

BOYLSTON CONSERVATION COMMISSION RULES & REGULATIONS FOR STORMWATER

UNDER THE BOYLSTON GENERAL BY-LAWS, ARTICLE VI, SECTION 9 – STORMWATER CONTROL BY-LAW

1.0 PURPOSE

The purpose of these Regulations is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased construction site and post-development stormwater runoff, decreased groundwater recharge, and nonpoint source pollution associated with new development and redevelopment, as more specifically addressed in the Stormwater Control By-law of the Town of Boylston.

2.0 DEFINITIONS

The definitions contained herein apply to issuance of a Stormwater Control Permit established by the Town of Boylston Stormwater Control By-law and implemented through these Regulations. Terms not defined in this section shall be construed according to their customary and usual meaning unless the context indicates a special or technical meaning.

ALTER: Any activity, which will measurably change the ability of a ground surface area to absorb water or will change existing surface drainage. Alter may be similarly represented as “alteration of drainage characteristics,” and “conducting land disturbance activities.”

APPROVAL NOT REQUIRED (ANR): A plan of land that does not require approval under the Subdivision Control Law of Massachusetts (M.G.L. - Chapter 41, Sections 81K through 81GG).

APPLICANT: A property owner or agent of a property owner who has filed an application for a Stormwater Control Permit.

STORMWATER BEST MANAGEMENT PRACTICE (BMP): A structural or nonstructural technique for managing stormwater to prevent or reduce non-point source pollutants from entering surface waters or ground waters. A structural stormwater best management practice includes a basin, discharge outlet, swale, rain garden, biofilter or other stormwater treatment practice or measure either alone or in combination including without limitation any discharge pipe, 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 include source control and pollution prevention measures.

BETTER SITE DESIGN: Site design approaches and techniques that can reduce a site’s negative impact on the watershed through the use of nonstructural stormwater management practices. Better site design includes conserving and protecting natural areas and increasing green spaces, reducing impervious cover, and using natural features for stormwater management.

CEASE AND DESIST ORDER: An order issued by the Conservation Commission or an authorized agent of the Conservation Commission which requires that all construction activity on a site be stopped.

CERTIFICATE OF COMPLETION (COC): A document issued by the Conservation Commission after all construction activities have been completed which states that all conditions of an issued Stormwater Control Permit have been met and that a project has been completed in compliance with the conditions set forth in the Stormwater Control By-law.

COMMON PLAN: Any announcement or piece of documentation (including a sign, public notice or hearing, advertisement, drawing, ANR plan, or permit application, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor marking, etc.) indicating imminent or future construction activities.

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

DEVELOPER: A person who undertakes or proposes to undertake land disturbance activities.

DEVELOPMENT: The modification of land to accommodate a new use or expansion of use, usually involving construction.

DRAINAGE EASEMENT: A legal right granted by a landowner to a grantee allowing the use of private land for Stormwater Management purposes.

GRADING: Changing the level or shape of the ground surface.

EROSION CONTROL: The prevention or reduction of the movement of soil particles or rock fragments due to stormwater runoff.

EROSION CONTROL PLAN: A plan that shows the location and construction detail(s) of the erosion and sediment reduction controls to be utilized for a construction site during and after construction.

FLOOD CONTROL: The prevention or reduction of flooding and flood damage.

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.

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

LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS: Land uses or activities with higher potential pollutant loadings, such as areas within an industrial site that are the location of activities subject to an individual National Pollutant Discharge Elimination System (NPDES) permit or the NPDES Multi-Sector General Permit, vehicle salvage yards, vehicle fueling facilities, exterior fleet storage areas, commercial parking lots with high intensity use, road salt storage areas, commercial nurseries and landscaping, outdoor storage and loading areas of hazardous substances, or marinas. Refer to Massachusetts Stormwater Management Standard 5 for higher potential pollutant loads, or the most current Massachusetts *Stormwater Management Handbooks*.

LOW IMPACT DEVELOPMENT TECHNIQUES: Stormwater management systems that are modeled after natural hydrologic features. Low impact development techniques manage rainfall at the source using uniformly distributed decentralized micro-scale controls. Low impact development techniques use small cost-effective landscape features located at the lot level.

IMPERVIOUS SURFACE: Any material or structure on or above the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: roads, paved surfaces (parking lots, sidewalks, driveways), roof tops, swimming pools, and patios.

INFILTRATION: The act of conveying surface water into the ground to permit groundwater recharge and the reduction of stormwater runoff from a project site.

LAND DISTURBANCE: Any action that causes a change in the position, location, or arrangement of soil, sand, rock, gravel or similar earth material.

MASSACHUSETTS STORMWATER MANAGEMENT HANDBOOKS (HANDBOOKS): The Stormwater Management Handbooks, and as amended from time to time, that were produced by MassDEP and the Massachusetts Office of Coastal Zone Management to be used as guidance for controlling stormwater. The Handbooks consist of two volumes: *Volume One: Stormwater Policy Handbook* and *Volume Two: Stormwater Technical Handbook*.

MASSACHUSETTS STORMWATER MANAGEMENT POLICY: The Policy issued by the Department of Environmental Protection, and as amended from time to time, that coordinates the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act G.L. c. 131 § 40 and Massachusetts Clean Waters Act G.L. c. 21, §. 23-56. The Policy addresses stormwater impacts through implementation of performance standards to reduce or prevent pollutants from reaching water bodies and control the quantity of runoff from a site.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM or MUNICIPAL STORM SEWER SYSTEM: A conveyance or system of conveyances designed or used for collecting or conveying stormwater, which is not a combined sewer, including any road with a drainage system, municipal street, catch basins, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, ditch, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the Town of Boylston.

NEW DEVELOPMENT: Any construction or Land Disturbance on a parcel of land that is currently in a natural vegetated state and does not contain alteration by man-made activities.

NONPOINT SOURCE POLLUTION: Pollution from many diffuse sources caused by rainfall or snowmelt moving over and/or through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into water resource areas.

OPERATION AND MAINTENANCE PLAN: A plan that defines the functional, financial and organizational mechanisms for the ongoing operation and maintenance of a Stormwater Management system to insure that it continues to function as designed.

OUTSTANDING RESOURCE WATER: Waters designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, which includes surface Public Drinking Water Supplies and their tributaries and bordering vegetated wetlands (Wachusett Reservoir, its tributaries and wetlands); specified Areas of Critical Environmental Concern (ACECs); and certified vernal pools.

OWNER: A person with a legal or equitable interest in a property.

PERSON: Any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof to the extent subject to Town By-laws, codes, administrative agency, public or quasi-public corporation or body, the Town of Boylston, and any other legal entity, its legal representatives, agents, or assigns.

PRE-DEVELOPMENT: The conditions that exist at the time that plans for the land development of a tract of land are submitted to the Conservation Commission. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time prior to the first plan submission shall establish pre-development conditions.

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.

POST-DEVELOPMENT: The conditions that reasonably may be expected or anticipated to exist after completion of the land development activity on a specific site or tract of land. Post-development

refers to the phase of a new development or redevelopment project after completion, and does not refer to the construction phase of a project.

RECHARGE: The replenishment of underground water reserves.

REDEVELOPMENT: Development, replacement, rehabilitation, expansion, demolition or phased projects that disturb the ground surface on previously developed sites. Standards for Redevelopment only apply to those portions of the parcel that currently contain alteration by human activities. Redevelopment is further defined in the Massachusetts Stormwater Management Policy and Handbooks, Standard No. 7 or current applicable standard.

RESOURCE AREA: Any area protected under, including without limitation: the Massachusetts Wetlands Protection Act, Massachusetts Rivers Act, or Town of Boylston Wetlands Protection By-law.

RUNOFF: Rainfall or snowmelt flowing over the ground surface.

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

SITE: The parcel of land being developed, or a designated planning area in which the land development project is located.

CONSERVATION COMMISSION: Conservation Commission or authorized agent(s). The Conservation Commission or his/her authorized agent(s) is responsible for coordinating the review, approval and permit process as defined in this By-law. Other Boards and/or departments participate in the review process as defined in the Stormwater Control Regulations promulgated under this By-law.

STANDARD SPECIFICATIONS: Commonwealth of Massachusetts, Department of Public Works Standard Specifications for Bridges & Highways, as amended.

STORMWATER MANAGEMENT: The use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, and/or peak flow discharge rates. Stormwater Management includes the use of LID management practices.

STORMWATER MANAGEMENT SYSTEM: A system for conveying, collecting, storing, discharging, recharging or treating stormwater onsite including stormwater best management practices and any pipes and outlets intended to transport and discharge stormwater to the ground water, a surface water or a municipal storm sewer.

STORMWATER CONTROL PERMIT: A permit issued by the Conservation Commission, after review of an application, plans, calculations, and other supporting documents, which is designed to protect the environment of the Town from the deleterious affects of uncontrolled and untreated stormwater runoff.

SUBDIVISION: Defined in the Subdivision Control Law of Massachusetts (M.G.L. – Chapter 41, Section 81L Definitions).

SURFACE WATERS: All waters other than ground water within the jurisdiction of the Town of Boylston including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, and coastal waters.

TSS: Total Suspended Solids.

UNSTABLE AREAS: Area subject to excessive erosion, further described in Section 6.M.4.

WATER QUALITY VOLUME (WQ_v): The storage volume needed to capture a specified average annual stormwater runoff volume. Numerically (WQ_v) will vary as a function of drainage area or impervious area.

3.0 AUTHORITY

- A) The Rules and Regulations contained herein have been adopted by the Conservation Commission in accordance with the Town of Boylston Stormwater Control By-law.
- B) Nothing in these Rules and Regulations is intended to replace or be in derogation of the requirements of the Town of Boylston Zoning By-law, Subdivision Control Law, or any Rules and Regulations adopted there under.
- C) These Stormwater Regulations may be periodically amended by the Conservation Commission in accordance with the procedures outlined in Section 9.05.02 of the Town of Boylston Stormwater Control By-law.

4.0 ADMINISTRATION

The Conservation Commission is designated as the Stormwater Authority under the Stormwater Control By-law. The Conservation Commission shall administer, implement and enforce these Regulations. The Conservation Commission may, with the concurrence of the Applicant, designate another Town board, commission, or department, including but not limited to the Building Inspector, Planning Board, Conservation Commission, Board of Health, as its authorized agent for the purposes of reviewing all stormwater submittals, conducting inspections described in Section 11.0, and enforcing the Stormwater Control By-law and these Regulations per Section 9.0.

5.0 APPLICABILITY

- A) These Stormwater Control Regulations apply to all activities in accordance with the Scope and Applicability section of the Stormwater Control By-law as described in this section. Projects and/or activities not specifically under the currently regulated jurisdiction of any of the Town of Boylston boards, commissions or departments but still within the jurisdiction of the Town of Boylston Stormwater Control By-law must obtain a Stormwater Control Permit from the Conservation Commission in accordance with the permit procedures and requirements defined in Section 6.0 of these Regulations.
- B) If a portion of a project or activity meets the Scope and Applicability of Section 9.04 of the Stormwater Control By-law and it is within the specific jurisdiction of the Planning Board or another Town board, then the Conservation Commission will remain the Stormwater Authority, responsible for facilitating stormwater review and approval of the Stormwater Control Permit. The specific application submission requirements, public notices, and fee requirements of the applicable board, commission, and/or department shall remain in effect in addition to the requirements of the Stormwater Control By-law. The Conservation Commission and other Town boards shall coordinate any necessary expert engineering and other consultant services and resulting Technical Review Fees. The Conservation Commission and other Town boards may, at the request of the Applicant, coordinate the public hearing process. Conservation Commission will make every effort to review the Stormwater Control Permit application in a timely manner, as not to unnecessarily delay permit approval process of other Town Boards. No work may commence without a Stormwater Control Permit from the Conservation Commission.

6.0 PERMIT PROCEDURES AND REQUIREMENTS

- A) Projects requiring a Stormwater Control Permit per Section 9.04 of the Stormwater Control By-law shall be required to submit the materials as specified in this Section, and are required to meet the Performance Standards: Stormwater Control Criteria as specified in Section 7.0 of these Regulations.

B) Filing Application

1. The applicant shall file with the Conservation Commission, seven (7) copies of a completed application package for a Stormwater Control Permit. Permit issuance is required prior to any site altering activity. While the applicant can be a representative, the permittee must be the owner of the site or holder of an easement. The Stormwater Control application package shall include:
 - a) A completed Application Form with original signatures of all owners;
 - b) A list of abutters, certified by the Assessors Office; (abutters at their mailing addresses shown on the most recent applicable tax list of the assessors, including owners of land directly opposite on any public or private street or way, and abutters to the abutters within 300 feet of the property line of the applicant, including any in another municipality or across a body of water);
 - c) Stormwater Management Plan and project description;
 - d) Operation and Maintenance Plan;
 - e) Payment of the application;
 - f) Inspection and Maintenance agreement;
 - g) Erosion and Sediment Control Plan;
 - h) Surety bond (if required).
2. No work proposed shall be undertaken until the final Stormwater Control Permit with respect to such work has been recorded by the applicant in the Worcester County Registry of Deeds. The applicant shall furnish proof of such recording.

C) Fees

1. General

The Conservation Commission shall obtain with each submission an Application Fee established by the Conservation Commission to cover expenses connected with the review of the Stormwater Control Permit and a Technical Review Fee sufficient to cover professional review services for the project. The Conservation Commission is authorized to retain a Registered Professional Engineer or other professional consultant to advise the Conservation Commission and Review Board on any or all aspects of these plans at the applicant's expense. Applicants must pay review fees before the review process may begin.

2. Rules

- a) Application Fees are payable at the time of application and are non-refundable.
- b) All fees shall be calculated by the Conservation Commission in accordance with the fee schedule below.
- c) These fees are in addition to any other local or state fees that may be charged under any other law, regulation, or local By-law.
- d) Municipal projects shall be exempt from Application Fees associated with a Stormwater Control Permit.

3. Application Fees

- a) A non-refundable Application Fee of \$50.00 for up to two (2) acres and \$100 for two (2) acres or greater of land area that will be disturbed by activities authorized by the Stormwater Control Permit shall be due and payable to the Town of Boylston at the time an application is filed. The Application Fee will be used for processing of the application, coordination of Town staff, posting hearings, and other clerical work by Town staff.

4. Technical Review Fees

- a) The Conservation Commission is authorized to require an applicant to pay a fee for the reasonable costs and expenses for specific expert engineering and other consultant services deemed necessary by the Conservation Commission to come to a final decision on the application. This fee is called the "Technical Review Fee" and may include the following:
 - i. Services by an expert engineer or other consultant that include, but are not limited to, resource area survey and delineation, analysis of resource area values, hydrogeologic and drainage analysis, wildlife evaluation, impacts on municipal conservation lands, stormwater quality analysis, site inspections, as-built plan review, and analysis of legal issues.
 - ii. Activities which utilize the services of Town Staff. This includes such activities as inquiries concerning potential projects as well as site inspections not associated with a pending permit application.
 - iii. Additional fee of \$30.00 per hour for review, inspection, and monitoring services for any project filing that requires an excess of two (2) hours of review, inspection, and monitoring time by a Town Staff member.
- b) Technical Review Fees shall be determined at the time of project review based on a specific scope of work. The Conservation Commission shall determine a rate (\$/hour) using reasonable and customary fees associated with its selected consultant and/or engineer. The Conservation Commission shall give written notice to the applicant of the selection of an outside consultant, which notice shall state the identity of the consultant, the amount of the fee to be charged to the applicant, and a request for payment of said fee in its entirety. No such costs or expenses shall be incurred by the applicant if the application or is withdrawn within five (5) days of the date notice is mailed or delivered. The fee must be received in its entirety prior to the initiation of the technical review, otherwise the application will be considered administratively incomplete.
- c) The Commission may request additional consultant fees if necessary review requires a larger expenditure than originally anticipated or new information requires additional consultant services. Failure by the applicant to pay the consultant fee specified by the Commission within ten (10) business days of the request for payment shall be cause for the Commission to determine that the application is administratively incomplete. The Commission shall state such in a letter to the applicant. No additional review or action shall be taken on the permit application until the applicant has paid the request fee.
- d) The applicant may appeal the selection of the outside consultant to the select board, who may disqualify the outside consultant selected only on the grounds that the consultant has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications shall consist of either an educational degree or three or more years of practice in the field at issue or a related field. Such an appeal must be in writing and received by the select board and a copy received by the Conservation Commission, so as to be received within ten (10) days of the date consultant fees were requested by the Conservation Commission. The required time limits for action upon the application shall be extended by the duration of the administrative appeal.
- e) The Technical Review Fees collected under this section shall be deposited with the Boylston Treasurer who shall establish a special account for this purpose. Expenditures from this special account may be made at the direction of the Conservation Commission without further appropriation as provided in GL Ch. 44 § 53G. Expenditures from this account shall be made only in connection with the review of a specific project of projects for which a Technical Review Fee has been collected from the applicant.

- f) Subject to applicable laws, any unused portion of any Technical Review fees collected shall be returned by the Conservation Commission to the applicant along with any interest accrued within forty-five calendar days of a written request by the applicant, unless the Conservation Commission decides in a public meeting that other action is necessary. The Commission must make a report of the account available to the Applicant.

5. Revision Of Fee Schedules And Regulations Governing Fees

- a) The Conservation Commission may review and revise its Regulations and fee schedules periodically as it sees fit.
- b) Amendments shall be preceded by a posted public hearing of the Conservation Commission not less than 15 days prior to the date upon which the change is to be effective.
- c) A copy of the written decision will be filed with the Town Clerk within 10 business days after final action is taken.

D) Public Hearings

The Conservation Commission shall hold a public hearing within twenty-one (21) days of the receipt of a complete application and shall take final action within twenty-one (21) days from the close of the hearing unless such time is extended by agreement between the applicant and the Conservation Commission. Notice of the public hearing shall be given at the applicants expense by a publication in a local newspaper of general circulation, by posting, and by hand delivery or a certified mailing, return receipt requested, to abutters at least seven (7) days prior to the hearing.

E) Actions

The Conservation Commission's action, rendered in writing, shall consist of either:

1. Approval of the Stormwater Control Permit Application based upon determination that the proposed plan will adequately protect the water resources of the community and is in compliance with the requirements set forth in these Regulations;
2. Approval of the Stormwater Control Permit Application subject to any conditions, modifications or restrictions required by the Conservation Commission which will ensure that the project will adequately protect the water resources of the community and is in compliance with the requirements set forth in these Regulations; or
3. Disapproval of the Stormwater Control Permit Application based upon a determination that the proposed plan, as submitted, does not adequately protect water resources, as set forth in these Regulations, or the application is deemed incomplete.

Failure of the Conservation Commission to take final action upon an Application within the time specified above shall be deemed to be approval of said Application. Upon certification by the Town Clerk that the allowed time has passed without Conservation Commission action, the Conservation Commission must issue a Stormwater Control Permit.

F) Appeals of Actions of the Conservation Commission

A decision of the Conservation Commission shall be final. Further relief of a decision by the Conservation Commission made under these Regulations shall be reviewable in the Superior Court in an action filed within 60 days thereof, in accordance with M.G.L. Ch 249. § 4. An appeal of an action by a board, commission or department that has current regulatory authority for a project and/or activity shall be conducted under the applicable appeal provisions of said board, commission and/or department of the Town of Boylston. Such an appeal shall result in revocation of the written approval

as described under Section 6.E of these Regulations, until such time as the appeal process of the applicable board, commission and/or department has been resolved.

G) Plan Changes

The permittee must notify the Conservation Commission in writing of any drainage change or alteration in the system authorized in a Stormwater Control Permit before any change or alteration is made. If the Conservation Commission determines that the change or alteration is significant, based on the MA Stormwater Management Standards, Performance Standards in Section 7.0, and accepted construction practices, the Conservation Commission may require that an amended application be filed.

H) Entry

Filing an application for a permit grants the Conservation Commission, or its agent, permission to enter the site to verify the information in the application and to inspect for compliance after issuance of the Stormwater Control Permit.

I) Project Completion

At completion of the project the permittee shall submit as-built record drawings of all structural and non-structural stormwater best management practices required in the Stormwater Control Permit and an updated Maintenance Agreement noting any changes and new responsible parties. As-built Plans shall be full size plans at a scale approved by the Conservation Commission that reflect the “as built” conditions, including all final grades, developed by a Registered Professional Engineer. All changes to project design shall be recorded in red ink on plans to define changes made or otherwise noted as changes. All work deleted, corrections in elevations, and changes in materials, shall be shown on the as-built drawings. Deviations from the approved plans, if any, shall be certified in writing by a Registered Professional Engineer.

J) Permit Expiration

Should a land-disturbing activity permitted in accordance with these Regulations not begin during a 180-day period following permit issuance, or if work has not been completed within three (3) years, the Applicant shall notify the Conservation Commission. The Commission may re-evaluate the originally approved Stormwater Management Plan to determine whether the plan still satisfies local program requirements. Permits may be renewed without Hearings at the discretion of the Commission. If the Conservation Commission finds the previously filed Plan to be inadequate, a modified plan shall be submitted and approved prior to the commencement of land-disturbing activities per the procedure in Section 6.0 of these Regulations.

K) Stormwater Management Plan Contents

1. The application for a Stormwater Control Permit shall include the submittal of a Stormwater Management Plan to the Conservation Commission. This Stormwater Management Plan shall contain sufficient information for the Conservation Commission to evaluate the environmental impact, effectiveness, and acceptability of the site planning process and the measures proposed by the applicant for reducing adverse impacts from stormwater runoff. This plan shall be in accordance with the criteria established in these Regulations. The Stormwater Management Plan shall remain on file with the Conservation Commission.
2. The Stormwater Management Plan shall fully describe the project in drawings, narrative, and calculations. It shall include, at a minimum:
 - a) Contact Information. The name, address, and telephone number of all persons having a legal interest in the property and the tax reference number and parcel number of the property or

- properties affected;
- b) Stormwater Impact Statement. Brief narrative description of the project and description of how and where stormwater will be controlled;
- c) Locus Map;
- d) Existing Site Plan;
- e) The existing zoning, and land use at the site and abutting properties;
- f) The proposed land use;
- g) The location(s) of existing and proposed easements;
- h) The location of existing and proposed utilities;
- i) The site's existing & proposed topography with contours at 2-foot intervals;
- j) The existing site hydrology (both groundwater recharge and surface runoff);
- k) A description and delineation of existing stormwater conveyances, impoundments, wetlands, drinking water resource areas, swimming beaches or other critical environmental resource areas, on or adjacent to the site or into which stormwater flows;
- l) A delineation of 100-year flood plains, if applicable;
- m) The existing and proposed vegetation and ground surfaces with runoff coefficients for each; (including all impervious cover – parking, driveways, etc.)
- n) A drainage area map showing pre- and post-construction watershed boundaries including offsite contributing watersheds, drainage areas, time of concentration (tc), stormwater flow paths, including municipal drainage system flows, and ;
- o) A recharge analysis that calculates pre- and post-construction annual groundwater recharge rates on the parcel;
- p) A description and drawings of all components of the proposed Stormwater Management system including:
 - i. All measures for the detention, retention or infiltration of water;
 - ii. Description of non-structural BMPs;
 - iii. All measures for the protection of water quality;
 - iv. The structural details for all components of the proposed drainage systems and Stormwater Management facilities;
 - v. Notes on drawings specifying materials to be used, construction specifications, and expected hydrology with supporting calculations;
 - vi. Proposed site plan including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable;
 - vii. Any other information requested by the Conservation Commission.
- q) Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in these Regulations. Such calculations shall include:
 - i. Description of the design storm frequency, intensity and duration;
 - ii. Time of concentration;
 - iii. Soil Runoff Curve Number (RCN) based on land use and soil hydrologic group;
 - iv. Peak runoff rates and total runoff volumes for each watershed area;
 - v. Provisions for protecting, during construction, the infiltration capacity of the soil where infiltration is proposed;
 - vi. Infiltration rates, where applicable;
 - vii. Culvert capacities;
 - viii. Flow velocities;
 - ix. Data on the increase in rate and volume of runoff for the specified design storms, and
 - x. Documentation of sources for all computation methods and field test results.
- r) Soils information from test pits performed at the location of proposed stormwater retention, detention, or infiltration systems, including but not limited to soil descriptions, depth to estimated seasonal high groundwater, depth to bedrock, soil texture, and percolation rates. Soils information will be based on site test pits logged by a MassDEP approved Soil Evaluator;
- s) Soil tests shall be conducted at the proposed location of each infiltration device by a Registered Professional Engineer or a MassDEP approved Soil Evaluator at the depth proposed for the infiltration device. The design infiltration rate shall be determined from the

on-site soil texture. The Applicant shall submit to the Conservation Commission the results of the soil test pits and the design of the infiltration devices for review and approval.

- t) Landscaping plan describing the woody and herbaceous vegetative stabilization and management techniques to be used within and adjacent to the stormwater practice.
- u) Stamp and signature of a Professional 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 Control By-law and these Regulations. A completed, stamped and signed MassDEP Stormwater Management Form certifying that the proposed development complies with the Stormwater Management Standards.

L) Operation and Maintenance Plan Contents

An Operation and Maintenance Plan (O&M Plan) is required at the time of application for all projects with constructed stormwater BMPs and stormwater management practices. The O&M Plan shall be designed to ensure compliance with the Permit and these Regulations and ensure that the Massachusetts Surface Water Quality Standards (314 CMR 4.00) are met in all seasons and throughout the life of the system. The Operation and Maintenance Plan shall remain on file with the Conservation Commission and shall be an ongoing requirement. The Applicant shall provide copies of the Operation and Maintenance Plan to all persons responsible for maintenance and repairs. The O&M Plan shall include:

1. The name(s) of the owner(s) for all components of the system;
2. A map showing the location of the systems and facilities including all structural and nonstructural stormwater best management practices (BMPs), catch basins, manholes/access lids, pipes, and other stormwater devices. The plan showing such systems and facilities to be privately maintained, including associated easements shall be recorded with the Worcester County Registry of Deeds prior to issuance of a Certificate of Completion by the Conservation Commission.
3. Maintenance Agreement that specifies:
 - a) The names and addresses of the person(s) responsible for operation and maintenance;
 - b) The person(s) responsible for financing maintenance and emergency repairs;
 - c) An Inspection and Maintenance Schedule for all stormwater management facilities including routine and non-routine maintenance tasks to be performed. Where applicable, this schedule shall refer to the Maintenance Criteria provided in the Massachusetts Handbooks or the EPA *National Menu of Stormwater Best Management Practices*;
 - d) Instructions for routine and long-term operation and maintenance shall have sufficient detail for responsible parties to perform necessary maintenance activities and prevent actions that may adversely affect the performance of each structural and/or non structural stormwater BMP.
 - e) A list of easements with the purpose and location of each; and
 - f) The signature(s) of the owner(s) and all persons responsible for operation and maintenance, financing, and emergency repairs, as defined in the Maintenance Agreement, if maintenance is to be performed by an entity other than the owner.
4. Stormwater Management Easement(s)
 - a) Stormwater Management easements shall be provided by the property owner(s) as necessary for:
 - i. Access for facility inspections and maintenance;
 - ii. Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event;
 - iii. Direct maintenance access by heavy equipment to structures requiring maintenance.

- b) The purpose of each easement shall be specified in the Maintenance Agreement signed by the property owner.
 - c) Stormwater Management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Conservation Commission.
 - d) Easements shall be recorded with the Worcester County Registry of Deeds prior to issuance of a Certificate of Completion by the Conservation Commission.
5. Changes to Operation and Maintenance Plans
- a) The owner(s) of the Stormwater Management system must notify the Conservation Commission of changes in ownership or assignment of financial responsibility within 30 days of the change in ownership. The present owner shall be responsible until they furnish a copy of the most current Operation and Maintenance Plan to the Conservation Commission signed by the new owner or any new responsible person.
 - b) The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this By-law by mutual agreement of the Conservation Commission and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational and/or maintenance responsibility.

M) Erosion and Sediment Control Plan Contents

1. If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges From Construction Activities (and as amended), then the permittee is required to submit a complete copy of the SWPPP (including the signed Notice of Intent and approval letter). If the SWPPP meets the requirements of Section 3 of the General Permit, it will be considered equivalent to the Erosion and Sediment Control Plan described in this section and required in the Stormwater Control Permit application package.
2. The Erosion & Sediment Control Plan shall be designed to ensure compliance with these Regulations and if applicable, the NPDES General Permit for Storm Water Discharges From Construction Activities. In addition, the plan shall ensure that the Massachusetts Surface Water Quality Standards (314 CMR 4.00) are met in all seasons. The Erosion and Sediment Control Plan shall remain on file with the Conservation Commission. Refer to the latest version of the Massachusetts Erosion & Sediment Control Guidelines for Urban & Suburban Areas, for detailed guidance.
3. The Erosion & Sediment Control Plan shall be submitted in writing, and contain an accurate description of the topography, geology, soils, hydrology, and vegetation of the portion of land to be altered. It shall state fully the purpose for the land disturbance, and shall contain detailed Site Specification Plans, schedules and descriptions of methods proposed to control erosion and sediment. The following items shall be included in, or with an Erosion & Sediment Control Plan:
 - a) existing and proposed topography,
 - b) locations of existing and proposed drains and culverts, and names of streams, rivers, ponds or reservoirs in the Town of Boylston, into which they flow, with design discharge capacity and velocities and supporting computations.
 - c) soil information, and existing and proposed land cover types
 - d) Estimation of the total area expected to be cleared or disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas.
 - e) Schedule, or sequence of operations with starting dates for clearing and/or grading, timing and storm drain and culvert installation, duration of exposure of soils and Unstable Area stabilization, both temporary and permanent. Indicate dates when Unstable Area stabilization, paving, seeding, mulching or sodding is to be completed.

- f) Description of appropriate erosion control measures to limit water borne and wind induced erosion, the general sequence during the construction process in which the measures will be implemented, and which operator is responsible for the control measure's implementation. Control measures shall include, but not limited to, quick rooting vegetation, expeditious stabilization of disturbed area, hay bales, diversions, siltation fences, and sedimentation basins.
 - g) Description of structural practices (such as diversions, waterways, slope stabilization structures, sediment basins, etc.) to divert flows from exposed soils, retain/detain flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site in sufficient detail to implement their installation together with referred standards for soil erosion and sediment control as appropriate. Provide design calculations as required for each structure. Placement of structural practices in floodplains must be avoided to the degree practicable.
 - h) Instructions for proper operation and maintenance of structural erosion and sediment control structures during construction. Operation and maintenance requirements shall be included, at least by reference, on the site plans and/or detail sheets;
 - i) Description of construction and waste materials expected to be stored onsite with updates as appropriate, and a description of controls, including storage practices, to minimize exposure of the materials to stormwater, and spill prevention and response practices.
 - j) The pre-development and construction stage sediment loadings in all watercourses shall be calculated using the Revised Universal Soil Loss Equation (RUSLE).
 - k) Description of interim and permanent bank stabilization practices for the site, including a schedule of when the practices will be implemented. Site plans should ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized. Use of impervious surfaces for stabilization should be avoided.
 - l) Description of temporary and permanent seeding or sodding requirements for exposed areas including seedbed preparation, seed mixtures, lime, fertilizer, and mulching requirements with referenced standards.
 - m) Blank Forms for construction phase record keeping for:
 - i. Dates when major grading activities occur, precipitation events and repairs made to erosion controls;
 - ii. Dates when construction activities temporarily or permanently cease on a portion of the site; and
 - iii. Dates when stabilization measures are initiated.
 - n) Description of measures to prevent the discharge of solid materials, including building materials, to waters of the United States, except as authorized by a permit issued under Section 404 of the Clean Water Act.
 - o) Description of measures to minimize, to the extent practicable, off-site vehicle tracking of sediments onto paved surfaces and the generation of dust.
 - p) Description of pollutant sources from areas other than construction (including stormwater discharges from dedicated asphalt plants and dedicated concrete plants), and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.
 - q) Stamp and signature of a Professional 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 Control By-law.
4. The applicant shall minimize the area of the land disturbance to the maximum extent practicable by using LID and Better Site Design techniques.
 5. Unstable Areas shall be those areas subject to excessive erosion due to highly erodible soils, slope length, and steepness or water concentrations. Concentrations of run-off water or other reasons may cause this area to be "unstable". All areas may become "unstable" when vegetation or other soil surface protection is removed as shown on the drawings, or otherwise identified.
 6. The applicant shall perform all work, furnish all materials, and install all measures required to control soil erosion resulting from the proposed action that are appropriate for the conditions at the

construction site, and prevent excessive flow of sediment from the development site. Such work may include the installation of water diversion structures, diversion ditches, and sediment basins, and seeding, mulching or sodding Unstable Areas to provide temporary protection. An applicant shall submit a Plan showing the methods used to control soil erosion during construction along with the schedule of construction operations. When no work will be performed on Unstable Areas for more than thirty (30) days, or less if deemed necessary by the Conservation Commission, they shall be protected by temporary seeding, mulching, or sodding or the slope lengths shall be reduced by the installation of diversions or other means. When topography permits, sedimentation basins shall be constructed at points of water concentration from Unstable Areas that will remain unprotected longer than thirty (30) days or less, if deemed necessary by the Conservation Commission. Earth berms or diversions shall be constructed to intercept and divert runoff water away from Unstable Areas. Diversion outlets shall be stable or shall be stabilized by paving or other means acceptable to the Conservation Commission.

7. The permanent restoration of vegetative cover such as seeding or sodding on all areas shall be accomplished within fourteen (14) days after final grading operations have been completed. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practicable.
8. Excavated soil material shall not be placed within one hundred (100) feet of rivers, streams, ponds, or reservoirs in a manner that will cause it to be washed away by high water or runoffs.
9. Forging of streams with construction equipment will not be permitted; therefore, temporary bridges, culverts, or other structures shall be used whenever stream crossings are necessary. Unless otherwise approved in writing by the Conservation Commission, mechanized equipment shall not be operated in streams except as may be required to construct channel work, and temporary or permanent structures.
10. The Applicant shall comply with the applicable State and local requirements relating to the prevention and abatement of pollution. Specifically, projects must meet the Standards of the Massachusetts Stormwater Management Policy.
11. As each construction operation is completed, the Board or its agent shall be notified at least forty-eight (48) hours in advance for necessary inspections by the proper Town authority prior to starting work on the succeeding operation.

N) Compliance with Federal and State Permits

1. Coordinated filing for other stormwater-related permits is required under Federal and State regulations for specific activities and areas. Such permits include, but are not limited to:
 - a) NPDES General Permit for Stormwater Discharges from Construction Activities - The EPA, through federal regulations under the Clean Water Act, Phase II Stormwater Regs (64 FR 68722) requires that any construction activity that disturbs one or more acres of land, either by itself or as part of a “common plan” of development or sale, and has the potential to have a discharge of storm water to a water of the United States, must either have a permit OR have qualified for a waiver.
 - b) The MassDEP Notice of Intent (DEP Form BRP WM 08B) - The MassDEP Division of Watershed Management, requires that applicants filing with EPA for coverage under the NPDES General Permit for Stormwater Discharges from Construction Activities for construction projects altering one acre or greater, and that have the potential to discharge to an Outstanding Resource Water (e.g., Wachusett Reservoir), must have the project reviewed and approved by MassDEP before construction commences. Statutory and regulatory authority for the review can be found through the Federal CWA Section 401 certification process, the Massachusetts Clean Waters Act (MGL Chapter 21, s. 26-53), the Surface Waters Discharge Permit Regulations (314 CMR 3.00), the Surface Water Quality Regulations (314 CMR 4.00).

7.0 PERFORMANCE STANDARDS: STORMWATER AND LID CRITERIA

A) At a minimum Stormwater management shall be designed in accordance with the standards described in the Massachusetts Department of Environmental Protection's Stormwater Management Policy and Handbooks using current Best Management Practices (BMP). The applicant may propose alternative BMPs not listed in the Handbooks, subject to a full technical review and approval by the Conservation Commission. The performance of specific proprietary commercial devices and systems must be provided by the manufacturer and should be verified by independent third-party sources and data, such as through Massachusetts Stormwater Technology Evaluation Project (MASTEP).

B) Increases in stormwater runoff resulting from development shall be minimized and retained or detained within the development, rather than being piped to existing surface waters. The order of preference by the Board for handling stormwater runoff is as follows:

1. Infiltration
2. Retention
3. Detention

C) All stormwater from public rights of way, land uses with higher potential pollutant loads, impervious areas within Industrial, Industrial Park, Commercial, and Highway Business Zoning Districts, and where a potential pollution problem exists, as deemed by the Conservation Commission, shall pass through a pre-treatment device to reduce oil, sediment, and trash loadings. All stormwater treatment devices shall have a convenient vehicular access and if necessary a twenty foot (20') wide easement. All stormwater shall be conveyed in ditches or storm drain lines to stormwater BMPs for water quality treatment, infiltration, and/or flow attenuation. Permanent easements and provisions for vehicular access shall be provided along the entire length of ditches and storm drain lines.

D) Lot Drainage

Lots shall be prepared and graded in such a manner that development of one shall not cause detrimental drainage on another; if provision is necessary to carry drainage to or across a lot, an easement or drainage right-of-way of a minimum width of twenty feet (20') and proper side slope shall be provided.

The Applicant shall furnish evidence that adequate provision has been made for the proper drainage of surface and underground waters from any lot or lots. Use of on-lot drywells for disposal of roof runoff is encouraged. Stormwater shall not discharge overland across lot lines. Drainage conveyances and easements shall be provided to convey stormwater to the nearest permanent stream or municipal drainage system.

E) General Criteria

All projects and activities that meet the Scope and Applicability of Section 9.04 of the Stormwater Control By-law must meet the following general performance criteria unless otherwise provided for in these Regulations:

1. Landscape Design

Site plans and landscape plans for all proposed projects must take appropriate steps to minimize water use for irrigation and to allow for natural recharge of groundwater. Native species and habitat-creating species shall be used in all landscape plans to the maximum extent possible as site conditions allow. Invasive species shall not be planted in the Town of Boylston under any circumstances.

2. Hydrologic Basis for Design of Structural Management Facilities

For stormwater facility sizing criteria, the basis for hydrologic and hydraulic evaluation of development and redevelopment sites are as follows:

- a) All hydrological calculations shall be completed and certified to by a Registered Engineer licensed to practice in this field. Typically the procedures to follow will include Technical Release Number 55 (TR55) and/or TR20 (as amended); with pipe design flows calculated using the Rational Method.
- b) The rainfall amounts shall be determined using Type III 24-hour storm precipitation as referenced in Technical Release Number 55 and 20. Precipitation amounts shall be defined by the "Rainfall Frequency Atlas of the United States (Hershfield 1961), also known as Technical Paper 40, or equivalent atlas of precipitation extremes endorsed by both the Conservation Commission and MassDEP through the Massachusetts Stormwater Management Policy and Handbooks.
- c) The minimum time of concentration for street drainage (Rational Method) shall be five (5) minutes.
- d) Water velocities in pipes and gutters shall be between two (2) and ten (10) feet per second, not more than five (5) feet per second on paved surfaces, and not more than four (4) feet per second in vegetated areas.
- e) Impervious cover is measured from the site plan and includes any material or structure on or above the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved or gravel parking lots, sidewalks, roof tops, driveways, patios, and paved, gravel and compacted dirt surfaced roads with the exception of Pervious Paving Surfaces, such as porous asphalt, pervious concrete, paving stones, or grass pavers.
- f) Off-site areas shall be assessed based on their "pre-developed condition" for computing the water quality volume (i.e., treatment of only onsite areas is required). However, if an offsite area drains to a proposed BMP, flow from that area must be accounted for in the sizing of a specific practice.
- g) Off-site areas draining to a proposed facility should be modeled as "present condition" for peak-flow attenuation requirements.
- h) The length of sheet flow used in time of concentration calculations is limited to no more than 100 feet.
- i) Detention time is defined as the time between the center of mass of the inflow hydrograph and the center of mass of the outflow hydrograph.
- j) The standard for selecting a pre-development Cover Type for undeveloped onsite areas shall be "Woods", as recommended in the Massachusetts Smart Growth Toolkit *Model Low Impact Development (LID) Bylaw*.
- k) For purposes of choosing a runoff Curve Number, all pervious lands in the site shall be assumed prior to development to be in "good" hydrologic condition regardless of conditions existing at the time of computation.
- l) Flooding and channel erosion impacts to receiving streams due to land development projects shall be determined at each point of discharge from the development project and such determination shall include any runoff from the balance of the watershed which also contributes to that point of discharge.
- m) Proposed residential, commercial, or industrial subdivisions or ANRs shall apply these Stormwater Management criteria to the land development as a whole. Individual lots in new subdivisions shall not be considered separate land development projects, but rather the entire subdivision shall be considered a single land development project. Hydrologic parameters shall reflect the ultimate land development and shall be used in all engineering calculations.
- n) Additional drainage design criteria for Subdivisions shall be met as described in the *Rules and Regulations Governing the Subdivision of Land in Boylston, Massachusetts*.

3. Peak Discharge Rates and Design Storms

Calculations performed and stamped by a Massachusetts Registered Professional Engineer shall be submitted and approved by the Conservation Commission that verify the following conditions have been met:

- a) Localized flood mitigation and protection of channels from excessive bank and bed erosion and degradation shall be accomplished by providing 24-hour extended detention of runoff from the post-development **1-year, 24-hour return frequency storm**. In addition, post-development peak discharge rates may not exceed pre-development peak discharge rates for the **2-year 24-hour return frequency storm** as required by the current MassDEP Stormwater Management Policy.
- b) Downstream overbank flood and property protection shall be provided by attenuating the post-development peak discharge rate to the pre-development rate for the **10-year, 24-hour return frequency storm** as required by the current MassDEP Stormwater Management Policy.
- c) Extreme flooding and public safety protection shall be provided by evaluating **100-yr, 24-hour return frequency storm** to demonstrate that there will be no increased flooding impacts off-site, as required by the current MassDEP Stormwater Management Policy.

4. Water Quality Criteria

- a) All land disturbance, new development or redevelopment activities shall not discharge untreated stormwater runoff directly to a wetland, local water body, municipal drainage system, or abutting property, without treatment as stipulated in these Regulations.
- b) The prescribed **water quality volume** required in the sizing of a structural stormwater practice shall be in accordance with current MassDEP Stormwater Policy:
 - i. 0.50 inches x the total impervious area of the drainage area and/or
 - ii. 1.0 inches x the total impervious area of the drainage area for stormwater discharges to Sensitive Areas. Sensitive Areas are defined in Section 7.G.

5. Presumed Compliance with Massachusetts Water Quality Standards

- a) All structural Stormwater Management facilities shall be selected and designed using the appropriate criteria from the most recent version of the Massachusetts DEP Stormwater Management Handbooks.
- b) For structural stormwater controls not included in the Massachusetts Stormwater Management Handbooks, or for which pollutant removal rates have not been provided, the effectiveness and pollutant removal of the structural control must be documented through prior studies, independent third-party testing, literature reviews, or other means and receive approval from the Conservation Commission before being included in the design of a Stormwater Management system.
- c) Structural best management practices (BMPs) must be designed to remove 80% of the average annual post-development total suspended solids (TSS) and 40% of total phosphorus (TP), and 30% of total nitrogen (TN). It is presumed that a BMP complies with this performance goal if it is:
 - i. Sized to capture the prescribed Water Quality Volume;
 - ii. Designed according to the specific design and performance criteria outlined in the Massachusetts Stormwater Management Handbooks;

- iii. Constructed properly, as approved by the Stormwater Authority; and
- iv. Maintained in accordance with the O&M Plan approved by the Conservation Commission.

F) Recharge Criteria

1. Annual groundwater recharge rates shall be maintained, by promoting infiltration and recharge through the use of structural and non-structural methods to the maximum extent practicable. At a minimum, annual recharge from the post-development site shall equal the annual recharge from pre-development site conditions.
2. The stormwater runoff volume to be recharged to groundwater shall be determined using the methods prescribed in the latest version of the Massachusetts DEP Stormwater Management Handbooks. The recharge requirements shall apply to all activities within the jurisdiction of this By-law except as noted, and unless specifically waived by the Conservation Commission. The recharge criterion is not required for any portion of a site designated as a land use with higher potential pollutant loads (see Section 7.H of these Regulations). In addition, the Conservation Commission may relax or eliminate the recharge requirement at its discretion, if the site is situated on unsuitable soils or is in a redevelopment area with documentation of prior contaminated soils.

G) Sensitive Areas

Stormwater discharges to Critical Areas with sensitive resources as defined in the current Massachusetts Stormwater Policy (i.e., Outstanding Resource Waters (ORWs) which includes the Wachusett Reservoir and its tributaries, swimming beaches, cold water fisheries, and recharge areas for public water supplies) are subject to additional criteria, and may need to utilize or restrict certain Stormwater Management practices at the discretion of the Conservation Commission. The Conservation Commission may designate additional Sensitive Areas and specific criteria for these areas by amending these Regulations.

H) Land Uses with Higher Potential Pollutant Loads

Stormwater discharges from land uses or activities with higher potential pollutant loadings require the use of specific Stormwater Management BMPs as specified in the most recent version of the MassDEP Stormwater Management Handbooks. The use of infiltration practices without pretreatment is prohibited.

I) Additional Design Criteria for Structural BMPs

The following design criteria are in addition to the criteria established in the current MA Stormwater Management Policy and Handbooks.

1. The Conservation Commission encourages the use of vegetated swales with check dams to detain water. Where practical, catch basins can be drained to swales adjacent to the catch basin, such swales being located generally perpendicular to the roadway and following a curvilinear form. All swales in a subdivision shall be curvilinear and follow topography to appear as a natural part of the landscape. Swales used for detention and filtration shall be located at least fifty (50) feet from the road right of way. Swales used solely to intercept or direct water, and in which water will not remain standing, do not need to be set fifty (50) feet away from the road right of way.
2. The interior top of slope of detention and filtration systems shall be located onsite at least seventy-five (75) feet from the road right of way and/or a subdivision boundary line and shall have curvilinear sides, so as to appear as a natural part of the landscape. In no case shall the disturbed zone for the basin be less than fifty (50) feet from the property line. Depending upon the size of the project and topography of the land, multiple stormwater BMPs are encouraged and may be required in order to avoid the concentration of water in any one area of the development. Areas

disturbed by construction of detention and filtration systems shall be properly stabilized during construction with temporary hydroseeding and/or mulch. Basins shall be screened from adjacent lots and streets by a greenbelt of evergreen trees and shrubs not more than fifteen (15) feet apart planted in two (2) staggered rows. Such trees and shrubs shall not be less than eight (8) feet in height at time of planting. Trees shall not be planted on berms.

3. All basins shall be loamed, seeded and revegetated (with appropriate plantings including trees) in order to foster filtration of pollutants. Basins shall be designed so that ninety percent (90%) of total volume shall be drained within twenty-four (24) hours after cessation of rainfall that generates runoff.
4. In order to meet the design criteria in Sections 7.E.3 and 7.E.4., the bottom of the outlet of detention and filtration facilities shall be higher than the floor of the basin, and the inlet shall be at least 6 inches higher than the outlet to minimize surcharging. Basin volume below positive outlet shall not be considered part of required storage volume. Sufficient ponding area shall be provided to retain the Water Quality Volume. The Commission may require that discharge control shall be accomplished with plate orifices in order to facilitate future adjustment if conditions change.
 - a) Any pipes and structures shall be designed or shielded with grating designed so that children cannot fall or be drawn into the pipe during a storm. Principal and emergency spillways shall be designed by an engineer and be appropriate to the size and capacity of the basin.
 - b) All human-made embankment areas shall be completely cleared of organic matter. Manmade embankments shall consist of clean inorganic fill, properly compacted with a maximum side slopes of three (3) feet horizontal and (1) foot vertical (3:1), then loamed (6" minimum) and seeded with grass. The top of any berm shall be flat for a width of ten (10) feet, with one (1) foot of freeboard above the overflow water level. The plans shall include a design detail and cross section of the proposed detention/retention basin, which shall include details of the invert construction at both the inlet and discharge.
 - c) All embankments, whether manmade or existing, shall be composed of a material that does not allow seepage. The engineer is encouraged to design basins and embankments that utilize existing topographic features. The basin(s) shall be designed for aesthetics as well as function.
 - d) The design of the facilities shall be approved by the Commission after technical review and comment by the Boylston Highway Department and the Planning Board or a private consultant hired by the Commission. Detention and filtration systems shall be designed and located in such a manner that their presence shall not threaten life or property.
 - e) Adequate physical access for maintenance purposes shall be provided to detention and filtration facilities. Five (5) foot fencing shall be installed five (5) to ten (10) feet beyond the outside edge of the top of the berm completely enclosing the basin. A twelve (12) foot gate shall also be installed to allow for vehicular access to the berm. The fence and gate shall be vinyl coated, black post and rail fencing and installed in accordance with Standard Specifications or equal.

8.0 WAIVERS

- A) The Conservation Commission may in its discretion and after due consideration decide to waive and exempt strict compliance with any requirement of the Stormwater Control By-law and these Regulations, where it makes a written finding that such action is:
 1. Allowed by federal, state and local statutes and/or regulations;
 2. In the public interest; and
 3. Consistent with the purpose and intent of the Town of Boylston Stormwater Control By-law and these Regulations.
- B) Any applicant shall submit a written request to be granted such a waiver. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that strict application of the By-law does not further the purposes or objectives of the By-law.

- C) All waivers requested shall be discussed and voted on at the public hearing for the project.
- D) If in the Conservation Commission's opinion, additional time or information is required for review of a waiver request, the Conservation Commission may continue a hearing to a date announced at the meeting. In the event the applicant objects to a continuance, or fails to provide requested information, the waiver request shall be denied.
- E) Waivers described herein shall not constitute an exemption from any applicable Federal or State permitting requirements.

9.0 ENFORCEMENT

- A) Enforcement powers of the Conservation Commission or an authorized agent of the Conservation Commission are granted in the Stormwater Control By-law, Section 9.09.
- B) Notices and Orders
 - 1. The Conservation Commission or an authorized agent of the Conservation Commission may issue a written notice of violation or enforcement order to enforce the provisions of the Stormwater Control By-law and these Regulations, which may include requirements to:
 - a) Suspend or revoke approval of any Stormwater Control Permit;
 - b) Cease and desist from all or a portion of construction or land disturbing activity until there is compliance with the By-law and the Stormwater Control Permit;
 - c) Repair, maintain, or replace the stormwater management system or portions thereof in accordance with the O&M Plan;
 - d) Perform monitoring, analyses, and reporting; and/or
 - e) Fix adverse impact resulting directly or indirectly from malfunction of the stormwater management system.

The suspension or revocation of the Stormwater Control Permit shall not relieve the Applicant of his obligation there under except at the discretion of the Commission.

- 2. If the Conservation Commission determines that abatement or remediation of adverse impacts is required, the order may set forth a deadline by which such abatement or remediation must be completed. Said order may further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town of Boylston may, at its option, undertake such work, and the property owner shall reimburse the Town of Boylston for expenses incurred.
- 3. Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the Town of Boylston, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the Conservation Commission within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the Conservation Commission affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. Ch. 59, § 57, after the thirty-first day at which the costs first become due.
- C) Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of the Stormwater Control Bylaw and these Regulations, or in violation

of the approved Plans under this Section shall forthwith comply with any such Order, and restore such real estate to its condition prior to such violation, as the Conservation Commission deems necessary to remedy such violation.

- D) Any person who violates any provision of the Town of Boylston Stormwater Control By-law, these Regulations, 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, excluding the cost of damages. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.
- E) Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Town of Boylston may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, §21D and the Town of Boylston General By-laws Section 18 in which case the Conservation Commission shall be the enforcing person. The provisions of the General By-laws Section 18 as to the monetary penalties shall prevail. The penalty for the 1st violation shall be \$100.00. The penalty for the 2nd and subsequent violations shall be \$300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.
- F) Appeals. The decisions or orders of the Conservation Commission shall be final. Further relief shall be to a court of competent jurisdiction.
- G) Remedies Not Exclusive. The remedies listed in this By-law are not exclusive of any other remedies available under any applicable federal, state or local law.

10.0 SURETY

The Conservation Commission may require as a condition to approving an Erosion and Sediment Control Plan and Stormwater Management Plan that the Applicant shall furnish a Performance Bond of cash, certified check, a Surety Company, or other acceptable security to the Town as obligee in a penal sum to be fixed by said Commission as it shall deem sufficient to cover the cost of the performance of all labor and materials as shall be required to carry out all the conditions, limitations and safeguards as may be imposed by said Commission in connection with the control of erosion and sediment and post-construction stormwater management.

If the project is phased, the Conservation Commission may release part of the bond as each phase is completed in compliance with the Plan but the bond may not be fully released until the Conservation Commission has received the final inspection report as required by Section 11 of these By-laws and issued a Certificate of Completion.

11.0 CONSTRUCTION INSPECTIONS

- A) Notice of Construction Commencement. The applicant must notify the Conservation Commission or its authorized Agent fourteen (14) days prior to the commencement of construction. In addition, the applicant must notify the Conservation Commission fourteen (14) days in advance of construction of any stormwater management facility.
- B) At the discretion of the Conservation Commission, periodic inspections of the stormwater management system construction shall be conducted by qualified personnel (a Town Officer, a professional engineer, or their designee who has been approved by the Conservation Commission). All inspections shall be documented and written reports prepared that contain the following information:
 - 1. The date and location of the inspection;
 - 2. Names, titles, and qualifications of personnel making the inspection;
 - 3. Whether construction is in compliance with the approved Stormwater Management Plan;
 - 4. Variations from the approved construction specifications; and

5. Any other variations or violations of the conditions of the approved Stormwater Management Plan.

C) Erosion Control Inspection

1. To ensure erosion control practices are in accord with the filed Erosion and Sediment Control Plan, Erosion Control Inspections will be conducted by the site owner or an authorized representative at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater from the start of construction until the site is permanently stabilized. Inspection frequency may be reduced to at least once a month if the site is determined by the Commission to be temporarily stabilized, such as runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or if construction is occurring during seasonal dry periods. The permittee is required to notify the Conservation Commission of any change in inspection frequency, including termination of inspections due to site stabilization.
2. The inspection form will include:
 - a) Name, date, and signature of qualified inspector.
 - b) Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
 - c) Location(s) of discharges of sediment or other pollutants from the site;
 - d) Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location, and/or location(s) where additional BMPs are needed that did not exist at prior inspection; and
 - e) Corrective action required including any changes to the Erosion and Sediment Control Plan necessary and implementation dates.

If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges From Construction Activities (Construction General Permit), then the permittee is required to submit all Inspection Reports to the Conservation Commission. If the Inspection Reports meet the requirements of Section 3.10 of the Construction General Permit, it will be considered equivalent to the Erosion Control Inspection as described above.

D) The Conservation Commission or its designee shall inspect the project site at the following stages, at a minimum:

1. Initial Site Inspection: prior to approval of any plan;
2. Stormwater Management System Inspection: An inspection will be made of the completed stormwater management system, prior to backfilling of any underground drainage or stormwater conveyance structures.
3. Final Inspection
 - a) After the stormwater management system has been constructed and before the surety has been released, all applicants are required to submit actual "as built" plans for any stormwater management facilities or practices after final construction is completed and must be certified by a Professional Engineer.
 - b) The Conservation Commission or an authorized agent shall inspect the system to confirm its "as-built" features. This inspector shall also evaluate the effectiveness of the system in an actual storm. If the inspector finds the system to be adequate he shall so report to the Conservation Commission before a Certificate of Completion is issued.

E) Inadequacy of System

1. If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built in accordance with the Stormwater Management Plan, it shall be corrected by the applicant before the Certificate of Completion is released. If the applicant fails to act the Conservation Commission may use the surety bond to complete the work.
2. If the Conservation Commission determines that there is a failure to comply with the plan, the property owner shall be notified in writing of the nature of the violation and the required corrective actions. A Cease and Desist Order shall be issued until any violations are corrected and all work previously completed has received approval by the Conservation Commission.

12.0 CERTIFICATE OF COMPLETION

- A) Upon completion, the Applicant is responsible for certifying that the completed project is in accordance with the approved plans and specifications by submitting As-built Plans to the Conservation Commission as described in Section 6.I and shall provide regular inspections sufficient to adequately document compliance.
- B) The Conservation Commission will issue a letter certifying completion upon receipt and approval of the As-Built Plans, final inspection and reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this By-law.

13.0 PERPETUAL INSPECTION AND MAINTENANCE

A) Maintenance Responsibility

1. The Town of Boylston will not accept ownership of stormwater BMPs located outside of street rights of way, and the maintenance of such facilities shall remain the permanent responsibility of the applicant or his successors and/or assigns. The owner of the property on which work has been done pursuant to these Regulations for private stormwater management facilities, or any other person or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sedimentation controls, and other protective devices. Such repairs or restoration and maintenance shall be in accordance with approved plans.

B) Maintenance Inspections

1. Stormwater management facilities and practices included in an O&M Plan with a Maintenance Agreement in accordance with Section 6.L of these Regulations must undergo ongoing inspections to document maintenance and repair needs and ensure compliance with the requirements of the agreement, the Plan, and these Regulations.
2. A Maintenance Agreement as specified under Section 6.L of these Regulations between the owner and the Conservation Commission shall be executed for privately-owned stormwater management systems that specify the Responsible Party for conducting long term inspections.
3. At a minimum, inspections shall occur once during the first year of operation and at least once every three years thereafter. Some BMPs may require more frequent inspection, as specified in the O&M Plan.
4. Inspection reports shall be submitted to the Conservation Commission for all stormwater management systems. Inspection reports for stormwater management systems shall include at a minimum:

- a) The date of inspection;
- b) Name and signature of inspector;
- c) The condition of:
 - i. Pretreatment devices
 - ii. Vegetation or filter media
 - iii. Fences or other safety devices
 - iv. Spillways, valves, or other control structures
 - v. Embankments, slopes, and safety benches
 - vi. Reservoir or treatment areas
 - vii. Inlet and outlet channels and structures
 - viii. Underground drainage
 - ix. Sediment and debris accumulation in storage and fore bay areas (including catch basins)
 - x. Any nonstructural practices
 - xi. Any other item that could affect the proper function of the stormwater management system
- d) Description of the need for maintenance.

C) Right-of-Entry for Inspection

The terms of the Maintenance Agreement as specified in Section 6.L.3 of these Regulations shall provide for the Conservation Commission or its designee to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. The Conservation Commission, its agents, officers, and employees shall have authority to enter upon privately owned land for the purpose of performing their duties under these Regulations and may make or cause to be made such examinations, surveys, or sampling as the Conservation Commission deems necessary, subject to the constitutions and laws of the United States and the Commonwealth.

In addition, any action by any person which violates any provision of the Town's Stormwater Control By-law or any application for a permit of a finding or waiver thereunder, shall and does hereby constitute irrevocable authorization by the applicant and any owner or successor in interest to them, for the Conservation Commission of its agents to enter and inspect the premises at any time, and to take action to abate or mitigate any potentially irreparable harm or damage to the public health, safety, environment and general welfare of the Town or the public.

D) Records of Maintenance and Repair Activities

Parties responsible for the operation and maintenance of a stormwater management facility shall provide records of all maintenance and repairs to the Conservation Commission upon request. Parties responsible for the operation and maintenance of a stormwater management facility shall prepare records of the installation and of all maintenance and repairs, and shall retain the records for at least five years. These records shall be made available to the Conservation Commission during inspection of the facility and at other reasonable times upon request.

E) Failure to Maintain

1. If a Responsible Party fails or refuses to meet the requirements of the Maintenance Agreement, the Conservation Commission, after 30 days written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient), may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility or practice in proper working condition. The Conservation Commission may assess the owner(s) of the facility for the cost of repair work, which shall be a lien on the property.
2. After notification is provided to the person responsible for carrying out the maintenance plan of any deficiencies discovered from an inspection of a stormwater management system, the person responsible for carrying out the maintenance plan shall have 30 days or other time frame mutually agreed to between the Conservation Commission and the person responsible for carrying out the

maintenance plan to correct the deficiencies. The Conservation Commission shall then conduct a subsequent inspection to ensure completion of repairs.

14.0 SEVERABILITY

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