Public Facilities Committee Agenda

City of Newton
In City Council

Wednesday, March 23, 2022

The Public Facilities Committee will hold this meeting as a virtual meeting on Wednesday, March 23, 2022, at 7:00 pm. To view this meeting using Zoom use this link: https://us02web.zoom.us/j/84938171929 or call 1-646-558-8656 and use the following Meeting ID: 849 3817 1929

Item Scheduled for Discussion:

Public Hearing

#202-22 **Request for a sanitary sewer main extension in Winchester Street**
LIZBETH HEYER, on behalf of 2Life Holdings, LLC, 30 Wallingford Road, Brighton, petitioning for a sanitary sewer main extension in WINCHESTER STREET beginning at the existing sanitary sewer manhole at the intersection of Winchester Street & Nahanton Street to be extended northerly ± 305 feet with 8-inch PVC pipe and 4 new manholes. (Ward 8)
PETITIONER TO PAY ENTIRE COST

Referred to Public Facilities and Finance Committees

#111-22 **Request for Stormwater Management and Erosion Control Ordinance**
HER HONOR THE MAYOR requesting Chapter 29 to be amended by adding a new Article VIII and for Chapter 17, Sections 16 and 21 **Fees to be Paid to the Department of Public Works** and **General Fine** of the City of Newton Revised Ordinances to be amended to add defining language, provide for enforcement, establish permit fees and fines for violations of the stormwater management and erosion control ordinance established in Article VIII.
Public Facilities Held 7-0 on 01/19/22

#204-22 **Reappointment of Steven Ferrey to the Sustainable Materials Management Commission**
HER HONOR THE MAYOR reappointing STEVEN FERREY, 25 Huntington Road, Newton, as a member of the SOLID WASTE COMMISSION for a term to expire January 15, 2025. (60 days 5/20/22)

The location of this meeting is accessible and reasonable accommodations will be provided to persons with disabilities who require assistance. If you need a reasonable accommodation, please contact the city of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: jfairley@newtonma.gov or (617) 796-1253. The city's TTY/TDD direct line is: 617-796-1089. For the Telecommunications Relay Service (TRS), please dial 711.

Chair's Note: *The Public Facilities Committee will meet jointly with the Programs & Services Committee to discuss the following item. The link for this portion of the meeting is as follows: https://us02web.zoom.us/j/85894086747*

Referred to Programs & Services and Public Facilities Committee

#134-22 **Discussion with City Staff regarding how to integrate a year-round pool into the CIP**

COUNCILORS KELLEY, LIPOF, LAREDO, NORTON, BOWMAN, CROSSLEY, MALAKIE, LUCAS, DOWNS, DANBERG, GREENBERG, RYAN, KRINTZMAN, KALIS, MARKIEWICZ, NOEL, OLIVER, ALBRIGHT, HUMPHREY, BAKER, AND GROSSMAN requesting a discussion with the Mayor, Public Buildings Department, and Parks, Recreation and Culture about how to integrate a year-round pool into the CIP and comprehensive planning for public recreational opportunities, specifically in the Albemarle area

Respectfully submitted,

Alison M. Leary, Chair

202-22

RECEIVED
2022 MAR -4 PM 1:46
CITY CLERK
NEWTON, MA. 02459

PETITION FOR DRAIN AND SEWER

City of Newton

Date: March 1, 2022

To the City Council of Newton:

The undersigned believing that the public convenience the public health require it respectfully petition that a main drain and/or common sewer be constructed in

677 Winchester Street

Insert street, way, or private lands, give names of owners

from 677 Winchester Street

to 333 Nahanton Street

in that part of Newton called Oak Hill

Signatures of petitioners here:	*Addresses*
	Lizbeth Heyer 2Life Holdings, LLC 30 Wallingford Road Brighton, MA 02135

202-22

SCHLESINGER AND BUCHBINDER, LLP
ATTORNEYS AT LAW

STEPHEN J. BUCHBINDER
ALAN J. SCHLESINGER
LEONARD M. DAVIDSON
A. MIRIAM JAFFE
SHERMAN H. STARR, JR.
JUDITH L. MELIDEO-PREBLE
BARBARA D. DALLIS
KATHRYN K. WINTERS
JULIE B. ROSS
KATHERINE BRAUCHER ADAMS
FRANKLIN J. SCHWARZER
ADAM M. SCHECTER

1200 WALNUT STREET
NEWTON, MASSACHUSETTS 02461-1267
TELEPHONE (617) 965-3500
FAX (617) 965-6824
www.sab-law.com

E-Mail: aschlesinger@sab-law.com

March 1, 2022

BY ELECTRONIC MAIL

Ms. Cassidy Flynn
Committee Clerk
1000 Commonwealth Avenue
Newton, MA 02459-1449

Re: 667 Winchester Street (the "Property")

Dear Cassidy,

Enclosed please find an original Petition for Drain and Sewer application in addition to the following:

1. Copy of the Petition for Drain and Sewer; and
2. Plans prepared by Stantec consisting of two (2) sheets, as follows:
   a. Sanitary Main Plan dated March 1, 2022 (Sheet C-102); and
   b. Sanitary Main Profile dated March 1, 2022 (Sheet C-103).

By way of background, the enclosed petition seeks to extend the existing City of Newton sewer main located on Winchester Street adjacent to the intersection of Winchester Street and Nahanton Street. The sewer extension is necessary to accommodate the construction of the congregate living facility approved by the City Council in Council Order #179-21, and the petitioner's intention is that the relocation be conditional upon the exercise of that special permit. 2Life Holdings, LLC will bear the costs of the extension, subject to its approval of final construction costs estimate.

Please feel free to call me if you have any questions.

Sincerely,

Alan J. Schlesinger

AJS/kba
enclosures

cc: (By electronic mail, w/enclosures)
Mr. John Daghlian, Associate City Engineer
Jonah Temple, Associate City Solicitor

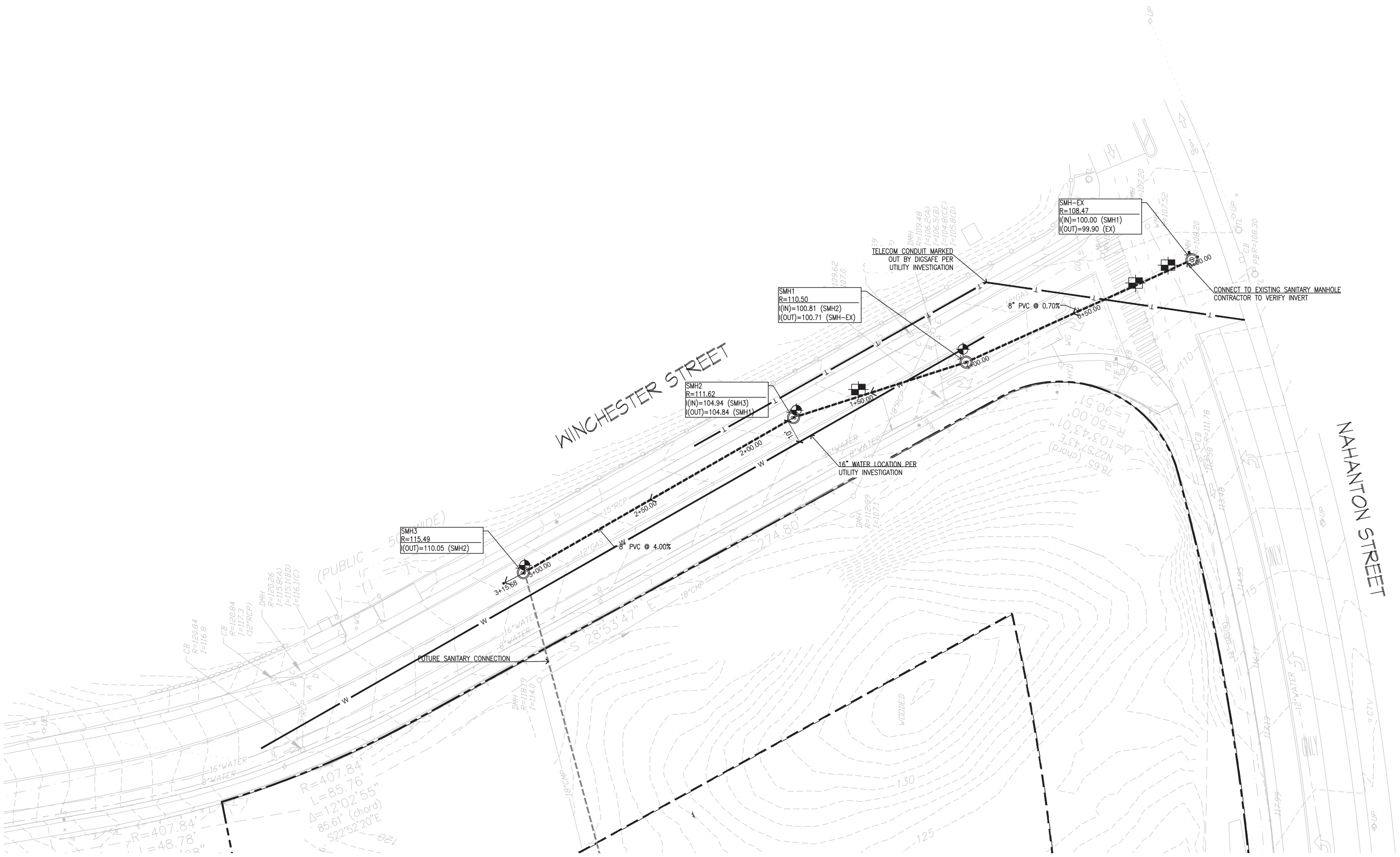
NO.	DATE	ISSUE
01	03/02/2022	PUBLIC FACILITIES COMMITTEE

NOTES:

1. WINCHESTER STREET MUST BE REPAVED CURB LINE TO CURB LINE FOR EXTENTS OF UTILITY WORK.

UTILITY LEGEND

- SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- BORING LOCATIO
- TEST PIT LOCATION



SEAL

KEY PLAN

PERKINS EASTMAN
525 William Penn Pl Ste 2510
Pittsburgh, PA 15219
T: +1 412 456 0900
F: +1 412 456 0906

Owner:
2 LIFE COMMUNITIES
30 Wallingford Road
Brighton, MA 02135

Construction Manager:
DELLBROOK
One Adams Place 859 Willard St
Quincy, MA 02169

Civil / Site / Landscape:
STANTEC
141 Portland St.
Boston, MA 02114

Structural:
VEITAS & VEITAS ENGINEERS, INC
639 Granite Street
Braintree, MA 02184

MEP consultant:
PETERSEN ENGINEERING, INC.
127 Parrott Ave.
Portsmouth, NH 03801

Lighting Consultant:
HILBISH MCGEE LIGHTING DESIGN
402 Peebles Street
Sewickley, PA 15143

Food Service:
FOOD FACILITIES CONCEPTS, INC.
1100 Washington Ave, Suite 302
Carnegie, PA 15106

Acoustical Consultant:
CAVANAUGH TOCCI
327F Boston Post Road
Sudbury, MA 01776

PROJECT TITLE:
2LIFE - OPUS

667 WINCHESTER STREET
NEWTON, MA 02459

PROJECT No: 66571

DRAWING TITLE:
SANITARY MAIN PLAN

NORTH

SCALE: 1" = 20'

C-102

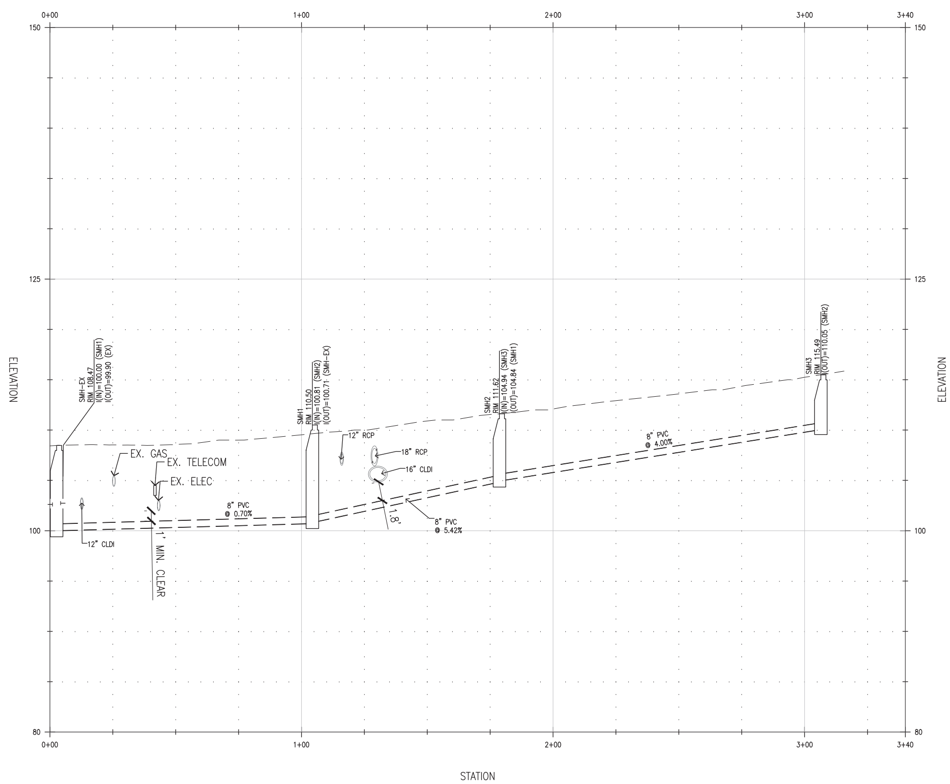
PUBLIC FACILITIES COMMITTEE

03/01/2022

C:\REVIT LOCAL\66571_2Life-Newton_R19_a.krankova.rvt
1/21/2022 9:59:05 AM

NO.	DATE	ISSUE
01	03/02/2022	PUBLIC FACILITIES COMMITTEE

PROFILE NAME: PROFILE – SEWER
VERTICAL EXAGERATION: 4:1



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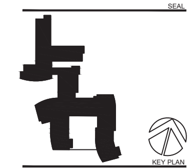
1/21/2022 9:59:05 AM

SEAL



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CAVANAUGH TOCCI
327F Boston Post Road
Sudbury, MA 01776

PROJECT TITLE:
2LIFE - OPUS

667 WINCHESTER STREET
NEWTON, MA 02459

PROJECT No: 66571

DRAWING TITLE:
SANITARY MAIN PROFILE

SCALE: 1" = 20'

C-103

PUBLIC FACILITIES COMMITTEE

03/01/2022

CITY OF NEWTON

Department of Public Works

ENGINEERING DIVISION

Memorandum

To: Councilor Alison Leary, Facilities Committee Chair.

From: John Daghlian, Associate City Engineer

Re: 2Life -Opus 667 Winchester Street

Date: March 18, 2022

CC: Jim Mcgonagle, Commissioner
Shawna Sullivan, Chief of Staff
Lou Taverna, PE City Engineer
Thomas Fitzgerald, Director of Utilities
Doug Valovcin, Deputy Director
Cassidy Flynn, Associate City Clerk

In reference to the above location, the following are my comments for a plan entitled:

2Life – Opus
Sanitary Main Plan
667 Winchester Street
Prepared by: Stantec
Dated: 3-1-2022

Executive Summary:

As part of the Special Permit that was granted for this site a sanitary sewer main extension is needed to provide service for the development. The plan indicates a main extension beginning at the existing sanitary sewer manhole at the intersection of Winchester Street & Nahanton Street be extended northerly +/- 305 feet with 8-inch PVC pipe and 4 new manholes.

The applicant is funding 100% of the construction costs. Winchester Street is under a 5 -year moratorium, as such once the new sewer main is installed, tested, and approved by the City Engineer the road shall be milled and overlayed with Super Pavement the City's standard from

curb line to curb line for the entire limits of the construction. Due to the volume of traffic a minimum of two Police Officers will be required during construction.

Final construction plans need to be stamped by Massachusetts Professional Engineer and the following notes and details must be added to the plan. Prior to any construction a Traffic Management Plan will be required for review and approval by the Traffic Division & Police Department. A preconstruction meeting will be required with the DPW, Newton Police & Utilities and the contractor of record prior to commencement. Early construction ahead warning signs, variable message boards and neighborhood notifications shall be executed two weeks prior to the start of construction.

Conditions & Special Provisions:

1. Finalized utility connection plan reflecting these changes that meets the minimal design standards of the City of Newton must be submitted for approval.

2. The contractor of record shall apply for a Utility Connection, Street Opening & Trench Permits with the DPW prior to any construction with appropriate Bonds, Certificate of Insurance & Dig Safe clearance. The Utilities Division must be contacted for utility mark outs as the City is not a member of Dig Safe call 617-796-1640. *(This note shall be on the final construction plans).*

3. The proposed PVC pipe shall be replaced with 8" SDR-35 PVC pipe.

4. If any service connections or private utilities are disturbed by the contractor of record during construction, they shall be updated and replaced to the City's current Construction Standards. *(This note shall be on the final construction plans).*

5. All downstream catch basins shall be retrofitted with an approved type of siltation control devices, details of this shall be submitted to the City Engineer for approval. The contractor of record shall maintain these catch basins throughout the construction process and ensure that street and property flooding does not occur during construction. *(This note shall be on the final construction plans).*

6. The proposed main and service connections shall be pressure tested in accordance with the City's Construction Standards. A representative of the Engineering Division shall witness the testing, 48-hours prior notification shall be given to the inspection. *(This note shall be on the final construction plans).*

7. All sewer manholes shall be vacuum tested in accordance with the City's Construction Standards & Specifications. *(This note shall be on the final construction plans).*

8. The sewer service connection to the building be pressure tested, manhole(s) vacuum tested, and video inspected prior to coming online and witnessed by the DPW. All testing MUST be witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until this test is completed and a written report is received by the City Engineer. *(This note shall be on the final construction plans).*

9. Pedestrian access around the construction zone shall be accommodated by the contractor for the duration of the construction in accordance with the DPW requirements. *(This note shall be on the final construction plans).*

10. The contractor shall prepare a dewater plan ahead of the preconstruction in anticipation of groundwater being encountered, submitted for approval. *(This note shall be on the final construction plans).*

11. The test results shall be submitted in type written report format to the City Engineer. *(This note shall be on the final construction plans).*

12. Details of precast concrete manhole are needed.

13. A detail of the manhole's invert table is needed.

14. Any existing clay stub at the existing sewer manhole shall be replaced with SDR35 PVC pipe.

15. Upon final installation & testing of the sewer system an As Built drawing [plan & profile] indicating rim, invert elevations, and slopes shall be submitted in digital and hard copy format to the City Engineer. *(This note shall be on the final construction plans).*

The Engineering Division makes no representations and assumes no responsibility for the design(s) in terms of suitability for the particular site conditions or of the functionability or performance of any items constructed in accordance with the design(s). The City of Newton assumes no liabilities for design assumption, error, or omissions by the Engineer of Record.

If you have any questions or concerns, please call me at 617-796-1023.

Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Office of the Mayor

#111-22

Telephone
(617) 796-1100
Fax
(617) 796-1113
TDD/TTY
(617) 796-1089
Email
rfuller@newtonma.gov

January 10, 2021

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton, MA 02459

Honorable City Councilors:

I respectfully submit this docket item to this Honorable Council requesting amendments to Chapter 29 by adding a new Article VIII and to Chapter 17, Sections 16 and 21 of the Revised Ordinances to add defining language, provide for enforcement, establish permit fees and fines for violations of the stormwater management and erosion control ordinance.

The purpose of this ordinance is to protect, maintain, and enhance public safety as well as environmental health and general public welfare. This ordinance focuses on controlling the volume and rate of stormwater runoff resulting from land disturbing activities (both during and after such activities), managing stormwater at its source, and directing stormwater into the ground rather than sending it into storm drain pipes and channels. Adopting this ordinance or other regulatory mechanism to manage increased stormwater runoff from (re)development and reduce pollutants in stormwater runoff discharged from construction activities (greater than or equal to 1 acre) into the City's drainage system is a requirement of the City's National Pollution Discharge Elimination System (NPDES) Stormwater permit.

The proposed Ordinance will be complemented by Stormwater Management Erosion Control Rules and Regulations, which are attached. The rules and regulations provide applicability and exemption language, definitions of terms, application requirements, and design standards. Administration of these rules and regulations will be by the City Engineer through the Engineering Division. The Engineering Division will also collect the fees for all stormwater management permits.

The proposed permit fees to be added to Chapter 17, Section 16 are as follows:

Stormwater Permit Fees:

(l) Land Disturbance (only) Permit: $50

(m) Minor Stormwater Permit: $100

(n) Major Stormwater Permit:

1-4 family dwellings $300
All other properties $1,000

Proposed fine to be added to Chapter 17, Section 21 is as follows:

The proposed fine for violation of the stormwater management and erosion control ordinance is $300 per offense as stated in Chapter 17, Section 21 of the Revised Ordinance and clarified in §29-153(b) of the proposed Ordinance. Each day the violation of the ordinance continues it is considered a separate offense.

Please see the attached memo from Commissioner of Public Works James McGonagle.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Mayor Ruthanne Fuller

#111-22

City of Newton

DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE COMMISSIONER

1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

Ruthanne Fuller
Mayor

To: Mayor Ruthanne Fuller

From: James McGonagle – Commissioner DPW

Subject: Stormwater Ordinance

Date: January 10, 2022

I respectfully request amendments to Chapter 29 by adding a new Article VIII and to Chapter 17, Sections 16 and 21 of the Revised Ordinances to add defining language, provide for enforcement, establish permit fees and fines for violations of the stormwater management and erosion control ordinance.

The City's stormwater management system is strained by increased volumes of runoff from more frequent and higher intensity storms. Compounding the issue is a trend of increasing impervious areas and elevated grades around new structures limiting natural infiltration. Further, stormwater runoff from impervious surfaces is the greatest source of pollution to Newton's ponds, lake, and waterways.

The purpose of this ordinance is to protect, maintain, and enhance public safety, environmental, health, and general public welfare by controlling the volume and rate of stormwater runoff resulting from land disturbing activities (during and after such activities), managing stormwater at its source, and directing it into the ground rather than sending it into a system of storm drain pipes and channels. Adopting this ordinance or other regulatory mechanism to manage increased stormwater runoff from (re)development and reduce pollutants in stormwater runoff discharged from construction activities (greater than or equal to 1 acre) into the City's drainage system is a requirement of the City's NPDES Stormwater permit.

The proposed Ordinance will be complemented by the attached Stormwater Management Erosion Control Rules and Regulations. The rules and regulations provide applicability and exemption language, definitions of terms, application requirements, and design standards. Administration of these rules and regulations will be administered by the City Engineer through the Engineering Division. The Engineering Division will also collect the fees for all stormwater management permits.

James McGonagle
Commissioner
Telephone: (617) 796-1010 • Fax: (617) 796-1050 • jmcgonagle@newtonma.gov

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James McGonagle
Commissioner
Telephone: (617) 796-1010 • Fax: (617) 796-1050 • jmcgonagle@newtonma.gov

STORMWATER MANAGEMENT AND EROSION CONTROL ORDINANCE
DRAFT WINTER 2021-2022

Article VIII.
STORMWATER MANAGEMENT AND EROSION CONTROL

§29-148 General provisions (*Section 5.3 of Zoning will need to be deleted/updated concurrent with this ordinance adoption*)

(a) Purpose

The purpose of this ordinance is to protect, maintain, and enhance public safety, environmental health, and general public welfare by controlling the volume and rate of stormwater runoff resulting from land disturbing activities (during and after such activities), managing stormwater at its source and directing it into the ground rather than sending it into a system of storm drain pipes and channels.

This ordinance establishes a permit system to ensure that all applicable projects are reviewed and comply with established standards, the city's legal authority to ensure compliance with the provisions of this ordinance through inspection, monitoring and enforcement and a mechanism by which the City can meet the requirements of its National Pollutant Discharge Elimination System (NPDES) general permit.

(b) Definitions. Definitions. For the purposes of this ordinance the following words and phrases shall have the meanings respectively ascribed to them by this section:

Alter or alteration: Any activity on an area of land that changes the water quality, or the force, quantity, direction, timing, or location of runoff flowing from the area. Such changes include change from distributed runoff to confined, discrete discharge; change in the volume of runoff from the area; change in the peak rate of runoff from the area; and change in the recharge to groundwater on the area. Alter may also be referred to as "alteration of drainage characteristics," and "conducting land disturbance activities."

Best management practice (BMP): A structural or nonstructural activity, procedure, restraint, or structural improvement that helps to reduce the quantity of or improve the quality of stormwater runoff. A structural stormwater best management practice may include a basin, discharge outlet, swale, rain garden, filter, or other stormwater treatment practice or measure either alone or in combination, including without limitation any overflow pipe, conduit, weir control structure that: (a) is not naturally occurring; (b) is not designed as a wetland replication area; and (c) has been designed, constructed, and installed for the purpose of conveying, collecting, storing, discharging, recharging, or treating stormwater. Nonstructural stormwater best management practices may include source control and pollution prevention measures.

Conveyance: Any structure or device, including, but not limited to, pipes, drains, culverts, curb breaks, paved swales and man-made swales, natural and man-made channels, and ditches, designed or utilized to move or direct stormwater runoff or existing water flow; any impervious

surface/sheet flow utilized to remove rainfall (for example, a parking lot) which drains directly onto a vegetated surface or public road without any curbing or stormwater system to intercept the flow.

Erosion and sedimentation control plan: A document containing a narrative, drawings and details developed by a registered professional civil engineer (PE), which includes best management practices, or equivalent measures designed to control surface runoff, erosion and sedimentation during pre-construction and construction related land disturbance activities.

Impervious Surface or Area: Any material or structure in, on or above the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved surfaces (parking lots, sidewalks, driveways, etc.), roof tops, swimming pools, stone patios/pavers, gravel, and compacted dirt surfaces such as driveways and roads.

Land disturbance: Any activity that causes a change in the position or location of soil, sand, rock, gravel, or similar earth material. Examples include, but are not limited to, demolition, construction (of buildings or retaining walls), site preparation, grading, paving, tree cutting, and earth moving.

Low impact development (LID): A site design strategy for managing stormwater by maintaining or replicating the predevelopment hydrologic functions using design techniques to create a functionally equivalent hydrologic landscape.

Municipal Storm Drain System or Municipal Separate Storm Sewer System (MS4): The system of conveyances designed or used for collecting or conveying stormwater, including any road with a stormwater management system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, or other drainage structure(s) that together comprise the storm drainage system owned or operated by the city.

Person Aggrieved: all record owners of the subject property or an owner of property directly abutting the subject property.

Stormwater Management and Erosion Control Permit: A permit issued by the Engineering Division of the Department of Public Works, after review of an application, plans, calculations, and other supporting documents, in accordance with the provisions of this ordinance.

Stormwater management plan: A plan submitted as part of an application for a stormwater management and erosion control permit, as required by Section 29-150(A) of this ordinance. A document containing narrative, drawings and details prepared by a registered professional civil engineer (PE), which includes structural and non-structural best management practices to manage and treat stormwater runoff generated from regulated development activity. A stormwater management plan also includes an operation and maintenance plan describing the maintenance requirements for structural best management practices.

Stormwater management system: the collective system for conveying, collecting, storing, discharging, recharging, or treating stormwater on-site, including stormwater best management practices, and any pipes and outlets intended to transport and discharge stormwater to the groundwater, a surface water, or a municipal separate storm sewer system.

(c) Applicability

This ordinance shall apply to all land-disturbing activities over the thresholds below, within the jurisdiction of the city. A stormwater management permit shall be required prior to undertaking any alteration or land disturbing activity as follows:

(1) Land disturbance

(a) Projects that will or could disturb over 5,000 square feet (SF) of land (i.e., the limit of work line encompasses >5,000 SF of land).

(2) Minor stormwater management

(a) Any residential development or redevelopment with four or fewer units, provided the land disturbance is less than 0.5-acre (or 21,780 SF) .

(b) Any residential, commercial, industrial, institutional, or municipal alteration, development or redevelopment creating 401 to 1,000 SF of new impervious area.

(c) The construction of any new retaining wall required due to proposed changes in grade, unless already approved by Special Permit (per Chapter 30 Sec. 5.4.2).

(d) Trench excavation requiring dewatering.

(3) Major stormwater management

(a) Any alteration, disturbance, development, or redevelopment exceeding the thresholds listed in § 29-148(C)(1) and (2) above.

(d) Exemptions

The commissioner of public works may establish exemptions from the requirements of this ordinance, which exemptions shall be set forth in the city of Newton stormwater management and erosion control rules and regulations.

§29-149 Administration

(a) Administration

The commissioner of public works or his or her designee shall administer, implement, and

enforce this ordinance.

(b) Rules and regulations

The commissioner of public works shall adopt, and periodically amend as deemed necessary, rules and regulations relating to the detailed requirements, procedures, and administration of this ordinance.

§29-150 Permit procedures

(a) Permit required

No land disturbing activity that meets the criteria specified in Section 29-148(c) may commence prior to the issuance of a stormwater management and erosion control permit as set forth in this ordinance.

(b) Procedures and Requirements

The commissioner of public works shall set forth the application procedures and requirements - including but not limited to content of applications, stormwater management plan and operations and maintenance plan contents, technical requirements, inspections, and project closeout process in the rules and regulations promulgated under section §29-149(b) of this ordinance.

(c) Deadline for Action

Failure of the commissioner of public works or his or her designee to take action within sixty (60) days of receipt of a complete stormwater management and erosion control permit shall be deemed approval of said application, unless extension of the sixty (60) days is agreed upon, in writing, by the applicant.

§29-151 Entry, inspections and close-out

To the extent permitted by law, the commissioner of public works or his or her designee may enter upon privately owned property for the purpose of performing their duties under this ordinance and may make or cause to be made such examinations, surveys or sampling as the commissioner of public works or his or her designee deems reasonably necessary to determine compliance with the permit

§29-152 Final report and certificate of compliance

Upon completion of the work done pursuant to a permit issued for a minor or major stormwater land disturbing activity, the permittee shall request a final inspection and submit the following: (Note: Land disturbance only permits do not require a certificate of compliance)

(1) Certified as-built construction plans from a Massachusetts Registered Professional Engineer (P.E.) and/or Registered Professional Land Surveyor (P.L.S) depicting all final grade changes, water, sewer and stormwater utilities and any BMPs installed.

(2.) A note on the As-built plan from the Engineer of Record indicating that the stormwater management system(s) have been constructed in accordance with, and meet the requirements of, the Stormwater Management Permit, including compliance with performance standards for Best Management Practices (BMPs) as noted in manufacturer's literature and/or Environmental Protection Agency's performance curves in the NPDES Small MS4 Permit. Any discrepancies between the approved plan and the as-built plan shall be noted.

(3.) Proof of recording the Operations and Maintenance Plan at the South Middlesex County Registry of Deeds.

The city engineer will issue a certificate of compliance upon receipt of these items and upon determination that all work of the permit has been satisfactorily completed and is in conformance with this ordinance. the commissioner of inspectional services shall not issue a certificate of occupancy for any property subject to this Sec. 29 prior to receipt of such certificate of compliance.

§29-153 Enforcement

The commissioner of public works shall have authority to enforce this ordinance and the associated rules and regulations; issue orders, violation notices, and enforcement orders as necessary; and may pursue all available civil and criminal remedies for such violations.

(a) Violation notices and enforcement orders

(1) The commissioner of public works may issue a written order to enforce the provisions of the stormwater management and erosion control ordinance or the rules and regulations, which may include demands to:

(a) Cease and desist from further alterations or land disturbance activity until there is compliance with the stormwater management and erosion control ordinance and/or the stormwater management and erosion control permit.

(b) Maintain, install or perform additional erosion and sedimentation control measures.

(c) Remediate erosion and sedimentation resulting directly or indirectly from land-disturbing activity.

(d) Remediate adverse impacts resulting directly or indirectly from malfunction of the stormwater management system.

(e) Eliminate discharges, directly or indirectly, into a watercourse or into the waters of the Commonwealth.

(2) If the commissioner of public works determines that abatement or remediation of adverse impacts is required, the order shall set forth a deadline by which such abatement or remediation must be completed.

(3) If a person violates the provisions of this ordinance, regulations, permit, notice, or order issued thereunder, the commissioner of public works may seek injunctive relief in a court of competent jurisdiction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

(b) Penalties

Pursuant to Section 17-21 of the City Ordinances, any person who violates any provision of the Stormwater Management and Erosion Control Ordinance, or order or permit issued thereunder, may be ordered to correct the violation and/or shall be punished by a fine of not more than $300.00 per violation, excluding the cost of damages. Each day or part thereof that such violation occurs or continues shall constitute a separate violation.

(C) Non-Criminal Disposition

As an alternative to criminal prosecution, the commissioner of public works may elect to utilize the non-criminal disposition procedure set forth in M.G.L. c. 40, § 21D.

(D) Appeals

Judicial review. Any person aggrieved by the grant or denial of a permit may seek relief therefrom by a civil action in any court of competent jurisdiction as provided by the laws of the Commonwealth of Massachusetts.

§29-154 Severability

Any finding of the invalidity of any section, provision, paragraph, sentence, or clause of this ordinance shall not invalidate any other section, provision, sentence, or clause thereof, nor shall it invalidate any permit or determination that has been previously issued under this ordinance.

CITY OF NEWTON
Stormwater Management and Erosion Control Rules & Regulations
Draft WINTER 2021-2022 Adopted _____ xx, 2021

SECTION 1: AUTHORITY

A. These Rules and Regulations have been adopted by the Commissioner of the Department of Public Works in accordance with Chapter 29 of the Revised Ordinances of the City of Newton, Massachusetts, and will be administered by the City Engineer through the Engineering Division.

B. Nothing in these Rules and Regulations is intended to replace or be in derogation of the requirements of the City of Newton's Floodplain/Watershed Ordinance (Ch. 22, Article II Sec. 22), the City of Newton's Zoning Ordinance (Ch. 30), or any other ordinance adopted by the City of the Newton. Any project or activity subject to the provisions of the above-cited Ordinances or related Rules and Regulations must comply with the specifications of each.

C. These Rules and Regulations may be periodically amended by the Commissioner of the Department of Public Works in accordance with the procedures outlined in Ch. 29-149 of Newton's Stormwater Management and Erosion Control Ordinance, hereinafter referenced as the Stormwater Management Ordinance.

D. Waivers. The Commissioner of Public Works, as delegated to the City Engineer may waive strict compliance with any of the requirements of the City of Newton Stormwater Management and Erosion Control Rules and Regulations (hereinafter referenced as the Stormwater Management Rules and Regulations), if it finds that strict application of some of the requirements is unnecessary or impracticable because of the size or character of the development project or because of the natural conditions at the site. Waivers may only be granted for projects disturbing less than 1 acre of land. Any Applicant requesting a waiver must submit a written request for such a waiver. Such a request shall be accompanied by an explanation and documentation supporting the waiver request.

SECTION 2: PURPOSE

A. The City's stormwater management system is strained by increased volumes of runoff from more frequent and higher intensity storms. Compounding the issue is a trend of increasing impervious areas and elevated grades around new structures limiting natural infiltration. Further, stormwater runoff from impervious surfaces is the greatest source of pollution to Newton's ponds, lake and waterways. Development proposals provide an inconsistent level of detail, making review and analysis challenging.

B. The purpose of these regulations is to clarify administration of Newton's Stormwater Management Ordinance, in order to achieve its objectives to:

1. Limit land clearing and alteration of natural topography prior to (re)development.
2. Prevent soil erosion and sedimentation resulting from construction.
3. Promote filtration, infiltration and the recharge of groundwater, and limit additional stormwater flow into the City's drainage system.
4. Minimize flooding.
5. Improve water quality.
6. Prevent alteration or destruction of aquatic resources and wildlife habitat.
7. Prevent clogging and pollution entering municipal catch basins and storm drainage systems.
8. Establish a mechanism by which the City can meet the requirements of its National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer (Drainage) System (MS4) permit.

SECTION 3: DEFINITIONS

A. All definitions are provided in Appendix A of these Rules and Regulations.

B. These definitions apply to the Stormwater Management Ordinance and these Rules and Regulations.

C. Terms not defined in the Stormwater Management Ordinance or Appendix A of these Rules and Regulations shall be construed according to their customary and usual meaning unless the context indicates a special or technical meaning.

SECTION 4: APPLICABILITY

These Rules and Regulations apply to all projects or activities subject to Ch. 29-148(c) the Applicability Section of the Stormwater Management Ordinance. All projects or activities referenced in Ch. 29-148 and not falling under an exception listed in Ch 29-148(d) shall require a Stormwater Management Permit in accordance with the Stormwater Management Ordinance.

Projects and/or activities within the jurisdiction of the Stormwater Management Ordinance must obtain a Stormwater Management Permit (SMP) from the City Engineer in accordance with the permit procedures and requirements defined in Sections 5 through 9 of these Rules and Regulations.

No work on a project within the jurisdiction of the City's Stormwater Management Ordinance may commence without a SMP or waiver from the City Engineer. Work commenced without an approved permit or waiver can result in an enforcement action and/or fines.

A. Exemptions. Notwithstanding Section 4.B, no SMP shall be required by the City Engineer for:

1) Normal maintenance and improvement of land for the primary purpose of agriculture, horticulture, floriculture, or viticulture, or the use, expansion, or reconstruction of existing structures for the primary purpose of agriculture, horticulture, floriculture, or viticulture, to the extent protected under the Zoning Act, M.G.L Chapter 40A, Section 3.

2) Normal maintenance of existing landscaping, gardens, or lawn areas.

3) Milling, excavating and replacement (but not enlargement) of lawfully located, existing pavement (bituminous concrete or concrete) provided the existing drainage patterns are not altered.

4) Overlaying of existing pavement, with no increase in impervious area.

5) Construction of a fence that does not alter the existing terrain or drainage patterns.

6) Drain connections declared necessary by the Commissioner to remove groundwater and stormwater inflow from the sanitary sewer.

7) Emergency activities necessary for the protection of the health and safety of the public, provided that: (a) the work is to be performed by or has been ordered by an agency of the Commonwealth of Massachusetts or a political subdivision thereof, (b) advance notice, oral or written, has been given to the Commissioner prior to commencement of work or within 24 hours after commencement, (c) the Commissioner certifies the work as an emergency activity, and (d) the work is performed only for the time and place certified by the Commissioner for the limited purposes necessary to abate the emergency.

8) Maintenance, repair or replacement of an existing and lawfully located structure or facility used in the service of the public to provide electric, gas, water, telephone, telegraph or other

telecommunication services, provided that applicable permits are obtained and there is no alteration in the terrain, ground cover or drainage patterns.

9) Maintenance, repair or replacement of existing stormwater infrastructure or stormwater Best Management Practices (BMPs) provided that: (a) there is no alteration of the existing terrain or drainage patterns; (b) there is no increase in the size or capacity of over 25%; (c) there is no change in the drainage area contributing to the system; and (d) best practical measures are utilized to avoid any negative impacts on stormwater quality or runoff rate or volume.

10) Normal maintenance of City-owned public land, rights-of-way, public utilities, and appurtenances, including roadway reconstruction.

11) Any work or projects for which all necessary approvals and permits, including building permits, have been issued before the effective date of the City of Newton's Stormwater Management Ordinance.

12) Activities that are temporary in nature, have negligible impacts, and are necessary for planning and design purposes (e.g., installation of monitoring wells, exploratory borings, sediment sampling, surveying and percolation tests).

B. A **Land Disturbance** Stormwater Management Permit is required for the following activity, as stated in Ch. 29-148(c).

1. Projects that will or could disturb over 5,000 square feet (SF) of land (i.e., the limit of work line encompasses over 5,000 SF of land).

C. A **Minor** Stormwater Management Permit is required for any one or more of the following activities, as stated in Ch.29-148(c):

1. Any residential development or redevelopment up to 4 units, provided the land disturbance is less than 0.5-acre.

2. Any residential, commercial, industrial, institutional, or municipal alteration, development or redevelopment creating 401 to 1,000 SF of new impervious area.

3. The construction of any new retaining wall required due to proposed changes in grade, unless already approved by Special Permit (per Zoning Sec. 5.4.2).

4. Trench excavation that requires dewatering.

D. A **Major** Stormwater Management Permit is required for any alteration, disturbance, development, or redevelopment exceeding the thresholds listed above for Land Disturbance or Minor Stormwater, as stated in Ch. 29-148(c).

SECTION 5: DESIGN STANDARDS

A. All SMP applications must clearly illustrate compliance with the following standards.

1. Calculate and depict prominently on the plans: the existing and proposed impervious surface areas. This information shall be included as a table with other zoning information.

2. Grading. Topographic contours shall be shown at 1-foot intervals on plans. Changes in grading of the land must demonstrate to the City Engineer's satisfaction that there will be no net increase in stormwater runoff to abutting properties or the City's stormwater drainage system. Changes to

landforms (i.e., ledge removal, blasting) shall be avoided and where necessary conducted to minimize land disturbance and avoid negative impacts to adjacent properties.

3. Retaining walls. In order to prevent potential flooding caused by the construction of a retaining wall, any proposed retaining wall shall be designed and constructed so as not to block or exacerbate any existing stormwater or groundwater flow patterns to or from abutting properties, as well as to or from the city's right of way.

4. Tree removal. Preserving healthy trees is encouraged due to the many benefits trees provide. Existing condition plans shall identify and note the sizes of all trees eight (8) inches dbh and larger on the subject property. Trees 8 inches dbh and larger that are proposed for cutting shall be clearly identified as such on a plan sheet. A clearly illustrated replacement planting plan shall be provided on a proposed condition plan sheet. Protected trees shall be replaced with an appropriate quantity of trees equaling the caliper inches lost due to development, in accordance with the City's Tree Preservation Ordinance[1], unless the project is exempt from compliance with the Tree Ordinance. If unable to meet this replacement policy the applicant may contribute to the City's tree fund.

5. Groundwater Intrusion: The bottom of the lowest foundation footing for habitable space must be 1-foot above the seasonal high groundwater elevation as determined by a Soil Evaluator licensed in Massachusetts or determine the seasonal high groundwater table using Frimpter Method[2].

6. Erosion and Sedimentation Control. Sediment that washes off construction sites and into the City's catch basins, ponds, lake, and wetlands has considerable cost and ecological implications for the City. Runoff, erosion and sediment control are important at every phase of the construction process. Implementing and maintaining the right control practice saves money, time and the environment. The application will be evaluated on the following criteria.

   a) Minimize disturbance of natural vegetation wherever possible. This is the best and most economical control measure.

   b) Control stormwater runoff and minimize soil erosion potential during construction. Divert flows around exposed soils, material stockpiles and slow down stormwater flows.

   c) Control soil movement and retain sediment within the 'limits of work' during and after construction. These measures may include but are not limited to perimeter controls such as straw wattles and silt fence, stabilized construction entrances/exits, sediment basins, catch basin silt sacks, proper dewatering practices (as needed).

   d) Stabilize disturbed soils, particularly unvegetated slopes, during any lapse in construction and immediately post-construction.

   e) Include a note (on the plans) for the contractor to regularly inspect and maintain the erosion and sediment controls measures. See additional note requirement in Section 6.B.

   f) Construction phasing or sequencing is encouraged for larger projects (e.g., ≥ 2 acres).

B. Minor Stormwater Management Permits. In addition to Section 5.A above, all projects subject to a Minor Stormwater Management Permit shall be designed to the following standards.

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[1] Newton's Tree Preservation Ordinance

[2] Frimpter Method: https://www.usgs.gov/centers/new-england-water/science/updating-a-method-estimate-probable-high-groundwater-levels?qt-science_center_objects=0#qt-science_center_objects

1. Stormwater management systems for new development and redevelopment sites shall be designed to retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the *net increase* in impervious surface area on the site.

2. There must be a minimum two-foot separation between bottom of structure and seasonal high groundwater.

3. Stormwater infiltration systems shall be design with the following setbacks:

   a) A minimum of 10 feet from any building.
   b) A minimum of 50 feet from any slope greater than 15%. A variance may be allowed if an impermeable barrier is installed.

4. Proposals must analyze, propose, and implement Low Impact Development (LID) Best Management Practices (BMPs), unless PROVEN IN WRITING TO THE SATISFACTION OF THE City Engineer to be infeasible. See Appendix B for LID BMPs. If infeasible, Applicants shall demonstrate reasons why LID BMPs are infeasible and demonstrate compliance with design standards through generally accepted methods.

5. Soils tests must be conducted by a Soil Evaluator licensed in Massachusetts and must be performed within 25 feet of the location of every proposed infiltration BMPs and LID technique, to clearly identify soil descriptions, depth to estimated seasonal high groundwater, depth to bedrock, and soil texture. Any soil test conducted between the months of June and February must also be accompanied by a determination of the seasonal high groundwater table using Frimpter Method[3].

6. Drainage Design: Drainage calculations shall be performed for existing site conditions (pre-development) and proposed site conditions (post-development) based on proposed site plans. Storms of 2, 10, 25, and 100-year frequency events shall be analyzed to demonstrate no net increase in stormwater runoff volume or peak flow for any storm event. The rainfall amounts used shall be based on the 1998 Cornell University Study, NOAA Atlas 14 Volume 10 Point Precipitation Frequency Estimates for Newton.

   Note: the 100-year design storm is based on 8.78 inches of precipitation in 24 hours. For purposes of choosing a Runoff Curve Number, all pervious lands on the Site shall be assumed prior to development to be in "good" hydrologic condition regardless of conditions existing at the time of computation. All drainage calculations shall be stamped by a Registered Professional Civil Engineer.

7. Infiltration systems shall be designed to drain fully within 72 hours.

8. Plan submission requirements are detailed in Section 6 – Application Requirements and Procedures.

C. Major Stormwater Management Permits. **In addition to Section 5.A. and 5.B., above**, all projects subject to a Major Stormwater Management Permit shall be designed to meet the following additional standards.

1. All projects triggering the thresholds for a Major Stormwater Permit must meet the minimum pollutant removal requirements and on-site stormwater volume retention requirements identified

[3] Frimpter Method: https://www.usgs.gov/centers/new-england-water/science/updating-a-method-estimate-probable-high-groundwater-levels?qt-science_center_objects=0#qt-science_center_objects

in C.3 and C.4 below; if due to site conditions this is technically infeasible, then the Applicant may request a waiver (waivers are only applicable for projects less than 1 acre).

2. Projects shall comply with the Stormwater Standards of the most recent version of Massachusetts Stormwater Management Handbook (Handbook)[4], and the City of Newton General Construction Detail Book and Streets Design Guide except that our requirement for the volume of stormwater runoff to be stored (retained on-site) is higher than the Handbook.

3. Stormwater management systems on **new development** sites shall be designed to:

   a) Retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the total post-construction impervious surface area on the site; and

   b) Remove 90% of the average annual load of Total Suspended Solids generated from the total post-construction impervious area on the site; and

   c) Remove 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site; and

   d) Whenever feasible exceed the above minimum phosphorus removal[5] requirement. Infiltration BMPs, bioretention areas, constructed stormwater wetlands, and filter systems are recommended ways to reduce phosphorus in stormwater discharges.

4. Stormwater management systems on **redevelopment** sites shall be designed to improve existing conditions by:

   a) Retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the total post-construction impervious surface area on the site; and

   b) Remove 80% of the average annual load of Total Suspended Solids generated from the total post-construction impervious area on the site; and

   c) Remove 50% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site; and

   d) Whenever feasible exceed the minimum total phosphorus removal[2] requirement. Infiltration BMPs, bioretention areas, constructed stormwater wetlands, and filter systems are recommended ways to reduce phosphorus in stormwater discharges.

5. To support compliance with the City's MS4 Permit, all new stormwater management BMPs located on commercial and industrial property shall incorporate shutdown and containment in the design to isolate the drainage system in the event of an emergency spill or other unexpected event.

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[4] Massachusetts Stormwater Handbook, as most recently updated.
http://www.mass.gov/eea/agencies/massdep/water/regulations/massachusetts-stormwater-handbook.html

[5] The required removal percentages are not required for each storm, it is the average removal over a year that is required. Pollutant removal shall be calculated consistent with EPA Region 1's Opti-Tool found here; https://www.epa.gov/tmdl/opti-tool-epa-region-1s-stormwater-management-optimization-tool, Or use the performance curves in the MS4 Permit, Appendix F, Attachment 3, found here: https://www3.epa.gov/region1/npdes/stormwater/ma/2016fpd/appendix-f-attach-3-2016-ma-sms4-gp-mod.pdf.

SECTION 6: APPLICATION REQUIREMENTS AND PROCEDURES FOR STORMWATER MANAGEMENT PERMITS

A. All Stormwater Management Permits (SMP) Applications

1. One (1) completed Stormwater Management Permit Application Form with the following:

   a) Name, contact information, and original signatures of owner(s), Applicant(s), and, if applicable, representative.

   b) Address of property and parcel ID.

   c) Project description.

   d) Site plan reference(s).

   e) Signature of Applicant, property owner (if different), and representative, if applicable.

   f) Payment of the Application fee.

2. Supporting engineering plans for a SMP shall include the materials as specified in this section.

B. Land Disturbance Permit Submission Requirements

1. In addition to the signed, completed application, the Applicant shall provide a brief narrative explaining the purpose of the proposed land disturbance.

2. A Site Plan denoting property lines, existing buildings, existing and proposed trees (clearly noting any trees to be cut), existing and proposed edge of lawn and ground cover materials and existing and proposed topographic contours. This plan shall be stamped and signed by a Professional Civil Engineer (PE) licensed in the Commonwealth of Massachusetts and/or Professional Land Surveyor (PLS).

3. Methods to minimize the potential for soil erosion and control soil / sediment from leaving the property shall be depicted on the Site Plan.

C. Minor Permit Submission Requirements

1. In addition to the signed, completed permit application, the Applicant shall provide: one (1) set of full-size plans, stapled and rolled; plus, an electronic copy (pdf) provided on a flash drive. Additional copies may be requested by the City Engineer.

2. A Stormwater Management Site Plan that may be prepared by drafting or hand sketching. depending on project size and complexity, at the discretion of the City Engineer, to include:

   a) General Information:

      (1) Sheet size: Sheets shall have a maximum dimension of 24" x 36" and formatted for landscape layout. Large plans should be rolled rather than folded. If more than one sheet is needed to describe the proposed work, a key sheet is required showing a general composite of all work proposed.

      (2) Scale: Not more than 1" = 50' (the Engineering Division routinely accepts plans at 1" =20' or 1" =40'). If project sites are large, an overall site plan at 1" = 100' is acceptable, but detailed plans must be at or less than 1" = 50'. Include graphical scales on all plans.

Coordinate system shall be 1983 North American Datum, Massachusetts State Plane, feet, and North American Vertical Datum (NAVD) of 1988.

(3) Title Block: A title block shall be included on all plans, located at the lower right-hand corner, oriented to be read from the bottom when bound at the left margin. Include:

(a) Plan title.
(b) Original date plus additional space to reference the title and dates of all plan revisions.
(c) Name and address of record owner and engineer and/or surveyor.
(d) Address of property, Assessor Map and Parcel ID.

(4) Legend: Include legend identifying line types and symbols used in plan set

(5) Locus Map.

b) An Existing Conditions Plan containing the following:

(1) Property lines.

(2) The existing zoning, and land use at the site and abutting properties.

(3) The location(s) of existing easements.

(4) The location of existing utilities.

(5) Existing contours at 1-foot minimum vertical increments.

(6) Existing landscaping and vegetation including all existing trees within 25 feet of the work area that are over 8 inches in diameter breast height (dbh) and major vegetative cover types, including wooded areas defined by tree line drip line, shrub communities, limits of lawn, and edge of tree canopy.

(7) Locations of existing structures, pipes, swales and detention ponds.

(8) Locations of bodies of water, including wetlands.

(9) A delineation of FEMA Special Flood Hazard areas and calculation of FEMA flood elevation, if applicable. Floodplain elevation data shall be based on 1988 NAVD (North American Vertical Datum) and reference the appropriate National Flood Insurance Rate Map and/or Flood Study.

(10) Location of existing septic systems, monitoring and private wells, if present.

(11) The location(s) of soil tests and description of soil from test pits performed at the location of proposed stormwater management facilities, including but not limited to soil description, depth to seasonal high groundwater table (SHGWT), depth to bedrock, and percolation rates. Soils and the SHGWT elevation shall be based on site test pits logged by a Soil Evaluator licensed in Massachusetts

(12) The existing vegetation (e.g., lawn area, mature trees, etc.) and ground surfaces with runoff coefficients for each.

(13) Stamp and signature of a Professional Civil Engineer (PE) licensed in the Commonwealth of Massachusetts and/or Professional Land Surveyor (PLS).

c) A Proposed Conditions Plan containing the following:

(1) Property lines, building envelope restrictions and/or easement areas, including areas affected by conservation restrictions, if applicable.

(2) Proposed improvements including location of buildings or other structures, utilities, easements, etc., if applicable, and impervious surfaces. For single family homes plans shall show, at a minimum, house footprint, decks, garages, sheds, roof drainage and stormwater drainage structures, as applicable) and all areas of existing and proposed impervious areas: including tennis courts, patios, and driveways, etc.

(3) **Proposed total impervious surface areas in square feet,** shown as a table with comparison to existing impervious surface area conditions.

(4) FEMA Flood Hazard areas and Newton Floodplain Ordinance areas, if applicable.

(5) Limit of work.

(6) Proposed grading for work area. Proposed contours at 1-foot vertical increments.

(7) Locations for storage of materials, equipment, soil, snow and other potential pollutants.

(8) A note on the plan indicating the Contractor shall sequence construction activities to avoid stockpiling materials and soil compaction where proposed stormwater BMPs will be located.

(9) Location(s) and description of existing stormwater conveyances, impoundments, wetlands, drinking water resource areas, or other critical environmental resource areas on or adjacent to the site or into which stormwater flows.

(10) Proposed drainage facilities (plan view and details) including drawings of all components of the proposed stormwater management system including:

1. Locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization.

2. All measures for the detention, retention or infiltration of water.

3. All measures for the protection of water quality.

4. For engineered systems designed to provide drainage or stormwater management including, but not limited to, culverts, drainage outfalls, catch basins and pervious pavement 'systems'; provide an appropriate plan detail with notes on drawings specifying materials to be used, and construction specifications.

5. Notes indicating the required inspections for the site and the stormwater drainage facilities during construction.

(11) Proposed landscaping, vegetation, and ground surfaces. When trees 8-inches dbh and larger are proposed for cutting, a clearly illustrated planting plan shall be provided. The replacement planting plan shall comply with the City's Tree Preservation Ordinance (see footnote 1). If it is not feasible to plant the required number of trees, an applicant may propose a combination of trees and shrubs for approval.

(12) Locations where stormwater discharges to surface water (include all roads, drains and other structures that could carry stormwater to a wetland or other water body, on or offsite).

(13) A general construction note stating the Engineering Division Inspector shall be notified 48 hours prior to any site work in accordance with project permits.

(14) Stamp and signature of a Professional Civil Engineer (PE) licensed in the Commonwealth of Massachusetts to certify that the Stormwater Management Plan is in accordance with the criteria established in the Stormwater Regulations; a stamp and signature of a Professional Land Surveyor (PLS) is acceptable if no drainage facilities are proposed and they have the experience and capability to prepare the required Site Plan and to provide the required existing and proposed grading and erosion control provisions.

4. The Erosion and Sediment Control Plan shall demonstrate that erosion will be minimized, and sediment contained. The plan shall include, at a minimum, the following:

c) Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas.

d) Location and design of all proposed soil erosion and sediment control measures.

e) Pollution control measures to be implemented during construction to mitigate pollutants from entering the public right of way and storm drains. Consider construction and waste materials expected to be stored on-site, describe source control and storage methods to minimize exposure of the materials to stormwater.

f) Location of anti-tracking area at each construction entrance or other means to minimize off-site tracking of soil and sediment onto paved surfaces

g) Means to protect all existing drainage infrastructure (i.e., catch basins) and proposed drainage infrastructure from clogging during construction. For projects anticipated to encounter or manage groundwater, show proposed dewatering operations, including proposed locations of discharge and related details.

h) Location of proposed construction stockpiling areas with appropriate erosion and sediment control measures.

i) The intended sequence and timing of activities that disturb soils at the site and the general sequence during the construction process in which the erosion and sediment control measures will be implemented. Or include this note on the plan: "The contractor shall sequence construction activities to minimize the potential for soil, stone or sediment to migrate off-site; divert flows around bare soils, to the maximum extent practicable; stabilize unvegetated areas as soon as practical, and prevent pollutants from entering the City's storm drainage system"

j) Measures to control wastes, including discarded building materials, concrete truck wash-out, chemicals, litter, and sanitary wastes during construction and prevent the discharge of these and any solid material to Newton's MS4 or waters of the United States, unless authorized by a permit issued under Section 404 of the Clean Water Act.

k) Where a site is located in whole or in part within the floodplain, a Floodplain Contingency Plan shall be included with the Erosion and Sediment Control Plan. This Plan shall describe the steps necessary to stabilize the site during construction in the event of a possible flood. A possible flood shall be defined as period when a flood watch is declared for the Charles River by the National Weather Service.

5. A Stormwater Management Report shall be prepared in conformance with the Design Standards contained in Section 5 and contain the following elements:

   a) The existing site hydrology.

   a) A drainage area map showing pre- and post-construction watershed boundaries, drainage area and stormwater time of concentration (Tc) flow paths, including drainage system flows.

   b) Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this Regulation. Such calculations shall include:

      (i) Description of the design storm frequency, intensity and duration.

      (ii) Time of concentration.

      (iii) Soil Runoff Curve Number (CN) based on land use and soil hydrologic group.

      (iv) Peak runoff rates and total runoff volumes for each watershed area.

      (v) Infiltration rates, where applicable.

      (vi) Culvert capacities, where applicable.

      (vii) Flow velocities.

      (viii) Data on the rate and volume of runoff for the specified design storms.

      (ix) Documentation of sources for all computation methods and field test results.

   c) If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges from Construction Activities (applicable to construction sites that disturb one or more acres of land), then the Applicant is required to submit a complete copy of the SWPPP (including the signed Notice of Intent and approval letter) as part of its Application for a SMP.

6. Post Construction Operation and Maintenance Plan (O&M)

   a) The Post-Construction O&M Plan shall be designed to ensure compliance with the SMP, the Stormwater Management Ordinance and these Rules and Regulations and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The O&M Plan shall be a stand-alone document and shall remain on file with the Engineering Division and shall be an ongoing requirement.

   b) The Post-Construction O&M Plan shall include, at a minimum:

      i. The name(s) of the owner(s) for all components of the system and emergency contact information.

      ii. The signature(s) of the owner(s).

      iii. The names and addresses of the person(s) currently responsible for O&M.

      iv. An Inspection and Maintenance Schedule for all stormwater management facilities including routine and non-routine maintenance tasks to be performed.

v. A reduced size plan or map clearly showing the location of the systems and facilities including easements, catch basins, manholes/access lids, main, and stormwater devices.

vi. If applicable, a list of easements necessary for the construction and O&M of the stormwater system, with the purpose and location of each. Easements shall be recorded with the South Middlesex County Registry of Deeds prior to issuance of a Stormwater Management Certificate of Compliance by the Engineering Division.

vii. O&M inspection schedule and log form.

viii. Provisions for the, City Engineer or his/her designee to enter the property at reasonable times and in a reasonable manner for the purpose of inspection.

D. Major Permit Submission Requirements

In addition to all the requirements for a Minor Stormwater Permit, provide:

1. A Project Narrative that includes a description of the proposed project and a description of how and where stormwater will be controlled and erosion and sedimentation controls implemented, and an explanation of how the proposed project:

   a) Meets the Design Standards enumerated in Section 5C.

   b) Meets the Stormwater Standards outlined in the Massachusetts Stormwater Handbook[6];

   c) Attempt to reproduce natural hydrologic conditions with respect to groundwater and surface water.[7]

   d) Include square footage summaries indicating square footage of work area as well as existing, proposed and net changes in impervious surface areas.

SECTION 7: ADMINISTRATION

A. Administration of Rules and Regulations. The City Engineer through its Engineering Division shall administer, implement, and enforce these Rules and Regulations.

B. Stormwater Management Permit Application Approval Process

Actions by the City Engineer / Engineering Division:

1. Determination of Completeness: The City Engineer shall review the Stormwater Management Permit Application for completeness with the requirements and standards of Sections 5 through 8 within fifteen (15) business days of receipt.

2. Incomplete Applications: If the City Engineer determines the Application is incomplete, including, but not limited to, insufficient information to describe the site, the work, or the effect

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[6] Massachusetts Stormwater Handbook, as most recently updated.
http://www.mass.gov/eea/agencies/massdep/water/regulations/massachusetts-stormwater-handbook.html

[7]Guidance on these practices is provided in Appendix C of these Regulations and the MA Stormwater Management Handbook.

that work has on water quality and runoff volume, the Engineering Division may reject the application, require the submission of additional information, or deny the Permit.

3. Complete Applications. Each Application for a Stormwater Management Permit Application that is determined to be a complete Application shall be reviewed by the City Engineer. The Application shall be acted upon within fifteen (15) business days of the date that the Engineering Division determines that the Application is complete unless such Application has been withdrawn from consideration. The Engineering Division may:

   a) Approve the Permit Application upon finding that the proposed project will meet the objectives of the Stormwater Management Ordinance and the Design Standards.

   b) Approve the Permit Application with conditions, modifications and/or restrictions that are required to ensure that the project will protect water resources and meets the objectives of the Stormwater Management Ordinance and the Design Standards.

   c) Deny the Permit Application due to non-compliance with Design Standards (in Section 5) or insufficient information to make a determination.

C. Plan Changes

The Applicant must notify the City Engineer, in writing, of any proposed change to or alteration of the site plans and details authorized in any Stormwater Management Permit before any change or alteration is made. Proposed changes are only considered approved by the Engineering Division if the changes are *noted in writing by the Engineering Division and/or revised plans / documents are stamped approved by the Engineering Division.* If the Engineering Division determines that a proposed change or alteration is significant, based on the Design Standards in Section 5 of these Rules and Regulations and accepted construction practices, it may require an amended Application be filed.

D. Expiration of Permits and Permit Extensions

1. Should a land-disturbing project or activity associated with an approved plan in accordance with this City Ordinance not begin within one (1) year following permit issuance, the permit shall lapse and should the Applicant wish to continue with the previously approved plan, the Applicant must re-apply for a new permit.

2. If the project associated with an approved Stormwater Management Permit granted under the Ordinance has not been completed within three (3) years of permit issuance, a new permit or a permit extension will be required by the Engineering Division. The Engineering Division may require revisions to the project to comply with current regulations and standards as a condition of the permit extension.

3. Applicants may request permit extensions in one (1) year increments.

E. Project Completion. A Stormwater Management Certificate of Compliance (SMCC) is required for completion of all Minor and Major Stormwater Management Permits. Upon request by the permittee and following review and approval that all work of the permit has been satisfactorily completed in conformance with the Stormwater Management Ordinance and Permit, the Engineering Division will issue a Stormwater Management Certificate of Compliance. (See Section 10 for details.)

SECTION 8: PRE-CONSTRUCTION NOTICE and CONSTRUCTION INSPECTIONS

A. Pre-Construction Meetings and Site Inspections

1. Pre-Construction Meeting: Once a permit has been approved, the Engineering Division may require a pre-construction meeting prior to starting any clearing, excavation, construction or land-disturbing activity by the Applicant. The Applicant's technical representative, the general contractor or any other person with authority to make changes to the project, shall meet with the Engineering Division or its representative to review construction sequencing and the permitted plans and their implementation.

2. Notice of Construction Commencement: The Applicant must notify the Engineering Division City Engineer two (2) business days prior to the commencement of any construction or land disturbance activities. In addition, the Applicant must notify the assigned Engineering Division inspector two business (2) days prior to construction of any stormwater management structural Best Management Practices (BMPs).

3. Initial Site Inspection: An inspection may be made of erosion and sedimentation controls prior to any land-disturbance to assess overall effectiveness and functioning to protect resources

B. Construction-Period Inspections

1. Upon issuance of any Stormwater Management Permit, and until issuance of a SMCC, representatives from the Engineering Division and their designees shall be granted the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection.

2. The Engineering Division may, at a minimum, inspect the project site at the following stages:

   a) Prior to any vegetation clearing and upon installation of all soil erosion and sediment control measures. Periodic inspections will be made thereafter to ensure the durability and function of these measures.

   b) Stormwater Management System Excavation Inspection: The Engineer of Record shall inspect the excavation of the stormwater management system(s) to ensure adequate separation of the stormwater system from ground water. This is required for Major Stormwater Permits and highly encouraged for Minor Stormwater Permits.

   c) Stormwater Management System Inspection: An inspection will be made prior to backfilling of any underground drainage or stormwater conveyance structures and management

   d) The City Engineer may require the submission of periodic inspections and reporting by the Applicant as dictated by site conditions. Inspections must be completed by qualified persons approved by the Engineering Division.

C. Post-Construction Inspection. The Engineering Division shall inspect the site and all stormwater infrastructure / BMPs to confirm its "as-built" features and full compliance with all approved plans and permit conditions, including final site stabilization.

SECTION 8: STANDARD CONDITIONS

A. A copy of the approved and signed plans and permits shall always be kept on the construction site.

B. Notes indicating the required inspections must appear on the final approved Site Plan(s).

C. Post-Construction Annual Reporting on O&M of Stormwater Management System for Major Stormwater Permits only. Annual stormwater management systems inspection reports shall be

submitted to the Engineering Division by January 15th of the following year. Inspection reports *including photographs or videos* (as appropriate) for stormwater management systems shall include:

1. The date of inspection.
2. Name of inspector.
3. The condition of each BMP including components such as:
   a) Pretreatment devices.
   b) Vegetation or filter media.
   c) Spillways, valves, or other control structures.
   d) Embankments and slopes.
   e) Inlet and outlet channels and structures.
   f) Underground drainage.
   g) Sediment and debris accumulation in storage and forebay areas (including catch basins).
   h) Any nonstructural practices.
   i) Any other item that could affect the proper function of the stormwater management system.
4. Description of the need for maintenance.
5. Observations of any physical changes to system in comparison with the approved as-built plan.

SECTION 9: STORMWATER MANAGEMENT CERTIFICATE OF COMPLIANCE (SMCC)

A. Upon completion of the work done under any minor or major stormwater management activity, the permittee shall request a final inspection and submit the following: Note: Land disturbance only permits do not require a certificate of compliance.

The permittee shall submit:

1. A written request for a Stormwater Management Certificate of Compliance from the Engineering Division.
2. As-built plans detailing all aspects of the construction project including the stormwater management systems, structures and devices, as installed. As-built plans shall be stamped by a Registered Professional Engineer.
3. A letter from the Engineer of Record indicating that the constructed facility(s) have been constructed in accordance with, and meet the requirements of, the Stormwater Management Permit, including compliance with performance standards for Best Management Practices (BMPs) as noted in manufacturer's literature and/or EPA's performance curves in the NPDES Small MS4 Permit.
4. Proof of recording the Operations and Maintenance Plan at the South Middlesex Registry of Deeds.

B. After receipt of a written request for a Stormwater Management Certificate of Compliance, as-built plans, and a letter from the Engineer of Record, the Engineering Division shall inspect the stormwater management system to confirm its "as-built" features, determine if the site has been stabilized and determine whether to issue a Stormwater Management Certificate of Compliance.

1. The Engineering Division shall issue a Stormwater Management Certificate of Compliance upon finding that the permit and all its conditions have been complied with.

2. The Engineering Division shall not issue a Stormwater Management Certificate of Compliance upon physical evidence of operational failure, even though it was built as called for the Engineering Plans. In such a case, the Engineering Division shall have the right to require corrections or improvements to the "as-built" system before issuing a Stormwater Management Certificate of Compliance.

SECTION 10: SECURITY

A. As part of any Minor or Major Stormwater Management Permit issued, in addition to any security required by another municipal or state board, agency or official, the Engineering Division may require that the performance and observance of the conditions imposed hereunder be secured wholly or in part by a proper bond or deposit of money or negotiable securities or the undertaking of financial responsibility sufficient in the opinion of the Engineering Division, to be released in whole or in part upon issuance of a SMCC for work performed pursuant to the Permit.

SECTION 12: SEVERABILITY

The invalidity of any section, provision, paragraph, sentence, or clause of these Rules and Regulations shall not invalidate any other section, provision, paragraph, sentence, or clause thereof, nor shall it invalidate any permit or determination that previously has been issued.

END OF NEWTON'S STORMWATER MANAGEMENT ORDINANCE RULES AND REGULATIONS

APPENDICES FOLLOW

APPENDIX A: DEFINITIONS SUPPLEMENTING THOSE IN THE ORDINANCE

The following definitions supplement those included in the City of Newton Stormwater Management Ordinance (**Chapter 29**).

1. ABUTTER -Any property owner whose land directly abuts the land upon which work is being proposed.

2. APPLICANT -Any "person", as defined in the ordinance, who has filed an application for a Stormwater Management and Erosion Control Permit.

3. CONVEYANCE

   A. Any structure or device, including pipes, drains, culverts, curb breaks, paved swales or man-made swales of all types designed or utilized to move or direct stormwater runoff or existing water flow.

   B. Any impervious surface, including pavement, where surface/sheet flow is utilized to remove rainfall.

4. ENGINEER OF RECORD – is the professional engineer who seals drawings, reports, or documents for a project. The seal shall acknowledge that the professional engineer prepared, coordinated, or had subordinates prepare under the direct supervision of the professional engineer, drawings, reports, or documents for a project.

5. ESTIMATED SEASONAL HIGH GROUNDWATER – the shallowest depth to free water that stands in an unlined borehole or test pit.

6. EROSION CONTROL - The prevention or reduction of the movement of soil particles or rock fragments.

7. EROSION CONTROL PLAN

   A document containing narrative, drawings and details developed by a registered professional engineer (PE) or a registered professional land surveyor (PLS), which includes best management practices, or equivalent measures designed to control surface runoff, erosion and sedimentation during pre-construction and construction related land disturbance activities.

8. EXISTING LAWN: Grass area which has been maintained and mowed in the previous two years.

9. FILL: The placement or deposit of any material that raises, either temporarily or permanently, the elevation of any area subject to the Ordinance.

10. FLOODING - A local and temporary inundation or a rise in the surface of a body of water, such that it covers land not usually under water.

11. GENERAL CONSTRUCTION DETAIL BOOK – The latest version of general construction details promulgated by the City of Newton's Department of Public Works, which is available from the Engineering Division.

12. GROUNDWATER - All water beneath any land surface including water in the soil and bedrock beneath water bodies.

13. HOODED CATCH BASIN - A catch basin that is fitted with an inverted elbow over its outlet pipe or similar structure that is designed to retain oils and other floatables within the catch basin sump and prevent them from flowing into the drainage system.

14. IMPERVIOUS AREA or IMPERVIOUS SURFACES: Any material or structure in, on or above the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved surfaces (parking lots, sidewalks, driveways, etc.), roof tops, swimming pools, stone patios, gravel, and compacted dirt surfaces such as driveways and roads.

15. NEW DEVELOPMENT

    Any construction or disturbance of land that is currently in a natural vegetated state. New development also includes any disturbance beyond existing impervious and disturbed areas that is contiguous to redevelopment projects.

16. PERVIOUS MATERIAL

    Soil Types that are listed as Class I, II and III soils as defined in 310 CMR 15.243 and 15.244 based upon the general soil classification used by the U.S. Department of Agriculture and depicted in the Soil Textural Triangle

17. POINT SOURCE

    Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or may be discharged.

18. REDEVELOPMENT

    Any construction, land alteration, demolition or improvement of impervious surfaces that does not meet the definition of new development. The following activity is excluded from this definition:

    a. Maintenance and improvement of existing roadways, including widening less than a single lane, adding shoulders, and correcting substandard intersections and drainage, and repaving.

19. RESOURCE AREA

    Any area protected under including without limitation: the Massachusetts Wetlands Protection Act, Massachusetts Rivers Act, or City of Newton General Wetlands Protection Ordinance.

20. SEDIMENTATION

    A process of depositing material that has been suspended and transported in water.

21. SLOPE

    The incline of a ground surface expressed as a ratio of horizontal distance to vertical distance (*e.g.,* a 4:1 slope). It can also be expressed as a percentage of the vertical rise divided by the horizontal distance (*e.g.,* a twenty-five (25) percent slope).

22. STORMWATER MANAGEMENT CERTIFICATE OF COMPLIANCE (SMCC)

    A document issued by the Engineering Division after all construction activities have been completed which states that all conditions of an issued Stormwater Management Permit (SMP)

have been met and that a project has been completed in compliance with the conditions set forth in a SMP.

23. TOTAL PHOSPHORUS (TP) – phosphorus is a nutrient commonly contaminating stormwater, derived from the natural decay of plant material and human activities. Total phosphorus is a measure of all forms of phosphorus, dissolved and suspended particulate found in a sample.

24. TOTAL SUSPENDED SOLIDS (TSS) -Total Suspended Solids. Material, including but not limited to trash, debris, and sand suspended in stormwater runoff.

APPENDIX B: LOW IMPACT DEVELOPMENT PRACTICES

Low Impact Development (LID) strategies use careful site design and decentralized stormwater management to reduce the environmental footprint of new growth and redevelopment. This approach improves water quality, minimizes the need for expensive pipe and pond stormwater systems, and creates more attractive developments. The following are LID strategies and various benefits of implementation.

1. Bioretention cells, commonly known as rain gardens, are relatively small-scale, landscaped depressions containing plants and a soil mixture that absorbs and filters runoff.

   Management Objectives:
   - Provide quality treatment.
   - Remove suspended solids, metals, nutrients.
   - Increase groundwater recharge through infiltration.
   - Reduce peak discharge rates and total runoff volume.

2. Permeable and porous pavements allow water to soak through the paved surface into the ground beneath. Permeable pavement encompasses a variety of mediums including porous concrete and asphalt, plastic grid systems and interlocking paving bricks.

   Management Objectives:
   - Reduce stormwater runoff volume from paved surfaces.
   - Reduce peak discharge through infiltration.
   - Reduce pollutant transport through direct infiltration.
   - Improve site landscaping benefits (grass pavers).

3. Grass swales are broad, open channels sown with erosion resistant and flood tolerant grasses.

   Management Objectives:
   - Provide water quality treatment; remove suspended solids; heavy metals, trash.
   - Reduce peak discharge rate and total runoff volume.
   - Infiltrate water into the ground.
   - Provide a location for snow storage.

4. Infiltration Trenches and Dry Wells These are standard stormwater management structures that store water in the void space between crushed stone or gravel; the water slowly percolates downward into the subsoil.

   Management Objectives:
   - Remove suspended solids, heavy metals trash, oil, and grease.
   - Reduce peak discharge rate and total runoff volume.
   - Provide modest infiltration and recharge.
   - Provide snow storage areas.

5. Grass Filter Strips are low-angle vegetated slopes designed to treat sheet flow runoff from adjacent impervious areas.

   Management Objectives:
   - Remove suspended solids, heavy metals, trash, oil and grease.

- □ Reduce peak discharge rate and total runoff volume.
- □ Provide modest infiltration and recharge.
- □ Provide snow storage areas.

6. Roadway and Parking Lot Design:

   Management Objectives:
   - □ Remove suspended solids, heavy metals trash, oil, and grease.
   - □ Reduce peak discharge rate and total runoff volume.
   - □ Provide modest infiltration and recharge.
   - □ Provide snow storage areas.

7. Cisterns and rain barrels harvest and store rainwater collected from roofs [Note: not to be used as part of measures to meet minimum recharge volumes]

   Management Objectives:
   - □ Storing and diverting runoff.
   - □ Reduce flooding and erosion caused by stormwater runoff.
   - □ They contain no salts or sediment which provides "soft" chemical-free water for garden or lawn irrigation, reducing water bills and conserving municipal water supplies.

8. Other LID Implementations

   - □ Shared Driveways
   - □ Green Roofs
   - □ Tree box filters
   - □ Eliminating curbs and gutters or minimizing in new construction.
   - □ Soil Amendments.
   - □ Creating long flow paths over landscaped areas.
   - □ Creating terraces and check dams.
   - □ Pervious pavers.
   - □ Infiltration, Filtration
     - o Rain gardens.
     - o Disconnected downspouts (not on hills).
     - o Filter Mitts.

9. Low Impact Landscaping

   - Native, drought tolerant species.
   - Turf area conversion (shrubs, etc.).
   - Encouraging longer grass length.
   - Planting wildflower meadows rather than turf along medians.

Conservation Development

Like LID, Conservation Development tries to mitigate the effects of urbanization, but it places additional emphasis on protecting aquatic habitat and other natural resources. Conservation Development subdivisions are characterized by compact clustered lots surrounding a common open space. Conservation Development's goal is to disturb as little land area as possible while simultaneously allowing for the maximum number of residences permitted under zoning laws.

Prior to new construction, conservation developers evaluate natural topography, natural drainage patterns, soils and vegetation. They deploy stormwater Best Management Practices to help prevent flooding and protect natural hydrology. By maintaining natural hydrological processes, Conservation Development creates conditions that slow, absorb, and filter stormwater runoff onsite.

Because future development threatens valuable natural features, Conservation Development provides specific provisions for long-term and permanent resource protection. Conservation easements, transfer of development rights, and other "in perpetuity" mechanisms ensure that protective measures are more than just temporary.

Effective Site Design

The goals of Effective (or Better) Site Design are to reduce impervious cover, preserve natural lands, and capture stormwater onsite. To meet these goals, designers employ a variety of methods. To reduce impervious cover, they narrow streets and sidewalks, minimize cul-de-sacs, tighten parking spaces, and reduce the size of driveways and housing lots.

To reduce stormwater runoff, designers preserve natural lands, using them as buffer zones along streams, wetlands and steep slopes. They employ landscaping techniques that flatten slopes and preserve native vegetation and clusters of trees. They create bio-retention areas - open channels, filter strips and vegetated swales - to increase stormwater infiltration, helping to protect streams, lakes, and wetlands.

DEPARTMENT OF PUBLIC WORKS
OFFICE OF THE COMMISSIONER
1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

March 4, 2022

To: The Honorable City Council

From: James McGonagle, Commissioner of Public Works

Subject: Stormwater Ordinance Q & A

Councilors,

Attached please find the questions and answers related to the proposed stormwater ordinance discussion from the January 19, 2022 Public Facilities Committee meeting. This information includes the comments from the Charles River Watershed Association.

The next discussion of the proposed ordinance is tentatively scheduled for March 23, 2022.

Please contact me with any questions.

Telephone: 617-796-1009 • Fax: 617-796-1050 • Jmcgonagle@newtonma.gov

Stormwater Management and Erosion Control Ordinance and Rules & Regulations

Docket Item:# 111-22

January 19, 2022, Public Facilities Committee Meeting Questions and Answers

1. Discuss how it was decided what goes into ordinance versus what goes into regulations.

   The ordinance provides the framework for the requirements and the rules and regulations provide the details. The City will be able to address changes in the requirements through the rules and regulations without having to amend the ordinance.

   Developing stormwater regulations is a common approach due to the technical subject matter. Many neighboring communities including Lexington, Watertown, Wellesley, Natick and Dedham have stormwater regulations as a supplemental document to their ordinance or bylaw.

   The draft ordinance and the rules & regulations included input and review from our Law Dept.

2. If a homeowner is adding a small addition, it doesn't seem equitable to require a full topographic survey of the property. Can we define a boundary or threshold if the site is generally flat and/or the addition is a small change to the landscape? It would be helpful to define a threshold for smaller projects. Could we develop some limits and triggers for these types of projects?

   Our Rules & Regulations do <u>not</u> state the entire lot must be land surveyed for topography. We work with the Design Engineer in order to evaluate the extent of topographic survey needed based upon the nature of the site and the proposed project. Currently, Engineering typically receives existing conditions plans with topography for the entire lot, regardless of project size. Note that boundary surveys are required for all permits, so the owner / developer needs to procure land survey services in all cases. Modern topographic survey technology has improved the efficiency of topo data collection, with the use of computerized data collection devices and robotics. The cost difference between producing topo data at 1-foot contours vs 2-foot contours is minimal, if not negligible.

   The following survey costs are approximate, do not include design, and they will vary based on lot configuration.
   For Land Disturbance, expect $ 2000 to $4000
   For Minor Stormwater projects, expect $4000 to $8000

For Major Stormwater projects, expect $8000 to $16000

3. Could we make requirements stricter for bigger projects? If a site is newly developed, we count all new impervious surface against the natural state of the land but if an existing home is demolished and replaced than I am not sure why we are using a delta of existing impervious surface against the new impervious surface. Does this create a complication we cannot overcome?

   We have updated the Rules & Regulations (Minor Stormwater Permit section (pg. 5)) to clarify this better. To paraphrase: small projects, such as new garages and additions will only need to manage the stormwater runoff created by this new structure. Projects that involve complete demolition of existing structures in order to build new structures will be required to manage stormwater runoff from the total impervious surface area on the property.

4. The CRWA staff reviewed the ordinance and rules & regulations and provided feedback to the City.

   CRWA comments will be included in the Friday packet.

5. The EPA has listed the phosphorus reduction target for the City of Newton as 61% in the MS4 permit. This is one of the largest reduction goals of the Charles River watershed communities. Reduction requirements of 50 and 60 % for development seem low. Why aren't we trying to make owners and developers achieve a 65% reduction as recommended in the Total Maximum Daily Load (TMDL) for Nutrients in the Upper/Middle Charles River Report?

   While it is true, the Charles River Phosphorus TMDL model outlines a 65% phosphorus reduction from specific land uses (i.e., commercial, high, and medium density residential); our phosphorus reduction requirements are consistent with the 'Stormwater Management in New Development and Redevelopment' detailed in Section 2.3.6 of the MS4 (Stormwater) General Permit administered by EPA. EPA expects multiple strategies will be employed by communities to reduce phosphorus in stormwater, such as, removing illicit sewer connections (from the City's drainage system), street sweeping and catch basin cleaning – in addition to controlling it from new and redevelopment. We understand that EPA has factored these additional strategies into developing the reduction targets we are adhering to per the MS4 Permit.

   As our Phosphorus Control Plan is developed, we will reassess whether the % reductions need to be updated. For special permit projects, we have more flexibility and will continue to request higher phosphorus reduction amounts.

6. The formula used for precipitation appears to be from 1998, is that the most up to date model? May want to use a more current model.

   The Engineering Division's current policy to require a pre- and post-construction evaluation using Cornell University Northeast Regional Climate Center 100-year storm data (8.78 inches over 24 hours) and National Oceanic and Atmospheric Administration (NOAA) Atlas 14 100-year storm (8.5 inches over 24 hours) are widely accepted as appropriate standards for stormwater best management practices (BMPs). (We use the higher number.) The design storm requirement was updated in January 2017, based on recent hurricane events. The city engineer will continue to revise this design storm requirement periodically, based on NOAA Atlas 14 and Cornell University Northeast Regional Climate Center data. The criteria that is most important is the volume of runoff. We require Applicants / Permittees to retain, infiltrate or treat stormwater on site.

7. Should tree protection be incorporated into this ordinance?

   This will be incorporated into a proposed amendment to the Tree Ordinance.

8. Is the City going to need additional resources to administer these new requirements?

   Engineering Division personnel are prepared to administer these new requirements for the stormwater permit process. We currently have enough resources among the Office Engineers, the Permits Engineer, and the field Construction Inspectors, to administer this program. All stormwater permits will be applied for on-line, on the new NewGov permitting software. This software allows Engineering Division to share the permit applications with Inspectional Services Department, the Planning Department, and any other Department that may need to review them. We have already set up a template of the stormwater permits on NewGov, and we will finalize this once the Ordinance and Rules and Regulations are voted and approved by the City Council. For large commercial projects, the special permit process should include requirements for the developer to provide engineering oversight during construction.

9. Will the City be measuring success of this permitting program by sampling outfalls?

   Yes, we will continue to monitor and collect samples for the duration of the current MS4 Permit. Success will also be measured by tracking the volume of material accumulated in all catch basins prior to cleaning. We have implemented a real-time data collection system in our Utilities work order software to collect this information.

Notes compiled by

Jennie Moonan, PE, Stormwater Program Director
Heather Miller, Esq., General Counsel and Policy Director
Charles River Watershed Association

on the

City of Newton Stormwater Management and Erosion Control Ordinance Draft 09-13-21 and Stormwater Management and Erosion Control Rules & Regulations Draft 9/23/21

January 2021

Charles River Watershed Association (CRWA) has reviewed the draft Stormwater Management and Erosion Control Ordinance (dated September 13, 2021) and the draft Stormwater Management and Erosion Control Rules & Regulations (dated September 23, 2021) and offers the following comments and recommendations.

Draft Stormwater Management and Erosion Control Ordinance

Sections 29-149 Administration and 29-150 Permit Procedures

In § 29-149(b), the ordinance states only that "The commissioner of public works shall adopt, and periodically amend as deemed necessary, rules and regulations relating to the detailed requirements, procedures, and administration of this ordinance." In Section 29-150(b), the ordinance states that "The commissioner of public works shall set forth the application procedures and requirements - including but not limited to content of applications, stormwater management plan and operations and maintenance plan contents, technical requirements, inspections, and project closeout process in the rules and regulations promulgated under section §29-149(b) of this ordinance."

We recommend that the ordinance provide more specificity about the standards that must be used when developing the regulations to ensure compliance with the U.S. EPA NPDES MS4 General Permit. For example, the Northern Middlesex Stormwater Collaborative Model Stormwater Bylaw (August 2020) provides, in relevant part, that "Stormwater Management regulations, rules or guidance shall identify requirements for Administrative Land Disturbance Approval and Land Disturbance Permits required by this bylaw and consistent with or more stringent than the relevant requirements of the most recent MS4 Permit."

In Section 29-150 Permit Procedures, subsection (b) Procedures and Requirements, consider adding the following to the end: "The requirements shall be consistent with or more stringent than the relevant requirements of the most recent version of the Massachusetts Stormwater Management Handbook and the U.S. EPA NPDES MS4 General Permit. The requirements should be considered minimum requirements, and where any provision of this ordinance or rules and regulations imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, whichever provisions are more restrictive or impose higher protective standards for human health or the environment shall take precedence." (This language comes from the Town of Bedford's Stormwater Management Bylaw). Alternatively, "Where an inconsistency exists between the Massachusetts Stormwater Handbook, the U.S. EPA NPDES MS4 General Permit, and these regulations, the stricter requirement shall apply." (This language comes from the Town of Lexington's Stormwater Management Regulations).

Section 29-150 Permit Procedures

In subsection (a) Permit Required, consider adding the term "alteration" to this such that it reads "No alteration or land disturbing activity…"

Section 29-152 Final report and certificate of compliance

Subsection (2.) states, in part, "...including compliance with performance standards for Best Management Practices (BMPs) as noted in manufacturer's literature and/or Environmental Protection Agency's performance curves in the NPDES Small MS4 Permit." We recommend moving this language to the regulations instead of the ordinance. It requires additional explanation and detail, and these references may also change over time–it would be much easier to revise the regulations than the ordinance.

Draft Stormwater Management and Erosion Control Rules & Regulations

Section 4 Applicability, subsection A. Exemptions

As you're aware, the MS4 General Permit section 2.3.6 a.ii.4.b provides flexibility for certain roadway projects: "Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways, (including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving projects) shall improve existing conditions unless infeasible and are exempt from part 2.3.6.a.ii.4 (80% TSS and 50% Phosphorus removal). Roadway widening or improvements that increase the amount of impervious area on the redevelopment site by greater than or equal to a single lane width shall meet the requirements of part 2.3.6.a.ii.4." The way that the City has attempted to incorporate this flexibility into the regulations raises some concerns about potential inconsistencies between the definitions section and exemptions section which probably warrants further review and discussion.

We also recommend that the regulations require projects to address other existing and future TMDLs and pollutants of concern.

The regulations do not address the Final Pathogen TMDL for the Charles River Watershed (Jan. 2007). We recommend that:

- For any sewer and storm drain infrastructure remaining on site, the proponent should confirm the condition and that there are no illicit connections.
- As appropriate, a project should provide pet waste stations or trash cans that are emptied on a sufficiently frequent schedule, catch basin grates cast with the term "Do not Dump – Drains to River," and signs about the importance of picking up after your pet.
- Frequent cleaning of catch basins and water quality units should be required as part of the long-term operation and maintenance program as this is a critical way to reduce the discharge of bacteria.

Pollutants of concern identified on the most recent Integrated List of Waters should also be considered for the receiving waterbody. We recommend that the language below from the Northern Middlesex Stormwater Collaborative Model Stormwater Regulations (August 2020) be used to broadly address these concerns, and that more specific language as noted above be used to address the pathogen TMDL.

> "(1) To the extent that the project will discharge, directly or indirectly, to a water body subject to one or more pollutant-specific Total Maximum Daily Loads (TMDLs), implement structural and non-structural stormwater best management practices (BMPs) that are consistent with each such TMDL.
>
> (2) To the extent the project will discharge, directly or indirectly, to an impaired water body not subject to a TMDL, implement structural and non-structural stormwater BMPs optimized to remove the pollutant or pollutants responsible for the impairment."

Subsection B.1 provides, for Minor Stormwater Permits, that "Stormwater management systems for new development and redevelopment sites shall be designed to retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the *net increase* in impervious surface area on the site." It is not clear why the net increase in impervious surface area would be used instead of the *entire* impervious area? We recommend changing this to "multiplied by the entire impervious surface."

Subsection C. Major Stormwater Permits requires projects to "Retain the volume of runoff equivalent to, or greater than, two (2) inches multiplied by the total post-construction impervious surface area on the site" for both new and redevelopments. We agree with this requirement. There is a provision for a waiver at subsection C.1, which is only available to sites that disturb less than one acre. We recommend considering a tiered approach for the waiver that would at a minimum implement the requirements in the MS4 General Permit of 1.0 inch (new development) and 0.8 inches (redevelopment) across the total post construction impervious surface area on the site.

Section 8 Standard Conditions

We support the requirement for post-construction annual reporting on operations and maintenance of Stormwater Management Systems for Major Stormwater Permits. Ideally this would be required for all permits that have any structural or non-structural controls.

Section 9 Stormwater Management Certificate of Compliance (SMCC)
It is not clear whether there are any required timelines for the certificate of compliance. The MS4 General Permit requires that the City, at a minimum, require "the submission of as-built drawings no later than two (2) years after completion of construction projects. The as-built drawings must depict all on site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site (post construction stormwater management)." We recommend revisiting this section to ensure it is consistent with the MS4 General Permit requirements.

Question re off-site mitigation per the MS4 General Permit: Is there no interest in allowing off-site mitigation in the same USGS HUC12?

Appendix B: Low Impact Development Practices

While Section 5 Design Standards, subsection B.4 requires that "Proposals must analyze, propose, and implement Low Impact Development (LID) Best Management Practices (BMPs), unless PROVEN IN WRITING TO THE SATISFACTION OF THE City Engineer to be infeasible. See Appendix B for LID BMPs. If infeasible, Applicants shall demonstrate reasons why LID BMPs are infeasible and demonstrate compliance with design standards through generally accepted methods.", we are concerned that Appendix B could be more rigorous and reflect the phased approach that is more in line with LID:

- What natural features are located on-site and what features can be preserved?
- If preservation is not possible, where can natural systems be recreated?
    - What GSI will you use to recreate and promote natural movement of water?
    - What tree canopy will be provided?
    - What habitat will be provided?
- Etc.

There are numerous LID checklists available that the City may wish to employ such as: mapc.org/wp-content/uploads/2017/11/LID_Local_Codes_Checklist.pdf

Ruthanne Fuller
Mayor

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March 11, 2022

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton, MA 02459

To the Honorable City Councilors:

I am pleased to reappoint Steven Ferrey of 25 Huntington Road, Newton 02458 as a member of the Sustainable Materials Management Commission. His term of office shall expire on 1/15/2025 and his appointment is subject to your confirmation.

Thank you for your attention to this matter.

Warmly,

Ruthanne Fuller
Mayor

RECEIVED
2022 MAR 14 PM 4:32
CITY CLERK
NEWTON, MA. 02459

Newton, MA Boards & Commissions

Submit Date: Feb 24, 2022

Application Form

Profile

Steven
First Name

E
Middle Initial

Ferrey
Last Name

[redacted]
Email Address

25 Huntington Road
Home Address

Suite or Apt

Newton
City

MA
State

02458
Postal Code

What Ward do you live in?

☑ Ward 7

[redacted]
Primary Phone

[redacted]
Alternate Phone

Suffolk University Law School
Employer

Professor of Law
Job Title

Which Boards would you like to apply for?

Sustainable Materials Management Commission: Submitted

Interests & Experiences

Please tell us about yourself and why you want to serve.

Why are you interested in serving on a board or commission?

I have served two terms on this Commission currently and am applying to continue for a third term. I am one of the longer-serving members on the Commission

Resume_acad_year-end.doc
Upload a Resume

STEVEN E. FERREY

25 Huntington Road
Newton, MA 02158

ACADEMIC POSITION

1985 - Present

SCHOOL OF LAW, SUFFOLK UNIVERSITY, Boston
PROFESSOR OF LAW

Teach courses in Environmental Law; Energy & Natural Resources Law, Transactional Skills & Contract Drafting Law, Contracts Law I, Contracts Law II, International Climate Change Law

Associate Professor, 1985-1989; Professor, 1989-present
Granted tenure in 1992

Committees: Administrative/Disciplinary Committee, Faculty Review Committee, Tenure Committee, elected member of University Budget Committee

Faculty Senate: Elected by Law School faculty to serve on Suffolk University Faculty Senate
Chair: 2019-2020 Vice Chair: 2020-2021 Vice-Chair: 2021-2022
serve as Faculty Senate's representative on University Budget Committee;

Faculty Advisor, Environmental Law Society

January - June 2003

HARVARD LAW SCHOOL, HARVARD UNIVERSITY, Cambridge
VISITING PROFESSOR OF LAW

PRIOR EMPLOYMENT

1977-1985:
NATIONAL CONSUMER LAW CENTER, INC., Boston
DIRECTOR, FORD FOUNDATION ENERGY PROJECT & SENIOR COUNSEL

Counsel in precedent-setting litigation before federal District, federal Court of Appeals, and U.S. Supreme Court, and state regulatory commissions in various states

Direct program's legislative advocacy before U.S. Congress

1975:

ENVIRONMENTAL DEFENSE Fund, Berkeley

Representation regarding various environmental and energy law issues

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY, SCHOOL OF LAW

J.D.

Honors: Fulbright Fellowship (at completion of J.D. and during graduate Masters Degree)

California Merit Fellowship (2 in class)

FULBRIGHT FELLOW
UNIVERSITY COLLEGE LONDON, LONDON, ENGLAND

(at completion of J.D. degree and prior to completion of Masters Degree)

Fulbright Dissertation: Environmental Technological Change, Energy and Restructuring

COLLEGE OF ENVIRONMENTAL DESIGN
UNIVERSITY OF CALIFORNIA, BERKELEY

Masters Degree, Urban and Regional Environmental Planning

Honors: Mellon Fellow
Honors at Graduation

POMONA COLLEGE
Claremont, California

B.A. Cum Laude

Major: Economics

Honors: Backstrand Memorial Prize in Economics (awarded at Graduation to outstanding student in economics major)

Pomona College Scholar Award

Independent thesis research, junior year, Geneva, Switzerland

PUBLICATIONS

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S. Ferrey, Los Angeles Times, "Liability Crisis for Cities," Oct. 20, 1986

S. Ferrey, New York Times, "Electric Shortage," April 24, 1984

S. Ferrey, Los Angeles Times, "America: Spoiler on Energy," Oct. 21, 1981

S. Ferrey, Boston Globe, "Cold Words of Comfort," Aug. 28, 1981

S. Ferrey, New York Times, "Crisis," Aug. 10, 1981

S. Ferrey, Boston Globe, "Solar Bank Spared," June 27, 1981

S. Ferrey, Boston Globe Sunday Magazine, "An Alaskan Dilemma," March 22, 1981

S. Ferrey, Boston Globe, "A Chilly Forecast," Nov. 26, 1980

S. Ferrey, Los Angeles Times, "In Thrall to Oil," July 6, 1980

S. Ferrey, Boston Globe, "The Energy Problem: Now What?" Oct. 16, 1979

S. Ferrey, Los Angeles Times, "Oil Price Decontrol," April 26, 1979

S. Ferrey, Boston Globe, "The Price of Decontrol," April 12, 1979

S. Ferrey, New York Times, "Solar Policy," June 30, 1978

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S. Ferrey, Los Angeles Times, "Solar Power: It Could Help Revivify Inner Cities," May 7, 1978

S. Ferrey, Boston Globe, "Powering Our Cities," May 3, 1978
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SPEECHES AT NATIONAL & INTERNATIONAL CONFERENCES

- Stanford Law School
- Duke Law School
- Yale Law School
- Harvard University Law School
- Harvard University Kennedy School of Government
- Massachusetts Institute of Technology
- University of Southern California
- N.Y.U. Law School
- Boston College Law School
- William & Mary Law School
- Boston University
- University of California at Berkeley School of Law
- Northwestern University Law School
- Arizona State University Law School
- San Diego University Law School
- George Washington University Law School
- Lewis & Clark Law School

Western New England Law School

- Vermont Law School
- Suffolk University Law School
- Wake Forest Law School
- Dartmouth College

- Australian National University College of Law, Centre for Climate Law and Policy, Canberra, Australia

- Universite de Vietnam Law School, Ho Chi Minh City (Saigon), Vietnam

- Korean Legislative Research Institute, Seoul, South Korea

- Florida State University School of Law

- University of Minnesota Law School

- University of Connecticut Law School

Texas A & M Law School

- Chapman University Law School

- Fordham University Law School

- Southwestern Law School

- The Woodrow Wilson Foundation

- The American Academy for an Energy Efficient Economy (ACEEE)

- The National Governors' Association

- The National Conference of State Legislatures

- Conference of New England Governors and Eastern Canadian Premiers

- World Resources Institute

- The White House Conference on Energy

- The World Bank

- United Nations

American Association of Law Schools

- American Bar Association

– Numerous privately sponsored conferences in U.S.

NATIONAL GOVERNMENT BOARD & ABA SERVICE (during career)

Appointed by U.S. President as one of five members of U.S. Solar & Conservation Bank
Advisory Board

Appointed by U.S. President to eight-member Presidential Advisory Committee on the Gas
Research Institute

Appointed by U.S. President as member of Domestic Policy Review on Energy

U.S. Congress, Office of Technology Assessment, Committee on Dispersed Electric
Generating Systems

U.S. Department of Energy, Consumer Advisory Committee,
Chairman, Subcommittee on Policy & Management

Scientists' Institute for Public Information,
Working Group on Oil Supply Disruptions

Vice-Chair of American Bar Association, Environment, Energy & Resources Committee,
Special Committee on Energy and Environmental Finance

Vice-Chair of American Bar Association, Environment, Energy & Resources Committee,
Special Committee on Carbon Trading and Energy Finance Committee

Served on various Massachusetts state and local advisory committees on various
environmental, energy, and human rights matters

LEGAL AFFILIATIONS

Admitted to practice law before:

- various Federal District and Appellate Courts
- California Bar
- Massachusetts Bar
- Numerous federal and state regulatory agencies

CONGRESSIONAL TESTIMONY

On various occasions presented testimony on energy and environmental issues at the invitation of 7 different committees of the U.S. Congress:

U.S. Senate Committee on Environment & Public Works

U.S. House of Representatives Committee on Energy & Commerce

U.S. House of Representatives Committee on Interior & Insular Affairs

U.S. House of Representatives Committee on Banking, Finance & Urban Affairs

U.S. House of Representatives Committee on Government Operations

U.S. House of Representatives Committee on Education & Labor

U.S. House of Representatives Committee on Small Business

PUBLIC SECTOR ADVISORY SERVICE (DURING CAREER)

The World Bank

The United Nations Development Programme (UNDP)

The United Nations Global Environment Facility (GEF)

The European Union

U.S. Congress Office of Technology Assessment

U.S. Federal Trade Commission

U.S. Department of Energy

U.S. State Department Agency for International Development

U.S. Department of Housing and Urban Development

U.S. Government Accountability Office

U.S. League of Women Voters Education Fund

U.S. National Renewable Energy Laboratory (NREL)

Commonwealth of Massachusetts

State of California Energy Commission

State of California Public Utilities Commission

North Carolina Alternative Energy Corporation

New York City

Bonneville Power Administration

National Rural Electric Cooperative Association

PERSONAL

Married, two children (Cameron and Curran)