Chapter 227, EROSION CONTROL

[HISTORY: Adopted by the City Council of the City of Binghamton as indicated. Amendments noted where applicable.]

GENERAL REFERENCES

Flood damage prevention -- See Ch. 240.
Subdivision of land -- See Ch. 360.
Zoning -- See Ch. 410.

Part 1, Filling, Grading and Terracing

ARTICLE I, General Provisions [Adopted 9-16-1986 by Ord. No. 96-86 (Ch. 9, Art. IV, §§ 9-53 through 9-57, of the 1970 Code); Amended 12-21-2011 by Ord. No. 11-51]

§ 227-1. Findings of fact.

It is hereby determined that:

A. Land development activities and associated increases in site impervious cover often alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, steam channel erosion, or sediment transport and deposition.

B. This stormwater runoff contributes to increased quantities of water-borne pollutants, including siltation of aquatic habitat for fish and other desirable species.

C. Clearing and grading during construction tends to increase soil erosion and add to the loss of native vegetation necessary for terrestrial and aquatic habitat.

D. Improper design and construction of stormwater management practices can increase the velocity of stormwater runoff thereby increasing street bank erosion and sedimentation.

E. Impervious surfaces allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream base flow.

F. Substantial economic losses can result from these adverse impacts on the waters of the municipality.

G. Stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from land development activities.

H. The regulation of stormwater runoff discharges from land development activities is in the public interest and will minimize threats to public health and safety.

I. Regulation of land development activities by means of performance standards governing stormwater management and site design will mitigate the adverse effects of erosion and sedimentation from development.

J. Impervious surfaces and stormwater runoff contribute to the area's frequent floods, as indicated by FEMA's determination to expand the boundaries of the 100-year Flood Plain.

K. Stormwater runoff flows into a combined sewer system in over 30% of the City, adding to the likelihood of untreated sewage flowing into the Susquehanna and Chenango rivers during storm events. Combined sewers normally flow to the Joint Sewage Treatment Plant, adding to the high

quantity of water needed to be treated and exacerbating capacity issues in an already overburdened system during wet weather conditions.

§ 227-2. Purpose.
The purpose of this Chapter is to establish minimum erosion and stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in § 227-1 hereof. This Chapter seeks to meet those purposes by achieving the following objectives:

A. Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised.

B. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised.

C. Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels.

D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality.

E. Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable.

F. Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

G. Promote an urban landscape with more green infrastructure in order to manage stormwater more effectively, and to use trees to minimize the urban heat island effect, create more sustainable plant and animal habitat, and improve the overall quality of life.

H. Make the connection between green infrastructure, aesthetically pleasing landscaping and increase property values.

I. Promote the reestablishment of vegetation in urban areas to improve aesthetics, health, and biodiversity.

§ 227-3. Statutory authority.
In accordance with Article 10 of the Municipal Home Rule Law of the State of New York, the City Council of the City of Binghamton ahs the authority to enact local laws and amend local laws for the purpose of promoting the health, safety or general welfare of the City of Binghamton and for the protection and enhancement of its physical environment. The City Council of the City of Binghamton may include in any such local law provisions for the appointment of any municipal officer, employees, or independent contractor to effectuate, administer and enforce such local law.

§ 227-4. Definitions.

As used in this Article, the following terms shall have the meanings indicated:

AGRICULTURAL ACTIVITY—The activity of an active farm, including grazing and watering livestock, irrigating crops, harvesting crops, using land for growing agricultural products, and cutting timber for sale, but shall not include the construction of new structures associated with agricultural activities.
APPLICANT—A property owner or agent of a property owner who has filed an application for a land development activity.
BEST MANAGEMENT PRACTICES (BMPs)—Structural devices, measures, or programs used to reduce pollution in stormwater runoff. BMPs manage the quantity and improve the quality of development runoff.
BIORETENTION—An integrated stormwater management practice that uses the chemical, biological, and physical properties of plants, microbes and soils to remove or retain pollutants from stormwater. Bioretention areas may or may not have an underdrain.
BIORETENTION AREAS—Shallow depressions with a designed planting soil mix and a variety of plant material, including trees, shrubs, grasses, and/or other herbaceous plants.
BIOSWALE—Vegetated, curbless, depressed filter strip planted with native grasses and shrubs designed to retain and temporarily store water, often used to control parking lot runoff.
BUILDING—Any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property, and occupying more than 100 square feet of area.
CATCH BASIN (DRAIN INLET)—A structure which allows the entry of surface runoff into a storm sewer by connection to the storm sewer.
CHANNEL—A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.
CLEARING—Any activity that removes the vegetative surface cover.
DEDICATION—The deliberate appropriation of property by its owner for general public use.
DEPARTMENT—The New York State Department of Environmental Conservation.
STORMWATER DESIGN MANUAL—The New York State Stormwater Design Manual, most recent version, including applicable updates, that serves as the official guide for stormwater management principles, methods and practices.
DETENTION STRUCTURE—A permanent stormwater management structure the primary purpose of which is to temporarily store stormwater runoff. A detention structure may be dry during non-storm events or may have a permanent pool of water.
DEVELOPER—A person who undertakes land development activities.
EROSION CONTROL MANUAL—The most recent version of the New York Standards and Specifications for Erosion and Sediment Control Manual, commonly known as the "Blue Book".
FIRST FLUSH—The delivery of a disproportionately large load of pollutants during the early part of storms due to the rapid runoff of accumulated pollutants, The first flush is defined as the runoff generated from the first ½ inch of runoff from the entire site from land which has been made less pervious than the pre-development conditions through land grading and/or construction/development activities.
GRADING—Excavation or fill of material, including the resulting conditions thereof.
GRASS CHANNEL—An open vegetated channel used to convey runoff and to provide treatment by filtering out pollutants and sediments.
GREEN GUTTER—Narrow strip of pervious soils and landscaping along streets or sidewalks, or along the perimeters of a parking lot, usually contained within curbing with curb cuts. Designed to infiltrate runoff from the impervious surface adjacent to it. Similar to bioswale but used in tighter settings.
GREEN INFRASTRUCTURE—An approach to wet weather management that uses natural systems like vegetation to filter and control runoff.
GREENROOF, VEGETATED ROOFTOP—A layer of planting medium and vegetation, with a waterproof membrane and drainage system, integrated into the roof of a building in order to capture rainwater, reduce building energy consumption, and/or provide habitat or recreational amenity.
IMPERVIOUS SURFACE—Any surface from which most water runs off, including, but not limited to, paced streets, graveled or paved areas such as driveways, parking areas, packed earth material, walkways, roof surfaces, and patios.

INFILTRATION—The process of percolating water into the subsoil.
LAND DEVELOPMENT ACTIVITY—Construction activity, including clearing, grading, excavating, soil disturbance or placement of fill, that results in land disturbance of equal to or greater than one acre, or activities disturbing less than one acre of total land area that is part of a larger common plan of development or sale, even through multiple separate and distinct land development activities may take place at different times on different schedules.
LANDOWNER—The legal or beneficial owner of land, including those holding the right to purchase or lease the land, or any other person holding proprietary rights in the land.
MAINTENANCE AGREEMENT—A legally recorded document that acts as a property deed restriction, and which provides for long-term maintenance of stormwater management practices.
NONPOINT SOURCE POLLUTION—Pollution from any source other than from any discernible, confined, and discrete conveyances, and shall include, but not be limited to, pollutants from agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.
PARKING, ANCILLARY—A parking area which is ancillary to the principal use not situated on the same lot as such parking area, which is not operated as a separate commercial enterprise available to the public at large and which is created to provide part of the required parking for the principal use.
PARKING AREA, PUBLIC—A parking area that is not accessory to a principal use and is operated as a separate commercial enterprise available to the public at large.
PARKING SPACE, OFF-STREET—A paved or surfaced space available for the parking of one motor vehicle on a transient basis and non located on an existing street or street right-of-way.
PERVIOUS PAVEMENT—Aggregate surfaces that allow water to infiltrate or pass through them, such as porous asphalt, porous concrete, and porous interlocking pavers.
PHASING—Developing a parcel of land in distinct pieces or parts, with the stabilization of each piece completed before the development of the next.
POLLUTANT OF CONCERN—Sediment or a water quality measurement that addresses sediment (such as total suspended solids, turbidity, or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the land development activity.
RAIN BARREL—A temporary storage device connected to a roof downspout, typically including a hose attachment to allow for reuse of rooftop runoff.
RAIN GARDEN—A bioretention area that management and treats small volumes of runoff using a conditioned planting soil bed and planting materials to filter water, usually appropriate in residential settings.
RETENTION—The amount of precipitation on a drainage area that does not escape as runoff. It is the difference between total precipitation and total runoff.
RECHARGE—The replenishment of underground water reserves.
SEDIMENT—Solid material, both mineral and organic, that is in suspension, is being transported, or has been removed from its site of origin by erosion.
SEDIMENT CONTROL—Measures that prevent eroded sediment from leaving the site.
SENSITIVE AREAS—Cold water fisheries, shellfish beds, swimming beaches, groundwater recharge areas, water supply reservoirs, habitats for threatened, endangered or special concern species, and critical environmental areas designated by the City.
SEPARATE STORMWATER SYSTEM—Stormwater and sanitary sewage collection facilities that convey, treat, and discharge stormwater and sewage in separated catchbasins, pipelines, treatment facilities, outfalls, and other facilities, and do not combine stormwater and sewage in the same facilities.
SPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES GP-01-01—A permit under the New York State Pollutant Discharge Elimination System (SPDES) issued to developers of construction activities to regulate disturbances of one or more acres of land.
SPEDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM MUNICIPAL SEPARATE STORMWATER SEWER SYSTEMS CP-02-02—A permit under the New York State Pollutant Discharge Elimination System (SPDES) issued to municipalities to regulate discharges from municipal separate storm sewers for compliance with EPA-established water quality standards and/or to specify stormwater control standards.
STABILIZATION—The use of practices that prevent exposed soil from eroding.

STOP-WORK ORDER—An order issued which requires that all construction activity on a site be stopped immediately.
STORMWATER—The discharge of water from the surface of land resulting from precipitation or snow or ice melt, including surface runoff, groundwater flows, percolation and seepage.
STORMWATER HOTSPOT—A land use or activity that generates higher concentrations of hydrocarbons, trace metals, or toxicants than are found in typical stormwater runoff, based on monitoring studies.
STORMWATER MANAGEMENT—The use of structural or nonstructural practices that are designed to reduce stormwater runoff and mitigate its adverse impacts on property, natural resources and the environment.
STORMWATER MANAGEMENT FACILITY—One or a series of stormwater management practices installed, stabilized, and operated for the purpose of controlling stormwater runoff.
STORMWATER MANAGEMENT OFFICER—An employee or officer designated by the City of Binghamton to accept, review, and approve stormwater pollution prevention plans and urban runoff reduction plans and inspect stormwater management practices and infrastructure.
STORMWATER MANAGEMENT PRACTICES (SMPs)—Measures, either structural or nonstructural, that are determined to be the most effective, practical means of preventing flood damage and preventing or reducing point source or nonpoint source pollution inputs to stormwater runoff and water bodies.
STORMWATER PLANTER—A structural container with soil and plants built to collect and slow runoff.
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)—A plan for controlling stormwater runoff and pollutants from a site during and after construction activities.
STORMWATER RUNOFF—Flow on the surface of the ground, resulting from precipitation.
STRIPPING—Any activity which removes or significantly disturbs trees, brush, grass, or any other kind of vegetation.
SURFACE WATERS OF THE STATE OF NEW YORK—Lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic Ocean within the territorial seas of the State of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction. Storm sewers and waste treatment systems, including treatment ponds or lagoons which also meet the criteria of this definition are not waters of the state. This exclusion applies only to man-made bodies of water which neither were originally created in waters of the state (such as a disposal area in wetlands) nor resulted from impoundment of waters of the state.
SWALE—An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff.
TEN YEAR STORM EVENT—The frequency at which a particular amount of rainfall in a given duration (from 30 minutes to 24 hours) is expected to "return", on average. A ten year storm event has on average a 10% chance of recurrence in a given year. National Weather Service reports that the ten (10) year, one-hour storm in Broome County consists of approximately 1.7 inches of precipitation and the ten (10) year, 24 hour storm consists of approximately 4 inches of precipitation.
TREE BOX FILTER—In-ground containers typically containing street trees in urban area. Runoff is directed to the tree box, where it is filtered by vegetation and soil before entering a catch basin.
WATERCOURSE—A permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.
WATERSHED—A region or area contributing stormwater ultimately to a particular watercourse or body of water.
WATERWAY—A channel that directs surface runoff to a watercourse or to the public storm drain.
VEGETATED OPEN CHANNELS—Also known as swales, grass channels, and biofilters for the conveyance, retention, infiltration and filtration of stormwater runoff.

ARTICLE II. Filling, Grading, Terracing, and Drainage Work [Adopted 9-16-1986 by Ord. No. 96-86 (Ch. 9, Art. IV, §§ 9-53 through 9-57, of the 1970 Code); Amended 12-21-2011 by Ord. No. 11-51]

§ 227-5. Permit required; completion of work.

A. No person shall commence any filling, grading, terracing, or drainage work, without first obtaining a permit from the Office of Building and Construction, on any site which requires the transportation of:
   (1) Clean fill to the site or which moves existing soil on the site exceeding a total of 50 cubic yards within any parcel of land or contiguous area
   (2) Clean fill to the site or which moves existing soil on the site creating a slope of 10% or greater on a portion of, or the entire area of, any parcel of land or contiguous area.

B. An application for a permit shall be made in writing to the Building Inspector, who shall immediately refer the application to the City Engineer for review.

C. Such application, in triplicate, shall be accompanied by a detailed statement of proposed work and the purpose thereof and in addition shall include the following:

   (1) Three sets of maps and plans with specifications showing the site(s) location of proposed filling, grading, terracing, or drainage work. Such plans shall be prepared by and shall bear the seal of a licensed engineer or surveyor and such plans shall show the following:
      (a) The name and address of the applicant, specifying, in the case of any unincorporated association, the names and addresses of each member thereof, and, in the case of any corporation, the names and addresses of each officer and director thereof.
      (b) If the applicant conducts business under a trade name or if the applicant is a partnership, the application for a permit must be accompanied by a copy of the trade name.
      (c) Street address, if any, and Tax Map number.
      (d) Property location showing all buildings, roads, watercourses or drainage areas and abutting property owners within 100 feet of the boundaries of the plot and designation of the one-hundred-year floodplain and floodway, if applicable
      (e) Estimated minimum quantity of and detailed description of fill material.
      (f) Existing topography and proposed final contours of existing and final elevations.
      (g) Details of any drainage system proposed to be installed and maintained, designed to provide for proper surface drainage during and after completion of work.
      (h) Details of soil preparation and/or revegetation or of other methods of soil erosion control.
      (i)A completed SEQR Environmental Assessment Form (EAF), Parts I, II, and III.
      (j)Location of any watercourse or DEC regulated wetlands.
   (2) A fee to cover the cost of the permit and inspections as set from time to time by the City Council (See Exhibit J).

D. The City Engineer shall, within 15 business days of receipt of said request, direct the Building Inspector to issue or deny the permit in accordance with this Article and in connection therewith may establish the amount of any performance bound. The City Engineer may impose such conditions or requirements as he or she deems necessary and proper to assure faithful compliance with this Article.

E. Upon completion of the work allowed by permit, the permittee shall grade the property to the level of adjoining properties, where applicable. Excess material shall either be removed from the premises

or leveled and covered with sufficient topsoil and seeded and shall be reseeded as often as necessary until the area is stabilized.

F. At the completion of the filling, grading, terracing, or drainage work, the permittee shall notify the Building Inspector, who shall make a field inspection to issue a certificate of compliance, and upon such issuance, any bond required to have been posted shall thereupon be released.

§ 227-6. Expiration of permit; additional permits required.

A. Permits issued pursuant to this Article shall expire six months from the date of issuance. Any remaining filling, grading, terracing, or drainage work shall not be completed without application and issuance of a new permit.

B. Exceptions. This permit shall be required for filling operations in addition to a duly issued building permit.

§ 227-7. Storage of fill material.

No person, owner, agent, or occupant of a lot or premises upon which a building may exist or of a vacant lot shall place clean fill for the purpose of storage without exercising every precaution to protect such fill from the elements and prevent erosion and/or runoff. Under no circumstances shall clean fill be stored for more than two months.

§ 227-8. Penalties for offenses.

A. Any person violating any provision of this Article shall be guilty of a violation, punishable by a fine not exceeding $150 or by imprisonment for a period of not more than 15 days, or both.

B. The violation of any provision of this Article for the third or more time in a two-year period shall be a violation punishable by a fine of not less than $500 nor exceeding $1,500 or by imprisonment for a period of not more than 15 days, or both.

C. Each notice of violation shall constitute a separate violation.

ARTICLE III. Stormwater Control [Amended 12-21-2011 by Ord. No. 11-51; Amended 6-20-2012 by Ord. No. 12-41]

§ 227-9. Stormwater Pollution Prevention Plans.

A. Stormwater pollution prevention plan requirement. No building, grading, or demolition permit shall be issued for a Land Development Activity as defined in this Chapter until the Stormwater Management Officer has approved a stormwater pollution prevention plan (SWPPP) prepared in accordance with the specifications as set forth in the New York State Pollution 9 December 6, 2011 Discharge Elimination System (SPDES) General Permit for Construction Activities (GP-00-10-001) and associated documents, including the New York Standards for Specifications for Erosion and Sediment Control and the New York State Stormwater management Design Manual which are herein incorporated by reference, as well as specifications set forth in Chapter 227-10, *Urban Runoff Reduction Plans,* Part C, *Standards and Specifications*.

B. Plan certification. The SWPPP shall be prepared by a New York State licensed landscape architect, certified professional in stormwater erosion and sediment control, or New York State licensed professional engineer and must be signed by the professional preparing the plan, who shall certify that the design of all stormwater management practices meets the requirements in this Chapter.

§ 227-10. Urban Runoff Reduction Plans.

A. Applicability. Projects not requiring a SWPPP and an Erosion and Sedimentation Control Plan pursuant to § 227-9 and meeting the following thresholds shall require an Urban Runoff Reduction Plan:
   (1) New or additions of any ancillary parking area or public off-street parking area of any size and containing any number of parking areas.
   (2) New off-street parking and/or loading areas located on the same lot as the primary use it serves, including driveways and maneuvering aisles, containing 20 or more parking spaces or covering 5,000 square feet or more of site area, whichever is less. Additions of existing off-street parking and/or loading areas located on the same lot as the primary use it serves, including driveways and maneuvering aisles, resulting in or involving 20 or more parking spaces or 5,000 square feet or more of site area, whichever is less.
   (3) Commercial, Mixed Use, Multi-Family Residential involving 3 or more dwelling units, and/or Industrial projects creating, replacing, or adding 1,000 square feet or more of impervious surface area including associated off-street parking and loading areas.
   (4) Single-family or Two-family Residential project creating, replacing, or adding 2,500 square feet or more of impervious surface area including associated off-street parking areas.
   (5) Any project creating, replacing, or adding new impervious surface area located within the Federal Emergency Management Agency's (FEMA) Special Flood Hazard Area.
   (6) Land subdivisions involving less than one (1) acre of land.

B. Procedures for Consideration and Submittal Requirements.
   (1) Urban Runoff Reduction Plans for projects requiring approval of a zoning application pursuant to Chapter 410, Zoning. In addition to the procedures contained in Subsection B(2), whenever a construction project subject to § 227-10 also requires an application for a Series A or B Site Plan Approval, an Area or Use Variance, and/or a Special Use Permit a preliminary Urban Runoff Reduction Plan shall be submitted along with said application for review by the Planning Department, Zoning Board of Appeals or Planning Commission of the City of Binghamton.

   Two full-sized copies, drawn to scale at not less than 1" = 30', and an electronic PDF copy sent via email or provided via approved storage devise to be retained by the City, of the preliminary Urban Runoff Reduction Plan incorporating green infrastructure techniques shall be submitted to, and accepted by, the Planning Department along with any required zoning application. The preliminary plan shall include the following information:
      (a) A description of each proposed post-construction stormwater management measure.
      (b) A preliminary comparison of post-development stormwater runoff conditions with predevelopment conditions.
      (c) Dimensions and material specifications for each proposed post-construction stormwater management practice, including size, species and location of all proposed landscaping.
      (d) Any other information that the Planning Department deems necessary to determine preliminary compliance with this Chapter.

The Planning Department shall review the preliminary Urban Runoff Reduction Plan and determine if the Plan includes adequate stormwater management measures to meet the minimum requirements of this Chapter. If the Planning Department determines that the Plan fails to achieve the minimum requirements of this Chapter, the Applicant shall revise the Plan with such modifications and additions as may be required by the Planning Department.

Final approval of a zoning application that includes a preliminary Urban Runoff Reduction Plan shall not constitute final approval of the Urban Runoff Reduction Plan. After approval of the zoning application an Urban Runoff Reduction Plan shall be submitted and considered pursuant to Subsection B(2). As set forth in Section B(2), the Stormwater Management Officer, or his or her designee, shall have final authorizing approval of all Urban Runoff Reduction Plans.

(2) Urban Runoff Reduction Plan. Prior to the issuance of a grading, building, and/or demolition permit for any construction project subject to § 227-10, including those subject to B(1), an Urban Runoff Reduction Plan incorporating green infrastructure techniques shall be submitted to the Building Department for review and approval by the Stormwater Management Officer, or his or her designee. Upon submittal, the Building Department shall refer the Plan immediately to the Stormwater Management Officer, or his or her designee. Within 30 business days of receiving the Plan, the Stormwater Management Officer shall approve, require revisions to, or disapprove the Plan. Prior to approval or denial of a Plan, the Stormwater Management Officer may require that the applicant make revisions to the Plan as may be necessary to comply with the provisions of this Section. Approved Plans shall be referred back to the Building Department, who shall issue the Plan to the applicant concurrent with other necessary permits pertinent to site alteration and construction. Any Plan disapproved by the Stormwater Management Officer must be revised by the applicant and resubmitted for approval in order for the project to proceed. No building, grading, and/or demolition permit shall be issued until an Urban Runoff Reduction Plan has been approved by the Stormwater Management Officer.

In addition to building permit submittal requirements, two full-sized copies, drawn to scale at not less than 1" = 30', and an electronic PDF copy sent via email or provided via approved storage devise to be retained by the City, of the preliminary Urban Runoff Reduction Plan incorporating green infrastructure techniques shall be submitted to, and accepted by, the Department of Building and Construction, along with a building and/or demolition permit associated with any construction project subject to § 227-10.

The Plan shall be certified by a licensed landscape architect or licensed engineer and shall include the following information:

(a) A site map/construction drawing(s) specifying the location(s), size(s), and length(s) of each post-construction stormwater management practice.
(b) A description of each post-construction stormwater management measure.
(c) Dimensions, material specifications, and installation details for each post-construction stormwater management practice, includes size, species and location of all proposed landscaping and existing landscaping to be retained.
(d) A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in stormwater runoff.
(e) A description of waste materials, if any, expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response.

(f) Permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control.
(g) A comparison of post-development stormwater runoff conditions with predevelopment conditions.
(h) A maintenance schedule to ensure continuous and effective operation of each post-construction stormwater management practice.
(i) Maintenance easements, if required by the Stormwater Management Officer, to ensure access to all stormwater management practices at the site for the purpose of inspection and repair. Easements shall be recorded on the plan and shall remain in effect with transfer of title to the property.
(j) An inspection and maintenance agreement, if required by the Stormwater Management Officer, binging on all subsequent landowners served by the on-site stormwater management measures in accordance with Section D.
(k) Any other information which may be required by the Stormwater Management Officer.

C. Standards and Specifications. Urban Runoff Reduction Plans shall be designed in accordance with the standards set forth in the New York State Stormwater management Design Manual to retain a Ten (10) Year, 24-Hour Storm event. Runoff Reduction shall be achieved through incorporation of green infrastructure, post-construction stormwater management measures, and best management practices (BMPs) designed to increase permeable areas and to reduce pollution.

A waiver may be granted if it can be demonstrated that incorporation of design elements necessary to retain a Ten (10) Year, 24-Hour Storm event such as those set forth in subsection C are physically or economically impossible due to topographic, soil or physical conditions of the site, excluding irreconcilable conflicts with other City requirements. A committee comprised of the Storm water Management Officer, Director of Planning, Director of Economic Development, Building & Construction Superintendent and the Chairperson of the Public Works Committee of City Council or their designee can grant a waiver with a majority vote.

Urban Runoff Reduction Plans shall include green infrastructure designed to reduce stormwater runoff. The following green infrastructure and stormwater management features are recommended, with the exception of subsection (3)(a) which shall be required where applicable:

(1) Increase permeable areas:
    (a) Conserve natural areas and existing vegetation, use natural drainage, detention ponds, grass channels, or infiltration pits so that runoff may collect and seep into the ground and reduce or prevent off-site flows.
    (b) Catch and divert runoff into rain gardens, bioswales, bioretention areas, stormwater planters, tree box filters, vegetated filter strips and swales, stormwater planters, gravel beds and French drains.
    (c) Construct driveways, parking areas and walkways from pervious materials, such as pavers, grasscrete, porous asphalt and porous concrete, to allow increased percolation of runoff into the ground.
    (d) Install green roofs and green gutters.
(2) Minimize the amount of runoff directed to impermeable areas and/or maximize storm water storage for reuse:
    (a) Install and orient rain gutters into permeable areas so that runoff will penetrate into the ground instead of flowing off-site.
    (b) Modify grades of property to divert flow to on-site permeable areas.
    (c) Use sediment traps to intercept runoff from drainage areas and hold or slowly release the runoff, with sediments held in the trap for later removal.

(d) Use retention structures or design rooftops to store runoff. Utilize rain barrels, subsurface areas, or cisterns for storm runoff either for reuse or to enable release of runoff at predetermined times or rates to minimize the peak discharge into storm drains.

(e) Design curbs, berms, or similar barriers with cuts and openings to allow stormwater to flow into permeable or landscaped areas and to avoid isolation of permeable or landscaped areas.

(f) Install separate stormwater systems.

(3) Reduce parking area run-off and pollution.

(a) All off-street parking areas shall have the capability to contain four (4) inches of precipitation in a 24 hour period. Options to meet this requirement include use of vegetated filter strips, bioswales, rain gardens, tree box filters, stormwater planters and pervious pavement to capture and percolate runoff.

(b) Direct runoff toward permeable areas.

(c) Design curbs, berms, or similar barriers with cuts and openings to allow stormwater to flow into permeable or landscaped areas and to avoid isolation of permeable or landscaped areas.

(d) Construct off-street parking areas from pervious materials.

(e) Use of oil and water separators or clarifiers to remove petroleum-based contaminants and other pollutants.

D. Maintenance and repair of stormwater facilities.

(1) Maintenance easement(s). Prior to approval of an Urban Runoff Reduction Plan, if required by the Stormwater Management Officer, the applicant or developer must execute a maintenance easement agreement that shall be binding on all subsequent landowners served by the stormwater management facility. The easement shall provide for access to the facility at reasonable times for periodic inspection by the City of Binghamton to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by this Chapter. The easement shall be recorded by the grantor in the office of the County Clerk after approval by the Corporation Counsel for the City of Binghamton.

(2) Maintenance after construction. The owner or operator of permanent stormwater management practices (SMPs) installed in accordance with this Chapter shall be responsible for the operation and maintenance of such facilities to achieve the goals of this Chapter. Proper operation and maintenance shall include, at a minimum, the following:

(a) A preventative/corrective maintenance program for all critical facilities and systems of treatment and control (or related appurtenances) which are installed or used by the owner or operator to achieve the goals of this Chapter.

(b) Written procedures for training personnel in the operation and maintenance of the facilities.

(c) Discharge from the SMPs shall not exceed design criteria or cause or contribute to water quality standard violations.

(3) Maintenance agreements. When required by the Stormwater Management Officer, the City of Binghamton shall approve a formal maintenance agreement for stormwater management facilities binding on all subsequent landowners and recorded in the office of the County Clerk as a deed restriction on the property prior to issuance of any permits. The City of Binghamton, in lieu of a maintenance agreement, at its sole discretion may accept dedication of any existing or future stormwater management facility, provided such facility meets all the requirements of this Chapter and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

E. General provisions. The provisions of Chapter 227-10 shall not supersede any other applicable City of Binghamton Codes, Ordinances, or General Laws. All green infrastructure and stormwater treatment techniques shall comply with any other applicable City of Binghamton Codes, Ordinances, or General Laws.

ARTICLE IV, Administration and Enforcement [Amended 12-21-2011 by Ord. No. 11-51]

§ 227-11. Construction inspections.

A. Erosion and sediment control inspection. The City of Binghamton Stormwater Management Officer may require such inspections as necessary to determine compliance with this Chapter and may either approve that portion of the work completed or notify the applicant wherein the work fails to comply with the requirements of this Chapter and the stormwater pollution prevention plan (SWPPP) as approved.
   (1) To obtain inspections, the applicant shall notify the City of Binghamton enforcement official at least 48 hours before any of the following as required by the Stormwater Management Officer:
      (a) Start of construction.
      (b) Instillation of sediment and erosion control measures.
      (c) Completion of site clearing.
      (d) Completion of rough grading.
      (e) Completion of final grading
      (f) Close of the construction season.
      (g) Completion of final landscaping.
      (h) Successful establishment of landscaping in public areas.
   (2) In any violations are found, the applicant and developer shall be notified in writing of the nature of the violation and the required corrective actions. No further work shall be conducted except for site stabilization until any violations are corrected and all work previously completed has received approval by the Stormwater Management Officer.

B. Stormwater management practice inspections. The City of Binghamton Stormwater Management Officer of his/her designee is responsible for conducting inspections of stormwater management practices (SMPs). All applicants are required to submit "as built" plans for any stormwater management practices located on-site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be certified by a professional engineer.

C. Inspection of stormwater facilities after project completion inspection programs shall be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of a state or federal water or sediment quality standards or the SPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other stormwater management practices.

D. Submission of reports. The City of Binghamton Stormwater Management Officer may require monitoring and reporting as are necessary to determine compliance with this Chapter.

E. Right-of-entry for inspection. When any new stormwater management facility is installed on private property or when any new connection is made between private property and the public storm water system, the landowner shall grant to the City of Binghamton the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection as specified in Subsection C.

§ 227-12. Performance guarantees; recordkeeping.

A. Construction completion guarantee. In order to ensure the full and faithful completion of all land development activities related to compliance with all conditions set forth by the City of Binghamton in its approval of the stormwater pollution prevention plan, the City of Binghamton may require the applicant or developer to provide, prior to construction, a performance bond, cash escrow, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the City of Binghamton as the beneficiary. The security shall be in an amount to be determined by the City of Binghamton based on submission of final design plans, with reference to actual construction and landscaping costs. The performance guarantee shall remain in force until the surety is released from liability by the City of Binghamton, provided that such period shall not be less than one year from the accordance with the approved plans and specifications and that a one-year inspection has been conducted and the facilities have been found to be acceptable to the City of Binghamton. Per-annum interest on cash escrow deposits shall be reinvested in the account until the surety is released from liability.

B. Maintenance guarantee. Where stormwater management and erosion and sediment control facilities are to be operated and maintained by the developer or by a corporation that owns or manages a commercial or industrial facility, the developer, prior to construction, may be required to provide the City of Binghamton with an irrevocable letter of credit from an approved financial institution or surety to ensure proper operation and maintenance of all stormwater management and erosion control facilities both during and after construction, and until the facilities are removed from operation. If the developer or landowner fails to properly operate and maintain stormwater management and erosion and sediment control facilities, the City of Binghamton may draw upon the account to cover the costs of proper operation and maintenance, including engineering and inspection costs.

C. Recordkeeping. The City of Binghamton may require entities subject to this Chapter to maintain records demonstrating compliance with this Chapter.

§ 227-13. Enforcement; penalties for offenses.

A. Notice of violation. When the City of Binghamton determines that a land development activity is not being carried out in accordance with the requirements of this Chapter, it may issue a written notice of violation to the landowner. The notice of violation shall contain:
   (1) The name and address of the landowner, developer or applicant.
   (2) The address, when available, or a description of the building, structure or land upon which the violation is occurring.
   (3) A statement specifying the nature of the violation.
   (4) A description of the remedial measures necessary to bring the land development activity into compliance with this Chapter and a time schedule for the completion of such remedial action.

(5) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed.
(6) A statement that the determination of violation may be appealed to the municipality by filing a written notice of appeal within 15 calendar days of service of notice of violation.

B. Stop-work orders.
(1) The City of Binghamton may issue a stop-work order for violations of this Chapter.
(2) Persons receiving a stop-work order shall be required to halt all land development activities, except those activities that address the violations leading to the stop-work order. The stop-work order shall be in effect until the City of Binghamton confirms that the land development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a stop-work order in a timely manner may result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in this Chapter.

C. Violations. Any land development activity that is commenced or is conducted contrary to this Chapter may be restrained by injunction or otherwise abated in a manner provided by law.

D. Penalties. In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this Chapter shall be guilty of a violation punishable by a fine not exceeding $350 or imprisonment for a period not to exceed six months, or both, for conviction of a first offense; for conviction of a second offense, both of which were committed within a period of five years, punishable by a fine not less than $350 nor more than $700 or imprisonment for a period not to exceed six months, or both; and upon conviction for a third or subsequent offense, all of which were committed within a period of five years, punishable by a fine not less than $700 nor more than $1,000 or imprisonment for a period not to exceed six months, or both. However, for the purposes of conferring jurisdiction upon courts and judicial officers generally, violations of this Chapter shall be deemed misdemeanors and for such purpose only all provisions of law relating to misdemeanors shall apply to such violations. Each week's continued violation shall constitute a separate additional violation.

E. Withholding of certificate of occupancy. If any building or land development activity is installed or conducted in violation of this Chapter, the Stormwater Management Officer may prevent the occupancy of said building or land.

F. Restoration of lands. Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the City of Binghamton may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

§ 227-14. Fees for services.
The City of Binghamton may require any person undertaking land development activities regulated by this Chapter to pay reasonable costs at prevailing rates for review and inspections of SWPPPs, Urban Runoff Reduction Plans, or SMP maintenance performed by the City of Binghamton or performed by a third party for the City of Binghamton.