Union Branch Multiuse Pathway
Bid #26014

Current Date: September 3, 2025

The attention of firms submitting proposals for the work named in the above Invitation is called to the following modifications to the documents as were issued.

The items set forth herein, whether of clarification, omission, addition and/or substitution, shall be included and form a part of the Contractor's submitted material and the corresponding Contract when executed. No claim for additional compensation, due to lack of knowledge of the contents of this Addendum will be considered.

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ALL BIDDERS ARE ADVISED THAT RECEIPT OF THIS NOTICE MUST BE DULY ACKNOWLEDGED ON THE BID PROPOSAL FORM OR BY THE INSERTION OF THIS SHEET, SIGNED, AND SUBMITTED WITH YOUR PROPOSAL.

****

SAMANTHA CHAPIN
PURCHASING & CONTROLS MANAGER

Please see attached responses to questions received, clarifications, updated Bid form and plans.

Receipt of **Addendum No 1** to the City of Portland's **Bid #26014, Union Branch Multiuse Pathway**, is hereby acknowledged.

COMPANY NAME: _____

SIGNED BY: _____ DATE: _____

PRINT NAME & TITLE: _____

ADDRESS: _____

_____
ZIP CODE

The Bid Opening Date has been postponed to Thursday September 24, 2025 at 3:30PM.

Attached please find the Prebid Meeting Attendee List and Agenda from the Prebid Meeting.

CLARIFICATION REGARDING ADDITIVE ALTERNATE #1:

Bidders are required to provide pricing for Add Alternative #1, and it is the City's sole discretion to award the alternative or not. The initial bid form indicated that this additive alternate was "Optional"; however, the text on the revised bid form has been updated to **"Mandatory".**

There is no change to the basis of the award. The basis of the award remains "Section 1 Transportation Items , Section 2 Streetscape Items, and Section 3 Water Resource Items." **The price for Additive Alternate #1 will not be factored into the basis of award.**

CLARIFICATION REGARDING "BUY AMERICA" REQUIREMENT

Buy America does not apply to this project. A revised Section 104 without the Buy America language has been provided.

ADDITIONAL STORMDRAIN WORK:

Addendum 1 includes additional stormdrain work along the east side of Deering Ave, between the proposed pathway and the entrance drive to Deering Oaks, as shown on the revised Sheet C-6 dated 2025-08-27 and as summarized below. A set of final plans with this change incorporated will be issued prior to construction.

- Drain Manhole S-4 will be shifted to the west as shown.
- Stormdrain and underdrain piping from the bioretention areas will be realigned to drain to Manhole S-4.
- Additional 36" and 30" stormdrain running parallel to Deering Avenue have been added as shown.
- Two (2) drain manholes (S-5 8' diameter and S-6 5' diameter) have been added
- Four (4) test pits have been added to provide information on existing gas and sewer utilities.
- A revised bid form has been provided with updated quantities. The revised bid form includes two new items:
    - 603.181 30 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS)
    - 604.132 5' DIAMETER MANHOLE
- Special Provisions 603 and 604 have been revised to include the two new items above.

CHANGE TO HADLOCK FIELD LIGHTING ELECTRICAL SERVICE INSTALLATION:

Addendum 1 includes adjustments to the lighting service installation at Hadlock Field as shown on the revised Sheet C-2 dated 2025-08-27 and as summarized below.

- The proposed lighting service cabinet will be located on the south side of the metal building identified on Sheet C-2, near the existing service. Proposed underground lighting conduit has been extended to this location.
- The Special Provision 626 has been revised to incorporate this change.
- The quantity for pay item 626.22 - NON-METALLIC CONDUIT (2”) has been increased from 3800 LF to 3910 LF.

Winter work will be allowed on this project; refer to Special Provision 107 for additional details.

Q1: MaineDOT standard specification includes a mechanism for paying the contractor to relocate stockpiled materials. Please clarify how the City’s special provision for this project differs from the State standard specification with regards to stockpiling and relocating excavated materials.

A1: Excavation is either incidental to associated pay items (i.e. installation of storm drain, structures, conduit, etc.) or paid for separately as Common Excavation. There will be no additional payment for moving material into areas where it will be permanently stored or temporarily stockpiled, and there will be no additional payment for moving material out of temporary stockpiles into permanent storage locations. See the special provision for Section 203 for additional details.

Q2: What Permits are Required?

A2: Standard Excavation Permits

UNION BRANCH PATHWAY PROJECT
WIN: 18469.00
Bid Number: 26014

PREBID CONFERENCE
Date: August 21, 2025 at 9:00 am
Location: Training Room at 250 Canco Road, Portland.

Bid opening: 3:30 p.m., Wednesday, September 10, 2025

Project Location:

1. The Union Branch rail corridor between I-295 and the parcels containing Hadlock Field, Fitzpatrick Stadium, and Deering Oaks.
2. Western limit of work is the Hadlock Field parking lot on Park Avenue.
3. Eastern limit of work is at the intersection of the Union Branch rail corridor with State Street.

Project Overview:

The project includes but is not limited to the following elements.

1. Construction of a 12' wide asphalt multiuse pathway along the Union Branch rail corridor.
2. Construction of several 8-12'wide pathway connections into adjacent parcels, including those containing Hadlock Field, Fitzpatrick Stadium, and Deering Oaks.
3. Installation of a stone dust walking surface between the existing railroad tracks.
4. Compliance with a Voluntary Remedial Action Program (VRAP) plan covering the Union Branch rail corridor, which will include covering all developed area with a snowfence marker layer and 6" of clean loam.
    - Compliance with VRAP plan will also require careful management of soils, particularly excess soils generated from grading and excavation. This will require stockpiling soil on site to be used as fill within the project area.
    - SP 203 and plan notes describe in detail including OSHA requirements
5. Installation of pathway lighting and associated work to establish new electrical services.
6. Drainage work associated with the pathway construction, including installation of storm drain piping, drainage structures, and Bioretention areas (rain gardens).
7. Landscaping including planting of shrubs, trees, and ornamental grasses.
8. Coordination with users and operators of the adjacent facilities, including Hadlock Field, Fitzpatrick Stadium, and Deering Oaks.
9. Construction access from I-295 prohibited, coordination with MaineDOT required for work within the I-295 ROW

All work shall be completed by November 26, 2026, with the exception that landscaping may be completed by June 30, 2027.

General Requirements
Bid Bond required (5%)
State wage rates required – see Appendix
Locally Administered Project

Buy America Applies to ALL aspects of this project.

Contract and Coordination Requirements:

1.) Coordination with Adjacent Users and Facilities
   - Hadlock Field
   - Fitzpatrick Stadium
   - Deering Oaks

2.) Utility Coordination:
   Underground
   - City of Portland Water Resources - test pits to be completed upon mobilization and prior submitting shop drawing for or ordering stormdrain structures.
   - AT&T fiber optic line runs along tracks under pathway footprint. Six storm drain crossings will require close coordination with AT&T. Test pits to be completed upon mobilization. May be necessary to adjust elevation of fiber optic line. Contractor to Contact AT&T one week in advance of test pits and installation of storm drain crossings.
   - Unitil – abandoned gas line in Deering Oaks

3.) MaineDEP air Monitoring Station to be removed by others.

4.) Coordination with recently completed City projects
   a. The sidewalk across the Hadlock Field parking lot was recently reconstructed. It is anticipated that this area will be removed from the scope and a small adjustment to the design will be required to meet the current conditions.
   b. A retaining wall was recently constructed behind the new clubhouse at Hadlock Field. It is anticipated that there may be some minor adjustments to the grading adjacent to the pathway, or a short segment of retaining wall may need to be removed.
   c. Two buildings were recently constructed between Fitzpatrick Stadium and the Union Branch rail corridor, adjacent to a pathway connection into the Fitzpatrick property. Anticipate some field fitting relative to proposed grading currently shown on plan.

5.) ADA standards must be met as described in specifications and on plans. Coordinate with City/engineer for inspection prior to pouring concrete or placing HMA. Non-compliant work installed without prior written approval from City will be replaced at no additional cost to City.

Special Provisions:

Section 202 Removing Structures and Obstructions

- Removal of railroad tracks and ties; document disposal of ties in state licensed facility
- Segments of rail to be removed for pathway connections will require attention to detail to preserve segments to remain and provide good finished product
- Removal of light poles and foundations – coordinate with City to de-energize.
- Cutting of railroad ties to install light pole foundations incidental to light foundation pay items.

Section 203

- Union Branch property is subject to a Voluntary Remedial Action Program (VRAP) plan.
- All soils excavated from within the Union Branch property, with the exception of soils characterized as hazardous according to Maine Hazardous Waste Management Rules and/or petroleum saturated soils, shall remain within the Union Branch property.
- Soils from the Union Branch property shall not be relocated to adjacent I-295 property, and shall not be relocated into adjacent City of Portland properties with the exception of limited areas within Deering Oaks, as shown schematically on plans and in cross sections.
- All soils within Union Branch property are to be capped with a marker layer and 6" of clean loam. Grubbing not required beneath the 6" cover but mowing is required and incidental to snow fence item. Grubbing required only under hard scape or 24" of fill (paid as Common Ex).
- When fill materials are needed beneath the cover system elevation, excess material from excavation within Union Branch property shall be used to the greatest degree feasible (as approved and directed by the Resident) before material is imported to the site.
- The contract drawings identify Soil Storage Areas (within the Union Branch property and in certain areas of Deering Oaks Park as shown on the plans) where Group 2 soils that cannot be reused within the work area as fill or backfill can be placed.
- There will be no payment for moving material into or out of soil stockpiling or storage areas. Linear nature of the site means soil may need to be moved multiple times.
- Any soils removed from the project site shall be disposed of at a state licensed disposal facility unless determined to be not contaminated based on the soil testing and evaluation criteria outlined in the VRAP plan. This includes soils removed from adjacent City properties and the 1-295 right of way. Paid by the ton.

Section 401 Plant Mix Pavements

- Submittals

Section 403 Hot Bituminous Pavement

- 1.5" Base with 1.5" wearing course, both 9.5 mm

Section 603 Sewer and Storm Drains

- Standard City Pipe Spec for project

- In areas where stormdrains are proposed to be installed beneath existing rails that are to remain, installing stormdrain beneath, while safeguarding the rails, shall be incidental to the linear foot price of the stormdrain. Removing and disposing of ties as necessary, will be paid under Pay Item 202.5

Section 604 Manholes, Inlets and Catch Basins

- City Standards

Section 608 Sidewalks and Driveways

- Brick sidewalk and driveway aprons
- Small segments of concrete for steep transitions/ramps
- Warning Panels - Cast iron - City Standard.

Section 609 Curb

- All curb set in concrete, concrete incidental to curb items
- Only exception is the curbing for the tree planters (no concrete)

Section 620 Geotextiles

- Mowing area between tracks required prior to placing geotextile – incidental to geotextile.

Section 621 Landscaping

- See landscaping detail for installation of plantings through snow fence marker layer
- Various seed mixtures required for specific areas – see LA plans; limits to be field verified before seeding.
- Hand excavation required surround ties at pathway junctions

Section 645 Railroad Interpretive signage

- Fabrication and installation of interpretive sign holder and foundation. Sign itself to be provided by others. Coordination with MaineDOT required

Section 703 Aggregates

- Submittals
- Type D = 3" minus
- Type B = 2" minus – or – Type A

Communications:

- Virtual Project Manager will be used for coordination with City.
- Contractor Requests for Information
- Anticipated Issues, Disputes, or Claims

BID FORM – Revised 9/3/25
UNION BRANCH MULTIUSE PATHWAY PROJECT
Bid #26014 WIN Number: 18469.00

Section 1: Transportation Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
201.13	150 LF	SELECTIVE TREE TRIMMING @_____ _____ Per Linear Foot		
201.23	11 EA	REMOVING SINGLE TREE TOP ONLY @_____ _____ Per Each		
201.24	11 EA	REMOVING STUMP @_____ _____ Per Each		
202.14	700 LF	REMOVE EXISTING RAILS (PROPERTY OF CONTRACTOR) @_____ _____ Per Linear Foot		
202.50	420 EA	REMOVAL AND DISPOSAL OF WOOD TIES @_____ _____ Per Each		
202.70	3 EA	REMOVE EXISTING LIGHT POLE AND FOUNDATION @_____ _____ Per Each		
203.20	1250 CY	COMMON EXCAVATION @_____ _____ Per Cubic Yard		
203.2312	1 LS	HEALTH AND SAFETY PLAN @_____ _____ Per Lump Sum		
203.2333	500 TN	DISPOSAL OF CONTAMINATED SOIL MATERIALS @_____ _____ Per Ton		
203.24	1370 CY	COMMON BORROW @_____ _____ Per Cubic Yard		

Section 1: Transportation Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
304.14	2100 CY	AGGREGATE BASE COURSE - TYPE A @_____ _____ Per Cubic Yard		
403.210	1240 TN	HOT MIX ASPHALT 9.5 MM @_____ _____ Per Ton		
409.15	220 G	BITUMINOUS TACK COAT - APPLIED @_____ _____ Per Gallon		
410.151	2450 SY	EMULSIFIED ASPHALT SEAL COAT, APPLIED @_____ _____ Per Square Yard		
410.161	1230 LB	COVER COAT MATERIAL, SAND @_____ _____ Per Pound		
411.13	340 CY	STONE DUST SURFACE COURSE @_____ _____ Per Cubic Yard		
603.13	30 LF	8 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS) @_____ _____ Per Linear Foot		
603.15	96 LF	12 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS) @_____ _____ Per Linear Foot		
607.1701	350 LF	TEMPORARY CHAIN LINK FENCE - 6 foot @_____ _____ Per Linear Foot		
607.173	2160 LF	CHAIN LINK FENCE - 6 foot - PVC COATED @_____ _____ Per Linear Foot		
607.2431	2240 LF	REMOVE CHAIN LINK FENCE OR GUARD RAIL @_____ _____ Per Linear Foot		

Section 1: Transportation Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
608.08	180 SY	REINFORCED CONCRETE SIDEWALK @_____ _____ Per Square Yard		
608.15	50 SY	BRICK SIDEWALK WITH BIT BASE @_____ _____ Per Square Yard		
608.16	70 SY	BRICK DRIVEWAY WITH BIT BASE @_____ _____ Per Square Yard		
608.241	1190 SF	PRECAST CONCRETE PAVER SIDEWALK @_____ _____ Per Square Foot		
609.11	240 LF	VERTICAL CURB TYPE 1 @_____ _____ Per Linear Foot		
609.112	220 LF	VERTICAL CURB TYPE 1 (CHAMFERED) @_____ _____ Per Linear Foot		
609.12	125 LF	VERTICAL CURB TYPE 1- CIRCULAR @_____ _____ Per Linear Foot		
609.122	10 LF	VERTICAL CURB TYPE 1 - CIRCULAR (CHAMFERED) @_____ _____ Per Linear Foot		
609.21	20 LF	TERMINAL CURB TYPE 1 @_____ _____ Per Linear Foot		
609.212	60 LF	TERMINAL CURB TYPE 1 (CHAMFERED) @_____ _____ Per Linear Foot		
609.38	55 LF	RESET CURB TYPE 1 @_____ _____ Per Linear Foot		

Section 1: Transportation Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
610.08	50 CY	PLAIN RIPRAP @_____ _____ Per Cubic Yard		
610.21	30 CY	RIVER STONE RIPRAP @_____ _____ Per Cubic Yard		
610.30	9 EA	PLACING HEAVY STONE BOULDERS @_____ _____ Per Each		
613.319	5000 SY	EROSION CONTROL BLANKET @_____ _____ Per Square Yard		
614.30	910 SF	GEOCELL SLOPE PROTECTION SYSTEM @_____ _____ Per Square Foot		
615.07	2010 CY	LOAM @_____ _____ Per Cubic Yard		
618.144	30 UN	SPECIAL SEEDING MIXTURE: STEEP SLOPE HIGHWAY @_____ _____ Per Unit		
618.145	78 UN	SPECIAL SEEDING MIXTURE: MEADOW @_____ _____ Per Unit		
618.146	4 UN	SPECIAL SEEDING MIXTURE: RAINGARDENS @_____ _____ Per Unit		
618.147	40 UN	SEEDING METHOD #1, PARK MIXTURE @_____ _____ Per Unit		
620.70	1700 SY	GEOTEXTILE MARKER LAYER @_____ _____ Per Square Yard		

Section 1: Transportation Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
620.75	14450 SY	SNOW FENCE MARKER LAYER @_____ _____ Per Square Yard		
621.250	280 LF	TREE PROTECTION @_____ _____ Per Linear Foot		
623.07	5 EA	NEW GRANITE MONUMENT @_____ _____ Per Each		
623.09	5 EA	ADJUST EXISTING MONUMENT @_____ _____ Per Each		
626.11	1 EA	PRECAST CONCRETE JUNCTION BOX @_____ _____ Per Each		
626.115	1 LS	LIGHTING SERVICE INSTALLATION (HADLOCK FIELD) @_____ _____ Per Lump Sum		
626.116	1 LS	LIGHTING SERVICE INSTALLATION (VOLLEYBALL COURTS) @_____ _____ Per Lump Sum		
626.22	3910 LF	NON-METALLIC CONDUIT (2") @_____ _____ Per Linear Foot		
626.31	6 EA	18" FOUNDATION @_____ _____ Per Each		
626.32	30 EA	24" FOUNDATION @_____ _____ Per Each		
627.733	1550 LF	4" WHITE OR YELLOW PAINTED PAVE MRK LINE @_____ _____ Per Linear Foot		

Section 1: Transportation Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
627.75	100 SF	WHITE OR YELLOW PAVEMENT MARKING @_____ _____ Per Square Foot		
629.05	5 HR	HAND LABOR, STRAIGHT TIME @_____ _____ Per Hour		
631.11	5 HR	AIR TOOL (INCLUDING OPERATOR) @_____ _____ Per Hour		
631.12	5 HR	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR) @_____ _____ Per Hour		
631.133	5 HR	SKID STEER (INCLUDING OPERATOR) @_____ _____ Per Hour		
631.172	5 HR	TRUCK - LARGE (INCLUDING OPERATOR) @_____ _____ Per Hour		
634.210	23 EA	CONVENTIONAL LIGHT STANDARD (SINGLE FIXTURE) @_____ _____ Per Each		
634.212	7 EA	CONVENTIONAL LIGHT STANDARD (TWIN FIXTURE) @_____ _____ Per Each		
634.30	6 EA	BOLLARD LIGHT @_____ _____ Per Each		
642.184	17 EA	GRANITE STEP @_____ _____ Per Each		
642.185	51 EA	HANDRAIL @_____ _____ Per Each		

Section 1: Transportation Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
645.106	10 EA	DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN @_____ _____ Per Each		
645.116	5 EA	REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN @_____ _____ Per Each		
645.271	11 EA	NEW SIGN ASSEMBLY (POST INCIDENTAL) @_____ _____ Per Each		
645.58	1 LS	RAILROAD INTERPRETIVE SIGN HOLDER AND FOUNDATION @_____ _____ Per Lump Sum		
652.39	1 LS	WORK ZONE TRAFFIC CONTROL @_____ _____ Per Lump Sum		
656.75	1 LS	TEMP SOIL EROSION & WATER POLLUTION CTRL @_____ _____ Per Lump Sum		
659.10	1 LS	MOBILIZATION @_____ _____ Per Lump Sum		
TOTAL AMOUNT OF SECTION 1, WRITTEN IN WORDS AND IN NUMBERS BASED ON ESTIMATE OF QUANTITIES:				

BID FORM
UNION BRANCH MULTIUSE PATHWAY PROJECT
Bid #26014 WIN Number: 18469.00

Section 2: Streetscape Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
610.80	55 LF	GRANITE BENCHES (CITY SUPPLIED GRANITE) @_____ _____ Per Linear Foot		
621.2551	6 EA	HACKBERRY 2"-2.5" CALIPER @_____ _____ Per Each		
621.2552	3 EA	FIRESTARTER BLACK TUPELO 2"-2.5" CALIPER @_____ _____ Per Each		
621.2553	6 EA	SWAMP WHITE OAK 2-2.5" CALIPER @_____ _____ Per Each		
621.264	16 EA	MULTISTEM DEC TREE (SERVICEBERRY 6' HT) GROUP A @_____ _____ Per Each		
621.0431	3 EA	PITCH PINE 8' HT @_____ _____ Per Each		
621.5581	21 EA	RED TWIG DOGWOOD - 2 GALLON @_____ _____ Per Each		
621.5582	26 EA	BORDER FORSYTHIA - 5 GALLON @_____ _____ Per Each		
621.5583	15 EA	INKBERRY - 2 GALLON @_____ _____ Per Each		
621.525	47 EA	BAYBERRY - 2 GALLON @_____ _____ Per Each		
621.5251	20 EA	STAGHORN SUMAC - 3 GALLON @_____ _____ Per Each		

Section 2: Streetscape Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
621.5252	41 EA	ARROWWOOD VIBURNUM - 3 GALLON @_____ _____ Per Each		
621.7131	55 EA	PRETTY BELINDA COMMON YARROW 1' HT @_____ _____ Per Each		
621.7132	55 EA	LANCELEAF COREOPSIS 6" HT @_____ _____ Per Each		
621.7133	92 EA	TUFTED HAIR GRASS - 1 GALLON @_____ _____ Per Each		
621.7134	89 EA	CHEYENNE SKY SWITCHGRASS - 1 GALLON @_____ _____ Per Each		
621.7135	154 EA	LARINEM PARK WOODLAND STONECROP 6" SPREAD @_____ _____ Per Each		
890.07	11 EA	BIKE RACKS @_____ _____ Per Each		
TOTAL AMOUNT OF SECTION 2, WRITTEN IN WORDS AND IN NUMBERS BASED ON ESTIMATE OF QUANTITIES:				

BID FORM
UNION BRANCH MULTIUSE PATHWAY PROJECT
Bid #26014 WIN Number: 18469.00

Section 3: Water Resources Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
203.25	50 CY	GRANULAR BORROW @_____ _____ Per Cubic Yard		
206.061	50 CY	STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES BELOW GRADE @_____ _____ Per Cubic Yard		
206.07	15 CY	STRUCTURAL ROCK EXCAVATION - DRAINAGE & MINOR STRUCTURES @_____ _____ Per Cubic Yard		
603.13	40 LF	8 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS) @_____ _____ Per Linear Foot		
603.15	234 LF	12 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS) @_____ _____ Per Linear Foot		
603.18	400 LF	24 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS) @_____ _____ Per Linear Foot		
603.181	220 LF	30 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS) @_____ _____ Per Linear Foot		
603.19	205 LF	36 INCH DIAMETER STORM DRAIN PIPE (ALL DEPTHS) @_____ _____ Per Linear Foot		

Section 3: Water Resources Items				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
604.13	5 EA	2' DIAMETER CONCRETE CATCH BASIN @_____ _____ Per Each		
604.131	3 EA	4' DIAMETER CATCH BASIN @_____ _____ Per Each		
604.132	1 EA	5' DIAMETER MANHOLE @_____ _____ Per Each		
604.133	1 EA	6' DIAMETER CATCH BASIN @_____ _____ Per Each		
604.156	2 EA	8' DIAMETER MANHOLE @_____ _____ Per Each		
604.18	1 EA	ADJUST MANHOLE OR CB TO GRADE @_____ _____ Per Each		
610.70	20 EA	STONE CHECK DAMS @_____ _____ Per Each		
803.01	15 EA	TEST PITS @_____ _____ Per Each		
900.1	325 SY	BIO-RETENTION CELL CONSTRUCTION @_____ _____ Per Square Yard		
TOTAL AMOUNT OF SECTION 3, WRITTEN IN WORDS AND IN NUMBERS BASED ON ESTIMATE OF QUANTITIES:				

Union Branch Multiuse Pathway Bid #26014 WIN# 18469.00 Summary of Bid Price Based on Estimated Quantities		
Section	**Bid Price Written in Words**	**Bid Price Written in Numbers**
1		
2		
3		
Total (Basis of Award)		

Mandatory Bid Alternate 1 42" Weholite Pipe				
Item No.	**Estimated Quantity**	**Items with Unit Bid Price Written in Words**	**Unit Price**	**Amount**
603.2291	30 LF	42” WEHOLITE PIPE @_____ _____ Per Linear Foot		
656.75	1 LS	Bid Alt 1 - TEMP SOIL EROSION &WATER POLLUTION CONTROL @_____ _____ Per Lump Sum		
659.1	1 LS	Bid Alt 1 - MOBILIZATION @_____ _____ Per Lump Sum		
TOTAL AMOUNT OF BID ALTERNATE 1, WRITTEN IN WORDS AND IN NUMBERS BASED ON ESTIMATE OF QUANTITIES:				

SPECIAL PROVISION

SECTION 104 – GENERAL RIGHTS AND RESPONSIBILITIES (UTILITIES)

UTILITY COORDINATION

The Contractor has primary responsibility for coordinating their work with utilities after contract award. The Contractor shall communicate directly with the utilities regarding any utility work necessary to maintain the Contractor's schedule and prevent project construction delays. The Contractor shall notify the resident inspector of any issues.

All costs for utility coordination shall be paid under Mobilization: Item 659.1

THE CONTRACTOR SHALL PLAN AND CONDUCT WORK ACCORDINGLY.

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications **is** required. The utility preconstruction meeting will be a separate meeting to be scheduled before the preconstruction meeting; i.e. two preconstruction meetings will be required, with the first being a smaller group focused on utility coordination, phasing and scheduling. Both should be scheduled for the same day with the utility meeting immediately preceding the larger meeting.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the City for utility and/or railroad work to be undertaken in conjunction with this project. The following list identifies all known utilities or railroads having facilities presently located within the limits of this project or intending to install facilities during project construction.

Utilities have been notified and will be furnished a project specification.

Overview:

Utility/Railroad	Aerial	Underground	Railroad
Central Maine Power Company	X		
City of Portland (Sewer)		X	
Consolidated Communications	X		
AT&T		X	
MaineDEP	X		
Portland Fire Department			
Portland Water District		X	
Unitil Corp.		X	

- Any times and dates mentioned are estimates only and are dependent upon favorable weather, working conditions, and freedom from emergencies. The Contractor shall have no claim against the City if they are exceeded.

- Utility working days are Monday through Friday, conditions permitting. Times are estimated on the basis of a single crew for each utility, unless specified otherwise.

- The Contractor shall not excavate around any pole, guy anchor or street light to a depth that compromises the stability of the pole.

- Unless otherwise specified, any underground utility facilities shown on the project plans represent approximate locations gathered from available information. The City cannot certify the level of accuracy of this data. Underground facilities indicated on the topographic sheets (plan views) have been collected from historical records and/or on-site designations provided by the respective utility companies. Underground facilities indicated on the cross-sections have been carried over from the plan view data and may also include further approximations of the elevations (depths) based upon straight-line interpolation from the nearest manholes, gate valves, or test pits.

- All adjustments are to be made by the respective utility/railroad unless otherwise specified herein.

- Fire hydrants shall not be disturbed until all necessary work has been accomplished to provide proper fire protection.

- All clearing and tree removal in areas where utilities are involved must be completed before the utilities are able to relocate their facilities.

- It is the responsibility of the Contractor with the Utility Pole owner, to layout all of the proposed pole locations in the field prior to the start of utility relocations. Should any adjustments be needed, the Utility will document adjustments and inform the Department prior to utility relocations.

- The Contractor shall provide the utilities access to the existing and new pole locations. Construction of any spot cuts or fills in excess of 2 feet must be completed prior to utility relocations.

AERIAL

In general, the utility poles in the project areas will remain in place and untouched. The exception is the conversion of a guy wire on Park Ave at the Hadlock Field parking lot from a traditional guy wire to a sidewalk guy (Pole #31 on Park Avenue).

The contractor should inspect entire project, prior to bid, and be aware of any overhead lines or other potential utility conflicts.

In addition to coordination with CMP as discussed above, the contractor is responsible for coordinating with all other overhead utilities (power or communications) that may be co-located on the poles.

***** Specific information regarding the line voltage can be requested from* Central Maine Power Company****

MaineDEP

Maine DEP is currently maintaining an air monitoring station near State Street (approximate Sta 136+80 Lt). This facility (including overhead utility connections) will be removed by MaineDEP prior to September 31, 2025. Contractor is responsible for coordinating with MaineDEP.

Until the station is removed, MaineDEP will need access to the station twice weekly to maintain the equipment. MaineDEP will also need pedestrian access to the shelter to remove the equipment inside. The actual removal of the shed will require vehicular access and is estimated to take two days.

SUBSURFACE

City of Portland Sewer and Stormwater

As part of the project, the City of Portland will be installing stormdrain pipes, catch basins, and piping throughout the project area. Manhole covers for sewer manholes that are proposed to remain will be adjusted to match proposed grades.

AT&T Fiber Optic Conduit

AT&T owns and maintains a fiber optic communication line in conduit that runs parallel to and to the north of the railroad tracks, beneath the alignment of the proposed paved pathway. There are 6 locations where proposed stormdrain piping will cross this communications line. The test pits proposed at these crossings will be conducted at the very beginning of the project, prior to ordering stormdrain structures, immediately upon mobilization and the results provided to the engineer. If any stormdrain-fiber test pits identify a conflict which cannot be addressed by adjusting the stormdrain design, the plan is to excavate parallel to the fiber conduit in either direction so that the conduit can be raised or lowered (up to 6" +/-) in order to avoid the stormdrain conflict. Additional excavation, if required, shall be completed as directed by the Resident, with AT&T onsite, and paid under the Common Excavation item 203.20.

Contractor shall contact AT&T one week before conducting the test pits and also one week before any stormdrain work that is likely to expose the fiber optic line. The contractor shall not touch, handle, excavate in close proximity to, or move the fiber optic line unless an AT&T representative is onsite.

MAINTAINING UTILITY LOCATION MARKINGS

The Contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate utility or their designated representative.

UTILITY SIGNING

Any utility working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. All work areas shall be signed, lighted, and traffic flaggers employed as determined by field conditions. All traffic controls shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as issued by the Federal Highway Administration.

UTILITY CONTACT INFORMATION

Utility/Railroad	Impacts	Contact Person*	Contact Phone/Email**
Central Maine Power Company	N	Lloyd Hendrix	lloyd.hendrix@cmpco.com
Charter Communications (Time Warner)	N	Mark Pelletier	(207) 253-2324
City of Portland (Storm/Sewer)	Y	John Emerson	(207) 874-8468
Consolidated Communications	N	Patrick Morrison	patrick.morrison@consolidated.com
Oxford Networks	N	Mike Ellingwood	mellingwood@firstlight.net
Portland Fire Department	N	Jon Belanger	(207) 653-2450 belangerj@portlandmaine.gov
Portland Traffic Signal Operations	N	Kevin Thomas	207-808-5409 kthomas@portlandmaine.gov
Portland Water District	N	Joe Parent Roger Paradis	(207) 774-5961 jparent@pwd.org rparadis@pwd.org
Unitil Corp.	N	Derrick Giroux	(207) 536-5663
AT&T	Y	Kevin Keady Dave Case Mark Larchar	kk117w@att.com (207) 239-2357 dc1272@att.com (207) 770-7763 ml191h@att.com (207) 213-9248
MaineDEP (Air Monitoring Station)	N	Stacy R. Knapp	Stacy.R.Knapp@maine.gov (207)766-1928

*This contact information was current as of the bid date but cannot be guaranteed to be accurate.
**If the phone number was unknown, an email address was provided for the contact.

Special Provision – Section 104
(Virtual Project Manager Software Requirements)

1.1 Project Management & Administration
- 1.1.1 The Contractor shall submit the items associated with this section via Virtual Project Manager (VPM), an online cloud-based project management system

1.2 General
- 1.2.1 VPM allows for paperless documentation and project administration. All posted information is available to all personnel involved with the project at any time using the internet.
- 1.2.2 The use of VPM by the Contractor is mandatory. Access to VPM will be provided at no cost to the contractor.
- 1.2.3 In order to utilize VPM, the contractor needs a computer or smartphone, internet access, a digital camera, and a scanner. For more information, go to www.virtual-pm.com. To login, front the homepage, select LOGIN. A user invitation will be emailed to you by the City that allows you to create a user account.
- 1.2.4 VPM provides up to unlimited virtual project software site user licenses for use of City Staff, the Engineer of Record, and their consultants. User support and training is available upon request.
- 1.2.5 On completion of Project, provide one complete archive copy(ies) of VPM project site files to the City and the Engineer of Record in a digital storage format acceptable to the City.
- 1.2.6 Contractor, subcontractors, and other parties granted access by Contractor to VPM project site shall execute a data licensing agreement in the form of Agreement acceptable to the City and the Engineer of Record.

1.3 Content: The VPM software includes and the contractor shall be required to use the following features at a minimum
- 1.3.1 Project directory.
- 1.3.2 Project correspondence.
- 1.3.3 Meeting minutes.
- 1.3.4 Contract modifications forms and logs.
- 1.3.5 RFI forms and logs.
- 1.3.6 Task and issue management.
- 1.3.7 Photo documentation.
- 1.3.8 Schedule and calendar management.
- 1.3.9 Submittals forms and logs.
- 1.3.10 Payment application forms.
- 1.3.11 Drawing and specification document hosting, viewing, and updating.
- 1.3.12 Reminder and tracking functions.
- 1.3.13 Punch list item tracking and documentation
- 1.3.14 Archiving functions.

SPECIAL PROVISION
SECTION 104
(WAGE RATES)

When two or more wage rate schedules appear in the bid Book, the highest rate shall prevail for each classification.

END OF SECTION 104

SPECIAL PROVISION

SECTION 603 – PIPE CULVERTS AND STORM DRAINS

The provisions of Section 603 of the Standard Specifications shall apply with the following additions and modifications:

603.011 Description:

This work shall consist of the construction of storm drains, sewer pipes by means of trenched or trenchless installation, casing pipe, service leads, hereinafter referred to as "pipe" as shown on the plans, details, and specified herein.

Where noted on the plans, the contractor shall use the specific pipe material indicated.

When the alternative of pipe material is listed in the Proposal, the Contractor shall signify his choice of pipe to be used by inserting his mark in the proper space provided. Contractor is responsible for all associated work, connections and appurtenances for the pipe selection. This shall be considered incidental to the pay item.

The Contractor shall install locating/warning tape over the centerline of all sanitary, storm, and combined sewer pipes including main lines, service leads and catch basin laterals both within the right of way and outside of the established street as required by City ordinance. Both a green warning tape and a number 10- or 12-gauge single strand coated wire shall be installed at a maximum of 24 inches below finish surface grade for the entire length of the pipe. Magnetic warning tape may be used in place of the separate warning tape and wire. The end of all services stubs shall be recorded on the included sheet entitled Storm Sewer Service Location and submitted to the City upon completion of the work.

All connections shall be made in conformance with the Plumbing Code of the City of Portland and the Maine State Plumbing Code.

603.02 Materials:

This section shall be revised to read as follows:

Materials shall meet the requirements specified for the various subsections of the specifications and listed below:

Reinforced Concrete Pipe (RCP): Pipe shall meet the following requirements.

Stand. Spec 706.02.

Polyvinyl Chloride (PVC) SDR-35 Pipe: Pipe shall meet the following requirements.

1. PVC SDR-35 pipe shall be Ring Type Sewer Pipe SDR-35.
2. PVC SDR-35 pipe shall meet ASTM D3034 for sizes 4” thru 15”.
3. PVC SDR-35 shall meet ASTM F-679 for sizes 18” thru 27”.
4. PVC SDR-35 rubber seals shall meet ASTM D 3212.
5. PVC Schedule 80 shall meet ASTM D 1785
6. All fittings and pipe shall have a water-tight push on joint and must meet the ASTM D3034 and ASTM D3212 standards.
7. Minimum "pipe stiffness" at 4% deflection shall be 46 psi for all sizes when tested in accordance with ASTM D2421.
8. All fittings and connectors shall meet ASTM D3034 and ASTM D 3212 Standards.
9. Joints shall be push-on rubber gasketed “Bell and Spigot” type joints using factory installed elastomeric ring gaskets. The gaskets shall be securely fixed into place by the manufacturer so that they cannot be dislodged during joint assembly.

10. The gaskets shall be of a composition and texture that is resistant to common ingredients of storm sewer, including oils and groundwater, and that will permanently endure the conditions of the proposed use.
11. Where perforated pipe is used perforations will be ½" holes every 5" on center and two rows at 120° apart.
12. Acceptable Manufacturers include:
    a. J-M Manufacturing
    b. IPEX
    c. Or equal to above

High Performance Polypropylene (HPPP) Pipe: Pipe shall meet the requirements of Standard Specifications Section 706.06 with the additions and modifications.

1. 12" through 30" pipe shall have a smooth interior and annular exterior corrugations.
2. 12" through 30" dual wall pipe shall meet ASTM F2881 or AASHTO M330
3. Polypropylene compound for pipe and fitting production shall be impact modified copolymer meeting the material requirements of ASTM F2881, Section 5 and AASHTO M330, Section 6.1.
4. Pipe shall be joined with a gasketed integral bell and spigot joint meeting the requirements of ASTM F2881 or AASHTO M330.
5. 12" through 30" joints shall be watertight according to the requirements of ASTM D3212. Spigots shall have gaskets meeting the requirements of ASTM F477. Gasket shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.
6. 12" through 30" diameters shall have an exterior bell wrap installed by the manufacturer.
7. Fittings shall conform to ASTM F2881 or AASHTO M330. Bell and spigot connections shall utilize a welded or integral bell and valley or inline gaskets meeting the watertight joint performance requirements of ASTM D3212.
8. Pipe must have minimum pipe stiffness (PS) of 46 at 5% deflection. Larger sizes shall be Triple Wall SaniTite.
9. Corrugated couplings shall be split collar, engaging at least two (2) full corrugations.
10. Acceptable Manufacturers include:
    a. Advanced Drainage Systems (HP Storm Pipe)
    b. Or equal to above

High Density Polypropylene (HDPP) SaniTite Pipe: Pipe shall meet the requirements of Standard Specifications Section 706.06 with the additions and modifications.

1. 12" through 30" (300 to 750mm) SaniTite HP dual pipe shall have a smooth interior and annular exterior corrugations; 30"-60" SaniTite HP triplewall pipe shall have smooth interior and exterior surfaces with annular inner corrugations.
2. 12" through 30" dual wall pipe shall meet ASTM F2736
3. 30" through 60" triple wall pipe shall meet ASTM F2764
4. Pipe shall be joined with a gasketed integral bell & spigot joint meeting the requirements of ASTM F2736.
5. 12" through 60" shall be watertight according to the requirements of ASTM D3212, with the addition of a 15 psi pressure requirement. Spigot shall have two gaskets meeting the requirements of ASTM

F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gaskets are free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.

6. 12" through 60" diameters shall have a reinforced bell with a polymer composite band installed by the manufacturer
7. Pipe must have a minimum pipe stiffness (PS) of 46 @ 5% deflection.
8. Fittings and connections shall provide a watertight connection according to the requirements of ASTM D3212. Gaskets, when present, shall meet ASTM F477
9. Acceptable Manufacturers include:
    a. Advanced Drainage Systems
    b. Or equal to above

603.03 Construction Requirements:

Keep existing sewers and drains in operation. If existing sewers and drains are disturbed, provide for maintenance of such flows until work is completed. Do not allow raw sewage to flow or stand on ground surface or in an excavation.

603.0311 Reinforced Concrete Storm Drain Pipe:

Reinforced concrete pipe may be used for storm drain applications.

Reinforced concrete pipe shall be obtained only from a manufacturer of established good reputation in the industry. The pipe shall have a smooth and even interior surface, free from projections, indentations, or irregularities of any kind.

The joint shall be such that when joined the pipes will form a continuous and uniform line without projections, off-sets or irregularities and be capable of satisfying the specified leakage requirements.

Pipes shall be joined with rubber or rubber type gaskets that conform to the requirements established in ASTM Designation 443-67.

Each length of pipe shall be provided with proper ends made either of concrete formed on machined rings to ensure accurate joint surfaces or of metal rings. The diameters of the joints surface, depended upon to compress the gasket, shall not vary from the theoretical diameters by more than 1/16 inch. The joint shall be sealed by the rubber gasket so that the joint will remain tight under all conditions of service.

The rubber gasket shall be applied in accordance with the manufacturer's recommendations.

After the pipes are aligned in the trench and are ready to be jointed, all joint surfaces shall be cleaned. Immediately before jointing the pipe, the inside surface of the groove shall be thoroughly lubricated with a recommended lubricant. Pipe shall then be coupled immediately by carefully pushing each pipe into place without damage to pipe or gasket. The position of the gasket in the joint shall then be inspected to be sure it is properly put together and is tight.

Pipes shall be coupled by any suitable arrangement of come-along, winch, jack, or other power equipment that can exert sufficient force to couple pipe to its tightest position.

All RCP pipe where the pipe joint gap is 0.5-inches wide or more shall be sealed on the insider with cement mortar. Cement mortar if used shall be applied by trowel and the joint shall be thoroughly filled and finished smoothly with the inside surface of the pipe.

All pipe thirty-six inches in diameter or larger shall be sealed on the inside with cement mortar or with gunite by the grout-weld method using a pneumatic machine of the Nicholson, Bondactor, or equal type. Cement mortar if used shall be applied by trowel and the joint shall be thoroughly filled and finished smoothly with the inside surface of the pipe. The grout-weld seal shall be applied only by experienced and skilled workers in accordance with the instructions of the manufacturers of the machine.

The pipe shall be laid accurately to line and grade. Pipe bedded in compacted crushed stone shall not be

supported on blocking, wedges, brick, or anything except the bedding material. Pipe on concrete cradle shall be supported on solid concrete blocks or precast concrete saddles which become part of the completed cradle.

Each length of pipe shall be shoved home against the pipe previously laid, and held securely in position. Joints shall not be "pulled" or "cramped". Holes provided for jointing shall be filled and compacted.

Pipe from which a core has been cut and the resulting hole repaired, shall be placed with the cored hole located forty-five degrees above or below the horizontal centerline of the pipe.

To prevent the entrance of earth and other materials when pipe laying is not actually in progress, the open ends of pipe shall be closed by suitable temporary bulkheads. The Contractor shall take all necessary precautions to prevent floatation of the pipe because of flooding of the trench. If water is in the trench when work is resumed, the bulkheads shall not be removed until the danger of earth and other materials entering the pipe has passed.

All pipe joints and structures shall be made water tight. There shall be no visible leakage, spurting or gushing of water, sand, silt, clay or soil of any description entering the pipe lines at the joints or structures. Where there is evidence of water or soil entering the pipeline, connecting pipes or structures, defects shall be repaired.

603.1312 SDR 35 Poly Vinyl Chloride (PVC) Gravity Sewer and Drain Pipe and Fittings:

PVC pipe may be used for sanitary sewer and storm drain applications.

Open ends of pipe shall be closed by suitable temporary bulkheads to prevent entrance of earth and other materials when pipe laying is not in progress. The Contractor shall take all necessary precautions to prevent floatation of the pipe as a result of the water in the trench.

Each pipe length shall be inspected before being laid. Pipe shall be laid to conform to the lines and grades indicated on the drawings. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.

Bell holes shall be excavated or provided in the base material to receive the bell or coupling so that only the barrel of the pipe receives bearing pressure from the supporting material.

When each pipe has been properly bedded, enough of the backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment.

No pipe or fitting shall be permanently supported on blocks, wedges, boards or stones.

All joints shall be made in a dry trench and in accordance with the manufacturer's recommendations.

All PVC Gravity Pipe SDR 35 or equal supplied shall conform to all aspects of ASTM specification D3034-73A and/or ASTM Spec. F789 for PVC sewer pipe, joints and fittings. Joints shall be rubber gasketed "Bell and Spigot" type. Installation of materials shall be as suggested in ASTM D2321. Minimum "pipe stiffness" at 4% deflection shall be 46 psi for all sizes when tested in accordance with ASTM D2421.

It is the responsibility of the Contractor to assure that the trench and the backfill around the pipe has been compacted sufficiently to limit deflection in the pipe to no more than 4%. All flexible pipe installed under this contract shall be tested by a "go-no-go" mandrel permitting no greater than 4% deflection. Testing of the pipe shall be done in the presence of an Engineer. The Engineer shall be given a minimum of 24 hour advance notice before testing is to take place. All pipe not passing the 4% deflection limit test shall be removed and replaced at no additional cost to the City.

Pipe bundles shall be stored on a flat surface so as to support the barrels evenly. This is important as in hot weather PVC pipe will deflect or warp causing installing problems in line and grade. If a warped section is found, the Contractor shall not use such length of pipe.

In order to ensure proper compaction, alignment, and grade, and eliminate any construction problems that may be encountered, the Contractor shall be required to use only the 12-1/2 foot lengths of PVC pipe.

Pipe shall remain stacked in the original shipping bundles, and only pipe taken off the bundle for one day's laying shall be distributed along the trench.

PVC pipe will not bond to concrete or mortar and therefore connection to a cast-in-place or brick manhole and catch basin shall be made as shown on the pipe connection detail of the project plans.

603.0313 Smooth Bore High Performance Polypropylene (HPPP) Storm Drain Pipe and Fittings:

Smooth Bore High Performance Polypropylene (HPPP) dual wall (HP Storm Pipe or equal) may be used for storm drain applications and shall not be used for sanitary sewer applications.

Installation shall be in accordance with ASTM D2321 and the manufacturers installation guidelines. Each pipe length shall be inspected before being laid. Pipe shall be laid to conform to the lines and grades indicated on the drawings. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.

When each pipe has been properly bedded, enough of the backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment.

No pipe or fitting shall be permanently supported on blocks, wedges, boards or stones.

All joints shall be made in a dry trench and in accordance with the manufacturer's recommendations.

It is the responsibility of the Contractor to assure that the trench and the backfill around the pipe has been compacted sufficiently to limit deflection in the pipe to no more than 4%. All flexible pipe installed under this contract shall be tested by a "go-no-go" mandrel permitting no greater than 4% deflection. Testing of the pipe shall be done in the presence of an Engineer. The engineer shall be given a minimum of 24 hour advance notice before testing is to take place. All pipe not passing the 4% deflection limit test shall be removed and replaced at no additional cost to the City.

During loading, transportation and unloading, every precaution shall be taken to prevent injury to the pipe. No pipe shall be dropped from cars or trucks, or allowed to roll down slides without proper retaining ropes. During transportation each pipe shall rest on suitable pads, strips, skids or blocks securely wedged or tied in place. Any pipe damaged shall be replaced. Pipe shall remain stacked in the original shipping bundles, and only pipe taken off the bundle for one day's laying shall be distributed along the trench.

603.0314 High Performance Polypropylene (HPPP) SaniTite Pipe Gravity Sewer Drain Pipe and Fittings:

SaniTite pipe may be used for sewer line applications.

The pipe shall be ADS SaniTite High Performance Polypropylene (HPPP) pipe or approved equal and installed in accordance with the manufacturer’s recommendations.

High Performance Polypropylene (HPPP) SaniTite pipe may be used for sewer applications.

Each pipe length shall be inspected before being laid. Pipe shall be laid to conform to the lines and grades indicated on the drawings. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.

When each pipe has been properly bedded, enough of the backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment.

No pipe shall be permanently supported on blocks, wedges, boards or stones.

All joints shall be made in a dry trench and in accordance with the manufacturer's recommendations.

It is the responsibility of the Contractor to assure that the trench and the backfill around the pipe has been compacted sufficiently to limit deflection in the pipe to no more than 4%. All flexible pipe installed under this contract shall be tested by a "go-no-go" mandrel permitting no greater than 4% deflection. Testing of the pipe shall be done in the presence of an Engineer. The engineer shall be given a minimum of 24 hour advance notice before testing is to take place. All pipe not passing the 4% deflection limit test shall be removed and replaced at no additional cost to the City.

During loading, transportation and unloading, every precaution shall be taken to prevent injury to the pipe. No pipe shall be dropped from cars or trucks, or allowed to roll down slides without proper retaining ropes.

During transportation each pipe shall rest on suitable pads, strips, skids or blocks securely wedged or tied in place. Any pipe damaged shall be replaced. Pipe shall remain stacked in the original shipping bundles, and only pipe taken off the bundle for one day's laying shall be distributed along the trench.

Weholite Large Diameter High Density Profile Wall Polyethylene Pipe:

Weholite pipe may be used for sanitary sewer and storm drain applications.

The closed profile wall pipe shall be manufactured from a high density polyethylene material which meets or exceeds the minimum cell classification requirements for base materials as specified in ASTM F894 when classified in accordance with ASTM D3350.

The pipe material shall contain 2% - 3% well dispersed carbon black. Additives which can be conclusively proven not to be detrimental to the pipe may also be used, provided the pipe produced meets the requirements of this specification.

The pipe material shall be resistant to corrosion resulting from the presence of Hydrogen Sulfide and pH values between 2 and 13.

The pipe shall be manufactured in accordance with the requirements of ASTM F894 which shall be verified by supplying certification from a 3rd party certification body such as NSF.

Pipe shall be manufactured with profile cut ends.

The pipe shall have a Ring Stiffness Class (RSC)[1] 250 as necessitated by structural evaluation of burial, installation and application loads.

The pipe shall be manufactured in pipe lengths of 25'or 50'.

Other laying lengths may be used as necessitated by the project conditions.

The pipe shall be homogenous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. The pipe shall be as uniform as commercially practical in color, opacity, density and other physical properties.

Flanges, elbows, reducers, tees and other fabricated fittings supplied by manufacturer shall be constructed with dimensions and tolerances in accordance with the manufacturer's internal manufacturing standard.

The pipe shall be marked in accordance with the ASTM F894 standard.

Extrusion welded joints shall meet the joint qualification requirements of ASTM D3212.

Joining shall be in accordance with the pipe manufacturer's construction and installation guidelines.

Extrusion welding shall be performed by the pipe manufacturer's field service technician(s) or other party(s) as approved by the manufacturer and engineer.

Installation shall be in accordance with the manufacturer's installation guidelines.

Contractor shall engage Weholite Manufactures Welder to Make the connection between the existing 84" stormdrain and the proposed 42" pipe. The ends of the pipe shall be plugged to prevent flow or ground water from entering pipe.

603.0315 Rigid Insulation:

Extruded closed-cell rigid foamed polystyrene, 2-inch thickness, width of trench, Styrofoam HI-60, by Dow Chemical, or approved equal.

603.0316 Anti Seep Collars:

The following products may be used for trench dam applications.

Ripley's Trench Dams:

The Ripley's Dam shall be installed at the locations as specified in the plans. The baffle shall be self-supporting and provide a watertight seal around the main line pipe and underdrain by use of an appropriately sized Fernco flexible coupling. The baffle shall form an impenetrable barrier in the pipe envelope to the flow of water. Installation of the baffle shall be in accordance with the manufacturer guidelines. Refer to the following link for additional information: http://www.trenchdam.com/

Dams constructed of ABS plastic are acceptable. Underdrain material and installation shall conform to the standards listed in section 605.

Bentonite Clay Trench Dams:

The Bentonite Clay Trench Dams shall consist of granular or powdered sodium bentonite equal to Volclay® C/S Granular. Hydrate in place by addition of water. Hydrated bentonite shall have a minimum wet particle size of 94% passing the No. 200 sieve and 92% passing the No 325 sieve. The maximum moisture content of the dry granulars shall be 12%

603.033 Cleaning Inspection and Testing:

603.0331 General:

Pipe may be inspected at the manufacturing plant, or on the work site and shall be subject to rejection at any time, even though sample pipes may have been accepted as satisfactory at the manufacturing plant.

All pipe shall be subject to thorough inspection and tests. All tests shall be made in accordance with the methods prescribed by, and the acceptance or rejections shall be based on, applicable ASTM specifications.

Pipe will be inspected upon delivery and all pipe which does not conform to the requirements of this contract will be rejected and shall be immediately removed from the work area by the Contractor.

Unsatisfactory pipe will be either permanently rejected or minor repairs made. After delivery, any pipe will be rejected which has been damaged beyond the possibility of satisfactory repair.

If such pipe is found in the pipeline, it shall be removed and replaced or encased in a Class A concrete collar or envelope as directed, at no additional cost to the City.

An inspection of the interior of all mainline pipe and catch basin lateral connections installed as part of the project shall be completed prior to final paving of the project by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit television. A video tape and suitable log shall be provided to the City for review prior to final paving.

603.0332 Cleaning:

All sewers and storm drains shall be thoroughly cleaned with high pressure water jetting equipment.

Movable dams shall be permitted for the purpose of cleaning storm sewers. Movable dams shall be collapsible in case of upstream line surcharging, so the dam can be removed to allow flow to resume down the storm sewer line. Movable dams must be the same size as the inside diameter of the storm sewer

line being cleaned, and have a flexible scraper attached so a thorough cleaning of debris is accomplished.

603.0333 Testing:

Gravity sewers shall be tested by one of the following methods:

A. Low Pressure Air.

Approval of method will be made by the Engineer with due consideration for subsurface conditions and size and type of pipe.

The Contractor shall have the proper plugs, weirs, and other equipment to perform all required tests. Testing of each section of sewer installed shall include the portions of service laterals installed under this contract.

A. Low Pressure Air:

When low pressure air test is used, it shall be conducted in compliance with the following:

1. After completing backfill of the wastewater line, the Contractor shall, at no additional cost to the City, conduct a line acceptance test using low pressure air. The test shall be performed according to stated procedures and in the presence of the Engineer.

A. Procedures:

1. All pneumatic plugs shall be seal tested before being used in the actual test installation. One (1) length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs at 25 psig. The sealed pipe shall be pressured to 5 psig. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipes.
2. After a manhole to manhole reach of pipe has been backfilled and cleaned, and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each manhole and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psig greater than the average back pressure off any ground water that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize.
3. After the stabilization period (3.5 psig minimum pressure in the pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "acceptable" if the time required in minutes for the pressure to decrease from 3.5 to 2.5 psig (greater than average back pressure of any ground water that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

Pipe Diameter (in inches)	Minutes
4	2.0
6	3.0
8	4.0
10	5.0
12	5.5
15	7.5
18	8.5
21	10.0
24	11.5
30	13
36	15
42	20
48	20

4. In areas where groundwater is known to exist, the Contractor shall install a one-half inch diameter

capped pipe nipple, approximately 10" long, through the manhole wall on top of one of the sewer lines entering the manhole. This shall be done at the time the sewer line is installed. Immediately prior to the performance of the Line Acceptance Test, the groundwater shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the nipple. The hose shall be held vertically and a measurement of the height in feet shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of the water is 11-1/2 feet, then the added pressure will be 5 psig, and the 2.5 psig to 7.5 psig. The allowable drop of one pound and the timing shall remain the same.)

5. If the installation fails the air test, the contractor shall, at no additional cost to the City, determine the source of the leakage. He shall then repair or replace all defective materials and/or workmanship.

603.04 Dewatering:

The City of Portland has revised the Rules and Regulations for Use of the Sewer System with the addition of a Dewatering Program.

A Dewatering Plan and Application must be submitted and approved prior to discharging water from a construction site to City infrastructure.

For more information or assistance, please email Benjamin Pearson, PE, Compliance Section Coordinator, Water Resources Division at bnp@portlandmaine.gov or call them at 207-874-8843.

- Dewatering Program - Application Form (PDF)
- Chapter 8 - Dewatering Program (PDF)
- Dewatering Program Public Hearing Presentation (PDF)

Dewatering refers to the removal of water from construction sites to City infrastructure or abutting natural resources. The water can be from groundwater or rainfall and impacts construction activities. Dewatering discharges have the potential to create a public hazard, contribute to sewer overflow events, impact the treatment processes, adversely impact Federal- and/or State-regulated natural resources, and could result in fines and increased maintenance costs for the City.

The Program is intended to establish guidelines for dewatering discharges to City infrastructure and natural resources. The goal is to monitor discharges in order to prevent the introduction of excessive sediment and pollutants to City infrastructure (e.g., sewer pipes, storm drains, catch basins, ditches) and natural resources (e.g., wetlands, streams, rivers, and bays).

Residing in the Rules and Regulations for Use of the Sewer System as Chapter 8, the Program formalizes the requirements and provides guidance for what should be included in the Construction Management Plan dewatering section. Additionally, it provides guidance for dewatering for utility work.

603.11 Method of Measurement:

The Engineer shall have the right to take samples of the concrete after it has been mixed, or as it is being placed in the forms, and to require cores to be cut from the finished pipe for any inspection and tests he may require. Holes left by the removal of cores shall be filled in an approved manner by the Contractor at no additional cost to the City.

Pipes will be measured by the linear foot in place within the limits specified below. Cleanouts shall be measured by the linear foot of pipe required for the vertical portion of the piping.

For measurement purposes the end of the pipe in closed structures will be considered at the inside face of the wall, and in masonry headwalls it will be considered to be at least the face of the headwall.

603.12 Basis of Payment:

The accepted quantities of pipe for culverts, drains and sewers will be paid for at the contract unit price per linear foot, complete in place.

Payment for all trench excavation to the established trench profile indicated within the plans shall be considered incidental and included in the pay item with the exception of removal of RR tracks and ties, which shall be paid under Pay Item, 202.14 and 202.5 respectively.

In areas where stormdrains are proposed to be installed beneath existing rails that are to remain, installing stormdrain beneath, while safeguarding the rails, shall be incidental to the linear foot price of the stormdrain. Removing and disposing of ties as necessary, will be paid under Pay Item 202.5

All sheeting, shoring, temporary bracing and dewatering will be included in this item. Payment for approved undercuts below the established trench profile will be paid for under Item 206.061 - Structural Earth Excavation Drainage and Minor Structures (overdepth).

Backfill material and backfilling of the trench shall be incidental to the related pipe pay item, except in the case where the Engineer requires the Contractor to backfill with Granular Borrow. Granular Borrow, in this case, shall be paid for under pay item 203.25.

Should the Contractor elect to utilize drag boxes or related box shoring structures, sheeting or other methods during installation work, overcutting will be allowed to accommodate the structures. However, no payment will be made for the excess excavation and backfill material.

Contractor is responsible for any and all engineering necessary for trench sheeting or shoring of any trench excavation designed by a professional engineer licensed in the State of Maine. No extra payment will be made for the engineered sheeting and shoring methods, materials or equipment used by the Contractor. All trench stabilization shall be considered incidental to the applicable pay items.

The cost of locating/warning tape including installation shall be considered incidental to the appropriate pipe item.

The cost of maintaining flows in existing sewer lines, drain lines and manholes and any maintenance and cleaning of said sewers or storm drainage that may be required as a result of new pipe installation shall be incidental to the related pay item and no separate payment for this work will be made.

Work associated with providing anti-floatation during installation of the pipes shall be the responsibility of the contractor and shall be considered incidental to the pay items under this section.

The accepted quantity of service leads will be paid for at the contract unit price per linear foot of pipe installed, complete in place. The amount bid for each lateral shall be full compensation for furnishing all labor, equipment, tools, adapters, reducers, and materials necessary to satisfactorily connect all laterals.

Bypass pumping will be required for some pipe installations to maintain existing sewer and storm drainage flows. Bypass pumping and other required work to maintain flows shall be considered incidental to the related pipe pay item.

Pipe bedding materials, geotextile, backfilling, backfill, and base gravels are incidental to the pay items under this section. Removal and resetting of existing electrical services (when necessary) is incidental to the pay items under this section.

The costs for PVC, PE, HPPP and HDPE fitting, bends, end caps, retainer glands and thrust blocking shall be incidental to the appropriate pipe item.

The cost for providing exterior drops to manholes, as called out on the plans and as detailed within the

detail sheets, shall be incidental to the appropriate pipe item.

Payment for non-standard lengths of pipe shall be at the contract unit price per linear foot for those pay items and no additional payment shall be made.

The cost of cutting pipe and/or connectors necessary to construct new storm drain and sewer pipe, in addition to the work and materials necessary to connect new or existing pipes to existing pipes, catch basins, or manholes, shall be incidental to the appropriate pay item.

Changes to flow lines, profile grades, and pipe inverts of one foot or less shall be incidental to the appropriate pay items.

The costs to install rigid insulation shall be considered incidental to the related pay item.

Removal of existing sewer and storm drain within the trench limits of new pipe and structure excavations shall be considered incidental to the related pipe or structure pay item.

Trench Dams shall be incidental to the pipe installation cost.

For the 42" Weholite Pipe item, any and all costs associated with connecting the proposed pipe to the existing pipe shall be incidental to the linear foot price of the pipe, including engaging the manufacturer's welder to make the connection.

Castings and fittings to construct cleanouts shall be incidental to the linear foot price of pipe.

Payment will be made under:

Pay Item		Pay Unit
603.13	8 Inch Diameter Storm Drain Pipe (All Depths)	Linear Foot
603.15	12 Inch Diameter Storm Drain Pipe (All Depths)	Linear Foot
603.18	24 Inch Diameter Storm Drain Pipe (All Depths)	Linear Foot
603.181	30 Inch Diameter Storm Drain Pipe (All Depths)	Linear Foot
603.19	36 Inch Diameter Storm Drain Pipe (All Depths)	Linear Foot
603.2291	42 Inch Diameter Weholite Pipe (All Depths)	Linear Foot

END OF SECTION 603

SPECIAL PROVISION
SECTION 604 – MANHOLES, INLETS AND CATCH BASINS

The provisions of Section 604 of the Standard Specifications shall apply with the following additions and modifications:

604.01 Description:

This work shall consist of the construction, alteration, repair, or placement of manholes, inlets, and catch basins.

604.02 Materials:

Manhole frames and covers used on this project for both new and altered structures shall be 24" circular "sewer" and "drain" frames and covers, or approved equal. Covers shall be solid. Sewer covers shall have "Sewer" cast into the cover and storm drain covers shall have "Drain" cast into the cover. Catch basin frames and grates shall be as detailed on the plans.

The approved models for manhole frame and covers are:

- East Jordan: Frame = 1690Z, Cover = 2160A either "SEWER" or "DRAIN" lettering
- Neenah: Frame = 14960001, Cover = 14960002 "SEWER" or 14960003 "DRAIN
- The approved models of catch basin frame and covers are:
- East Jordan: Frame = 7375Z, Grate = 2440M
- Neenah: Frame = 32480001, Grate = 32480002

Locking manhole covers are required for all manholes located in grass areas. The approved models for locking frames and covers are:

- East Jordan: 2114ZPT/2114APT Manhole Assembly

604.03 Construction Requirements:

Concrete Blocks shall not be used in any way in the construction or alteration of manholes or catch basins.

All manhole bases, barrel sections and top sections shall be marked, by the manufacturer, with the appropriate manhole station (and offset if applicable) and the street name, if more than one street is incorporated within a single contract.

Between the third and fourth paragraphs of the Subsection insert the following paragraphs.

Storm drain inverts/channels shall be constructed by brick set in cement mortar, approved fiberglass insert, or by factory pre-cast concrete.

Sewer manhole inverts/channels shall be constructed by brick set in cement mortar, approved fiberglass insert, or by factory pre-cast concrete. Such pre-cast concrete shall be epoxy coated and the shelf shall have a permanent non-skid surface. Pre-cast concrete invert shall be cured at least 7 days in a controlled environment with use of plasticizers to reduce moisture content before applying epoxy. Epoxy shall be Sikagard 62 or approved equal and shall be cured to manufacturer's specifications before delivery to the project site.

Special precautions shall be taken to provide adequate ventilation and attending personnel for the safety of all workers who may be required to enter existing sewers or sewers under construction.

It is emphasized to the Contractor that sanitary sewer and drainage construction under this contract shall be coordinated with existing sewer facilities so that continuous service and handling of existing flows is accomplished.

In the existing fifth paragraph, first sentence of that Subsection delete only "Metal frames and traps", and substitute therefore "Metal frames, steps, other appurtenances, and traps".

The outside surface of any masonry work for catch basins and manholes shall be plastered with mortar from

1/4 inch to 3/8 inch thick. The masonry shall be properly wetted before the plaster is applied. The plaster shall be carefully spread and troweled so that all cracks are thoroughly worked out. After hardening, the plaster shall be carefully checked by being tapped for bond and soundness.

All brick masonry surfaces with mortar shall be waterproofed with one coat of DEHYDRATINE 6 TROWEL MASTIC, DEHYDRATINE 10 SEMI-MASTIC or approved equal.

All poured concrete or precast concrete surfaces shall be waterproofed with two heavy coats of bituminous waterproofing materials. The material shall be MINWAX FIBROUS BRUSH COAT made by the Minwax Company, New York, New York; TREMCO 121 FOUNDATION COATING, made by the Tremco Manufacturing Company, Cleveland, Ohio; INERTOL NO-7 made by Inertol Company, Newark, New Jersey or approved equal.

All waterproofing material shall be applied according to the manufacturer's specifications and directions.

Catch basins shall be constructed as shown on the "Standard Details, Catch Basins and Inlets" of the contract drawings. Unless otherwise indicated, catch basins shall have A-4 inlet stones and sediment hoods which shall be incidental to the contract unit price of the structure.

Vacuum Testing of Manholes:

All manholes constructed by the Contractor shall be vacuum tested for leakage in the presence of an Engineer after installation and prior to backfilling. Vacuum testing shall be performed in accordance with ASTM C1244. The vacuum test requirement will apply to any existing manhole altered.

The Contractor shall furnish all labor, equipment, and any appurtenant items necessary to satisfactorily perform the vacuum test. All testing equipment shall be approved for vacuum testing manholes.

Procedure:

All lifting holes shall be plugged with an approved non-shrink grout inside and out. Manhole joints shall be grouted from the outside only. All pipes entering the manhole shall be plugged. The Contractor shall securely brace the plugs in order to keep them from being drawn into the manhole. The test head shall be placed at the inside of the top of the cone section of the manhole and the seal inflated in accordance with the manufacturer's recommendations.

A vacuum of 10 inches of mercury shall be drawn and the vacuum pump shut off. With the valves closed, the time for the vacuum to drop to 9 inches of mercury shall not be less than that shown below:

	Manhole Diameter		
Depth (ft)	**48**	**60**	**72**
0-8	20	26	33
10	25	33	41
12	30	39	49
14	35	46	57
16	40	52	67
18	45	59	73
20	50	65	81
22	55	72	89
24	59	78	97
26	64	85	105
28	69	91	113
30	74	98	121

(Times shown are minimum elapsed times, in seconds, for a drop in vacuum of 1 inch of mercury.)

If the manhole fails the initial rest, necessary repairs shall be made with a non-shrink grout to manhole exterior, while the vacuum is still being drawn. Retesting shall proceed until a satisfactory test is obtained.

604.031 Drainage Structures Abandoned or Removed:

The existing castings on manholes and/or catch basins to be abandoned or removed shall be carefully

removed, cleaned and delivered to the City stockyard as directed. All such castings shall become the property of the City.

Inlet stones for catch basins to be abandoned or removed shall be carefully removed, cleaned and delivered to the City Stockyard as directed.

The inlets and outlets of structures to be abandoned shall be plugged with bricks and mortar and filled with flowable fill unless specified to be removed. The structure shall be completely removed.

The existing masonry of structures to be removed shall be completely removed. The inlets and outlets shall be fully plugged with bricks and mortar. The cavity shall be completely filled with selected excavated materials placed in six (6") inch layers and thoroughly compacted.

604.032 Remove Existing Drainage Structures and Replace with New Drainage Structures:

The existing castings on manholes and/or catch basins to be removed and replaced shall be carefully removed, cleaned and delivered to a City stockyard as directed. All such castings shall become the property of the City. Existing inlet stones for catch basins to be replaced shall be carefully removed, cleaned and delivered to a City Stockyard as directed and shall be incidental to the cost of said item.

604.04 Altering, Adjusting and Rebuilding Catch Basins and Manholes:

Replace existing manhole frame and cover shall include removal of existing frame and cover, reconstructing riser brick and furnishing and installing a new frame and cover that meets the City's specifications.

Modify manhole or catch basin shall include making alterations as indicated on the plans or as required by field conditions. Alterations may include (as applicable) coring new inlet or outlet pipe holes, adjustments to manhole invert channels caused by new pipe connections, waterproofing, installation of new steps, replacement of inlet stone, replacement of outlet trap.

Adjust existing structure to grade shall include adjusting a catch basin frame and grate or manhole frame and cover to grade. Adjusting manholes and catch basins to grade shall include removing and resetting curb inlet stone and terminal curbs (as applicable), removing and resetting frame and cover/grate, and fully reconstructing riser brick to install frame at finish grade.

Core inlet/outlet pipe hole in catch basin or manhole shall include equipment and labor costs to coring a new hole in a catch basin or manhole. Costs for connection boot or mortaring pipe in place are incidental to cost of the pipe.

604.045 Winterization:

The Contractor will have the choice of two methods for winterizing the new catch basin and manhole frames and covers.

1. The Contractor may elect to leave the frames and covers at or below grade with the binder pavement during the winter. This item would then include the removal of pavement in the spring from around the frame, the raising of the frame to the proper elevation for the final paving and the replacement of the binder pavement that was removed from around the frame.
2. Or, the Contractor may elect to set the frame and cover at the finish grade for the street and provide a 4 foot wide hand placed pavement ramp/taper around the frame to protect it during the winter plowing operations. This item would then include the placement of pavement ramp around the frame in the fall and the removal of pavement ramp in the spring.

In either event, the Contractor maintains responsibility for the frame and cover during with winter months. In the event of a loose frame and cover, the removal of the pavement ramp, or damage to the frame and cover, it is the Contractors responsibility to respond with replacement of damaged structure or additional pavement material to safeguard the public and structure.

In the event the Contractor does not bring the frame and cover to grade for the winter months then the work to install the frame and cover in the spring will not be considered a Winterization item but considered the completion of the initial manhole installation.

In the event of a structure requiring additional winterizing mix after surface is no longer available, QPR

mix may be substituted as an alternate material.

604.05 Method of Measurement:

Under this Subsection the following sections shall be amended and expanded as follows:

Subsection (a) of the Standard Specifications shall be deleted and the following paragraph shall be included: Complete structures. Each catch basin and manhole will be measured per each complete.

Subsections (c) and (d) of the Standard Specifications shall be deleted and the following paragraph shall be included: All steps, castings or other appurtenances installed as shown on the plans or as required shall not be measured for payment and shall be incidental to the pay items of new structures.

Each existing drainage structure to be abandoned or removed will be incidental to the installation of new drainage structures if they are within 8' from center to center of a proposed structure.

Each existing drainage structure to be removed and replaced with a new drainage structure will be considered as one unit, including inlet stone, frame, grate, sediment hood, adjustment to grade, connection of the storm drain pipe(s) to basin and installation of new inlet/outlet.

Removing and resetting granite curb associated with structure installation shall be considered incidental.

604.06 Basis of Payment:

The first paragraph shall be amended by adding the following sentences:

The cost of furnishing and installing steps, installing stubs and other appurtenances shall be considered as incidental to the structure and no separate payment will be made therefore. The cost of coring new inlet and outlet holes in existing structures is incidental to the Modify Structure item and no separate payment will be made.

The following paragraphs shall be added:

The cost of excavation and backfill of all catch basins or manholes, either new, abandoned, or removed and/or replaced shall be included in the cost of the specific work for each type of structure.

The cost of furnishing and installing curb inlet stones shall be incidental to the catch basin structures and no separate payment shall be made.

The cost of resetting curb inlet stones shall be considered incidental to the cost of adjusting catch basins to grade and no separate payments will be made. The cost of delivering inlet stones and/or castings to the City or other approved sites shall be considered as incidental to the contract items involved.

The cost of maintaining flows in existing sewer lines and manholes and any maintenance and cleaning of said sewers that may be required as a result of new manhole installations shall be incidental to the related pay item and no separate payment for this work will be made.

Contractor shall pay special attention to maintaining flows in existing sewers. Sanitary sewer pipes will require bypass pumping and shall be the contractor's responsibility including all bypass pumping, associated work elements and coordination with City and Portland Water District. Work shall be coordinated with the Engineer and will require special consideration and work to maintain sewer, drainage and CSO's during project construction. This work shall be considered incidental to the costs of construction.

Removal and resetting of existing electrical service (where encountered) is incidental to the pay items under this section.

The cost of cutting pipe and/or connectors necessary to construction new storm drain and sewer pipe, in additional to the work and materials necessary to connect new or existing pipes to existing pipes, catch basins, or manholes, shall be incidental to the appropriate pay item. Changes to flow lines, profile grades, and pipe inverts of one foot or less shall also be incidental to appropriate pay item.

The cost of winterizing frames and covers shall be incidental to pay items in this section.

Connection of existing pipes to proposed structures, including all necessary, excavation, fittings and backfill shall be considered incidental to the respective structure and no separate payment shall be made.

Payment will be made under:

Pay Item		Pay Unit
604.13	2' Diameter Concrete Catch Basin	Each
604.131	4’ Diameter Catch Basin	Each
604.132	5’ Diameter Manhole	Each
604.133	6’ Diameter Catch Basin	Each
604.156	8’ Diameter Manhole	Each
604.18	Adjust Manhole or Catch Basin to Grade	Each

END OF SECTION 604

SPECIAL PROVISION

SECTION 626 – FOUNDATIONS, CONDUIT AND JUNCTION BOXES FOR LIGHTING

The provisions of Section 626 of the Standard Specifications shall apply with the following additions and modifications:

626.01 DESCRIPTION
This work shall consist of furnishing, installing, or modifying conduit, foundations and service connections for lighting in accordance with these specifications and plans.

626.02 GENERAL
Installation of conduit methods and locations shall be approved by the City of Portland.

626.021 MATERIALS
Materials shall meet the requirements specified in the following Subsection of Division 700 - Materials:

Reinforcing Steel	709.01
Non-Metallic Conduit	715.03

2" inch Schedule 80 conduit underground shall be provided to each light fixture.

Refer also to Special Provision Section 715 – Lighting Materials

626.022 EQUIPMENT LIST AND DRAWINGS (SUBMITTALS)

Contractor shall submit Shop Drawings and manufacturers' information for approval of the following. Provide shop drawings and details of light foundations, including conduit sweeps and anchor bolt installation methods for new foundations.

Provide a list of equipment and materials. The list shall include the name of manufacturer, size, and identifying number of each item. The list shall be supplemented by such other data as may be required, including detailed scale drawings of proposed minor deviations from the plans. If requested, the Contractor shall submit for review design data and sample articles of the material proposed for use. All of the above data shall be submitted in duplicate except samples for testing. Following checking, correcting, and reviewing, two complete sets of drawings shall be submitted. The Department will not be liable for material purchased, labor performed, or work delayed before such review.

Upon completion of the work, the Contractor shall submit three complete sets of corrected plans showing all construction changes.

626.03 CONSTRUCTION FOUNDATIONS
Coordinate excavation for foundations with existing underground utilities. Where conflicts are found with existing utilities, make all practical efforts to install new work to produce a minimum impact on existing conditions. Where relocation of existing utilities is deemed necessary, obtain approval from affected utility supplier in advance of commencing relocation work.

626.031 CONDUIT AND JUNCTION BOXES
Junction boxes shall be flush in ground watertight polymer concrete 12" by 12" (nom.) with flared side construction. Boxes shall comply with ANSI/SCTE 77 loading and shall have an H-20 rating. Junction boxes shall be as manufactured by Hubbell/CDR # B13121212A/C10121202A, or approved equal.

The minimum burial depth for all conduits shall be 36 inches below grade.

626.034 CONCRETE FOUNDATIONS

Anchor bolts for new lighting poles shall be of size and diameter as required by manufacturer. In areas of shallow bedrock, the Contractor may reduce the foundation depth as long as the pole anchors and concrete foundation are properly secured to solid bedrock. Securing by a drill and anchoring method is acceptable however a shop drawing submittal is required for the attachment method and the shop drawing must be stamped by a professional engineer, licensed in the State of Maine. Shop drawing submittal is subject to the City/Engineer for review and approval.

Payment for the foundations will be made under Item 626.31 and 626.32 regardless of depth of bedrock and foundation method. Any material encountered that fits the description of Items 203.20 and 203.21 shall be paid accordingly.

626.35 LIGHTING SERVICE INSTALLATIONS

The **Lighting Service Installation (Volleyball Courts)** shall include the following. Refer to Special Provision Section 715 – Lighting Materials for additional requirements.

- Lighting Service Cabinet installed inside the concrete building identified on the plans. Cabinet shall be installed on the north wall adjacent to the existing main panel.
- Conduit and conductors connecting the proposed lighting service panel to the existing main service panel.
- Appropriately sized circuit breaker for the circuits listed below, installed in existing main service panel.
    - Two lighting circuits: one for pathway lighting to the east and one for pathway lighting to the west.
    - Capacity for two additional 20-amp circuits at a minimum.
- Conduit and conductors from the lighting service to the underground conduit outside the masonry building.
- Lighting circuits shall be 240 volts. Conductors shall include a neutral wire.
- Lighting protection
- A single contactor to operate both lighting circuits.
- An override control switch, with options for hand, off and auto.
- A photo sensor shall be installed on the north exterior wall of the masonry building, 5 ½' above finish grade.
- Conduit and conductors from the lighting service to the underground conduit outside the masonry building.
- Contractor shall meet with the City's electrical staff to verify locations and layouts prior to installation. Field adjustments should be anticipated and incorporated in the lump sum bid.

The **Lighting Service Installation (Hadlock Field)** shall include the following. Refer to Special Provision Section 715 – Lighting Materials for additional requirements.

- Lighting Service Cabinet installed on the exterior south wall of the metal building as identified on the plans, specific location to be field verified.
- Connection between the proposed lighting service panel on the exterior of the south wall of the building to the existing main service panel on the interior of the south wall of the building.
- Appropriately sized circuit breaker for the circuits listed below, installed in existing main service panel.
    - Two lighting circuits: one for pathway lighting to the east and one for pathway lighting to the west.
    - Capacity for two additional 20-amp circuits at a minimum.
- Conduit and conductors from the lighting service to the underground conduit outside the masonry building.
- Lighting circuits shall be 240 volts. Conductors shall include a neutral wire.
- Lighting protection
- A single contactor to operate both lighting circuits.

- An override control switch, with options for hand, off and auto.
- A photo sensor shall be installed on the south exterior wall of the masonry building, 5 ½' above finish grade.
- Contractor shall meet with the City's electrical staff to verify locations and layouts prior to installation. Field adjustments should be anticipated and incorporated in the lump sum bid.

626.04 METHOD OF MEASUREMENT

Method of Measurement shall be in accordance with MaineDOT Standard Specifications Subsection 626.04 with the addition of the following:

Provision of new foundations will be measured by the single unit, including concrete and steel reinforcing. Steel and non-metallic conduit will be measured per linear feet. Precast Concrete Junction Boxes shall be measured by the single unit, including concrete and steel reinforcing.

The lighting Service Installation items 626.115 and 626.116 shall be measured by Lump Sum.

626.05 BASIS OF PAYMENT:

Basis of Payment shall be in accordance with MaineDOT Standard Specifications Subsection 626.05 with the addition of the following:

The accepted quantity of foundations will be paid for at the contract unit price for each type of foundation. This payment shall include anchor bolts, reinforcing steel, conduit within the foundation and extending 12 inches from the foundation, loam, seeding, and all incidentals necessary to complete the work.

Payment will be made for the total number of linear feet of Non-Metallic Conduit actually furnished, installed, and accepted at the contract price per linear foot. This price shall include the cost of: furnishing and installing the conduit and **conductors as well as neutral and ground wiring**; excavating; furnishing special backfilling materials, pull wire, fittings, conductors, groundings and bonding; test cleaning interiors of conduits and all materials, labor, equipment and incidentals necessary to complete the work.

Excavating and backfilling for foundations and excavating, backfilling and sand bedding for conduit ducts will be considered included in the respective contract unit prices and no separate payment will be made, except as hereafter provided. Cutting railroad ties as needed to fit in foundations shall be incidental to pay items 626.31 and 626.32; disposal of ties shall be paid separately under 202.50.

Payment for the lighting Service Installation items 626.115 and 626.116 shall be Lump Sum. Payment shall include all labor and equipment necessary for the work described above, including above ground conduit and conductors, mounting and other ancillary hardware for securing conduit and equipment, and all other labor and hardware necessary to comply with applicable codes and regulations.

Pay Item	Payment will be made under:	Pay Unit
626.11	Precast Concrete Junction Box	Each
626.115	Lighting Service Installation (Hadlock Field)	Lump Sum
626.116	Lighting Service Installation (Volleyball Courts)	Lump Sum
626.22	Non-Metallic Conduit (2")	Linear Feet
626.31	18-inch Diameter Foundation	Each
626.32	24-inch Diameter Foundation	Each

END OF SECTION 626

INTERSTATE 295
NORTH BOUND

STORAGE AREA FOR RAILROAD CORRIDOR SOILS. SEE NOTE ON PREVIOUS SHEET.

PROTECT EX TREE

TREES TO BE REMOVED BY OTHERS

REM EX SIGN

ADJ MONUMENT AND ADD DRIP BOX. COORDINATE WITH CITY SURVEY STAFF

INSTALL STONE CHECK DAM IN DITCH EVERY 100' BETWEEN STA 107+50, L AND STA 115+50, L. SEE DETAIL

CONNECT PROPOSED FENCE TO EXISTING FENCE. INSTALL NEW CORNER POST.

GRADING LIMIT. TYP.

INSTALL 4 BIKE RACKS ON CONCRETE PAD.

12" CULVERT
L: 40'
S: 0.005

CHAMFERED CURBED PLANTERS, SEE DETAIL, TYP.

REMOVE RAILS AND TIES AT PATHWAY CONNECTION. CUT RAILS AT LIMIT OF PLANTER.

12" INV: 17.2

12" INV: 17.0

REM EX SIGN

PROTECT EX MONUMNET

12' WIDE HMA PATHWAY

3.5' GRASS BUFFER, TYP.

STONE DUST BETWEEN RAILS

EX TREES TO REMAIN, TYP. REFER TO LANDSCAPE DETAIL 'COVER SYSTEM ABUTTING TREES TO REMAIN'

LIGHT AND FOUNDATION (SINGLE). TYP

REM EX SIGN

2" NON-METALLIC CONDUIT

MEET AND MATCH. FIELD VERIFY PAVEMENT GRADES IN THIS AREA IMMEDIATELY UPON MOBILIZATION AND PROVIDE RESULTS TO RESIDENT

FOOTPRINT OF LOCKER ROOM BUILDINGS TO BE CONSTRUCTED BY PORTLAND UNITED

12' WIDE GATE IN 6' TALL CHAIN LINK FENCE. GRADE ADJACENT AREA SUCH THAT GATE WILL OPEN ALL THE WAY BACK TO ADJACENT FENCE SECTIONS. (~180° SWING)

MATCH LINE

MATCH LINE

ADDENDUM 1 ELECTRICAL SERVICE CONNECTION REVISED SUCH THAT CABINET WILL BE LOCATED ON SOUTHERN, NOT NORTHERN, WALL OF BUILDING AND CONDUIT WILL RUN EXTERIOR OF BUILDING

APPROXIMATE LOCATION OF EXISTING ELECTRICAL SERVICE PANEL (INSIDE BUILDING, SOUTHWEST CORNER)

ELECTRICAL SERVICE CONNECTION FOR PATHWAY LIGHTS. INSTALL NEW LIGHTING CABINET ON EXTERIOR OF BUILDING (WEST SIDE OF SOUTH WALL) AS SHOWN. FEED LIGHTING CABINET THROUGH WALL FROM EXISTING SERVICE PANEL INSIDE BUILDING. PROVIDE TWO LIGHTING CIRCUITS, ONE FOR PATHWAY LIGHTS TO THE EAST AND A SECOND CIRCUIT FOR LIGHTS TO THE WEST. MOUNT SINGLE PHOTO EYE ON EXTERIOR OF SOUTH WALL. SEE LIGHTING SPECIFICATIONS FOR ADDITIONAL DETAILS

THIS AREA WAS RE-GRADED AFTER THE DESIGN WAS COMPLETED AND RECENT SURVEY DATA HAS BEEN INCORPORATED INTO THIS PLAN. CONTRACTOR TO COORDINATE WITH RESIDENT TO VERIFY THAT THE EXISTING GRADES IN THIS AREA ARE COMPATIBLE WITH THE PROPOSED GRADING AND DRAINAGE DESIGN. CONTRACTOR SHALL PROVIDE ELEVATION MEASUREMENTS TO ENGINEER AND SHOULD ANTICIPATE FIELD FITTING AND ADJUSTMENTS TO THE PROPOSED GRADING. COORDINATION, FIELD ADJUSTMENT AND MEASURING ELEVATIONS SHALL BE INCIDENTAL TO THE PROJECT.

VERIFY THAT BENCH MARK HAS NOT BEEN DISTURBED BY RECENT CONSTRUCTION. NOTIFY RESIDENT IF THERE ARE ANY QUESTIONS REGARDING INTEGRITY OF BENCHMARK.

SCALE in FEET
1"=20'

INTERSTATE 295
NORTH BOUND

GRADING LIMIT. TYP.

STA 113+26.2, LT 20.2'
BEGIN 6' CHAIN LINK FENCE ON PROPERTY BOUNDARY LINE

S-1: 4'Ø DMH WITH BEEHIVE
STA 114+3.6, RT 12.1'
RIM: 12.95
24" INV IN: 8.60
24" INV OUT: 8.50

24" SD
L: 187'
S: 0.0075

S-2: 4'Ø DMH WITH BEEHIVE
STA 115+94.6, RT 8.0'
RIM: 11.30
12" INV IN: 7.50
24" INV IN: 7.10
24" INV OUT: 7.00

12" CULVERT
L: 29'
S: 0.017

BOLLARD LIGHTING BENEATH DEERING OVERPASS, INSTALLED 20' OC, TYP

S-2.1: 2'Ø CB WITH BEEHIVE
STA 115+95.6, LT 23.8'
RIM: 10.8
12" INV OUT: 8.0

PLAIN RIPRAP INLET/OUT PROTECTION. TYPICAL

RIVER STONE RIPRAP INLET/OUT PROTECTION. TYPICAL

12' WIDE HMA PATHWAY

3.5' GRASS BUFFER, TYP.

STONE DUST BETWEEN RAILS

2" NON-METALLIC CONDUIT

INSTALL STONE CHECK DAM IN DITCH. STA 112+00

INSTALL STONE CHECK DAM IN DITCH. STA 113+00

24" SD
L: 64'
S: 0.046

SAWCUT AND REPAIR PAVEMENT

CORE EX STRUCTURE TO CONNECT NEW OUTLET. INSTALL TEMPORARY PLUG IN NEW OUTLET.
24" INV OUT: 11.5

INSTALL STONE CHECK DAM IN DITCH. STA 115+00

PROTECT EX MONUMENT

SHAPE FILL TO PROVIDE MORE GRADUAL SLOPE FOR DESIRE PATH VIF BEFORE INSTALLING SOIL COVER SYSTEM

AREA 2. STORAGE FOR UNION BRANCH CORRIDOR SOILS. COORDINATE WITH RESIDENT AND ENGINEER ON EXTENTS AND GRADING PRIOR TO MOVING SOILS TO STORAGE AREA. DO NOT EXCEED 2:1 SLOPE. COVER SLOPES BETWEEN 2:1 AND 3:1 WITH EROSION CONTROL BLANKET. PROVIDE AND MAINTAIN EROSION CONTROL MEASURES AS OUTLINED IN GENERAL NOTES AND SPECIFICATIONS. ANTICIPATE FIELD FITTING. SEE SECTIONS 114+00 TO 115+50.

SCALE in FEET
1"=20'

H:\60000\00BOS.001199.00_P. PORTLAND PATHWAY UNION BRANCH SEGMENT\PRODUCTION\CAD\00199_(CONSTRUCTION PLANS).DWG 6 5/16/2023

Civil 3D 2019 Drawing: Drawing NAME:
Civil 3D 2019 Survey Database: Database NAME

REFERENCES:
PROJECT FIELD BOOK:
OTHER FIELD BOOKS:
BLUE SHEETS
TAX MAPS
CATCH BASIN CARDS
CITY GIS SEWERS

SURVEY CREW:
DRAWN BY:
CHECKED BY:
SCALE: AS NOTED
DATE:

REV	DATE
1	ADDENDUM 1	8/27/25
0	ISSUED FOR BIDDING	8/6/25
	SUBMISSION	DATE

PROJECT NAME:
UNION BRANCH MULTI-USE PATHWAY
WIN18469.00

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
212 CANCO ROAD PORTLAND, MAINE 04101
PHONE (207) 874-8801 FAX (207) 874-8852

DESIGN BY: TGN
DRAWN BY: TGN
CHECKED BY: JIM
SHEET NAME: CONSTRUCTION PLANS
DATE: 2025-08-05
SHEET NO.: PAGE 8 OF 37
REV.: C-2

ADDENDUM 1 Includes shifting drain manhole S-5, two additional drain manholes, additional 36" stormdrain, additional 30" stormdrain, and test pits as shown below.

1

S-4 RELOCATED AS SHOWN
8' DIAMETER DMH
RIM: 11.2
6" INV IN: 5.3 (CAP WITH 1" ORIFICE)
12" INV IN: 5.04
36" INV IN: 4.33
36" INV OUT: 4.33

S-5 8' DIAMETER DMH
RIM: 12.6
30" INV IN: 8.00
36" INV IN: 4.20
DMH IS FOR FUTURE EXTENSION OF STORM DRAIN THROUGH PARK. TO BE CORED BY OTHERS FOR 42" OUTLET.

END PROPOSED 30" STORMDRAIN WITH PLUG FITTING IN SPIGOT END. INSTALL 4x4 PT POST AT CAP, CUT 2' BELOW PROPOSED GRADE. PROVIDE GPS COORDINATES (X,Y,Z) AND SWING TIES TO END OF PIPE.
INV: 9.1 (AT CAP)

ALIGNMENT OF 8' WIDE PATHWAY CONNECTION TO DEERING AVENUE. MAXIMUM DESIGN RUNNING SLOPE 4.5%, NOT TO EXCEED 5%

TEST PIT EXISTING SEWER

S-6 5' DIAMETER DMH
RIM: 13.4
30" INV IN: 8.21
30" INV OUT: 8.21

30" SD
L: 42'
S: 0.005

30" SD
L: 178'
S: 0.005

PROTECT EXISTING STONE MASONRY WALL

TEST PIT EXISTING SEWER

INV OUT: 9.8

36" SD
L: 67'
S: 0.001

36" SD
L: 138'
S: 0.001

8" INV OUT: 11.9

SAWCUT AND TACK COAT

36" INV OUT: 4.4
(No Change)

8" INV IN: 12.0
8" CULVERT
L: 26'

REMOVE EX TREE. PROTECT ALL OTHERS ADJACENT TO CONSTRUCTION ACTIVITIES. SEE LANDSCAPE PLANS

LOCATE GAS DRIP AND COORDINATE WITH UNITIL TO PROTECT/SAFEGUARD DURING CONSTRUCTION AS NEEDED.

MATCH EX

TEST PIT EXISTING GAS UTILITES

MEET AND MATCH EX BIT SIDEWALK. MILL 1"x12" BUTT JOINT WHERE NEW BIT PATHWAY MEETS EX SIDEWALK.

303+98

DEERING AVENUE

MATCH LINE

SCALE in FEET
1"=20'

DEERING AVENUE CONNECTION ELEVATIONS			
STATION	NORTHING	EASTING	ELEVATION
300+00	301096.6965	2923921.239	11.32
300+10	301089.0448	2923927.677	11.39
300+20	301081.3931	2923934.115	11.49
300+30	301073.7414	2923940.554	11.59
300+40	301066.0897	2923946.992	11.69
300+50	301058.294	2923953.254	11.79
300+60	301050.4052	2923959.399	11.89
300+70	301042.5165	2923965.545	11.99
300+80	301034.6277	2923971.69	12.09
300+90	301026.7389	2923977.836	12.19
301+00	301018.8501	2923983.981	12.28
301+10	301010.9613	2923990.127	12.38
301+20	301003.0716	2923996.271	12.48
301+30	300994.9164	2924002.054	12.58
301+40	300986.3252	2924007.166	12.68
301+50	300977.353	2924011.576	12.78
301+60	300968.057	2924015.254	12.88
301+70	300958.4967	2924018.178	12.98
301+80	300948.7334	2924020.329	13.08
301+90	300938.8855	2924022.059	13.18
302+00	300929.1966	2924024.522	13.34
302+10	300919.7477	2924027.787	13.62
302+20	300910.6051	2924031.831	14.03
302+30	300901.8329	2924036.626	14.48
302+40	300893.4925	2924042.137	14.93
302+50	300885.6424	2924048.328	15.38
302+60	300878.3378	2924055.153	15.83
302+70	300871.6297	2924062.565	16.28
302+80	300865.5652	2924070.513	16.73
302+90	300859.9118	2924078.761	17.18
303+00	300854.2631	2924087.013	17.63
303+10	300848.6068	2924095.26	18.08
303+20	300842.3392	2924103.043	18.53
303+30	300835.1502	2924109.985	18.98
303+40	300827.1517	2924115.976	19.43
303+50	300818.4687	2924120.924	19.88
303+60	300809.2367	2924124.75	20.33
303+70	300799.7307	2924127.854	20.78
303+80	300790.2216	2924130.948	21.23
303+90	300780.7124	2924134.043	21.68

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SHEET NAME: CONSTRUCTION PLANS
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SHEET NO.: C-6
REV.:

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