

Planning & Zoning Commission
Sub-Division Regulation
Revisions

The following revisions are to the July 5, 2011 Sub-Division Regulations received by the Town Clerk on July 19, 2011.

Text Amendments:

Construction Specifications

Sec 7.5 - Utilities

Approved: 5/1/2012
Effective: 6/1/2012

Soil Erosion & Sediment Control Plans, Storm Water Management Plan & Low Impact Development

Sec 5.5 – Soil Erosion/Sediment Control Plan, Storm-water Mgt Plan & Low Impact Dev Req

Sec 2 - Definitions

Approved: 8/3/2021
Effective: 9/1/2021

Planning and Zoning Commission

Subdivision Regulations Amendments to Section 5.5 Inclusive Regarding Soil Erosion and Sediment Control Plans, Storm-water Management Plans and Low Impact Development

MODIFIED AND ADOPTED: 8/3/2021

EFFECTIVE DATE: 9/1/2021

5.5. Soil Erosion and Sediment Control Plan (E & S Plan), Storm-water Management Plan and Low Impact Development (LID) Requirements.

E & S Plan. The applicant will submit as part of the subdivision plan, a Soil Erosion and Sediment Control Plan that contains proper provisions when the disturbed area of such subdivision development or activity is, or would be, cumulatively more than one half acre (21,780 square feet). The soil erosion and sediment control plan shall contain proper provisions to adequately control storm water runoff on the site and at the individual lot level based on the best available technology. The E&S Plan should be developed using the principles, methods, and practices outlined in the Connecticut Guidelines for Soil Erosion and Sediment Control (2002) (E&S Guidelines), as amended, including its Low Impact Development Appendix (2011). The E&S Plan must result in a development that minimizes erosion and sedimentation. Alternative methods and practices may be used with approval of the Commission, based on recommendations of planning staff or the Town's Engineer. Any such proposed alternative must be certified by the applicant's professional engineer.

Storm-water Management Plan. Storm-water Management Plans, including measures for low impact development shall be submitted in accordance with the provisions of section 5. below. At a minimum, plans shall be developed using, and shall comply with, the design criteria and objectives identified in the 2004 Connecticut Storm-water Quality Manual, as amended, including its most recent Low Impact Development (LID) Appendix.

5.5.1 The Soil Erosion and Sediment Control Plan (E & S Plan) shall include the following:

- a. A narrative describing:
 1. The development;
 2. The schedule for grading and construction activities including:
 - A. start and completion dates;
 - B. sequence of grading and construction activities;
 - C. sequence for installation and/or application of soil erosion and sediment control measures;
 - D. sequence for final stabilization of project site.
 - E. limitations on access of construction vehicles.
 3. The design criteria for proposed soil erosion and sediment control measures and storm water management facilities.
 4. The construction details and the installation and/or application procedures for proposed soil erosion and sediment control measures and storm water management facilities.
 5. The operations and maintenance program for proposed soil erosion and sediment control measures and storm water management facilities.
 6. Requirement for a pre-construction meeting with Town staff prior to any disturbance on the site, unless this requirement is modified by the commission.
 7. Requirement for site inspections by Town Staff for the following: After installation/staking of clearing limit lines (clearing limit lines should be established prior to tree and vegetation cutting or disturbing of any soil); after installation of E&S controls (installation of E&S controls should occur prior to any disturbance of the soil on the site). Tree and

vegetation cutting may occur prior to installation of E&S controls if no soil is disturbed.

- b. A map meeting the scale requirements of Section 5.3, unless the commission's agent requires the E&S Plan to be at a more sufficient scale to identify existing and proposed site drainage patterns and conditions, and improve readability. It shall include:
 1. The location of the proposed development and adjacent properties;
 2. The existing and proposed topography including soil types, wetlands, watercourses and water bodies;
 3. The existing structures on the project site, if any;
 4. The proposed area alterations including cleared, excavated, filled or graded 5. areas and proposed structures, utilities, roads and, if applicable, new property lines;
 5. The location of and design details for all proposed soil erosion and sediment control measures and storm water management facilities;
 6. The sequence for grading and construction activities;
 7. The sequence for installation and/or application of soil erosion and sediment control measures;
 8. The sequence for final stabilization of the development site;
 9. The words "Certified by the Lisbon Planning and Zoning Commission" with designated space for the date and signature of the Chairman or Secretary of the Commission.
 10. Location and design details for development or redevelopment within designated priority areas on the Town of Lisbon, Priority Areas, 6/28/2021 MS4 Map which shall require adherence to the Low Impact Development Appendix to the CT Guidelines for Soil Erosion & Sediment Control and the criteria in section 5.5.3 b below.
 11. Additional Requirements in the form of a more complex E&S Plan shall be required by the Commission for projects where proposed development will directly impact any of the following: soils having severe or very severe erosion hazard; slopes steeper than twenty-five (25) percent; a cumulative area of greater than five acres regardless of the land's attributes. This more complex E & S Plan may include, but shall not be limited to, the requirement to phase the Plan and include limitations on the amount of soil exposed at any given time, and/or seasonal limitations for implementation of the plan, or addition of certification of the E&S Plan by a Certified Erosion Control Professional, as the case may be.
 12. Any other information deemed necessary by the Commission or its agent
- c. The narrative required in Section 5.5.1 (a) may be included on the map of Section 5.5.1 (b) if room allows it without affecting readability of the map. The items required to be mapped in Section 5.5.1 (b) may be depicted on the subdivision plan map required in Section 5.3 if the readability of the subdivision map is not affected.

5.5.2 The Planning and Zoning Commission shall vote to certify, modify and certify, or deny that the soil erosion and sediment control plan complies with these Regulations. Any decision to deny certification should consider written recommendations from the planning staff and Town Engineer and any other relevant information. Certification will be included as part of the Commission's vote to approve a subdivision plan or approve the plan with modifications. Site disturbance must not begin unless the E&S Plan is certified and those control measures that are scheduled for installation prior to site disturbance or development are installed, functional, and have been inspected by the commission's agent.

5.5.3 Storm-water Management Plan and Low Impact Development

a. Applicability. In addition to the required erosion and sediment control plan, grading plan and other required plans and application submittals, a Storm-water Management Plan must be submitted with any application or activity subject to Planning authority review that will result in the cumulative disturbance of one (1) acre (43,560 square feet) or more. The purpose of the plan is to identify potential water quality and quantity impacts of the proposed development and to propose selected source controls and treatment practices to mitigate against those impacts. These measures shall be in furtherance of the State DEEP requirement regarding the administration of the General Permit for the Discharge of Storm-water and Dewatering Wastewaters Associated with Construction Activities ("Construction General Permit") by municipal planning authorities.

b. Site Design Criteria and Techniques. The purpose of this section is to encourage development proposals to address drainage and storm-water issues related to new development and to incorporate Low Impact Development (LID) planning and design approaches in the Town of Lisbon. The following LID techniques shall be incorporated into the planning and design of development plans subject to these requirements to preserve pre-development hydrologic conditions and minimize storm-water run-off as deemed necessary by the commission and its staff:

1. Avoid installation of roof drains that discharge to impervious surfaces.
2. Direct flows to vegetated areas.
3. Direct flows from paved areas to stabilized vegetated areas.
4. Break up flow directions from large paved surfaces to distribute storm-water.
5. Encourage sheet flow through vegetated areas.
6. Locate and retain impervious areas so that they drain to permeable areas.
7. Maximize overland sheet flow that avoids channelization and reduces storm-water velocities.
8. Lengthen flow paths and increase the number of flow paths.
9. Maximize use of properly designed open swale systems.
10. Increase or augment the amount of vegetation on the site.
11. Minimize the total amount of disturbed area at the individual lot level, restricting ground disturbance to the smallest areas that will be used for structures, driveways and other infrastructure.
12. Reduce pavement and impervious surface areas.
13. Avoid compaction or disturbance of highly permeable soils.
14. Maximize the retention of trees, native vegetation, understory plants, and native soils
15. Reduce the use of turf and use more natural land and ground cover.
16. Maintain existing topography and drainage/watershed divides.
17. Locate structures, roadways on Type C soils where feasible.
18. Provide source controls to prevent or minimize the use of, and potential introduction of, pollutants into storm-water run-off

5.5.4 Storm-water Management Plan

A Storm-water Management Plan must be prepared by a Professional Engineer, licensed by the State of Connecticut, and address and include the following:

a. Detailed Site and Activity Description

1. Existing natural features and proposed subdivision and site improvements
2. Site topography, pre- and post- development drainage patterns
3. Existing and proposed storm-water discharges and known sources of on-site storm-water pollutants and sediment loading

b. Water Quality Classification

Confirm State D.E.E.P. water quality classification of on-site and adjacent water bodies, which will receive project storm-water.

c. Pollutant Sources

Identification of potential pollutant sources including:

1. Description of all potential pollution sources such as erosive soils, steep slopes, vehicle fueling and maintenance, and materials storage
2. Identification of the types of anticipated storm-water (i.e. from pervious, compacted and/or impervious areas)
3. Peak Flows: A summary of calculated pre- and post-development peak flows, per the requirements of the Town's civil engineer

d. Pollutant Controls

Description of controls and/or measures to reduce pollutants, including Low Impact Development strategies, such as:

1. Proposed storm-water system retrofits including retrofit projects to modify an existing developed site for the primary purpose of disconnecting impervious areas. For redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, include proposed measures to retain on-site half the water quality volume for the site; for new development and redevelopment of sites with less than forty percent DCIA, include proposed measures to retain the water quality volume for the site. In cases where these above standards cannot be met, provide an alternate retention/treatment standard as outlined in the state's General Permit.
2. Methods to retain sediments on site
3. Methods to control water flowing onto and from the construction site
4. Method(s) to minimize disturbed areas
5. Post-construction storm-water management measures that will be installed during the construction process to control pollutants in storm-water discharges after construction operations have been completed
6. Provide source controls to prevent or minimize the use of, and potential introduction of, pollutants into storm-water run-off

e. Other Information

Calculations, plans, data and other information intended to support the design and operation of structures and green infrastructure, and other proposed methods to reduce pollutants

f. Maintenance and Inspection

Maintenance and inspection procedures including:

1. Inspection protocols and related requirements
2. Repair and maintenance documentation, including provisions to assure that all

on-site facilities shall be properly maintained.

3. Identification of individual(s) responsible for management and oversight
4. Confirmation from the applicant to provide and comply with a long term maintenance plan and schedule to ensure the performance and pollutant removal efficiency of privately - owned detention ponds, retention ponds and other storm-water basins that discharge to, or receive, discharge from the Town of Lisbon including short-term and long- term inspection and maintenance measures to be implemented by the private owner, if applicable
5. The provision of an annual inspection of all such structures/measures and a written report to confirm removal of accumulated pollutants (such as sediment, oils, leaves, litter, etc.) to restore full solids capture design capacity where found to be in excess of 50% design capacity

g. Environmental Workplace Housekeeping Procedures
Procedures which, at a minimum, will address:

1. Material handling and waste management
2. Building material staging area operations
3. Equipment and vehicle fueling and maintenance
4. Spill prevention plan requirements
5. Long term maintenance of storm-water facilities

h. In cases where the Commission determines that engineering, aesthetics, environmental protection and/or economic factors make combined retention or other drainage facilities more practical, the Commission may require contiguous project developers to construct joint facilities in the public interest, provided that a maintenance agreement is filed on the land records for each property involved. The Commission may require maintenance bonding or the creation of a maintenance fund for combined retention areas.

5.5. The Commission or its designated agent shall periodically conduct inspections to verify compliance with the certified E & S Plan and Storm-water Management Plan to confirm that control measures, including LID measures are properly performed or installed and maintained, as the case may be. The Commission may require the applicant to submit progress reports which show that soil erosion and sediment control measures and storm-water facilities have been performed or installed according to the certified plan and are being correctly operated and maintained.

5.5.6 The estimated costs of measures required to control erosion and sedimentation, and/or implement the storm-water management plan and low impact development requirements of these regulations, as the case may be, shall be submitted in detailed form by the applicant. Such estimate shall include the cost of materials and labor, including the cost of ongoing maintenance during the activity and of inspection of such controls and improvements. The cost estimate is subject to review and approval by Town staff. The approved estimate shall be the basis for establishment of a performance bond or other surety, which surety shall be acceptable to the Commission in accordance with the provisions specified in Section 4.7 of these Regulations. Such surety instrument shall be at least partly or wholly in the form of cash, as determined by the Commission or its agent. Such surety shall be posted prior to any disturbance of the site.

RECEIVED
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Stuart Birch
TOWN CLERKS OFFICE
TOWN OF LISBON

Planning and Zoning Commission

Subdivision Amendments to Section 2 Definitions to accompany other Subdivision Amendments for Erosion and Sediment Control Plans, Storm-water Management and Low Impact Development

MODIFIED AND ADOPTED: 8/3/2021

EFFECTIVE DATE: 9/1/2021

Best Management Practices. Activities, prohibition of practices, general environmental good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to storm-water, receiving waters, or storm-water conveyance systems, including treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Bio-retention Area. A shallow landscaped depression designed to manage and treat storm water runoff through the use of a planted soil bed designed to remove pollutants through physical and biological processes.

DEEP: State of Connecticut Department of Energy and Environmental Protection

Development. Any man-made change to improved or unimproved real estate including, but not limited to, the construction or placement of buildings or structures; the construction of additions, alterations or substantial improvements to buildings or structures; mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment; the storage, deposition or extraction of materials; and the installation, repair or removal of public or private sewage disposal systems or water supply or distribution facilities.

Disturbed Area. An area of land subject to erosion due to the removal of vegetative cover or earthmoving activities, including filling.

Grading. Any excavating, grubbing, filling (including hydraulic fill) or stockpiling of earth materials or any combination thereof, including the land in its excavated or filled condition.

Impervious Surface/Cover. A hard material that prevents the percolation of water into the soil including building roofs, streets, parking lots, driveways, sidewalks, swimming pools, and other impenetrable surfaces.

Low Impact Development. A range of development practices and operational methods associated with site planning, design and development, all having the objective of reducing or mitigating environmental impacts, mimicking predevelopment hydrology and treating storm-water as close to its source as possible to preserve natural drainage systems. LID may include use of storm-water infiltration, clustering of buildings to reduce land clearing and grading, use of overland (sheet) flow and grass swales, use of permeable pavement or other pervious materials, shared or deferred parking, bio-retention facilities and other small-scale controls or similar techniques to detain and filter storm-water.

Municipal Separate Storm Sewer System or MS4 Map. Map depicting conveyances for storm water (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) owned or operated by the Town of Lisbon or by any State of Connecticut or federal institution and discharging into surface waters of the state.

Permeable Paving. Materials that are alternatives to conventional bituminous paving or concrete surfaces that are designed to increase infiltration, reduce storm-water runoff and pollutant loads. These materials have variable porosity dependent on the product, its installation and the site conditions.

Redevelopment. To demolish existing buildings or to increase the overall floor area or impervious surface/ cover on a site; or any combination of these activities, irrespective of whether a change occurs in the land use of the site.

Slope, Percentage of. The ratio of vertical rise or fall to horizontal distance measured perpendicular to the contour lines at horizontal intervals of typically 10 feet or greater.

Slope, Steep. Areas of topography greater than 25% slope as measured across the most extreme change in elevation portions of the ground surface in minimum horizontal intervals of typically forty (40) feet.

Soil. Any unconsolidated mineral or organic material of any origin.

Soil Erosion and Sediment Control Plan (E & S Plan). A designed program that minimizes soil erosion and sedimentation resulting from development and includes, but is not limited to a map and narrative.

Storm-water. Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Water Quality Volume. The volume of runoff generated by one inch of rainfall on a site as defined in the Connecticut Storm-water Quality Manual, as amended.

Water Surface Elevation. The height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains or riverine areas