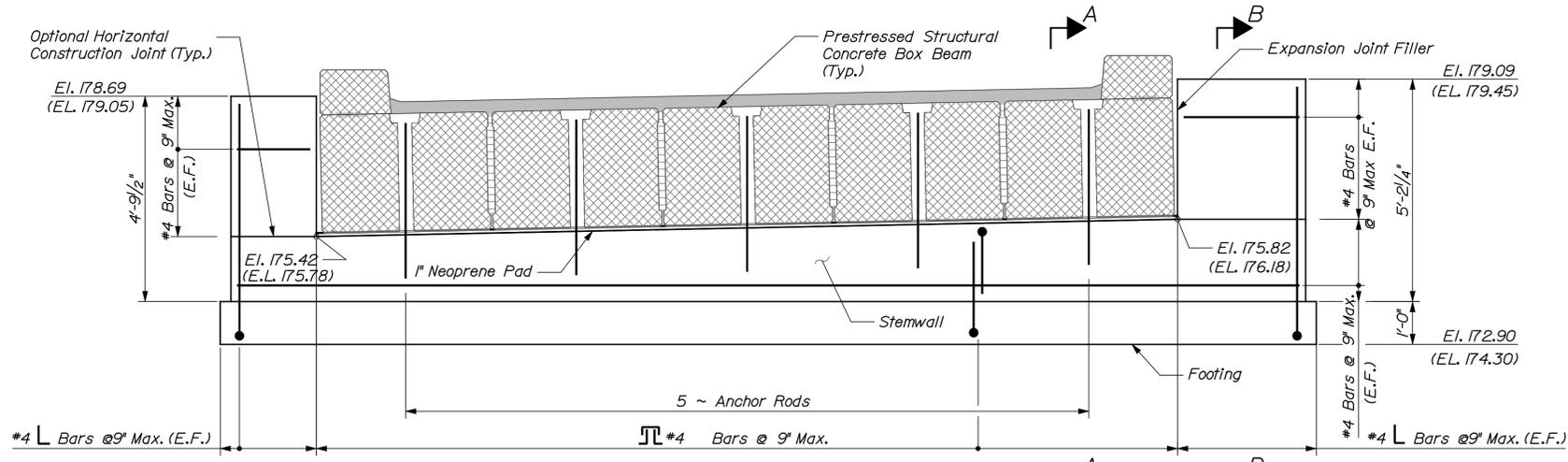
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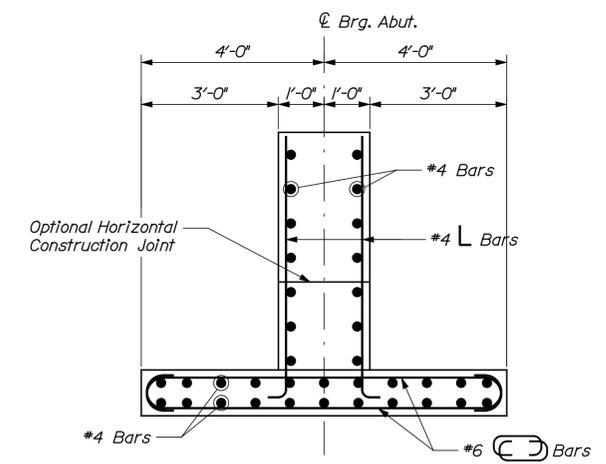
PLAN



SECTION A-A



ELEVATION



SECTION B-B

ABUTMENT AND EARTHWORK NOTES:

1. Details Shown are for Abutment 1. Abutment 2 details are similar, with elevations noted within parenthesis.
2. Shear keys shall be provided at horizontal construction joints in accordance with Standard Detail 502(O).
3. Reinforcing Steel shall have a minimum concrete cover of 2 inches.
4. The average factored bearing pressure beneath the footing is 2.2 ksf under Service I load combination and 3.2 ksf under Strength I load combination.
5. Neoprene pads shall be full width of the abutment stem and shall be either polychloroprene or natural polyisoprene of 50 +/- 5 Shore A durometer hardness, and shall conform to the requirements of Division 2, Section 18.2 of AASHTO Standard Specifications for Highway Bridges. Neoprene pads will not be paid for directly but will be considered incidental to related contract items.

CITY OF AUBURN 60 COURT STREET AUBURN, ME 04210		BR-1819(000)X	
AUBURN		ANDROSCOGGIN COUNTY	
HELM BRIDGE ROYAL RIVER		ABUTMENT GEOMETRY AND DETAILS	
PROJ. MANAGER	DATE	BRIDGE NO. 0074	BRIDGE PLANS
DESIGN-DETAILED	4/5/2013	WIN	018190.00
CHECKED-REVIEWED	4/5/2013		
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
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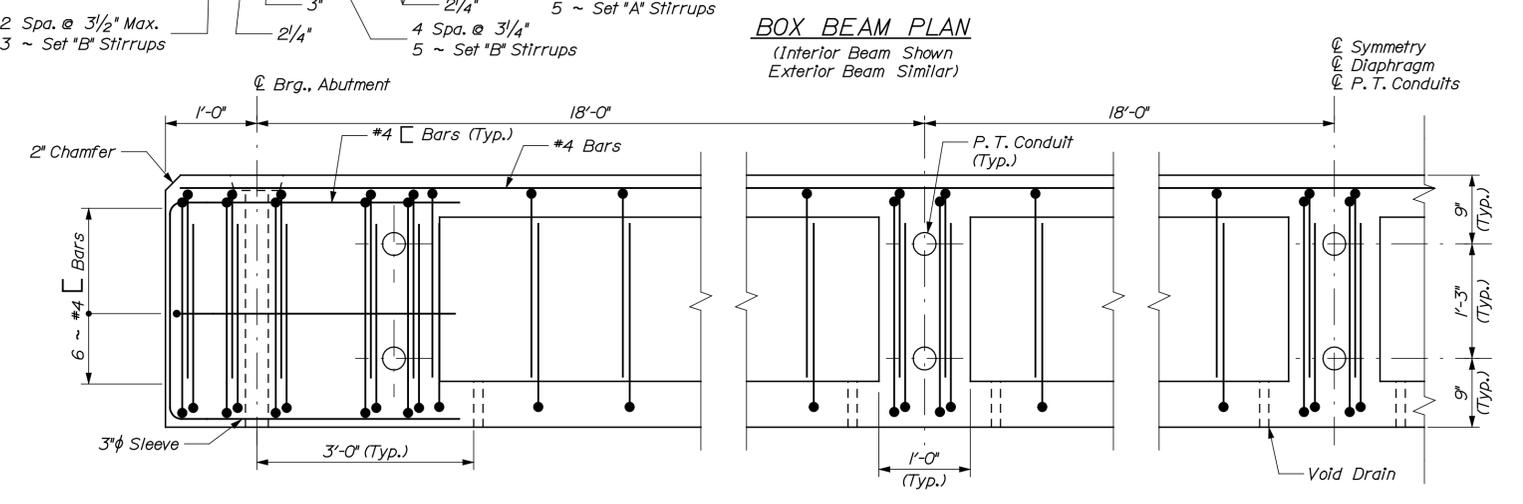
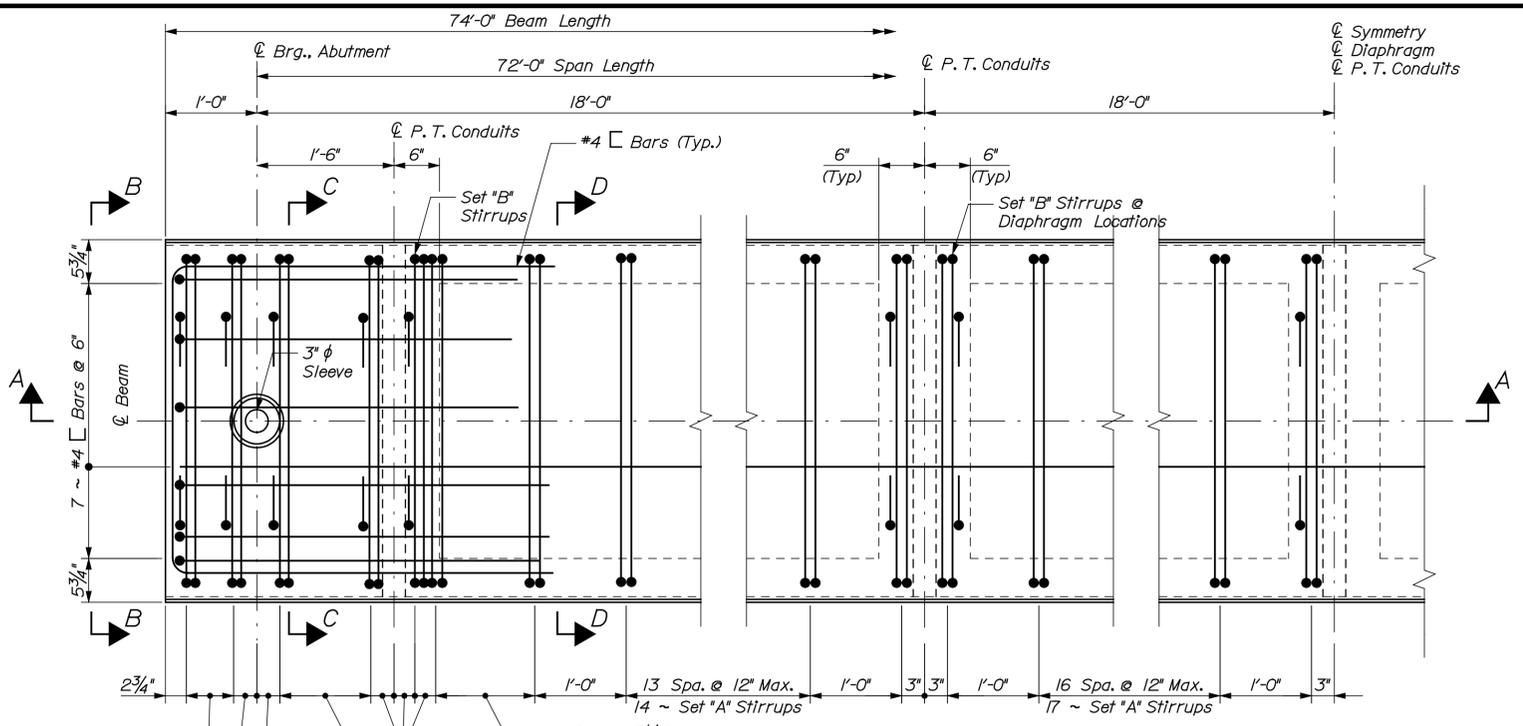


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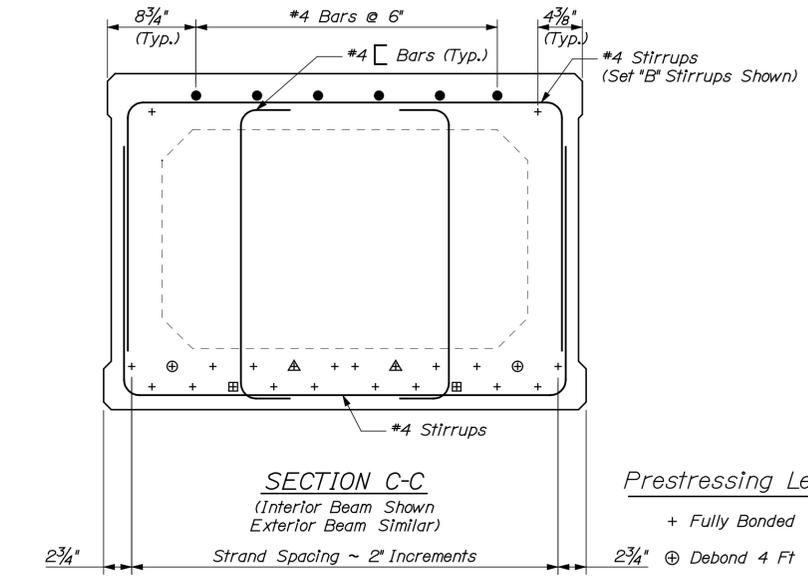
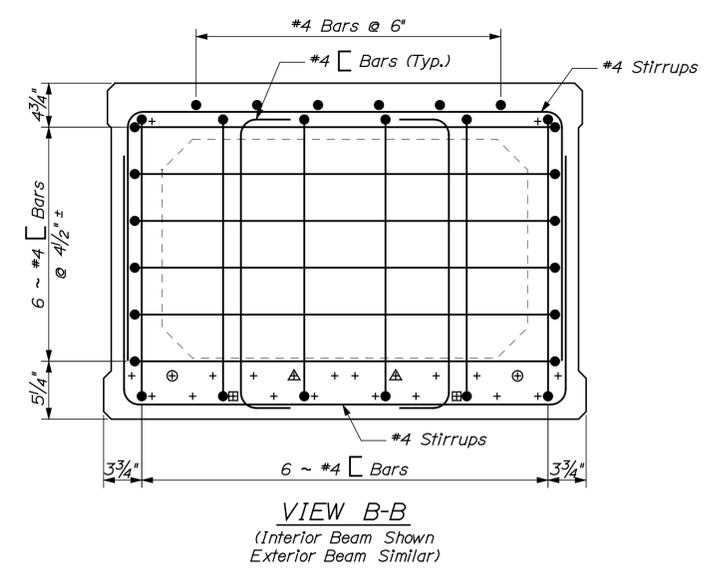
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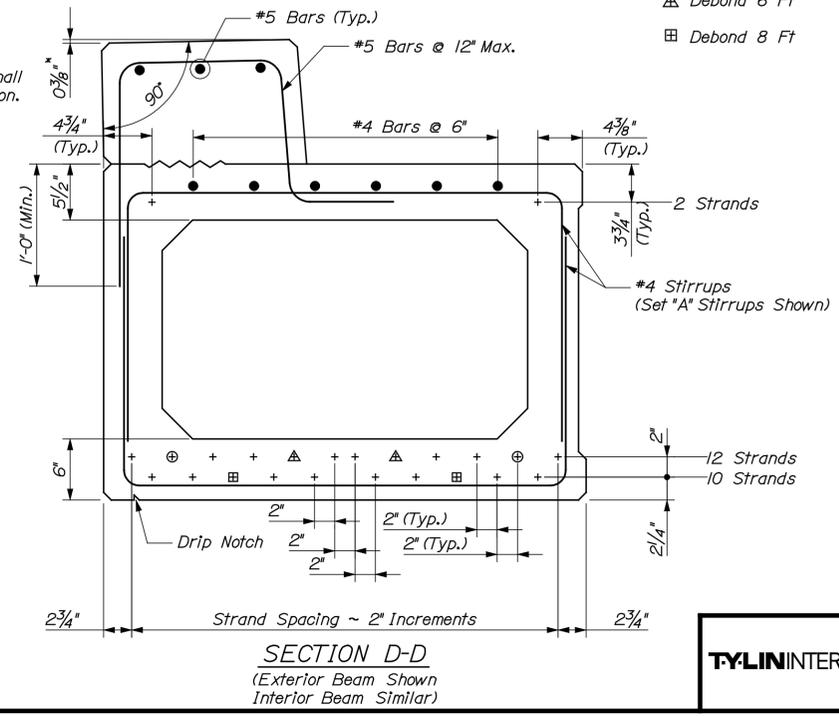


NOTES:

1. Prestressing strands shall be 0.6" ϕ .
2. All strands shall be tensioned to 44 kips each.
3. The drilling of holes in the prestressed beams and the use of power actuated tools on the beams will not be permitted.
4. Shear key faces shall be sand blasted at the precast facility to improve grout bond. If visual inspection reveals laitance or debris within the shear keys upon arrival to the job site, then the shear key faces shall be cleaned by power-washing or other method approved by the resident.
5. Install a 1" ϕ non-metallic void drain in the bottom of each void at each end.
6. Drip notches shall be installed in accordance with Standard Detail 535(02).
7. Curbs shall be precast and installed in accordance with Standard Detail 502(03) and the construction joint surface between curb and box beam shall be prepared in accordance with Standard Detail 535(02).
8. Curbs shall be cast such that the tops are level in the final position.
9. Reinforcing steel shall have a minimum cover of 2" unless noted otherwise.
10. Shear Keys shall be provided at each butt joint between beams. See standard details 535 (01) & 535 (04).
11. For additional Prestressed Structural Concrete Box Beam details, see standard details 535 (01) thru 535 (17).



*Beam 1 shown, Beam 5 shall be sloped opposite direction.



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PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE	
DESIGN-DETAILED	4/5/2013	TSK	4/5/2013				
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REVISIONS 1							
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REVISIONS 3							
REVISIONS 4							
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SHEET NUMBER				8			
OF 8				TYLIN INTERNATIONAL			