

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND BUILDING PERMIT



This is to certify that

CITY OF PORTLAND /MAINE DOT/Joel Kittredge

Located at

454 COMMERCIAL ST

PERMIT ID: 2013-00440

ISSUE DATE: 04/26/2013

CBL: 043 D005001

has permission to **Phase II - small addition to existing utility building, Install of concrete junction boxes and pedestals in support of refrigerator container storage. Electric trenching, conduits, and wiring to be installed**

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise cloed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

A handwritten signature in black ink, appearing to read "Jamie Bonke".

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
THERE IS A PENALTY FOR REMOVING THIS CARD**

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703 (ONLY)
or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

REQUIRED INSPECTIONS:

Footings/Setbacks
Foundation/Rebar
Electrical - Commercial
Close-in Plumbing/Framing
Electrical Close-in
Final - Electric
Final - Commercial
Final - Fire

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 2013-00440	Date Applied For: 03/06/2013	CBL: 043 D005001
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Location of Construction: 454 COMMERCIAL ST	Owner Name: CITY OF PORTLAND	Owner Address: 389 CONGRESS ST	Phone:
Business Name: Internation Marine Terminal	Contractor Name: MAINE DOT/Joel Kittredge	Contractor Address: 16 State House Station Augusta	Phone: (207) 624-3550
Lessee/Buyer's Name	Phone:	Permit Type: Additions - Commercial	

Proposed Use: International Marine Terminal - Freight Processing	Proposed Project Description: Phase II - small addition to existing utility building, Install of concrete junction boxes and pedestals in support of refrigerator container storage. Electric trenching, conduits, and wiring to be installed
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Dept: Zoning	Status: Approved	Reviewer: Marge Schmuckal	Approval Date: 03/06/2013
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
Dept: Building	Status: Approved w/Conditions	Reviewer: Jeanie Bourke	Approval Date: 04/24/2013
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
<ol style="list-style-type: none"> 1) Ventilation of this space is required per ASHRAE 62.2 or 62.1, 2007 edition. 2) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm, HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process. 3) Equipment shall be installed in compliance with the manufacturer's specifications and the UL listing. 4) Permit approved based upon information provided by the applicant or design professional. Any deviation from approved plans requires separate review and approval prior to work. 			
Dept: Fire	Status: Not Applicable	Reviewer:	Approval Date: 04/24/2013
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
Dept: Planning	Status: In Review	Reviewer: Bill Needelman	Approval Date: 04/03/2013
Note: Requires Administrative Authorization approval	Ok to Issue: <input checked="" type="checkbox"/>		



City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 2013-00440	Issue Date:	CBL: 043 D005001
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Location of Construction: 454 COMMERCIAL ST	Owner Name: CITY OF PORTLAND	Owner Address: 389 CONGRESS ST PORTLAND, ME 04101	Phone:
Business Name: International Marine Terminal	Contractor Name: MAINE DOT/Joel Kittredge	Contractor Address: 16 State House Station Augusta ME 04333	Phone: (207) 624-3550
Lessee/Buyer's Name	Phone:	Permit Type: Additions - Commercial	Zone: WPDZ
Past Use: International Marine Terminal - Freight Processing	Proposed Use: International Marine Terminal - Freight Processing	Permit Fee:	Cost of Work: \$0.00
Proposed Project Description: Install of concrete junction boxes and pedestals in support of refrigerator container storage. Electric trenching, conduits, and wiring will be installed, small addition etc.- phase II		FIRE DEPT: <input type="checkbox"/> Approved <input type="checkbox"/> Denied <input checked="" type="checkbox"/> N/A	INSPECTION: Use Group: U Type: 203 MUBEC / DEC 2009 Signature: JMB 4/24/13
		Signature: JMB	Signature: JMB 4/24/13
		PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)	
		Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied	
		Signature: _____ Date: _____	

Permit Taken By: bjs	Date Applied For: 03/06/2013	Zoning Approval	
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<ol style="list-style-type: none"> This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. Building permits do not include plumbing, septic or electrical work. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work.. 	Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: 3/14/13	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date:
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CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE



General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: International Marine Terminal, 454 Commercial Street.		
Total Square Footage of Proposed Structure/Area NA	Square Footage of Lot 624,650 sq. ft.	
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# 043-D-5/0000501	Applicant 'must be owner, Lessee or Buyer' Name Mr. Joel Kittredge Address 16 State House Station City, State & Zip Augusta, ME 04333	Telephone: 207-624-3550
Lessee/DBA (If Applicable) 043-D-5/0000501	Owner (if different from Applicant) Name Mr. John Henshaw Address 16 State House Station City, State & Zip Augusta, ME 04333	Cost Of Work: \$ _____ C of O Fee: \$ _____ Total Fee: \$ _____
Current legal use (i.e. single family) <u>Marine freight processing</u> If vacant, what was the previous use? <u>NA</u> Proposed Specific use: <u>No change.</u> Is property part of a subdivision? <u>No.</u> If yes, please name _____ Project description: <u>Installation of six at-grade concrete junction boxes and eight concrete pedestals in support of refrigerator container storage. Electrical trenching, conduits, and wiring will be installed, as well as a small addition to the existing utility building to house the panelboards, meter, and circuit breakers.</u>		
Contractor's name: _____ Address: _____ City, State & Zip _____ Telephone: _____ Who should we contact when the permit is ready: _____ Telephone: _____ Mailing address: _____		

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MAY 6 2013
Dept. of Building Inspections
City of Portland, Maine

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: [Signature] Date: 3-4-13

This is not a permit; you may not commence ANY work until the permit is issue



Administrative Authorization Application

Portland, Maine

Planning and Urban Development Department, Planning Division

Portland IMT - Eimskip Improvements, Phase 2

PROJECT NAME: _____

PROJECT ADDRESS: 454 Commercial Street **CHART/BLOCK/LOT:** 043 D 5 / 043 G 1

APPLICATION FEE: \$50.00 **(\$50.00)**

PROJECT DESCRIPTION: (Please Attach Sketch/Plan of the Proposal/Development)

Improvements to the existing IMT site including: ~~modifications to the existing Rubb Building; replacement of a 50ft x 100ft concrete slab; pavement reconstruction within truck loading areas; light pole modifications; and fire hydrant relocation.~~ Installation of six at-grade concrete junction boxes and eight concrete pedestals in support of refrigerator container storage. Electrical trenching, conduits, and wiring will be installed, as well as a small addition to the existing utility building to house the panel boards, meter, and circuit breakers.

CONTACT INFORMATION:

OWNER/APPLICANT

CONSULTANT/AGENT

Name: Mr. Joel Kittredge
Address: Maine Department of Transportation
16 State House Station
Augusta, ME 04333
Work #: 207-624-3550
Cell #: _____
Fax #: _____
Home #: _____
E-mail: Joel.C.Kittredge@maine.gov

Name: Mr. Craig Morin, PE
Address: HNTB
340 County Road
Suite 6C
Westbrook, ME 04092
Work #: 207-228-0908
Cell #: _____
Fax #: _____
Home #: _____
E-mail: CMorin@hntb.com

Criteria for an Administrative Authorization:
(see section 14-523(4) on pg .2 of this appl.)

Applicant's Assessment
Y(yes), N(no), N/A

- a) Is the proposal within existing structures? yes
- b) Are there any new buildings, additions, or demolitions? yes
- c) Is the footprint increase less than 500 sq. ft.? yes
- d) Are there any new curb cuts, driveways or parking areas? no
- e) Are the curbs and sidewalks in sound condition? yes
- f) Do the curbs and sidewalks comply with ADA? N/A
- g) Is there any additional parking? N/A
- h) Is there an increase in traffic? no
- i) Are there any known stormwater problems? no
- j) Does sufficient property screening exist? N/A
- k) Are there adequate utilities? yes
- l) Are there any zoning violations? no
- m) Is an emergency generator located to minimize noise? N/A
- n) Are there any noise, vibration, glare, fumes or other impacts? no

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Dept. of Building Inspections
City of Portland Maine

**SPECIAL PROVISIONS
SECTION 104
UTILITIES**

MEETING

A pre-construction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications is required.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Department 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.

Overview

Utility / Railroad	Aerial	Underground
Central Maine Power (Electrical)	X	X
Fairpoint (Communication)	X	X
Unitil (Gas)		X
City of Portland – Public Works Dept. (Sewer)		X
Portland Water District (Water)		X
Galaxy Integrated (Security) *		X

* Includes wireless technology

Temporary utility adjustments are not anticipated. If temporary relocation becomes necessary, sufficient time will need to be allowed prior to the construction for all required temporary relocation.

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

All utility crossings over driveways will provide not less than 18 feet vertical clearance over existing ground in cut or over finished grade in fill, during construction of this project.

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 Department if they are exceeded.

In all cases, the utilities shall be notified, by the Contractor, well in advance (three weeks) before work in any area is to commence.

Special note to Contractor and the Utilities: The Contractor shall plan and schedule his work in such a manner that the utilities that are located on this project will not be harmed, damaged or impacted in any way. The Contractor and Utility will coordinate and communicate their work plans in an effort not to interfere with each other's progress or the completion of the project.

Unless otherwise specified, any underground utility facilities shown on the project plans represent approximate locations gathered from available information. The Department 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.

The Portland Water District maintains a 20-ft wide easement from Commercial Street through the site's container storage facility and along the waterfront. Work within the easement must be coordinated with the Portland Water District since the water main will continue to be owned and operated by the PWD. Test pits to verify the water main's condition and location are incorporated into the project and shall be performed by the Contractor.

AERIAL

Central Maine Power Company has transmission lines and poles along Commercial Street which exist along the boundary of the project property. These wires do not appear to be issue given the project scope. No relocation or involvement of any kind is anticipated by the aerial utilities as part of the work but the contractor should inspect this location, prior to bid, and be aware of these lines when preparing their bid and using machines that are over legal heights. The contractor is urged to use caution around these lines. The Central Maine Power Company contact is: Gary Crabtree at 207-791-8025.

Fairpoint has a cable and fiber line which exist along the boundary of the project property. These wires do not appear to conflict with the scope of the project. Fairpoint contact is Steve Polyot at 207-990-5280.

SUBSURFACE

Central Maine Power Company has electrical lines which run throughout the scope of the project property. Lines extend from Commercial Street down to the waterfront and into the Maintenance Building (to remain); the Terminal Building (to be demolished), and to the RUBB Building (to remain). The Central Maine Power Company contact is: Gary Crabtree at 207-791-8025.

Fairpoint has a cable and fiber line which run throughout the scope of the project property. Lines extend from Commercial Street down to the waterfront and into the Maintenance Building (to remain); and the Terminal Building (to be demolished). Fairpoint contact is Steve Polyot at 207-990-5280.

Unitil has a gas line which extends from Commercial Street down to the Terminal Building (to be demolished); and overhead in the building canopy to the Maintenance Building (to remain). The Unitil contact is: Sam Murray at 207-541-2528.

City of Portland – Public Works Department has a sewer line which extends from Commercial street to the Terminal Building (to be demolished); and overhead in the building canopy to the Maintenance Building (to remain). City of Portland – Public Works Dept. contact is: Mike Farmer at 207-874-8845.

Portland Water District has a water main which extends from Commercial Street down to the waterfront within a 20-ft wide easement. One T-branch extends from this main to the Terminal Building (to be demolished). The contact for Portland Water District is Rico Spugnardi at 207-774-5961.

Galaxy Integrated has a wireless security system on site. The system is currently connected to the Port Office Building located along Commercial Street and is linked to several security cameras and card readers throughout the project site. The security system is also linked to the City of Portland's emergency call centers. The contact for Galaxy Integrated is Michael Finegan at 617-202-6388.

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.

SAFE PRACTICES AROUND UTILITY FACILITIES

The Contractor shall be responsible for complying with M.R.S.A. Title 35-A, Chapter 7-A Sections 751 - 761 Overhead High-Voltage Line Safety Act. Prior to commencing any work that may come within ten (10) feet of any aerial electrical line; the Contractor shall notify the aerial utilities as per section 757 of the above act. Any work around and below aerial utilities shall be done using OSHA standards.

DIG SAFE

The Contractor shall be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with M.R.S.A. Title 23 §3360-A, Maine "Dig Safe" System.

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.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

The following utilities are known to be located on this project:

Utility	Contact	Email	Phone Number
Central Maine Power	Gary Crabtree	gary.crabtree@cmpco.com	207-791-8025
Fairpoint	Steve Polyot	spolyot@fairpoint.com	207-990-5280
Unitil	Sam Murray	murray@unitil.com	207-541-2528
Portland Public Works Dept.	Mike Farmer	mfarmer@portlandmaine.gov	207-874-8845
Portland Water District	Rico Spugnardi	rspugnardi@pwd.org	207-774-5961
Galaxy Integrated	Michael Finegan	michaelf@galaxyintegrated.com	617-202-6388

SPECIAL PROVISION

SECTION 403

HOT MIX ASPHALT

Desc. of Course	Grad. Design	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
6" HMA Pavement						
Wearing	9.5 mm	403.210	N/A	1-1/2 in.	1	4, 16, 18
Base	12.5 mm	403.213	N/A	4-1/2 in.	1	4, 16, 18

COMPLEMENTARY NOTES

4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
16. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **3-5 ton** vibratory roller. An approved release agent is required to ensure the mixture does not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.
18. The Agency administering the contract will provide a NETTCP certified inspector qualified to accept or reject any HMA based on a visual basis, either prior to its use, during placement, or in its final disposition. Mixtures exceeding the minimum 275 degree (F) lower limit or the 325 degree (F) upper limit will be rejected from the project. Informational mix samples may be obtained by the Agency at any time for verification of material properties. All HMA mixtures shall be sourced from one approved JMF, per type of mix. The Agency administering the contract shall submit a letter of acceptance at the completion of the contract certifying that all work and materials were inspected and found to be acceptable to the Agency.

Tack Coat

A tack coat of emulsified asphalt, RS-1 (see Special Provision 409) shall be applied to any existing pavement at a rate of approximately 0.025 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and the surface course, at a rate not to exceed 0.025 gal/yd². Cleaning objectionable material from the pavement and furnishing and applying the bituminous tack coat to joints and contact surfaces is incidental to the contract paving items.

403.04 Method of Measurement

The following paragraph is added:

Hot Mix Asphalt, 9.5 mm Nominal Maximum Size shall also include all materials, labor, equipment and incidentals necessary to install Bituminous Tack Coat materials in accordance with Section 409.

403.04 Basis of Payment

The following paragraph is added:

The unit contract price for Pay Item 403.210, Hot Mix Asphalt, 9.5 mm Nominal Maximum Size shall also include all materials, labor, equipment and incidentals necessary to install Bituminous Tack Coat materials in accordance with Section 409.

SPECIAL PROVISION

SECTION 409

BITUMINOUS TACK COAT

409.06 Preparation of Surface

The following paragraph is added:

All existing pavement on which bituminous concrete mixtures are to be placed shall receive a tack coat. The surface area where the tack coat is to be applied shall be dry and cleaned of all dirt, sand, and loose material. Cleaning shall be accomplished by use of revolving brooms or mechanical sweepers. Undesirable material not removed by the above means shall be cleaned by hand-brooming or scraping, or a combination of both. Small areas otherwise inaccessible may be broomed with hand brooms. The tack coat shall be applied only when the existing surface is dry.

409.08 Method of Measurement

This subsection is replaced with the following:

Measurement for Bituminous Tack Coat will not be made separately, but rather shall be incidental to Pay Item 403.210, Hot Mix Asphalt, 9.5 mm Nominal Maximum Size.

409.09 Basis of Payment

This subsection is replaced with the following:

Bituminous Tack Coat will not be paid for separately, but rather shall be paid under Pay Item 403.210, Hot Mix Asphalt, 9.5 mm Nominal Maximum Size.

SPECIAL PROVISION

SECTION 419

SAWING AND SEALING JOINTS IN BITUMINOUS PAVEMENT

419.01 Description

This work consists of sawing bituminous concrete pavement as shown on the Plans, as specified herein or as approved by the Resident.

419.02 General

The bituminous concrete pavement to be sawed shall be accurately marked before cutting. The marking shall be in accordance with the locations as shown on the Plans or as approved by the Resident. Cutting shall be with an approved power driven saw with an abrasive blade.

Unless otherwise noted or directed, the full depth sawcut shall be vertical, a minimum of 3/8 inch wide, and extend to the bottom of the pavement.

Residue or debris from the sawing operation shall be removed immediately and legally disposed of by the Contractor.

419.03 Method of Measurement

Measurement for Sawing and Sealing Joints in Bituminous Pavement will not be made separately, but rather shall be incidental to the respective 605 or 626 Pay Items.

419.04 Basis of Payment

Sawing and Sealing Joints in Bituminous Pavement will not be paid for separately, but rather shall be paid under the respective 605 or 626 Pay Items.

SPECIAL PROVISION

SECTION 605

UNDERDRAINS

(4" Underdrain Pipe)

605.01 Description

The following paragraphs are added:

This work shall consist of installation of underdrain pipe to the limits shown on the contract plans. Underdrain pipe shall be installed below the proposed conduit materials, and shall outlet to Catch Basin #13A at the elevation shown. The catch basin wall will require coring to provide proper outlet, and the annulus shall be filled with a non-shrink cementitious mortar.

605.06 Method of Measurement

The second paragraph is deleted and replaced with the following:

4" Underdrain Pipe shall be measured by the contract lump sum price.

605.07 Basis of Payment

The following paragraphs are added:

The accepted quantity of 4" Underdrain Pipe will be paid at the Contract lump sum price which shall be full compensation for sawcutting pavement, excavation, compaction, underdrain materials including tees and connections, temporary shoring, coring of the existing catch basin, mortar patching, and backfilling. All labor, equipment and all other incidentals necessary to complete the work shall be considered incidental to the 4" Underdrain Pipe pay item.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
605.071	4" Underdrain Pipe	Lump Sum

SPECIAL PROVISION

SECTION 626

FOUNDATIONS, CONDUIT AND JUNCTION BOXES
FOR HIGHWAY SIGNING, LIGHTING AND SIGNALS

- (Stainless Steel Junction Box)
- (Pre-Cast Junction Box – Heavy Duty)
- (Concrete Pedestal Foundation)
- (Electrical Conduit, Wiring and Trenching)
- (Power Distribution Panelboard and Circuit Breakers)

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 and installing the following in accordance with these specifications and plans:

- Provision of electrical service/distribution panelboard.
- Provision of an underground electrical 277/480 volt, 3-phase secondary service (conduit and wire) between an existing Central Maine Power Company service transformer and the service/distribution panelboard being provided under this contract.
- Provision of electrical underground feeders (conduit and wire) to serve owner-furnished portable refer assemblies.
- Provision of in-ground precast concrete junction boxes to facilitate the connection of the owner-furnished portable refer assemblies.
- Provision of electrical underground feeders (conduit and wire) to serve owner-furnished pedestal-type refer assemblies.
- Provision of concrete foundation bases for the owner-furnished pedestal-type refer assemblies.

626.02 General

Installation of service conduit and wiring methods for the new underground electrical 277/480 volt, 3-phase service shall be approved by the Central Maine Power Company.

626.021 Materials

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

Reinforcing Steel	709.01
Steel Conduit	715.02
Non-Metallic Conduit	715.03
Secondary Wiring	715.07

626.022 Equipment List and Drawings

Provide scale drawings and details for anchor bolt installation methods.

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.

626.08 Electrical Service

The utility service will be 277/480 volt, 3 wire, as received from the existing *Central Maine Power Company* service transformer. The new electrical service shall be separately metered by *CMP*.

634.081 Bonding and Grounding

A separate, continuous, green insulated ground conductor shall be provided to extend from the power distribution panelboard within all refer feeders. Service grounding shall be made to 5/8 inch by 8 feet long copper-clad steel ground rods.

626.45 Electrical Conduit, Wiring, and Trenching

Underground electrical conduit shall be schedule 40 PVC.

626.91 Power Distribution Panelboard and Circuit Breakers

The power distribution panelboard shall be Square D Company I-LINE – Class 2110, or approved equal. The panelboard shall be rated 600 VAC or 250 VDC maximum. Continuous main current ratings as indicated on associated schedules not to exceed 1200 amperes maximum. Panelboard bus current ratings shall be determined by heat-rise tests conducted in accordance with UL 67

The UL listed short circuit current rating (SCCR) shall be equal to 35K or greater. The panelboard shall be suitable for use as Service Equipment. The panelboard interior shall have three flat bus bars stacked and aligned vertically with glass reinforced polyester insulators laminated between phases. The molded polyester insulators shall support and provide phase isolation to the entire length of bus. The bussing shall be fully rated with sequentially phased branch distribution. Panelboard bussing shall be plated copper. Bus bar plating shall run the entire length of the bus bar. The entire interleaved assembly shall be contained between two (2) U-shaped steel channels, permanently secured to a galvanized steel-mounting pan by fasteners.

The interior trim shall be of dead-front construction to shield user from all energized parts. Main circuit breaker and main lug interiors shall be field convertible for top or bottom incoming feed. A solidly bonded copper equipment ground bar shall be provided. Solid neutral shall be equipped with a full capacity bonding strap for service entrance applications. Gutter-mounted neutral will not be acceptable.

Nameplates shall contain system information and catalog number or factory order number. Interior wiring diagram, neutral wiring diagram, UL Listed label, and Short Circuit Current Rating shall be displayed on the interior or in a booklet format. Leveling provisions shall be provided for flush mounted applications.

Circuit breaker(s) shall be group mounted plug-on with mechanical restraint on a common pan or rail assembly. The interior shall have three flat bus bars stacked and aligned vertically with glass reinforced polyester insulators laminated between phases. The molded polyester insulators shall support and provide phase isolation to the entire length of bus. Circuit breakers equipped with line terminal jaws shall not require additional external mounting hardware. Circuit breakers shall be held in mounted position by a self-contained bracket secured to the mounting pan by fasteners. Circuit breakers of different frame sizes shall be capable of being mounted across from each other. Line-side circuit breaker connections are to be jaw type. All unused spaces provided, unless otherwise specified, shall be fully equipped for future devices, including all appropriate connectors and mounting hardware.

Molded case circuit breakers shall be constructed using glass reinforced insulating material. Current carrying components shall be completely isolated from the handle and the accessory mounting area. Circuit breakers shall have an over center, trip free, toggle operating mechanism which will provide quick-make, quick-break contact action. The circuit breaker shall have common tripping of all poles. The circuit breaker handle shall reside in a tripped position between ON and OFF to provide local trip indication. Circuit breaker escutcheon shall be clearly marked ON and OFF in addition to providing International I/O markings.

The maximum ampere rating and UL certification standard with applicable voltage systems and corresponding interrupting ratings shall be clearly marked on face of circuit breaker. Each circuit breaker shall be equipped with a push-to-trip button, located on the face of the circuit breaker to mechanically operate the circuit breaker tripping mechanism for maintenance and testing purposes. Circuit breakers shall be factory sealed with a hologram quality mark and shall have date code on face of circuit breaker. Circuit breaker/circuit breaker combinations for series connected interrupting ratings shall be listed by UL as recognized component combinations. Any series rated combination used shall be marked on the end use equipment along with the statement "Caution - Series Rated System. 34370 Amps Available. Identical Replacement Component Required".

Circuit breakers shall be equipped with UL Listed electrical accessories as noted on the associated schedule or they may be field-installable. Circuit breaker handle accessories shall provide provisions for locking handle in the ON and OFF position. All circuit breakers with permanent trip units shall be UL Listed for reverse connection without restrictive line and load markings and be suitable for mounting in any position.

Circuit breakers shall be up to 1200 Amp maximum, construction with factory installed mechanical lugs. All circuit breakers shall be UL Listed to accept field installable/removable mechanical type lugs. All lugs shall be UL Listed to accept solid (not larger than #8 AWG) and/or stranded copper and aluminum conductors. Lugs shall be suitable for 75° C rated wire.

Thermal-magnetic distribution circuit breakers shall be Square D type: HG and MG, or approved equal. Circuit breakers shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole. Thermal trip elements shall be factory preset and sealed. Circuit breakers shall be true RMS sensing and thermally responsive to protect circuit conductor(s) in a 40° C ambient temperature. Circuit breaker frame sizes above 150 amperes shall have a single magnetic trip adjustment located on the front of the circuit breaker. Standard two- and three-pole circuit breakers up to 250 amperes at 600 VAC shall be UL Listed as HACR type.

The electronic trip main circuit breaker shall be equipped with a Square D MICROLOGIC Trip System. The main breaker shall be Square D type: PowerPact P- frame or approved equal. All trip units shall be removable to allow for field upgrades. Trip Units shall incorporate "True RMS Sensing", and have LED long-time pickup indications. MICROLOGIC trip unit functions shall consist of adjustable long-time pickup and delay, short-time pickup and delay. Adjustable long-time pickup (I_r) and delay shall be available in an adjustable rating plug that is UL Listed as field-replaceable. Adjustable rating plug shall allow for nine long-time pickup settings from 0.4 to 1 times the sensor plug (I_n). Other adjustable rating plugs shall be available for more precise settings to match the application. Long-time delay settings shall be in nine bands from 0.5–24 seconds at six times I_r . Short-time pickup shall allow for nine settings from 1.5 to 10 times I_r . Short-time delay shall be in nine bands from 0.1–0.4 I 2 t ON and 0–0.4 I 2 t OFF. Instantaneous settings on the trip units with LSI protection shall be available in nine bands from 2 to 15 times I_n . The Instantaneous setting shall also have an OFF setting when short-time pick-up is provided.

All trip units shall have the capability for the adjustments to be set and read locally by rotating a switch. Trip unit shall provide local trip indication. Ground-fault protection shall be provided. Trip unit shall be capable of the following types of ground-fault protection: residual, source ground return, and modified differential. Ground-fault sensing systems may be changed in the field. Ground-fault settings for circuit breaker sensor sizes 1200 A or below shall be in nine bands from 0.2 to 1.0 times I_n . A means to seal the trip unit adjustments in accordance with NEC Section 240-6(b) shall be provided.

The enclosure shall be hot zinc dipped galvanized steel constructed in accordance with UL 50 requirements. Unpainted galvanized steel is not acceptable. Boxes shall have removable blank end walls and interior mounting studs. Interior support bracket shall be provided for ease of interior installation.

The trim front steel shall meet strength and rigidity requirements per UL 50 standards. Shall have an ANSI 49 medium gray enamel electrodeposited over cleaned phosphatized steel. Trim front shall be 4-piece surface in surface mount. Trim front door shall have rounded corners

and edges free of burrs. A clear plastic directory cardholder shall be mounted on the inside of the door. Locks shall be cylindrical tumbler type with larger enclosures requiring sliding vault locks with 3-point latching. All lock assemblies shall be keyed alike. One (1) key shall be provided with each lock.

Section One:

277/480 Volts, 3-Phase, 4-Wire

1200 Ampere Bus

AIC Rating: 35K

Surface Cabinet

Main Circuit Breaker: 1200A/3P

Distribution Circuit Breakers:

<u>Ckt #</u>	<u>CB Size</u>	<u>Load</u>
1,3,5	150A/3P	Portable Refer Outlet Assembly
2,4,6	150A/3P	Portable Refer Outlet Assembly
17,11,13	150A/3P	Portable Refer Outlet Assembly
8,10,12	150A/3P	Portable Refer Outlet Assembly
13,15,17	150A/3P	Portable Refer Outlet Assembly
14,16,18	150A/3P	Portable Refer Outlet Assembly
25,27,29	600A/3P	Panelboard Section Two

Section Two:

277/480 Volts, 3-Phase, 4-Wire

600 Ampere Bus

AIC Rating: 35K

Surface Cabinet

Main Lugs Only

Distribution Circuit Breakers:

<u>Ckt #</u>	<u>CB Size</u>	<u>Load</u>
1,3,5	125A/3P	Permanent Refer Outlet Assembly
2,4,6	125A/3P	Permanent Refer Outlet Assembly
17,11,13	125A/3P	Permanent Refer Outlet Assembly
8,10,12	125A/3P	Permanent Refer Outlet Assembly
13,15,17	125A/3P	Permanent Refer Outlet Assembly
14,16,18	125A/3P	Permanent Refer Outlet Assembly
19,21,23	125A/3P	Permanent Refer Outlet Assembly
20,22,24	125A/3P	Permanent Refer Outlet Assembly

626.92 Precast Concrete Junction Box - Heavy Duty

The precast concrete junction box shall be a heavy-duty grade junction box capable of withstanding the loads shown on the Contract plans. The junction box shall be steel reinforced and shall contain an inlet blockout for the electrical wiring and an outlet blockout for a drain pipe. The junction box shall also contain a cast gray iron frame/lid of ASTM A-48 material, Class 35B. Four bolts shall be used to fasten the frame to the top of the junction box. The

junction box shall be water-tight when not in use, yet shall contain a hole in the cover such that a 1-3/4 inch diameter cable can pass thru the lid when in operation.

The Contractor shall submit design plans and calculations for the precast concrete junction box for review by the Engineer. The design shall be stamped by a licensed professional engineer and shall be designed for the wheel load and footprint shown on the Contract plans.

The steel reinforcement shall be ASTM A615, Grade 60 epoxy coated, and the concrete shall have a compressive strength of 4,000 psi (min.) at 28 days.

The opening at the lid and within the junction box itself shall be no less than 14-inches. Inside the junction box, the manufacturer shall provide a stainless steel chain and hook mechanism for securing the head of the outlet and ensuring that the head of the outlet can be easily extracted from the box and so that the head of the outlet does not lie on the bottom of the box when not in use.

626.93 Stainless Steel Junction Box

The stainless steel junction boxes shall be fabricated of Type 304 stainless steel to the size and dimensions shown on the Contract plans. The junction boxes shall be water-tight, yet shall have a hole on its side wall such that a 1-3/4 inch diameter cable can pass thru the side wall when the cable is in use. The hole should otherwise be covered when the cable is not in use.

The junction box shall be fastened to the top of the concrete pedestal using four 1/2-inch diameter anchor bolts of 16 inches in length, or which shall be drilled and grouted in place to a depth of no less than 9 inches and secured with an epoxy grout.

626.94 Concrete Pedestal Foundation

The concrete pedestal foundations shall be constructed of concrete with a compressive strength of 4,000 psi (min.) at 28 days and shall be reinforced with epoxy-coated steel as shown on the Contract plans. Conduit shall extend into the pedestal foundations as shown on the drawings.

626.04 Method of Measurement

Stainless Steel Junction Box will be measured by the single unit.

Concrete Pedestal Foundation for the 8-gang pedestal-mounted reefer outlet assemblies will be measured by the single unit.

Precast concrete junction boxes for the 12-gang portable reefer outlet assemblies will be measured by the single unit.

Electrical Conduit, Wiring, and Trenching will be measured by the lump sum.

Power distribution Panelboard and Circuit Breakers will be measured by the lump sum.

626.05 Basis of Payment

The accepted quantity of Stainless Steel Junction Box will be paid for at the contract unit price for each junction box. Payment shall be full compensation for all materials, labor, equipment, and incidentals for the fabrication and installation of the junction boxes atop Pedestals #7 and #8.

The accepted quantity of Pre-Cast Junction Box - Heavy Duty will be paid for at the contract unit price for each junction box. Payment shall be full compensation for all materials, labor, equipment, and incidentals for the fabrication and installation of the junction box, including concrete, steel reinforcing, cast gray iron lid, sawcutting pavement, excavation, compaction, materials, temporary shoring (if necessary), electrical conduit, and engineered design with shop drawings.

The accepted quantity of Concrete Pedestal Foundation will be paid for at the contract unit price for each foundation. Payment shall be full compensation for all materials, labor, equipment, and incidentals for the complete installed foundation, including concrete, steel reinforcing, anchor bolts, sawcutting pavement, excavation, compaction, materials, temporary shoring (if necessary), electrical conduit and copper clad ground rod, and electrical connection to the owner-furnished refer assembly (Pedestals 1 thru 6).

The accepted quantity of Electrical Conduit, Wiring, and Trenching will be paid for at the contract lump sum price. Payment shall be full compensation for all materials, labor, equipment, and incidentals for the complete installation of all underground conduits actually furnished, installed and accepted. This price shall include the cost of furnishing and installing the conduit, wiring conductors, fittings, receptacles, trenching, labor, temporary shoring (if needed), sawcutting pavement, equipment, and incidentals necessary to complete the work.

The accepted quantity Power Distribution Panelboard and Circuit Breakers will be paid for at the contract lump sum price. Payment shall be full compensation for the complete installed panel, including panelboard with circuit breakers; service CT box and service meter; service grounding; labor; equipment and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
626.1011 Stainless Steel Junction Box	Each
626.113 Pre-Cast Junction Box – Heavy Duty	Each
626.322 Concrete Pedestal Foundation	Each
626.45 Electrical Conduit, Wiring and Trenching	Lump Sum
626.91 Power Distribution Panelboard and Circuit Breakers	Lump Sum

SPECIAL PROVISION

SECTION 700

MATERIAL DETAILS

The following are revisions and additions to the Material Details Division of the Standard Specifications, Highways and Bridges, Revision of December 2002. Provisions contained herein shall be considered to supplement or supersede those portions of the Standard Specifications as they apply to the Contract.

The GENERAL STATEMENT of this Division is hereby revised to read as follows; All materials which are to be used in the work for which there is no prescribed testing by the project inspectors or other certified laboratories, the Contractor shall, prior to final acceptance as specified in subsection 105.17(b), submit a Materials Certification Letter similar to:

Company Letterhead

Mr. _____ Resident Date _____
Address _____ Project No. _____
_____ Town _____

"This is to certify that the below listed materials, which are incorporated into the above designated project, comply with the pertinent specified material requirements of the contract. Processing, project testing and inspection control of raw materials are in conformity with the applicable drawings and/or standards of all articles furnished.

Electrical Conduit
Electrical Wiring
Service Grounding
Pre-Cast Concrete Junction Boxes
Concrete Pedestal Foundations
Power and Distribution Panelboards and Circuit Breakers

All records and documents pertinent to this letter and not submitted herewith shall be maintained available by the undersigned for a period of not less than three (3) years from the date of completion of the project.

The Materials Certification letter shall be signed by a person having legal authority to bind the Contractor.

Materials for which the above Certificate is acceptable may be subject to random sampling and testing by the City. Certified materials which fail to meet specification requirements may not be accepted.

SPECIAL PROVISION

SECTION 815

BUILDINGS

(Utility Building - Structure)
(Utility Building – Concrete Foundation)
(Utility Building – Concrete Entrance Slab)
(Utility Building – Concrete Interior Floor)

815.01 Description

The following paragraphs are added:

This work shall consist of installation of a utility building for the housing of the electrical panelboards, circuit breakers, and metering devices. The utility building shall be a weather-tight, pre-fabricated, three-wall structure with rooftop, and shall connect to the existing utility building on one side. The utility building will contain a steel-reinforced concrete foundation with footings below frost level; a steel-reinforced concrete entrance slab; and a steel-reinforced concrete interior slab.

815.02 Design

The following paragraphs are added:

The design of the Contractor's utility building pre-fabricated structure shall be in accordance with the International Building Code, 2012, and the City of Portland's Building Code. The design plans and calculations shall be performed by a professional engineer licensed in the State of Maine, and shall be submitted to the Engineer of Record for review and approval. The Contractor's engineer will be responsible for completing the City of Portland's General Building Permit Application paperwork associated with the utility building.

Materials for the utility building pre-fabricated structure shall closely match those of the existing utility building in terms of style of metal corrugated sheets and roof type. Wall and roof connections between the proposed and the existing structure shall be weather-tight.

All concrete shall have a compressive strength of 4,000 psi (min.) at 28-days, and all steel reinforcing shall be ASTM A615, Grade 60, epoxy coated.

815.03 Method of Measurement

The following paragraphs are added:

Utility Building – Structure shall be measured by the lump sum complete and installed. All materials, labor, designs, and equipment associated with the structure will not be measured individually for payment.

Utility Building – Concrete Foundation shall be measured by the lump sum complete and installed. All materials, labor, and equipment associated with the foundation will not be measured individually for payment.

Utility Building – Concrete Entrance Slab shall be measured by the lump sum complete and installed. All materials, labor, and equipment associated with the foundation will not be measured individually for payment.

Utility Building – Concrete Floor Slab shall be measured by the lump sum complete and installed. All materials, labor, and equipment associated with the foundation will not be measured individually for payment.

815.98 Basis of Payment

The following paragraphs are added:

Utility Building – Structure shall be paid for at the contract lump sum price which shall include all materials, labor, designs, and equipment associated with the successful installation of the structure. The lump sum price shall also include design and submission of shop drawings and calculations; procurement, delivery, and erection; and final permit paperwork and acceptance by the City of Portland.

Utility Building – Concrete Foundation shall be paid for at the contract lump sum price which shall include all materials, labor, and equipment associated with the successful installation of the concrete foundation. The lump sum price shall also include the removal and on-site storage of the large rocks alongside the existing utility building near the existing electrical transformer, as the large rocks may interfere with excavation activities. The lump sum price shall also include all excavation, backfilling, materials, and compaction. The lump sum price shall also include all materials including a top layer of Type A crushed aggregate within the interior floor area as shown on the contract drawings, and all concrete and epoxy-coated steel reinforcement.

Utility Building – Concrete Entrance Slab shall be paid for at the contract lump sum price which shall include all materials, labor, and equipment associated with the successful installation of the concrete entrance slab. The lump sum price shall include all concrete and epoxy-coated steel reinforcement.

Utility Building – Concrete Floor Slab shall be paid for at the contract lump sum price which shall include all materials, labor, and equipment associated with the successful installation of the concrete floor slab. The lump sum price shall include all concrete and epoxy-coated steel reinforcement.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
815.271	Utility Building – Structure	Lump Sum
815.272	Utility Building – Concrete Foundation	Lump Sum
815.273	Utility Building – Concrete Entrance Slab	Lump Sum
815.274	Utility Building – Concrete Floor Slab	Lump Sum