LINWOOD COMMON COUNCIL
CAUCUS AGENDA
March 24, 2021
6:00 P.M.

NOTICE OF THIS MEETING HAS BEEN PUBLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OPEN PUBLIC MEETINGS ACT.

1. Roll Call

	Mayor Matik __	Mrs. Byrnes _____	Mrs. DeDomenicis_____
	Mr. Ford _____	Mr. Gordon _____	Mr. Levinson ____
	Mr. Michael _____	Mr. Paolone _____	
Professionals:	Mr. Youngblood____	Mr. Polistina _____	Mrs. Napoli ____

2. Approval of Minutes Without Formal Reading

3. Mayor's Report

4. Councilwoman Byrnes
   A. Neighborhood Services

5. Councilwoman DeDomenicis
   A. Public Works

6. Councilman Ford
   A. Planning, Engineering, & Development
      1. Ordinance amending Chapter 155 Flood Damage Prevention in accordance with FEMA regulations – first reading
      2. Resolution awarding a Contract to Shore Solutions Mechanical Contracting, LLC for HVAC repairs and service
      3. Resolution providing Notice of Intent to comply with FEMA Floodplain Management Standards

7. Councilman Gordon
   A. Planning, Engineering, & Development
      1. Ordinance amending Chapter 238 Stormwater Management pursuant to DEP revised rules – final reading

8. Council President Paolone
   A. Public Safety
      1. Resolution awarding a Contract for Shared EMS to Inspira
      2. Resolution authorizing the hiring of Tyler R. Odenath and Thomas P. Flynn as Part Time Firefighters

9. Councilman Levinson
   A. Revenue & Finance
      1. Resolution authorizing payment to the Linwood Volunteer Fire Co. for the online sale of a fire truck
      2. 2021 Budget introduction
      3. CAP Ordinance – first reading

10. Councilman Michael

11. Council President Paolone
    A. Administration

12. Mr. Youngblood

LINWOOD COMMON COUNCIL
AGENDA OF REGULAR MEETING
March 24, 2021

CALL TO ORDER

NOTICE OF THIS MEETING HAS BEEN PUBLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OPEN PUBLIC MEETINGS ACT.

FLAG SALUTE: Councilman Matt Levinson

ROLL CALL

APPROVAL OF MINUTES WITHOUT FORMAL READING

ORDINANCES

7 OF 2021 AN ORDINANCE AMENDING CHAPTER 238 STORMWATER MANAGEMENT OF THE CODE OF THE CITY OF LINWOOD AND REPEALING ALL ORDINANCES HERETOFORE ADOPTED, THE PROVISIONS OF WHICH ARE INCONSISTENT HEREWITH.

FIRST READING: *March 10, 2021*
PUBLICATION: *March 15, 2021*
PASSAGE: ***March 24, 2021***

8 OF 2021 AN ORDINANCE BY THE CITY OF LINWOOD AMENDING THE LINWOOD CODE OF ORDINANCES TO REPEAL CHAPTER 155 FLOOD DAMAGE PREVENTION; TO ADOPT A NEW FLOOD DAMAGE PREVENTION ORDINANCE CHAPTER 155; TO ADOPT FLOOD HAZARD MAPS; TO DESIGNATE A FLOODPLAIN ADMNISTRATOR; AND PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

FIRST READING: ***March 24, 2021***
PUBLICATION: *March 29, 2021*
PASSAGE: *April 14, 2021*

9 OF 2021 AN ORDINANCE TO EXCEED THE MUNICIPAL BUDGET APPROPRIATION LIMITS AND TO ESTABLISH A CAP BANK

FIRST READING: ***March 24, 2021***
PUBLICATION: *March 29, 2021*
PASSAGE: *April 14, 2021*

RESOLUTIONS

69-2021 A Resolution introducing the 2021 Municipal Budget

RESOLUTIONS WITHIN CONSENT AGENDA

All matters listed under item, **Consent** Agenda, are considered to be routine by City Council, and will be enacted by one motion in the form listed. Any items requiring expenditure are supported by a Certification of Availability of Funds and any item requiring discussion will be removed from the Consent Agenda and discussed separately. All Consent Agenda items will be reflected in full in the minutes.

66-2021 A Resolution authorizing payment to the Linwood Volunteer Fire Company for the sale of a fire truck

67-2021 A Resolution awarding the Contract to Inspira Health Network, Inc. for Shared Emergency Medica Services in the City of Linwood and the City of Northfield

68-2021 A Resolution awarding a Contract to Shore Solutions mechanical Contracting, LLC for HVAC repairs and services for the City of Linwood

RESOLUTIONS WITHIN CONSENT AGENDA (continued)

70-2021	A Resolution providing Notice of Intent to comply with FEMA standards for Linwood's Floodplain Management Program
71-2021	A Resolution authorizing the hiring of Tyler R. Odenath and Thomas P. Flynn, III as Part Time Relief Firefighters for the City of Linwood

APPROVAL OF BILL LIST: $

MEETING OPEN TO THE PUBLIC

FINAL REMARKS BY MAYOR AND COUNCIL

ADJOURNMENT

ORDINANCE NO. 7, 2021

AN ORDINANCE AMENDING CHAPTER 238 STORMWATER MANAGEMENT OF THE CODE OF THE CITY OF LINWOOD AND REPEALING ALL ORDINANCES HERETOFORE ADOPTED, THE PROVISIONS OF WHICH ARE INCONSISTENT HEREWITH.

BE IT ORDAINED, by the Common Council of the City of Linwood, County of Atlantic and State of New Jersey as follows:

SECTION 1: Chapter 238, Stormwater Management is hereby amended to read as follows:

Article I **General Regulations**

§ 238-1 **Title.**
This chapter shall be known and may be cited as the "Stormwater Management Ordinance."

§ 238-2 **Policy, purpose and applicability.**
A. Policy statement. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(1) Reduce flood damage, including damage to life and property;

(2) Minimize, to the extent practical, any increase in stormwater runoff from any new development;

(3) Reduce soil erosion from any development or construction project;

(4) Assure the adequacy of existing and proposed culverts and bridges, and other in stream structures;

(5) Maintain groundwater recharge;

(6) Prevent, to the greatest extent feasible, an increase in nonpoint pollution;

(7) Maintain the integrity of stream channels for their biological functions, as well as for drainage;

(8) Minimize pollutants in stormwater runoff from new and existing development in order to restore, enhance and maintain the chemical, physical, and biological integrity of the waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial and other uses of water;

(9) Protect public safety through the proper design and operation of stormwater management basins; and

(10) Flood control, groundwater recharge, and pollutant reduction shall be achieved through the use of stormwater management measures, including green infrastructure Best Management Practices (GI BMPs) and nonstructural stormwater management strategies. GI BMPs and low impact development (LID) should be utilized to meet the goal of maintaining natural hydrology to reduce stormwater runoff volume, reduce erosion, encourage infiltration and groundwater recharge, and reduce pollution. GI

BMPs and LID should be developed based upon physical site conditions and the origin, nature and the anticipated quantity, or amount, of potential pollutants. Multiple stormwater management BMPs may be necessary to achieve the established performance standards for water quality, quantity, and groundwater recharge.

B. Purpose.

(1) It is hereby determined that the lakes and waterways within the City of Linwood of Atlantic County may be subject to flooding; that development tends to accentuate the possibility of such flooding by increasing stormwater runoff, due to alterations of the hydrologic response of the watershed in changing from the undeveloped to the developed condition; that such increased stormwater runoff produced by development of real property contributes to the possibility of increased quantities of waterborne pollutants and tends to increase channel erosion; that such increased stormwater runoff, increased erosion potential and increased pollution potential constitutes the possibility of the deterioration of the water resources of the City of Linwood, the County of Atlantic and the State of New Jersey; and that such impacts can be controlled to some extent by the regulation of stormwater runoff from such development. It is determined that it is in the public interest to regulate the development of real property and to establish standards to regulate the additional discharge of stormwater runoff from such developments as provided in this chapter.

(2) It is the purpose of this chapter to be consistent with established minimum stormwater management requirements and controls for major development, in accordance with N.J.A.C. 5:21, New Jersey Residential Site Improvement Standards, and N.J.A.C. 7:8, Stormwater Management Rules. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(3) In addition, this chapter seeks to expand those same minimum stormwater management requirements for certain developments not defined as "major development." **[Added 9-25-2013 by Ord. No. 16-2013]**

C. Applicability.

(1) For "major development" N.J.A.C. 5:21, New Jersey Residential Site Improvement Standards, N.J.A.C. 7:8, Stormwater Management Rules, and the requirements of this chapter shall apply. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(2) For the following non-major development, the rules of this chapter (excluding § **238-5**) shall apply: **[Amended 9-25-2013 by Ord. No. 16-2013]**

(a) Applications to the Planning Board; **[Amended 4-11-2018 by Ord. No. 6-2018]**

(b) New construction of one or more residential dwelling units.

(3) All other non-major development shall comply with this chapter (excluding § **238-5**), except that a stormwater management plan shall not be required. The lack of stormwater management plan in these instances shall not relieve any property owner, developer, building, contractor, etc. from the requirements of this chapter. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(4) This ordinance shall also be applicable to all major developments undertaken by the City of Linwood.

(5) The applicant may request a waiver from the strict compliance with the standards if it can be demonstrated and documented that the enforcement of one or more of these standards will cause an undue hardship.

(6) These standards shall apply unless more strict controls have been established by other agencies having jurisdiction. In those areas, the strictest standard shall control.

D. Procedure.

(1) Burden of proof. Whenever an applicant seeks a City approval of a development to which this chapter is applicable from any board or official of the City, that applicant shall be required to demonstrate that the project meets the standards set forth in this chapter, including a stormwater management plan. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(2) Submission materials due. The applicant shall submit materials, as required by this chapter hereof, to the City Board or official from which the applicant seeks City approval prior to or at the same time of submission of an application for City approval. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(3) Review. The applicant's project shall be reviewed by the City Board or official from which the applicant seeks City approval. That City Board or official shall consult with the City Engineer to determine if the project meets the standards set forth in this chapter. A $500 escrow fee will be assessed for the City's review of the stormwater management plan. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(4) Time for decision. The City Board or official shall promptly determine if the project meets the standards set forth in this chapter. The time for that determination should be the time permitted to review and act on the applicant's application for a City approval.

(5) Failure to comply. Failure of the applicant to demonstrate that the project meets the standards set forth in this chapter is reason to deny the applicant's underlying application for a City approval.

(6) Variance. For good reason, the City may grant a waiver of the standards given in this chapter. **[Amended 9-25-2013 by Ord. No. 16-2013]**

E. Goals and objectives. In order to protect, maintain and enhance both the immediate and long-term health and general welfare of its citizens, Linwood established the following goals and objectives for stormwater control:

(1) To ensure that stormwater runoff after development of a site will approximate the same rate of flow and timing of stormwater runoff that would have occurred under predevelopment conditions.

(2) To maintain the adequacy of existing and proposed culverts and bridges, dams and other conveyance structures.

(3) To minimize erosion and sedimentation from any development or construction project.

(4) To the maximum extent practicable, alleviate any deleterious drainage condition(s) on or adjacent to any site proposed for development.

F. Compatibility with other permit and ordinance requirements. Development approvals issued for subdivisions and site plans pursuant to this chapter are to be considered an integral part of development approvals under the subdivision and site plan review process and do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or ordinance. In their interpretation and application, the provisions of this chapter shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. This chapter is not intended to interfere with, abrogate, or annul any other ordinances, rule or regulation, statute, or other provision of law except that, where any provision of this chapter imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, the more restrictive provisions or higher standards shall control.

§ 238-3 **Definitions.**
Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application. The definitions below are the same as or based on the corresponding definitions in the Stormwater Management Rules at N.J.A.C. 7:8-1.2.

BMP

Best management practice as defined in the New Jersey Stormwater Best Management Practices Manual.

CAFRA CENTERS, CORES OR NODES

Those areas within boundaries accepted by the Department pursuant to N.J.A.C. 7:8E-5B.

CAFRA PLANNING MAP

The geographic depiction of the boundaries for Coastal Planning Areas, CAFRA Centers, CAFRA Cores and CAFRA Nodes pursuant to N.J.A.C. 7:7E-5B.3.

COMMUNITY BASIN

An infiltration system, sand filter designed to infiltrate, standard constructed wetland, or wet pond, established in accordance with N.J.A.C. 7:8-4.2(c)14, that is designed and constructed in accordance with the New Jersey Stormwater Best Management Practices Manual, or an alternate design, approved in accordance with N.J.A.C. 7:8-5.2(g), for an infiltration system, sand filter designed to infiltrate, standard constructed wetland, or wet pond and that complies with the requirements of this chapter.

COMPACTION

The increase in soil bulk density.

CONTRIBUTORY DRAINAGE AREA

The area from which stormwater runoff drains to a stormwater management measure, not including the area of the stormwater management measure itself.

CORE

A pedestrian-oriented area of commercial and civic uses serving the surrounding City, generally including housing and access to public transportation.

COUNTY

The County of Atlantic.

COUNTY REVIEW AGENCY

An agency designated by the County Board of Chosen Freeholders to review the City's stormwater management plans and implementing ordinance(s). The county review agency is the Atlantic County Department of Regional Planning and Development.

DEPARTMENT

The New Jersey Department of Environmental Protection.

DESIGNATED CENTER

A State Development and Redevelopment Plan Center as designated by the State Planning Commission, such as urban, regional, town, village, or hamlet.

DESIGN ENGINEER

A person professionally qualified and duly licensed in New Jersey to perform engineering services that may include, but not necessarily be limited to, development of project requirements, creation and development of project design and preparation of drawings and specifications.

DEVELOPMENT

The division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or structure, any mining excavation or landfill, and any use or change in the use of any building or other structure, or land or extension of use of land, by any person, for which permission is required under the City Land Use Law, N.J.S.A. 40:55D-1 et seq. In the case of development of agricultural lands, development means: any activity that requires a state permit; any activity reviewed by the County Agricultural Board (CAB) and the State Agricultural Development Committee (SADC), and City review of any activity not exempted by the Right to Farm Act, N.J.S.A. 4:1C-1 et seq.

DISTURBANCE

The placement or reconstruction of impervious surface or motor vehicle surface, or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation. Milling and repaving is not considered disturbance for the purposes of this definition.

DRAINAGE AREA

A geographic area within which stormwater, sediments, or dissolved materials drain to a particular receiving water body or to a particular point along a receiving water body.

ENVIRONMENTALLY CONSTRAINED AREA

The following areas where the physical alteration of the land is in some way restricted, either through regulation, easement, deed restriction or ownership such as: wetlands, floodplains, threatened and endangered species sites or designated habitats, and parks and preserves. Habitats of endangered or threatened species are identified using the Department's Landscape Project as approved by the Department's Endangered and Nongame Species Program.

ENVIRONMENTALLY CRITICAL AREAS

An area or feature which is of significant environmental value, including but not limited to: stream corridors; natural heritage priority sites; habitat of endangered or threatened species; large areas of contiguous open space or upland forest; steep slopes; and wellhead protection and groundwater recharge areas. Habitats of endangered or threatened species are identified using the Department's Landscape Project as approved by the Department's Endangered and Nongame Species Program.

EROSION

The detachment and movement of soil or rock fragments by water, wind, ice or gravity.

GREEN INFRASTRUCTURE

A stormwater management measure that manages stormwater close to its source by:

1. Treating stormwater runoff through infiltration into subsoil;
2. Treating stormwater runoff through filtration by vegetation or soil; or
3. Storing stormwater runoff for reuse.

HUC 14 OR HYDROLOGIC UNIT CODE 14

An area within which water drains to a particular receiving surface water body, also known as a subwatershed, which is identified by a 14-digit hydrologic unit boundary designation, delineated within New Jersey by the United States Geological Survey.

IMPERVIOUS SURFACE

Pursuant to N.J.A.C. 7:8-1.2, impervious surface means a surface that has been covered with a layer of material so that it is highly resistant to infiltration by water.

INFILTRATION

The process by which water seeps into the soil from precipitation.

MAJOR DEVELOPMENT

an individual "development," as well as multiple developments that individually or collectively result in:

1. The disturbance of one or more acres of land since February 2, 2004;
2. The creation of one-quarter acre or more of "regulated impervious surface" since February 2, 2004;
3. The creation of one-quarter acre or more of "regulated motor vehicle surface" since March 2, 2021 *{or the effective date of this ordinance, whichever is earlier}*
4. A combination of 2 and 3 above that totals an area of one-quarter acre or more. The same surface shall not be counted twice when determining if the combination area equals one-quarter acre or more.

Major development includes all developments that are part of a common plan of development or sale (for example, phased residential development) that collectively or individually meet any one or more of paragraphs 1, 2, 3, or 4 above. Projects undertaken by any government agency that otherwise meet the definition of "major development" but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered "major development."

MOTOR VEHICLE

Land vehicles propelled other than by muscular power, such as automobiles, motorcycles, autocycles, and low speed vehicles. For the purposes of this definition, motor vehicle does not include farm equipment, snowmobiles, all-terrain vehicles, motorized wheelchairs, go-carts, gas buggies, golf carts, ski-slope grooming machines, or vehicles that run only on rails or tracks.

MOTOR VEHICLE SURFACE

Any pervious or impervious surface that is intended to be used by "motor vehicles" and/or aircraft, and is directly exposed to precipitation including, but not limited to, driveways, parking areas, parking garages, roads, racetracks, and runways.

CITY

The City of Linwood.

NEW CONSTRUCTION

A development project that results in the issuance of a new certificate of occupancy before the area can be occupied.

[Added 9-25-2013 by Ord. No. 16-2013]

NEW JERSEY STORMWATER BEST MANAGEMENT PRACTICES (BMP) MANUAL OR BMP MANUAL

The manual maintained by the Department providing, in part, design specifications, removal rates, calculation methods, and soil testing procedures approved by the Department as being capable of contributing to the achievement of the stormwater management standards specified in this chapter. The BMP Manual is periodically amended by the Department as necessary to provide design specifications on additional best management practices and new information on already included practices reflecting the best available current information regarding the particular practice and the Department's determination as to the ability of that best management practice to contribute to compliance with the standards contained in this chapter. Alternative stormwater management measures, removal rates, or calculation methods may be utilized, subject to any limitations specified in this chapter, provided the design engineer demonstrates to the municipality, in accordance with Section IV.F. of this ordinance and N.J.A.C. 7:8-5.2(g), that the proposed measure and its design will contribute to achievement of the design and performance standards established by this chapter.

NODE

An area designated by the State Planning Commission concentrating facilities and activities which are not organized in a compact form.

NUTRIENT

A chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the development of organisms.

PERSON

Any individual, corporation, company, partnership, firm, association, the City of Linwood or political subdivision of this state subject to City jurisdiction pursuant to the City Land Use Law, N.J.S.A.

40:55D-1 et seq.

POLLUTANT

Any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, refuse, oil, grease, sewage sludge, munitions, chemical wastes, biological materials, medical wastes, radioactive substance (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), thermal waste, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, City, agricultural, and construction waste or runoff, or other residue discharged directly or indirectly to the land, groundwaters or surface waters of the state, or to a domestic treatment works. "Pollutant" includes both hazardous and nonhazardous pollutants.

RECHARGE

The amount of water from precipitation that infiltrates into the ground and is not evapotranspired.

REGULATED IMPERVIOUS SURFACE

Any of the following, alone or in combination:

1. A net increase of impervious surface;
2. The total area of impervious surface collected by a new stormwater conveyance system (for the purpose of this definition, a "new stormwater conveyance system" is a stormwater conveyance system that is constructed where one did not exist immediately prior to its construction or an existing system for which a new discharge location is created);
3. The total area of impervious surface proposed to be newly collected by an existing stormwater conveyance system; and/or
4. The total area of impervious surface collected by an existing stormwater conveyance system where the capacity of that conveyance system is increased.

REGULATED MOTOR VEHICLE SURFACE

Any of the following, alone or in combination:

1. The total area of motor vehicle surface that is currently receiving water;
2. A net increase in motor vehicle surface; and/or quality treatment either by vegetation or soil, by an existing stormwater management measure, or by treatment at a wastewater treatment plant, where the water quality treatment will be modified or removed.

SEDIMENT

Solid material, mineral or organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water or gravity as a product of erosion.

SITE

The lot or lots upon which a development is to occur or has occurred.

[Amended 9-25-2013 by Ord. No. 16-2013]

SOIL

All unconsolidated mineral and organic material of any origin.

SPECIAL WATER RESOURCE PROTECTION AREAS

Pursuant to N.J.A.C. 7:8 — 5.5(h), special water resource protection areas shall be established along all waters designated Category One at N.J.A.C. 7:9B and perennial or intermittent streams that drain into or upstream of the Category One waters as shown on the USGS Quadrangle. Areas shall be established for the protection of water quality, aesthetic value, exceptional ecological significance, exceptional recreational significance, and exceptional fisheries significance of those established Category One waters.

STATE

The State of New Jersey.

STATE DEVELOPMENT AND REDEVELOPMENT PLAN METROPOLITAN PLANNING AREA (PA1)

An area delineated on the State Plan Policy Map and adopted by the State Planning Commission that is intended to be the focus for much of the state's future redevelopment and revitalization efforts.

STATE PLAN POLICY MAP

The geographic application of the State Development and Redevelopment Plan's goals and statewide policies, and the official map of these goals and policies.

STORMWATER

Water resulting from precipitation (including rain and snow) that runs off the land's surface, is transmitted to the subsurface, or is captured by separate storm sewers or other sewage or drainage facilities, or conveyed by snow removal equipment.

STORMWATER MANAGEMENT BMP

An excavation or embankment and elated areas designed to retain stormwater runoff. A stormwater management basin may either be normally dry (that is, a detention basin or infiltration basin), retain water in a permanent pool (a retention basin), or be planted mainly with wetland vegetation (most constructed stormwater wetlands).

STORMWATER MANAGEMENT MEASURE

Any structural or nonstructural strategy, practice, technology, process, program, or other method intended to control or reduce stormwater runoff and associated pollutants, or to induce or control the infiltration or groundwater recharge of stormwater or to eliminate illicit or illegal nonstormwater discharges into stormwater conveyances.

STORMWATER RUNOFF

Water flow on the surface of the ground or in storm sewers, resulting from precipitation.

STORMWATER MANAGEMENT PLANNING AGENCY

A public body authorized by legislation to prepare stormwater management plans.

STORMWATER MANAGEMENT PLANNING AREA

The geographic area for which a stormwater management planning agency is authorized to prepare stormwater management plans, or a specific portion of that area identified in a stormwater management

plan prepared by that agency.

TIDAL FLOOD HAZARD AREA

A flood hazard area in which the flood elevation resulting from the two-, 10-, or 100-year storm, as applicable, is governed by tidal flooding from the Atlantic Ocean. Flooding in a tidal flood hazard area may be contributed to, or influenced by, stormwater runoff from inland areas, but the depth of flooding generated by the tidal rise and fall of the Atlantic Ocean is greater than flooding from any fluvial sources. In some situations, depending upon the extent of the storm surge from a particular storm event, a flood hazard area may be tidal in the 100-year storm, but fluvial in more frequent storm events.

WATER CONTROL STRUCTURE

A structure within, or adjacent to, a water, which intentionally or coincidentally alters the hydraulic capacity, the flood elevation resulting from the two-, 10-, or 100-year storm, flood hazard area limit, and/or floodway limit of the water. Examples of a water control structure may include a bridge, culvert, dam, embankment, ford (if above grade), retaining wall, and weir.

WATERS OF THE STATE

The ocean and its estuaries, all springs, streams, wetlands, and bodies of surface or groundwater, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

WETLANDS

Pursuant to N.J.A.C. 7:8-1.2, Wetlands or wetland means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

§ 238-4 **General standards.**

A. Design and performance standards for stormwater management measures.

(1) Stormwater management measures shall be developed to meet the erosion control, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality standards stated in this section as well as those standards for stormwater management stated in § **238-5**. To the maximum extent practicable, these standards shall be met by incorporating nonstructural stormwater management strategies into the design. If these strategies alone are not sufficient to meet these standards, structural stormwater management measures necessary to meet these standards shall be incorporated into the design. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(2) The standards stated in § **238-5** apply to new major development and are intended to minimize the impact of stormwater runoff on water quality and water quantity in receiving water bodies and maintain groundwater recharge. The standards do not apply to new development to the extent that alternative design and performance standards are applicable under a regional stormwater management plan or water quality management plan adopted in accordance with Department rules. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(3) For site improvements regulated under the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21, the RSIS shall apply in addition to this section except to the extent the RSIS are superseded by this

section or alternative standards applicable under a regional stormwater management plan or water quality management plan adopted in accordance with Department rules.

(4) All developments shall demonstrate through hydrologic and hydraulic analysis that quantity and quality standards are met as follows.

(a) The total volume of runoff leaving the site from the postdevelopment condition shall not be greater than the total volume of runoff leaving the site from the predevelopment condition, nor shall there be any alterations of the flow pattern of stormwater runoff from the lot such that flooding, erosion, sedimentation, loss of water supply or other harmful effect will occur.

(b) The volume of runoff resulting from the water quality design storm defined as 1.25 inches in a two-hour period or the one-year twenty-four-hour Type III design storm shall be completely retained and infiltrated on site.

(5) Wetlands.

(a) No land development shall be carried out within 50 feet of a wetland or in an area adjacent to a wetland area where the seasonal high-water table is three feet or less, unless the applicant can demonstrate that the proposed development will not result in significant adverse impact on any drainage structure.

(b) A significant adverse impact shall be deemed to exist if:

[1] A drainage structure is affected through the increased runoff discharged to the wetlands;

[2] There is a change in the seasonal flow patterns;

[3] There is an alteration of the water table; or

[4] There is an increase in erosion and increased sedimentation of the wetlands.

(6) Methods of management.

(a) The following is a list of various control methods which may be utilized in stormwater management systems, if appropriate. The choice of control techniques is not limited to the ones appearing on this list. However, it will be the policy of the City to encourage the use of retention basins wherever possible.

[1] Detention/retention basins.

[2] Rooftop storage.

[3] Parking lot ponding.

[4] Porous pavement and concrete lattice block surface.

[5] Grassed channels and vegetated strips.

[6] Routed flow over grass.

[7] Decreased impervious area coverage.

[8] French drains, porous pipes and dry wells.

(b) The use of other control methods which meet the criteria in this section will be permitted when approved by the Engineer. Various combinations of methods should be tailored to suit the particular requirements of the type of development and the topographic features of the project area.

(c) Regardless of the method used, the applicant will be required to provide a maintenance plan in accordance with § **238-14**.

(7) Drainage easements.

(a) All stormwater management plans shall illustrate the pathway of positive outflow to the nearest stormwater easement, stream, lake, pond or other natural watercourse. Prior to receiving the final approval, the applicant shall obtain the necessary easements corresponding with the flow patterns illustrated on the plans should those patterns affect the present or future use of adjoining parcels by increasing the quantity of runoff over the adjoining parcel.

(b) Where a subdivision is traversed by a watercourse, surface or underground drainageway or drainage system, channel or stream, there shall be provided and dedicated a drainage right-of-way easement to the City conforming substantially to the lines of such watercourse, and such further width or construction, or both, as will be adequate to accommodate expected stormwater runoff meeting any minimum widths and locations shown on any adopted Official Map and/or Master Plan and, as a minimum, that fixed in § **238-3** defined as "stream corridor." Such easement dedication shall be expressed on the plan as follows: "Drainage and utility right-of-way easement granted to the City of Linwood."

(8) Drainage structures in county or state right-of-way. Drainage structures which are located within New Jersey or Atlantic County highway rights-of-way shall be approved by the state or county agency, and a letter from that office indicating such approval shall be directed to the administrator of the Planning Board and shall be received prior to the final plat approval. Drainage structures abutting a brook or stream whose drainage area, up to and including the subdivision or development, is greater than 50 acres or within a one-hundred-year floodplain shall be required to secure a stream encroachment permit from the New Jersey Department of Environmental Protection, Division of Water Resources, in accordance with the latest criteria, prior to authorization of final approval. A copy of said permit shall be forwarded to the Administrator of the Planning Board and attached to the final engineering plans.

§ 238-5 **Stormwater management requirements for major development.**

A. The development shall incorporate a maintenance plan for the stormwater management measures incorporated into the design of a development in accordance with § **238-14**. **[Amended 9-25-2013 by Ord. No. 16-2013]**

B. Stormwater management measures shall avoid adverse impacts of concentrated flow on habitat for threatened and endangered species as documented in the Department's Landscape Project or Natural Heritage Database established under N.J.S.A. 13:1B-15.147 through 15.150, particularly Helonias bullata (swamp pink) and/or Clemmys muhlnebergi (bog turtle).

C. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of § **238-5G**:

(1) The construction of an underground utility line, provided that the disturbed areas are revegetated upon completion;

(2) The construction of an aboveground utility line, provided that the existing conditions are maintained to the maximum extent practicable; and

(3) The construction of a public pedestrian access, such as a sidewalk or trail with a maximum width of 14 feet, provided that the access is made of permeable material.

D. A waiver from strict compliance from the green infrastructure, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of § **238-5G** may be obtained for the enlargement of an existing public roadway or railroad or the construction or enlargement of a public pedestrian access, provided that the following conditions are met:

(1) The applicant demonstrates that there is a public need for the project that cannot be accomplished by any other means;

(2) The applicant demonstrates through an alternative analysis that, through the use of nonstructural and structural stormwater management strategies and measures, the alternative selected complies with the requirements of § **238-5G** to the maximum extent practicable;

(3) The applicant demonstrates that, in order to meet the requirements of § **238-5G**, existing structures currently in use, such as homes and buildings, would need to be condemned; and

(4) The applicant demonstrates that it does not own or have other rights to areas, including the potential to obtain through condemnation lands not falling under Subsection **D(3)** above within the upstream drainage area of the receiving stream that would provide additional opportunities to mitigate the requirements of § **238-5G** that were not achievable on site.

E. Nonstructural stormwater management strategies.

(1) To the maximum extent practicable, the standards in § **238-5G** shall be met by incorporating nonstructural stormwater management strategies set forth at § **238-7** into the design. The applicant shall identify the nonstructural measures incorporated into the design of the project. If the applicant contends that it is not feasible for engineering, environmental, or safety reasons to incorporate any nonstructural stormwater management measures identified in Subsection **E(2)** below into the design of a particular project, the applicant shall identify the strategy considered and provide a basis for the contention.

(2) If the applicant contends that it is not practical for engineering, environmental or safety reasons to incorporate any of the nine nonstructural strategies into the design of a particular project, the applicant shall provide a detailed rationale establishing a basis for the contention that use of the strategy is not practical on the site. This rationale shall be submitted, in accordance with the checklist requirements established by § **238-13**, to the City. A determination by the City that this rationale is inadequate or without merit shall result in a denial of the application unless one of the following conditions is met:

(a) The land use planning and source control plan is amended to include a description of how all nine nonstructural measures will be implemented on the development site, and the amended plan is approved by the City;

(b) The land use planning and source control plan is amended to provide an alternative nonstructural strategy or measure that is not included in the list of nine nonstructural measures, but still meets the performance standards in §§ **238-3** and **238-4**, and the amended plan is approved by the City; or

(c) The land use planning and source control plan is amended to provide an adequate rationale for the contention that use of the particular strategy is not practical on the site, and the amended plan is approved by the City.

(3) In addition to all other requirements of this section, each applicant shall demonstrate that, at a minimum, existing trees and vegetation on the development site will be preserved, protected and maintained according to the minimum standards established by provisions of the City Land Use Ordinance, Zoning Ordinance or by conditions of zoning or variance approval. Existing trees and vegetation shall be protected during construction activities in accordance with the standard for tree protection during construction provided in the New Jersey State Soil Conservation Committee Standards for Soil Erosion and Sediment Control in New Jersey, which is incorporated herein by reference, as amended and supplemented.

(4) Any land area used as a nonstructural stormwater management measure to meet the performance standards in §§ **238-5** and **238-6** shall be dedicated to a government entity; shall be subjected to a conservation easement filed with the appropriate County Clerk's office; or shall be subjected to an equivalent form of restriction approved by the City that ensures that that measure, or equivalent stormwater management measure, is maintained in perpetuity, as detailed in § **238-14** of this chapter.

(5) Guidance for nonstructural stormwater management strategies is available in the New Jersey BMP Manual, which may be obtained from the NJDEP's Web site at www.njstormwater.org.

F. Threatened and endangered species and associated habitat standards.

(1) Stormwater management measures shall avoid adverse impacts of the development on habitat for threatened and endangered species, in accordance with N.J.A.C. 7:8-5.2(c).

G. Erosion control, groundwater recharge and runoff quantity and quality standards.

(1) This subsection contains minimum design and performance standards to control erosion, encourage and control infiltration and groundwater recharge, and control stormwater runoff quantity impacts of major development.

(a) The minimum design and performance standards for erosion control are those established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules at N.J.A.C. 2:90.

(2) The minimum design and performance standards for groundwater recharge are as follows:

(a) The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater

recharge calculations at § **238-6**, either:

[1] Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100% of the average annual preconstruction groundwater recharge volume for the site; or

[2] Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from preconstruction to postconstruction for the two-year storm is infiltrated.

(b) The following types of stormwater shall not be recharged:

[1] Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied; areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than "reportable quantities" as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department-approved remedial action work plan or landfill closure plan and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities; and

[2] Industrial stormwater exposed to source material. "Source material" means any material(s) or machinery, located at an industrial facility, which is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents, and detergents that are related to process, manufacturing, or other industrial activities that are exposed to stormwater.

(c) The design engineer shall assess the hydraulic impact on the groundwater table and design the site so as to avoid adverse hydraulic impacts. Potential adverse hydraulic impacts include, but are not limited to, exacerbating a naturally or seasonally high-water table so as to cause surficial ponding, flooding of basements, or interference with the proper operation of subsurface sewage disposal systems and other subsurface structures in the vicinity or downgradient of the groundwater recharge area.

(3) The minimum design and performance standards for stormwater runoff quantity are as follows. In order to control stormwater runoff quantity impacts, the design engineer shall, using the assumptions and factors for stormwater runoff calculations at § **238-6**, complete one of the following:

(a) Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, postconstruction runoff hydrographs for the two-, ten- and one-hundred-year storm events do not exceed, at any point in time, the preconstruction runoff hydrographs for the same storm events;

(b) Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the preconstruction condition, in the peak runoff rates of stormwater leaving the site for the two-, ten- and one-hundred-year storm events and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site. This analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area;

(c) Design stormwater management measures so that the postconstruction peak runoff rates for the two-, ten- and one-hundred-year storm events are 50%, 75% and 80%, respectively, of the preconstruction peak runoff rates. The percentages apply only to the postconstruction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed; or

(d) In tidal flood hazard areas, stormwater runoff quantity analysis in accordance with Subsections **G(3)(a)**, **G(3)(b)** and **G(3)(c)** above is required unless the design engineer demonstrates through hydrologic and hydraulic analysis that the increased volume, change in timing, or increased rate of the stormwater runoff, or any combination of the three will not result in additional flood damage below the point of discharge of the major development. No analysis is required if the stormwater is discharged directly into any ocean, bay, inlet, or the reach of any watercourse between its confluence with an ocean, bay, or inlet and downstream of the first water control structure.

(4) The minimum design and performance standards for stormwater quality are as follows:

(a) Stormwater management measures shall be designed to reduce the postconstruction load of total suspended solids (TSS) in stormwater runoff by 80% of the anticipated load, expressed as an annual average shall be achieved for the stormwater runoff from the net increase of motor vehicle surface. Stormwater management measures shall only be required for water quality control if an additional 1/4 acre of impervious surface is being proposed on a development site. The requirement to reduce TSS does not apply to any stormwater runoff in a discharge regulated under a numeric effluent limitation for TSS imposed under the New Jersey Pollution Discharge Elimination System (NJPDES) rules, N.J.A.C. 7:14A, or in a discharge specifically exempt under a NJPDES permit from this requirement. The water quality design storm is 1.25 inches of rainfall in two hours. Water quality calculations shall take into account the distribution of rain from the water quality design storm. The calculation of the volume of runoff may take into account the implementation of nonstructural and structural stormwater management measures.

(b) For purposes of TSS reduction calculations, see § **238-6** for removal rates for certain BMPs designed in accordance with the New Jersey Stormwater Best Management Practices Manual. The BMP Manual may be obtained from the address identified in § **238-8**, or found on the Department's Web site at www.njstormwater.org. The BMP Manual and other sources of technical guidance are listed in § **238-11**. Alternative removal rates and methods of calculating removal rates may be used if the design engineer provides documentation demonstrating the capability of these alternative rates and methods to the review agency. A copy of any approved alternative rate or method of calculating the removal rate shall be provided to the Department at the following address: Division of Watershed Management, New Jersey Department of Environmental Protection, PO Box 418, Trenton, New Jersey, 08625-0418.

(c) If more than one BMP in series is necessary to achieve the required eighty-percent TSS reduction for a site, the applicant shall utilize the following formula to calculate TSS reduction:

$$R = A + B - (AxB)/100$$

Where:

R = total TSS percent load removal from application of both BMPs

A = the TSS percent removal rate applicable to the first BMP

B = the TSS percent removal rate applicable to the second BMP

(d) If there is more than one on-site drainage area, the eighty-percent TSS removal rate shall apply to each drainage area, unless the runoff from the subareas converge on site, in which case the removal rate can be demonstrated through a calculation using a weighted average.

(e) Stormwater management measures shall also be designed to reduce, to the maximum extent feasible, the postconstruction nutrient load of the anticipated load from the developed site in stormwater runoff generated from the water quality design storm. In achieving reduction of nutrients to the maximum extent feasible, the design of the site shall include nonstructural strategies and structural measures that optimize nutrient removal while still achieving the performance standards in § **238-5G**.

(f) In accordance with the definition of FW1 at N.J.A.C. 7:9B-1.4, stormwater management measures shall be designed to prevent any increase in stormwater runoff to waters classified as FW1.

(g) Special water resource protection areas shall be established along all waters designated Category One at N.J.A.C. 7:9B, and perennial or intermittent streams that drain into or upstream of the Category One waters as shown on the USGS Quadrangle Maps or in the County Soil Surveys, within the associated HUC14 drainage area. These areas shall be established for the protection of water quality, aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, and exceptional fisheries significance of those established Category One waters. These areas shall be designated and protected as follows:

[1] The applicant shall preserve and maintain a special water resource protection area in accordance with one of the following:

[a] A three-hundred-foot special water resource protection area shall be provided on each side of the waterway, measured perpendicular to the waterway from the top of the bank outwards or from the center line of the waterway where the bank is not defined, consisting of existing vegetation or vegetation allowed to follow natural succession.

[b] Encroachment within the designated special water resource protection area under Subsection G(4)(g)[1][a] above shall only be allowed where previous development or disturbance has occurred (for example, active agricultural use, parking area or maintained lawn area). The encroachment shall only be allowed where applicant demonstrates that the functional value and overall condition of the special water resource protection area will be maintained to the maximum extent practicable. In no case shall the remaining special water resource protection area be reduced to less than 150 feet as measured perpendicular to the top-of-bank of the waterway or center line of the waterway where the bank is undefined. All encroachments proposed under this subparagraph shall be subject to review and approval by the Department.

[2] All stormwater shall be discharged outside of and flow through the special water resource protection area and shall comply with the standard for off-site stability in the Standards for Soil Erosion and Sediment Control in New Jersey, established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq.

[3] If stormwater discharged outside of and flowing through the special water resource protection area cannot comply with the standard for off-site stability in the Standards for Soil Erosion and Sediment

Control in New Jersey, established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., then the stabilization measures in accordance with the requirements of the above standards may be placed within the special water resource protection area, provided that:

[a] Stabilization measures shall not be placed within 150 feet of the Category One waterway;

[b] Stormwater associated with discharges allowed by this section shall achieve a ninety-five-percent TSS postconstruction removal rate;

[c] Temperature shall be addressed to ensure no impact on the receiving waterway;

[d] The encroachment shall only be allowed where the applicant demonstrates that the functional value and overall condition of the special water resource protection area will be maintained to the maximum extent practicable;

[e] A conceptual project design meeting shall be held with the appropriate Department staff and Soil Conservation District staff to identify necessary stabilization measures; and

[f] All encroachments proposed under this section shall be subject to review and approval by the Department.

[4] A stream corridor protection plan may be developed by a regional stormwater management planning committee as an element of a regional stormwater management plan, or by the City through provisions in the adopted municipal stormwater management plan. If a stream corridor protection plan for a waterway has been approved by the Department of Environmental Protection, then the provisions of the plan shall be the applicable special water resource protection area requirements for that waterway. A stream corridor protection plan for a waterway shall maintain or enhance the current functional value and overall condition of the special water resource protection area. In no case shall a stream corridor protection plan allow the reduction of the special water resource protection area to less than 150 feet as measured perpendicular to the waterway subject to this subsection.

(h) The stormwater runoff quality standards do not apply to the construction of one individual single-family dwelling, provided that it is not part of a larger development or subdivision that has received preliminary or final site plan approval prior to December 3, 2018, and that the motor vehicle surfaces are made of permeable material(s) such as gravel, dirt, and/or shells.

H. Green Infrastructure Requirements

(1) When designed in accordance with the most current version of the New Jersey Stormwater Best Management Practices Manual, the stormwater management measures found at N.J.A.C. 7:8-5.2 (f) Tables 5-1, 5-2 and 5-3 and listed below in Tables 1, 2 and 3 are presumed to be capable of providing stormwater controls for the design and performance standards as outlined in the tables below. Upon amendments of the New Jersey Stormwater Best Management Practices to reflect additions or deletions of BMPs meeting these standards, or changes in the presumed performance of BMPs designed in accordance with the New Jersey Stormwater BMP Manual, the Department shall publish in the New Jersey Registers a notice of administrative change revising the applicable table. The most current version of the BMP Manual can be found on the Department's website at:

http://njstormwater.org/bmp_manual2.htm

(2) An alternative stormwater management measure, alternative removal rate, and/or alternative method to calculate the removal rate may be used if the design engineer demonstrates the capability of the proposed alternative rate or method to the municipality. A copy of any approved alternative stormwater management measure, alternative removal rate, and/or alternative method to calculate the removal rate shall be provided to the Department. Alternative stormwater management measures may be used to satisfy the requirements only if the measures meet the definition of green infrastructure. Alternative stormwater management measures that function in a similar manner to a BMP are subject to the contributory drainage area less than or equal to 2.5 acres, except for alternative stormwater management measures that function similarly to cisterns, grass swales, green roofs, standard constructed wetlands, vegetative filter strips, and wet ponds, which are not subject to a contributory drainage area limitation. Alternative measures that function similarly to standard constructed wetlands or wet ponds shall not be used for compliance with the stormwater runoff quality standard unless a variance in accordance with N.J.A.C. 7:8-4.6 or a waiver from strict compliance in accordance with **§238-5D.**

(a) Where the BMP tables in the NJ Stormwater Management Rule are different due to updates or amendments with the tables in this ordinance the BMP Tables in the Stormwater Management rule at N.J.A.C. 7:8-5.2(f) shall take precedence.

Table 1
Green Infrastructure BMPs for Groundwater Recharge, Stormwater Runoff Quality, and/or Stormwater Runoff Quantity

Best Management Practice	Stormwater Runoff Quality TSS Removal Rate (percent)	Stormwater Runoff Quantity	Groundwater Recharge	Minimum Separation from Seasonal High Water Table (feet)
Cistern	0	Yes	No	--
Dry Well[a]	0	No	Yes	2
Grass Swale	50 or less	No	No	2[e] 1[f]
Green Roof	0	Yes	No	--
Manufactured Treatment Device[a] [g]	50 or 80	No	No	Dependent upon the device
Pervious Paving System[a]	80	Yes	Yes[b] No[c]	2[b] 1[c]
Small-Scale Bioretention Basin[a]	80 or 90	Yes	Yes[b] No[c]	2[b] 1[c]

Small-Scale Infiltration Basin[a]	80	Yes	Yes	2
Small-Scale Sand Filter	80	Yes	Yes	2
Vegetative Filter Strip	60-80	No	No	--

(Notes corresponding to annotations [a] through [g] are found at the end of Table 3)

Table 2
Green Infrastructure BMPs for Stormwater Runoff Quantity (or for Groundwater Recharge and/or Stormwater Runoff Quality with a Waiver or Variance from N.J.A.C. 7:8-5.3)

Best Management Practice	Stormwater Runoff Quality TSS Removal Rate (percent)	Stormwater Runoff Quantity	Groundwater Recharge	Minimum Separation from Seasonal High Water Table (feet)
Bioretention System	80 or 90	Yes	Yes[b] No[c]	2[b] 1[c]
Infiltration Basin	80	Yes	Yes	2
Sand Filter[b]	80	Yes	Yes	2
Standard Constructed Wetland	90	Yes	No	N/A
Wet Pond[d]	50-90	Yes	No	N/A

(Notes corresponding to annotations [b] through [d] are found at the end of Table 3)

Table 3
BMPs for Groundwater Recharge, Stormwater Runoff Quality, and/or Stormwater Runoff Quantity only with a Waiver or Variance from N.J.A.C. 7:8-5.3

Best Management Practice	Stormwater Runoff Quality TSS Removal Rate (percent)	Stormwater Runoff Quantity	Groundwater Recharge	Minimum Separation from Seasonal High Water Table (feet)
Blue Roof	0	Yes	No	N/A

Extended Detention Basin	40-60	Yes	No	1
Manufactured Treatment Device[(h)]	50 or 80	No	No	Dependent upon the device
Sand Filter[(c)]	80	Yes	No	1
Subsurface Gravel Wetland	90	No	No	1
Wet Pond	50-90	Yes	No	N/A

Notes to Tables 1, 2, and 3:

(a) subject to the applicable contributory drainage area limitation specified at §238-5I(2);
(b) designed to infiltrate into the subsoil;
(c) designed with underdrains;
(d) designed to maintain at least a 10-foot wide area of native vegetation along at least 50 percent of the shoreline and to include a stormwater runoff retention component designed to capture stormwater runoff for beneficial reuse, such as irrigation;
(e) designed with a slope of less than two percent;
(f) designed with a slope of equal to or greater than two percent;
(g) manufactured treatment devices that meet the definition of green infrastructure at §238-3;
(h) manufactured treatment devices that do not meet the definition of green infrastructure at §238-3.

I. Green Infrastructure Standards

(1) This subsection specifies the types of green infrastructure BMPs that may be used to satisfy the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards.

(2) To satisfy the groundwater recharge and stormwater runoff quality standards at **§238-5G(2)** and **§238-5G(4)**, the design engineer shall utilize green infrastructure BMPs identified in Table 1 at **§238-5.H(2)(a).** and/or an alternative stormwater management measure approved in accordance with **§238-5H(2)**. The following green infrastructure BMPs are subject to the following maximum contributory drainage area limitations:

Best Management Practice	Maximum Contributory Drainage Area
Dry Well	1 acre
Manufactured Treatment Device	2.5 acres
Pervious Pavement Systems	Area of additional inflow cannot exceed three times the area occupied by the BMP
Small-scale Bioretention Systems	2.5 acres
Small-scale Infiltration Basin	2.5 acres
Small-scale Sand Filter	2.5 acres

(3) To satisfy the stormwater runoff quantity standards at **§238-5G(3)**, the design engineer shall utilize BMPs from Table 1 or from Table 2 and/or an alternative stormwater management measure approved in accordance with **§238-5H(2)**.

(4) If a variance in accordance with N.J.A.C. 7:8-4.6 or a waiver from strict compliance in accordance with Section IV.D is granted from the requirements of this subsection, then BMPs from Table 1, 2, or 3, and/or an alternative stormwater management measure approved in accordance with **§238-5H(2)** may be used to meet the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at **§238-5G(2), §238-5G(3) and §238-5G(4)**.

(5) For separate or combined storm sewer improvement projects, such as sewer separation, undertaken by a government agency or public utility (for example, a sewerage company), the requirements of this subsection shall only apply to areas owned in fee simple by the government agency or utility, and areas within a right-of-way or easement held or controlled by the government agency or utility; the entity shall not be required to obtain additional property or property rights to fully satisfy the requirements of this subsection. Regardless of the amount of area of a separate or combined storm sewer improvement project subject to the green infrastructure requirements of this subsection, each project shall fully comply with the applicable groundwater recharge, stormwater runoff quality control, and stormwater runoff quantity standards at **§238-5G(2), §238-5G(3) and §238-5G(4)**, unless the project is granted a waiver from strict compliance in accordance with **§238-5D**.

§ 238-6 **Calculation of stormwater runoff quantity, quality and groundwater recharge.**

A. Methods of calculating stormwater runoff quantity:

(1) The design engineer shall calculate runoff using one of the following methods:

(a) The USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation and Dimensionless Unit Hydrograph, as described in Chapters 7, 9, 10, 15 and 16 Part 630, Hydrology National Engineering Handbook, incorporated herein by reference as amended and supplemented. This methodology is additional described in *Technical Release 55 – Urban Hydrology for Small Watersheds* (TR-55), dated June 1986 incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the Natural Resources Conservation Service website at:

http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044171.pdf

or at United States Department of Agriculture Natural Resources Conservation Service, 220 Davison Avenue, Somerset, New Jersey 08873; or

(b) The Rational Method for peak flow and the Modified Rational Method for hydrograph computations. The rational and modified rational methods are described in "Appendix A-9 Modified Rational Method" in the Standards for Soil Erosion aned Sediment Control in New Jersey, January 2014. This document is available from the State Soil Conservation Committee or any of the Soil Conservation Districts listed at N.J.A.C. 2:90-1.3(a)3. The location, address, and telephone number for each Soil Conservation

District is available from the State Soil Conservation Committee, PO Box 330, Trenton, New Jersey 08625. This document is also available at:

http://www.nj.gov/agriculture/divisions/anr/pdf/2014NJSoilErosionControlStandardsComplete.pdf

(2) For the purpose of calculating runoff coefficients and groundwater recharge, there is a presumption that the preconstruction condition of a site or portion thereof is a wooded land use with good hydrologic condition. The term "runoff coefficient" applies to both the NRCS methodology at § **238-6A(1)(a)** and the Rational and Modified Rational Methods at § **238-6A(1)(b)**. A runoff coefficient or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site if the design engineer verifies that the hydrologic condition has existed on the site or portion of the site for at least five years without interruption prior to the time of application. If more than one land cover have existed on the site during the five years immediately prior to the time of application, the land cover with the lowest runoff potential shall be used for the computations. In addition, there is the presumption that the site is in good hydrologic condition (if the land use type is pasture, lawn, or park), with good cover (if the land use type is woods), or with good hydrologic condition and conservation treatment (if the land use type is cultivation).

(3) In computing preconstruction stormwater runoff, the design engineer shall account for all significant land features and structures, such as ponds, wetlands, depressions, hedgerows, or culverts that may reduce preconstruction stormwater runoff rates and volumes.

(4) In computing stormwater runoff from all design storms, the design engineer shall consider the relative stormwater runoff rates and/or volumes of pervious and impervious surfaces separately to accurately compute the rates and volume of stormwater runoff from the site. To calculate runoff from unconnected impervious cover, urban impervious area modifications as described in the NRCS Technical Release 55, Urban Hydrology for Small Watersheds, and other methods may be employed.

(5) If the invert of the outlet structure of a stormwater management measure is below the flood hazard design flood elevation as defined at N.J.A.C. 7:13, the design engineer shall take into account the effects of tailwater in the design of structural stormwater management measures.

(6) Detention facilities. For the purpose of determining the total quantity of runoff prior to and following development, the Soil Conservation Service's Technical Release No. 55 shall be used. This methodology shall serve as the basis for determining total storage capacity required subject to the guidelines identified in previous sections of this report and will also serve as the basis for determining release rates from the one-year, two-year, ten-year and fifty-year storms.

(7) Calculations shall be computed on the basis of all areas upstream of the parcel(s) in question. Peak rates of runoff shall be computed for the entire area and design release rates computed on the basis of preexisting conditions for the entire watershed.

(8) The maximum curve number values suitable for use in computing runoff values for on-site developed conditions are as follows:

Hydrologic Soil Group	**Curve Number**
A	25

Hydrologic Soil Group	Curve Number
B	55
C	70
D	77

(9) Rainfall values for each of the storms used in designing stormwater facilities include (Type III rainfall distribution):

Storm Event	Total Rainfall (inches)
1-year	2.8
2-year	3.3
10-year	5.2
50-year	7.6
100-year	8.9

(10) The applicant must identify:

(a) The peak rate of runoff making adjustments as required for percent of impervious cover, alterations to hydraulic length and percentage of watershed and wetland as described in TR-55 and supplemented by notes provided by the Soil Conservation Service. The tabular method described in TR-55 shall be used for calculating runoff rates.

(b) The total quantity of runoff utilizing the tabular hydrographic data contained in TR-55. Total quantities of runoff shall be estimated prior to and after development by calculating the total area under the hydrograph utilizing the hydrographic coefficients contained in TR-55.

(c) The relative timing of the peak rate of discharge following the onset of a storm shall be identified within the stormwater calculations.

(11) Retention basins, detention basins and partial detention basins shall be sized by routing each of the required design storms using either reservoir routing or graphical methods.

(12) For storm sewer design, the rational method (Q=CIA) may be utilized for calculating runoff quantities subject to the following criteria. The minimum design requirements for storm sewers shall be the ten-year storm. Runoff generated by storms of greater intensity, up to and including the fifty-year storm, shall be directed towards detention basins or alternative stormwater facilities on the site:

(a) The rainfall intensity (I) shall be computed as a function of the time of concentration by generally accepted procedures found in Seeyles, algebraic equations, Soil Conservation Service Engineering Field Manual, etc.

(b) The area (A) shall include all off-site acreage draining onto or through the site.

(c) The coefficient of runoff (C) shall not be less than the values stated below unless well documented and approved by the Engineer:

Surface	Minimum "C"
Structures, pavements	0.90
Cultivated dense or clay soils	0.30
Cultivated sand or loam soils	0.25
Meadows, rural areas	0.20
Heavily wooded areas	0.15

Overall drainage runoff factors will not, in general, be less than the following:

Proposed Development -

Site Plans (To the limits of improvements)	Minimum "C"
1/4 acre residential	0.70
1/2 acre residential	0.50
1 acre residential	0.40
	0.30

NOTE: The above tables are intended as minimum design standards. They are not mandated design criteria.

(d) Velocities will be computed using Manning's equation or generally accepted nomographs for pipe flow. Pipes shall be designed flowing full without head conditions for the ten-year storm (minimum).

(e) Acceptable friction factors "n" are listed below:

[1] Circular cross section concrete pipe 18 inches or less: 0.013.

[2] Circular cross section concrete pipe 18 inches or larger: 0.015.

[3] Concrete lined ditches: 0.015.

[4] Clear unlined ditches: 0.25.

[5] Natural stream and watercourses: 0.3.

(f) Other cross sections or pipe materials shall have commensurate friction factors as may be approved by the City Engineer or consultant.

B. Methods of calculating stormwater runoff quality.

(1) In complying with the stormwater runoff quality standards in § **238-5G(4)**, the design engineer shall calculate the stormwater runoff rate and volume using the USDA Natural Resources Conservation Service (NRCS) Runoff Equation, Runoff Curve Numbers, and Dimensionless Unit Hydrograph, as described in the NRCS National Engineering Handbook Part 630 — Hydrology and Technical Release 55, Urban Hydrology for Small Watersheds, as amended and supplemented.

(2) The design engineer shall also use the NJDEP water quality design storm, which is one and one-quarter inches of rainfall falling in a nonlinear pattern in two hours. Details of the water quality design storm are shown in Table 1 below.

(3) Calculation of runoff volumes, peak rates, and hydrographs for the water quality design storm may take into account the implementation of nonstructural and structural stormwater management measures.

Table 1: Water Quality Design Storm Distribution

Time (minutes)	Cumulative Rainfall (inches)
0	0.0000
5	0.0083
10	0.0166
15	0.0250
20	0.0500
25	0.0750
30	0.1000
35	0.1330
40	0.1660
45	0.2000
50	0.2583
55	0.3583
60	0.6250
65	0.8917
70	0.9917
75	1.0500
80	1.0840
85	1.1170
90	1.1500
95	1.1750
100	1.2000
105	1.2250
110	1.2384
115	1.2417
120	1.2500

Source N.J.A.C. 7:8 — 5.5 (A)

(4) Total suspended solids (TSS) reduction calculations.

(a) If more than one stormwater BMP in series is necessary to achieve the required eighty-percent TSS reduction for a site, the applicant shall utilize the following formula to calculate TSS reduction:

$R = A + B - (A \times B) / 100$, where:
R = total TSS percent load removal from application of both BMPs
A = the TSS percent removal rate applicable to the first BMP
B = the TSS percent removal rate applicable to the second BMP

(5) TSS removal rates for stormwater BMPs.

(a) For purposes of TSS reduction calculations, Table 2 presents the presumed removal rates for certain BMPs designed in accordance with the New Jersey BMP Manual. The BMP Manual may be obtained from the address identified in § **238-11** or found on the NJDEP's Web site at www.njstormwater.org. TSS reduction shall be calculated based on the removal rates for the BMPs in Table 2.

(b) Alternative stormwater management measures, removal rates and methods of calculating removal rates may be used if the design engineer provides documentation demonstrating the capability of these alternative rates and methods to the City. Any alternative stormwater management measure, removal rate or method of calculating the removal rate shall be subject to approval by the City and a copy shall be provided to the following:

[1] The Division of Watershed Management, New Jersey Department of Environmental Protection, PO Box 418, Trenton, NJ, 08625-0418.

Table 2: Pollutant Removal Rates for BMPs

Best Management Practice	TSS Percent Removal Rate	Total Phosphorus Percent Removal Rate	Total Nitrogen Percent Removal Rate
Bioretention systems	90	60	30
Constructed stormwater wetland	90	50	30
Extended detention basin	40-60 (final rate based upon detention time; see New Jersey BMP Manual, Chapter 9)	20	20
Infiltration basin	80	60	50
Manufactured treatment device	Pollutant removal rates as certified by NJDEP; see § **238-8A(2)(i)**.	Pollutant removal rates as certified by NJDEP; see § **238-8A(2)(i)**.	Pollutant removal rates as certified by NJDEP; see § **238-8A(2)(i)**.
Pervious paving systems	80 (porous paving) 80 (permeable pavers with storage bed) 0 - volume reduction only (permeable pavers without storage bed)	60 0 - volume reduction only (permeable pavers without storage bed)	50 0 - volume reduction only (permeable pavers without storage bed)
Sand filter	80	50	35
Vegetative filter strip (For filter strips with multiple vegetated covers, the final TSS removal rate should be based upon a weighted average of the adopted rates shown in Table 2, based upon the relative flow lengths through each cover type.)	60 (turf grass) 70 (native grasses, meadow and planted woods) 80 (indigenous woods)	30	30

Table 2: Pollutant Removal Rates for BMPs

Best Management Practice	TSS Percent Removal Rate	Total Phosphorus Percent Removal Rate	Total Nitrogen Percent Removal Rate
Wet pond / retention basin	50-90 (final rate based upon pool volume and detention time; see NJ BMP Manual)	50	30

Source: 7:8 — 5.5 (c) and New Jersey BMP Manual Chapter 4.

(6) Nutrient removal rates for stormwater BMPs. For purposes of postdevelopment nutrient load reduction calculations, Table 2 presents the presumed removal rates for certain BMPs designed in accordance with the New Jersey BMP Manual. If alternative stormwater BMPs are proposed, the applicant shall demonstrate that the selected BMPs will achieve the nutrient removal standard required in § **238-5G**.

C. Groundwater recharge may be calculated in accordance with the following:

(1) In complying with the groundwater recharge requirements in § **238-5G**, the design engineer shall calculate groundwater recharge in accordance with the New Jersey Groundwater Recharge Spreadsheet (NJGRS) computer program incorporated herein by reference, as amended and supplemented. Information regarding the methodology is available in § **238-5** or from the New Jersey BMP Manual.

(2) Alternative groundwater recharge calculation methods to meet these requirements may be used upon approval by the City Engineer.

(3) In complying with the groundwater recharge requirements in § **238-5**, the design engineer shall:

(a) Calculate stormwater runoff volumes in accordance with the USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation and Runoff Curve Numbers, as described in the NRCS National Engineering Handbook Part 630 — Hydrology and Technical Release 55, Urban Hydrology for Small Watersheds, as amended and supplemented; and

(b) Use appropriate two-year, twenty-four-hour rainfall depths as developed for the project site by the National Oceanic and Atmospheric Administration, available online at http://hdsc.nws.noaa.gov/hdsc/pfds/index.html.

(4) When calculating groundwater recharge or stormwater runoff for predeveloped site conditions, the design engineer shall use the following criteria:

(a) When selecting land covers or calculating runoff curve numbers (CNs) for predeveloped project site conditions, the project site's land cover shall be assumed to be woods. However, another land cover may be used to calculate runoff coefficients if:

[1] Such land cover has existed at the site or portion thereof without interruption for at least five years immediately prior to the time of application; and

[2] The design engineer can document the character and extent of such land cover through the use of photographs, affidavits, and/or other acceptable land use records.

(b) If more than one land cover, other than woods, has existed on the site during the five years immediately prior to the time of application, the land cover with the lowest runoff potential (including woods) shall be used for the computations.

(c) All predeveloped land covers shall be assumed to be in good hydrologic condition and, if cultivated, shall be assumed to have conservation treatment.

238-7 **Standards for nonstructural stormwater management measures.**

A. Nonstructural stormwater management strategies incorporated into site design shall:

(1) Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss;

(2) Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces;

(3) Maximize the protection of natural drainage features and vegetation;

(4) Minimize the decrease in the time of concentration from preconstruction to postconstruction. "Time of concentration" is defined as the time it takes for runoff to travel from the hydraulically most distant point of the watershed to the point of interest within a watershed;

(5) Minimize land disturbance including clearing and grading;

(6) Minimize soil compaction;

(7) Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers and pesticides;

(8) Provide vegetated open-channel conveyance systems discharging into and through stable vegetated areas;

(9) Provide other source controls to prevent or minimize the use or exposure of pollutants at the site, in order to prevent or minimize the release of those pollutants into stormwater runoff. Such source controls include, but are not limited to:

(a) Site design features that help to prevent accumulation of trash and debris in drainage systems;

(b) Site design features that help to prevent discharge of trash and debris from drainage systems;

(c) Site design features that help to prevent and/or contain spills or other harmful accumulations of pollutants at industrial or commercial developments; and

(d) When establishing vegetation after land disturbance, applying fertilizer in accordance with the requirements established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules.

(10) Blocks and lots shall be graded to secure proper drainage away from all buildings and to prevent the collection of stormwater in pools and to avoid concentration of stormwater from each lot to adjacent

lots.

B. Site design features identified under § **238-6A,** or alternative designs in accordance with **§238-5H(2)**, to prevent discharge of trash and debris from drainage systems shall comply with the following standard to control passage of solid and floatable materials through storm drain inlets. For purposes of this paragraph, "solid and floatable materials" means sediment, debris, trash, and other floating, suspended, or settleable solids.

(1) Design engineers shall use either of the following grates whenever they use a grate in pavement or another ground surface to collect stormwater from that surface into a storm drain or surface water body under that grate:

(a) The New Jersey Department of Transportation (NJDOT) bicycle safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines; or

(b) A different grate, if each individual clear space in that grate has an area of no more than seven (7.0) square inches, or is no greater than 0.5 inches across the smallest dimension.

Examples of grates subject to this standard include grates in grate inlets, the grate portion (non-curb-opening portion) of combination inlets, grates on storm sewer manholes, ditch grates, trench grates, and grates of spacer bars in slotted drains. Examples of ground surfaces include surfaces of roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields, open channels, and stormwater basin floors.

(2) Whenever design engineers use a curb-opening inlet, the clear space in that curb opening (or each individual clear space, if the curb opening has two or more clear spaces) shall have an area of no more than seven square inches, or be no greater than two inches across the smallest dimension. Curb-opening inlet grates to be consistent with standardized casting specifications as approved by the City Engineer.

(3) This standard does not apply:

(a) Where each individual clear space in the curb opening in existing curb opening inlet does not have an area of more than nine (9.0) square inches;

(b) Where the review agency determines that this standard would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets that meet these standards;

(c) Where flows from the water quality design storm as specified in § **238-5G(4)(a)** are conveyed through any device (e.g., end-of-pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:

[1] A rectangular space 4 5/8 inches long and 1 1/2 inches wide (this option does not apply for outfall netting facilities); or

[2] A bar screen having a bar spacing of 0.5 inches.

Note that these exemptions do not authorize any infringement of requirements in the Residential Site Improvement Standards for bicycle safe grates in new residential development (N.J.A.C. 5:21-4.18(b)2 and 7.4(b)1)

(d) Where flows are conveyed through a trash rack that has parallel bars with one-inch spacing between the bars, to the elevation of the water quality design storm as specified in § **238-5**; or

(e) Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.

238-8 **Standards for structural stormwater management measures.**

A. General design and construction standards.

(1) Structural stormwater management measures shall be designed to meet the standards established in this section. These standards have been developed to protect public safety, conserve natural features, create an aesthetically pleasing site and promote proper on-site stormwater management.

(2) The following structural stormwater management measures may be utilized as part of a stormwater management system at a land development, provided that the applicant demonstrates that they are designed, constructed and maintained so as to meet the standards and requirements established by this chapter. If alternative stormwater management measures are proposed, the applicant shall demonstrate that the selected measures will achieve the standards established by this chapter. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(a) Bioretention systems: Bioretention systems area designed to aid in the removal of suspended solids, nutrients, metals, hydrocarbons and bacteria from stormwater runoff.

[1] The use of bioretention systems should be used as a secondary stormwater management structure. Bioretention systems should be located as close to the area of runoff as possible with runoff entering the system through overland flow. Bioretention systems may be placed in lawns, median strips, parking lot islands, unused lots and certain easements.

[2] Bioretention systems must not be placed in operation until the site was been completely stabilized.

[3] Bioretention systems should only be used in areas of well draining soils.

(b) Constructed stormwater wetlands: Constructed stormwater wetlands are designed to remove suspended solids, nutrients and bacteria from stormwater runoff and provide wildlife habitat.

[1] Constructed stormwater wetlands require a minimum drainage area of 10 to 25 acres depending on the type of wetlands.

[2] Soils must be poorly draining as to provide permanent pools.

[3] Care must be taken to ensure that mosquito breeding does not become a problem.

(c) Dry wells: Drywells and porous pipes are designed to infiltrate the runoff from small drainage areas, such as roof structures. These structures supply a means to remove pollutants and provide infiltration when space is limited.

[1] Such devices should be used in areas of well draining soils and in cases where there is sufficient separation between the seasonal high-water table and the bottom of the infiltration device.

(d) Extended detention basins: Extended detention basins provide a means to control stormwater quantity and quality concerns. The lower stages of the basin provide measures to control the stormwater quality storm, while higher stages in the basin can attenuate the peak rates of runoff from larger storms.

[1] Such devices are most suitable in cases where there is a significant increase in the amount of runoff. Extended detention basins require a significant amount of room and depth to provide proper performance.

(e) Vegetated filters: Vegetated filter strips area designed to remove various pollutants such as suspended solids by providing runoff a flow path over a vegetated area. Such areas can be developed in grass-lined waterways or swales and be primarily grass or larger areas may be primarily composed of woods and brush.

[1] Grass-lined waterways are a viable option for stormwater conveyance, especially to secondary devices such as infiltration/detention basins. Such areas help promote the life span of basins by removing suspended solids before runoff reaches and settles on basin bottoms.

[2] Large vegetated filters such as areas of woods and dense grass may be used alone in small areas of development or in areas where the amount of impervious cover will not be drastically increased.

(f) Infiltration basins and trenches: Infiltration basins are designed to remove certain pollutants and to infiltrate stormwater. Infiltration basins provide a means to reduce both the peak rate and total volume of runoff caused by land development.

[1] Infiltration basins may be used in areas requiring enhanced infiltration of stormwater to meet recharge, quantity and quality requirements set forth by the NJDEP.

[2] Such devices should be designed with emergency outfall structures as stated in this code.

(g) Wet ponds with suitable liners: Wet ponds should be used as landscape devices providing minimal stormwater quantity control. Some quality control can be expected; however, this type of facility should not be your only form of stormwater control.

(h) Pervious paving systems: Pervious pavements act as infiltration systems providing infiltration either through a pervious paving surface course or through void spaces between individual paving blocks or pavers. Such systems offer enhanced infiltration performance and some pollutant removal.

[1] Such devices should not be used in industrial and commercial areas where solvents and/or petroleum products are loaded, unloaded, stored or applied or pesticides are loaded, unloaded, or stored.

[2] The use of such devices should be limited around building structures where enhanced infiltration could cause basement seepage or flooding.

[3] Due to reduced shear strength of the surface course, pervious paving surface should be limited to areas of low traffic volumes and weight, such as: secondary aisles in parking lots, single-family driveways, sidewalk and walkways, golf cart paths, and overflow parking areas.

(i) Manufactured treatment devices, provided their pollutant removal rates are verified by the New Jersey Corporation for Advanced Technology and certified by the NJDEP.

(3) Structural stormwater management measures shall be designed to take into account the existing site conditions, including environmentally critical areas, wetlands, flood-prone areas, slopes, depth to seasonal high-water table, soil type, permeability and texture, and drainage area and drainage patterns.

(4) Structural stormwater management measures shall be designed and constructed to be strong, durable, and corrosion resistant (measures that are consistent with the relevant portions of the Residential Site Improvement Standards at N.J.A.C. 5:21-7.3, 7.4, and 7.8 shall be deemed to meet this requirement); to minimize and facilitate maintenance and repairs; and to ensure proper functioning.

(5) For all stormwater management measures at a development site, each applicant shall submit a detailed inspection, maintenance and repair plan consistent with the requirements of § **238-14** of this chapter.

(6) To the maximum extent practicable, the design engineer shall design structural stormwater management measures on the development site in a manner that:

(a) Limits site disturbance, maximizes stormwater management efficiencies, and maintains or improves aesthetic conditions;

(b) Utilizes multiple stormwater management measures, smaller in size and distributed spatially throughout the land development site, instead of a single larger structural stormwater management measure;

(c) Incorporates pretreatment measures. Pretreatment can extend the functional life and increase the pollutant removal capability of a structural stormwater management measure. Pretreatment measures may be designed in accordance with the New Jersey BMP Manual or other sources approved by the City Engineer.

(7) Stormwater management basins shall be designed in a manner that complements and mimics the existing natural landscape, including but not limited to the following design strategies:

(a) Use of natural, nonwetland wooded depressions for stormwater runoff storage; and

(b) Establishment of attractive landscaping in and around the basin that mimics the existing vegetation.

(8) Structural stormwater management measures shall be designed to minimize maintenance, facilitate maintenance and repairs, and ensure proper functioning.

(9) In many instances, the provisions of separate detention facilities for a number of single sites may be more expensive and more difficult to maintain than provisions of joint facilities for a number of sites. In

such cases, the City will be willing to consider provisions of joint detention facilities which will fulfill the requirements of this regulation. In such cases, a properly planned staged program of detention facilities may be approved by the City.

(10) The location of a retention system that is approved in lieu of detention facilities shall be in areas with seasonal high water a minimum of two feet below the lowest elevation of the facility. Where the bottom of any proposed retention basin is less than two feet above impervious soil formations, the use of vertical drains or other methods, subject to the approval of the Engineer, may be employed, provided that the water quality is addressed.

(11) In establishing the location and constructing basins, every effort shall be made to utilize existing contours and depressions.

(12) Guidance on the design and construction of structural stormwater management measures may be found in the New Jersey BMP Manual. Other guidance sources may also be used upon approval by the City Engineer.

(13) After all construction activities and required field testing have been completed on the development site, as-built plans depicting design and as-built elevations of all stormwater management measures shall be prepared by a licensed land surveyor and submitted to the City Engineer in paper and electronic format acceptable to the City Engineer. Based upon the City Engineer's review of the as-built plans, all corrections or remedial actions deemed by the City Engineer to be necessary due to the failure to comply with the standards established by this chapter and/or any reasons of public health or safety shall be completed by the applicant. In lieu of review by the City Engineer, the City of Linwood reserves the right to engage a professional engineer to review the as-built plans. The applicant shall pay all costs associated with such review. Review costs shall be guaranteed through the establishment of an escrow posted by the applicant in accordance with the provisions of the Municipal Land Use Law (N.J.S.A. 40:55D).

B. Standards for detention basins are as follows:

(1) At the intake to the outlet from the stormwater management basin, the orifice size shall be a minimum of three inches in diameter.

(2) Stormwater management basins shall be designed with gently sloping sides. The maximum allowable basin side slope shall be three horizontal to one vertical (3:1).

(3) Detention facilities must accommodate site runoff in accordance with § **238-5**.

(4) Outlet waters, including that from a design storm with a recurrence interval of 100 years, shall be discharged from the development at such locations and velocities as to not cause additional erosion or cause additional channels beyond the development from those natural or other drainageways available before development.

(5) The location of a detention facility shall be in an area with seasonal high water a minimum of 2.0 feet below the lowest invert elevation of the facility.

(6) All detention basins must maximize to the extent practicable the distance between basin inflow and outflow. A slope of 1% shall be provided from inlet to outlet.

(7) Water-tolerant species of vegetative cover for detention basin usage must be employed. Suggested varieties of cover include reed, canary grass, fescue, perennial rye, orchard grass and Bermuda grass.

(8) Outlets from detention facilities shall be designed to function without manual, electric or mechanical controls.

(9) If detention basins are provided through which water passes at times other than following rainfall, the City Engineer should be consulted concerning design criteria. It will be necessary for detention requirements to be met, despite the necessity of passing certain low flows. This applies to all online detention basins.

(10) A low-flow channel shall be incorporated into the detention basin to prevent broad area ponding.

(11) Stabilized access 20 feet wide is to be provided to the detention facility capable of supporting maintenance vehicles.

(12) During construction, all basins shall be lined with filter fabric to prevent the siltation of subsurface soils. After completion of the proposed development, the fabric shall be inspected on a regular basis and removed or replaced, if necessary.

(13) At inflow points to detention basins, energy dissipaters, designed in accordance with the current Soil Conservation Service standards for soil erosion and sediment control, must be incorporated to reduce the velocity of inflowing waters.

(14) The design of the facility should be based upon peak rates of runoff for the entire drainage area upstream from the parcel in question, and the design release rates should be computed on the basis of preexisting conditions for the entire watershed.

(15) Stormwater management basins shall be designed to meet the minimum safety standards for stormwater management basins at § **238-12**.

C. Standards for retention/infiltration basins shall incorporate all of the standards listed above for detention basins except for outlet design with the addition of the following:

(1) A retention basin system must accommodate stormwater runoff so that the minimum rate of percolation of the soil is 15 minutes per inch, which allows infiltration of 36 inches of runoff over a three-day period from the basin.

(2) The location of a retention facility shall be in an area with seasonal high water a minimum of two feet below the lowest invert elevation of the facility. The bottom of any proposed basin shall be at least five feet above any impervious soil formations found in the soil logs or otherwise the impervious layer shall be penetrated at required intervals.

(3) Sediment traps must be located such that all inflowing stormwater is treated before entering any

subsurface recharge system.

(4) Soil within the recharge system shall be protected with filter fabric during construction; then, when site construction is complete, the filter fabric shall be removed and basin soils stabilized.

(5) A low-flow channel shall be incorporated into the retention basin to prevent broad area ponding.

(6) Stabilized access 20 feet wide is to be provided to the retention facility capable of supporting maintenance vehicles.

(7) The retention of site runoff as required by this chapter will result in the accumulation of sediment, including particulate silt and debris. Provision must be made for periodic removal of accumulated solid materials such that the basin continues to operate as designed.

(8) Infiltration practices, such as dry well, infiltration basins, infiltration trenches, buffer strips, etc., may be used to satisfy this requirement, provided that they produce zero runoff from the water quality design storm and allow for complete infiltration within 36 hours.

D. Standards for detention/infiltration basins in flood hazard areas shall meet or exceed all standards as listed in the above two sections with the additional requirements as listed below:

(1) Whenever practicable, developments and their stormwater facility basins should be located outside the extent of Zone A5, flood hazard boundary. When this is not possible and facility basins are located partially or wholly within Zone A5 (as defined by New Jersey Division of Water Resources, Bureau of Flood Plain Management), some storm conditions will make the facility ineffective at providing retention of site runoff. This will happen if the stream is already overflowing its banks and the basin, causing the basin to be filled prior to the time it is needed for containment of runoff. In such cases, the standards established in these regulations will be modified in order to give only partial credit to detention capacities located within the A5 Zones. The credit will vary in a ratio intended to reflect the probability that storage will be available at the time a storm occurs at the site.

(2) Stormwater runoff storage parameters shall be based upon the location and elevation of said facility. If a facility is located on the edge or within the base flood elevation (A5 Zone), the following criteria shall be used to determine effective storage:

(a) When the bottom of the stormwater facility is less than two feet below the base flood elevation, a storage volume of 2 1/2 times the calculated site runoff storage volume must be accommodated by the basin.

(b) When the bottom of the stormwater facility is between two feet and four feet below base flood elevation, a storage volume of four times the calculated site runoff storage volume must be accommodated by the basin.

(c) When the bottom of the said facility is four feet or more below the base flood elevation, a storage volume of 10 times the calculated site runoff storage volume must be provided by the basin.

(3) As an alternative approach to the above criteria, if the developer can demonstrate that the detention

provided would be effective, during runoff from the twenty-five-year twenty-four-hour Type III storm, peaking simultaneously at the site and on the flood hazard area, his plan will be accepted as complying with provisions in the above set criteria.

E. Landscaping. All detention and retention-infiltration basins shall be landscaped in accordance with Chapter **7** of the New Jersey Stormwater Best Management Practices Manual.

F. Stormwater management measure guidelines are available in the New Jersey Stormwater Best Management Practices Manual. Other stormwater management measures may be utilized, provided the design engineer demonstrates that the proposed measure and its design will accomplish the required water quantity, groundwater recharge and water quality design and performance standards established by § **238-4** of this chapter.

G. Drainage structures and stormwater conveyance systems are required to meet the following standards:

(1) All drainage structures, including manholes, inlets, headwalls and sections and box culverts, shall conform to the current details of the New Jersey Department of Transportation. Unless approved otherwise by the Engineer, all curb inlets shall be standard Type B with curb piece heights equal to the exposed curb face of the adjacent curb plus two inches. All lawn inlets shall be standard Type E. When the pipe size is such as to require a larger structure, standard Type B1 or B2, El and E2 shall be used. If still larger sizes are required, they shall be specifically detailed using standard frames and grates.

(2) Type B street inlets shall have the "J-ECO" casting or approved equal. All street inlets shall be constructed with a bicycle safe grate.

(3) Dished gutters on local streets shall be permitted only at T intersections involving local streets. Dished gutters shall not be permitted on arterial or collector streets.

(4) Storm drain pipes running longitudinally along streets shall not be located under curbing.

(5) Storm drainage pipe shall be concrete unless an alternate is approved. If an alternate is considered, it may be corrugated round, arch or helical. All pipe shall be of the size specified and laid to the exact lines and grades approved. Reinforced concrete pipe shall conform to ASTM Specification C76. All pipe shall be Class 111 strength, except where stronger pipe is required. Joints shall have 0-ring rubber gaskets, where necessary. Steel, aluminum or other pipe shall meet the latest American Association of State Highway and Transportation Officials standard.

(a) All storm sewer systems shall have a design capacity equal to or greater than the volume of runoff generated by the ten-year twenty-four-hour Type III storm event. The minimum pipe diameter shall be 15 inches. The maximum distances between manholes or inlets shall be 500 feet.

(b) Pipe crown elevations shall be matched in all manholes and inlets. In general, a cover of one diameter shall be maintained over the drainage pipe. If this is not possible, a higher class pipe must be specified or trench conditions must be designed and detailed to ensure at least eighty-five-percent relative compaction.

(c) Inlets shall be specified with cast curb piece inlets attached. Inlets shall be depressed one or two inches

to increase capacities on steep grades (6% or more).

(d) The minimum design velocity when flowing 1/4 full shall be at least two feet per second, but no more than 10 feet per second. Pipes shall be considered flowing full at maximum capacity.

(e) Single Type B inlets shall not be designed to catch more than 5 1/2 cubic feet per second, regardless of head.

(f) Concrete pipe shall be utilized beneath roadways and parking areas.

238-9 **Mitigation plans.**

A. Applicants seeking a variance or exemption from the stormwater management design and performance standards stated herein may at the City's discretion; provide off-site mitigation measures subject to the following:

(1) The mitigation project must be implemented in the same drainage area as the proposed development. The project must provide additional groundwater recharge benefits, or protection from stormwater runoff quality and quantity from previously developed property that does not currently meet the design and performance standards defined herein. The developer must ensure the long-term maintenance of the project, including maintenance requirements specified under § **238-14**.

(a) The Planning Board may direct an applicant seeking variance or waiver relief to perform all or a portion of the work identified in any mitigation projects to compensate for a deficit from the performance standards resulting from the proposed project. Potential mitigation projects shall be as designated by the City Engineer. **[Amended 4-11-2018 by Ord. No. 6-2018]**

(2) If a suitable site cannot be located in the same drainage area as the proposed development, as discussed in Subsection **A(1)** above, the mitigation project may provide mitigation that is not equivalent to the impacts for which the variance or exemption is sought, but that addresses the same issue. For example, if a variance is given because the eighty-percent TSS requirement is not met, the selected project may address water quality impacts due to a fecal impairment.

B. The municipality may allow a developer to provide funding or partial funding to the municipality for an environmental enhancement project that has been identified in the City's municipal stormwater management plan or towards the development of a regional stormwater management plan. The funding must be equal to or greater than the cost to implement the mitigation measures, including costs associated with the long-term maintenance requirements of the mitigation measure.

238-10 **Soils investigation requirements.**

A. A minimum of two test pits shall be required for all detention, retention or other stormwater facilities. For all basins with a surface area of 1/2 acre or more, test pits will be required at a rate of one test pit for each 1/2 acre in excess of the initial minimum of two test pits per facility. All test pits must extend at least five feet below the bottom of any proposed detention facility and 10 feet below the bottom of any retention/infiltration facility. Soil boring information shall be displayed on preliminary plans and shall include:

(1) The soil texture as described in the United States Department of Agriculture Soil Texture Classification

System.

(2) The soil colors as described in the Munsell Color Chart.

(3) The estimated depth of seasonal high groundwater based on mottling characteristics of the soil.

(4) The depth of static water level at the time of boring.

(5) The vegetation types immediately surrounding the area.

B. Percolation/permeability tests. At least one percolation or permeability test shall be performed at the site of each basin or disposal area. The percolation/permeability tests shall be performed at a depth corresponding to the approximate bottom of the basin or infiltration facility.

C. Fill material. Fill material used for stormwater facilities shall have a percolation/permeability rate equal to or greater than the existing soils. All fill material shall meet or exceed the quality of the existing soil. Fill shall be as free of clay soils as possible.

238-11 **Sources for technical guidance.**

A. Technical guidance for stormwater management measures can be found in the documents listed in Subsections **A(1)** and **A(2)** below, which are available to download from the Department's website at:

http://www.nj.gov/dep/stormwater/bmp_manual2.htm

(1) Guidelines for stormwater management measures are contained in the New Jersey Stormwater Best Management Practices Manual, as amended. Information is provided on stormwater management measures such as, but not limited to: bioretention systems, constructed stormwater wetlands, dry wells, extended detention basins, infiltration structures, manufactured treatment devices, pervious paving, sand filters, vegetative filter strips, and wet ponds.

(2) The New Jersey Department of Environmental Protection Stormwater Management Facilities Maintenance Manual, as amended.

(3) Additional maintenance guidance is available on the Department's website at:

http://www.njstormwater/org/maintenance_guidance.htm

B. Additional technical guidance for stormwater management measures can be obtained from the following:

(1) The Standards for Soil Erosion and Sediment Control in New Jersey, promulgated by the State Soil Conservation Committee and incorporated into N.J.A.C. 2:90. Copies of these standards may be obtained by contacting the State Soil Conservation Committee or any of the soil conservation districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each soil conservation district may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey, 08625, (609) 292-5540;

(2) The Rutgers Cooperative Extension Service, (732) 932-9306; and

(3) The soil conservation districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each soil conservation district may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey, 08625, (609) 292-5540.

C. Submissions required for review by the Department should be mailed to the Division of Water Quality, New Jersey Department of Environmental Protection, Mail Code 401-02B, PO Box 420, Trenton, New Jersey 08625-0420.

238-12 **Safety standards for stormwater management BMPs.**

A. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management BMP. This section applies to any new stormwater management BMP.

B. Requirements for trash racks, overflow grates and escape provisions.

(1) A trash rack is a device designed to catch trash and debris and prevent the clogging of outlet structures. Trash racks shall be installed at the intake to the outlet from the stormwater management BMP to ensure proper functioning of the BMP outlets in accordance with the following:

(a) The trash rack shall have parallel bars, with no greater than six-inch spacing between the bars.

(b) The trash rack shall be designed so as not to adversely affect the hydraulic performance of the outlet pipe or structure.

(c) The average velocity of flow through a clean trash rack is not to exceed 2.5 feet per second under the full range of stage and discharge. Velocity is to be computed on the basis of the net area of opening through the rack.

(d) The trash rack shall be constructed and installed to be rigid, durable, and corrosion resistant and shall be designed to withstand a perpendicular live loading of 300 pounds per square foot.

(2) An overflow grate is designed to prevent obstruction of the overflow structure. If an outlet structure has an overflow grate, such grate shall meet the following requirements:

(a) The overflow grate shall be secured to the outlet structure but removable for emergencies and maintenance.

(b) The overflow grate spacing shall be no less than two inches across the smallest dimension.

(c) The overflow grate shall be constructed and installed to be rigid, durable, and corrosion resistant and shall be designed to withstand a perpendicular live loading of 300 pounds per square foot.

(3) For purposes of this paragraph, escape provisions means the permanent installation of ladders, steps, rungs, or other features that provide easily accessible means of egress from stormwater management basins. Stormwater management BMP shall include escape provisions as follows:

(a) If a stormwater management BMP has an outlet structure, escape provisions shall be incorporated in or on the structure. With the prior approval of the reviewing agency identified in § **238-8C**, a freestanding outlet structure may be exempted from this requirement.

(b) Safety ledges shall be constructed on the slopes of all new stormwater management basins having a permanent pool of water deeper than 2 1/2 feet. Such safety ledges shall be comprised of two steps. Each step shall be four to six feet in width. One step shall be located approximately 2 1/2 feet below the permanent water surface, and the second step shall be located 1 1/2 feet above the permanent water surface. See § **238-8D** for an illustration of safety ledges in a stormwater management basin.

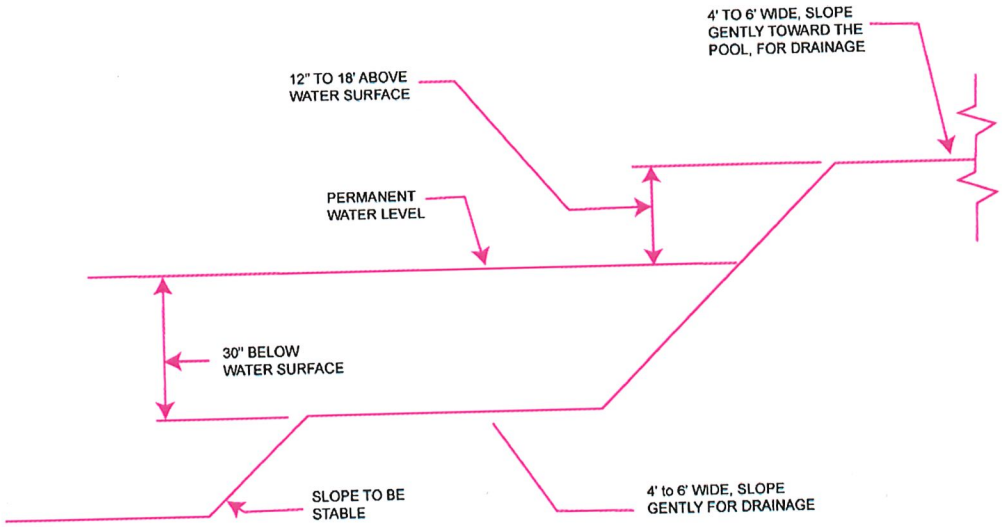
(c) In new stormwater management basins, the maximum interior slope for an earthen dam, embankment, or berm shall not be steeper than 3 horizontal to 1 vertical.

C. Variance or exemption from safety standards.

(1) A variance or exemption from the safety standards for stormwater management basins may be granted only upon a written finding by the appropriate reviewing agency (City, county or Department) that the variance or exemption will not constitute a threat to public safety.

D. Illustration of safety ledges in a new stormwater management basin.

Depicted is an elevational view.



NOTE: NOT DRAWN TO SCALE

NOTE: FOR BASINS WITH PERMANENT POOL OF WATER ONLY

§ 238-13 **Requirements for a site development stormwater plan.**

A. Submission of site development stormwater plan.

(1) Whenever an applicant seeks City approval of a development subject to this chapter, the applicant shall submit all of the required components of the checklist for the site development stormwater plan at § **238-13C** below as part of the submission of the applicant's application for subdivision or site plan approval.

(2) The applicant shall demonstrate that the project meets the standards set forth in this chapter.

(3) The applicant shall submit the required number of copies of the materials listed in the checklist for site development stormwater plans in accordance with § **238-13C** of this chapter.

B. Site development stormwater plan approval. The applicant's site development project shall be reviewed as a part of the subdivision or site plan review process by the City board or official from whom City approval is sought. That City board or official shall consult the engineer retained by the Planning Board (as appropriate) to determine if all of the checklist requirements have been satisfied and to determine if the project meets the standards set forth in this chapter. **[Amended 4-11-2018 by Ord. No. 6-2018]**

C. Checklist requirements. The following information shall be required:

(1) Topographic Base Map. The reviewing engineer may require upstream tributary drainage system information as necessary. It is recommended that the topographic base map of the site be submitted which extends a minimum of 200 feet beyond the limits of the proposed development, at a scale of one inch equals 200 feet or greater, showing two-foot contour intervals. The map, as appropriate, may indicate the following: existing surface water drainage, shorelines, steep slopes, soils, erodible soils, perennial or intermittent streams that drain into or upstream of the Category One waters, wetlands and floodplains along with their appropriate buffer strips, marshlands and other wetlands, pervious or vegetative surfaces, existing man-made structures, roads, bearing and distances of property lines, and significant natural and man-made features not otherwise shown.

(2) Environmental site analysis. A written and graphic description of the natural and man-made features of the site and its environs. This description should include a discussion of soil conditions, slopes, wetlands, waterways and vegetation on the site. Particular attention should be given to unique, unusual, or environmentally sensitive features and to those that provide particular opportunities or constraints for development.

(3) Project description and site plan(s). A map (or maps) at the scale of the topographical base map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural facilities for stormwater management and sediment control, and other permanent structures. The map(s) shall also clearly show areas where alterations occur in the natural terrain and cover, including lawns and other landscaping, and seasonal high groundwater elevations. A written description of the site plan and justification of proposed changes in natural conditions may also be provided.

(4) Land use planning and source control plan. This plan shall provide a demonstration of how the goals and standards of §§ **238-3** through **238-6** are being met. The focus of this plan shall be to describe how the site is being developed to meet the objective of controlling groundwater recharge, stormwater quality and stormwater quantity problems at the source by land management and source controls whenever possible.

(5) Stormwater management facilities map. The following information, illustrated on a map of the same scale as the topographic base map, shall be included:

(a) Total area to be paved or built upon, proposed surface contours, land area to be occupied by the stormwater management facilities and the type of vegetation thereon, and details of the proposed plan to

control and dispose of stormwater.

(b) Details of all stormwater management facility designs, during and after construction, including discharge provisions, discharge capacity for each outlet at different levels of detention and emergency spillway provisions with maximum discharge capacity of each spillway.

(6) Calculations. Comprehensive hydrologic and hydraulic design calculations for the predevelopment and postdevelopment conditions for the design storms specified in § **238-6** of this chapter. When the proposed stormwater management control measures depend on the hydrologic properties of soils or require certain separation from the seasonal high water table, then a soils report shall be submitted. The soils report shall be based on onsite boring logs or soil pit profiles. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soils present at the location of the control measure.

(7) Maintenance and repair plan. The design and planning of the stormwater management facility shall meet the maintenance requirements of § **238-14**.

(8) Soil investigation report. Soils report must contain the results from subsurface investigations including test pits and borings along with the results for percolation and permeability. The locations of the tests should be clearly labeled on plans.

(9) Waiver from submission requirements. The City official or board reviewing an application under this chapter may, in consultation with the City Engineer, waive submission of any of the requirements in § **238-13C(1)** through **C(6)** of this chapter when it can be demonstrated that the information requested is impossible to obtain, or it would create a hardship on the applicant to obtain, and its absence will not materially affect the review process.

238-14 **Maintenance and repair.**

A. Applicability. Projects subject to review as in § **238-1** of this chapter shall comply with the requirements of § **238-14B**.

B. General maintenance.

(1) Responsibility for operation and maintenance of all facilities, including periodic removal and disposal of accumulated particulate material and debris, shall remain with the owner or owners of the property, with permanent arrangements that shall pass to any successive owner, unless assumed by a government agency. If portions of the land are to be sold, legally binding arrangements shall be made to pass the basic responsibility to successors in title. These arrangements shall designate for each project the property owner, governmental agency or other legally established entity to be permanently responsible for maintenance.

(a) The design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a development. **[Amended 9-25-2013 by Ord. No. 16-2013]**

(b) The maintenance plan shall contain specific preventative maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal, manpower, capital cost of equipment, repair costs; and the name, address, and telephone number of the person or persons

responsible for preventative and corrective maintenance (including replacement). This plan shall contain information on BMP location, design, ownership, maintenance tasks and frequencies, and other details as specified in Chapter 9 of the NJ BMP Manual, as well as the tasks specific to the type of BMP, as described in the applicable chapter containing design specifics. Maintenance guidelines for stormwater management measures are available in the New Jersey Stormwater Best Management Practices Manual. If the maintenance plan identifies a person other than the developer (for example, a public agency or homeowners' association) as having the responsibility for maintenance, the plan shall include documentation of such person's agreement to assume this responsibility, or of the developer's obligation to dedicate a stormwater management facility to such person under an applicable ordinance or regulation.

(c) Responsibility for maintenance shall not be assigned or transferred to the owner or tenant of an individual property in a residential development or project, unless such owner or tenant owns or leases the entire residential development or project. The individual property owner may be assigned incidental tasks, such as weeding of a green infrastructure BMP, provided the individual agr3ees to assume these tasks; however, the individual cannot be legally responsible for all of the maintenance required.

(d) If the person responsible for maintenance identified under § **238-14B(1)** above is not a public agency, the maintenance plan and any future revisions shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken.

(e) Preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure, including repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement; restoration of vegetation; and repair or replacement of nonvegetated linings.

(f) The person responsible for maintenance identified under § **238-14B(1)** above shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.

(g) The person responsible for maintenance identified under § **238-14B(1)** above shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed.

(h) The person responsible for maintenance identified under § **238-14B(1)** above shall retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the maintenance plan and the documentation required by this section.

(i) The requirements of § **238-14B(1)(f)**, **238-14B(1)(g)** and **238-14B(1)(h)** do not apply to stormwater management facilities that are dedicated to and accepted by the City or another governmental agency, subject to all applicable municipal stormwater general permit conditions, as issued by the Department.

(j) In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance or repair, the City shall so notify the responsible person in writing. Upon receipt of that notice, the responsible person shall have 14 days to effect maintenance and repair of the facility in a manner that is approved by the City Engineer or his designee. The City, in its discretion, may extend the time allowed for effecting maintenance and repair for good cause. If the

responsible person fails or refuses to perform such maintenance and repair, the City may immediately proceed to do so and shall bill the cost thereof to the responsible person. Nonpayment of such bill may result in a lien on the property.

(k) Prior to the granting of any site development approval, the applicant shall enter into an agreement (declaration of covenants and restrictions for drainage structures) with the City to insure the continued operation and maintenance of the stormwater facility unless the City has consented to accept the facility as City property. This agreement shall be in a form satisfactory to the City Attorney and may include, but may not necessarily be limited to, personal guarantees, deed restrictions, covenants and bonds. In cases where the property is subdivided and sold separately, a homeowners' association or similar permanent entity shall be established as the responsible entity, absent an agreement by a governmental agency to assume responsibility. The agreement shall also provide for regular inspection at the expense of the applicant, or the applicant's successors in interest, and for the undertaking by the applicant and successors of such corrective measures as are shown by such inspection to be required for the proper functioning of the facilities. The agreement shall provide, among other things, that the applicant shall provide up to a four-year maintenance guaranty for the entire stormwater management system, which shall commence at the conclusion of the period required for such performance guaranty as required by the Board. The agreement shall also provide for an inspection and maintenance program of up to 10 years in duration.

(l) The applicant must obtain approval from the Engineer for all arrangements and values described in Subsection **B(1)(b)**.

(m) The applicant must deliver an easement for a clear accessway of 20 feet to all stormwater facilities for the purpose of assuring vehicular access for maintenance activities.

(2) Nothing in this section shall preclude the City from requiring the posting of a performance and/or maintenance guarantee in accordance with N.J.S.A. 40:55D-53.

238-15 **As-built certification.**

A. When excavated and completed, the design engineer shall certify in writing to the City that the stormwater facility will operate as intended in the design phase, taking into consideration all soil and water conditions encountered during construction. As-built percolation test results shall also be provided if the basin has been used as a place for sediment accumulation during the construction process.

B. Both retention and detention basins shall have the following improvements as further specified in the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, as amended, and New Jersey Department of Transportation Standard Construction Details, as amended:

(1) Headwalls and riprap.

(2) A chain link fence, four feet high, around the entire perimeter may be required by the Planning Board. In cases where a fence is required, a twelve-foot opening shall be provided for vehicular access to streets by means of a fifteen-foot-wide access right-of-way. The fence shall not extend into the building front yard setback area.

(3) An eighteen-inch berm around the inside of the basin.

(4) Landscaping is required around the entire perimeter, except where it faces planned open spaces or wooded areas or other natural or man-made visual separation existing between the facility and adjoining lands.

238-16 **Violations and penalties.**
Any person(s) who continues to be in violation of the provisions of this article, after being duly notified, shall be subject to a fine not to exceed $5,000 plus costs of remediation.

238-17 **Effective date.**
This chapter shall take effect immediately upon the approval by the county review agency or 60 days from the receipt of the ordinance by the county review agency if the County review agency should fail to act.

238-18 **Severability.**
If the provisions of any section, subsection, paragraph, subdivision, or clause of this chapter shall be judged invalid by a court of competent jurisdiction, such order of judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision, or clause of this chapter.

Article II **Improper Disposal of Waste**

238-19 **Purpose.**
The purpose of this article is to prohibit the spilling, dumping or disposal of materials other than stormwater to the municipal separate storm sewer system (MS4) operated by the City of Linwood so as to protect public health, safety and welfare and to prescribe penalties for the failure to comply.

238-20 **Definitions.**
For the purpose of this article, the following terms, phrases, words and their derivations shall have the meanings stated herein unless their use in the text of this article clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that is owned or operated by the City of Linwood or other public body and is designed and used for collecting and conveying stormwater.

PERSON
Any individual, corporation, company, partnership, firm, association or political subdivision of this state subject to municipal jurisdiction.

STORMWATER
Water resulting from precipitation (including rain and snow) that runs off the land's surface, is transmitted to the subsurface, is captured by separate storm sewers or other sewerage or drainage facilities or is conveyed by snow removal equipment.

238-21 **Prohibited conduct.**
The spilling, dumping or disposal of materials other than stormwater to the municipal separate storm sewer system operated by the City of Linwood is prohibited. The spilling, dumping or disposal of materials other than stormwater in such a manner as to cause the discharge of pollutants to the municipal separate storm

sewer system is also prohibited.

238-22 **Exceptions to prohibition.**

A. Waterline flushing and discharges from potable water sources.

B. Uncontaminated groundwater (e.g., infiltration, crawl space or basement sump pumps, foundation or footing drains, rising groundwaters).

C. Air-conditioning condensate (excluding contact and noncontact cooling water).

D. Irrigation water (including landscape and lawn watering runoff).

E. Flows from springs, riparian habitats and wetlands, water reservoir discharges and diverted steam flows.

F. Residential car washing water and residential swimming pool discharges.

G. Sidewalk, driveway and street wash water.

H. Flows from fire-fighting activities.

I. Flows from rinsing of the following equipment with clean water:

(1) Beach maintenance equipment immediately following their use for their intended purposes; and

(2) Equipment used in the application of salt and deicing materials immediately following salt and deicing material applications. Prior to rinsing with clean water, all residual salt and deicing materials must be removed from equipment and vehicles to the maximum extent practicable using dry cleaning methods (e.g., shoveling and sweeping). Recovered materials are to be returned to storage for reuse or properly discarded. Rinsing of equipment, as noted in the above situation, is limited to exterior, undercarriage and exposed parts and does not apply to engines or other enclosed machinery.

238-23 **Enforcement.**

This article shall be enforced by the Police Department of the City of Linwood.

238-24 **Violations and penalties.**

Any person(s) who continues to be in violation of the provisions of this article, after being duly notified, shall be subject to a fine not to exceed $5,000 plus costs of remediation.

Article III **Illicit Connection**

238-25 **Purpose.**

The purpose of this article is to prohibit illicit connections to the municipal separate storm sewer system(s) operated by the City of Linwood so as to protect public health, safety and welfare and to prescribe penalties for the failure to comply.

238-26 **Definitions.**

For the purpose of this article, the following terms, phrases, words and their derivations shall have the meanings stated herein unless their use in the text of this article clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number.

The word "shall" is always mandatory and not merely directory. The definitions below are the same as or based on corresponding definitions in the New Jersey Pollutant Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A-1.2.

DOMESTIC SEWAGE

Waste and wastewater from humans or household operations.

ILLICIT CONNECTION

Any physical or nonphysical connection that discharges domestic sewage, noncontact cooling water, process wastewater or other industrial waste (other than stormwater) to the municipal separate storm sewer system operated by the City of Linwood, unless that discharge is authorized under a NJPDES permit other than the Tier A Municipal Stormwater General Permit (NJPDES Permit Number NJ0141852). Nonphysical connections may include, but are not limited to, leaks, flows or overflows into the municipal separate storm sewer system.

INDUSTRIAL WASTE

Nondomestic waste, including but not limited to those pollutants regulated under Section 307(a), (b) or (c) of the Federal Clean Water Act [33 U.S.C. § 1317(a), (b) or (c)].

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that is owned or operated by the City of Linwood or other public body and is designed and used for collecting and conveying stormwater.

NJPDES PERMIT

A permit issued by the New Jersey Department of Environmental Protection to implement the New Jersey Pollutant Discharge Elimination System (NJPDES) rules at N.J.A.C. 7:14A.

NONCONTRACT COOLING WATER

Water used to reduce temperature for the purpose of cooling. Such waters do not come into direct contact with any raw material, intermediate product (other than heat) or finished product. Noncontact cooling water may, however, contain algaecides or biocides to control fouling of equipment such as heat exchangers and/or corrosion inhibitors.

PERSON

Any individual, corporation, company, partnership, firm, association or political subdivision of this state subject to municipal jurisdiction.

PROCESS WASTEWATER

Any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product or waste product. Process wastewater includes, but is not limited to, leachate and cooling water other than noncontact cooling water.

STORMWATER

Water resulting from precipitation (including rain and snow) that runs off the land's surface, is transmitted to the subsurface, is captured by separate storm sewers or other sewerage or drainage facilities or is conveyed by snow removal equipment.

238-27 **Prohibited conduct.**
No person shall discharge or cause to be discharged through an illicit connection to the municipal separate storm sewer system operated by the City of Linwood any domestic sewage, noncontact cooling water, process wastewater or other industrial waste (other than stormwater).

238-28 **Enforcement.**
This article shall be enforced by the Police Department of the City of Linwood.

238-29 **Violations and penalties.**
Any person(s) who is found to be in violation of the provisions of this article shall be subject to a fine not to exceed $5,000 plus costs of remediation.

Article IV **Private Storm Drain Inlet Retrofitting**

[Added 2-24-2010 by Ord. No. 2-2010]

238-30 **Purpose.**
The purpose of this article is to require the retrofitting of existing storm drain inlets which are in direct contact with repaving, repairing, reconstruction, resurfacing or alterations of facilities on private property, to prevent the discharge of solids and floatables (such as plastic bottles, cans, food wrappers and other litter) to the municipal separate storm sewer system(s) operated by the City of Linwood so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

238-31 **Definitions.**
For the purpose of this article, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this article clearly demonstrates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words used in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by the City of Linwood or other public body, and is designed and used for collecting and conveying stormwater.

PERSON
Any individual, corporation, company, partnership, firm, association, or political subdivision of this state subject to municipal jurisdiction.

STORM DRAIN INLET
An opening in a storm drain used to collect stormwater runoff and includes, but is not limited to, a grate inlet, curb-opening inlet, slotted inlet, and combination inlet.

WATERS OF THE STATE
The ocean and its estuaries, all springs, streams and bodies of surface water or groundwater, whether

natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

238-32 **Prohibited conduct.**
No person in control of private property (except a residential lot with one single-family house) shall authorize the repaving, repairing (excluding the repair of individual potholes), resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen), reconstructing or altering of any surface that is in direct contact with an existing storm drain inlet on that property unless the storm drain inlet either:

A. Already meets the design standard below to control passage of solid and floatable materials; or

B. Is retrofitted or replaced to meet the standard in § **238-33** prior to the completion of the project.

238-33 **Design standard.**
Storm drain inlets identified in § **238-32** shall comply with the following standard to control passage of solid and floatable materials through storm drain inlets. For purposes of this section, "solid and floatable materials" means sediment, debris, trash, and other floating, suspended or settleable solids. For exemptions to this standard, see Subsection C below.

A. Grates.

(1) Design engineers shall use either of the following grates whenever they use a grate in pavement or another ground surface to collect stormwater from that surface into a storm drain or surface water body under that grate:

(a) The New Jersey Department of Transportation (NJDOT) bicycle-safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (April 1996); or

(b) A different grate, if each individual clear space in that grate has an area of no more than seven square inches, or is not greater than 0.5 inch across the smallest dimension.

(2) Examples of grates subject to this standard include grates in grate inlets, the grate portion (non-curb-opening portion) of combination inlets, grates on storm sewer manholes, ditch grates, trench grates, and grates of spacer bars in slotted drains. Examples of ground surfaces include surfaces of roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields, open channels, and stormwater basin floors.

B. Whenever design engineers use a curb-opening inlet, the clear space in that curb opening (or each individual clear space, if the curb opening has two or more clear spaces) shall have an area of no more than seven square inches, or be no greater than two inches across the smallest dimension.

C. This standard does not apply:

(1) Where the municipal engineer agrees that this standard would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets that meet these standards;

(2) Where flows are conveyed through any device (e.g., end-of-pipe netting facility, manufactured

treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:

(a) A rectangular space 4 5/8 inches long and 1 1/2 inches wide (This option does not apply for outfall netting facilities.); or

(b) A bar screen having a bar spacing of 0.5 inch.

(3) Where flows are conveyed through a trash rack that has parallel bars with one-inch spacing between the bars; or

(4) Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.

238-34 **Application for permit; fee.**

A. Whenever any person in control of private property (except a residential lot with one single-family house) desires to repave, repair (excluding the repair of individual potholes), resurface (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen), reconstruct or alter any surface, application by the owner or owner's contractor shall be made to the Zoning Officer. The Zoning Officer or his designee shall examine said application and upon approval shall grant a permit to the applicant. Fees for the aforesaid permit shall be $25 each.

B. Whenever an applicant believes that his private property or any storm drain inlet on his property should be excluded in accordance with § **238-33C**, he shall provide a written justification with his application stating the reasons why. When an applicant believes that he is exempt under the § **238-33C(1)**, he shall provide the necessary hydraulic calculation as prepared a professional engineer, licensed in the State of New Jersey.

C. An inspection fee deposit for retrofitting of storm drain inlets shall be paid by the applicant to the City Clerk. The amount of the deposit shall be calculated as follows:

(1) Verification by Municipal Engineer that subject private property does not have any existing storm drain inlets: $100.

(2) Verification by Municipal Engineer that existing storm drain inlets already meet the design standard of this article: $100 for the first four storm drain inlets, plus an additional $20 per each additional storm drain inlet over four. A minimum of $100 shall be paid.

(3) Verification by Municipal Engineer that existing storm drain inlets have been retrofitted to meet the design standard of this article: $100 for the first four storm drain inlets, plus an additional $20 per each additional storm drain inlet over four. A minimum of $100 shall be paid.

238-35 **Enforcement.**
[Amended 9-25-2013 by Ord. No. 16-2013]

This article shall be enforced by the City Construction Official, City Engineer, Zoning Officer, and/or City

Code Enforcement Officer in conjunction with the City of Linwood Police Department.

238-36 **Violations and penalties.**
Any person(s) who is found to be in violation of the provisions of this article shall be subject to a fine of $250 for each storm drain inlet that is not retrofitted to meet the design standard and/or $250 for failure to make application for any appropriate permit. This fine shall not relieve the person(s) found in violation of the requirement to obtain any necessary permit and/or the requirement to retrofit each storm drain inlet.

Article V **Refuse Containers; Dumpsters**

[Added 2-24-2010 by Ord. No. 2-2010]

238-37 **Purpose.**
The purpose of this article is to require dumpsters and other refuse containers that are outdoors or exposed to stormwater to be covered at all times and prohibits the spilling, dumping, leaking, or otherwise discharge of liquids, semi-liquids or solids from the containers to the municipal separate storm sewer system(s) operated by the City of Linwood and/or the waters of the state so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

238-38 **Definitions.**
For the purpose of this article, the following terms, phrases, words, and their derivations shall have the meanings stated herein unless their use in the text of this article clearly demonstrates a different meaning. When not consistent with the context, words used in the present tense include the future, words used in the plural number include the singular number, and words in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by the City of Linwood or other public body, and is designed and used for collecting and conveying stormwater.

PERSON
Any individual, corporation, company, partnership, firm, association, or political subdivision of this state subject to municipal jurisdiction.

REFUSE CONTAINER
Any waste container that a person controls, whether owned, leased, or operated, including dumpsters, trash cans, garbage pails, and plastic trash bags.

STORMWATER
Water resulting from precipitation (including rain and snow) that runs off the land's surface, is transmitted to the subsurface, is captured by separate storm sewers or other sewerage or drainage facilities, or is conveyed by snow removal equipment.

WATERS OF THE STATE
The ocean and its estuaries, all springs, streams and bodies of surface water or groundwater, whether natural or artificial, within the boundaries of the State of New Jersey or subject to its jurisdiction.

238-39 **Covering of containers; prevention of leaks and discharges.**

A. Any person who controls, whether owned, leased, or operated, a refuse container or dumpster must ensure that such container or dumpster is covered at all times and shall prevent refuse from spilling out or overflowing.

B. Any person who owns, leases or otherwise uses a refuse container or dumpster must ensure that such container or dumpster does not leak or otherwise discharge liquids, semi-liquids or solids to the municipal separate storm sewer system(s) operated by the City of Linwood.

238-40 **Exceptions.**

Exceptions are as follows:

A. Permitted temporary demolition containers.

B. Litter receptacles (other than dumpsters or other bulk containers).

C. Individual homeowner trash and recycling containers.

D. Refuse containers at facilities authorized to discharge stormwater associated with industrial activity under a valid NJPDES permit.

E. Large bulky items (e.g., furniture, bound carpet and padding, white goods placed curbside for pickup).

238-41 **Enforcement.**

This article shall be enforced by the City Construction Official and/or City Code Enforcement Office in conjunction with the City of Linwood Police Department.

238-42 **Violations and penalties.**

Any person(s) who is found to be in violation of the provisions of this article shall be subject to a fine of $1,000 for each refuse container and/or dumpster found in violation. This fine shall not relieve the person(s) found in violation of the requirement to correct the violation. Any person(s) found to be in violation of this article shall also be responsible for all remedial actions to correct any damage to the MS4 system and/or any public water body caused by a refuse container and/or dumpster that was found to be leaking.

SECTION 2: All ordinances or parts of ordinances inconsistent herewith are hereby repealed to the extent of such inconsistencies.

SECTION 3: Should any sentence, clause, sentence, phrase or provision of this ordinance be declared unconstitutional or invalid by a Court of competent jurisdiction, such decision shall not affect the remaining portions of this ordinance.

SECTION 4: This ordinance shall take effect upon its final passage, publication and adoption in the manner prescribed by law.

FIRST READING:	*March 10, 2021*
PUBLICATION:	*March 15, 2021*
PASSAGE:	*March 24, 2021*

The within Ordinance was introduced at a meeting of the Common Council of the City of Linwood, County of Atlantic and State of New Jersey held on, March 10, 2021 and will be further considered for final

passage after a public hearing thereon at a meeting of said Common Council on March 24, 2021.

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LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

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DARREN MATIK, MAYOR

ORDINANCE NO. 8, 2021

AN ORDINANCE BY THE CITY OF LINWOOD AMENDING THE LINWOOD CODE OF ORDINANCES TO REPEAL CHAPTER 155 FLOOD DAMAGE PREVENTION; TO ADOPT A NEW FLOOD DAMAGE PREVENTION ORDINANCE CHAPTER 155; TO ADOPT FLOOD HAZARD MAPS; TO DESIGNATE A FLOODPLAIN ADMNISTRATOR; AND PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the Legislature of the State of New Jersey has, in N.J.S.A. 40:48 et seq and N.J.S.A. 40:55D et seq., conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Federal Emergency Management Agency has identified special flood hazard areas within the boundaries of **City of Linwood** and such areas may be subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare, and

WHEREAS, the **City of Linwood** was accepted for participation in the National Flood Insurance Program on **November 1983** and the **City of Linwood** desires to continue to meet the requirements of Title 44 Code of Federal Regulations, Sections 59 and 60, necessary for such participation; and

WHEREAS, the **City of Linwood** is required, pursuant to N.J.S.A. 5:23 et seq., to administer and enforce the State building codes, and such building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas; and

WHEREAS, the **City of Linwood** is required, pursuant to N.J.S.A. 40:49-5, to enforce zoning codes that secure safety from floods and contain certain provisions that apply to the development of lands; and

WHEREAS, the **City of Linwood** is required, pursuant to N.J.S.A.58:16A-57, within 12 months after the delineation of any flood hazard area, to adopt rules and regulations concerning the development and use of land in the flood fringe area which at least conform to the standards promulgated by the New Jersey Department of Environmental Protection (NJDEP).

NOW, THEREFORE, BE IT ORDAINED by the **City of Linwood** of **City of Linwood** that the following floodplain management regulations are hereby adopted.

SECTION 1. RECITALS.

The foregoing whereas clauses are incorporated herein by reference and made a part hereof.

SECTION 2. These regulations specifically repeal and replace the following ordinance(s) and regulation(s): **Flood Damage Prevention Ordinance Chapter 155**

SECTION 101 SCOPE AND ADMINISTRATION

101.1 Title. These regulations, in combination with the flood provisions of the Uniform Construction Code (UCC) N.J.A.C. 5:23 (hereinafter "Uniform Construction Code," consisting of the Building Code, Residential Code, Rehabilitation Subcode, and related codes, and the New Jersey Flood Hazard Area Control Act (hereinafter "FHACA"), N.J.A.C. 7:13, shall be known as the *Floodplain Management Regulations* of **City of Linwood** (hereinafter "these regulations").

101.2 Scope. These regulations, in combination with the flood provisions of the Uniform Construction Code and FHACA shall apply to all proposed development in flood hazard areas established in Section 102 of these regulations.

101.3 Purposes and objectives. The purposes and objectives of these regulations are to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas, designed to:

(1) Protect human life and health.

(2) Prevent unnecessary disruption of commerce, access, and public service during times of flooding.

(3) Manage the alteration of natural floodplains, stream channels and shorelines;

(4) Manage filling, grading, dredging and other development which may increase flood damage or erosion potential.

(5) Prevent or regulate the construction of flood barriers which will divert floodwater or increase flood hazards.

(6) Contribute to improved construction techniques in the floodplain.

(7) Minimize damage to public and private facilities and utilities.

(8) Help maintain a stable tax base by providing for the sound use and development of flood hazard areas.

(9) Minimize the need for rescue and relief efforts associated with flooding.

(10) Ensure that property owners, occupants, and potential owners are aware of property located in flood hazard areas.

(11) Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events.

(12) Meet the requirements of the National Flood Insurance Program for community participation set forth in Title 44 Code of Federal Regulations, Section 59.22.

101.4 Coordination with Building Codes. Pursuant to the requirement established in N.J.A.C. 5:23, the Uniform Construction Code, that the **City of Linwood** administer and enforce the State building codes, the **City of Linwood** of **City of Linwood** does hereby acknowledge that the Uniform Construction Code contains certain provisions that apply to the design and construction of buildings and structures in flood hazard areas. Therefore, these

regulations are intended to be administered and enforced in conjunction with the Uniform Construction Code.

101.5 Ordinary Building Maintenance and Minor Work. Improvements defined as ordinary building maintenance and minor work projects by the Uniform Construction Code including non-structural replacement-in-kind of windows, doors, cabinets, plumbing fixtures, decks, walls, partitions, new flooring materials, roofing, etc. shall be evaluated by the Floodplain Administrator through the floodplain development permit to ensure compliance with the Substantial Damage and Substantial Improvement Section 103.14 of this ordinance.

101.6 Warning. The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. Enforcement of these regulations does not imply that land outside the special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage.

101.7 Other laws. The provisions of these regulations shall not be deemed to nullify any provisions of local, State, or Federal law.

101.8 Violations and Penalties for Noncompliance. No structure or land shall hereafter be constructed, re-located to, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violation of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor under N.J.S.A. 40:49-5. Any person who violates this ordinance or fails to comply with any of its requirements shall be subject to one (1) or more of the following: a fine of not more than $1250, imprisonment for a term not exceeding ninety(90) days or a period of community service not exceeding 90 days, in the discretion of the Municipal Court Judge.

Each day in which a violation of an ordinance exists shall be considered to be a separate and distinct violation subject to the imposition of a separate penalty for each day of the violation as the Court may determine except that the owner will be afforded the opportunity to cure or abate the condition during a 30 day period and shall be afforded the opportunity for a hearing before the court for an independent determination concerning the violation. Subsequent to the expiration of the 30 day period, a fine greater than $1250 may be imposed if the court has not determined otherwise, or if upon reinspection of the property, it is determined that the abatement has not been substantially completed.

Any person who is convicted of violating an ordinance within one year of the date of a previous violation of the same ordinance and who was fined for the previous violation, shall be sentenced by a court to an additional fine as a repeat offender. The additional fine imposed by the court upon a person for a repeated offense shall not be less than the minimum or exceed the maximum fine fixed for a violation of the ordinance, but shall be calculated separately from the fine imposed for the violation of the ordinance. The City of Linwood, at their discretion, may choose not to impose an additional fine upon a person for a repeated violation of this ordinance and may waive the additional fine by ordinance or resolution.

Any person convicted of the violation of any ordinance may, in the discretion of the court by which he was convicted, and in default of the payment of any fine imposed therefore, be imprisoned in the county jail or place of detention provided by the municipality, for any term not exceeding 90 days, or be required to perform community service for a period not exceeding 90 days.

101.8.1 Solid Waste Disposal in a Flood Hazard Area. Any person who has unlawfully disposed of solid waste in a floodway or floodplain who fails to comply with this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than $2500 or up to a maximum penalty by a fine not exceeding $10,000 under N.J.S.A. 40:49-5.

101.9 Abrogation and greater restrictions. These regulations supersede any ordinance in effect in flood hazard areas. However, these regulations are not intended to repeal or abrogate any existing ordinances including land development regulations, subdivision regulations, zoning ordinances, stormwater management regulations, or building codes. In the event of a conflict between these regulations and any other ordinance, code, or regulation, the more restrictive shall govern.

SECTION 102 APPLICABILITY

102.1 General. These regulations, in conjunction with the Uniform Construction Code, provide minimum requirements for development located in flood hazard areas, including the subdivision of land and other developments; site improvements and installation of utilities; placement and replacement of manufactured homes; placement of recreational vehicles; new construction and alterations, repair, reconstruction, rehabilitation or additions of existing buildings and structures; substantial improvement of existing buildings and structures, including repair of substantial damage; installation of tanks; temporary structures and temporary or permanent storage; utility and miscellaneous Group U buildings and structures; and certain building work exempt from permit under the Uniform Construction Code; and other buildings and development activities.

102.2 Establishment of Flood Hazard Areas. The **City of Linwood** was accepted for participation in the National Flood Insurance Program on **November 1983**.

The National Flood Insurance Program (NFIP) floodplain management regulations encourage that all Federal, State, and Local regulations that are more stringent than the minimum NFIP standards take precedence in permitting decisions. The FHACA requires that the effective Flood Insurance Rate Map, most recent preliminary FEMA mapping and flood studies, and Department delineations be compared to determine the most restrictive mapping. The FHACA also regulates unstudied flood hazard areas in watersheds measuring 50 acres or greater in size and most riparian zones in New Jersey. Because of these higher standards, the regulated flood hazard area in New Jersey may be more expansive and more restrictive than the FEMA Special Flood Hazard Area. Maps and studies that establish flood hazard areas are on file at the **Linwood City Hall, 400 Poplar Ave, Linwood, NJ.**

The following sources identify flood hazard areas in this jurisdiction and must be considered when determining the Best Available Flood Hazard Data Area:

1) **Effective Flood Insurance Study.** Special Flood Hazard Areas (SFHAs) identified by the Federal Emergency Management Agency in a scientific and engineering report entitled Flood Insurance Rate Map dated August 28, 2018 and the accompanying Flood Insurance Rate Maps (FIRM) identified in Table 102.2(1) whose effective date is August 28, 2018 are hereby adopted by reference.

Table 102.2(1)

Map Panel #	Effective Date	Revision Letter	Map Panel #	Effective Date	Revision Letter
34001C0427F	08/28/2018	f	34001C0433F	08/28/2018	f
34001C0428F	08/28/2018	f	34001CIND0A	08/28/2018	f
34001C0429F	08/28/2018	f	34001CV000A	08/28/2018	A
34001C0431F	08/28/2018	f			

2) **Federal Best Available Information. City of Linwood** shall utilize Federal flood information as listed in the table below that provides more detailed hazard information, higher flood elevations, larger flood hazard areas, and results in more restrictive regulations. This information may include but is not limited to preliminary flood elevation guidance from FEMA (such as Advisory Flood Hazard Area Maps, Work Maps or Preliminary FIS and FIRM). Additional Federal Best Available studies issued after the date of this ordinance must also be considered. These studies are listed on FEMA's Map Service Center. This information shall be used for floodplain regulation purposes only.

Table 102.2(2)

Map Panel #	Preliminary Date	Map Panel #	Preliminary Date

3) **Other Best Available Data. City of Linwood** shall utilize high water elevations from flood events, groundwater flooding areas, studies by federal or state agencies, or other information deemed appropriate by the City of Linwood. Other "best available information" may not be used which results in less restrictive flood elevations, design standards, or smaller flood hazard areas than the sources described in Section 102.2 (1) and (2), above. This information shall be used for floodplain regulation purposes only.

Optional Higher Standard – The community may develop more restrictive flood zone mapping with larger areal extents or more restrictive elevations by resolution and incorporating these maps into this ordinance. A record shall be kept in this ordinance of the more restrictive map in the following Table, renumbering subsequent tables, as necessary.

Table 102.2(3)

Map Description	Ordinance Number	Date Effective	Date Withdrawn and Ordinance Number

4) **State Regulated Flood Hazard Areas.** For State regulated waters, the NJ Department of Environmental Protection (NJDEP) identifies the flood hazard area as the land, and the space above that land, which lies below the "Flood Hazard Area Control Act Design Flood Elevation", as defined in Section 201, and as described in the New Jersey Flood Hazard Area Control Act at N.J.A.C. 7:13. A FHACA flood hazard area exists along every regulated water that has a drainage area of 50 acres or greater. Such area may extend beyond the boundaries of the Special Flood Hazard Areas (SFHAs) as identified by FEMA. The following is a list of New Jersey State studied waters in this community under the FHACA, and their respective map identification numbers.

Table 102.2(3 or 4) List of State Studied Waters

Name of Studied Water	Section Studied	Project	File Name	Map Number

5) Optional Higher Standard – The most restrictive 0.2% annual chance (500 year) effective or preliminary FEMA flood study is adopted by this ordinance for consideration when establishing the Best Available Flood Hazard Data Area.

6) Optional Higher Standard- US Army Corps of Engineers Maps with more restrictive data could be referenced here if the jurisdiction wants to include these maps for construction and decision-making purposes.

7) Optional Higher Standards for minimum design elevations could be included here if these are more restrictive than the standards referred to in this section.

102.3 Establishing the Local Design Flood Elevation (LDFE).

The Local Design Flood Elevation (LDFE) is established in the flood hazard areas determined in Section 102.2, above, using the best available flood hazard data sources, and the Flood Hazard Area Control Act minimum Statewide elevation requirements for lowest floors in A, Coastal A, and V zones, ASCE 24 requirements for critical facilities as specified by the building code, plus additional freeboard as specified by this ordinance.

At a minimum, the Local Design Flood Elevation shall be as follows:

1) For a delineated watercourse, the elevation associated with the Best Available Flood Hazard Data Area determined in Section 102.2, above plus one foot or as described by N.J.A.C. 7:13 or higher standard feet of freeboard; or

2) For any undelineated watercourse (where mapping or studies described in 102.2 (1) and (2) above are not available) that has a contributary drainage area of 50 acres or more, the applicants must provide one of the following to determine the Local Design Flood Elevation:

    a. A copy of an unexpired NJDEP Flood Hazard Area Verification plus additional feet of freeboard to comply with this ordinance; or

    b. A determination of the Flood Hazard Area Design Flood Elevation using Method 5 or Method 6 (as described in N.J.A.C. 7:13) which includes one foot or [higher standard feet] of freeboard and is sealed and submitted according to Section 105.2-3.

3) AO Zones – For Zone AO areas on the municipality's FIRM (or on preliminary flood elevation guidance from FEMA), the Local Design Flood Elevation is determined from the FIRM panel as the highest adjacent grade plus the depth number specified plus one foot or higher standard feet of freeboard. If no depth number is specified, the Local Design Flood Elevation is three (3) feet or more feet above the highest adjacent grade.

4) Class IV Critical Facilities - For any proposed development of new and substantially improved Flood Design Class IV Critical Facilities, the Local Design Flood Elevation must be the higher of the 0.2% annual chance (500 year) flood elevation or the Flood Hazard Area Design Flood Elevation with an additional 2 feet or higher standard feet of freeboard in accordance with ASCE 24.

5) Class III Critical Facilities - For proposed development of new and substantially improved Flood Design Class III Critical Facilities in coastal high hazard areas, the Local Design Flood Elevation must be the higher of the 0.2% annual chance (500 year) flood elevation or the Flood Hazard Area Design Flood Elevation with an additional 1 foot or higher standard feet of freeboard in accordance with ASCE 24.

SECTION 103 DUTIES AND POWERS OF THE FLOODPLAIN ADMINISTRATOR

103.1 Floodplain Administrator Designation. The **Certified Floodplain Manager** is designated the Floodplain Administrator. The Floodplain Administrator shall have the authority

to delegate performance of certain duties to other employees.

103.2 General. The Floodplain Administrator is authorized and directed to administer the provisions of these regulations. The Floodplain Administrator shall have the authority to render interpretations of these regulations consistent with the intent and purpose of these regulations and to establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be consistent with the intent and purpose of these regulations and the flood provisions of the building code and shall not have the effect of waiving specific requirements without the granting of a variance pursuant to Section 107 of these regulations.

103.3 Coordination. The Floodplain Administrator shall coordinate with the Construction Official to administer and enforce the flood provisions of the Uniform Construction Code.

103.4 Duties. The duties of the Floodplain Administrator shall include but are not limited to:

(1) Review all permit applications to determine whether proposed development is located in flood hazard areas established in Section 102 of these regulations.

(2) Require development in flood hazard areas to be reasonably safe from flooding and to be designed and constructed with methods, practices and materials that minimize flood damage.

(3) Interpret flood hazard area boundaries and provide available flood elevation and flood hazard information.

(4) Determine whether additional flood hazard data shall be obtained or developed.

(5) Review required certifications and documentation specified by these regulations and the building code to determine that such certifications and documentations are complete.

(6) Establish, in coordination with the Construction Official, written procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to Section 103.14 of these regulations.

(7) Coordinate with the Construction Official and others to identify and investigate damaged buildings located in flood hazard areas and inform owners of the requirement to obtain permits for repairs.

(8) Review requests submitted to the Construction Official seeking approval to modify the strict application of the flood load and flood resistant construction requirements of the Uniform Construction code to determine whether such requests require consideration as a variance pursuant to Section 107 of these regulations.

(9) Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses propose to change base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available.

(10) Require applicants who propose alteration of a watercourse to notify adjacent jurisdictions and the NJDEP Bureau of Flood Engineering, and to submit copies of such notifications to the Federal Emergency Management Agency (FEMA).

(11) Inspect development in accordance with Section 106 of these regulations and inspect flood hazard areas to determine if development is undertaken without issuance of permits.

(12) Prepare comments and recommendations for consideration when applicants

seek variances in accordance with Section 107 of these regulations.

(13) Cite violations in accordance with Section 108 of these regulations.

(14) Notify the Federal Emergency Management Agency when the corporate boundaries of **City of Linwood** have been modified.

(15) Permit Ordinary Maintenance and Minor Work in the regulated areas discussed in Section 102.2.

103.5 Use of changed technical data. The Floodplain Administrator and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the Floodplain Administrator or applicant has applied for a Conditional Letter of Map Revision (CLOMR) to the Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency. A revision of the effective FIRM does not remove the related feature(s) on a flood hazard area delineation that has been promulgated by the NJDEP. A separate application must be made to the State pursuant to N.J.A.C. 7:13 for revision of a flood hazard design flood elevation, flood hazard area limit, floodway limit, and/or other related feature.

103.6 Other permits. It shall be the responsibility of the Floodplain Administrator to assure that approval of a proposed development shall not be given until proof that necessary permits have been granted by Federal or State agencies having jurisdiction over such development, including section 404 of the Clean Water Act. In the event of conflicting permit requirements, the Floodplain Administrator must ensure that the most restrictive floodplain management standards are reflected in permit approvals.

103.7 Determination of Local Design Flood Elevations. If design flood elevations are not specified, the Floodplain Administrator is authorized to require the applicant to:

(1) Obtain, review, and reasonably utilize data available from a Federal, State, or other source, or

(2) Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering techniques. Such analyses shall be performed and sealed by a licensed professional engineer. Studies, analyses, and computations shall be submitted in sufficient detail to allow review and approval by the Floodplain Administrator. The

accuracy of data submitted for such determination shall be the responsibility of the applicant.

It shall be the responsibility of the Floodplain Administrator to verify that the applicant's proposed Best Available Flood Hazard Data Area and the Local Design Flood Elevation in any development permit accurately applies the best available flood hazard data and methodologies for determining flood hazard areas and design elevations described in 102.2 and 102.3 respectively. This information shall be provided to the Construction Official and documented according to Section103.15.

103.8 Requirement to submit new technical data. Base Flood Elevations may increase or decrease resulting from natural changes (e.g. erosion, accretion, channel migration, subsidence, uplift) or man-made physical changes (e.g. dredging, filling, excavation) affecting flooding conditions. As soon as practicable, but not later than six months after the date of a man-made change or when information about a natural change becomes available, the Floodplain Administrator shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Title 44 Code of Federal Regulations Section 65.3. Such a submission is necessary so that upon confirmation of those physical

changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data.

103.9 Activities in riverine flood hazard areas. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the Floodplain Administrator shall not permit any new construction, substantial improvement or other development, including the placement of fill, unless the applicant submits an engineering analysis prepared by a licensed professional engineer that demonstrates that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachment, will not increase the design flood elevation more than 0.2 feet at any point within the community.

103.10 Floodway encroachment. Prior to issuing a permit for any floodway encroachment, including fill, new construction, substantial improvements and other development or land- disturbing-activity, the Floodplain Administrator shall require submission of a certification prepared by a licensed professional engineer, along with supporting technical data, that demonstrates that such development will not cause any increase in the base flood level.

> **103.10.1 Floodway revisions.** A floodway encroachment that increases the level of the base flood is authorized if the applicant has applied for a Conditional Letter of Map Revision (CLOMR) to the Flood Insurance Rate Map (FIRM) and has received the approval of FEMA.

103.11 Watercourse alteration. Prior to issuing a permit for any alteration or relocation of any watercourse, the Floodplain Administrator shall require the applicant to provide notification of the proposal to the appropriate authorities of all adjacent government jurisdictions, as well as the NJDEP Bureau of Flood Engineering and the Division of Land Resource Protection. A copy of the notification shall be maintained in the permit records and submitted to FEMA.

> **103.11.1 Engineering analysis.** The Floodplain Administrator shall require submission of an engineering analysis prepared by a licensed professional engineer, demonstrating that the flood-carrying capacity of the altered or relocated portion of the watercourse will be maintained, neither increased nor decreased. Such watercourses shall be maintained in a manner that preserves the channel's flood-carrying capacity.

103.12 Alterations in coastal areas. The excavation or alteration of sand dunes is governed by the New Jersey Coastal Zone Management (CZM) rules, N.J.A.C. 7:7. Prior to issuing a flood damage prevention permit for any alteration of sand dunes in coastal high hazard areas and Coastal A Zones, the Floodplain Administrator shall require that a New Jersey CZM permit be obtained and included in the flood damage prevention permit application. The applicant shall also provide documentation of any engineering analysis, prepared by a licensed professional engineer, that demonstrates that the proposed alteration will not increase the potential for flood damage.

103.13 Development in riparian zones All development in Riparian Zones as described in N.J.A.C. 7:13 is prohibited by this ordinance unless the applicant has received an individual or general permit or has complied with the requirements of a permit by rule or permit by certification from NJDEP Division of Land Resource Protection prior to application for a floodplain development permit and the project is compliant with all other Floodplain Development provisions of this ordinance. The width of the riparian zone can range between 50 and 300 feet and is determined by the attributes of the waterbody and designated in the New Jersey Surface Water Quality Standards N.J.A.C. 7:9B. The portion of the riparian zone

located outside of a regulated water is measured landward from the top of bank. Applicants can request a verification of the riparian zone limits or a permit applicability determination to determine State permit requirements under N.J.A.C. 7:13 from the NJDEP Division of Land Resource Protection.

103.14 Substantial improvement and substantial damage determinations. When buildings and structures are damaged due to any cause including but not limited to man-made, structural, electrical, mechanical, or natural hazard events, or are determined to be unsafe as described in N.J.A.C. 5:23; and for applications for building permits to improve buildings and structures, including alterations, movement, repair, additions, rehabilitations, renovations, ordinary maintenance and minor work, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Construction Official, shall:

(1) Estimate the market value, or require the applicant to obtain a professional appraisal prepared by a qualified independent appraiser, of the market value of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made.

(2) Determine and include the costs of all ordinary maintenance and minor work, as discussed in Section 102.2, performed in the floodplain regulated by this ordinance in addition to the costs of those improvements regulated by the Construction Official in substantial damage and substantial improvement calculations.

(3) Compare the cost to perform the improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, where applicable, to the market value of the building or structure.

(4) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage. This determination requires the evaluation of previous permits issued for improvements and repairs over a period of [*insert number*] years prior to the permit application or substantial damage determination as specified in the definition of substantial improvement.

(5) Notify the applicant in writing when it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the building code is required and notify the applicant in writing when it is determined that work does not constitute substantial improvement or repair of substantial damage. The Floodplain Administrator shall also provide all letters documenting substantial damage and compliance with flood resistant construction requirements of the building code to the NJDEP Bureau of Flood Engineering.

103.15 Department records. In addition to the requirements of the building code and these regulations, and regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of these regulations and the flood provisions of the Uniform Construction Code, including Flood Insurance Studies, Flood Insurance Rate Maps; documents from FEMA that amend or revise FIRMs; NJDEP delineations, records of issuance of permits and denial of permits; records of ordinary maintenance and minor work, determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required certifications and documentation specified by the Uniform Construction Code and these regulations including as-built Elevation Certificates; notifications to adjacent communities, FEMA, and the State related to alterations of

watercourses; assurance that the flood carrying capacity of altered waterways will be maintained; documentation related to variances, including justification for issuance or denial; and records of enforcement actions taken pursuant to these regulations and the flood resistant provisions of the Uniform Construction Code. The Floodplain Administrator shall also record the required elevation, determination method, and base flood elevation source used to determine the Local Design Flood Elevation in the floodplain development permit.

103.16 Liability. The Floodplain Administrator and any employee charged with the enforcement of these regulations, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by these regulations or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of these regulations shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The Floodplain Administrator and any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of these regulations.

SECTION 104 PERMITS

104.1 Permits Required. Any person, owner or authorized agent who intends to conduct any development in a flood hazard area shall first make application to the Floodplain Administrator and shall obtain the required permit. Depending on the nature and extent of proposed development that includes a building or structure, the Floodplain Administrator may determine that a floodplain development permit or approval is required in addition to a building permit.

104.2 Application for permit. The applicant shall file an application in writing on a form furnished by the Floodplain Administrator. Such application shall:

(1) Identify and describe the development to be covered by the permit.

(2) Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitely locate the site.

(3) Indicate the use and occupancy for which the proposed development is intended.

(4) Be accompanied by a site plan and construction documents as specified in Section 105 of these regulations, grading and filling plans and other information deemed appropriate by the Floodplain Administrator.

(5) State the valuation of the proposed work, including the valuation of ordinary maintenance and minor work.

(6) Be signed by the applicant or the applicant's authorized agent.

104.3 Validity of permit. The issuance of a permit under these regulations or the Uniform Construction Code shall not be construed to be a permit for, or approval of, any violation of this appendix or any other ordinance of the jurisdiction. The issuance of a permit based on submitted documents and information shall not prevent the Floodplain Administrator from requiring the correction of errors. The Floodplain Administrator is authorized to prevent occupancy or use of a structure or site which is in violation of these regulations or other ordinances of this jurisdiction.

104.4 Expiration. A permit shall become invalid when the proposed development is not

commenced within 180 days after its issuance, or when the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions shall be requested in writing and justifiable cause demonstrated. The Floodplain Administrator is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each.

104.5 Suspension or revocation. The Floodplain Administrator is authorized to suspend or revoke a permit issued under these regulations wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or code of this jurisdiction.

SECTION 105 SITE PLANS AND CONSTRUCTION DOCUMENTS

105.1 Information for development in flood hazard areas. The site plan or construction documents for any development subject to the requirements of these regulations shall be drawn to scale and shall include, as applicable to the proposed development:

(1) Delineation of flood hazard areas, floodway boundaries and flood zone(s), base flood elevation(s), and ground elevations when necessary for review of the proposed development. For buildings that are located in more than one flood hazard area, the elevation and provisions associated with the most restrictive flood hazard area shall apply.

(2) Where base flood elevations or floodway data are not included on the FIRM or in the Flood Insurance Study, they shall be established in accordance with Section 105.2.

(3) Where the parcel on which the proposed development will take place will have more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM or in the Flood Insurance Study, such elevations shall be established in accordance with Section 105.2(3) of theseregulations.

(4) Location of the proposed activity and proposed structures, and locations of existing buildings and structures; in coastal high hazard areas and Coastal A zones, new buildings shall be located landward of the reach of mean high tide.

(5) Location, extent, amount, and proposed final grades of any filling, grading, or excavation.

(6) Where the placement of fill is proposed, the amount, type, and source of fill material; compaction specifications; a description of the intended purpose of the fill areas; and evidence that the proposed fill areas are the minimum necessary to achieve the intended purpose. The applicant shall provide an engineering certification confirming that the proposal meets the flood storage displacement limitations of N.J.A.C. 7:13.

(7) Extent of any proposed alteration of sand dunes.

(8) Existing and proposed alignment of any proposed alteration of a watercourse.

(9) Floodproofing certifications, V Zone and Breakaway Wall Certifications, Operations and Maintenance Plans, Warning and Evacuation Plans and other documentation required pursuant to FEMA publications.

The Floodplain Administrator is authorized to waive the submission of site plans, construction documents, and other data that are required by these regulations but that are not required to be prepared by a registered design professional when it is found that the nature of the proposed development is such that the review of such submissions is not necessary to ascertain compliance.

105.2 Information in flood hazard areas without base flood elevations (approximate Zone

A). Where flood hazard areas are delineated on the effective or preliminary FIRM and base flood elevation data have not been provided, the applicant shall consult with the Floodplain Administrator to determine whether to:

(1) Use the Approximation Method (Method 5) described in N.J.A.C. 7:13 in conjunction with Appendix 1 of the FHACA to determine the required flood elevation.

(2) Obtain, review, and reasonably utilize data available from a Federal, State or other source when those data are deemed acceptable to the Floodplain Administrator to reasonably reflect flooding conditions.

(3) Determine the base flood elevation in accordance with accepted hydrologic and hydraulic engineering techniques according to Method 6 as described in N.J.A.C. 7:13. Such analyses shall be performed and sealed by a licensed professional engineer.

Studies, analyses, and computations shall be submitted in sufficient detail to allow review and approval by the Floodplain Administrator prior to floodplain development permit issuance. The accuracy of data submitted for such determination shall be the responsibility of the applicant. Where the data are to be used to support a Letter of Map Change (LOMC) from FEMA, the applicant shall be responsible for satisfying the submittal requirements and pay the processing fees.

105.3 Analyses and certifications by a Licensed Professional Engineer. As applicable to the location and nature of the proposed development activity, and in addition to the requirements of this section, the applicant shall have the following analyses signed and sealed by a licensed professional engineer for submission with the site plan and construction documents:

(1) For development activities proposed to be located in a regulatory floodway, a floodway encroachment analysis that demonstrates that the encroachment of the proposed development will not cause any increase in base flood elevations; where the applicant proposes to undertake development activities that do increase base flood elevations, the applicant shall submit such analysis to FEMA as specified in Section 105.4 of these regulations and shall submit the Conditional Letter of Map Revision, if issued by FEMA, with the site plan and construction documents.

(2) For development activities proposed to be located in a riverine flood hazard area where base flood elevations are included in the FIS or FIRM but floodways have not been designated, hydrologic and hydraulic analyses that demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachments will not increase the base flood elevation more than 0.2 feet at any point within the jurisdiction. This requirement does not apply in isolated flood hazard areas not connected to a riverine flood hazard area or in flood hazard areas identified as Zone AO or Zone AH.

(3) For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices which demonstrates that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased, and certification that the altered watercourse shall be maintained, neither increasing nor decreasing the channel's flood-carrying capacity. The applicant shall submit the analysis to FEMA as specified in Section 105.4 of these regulations. The applicant shall notify the chief executive officer of all affected adjacent jurisdictions, the NJDEP's Bureau of Flood Engineering and the Division of Land Resource Protection; and shall provide documentation of such notifications.

(4) For activities that propose to alter sand dunes in coastal high hazard areas (Zone V) and Coastal A Zones, an engineering analysis that demonstrates that the proposed alteration will not increase the potential for flood damage and documentation of the

issuance of a New Jersey Coastal Zone Management permit under N.J.A.C. 7:7.

(5) For analyses performed using Methods 5 and 6 (as described in N.J.A.C. 7:13) in flood hazard zones without base flood elevations (approximate A zones).

105.4 Submission of additional data. When additional hydrologic, hydraulic or other engineering data, studies, and additional analyses are submitted to support an application, the applicant has the right to seek a Letter of Map Change (LOMC) from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs, and to submit such data to FEMA for such purposes. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant.

SECTION 106 INSPECTIONS

106.1 General. Development for which a permit is required shall be subject to inspection. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of these regulations or the building code. Inspections presuming to give authority to violate or cancel the provisions of these regulations or the building code or other ordinances shall not be valid.

106.2 Inspections of development. The Floodplain Administrator shall inspect all development in flood hazard areas authorized by issuance of permits under these regulations. The Floodplain Administrator shall inspect flood hazard areas from time to time to determine if development is undertaken without issuance of a permit.

106.3 Buildings and structures. The Construction Official shall make or cause to be made, inspections for buildings and structures in flood hazard areas authorized by permit in accordance with the Uniform Construction Code, N.J.A.C. 5:23.

1) **Lowest floor elevation**. Upon placement of the lowest floor, including the basement, and prior to further vertical construction, certification of the elevation required in Section 801.2 shall be submitted to the Construction Official on an Elevation Certificate.

2) **Lowest horizontal structural member.** In V zones and Coastal A zones, upon placement of the lowest floor, including the basement, and prior to further vertical construction, certification of the elevation required in Section 801.2 shall be submitted to the Construction Official on an Elevation Certificate.

3) **Installation of attendant utilities (**electrical, heating, ventilating, air-conditioning, and other service equipment) and sanitary facilities elevated as discussed in Section 801.2.

4) **Final inspection.** Prior to the final inspection, certification of the elevation required in Section 801.2 shall be submitted to the Construction Official on an Elevation Certificate.

106.4 Manufactured homes. The Floodplain Administrator shall inspect manufactured homes that are installed or replaced in flood hazard areas to determine compliance with the requirements of these regulations and the conditions of the issued permit. Upon placement of a manufactured home, certification of the elevation of the lowest floor shall be submitted on an Elevation Certificate to the Floodplain Administrator prior to the final inspection.

SECTION 107 VARIANCES

107.1 General. The **Linwood City Council** shall hear and decide requests for variances. The **Linwood Planning/Zoning Board** shall base its determination on technical justifications submitted by applicants, the considerations for issuance in Section 107.5, the conditions of issuance set forth in Section 107.6, and the comments and recommendations of the Floodplain Administrator and, as applicable, the Construction Official. The **Linwood Planning/Zoning Board** has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of these regulations.

107.2 Historic structures. A variance is authorized to be issued for the repair or rehabilitation of a historic structure upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure, the historic structure is eligible for the exception in the section in Chapter 12 of the Existing Building Code applicable to historic structures in flood hazard areas, and the variance is the minimum necessary to preserve the historic character and design of the structure.

107.3 Functionally dependent uses. A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use provided the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to use of methods and materials that minimize flood damage during the base flood and create no additional threats to public safety.

107.4 Restrictions in floodways. A variance shall not be issued for any proposed development in a floodway when any increase in flood levels would result during the base flood discharge, as evidenced by the applicable analysis and certification required in Section 105.3(1) of these regulations.

107.5 Considerations. In reviewing requests for variances, all technical evaluations, all relevant factors, all other portions of these regulations, and the following shall be considered:

(1) The danger that materials and debris may be swept onto other lands resulting in further injury or damage.

(2) The danger to life and property due to flooding or erosion damage.

(3) The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.

(4) The importance of the services provided by the proposed development to the community.

(5) The availability of alternate locations for the proposed development that are not subject to flooding or erosion and the necessity of a waterfront location, where applicable.

(6) The compatibility of the proposed development with existing and anticipated development.

(7) The relationship of the proposed development to the comprehensive plan and floodplain management program for that area.

(8) The safety of access to the property in times of flood for ordinary and emergency vehicles.

(9) The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwater and the effects of wave action, where applicable, expected at the site.

(10) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets, and bridges.

107.6 Conditions for issuance. Variances shall only be issued upon:

(1) Submission by the applicant of a showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site limit compliance with any provision of these regulations or renders the elevation standards of the building code inappropriate.

(2) A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable.

(3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.

(4) A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(5) Notification to the applicant in writing over the signature of the Floodplain Administrator that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as $25 for $100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

SECTION 108 VIOLATIONS

108.1 Violations. Any development in any flood hazard area that is being performed without an issued permit or that is in conflict with an issued permit shall be deemed a violation. A building or structure without the documentation of elevation of the lowest floor, the lowest horizontal structural member if in a V or Coastal A Zone, other required design certifications, or other evidence of compliance required by the building code is presumed to be a violation until such time as that documentation is provided.

108.2 Authority. The Floodplain Administrator is authorized to serve notices of violation or stop work orders to owners of property involved, to the owner's agent, or to the person or persons doing the work for development that is not within the scope of the Uniform Construction Code, but is regulated by these regulations and that is determined to be a violation.

108.3 Unlawful continuance. Any person who shall continue any work after having been served with a notice of violation or a stop work order, except such work as that person is directed to perform to remove or remedy a violation or unsafe condition, shall be subject to penalties as prescribed by N.J.S.A. 40:49-5 as appropriate.

108.4 Review Period to Correct Violations. A 30-day period shall be given to the property owner as an opportunity to cure or abate the condition. The property owner shall

also be afforded an opportunity for a hearing before **[Linwood City Court]** for an independent determination concerning the violation. Subsequent to the expiration of the 30-day period, a fine greater than $1,250.00 [or optional higher threshold amount up to $2000.00 under N.J.S.A. 40:49-5] may be imposed if a court has not determined otherwise or, upon reinspection of the property, it is determined that the abatement has not been substantially completed.

SECTION 201 DEFINITIONS

201.1 General. The following words and terms shall, for the purposes of these regulations, have the meanings shown herein. Other terms are defined in the Uniform Construction Code N.J.A.C. 5:23 and terms are defined where used in the International Residential Code and International Building Code (rather than in the definitions section). Where terms are not defined, such terms shall have ordinarily accepted meanings such as the context implies.

201.2 Definitions

30 DAY PERIOD – The period of time prescribed by N.J.S.A. 40:49-5 in which a property owner is afforded the opportunity to correct zoning and solid waste disposal after a notice of violation pertaining to this ordinance has been issued.

100 YEAR FLOOD ELEVATION – Elevation of flooding having a 1% annual chance of being equaled or exceeded in a given year which is also referred to as the Base Flood Elevation.

500 YEAR FLOOD ELEVATION – Elevation of flooding having a 0.2% annual chance of being equaled or exceeded in a given year.

A ZONES – Areas of 'Special Flood Hazard in which the elevation of the surface water resulting from a flood that has a 1% annual chance of equaling or exceeding the Base Flood Elevation (BFE) in any given year shown on the Flood Insurance Rate Map (FIRM) zones A, AE, AH, A1–A30, AR, AR/A, AR/AE, AR/A1– A30, AR/AH, and AR/AO. When used in reference to the development of a structure in this ordinance, A Zones are not inclusive of Coastal A Zones because of the higher building code requirements for Coastal A Zones.

AH ZONES– Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown in this zone.

AO ZONES – Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet.

ACCESSORY STRUCTURE – Accessory structures are also referred to as appurtenant structures. An accessory structure is a structure which is on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure. For example, a residential structure may have a detached garage or storage shed for garden tools as accessory structures. Other examples of accessory structures include gazebos, picnic pavilions, boathouses, small pole barns, storage sheds, and similar buildings.

AGRICULTURAL STRUCTURE - A structure used solely for agricultural purposes in which the use is exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities, including the raising of livestock. Communities must require that new construction or substantial improvements of agricultural structures be elevated or floodproofed to or above the Base Flood Elevation (BFE) as any other nonresidential building. Under some

circumstances it may be appropriate to wet-floodproof certain types of agricultural structures when located in wide, expansive floodplains through issuance of a variance. This should only be done for structures used for temporary storage of equipment or crops or temporary shelter for livestock and only in circumstances where it can be demonstrated that agricultural structures can be designed in such a manner that results in minimal damage to the structure and its contents and will create no additional threats to public safety. New construction or substantial improvement of livestock confinement buildings, poultry houses, dairy operations, similar livestock operations and any structure that represents more than a minimal investment must meet the elevation or dry-floodproofing requirements of 44 CFR 60.3(c)(3).

AREA OF SHALLOW FLOODING – A designated Zone AO, AH, AR/AO or AR/AH (or VO) on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow. AREA OF SPECIAL FLOOD HAZARD – see SPECIAL FLOOD HAZARD AREA

ALTERATION OF A WATERCOURSE – A dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

ASCE 7 – The standard for the Minimum Design Loads for Buildings and Other Structures, referenced by the building code and developed and published by the American Society of Civil Engineers, Reston, VA. which includes but is not limited to methodology and equations necessary for determining structural and flood-related design requirements and determining the design requirements for structures that may experience a combination of loads including those from natural hazards. Flood related equations include those for determining erosion, scour, lateral, vertical, hydrostatic, hydrodynamic, buoyancy, breaking wave, and debris impact.

ASCE 24 – The standard for Flood Resistant Design and Construction, referenced by the building code and developed and published by the American Society of Civil Engineers, Reston, VA. References to ASCE 24 shall mean ASCE 24-14 or the most recent version of ASCE 24 adopted in the UCC Code [N.J.A.C. 5:23].

BASE FLOOD ELEVATION (BFE) – The water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year, as shown on a published Flood Insurance Study (FIS), or preliminary flood elevation guidance from FEMA. May also be referred to as the "100-year flood elevation".

BASEMENT – Any area of the building having its floor subgrade (below ground level) on all sides.

BEST AVAILABLE FLOOD HAZARD DATA - The most recent available preliminary flood risk guidance FEMA has provided. The Best Available Flood Hazard Data may be depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM.

BEST AVAILABLE FLOOD HAZARD DATA AREA- The areal mapped extent associated with the most recent available preliminary flood risk guidance FEMA has provided. The Best Available Flood Hazard Data may be depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM.

BEST AVAILABLE FLOOD HAZARD DATA ELEVATION - The most recent available preliminary

flood elevation guidance FEMA has provided. The Best Available Flood Hazard Data may be depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM.

BREAKAWAY WALLS – Any type of wall subject to flooding that is not required to provide structural support to a building or other structure and that is designed and constructed such that, below the Local Design Flood Elevation, it will collapse under specific lateral loads such that (1) it allows the free passage of floodwaters, and (2) it does not damage the structure or supporting foundation system. Certification in the V Zone Certificate of the design, plans, and specifications by a licensed design professional that these walls are in accordance with accepted standards of practice is required as part of the permit application for new and substantially improved V Zone and Coastal A Zone structures. A completed certification must be submitted at permit application.

BUILDING – Per the FHACA, "Building" means a structure enclosed with exterior walls or fire walls, erected and framed of component structural parts, designed for the housing, shelter, enclosure, and support of individuals, animals, or property of any kind. A building may have a temporary or permanent foundation. A building that is intended for regular human occupation and/or residence is considered a habitable building.

COASTAL A ZONE – An Area of Special Flood Hazard starting from a Velocity (V) Zone and extending up to the landward Limit of the Moderate Wave Action delineation. Where no V Zone is mapped the Coastal A Zone is the portion between the open coast and the landward Limit of the Moderate Wave Action delineation. Coastal A Zones may be subject to wave effects, velocity flows, erosion, scour, or a combination of these forces. Construction and development in Coastal A Zones is to be regulated similarly to V Zones/Coastal High Hazard Areas except as allowed by ASCE 24.

COASTAL HIGH HAZARD AREA – An Area of Special Flood Hazard inclusive of the V Zone extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.

CONDITIONAL LETTER OF MAP REVISION - A Conditional Letter of Map Revision (CLOMR) is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The letter does not revise an effective NFIP map, it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review that is described in the Letter of Map Change (LOMC) process. Building permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map.

CONDITIONAL LETTER OF MAP REVISION - FILL -- A Conditional Letter of Map Revision - Fill (CLOMR-F) is FEMA's comment on a proposed project involving the placement of fill outside of the regulatory floodway that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The letter does not revise an effective NFIP map, it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review that is described in the Letter of Map Change (LOMC) process. Building permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map.

CRITICAL BUILDING – Per the FHACA, "Critical Building" means that:

a. It is essential to maintaining continuity of vital government operations and/or supporting emergency response, sheltering, and medical care functions before, during, and after a flood, such as a hospital, medical clinic, police station, fire station, emergency response center, or public shelter; or
b. It serves large numbers of people who may be unable to leave the facility through their own efforts, thereby hindering or preventing safe evacuation of the building during a flood event, such as a school, college, dormitory, jail or detention facility, day care center, assisted living facility, or nursing home.

DEEP FOUNDATIONS – Per ASCE 24, deep foundations refer to those foundations constructed on erodible soils in Coastal High Hazard and Coastal A Zones which are founded on piles, drilled shafts, caissons, or other types of deep foundations and are designed to resist erosion and scour and support lateral and vertical loads as described in ASCE 7. Foundations shall extend to 10 feet below Mean Water Level (MWL) unless the design demonstrates that pile penetration will provide sufficient depth and stability as determined by ASCE 24, ASCE 7, and additional geotechnical investigations if any unexpected conditions are encountered during construction.

DEVELOPMENT – Any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, drilling operations and other land-disturbing activities.

DRY FLOODPROOFING – A combination of measures that results in a non-residential structure, including the attendant utilities and equipment as described in the latest version of ASCE 24, being watertight with all elements substantially impermeable and with structural components having the capacity to resist flood loads.

ELEVATED BUILDING – A building that has no basement and that has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns. Solid perimeter foundations walls are not an acceptable means of elevating buildings in V and VE Zones.

ELEVATION CERTIFICATE – An administrative tool of the National Flood Insurance Program (NFIP) that can be used to provide elevation information, to determine the proper insurance premium rate, and to support an application for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

ENCROACHMENT – The placement of fill, excavation, buildings, permanent structures or other development into a flood hazard area which may impede or alter the flow capacity of riverine flood hazard areas.

FEMA PUBLICATIONS – Any publication authored or referenced by FEMA related to building science, building safety, or floodplain management related to the National Flood Insurance Program. Publications shall include but are not limited to technical bulletins, desk references, and American Society of Civil Engineers Standards documents including ASCE 24.

FLOOD OR FLOODING

a. A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters.
2. The unusual and rapid accumulation or runoff of surface waters from any source.
3. Mudslides (I.e. mudflows) which are proximately caused by flooding as defined in (a) (2) of this definition and are akin to a river or liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

b. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

FLOOD HAZARD AREA DESIGN FLOOD ELEVATION – Per the FHACA, the peak water surface elevation that will occur in a water during the flood hazard area design flood. This elevation is determined via available flood mapping adopted by the State, flood mapping published by FEMA (including effective flood mapping dated on or after January 31, 1980, or any more recent advisory, preliminary, or pending flood mapping; whichever results in higher flood elevations, wider floodway limits, greater flow rates, or indicates a change from an A zone to a V zone or coastal A zone), approximation, or calculation pursuant to the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13-3.1 – 3.6 and is typically higher than FEMA's base flood elevation. A water that has a drainage area measuring less than 50 acres does not possess, and is not assigned, a flood hazard area design flood elevation.

FLOOD INSURANCE RATE MAP (FIRM) – The official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY (FIS) – The official report in which the Federal Insurance Administration has provided flood profiles, as well as the Flood Insurance Rate Map(s) and the water surface elevation of the base flood.

FLOODPLAIN OR FLOOD PRONE AREA – Any land area susceptible to being inundated by water from any source. See "Flood or flooding."

FLOODPLAIN MANAGEMENT REGULATIONS – Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance, and erosion control ordinance) and other applications of police power. The term describes such State or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

FLOODPROOFING – Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

FLOODPROOFING CERTIFICATE – Certification by a licensed design professional that the design and methods of construction for floodproofing a non-residential structure are in accordance with accepted standards of practice to a proposed height above the structure's lowest adjacent grade that meets or exceeds the Local Design Flood Elevation. A completed floodproofing certificate is required at permit application.

FLOODWAY – The channel of a river or other watercourse and the adjacent land areas that must

be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 0.2 foot.

FREEBOARD – A factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

FUNCTIONALLY DEPENDENT USE – A use that cannot perform its intended purpose unless it is located or carried out in close proximity to water, including only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding and ship repair facilities. The term does not include long-term storage or related manufacturing facilities.

HABITABLE BUILDING– Pursuant to the FHACA Rules (N.J.A.C. 7:13), means a building that is intended for regular human occupation and/or residence. Examples of a habitable building include a single-family home, duplex, multi-residence building, or critical building; a commercial building such as a retail store, restaurant, office building, or gymnasium; an accessory structure that is regularly occupied, such as a garage, barn, or workshop; mobile and manufactured homes, and trailers intended for human residence, which are set on a foundation and/or connected to utilities, such as in a mobile home park (not including campers and recreational vehicles); and any other building that is regularly occupied, such as a house of worship, community center, or meeting hall, or animal shelter that includes regular human access and occupation. Examples of a non-habitable building include a bus stop shelter, utility building, storage shed, self-storage unit, construction trailer, or an individual shelter for animals such as a doghouse or outdoor kennel.

HARDSHIP – As related to Section 107 of this ordinance, meaning the exceptional hardship that would result from a failure to grant the requested variance. The City of Linwood requires that the variance be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

HIGHEST ADJACENT GRADE – The highest natural elevation of the ground surface prior to construction next to the proposed or existing walls of a structure.

HISTORIC STRUCTURE – Any structure that is:

a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
c. Individually listed on a State inventory of historic places in States with historic preservation programs which have been approved by the Secretary of the Interior; or
d. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
    1. By an approved State program as determined by the Secretary of the Interior; or
    2. Directly by the Secretary of the Interior in States without approved programs.

LAWFULLY EXISTING – Per the FHACA, means an existing fill, structure and/or use, which meets all Federal, State, and local laws, and which is not in violation of the FHACA because it was established:

a. Prior to January 31, 1980; or
b. On or after January 31, 1980, in accordance with the requirements of the FHACA as it existed at the time the fill, structure and/or use was established.

Note: Substantially damaged properties and substantially improved properties that have not been elevated are not considered "lawfully existing" for the purposes of the NFIP. This definition is included in this ordinance to clarify the applicability of any more stringent statewide floodplain management standards required under the FHACA.

LETTER OF MAP AMENDMENT - A Letter of Map Amendment (LOMA) is an official amendment, by letter, to an effective National Flood Insurance Program (NFIP) map that is requested through the Letter of Map Change (LOMC) process. A LOMA establishes a property's location in relation to the Special Flood Hazard Area (SFHA). LOMAs are usually issued because a property has been inadvertently mapped as being in the floodplain but is actually on natural high ground above the base flood elevation. Because a LOMA officially amends the effective NFIP map, it is a public record that the community must maintain. Any LOMA should be noted on the community's master flood map and filed by panel number in an accessible location.

LETTER OF MAP CHANGE – The Letter of Map Change (LOMC) process is a service provided by FEMA for a fee that allows the public to request a change in flood zone designation in an Area of Special Flood Hazard on an Flood Insurance Rate Map (FIRM). Conditional Letters of Map Revision, Conditional Letters of Map Revision – Fill, Letters of Map Revision, Letters of Map Revision-Fill, and Letters of Map Amendment are requested through the Letter of Map Change (LOMC) process.

LETTER OF MAP REVISION - A Letter of Map Revision (LOMR) is FEMA's modification to an effective Flood Insurance Rate Map (FIRM). Letter of Map Revisions are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The LOMR officially revises the Flood Insurance Rate Map (FIRM) and sometimes the Flood Insurance Study (FIS) report, and when appropriate, includes a description of the modifications. The LOMR is generally accompanied by an annotated copy of the affected portions of the FIRM or FIS report. Because a LOMR officially revises the effective NFIP map, it is a public record that the community must maintain. Any LOMR should be noted on the community's master flood map and filed by panel number in an accessible location.

LETTER OF MAP REVISION – FILL -- A Letter of Map Revision Based on Fill (LOMR-F) is FEMA's modification of the Special Flood Hazard Area (SFHA) shown on the Flood Insurance Rate Map (FIRM) based on the placement of fill outside the existing regulatory floodway may be initiated through the Letter of Map Change (LOMC) Process. Because a LOMR-F officially revises the effective Flood Insurance Rate Map (FIRM) map, it is a public record that the community must maintain. Any LOMR-F should be noted on the community's master flood map and filed by panel number in an accessible location.

LICENSED DESIGN PROFESSIONAL – Licensed design professional shall refer to either a New Jersey Licensed Professional Engineer, licensed by the New Jersey State Board of Professional Engineers and Land Surveyors or a New Jersey Licensed Architect, licensed by the New Jersey State Board of Architects.

LICENSED PROFESSIONAL ENGINEER - A licensed professional engineer shall refer to individuals licensed by the New Jersey State Board of Professional Engineers and Land Surveyors.

LIMIT OF MODERATE WAVE ACTION (LiMWA) – Inland limit of the area affected by waves greater than 1.5 feet during the Base Flood. Base Flood conditions between the VE Zone and the LiMWA will be similar to, but less severe than those in the VE Zone.

LOCAL DESIGN FLOOD ELEVATION (LDFE) – The elevation reflective of the most recent available preliminary flood elevation guidance FEMA has provided as depicted on but not limited to Advisory Flood Hazard Area Maps, Work Maps, or Preliminary FIS and FIRM which is also inclusive of freeboard specified by the New Jersey Flood Hazard Area Control Act and Uniform Construction Codes and any additional freeboard specified in a community's ordinance. In no circumstances shall a project's LDFE be lower than a permit-specified Flood Hazard Area Design Flood Elevation or a valid NJDEP Flood Hazard Area Verification Letter plus the freeboard as required in ASCE 24 and the effective FEMA Base Flood Elevation.

LOWEST ADJACENT GRADE – The lowest point of ground, patio, or sidewalk slab immediately next a structure, except in AO Zones where it is the natural grade elevation.

LOWEST FLOOR – In A Zones, the lowest floor is the top surface of the lowest floor of the lowest enclosed area (including basement). In V Zones and coastal A Zones, the bottom of the lowest horizontal structural member of a building is the lowest floor. An unfinished or flood resistant enclosure, usable solely for the parking of vehicles, building access or storage in an area other than a basement is not considered a building's lowest floor provided that such enclosure is not built so as to render the structure in violation of other applicable non-elevation design requirements of these regulations.

LOWEST HORIZONTAL STRUCTURAL MEMBER - In an elevated building in a Coastal A or Coastal High Hazard Zone, the lowest beam, joist, or other horizontal member that supports the building is the lowest horizontal structural member. Grade beams installed to support vertical foundation members where they enter the ground are not considered lowest horizontal members.

MANUFACTURED HOME – A structure that is transportable in one or more sections, eight (8) feet or more in width and greater than four hundred (400) square feet, built on a permanent chassis, designed for use with or without a permanent foundation when attached to the required utilities, and constructed to the Federal Manufactured Home Construction and Safety Standards and rules and regulations promulgated by the U.S. Department of Housing and Urban Development. The term also includes mobile homes, park trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

MANUFACTURED HOME PARK OR SUBDIVISION – A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

MARKET VALUE – The price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in these regulations, the term refers to the market value of buildings and structures, excluding the land and other improvements on the parcel. Market value shall be determined by one of the following methods (1) Actual Cash Value (replacement cost depreciated for age and quality of construction), (2) tax assessment value adjusted to approximate market value by a factor provided by the Property Appraiser, or (3) established by a

qualified independent appraiser.

NON-RESIDENTIAL – Pursuant to ASCE 24, any building or structure or portion thereof that is not classified as residential.

ORDINARY MAINTENANCE AND MINOR WORK – This term refers to types of work excluded from construction permitting under N.J.A.C. 5:23 in the March 5, 2018 New Jersey Register. Some of these types of work must be considered in determinations of substantial improvement and substantial damage in regulated floodplains under 44 CFR 59.1. These types of work include but are not limited to replacements of roofing, siding, interior finishes, kitchen cabinets, plumbing fixtures and piping, HVAC and air conditioning equipment, exhaust fans, built in appliances, electrical wiring, etc. improvements necessary to correct existing violations of State or local health, sanitation, or code enforcement officials which are the minimum necessary to assure safe living conditions and improvements of historic structures as discussed in 44 CFR 59.1 shall not be included in the determination of ordinary maintenance and minor work.

NEW CONSTRUCTION – Structures for which the start of construction commenced on or after the effective date of the first floodplain regulation adopted by a community; includes any subsequent improvements to such structures. New construction includes work determined to be a substantial improvement.

RECREATIONAL VEHICLE – A vehicle that is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light-duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

RESIDENTIAL – Pursuant to the ASCE 24:

a. Buildings and structures and portions thereof where people live or that are used for sleeping purposes on a transient or non-transient basis;
b. Structures including but not limited to one- and two-family dwellings, townhouses, condominiums, multi-family dwellings, apartments, congregate residences, boarding houses, lodging houses, rooming houses, hotels, motels, apartment buildings, convents, monasteries, dormitories, fraternity houses, sorority houses, vacation time-share properties; and
c. institutional facilities where people are cared for or live on a 24-hour basis in a supervised environment, including but not limited to board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers, convalescent facilities, hospitals, nursing homes, mental hospitals, detoxification facilities, prisons, jails, reformatories, detention centers, correctional centers, and prerelease centers.

SOLID WASTE DISPOSAL – "Solid Waste Disposal" shall mean the storage, treatment, utilization, processing or final disposition of solid waste as described in N.J.A.C. 7:26-1.6 or the storage of unsecured materials as described in N.J.A.C. 7:13-2.3 for a period of greater than 6 months as specified in N.J.A.C. 7:26 which have been discharged, deposited, injected, dumped, spilled, leaked, or placed into any land or water such that such solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

SPECIAL FLOOD HAZARD AREA – The greater of the following: (1) Land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year, shown on

the FIRM as Zone V, VE, V1-3-, A, AO, A1-30, AE, A99, or AH; (2) Land and the space above that land, which lies below the peak water surface elevation of the flood hazard area design flood for a particular water, as determined using the methods set forth in the New Jersey Flood Hazard Area Control Act in N.J.A.C. 7:13; (3) Riparian Buffers as determined in the New Jersey Flood Hazard Area Control Act in N.J.A.C. 7:13. Also referred to as the AREA OF SPECIAL FLOOD HAZARD.

START OF CONSTRUCTION – The **Start of Construction is as follows:**

a. **For other than new construction or substantial improvements, under the** Coastal Barrier Resources Act (CBRA), this is the date the building permit was issued, provided that the actual start of construction, repair, rehabilitation, addition, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a building on site, such as the pouring of a slab or footing, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured (mobile) home on a foundation. For a substantial improvement, actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

b. For the purposes of determining whether proposed construction must meet new requirements when National Flood Insurance Program (NFIP) maps are issued or revised and Base Flood Elevation's (BFEs) increase or zones change, the Start of Construction includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.

   Permanent construction does not include land preparation, such as clearing, grading, and filling, nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. Such development must also be permitted and must meet new requirements when National Flood Insurance Program (NFIP) maps are issued or revised and Base Flood Elevation's (BFEs) increase or zones change.

   For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

   For determining if new construction and substantial improvements within the Coastal Barrier Resources System (CBRS) can obtain flood insurance, a different definition applies.

STRUCTURE – A walled and roofed building, a manufactured home, or a gas or liquid storage tank that is principally above ground.

SUBSTANTIAL DAMAGE – Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 [or optional

lower number] percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT – Any combination of reconstruction, rehabilitation, addition, or other improvement including those considered ordinary maintenance and minor work of a structure taking place over a number of [5] year period, the cumulative cost of which equals or exceeds fifty (50) [or optional lower number] percent of the market value of the structure before the "start of construction" of the improvement. The period of accumulation includes the first improvement or repair of each structure is permanent subsequent to [date]. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

a. Any project for improvement of a structure to correct existing violations of State or local health, sanitary or safety code specifications which have been identified by the local code enforcement officer and which are the minimum necessary to assure safe living conditions; or

b. Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure."

UTILITY AND MISCELLANEOUS GROUP U BUILDINGS AND STRUCTURES – Buildings and structures of an accessory character and miscellaneous structures not classified in any special occupancy, as described in ASCE 24.

V ZONE CERTIFICATE - A certificate that contains a certification signed by a licensed design professional certifying that the designs, plans, and specifications and the methods of construction in V Zones and Coastal A Zones are in accordance with accepted standards of practice. This certificate also includes an optional Breakaway Wall Design Certification for enclosures in these zones below the Best Available Flood Hazard Data Elevation. A completed certification is required at permit application.

V ZONES – Areas of Special Flood Hazard in which the elevation of the surface water resulting from a flood that has a 1% annual chance of equaling or exceeding the Base Flood Elevation in any given year shown on the Flood Insurance Rate Map (FIRM) zones V1-V30 and VE and is referred to as the Coastal High Hazard Area.

VARIANCE – A grant of relief from the requirements of this section which permits construction in a manner otherwise prohibited by this section where specific enforcement would result in unnecessary hardship.

VIOLATION – A development that is not fully compliant with these regulations or the flood provisions of the building code. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

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 flood plains of coastal or riverine areas.

WATERCOURSE. A river, creek, stream, channel, or other topographic feature in, on, through, or over which water flows at least periodically.

WET FLOODPROOFING – Floodproofing method that relies on the use of flood damage resistant materials and construction techniques in areas of a structure that are below the Local Design

Flood Elevation by intentionally allowing them to flood. The application of wet floodproofing as a flood protection technique under the National Flood Insurance Program (NFIP) is limited to enclosures below elevated residential and non-residential structures and to accessory and agricultural structures that have been issued variances by the community.

SECTION 301 SUBDIVISIONS AND OTHER DEVELOPMENTS

301.1 General. Any subdivision proposal, including proposals for manufactured home parks and subdivisions, or other proposed new development in a flood hazard area shall be reviewed to assure that:

(1) All such proposals are consistent with the need to minimize flood damage.

(2) All public utilities and facilities, such as sewer, gas, electric and water systems are located and constructed to minimize or eliminate flood damage.

(3) Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from structures.

301.2 Subdivision requirements. Where any portion of proposed subdivisions, including manufactured home parks and subdivisions, lies within a flood hazard area, the following shall be required:

(1) The flood hazard area, including floodways, coastal high hazard areas, and Coastal A Zones, and base flood elevations, as appropriate, shall be delineated on tentative subdivision plats.

(2) Residential building lots shall be provided with adequate buildable area outside the floodway.

(3) The design criteria for utilities and facilities set forth in these regulations and appropriate codes shall be met.

SECTION 401 SITE IMPROVEMENT

401.1 Encroachment in floodways. Development, land disturbing activity, and encroachments in floodways shall not be authorized unless it has been demonstrated through hydrologic and hydraulic analyses required in accordance with Section 105.3(1) of these regulations, that the proposed encroachment will not result in any increase in the base flood level during occurrence of the base flood discharge. If Section 105.3(1) is satisfied, proposed elevation, addition, or reconstruction of a lawfully existing structure within a floodway shall also be in accordance with Section 801.2 of this ordinance and the floodway requirements of N.J.A.C. 7:13.

401.1.1 Prohibited in floodways. The following are prohibited activities:

(1) The storage of unsecured materials is prohibited within a floodway pursuant to N.J.A.C. 7:13.

(2) Fill and new structures are prohibited in floodways per N.J.A.C. 7:13.

401.2 Coastal High Hazard Areas (V Zones) and Coastal A Zones. In Coastal High Hazard Areas and Coastal A Zones:

(1) New buildings shall only be authorized landward of the reach of mean high tide.

(2) The placement of manufactured homes shall be prohibited except in an existing manufactured home park or subdivision.

(3) Basements or enclosures that are below grade on all sides are prohibited.

(4) The use of fill for structural support of buildings is prohibited.

401.3 Sewer facilities. All new and replaced sanitary sewer facilities, private sewage treatment plants (including all pumping stations and collector systems) and on-site waste disposal systems shall be designed in accordance with the New Jersey septic system regulations contained in N.J.A.C. 14A and N.J.A.C. 7:9A, the UCC Plumbing Subcode (N.J.A.C. 5:23) and Chapter 7, ASCE 24, to minimize or eliminate infiltration of floodwater into the facilities and discharge from the facilities into flood waters, or impairment of the facilities and systems.

401.4 Water facilities. All new and replacement water facilities shall be designed in accordance with the New Jersey Safe Drinking Water Act (N.J.A.C. 7:10) and the provisions of Chapter 7 ASCE 24, to minimize or eliminate infiltration of floodwater into the systems.

401.5 Storm drainage. Storm drainage shall be designed to convey the flow of surface waters to minimize or eliminate damage to persons or property.

401.6 Streets and sidewalks. Streets and sidewalks shall be designed to minimize potential for increasing or aggravating flood levels.

401.7 Limitations on placement of fill. Subject to the limitations of these regulations, fill shall be designed to be stable under conditions of flooding including rapid rise and rapid drawdown of floodwater, prolonged inundation, and protection against flood-related erosion and scour. In addition to these requirements, when intended to support buildings and structures (Zone A only), fill shall comply with the requirements of the UCC (N.J.A.C. 5:23). Proposed fill and encroachments in flood hazard areas shall comply with the flood storage displacement limitations of N.J.A.C. 7:13.

401.8 Limitations on sites in coastal high hazard areas (V Zones) and Coastal A Zones. In coastal high hazard areas and Coastal A Zones, alteration of sand dunes shall be permitted only when the engineering analysis required by Section 105.3(4) of these regulations demonstrates that the proposed alteration will not increase the potential for flood damage. Construction or restoration of dunes under or around elevated buildings and structures shall comply with Section 801.9(3) of these regulations and as permitted under the NJ Coastal Zone Management Rules (N.J.A.C. 7:7).

401.9 Hazardous Materials. The placement or storage of any containers holding hazardous substances in a flood hazard area is prohibited unless the provisions of N.J.A.C. 7:13 which cover the placement of hazardous substances and solid waste is met.

SECTION 501 MANUFACTURED HOMES

501.1 General. All manufactured homes installed in flood hazard areas shall be installed pursuant to the Nationally Preemptive Manufactured Home Construction and Safety Standards Program (24 CFR 3280).

501.2 Elevation. All new, relocated, and replacement manufactured homes to be placed

or substantially improved in a flood hazard area shall be elevated such that the bottom of the frame is elevated to or above the elevation specified in Section 801.2.

501.3 Foundations. All new, relocated, and replacement manufactured homes, including substantial improvement of existing manufactured homes, shall be placed on permanent, reinforced foundations that are designed in accordance with Section R322 of the Residential Code.

501.4 Anchoring. All new, relocated, and replacement manufactured homes to be placed or substantially improved in a flood hazard area shall be installed using methods and practices which minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

501.5 Enclosures. Fully enclosed areas below elevated manufactured homes shall comply with the requirements of Section 801.2.

501.6 Protection of mechanical equipment and outside appliances. Mechanical equipment and outside appliances shall be elevated to or above the elevation of the bottom of the frame required in Section 801.2 of these regulations.

> **Exception.** Where such equipment and appliances are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to the elevation required by Section 801.2, the systems and equipment shall be permitted to be located below that elevation. Electrical wiring systems shall be permitted below the design flood elevation provided they conform to the provisions of NFPA 70 (National Electric Code).

SECTION 601 RECREATIONAL VEHICLES

601.1 Placement prohibited. The placement of recreational vehicles shall not be authorized in coastal high hazard areas and in floodways.

601.2 Temporary placement. Recreational vehicles in flood hazard areas shall be fully licensed and ready for highway use and shall be placed on a site for less than 180 consecutive days.

601.3 Permanent placement. Recreational vehicles that are not fully licensed and ready for highway use, or that are to be placed on a site for more than 180 consecutive days, shall meet the requirements of Section 801.2 for habitable buildings.

SECTION 701 TANKS

701.1 Tanks. Underground and above-ground tanks shall be designed, constructed, installed, and anchored in accordance with ASCE 24 and N.J.A.C. 7:13.

SECTION 801 OTHER DEVELOPMENT AND BUILDING WORK

801.1 General requirements for other development and building work. All development and building work, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in these regulations or the Uniform Construction Code

(N.J.A.C. 5:23), shall:

(1) Be located and constructed to minimize flood damage;

(2) Meet the limitations of Section 105.3(1) of this ordinance when located in a regulated floodway;

(3) Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic and hydrodynamic loads, including the effects of buoyancy, during the conditions of flooding up to the Local Design Flood Elevation determined according to Section 102.3;

(4) Be constructed of flood damage-resistant materials as described in ASCE 24 Chapter 5;

(5) Have mechanical, plumbing, and electrical systems above the Local Design Flood Elevation determined according to Section 102.3 or meet the requirements of ASCE 24 Chapter 7 which requires that attendant utilities are located above the Local Design Flood Elevation unless the attendant utilities and equipment are:

i. Specifically allowed below the Local Design Flood Elevation; and

ii. Designed, constructed, and installed to prevent floodwaters, including any backflow through the system from entering or accumulating within the components.

(6) Not exceed the flood storage displacement limitations in fluvial flood hazard areas in accordance with N.J.A.C. 7:13; and

(7) Not exceed the impacts to frequency or depth of offsite flooding as required by N.J.A.C. 7:13 in floodways.

801.2 Requirements for Habitable Buildings and Structures.

1) Construction and Elevation in A Zones not including Coastal A Zones.

a. No portion of a building is located within a V Zone.

b. No portion of a building is located within a Coastal A Zone, unless a licensed design professional certifies that the building's foundation is designed in accordance with ASCE 24, Chapter 4.

c. All new construction and substantial improvement of any habitable building (as defined in Section 201) located in flood hazard areas shall have the lowest floor, including basement, together with the attendant utilities (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated to or above the Local Design Flood Elevation as determined in Section 102.3, be in conformance with ASCE Chapter 7, and be confirmed by an Elevation Certificate.

d. All new construction and substantial improvements of non-residential structures shall:
   i. Have the lowest floor, including basement, together with the attendant utilities (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated to or above the Local Design Flood Elevation as determined in Section 102.3, be in conformance with ASCE Chapter 7, and be confirmed by an Elevation Certificate; or
   ii. Together with the attendant utility and sanitary facilities, be designed so that below the Local Design Flood Elevation, the structure:
      1. Meets the requirements of ASCE 24 Chapters 2 and 7; and

2. Is constructed according to the design plans and specifications provided at permit application and signed by a licensed design professional, is certified by that individual in a Floodproofing Certificate, and is confirmed by an Elevation Certificate.

e. All new construction and substantial improvements with fully enclosed areas below the lowest floor shall be used solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding. Enclosures shall:

iii. For habitable structures, be situated at or above the adjoining exterior grade along at least one entire exterior wall, in order to provide positive drainage of the enclosed area in accordance with N.J.A.C. 7:13; enclosures (including crawlspaces and basements) which are below grade on all sides are prohibited;
iv. Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters unless the structure is non-residential and the requirements of 801.2.1(d)ii are met;
v. Be constructed to meet the requirements of ASCE 24 Chapter 2;
vi. Have openings documented on an Elevation Certificate; and
vii. Have documentation that a deed restriction has been obtained for the lot if the enclosure is greater than six feet in height. This deed restriction shall be recorded in the Office of the County Clerk or the Registrar of Deeds and Mortgages in which the building is located, shall conform to the requirements in N.J.A.C.7:13, and shall be recorded within 90 days of receiving a Flood Hazard Area Control Act permit or prior to the start of any site disturbance (including pre-construction earth movement, removal of vegetation and structures, or construction of the project), whichever is sooner. Deed restrictions must explain and disclose that:

1. The enclosure is likely to be inundated by floodwaters which may result in damage and/or inconvenience.
2. The depth of flooding that the enclosure would experience to the Flood Hazard Area Design Flood Elevation;
3. The deed restriction prohibits habitation of the enclosure and explains that converting the enclosure into a habitable area may subject the property owner to enforcement;

2) Construction and Elevation in V Zones and Coastal A Zones.

a. All new construction and substantial improvements shall be constructed according to structural designs, plans and specifications conforming with ASCE 24 Chapter 4 which are signed by a licensed design professional and certified by that individual in a V Zone Certificate.

b. All new construction and substantial improvement of any habitable building (as defined in Section 201) located in coastal high hazard areas shall have the lowest horizontal structural member, together with the attendant utilities (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated to the Local Design Flood Elevation as determined in Section 102.3, be in conformance with ASCE Chapter 7, and be confirmed by an Elevation Certificate.

c. All new construction and substantial improvements of non-residential structures shall:

   i. Have the lowest horizontal structural member, including basement, together with the attendant utilities (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated to or above the Local Design Flood Elevation as determined in Section 102.3, be in conformance with ASCE 24 Chapter 7, and be confirmed by an Elevation Certificate; or
   ii. Together with the attendant utility and sanitary facilities, be designed so that below the Local Design Flood Elevation, the structure:
      1. Meets the requirements of ASCE 24 Chapters 4 and 7; and
      2. Is constructed according to the design plans and specifications provided at permit application and signed by a licensed design professional, is certified by that individual in a Floodproofing Certificate, and is confirmed by an Elevation Certificate.

d. All new construction and substantial improvements shall have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. All breakaway walls shall be constructed according to structural designs, plans and specifications conforming with ASCE 24 Chapter 4, signed by a licensed design professional, and certified by that individual in a Breakaway Wall Certificate.

e. All new construction and substantial improvements with fully enclosed areas below the lowest floor shall be used solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding. Enclosures shall:

   i. Be situated at or above the adjoining exterior grade along at least one entire exterior wall, in order to provide positive drainage of the enclosed area in accordance with N.J.A.C. 7:13; enclosures (including crawlspaces and basements) which are below grade on all sides are prohibited.
   ii. Be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters unless the structure is non-residential and the requirements of 801.2.2(c)ii are met;
   iii. Be constructed to meet the requirements of ASCE 24 Chapter 4;
   iv. Have openings documented on an Elevation Certificate and have breakaway wall construction documented on a Breakaway Wall Certificate unless the requirements of 801.2.2(c)ii are met for a non-residential structure; and
   v. Have documentation that a deed restriction has been obtained for the lot if the enclosure is greater than six feet in height. This deed restriction shall be recorded in the Office of the County Clerk or the Registrar of Deeds and Mortgages in which the building is located, shall conform to the requirements in N.J.A.C.7:13, and shall be recorded within 90 days of receiving a Flood Hazard Area Control Act permit or prior to the start of any site disturbance (including pre-construction earth movement, removal of vegetation and structures, or construction of the project), whichever is sooner. Deed restrictions must explain and disclose that:

      1. The enclosure is likely to be inundated by floodwaters which may result in damage and/or inconvenience.

2. The depth of flooding that the enclosure would experience to the Flood Hazard Area Design Flood Elevation;
3. The deed restriction prohibits habitation of the enclosure and explains that converting the enclosure into a habitable area may subject the property owner to enforcement;

f. Enclosures are prohibited for new construction or substantial improvements; OR For new construction or substantial improvements, enclosures shall be less than 295 square feet in size.

801.3 Garages and accessory storage structures. Garages and accessory storage structures shall be designed and constructed in accordance with the Uniform Construction Code.

801.4 Fences. Fences in floodways that have the potential to block the passage of floodwater, such as stockade fences and wire mesh fences, shall meet the requirements of Section 105.3(1) of these regulations. Pursuant to N.J.A.C. 7:13, any fence located in a floodway shall have sufficiently large openings so as not to catch debris during a flood and thereby obstruct floodwaters, such as barbed-wire, split-rail, or strand fence. A fence with little or no open area, such as a chain link, lattice, or picket fence, does not meet this requirement. Foundations for fences greater than 6 feet in height must conform with the Uniform Construction Code. Fences for pool enclosures having openings not in conformance with this section but in conformance with the Uniform Construction Code to limit climbing require a variance as described in Section 107 of this ordinance.

801.5 Retaining walls, sidewalks, and driveways. Retaining walls, sidewalks and driveways that involve placement of fill in floodways shall meet the requirements of Section 105.3(1) of these regulations and N.J.A.C. 7:13.

801.6 Swimming pools. Swimming pools shall be designed and constructed in accordance with the Uniform Construction Code. Above-ground swimming pools and below-ground swimming pools that involve placement of fill in floodways shall also meet the requirements of Section 105.3(1) of these regulations. Above-ground swimming pools are prohibited in floodways by N.J.A.C. 7:13.

801.7 Roads and watercourse crossings.

(1) For any railroad, roadway, or parking area proposed in a flood hazard area, the travel surface shall be constructed at least one foot above the Flood Hazard Area Design Elevation in accordance with N.J.A.C. 7:13.
(2) Roads and watercourse crossings that encroach into regulated floodways or riverine waterways with base flood elevations where floodways have not been designated, including roads, bridges, culverts, low- water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, shall meet the requirements of Section 105.3(1) of these regulations.

801.8 Other development in coastal high hazard areas (Zone V) and Coastal A Zones. In Coastal High Hazard Areas (V Zones) and Coastal A Zones, development activities other than buildings and structures shall be permitted only when also authorized by the appropriate Federal, State or local authority; when located outside the footprint of, and not structurally attached to, buildings and structures; and when analyses prepared by a licensed professional engineer demonstrates no harmful diversion of floodwater or wave runup and wave reflection that would increase damage to adjacent buildings and structures. Such other development

activities include but are not limited to:

(1) Bulkheads, seawalls, retaining walls, revetments, and similar erosion control structures;

(2) Solid fences and privacy walls, and fences prone to trapping debris, unless designed and constructed to fail under flood conditions less than the base flood or otherwise function to avoid obstruction of floodwater; and

(3) On-site filled or mound sewage systems.

801.9 Nonstructural fill in coastal high hazard areas (Zone V) and Coastal A Zones. In coastal high hazard areas and Coastal A Zones:

(1) Minor grading and the placement of minor quantities of nonstructural fill shall be permitted for landscaping and for drainage purposes under and around buildings.

(2) Nonstructural fill with finished slopes that are steeper than one unit vertical to five units horizontal shall be permitted only when an analysis prepared by a licensed professional engineer demonstrates no harmful diversion of floodwater or wave runup and wave reflection that would increase damage to adjacent buildings and structures.

(3) Sand dune construction and restoration of sand dunes under or around elevated buildings are permitted without additional engineering analysis or certification of the diversion of floodwater or wave runup and wave reflection where the scale and location of the dune work is consistent with local beach-dune morphology and the vertical clearance is maintained between the top of the sand dune and the lowest horizontal structural member of the building.

SECTION 901 TEMPORARY STRUCTURES AND TEMPORARY STORAGE

901.1 Temporary structures. Temporary structures shall be erected for a period of less than 180 days. Temporary structures shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood. Fully enclosed temporary structures shall have flood openings that are in accordance with ASCE 24 to allow for the automatic entry and exit of flood waters.

901.2 Temporary storage. Temporary storage includes storage of goods and materials for a period of less than 180 days. Stored materials shall not include hazardous materials.

901.3 Floodway encroachment. Temporary structures and temporary storage in floodways shall meet the requirements of Section 105.3(1) of these regulations.

SECTION 1001 UTILITY AND MISCELLANEOUS GROUP U

1001.1 Utility and Miscellaneous Group U. In accordance with Section 312 of the International Building Code, Utility and Miscellaneous Group U includes buildings and structures that are accessory in character and miscellaneous structures not classified in any specific occupancy in the Building Code, including, but not limited to, agricultural buildings, aircraft hangars (accessory to a one- or two-family residence), barns, carports, communication equipment structures (gross floor area less than 1,500 sq. ft.), fences more than 6 feet (1829 mm) high, grain silos (accessory to a residential occupancy), livestock shelters, private garages, retaining walls, sheds, stables, tanks and towers.

1001.2 Flood loads. Utility and miscellaneous Group U buildings and structures, including substantial improvement of such buildings and structures, shall be anchored to prevent flotation, collapse or lateral movement resulting from flood loads, including the effects of buoyancy,

during conditions up to the Local Design Flood Elevation as determined in Section 102.3.

1001.3 Elevation. Utility and miscellaneous Group U buildings and structures, including substantial improvement of such buildings and structures, shall be elevated such that the lowest floor, including basement, is elevated to or above the Local Design Flood Elevation as determined in Section 102.3 and in accordance with ASCE 24. Utility lines shall be designed and elevated in accordance with N.J.A.C. 7:13.

1001.4 Enclosures below base flood elevation. Fully enclosed areas below the design flood elevation shall be constructed in accordance with Section 801.2 and with ASCE 24 for new construction and substantial improvements. Existing enclosures such as a basement or crawlspace having a floor that is below grade along all adjoining exterior walls shall be abandoned, filled-in, and/or otherwise modified to conform with the requirements of N.J.A.C. 7:13 when the project has been determined to be a substantial improvement by the Floodplain Administrator.

1001.5 Flood-damage resistant materials. Flood-damage-resistant materials shall be used below the Local Design Flood Elevation determined in Section 102.3.

1001.6 Protection of mechanical, plumbing, and electrical systems. Mechanical, plumbing, and electrical systems, equipment and components, heating, ventilation, air conditioning, plumbing fixtures, duct systems, and other service equipment, shall be elevated to or above the Local Design Flood Elevation determined in Section 102.3.

> **Exception:** Electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment shall be permitted to be located below the Local Design Flood Elevation provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the Local Design Flood Elevation in compliance with the flood-resistant construction requirements of ASCE 24. Electrical wiring systems shall be permitted to be located below the Local Design Flood Elevation provided they conform to the provisions of NFPA 70 (National Electric Code).

SECTION 3. SEVERABILITY.
Where any section, subsection, sentence, clause, or phrase of these regulations is, for any reason, declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof, other than the part so declared.

SECTION 4. EFFECTIVE DATE.
This ordinance shall take effect upon its final passage, publication and adoption in the manner prescribed by law.

FIRST READING:	*March 24, 2021*
PUBLICATION:	*March 29, 2021*
PASSAGE:	*April 14, 2021*

The within Ordinance was introduced at a meeting of the Common Council of the City of Linwood, County of Atlantic and State of New Jersey held on, March 24, 2021 and will be further considered for final passage after a public hearing thereon at a meeting of said Common Council on April 14, 2021.

_____

LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

_____

DARREN MATIK, MAYOR

ORDINANCE NO. 9, 2021

AN ORDINANCE TO EXCEED THE MUNICIPAL BUDGET APPROPRIATION LIMITS AND TO ESTABLISH A CAP BANK

WHEREAS, the Local Government Cap Law, N.J.S.A.40:A:4-45.1., provides that in the preparation of its annual budget, a municipality shall limit any increase in said budget up to 2.5% unless authorized by ordinance to increase it to 3.5% over the previous year's final appropriations, subject to certain exceptions; and,

WHEREAS, N.J.S.A. 40A:4-45.15a provides that a municipality may, when authorized by ordinance appropriate the difference between the amount of its actual final appropriation and the 3.5% percentage rate as an exception to its final appropriations in either of the next two succeeding years; and,

WHEREAS, the Common Council of the City of Linwood in the County of Atlantic finds it advisable and necessary to increase its CY 2021 budget up to 3.5% over the previous year's final appropriations, in the interest of promoting health, safety and welfare of the citizens; and,

WHEREAS, the Common Council hereby determines that a 3.5% increase in the budget for said year, amounting to $212,617.38 in excess of the increase in final appropriations otherwise permitted by the Local Government Cap Law, is advisable and necessary; and,

WHEREAS, the Common Council hereby determines that any amount authorized hereinabove that is not appropriated, as part of the final budget shall be retained as an exception to final appropriating in either of the next two succeeding years.

NOW THEREFORE BE IT ORDAINED, by the Common Council of the City of Linwood, in the County of Atlantic, a majority of the full authorized membership of this governing body affirmatively concurring that, in the CY 2021 budget year, the final appropriations of the City of Linwood shall, in accordance with this ordinance and N.J.S.A. 40A:4-45.14, be increased by 3.5% amounting to $212,617.38, and that the CY 2021 municipal budget for the City of Linwood be approved and adopted in accordance with this ordinance; and,

BE IT FURTHER ORDAINED, that any amount authorized hereinabove that is not appropriated as part of the final budget shall be retained as an exception to final appropriation in either of the next two succeeding years; and,

BE IT FURTHER ORDAINED, that a certified copy of this ordinance as introduced be filed with the Director of the

Division of Local Government Services within 5 days of introduction; and,

BE IT FURTHER ORDAINED that a certified copy of this ordinance upon adoption, with the recorded vote included thereon, be filed with said Director within 5 days after such adoption.

FIRST READING: *March 24, 2021*
PUBLICATION: *March 29, 2021*
PASSAGE: *April 14, 2021*

The within Ordinance was introduced at a meeting of the Common Council of the City of Linwood, County of Atlantic and State of New Jersey held on March 24, 2021 and will be further considered for final passage after a public hearing thereon at a meeting of said Common Council on April 14, 2021.

_____
LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

_____
DARREN MATIK, MAYOR

069-2021

MUNICIPAL BUDGET NOTICE

Section 1.

Municipal Budget of the CITY of LINWOOD, County of ATLANTIC for the Fiscal Year 2021

Be it Resolved, that the following statements of revenues and appropriations shall constitute the Municipal Budget for the year 2021;

Be it Further Resolved, that said Budget be published in the THE PRESS OF ATLANTIC CITY

in the issue of April 1st, 2021

The Governing Body of the CITY of LINWOOD does hereby approve the following as the Budget for the year 2021:

RECORDED VOTE
(Insert last name)

Ayes	Nays	Abstained	Absent

Notice is hereby given that the Budget and Tax Resolution was approved by the COUNCIL MEMBERS of the CITY of LINWOOD, County of ATLANTIC, on March 24th, 2021.

A Hearing on the Budget and Tax Resolution will be held at City Hall, on April 28th, 2021 at 6:00 o'clock PM at which time and place objections to said Budget and Tax Resolution for the year 2021 may be presented by taxpayers or other interested persons.

Sheet 2

RESOLUTION No. 66, 2021

A RESOLUTION AUTHORIZING PAYMENT TO THE LINWOOD VOLUNTEER FIRE COMPANY FOR THE SALE OF A FIRE TRUCK

WHEREAS, Resolution 45, 2021 adopted on February 10, 2021 authorizing the sale of surplus property conducted online through GovDeals; and

WHEREAS, one of the items sold was a 1986 Fire Truck, Vin#1FDYD80U5GVA7523, owned by the Linwood Volunteer Fire Company; and

WHEREAS, the fire truck was sold on March 16, 2021 for the amount of $3,025.00; and

WHEREAS, payment for the fire truck is due to the Linwood Volunteer Fire Company;

NOW, THEREFORE, BE IT RESOLVED, by the Common Council of the City of Linwood that the Chief Financial Officer of the City of Linwood be and is hereby authorized, empowered and directed to execute and deliver a draft in favor of the Linwood Volunteer Fire Company, 750 Lincoln Avenue, Linwood, NJ 08221 in the amount of $3,025.00 as payment for the sale of a 1986 fire truck sold on GovDeals on March 16, 2021.

I, Leigh Ann Napoli, RMC, Municipal Clerk of the City of Linwood, do hereby certify that the foregoing resolution was duly adopted at a Regular Meeting of the City Council of Linwood, held this 24th day of March, 2021.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 24th day of March, 2021.

_____
LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

_____
DARREN MATIK, MAYOR

APPROVED:_____

Linwood, NJ
400 W Poplar Ave
Linwood, NJ 08221-1853

Bill of Sale Date: 16 Mar 2021
Asset ID: 48

Bill of Sale Number: 3162021
Inventory ID: 48

Description of Property
1986 Ford C8000 Fire truck

Award Amount
3025.00

Asset Information

Year: 1986
Meter: 24266 Miles (Accurate?: Yes)
Make/Brand: Ford
Title Restriction: No Title Restriction
Model: C8000 **VIN/Serial:** 1FDYD80U4GVA37523

Sale Information

Actual Sold Amount:	USD $3,025.00
Other Amount:	USD $0.00
Buyer's Premium:	USD $378.12
Total Amount:	USD $3,403.12

Paid On: 17 Mar 2021 Wire Transfer

Other Amount Description:

Tim Wallace
23 E Seaview Ave
Linwood, NJ 08221
USA
tjwallace23@gmail.com
6097039395

Asset is sold as is, where is and without warranty. Once the asset is removed from the seller's premises there is no refund of monies previously paid.

Buyer/Agent Signature:_____
Print Name:_____
Date:_____

RESOLUTION No. 67, 2021

A RESOLUTION AWARDING THE CONTRACT TO INSPIRA HEALTH NETWORK, INC. FOR SHARED EMERGENCY MEDICAL SERVICES IN THE CITY OF LINWOOD AND THE CITY OF NORTHFIELD

WHEREAS, the City of Linwood received proposals for shared emergency medical services in the City of Linwood and the City of Northfield, under an Agreement for a Cooperative Pricing System with the City of Northfield, on March 3, 2021; and

WHEREAS, the proposals have been reviewed and a recommendation has been made with regard to same;

NOW, THEREFORE, BE IT RESOLVED, by the Common Council of the City of Linwood that the Contract for shared emergency medical services in the City of Linwood and the City of Northfield be and is hereby awarded, under an Agreement for a Cooperative Pricing System with the City of Northfield, to Inspira Health Network, Inc., 600 Cedar Street, Millville, New Jersey 08332, for a term of three years at no cost to the City of Linwood, as set forth in the proposal submitted, which is attached hereto and incorporated herein;

BE IT FURTHER RESOLVED, that the Mayor and City Clerk be and are hereby duly authorized, empowered and directed to execute a Contract or Agreement with Inspira Health Network, Inc. in accordance with the terms and conditions set forth in the proposal submitted;

BE IT FURTHER RESOLVED, that this Resolution is contingent upon the passage of a Resolution concurring in the award of this Contract by the City of Northfield;

I, Leigh Ann Napoli, RMC, Municipal Clerk of the City of Linwood, do hereby certify that the foregoing resolution was duly adopted at a Regular Meeting of the City Council of Linwood, held this 24th day of March, 2021.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 24th day of March, 2021.

_____
LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

_____
DARREN MATIK, MAYOR

APPROVED: _____

TABLE OF CONTENTS

TRANSMITTAL LETTER

March 3, 2021

OFFICE OF THE LINWOOD CITY CLERK

c/o Shared Services EMS Committee

CITY OF LINWOOD

400 POPLAR AVENUE LINWOOD, NEW JERSEY 08221

Dear Sir or Madam,

Inspira EMS and Ground Transportation is pleased to answer your RFP for BLS Emergency Ambulance Service for the cities of Northfield and Linwood in Atlantic County, New Jersey.

Inspira EMS and Ground Transportation is a premier provider of Emergent and Non-Emergent Prehospital and Interfacility Medical Transport operating in the counties of Cumberland, Gloucester and Salem. As a quadruple licensed EMS agency, we proudly provide Basic and Advanced Life Support, Specialty Critical Care Transport and Mobility Assistance Vehicles.

Our Team of over 350 employees are governed by two (2) 24-hour Field Supervisors, one (1) 12-hour EMS Operations Supervisor, and three (3) Service Line Operations Managers. Our newly redesigned dispatch center, iCOMM, is staffed 24 hours per day with Emergency Medical Dispatchers, EMT's, and a Communications Supervisor. Inspira EMS provides pre-hospital 911 services to Maurice River, Downe, and Fairfield Townships in Cumberland County NJ, as well as ALS Paramedic service in Cumberland, Salem and Gloucester Counties. Inspira EMS proudly participates in the NJ Motorsports Park racing season providing Basic and Advanced Life Support as well as Fire Suppression and Recovery Specialists. We provide in house Fleet Maintenance, Logistics, and 24-hour towing capability.

Inspira EMS and Ground Transport is focused on providing professional, competent and compassionate care to the residents and visitors in our service areas. Our extensive clinical team assures up to date training, education, certification and other requirements are met, maintained and verified. Clinical oversight is provided by our Medical Director, Dr. Jay Stiefel, who maintains medical direction for all EMT's, Paramedic's and Registered Nurses through Standing Order and Radio Failure guidance as dictated in NJ OEMS Regulations, including 8:40 and 8:41.

Reaffirming Inspira's commitment to the health and safety of our communities, please note that we have submitted a "Zero bid" for all service years.

We look forward to the opportunity to serve the citizens and visitors of The Cities of Northfield and Linwood.

In the event Inspira EMS is awarded the highest bid score, final acceptance of the contract will be subject to approval by the Board of Trustees of Inspira Health Network, Inc., with a requested start date of 6/1/2021.

Should you have any questions feel free to contact me.

Sincerely,

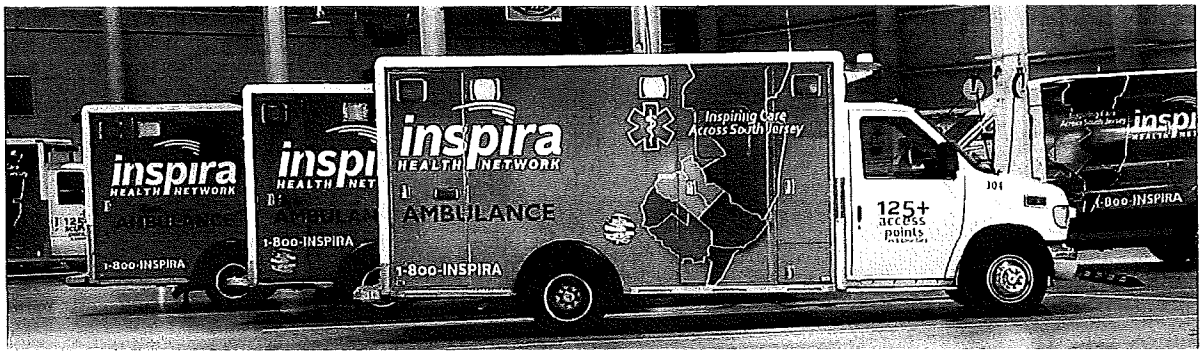
Mark Chapman
Administrative Director
Inspira EMS
600 Cedar Street
Millville, New Jersey 08332
chapmanm@ihn.org
Phone (856)825-5063

EXPERIENCE

Inspira Medical Centers (Woodbury), Inc. ("IHN") has been providing emergency medical services for over 40 years in Southern New Jersey at both the basic (EMT) and advanced life support (MICU) levels. Currently IHN provides 9-1-1 response services to the following communities:

- Maurice River Township (contract) – 911 Basic Life Support Pre-Hospital
- Downe Township (Municipal Resolution) – 911 Basic Life Support Pre-Hospital
- Fairfield Township (contract)– 911 Basic Life Support Pre- Hospital
- All of Cumberland, Salem and Gloucester Counties at the Advanced Life Support Level (MICU).

IHN is licensed by the NJ Department of Health and is currently in good standing for the entire fleet of over 30 licensed operational EMS vehicles (License attached).



STAFFING & TRAINING

IHN currently employs over 350 full time and part time emergency medical services field providers, support staff, and EMS Academy staff. All IHN field staff exceed the minimum requirements of the State of New Jersey including clinical training, background checks, driving history and drug screening. All ambulances are equipped with Automatic External Defibrillators (AED) and all staff are certified to utilize them. Additionally, Emergency Medical Technician -Basic staff are trained in administration of Narcan, CPAP, Aspirin for cardiac chest pain and Epinephrine for anaphylaxis. Inspira EMS is in the process of adding Albuterol administration by basic life support providers for the treatment of acute exacerbation of asthma.

EMERGENCY BACK UP/SUPPORT SERVICES

IHN maintains a mutual aid plan for the provision of 9-1-1 request during peak demand intervals. This plan is kept updated with the respective Communications dispatch protocol. The mutual aid plan will dispatch the nearest available ambulance service as a back-up when requested based on the type of incident and needs.

In addition to mutual aid protocol, IHN offers two (2) Bariatric Ambulances, a Fire Rehab unit, Special Operations Equipment including tents, heating and air-conditioning, off road ATV with patient transport capability. As a host agency of the New Jersey Task Force, we are tasked with the care, housing and operation of a 24-foot stake body with shelter system, skid steer and trailers, SOV with MCI Equipment, and additional off road "gator".

IHN will provide standby coverage for fire department activations as requested, as well as community events, MCI and Hazardous Materials exposure to the full of extent of our training and ability, to include advanced levels of service if requested by the entity that manages advanced care in the region.

LOCATION, PROXIMITY AND RESPONSE TIME STANDARD

IHN shall maintain a fractile response time of less than 7 minutes 30 Seconds for greater than 90% of requests for service in The Cities of Northfield and Linwood.

EMERGENCY DISPATCH SERVICE

IHN staffs our internal dispatch center (iCOMM) 24 hours/ 7 days a week. This will insure the immediate availability of direct communication to all calls made specifically to our organization. All requests for service that are made through the 9-1-1 system will go directly to Cumberland County Communications Center. These calls are directly handled by this public service answering point. All requests for emergency services are dispatched directly by County Communications. Inspira EMS does utilize fluid deployment strategies that allow it to efficiently move non-emergency ambulance services into the 9-1-1 systems through its internal communications system. Mapping Software and GPR units are utilized to assure fastest and most direct routes are utilized for response. Field crews are fully trained in the operation of GPS, Trauma Soft CAD and "Docsink" for communications and direction with iCOMM. All crews utilize pager, portable and mobile radio, unit cell phones, HIPAA compliant direct message service and CAD access to monitor service requests.

Requests for 911 activation will continue through the cities existing protocol. The need for additional units will be requested through agreed upon mutual aid plans to be negotiated with appropriate entities prior to commencement of services.

SERVICES & COST PROPOSAL

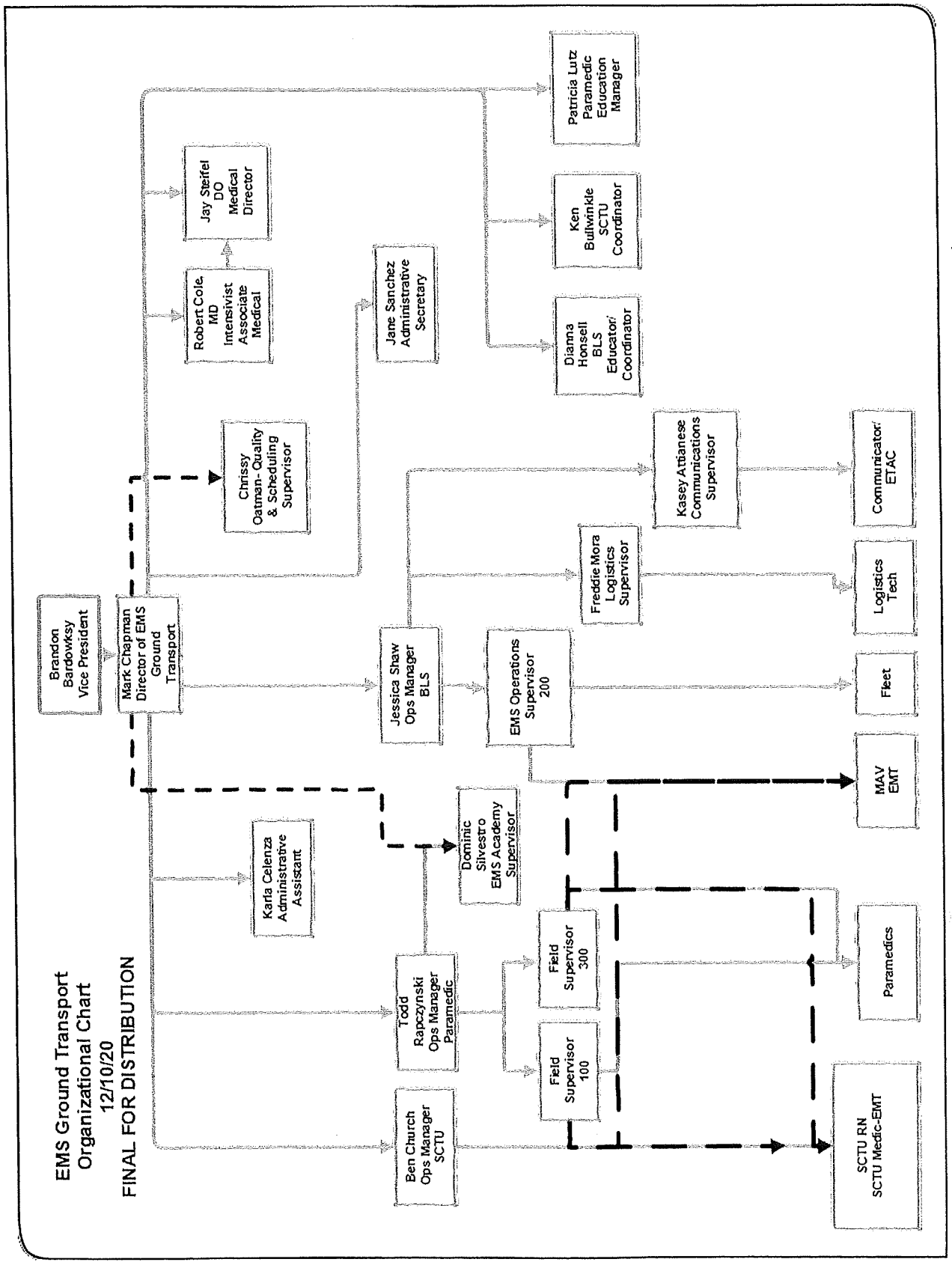
Inspira EMS is proposing, at Zero (0) cost to the Cities of Linwood and Northfield, one (1) 24-hour ambulance staffed with two (2) Emergency Medical Technicians who are certified and in good standing with the New Jersey Department of Health Office of Emergency Medical Services. Additionally, capable and properly equipped Advanced Life Support units may provide coverage as needed at no additional cost to the Township.

BILLING FOR SERVICES

IHN maintains an aggressive corporate compliance program focusing on billing practices. IHN will invoice all applicable third-party payors as well as residents and visitors for all out of pocket costs, such as copayments and deductibles as required by their subscriber agreement or under federal or state law. IHN will also invoice any uninsured patients in accordance with internal billing and apply IHN policies regarding charitable care as appropriate. IHN does not utilize the practice of billing insurance only when there is a patient responsibility component. IHN will make reasonable efforts to collect copayments and deductibles as required under current regulation.

LEADERSHIP

Inspira EMS is proud that its leadership team has a combined experience of 500 years in EMS. The following is the organizational structure:


EMS Ground Transport
Organizational Chart
12/10/20
FINAL FOR DISTRIBUTION
Brandon Bardowksy
Vice President
Mark Chapman
Director of EMS
Ground Transport
Jay Steifel
DO
Medical
Director
Robert Cole,
MD
Intensivist
Associate
Medical
Jane Sanchez
Administrative
Secretary
Patricia Lutz
Paramedic
Education
Manager
Ken
Bullwinkle
SCTU
Coordinator
Dianna
Honsell
BLS
Educator/
Coordinator
Chrissy
Oatman-Quality
& Scheduling
Supervisor
Kasey Attianese
Communications
Supervisor
Communicator/
ETAC
Freddie Mora
Logistics
Supervisor
Logistics
Tech
Jessica Shaw
Ops Manager
BLS
EMS Operations
Supervisor
200
Fleet
MAV
EMT
Karla Celenza
Administrative
Assistant
Dominic
Silvestro
EMS Academy
Supervisor
Field
Supervisor
300
Paramedics
Todd
Rapczynski
Ops Manager
Paramedic
Field
Supervisor
100
Ben Church
Ops Manager
SCTU
SCTU RN
SCTU Medic-EMT

RESOLUTION No. 68, 2021

A RESOLUTION AWARDING A CONTRACT TO SHORE SOLUTIONS MECHANICAL CONTRACTING, LLC FOR HVAC REPAIRS AND SERVICE FOR THE CITY OF LINWOOD

WHEREAS, quotes have been received with regard to HVAC repairs and service for all City owned buildings in the City of Linwood; and

WHEREAS, all quotes have been reviewed and a recommendation has been made with regard to same;

NOW, THEREFORE, BE IT RESOLVED, by the Common Council of the City of Linwood that a Contract for HVAC repairs and service be and is hereby awarded for a period of two years to Shore Solutions Mechanical Contracting, LLC, 106 Kensington Drive, Smithville, New Jersey 08205 in accordance with the quote attached hereto and made a part hereof;

BE IT FURTHER RESOLVED, that the Mayor and City Clerk be and are hereby duly authorized, empowered and directed to execute an Agreement on behalf of the City of Linwood with Shore Solutions Mechanical Contracting, LLC with regard to the aforesaid services.

BE IT FURTHER RESOLVED, that this Resolution is contingent upon a Certification of Availability of Funds from the Chief Financial Officer of the City of Linwood.

I, Leigh Ann Napoli, RMC, Municipal Clerk of the City of Linwood, do hereby certify that the foregoing resolution was duly adopted at a Regular Meeting of the City Council of Linwood, held this 24th day of March, 2021.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 24th day of March, 2021.

_____
LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

_____
DARREN MATIK, MAYOR

APPROVED: _____

CITY OF LINWOOD

Memo

To: Mayor and Members of Council

From: Anthony Strazzeri, CFO

CC: Leigh Ann Napoli, RMC, CMR, MPA, City Clerk

Date: 03-17-2021

Re: Availability of Funds-HVAC Repairs and Service

Pursuant to 40A: 4-57, I hereby certify that sufficient funds will be available under buildings and grounds in the operating budget. Funds will be encumbered to Shore Solutions Mechanical Contracting LLC, 106 Kensington Drive Smithville, NJ 08205.

City of Linwood

Department of Public Works

550 Hamilton Avenue * Linwood, New Jersey 08221

Solicitation of Quotes Form

Date: 3/1/21

Quotes Requested For: HVAC Maintenance and Repair – Hourly Rate

Employee Requesting Quotes: Chip Jones

#1 Vendor Contacted: Shore Solutions HVAC

Method of Contact:

Phone: _____ Fax: _____ Personal Contact: _____ E - Mail: X

Response: Yes X No_____ Awarded To: X

Name of Person: JAVIER RIVERA

Amount Quoted: $80.00 - $120.00 - $160.00 AS QUOTED

Department Head: 3/17/21

#2 Vendor Contacted: CM3 Building Solutions

Method of Contact:

Phone: _____ Fax: _____ Personal Contact: _____ E - Mail: X

Response: Yes X No_____ Awarded To: _____

Name of Person: SHANTEL ANDREWS

Amount Quoted: NO QUOTE SENT

Department Head: _____

#3 Vendor Contacted: Ferguson Enterprises

Method of Contact:

Phone: _____ Fax: _____ Personal Contact: _____ E - Mail: X

Response: Yes X No_____ Awarded To: _____

Name of Person: KIMBERLY KEENER

Amount Quoted: NO QUOTE SENT

Department Head: _____

* UNABE TO SUPPY REPAIR WORK

PROPOSAL FORM DATE: 3/2/2021

Straight time hourly rate
Normal workday is 8:00 a.m. to 4:00 p.m. $80/hr.

Overtime rate $120/hr

Holiday rate $160/hr

THE FOLLOWING ITEM (S) SHOULD BE SUBMITTED WITH THE PROPOSAL

1. New Jersey Business Registration Form

NAME OF CONTRACTOR

Javier Rivera
Person/Title

Shore Solutions Mechanical Contracting. LLC
Name of Company

BY: Javier Rivera
Signature

621 E. Seaview Ridge Drive, Galloway, NJ 08205
Street Address City State/Zip Code

Telephone # 609 748 1010 Fax # 609 7481010

03/12/13

Taxpayer Identification# 462-224-874/000

Dear Business Representative:

Congratulations! You are now registered with the New Jersey Division of Revenue.

Use the Taxpayer Identification Number listed above on all correspondence with the Divisions of Revenue and Taxation, as well as with the Department of Labor (if the business is subject to unemployment withholdings). Your tax returns and payments will be filed under this number, and you will be able to access information about your account by referencing it.

Additionally, please note that State law requires all contractors and subcontractors with Public agencies to provide proof of their registration with the Division of Revenue. The law also amended Section 92 of the Casino Control Act, which deals with the casino service industry.

We have attached a Proof of Registration Certificate for your use. To comply with the law, if you are currently under contract or entering into a contract with a State agency, you must provide a copy of the certificate to the contracting agency.

If you have any questions or require more information, feel free to call our Registration Hotline at (609)292-9292.

I wish you continued success in your business endeavors.

Sincerely,

James J. Fruscione

James J. Fruscione
Director
New Jersey Division of Revenue

STATE OF NEW JERSEY

BUSINESS REGISTRATION CERTIFICATE

DEPARTMENT OF TREASURY
DIVISION OF REVENUE
PO BOX 252
TRENTON, NJ 08646-0252

TAXPAYER NAME:
SHORE SOLUTIONS MECHANICAL CONTRACTING L

TRADE NAME:

ADDRESS:
106 KENSINGTON DRIVE
SMITHVILLE NJ 08205

SEQUENCE NUMBER:
1780176

EFFECTIVE DATE:
03/12/13

ISSUANCE DATE:
03/12/13

James J. Fruscione
Director
New Jersey Division of Revenue

FORM BRC

This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address.

RESOLUTION No. 70, 2021

A RESOLUTION PROVIDING NOTICE OF INTENT TO COMPLY WITH FEMA STANDARDS FOR LINWOOD'S FLOODPLAIN MANAGEMENT PROGRAM

WHEREAS, the City received correspondence on March 1, 2021 from the FEMA Floodplain Management and Insurance Branch with regard to a request for information and Corrective Actions; and

WHEREAS, the City of Linwood has taken the required steps to provide the information requested and actions that need to be corrected; and

WHEREAS, FEMA has requested a Resolution of intent to comply with same;

NOW, THEREFORE, BE IT RESOLVED, by the Common Council of the City of Linwood that all items noted and requested in the FEMA correspondence from March 1, 2021 will be addressed and provided prior to August 29, 2021.

I, Leigh Ann Napoli, RMC, Municipal Clerk of the City of Linwood, do hereby certify that the foregoing resolution was duly adopted at a Regular Meeting of the City Council of Linwood, held this 24th day of March, 2021.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 24th day of March, 2021.

_____
LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

_____
DARREN MATIK, MAYOR

APPROVED:_____

RESOLUTION No. 71, 2021

A RESOLUTION AUTHORIZING THE HIRING OF TYLER R. ODENATH AND THOMAS P. FLYNN, III AS PART TIME RELIEF FIREFIGHTERS FOR THE CITY OF LINWOOD

WHEREAS, there exists several vacancies in the position of Part-time Relief Firefighter in the City of Linwood; and

WHEREAS, the Common Council of the City of Linwood is desirous of filling the aforesaid vacancies;

NOW, THEREFORE, BE IT RESOLVED, by the Common Council of the City of Linwood, County of Atlantic, that Tyler R. Odenath and Thomas P. Flynn, III are hereby hired as Part-time Relief Firefighters at a rate as provided for in the Linwood Salary Ordinance and all amendments thereto;

BE IT FURTHER RESOLVED, that this Resolution is contingent upon satisfactory completed background checks on Tyler R. Odenath and Thomas P. Flynn, III.

I, Leigh Ann Napoli, RMC, Municipal Clerk of the City of Linwood, do hereby certify that the foregoing resolution was duly adopted at a Regular Meeting of the City Council of Linwood, held this 24th day of March, 2021.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 24th day of March, 2021.

_____
LEIGH ANN NAPOLI, RMC, MUNICIPAL CLERK

_____
DARREN MATIK, MAYOR

APPROVED:_____