

## Proposed Revisions to 11.28.020

*Proposed amendments are redlined by section:*

### 11.28.020 STORM WATER MANAGEMENT AND LAND DISTURBANCE ~~REGULATION~~

#### **Adding entirely new Paragraphs A, B and C:**

#### **A. Purpose and Objectives**

The purpose and objectives of this ordinance are to protect public health, safety, general welfare, and environment by regulating discharges to the storm drain system or, directly or indirectly, to a watercourse or into the waters of the Commonwealth, as well as to control the adverse effects of construction site stormwater runoff and post-construction runoff.

#### **B. Definitions**

- ABUTTER: The owner(s) of land adjacent to regulated activity.
- ALTERATION OF DRAINAGE CHARACTERISTICS: Any activity on an area of land that changes the water quality, force, direction, timing, or location of runoff flowing from the area. Such changes include: change from distributed runoff to confined or 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.
- BEST MANAGEMENT PRACTICE (BMP): Structural, non-structural and managerial techniques that are recognized to be the most effective and practical means to prevent and/or reduce increases in stormwater volumes and flows, reduce point source and nonpoint source pollution, and promote stormwater quality and protection of the environment. "Structural" BMPs are devices that are engineered and constructed to provide temporary storage and treatment of stormwater runoff. "Nonstructural" BMPs use natural measures to reduce pollution levels, do not require extensive construction efforts, and/or promote pollutant reduction by eliminating the pollutant source.
- COMMON PLAN OF DEVELOPMENT: A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- EROSION AND SEDIMENTATION CONTROL PLAN: A document containing narrative, drawings, and details developed by a registered Professional Engineer (PE) or a Certified Professional in Erosion and Sedimentation Control (CPESC), which includes best management practices or equivalent measures designed to control surface runoff, erosion, and sedimentation during pre-construction and construction related land disturbing activities.
- IMPERVIOUS SURFACE: Any surface that prevents or significantly impedes the infiltration of water into the underlying soil. This can include but is not limited to: roads, driveways, parking areas and other areas created using nonporous material; buildings, rooftops, structures, solar panels, artificial turf, and compacted gravel or soil. For the purposes of this ordinance, artificial turf with subsurface drainage that does not prevent or significantly impede the infiltration of water into the underlying soil is not considered impervious surface.
- LAND DISTURBANCE ACTIVITY: Any activity that causes a change in the position or location of soil, sand, rock, gravel, or similar earth material; results in an increased amount of runoff or pollutants; measurably

- changes the ability of a ground surface to absorb waters; involves clearing, grading, or excavating, including grubbing; or results in an alteration of drainage characteristics.
- LAND DISTURBANCE PERMIT: A permit issued by the City Engineer, after review of an application, plans, calculations, and other supporting documents, in accordance with the provisions of the Storm Water Management and Land Disturbance Regulation, City of Malden Municipal Code 11.28.020.
  - LOW-IMPACT DEVELOPMENT (LID): Site planning and design strategies that preserve natural resources and maintain or restore natural processes that result in the infiltration, evapotranspiration, or use of stormwater to protect water quality and associated aquatic habitat.
  - MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS: The performance standards as further defined by the Massachusetts Stormwater Handbook, issued by the Department of Environmental Protection, and as amended, that coordinate the requirements prescribed by state regulations promulgated under the authority of the Massachusetts Wetlands Protection Act M.G.L. c. 131 §. 40 and Massachusetts Clean Waters Act M.G.L. c. 21, §. 23-56 to prevent or reduce pollutants from reaching water bodies and control the quantity of runoff from a site.
  - MS4 PERMIT: General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts.
  - MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or human-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the City of Malden.
  - NEW DEVELOPMENT: Any construction activities or land alteration on an area that has not previously been developed to include impervious surface.
  - OPERATION AND MAINTENANCE PLAN: A plan setting up the functional, financial, and organizational mechanisms for the ongoing operation and maintenance of a stormwater management system to ensure that it continues to function as designed.
  - REDEVELOPMENT: Any construction, land alteration, or improvement of impervious surfaces that does not meet the definition of new development (see above).
  - SITE: The areal extent of construction and land disturbance activities, including but not limited to the creation of new impervious surface and improvement of existing impervious surface.
  - STORMWATER MANAGEMENT PLAN: A document containing narrative, drawings, details, and reporting requirements developed by a qualified Professional Engineer (PE) licensed in the Commonwealth of Massachusetts which describes structural and non-structural best management practices designed to control the discharge of pollutants from impervious surfaces and onsite activities as well as the volume and peak rate of surface runoff from a site on an ongoing basis after construction has been completed.

### **C. Severability**

Refer to Malden Code 1.04.020 Severability.

**Originally Paragraph A, now Paragraph D, with revisions to Section 1 and Section 2:**

**A-D. Applicability and Administration:**

- 1- Except as authorized by the City Engineer in a Land Disturbance Permit or as otherwise permitted by ordinance, no person shall engage in any activity which disturbs
- a. ~~one-acre~~ 10,000 square feet or more of land that drains to the municipal storm drainage system;
  - b. less than one-acre 10,000 square feet of land but is part of a larger common plan of development ~~or sale~~ that will ultimately disturb ~~one-acre 10,000 square feet~~ or more of land that drains to the municipal storm drainage system; or
  - c. 10,000 square feet or more of existing paved asphalt or equivalent impervious cover, disturbance being limited to regrading and/or alteration of sub-base. Mill and overlay are not considered disturbance for the purpose of this provision.
- 2- The following activities shall be exempt from the provisions of this ordinance:
- a. routine maintenance to maintain the original line, grade, hydraulic capacity or the original purpose of the site;
  - ~~b. normal maintenance and improvement of land in agricultural use as defined by Wetlands Protection Regulation;~~
  - ~~e.b.~~ b. maintenance of existing landscaping, gardens, or lawn areas associated with a single family dwelling;
  - ~~d.c.~~ c. construction of fencing that will not substantially alter existing terrain or drainage patterns;
  - ~~e.d.~~ d. construction of utilities other than drainage which will not alter terrain and drainage patterns;
  - ~~f. activities that are subject to the Wetlands Protection Act and demonstrate compliance with an Order of Conditions issued by the Conservation Commission.~~
  - e. normal maintenance or improvement to agricultural or aquacultural land as defined in 310 CMR 10.04.

**Revising Paragraph E (originally Paragraph D, Section 3):**

**B.E. Authority and Regulations**

- 3- The City Engineer is hereby designated as the Stormwater Authority and shall enforce the provisions of this ordinance and may delegate any duties imposed by it to ~~his City of Malden~~ employees and agents. The ~~Director~~ City Engineer may adopt and periodically amend rules, ~~and~~ regulations and/or guidance for stormwater management not inconsistent with the provisions of this ordinance and may waive strict compliance with any requirement of this ordinance where such action is allowed under federal, state or local statutes and regulations, is in the public interest and is not inconsistent with the purpose and intent of this ordinance. The failure to promulgate rules and regulations shall not have the effect of suspending or invalidating this ordinance.

**Adding a new Paragraph F:**

**F. Consent to Entry onto Property**

An applicant consents to entry of City Engineer or its authorized agents in or on the site to verify the information in the application and to inspect for compliance with Permit conditions.

**Deleting the Paragraph on Storm Water Management Plan in its entirety (originally Paragraph B):**

- ~~**B. Storm Water Management Plan:** The Stormwater Management Plan shall fully describe the proposed project in drawings and narrative and shall include:~~
- ~~1. a locus map~~
  - ~~2. existing zoning and land use at the site;~~
  - ~~3. the proposed land use;~~
  - ~~4. the location of existing and proposed easements and utilities;~~
  - ~~5. existing and proposed topography with contours at 2 foot intervals;~~
  - ~~6. existing site hydrology;~~
  - ~~7. description and delineation of existing stormwater conveyances, impoundments and wetlands on or adjacent to the site or into which stormwater flows;~~
  - ~~8. a delineation of 100 year flood plains, if applicable;~~
  - ~~9. estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention or infiltration;~~
  - ~~10. existing and proposed vegetation and ground surfaces with runoff coefficients for each;~~
  - ~~11. an area drainage map showing pre-construction and post-construction watershed boundaries, drainage area and stormwater flow paths;~~
  - ~~12. description and drawings of all components of the proposed drainage system including
    - ~~a. locations, cross sections and profiles of all brooks, streams, drainage swales and their method of stabilization;~~
    - ~~b. measures for detention, retention or infiltration of water;~~
    - ~~c. measures for the protection of water quality;~~
    - ~~d. structural details for all components of the proposed drainage system and stormwater management facilities;~~
    - ~~e. specification of materials to be used, construction specifications and typicals, and~~
    - ~~f. expected hydrology with supporting calculations;~~~~
  - ~~13. proposed improvements, including buildings or other structures, impervious surfaces and drainage facilities, as applicable;~~
  - ~~14. timing, schedules and sequence of development;~~
  - ~~15. a maintenance schedule for the construction period.~~
  - ~~16. such other information as is required by the Water Utilities Department.~~

**Revising all Sections of Paragraph G (originally Paragraph C).**

**G. Land Disturbance Permit - Applications and Procedures**

A Land Disturbance Permit must be obtained prior to the commencement of Land Disturbing Activity based on thresholds established in Paragraph D. An applicant seeking an approval and/or permit shall file an appropriate Land Disturbance Permit application with the City Engineer in a form and containing information as specified in this ordinance and in regulations adopted by the City Engineer. A Land Disturbance Permit must follow the following requirements and content:

1. Application for a Land Disturbance Permit shall be signed by all owners of the property for which the permit is requested and shall be accompanied by all of the following:
  - a. a list of abutters, certified by the Assessor's Office;
  - b. a non-refundable filing fee of \$150.00;
  - c. three copies of a ~~n~~ Construction Phase Erosion and Sediment Control Plan as described in Paragraph ~~D-H~~;
  - d. three copies of a ~~Post-Construction~~ Storm Water Management Plan as described in Paragraph ~~F-I~~;
  - e. three copies of an n Operation and Maintenance Plan for Storm Water Management as described in Paragraph ~~G-J~~ and
  - f. verification that an additional copy of required materials ~~have~~ has been placed on file in the City Clerk's Office. Filing of a completed application shall constitute permission for the City Engineer and ~~his~~ designated agents to enter the site to verify information contained in the application, to inspect for compliance with permit conditions and to make such tests and take such samplings as may be required to determine compliance with the permit or permit conditions.
2. The City Engineer may request additional information as ~~he deems~~ deemed necessary to issue a decision on the application.
3. The City Engineer is authorized to retain registered professional engineers, wetland scientists, or other experts or consultants to advise on any or all aspects of the Application and authorized to require an applicant to pay a fee for the reasonable costs and expenses borne by the City of Malden for specific expert engineering and other consultant services deemed necessary by the City Engineer to come to a final decision on the application.
- ~~2.4.~~ Within 10 days of receipt of a completed application, the City Engineer shall notify abutters that the application is available for inspection at a time and place designated by the ~~Director~~ City Engineer and that public comment will be accepted for 21 days from the date of notice. Within 14 days of the expiration of the time for public comment, the ~~Director~~ City Engineer shall render a decision on the permit application in one of the following forms:
  - a. approve the application and issue the permit;
  - b. approve the application and issue a permit with such conditions, restrictions or modifications as ~~he deems~~ deemed necessary to protect water resources; or

- c. disapprove the application and deny a permit as failing to meet the requirements of this ordinance.

~~3-5.~~ A permit shall be deemed to be approved if the City Engineer fails to take action within the times specified herein and, upon certification by the City Clerk that allowed times have passed, a permit shall be issued by the Water Utilities Engineering Department.

~~4-6.~~ Prior to any change or alteration of the permitted plan, the permit holder shall notify the Water Utilities Department City Engineer in writing. When, in the opinion of the City Engineer, the change or alteration is significant, ~~he may require~~ the permittee may be required to install interim erosion and sedimentation control measures and to submit an amended Land Disturbance Permit applications, which shall conform to the procedures outlined above.

#### Revising all Sections of Paragraph H (originally Paragraph D):

#### H. Construction Phase - Erosion and Sediment Control Plan - Form, Contents & Design Standards

1. Applicants shall implement practices to control construction-related erosion, sedimentation, and wastes in accordance with the most recent versions of the Massachusetts Stormwater Management Standards and Technical Handbooks and the Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas, or more stringent standards as specified in this ordinance. The following performance standards shall be met: ~~The Erosion and Sediment Control Plan shall be designed so as to:~~
  - a. minimize the total area of disturbance;
  - b. sequence activities to minimize simultaneous areas of disturbance;
  - ~~c. minimize peak rate runoff in accordance with the Massachusetts Stormwater Policy;~~
  - ~~d-c.~~ minimize soil erosion and control sedimentation during construction, provided that prevention of erosion shall take precedence over sedimentation control;
  - ~~e-d.~~ divert uncontaminated water around disturbed areas;
  - ~~f-e.~~ maximize groundwater recharge;
  - ~~g-f.~~ install and maintain all Erosion and Sediment Control measures in accordance with product specifications and good engineering practice;
  - ~~h-g.~~ prevent off-site transport of sediment;
  - ~~i-h.~~ protect and manage on and off-site material storage areas, including all areas used solely by the permitted project;
  - ~~j-i.~~ comply with all applicable laws and regulations, including waste disposal, sanitary sewer or septic system regulations, air quality requirements and dust control;
  - ~~k-j.~~ prevent significant alteration of habitats mapped by the Massachusetts Natural Heritage and Endangered Species Program as endangered, threatened or of special concern, estimated habitats of rare wildlife, certified vernal pools and priority habitats of rare species from the proposed activities;

~~h.k.~~ institute interim and permanent stabilization measures as soon as practicable but no more than 14 days after construction activity has temporarily or permanently ceased on a specified portion of the site;

~~m.l.~~ demolition debris, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes shall not be discharged to the MS4 and shall be disposed of in compliance with all local, state, and federal requirements.; and properly manage on-site construction and waste materials;

~~n.m.~~ prevent off-site vehicle tracking of sediments.

2. The Erosion and Sediment Control Plan shall be certified by a Professional Engineer or a Certified Professional in Erosion and Sediment Control and contain the following:

- a. ~~N~~ames, addresses and telephone numbers for the owner, applicant and the person or firm preparing the plan;
- b. ~~T~~itle, date, north arrow, names of abutters, scale, legend and locus map;
- c. ~~L~~ocation and description of natural features including:
  - 1) watercourses and waterbodies, wetland resource areas and all floodplain information, including the 100 year flood elevation based on the most recent Federal Emergency Management Agency (FEMA) Preliminary Flood Study and Flood Hazard Layer, dated 6/14/2021 or any subsequent revisions or update. Flood Insurance Rate Map or as calculated by a professional engineer for areas not assessed on maps;
  - 2) existing vegetation including tree lines, canopy layer, shrub layer and ground cover, and trees with a caliper twelve (12) inches or larger, noting specimen trees and forest communities; ~~and~~
  - 3) habitats mapped by the Massachusetts Natural Heritage and Endangered Species Program as endangered, threatened or of special concern, estimated habitats of rare wildlife, certified vernal pools and priority habitats of rare species within five hundred (500) feet of any construction activity;
  - 4) ~~L~~ines of existing abutting streets showing drainage, driveway and curb cut locations;
  - 5) existing soil volume and nature of imported soil materials;
  - 6) topographical features, including existing and proposed contours at intervals no greater than two (2) feet, with spot elevations provided when needed;
  - 7) surveyed property lines showing distances and monument locations, existing and proposed easements, rights-of-way and other encumbrances, the size of the entire parcel and the delineations and number of square feet of land area to be disturbed;
  - 8) ~~D~~rainage patterns and approximate slopes anticipated after major grading activities;
  - 9) location, details, and a narrative of the steps taken to conform with the design standards set forth above; ~~and~~

10) such other information as is required by the City Engineer, Water Utilities Department.

**Deleting original Paragraph E in its entirety:**

**~~E. Inspection and Site Supervision~~**

- ~~1. The City Engineer may require the permittee to post a surety bond or other acceptable security prior to the start of work under a Land Disturbance Permit. The form of the bond shall be in an amount deemed sufficient to ensure that the work will be completed in accordance with the approved plan and shall be in a form approved by the City Solicitor. The City Engineer may release portions of the bond on a phased project as each phase is completed in compliance with the permit; provided that the bond is not fully released until certification of final completion of the project.~~
- ~~2. Prior to the start of any permitted land disturbing activity, the City Engineer shall meet with responsible representatives of the permittee to review the permitted plans and their implementation. The permit and associated plans shall be maintained at the site until final certification of completion.~~
- ~~3. The permittee shall conduct and document weekly inspections to determine the overall effectiveness of the control plan and shall cause additional control or maintenance measures to be taken as needed. The permittee shall submit monthly reports to the Engineering Department in a format designated by the City Engineer.~~
- ~~4. The City Engineer or his agents shall inspect work under an approved permit in conformance with the following schedule:
  - ~~a. erosion and sediment control measures are in place and stabilized;~~
  - ~~b. site clearing has been substantially completed;~~
  - ~~c. rough grading has been substantially completed;~~
  - ~~d. final grading has been substantially completed;~~
  - ~~e. close of the construction season; and~~
  - ~~f. final stabilization and project completion.~~~~
- ~~5. The permittee shall notify the Engineering Department no less than two working days before inspection is required.~~
- ~~6. Upon completion of the work, the permittee shall submit a report, including as-built construction plans, from a Professional Engineer, surveyor or Certified Professional in Erosion and Sediment Control certifying that all erosion and sediment control devices have been completed in accordance with the approved permit or approved changes or modifications to the permit.~~

**Adding a new Paragraph I with new Sections 1 a through d:**

**I. Storm Water Management Plan – Form, Contents & Design Standards:**

The Storm Water Management Plan and Site designs shall meet the following standards:

- 1. Performance Standards**
  - a. General Standards for All Projects**



- 1) Stormwater Standards: At a minimum, projects shall comply with the Massachusetts Stormwater Standards and the MS4 Permit. Design of stormwater management systems shall be consistent with the requirements of the Massachusetts Stormwater Handbook (most recent version), or more stringent standards as specified in this ordinance.
- 2) Low Impact Development (LID): Applicants shall evaluate and, unless infeasible, implement LID planning and design strategies. LID practices shall include, but not be limited to, protection and restoration of natural resources, minimizing impervious surfaces, grading to direct runoff onto pervious surfaces, and soil decompaction and amendments to improve infiltration capacity. Further guidance on LID practices may be found in the Massachusetts Stormwater Handbook. If the Applicant finds that LID practices are infeasible, the Applicant shall demonstrate which LID practices were evaluated and reasons why those practices were deemed infeasible.
- 3) Optimize for Removal of Phosphorous: Selection and design of stormwater BMPs shall be optimized for phosphorus removal.
- 4) Design for Containment: Stormwater management systems designed on commercial and industrial land use shall incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event. Any stormwater management system designed to infiltrate stormwater on commercial or industrial sites shall provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff to be infiltrated, prior to infiltration.
- 5) At a minimum, projects shall utilize the 24-hour rainfall data taken from the NOAA Atlas 14 Point Precipitation Frequency Estimates unless the Massachusetts DEP Stormwater Management Standards adopts other sources for 24- hour rainfall data.

**b. New Development**

Stormwater management systems on new development shall be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) AND 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site (based on average annual loading). Average annual pollutant removal requirements identified above may be achieved through one of the following methods:

- 1) installing Best Management Practices (BMPs) that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
- 2) retaining the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the new development site; or

3) meeting a combination of retention and treatment that achieves the above standards; or

**c. Redevelopment**

Stormwater management systems on redevelopment sites shall be designed to meet an average annual pollutant removal equivalent to 80% of the average annual post-construction load of TSS AND 50% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious surface area on the site (based on average annual loading). Average annual pollutant removal requirements identified above may be achieved through one of the following methods:

- 1) installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tools provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
- 2) retaining the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the redeveloped site; or
- 3) meeting a combination of retention and treatment that achieves the above standards; or

Redevelopment includes maintenance and improvement of existing roadways including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems and repaving; and remedial projects specifically designed to provide improved stormwater management such as projects to separate storm drains and sanitary sewers and stormwater retrofit 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 Section I.1.c. of this ordinance. 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 Section I.1.c. of this ordinance.

**d. Stormwater Management Plan Contents**

The Stormwater Management Plan shall fully describe the proposed project in drawings and narrative and shall include:

- 1) a locus map;
- 2) existing zoning and land use at the site;

- 3) the proposed land use;
- 4) the location of existing and proposed easements and utilities;
- 5) existing and proposed topography with contours at 2 foot intervals;
- 6) existing site hydrology;
- 7) description and delineation of existing stormwater conveyances, impoundments and wetlands on or adjacent to the site or into which stormwater flows;
- 8) a delineation of 100 year flood plains, if applicable;
- 9) estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention or infiltration;
- 10) existing and proposed vegetation and ground surfaces with runoff coefficients for each;
- 11) an area drainage map showing pre-construction and post-construction watershed boundaries, drainage area and stormwater flow paths;
- 12) description and drawings of all components of the proposed drainage system including
  - i. locations, cross sections and profiles of all brooks, streams, drainage swales and their method of stabilization;
  - ii. measures for detention, retention or infiltration of water;
  - iii. measures for the protection of water quality;
  - iv. structural details for all components of the proposed drainage system and stormwater management facilities;
  - v. specification of materials to be used, construction specifications and typicals, and
  - vi. expected hydrology with supporting calculations.
- 13) proposed improvements, including buildings or other structures, impervious surfaces and drainage facilities, as applicable;
- 14) timing, schedules and sequence of development;
- 15) a maintenance schedule for the construction period; and
- 16) such other information as is required by the City Engineer.

**Revising all Sections of Paragraph J (originally Paragraph G):**

**G.J. Operation and Maintenance Plans:**

1. The Permittee shall ensure that all components of the proposed stormwater management system are functioning according to manufacturer or design specifications for the life of the system. All components shall be maintained in good condition and promptly repaired, in accordance with the approved Operation and Maintenance Plan. This shall constitute a perpetual condition of any Land Disturbance Permit issued under this ordinance.
2. The City Engineer may, by regulation, require ongoing reporting to ensure long-term compliance, including, but not limited to, appropriate operation and maintenance of stormwater BMPs. These procedures may include the submission of an annual certification documenting the work that has been done over the last 12 months to properly operate and maintain the stormwater control measures. Any discrepancies shall be noted in the cover letter.
3. The Operation and Maintenance Plan ~~shall be designed to insure compliance with the permit and~~ shall be signed by the property owners, shall include the name of the owner of each component of the ~~S~~stormwater ~~M~~management system and shall contain a maintenance agreement specifying:
  - a. ~~N~~ames and addresses of persons responsible for operation and maintenance of the stormwater management system;
  - b. ~~N~~ames and addresses of the persons responsible for financing maintenance and emergency repairs of the stormwater management system;
  - c. a site plan that shows the location of all stormwater management system components and all discharge points;
  - d. a description of all BMPs, including proper operating parameters and how the Owner will determine if a BMP is not functioning properly;
  - e. a description of long-term source control and pollution prevention measures;
  - f. a description of inspection and maintenance procedures, responsibilities, and frequencies;
  - g. a schedule for all routine and non-routine maintenance tasks to be performed; and
  - ~~h. a maintenance schedule for all drainage structures, including swales and ponds;~~
  - h. a listing of easements with the purpose and location of each ~~and~~ which shall include easements providing:
    - 1) access for facility inspections and maintenance;
    - 2) preservation of stormwater runoff conveyance, infiltration and detention areas and facilities, including flood routes for the 100-year storm event;
    - 3) direct maintenance access by heavy equipment to structures requiring regular cleanout.
4. Unless waived by the City Engineer, easements shall be required for all areas used for off-site stormwater control and shall be recorded in the Middlesex County Registry of Deeds.

## Adding a new Paragraph K:

### **K. Inspection and Site Supervision:**

1. The City Engineer may require the permittee to post a surety bond or other acceptable security prior to the start of work under a Land Disturbance Permit. The form of the bond shall be in an amount deemed sufficient to ensure that the work will be completed in accordance with the approved plan and shall be in a form approved by the City Solicitor. The City Engineer may release portions of the bond on a phased project as each phase is completed in compliance with the permit; provided that the bond is not fully released until certification of final completion of the project.
2. Prior to the start of any permitted land disturbing activity, the City Engineer shall meet with responsible representatives of the permittee to review the permitted plans and their implementation, including the site design, planned operations at the construction site, planned BMPs during the construction phase, and planned BMPs to be used to manage runoff created after development. The permit and associated plans shall be maintained at the site until final certification of completion.
3. The permittee shall conduct and document weekly inspections during construction to determine the overall effectiveness of the control plan and shall cause additional control or maintenance measures to be taken as needed. The permittee shall submit monthly reports to the City Engineer in a format designated by the City Engineer. Inspections shall be conducted by a Professional Engineer, surveyor or Certified Professional in Erosion and Sediment Control. BMPs shall be inspected during construction, as well as after construction, to ensure they are working as described in the approved plans.
4. The City Engineer or designated agents shall inspect work under an approved permit in conformance with the following schedule:
  - e. erosion and sediment control measures are in place and stabilized, prior to commencement of land disturbance activities;
  - f. site clearing has been substantially completed;
  - g. excavation for stormwater BMPs has been completed;
  - h. subsurface components of stormwater BMPs have been installed, prior to backfilling;
  - i. stormwater BMP surface features have been substantially completed;
  - j. rough grading has been substantially completed;
  - k. final grading has been substantially completed;
  - l. close of the construction season; and
  - m. final stabilization and project completion.
5. The permittee shall notify the City Engineer no less than two working days before inspection is required.
- ~~4-6.~~ Upon completion of the work, the permittee shall submit a report, including as-built construction plans, from a Professional Engineer, surveyor or Certified Professional in Erosion and Sediment Control certifying that all stormwater management measures have been implemented in accordance with the approved permit or approved changes or modifications to the permit. Where changes or modifications have been

approved, the permittee shall state deviations from the permit. As-built plans, stamped by a registered professional engineer, architect, landscape architect and/or land surveyor, shall be submitted to the City Engineer within 30 days of completion of major construction activities. For projects under the jurisdiction of the City of Malden Inspectional Services Department, as-built plans shall be submitted to the City Engineer prior to receipt of a Certificate of Occupancy. As-built plans must include all on-site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site (post construction stormwater management).

**Revising Paragraph L (originally Paragraph H):**

**L. Enforcement:**

1. If the ~~The~~ City Engineer determines that there is a failure to follow the requirements of this ordinance, or any associated regulations, permit or any authorization issued pursuant to this ordinance or regulations that is creating an adverse impact to a water resource, the City Engineer may issue a written order to enforce the provisions of this ordinance, including but not limited to:
  - a. an order to cease and desist from activity pending compliance with this ordinance or a permit issued thereunder;
  - b. maintenance, installation or performance of additional erosion and sediment control measures;
  - c. monitoring, analyses and reporting; and
  - d. remediation of erosion and sedimentation resulting directly or indirectly from land disturbing activity.
2. Where abatement or remediation is required, the order shall set forth a deadline for completion of said abatement or remediation. Said order shall state that, failure to abate the violation or perform the required remediation within the specified time, may result in the city undertaking such work at the expense of the owner.
3. The city shall, within 30 days of completing abatement or remediation of a violation, notify the property owner of cost incurred in remediation, including administrative costs. If the amount due is not received within 30 days of notification or within thirty days following a final decision of a court of competent jurisdiction affirming or reducing the costs, the costs shall become a special assessment and shall constitute a lien on the owner's property for the amount of said costs. Costs remaining unpaid more than 31 days after becoming due shall accrue interest at the rate provided by law.
4. The City Engineer ~~and his authorized agents~~ may purpose any civil and criminal remedy available in law and in equity to enforce the provisions of this ordinance or permits issued thereunder and may also ~~punish~~ issue violations in the manner provided in Mass. Gen. Laws, ~~chapter ch~~ 40 § 21D by a fine of \$300.00. Every twenty-four hours during which a violation exists shall constitute a separate offense punishable by an additional fine.
5. Appeals: The decisions or orders of the City Engineer shall be final. Further relief may be appealed to a court of competent jurisdiction.