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STORMWATER MANAGEMENT PLAN

**30 Fox Street
Portland, Maine**

The following Stormwater Management Plan has been prepared for Dyer Neck Development, LLC to evaluate stormwater runoff and erosion control for the proposed 3-unit residential building to be located at 30 Fox Street, Portland, Maine.

Site Calculations

Total Property Area	2,394 S.F.
Existing Impervious Area	323 S.F.
New Impervious Area	1,577 S.F.
Total Landscaped Area	817 S.F.
Total Developed Area	2,394 S.F.
Total New Impervious Area	1,254 S.F.

Existing Conditions

The development parcel is located on the southern side of Fox Street, near the intersection of Winthrop Street in Portland, Maine. The property is 2,394 square feet in area and currently includes a paved driveway and lawn area. There is a concrete sidewalk along the frontage of the lot and a street tree.

The lot gently slopes from south to north (back to front). Runoff is currently conveyed to Fox Street via overland flow. A catch basin collection system within the street collects stormwater runoff in a limited number of catchbasins.

Proposed Development

The applicant is proposing to construct an approximately 46'x82', four story building with 12' wide, paved driveway and parking on the first floor of the building. The roof of the building will be pitched to the north and stormwater runoff will be collected and treated within a roof dripline filter system.

Drainage Pattern

Runoff leaves the development area via overland flow to Fox Street. Runoff will continue to flow off the site via overland flow in the developed state. The entire roof area will drain to a roof dripline filter strip that will allow treatment of the first flush. First flush runoff will be collected within the filter layers of the dripline feature prior to being released into native soils and overflowing to the existing sidewalk at the front of the property. Once the sub-soil collection system is full, runoff will flow overland to Fox Street as it does today.

Flooding

The development area is not located within an area of flood hazard according to the Federal Insurance Rate Map 2300510013 B. See attached map.

Onsite & Offsite Soils

The on-site soils are shown on the attached Medium Intensity Soil Survey and are categorized as follows:

Soil Type Summary Table		
Soil Symbol	Soil Name	HSG
HID	Hinckley Loamy Sand	A

Water Quality (BMP Standard)

The use of LID features, such as the roof dripline filter strip offers water quality treatment for runoff from the highest areas for potential contaminants. The use of the roof dripline filter strip meets the water quality requirements of MDEP's Chapter 500 regulations.

Roof Dripline Filter Sizing

We propose to provide treatment for the entire building area by constructing a Roof Dripline Filter Strip along the northerly side of the proposed building.

This Filter Strip will receive the runoff from approximately 1,397 s.f. of rooftop area. The reservoir course of the Filter Strip is required to provide storage volume for 1" of runoff from the contributing area. The bed sizing is as follows:

Area of Watershed: 1,397 SF

Treatment Volume Required: Area x runoff depth: 1,397 SF x 1/12 FT = **116.42 CF**

Treatment Volume Provided:

Porosity = 40%, Bed Area = 98 s.f., Bed Depth = 1.20', Total Volume Treated = **117.60 CF**

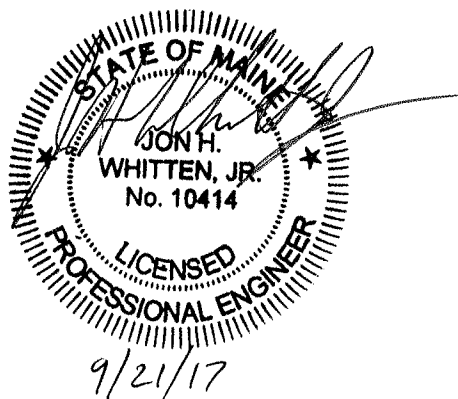
Summary

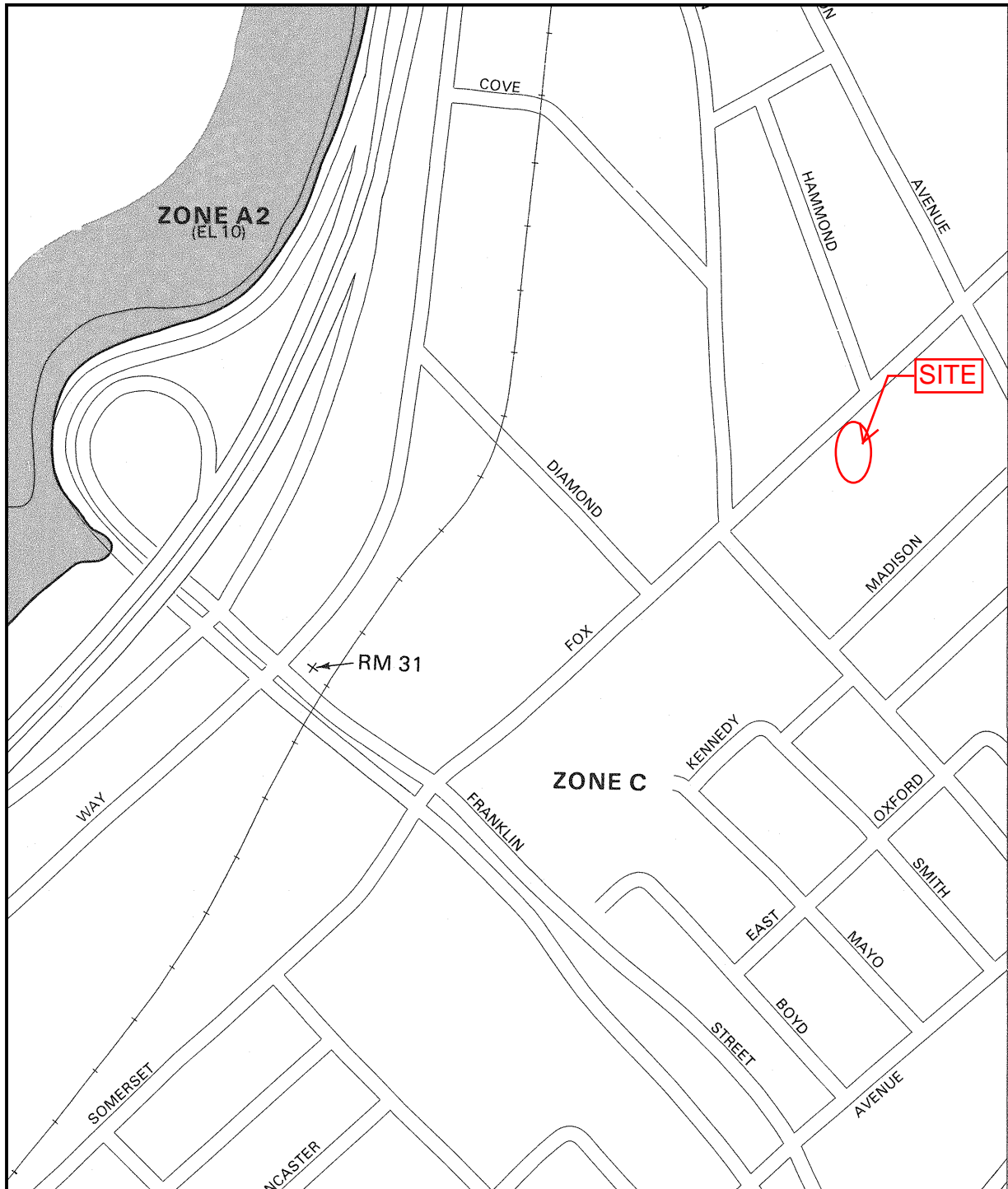
The utilization of proper erosion control methods during construction and construction and maintenance of the roof dripstrip filter strip, to collect and treat runoff from the proposed new impervious area on the site, it is expected that this project meets the Basic, General and Flooding Standards of Chapter 500. Furthermore, the proposed stormwater design is not expected to cause flooding, erosion or other significant adverse effects downstream of the site.

Prepared by:
PLYMOUTH ENGINEERING, INC.



Jon H. Whitten, Jr., P.E.
Senior Project Manager





APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

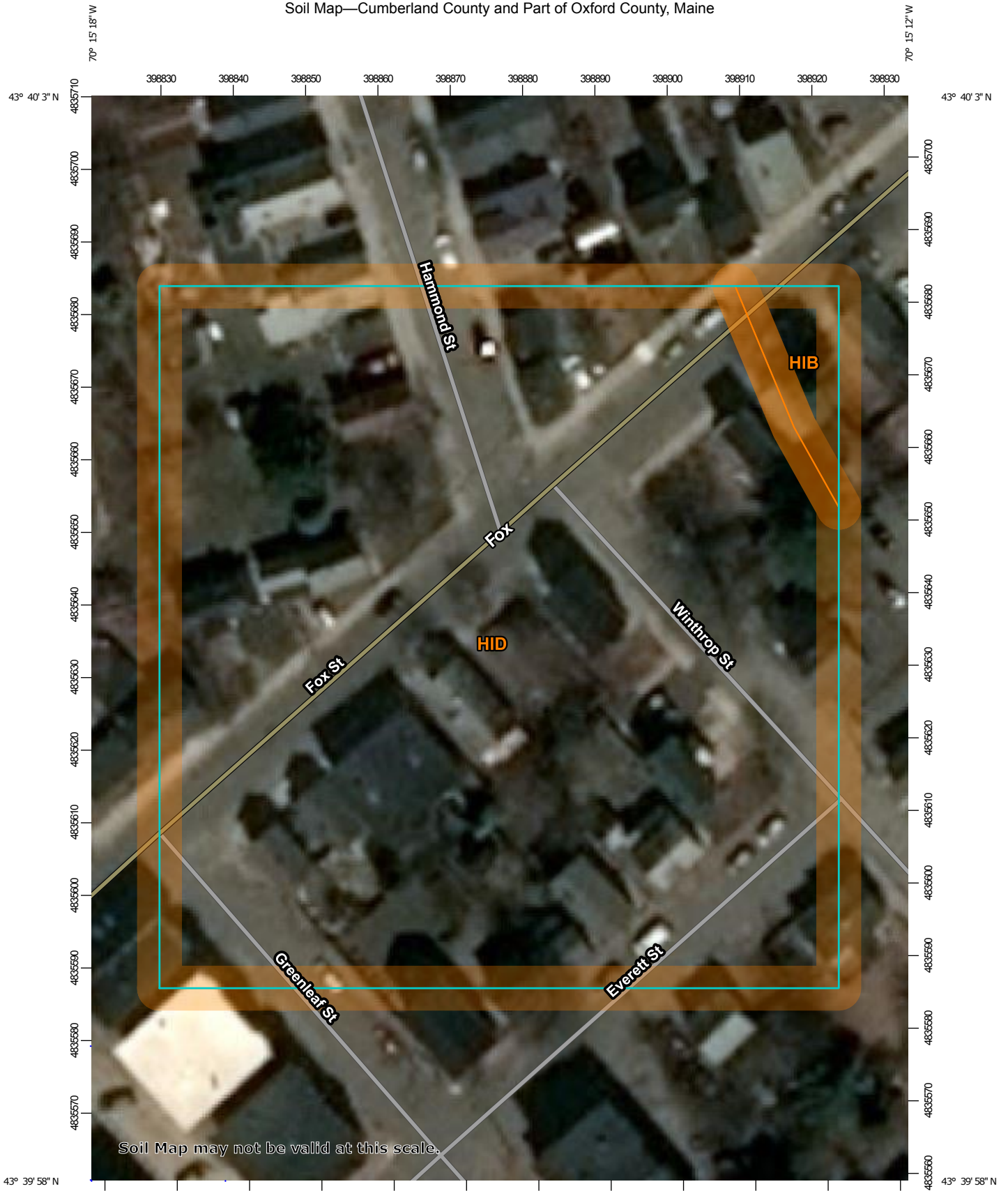
EFFECTIVE DATE:
JULY 17, 1986



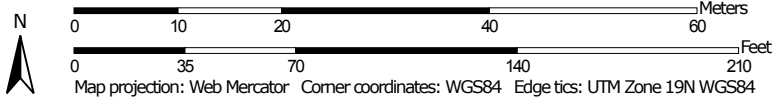
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Soil Map—Cumberland County and Part of Oxford County, Maine




Map Scale: 1:728 if printed on A portrait (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine

Survey Area Data: Version 12, Sep 15, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cumberland County and Part of Oxford County, Maine (ME005)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HIB	Hinckley loamy sand, 3 to 8 percent slopes	0.1	2.6%
HID	Hinckley loamy sand, 15 to 25 percent slopes	2.2	97.4%
Totals for Area of Interest		2.3	100.0%