3. UTILITIES

3.1 OVERVIEW

The site is currently served by a number of existing utilities including water, sewer, power, and communications. The project includes improvements to these systems. The Development Team continues to work closely with utility representatives and City officials to design adequate utility systems to serve the project. Capacity availability letters have been requested from each utility and responses are included with this submission. The following sections outline conditions and system improvements that are contemplated for each utility.

3.2 WATER SUPPLY

The proposed project will receive its water supply from the Portland Water District's public water supply system. FST sent a letter to the Portland Water District requesting that the Water District confirm their ability to provide water supply to the proposed development. Their response is included in this section.

The site is currently served by an 8" fire service main from Warren Avenue. We note that there are existing fire hydrants along Warren Avenue, thus providing ample coverage in this regard.

3.2.1 TOTAL PROJECT WATER USAGE

The total average daily water demand for the proposed project was estimated using commonly accepted flow per unit rates. These values are as follows:

6 Units at 180 gpd/unit =	1,080 gpd
37 Proposed Parking Spaces at 1 gpd/space =	36 gpd
TOTAL	**1,116 gpd**

3.3 WASTEWATER DISPOSAL

The proposed project will be connected to the Portland Water District's and City of Portland's wastewater collection and conveyance systems. The City of Portland Wastewater Capacity Application has been completed and forwarded to Mr. Frank Brancely. A copy is attached to this section.

The overall project is anticipated to generate an average daily flow of approximately 1,116 gpd. Based on the existing sewer systems in the area, there appears to be adequate capacity to handle these projected flow amounts.

3.4 NATURAL GAS SUPPLY

FST has contacted Northern Utilities regarding their ability to provide service to the project site. Currently, they maintain a distribution main in Warren Avenue. Our preliminary discussions have included the proposal to extend a gas supply main into the site. The development team continues to coordinate with the gas supplier as expected gas loads are refined.

3.5 ELECTRICITY SUPPLY

FST has contacted Central Maine Power (CMP) regarding their ability to provide service to the development site. CMP currently maintains overhead utilities in the area and they expect to continue service to the site through new underground primary service from Warren Avenue. The current proposal is to extend a new underground service from the pole mounted transformer(s) into the building. The applicant will continue to work with CMP for the delivery of primary power into the project.

3.6 ATTACHMENTS

Attachment E – Correspondence with Portland Water District
Attachment F – City of Portland Wastewater Capacity Application
Attachment G – Correspondence with Central Maine Power

ATTACHMENT E

Correspondence with Portland Water District

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

March 13, 2014

Fay, Spofford & Thorndike
778 Main Street, STE 8
South Portland, ME 04106

Attn: Stephen R. Bushey, P.E.
Re: Multi-Unit Commercial Building; 421 Warren Avenue, Portland
Ability to Serve with PWD Water

Dear Mr. Bushey:

The Portland Water District has received your request for an Ability to Serve determination for the noted site submitted on February 28, 2014. Based on the information provided, we can confirm that the District will be able to serve the proposed project as further described in this letter.

Please note that this letter does not constitute approval of this project from the District. Please review this letter for any special conditions specified by the District and to determine the appropriate next steps to take to move your project through the submittal and approval process.

Existing Site Service

According to District records, the project site does currently have existing water service. An 8-inch diameter ductile iron water service line, located as shown on the attached water service card, provides water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is a 20-inch diameter cast iron water main on the south side of Warren Avenue and a public fire hydrant located 220-feet from the site.

The current data from the nearest hydrant with flow test information is as follows:

Hydrant Location:	Warren Avenue 1430' east of Grove Street	
Hydrant Number:	POD-HYD01320	
Last Tested:	2/13/2013	5/13/2004
Static Pressure:	85 psi	79 psi
Residual Pressure:	Not Measured	Not Measured
Flow:	Not Measured	1,352 GPM

Public Fire Protection

You have indicated that this project will not include the installation of new public hydrants to be accepted into the District water system. The decision to require new hydrants and to determine

225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104-3553
PHONE: 207.774.5961 FAX: 207.761.8307 WEB: WWW.PWD.ORG

their locations is solely that of the local fire department. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The ability to serve request indicated that the total water usage required for the proposed seven unit commercial complex is 1,301 gallons per day. The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of the project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact the MEANS Division to request a hydrant flow test and we will work with you to get more complete data.

Conditions of Service

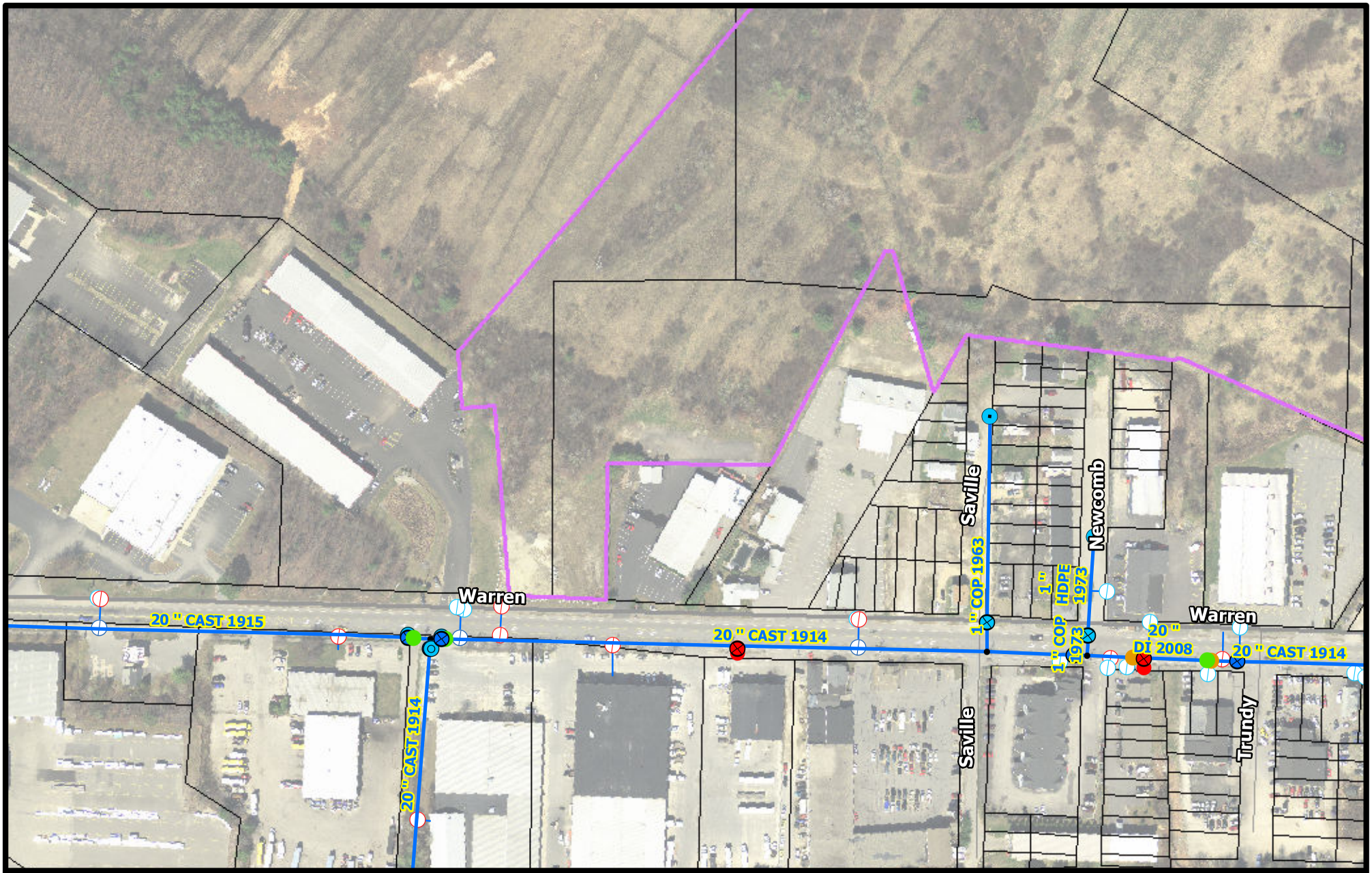
The District can confirm that the existing water system has the capacity to serve the proposed 7-unit commercial complex. We have reviewed the Site Layout and Utility Plan dated February 12, 2014 and have the following comment: Our records indicate that there is an existing 8-inch gate valve on the fire service at the street line. This valve should remain, and the domestic tap should be made prior to this gate valve so that the District will have a control valve on each service, which will allow them to be operated them independently.

Once a contractor has been selected and the project is ready to go to construction, please contact MEANS to arrange for an appointment to fill out a service application. If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Glissen Havu

Glissen Havu, E.I.
Design Engineer



421 Warren Avenue

Portland

PORTLAND WATER DISTRICT
225 Douglass Street
Portland, ME 04104

Scale 0 50 100 200 300 400 Feet — 1 inch = 200 feet

Legend

- Air Valve
- Blow Off
- By Pass
- Distribution
- Transmission
- Connection
- Attribute Change
- Reducer
- Hydrant
- Hydrant Control
- Combined Service
- Domestic Service
- Fire Service
- Private Hydrants
- Meter Pits
- Manhole
- CSO
- Gravity
- Force

N

Disclaimer: This map is suitable for preliminary study and analysis and is based on PWD record information. PWD is not liable for any damages whatsoever resulting from inaccurate data or from errors made in the location and marking of its infrastructure.

Drawn By: GJH	Prepared For: Fay, Spofford & Thorndike
Scale: As Noted	Date: March 13, 2014

ENGINEERS
FST
Since 1914

FAY, SPOFFORD & THORNDIKE
778 Main Street, Suite 8
South Portland, ME 04106
Toll Free: 800.835.8666
Main: 207.775.1121
Fax: 207.879.0896
www.fstinc.com

February 28, 2014

Mr. Rico Spugnardi, Means Coordinator
Portland Water District
225 Douglass Street
PO Box 3553
Portland, Maine 04104-3553

Subject: **Multi-Unit Commercial Building**
Warren Avenue, Portland, Maine
Request for Ability to Serve Letter

Dear Mr. Spugnardi:

Our office is working as a consultant to Peter Holmes on a proposed multi-use commercial building on Warren Ave in Portland. We would like to verify the Portland Water District's ability to provide domestic and fire supply water for the project and determine any impact fees. The project site is located on Map 301/Lot J010; Map 302/Lot A001; Map 303/Lot A010; and Map 304/Lot B028 according to the City of Portland Tax Assessor's Maps.

The project will consist of the development of a seven unit commercial complex with five (5) unit at 3,500 SF and two units at 5,250 SF for a total building size of 28,000 SF. The building will include domestic and fire supply services.

The projected water use using the typical City of Portland flows information is as follows:

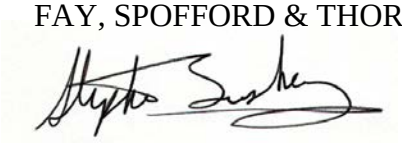
Use	Design Flow
7 units at 180 gpd/unit =	1,260 GPD
41 parking spaces at 1 gpd/space =	41 GPD
Total Water Usage Required:	**1,301 GPD**

Based on this modest amount of flow, we trust that the existing water supply system has adequate capacity to serve this project. We are in the process of completing the Site Plan Application for a submission to the City Planning Staff. We would appreciate your consideration of this request for an Ability to provide service determination. A copy of the proposed Site layout and utility plan accompanies this request letter.

If you have any questions regarding this letter, please contact our office.

Sincerely,

FAY, SPOFFORD & THORNDIKE



Stephen R. Bushey, P.E.
Senior Engineer

SRB/smk

Attachment

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ATTACHMENT F

City of Portland Wastewater Capacity Application

April 16, 2014

Mr. Frank Brancely
City of Portland
Department of Public Services
55 Portland Street
Portland, Maine 04101-2991

Subject: 421 Warren Avenue Multi Unit Commercial Building
Wastewater Capacity Application

Dear Mr. Brancely:

Our office is working as a consultant to PH Warren Avenue, LLC on the 6 Unit Commercial Building project at 421 Warren Avenue in Portland. The project site is located on Map 304/Block B/Lot 28 and Map 303/Block A/Lot 10 according to the City of Portland Tax Assessor's Maps. On behalf of the developer, we are requesting a letter affirming that the proposed project can be served by the municipal wastewater treatment system.

The project will consist of the new construction of a single level, seven-unit commercial/industrial complex. Tenant spaces will vary in size from 3,500 SF to 5,555 SF.

The projected water use using the typical City of Portland flows information is as follows:

Use	Design Flow
6 units at 180 gpd/unit =	1,080 GPD
36 parking spaces at 1 gpd/space =	36 GPD
Total Water Usage Required:	**1,116 GPD**

The property is currently undeveloped so there is no historic wastewater generation for the site.

Based on this modest amount of flow, we trust that the existing wastewater collection and treatment system has adequate capacity to serve this project. We are in the process of completing the Site Plan Application for a submission to the City Planning Staff and would appreciate your response to the Planning Department.

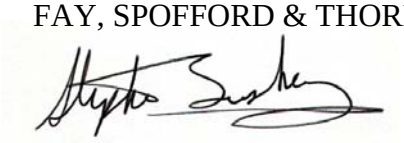
778 Main Street, Suite 8
South Portland, ME 04106
T: 800.835.8666
F: 207.879.0896
www.fstinc.com

FAY, SPOFFORD & THORNDIKE
Offices in: Massachusetts, New Hampshire, Maine, Connecticut and New York

If you have any questions concerning this request, please contact me.

Sincerely,

FAY, SPOFFORD & THORNDIKE



Stephen R. Bushey, P.E.
Senior Engineer

SRB/cmd

c: Peter Holmes
Jim Biskup

Attachment

R:\SP-M104 Portland, ME Harbor Auto Body - Peter Holmes\Admin\Correspondence Out\Utilities\SP-M104 2014.04.16 Brancely-WW Capacity.doc

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Department of Public Services,
55 Portland Street,
Portland, Maine 04101-2991

Date: 02/072014

Mr. Frank J. Brancely,
Senior Engineering Technician,
Phone #: (207) 874-8832,
Fax #: (207) 874-8852,
E-mail:fjb@portlandmaine.gov

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 421 Warren Avenue

Map 303/Lot A010
Map 304/Lot B028

Chart Block Lot Number:

Proposed Use: 6-Unit Commercial Complex
Previous Use: Undeveloped
Existing Sanitary Flows: 0 GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Site Category		
	Commercial *(see part 4 below)*	X
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	
	Other *(specify)*	

(Clearly, indicate the proposed connections, on the submitted plans)

2. Please, Submit Contact Information.

City Planner's Name: Barbara Barhydt Phone: 207-874-8699
Owner/Developer Name: PH Warren Avenue, LLC Attn: Peter F. Holmes
Owner/Developer Address: 401 Warren Avenue - Portland, ME 04101
Phone: 207-347-3398 Fax: E-mail: dick\harbour@maine.rr.com
Engineering Consultant Name: Fay, Spofford & Thorndike, Attn: Stephen Bushey, P.E.
Engineering Consultant Address: 778 Main Street, Suite 8, South Portland, ME 04106
Phone: 207-775-1121 Fax: 207-879-0896 E-mail: sbushey@fstinc.com

(Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review)

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 1,116 GPD
Peaking Factor/ Peak Times: X6
Specify the source of design guidelines: *(i.e.* x *"Handbook of Subsurface Wastewater Disposal in Maine,"* __ *"Plumbers and Pipe Fitters Calculation Manual,"* __ *Portland Water District Records,* _ *Other (specify)*

(Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet)

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: Not Applicable

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

(Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet)

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: Not Applicable GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *http://www.osha.gov/oshstats/sicser.html*

Peaking Factor/Peak Process Times: _____

(Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps)

(Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided below, or attached, as a separate sheet)

Notes, Comments or Calculation

6 Units at 180 gpd/unit =	1,080 gpd
36 Parking Spaces at 1 gpd/space =	36 gpd
TOTAL	1,116 gpd

DIMENSIONAL STANDARD	REQUIRED DIMENSION - B4	PROVIDED
MINIMUM LOT SIZE	10,000 SF	418,393 S.F.
MINIMUM STREET FRONTAGE	60 FEET	140.51 FEET
MINIMUM FRONT YARD	20 FEET OR THE AVERAGE DEPTH OF THE FRONT YARDS ON EITHER SIDE. AVERAGE DEPTH = 1 FOOT	54.85 FEET
MINIMUM REAR YARD	20 FEET	>20 FEET
MINIMUM SIDE YARD	1 OR 2 STORIES = 10 FEET 3 OR MORE STORIES = 12 FEET	20 FEET
MAXIMUM LOT COVERAGE	40% FOR LOTS CONTAINING 20 OR MORE UNITS; 50% FOR LOTS CONTAINING FEWER THAN 20 UNITS.	<40%
MINIMUM LOT WIDTH	60 FEET	>150 FEET
MAXIMUM STRUCTURE HEIGHT	65 FEET EXCEPT ON LOTS IN EXCESS OF 5 ACRES, 90 FEET IS PERMITTED IF EACH OF THE SETBACKS REQUIRED IS INCREASED BY 1 FOOT IN DISTANCE FOR EACH FOOT OF HEIGHT ABOVE 65 FEET	
IMPERVIOUS SURFACE RATIO	80%	<30%

PLAN NOTES

1. THE SUBJECT PARCEL IS NOT LOCATED WITHIN FLOOD HAZARD ZONE AS INDICATED ON FIRM PANEL 2300510006C.
2. OWNER OF RECORD:
   PH WARREN AVENUE, LLC
   C/O 401 WARREN AVENUE
   PORTLAND, MAINE 04103
   CCRD BOOK 30781, PAGE 74
3. SEE FULL PLAN SET TITLED "SITE DEVELOPMENT PLANS FOR MULTI-UNIT COMMERCIAL BUILDING" BY FAY, SPOFFORD & THORNDIKE, INC. DATED APRIL, 2014.
4. SEE COVER SHEET FOR TAX MAP AND LOT REFERENCES. THIS SITE IS LOCATED IN THE B4 ZONE PER THE CITY OF PORTLAND ZONING MAP.
5. SOLID WASTE REMOVAL SHALL BE BY PRIVATE WASTE HAULER UNDER DIRECT CONTRACT TO THE OWNER.
6. ACCESS AND UTILITY RIGHTS SUBJECT TO SHARED ACCESS AND UTILITY AGREEMENT BETWEEN 424 WARREN AVENUE LLC AND P H WARREN AVE, LLC (PROPERTIES ARE CURRENTLY UNDER COMMON OWNERSHIP).
7. TOTAL WETLAND IMPACT = 14,323 SF

PLAN REFERENCES

1. BOUNDARY SURVEY, WARREN AVENUE, PREPARED FOR REALTY RESOURCES CHARTERED, ALFRED J. WAXLER, BY SURVEY, INC. (JOB NO. 04-131) DATED DECEMBER 2004. THE VERSION OF THE PLAN REFERENCED BY FST, INC. WAS UNSIGNED.
2. PLAN DEPICTING THE RESULTS OF A PARTIAL BOUNDARY SURVEY, EXISTING CONDITIONS AND PROPOSED LOT DIVISION MADE FOR P H WARREN AVE, LLC BY NADEAU LAND SURVEYS DATE 01.07.2014 (JOB #2131442BT).

WAIVERS REQUESTED

1. WAIVER FROM SECTION 14-526(4)(b)(i)(b) BICYCLE PARKING SPACES.

SIGN LEGEND

STOP — R1-1, 24"x24", A

RESERVED PARKING — R7-8, 12"x18", B

PRELIMINARY - NOT FOR CONSTRUCTION

(IN FEET)
1 inch = 30 ft.

REV	DATE	DESCRIPTION
2	04.17.14	FINAL PLAN SUBMISSION TO CITY
1	02.10.14	SUBMITTED TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE — STEPHEN R. BUSHEY — 7429 — LICENSED PROFESSIONAL ENGINEER

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT: PH WARREN AVENUE, LLC
COMMERCIAL SITE
421 WARREN AVENUE

SHEET TITLE: SITE LAYOUT AND UTILITY PLAN

CLIENT: PH WARREN AVENUE, LLC
C/O PETER HOLMES
12 WILDWOOD LANE
SCARBOROUGH, ME 04074

ENGINEERS FST Since 1914
FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	CMW	DATE:	NOVEMBER 2013
DESIGNED:	SRB	SCALE:	1" =30'
CHECKED:	SRB	JOB NO.	SP-M104
FILE NAME:	SP-M104-SITE		
SHEET	C-3.0		

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ATTACHMENT G

Correspondence with CMP

3/10/2014

Stephen Bushey PE *Senior Principal Engineer*
FAY, SPOFFORD & THORNDIKE
778 Main Street| South Portland, Maine 04106
Tel: (207) 775-1121 Fax: (207)879-0896
sbushey@fstinc.com

RE: Ability to Serve Letter for 421 Warren Avenue project in Portland

Dear Mr. Bushey:

CMP has the ability to serve the proposed project located at 421 Warren Avenue in Portland, Maine, in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Standards Handbook. If you have any questions on the process, or need help in completion of the documents, please feel free to contact me.

New Service Milestones

- Call 1-800-565-3181 to establish a new account and an SAP work order.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.
- Submit Load information. Please complete this CMP spreadsheet using load information
- Submit the easement information worksheet. Please complete this CMP form and either email or fax back to us.
- Preliminary meetings with CMP to determine the details of job
- Field planner design appointment to cost out job and develop CMP Invoice.
- Submit invoice for payment.
- Easements signed and payment received.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer delivery, potential substation upgrades, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

162 Canco Road Portland, ME 04103
Tel (800) 750-4000
207-842-2367 office
207-458-0382 cell
207-626-4082 fax

www.cmpco.com

ENGINEERS
FST
Since 1914

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778 Main Street, Suite 8
South Portland, ME 04106
Toll Free: 800.835.8666
Main: 207.775.1121
Fax: 207.879.0896
www.fstinc.com

February 28, 2014

Mr. Jamie Cough
Central Maine Power
162 Canco Road
Portland, ME 04103

Subject: 4 Multi-Unit Commercial Building
Warren Avenue, Portland, Maine
Request for Ability to Serve Letter

Dear Mr. Cough:

Our office is working as a consultant to Peter Holmes on a proposed multi-use commercial building on Warren Ave in Portland. We would like to verify CMP's ability to provide power for the project and determine any impact fees. The project site is located on Map 301/Lot J010; Map 302/Lot A001; Map 303/Lot A010; and Map 304/Lot B028 according to the City of Portland Tax Assessor's Maps.

The project will consist of the development of a seven unit commercial complex with five (5) unit at 3,500 SF and two units at 5,250 SF for a total building size of 28,000 SF. The building will include an underground service extension into the building. Three Phase power is desired. On behalf of the developer, we are requesting a letter affirming that the proposed project can be served by the CMP supply system.

We trust that the existing power supply system has adequate capacity to serve this project. We are in the process of completing the Final Site Plan Application for a submission to the City Planning Staff and we would appreciate your confirmation of site conditions.

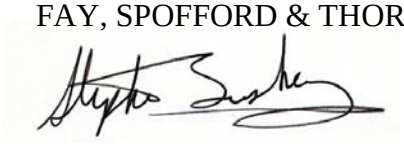
We look forward to your review of this request and a summary of your findings and any updated cost projections for the project you may be able to provide. Please include in your assessment for any costs that could be associated with the following:

- Upgrades to nearby CMP infrastructure
- All onsite overhead and underground improvements
- Impact fees or connection fees
- CMP engineering costs

If you have any questions regarding this letter, please contact our office.

Sincerely,

FAY, SPOFFORD & THORNDIKE



Stephen R. Bushey, P.E.
Senior Engineer

SRB/smk

Attachment

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