Topic:	Stormwater Management; Watershed Protection
Resource Type:	Regulations
State:	New York
Jurisdiction Type:	Municipal
Municipality:	Town of Brighton
Year *(adopted, written, etc.)*:	2002
Community Type – applicable to:	Suburban; Rural
Title:	Town of Brighton Stormwater Management Ordinance
Document Last Updated in Database:	April 18, 2017

Abstract

This ordinance is intended to allow for the redesign of the drainage system in order to protect the residents from the dangers of stormwater runoff. There are requirements for where the drain patterns may lie and a hydraulic design will be used for the watershed. There are also provisions on how to improve the previous damages from stormwater runoff.

Resource

Town of Brighton NY Stormwater Management
Code of the Town of Brighton NY
Chapter 215: Stormwater Management
Note: "Stormwater wetlands"
General Code
http://www.e-codes.generalcode.com
Chapter 215: Stormwater Management
[HISTORY: Adopted by the Town Board of the Town of Brighton 1-27-1993. Amendments noted where applicable.]

§ 215-1. Purpose and intent.

A. It is the purpose and intent of this chapter to protect the Town of Brighton and its residents from adverse effects of stormwater runoff caused by the modification of existing drainage systems during construction, reconstruction or development on one (1) or more parcels of land, and to promote water quality.

B. The adverse effects include but are not limited to the following:

(1) Increased rate of storm drainage runoff, soil movement or erosion, decreased water quality, sediment accumulation and an increase in peak flows caused by but not limited to:

(a) A decrease in soil area able to absorb water due to construction or reconstruction of streets, buildings and parking lots.

(b) A decrease in existing water quality of any creek, stream, river or other water body within the Town of Brighton.

(c) Increases in peak flows, volume, velocity and duration of water concentration caused by altering the steepness, distance, surface roughness and impermeability.

(2) The obstruction of stream and channel flow by construction or reconstruction, backfilling, excavation and refuse disposal.

§ 215-2. General requirements.

A. The design and construction of drainage systems shall be such that watercourses traversing the development and natural water emanating from within the development will be carried through and off the development without adversely affecting overall runoff rate or quantity or water quality, or injury to improvements, building sites or buildings existing or to be installed downstream within or adjacent to the development. Off-site drainage water entering the development shall be received and discharged at locations and in a manner consistent with requirements contained herein. The design of drainage facilities within the development shall be such that they will conform to the ultimate drainage requirements of the land within the development watershed. The discharged flow at the downstream area of the development shall be conducted in drainage facilities so that the flow effect shall be restored to predevelopment conditions prior to leaving the development area or reasonably distant therefrom.

B. Natural drainage patterns shall be employed in preference to rechanneling streams or watercourses. In no case shall work be performed which directly or indirectly affects natural patterns prior to the granting of approval by the Town, county, state and federal agencies having jurisdiction. **[Amended 6-26-2002 by L.L. No. 4-2002]**

C. All domestic and industrial sewage, as defined by the sewer provisions of the Town of Brighton, shall be excluded from any drainage systems as herein defined.

D. No chemicals, fuels, lubricants, sewage or other pollutants shall be discharged into any

streams, drainage or water supply systems.

E. Fill and refuse shall not be disposed of or deposited upon any wetland, floodplain or drainageway, except when otherwise permitted.

F. Man-made structures shall be placed so as not to block or restrict, in any manner, natural drainage patterns, except where otherwise permitted.

G. Where land excavation or filling has been permitted, provision shall be made for the safe conduct of surface water across the face of the slope, for subsurface drainage as necessary and to prevent materials from washing across or upon the property of another.

H. Ponds and stormwater wetlands shall be employed as required by the Town. **[Amended 6-26-2002 by L.L. No. 4-2002]**

I. All drainage systems and stormwater sewer capacity shall be designed to handle the anticipated flows from the entire upstream drainage basin when fully developed according to existing zoning as these anticipated flows shall be determined by the Town.

J. In order to expedite surface drainage, a minimum grade of five-tenths percent (5/10%) shall be employed on all newly finished slopes, unless otherwise required.

K. Sedimentation basins shall be employed as required by the Commissioner of Public Works to prevent siltation or turbidity in watercourses or drainage systems.

L. Drainage easements shall be identified by monuments, acceptable to the Town, set at an angle point and at such other locations which allow intervisibility.

M. Surface waters and drainage, where identified as being significant sources of groundwater replenishment and where such resources are being utilized as a potable water supply, shall not be revised or altered except by approval of the Town Board.

N. Any of the above requirements may be waived by presentation of sufficient evidence as determined by the Commissioner of Public Works.

§ 215-3. Prohibited acts.

Except as hereinafter provided, it shall be unlawful for any person, firm, entity or corporation to:

A. Modify the topography or surface qualities of any area greater than twenty thousand (20,000) square feet so that the water retention characteristics of the area are modified, unless the action has been approved by a permit granted as herein provided. Recognized agricultural procedures in areas zoned for such purpose are exempted from the regulations herein defined.

B. Place, deposit or permit to be placed or deposited any debris, fill, sand, stone or other solid materials of any kind or nature or construction of any kind into or across any stream, ditch, culvert, pipe, watercourse or other drainage system.

C. Fill, obstruct, dam, divert or otherwise change or alter the natural or artificial flow of waters or drainage or the intensity or quantity of flow through any stream, ditch, pipe, culvert, watercourse or other improvement or drainage system.

§ 215-4. Design of drainage system.

A. Hydrologic:

(1) The drainage channels for watercourses numerically identified in the Town drainage study shall be provided to accommodate not less than the minimum flows indicated in the drainage report. These values shall be independently verified by their users using hydrologic technology recommended herein, and the hydrologic analysis thereof shall become part of the supporting data of the proposed drainage plans. The minimum flow requirements for the ultimate channel of the watercourses shall be determined in accordance with not less than the following frequencies:

(a) Primary watercourses shall be designed for an average recurrence interval of one hundred (100) years in the determination of the ultimate channel.

(b) Secondary watercourses shall be designed for an average recurrence interval of twenty-five (25) years in the determination of the ultimate channel.

(c) Tertiary watercourses shall be designed for an average recurrence interval of ten (10) years in the determination of the ultimate channel.

(2) The capacity of the channel that will occupy the ultimate drainage easement within the development shall be based upon both the existing degree and anticipated rate of urbanization within the development watershed and the type of development possible under the Comprehensive Development Regulations, as the same may be modified from time to time. Wherever a development may be located within a watershed undergoing initial stages of urban development, the proposed drainage

system shall adequately pass the flows that would develop from continued urbanization within the useful life of the proposed channel improvement or system. Proposed drainage systems within developments located in watersheds that may be in the advanced stages of urbanization shall be designed and constructed to pass the project design flow determined for the ultimate urbanization of the tributary watershed, and/or where required, storage basins may be provided to increase the capacity of the drainage system and attenuate flows to downstream drainage structures such that their capacities will not be exceeded.

(a) Types.

[1] These storage basins may be of the following types:

[a] A detention basin, drained by gravity through a control-sized pipe located at the downstream end of the basin.

[b] A retention basin, where a portion of the drainage occurs by gravity. Inflow is usually over a side channel spillway leading from a natural channel. The spillway operates only when excessive normal channel flow is incipient.

[c] A stormwater wetland, designed in accordance with the requirements of the Irondequoit Watershed Collaborative's most recent report. **[Added 6-26-2002 by L.L. No. 4-2002]**

[2] Preference shall be given to the utilization of stormwater wetlands whenever possible instead of detention or retention basins. **[Added 6-26-2002 by L.L. No. 4-2002]**

(b) Storage basins may be designed for multiple use where possible. Such uses include:

[1] Playing fields.

[2] Picnic areas.

[3] Parks.

[4] Ice skating.

[5] Open spaces as access to adjacent linkages and buffers.

(c) Storage basins are sized to accept excessive flow over and above the capacity of downstream drainage facilities. They may be used to ameliorate flows through a proposed development or from a proposed development.

(3) For undeveloped areas of the tributary watershed, the percentage of surface classification shall be based upon the Town of Brighton's Land Use, Zoning and Soils Maps The maps are on file in the Building and Planning Department offices. and correlated with projected land uses developed by the Town Master Plan. Wherever a development watershed contains extensive permanent open land uses such as railroads, public parks, cemeteries and parkways, such factors may be additionally be considered in determining an appropriate coefficient of runoff.

(4) The design flow for major watercourses is offered in the Town drainage study. Design flows for tertiary and secondary watercourses shall be determined by the developer's engineer and approved by the Town.

(5) Drainage systems classified as tertiary and secondary shall be tested by engineering computations to pass the flow requirements of the next higher design level. If engineering computations indicate that only minor inundation results without damage or loss of accessibility, the system may be considered adequate.

B. Hydraulic:

(1) Hydraulic design.

(a) The hydraulic design shall be performed in accordance with the hydrologic criteria specified herein with the ultimate stormwater control being quantified with respect to the watercourse to which the development is tributary. The ultimate stormwater control capacity volume shall be based upon the design recurrence interval with the discharge rate from the structure's outfall not exceeding the criteria set forth as follows:

Watercourse Designation	**Design Recurrence Interval**	**Stormwater Control Design**
Primary	100-year	Difference of 100-year developed and 25-year undeveloped

Secondary	25-year	Difference of 25-year developed and 10-year undeveloped
Tertiary	10-year	Difference of 10-year developed and 2-year undeveloped

(b) In all instances, the outlet structure of the stormwater control facility shall uniformly regulate the discharge of stormwater throughout the range of the storm events accordingly. The design structure shall be such that the incremental control is consistent for the difference between pre- and post-development runoff as stipulated in the design recurrence interval for the watercourse, as well as controlling all lesser events in the same manner.

(2) The hydraulic design of development drainage systems shall be in accordance with modern standard procedures, endorsed by the American Society of Civil Engineers.

(3) Hydraulic design shall conform to the latest professional manuals dealing the many facets which constitute a comprehensive drainage system, including water quality management measures.

(4) The hydraulic design of closed drainage systems shall conform in basis details to the American Society of Civil Engineers Manual of Engineering Practice Number 37 (or most recent edition) and such applicable manuals that would supplement or integrate advanced and proved hydraulic principals and basic assumptions. Open and closed drainage systems shall be designed to provide complete drainage for all elements within the development and shall include all appurtenances essential for the adequate performance thereof. The size of conduits shall be selected as grades which produce the minimum velocity of three (3) feet per second when flowing full.

(5) A development grading plan indicating a contour interval suitable for the map scale shall be provided to show detailed comprehensive and efficient surface drainage for all lots within and immediately adjacent to the development.

C. Structural. Catch basins, manholes, inlet structures and other appurtenances placed within the development shall conform to standards approved by the Town Board. The structural design of all drainage appurtenances shall be subject to approval by the Commissioner of Public Works and shall conform to standard specifications adopted by the Town Board.

(1) Channels. The minimum center-line radius of constructed curved channels shall be at least three (3) times the bottom width of the channel for subcritical flow. The

minimum bottom width of constructed channels shall be four (4) feet. The creation of excessive numbers of curves in open channels shall be avoided by reason of the increase in friction loss and the potential erosion due to spiral flow. Outer bank protection, especially at the downstream end of the curve and to a lesser degree on the inner bank at the beginning of the curve, may be required by the Commissioner of Public Works. Earth channels constructed within the development shall have side slopes of one to four (1:4) or flatter, unless otherwise approved by the Commissioner of Public Works.

(2) Enclosed conduits. Except for adequate natural watercourses, all storm drainage within the development which is capable of being transmitted in a thirty-six-inch-diameter pipe shall be carried in an enclosed conduit. This size may be varied, either increased or decreased, according to topographic conditions or an economic analysis of the cost of the conduit against an equivalent open channel, provided that the ultimate selection is in the public interest. The minimum conduit size shall be twelve (12) inches in diameter. Manholes shall be provided at all changes in grade and direction. Spacing of manholes and minimum cover of conduits shall conform to the standard practice endorsed by the American Society of Civil Engineers. Inverted siphons shall not be permitted except for temporary structures.

§ 215-5. Correction of existing conditions.

All existing obstructions, dams, diversions, construction of any kind, deposits of debris, fill, sand or other solid material or other alterations or diversions of the natural flow of water or the intensity or water quantity of flow through, across or to any stream, ditch, culvert, watercourse or other drainage system which cause the inundation of real property, buildings or other premises or, in the opinion of the Commissioner of Public Works, constitute an undue burden upon the drainage system or hamper the proper present or future course of development of the drainage system or, in the opinion of the Commissioner of Public Works, presently constitute or in the reasonable foreseeable future will constitute a danger of hazard to the well-being, safety or general welfare of the residents of the Town or any property located therein or constitute, in the case of wild growth of natural vegetation or brush, an obstruction which may cause flooding, inundation or diversion of water upon other premises, shall be removed or corrected by the owners of the premises upon which said obstructions, dams, diversions, construction, deposits or other alternations of the natural flow are situated within thirty (30) days after written notice to remove or correct the same by the Commissioner of Public Works; subject, however, to appeal by such owner to the Town Board within ten (10) days of such notice.

§ 215-6. Easements for drainage facilities.

A. Easements for enclosed conduits and appurtenances. An easement not less than twenty (20) feet in width, sufficient to contain the enclosed conduit and appurtenances thereof and to provide working space for personnel and equipment for the servicing thereof, shall be indicated on the map of the development and designated as follows: "Drainage Easement to Town of Brighton." Drainage easements for enclosed conduits shall, insofar as possible, be placed along or adjacent to lot boundary lines in a parallel and straight alignment.

B. Easement for natural watercourses:

(1) Natural primary watercourses which traverse a development shall be preserved by an easement of sufficient width, including overbanks, which will adequately pass the project design flow. The gross allowable depth of flow shall not create a flood hazard to existing or proposed development and improvements. The channel and overbank widths, together with a minimum twenty-foot continuous maintenanceway on each side, shall constitute the floodway encroachment limits with a minimum width of one hundred (100) feet. Wherever such natural watercourses are endowed with significant natural beauty and have adequate capacity or have been determined to have value for fish and wildlife, the developer may dedicate widths in addition to those required above on the map of the development with the following designation: "Easement to Town of Brighton."

(2) In natural tertiary and secondary watercourses which contain insufficient waterway area to convey the flow from the ultimate development, but which may prove deficient only at infrequent intervals and locations, and where minor improvements could provide an adequate channel and still preserve, in the main, the natural channel beauty or fish and wildlife values, the developer shall make such minor channel improvements as are required to provide a channel which would otherwise meet the conditions of these regulations. However, the developer shall dedicate the full width required to contain the ultimate channel, together with a minimum twenty-foot-wide continuous maintenanceway on one (1) side of the ultimate channel. When the water surface exceeds twenty (20) feet in width, the continuous maintenanceway shall be twenty (20) feet on each side. The outside of the continuous maintenanceway shall constitute encroachment limits. Additional widths of scenic areas and areas of natural wetlands, which for economic reasons or limited suitability would not warrant improving for urban development, may be dedicated by the developer in addition to those above. Areas offered for dedication to the Town as drainage easements, if considered of special interest to the Town by the Planning Board, may be considered by the Planning Board as dedication for municipal purposes for the purpose of § 281 of the Town Law and its authority thereunder.

(3) Easement for constructed channels and appurtenances. Earth channels constructed within the development shall have sufficient easement dedicated to

contain the top width of the channel, plus a minimum twenty-foot continuous maintenanceway on one (1) side thereof for channels less than twenty (20) feet in width at the water surface. A twenty-foot continuous maintenanceway shall be provided on both sides of the channel with a water surface width greater than twenty (20) feet. The ultimate channel shall meet the flow requirements for the development of the tributary drainage area. The allowable depth of flow to pass the project design flow shall not create a flood hazard to existing and proposed developments and improvements. A minimum of one (1) foot freeboard above the design hydraulic gradient shall be provided to contain the effects of flow transmission factors. The outside of the continuous maintenanceway shall constitute encroachment limits. The easements for constructed channels shall be indicated on the map of the development and designated as follows: "Drainage Easement to Town of Brighton."

§ 215-7. Detailed stormwater management plans. [Amended 6-26-2002 by L.L. No. 4-2002]

The developer shall submit detailed drainage stormwater management plans with a report containing sufficient data for the Commissioner of Public Works to check the feasibility of the drainage system as proposed by the developer. The methodology shall adhere to the stipulations outlined herein and conform to the Irondequoit Watershed Collaborative Report's most recent edition requirements for stormwater mitigation design whenever possible. The following data shall be included:

A. Site characteristics:

(1) A topographic survey showing existing and proposed contours, including area necessary to determine upstream and downstream analysis for the proposed drainage system.

(2) A soils investigation, including, where appropriate, borings for construction of small ponds and infiltration practices.

(3) A description of all watercourses, impoundments and wetlands on or adjacent to the site or into which stormwater flows.

(4) Delineation of the one-hundred-year floodplain, if applicable.

B. Hydrologic (at all critical points within the development):

(1) Tributary drainage area delineated on the map.

(2) Times of concentration.

(3) Rainfall intensity.

(4) Runoff coefficients.

(5) Design flow and protection level.

C. Hydraulic.

(1) The plan and profile of all drainage systems.

(2) The sizes and types of drainage improvements, including special structures, typical sections, easements, width and fencing.

(3) When required, supporting calculations for upstream and downstream channel capacities as they affect water surface levels and backwater within the development. Such calculations shall be supported by such additional survey information as may be required to determine a profile and cross section of the upstream and downstream channel reaches of the development under consideration.

(4) A detailed development grading plan prepared to suitable contour intervals with grading details to indicate proposed street grades and surface elevations at critical points throughout the development.

(5) In certain cases, the Commissioner of Public Works may waive the requirement for detailed drainage plans on residential parcels of up to five (5) lots when the work proposed involves only minor modifications or alterations to the drainage system. In the event that detailed plans are waived, the developer shall be required to submit a drainage plan containing sufficient data for the Commissioner of Public Works to check the feasibility of the drainage system as proposed by the developer.

§ 215-8. Detailed construction plans.

A. The final construction plans for drainage disposal within the development shall conform to the provisions of these regulations, subsequent amendments thereto and any particular conditions as required by the Commissioner of Public Works in approving the proposed plans and supporting data thereof. The construction plans for the drainage requirements shall be approved by the Commissioner of Public Works prior to the

construction of any drainage facility within the development.

B. The plans shall bear the certification of a licensed professional engineer as evidence of the professional responsibility for the drainage planning within the development and shall contain the following information:

(1) A vicinity sketch and boundary line survey of the site on which the work is to be performed.

(2) Location of any existing buildings, structures, utilities, sewers, water and storm drains and all easements on the site where the work is to be performed.

(3) Location of any building or structure on lands of adjacent property owners within fifty (50) feet of the site.

(4) Spot elevations and existing and proposed contours, dimensioned extent of all work proposed to be done and existing shrub masses and trees with a diameter of two (2) inches or more to be accurately located and labeled.

(5) A certification of the volume of excavation and fill involved and the quality of fill.

(6) Detailed plans of all drainage provisions, retaining walls, cribbing, vegetative practices, erosion and sediment control measures consistent with those measures recommended in the New York Guidelines for Urban Erosion and Sedimentation Controls, published by the Empire State Chapter of the Soil and Water Conservation Society(most recent edition), location of approved fences around sedimentation basins, steep excavations or ponding areas and other protective devices to be constructed in connection with or as part of the proposed work, together with a map showing the drainage area of land tributary to the site and estimated cubic-foot-per-second runoff of the area served by any drain, computed in accordance with current Town Department of Public Works storm drainage criteria.

(7) A timing schedule and sequence indicating the anticipated starting and completion dates of the development sequence, stripping and/or clearing, rough grading and construction, final grading and vegetative establishment and maintenance and the time of exposure of each area prior to the completion of effective erosion and sediment control measures and any traffic or noise problems.

(8) The depth to bedrock if determined during site evaluation.

(9) The depth of the water table if determined during site evaluation.

(10) A complete maintenance schedule for drainage structures, including channels and appurtenances.

(11) Soil borings if determined during site evaluation.

(12) A general description of the watershed.

(13) Structural details of all components of the proposed drainage system and stormwater management facilities.

C. All drainage construction shall be subject to inspection. Any field changes which affect the intent of these provisions shall have the prior approval of the Commissioner of Public Works. Developers shall complete and submit an environmental impact statement when required by law.

D. In certain cases, the Commissioner of Public Works may waive the requirements for detailed construction plans and certification of plans by a licensed professional engineer on one- or two-lot parcels when the work proposed involves only minor modifications or alterations to the drainage system. In the event that detailed plans are waived, the developer shall be required to submit construction plans containing sufficient data for the Commissioner of Public Works to check the feasibility and adequacy of the drainage system as proposed by the developer.

§ 215-9. Application for permits; standards governing issuance.

A. Application for permit. A property owner(s) shall initiate a request for a permit or modification of a permit by filing an application with the Commissioner of Public Works. The application shall be accompanied by scale plans or drawings, in the amount of six (6) complete copies, and the permit fee.

B. Standards governing permits.

(1) In granting any permit, the Commissioner of Public Works may attach such conditions as may be deemed necessary to prevent danger to public or private property, prevent any denigration of water quality, or prevent any danger to any sewer, storm drain or watercourse, or to prevent the operation from being conducted in a manner hazardous to life or property or in any manner that will create a nuisance. Such conditions may include but are not limited to the erection or installation of walls, dams and structures; planting and vegetation; erosion and

sediment control measures or devices; the furnishing of necessary easements; and a specified method of performing the work.

(2) Major modifications of the approved permit shall be submitted to the Commissioner of Public Works and reprocessed in the same manner as the original permit. Field modifications of a minor nature may be authorized by the Commissioner of Public Works, provided that the Commissioner of Public Works shall monitor and approve the drainage change in writing.

§ 215-10. Performance bond.

The Town of Brighton shall require from the developer a surety or cash bond, irrevocable letter of credit or other means of security acceptable to the Town of Brighton prior to the issuance of any building permit or grading permit for construction of a development requiring a stormwater management facility or drainage system. The amount of the security shall not be less than the total estimated construction cost of the stormwater management facility or drainage system. The bond so required in this section shall include provisions relative to forfeiture for failure to complete work specified in the approved stormwater management plan, compliance with all the provisions of this chapter and other applicable laws and regulations, and any time limitations. The bond shall not be fully released without a final inspection of completed work by the Commissioner of Public Works; submission of as-built plans and certification of completion by the Commissioner of Public Works of the stormwater management facility or drainage system as being in compliance; and acceptance of the various stages of development as specifically delineated, described and scheduled on the required plans and specifications. The developer shall notify the Commissioner of Public Works upon completion of each stage that is ready for inspection.

§ 215-11. Inspection.

Prior to approval of a stormwater management plan, the developer shall submit to the Commissioner of Public Works a proposed inspection and construction control schedule. The Commissioner of Public Works shall conduct periodic inspections necessary during construction of the stormwater management or drainage system to ensure compliance with the approved plans.

§ 215-12. Penalties for offenses.

A. Any person, firm, corporation of entity found to be violating any provisions of this chapter shall be served with a written notice by the Commissioner of Public Works stating the nature of the violation and providing a thirty-day time for the satisfactory correction thereof, subject to appeal to the Town Board within ten (10) days.

B. Any person, firm, corporation or entity who shall continue any violation beyond the time limit provided for in Subsection A shall be guilty of a violation and, upon conviction thereof, shall be fined in an amount not to exceed five hundred dollars ($500.) for each violation. Each week in which such conditions shall continue shall be deemed a separate violation.

C. Any person, firm, corporation or entity violating any of the provisions of this chapter shall become liable to the Town for any expense or loss or damage occasioned the Town by reason of such violation.

§ 215-13. Liability.

The approval of plans for proposed drainage systems and flood hazard prevention requirements shall not constitute a representation, guaranty or warranty of any kind or nature by the Town of Brighton or by an officer or employee thereof of the safety, operation, adequacy or intent of the proposed facilities and shall create no liability upon or cause for action against such public body, officer or employee for any damages that may result from construction pursuant thereto.