

35-I-1

2014-096

356 State St.

Deering Oaks Pond Bottom
Replacement

City of Portland

add to Spreadsheet

City of Portland
 Development Review Application
 Planning Division Transmittal Form

Application Number: 2014-096 **Application Date:** 05/29/2014
CBL: 035 I001001 **Application Type:** Level I Site Alteration
Applicant: City of Portland, Department of Public Services /Michael Farmer
Project Name: Deering Oaks Pond Bottom Replacement
Address: 356 STATE ST
Project Description: Install a new pond bottom system in Deering Oaks Pond to allow for easier and more complete annual maintenance of the pond, helping to improve water quality in the pond.
Zoning: ROS

Other Required Reviews:

<input type="checkbox"/> Traffic Movement	<input type="checkbox"/> 14-403 Streets	<input type="checkbox"/> Housing Replacement
<input type="checkbox"/> Storm Water	# Units _____	<input type="checkbox"/> Historic Preservation
<input type="checkbox"/> Subdivision	<input type="checkbox"/> Flood Plain	<input type="checkbox"/> Other:
# Lots _____	<input type="checkbox"/> Shoreland	
<input type="checkbox"/> Site Location	<input type="checkbox"/> Design Review	
# Unit _____		

Distribution List:

Planner	Shukria Wiar	Parking	John Peverada
Zoning	Marge Schmuckal	Design Review	Alex Jaegerman
Traffic Engineer	Tom Errico	Corporation Counsel	Nennifer Thompson
Civil Engineer	David Senus	Sanitary Sewer	John Emerson
Fire Department	Chris Pirone	Inspections	Tammy Munson
City Arborist	Jeff Tarling	Historic Preservation	Deb Andrews
Engineering	David Margolis-Pineo	DRC Coordinator	Phil DiPierro
		Outside Agency	

Comments needed by 6/10/2014

**COMMITMENT & INTEGRITY
DRIVE RESULTS**

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635



May 27, 2014

Barbara Barhydt, Development Review Services Manager
City of Portland
389 Congress Street
Portland, Maine 04101

Re: Deering Oaks Pond Bottom & Water Quality Improvements, Level I Site Alteration

Dear Barbara:

Thank you for coordinating the review of the Deering Oaks Pond Bottom & Water Quality Improvements Project. Enclosed, please find one paper copy of the Level I Site Alteration application, one full size set of the plans, one set of plans in 11x17 format, and one CD containing all of the Application materials.

We presented to the project to the City's Historic Preservation Board on May 21, 2014 and received unanimous support from the Board at the Public Hearing for the project's Certificate of Appropriateness Application.

We look forward to discussing this project further. If you have any questions or require additional information, please contact me at any time at (207)774-2112 or by email lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Lauren Swett, P.E.
Project Engineer

222804.46

Enclosures: Level I Site Alteration Application with Attachments
Full Sized Plan Set
11x17 Plan Set
CD of Application Materials

cc: Michael Farmer, City of Portland Public Services
Troy Moon, City of Portland Public Services

Lauren Swett

From: Barbara Barhydt <BAB@portlandmaine.gov>
Sent: Tuesday, May 27, 2014 8:31 AM
To: Lauren Swett
Cc: Jennifer Yeaton; Jonathan Rioux; Lannie Dobson
Subject: Re: Deering Oaks Pond

Hi Lauren:

Yes, this is a city project, so the fees are waived.

Thank you.

Barbara

Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress Street 4th Floor
Portland, ME 04101
(207) 874-8699
Fax: (207) 756-8256
bab@portlandmaine.gov

>>> Lauren Swett <lswett@woodardcurran.com> Tuesday, May 27, 2014 8:21 AM >>>

Hi Barbara,

I will be dropping off the Deering Oaks Pond Level I Site Alteration application later today. Can you confirm that the fee will be waived as this is a City project? With recent applications, the inspections office has been requesting confirmation of fee waivers, and a copy of an email should work.

Thanks!

Lauren

Lauren Swett, P.E.

Project Engineer
Woodard & Curran
41 Hutchins Drive
Portland, Maine 04102
Phone: (800)426-4262 ext. 3303
Fax: (207)774-6635
Email: lswett@woodardcurran.com

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M.ASCE
President, Maine Section



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1. APPLICATION FORM



Level I – Site Alteration Development Review Application Portland, Maine

Planning and Urban Development Department
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level I: Site Alteration site plan.

Level I: Site Alteration Development includes:

- Alteration of a watercourse or wetland as defined in Section 14-47 of the City Code.
- Alteration of a site. The disturbance of land areas of less than one (1) acre that are stripped, graded, grubbed, filled or excavated. The Planning Authority shall exempt from review the loam and seeding of lawns and the cumulative placement of less than fifteen (15) cubic yards of fill on any lot provided such loaming or placement does not alter a drainage course, swale, wetland or redirect water onto adjoining property and does not violate any other provision of the Portland City Code or state or federal law. "Disturbed area" does not include routine maintenance, but does include re-development and new impervious areas.
- The construction of any temporary or permanent parking area, paving of existing unpaved surface parking areas between 1,000 and 7,500 square feet, or creation of other impervious surface areas between 1,000 and 7,500 square feet.
- The rehabilitation or reconstruction, but not new construction, of piers, docks, wharves, bridges, retaining walls, and other structures located within the shoreland zone.
- A site alteration in which vehicle access is proposed from more than one (1) street;

The Land Use Code (including Article V), the Technical Manual, and the Design Manual are available on the City's web site at <http://www.portlandmaine.gov/planning/default.asp> or copies may be purchased at the Planning Division Office.

Planning Division
Fourth Floor, City Hall
389 Congress Street
(207) 874-8721 or (207) 874-8719

Office Hours
Monday thru Friday
8:00 a.m. – 4:30 p.m.

PROJECT NAME: Deering Oaks Pond Bottom & Water Quality Improvements

PROPOSED DEVELOPMENT ADDRESS:

Deering Oaks Park, bounded by Deering Avenue, Forest Avenue, Park Avenue, and Interstate 295

PROJECT DESCRIPTION:

Install a new pond bottom system in Deering Oaks Pond to allow for easier and more complete annual maintenance of the pond, helping to improve water quality in the pond.

CHART/BLOCK/LOT: 035 I001, 050 A001, & 049 B001

CONTACT INFORMATION:		Applicant's Contact for electronic plans	
		Name: Woodard & Curran, c/o Lauren Swett, PE e-mail: lswett@woodardcurran.com work #: 207-774-2112	
Applicant – must be owner, Lessee or Buyer Name: Michael Farmer, Project Engineer Business Name, if applicable: City of Portland Department of Public Services Address: 55 Portland Street City/State : Portland/ME Zip Code: 04101		Applicant Contact Information Work # 207-874-8845 Home# Cell # Fax# e-mail: mfarmer@portlandmaine.gov	
Owner – (if different from Applicant) Name: Address: City/State : Zip Code:		Owner Contact Information Work # Home# Cell # Fax# e-mail:	
Agent/ Representative Name: Woodard & Curran, c/o Lauren Swett, PE Address: 41 Hutchins Drive City/State : Portland/ME Zip Code: 04102		Agent/Representative Contact information Work # 207-774-2112 Cell # e-mail: lswett@woodardcurran.com	
Billing Information (Same as Applicant) Name: Address: City/State : Zip Code:		Billing Information Work # Cell # Fax# e-mail:	

Engineer Name: Woodard & Curran, c/o Lauren Swett, PE Address: 41 Hutchins Drive City/State : Portland/ME Zip Code: 04102	Engineer Contact Information Work # 207-774-2112 Cell # Fax# e-mail: lswett@woodardcurran.com
Surveyor Name: Address: City/State : Zip Code:	Surveyor Contact Information Work # Cell # Fax# e-mail:

APPLICATION FEES:

Check all reviews that apply. Payment may be made by Check or Cash addressed to the City of Portland.

Level I Site Alteration Site Plan <small>Fee Waived for City Project</small> Application Fee (\$200.00) The City invoices separately for the following: <ul style="list-style-type: none"> • Notices (\$.75 each) • Legal Ad (% of total Ad) • Planning Review (\$40.00 hour) • Legal Review (\$75.00 hour) Third party review is assessed separately.	Fees Paid (office use) —
Performance Guarantee: A performance guarantee is required to cover all public and private site improvements.	Required
Inspection Fee: An inspection fee of 2% of the performance guarantee is due prior to the release of permits	2% of the performance guarantee

Application Check List

Refer to the application checklist for a detailed list of submittal requirements.

All site plans and written application materials must be uploaded to a website for review. At the time of application, instructions for uploading the plans will be provided to the applicant. One paper set of the plans, written materials and application fee must be submitted to the Planning Division Office to start the review process.

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14), which includes the Subdivision Ordinance (Section 14-491) and the Site Plan Ordinance (Section 14-521).

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 Planning Authority and Code Enforcement'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.

This application is for a Site Plan review only, a Performance Guarantee, Inspection Fee, Building Permit Application and associated fees will be required prior to construction.

Signature of Applicant: <i>Lauren Swett</i>	Date: 5/27/14
---	-------------------------

Please refer to Article V, Site Plan of the City of Portland Land Use Code for detailed information concerning the City's site plan review process, thresholds and standards. Should you have any questions regarding the submittal requirements or any other aspect of the site plan review process, please contact the Planning Division.

PROJECT DATA

The following information is required where applicable, in order complete the application

Total Site Area	42.7 acres	sq. ft.
Proposed Total Disturbed Area of the Site	3.5 acres	sq. ft.
IMPERVIOUS SURFACE AREA	N/A	
• Proposed Total Paved Area		sq. ft.
• Existing Total Impervious Area		sq. ft.
• Proposed Total Impervious Area		sq. ft.
• Proposed Impervious Net Change		sq. ft.
PARKING SPACES	N/A	
• Existing Number of Parking Spaces		
• Proposed Number of Parking Spaces		
TOTAL Number of Parking Spaces		

General Submittal Requirements – Level I Site Alteration

Applicant Checklist	Planner Checklist	Number of Paper Copies	Submittal Requirement
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Completed application form.
<input type="checkbox"/> N/A	<input type="checkbox"/>	1	Application fees.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Written description of project.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Evidence of right, title and interest. Tax Maps - request to waive survey requirement
<input type="checkbox"/> N/A	<input type="checkbox"/>	1	Copies of required state and/or federal permits.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Written assessment of proposed project's compliance with applicable zoning requirements.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Written description of existing and proposed easements or other burdens.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Written requests for waivers from individual site plan and/or technical standards.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Evidence of financial and technical capacity.

Site Plans and Boundary Survey Requirements – Level I Site Alteration

Applicant Checklist	Planner Checklist	Number of Copies	Submittal Requirement
<input type="checkbox"/>	<input type="checkbox"/>	1	Boundary Survey meeting the requirements of Section 13 of the City of Portland Technical Manual. Tax Maps - request to waive survey requirement
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Site Plan Including the following:
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Existing structures with distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone)
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Location and dimension of existing and proposed paved areas.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Location and details of proposed infrastructure improvements (e.g. - curb and sidewalk improvements, utility connections, roadway improvements).
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Identification of and proposed protection measures for any significant natural features on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b)1. of the Land Use Code.
<input type="checkbox"/> N/A	<input type="checkbox"/>		▪ Details of proposed pier rehabilitation (Shoreland areas only).
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Existing utilities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Existing and proposed grading and contours.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Proposed stormwater management and erosion controls.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Total area and limits of proposed land disturbance.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Existing vegetation to be preserved and proposed site landscaping.
<input checked="" type="checkbox"/>	<input type="checkbox"/>		▪ Existing and proposed easements or public or private rights of way.

Site Plan Standards for Review of Level I: Site Alteration

Level I: Site alteration plans shall only be subject to the following site plan standards, as applicable, as contained in section 14-526:

- (a) Transportation standards:
 - 1. Impact on surrounding street systems,
 - 2. Access and circulation, and
 - 4. Parking
- (b) Environmental quality standards
 - 1. Preservation of significant natural features,
 - 2. Landscaping and landscape preservation, and
 - 3. Water quality, stormwater management and erosion control.
- (c) Public infrastructure and community safety standards.
 - 1. Consistency with city master plans.
- (d) Site design standards
 - 5. Historic resources,
 - 6. Exterior lighting,
 - 8. Signage and wayfinding, and
 - 9. Zoning related design standards.

Except as provided in article III, or to conditions imposed under section 14-526(e) only, or to those submission requirements set forth in section 14-527 as relate solely thereto.



PORTLAND FIRE DEPARTMENT SITE REVIEW FIRE DEPARTMENT CHECKLIST



A separate drawing[s] shall be provided to the Portland Fire Department for all site plan reviews.

- 1. Name, address, telephone number of applicant.
- 2. Name address, telephone number of architect
- 3. Proposed uses of any structures [NFPA and IBC classification] Not Applicable
- 4. Square footage of all structures [total and per story]
- 5. Elevation of all structures
- 6. Proposed fire protection of all structures
 - **As of September 16, 2010 all new construction of one and two family homes are required to be sprinkled in compliance with NFPA 13D. This is required by City Code. (NFPA 101 2009 ed.)**
- 7. Hydrant locations

2. PROJECT DESCRIPTION

2.1 PROJECT SITE & BACKGROUND

Deering Oaks Park is a 55-acre public park owned by the City of Portland. Originally acquired by the City in the late 1800s, the park is recognized on the National Register of Historic Places. In 1994, a Master Plan was developed by The Halvorson Company, Inc. at the request of a committee of citizens, City staff, and the City's Mayor. The Friends of Deering Oaks Park group was incorporated in 1997. Today, the park has trails, sports fields, a playground, and space for a farmers market, all located throughout the wooded site. The park is located on the Portland Peninsula, and is bounded to the north by Interstate 295, to the west by Deering Avenue, to the south by Park Avenue, and to the east by Forest Avenue. A Location Map has been provided as Appendix A for your reference.



Figure 2-1 Deering Oaks Pond Existing Conditions Photographs

Deering Oaks Park is an important recreational feature in the City of Portland, and the focal point of the park is Deering Oaks Pond, a 3.5-acre manmade pond that serves both aesthetic and recreational purposes in the park. The pond was created in the late 1800s as a result of the sewer system installed in the adjacent State Street. The construction of the sewer dammed the tidal flats in the area, creating an impoundment that became the pond. The source of water for the pond has varied throughout its history, having first been filled with pumped drinking water. The pond currently receives source water from stormwater outfall pipes, sheet flow from surrounding areas, groundwater, and supplemental water from the Portland Water District's water distribution system, as needed. The pond's overflow discharges to the City of Portland's combined sewer system.

A majority of the pond's edge is formed by stacked granite block or stone-faced cast-in-place retaining wall systems. In 2006, a replacement fountain system was installed within the pond. This ornamental fountain is installed in the pond each spring and is removed in the fall so that the pond may be used for public ice skating during the winter months. The fountain recirculates pond water through a land-side pump vault and an intake pipe within the pond.

2.2 PROJECT NEED

Residents of Portland and surrounding communities utilize Deering Oaks Park and Deering Oaks Pond year round. The 1994 Master Plan emphasized the importance of maintaining water quality for this well-used resource. The lack of a structured pond bottom limits the City's ability to maintain the pond, and the lack of regular maintenance results in a buildup of organic material which can contribute to poor water quality and summer algae blooms, negatively impacting the pond's aesthetic and recreational character.

The City of Portland Department of Public Services completely drains Deering Oaks Pond twice annually to allow for the installation of pond infrastructure in the spring and the removal of equipment in the fall before the pond freezes. When the pond is drained, limited cleaning, including leaf and trash pickup, is completed, but thorough cleaning isn't done every year. The existing pond bottom and the underlying soils limit the type of equipment that may enter the pond to perform maintenance.



Figure 2-2 Deering Oaks Pond (a) trash accumulation below the pond water; (b) leaf and organic deposits visible during pond draindown; and (c) algae blooms during the summer months.

Leaves, trash, sediment, and other debris from the surrounding areas are continuously deposited in the pond, providing the nutrient source necessary to facilitate the growth of algae. The existing pond bottom can be very soft, and the City has historically had difficulty accessing some areas of the pond to perform maintenance. As a result, sediment and trash from stormwater runoff, along with deposited organic material (leaves and other vegetation), is not completely removed during annual cleaning, compromising water quality. With the organic material in the pond, nutrients cycle between the pond bottom material and the pond water, likely contributing to algae blooms during the warm summer months. The algae blooms impact pond aesthetics and can pose potential health risks to humans and animals that use the park. Algae can cycle organic matter and nutrients in the water column, further increasing the potential for additional blooms. Trash accumulation in the pond has impacts on wildlife (ducks and geese that frequent the pond), pets, and humans.

There is a need to improve water quality in Deering Oaks Pond. To accomplish this, the removal of existing soft materials and the installation of a new, more stable pond bottom will allow for more frequent and thorough cleaning of the pond on at least an annual basis.

2.3 PROJECT SUPPORT & FUNDING

In 2006, a report was written to identify critical issues in need of attention in Deering Oaks Pond. This report addressed water quality concerns, retaining wall stability, fountain replacement, and electrical and lighting challenges. Since the report was written, some of the identified concerns have been addressed, including the installation of a new fountain, and some limited pond edge repairs.

In 2010, approximately \$1.2 million in federal funding was appropriated to the City of Portland for use on water quality projects for Deering Oaks Pond. In order to receive this funding, the City was required to provide a 45% funding match and submit an application to the EPA for a State & Tribal Affairs Grant (STAG). The City has allocated \$500,000 to be utilized as a match to the federal funds. A STAG application was submitted to EPA in 2013, requesting \$611,111 of the available federal funding, resulting in a total project budget of just over \$1.1 million. Approval of the grant was received in 2014.

2.4 PROPOSED PROJECT

The scope of the current project is to address water quality issues utilizing the available federal funding and the committed City of Portland matching funds. Repairs to retaining walls are not eligible for the available funding, and will need to be addressed as part of another project.

2.4.1 Existing Soil Removal

The main goal of the proposed project is to improve the water quality of the pond by creating a more stable pond bottom that will allow for more thorough cleaning of the pond on at least an annual basis. By removing soft soils and installing a stable pond bottom that has been designed to withstand the loading of small earth moving and sweeping equipment and small dump trucks, a more thorough cleaning program can be implemented. At a minimum, during the fall draining of the pond, the pond bottom could be cleared of deposited organic material, reducing the nutrient source that typically supports algae blooms in the warm summer months.

The pond was evaluated in the spring of 2013 by Haley & Aldrich to determine the composition of the soils that make up the existing pond bottom. The results of the evaluation indicate that a thin organic layer exists on the pond bottom, followed by a layer of fine sand that varies from 4 inches to 22 inches in thickness, followed by an undetermined depth of silty clay (native marine clay layer). There are also areas of peat beneath the surface organics and sand, creating soft areas that pose challenges for maintenance equipment.

The proposed work will consist of the removal of approximately the top 14 inches of material from the entire pond, plus over-excavation of an additional 22 to 28 inches of material in select areas throughout the pond. This over-excavation will remove soft peat in areas identified during Haley & Aldrich’s subsurface investigation. The over-excavated areas will be re-filled with gravel, and a new pond bottom system will be installed. The intent of the work will be to maintain the existing pond bottom elevation, with minor adjustments to remove some low spots that currently hold water when the pond is drained down for maintenance. The depth of water in the pond will remain largely the same.

A total of approximately 8,500 cubic yards of material will be removed from the pond bottom, including the over-excavated soft soils. This dredged material is classified as “special waste” by the Maine Department of Environmental Protection, and will require a solid waste license for beneficial use or disposal. Sediment sampling within the pond indicates that the material meets the requirements for beneficial use, and this option will be provided to the Contractor.

2.4.2 Pond Bottom Alternatives

An alternatives analysis was completed to determine the type of pond bottom system to be specified for the Deering Oaks Pond. The alternatives analysis looked at four different options: asphalt, reinforced concrete, articulating concrete block mats, and gravel. Each alternative was evaluated based on seven screening criteria: capital cost, pond maintenance, pond bottom repair, installation impacts, expandability, future wall repair, and longevity.

The result of the alternatives analysis was the selection of a “hybrid” approach utilizing articulating concrete block mats and gravel. The articulating concrete block mats are typically 8-foot by 40-foot mats of concrete blocks attached together with polyester or steel cables. By connecting the blocks into large mats, they may be installed over large areas using a crane, instead of requiring individual hand placement. Individual blocks may also be installed by hand around edges and in areas that are irregularly shaped. The concrete blocks are installed over gravel, and have center holes that are also filled with gravel. Articulating block mats are often utilized for erosion protection on shorelines and at bridge abutments, and are also utilized as pond bottom systems.

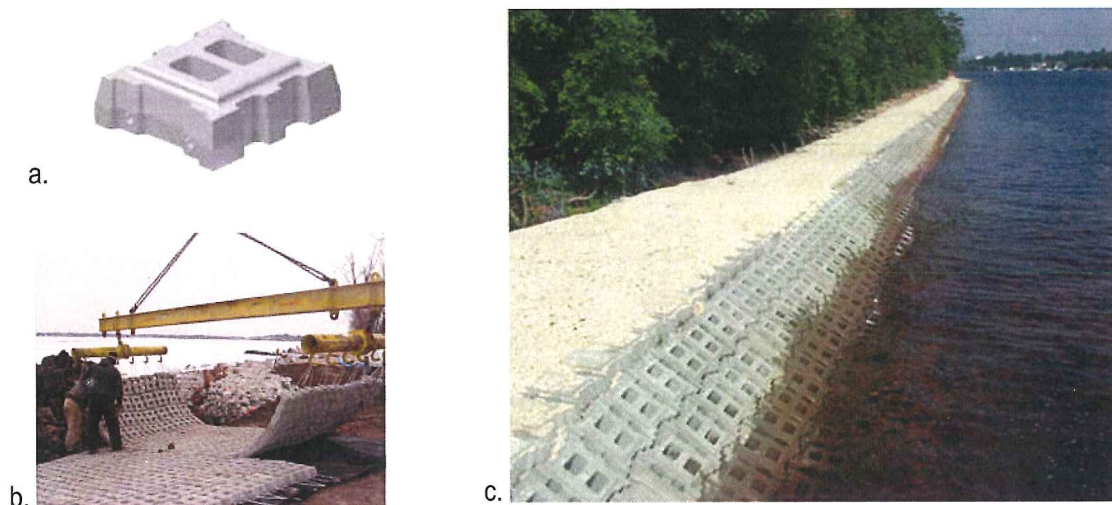


Figure 2-3 Articulating Concrete Block Mats: (a) typical individual block; (b) installation of mats by crane; and (c) blocks installed as shoreline protection (note, this project will not install the block mats above the water surface as shown above) (photos from Contech Engineered Solutions LLC)

A roadway of articulating concrete block mats will be constructed throughout the pond (and only in areas that will be below water), allowing for access by heavier vehicles, like larger dump trucks and loaders. In areas without the concrete block mats, 14 inches of gravel over a layer of reinforcing geotextile fabric will be installed. This gravel will provide adequate support for smaller equipment and vehicles that will be performing most of the maintenance on the pond. The gravel proposed for the pond bottom is the Maine Department of Transportation's Type B base gravel. This is the type of material that is often utilized as road base beneath asphalt, and is also used as the surface for some trails. Engineering plans for the proposed project are included in Appendix B. A memo from the geotechnical engineer describing the design basis for the pond bottom alternatives is included in Appendix C.

2.4.3 Pond Bottom Visual Appearance

The gravel pond bottom will be similar in color to the existing pond bottom. The concrete blocks will be gray in color when installed. Image C in Figure 2-3 above shows that as water depth increases, the visibility of the concrete from the surface decreases. For reference, Figure 2-4 below shows the appearance of existing concrete and granite blocks located beneath the water in the pond. Under approximately 3 feet of water and typically located away from the pond edge, they will not be clearly visible. It is also anticipated that the blocks will become partly covered by gravel during construction and future maintenance, and the concrete blocks will also darken over time, as has been observed in other concrete in the pond.



Figure 2-4 Deering Oaks Pond (a) concrete below water surface; (b) granite blocks below water surface at pond edge; and (c) darkened concrete at pond edge.

The pond bottom will remain covered with water or ice during all but the few weeks per year that the pond is drained for maintenance.

2.5 LEVEL I SITE PLAN APPLICATION

A pre-application meeting was held with the City of Portland Planning Division on April 16, 2014. Due to the nature of the project as primarily a maintenance activity, and the fact that the work will not create any new impervious surface, the project qualifies for review under the standards for Level 1 Site Alteration.

The following report is presented in conformance with the requirements of a Level 1 Site Alteration Application. Appendices are included with the Report in support of various sections. Civil engineering plans showing the proposed project design are included in Appendix B.

3. RIGHT, TITLE, & INTEREST

The project site is located entirely on public land owned by the City of Portland. The project parcels are located at chart, block, lot 049 B001, 050 A001, and 035 I001. A copy of the City of Portland Tax Map showing the parcel locations is provided in Appendix D.

4. ADDITIONAL PROJECT APPROVALS

4.1 LOCAL PERMITS

The project has been reviewed by the City of Portland Historic Preservation Board. A Public Hearing was held on May 21, 2014, and the Historic Preservation Board approved the project at that time. A copy of the final approval letter is included in Appendix E.

4.2 STATE & FEDERAL PERMITS

The project will require a Stormwater Permit By Rule (PBR), which requires compliance with the MaineDEP Basic Standards for erosion and sedimentation control and good housekeeping measures. The Stormwater PBR form also serves as the Notice of Intent to comply with the Maine Construction General Permit. The submission of a separate Notice of Termination to the MaineDEP will be required for the MCGP, following completion of the project. These permit applications will be filed and copies will be forwarded to the Planning office.

The pond is a manmade impoundment, which is not considered to be a jurisdictional wetland by the Maine Department of Environmental Protection (DEP) or the Army Corps of Engineers (ACOE). A review of publicly available information shows that the pond is not identified as habitat for endangered or threatened species. The area is not part of prime or unique agricultural lands, and is not located within any floodplains. The project will have no impact on air quality, and will also not impact any drinking water sources. The area is also not a habitat for Inland Wading Waterfowl, Shorebirds or Seabirds. The proposed project will not impact any natural resources. Natural Resources Protection Act (NRPA) permits from the Maine Department of Environmental Protection (MaineDEP) and Programmatic General Permits from the Army Corps of Engineers will not be required.

Deering Oaks Park is a registered historic landmark, and the project has been submitted to the State Historic Preservation Commission for review. Any correspondence received from the State Historic Preservation Commission will be provided under separate cover.

4.3 FEDERAL REVIEW

As part of the State and Tribal Affairs Grant process, the EPA carried out an environmental assessment for the project. A copy of that assessment, along with the Finding of No Significant Impact document is included as Appendix F for your reference.

5. FINANCIAL & TECHNICAL CAPACITY

5.1 FINANCIAL CAPACITY

As previously noted, the proposed project will be paid for by a combination of Federal grant money and local matching funds. As part of their Fiscal Year 2013 Capital Improvement Plan (CIP) budget, the City of Portland approved \$500,000 for use on the project. This represents all of the local funding available for the required 45% match, such that the Federal grant funding will be \$611,111, setting the total maximum project cost at \$1,111,111. The State and Tribal Affairs Grant from the EPA was approved in 2014, and a copy of the grant agreement is included in Appendix F.

5.2 TECHNICAL CAPACITY

On behalf of the City of Portland, Woodard & Curran is preparing this application for the Deering Oaks Pond Bottom and Water Quality Improvements Project. Woodard & Curran has extensive experience with design for large site construction and earth moving projects and resumes can be made available upon request. Woodard & Curran is an over 800-person Portland based firm that has provided engineering services to the public sector for more than 30 years, including permitting, civil/site engineering, stormwater, and construction management services.

6. ASSESSMENT OF ZONING

The project is located within the City of Portland Recreation and Open Space Zone (R-OS) and has been designed to comply with the standards and intent of Divisions 8.5 of the Land Use regulations. The proposed activity will not result in any changes to the site's existing use.

6.1 RECREATION AND OPEN SPACE ZONE (LAND USE CODE DIVISION 8.5)

The project consists of improvements to a pond which is part of an existing municipal park. In accordance with Division 8.5 of the Land Use Code, municipal parks are a permitted use within the R-OS. No change of use is proposed as part of this project.

6.1.1 Space and Bulk Requirements (Land Use Code Section 14-157)

No building or structure of a permanent nature will be erected, altered, enlarged, rebuilt, or used as part of the proposed project. This section is not applicable.

6.1.2 Development Standards for Recreation and Open Space Zone (Land Use Code Section 14-158)

The proposed project is not a new development, and no buildings or parking areas will be constructed or modified as part of this project. The work will be enhancement of an existing municipal park through improvements to the pond bottom of an existing pond. The project shall comply with the development standards outlined in Section 14-158 of the Land Use Code. Per the City's standards, vegetated areas not left in their natural state will be suitably landscaped, and natural features will be preserved to the greatest possible extent.

A majority of the proposed work will be taking place within the existing pond area. The work will impact the pond bottom, which will only be visible when the pond is drained for maintenance in the spring and fall. The only impacts to areas outside of the pond will be due to temporary construction equipment access. All areas impacted by construction equipment will be restored to their original conditions, either pavement or grass.

6.1.3 Shoreland and Flood Plain Management Regulations (Land Use Code Section 14-159)

The proposed project is not located in a shoreland zone or a flood hazard zone; this section of the Code is not applicable. A copy of the FEMA FIRM Map for the site is provided as Appendix G for your reference.

7. CONFORMANCE WITH SITE PLAN STANDARDS

Section 14-524 of the City of Portland's Land Use Code outlines the site plan standards that must be met by Level I Site Alteration projects. These standards are defined in Section 14-526 of the Code. Level I Site Alteration plans shall only be subject to the following site plan standards, as applicable:

7.1 TRANSPORTATION STANDARDS

The project proposes no changes to transportation systems. Construction access to the site will be managed to minimize impact to local streets and parking. Construction vehicle traffic and travel routes will be addressed further in the Construction Management Plan.

7.1.1 Impact on Surrounding Street Systems

No alterations to vehicular and pedestrian circulation are proposed as part of this project. No permanent impacts to surrounding street systems are anticipated as a result of this project.

7.1.2 Access and Circulation

No changes to site access and circulation are proposed as part of this project.

7.1.3 Parking

No new parking, or alterations to existing parking, is proposed or required as part of this project.

7.2 ENVIRONMENTAL QUALITY STANDARDS

7.2.1 Preservation of Significant Natural Features

The intent of the project is to provide water quality improvements to Deering Oaks Pond, which is a man-made pond. There will be no negative impacts to existing natural features.

7.2.2 Landscaping and Landscaping Preservation

No removal or addition of any landscaping features is proposed as part of this project. Grassed areas outside of the pond that are disturbed by construction activities will be re-vegetated at the completion of construction.

7.2.3 Water Quality, Stormwater Management, and Erosion Control

The intent of the project is to improve the pond bottom to allow for more thorough pond maintenance, helping to improve water quality. The project will not alter existing stormwater drainage patterns. Deering Oaks Pond currently receives stormwater inflow, and the sources of stormwater will not be impacted by this project. Stormwater inlets and outlets within the pond will be maintained and stabilized as part of the project.

The proposed work will impact the pond bottom system for Deering Oaks Pond, which is under water during all but two weeks of the year. No new impervious area will be created as part of this project, and there will be no increase in peak stormwater flows at the site. The project will comply with the standards of Section 5 of the City of Portland Technical Manual, as discussed in Section 9 of this Report. Groundwater contamination will not occur as a result of this project.

7.3 PUBLIC INFRASTRUCTURE & COMMUNITY SAFETY STANDARDS

7.3.1 Consistency with City Master Plans

The proposed project has been designed to be consistent with the Deering Oaks Master Plan developed in 1994. Major efforts to implement the Deering Oaks Park Master Plan priorities have been accomplished to date, including ravine rehabilitation, tree transplanting and maintenance, utility improvements, recreational improvements, historic building rehabilitation, pedestrian bridge restoration, and fountain replacement. These projects were funded through the City's Capital Improvements Program, the taxpayers of the City of Portland, the federal Housing and Community Development Program, private donations, and with donated funds from the Friends of Deering Oaks, a local non-profit committed to the preservation and enhancement of the park. The Deering Oaks Pond pond bottom replacement will mark another step in achieving the Master Plan goals.

The Pond has historic and ongoing issues with algae growth and has required frequent dredging and cleaning, as documented in the Master Plan. The Master Plan identified Deering Oaks Pond as an essential park element, and the Guiding Principles of the Master Plan emphasizes the importance of its management and maintenance. As previously discussed, the proposed project will allow for more regular and thorough maintenance of the pond. The proposed project will help achieve all five of the Master Plan Goals:

- Improve the Image and Safety of Deering Oaks
- Facilitate the Use and Enjoyment of Deering Oaks
- Rehabilitate and Preserve the Historic Design Intent of the Park
- Restore and Maintain the Park's Horticultural Beauty and Ecological Health
- Strengthen Park Maintenance and Management Programs

The improved maintenance operations (goal 5) that will result from the project, will result in a cleaner, more aesthetically pleasing pond, helping to meet the objectives of goals 1, 2, and 4. The objective of the third goal is to focus on rehabilitation in an effort to stabilize, preserve, and/or improve the character-defining features of the site, particularly elements such as the pond. Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses, while preserving those portions or features which convey its historical or cultural values.

The project meets the intent of the Deering Oaks Master Plan by helping to improve the water quality of Deering Oaks Pond through measures that are primarily not visible during most of the year. The project will not have a detrimental effect on the historic nature of the site, and will help to maintain the pond for future, enjoyable use by the Portland community.

7.3.2 Public Safety and Fire Prevention

The project does not propose any modifications that would require additional consideration of public safety and fire prevention.

7.3.3 Availability and Adequate Capacity of Public Utilities

No new utilities are proposed as part of this project, and existing utilities that are located on the project site will be protected. At this time, impacts to public and private utilities from the construction of this project are not anticipated. If utility impacts are identified, we will contact the impacted utility company to inform them of the planned work and incorporate any necessary requirements.

7.4 SITE DESIGN STANDARDS

7.4.1 Historic Resources

Deering Oaks Park is a designated historic landscape. The proposed work will not impact any visible historic features in Deering Oaks Park.

The project was approved by the City of Portland Historic Preservation Board at a Public Hearing held on May 21, 2014. The project is currently being reviewed by the State Historic Preservation Office, and any correspondence will be forwarded as it is available.

7.4.2 Exterior Lighting

No lighting is proposed as part of this project.

7.4.3 Signage and Wayfinding

No new signage is proposed as part of this project.

7.4.4 Zoning Related Design Standards

A narrative regarding how the proposed project will comply with zoning related design standards has been provided in Section 6 of this Report.

8. REQUEST FOR WAIVERS

8.1 BOUNDARY SURVEY

Woodard & Curran is requesting a waiver from the City of Portland Boundary Survey requirements of Section 14-527 of the Land Use Code and Section 13 of the City Technical Manual. As noted, the proposed project is located entirely on public land owned by the City of Portland (Deering Oaks parcels located at chart, block, lot 049 B001, 050 A001, and 035 I001). Historical plans of the site identifying the area as a City Park can be provided from the City's Archive Office as needed.

9. STORMWATER MANAGEMENT

The proposed project must comply with the water quality, stormwater management, and erosion control standards identified by the City of Portland in the Land Use chapter of the Code of Ordinance. While the City's Technical Manual does not identify Level I Site Alteration projects on the list of projects requiring compliance with manual's Section 5 on stormwater management, Section 14-524 of the Code of Ordinance requires that the stormwater standards must be met for this level of permit submission.

9.1 EXISTING CONDITIONS

The site is located in the existing Deering Oaks Park. The park consists of open water, open space, and landscaped areas. The proposed work will exclusively be taking place within the pond, with construction access provided from Park Avenue down to the pond.

In the existing condition, site runoff flows over the surface of vegetated areas and either infiltrates into the ground or directly to the Pond, which ultimately discharges to the combined sewer system and the tidal Back Cove.

9.2 PROPOSED DEVELOPMENT

The proposed project consists of improvements to the existing pond bottom, as described in Section 2. Proposed work will be limited to the footprint of the existing pond, with construction access provided from Park Avenue. No new impervious area will be created as part of this project. Site runoff will continue to flow as it does in the existing condition. The area that is draining to the pond will not change as a result of this project.

Existing stormwater outfall pipes that drain into or outlet from the pond will be maintained and stabilized. The existing pond bottom elevation will be maintained to a large extent, with only some minor regrading to ensure that the pond can be drained completely for maintenance in the future. Crushed stone channels will be constructed throughout the pond bottom to provide flow paths for base flow while the pond is drained.

9.3 STORMWATER STANDARDS

The project will comply with the Basic, General, and Flooding standards as outlined in the City of Portland's Technical Manual Section 5 and the MaineDEPs Chapter 500 Stormwater Management Rules.

9.3.1 Basic Standard

In accordance with Section 5 of the City of Portland Technical Standards, the project is required to meet the Basic Standard of the MaineDEP Chapter 500 rules. Erosion and sedimentation control measures will be utilized during construction to ensure that the work will not result in the contamination of any natural resources.

Details for all proposed erosion and sedimentation control measures are included in the engineering plan set submitted with this application. The plans include a narrative describing the plan for all temporary and permanent erosion control techniques to be utilized on this project in accordance with MaineDEP Erosion Control Best Management Practices.

9.3.2 General Standard

The project will not create any new impervious surface, and is therefore not required to provide stormwater quality treatment in accordance with the General Standard. The intent of the project is to construct a new pond bottom system to allow for more comprehensive pond maintenance in the future, helping to improve water quality.

9.3.3 Flooding Standard

The project will not create any new impervious surface, and is therefore not required to provide stormwater management features for stormwater quantity control in accordance with the Flooding Standard. No changes to stormwater flow rate or volume will result from the proposed project. The existing pond depth will be unchanged, maintaining the existing stormwater storage volume in the pond.

10. SOLID WASTE

10.1 MUNICIPAL SOLID WASTE MANAGEMENT

The proposed project will not result in any changes to solid waste management at the park.

10.2 CONSTRUCTION AND DEMOLITION DEBRIS

As with any construction project, the proposed construction will generate construction waste and demolition debris (CDD). For this project, the bulk of the solid waste will consist of material dredged from the pond. Approximately 14 inches of existing material will be removed from the entire pond bottom to allow for the installation of a new pond bottom system. In addition, over-excavation of soft organic peat material will take place in some areas of the pond. A total of approximately 9,000 cubic yards of existing soil, including soft organic peat, silt, clay, sand, and gravel, will be removed from the pond.

The construction contractor(s) will be responsible for hauling the dredged material, from the project site. The contractor(s) will be fully responsible for handling, managing, and disposing of all waste generated by construction in accordance with Maine Solid Waste Management Regulations – 06-096 CMR 400-409. The contractor(s) will be bound by contract to dispose of all materials in full accordance with all applicable local state and federal regulations.

Pond sediments have been analyzed for parameters in accordance with “Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, SW-846, 2nd Edition, 1982” and compared against the MaineDEP limits for beneficial reuse, as described in MaineDEP Chapter 418, Section A. This analysis and correspondence with MaineDEP has indicated that the material to be removed from the pond is of sufficient quality to meet Maine DEP beneficial use criteria. The contractor will have to option to beneficially reuse the material for another project off-site. If the contractor chooses to reuse the material, a license from the Maine DEP for beneficial use will be required. The contractor will be responsible for obtaining this license.

11. UTILITIES

No new utilities are proposed as part of this project and existing utilities that are located on the project site will be protected. Within the pond, existing electrical and water lines for the fountain will not be impacted as part of this project.

12. CONSTRUCTION MANAGEMENT PLAN

The Deering Oaks Pond site will be managed during construction to minimize impacts to the surrounding area and natural resources. Traffic controls will consist of temporary signage to manage pedestrian traffic. The contractor will be required to provide a construction management plan for the project, subject to the review and approval of the City and Engineer.

12.1 DREDGING

The pond will be drained and all dredging work will be conducted in the dry. Temporary erosion and sedimentation control measures will be established prior to the start of construction and removed after construction has been completed and the site has been stabilized. Erosion and sedimentation control measures will include temporary stabilized construction access and stormwater inlet/outlet protection. The locations of these erosion and sedimentation control measures will be specified on the construction plans.

Mechanical excavation will be utilized to remove pond sediment. Mechanical dredging equipment includes clamshells, draglines, backhoes or other machinery for excavating bottom sediments. A long reach excavator working from wooden crane mat platforms may be utilized to conduct the dredging. Dump trucks and low ground pressure equipment involvement may also be necessary to support the excavation and removal of material.

Mechanical dewatering of the dredged material shall not be allowed on site. All on-site dredge dewatering shall be accomplished by stockpiling the material within the footprint of the pond and allowing it to drain by gravity. All runoff from the dewatering process shall drain back into Deering Oaks Pond. The contractor may choose to perform additional dewatering off-site prior to disposal or reuse of the material, in accordance with all applicable MaineDEP standards.

Cleanup of tracked sediment from construction vehicles will be managed by the Contractor. Water-tight dump trucks will be utilized to transport sediment, and stabilized construction exits will be installed to collect sediment from vehicles wheels. The Contractor will be required to sweep Park Avenue a minimum of once per day to manage tracked sediments. Additional sweeping may be required as necessary to keep the street clean. Notes requiring sweeping have been included on the plans as part of the general notes, as well as part of the erosion control notes.

12.2 CONSTRUCTION ACCESS & TRAFFIC

All construction traffic shall access the site from Park Avenue, at the intersection with Mellen Street. Plan sheet G-001 provides a construction access plan that identifies the route within Deering Oaks Park that may be utilized by construction traffic. Any deviations from this route will require approval from the City of Portland.

A temporary construction access-way will be constructed over existing grassed areas, and existing paved pathways will also be utilized. All grass and pavement areas impacted by construction will be restored to their original conditions following construction. An existing paved ramp will provide the direct access to the pond. Concrete channels located on either side of the ramp will be protected during construction, and the pavement will be replaced after construction of the pond bottom is complete.

The existing Park Avenue/Mellen Street intersection has been utilized for construction access in the past, and adequate sight distance for construction vehicles will not be a concern. The contractor will be required to provide adequate signage to allow for construction traffic to safely use the intersection. We anticipate that the contractor will work with the City as necessary to manage the control of the existing traffic light at the intersection.

With the removal of approximately 9,000 cubic yards of dredged material, and the import of approximately 8,500 cubic yards of new pond bottom soil, the project will result in an increase in truck traffic during construction. The anticipated maximum rate of truck traffic is about 10 trucks per hour, corresponding to a total of 20 trip ends per hour for trucks entering and exiting the site. This corresponds to 60 to 100 loads, or 120 to 200 trip ends, per day. Construction is anticipated to take approximately 3 months to complete; however, traffic will not be maintained at this rate during the entire construction process. The highest rates of traffic are anticipated in the first third to half of the project when dredging is taking place.

In addition to the import of gravel, onto the site, approximately 22,000 square feet of concrete blocks will also be delivered and installed in the pond. The blocks are connected together in mats that are approximately 8 feet by 40 feet in size. The mats will be installed using cranes equipped with spreader bars in conformance with the manufacturer's recommendations for installation.

The proposed pond bottom has been designed for specific loading conditions, as outlined in the memo include in Appendix C. The Contractor will be required to comply with these loading conditions with their equipment when driving on the installed pond bottom, and will be required to use low-ground pressure equipment when driving on the native pond bottom soils, or provide temporary access reinforcement designed to support their equipment.

12.3 PEDESTRIAN CONTROL

Deering Oaks Park includes a network of paved pathways throughout the park and surrounding the pond. The Contractor will be required to provide adequate signage directing pedestrians safely around the construction area. Some existing paved pathways will be used for construction access, and these pathways will have signage and safety fencing to manage pedestrian use during the day while construction activities are ongoing. The Contractor's construction management plan will be required to outline all proposed pedestrian control measures.

13. FIRE DEPARTMENT REVIEW

The project will not result in the construction or modification of any structures, and no fire protection systems or hydrants will be required. We anticipate that review by the Fire Department will not be required for this project.

APPENDIX A: LOCATION MAP



**PROJECT
LOCATION**



**NOTE: AERIAL PHOTOGRAPHIC DATA PROVIDED BY
MAINE GIS, CITY OF PORTLAND 2012 DATA**

BAR SCALE
1" = 200'
CHECK GRAPHIC SCALE BEFORE USING



41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

LOCATION MAP

DESIGNED BY: N/A CHECKED BY: DAS
DRAWN BY: LJS 222804.46 LOCATION FIGURE.DWG

CITY OF PORTLAND
PORTLAND, MAINE

DEERING OAKS POND
POND BOTTOM IMPROVEMENTS

JOB NO: 222804
DATE: AUGUST 2013
SCALE: 1"=200'

FIG. 1-1

APPENDIX B: PLANS (BOUND SEPARATELY)

APPENDIX C: GEOTECHNICAL DESIGN BASIS MEMO

Haley & Aldrich, Inc.
75 Washington Avenue
Suite 203
Portland, ME 04101

Tel: 207.482.4600
Fax: 207.775.7666
HaleyAldrich.com

**HALEY &
ALDRICH**

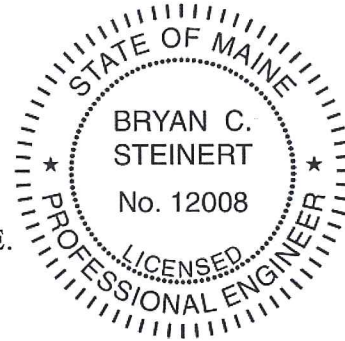
MEMORANDUM

23 May 2014
File No. 36488-010

TO: Woodard & Curran
Lauren Swett, P.E., Dave Senus, P.E.

FROM: Haley & Aldrich, Inc.
Bryan C. Steinert, P.E., Wayne A. Chadbourne, P.E.

SUBJECT: Geotechnical Design Recommendations
Deering Oaks Pond Improvements
Portland, Maine



This memorandum presents geotechnical design recommendations for the preferred pond bottom liner alternatives being considered for the subject project. Please recall that the results of subsurface explorations and preliminary design recommendations were provided in our memorandum to you, dated 7 November 2013. This work was undertaken at your request in accordance with our proposal dated 2 October 2013 and your subsequent authorization.

PROJECT BACKGROUND

It is our understanding, based on our discussions with you that the City of Portland (City) would like to install a liner or concrete base at the bottom of the Deering Oaks Pond (Pond) after removal of accumulated "pond-bottom" sediment. We understand that the installation of a bottom liner/base is intended to improve the overall water quality in the Pond while providing a stable surface for light construction equipment to perform periodic cleaning (debris removal). Currently, the Pond is drained two times annually (typically once in the fall and once in the spring) to install and remove the water fountain. During these drawdown periods City personnel typically remove accumulated debris from the Pond bottom by hand, prior to filling. As discussed during our conference call with the City on 10 September 2013, replacement of or repair to the existing mortared, granite-block retaining walls around the Pond edges is not included in the current scope of the project. As a result, Pond liner alternatives were developed and evaluated to minimize impacts to the existing walls.

In order to meet the City's objectives of improving Pond water quality while providing a stable working surface for future Pond maintenance while keeping the Pond bottom elevation unchanged, Woodard & Curran (W&C) and Haley & Aldrich considered several Pond liner alternatives. Factors including, but not limited to technical feasibility, impacts on the existing retaining walls, capital cost, future operating/maintenance and durability were considered in developing potential Pond liner alternatives as summarized in our memorandum dated 7 November 2013. Specifically, the following alternatives were evaluated:

- Alternative No. 1 – Cast-in-Place (CIP) Concrete Slab
- Alternative No. 2 – Articulated Concrete Block (ACB) System
- Alternative No. 3 – Gravel-Surfaced Liner
- Alternative No. 4 – Bituminous Concrete-Surfaced Liner

As a result of the alternatives analysis completed by W&C and based on discussions with and comments received from the City, Alternative Nos. 1 and 4 were removed from future consideration during the final design phase of the project. Final geotechnical design evaluations, as discussed in subsequent sections of this memorandum, were completed on the remaining two alternatives to either confirm or make adjustments to the preliminary recommendations. Ultimately, the Pond bottom liner alternative recommendations included herein will be used by W&C to complete construction cost estimates aimed at determining which liner alternative or combination of alternatives could be constructed within the City's budget while providing a stable working surface for future Pond maintenance.

GEOTECHNICAL ENGINEERING EVALUATIONS AND DESIGN RECOMMENDATIONS

As discussed above, the installation of a Pond bottom liner/base is intended to improve the overall water quality in the Pond while providing a stable surface for light construction equipment to perform periodic cleaning (debris removal).

Design Loading

Based on our recent discussions with W&C, we understand that the Pond will be separated into two areas based on assumed light construction equipment traffic patterns that will be used by the City to maintain the Pond. The first area will be a small network of primary travel ways across the entire Pond bottom area. Within this area, the Pond bottom liner Alternative No. 2 (ACB System) will be constructed to provide adequate support to larger/heavier construction equipment used to maintain the Pond. The remaining portion of the Pond will consist of secondary travel ways, which will be constructed using Alternative No. 3 (Gravel-Surfaced Liner), which will provide adequate support to lighter construction equipment. We understand that W&C will determine the actual width and location/alignment of the primary and secondary travel ways based on the recommendations provided herein as well as construction cost estimates (completed by W&C). Based on discussions with both W&C and City personnel, we understand that the following construction equipment types will likely be used to complete periodic Pond bottom maintenance.

- Primary Travel Ways (Alt. No. 2; ACB System):
 - 6 cy Dump Truck = 76 kip operating weight, 100 psi ground contact pressure (assumed)
 - Front-End Loader = 31 kip operating weight, 60 psi ground contact pressure
- Secondary Travel Ways (Alt. No. 3; Gravel-Surfaced Liner):
 - Takeuchi TB180 mini excavators = 19 kip operating weight, 25 psi ground contact pressure
 - Track-mounted Bobcat = <19 kip operating weight, <25 psi ground contact pressure (assumed)

Based on the information summarized above, Haley & Aldrich judged that the 6 cy dump truck and Takeuchi TB180 mini excavator would control the design of Alternative Nos. 2 and 3, respectively and were used, in part, to conduct engineering evaluations and to develop the design recommendations provided herein.

Determination of Minimum Section Thickness

The minimum section thicknesses for Alternative Nos. 2 and 3 were determined by generally following design methodology originally developed by Steward, Williamson, and Mohny (1977) for the United States Forest Service (USFS) for use in designing temporary and unpaved roads. Evaluations were conducted considering construction equipment type, frequency and loading, soil subgrade conditions, mean annual air temperature and inclusion of geosynthetic reinforcement. The results of our evaluations are summarized below.

- **Primary Travel Ways (Alt. No. 2; ACB System):**
 - 4.75-in. thick closed-cell concrete block mats (typical mat size is 8 ft x 40 ft) overlying an
 - 8-in. thick layer of structural fill placed on top of a naturally-deposited soil subgrade or a subgrade consisting of structural fill placed after over-excavation of unsuitable foundation soils.
 - Placement of a Mirafi HP370 (or approved equal) reinforcement geotextile placed between the structural fill and subgrade.
 - Overexcavation of highly organic soil present at subgrade level down to the top of the naturally-deposited marine silt/clay and replacement with structural fill. The approximate plan limits of the Pond that will require over-excavation and replacement below the bottom of the ACB system section is shown on Figure 6 of our 7 November 2013 memorandum.
 - Structural fill shall meet the requirements of MaineDOT Standard Specification Section 703.06 Type B.

- **Secondary Travel Ways (Alt. No. 3; Gravel-Surfaced Liner):**
 - 18-in. thick layer of structural fill placed on top of a naturally-deposited soil subgrade or a subgrade consisting of structural fill placed after over-excavation of unsuitable foundation soil.
 - Alternatively, the section could consist of a 14-in. thick layer of structural fill placed on top of a naturally-deposited soil subgrade or a subgrade consisting of structural fill placed after over-excavation of unsuitable foundation soil with a Mirafi HP370 (or approved equal) reinforcement geotextile placed between the structural fill and subgrade.
 - Overexcavation of highly organic soil present at subgrade level down to the top of the naturally-deposited marine silt/clay and replacement with structural fill for both gravel-surfaced liner alternatives presented. The approximate plan limits of the Pond that will require over-excavation and replacement below the bottom of the gravel-surfaced liner section is shown on Figure 8 of our 7 November 2013 memorandum.
 - Installation of a non-biodegradable, geosynthetic “marker” located approximately 4 to 6 in. below finish grade so that City personnel will be aware of how much material has been inadvertently removed during maintenance activities and so that additional material can be placed, if desired.

- Structural fill shall meet the requirements of MaineDOT Standard Specification Section 703.06 Type B.

Limitations of Design Recommendations

The design recommendations included herein are based on several assumptions as summarized below.

- USFS design methodology is based on fewer than 10,000 construction equipment vehicle passes and assumes that development of wheel ruts on the order of 4 to 6 in. in gravel-surface liner areas are acceptable. As a result, we have judged that some risk of such misalignment is tolerable.
- Minimum section thicknesses were determined based on maintenance equipment vehicle details provided by the City and as assumed by Haley & Aldrich when necessary. The use of larger (heavier) equipment by the City to complete periodic maintenance or by contractors during construction shall be done so at their own risk.
- Pond bottom liners are not constructed within 5 ft (minimum; in plan dimension) of the inside face of the existing retaining walls present around portions of the Pond perimeter.
- The analyses and recommendations are based, in part, upon the data obtained from the referenced subsurface explorations. The nature and extent of variations between explorations may not become evident until construction. If variations then appear, it may be necessary to reevaluate the recommendations of this report.
- The plan limits for the over-excavation and replacement of soft organic subgrade soils for each alternative as shown in our 7 November 2013 memorandum were developed using the subsurface information gathered during the exploration program and should be considered "minimum" limits. It is likely that additional areas of soft, organic subgrade soils may be encountered during construction. We recommend that a qualified geotechnical engineer be present during construction to observe soil subgrade conditions and determine the need for additional over-excavation and replacement.
- The geotechnical design recommendations contained herein are based on the known and predictable behavior of a properly engineered and constructed Pond bottom liner. Monitoring of the excavation and Pond bottom liner construction is required to enable the geotechnical engineer to keep in contact with procedures and techniques used in construction. Therefore, it is recommended that an individual representing the City, qualified by geotechnical training and experience be involved in the preparation of geotechnical related plans and specifications and also be present at the site to provide monitoring of earthwork and Pond bottom liner construction.

CLOSURE

We appreciate the opportunity to provide engineering services on this project. Please do not hesitate to call if you have any questions or comments.

APPENDIX D: CITY OF PORTLAND TAX MAPS



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Index Number - F8SE

April 1 2012 by 2013 Tax Map Index: <http://www.portlandassessors.com/taxmaps.htm>

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APPENDIX E: CITY OF PORTLAND HISTORIC PRESERVATION BOARD APPROVAL

CITY OF PORTLAND, MAINE
HISTORIC PRESERVATION BOARD

Rick Romano, Chair
Scott Benson, Vice Chair
Ted Oldham
Penny Pollard
John Turk
Bruce Wood
Susan Wroth

May 23, 2014

Lauren Swett
Woodard & Curran
41 Hutchins Drive
Portland, Maine 04102

Re: Deering Oaks Pond Bottom Replacement

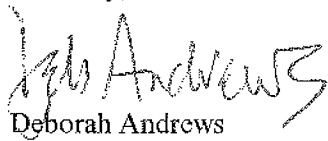
Dear Ms. Swett:

On May 21, 2014 the City of Portland's Historic Preservation Board reviewed your proposal, submitted on behalf of the City of Portland, for the replacement of Deering Oaks Pond bottom in order to improve water quality. Following deliberations, the Board voted 4-0 (Benson, Turk absent) to approve the application as submitted, with no conditions.

Construction to be carried out as shown on the plans and specifications submitted for the 5/21/14 public hearing and/or as described above. Changes to the approved plans and specifications and any additional work that may be undertaken must be reviewed and approved by this office prior to construction, alteration, or demolition. If, during the course of completing the approved work, conditions are encountered which prevent completing the approved work, or which require additional or alternative work, you must apply for and receive a Certificate of Appropriateness or Non-Applicability PRIOR to undertaking additional or alternative work.

This Certificate is granted upon condition that the work authorized herein is commenced within twelve (12) months after the date of issuance. If the work authorized by this Certificate is not commenced within twelve (12) months after the date of issuance or if such work is suspended in significant part for a period of one year after the time the work is commenced, such Certificate shall expire and be of no further effect; provided that, for cause, one or more extensions of time for periods not exceeding ninety (90) days each may be allowed in writing by the Department.

Sincerely,



Deborah Andrews
Historic Preservation Program Manager

Cc: Denise Cameron, Woodard & Curran
Michael Bobinsky, Director, Department of Public Services
Troy Moon, DPS
Mike Farmer, DPS
Joe Dumais, DPS

APPENDIX F: EPA DOCUMENTATION



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100

Boston, MA 02109-3912

October 29, 2013

Michael Bobinsky
Director of Public Services
City of Portland
55 Portland Street
Portland, Maine 04101

Re: FNSI Determination for the Deering Oaks Pond Bottom Replacement Project

Dear Mr. Bobinsky:

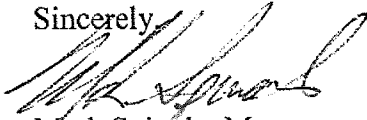
In compliance with EPA Regulations for Implementation of Procedures on the National Environmental Policy Act (NEPA), our office has prepared an Environmental Assessment (EA) for the proposed Deering Oaks Pond project. The City of Portland is proposing to excavate and remove accumulated sediment from the Deering Oaks Pond, and to construct a new pond bottom foundation system.

Based on the EA that has been prepared with supporting documentation (e.g. September 2013 EID) provided by the City of Portland in its grant application submittal, EPA has also prepared a corresponding Finding of No Significant Impact (FNSI) determination. No adverse environmental impacts are expected to occur from the proposed project. As a result, an Environmental Impact Statement (EIS) will not be required.

The FNSI will be distributed as required by 40 CFR Section 6.203. It will also be posted electronically for public review for 30 days. In addition, we request that this determination, and any additional proposed project documents, be made available for review by the public at the City of Portland offices. If any future review results in an indication of dissatisfaction with the way the environmental effects of the proposed project have been dealt with, our office should be notified immediately so that we can determine if modifications to the project are warranted.

Should you have any questions, you may contact David Chin of my staff at 617-918-1764. Thank you for your continued cooperation and we look forward to working with the City of Portland on its proposed Deering Oaks Pond project.

Sincerely

A handwritten signature in black ink, appearing to read "Mark Spinale", written in a cursive style.

Mark Spinale, Manager
Municipal Assistance Unit

Attachments

cc: U.S. ACOE
U.S. Fish and Wildlife



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

ENVIRONMENTAL ASSESSMENT

I. PROJECT NAME: Deering Oaks Pond – Portland, Maine
Pond Bottom Replacement Project

ADDRESS: City of Portland
Public Services Department
55 Portland Street
Portland, Maine 04101-2921
ATTN: Michael Bobinsky, Director

PROJECT LOCATION: Deering Oaks Pond, Deering Oaks Park
Portland, Maine

II. BACKGROUND, PURPOSE and NEED:

The Deering Oaks Pond, located in Deering Oaks Park in the City of Portland, Maine, is a 3.5 acre manmade pond/impoundment. Created in the late 1800s, the current source of water for the pond is from a combination of stormwater outfall pipes, stormwater runoff from the immediate surrounding areas, groundwater, and supplemental water from the Portland Water District's water distribution system. Any overflow from the pond enters the City of Portland's combined sewer system. The pond serves both aesthetic and recreational purposes in the park. The pond is utilized for public skating during the winter months.

A majority of the pond's edge is formed by stacked granite block or stone face cast-in-place retaining wall systems. The pond is drained twice a year for maintenance. The existing pond bottom in many areas is quite soft which hinders maintenance work. As a result, it is often difficult to remove sediment, trash, and deposited organic material, which compromises water quality. In addition, excess organic material helps to create and exacerbate algae blooms during the warm summer months.

The City of Portland has proposed to improve water quality by installing a new and more stable pond bottom that would allow more frequent and effective cleaning of the pond on an annual basis. The City of Portland will be provided with federal assistance (Public Law 111-88) in the amount of \$611,111, along with a required local match of \$500,000 (approved by the City of Portland as part of its FY2013 Capital Improvement Plan budget) to help fund this proposed endeavor.

II. PROJECT DESCRIPTION AND OBJECTIVES

Improving water quality is the primary goal of this proposed project. Deering Oaks Pond experiences high algal blooms as a result of low dissolved oxygen levels and elevated temperatures. Over the years, the pond has received organic materials from combined sewer overflow discharges, waterfowl waste, decomposed leaves, and sediment from stormwater runoff. The decomposition of the organic material contributes to higher nitrogen and phosphorous levels, which in turn, contributes to the lower dissolved oxygen levels.

The proposed project will include the removal of the accumulated organic matter. The installation of a new and more stable pond bottom foundation will result in improved and more effective future maintenance. Both endeavors will greatly enhance the water quality of the Deering Oaks Pond for the future.

The pond will be drained and the organic material will be removed down to the historic pond bottom elevation height. All sediment and organic material will be properly disposed of in compliance with local, state and federal requirements. After removal of the sediment, a new stable pond bottom system will be installed so the pond may be regularly and properly maintained in the future. The pond bottom system alternatives are being evaluated and they include: (a) gravel; (b) cast-in-place reinforced concrete; and (3) precast modular concrete blocks.

An Environmental Information Document was prepared by representatives of the City of Portland as part of its grant application submittal. Information from this specific document, as well as supplemental information (e.g. 9/25/13 memo) provided to the EPA is utilized to support the following narrative regarding environmental concerns and impacts.

III. SUMMARY REVIEW OF ENVIRONMENTAL CONCERNS AND IMPACTS, AND PUBLIC and INTERAGENCY REVIEW

A. Direct Impacts

1. Air Quality

During construction, there will be expected slight increase in noise and dust associated with excavation and removal work, installation work, and vehicular traffic.

2. Water Quality

There will be some temporary water quality impairment that is typical of these types of projects. The City of Portland will implement all necessary measures to minimize any temporary water quality degradation before, during, and after excavation and installation.

The installation of a new pond bottom system will result in the disturbance of ~ 3.5 acres of land area, requiring compliance with the Maine Department of Environmental Protection (DEP) Chapter 500 Stormwater Management regulations and the Maine Construction General Permit. Since the disturbance of land area will be greater than one acre and less than five acres, the project will qualify for a Stormwater Permit By Rule (PBR) that requires compliance with the Maine DEP Basic Standards for erosion and sedimentation control involving the implementation of best management practices.

The City of Portland will complete and submit a Notice of Intent/Stormwater PBR form to comply with the Maine Construction General Permit (MCGP). The City of Portland will also Submit a Notice of Termination to the Maine DEP following completion of the project.

In correspondence between the City of Portland representative and the Army Corps of Engineers, it has been determined that Deering Oaks Pond is not a water of the United States. Therefore, an ACOE permit is not required for the proposed project.

3. Environmentally Sensitive Areas

a. Flood plains and Wetlands

There are no mapped wetlands in the project area and is not located in a floodplain.

b. Prime Agricultural Land

The project area is not located in prime agricultural lands..

c. Wildlife Habitat

The area is not a habitat for inland wading waterfowl, shorebirds, or seabirds. According to the EID, the closest shorebird habitat is ~2,000 feet away from the propose project site. The closest inland wading waterfowl habitat is ~9,500 feet away. The proposed project will have no impact on wildlife habitat.

d. Stream Modification

No stream modifications are required as a result of this proposed project.

4. Socio-Economic Impacts

The proposed project will not require the relocation of residents and people, and area employment will not be disrupted by the construction project. No properties will be impacted by the Uniform Relocation and Assistance Act.

5. Historical/Archeological and National Landmarks

Deering Oaks Pond is a nationally registered historic landmark. We have assurances from the City of Portland that this project will be implemented in coordination with City of Portland's Historic Preservation Department. The City of Portland will also coordinate with the Maine Historic Preservation Commission.

6. Endangered Species

The pond is not identified as a habitat for endangered or threatened species.

7. Coastal Zone Management

The project area is not part of an immediate sea coast.

8. Wild and Scenic Rivers

The project area is not within a wild and/or scenic river designation area.

IV. MITIGATION AND CONCLUSIONS

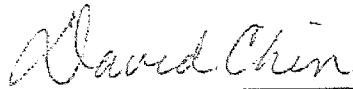
Short-term impacts to air quality (e.g. dust and equipment exhaust) may occur during construction. However, contract documents will require the contractor to control dust and comply with all applicable State and EPA air pollution control requirements. There will be minimal or no impacts to air quality. There will be no land use changes. There will be no environmentally sensitive areas that will be impacted.

With respect to impacts to water quality during construction, the contractor will be required to implement sedimentation and erosion control measures in accordance with MGCP. Appropriate erosion and sedimentation control will be utilized to prevent sedimentation in the areas of the pond and in the pond outlets connected to the City of Portland Combined Sewer System.

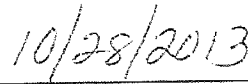
In addition, organic matter that is removed from the site during construction will be tested for contaminants and will be disposed of in accordance with all applicable local, state, and federal regulations/requirements. The potential for beneficial re-use of the sediment will be evaluated.

Overall water quality of the pond will be improved in the short-term and long-term. There may be minor and temporary short-term construction impacts affecting air quality and water quality, as well as the need to control the level of noise and traffic. Nevertheless, we have been assured by the City of Portland that any short-term impacts are expected to be properly mitigated and minimized.

Based on our review of available documentation, this proposed project is not expected to have any long-term adverse impacts on the environment.



David Chin, Environmental Engineer
Municipal Assistance Unit



Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

FINDING OF NO SIGNIFICANT IMPACT

To: All Interested Persons Date Issued: October 28, 2013

Pursuant to the Federal Water Pollution Control Act, as amended, we have made an environmental determination for the:

City of Portland, Maine
Public Services Department
55 Portland Street
Portland, Maine 04101-2921

Assigned EPA Grant Assistance # EM-96178401

Total Estimated Project Cost: \$1,111,111

Total EPA Grant Available: \$ 611,111

Background and Purpose

The Deering Oaks Pond, located in Deering Oaks Park in the City of Portland, Maine, is a 3.5 acre manmade pond/impoundment. The pond is drained twice a year for maintenance. The existing pond bottom in many areas is quite soft which hinders maintenance work. As a result, it is often difficult to remove sediment, trash, and deposited organic material, which compromises water quality. In addition, excess organic material helps to create and exacerbate algae blooms during the warm summer months.

The City of Portland has proposed to improve water quality by installing a new and more stable pond bottom that would allow more frequent and effective cleaning of the pond on an annual basis. The City of Portland will be provided with federal assistance (Public Law 111-88) in the amount of \$611,111, along with a required local match of \$500,000 (approved by the City of Portland as part of its FY2013 Capital Improvement Plan budget) to help fund this proposed endeavor.

The proposed project will also include the excavation and removal of the accumulated organic matter. The installation of a new and more stable pond bottom foundation will result in improved and more effective future maintenance. Both endeavors will enhance the water quality of the Deering Oaks Pond in the future.

Environmental Review Summary

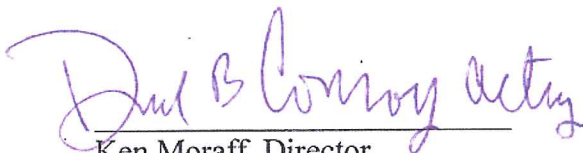
An Environmental Information Document (September 2013) was prepared by representatives of the City of Portland as part of its grant application submittal. Information from this specific document, as well as supplemental information (e.g. 9/25/13 memo) provided to the EPA has been utilized to support its EPA environmental determination.

All of the proposed work will take place within the existing pond and the immediate area adjacent to the pond. No adverse environmental impacts are anticipated from the project. A more detailed description and environmental review of the project is contained in the attached Environmental Assessment (EA) prepared by the Municipal Assistance Unit. Based on our review of the intended grant recipient's proposed scope of work and the corresponding EA document, EPA is issuing a Finding of No Significant Impact (FNSI).

Appropriate mitigation measures will be implemented to minimize any temporary minor air, traffic, noise, and any erosion impacts. No significant adverse impacts are expected as a result of the proposed project and more importantly, the water quality of the Deering Oaks Pond will be further protected as a result of the proposed project. Therefore, an Environmental Impact Statement will not be prepared.

Comments relative to this decision may be submitted to David Chin of the Municipal Assistance Unit on behalf of the EPA for review. Please note that no EPA reimbursement of eligible costs related to this proposed construction project will be approved for at least thirty (30) calendar days after the issuance of this Finding.

Additional documentation and information regarding this proposed project are available for public review at the Municipal Assistance Unit of Office of Ecosystem Protection at the EPA Regional Office in Boston and at the City of Portland, Maine's Public Services Department.




Ken Moraff, Director
Office of Ecosystem Protection

10-28-13

Date

Attachment

	U.S. ENVIRONMENTAL PROTECTION AGENCY Grant Agreement	GRANT NUMBER (FAIN): 96178401 MODIFICATION NUMBER: 0 PROGRAM CODE: EM	DATE OF AWARD 02/04/2014
		TYPE OF ACTION New	MAILING DATE 02/11/2014
		PAYMENT METHOD: ASAP	ACH# 10061
		RECIPIENT TYPE: Municipal	
RECIPIENT: Portland City of 389 Congress Street Portland, ME 04101 EIN: 01-6000032		PAYEE: City of Portland 389 Congress Street Portland, ME 04101	
PROJECT MANAGER Michael Farmer 389 Congress Street Portland, ME 04101 E-Mail: mfarmer@portlandmaine.gov Phone: 207-874-8845		EPA PROJECT OFFICER David Chin 5 Post Office Square, Suite 100, OEP06-3 Boston, MA 02109-3912 E-Mail: Chin.David@epamail.epa.gov Phone: 617-918-1764	
EPA GRANT SPECIALIST Diane Culhane Grants Management Office, OARM16-2 E-Mail: Culhane.Diane@epamail.epa.gov Phone: 617-918-1975			
PROJECT TITLE AND DESCRIPTION Deering Oaks Park Pond Bottom Accumulated sediment in the Deering Oaks Pond will be excavated and removed. A new pond bottom foundation will be constructed that will improve overall water quality.			
BUDGET PERIOD 03/29/2013 - 12/31/2014	PROJECT PERIOD 03/29/2013 - 12/31/2014	TOTAL BUDGET PERIOD COST \$1,111,111.00	TOTAL PROJECT PERIOD COST \$1,111,111.00
NOTICE OF AWARD			
Based on your Application dated 09/17/2013 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards \$611,111. EPA agrees to cost-share 55.00% of all approved budget period costs incurred, up to and not exceeding total federal funding of \$611,111. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA statutory provisions. The applicable regulatory provisions are 40 CFR Chapter 1, Subchapter B, and all terms and conditions of this agreement and any attachments.			
ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)		AWARD APPROVAL OFFICE	
ORGANIZATION / ADDRESS EPA New England 5 Post Office Square, Suite 100 Boston, MA 02109-3912		ORGANIZATION / ADDRESS U.S. EPA, Region 1 5 Post Office Square, Suite 100 Boston, MA 02109-3912	
THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY			
Digital signature applied by EPA Award Official for Michael Kenyon - Director Office of Administration & Resource Management Fred Weeks - Award Official delegate			DATE 02/04/2014

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$	\$ 611,111	\$ 611,111
EPA In-Kind Amount	\$	\$	\$ 0
Unexpended Prior Year Balance	\$	\$	\$ 0
Other Federal Funds	\$	\$	\$ 0
Recipient Contribution	\$	\$ 500,000	\$ 500,000
State Contribution	\$	\$	\$ 0
Local Contribution	\$	\$	\$ 0
Other Contribution	\$	\$	\$ 0
Allowable Project Cost	\$ 0	\$ 1,111,111	\$ 1,111,111

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.202 - Congressionally Mandated Projects	Public Law 111-88 Department of Interior Environment and Related Agencies Appropriations Act 2010	40 CFR PART 31

Fiscal									
Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
-	14010CG004	13	E4C	0120G9T	202B51	4192			611,111
									611,111

Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	\$0
2. Fringe Benefits	\$0
3. Travel	\$0
4. Equipment	\$0
5. Supplies	\$0
6. Contractual	\$1,111,111
7. Construction	\$0
8. Other	\$0
9. Total Direct Charges	\$1,111,111
10. Indirect Costs: % Base	\$0
11. Total (Share: Recipient 45.00 % Federal 55.00 %.)	\$1,111,111
12. Total Approved Assistance Amount	\$611,111
13. Program Income	\$0
14. Total EPA Amount Awarded This Action	\$611,111
15. Total EPA Amount Awarded To Date	\$611,111

Administrative Conditions

1. UTILIZATION OF SMALL, MINORITY AND WOMEN'S BUSINESS ENTERPRISES

GENERAL COMPLIANCE, 40 CFR, Part 33

The recipient agrees to comply with the requirements of EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 31.

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D

A recipient must negotiate with the appropriate EPA award official, or his/her designee, fair share objectives for MBE and WBE participation in procurement under the financial assistance agreements.

In accordance with 40 CFR, Section 33.411 some recipients may be exempt from the fair share objectives requirements described in 40 CFR, Part 33, Subpart D. Recipients should work with their DBE coordinator, if they think their organization may qualify for an exemption.

Current Fair Share Objective/Goal

The dollar amount of this assistance agreement or the total dollar amount of all of the recipient's financial assistance agreements in the current federal fiscal year from EPA is \$250,000, or more. MEDEP has negotiated the following, applicable MBE/WBE fair share objectives/goals with EPA as follows:

Combined	.64% MBE	1.64% WBE
----------	----------	-----------

Negotiating Fair Share Objectives/Goals

In accordance with 40 CFR, Part 33, Subpart D, established goals/objectives remain in effect for three fiscal years unless there are significant changes to the data supporting the fair share objectives. The recipient is required to follow requirements as outlined in 40 CFR Part 33, Subpart D when renegotiating the fair share objectives/goals.

SIX GOOD FAITH EFFORTS, 40 CFR, Part 33, Subpart C

Pursuant to 40 CFR, Section 33.301, the recipient agrees to make the following good faith efforts whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, and to require that sub-recipients, loan recipients, and prime contractors also comply. Records documenting compliance with the six good faith efforts shall be retained:

(a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.

(b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

(c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.

(d) Encourage contracting with a consortium of DBEs when a contract is too large for one of

these firms to handle individually.

(e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.

(f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

MBE/WBE REPORTING, 40 CFR, Part 33, Subpart E

MBE/WBE reporting is limited to annual reports and only required for assistance agreements where one or more the following conditions are met:

- (a) there are any funds budgeted in the contractual, equipment or construction lines of the award;
- (b) \$3,000 or more is included for supplies; or
- (c) there are funds budgeted for subawards or loans in which the expected budget(s) meet the conditions as described in items (a) and (b).

This award meets one or more of the conditions as described above, therefore, the recipient agrees to complete and submit a "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements and Interagency Agreements" report (EPA Form 5700-52A) on an annual basis.

When completing the annual report, recipients are instructed to check the box titled "annual" in section 1B of the form. For the final report, recipients are instructed to check the box indicated for the "last report" of the project in section 1B of the form. Annual reports are due by October 30th of each year. Final reports are due within 90 days after the end of the project period, whichever comes first.

The reporting requirement is based on planned procurements. Recipients with funds budgeted for non-supply procurement and/or \$3,000 or more in supplies are required to report annually whether the planned procurements take place during the reporting period or not. If no procurements take place during the reporting period, the recipient should check the box in section 5B when completing the form.

MBE/WBE reports should be sent to **[insert name and contact information of the appropriate DBE coordinator and Grants Specialist (optional)]**. The current EPA Form 5700-52A can be found at the EPA Office of Small Business Program's Home Page at http://www.epa.gov/osbp/dbe_reporting.htm

This provision represents an approved deviation from the MBE/WBE reporting requirements as described in 40 CFR, Part 33, Section 33.502; however, the other requirements outlined in 40 CFR Part 33 remain in effect, including the Fair Share Objectives negotiation as described in 40 CFR Part 33 Subpart D.

CONTRACT ADMINISTRATION PROVISIONS, 40 CFR, Section 33.302

The recipient agrees to comply with the contract administration provisions of 40 CFR, Section 33.302.

BIDDERS LIST, 40 CFR, Section 33.501(b) and (c)

Recipients of a Continuing Environmental Program Grant or other annual reporting grant, agree to create and maintain a bidders list. Recipients of an EPA financial assistance agreement to capitalize a revolving loan fund also agree to require entities receiving identified loans to create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. Please see 40 CFR, Section 33.501 (b) and (c) for specific requirements and exemptions.

2. General Terms and Conditions

The recipient agrees to comply with the applicable EPA general terms and conditions available at: <http://www.epa.gov/ogd/tc.htm>. These terms and conditions are in addition to the assurances and certifications made as part of the award and the terms, conditions or restrictions cited below.

Programmatic Conditions

STAG Earmark Programmatic Conditions City of Portland, Maine EPA Grant Assistance #EM- 96178401

1. It is the responsibility of the Grantee to comply with all the terms and conditions of the grant agreement, to efficiently and effectively manage grant funds within the approved budget, to complete the undertaking in a diligent and professional manner and to monitor and report performance.
2. The Grantee agrees to manage the project consistent with the intent of the March 29, 2010 U.S. EPA Headquarters memorandum, "Award of Grants and Cooperative Agreements for Special Projects and Programs Authorized by the Agency's FY 2010 Appropriations Act". The regulations at 40 CFR Part 31 apply to grants and cooperative agreements awarded to state and local governments. Furthermore, a listing of the Federal Laws and Executive Orders that apply to all EPA grants, including the projects authorized by the Agency's FY 2010 Appropriations Act, is contained within the aforementioned documents.
3. The Grantee is responsible for compliance with the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321 et seq. and Final Regulations promulgated under 40 Code of Federal Regulations, Part 6.

The Grantee agrees that final design work and /or any construction shall be undertaken in accordance with the results of the completed NEPA review and findings, including but not limited to, the implementation of measures the EPA and the other state and local entities have identified as reasonable to mitigate the environmental impacts of the project. Furthermore, the grant recipient agrees to ensure that the appropriate restrictions noted in EPA's environmental review determination are also adhered to. In the event the recipient fails to comply with any part of this condition, EPA will implement the remedies contained in 40 CFR Section 31.43. This may include requiring the return all of the federal funds that it has received from the EPA pertaining to this project. Any exceptions to the noted mitigation measures and restrictions would have to be approved by the EPA.

4. The Grantee agrees to submit final plans and specifications to the EPA Project Officer for administrative review.
5. The Grantee shall ensure that all permits required by Federal, State, or local statutes are

obtained. The Grantee further agrees to implement all of the requirements of the subject permits. In addition, the Grantee agrees to adhere to appropriate industry construction standards (e.g. Ten State Standards, AWWA Standards, etc...) as required or recommended by EPA or the State.

6. The Grantee agrees to procure all services, equipment, supplies, and construction awarded under this grant in accordance with 40 CFR Part 31, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

7. The Grantee shall comply with 49 CFR Part 24 which applies in the event the recipient procures land or if people are relocated. The Grantee shall obtain acceptable legal opinion for sites, easements and / or rights-of-way to ensure that they are free of any restrictions or encumbrances that might limit their use for the intended purpose, if necessary for project completion. This documentation must be kept on file and made available to EPA and to the State.

8. The Grantee agrees to provide access to the project site and all related construction records to EPA for the purpose of monitoring progress of the project.

9. The Grantee agrees to maintain all project records for three years after the issuance of EPA's final payment or until any litigation, appeal, claim or Federal audit that is begun before the end of the three-year period is completed and resolved, whichever is longer (40 CFR Part 31.42).

10. The Grantee agrees to submit a Request for Advance or Reimbursement (SF-270) to the designated EPA Project Officer for review and approval, as costs are incurred on the assistance agreement. The reimbursement request will also include copies of all supporting documentation such as invoices and paid receipts. The SF-270 may be submitted quarterly, but no more often than monthly. The EPA Project Officer will forward the approved reimbursement request to EPA's Finance Office for processing.

11. In accordance with 40 CFR 31.40 related to post award monitoring, the Grantee agrees to provide to the EPA Project Officer an annual progress report which may include information on each of the following areas: 1) a comparison of actual accomplishments to the outputs / outcomes established in the assistance agreement work plan for the period; 2) the reasons for slippage if established outputs / outcomes were not met; and 3) additional pertinent information, including, when appropriate, analysis and information of cost overruns or high unit costs.

12. In accordance with 40 CFR 31.40 (d), the Grantee agrees to inform EPA promptly in writing of any substantial project changes that may affect the grant amount, delay or accelerate the project schedule, or alter the project significantly, which may result in a grant amendment or will impair the ability of the Grantee to meet the outputs / outcomes specified in the assistance agreement work plan.

13. The Grantee agrees that costs incurred for the local share are subject to final EPA / State review. The Federal share of the grant will be limited to no more than 55% of the final cost for completing the scope of work described, regardless of the amount appropriated for the project. Approval of this project for Federal financial assistance does not imply a commitment of future Federal funds beyond current levels of Congressional appropriations.

14. If applicable (e.g. if federal financial assistance expenditures exceed \$500,000 annually), the Grantee shall comply with the Single Audit Act and the reporting requirements set forth in OMB Circular A-133.

15. EPA expects the recipient to make to make sufficient progress so as to reasonably ensure completion of the project within the project period, including any extensions. EPA will measure sufficient progress by examining the performance required under the work plan in conjunction with the milestone schedule, the time remaining for performance within the project period, and/or the availability of funds necessary to complete the project. If the recipient fails to make sufficient progress, EPA will take appropriate action.

APPENDIX G: FEMA FIRM MAP



APPROXIMATE SCALE



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)

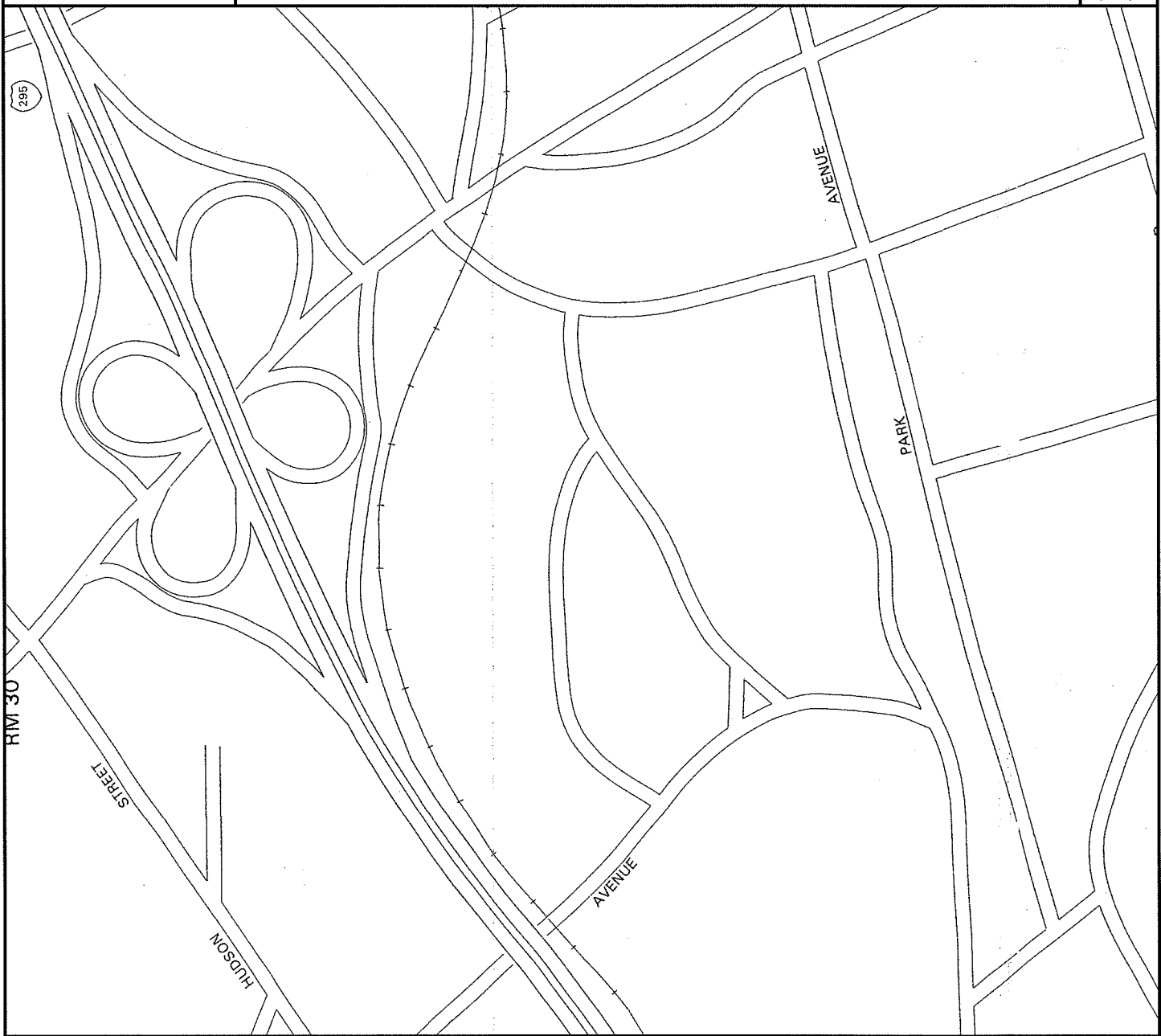
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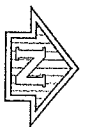
EFFECTIVE DATE:
JULY 17, 1986



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





APPROXIMATE SCALE

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 Oh-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

CITY OF PORTLAND PUBLIC SERVICES DEPARTMENT

CONTRACT DRAWINGS

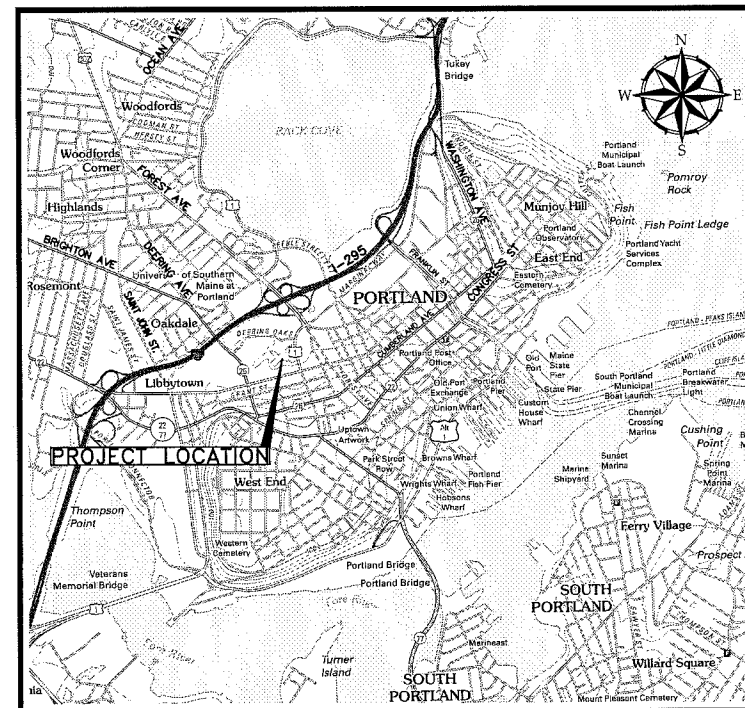
DEERING OAKS POND POND BOTTOM REPLACEMENT

YEAR
APPROVED
2014

BID NUMBER: #XXXX
PERMIT SET – NOT FOR CONSTRUCTION
MAY 2014

KATHERINE A. EARLEY DATE
CITY ENGINEER

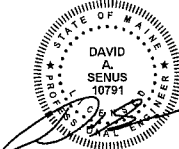
MIKE FARMER DATE
CITY PROJECT MANAGER



SITE LOCATION MAP

DRAWING INDEX

- G000	COVER SHEET
1 G001	GENERAL NOTES, LEGEND & ABBREVIATIONS
2 C-100	EXISTING CONDITIONS
3 C-101	EROSION & SEDIMENTATION CONTROL & EXCAVATION LIMITS PLAN
4 C-102	PROPOSED POND BOTTOM PLAN
5 C-103	PROPOSED POND BOTTOM LAYOUT
6 C-104	PROPOSED POND BOTTOM EXCAVATION INDEX & SECTIONS
7 D-200	CIVIL DETAILS – 1
8 D-201	CIVIL DETAILS – 2
9 D-202	CIVIL DETAILS – 3


DAVID A. SENIUS
10791
5/27/2014
SEAL & SIGNATURE

Z:\222804-Portland-Gen. Eng. Services\wp\46 Deering Oaks\Drawings\General\203846.dwg, May 27, 2014, 1:21pm



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Portland, Maine 04102
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COMMITMENT & INTEGRITY DRIVE RESULTS

GENERAL NOTES:

- EXISTING CONDITIONS BASE MAP WAS COMPILED USING THE FOLLOWING DATA:
 - PLANIMETRIC AND TOPOGRAPHIC DATA PROVIDED BY THE CITY OF PORTLAND DPW ENGINEERING OFFICE COMPILED USING 2000 AERIAL IMAGES BY BRADSTREET CONSULTANTS OF MANCHESTER, MAINE.
 - POND RETAINING WALL REPLACEMENT PLANS BY EPDA DATED 1980 (APPROX.).
 - FOUNTAIN REPLACEMENT AT DEERING OAKS PARK RECORD DRAWINGS PREPARED BY RBOC DATED 12/18/2006.
 - MELLEN STREET RECORD DRAWINGS PREPARED BY WOODARD & CURRAN DATED 4/2014.
- VERTICAL DATUM IS REFERENCED TO NAVD83, HORIZONTAL DATUM IS REFERENCED TO STATE PLANE NAD 1983 (FEET), MAINE WEST ZONE.
- PUSH PROBES COLLECTED BY HALEY & ALDRICH IN SPRING 2013, REFER TO CONSTRUCT SPECIFICATIONS.
- THE UTILITY LOCATIONS SHOWN IN PLAN AND PROFILE ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR. CONTACT THE CITY IMMEDIATELY UPON DISCOVERING ANY CONFLICTS WITH EXISTING AND PROPOSED UTILITY LOCATIONS. NOT ALL EXISTING UTILITIES ARE SHOWN ON PLANS.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND CITY. CONTACTS ARE LISTED IN SPECIFICATIONS. NOTIFY UTILITY COMPANIES WITHIN 48 HOURS OF WORK ACTIVITY ADJACENT TO THOSE UTILITIES.
- CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK, ALLOWING SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF BURIED UTILITIES. CONTRACTOR SHALL CONTACT "DIG SAFE", TELEPHONE 888-344-7233, PRIOR TO EXCAVATION.
- RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, GRASS, ETC.). RESTORATION OF PAVED SURFACES, GRAVEL SURFACES, DRIVEWAYS, AND LAWNS DAMAGED BY CONSTRUCTION ACTIVITIES OUTSIDE OF LIMITS OF WORK INDICATED ON THE PLANS SHALL BE PERFORMED AT NO ADDITIONAL COST TO OWNER. ANY CURB OR SIDEWALK DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN KIND AND SHALL CONFORM TO CITY OF PORTLAND AND MAINE DOT SPECIFICATIONS AT NO ADDITIONAL COST TO OWNER.
- PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO THE CITY.
- EXISTING FACILITIES SHALL BE REMOVED AND PROTECTED DURING CONSTRUCTION AS REQUIRED TO COMPLETE THE WORK. CITY RETAINS RIGHT TO KEEP ANY AND ALL REMOVED FACILITIES. CONTRACTOR SHALL DISPOSE OF ANY REMOVED FACILITY AT THE REQUEST OF CITY AT CONTRACTOR'S EXPENSE.
- ALL TREES IN THE VICINITY OF THE CONSTRUCTION ACCESS SHALL BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLAN TO THE TRAFFIC ENGINEER AT LEAST 7 DAYS BEFORE BEGINNING CONSTRUCTION. THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE SUBJECT TO APPROVAL BY THE TRAFFIC ENGINEER, WHO MAY ATTACH SPECIAL CONDITIONS TO, OR REQUIRE MODIFICATIONS OF, THE TRAFFIC CONTROL PLAN. WORK SHALL NOT BEGIN UNTIL THE PLAN IS APPROVED BY THE TRAFFIC ENGINEER.
- DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT CITY OR PRIVATELY OWNED LOTS, UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY CITY AND/OR LAND OWNER.
- RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
- ALL WORK ASSOCIATED WITH THE PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH ARTICLES VI, VII, AND IX OF CHAPTER 25-STREETS, SIDEWALKS, AND OTHER PUBLIC PLACES OF THE CITY OF PORTLAND CODE OF ORDINANCES.
- THE CITY OF PORTLAND ENGINEERING DIVISION REQUIRES THAT UPON COMPLETION OF CONSTRUCTION, A COMPLETE SET OF "RECORD" DRAWINGS THAT REFLECT ANY AND ALL MODIFICATIONS TO THE DESIGN BE SUBMITTED TO THE DIVISION. THESE DRAWINGS SHALL BE SUBMITTED IN BOTH DIGITAL AND HARD COPY FORMAT AS DEFINED IN THE SPECIFICATIONS PRIOR TO PAYMENT OF FINAL RETAINAGE.
- WORK IS PROPOSED IN CLOSE PROXIMITY TO EXISTING UTILITIES. PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION SHALL BE INCIDENTAL TO THE PAY ITEM UNDER WHICH WORK TO INSTALL SAID UTILITY IS PERFORMED.
- PROVIDE 6-INCHES OF LOAM AND MDOOT SEEDING METHOD #1 IN ALL LAWN AREAS DISTURBED BY CONTRACTOR'S OPERATIONS.
- IF CONTRACTOR PROPOSES TO TEMPORARILY STOCKPILE ANY SURPLUS SOIL AND ROCK IN THE CITY OF PORTLAND, THE CONTRACTOR SHALL OBTAIN APPROVAL FOR EACH STOCKPILE LOCATION FROM THE ENGINEER. IF CONTRACTOR PROPOSES TO PERMANENTLY STOCKPILE ANY SURPLUS SOIL AND ROCK ON PROPERTY IN THE CITY OF PORTLAND, THE CONTRACTOR MUST OBTAIN ANY SITE PLAN PERMITS REQUIRED FROM THE CITY PLANNING AUTHORITY OR ANY FILL PERMITS REQUIRED FROM MDEP OR U.S. ARMY CORPS OF ENGINEERS. BOTH TEMPORARY AND PERMANENT STOCKPILE LOCATIONS SHALL MEET THE APPLICABLE SETBACK REQUIREMENTS IN THE CITY LAND USE CODE AND SHALL RECEIVE PROPER STABILIZATION AND EROSION & SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH APPROVED SOIL EROSION & WATER POLLUTION CONTROL PLAN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING PARK AVENUE FREE OF SEDIMENT. A STABILIZED CONSTRUCTION EXIT SHALL BE CONSTRUCTED AT ALL ACCESS POINTS AND PARK AVENUE WILL BE SWEEPED ON A DAILY BASIS OR AT A MORE FREQUENT RATE AS NECESSARY AS REQUESTED BY THE CITY.

SYMBOLS

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER MANHOLE	⊙	⊙
STORM DRAIN MANHOLE	⊙	⊙
CATCH BASIN W/ HEADSTONE	⊙	⊙
CATCH BASIN, FIELD INLET	⊙	⊙
UTILITY POLE W/GUY	⊙	⊙
UTILITY POLE	⊙	⊙
WATER GATE	⊙	⊙
WATER VALVE	⊙	⊙
WATER SHUT OFF	⊙	⊙
HYDRANT	⊙	⊙
SIGN	⊙	⊙
TREE	⊙	⊙
IRON PIN (FOUND)	⊙	⊙
MONUMENTS (FOUND)	⊙	⊙
PROBE & NUMBER	⊙	⊙
MONITORING WELL	⊙	⊙
BORING	⊙	⊙
SEDIMENT SAMPLE	⊙	⊙
SPOT GRADE	⊙	⊙
ROADWAY BITUMINOUS PAVEMENT	⊙	⊙
BLOCK MATTING	⊙	⊙
TEMPORARY GRAVEL ACCESS	⊙	⊙

LINE TYPES

DESCRIPTION	EXISTING	PROPOSED
CONTOUR (1' INTERVAL)	---	---
CONTOUR (INDEX)	---	---
SANITARY SEWER	---	---
STORM DRAIN	---	---
UNDERDRAIN	---	---
WATER MAIN	---	---
UNDERGROUND ELECTRIC	---	---
GAS LINE	---	---
OVERHEAD ELECTRIC	---	---
PROPERTY LINE	---	---
RIGHT OF WAY	---	---
EASEMENT	---	---
EDGE OF VEGETATION	---	---
FENCE	---	---
CENTERLINE	---	---
RETAINING WALL	---	---
CURB	---	---
EDGE OF PAVEMENT	---	---
EDGE OF GRAVEL	---	---
CONTOUR (1' INTERVAL)	---	---
CONTOUR (INDEX)	---	---
CURB	---	---
EDGE OF PAVEMENT	---	---
EDGE OF GRAVEL	---	---
TEMPORARY SEDIMENT BARRIER	---	---
LIMIT OF WORK	---	---

ABBREVIATIONS

& A.G.	AND ABOVE GROUND
BIT	BITUMINOUS
B/W	BETWEEN
CB	CATCH BASIN
CI	CAST IRON
CMP	CENTRAL MAINE POWER
CMP CONC	CORRUGATED METAL PIPE CONCRETE
DI	DUCTILE IRON
DIA.	DIAMETER
DMH	DRAIN MANHOLE
DTL	DETAIL
E	UNDERGROUND ELECTRICAL
EL	ELEVATION
E.O.P.	EDGE OF PAVEMENT EXIST.
FF	FINISH FLOOR
FT	FOOT/FEET
G	GAS MAIN
GS	GAS SERVICE
GALV.	GALVANIZED
GRAN.	GRANITE
HDPE	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
INV.	INVERT
LF	LINEAR FEET
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MIN.	MINIMUM
MON	MONUMENT
N.I.C.	NOT IN CONTRACT
NO.	NO REFUSAL
NR	NOT TO SCALE
N.T.S.	NOT TO SCALE
OE	OVERHEAD ELECTRIC
OH	OVERHEAD
±	PLUS OR MINUS
LLS	LICENSED LAND SURVEYOR
PROP.	PROPOSED
P.T.	POINT
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R.O.W.	RIGHT-OF-WAY
ROP	REINFORCED CONCRETE PIPE
RENF.	REINFORCED
REQ'D	REQUIRED
S	SLOPE (FT./FT.)
SD	SEWER
SD	STORM DRAIN
SMH	SEWER MANHOLE
SCH	SCHEDULE
STA.	STATION
TYP.	TYPICAL
UP.	UTILITY POLE
VC	VITRIFIED CLAY
VIT.	VITRIFIED CLAY
W	WEST
W	WATER
W	WITH
W	WATERMAIN
WS	WATER SERVICE
WV	WATER VALVE

41 HUTCHINS DRIVE
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COMMITMENT & INTEGRITY DRIVE RESULTS

REFERENCES:

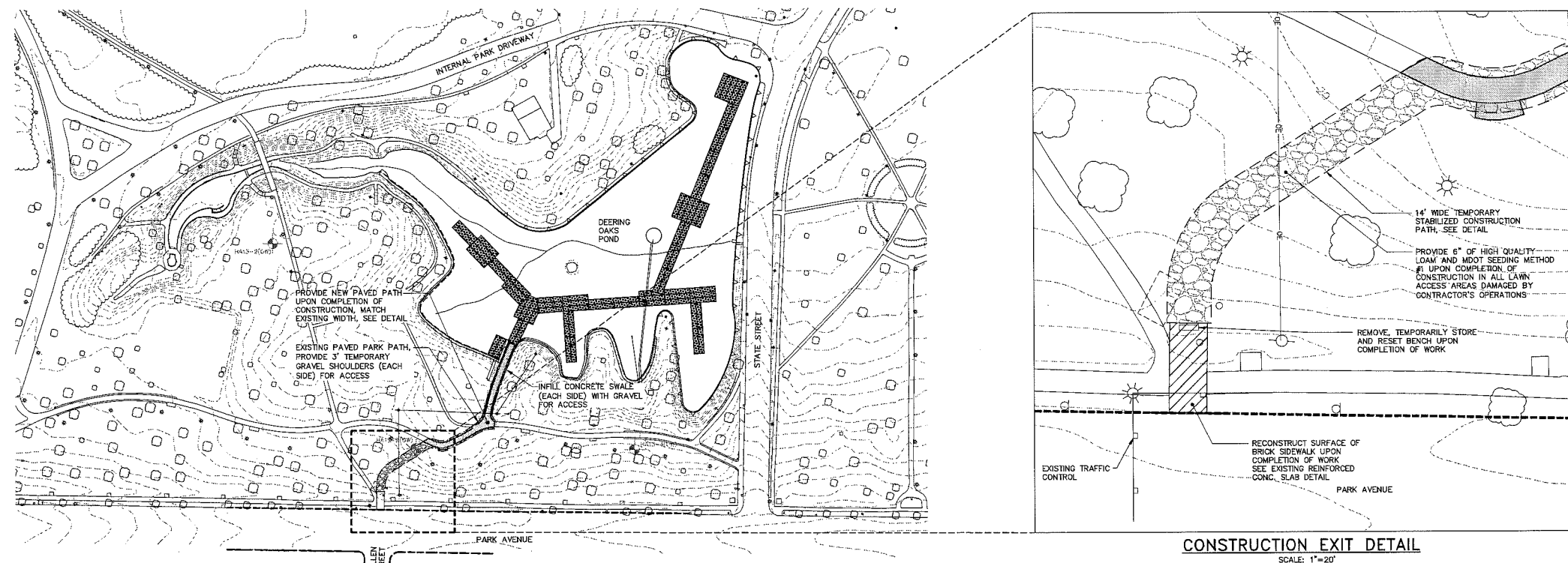
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DRAWN BY:	BCM
CHECKED BY:	DAS
SCALE:	AS NOTED
DATE:	MAY 2014

DEERING OAKS POND
POND BOTTOM REPLACEMENT
GENERAL NOTES, LEGEND &
ABBREVIATIONS

CITY OF PORTLAND, MAINE
PUBLIC SERVICES DEPARTMENT
ENGINEERING SECTION



SHEET #
1 OF 9
PLAN NUMBER
G-001

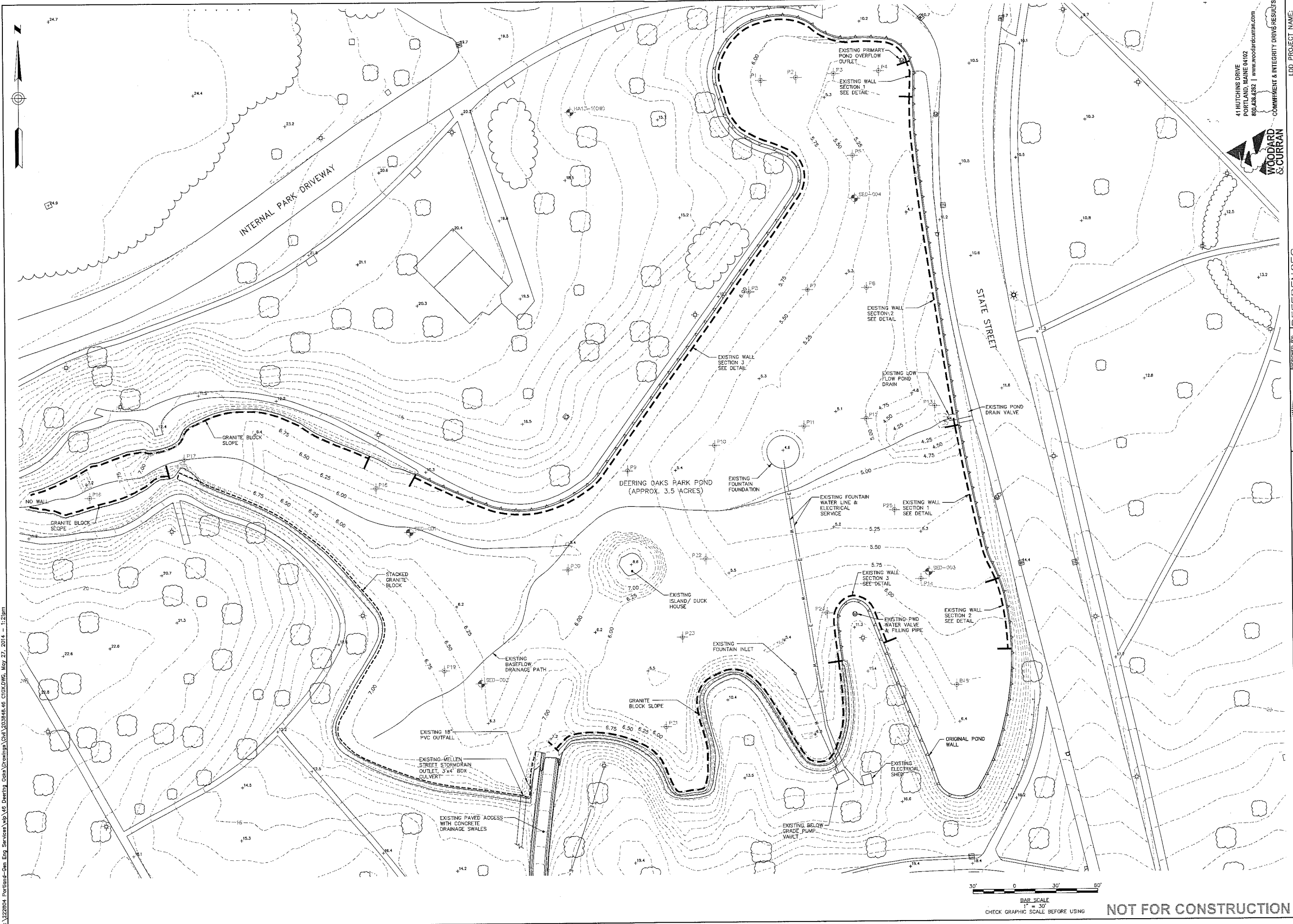


POND CONSTRUCTION ACCESS PLAN
SCALE: 1"=100'

CONSTRUCTION EXIT DETAIL
SCALE: 1"=20'

NOT FOR CONSTRUCTION

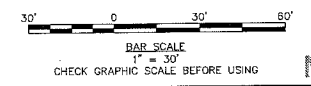
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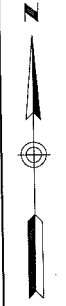
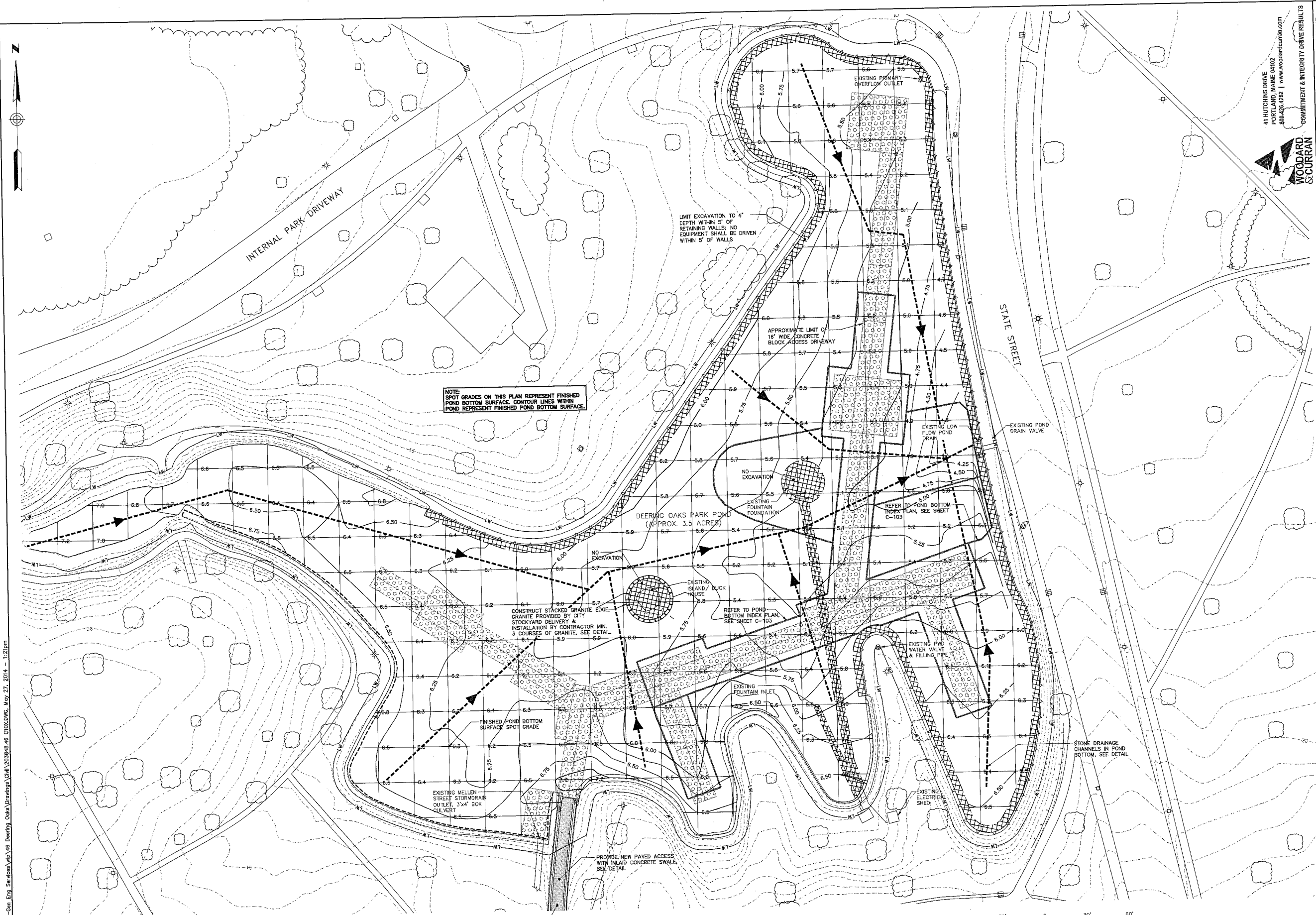
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 PORTLAND, MAINE 04102
 810.426.2382 | www.woodardcurran.com
WOODARD & CURRAN
 COMMITMENT & INTEGRITY DRIVE RESULTS

<p>DESIGNED BY: BGM/JJS DRAWN BY: BGM CHECKED BY: DAS SCALE: AS NOTED DATE: MAY 2014</p>	<p>PROJECT NAME: LDD PROJECT NAME: N/A DRAWING NAME: 203846.46 C10X.DWG FIELD BOOK USED: N/A</p>
<p>DEERING OAKS POND POND BOTTOM REPLACEMENT</p>	
<p>CITY OF PORTLAND, MAINE PUBLIC SERVICES DEPARTMENT ENGINEERING SECTION</p>	
<p>EXISTING CONDITIONS</p>	
<p>SHEET # 2 OF 9 PLAN NUMBER C-100</p>	



NOT FOR CONSTRUCTION

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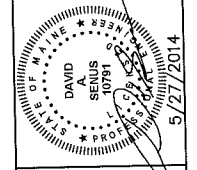


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LOD PROJECT NAME: N/A
DRAWING NAME: 203948-46 C10X.DWG
FIELD BOOK USED: N/A

REFERENCES:

DESIGNED BY:	BCM/ALS
DRAWN BY:	BCM
CHECKED BY:	DAS
SCALE:	AS NOTED
DATE:	MAY 2014



DEERING OAKS POND
POND BOTTOM REPLACEMENT
PROPOSED POND
BOTTOM PLAN

CITY OF PORTLAND, MAINE
PUBLIC SERVICES DEPARTMENT
ENGINEERING SECTION



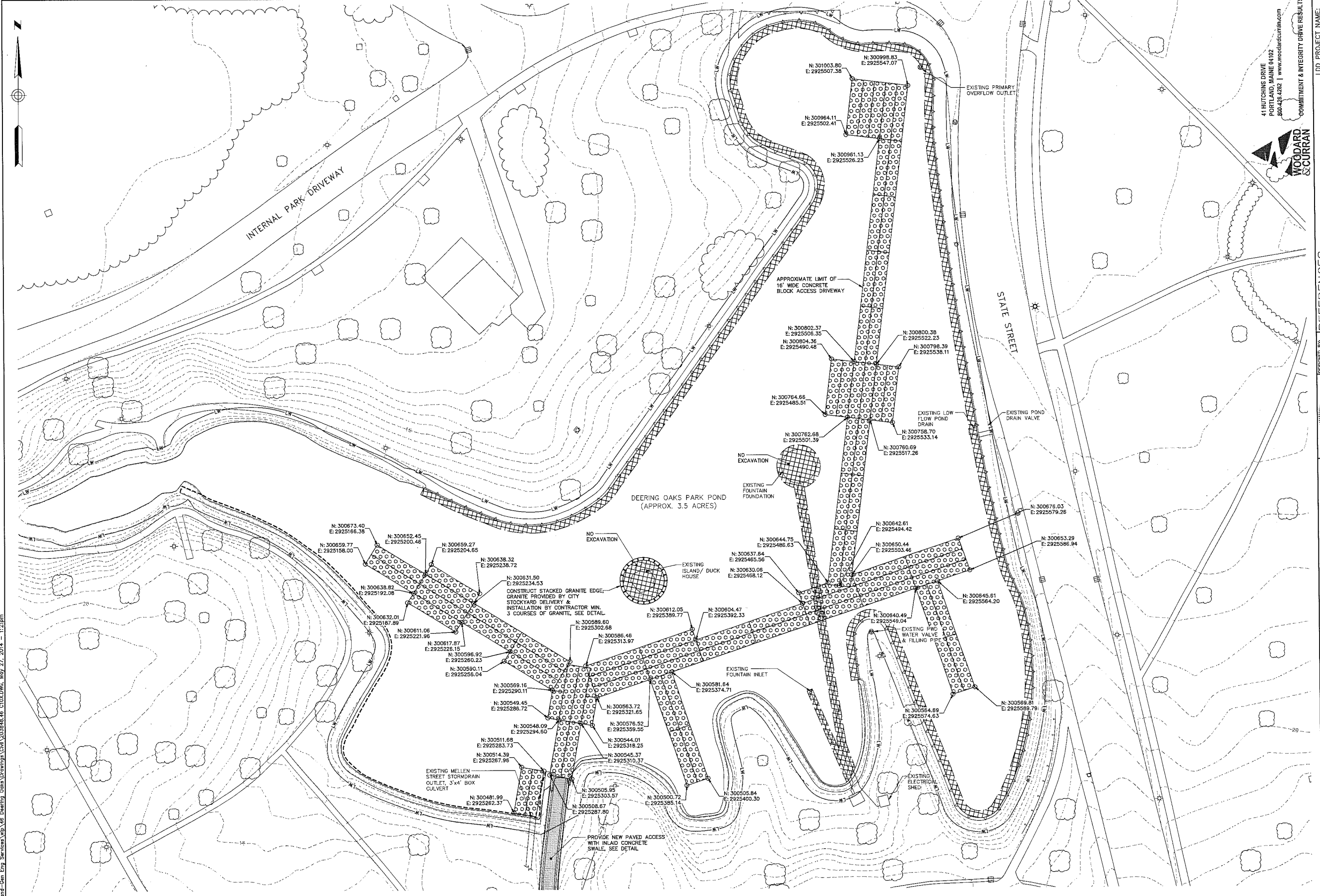
SHEET #
4 OF 9
PLAN NUMBER
C-102

SEE SHEET G-001 FOR
CONSTRUCTION ACCESS PLAN



BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION



Z:\222804 Portland-Cen Eng Services\wp\48 Deering Oaks Drawings\04\03948.46 C10X.DWG, May 27, 2014, 1:12pm

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**WOODARD
 & CURRAN**
 COMMITMENT & INTEGRITY DRIVE RESULTS

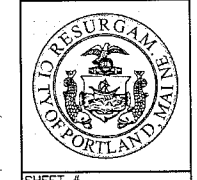
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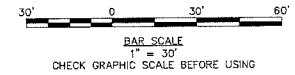
DESIGNED BY:	BCM/ALS
DRAWN BY:	BCM
CHECKED BY:	DAS
SCALE:	AS NOTED
DATE:	MAY 2014

DEERING OAKS POND
 POND BOTTOM REPLACEMENT
 CONCRETE BLOCK
 LAYOUT PLAN

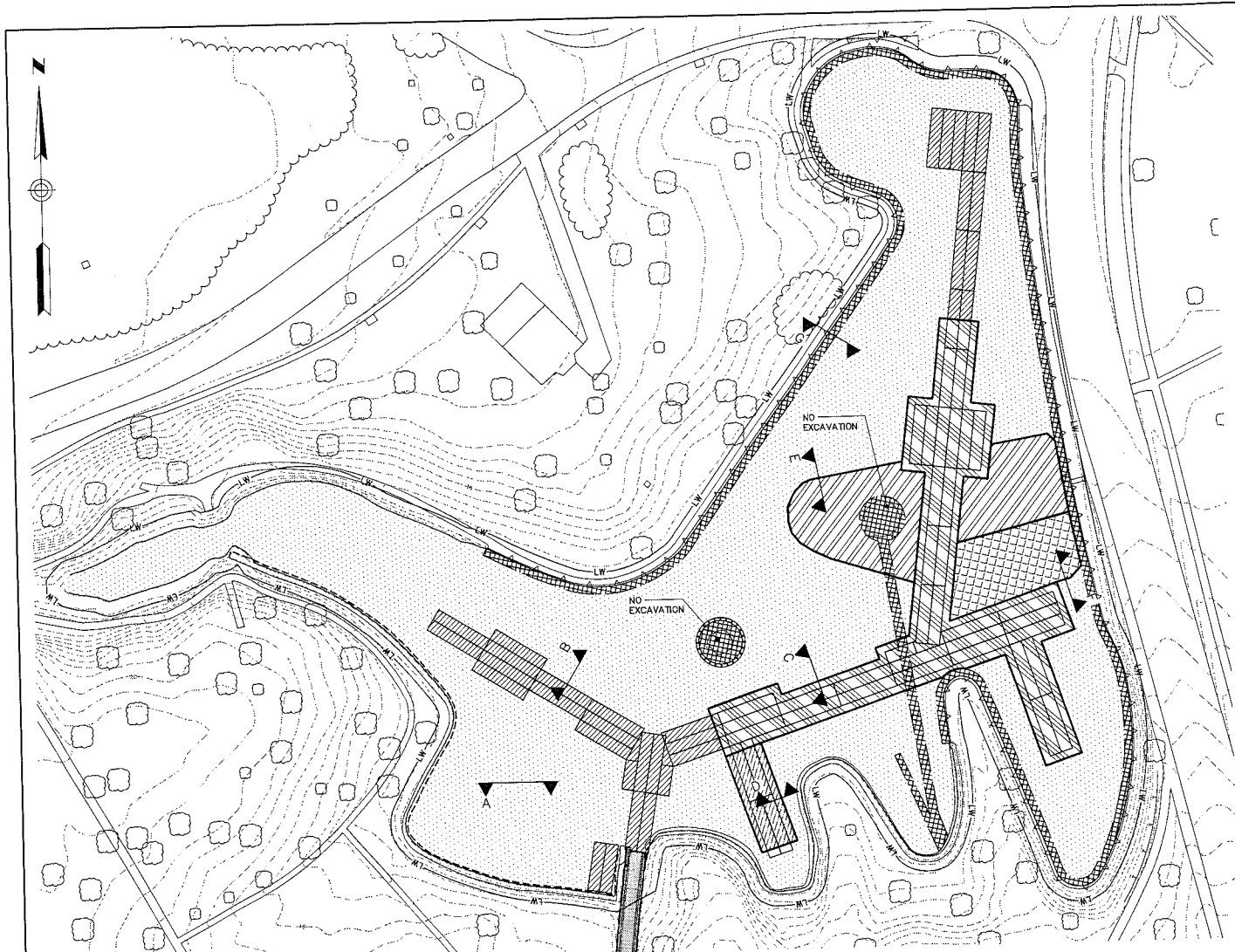
CITY OF PORTLAND, MAINE
 PUBLIC SERVICES DEPARTMENT
 ENGINEERING SECTION



SHEET #
 5 OF 9
 PLAN NUMBER
 C-103



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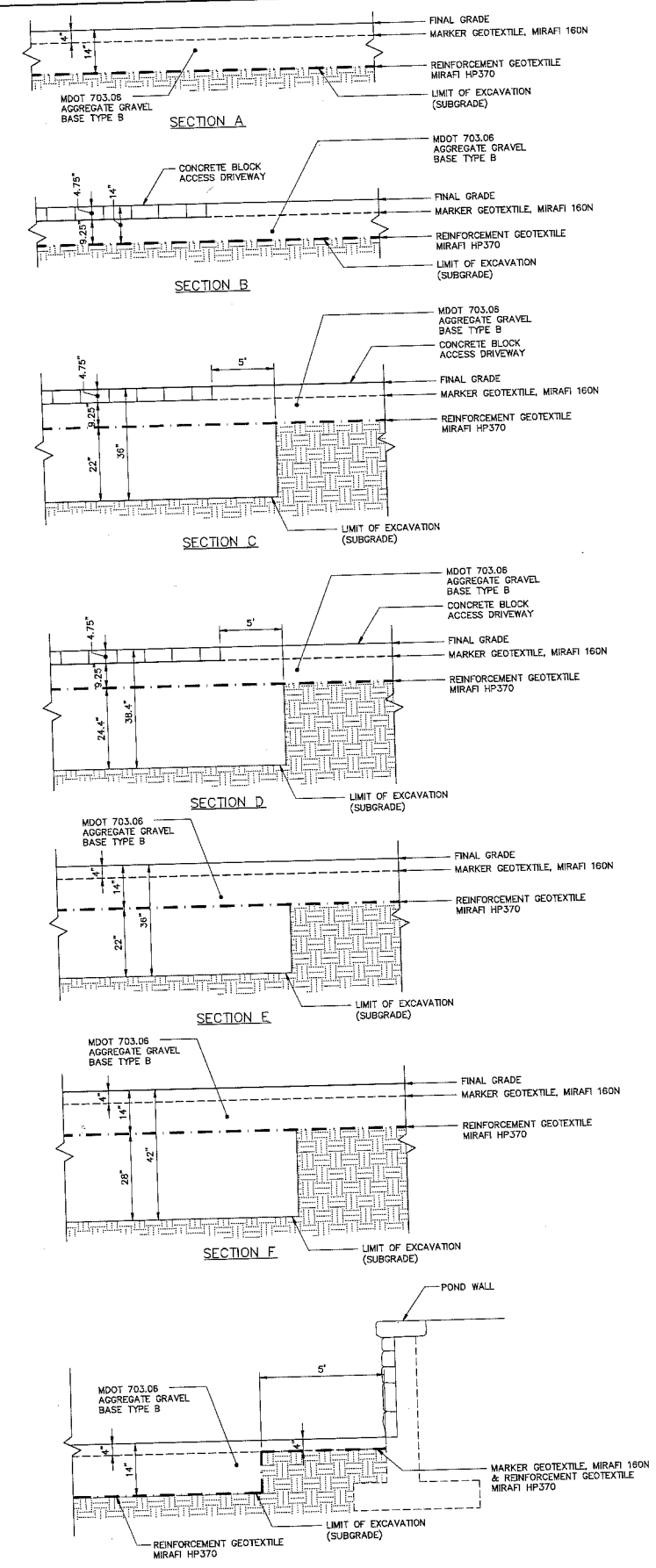


POND BOTTOM INDEX PLAN
SCALE: 1"=50'

BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

HATCH INDEX

SECTION A	
SECTION B	
SECTION C	
SECTION D	
SECTION E	
SECTION F	
SECTION G	
	NO EXCAVATION



POND BOTTOM EXCAVATION SECTIONS
N.T.S.

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COMMITMENT & INTEGRITY DRIVE RESULTS

LDD PROJECT NAME: N/A
DRAWING NAME: 203948.46 C10X.DWG
FIELD BOOK USED: N/A

REFERENCES:

DESIGNED BY: BOM/JS
DRAWN BY: BOM
CHECKED BY: DAS
SCALE: AS NOTED
DATE: MAY 2014

5/27/2014

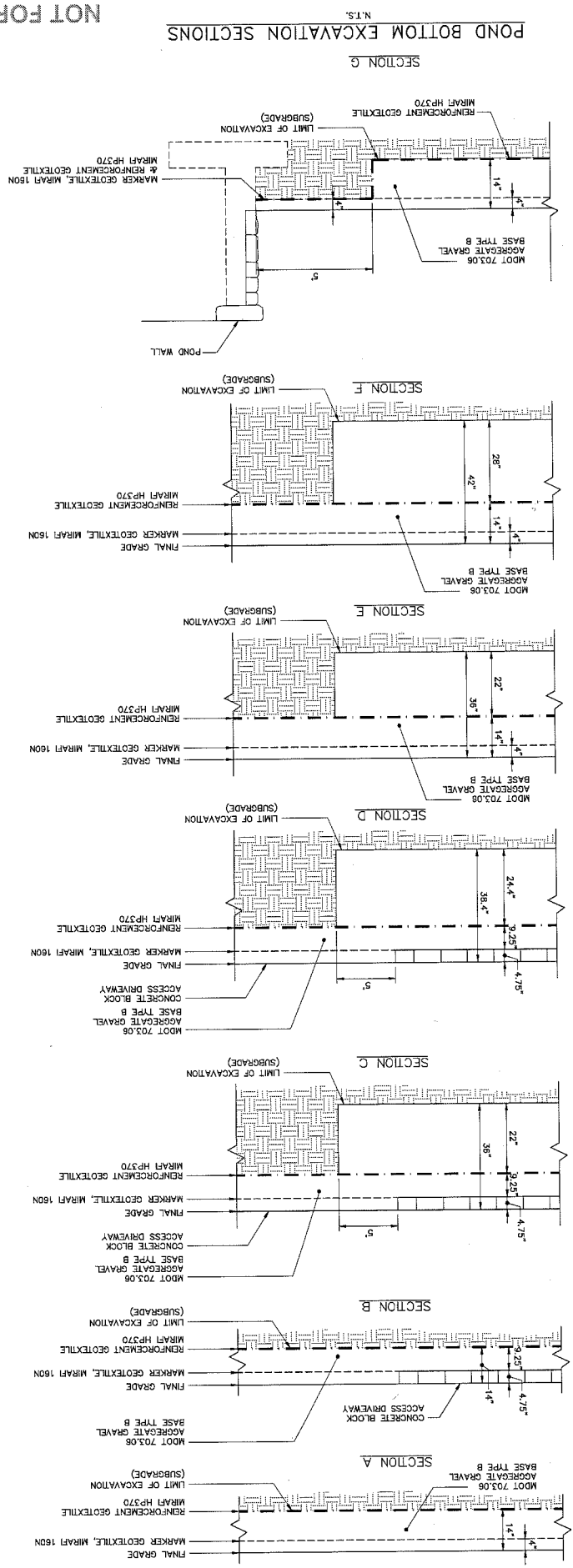
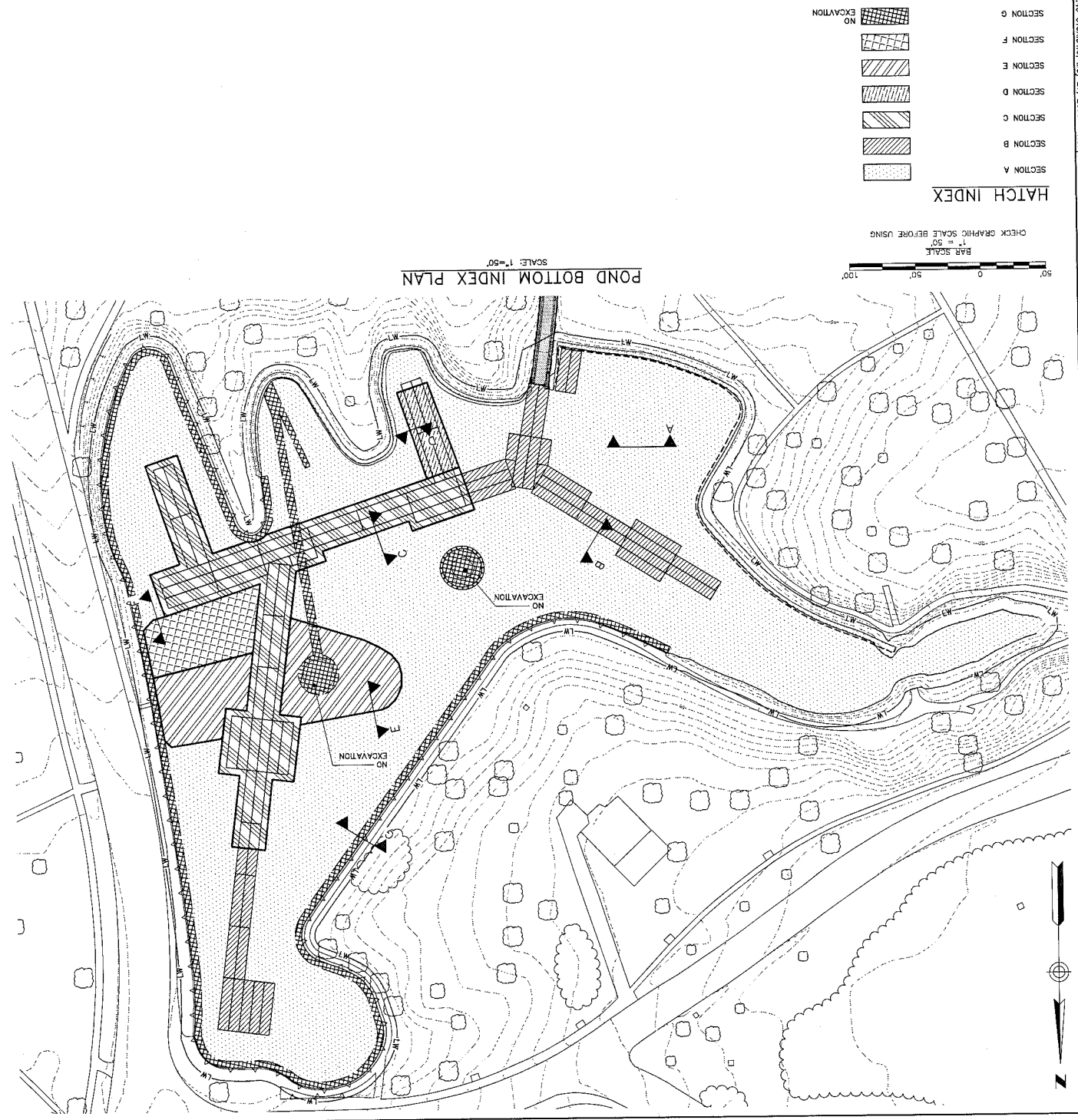
DEERING OAKS POND
POND BOTTOM REPLACEMENT
PROPOSED POND BOTTOM
EXCAVATION INDEX &
SECTIONS

CITY OF PORTLAND, MAINE
PUBLIC SERVICES DEPARTMENT
ENGINEERING SECTION



SHEET # 6 OF 9
PLAN NUMBER C-104

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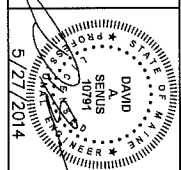
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PLAN NUMBER
C-104



CITY OF PORTLAND, MAINE
PUBLIC SERVICES DEPARTMENT
ENGINEERING SECTION

DEERING OAKS POND
POND BOTTOM REPLACEMENT
PROPOSED POND BOTTOM
EXCAVATION INDEX &
SECTIONS

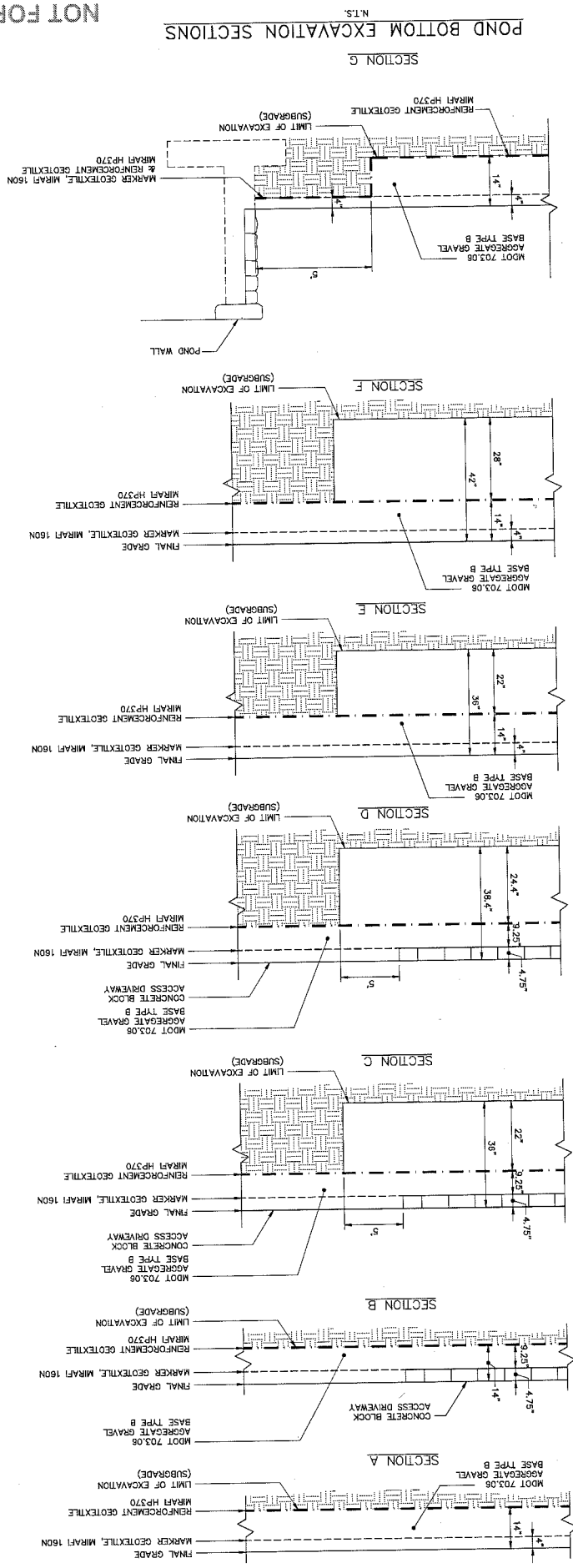
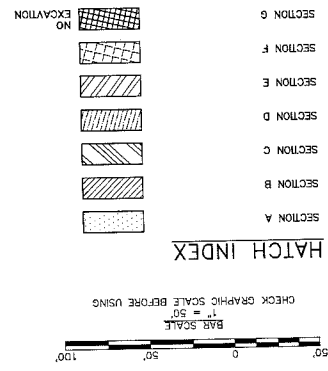
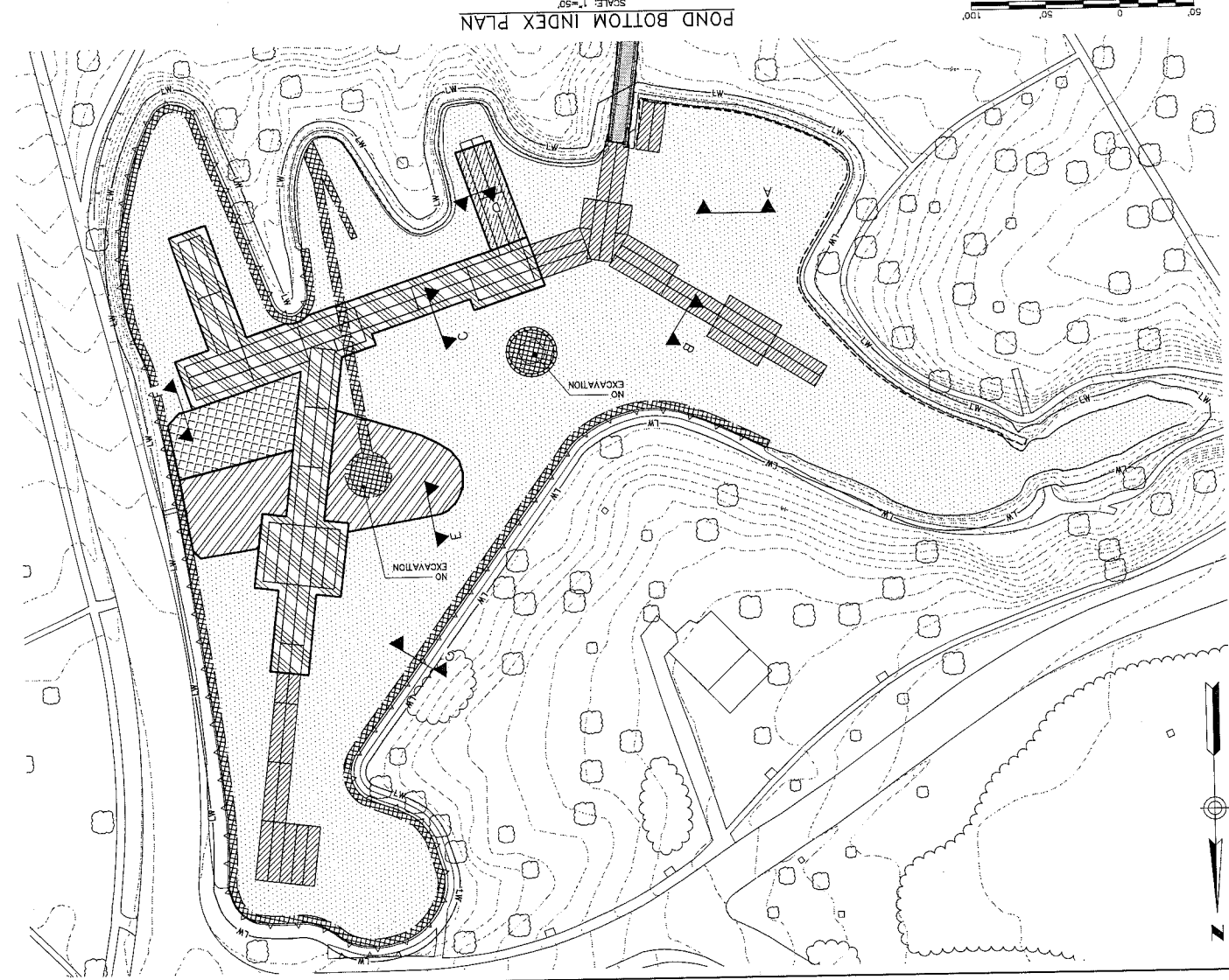


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CHECKED BY: [Blank]
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DATE: MAY 2014

REFERENCES:

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FIELD BOOK USED: N/A

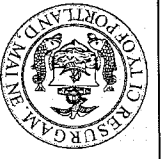
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POND BOTTOM EXCAVATION SECTIONS
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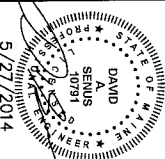
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SHEET # 6 OF 9



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PUBLIC SERVICES DEPARTMENT
ENGINEERING SECTION

DEERING OAKS POND
POND BOTTOM REPLACEMENT
PROPOSED POND BOTTOM
EXCAVATION INDEX &
SECTIONS



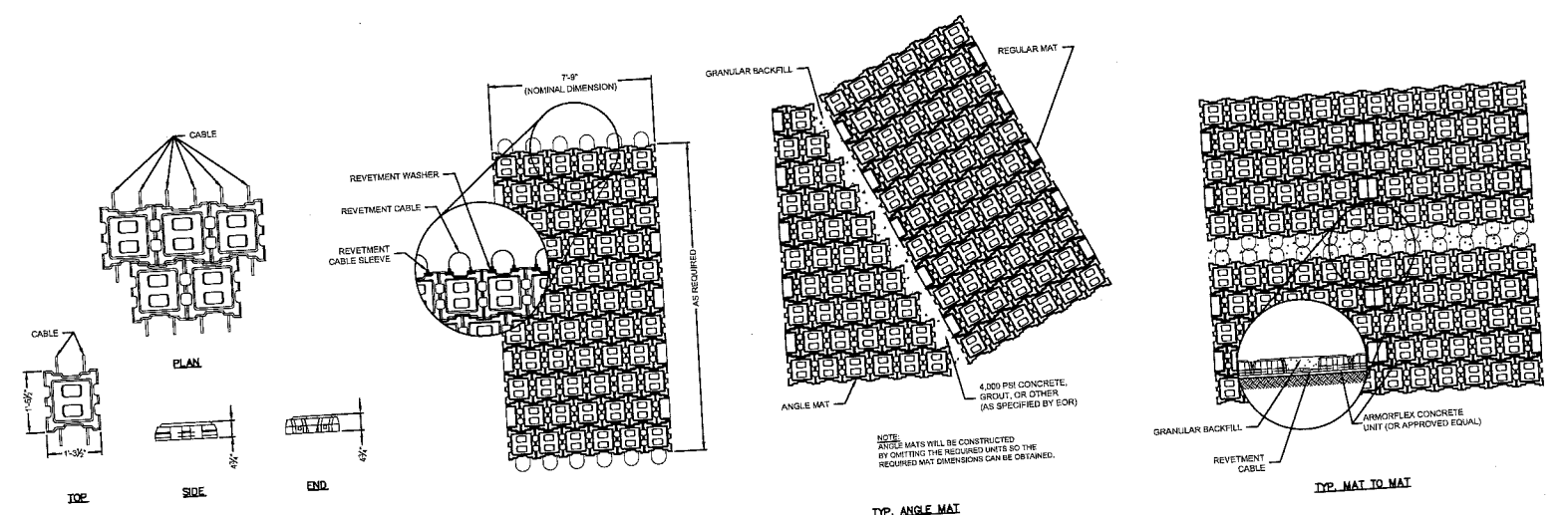
DESIGNED BY	BOB AJS
CHECKED BY	DAIS
SCALE	AS NOTED
DATE	MAY 2014

REFERENCES:

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LOD PROJECT NAME: N/A
DRAWING NAME: 203848_46_C10X.DWG
FIELD BOOK USED: N/A

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STANDARD MEDIUM OPEN CLASS 40 ARMORTEC BLOCK BY CONTECH OR APPROVED EQUAL.

BLOCK MAT DETAIL
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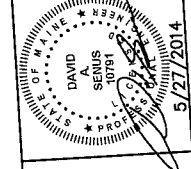


COMMITMENT & INTEGRITY DRIVE RESULTS

LDD PROJECT NAME: N/A
DRAWING NAME: 203848.46 DOX.DWG
FIELD BOOK USED: N/A

REFERENCES:

DESIGNED BY:	REVIEWED BY:
DRAWN BY:	CHECKED BY:
DATE:	DATE:
AS NOTED	MAY 2014



DEERING OAKS POND
POND BOTTOM REPLACEMENT
CIVIL DETAILS - 2

CITY OF PORTLAND, MAINE
PUBLIC SERVICES DEPARTMENT
ENGINEERING SECTION



SHEET #
8 OF 9
PLAN NUMBER
D-201

NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL NOTES

Temporary Erosion Control

Contractor shall prepare and submit a soil erosion and water pollution control plan to engineer in accordance with section 658.

Measure	Dates For Use	Timing, Activity, and Location
Sedimentation Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and around material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsock, Siltsover Inlet Filter, or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 1	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 85% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events or every 60 days, apply 100-150 lbs (2.5 bales) per 1,000 sq. ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation or every 60 days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower. Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and maintain and repair as necessary.

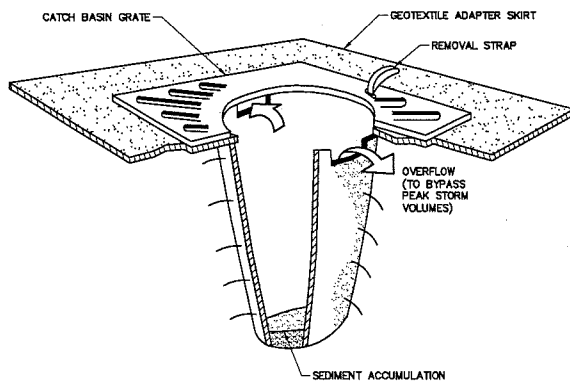
Permanent Erosion Control:

Measure	Dates For Use	Timing, Activity, and Location
Pavement - Base Course - Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	This mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rills/riplets.
Sediment Barrier	Sediment build-up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build-up and structure blockages. Slow flow/ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build-up.
Construction Entrance	Sedimentation of roadways. Off-site dust complaints.



NOTES:

CATCH BASIN PROTECTION TO BE "SILTSAK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).

INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.

INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

TEMPORARY INLET PROTECTION

N.T.S.

EROSION AND SEDIMENTATION CONTROL NOTES

TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, HYDRAULIC MULCH, HAY AND STRAW MULCH, EROSION CONTROL BLANKET, TURF REINFORCED MATTING, RIPRAP AND TEMPORARY SEEDING. TEMPORARY SEDIMENT CONTROL MEASURES INCLUDE THE USE OF SILT FENCE, EROSION CONTROL MIX BERMS, FLUNGE POOLS, CHECK DAMS, SEDIMENT TRAPS, CATCH BASIN SEDIMENT COLLECTION BAGS AND GEOTEXTILE FILTER BAGS. PERMANENT MEASURES INCLUDE THE USE OF RIPRAP AT EXPOSED STORMDRAIN AND CULVERT INLETS AND OUTLETS, ARMORED SWALES AND SLOPES AND PERMANENT VEGETATION.

GENERAL:

- A. THE PROJECT SHALL CONFORM WITH THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT, IF APPLICABLE.
- B. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMP'S HANDBOOK PUBLISHED BY THE MAINE DEP UNLESS OTHERWISE NOTED IN THESE PLANS. [HTTP://WWW.MAINE.GOV/2109/2008STAND/ESCOMPFS/](http://www.maine.gov/dep/2109/2008stand/escompfs/)
- C. ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.

- D. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.
- E. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE SITE WHENEVER POSSIBLE WHILE ALLOWING PROPER SITE DEVELOPMENT.
- F. CONSTRUCTION STAGING SHALL BE CONDUCTED IN A WAY TO MINIMIZE THE POTENTIAL FOR STORMWATER RUN-ON TO DISTURBED AREAS.
- G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

- I. FOR SEEDING AREAS, PERMANENT STABILIZATION MEANS THAT SOIL OF THE DISTURBED AREA IS COVERED WITH REASONABLY THICK UNIFORM STAND OF PERMANENT GRASS SPECIES, FREE FROM SIZABLE THIN OR BARE SPOTS.
- II. FOR SOODED AREAS, PERMANENT STABILIZATION MEANS THAT COMPLETE BINDING OF THE SOO ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOO OR DIE OFF.
- III. FOR MULCHED AREAS, PERMANENT STABILIZATION MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.
- IV. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE. STONE MUST BE SIZED APPROPRIATELY AND IN ACCORDANCE WITH SECTION E-6 OF THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL.
- V. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE ASPHALT BINDER COURSE.
- VI. FOR OPEN CHANNELS, LEVEL SPREADERS, ENGINEERED BUFFERS OR OTHER DESIGNED STORMWATER CONVEYANCE STRUCTURE, PERMANENT STABILIZATION MEANS THE CHANNELIZED AREA(S) IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH APPROVED RIPRAP OR OTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE SHALL BE NO EVIDENCE OF SLUMPING, UNDERCUTTING OR DOWNCUTTING OF THE DESIGNED CHANNEL.

- H. IF THE AREA WILL REMAIN UNWORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE AND WILL NOT BE BUILT ON, THEN IMMEDIATELY PROVIDE PERMANENT STABILIZATION USING VEGETATION THROUGH PLANTING, SEEDING, SOO OR THROUGH THE USE OF PERMANENT MULCH OR RIPRAP. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS. MEND AREAS OF DISTURBED, OVERLY-COMPACTED SUBSOIL WITH TOPSOIL OR COMPOST AND LIGHTLY TILL 2-3" OF SOIL. AMENDMENTS INTO THE TOP 8" OF SOIL.
- I. PERMANENT SEEDING SPECIFICATION: IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND AUGUST 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDED WITH ARDOSTOCK WINTER RYE OR MULCHED AT SPECIFIED RATES. SEE WINTER SEEDING AND MULCHING SPECIFICATIONS FOR STABILIZATION AFTER NOVEMBER 1.

- II. APPLY TOPSOIL TO A DEPTH OF 8 INCHES. IN COMPACTED AREAS TILL 2-3" OF COMPOST INTO UPPER 8" OF DISTURBED SOIL AND THEN APPLY 8 INCHES OF TOPSOIL.
- III. APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 35 LBS PER 1000 SQUARE FEET AND GRANULAR, COMMERCIAL-GRADE FERTILIZER 10-10-10 AT A RATE OF 18 LBS PER 1000 SQUARE FEET.
- IV. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES. APPLY HAY OR STRAW MULCH AT A RATE OF 2.5 BALES PER 1000 SQUARE FEET AND ANCHOR AS NECESSARY.

- J. PROTECT ALL SEEDING AREAS WITH MULCH OR EROSION CONTROL BLANKET IN AREAS OF SHEET OR CONCENTRATED FLOWS. MULCH ALL AREAS SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. SCHEDULE SEEDING OR SOODING TO AVOID FAILURE DUE TO SUMMER DROUGHT AND FALL FROST. NEWLY SEEDER AREAS SHOULD BE PROTECTED FROM VEHICLE TRAFFIC, PEDESTRIAN TRAFFIC AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE OR SURFACE EROSION IS EVIDENT.
- K. DITCH LININGS AND RIPRAP INLET AND OUTLET PROTECTION SHALL BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR INSTALLATION OF THE CULVERT.
- L. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1 OR AS OTHERWISE NOTED, IN THE BASE OF DITCHES AND ANY DISTURBED AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE (WETLANDS AND WATER RESOURCES). EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN S1000R OR APPROVED EQUAL. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- M. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURE UPON STABILIZATION OF PROJECT AREA & COST SHALL BE INCIDENTAL TO CONTRACT.

- WINTER CONDITIONS
 - A. WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 1. IF AREAS WITHIN THE CONSTRUCTION AREA ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15 THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS.

- GOOD HOUSEKEEPING AND POLLUTION PREVENTION
 - A. SPILL PREVENTION CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER RUNOFF AND APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING AND IMPLEMENTATION.
 - B. DURING CONSTRUCTION, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUND OR SURFACE WATERS MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO INFILTRATION AREAS. AN "INFILTRATION AREA" IS ANY ARE OF THE SITE THAT BY DESIGN, OR AS A RESULTS OF SOIL AND TOPOGRAPHY, ACCUMULATES RUNOFF THAT INFILTRATES IN THE SOIL. DICES, BERMS, Sumps AND OTHER FORMS OF TEMPORARY SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
 - C. LOCATE ALL MATERIAL STOCKPILES WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.
 - D. TAKE ALL REASONABLE MEASURES TO MINIMIZE DUST RESULTING FROM THE PROJECT. OIL MAY NOT BE USED FOR DUST CONTROL.
 - E. LOCATE ALL LITTER, CONSTRUCTION DEBRIS AND CONSTRUCTION CHEMICALS WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.
 - F. TRENCH OR FOUNDATION DE-WATERING MUST BE SPREAD THROUGH SUFFICIENT NATURAL BUFFERS THAT HAVE CAPACITY TO INFILTRATE THE PUMPED WATER OR SHOULD BE PUMPED TO DESIGNATED CONSTRUCTION DEWATERING DEVICES AS DESCRIBED IN THE MAINE EROSION AND SEDIMENT CONTROL BMP'S HANDBOOK.
 - G. SEDIMENTS AND SOIL MATERIALS SHOULD BE SWEEP FROM PAVED SURFACES AT THE END OF EACH WORKDAY OR PRIOR TO RAIN EVENTS, WHENEVER POSSIBLE.

- INSPECTION AND MAINTENANCE
 - A. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT, THE MAINE EROSION AND SEDIMENT CONTROL BMP'S HANDBOOK OR ANY MUNICIPAL REQUIREMENTS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF ADDITIONAL BMP'S OR MODIFICATIONS TO BMP'S ARE NECESSARY, THE MODIFICATIONS MUST BE IMPLEMENTED WITH 7 CALENDAR DAYS OR PRIOR TO ANY PRECIPITATION EVENT. ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
 - B. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT BY THE CONTRACTOR, SUMMARIZING THE SCOPE OF THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO THE OPERATION OF EROSION AND SEDIMENT CONTROL BMP'S, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE CONSTRUCTION AREA. THE INSPECTION LOG SHOULD BE DELIVERED TO THE PROPERTY OWNER OR RESPONSIBLE CONTRACTING ENTITY UPON COMPLETION OF THE PROJECT.

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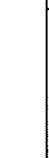
COMMITMENT & INTEGRITY DRIVE RESULTS

REFERENCES:

DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: 5/27/2014

DEERING OAKS POND
POND BOTTOM REPLACEMENT

CITY OF PORTLAND, MAINE
PUBLIC SERVICES DEPARTMENT
ENGINEERING SECTION



SHEET #
9 OF 9
PLAN NUMBER
D-202

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