

**BOROUGH OF BANGOR  
COUNTY OF NORTHAMPTON  
COMMONWEALTH OF PENNSYLVANIA  
ORDINANCE #966**

**AN ORDINANCE REPEALING AND REPLACING ORDINANCE #550, AS AMENDED TO PROVIDE AN UPDATE TO  
THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE**

WHEREAS, as a result of extensive discussions by the Borough Council and the Planning Commission it was found to be in the best interest of the Borough to update the Subdivision and Land Development Ordinance  
NOW, THEREFORE, it is hereby ORDAINED and ENACTED by the Borough Council of the Borough of Bangor as follows:

**Borough of Bangor  
Subdivision and Land  
Development Ordinance**

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## **ARTICLE ONE - GENERAL PROVISIONS**

### **Section 100. Title.**

This Ordinance shall be known and may be cited as the Bangor Borough Subdivision and Land Development Ordinance of [date].

### **Section 101. Enactment.**

This Ordinance has been enacted in conformance with the provisions of the Pennsylvania Municipalities Planning Code, Act No. 247 of 1968 and the Pennsylvania Stormwater Management Act P.L. 864 (Act 167), as amended.

### **Section 102. Contents.**

This Ordinance contains regulations which include, but are not limited to the following:

- A. Provisions for the filing, processing, review, and approval of all subdivision and land development plans;
- B. Design standards and guidelines for the overall layout, configuration, and placement of lots, roads, open space, parks, public facilities and other physical improvements on property to promote orderly development compatible with the Borough comprehensive plan;
- C. Engineering and technical standards, including appropriate financial guarantees, governing the manner by which various improvements including streets, bridges, common facilities, water supply and sewage facilities infrastructure, stormwater management facilities, walkways, lighting, and other improvements are properly constructed.

### **Section 103. Purposes.**

The following are the purposes of this Ordinance:

- A. To ensure the overall health, safety, and general welfare of the residents of Borough;
- B. To enable the development of Borough in an orderly, efficient, integrated, and harmonious manner;
- C. To guide the future growth and development of Borough in conformance to the Borough Comprehensive Plan and to other relevant regulations, maps, studies, and reports adopted in furtherance thereof;
- D. To ensure that streets in and bordering a subdivision or land development shall be coordinated, and be of such design, and in such locations as deemed necessary to accommodate prospective traffic and parking, and to facilitate fire protection and other emergency services;
- E. To require adequate, appropriately located easements or rights-of-way for existing and future utilities and storm drainage facilities;
- F. To preserve lands subject to inundation or flooding from subdivision or land development which would endanger life or property or further aggravate or increase the existing flooding or inundation conditions;
- G. To encourage and promote flexibility, economy, and ingenuity in the layout and design of subdivisions and land developments, including provisions authorizing the Borough to modify the requirements of this Ordinance in accordance with concepts and practices consistent with the modern and evolving, generally accepted principles of site planning, engineering, and land development;
- H. To provide equitable and expeditious handling of all subdivision and land development proposals by providing uniform procedures and standards;

- I. To ensure conformance of subdivision and land development plans with the public improvements of the Borough, and coordination of inter-municipal, county, and Pennsylvania improvement plans and programs;
- J. To provide adequate open space lands and recreation facilities;
- K. To preserve and protect natural resources and to prevent pollution of air and water so as to maintain the quality of life within the Borough and adjacent lands;
- L. To maintain the character and the social and economic stability of Borough and to encourage the orderly and beneficial development of the community;

**Section 104. Interpretation.**

The provisions of this Ordinance shall be the minimum requirements to meet the above-stated purposes. Where the provisions of this Ordinance impose greater restrictions than those of any other statute, ordinance, or regulations, then the provisions of this Ordinance shall prevail unless specifically preempted by a state or federal statute. Where the provisions of any other statute, ordinance, or regulations impose greater restrictions than those of this Ordinance, the provisions of such statute, ordinance, or regulations shall take precedence.

**Section 105. Jurisdiction.**

Borough Council shall, with the recommendation of the Planning Commission, review and act upon as appropriate all subdivision and land development plans as defined below and in Section 201 of this ordinance which are located entirely or in part of the Borough.

- A. **Subdivision and Land Development.** No subdivision or land development of any lot, tract, or parcel of land as defined in Article Two, shall be made, and no street, alley, sanitary sewer, storm drain, water main, gas, oil or electric line, or other improvements in connection therewith, shall be laid out, constructed, or dedicated for public use, or travel, or for the common use of occupants of a building abutting thereon, except in strict accordance with this Ordinance.
- B. **Sale of Lots, Issuance of Building Permits, or Erection of Buildings.** No lot in a subdivision or land development may be sold, and no permit to erect, alter, or repair any building upon land in a subdivision or land development will be issued unless and until a subdivision and/or land development plan has been approved, and where required, recorded, and until the required improvements in connection therewith have either been constructed or guaranteed for construction in the form of a bond, escrow, or other means approved by Borough under the advice of the Borough Engineer and Solicitor, in accordance with the laws of the Commonwealth of Pennsylvania.
- C. **Condominiums.** No provision of this Ordinance shall be construed to prohibit condominium ownership as permitted by the applicable enabling legislation of the Commonwealth of Pennsylvania.

**Section 106. Waiver of Requirements**

Borough Council may grant a modification of the requirements of this ordinance, through a waiver, if strict application of these requirements would be unreasonable or cause undue hardship, or when an alternative standard can be demonstrated to provide equal or better results, provided that such waiver will not be contrary to the public interest and that the purpose and intent of the Ordinance is observed. All requests for modifications shall be provided in writing and be part of the application for subdivision and/or land development. In the request for a modification, the applicant shall:

- 1. State the grounds and facts of unreasonableness or hardship on which the request is based or demonstrate that an alternative standard can provide equal or better results;
- 2. List the provision(s) of the Ordinance involved;
- 3. State the minimum modification necessary.

## **ARTICLE TWO - DEFINITIONS**

### **Section 200. Language Interpretations.**

For purposes of this Ordinance, certain words shall be interpreted as follows:

- A. Words used in the present tense include the future.
- B. The singular number includes the plural and the plural includes the singular.
- C. The phrase "used for" includes "arranged for," "designed for," "intended for," "maintained for," and "occupied for."
- D. The word "person" includes an individual, corporation, partnership, incorporated association, and/or any other similar entity.
- E. The words "include" or "including" shall not limit the term to the specified examples, but are intended to extend the meaning to all other instances of like kind and character.
- F. The word "building" shall always be construed as if followed by the words "or part thereof".
- G. The word "may" is permissive, and the words "shall" and "will" are always mandatory.
- H. The words: "he" or "she" or "they" are to be used interchangeably with the word "person".
- I. The word "street" includes road, highway, avenue, boulevard, or expressway.
- J. The word "stream" includes watercourse, creek or river.
- K. The names of organizations, including government agencies, shall be construed to include their successors.

### **Section 201. Definition of Terms.**

Words and terms used in this Ordinance shall have the meanings given in this Article. Unless expressly stated otherwise, any pertinent word or term not a part of this listing, but vital to the interpretation of this Ordinance, shall be construed to have its legal definition, or in absence of a legal definition, its meaning as commonly accepted by practitioners including civil engineers, surveyors, architects, landscape architects, and planners.

**Access Drive.** A privately owned, constructed, and maintained vehicular access from a public or private right-of-way to off-street parking or loading spaces.

**Accessory Structure or Building.** A structure or building detached from a principal building on the same lot and customarily incidental and subordinate to the principal building.

**Alley.** See "Street or Road".

**Applicant.** A person who has filed an application for approval of subdivision, land development plan, including his/her heirs, successors, agents and assigns. The term also includes landowner, developer, builder and/or other persons responsible for the plans and construction of buildings or other improvements on any parcel of land.

**Application for Subdivision or Land Development.** Every application, whether preliminary or final, required to be filed and approved prior to start of construction or development.

**Authority.** A public organization created pursuant to the Pennsylvania Municipal Authorities Act of 1945 (P.L. 382, No.164).

**Best Management Practice (BMP) Activities, facilities, designs, measures or procedures** used to manage stormwater impacts from regulated activities; to meet Pennsylvania water quality requirements, to promote groundwater recharge; and to otherwise meet the purposes of this Ordinance. Stormwater BMPs are commonly grouped into one of two broad categories or measures: "structural" or "non-structural." In this ordinance, non-structural BMPs or measures refer to operational and/or behavior-related practices that attempt to minimize

the contact of pollutants with stormwater runoff, whereas structural BMPs or measures are those that consist of a physical device or practice that is installed to capture and treat stormwater runoff. Structural BMPs include, but are not limited to, a wide variety of practices and devices. (i.e. infiltration facilities, bio-retention, wet ponds, permeable paving, grassed swales, riparian or forested buffers, sand filters, detention basins, and manufactured devices) Structural stormwater BMPs are permanent appurtenances to the project site.

**Block.** A unit of land bounded by streets or by a combination of streets and public land, railroad rights-of-way, waterways, or any other barrier to development.

**Bond.** Any form of surety bond in an amount and form satisfactory to Borough Council. All bonds shall be approved by the Borough Council whenever a bond is required by regulations.

**Borough.** The Borough of Bangor, Northampton County, Pennsylvania

**Borough Council.** The Borough Council of the Borough of Bangor, Northampton County, Pennsylvania

**Buffer.** An area designed and functioning to separate the elements and uses of land which abut it and to ease the transition between them. Unless otherwise specified, "buffer" may be included as part of the required setbacks and yard areas.

**Builder.** See Applicant.

**Building.** Any structure having a roof supported by columns or walls and intended for the shelter, housing or enclosure of any individual, animal, equipment, goods or materials of any kind or nature. (Also see Accessory Structure and Principal Building)

**Caliper.** Tree trunk diameter measured in inches at six (6") inches above ground level for trees four (4") inches or less in diameter or twelve (12") inches above ground level for larger trees.

**Cartway.** The paved portion of a street or highway designed for vehicular traffic.

**Common Facilities.** All of the real property and improvements set aside for the common use and enjoyment of the residents, including, but not limited to, buildings, open land, private roads, parking areas, walkways, recreation areas, landscaped areas, drainage easements, and any utilities that service more than one unit, such as sewer and water facilities.

**Common Open Space.** See "Open Space, Common".

**Comprehensive Plan.** The Comprehensive Plan and amendments thereto, including maps, charts, and/or descriptive matter officially adopted by the Borough, indicating recommendations for the continuing development of the municipality.

**Conservation District.** A conservation district, as defined in Section 3(c) of the Conservation District Law (3 P. S. § 851(c)), which has the authority under a delegation agreement executed with the Pennsylvania Department of Environmental Protection to administer and enforce all or a portion of the erosion and sediment control program in their county.

**Condominium.** Real estate, portions of which are designated for separate ownership and the remainder of which is designated for common ownership solely by the owners of those portions, created under either the Pennsylvania Unit Property Act of July 3, 1963 or the Pennsylvania Uniform Condominium Act.

**Contiguous.** Properties sharing a common boundary. Properties on opposite sides of a public right-of-way shall not be considered contiguous.

**Construction.** The construction, reconstruction, renovation, repair, extension, expansion, alteration, or relocation of a building or structure, including the placement of mobile homes.

**Crosswalk.** An improved right-of-way for pedestrian travel across a street connecting two blocks.



**Cul-de-sac.** See "Street or Road".

**Culvert.** A conduit not incorporated in a closed storm sewer system, that carries drainage water under a driveway, roadway, paved area, or other feature.

**Cut.** An excavation; the difference between a point on the original ground and a designated point of lower elevation on the final grade. Also, the material removed in an excavation.

**De Minimis Improvements.** Non-residential property improvements which would, by their use, require less than five parking spaces with a maximum footprint of the addition being less than 1,000 square feet of new building.

**Design Storm.** The magnitude and temporal distribution of precipitation from a storm event measured in probability of occurrence (e.g. a 5-year storm) and duration (e.g. 24 hours), used in the design and evaluation of stormwater management systems.

**Developer.** Any landowner, agent of such landowner, or tenant with the permission of such landowner, who makes or causes to be made a subdivision of land or a land development.

**Development.** Any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures, streets and other paving, utilities, mining, dredging, filling, grading, excavation, or drilling operations.

**Development Plan.** The provisions for guiding development, including a plan of subdivision, all covenants relating to use, location and bulk of buildings and other structures, intensity of use or density of development, streets, parking facilities, ways, common open space, and public facilities.

**Driveway.** A private way providing for vehicular access between a public street and a parking area or garage within a lot or property.

**Dwelling or Dwelling Unit.** One or more rooms designed, occupied, or intended for occupancy as a separate living quarter with cooking, sleeping, and sanitary facilities for the exclusive use of a single occupant, multiple occupants, or a family maintaining a household.

**Easement.** A vested or acquired legal right to use land other than as a tenant, for a specific purpose, such right being held by someone other than the owner who holds title to the land.

**Elevation.** A vertical distance above or below a fixed reference level; or a flat scale drawing of the front, rear, or side of a building.

**Engineer.** A professional engineer licensed as such in the Commonwealth of Pennsylvania and competent in the profession as established under the Pennsylvania Engineer, Land Surveyor, and Geologist Registration Act.

**Escrow.** A deposit of cash with the Borough or escrow agent to secure the promise to perform some future act.

**Excavation.** Any act by which natural materials are dug into, cut, quarried, uncovered, removed, displaced, relocated, or bulldozed, as well as the conditions resulting from such activities.

**Existing Condition.** The dominant land cover during the five (5) year period immediately preceding a proposed regulated activity.

**Fence.** A man-made barrier placed or arranged as a line of demarcation between lots or to enclose a lot or portion thereof. The term "fence" shall be deemed to include a freestanding wall.

**Fill.** Any act by which natural materials are placed, pushed, dumped, pulled, transported, or moved to a new location above the natural surface of the ground or on top of the stripped surface, as well as the conditions resulting from such activities.

**Floodplain.** A relatively flat or low land area adjoining a stream, river, or watercourse, which is subject to partial or complete inundation during a 100-year flood, or any area subject to the unusual and rapid accumulation of surface water from any source; also referred to as flood-prone area.

**Floodplain Districts.** These specifically designated areas delineated in the Bangor Borough Zoning Ordinance includes land which will be inundated primarily by the 100-year flood. Included would be areas identified as the Floodway District (FW), Flood-Fringe District (FF) and General Floodplain District (FA).

**Floodplain Management.** The application of a program or activities which may consist of both corrective and preventive measures for reducing flood damages.

**Foot-candle.** Unit of light intensity stated in lumens per square foot and measureable with a luminance meter.

**Frontage.** That side of a lot abutting on a street or right-of-way and ordinarily regarded as the front of the lot.

**Full Cutoff.** The attribute of a light fixture from which no light is emitted at or above a horizontal plain drawn through the bottom of the fixture and no more than 10% of the lights intensity is emitted at or above an angle of 10°degrees below the horizontal plain, at all lateral angles around the fixture.

**Glare.** Excessive brightness in the field of view that causes a loss in visual performance or annoyance so as to jeopardize health, safety, and welfare.

**Grade.** The slope of a street, parcel of land, utility lines, drainage ways, etc., specified in percent (%) and shown on plans as required herein.

**Ground Cover.** Low growing plant materials planted in a manner to provide continuous plant cover of the ground surface and other low plant materials are included. Non-plant ground cover may also include bark or wood chips, gravel, and stone provided they are maintained as a continuous pervious cover.

**Height of Building.** The vertical distance measured from the average elevation of the existing grade at the location of the building to the highest point of a flat or multi-level roof or, for gable, hip or gambrel roofs to the mean height between the eaves and ridge. Chimneys, spires, towers, mechanical penthouses, tanks, and similar projections not intended for human occupancy shall be excluded.

**Impoundment.** A body of water, such as a pond, confined by dam, dike, floodgate, or other barrier.

**Improvements.** The physical additions, installations, and changes required to render land suitable for the use proposed, including streets, curbs, sidewalks, utilities, and drainage facilities.

**Improvements, Public.** Improvements, including but not limited to those contained in the definition of "improvements," that are intended for dedication to the Borough, or other municipal body or authority, either in fee or in easement.

**Improvements, On-site.** Improvements, including but not limited to those contained in the definition of "improvements," that are constructed on the applicant's property or along the road frontage of the tract being developed up to the centerline of the road.

**Land Development.** Any of the following activities:

1. The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving:
  - a. A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or
  - b. The division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features.

2. A subdivision of land.
3. Development in accordance with Section 503 (1.1) of the Pennsylvania Municipalities Planning Code.

**Landowner.** The legal or beneficial owner or owners of land, including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee if he is authorized under the lease to exercise the rights of the landowner, or other person having proprietary interest in land.

**Light Trespass.** Light emitted by a fixture or installation which is cast beyond the boundaries of the property on which the lighting fixture is placed.

**Lot.** A contiguous tract, parcel, or unit of land held by a landowner and/or intended for use, development, lease, or transfer of ownership, and for which a deed description is recorded or is intended to be recorded at the Office of the Recorder of Deeds for Northampton County.

**Lot Area, Buildable.** Net lot area contained within the deeded boundaries of the lot minus the area of any land unsuitable for development due to natural conditions or various legal or physical restrictions.

**Lot Area, Gross.** Calculated land area contained within the deeded boundaries of a lot.

**Lot, Corner.** A lot having contiguous frontage on two or more intersecting roads. The yard setback for each road frontage shall be the front yard setback for the district in which the lot is located. One of the other two sides should have a rear yard setback while the other would be the side yard.

**Lot Line.** Any property boundary line of a lot, further defined as follows:

1. Front lot line is the line identical with the street ultimate right-of-way line.
2. Rear lot line is the line or lines most nearly parallel or concentric to the front lot line.
3. Side lot lines are the lines most nearly perpendicular or radial to the front lot line. On a corner lot, the side lot line shall be the line or lines most nearly perpendicular or radial to the higher classification of street, where applicable. The remaining line shall be considered the rear lot line.
4. A lot which fronts on more than one street shall have a front lot line on each street frontage.

**Mature Tree.** Any tree of six (6") inches or more in caliper, whether standing alone or in a tree mass or woodlands. A mature tree shall be a desirable species as determined by the Borough Engineer or landscape architect.

**Mobile Home.** A transportable single family dwelling intended for permanent occupancy in one unit or two units designed to be joined into an integral unit, which arrives at the site complete and ready for occupancy except for minor and incidental un-packing and assembly operations, and constructed so that it may be used without a permanent foundation. A mobile home need not meet local building codes, but shall meet the standards of the U.S. Department of Housing and Urban Development, as indicated in the Structural Engineering Bulletin(s) which shall be provided to the Borough by the applicant. Also referred to as a manufactured home.

**Mobile Home Park.** A parcel or contiguous parcels of land which has been so designated and improved that it contains two or more mobile home lots for the placement of mobile homes.

**Monument.** A tapered, permanent survey reference point of stone or concrete having a top four (4") inches on each side and a length of twenty-four (24") inches.

**Natural Feature.** A component of a landscape existing or maintained as part of the natural environment and having ecological value in contributing beneficially to, among other things, air and water quality, erosion control, groundwater recharge, noise abatement, visual amenities, growth of wildlife, human recreation, reduction of climatic stress and energy costs.

**Obstruction.** Any wall, dam, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel, rectification, culvert, building, fence, stockpile, refuse, fill, structure or matter in, along, across or projecting into any channel, watercourse or designated floodplain district which may impede, slow down or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water, or is placed where the flow of the water might carry the same downstream to damage of property or threaten lives.

**Official Map.** The map adopted by Borough pursuant to Article IV of the Municipalities Planning Code.

**Open Space.** Public or private lands designated for the use and enjoyment of residents of a development and/or the general public, incorporating natural features such as woodlands, streams, or meadows, and including state, county or Borough parks, trails, and other recreational facilities. Also includes Common Open Space as defined below, and other private lands which are available for the use of Borough residents (i.e., through access easements). (See Open Space, Common)

**Open Space, Common.** A parcel or parcels of land within a development site designed and intended for the use or enjoyment of the residents of the development and or the general public, not including streets, street right-of-ways, off-street parking areas, and areas set aside for public facilities. Common open space shall be substantially free of structures but may contain such recreational facilities for residents as are shown in the approved development plan.

**Park.** Any area which is predominantly open space, is used principally for active or passive recreation, and is not used for a profit-making purpose.

**Pathway.** A designated land corridor containing a route designed for non-motorized travel that connects local facilities, neighborhoods, commercial districts, etc. to a larger trail or sidewalk network. Sidewalks are not considered pathways.

**Pennsylvania Municipalities Planning Code.** The Municipalities Planning Code, originally enacted as Act 247 of 1968, which establishes the basic authority for the exercise of municipal land use controls in Pennsylvania. All subsequent amendments are included. Abbreviated as "MPC" or "Act 247".

**Plan.** A graphic representation of a proposal for subdivision and/or land development, including necessary written notes.

**Planning Commission.** The Borough Planning Commission.

**Plat.** The map or plan of a subdivision or land development, whether preliminary or final.

**Principal Building.** A building which is considered the principal use of the lot on which it is located.

**Principal Use.** The single dominant use or single main use on a lot.

**Property Line.** A recorded boundary of a lot. Any property line which abuts a street or other public way shall be measured from the right-of-way.

**Right-of-Way.** A strip of land occupied or intended to be occupied at some future date by roads, railroads, transmission lines, pathways, oil and gas pipe lines, water lines, sewer lines, and other similar facilities.

**Riparian.** Vegetated areas that characteristically have a high water table and are subject to periodic flooding and influence from the adjacent waterbodies. These areas can encompass wetlands, uplands, or some combination of these two landforms; they do not in all cases have all of the characteristics necessary for them to be classified as wetlands

**Security.** A letter of credit, surety bond, certified check, or cash escrow provided by the applicant to secure its promises regarding public improvements associated with an approved subdivision or land development.

**Sediment.** Soils or other materials transported by surface water as a product of erosion.

**Sewage Facilities Plan.** A comprehensive plan for the provision of adequate sewage facilities which was adopted by Borough and approved by the Department of Environmental Protection under the Pennsylvania Sewage Facilities Act (Act 537).

**Sight Distance, Stopping.** The distance of unobstructed view along the centerline of a street from the driver's eye-height of three and one-half (3½') feet above the pavement surface to the furthest visible point twenty-four (24) inches above the street surface.

**Sight Triangle.** A triangular-shaped portion of land established at street intersections in which nothing is erected, placed, planted, or allowed to grow in such a manner as to limit or obstruct the sight distance of motorists entering or leaving the intersection.

**Specimen Tree.** Any tree with a caliper that is 75% or more of the record tree of the same species in the Commonwealth of Pennsylvania

**Soil Survey.** The Northampton County Soil Survey, latest edition, prepared by the Nature Resources Conservation Service of the United States Department of Agriculture.

**Stormwater Management Facility.** Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff. Typical stormwater management facilities include, but are not limited to, detention and retention basins, open channels, storm sewers, pipes, and infiltration structures.

**Stormwater Basin.** A structure which provides for the storage and controlled release of stormwater runoff during and after a storm. Also referred to as a sediment, retention, or detention basin.

**Stormwater Runoff.** Water from rainfall or melting snow in a watershed in excess of the natural absorbency of that watershed, which flows over the ground surface to collect in streams and channels.

**Street or Road.** Any way which serves to access and provide for transportation between multiple properties, whether under public or private ownership, and used or intended to be used by vehicular traffic or pedestrians including street, avenue, boulevard, road, highway, freeway, parkway, lane, alley, viaduct, or other similar facilities.

1. **Arterial.** A street serving a large volume of comparatively high speed and long distance traffic.
  - a. **Principal Arterial.** An arterial serving the heaviest volumes of traffic in municipality, providing the highest degree of vehicular mobility, and involving controls on access.
  - b. **Minor Arterial.** An arterial serving high volumes, providing a high degree of mobility, and some limits on access.
2. **Collector.** A street designed and located to provide a means to accommodate traffic between neighboring communities and to interconnect arterial streets with local roads.
  - a. **Major Collector.** A collector serving moderate levels of traffic within the municipality, providing a mix of mobility and access and linking adjacent communities.
  - b. **Minor Collector.** A collector serving lower amounts of traffic, providing more access than mobility, and serving as a major road through residential neighborhoods.
3. **Local Road.** A road intended to provide access to other roads from individual properties.
4. **Cul-de-Sac Street.** A local street with only one outlet and having an appropriate terminus for the safe and convenient reversal of traffic.
5. **Private Street.** A local street, serving abutting lots that is not offered or required to be offered for dedication.

6. **Alley.** A public or privately owned right-of-way, on which no new dwellings, stores, or other principal buildings are intended to front, serving as the secondary means of access to two or more properties whose principal frontage is some other street.

**Street Rights-of-Way.** Rights-of-way for street purposes are defined as follows:

1. **Legal Right-of-Way.** The street right-of-way legally in the public domain at the time a subdivision or land development plan is submitted.
2. **Ultimate Right-of-Way.** The street right-of-way projected as necessary for adequate handling of anticipated maximum traffic volumes, according to the Ultimate Right-of-Way Map incorporated in the Borough Comprehensive Plan. The ultimate right-of-way becomes the legal right-of-way where it has been offered for dedication and accepted by the Borough.
3. **Equivalent Right-of-Way:** A street right-of-way required to be reserved where private streets are permitted. The width shall be determined by the street's function, in accordance with street classifications contained in this ordinance.

**Structure.** Anything built, constructed, or erected which requires location on the ground or attachment to something located on the ground.

**Subdivision.** The division or re-division of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels, or other divisions of land, including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisee, transfer of ownership or building or lot development. The subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or any residential dwelling shall be exempted.

**Subdivision, Major.** All subdivisions not classified as minor subdivisions, including but not limited to subdivisions of four or more lots, or any size subdivision requiring a new street or extension of the municipal facilities or the creation of public improvements.

**Subdivision, Minor.** Any subdivision containing not more than three lots fronting on an existing street, not involving any new street or road, or the extension of municipal facilities or the creation of public improvements, and not adversely affecting the remainder of the parcel or adjoining property, and not in conflict with any provision or portion of the Comprehensive Plan, Official Map, Zoning Ordinance, or other pertinent regulations.

Minor subdivisions include lot line adjustments and simple conveyances, as defined herein:

- A. **Lot Line Adjustment.** A proposal between two abutting, existing, legally approved and recorded lots in which a lot line between the two lots is proposed to be adjusted in terms of its location or configuration. Reasons for lot line adjustments include:
  1. Correcting errors regarding locations of existing improvements (e.g. if the driveway for Lot #1 is located on Lot #2);
  2. Relating the line to definitive physical characteristics (e.g. to adjust the line to run along an existing hedgerow);
  3. Preferences of the landowners involved.
- B. **Simple Conveyance.** A proposal between two abutting, existing, legally approved and recorded lots in which a portion of one lot is being divided off to be conveyed to the owner of the abutting lot. The land area to be conveyed in a simple conveyance generally does not comply with one or more of the dimensional standards of the district in which the lots are located.

**Surveyor.** A land surveyor, registered as such in the Commonwealth of Pennsylvania, and competent in profession as established under the Pennsylvania Engineer, Land Surveyor, and Geologist Registration Act.

**Topsoil.** The original upper layer of soil material to a depth of six (6") inches which is usually darker and more fertile than subsoil.

**Traffic Impact Study.** A technical evaluation of the traffic impacts associated with a proposed subdivision or land development. Criteria for a traffic impact study are contained in Section 801.

**Trail.** A designated land corridor containing an improved route designed for non-motorized travel that provides recreational, aesthetic, alternate transportation, or education opportunities for people of all ages and abilities. Sidewalks are not considered trails though they can serve as trail connections.

**Trip.** A single or one-way vehicle movement to or from a property or study area. "Trips" can be added together to calculate the total number of vehicles expected to enter or leave a specific land use or site over a designated period of time.

**Ultimate Right-of-Way Line.** The dividing line between a lot and the outside limit of a street ultimate right-of-way. Identical with "front lot line".

**Visual Screen.** A barrier for the purpose of limiting or obscuring a view; generally comprised of vegetation, structures, or earthworks suitable for the purpose.

**Watercourse.** A depression which carries the flow of surface water including permanent and intermittent streams, brooks, creeks, channels, ditches, swales, and rivers.

**Wetland.** Those areas that are inundated and saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions; includes swamps, marshes, bogs and similar areas. Development in "wetlands" is regulated by the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Protection. Identification of "wetlands" should be based upon the latest Corps of Engineers Wetlands Delineation Manual.

**Yard.** The area(s) of a lot which must remain free of buildings or other structures and may be used as lawn or planted area, parking, or driveway space, in compliance with the provisions of this Ordinance. A yard is measured at right angles from the right-of-way or lot line to the nearest building wall. Yard is further defined as follows:

1. **Front Yard.** A yard which extends across the full width of a lot, for a depth equal to the minimum front yard setback distance required by the specific regulations of the Zoning Ordinance, measured perpendicular from the street right-of-way line, unless stated otherwise, toward the center of the lot.
2. **Rear Yard.** The space extending across the full width of a lot for a depth equal to the minimum rear yard setback distance required by the specific regulations of the Zoning Ordinance, measured perpendicular from the rear lot line to the center of the lot.
3. **Side Yard.** A space extending from the front yard to the rear yard for a depth equal to the minimum side yard setback distance required by the specific regulations of the Zoning Ordinance, measured perpendicular from the side lot line toward the center of the lot.

## **Section 202. Abbreviations.**

DEP. Pennsylvania Department of Environmental Protection

DRBC. Delaware River Basin Commission

EPA. Federal Environmental Protection Agency

IES. Illuminating Engineering Society

ITE. Institute for Traffic Engineers

- E. The location and extent and configuration of buildings, parking lots, and common areas in multifamily and commercial developments.
- F. The proposed building density and impervious coverage.
- G. The compatibility of the proposal with respect to the objectives and policy recommendations of the Comprehensive Plan, the Open Space Plan, and other pertinent Borough plans and studies.
- H. Consistency with the Zoning Ordinance.

**Section 304. Preliminary Plan Requirements.**

This Section contains the requirements for Preliminary Plans for subdivisions and/or land developments in terms of Drafting Standards, Basic Information, Existing Features, and Proposed Features.

- A. Twenty (20) paper copies of the Preliminary Plan shall be filed with the Borough Manager or his/her designee, in person by the applicant or applicant's agent, at the Borough Office during normal Borough business hours. In addition to the paper copies of the plans required for submission, the applicant shall also provide a compact disk with plan sheets in a pdf or other acceptable software format.
- B. Notice of all applications for the approval of a subdivision and land development shall be given by conspicuously posting a written notice of the application on the affected tract prior to submission of the Preliminary Plan. This notice shall adhere to the following:
  - 1. The notice must remain in place until Final Plan approval is given.
  - 2. The notice shall be printed on a sign with the minimum dimensions of 24" by 36" of the type used for real estate sales.
  - 3. The sign shall state the following: "This property is subject to a subdivision and land development application in Bangor Borough."
  - 4. The sign shall be posted in a location that is clearly visible from adjacent roadway or roadways.
  - 5. Proof of posting by way of dated photograph must be provided in the application submitted to the Borough.
- C. Plans must be accompanied by:
  - 1. Borough filing fee.
  - 2. Lehigh Valley Planning Commission review fee.
  - 3. Completed Borough application and administrative forms.
- D. Drafting Standards. Plans shall be professionally prepared in compliance with the following:
  - 1. The plan shall be drawn to a standard engineering scale not exceeding 100' feet to the inch.
  - 2. Sheet size shall be or 18" X 30" or 24" X 36", appropriately related to the scale of the drawing.
  - 3. All sheets shall be the same size, and be numbered relative to the total number of sheets
  - 4. Where two or more sheets are needed to show the entire tract, a reduced scale key plan shall be provided to show how the sheets fit together. Match lines shall be shown.
  - 5. A reduced scale plan of the entire site at a scale greater than 100' feet to one inch may be required in cases where it would facilitate the review and approval process.
  - 6. Property lines shall be drawn and labeled in conformance with the act of May 23, 1945 (P.L. 913, No. 367), known as the "Engineer, Surveyor, and Geologists Registration Act," and accepted



surveying and civil engineering practices, including dimensions shown in feet and decimal fractions thereof, and bearings shown in degrees, minutes, and seconds.

- a. Tract boundary lines shall be the heaviest property lines.
- b. Proposed lot lines shall be the next heaviest.
- c. Possible future lots, if shown, shall be the lightest line weight, and may be shown as dashed lines.
- d. Property lines to be eliminated where 2 or more lots are proposed to be joined in common deed should be properly noted and depicted on the boundary to be removed.

**E. Basic Information. All Preliminary Plans shall show the following basic information:**

1. Name of the subdivision or land development.
2. Name, address, email, and phone number of applicant.
3. Name, address, email, and phone number of the firm which prepared the plan and professional seal of the individual certifying its accuracy and compliance with applicable standards.
4. Date of preparation of the plan and a descriptive list of revisions to the plan, and revision dates.
5. North point and scale displayed in graphic and written form.
6. Location plan showing the relationship of the subject tract to the surrounding road network, adjacent properties, and major physical features.
7. The entire tract boundary with bearings and distances and total tract acreage.
8. A list of the basic dimensional and density requirements of the applicable zoning district, compared to the applicant's proposal.
9. Zoning classification(s) of all lands abutting the proposal.
10. Names of all current owners of immediately adjacent lands.
11. A statement showing:
  - a. Number of acres under proposal (net and gross acreage should be indicated in accordance with the zoning ordinance).
  - b. Number of lots and/or dwelling units and total building area. If existing buildings are to be reused, the building area should be expressed as existing building area and additional building area.
12. Description of variances or special exceptions, conditions of their approval, and the dates they were granted, if any.
13. Description of any deed restrictions, including conservation and environmental, or other covenants affecting development of the tract. This information should contain the name of the easement holder or parties in the covenant agreement and a reference to their deed and page book recording location.
14. The requirements of any other local ordinance which may affect the proposal.
15. The plan shall bear an adequate legend to indicate clearly which features are existing and which are proposed, and include a description of all symbols used.
16. Name and address of the owner of record if different from the applicant.
17. Tax parcel number(s) of all parcels being subdivided or developed.
18. Deed book and page numbers for all parcels being subdivided or developed.

19. Dimensions shall be displayed in feet and decimal parts thereof, and bearings in degrees, minutes, and seconds.

F. Existing Features Plan. Within the tract proposed for subdivision and/or land development, and within one-hundred (100') feet of the tract boundaries, the following information shall be shown on the Preliminary Plan:

1. Streets bordering or crossing the tract, including:
  - a. Locations.
  - b. Names.
  - c. Rights-of-way; legal and ultimate
  - d. Cartway widths.
  - e. Surface conditions.
  - f. Location of curbs and sidewalks.
2. Water resources, including:
  - a. Lakes and ponds.
  - b. Wetlands, swamps, or marshes.
  - c. Watercourses and springs.
  - d. Existing well locations in use, capped, and abandoned
  - e. Flood-prone or floodplain areas including data from FEMA Studies, supporting hydrologic and hydraulic data for 100-year flood limits, or Northampton County Soil Survey when applicable, as determined appropriate by the Borough Engineer.
3. Sanitary Sewers, including:
  - a. Pipe locations.
  - b. Pipe sizes and materials.
  - c. Direction of flow.
  - d. Gradient of flow.
  - e. Manholes.
  - f. Invert Elevations.
  - g. Septic systems and drain fields.
4. Storm sewers, including:
  - a. Pipe locations.
  - b. Pipe sizes and materials.
  - c. Direction of flow.
  - d. Gradient of flow.
  - e. Inlets, catch basins, and manholes.
  - f. Invert elevations.
5. Other existing stormwater and/or erosion control facilities, including:
  - a. Basins.
  - b. Swales.
  - c. Diffusion devices.
  - d. Velocity controls.
  - e. Related technical data for those facilities.
6. Other natural features, including:
  - a. Location, size, species, and condition of trees six (6") inches in diameter (dbh) or greater, when standing alone or in small groups.
  - b. Outer limits of woodlands and a general description of their types, sizes, and conditions.

- c. Locations and limits of geologic features which may affect the locations of proposed streets or buildings, including:
  - 1) Rock outcroppings.
  - 2) Quarries.
  - 3) Sink holes.
  - 4) Ravines

7. Soil types, including:

- a. Mapped limits.
- b. Names.
- c. Significant limitations, such as, high water table or shallow bedrock.

8. Contour information including:

- a. Contours at a vertical interval of two (2') feet, accurately drawn from photogrammetric or on-site survey data.
- b. Areas with slopes of fifteen (15%) percent or greater should be adequately depicted, as determined from the contours shown on the plan.

9. Other man-made features, including:

- a. Location, size, character, and configuration of existing buildings or structures, driveways, parking lots or any type of paved surface, labeled "To Remain" or "To Be Removed" as applicable.
- b. Location and description of existing buildings and other structures less than one-hundred (100') feet beyond the tract boundaries.
- c. Location, type, and ownership of utilities, both above and below ground, with notes to describe:
  - 1) Easement or right-of-way dimensions.
  - 2) Additional setback or development restrictions imposed by the utility company or other regulations.
  - 3) Specific type of product transported with pipelines.

G. Proposed Features and Lotting Plan. Within the tract proposed for subdivision and/ or land development, the following information shall be shown on the Preliminary Plan:

1. Subdivision and/or Land Development Layout

- a. Proposed streets, alleys, driveways, and parking areas, including:
  - 1) Names or other identification.
  - 2) Right-of-way widths and lines.
  - 3) Cartway widths.
  - 4) Centerline courses, distances, and curve data.
  - 5) Curb lines.
  - 6) Radii at intersections.
  - 7) Street location tie-ins to nearest intersection by courses and distances.
  - 8) Capacity of parking areas.
  - 9) Sight distance at proposed intersections with existing streets.
  - 10) Location and type of all traffic control signs, signals, and devices proposed.
  - 11) Rights of way or easements proposed for drainage.
  - 12) Plan of street lighting indicating location and type of fixtures to be installed.
- b. Layout and dimensions of all lots, including the net and gross lot area as defined within the zoning ordinance.
- c. All building setback lines (including existing buildings to be used).
- d. All parking setback lines where applicable.

- e. Proposed sidewalk or other walkway locations.
  - f. Proposed buildings, including:
    - 1) Locations.
    - 2) Configurations.
    - 3) Sizes (ground level floor area, total floor area, number of stories, and height).
    - 4) Total building coverage (square feet and percentage of site).
    - 5) Locations, configuration, and types of accessory structures.
    - 6) Ground floor elevations.
  - g. Common use areas, including:
    - 1) Open Space Areas.
    - 2) Recreation facilities.
    - 3) Parking, driveway, or road areas when privately owned for common use.
    - 4) Walkways or pathways.
    - 5) Notes regarding offers of dedication or retention in private ownership.
  - h. Areas reserved for future uses, including:
    - 1) Road extensions.
    - 2) Stormwater management facilities.
    - 3) Additional subdivision or land development in sketch form, in accordance with the requirements of Section 302, Sketch Plan Submission Requirements, and in accordance with the intent of Section 303, Sketch Plan Review Procedure.
    - 4) Explanatory notes for such future uses.
  - i. Impervious Coverage Area Calculations
  - j. Proposed Landscaping Plan including:
    - 1) Existing vegetation to be removed.
    - 2) Existing vegetation to be preserved.
    - 3) A plan of proposed plantings showing the locations of street trees, parking lot landscaping, stormwater facilities landscaping, and any required buffer areas.
    - 4) Proposed planting schedule, including the number, location, species and sizes of plantings.
    - 5) Existing and proposed contours including related landscape features such as mounding and water features.
    - 6) Other planting areas such as managed meadow or other naturalized settings.
  - k. Proposed Outdoor Lighting Plan. Proposed fixtures for roadways, parking lots, and other public areas.
    - 1) A detailed ten-foot grid showing the horizontal maintained foot candle levels at grade, to the boundary of the site or past the boundary until the illumination values reach 0.0 foot candles.
    - 2) The minimum and average, and maximum maintained illumination levels for the areas being illuminated to demonstrate compliance with lighting requirements in Borough.
    - 3) Description of existing and proposed equipment including; mounted height from the lowest point of fixture to the finished grade, fixture mounting equipment, light shielding and light standard or pole height
2. Grading and Drainage Plan. The following information shall be shown on the Preliminary Plan:
- a. Proposed contours for the entire site.
  - b. Approximate limits of site disturbance, including a clear delineation of existing vegetation including trees, hedge rows, wooded areas, scrub growth, meadow, and actively farmed land:
    - 1) To be removed.
    - 2) To be preserved including method of preservation.

- c. **Stormwater management and erosion control and sedimentation facilities, including:**
  - 1) Basins.
  - 2) Swales.
  - 3) Diffusion devices.
  - 4) Velocity controls.
  - 5) Pipe locations.
  - 6) Pipe sizes and materials.
  - 7) Direction of flow.
  - 8) Gradient of flow.
  - 9) Inlets, catch basins, and manholes including rim and invert elevations.
  - 10) Invert elevations.
  - 11) Design calculations for these facilities shall be submitted in report form with a note on the plan referencing the report.

**3. Infrastructure Plan**

- a. **Sanitary sewer line locations, clearly identifying the following:**
  - 1) Pipe sizes and materials.
  - 2) Direction of flow.
  - 3) Gradient of flow.
  - 4) Manholes.
  - 5) Invert and rim elevations.
- b. **Sanitary sewage pumping stations.**
  - 1) Dimensions and material of pumping station.
  - 2) Pump type.
  - 3) Float and alarm elevations.
  - 4) Electrical equipment.
  - 5) Force main material, location, size and tie-in.
- c. **On-lot sewage disposal systems**
  - 1) Tanks
  - 2) Piping
  - 3) Field
- d. **Water supply facilities, including:**
  - 1) Central water supply lines.
  - 2) Pipe sizes and materials.
  - 3) Fire hydrant locations.
  - 4) Well locations when on lot, including the 100-foot radius clear zone separating wells from sewage disposal locations.
- e. **Finished floor elevations of proposed buildings.**
- f. **Municipal waste disposal facilities.**
- g. **Underground utilities**
  - 1) Electric
  - 2) Communications

**4. Cross Sections, Profiles, and Preliminary Structural Designs.**

The following shall be provided:

- a. **Cross section and centerline profile for each proposed or widened cartway, driveway, or parking area shown on the Preliminary Plan including:**

- 1) Road centerline grades and vertical curvature including road centerline elevations shown at horizontal intervals of twenty-five (25') feet along vertical curves and 50' feet for straight grades.
- 2) Profiles for sanitary sewers, water mains, storm drains, including locations of manholes, inlets, and catch basins. Including location, size, and type of line with stations; slope between manholes or inlets; location of laterals or water services including fire hydrants, valves, etc.; existing ground surface with elevation of rim/grate and invert elevations; location, size, depth, and type of material of all other utilities in the vicinity of the pipe.
- b. Preliminary design of any bridges, culverts, or other structures and appurtenances which may be required.
- c. Cross-section (Streets)
  - 1) Right of way and cartway width.
  - 2) Type, thickness, and crown of paving.
  - 3) Type and size of curb.
  - 4) Grading of sidewalk area.
  - 5) Location, width, type and thickness of sidewalks.
  - 6) Grading of stormwater swale adjacent to cartway.
  - 7) Typical location of sewers and utilities, street trees, street lights and other improvements along roads.
5. Supporting Information.
  - a. A new development schedule including the approximate date when the construction is expected to begin and completed.
  - b. A copy of all restrictions or covenants if any under which lots are to be sold.
  - c. Copy of the last recorded subdivision or land development plan pertaining to the site.
  - d. Traffic impact or water resources study if applicable.
  - e. A plan for the ownership, maintenance and management of open space areas.
  - f. Reports or letters regarding availability of sewer and water facilities.
  - g. Copies of letters and permit applications to all reviewing agencies.
  - h. Stormwater calculations and reports.
6. Additional Plans. Other plans as required to comply with this Ordinance or other provisions in the Borough Zoning Ordinance.

**Section 305. Preliminary Plan Filing and Review Procedure.**

The procedure contained in this Section shall regulate the review of Preliminary Plans for subdivision and land development.

- A. The Borough staff person designated will conduct a cursory review of the application filed including administrative forms, Preliminary Plans, and other required studies and reports to ensure that the submission appears to be complete, and will then stamp the plans with the plan filing date.
- B. The Preliminary Plan shall be placed on the agenda of the next regularly scheduled meeting of the Borough Planning Commission following the plan filing date provided that plans are filed at least fifteen (15) calendar days prior to the meeting date.
- C. The Borough staff person designated shall distribute copies of the plan to the following for review and recommendations:
  1. Borough Planning Commission.
  2. Borough Council.

3. Borough Engineer.
  4. Lehigh Valley Planning Commission, along with the required review fee and completed review request form.
  5. Borough staff including: Solicitor, other Borough boards or officials, and other technical consultants as needed.
- D. Upon completion of its review of the Preliminary Plan, which should include consideration of the timely recommendations of the Borough Engineer, Lehigh Valley Planning Commission, and other technical advisors when requested, the Borough Planning Commission shall communicate its recommendations to Borough Council.
- E. Borough Council shall have a ninety (90) day time period to act on the plan unless the applicant has agreed in writing to an extension of the time period, as set forth in the MPC.
- F. The Borough Council shall consider the Preliminary Plan application at one or more of its public meetings during the 90-day time period, and/or extension thereof if applicable, and shall render a decision on the plan following receipt of the recommendations of the Borough Planning Commission, Borough Engineer, Lehigh Valley Planning Commission, and/or other technical advisors as requested.
- G. Procedure Following the Borough Council Decision. When the Borough Council makes a decision on a Preliminary Plan, one of following procedures will be followed, depending on the type of decision:
1. Denial. If Borough Council denies a Preliminary Plan, then the written notification to the applicant shall specify the defects found in the application and describe the requirements which have not been met, and shall cite the provisions of the statute or ordinance relied upon.
  2. Approval. If a Borough Council approves a Preliminary Plan, as filed by the applicant, then the Secretary will so certify thereon, and a copy of the approved plan will be forwarded to the applicant. The applicant shall then submit two paper copies of the approved plan for Borough seal and signature.
  3. Approval Subject to Conditions. If Borough Council approves a Preliminary Plan, conditioned upon the performance of any act or the obtaining of any other approval or permit by the applicant, the applicant shall be given the opportunity to accept or reject the conditions within a ten (10) day period. The approval of the plan shall be rescinded automatically without action of Borough Council, at the end of 10 days from the date at which conditional approval was granted or notice received by the applicant regarding the conditional approval, upon either the applicant's failure to execute the written acceptance or upon rejection of such conditions by the applicant.
- H. Effective Period of Approval. Approval will be effective for a period of five (5) years from the date of plan approval in accordance with the MPC, unless extended in writing by the Borough Council.
1. No subsequent change or amendment in the zoning, subdivision, or other governing ordinance or plan shall be applied to affect adversely the right of the applicant to commence and to complete any aspect of the approved development in accordance with the terms of approval within that five (5) year period.
  2. In the case where Preliminary and Final Plan approval are concurrent, the five (5) year period shall be measured from the date of that concurrent approval.
  3. In a case of a Preliminary Plan calling for the installation of improvements beyond the five (5) year period, a schedule shall be filed by the applicant with the Preliminary Plan delineating all proposed sections as well as deadlines within which applications for Final Plan approval of each section are intended to be filed.

- a. Such schedule shall be updated annually by the applicant on or before the anniversary of the Preliminary Plan approval, until Final Plan approval has been granted to the final section.
- b. Any modification in the aforesaid schedule shall be subject to approval of Borough at its discretion.
- c. Each section in any residential subdivision or land development, except for the last section, shall contain a minimum of 25% percent of the total number of dwelling units as shown on the Preliminary Plan, unless a lesser percentage is approved by Borough Council in its discretion.
- d. For any section or sections, beyond the initial section, in which the required improvements have not been substantially completed within the initial five (5) year period, no subsequent change or amendment in the zoning, subdivision, or other governing ordinance or plan shall be applied to affect adversely the right of the applicant to commence and to complete each subsequent section for an additional term of three (3) years from the date of Final Plan approval of each section.

**Section 306. Final Plan Requirements.**

All Final Plans for subdivisions and/or land developments shall consist of two basic parts, the Improvement Construction Plan and the Record Plan, and shall comply with the requirements of this Section. Information on the Final Plans should reflect the approved Preliminary Plans and any conditions made in the approval of them.

- A. Twenty (20) copies of the paper copies of the Final Plan shall be submitted to the Borough Manager or his/her designee, in person by the applicant or applicant's agent, at the Borough Office during normal Borough business hours.
- B. Improvement Construction Plan.
  1. Drafting Standards. The same standards shall be required for an Improvements Construction Plan as for a Preliminary Plan, except that the horizontal scale of the plan and profile shall not exceed fifty (50') feet to the inch and the vertical scale of the plan shall be 2', 4', or 5' feet to the inch, whichever is most appropriate.
  2. Information to be Shown. The plan shall contain sufficient information needed for the construction of the proposed streets, or any portion thereof, including all appurtenances, sewers and utilities, as shown on the approved Preliminary Plan. **Paragraphs 2a, 2b, and 2c are only required when needed, as determined by the Borough Engineer.** This information shall include:
    - a. Horizontal Plan. The horizontal plan shall show details of the horizontal layout as follows:
      - 1) Information shown on the approved Preliminary Plan.
      - 2) The beginning and end of proposed immediate and future construction.
      - 3) Stations corresponding to those shown on the profiles.
      - 4) The curb elevation at tangent points of horizontal curves, at road or alley intersections, and at the projected intersections of the curb lines.
      - 5) The location and size of sanitary sewers and lateral connections and water mains with distances between manholes, gas, electric and other utility pipes or conduits and of storm drains, inlets and manholes.
      - 6) The location, type, and size of curbs and all paving widths.
      - 7) The location of fire hydrants and street lights.
    - b. Profiles. The profiles shall show details as follows:
      - 1) Profiles and elevations of the ground along the centerlines of proposed streets.



- 2) Profiles of sanitary sewers with a profile over the sewer of the existing and finished ground surface showing manhole locations beginning at the lowest manhole.
  - 3) Profiles of storm drains showing catch basins, inlet, and manhole locations, swales, ditches, or related features.
  - 4) Profiles of water mains.
- c. **Cross Sections.** The cross section for each classification of street shall comply with the Borough's standards and specifications as minimum requirements. It shall show a typical cross section across the road with details of grading and construction as follows:
- 1) The ultimate right-of-way width and the location and width of the cartway.
  - 2) The type, depth, and crown of paving.
  - 3) The type and size of curb.
  - 4) When sidewalks are required, grading of the sidewalk area should be carried to the full width of the ultimate right-of-way.
  - 5) The location, width, type and depth of sidewalks, when required.
  - 6) The typical locations, size, and depths of sewers and utilities.
  - 7) Proposed grading to the ultimate right-of-way line.
- d. **Construction Detail Drawings.** Drawings in sufficient detail shall be provided for all site improvements.
- e. **Additional Information.** The following additional information shall be submitted with the Final Plan.
- 1) All required Local, State, and Federal Permits shall be submitted. These permits may include: Northampton County, PennDOT, or Borough road access permits; DEP permits for drainage, stream alteration, wetlands encroachment, floodplain, water quality discharge, dams, erosion, and sedimentation control, air pollution, or sanitary sewage facilities.
  - 2) The following statements shall be required on the Final Plan:
    - i) "The Approved Improvement Construction Plan, a copy of which may be inspected at the Borough Office, has been made a part of the Approved Final Plan."
    - ii) "For access to a highway under the jurisdiction of PennDOT, a highway occupancy permit is required, pursuant to Section 420 of the act of June 1, 1945 (P.L. 1242, No. 428) known as the "State Highway Law." Access to the State highway shall be only as authorized by the highway occupancy permit."
  - 3) All engineering calculations which support the proposed improvements such as drainage calculations, sanitary facility design calculations, or structural calculations.
  - 4) Certification of inspection and satisfactory functioning of any on-lot sewage disposal system which will remain in use, in accord with current industry, DEP, or County Health Department standards.
  - 5) Developments utilizing public water or sewer facilities should provide proof that those services will be provided.
  - 6) Sewage facilities plan approval from DEP.
  - 7) Approval of the erosion and sediment control plan from the Conservation District.

**C. Record Plan.**

1. **Drafting Standards.** The same standards shall be required for a Record Plan as for a Preliminary Plan, and in addition, for recording purposes, the plans shall be placed on sheet sizes of 15" x

18", 18" X 30", or 24" X 36". All lettering and lines should be drawn to be legible if the plan is reduced to half size. A 2-inch border on the left side of the plan should be free of information.

2. Information to be shown. The plan, which includes all portions of an approved Preliminary Plan, shall also show:
  - a. Basic information, as required for a Preliminary Plan, Section 304.E.
  - b. Courses and distances sufficient for the legal description of all the lines shown on the plan. The error of closure shall not be greater than 1 part in 10,000.
  - c. Names or identification of the following:
    - 1) Abutting owners.
    - 2) All dimensional and technical descriptions of roads.
    - 3) Easements.
    - 4) Rights-of-way.
    - 5) Open space, recreation, and/or other common use areas.
    - 6) Other public improvements.
    - 7) For land development plans, all additional information pertinent to the location and construction of site improvements, including buildings, walks, parking, driveways, and other related facilities.
    - 8) Parcel identification number.
    - 9) Lehigh Valley Planning Commission file number.
  - d. All lots deeded to the ultimate right-of-way so that a single deed may be drawn to the appropriate body having jurisdiction for the dedication of streets by the applicant.
  - e. Evidence that the plans are in conformance with the zoning ordinance and other applicable Borough ordinances and regulations. In any instance where such plans do not conform, evidence shall be presented that an exception, waiver, or variance has been officially authorized.
  - f. The location, material, and size of all existing and proposed monuments or pins with reference to them.
  - g. Building setback lines with distances from the ultimate right-of-way line, and property lines.
  - h. Appropriate notes and conditions governing the use or development of the proposed property.

**D. Certifications. When approved, the Record Plan must show:**

1. The signature and seal of the registered Engineer and Surveyor certifying that the plan represents his/her work; that the monuments shown thereon exist as located; that the dimensional and geodetic details are correct and that the survey has been prepared in accordance with the "Pennsylvania Engineer, Land Surveyor, and Geologists Registration Law," PL 913, No. 367.
2. The signature of the applicant certifying ownership of the property and intent to record the plan.
3. The signature of the Borough Secretary, certifying that Borough Council approved the Final Plan on the date shown.
  - a. Spaces shall be provided for the signatures of Borough Council whose signatures are required.
  - b. Space shall be provided for the signature of the Borough Engineer and Chairman of the Borough planning commission.

4. A blank space or appropriate certification language shall be provided for the stamp and seal of the Lehigh Valley Planning Commission, located along the right-hand edge of the plan, measuring three and one-half (3 ½") inches wide and two and one-half (2 ½") inches tall.

#### **Section 307. Final Plan Filing and Review Procedure.**

Final Plans shall be filed and reviewed in accordance with the procedure contained in this Section.

- A. The application for approval of the Final Plan shall be placed on the agenda of the next regularly scheduled meeting of the Borough Planning Commission following the plan filing date provided that plans are received at least 45 calendar days prior to the meeting date.
- B. The Borough Secretary shall distribute copies of the plan to the following for review and recommendations:
  1. Borough Planning Commission.
  2. Borough Council.
  3. Borough Engineer.
  4. Lehigh Valley Planning Commission.
  5. Borough Solicitor, other Borough boards or officials, and other technical consultants as needed.
- C. A Final Plan for an application that has been previously granted Preliminary Plan approval shall be approved by Borough Council when it is assured that:
  1. The Final Plan conforms to the approved Preliminary Plan and any conditions made in the approval of it.
  2. All engineering and other technical details have been resolved to the satisfaction of the Borough Engineer, as evidenced by a letter from the Borough Engineer, and to the satisfaction of other technical advisors, when requested by Borough Council.
  3. A recommendation is received from the Planning Commission if specifically requested by the Borough Council.
  4. All financial security and legal agreements, including a development agreement, have been satisfactorily executed by applicant and found acceptable by Borough Council, under the advice of the Solicitor.
  5. The plan complies in all respects with applicable Borough ordinances or that appropriate variances or waivers have been granted for features that do not comply.
  6. All necessary permits and other plan approvals have been obtained from the applicable regulatory agencies, authorities, or departments.
- D. After the Final Plan is approved, the applicant shall present three (3) paper copies of the plan and two (2) Mylar Record Plan sheets to the Borough Manager for signature by Borough Council, including the affixing of the official Borough seal. Digital shape files or pdf of the appropriate proposed public improvements and record plan, in a form satisfactory to the municipality, shall also be provided.

#### **Section 308. Recording the Final Plan.**

Within ninety (90) days following Final Plan approval or ninety (90) days following the delivery of the signed plans to the applicant by the Borough or following completion of conditions imposed for such approval, the applicant shall record the Final Plan in the Office of the Recorder of Deeds of Northampton County.

- A. In accordance with the Pennsylvania Municipalities Planning Code, whenever Final Plan approval is required by a municipality, the Recorder of Deeds shall not accept any plan for recording unless it

contains the official approval of Borough Council and certification of review by the County Planning Commission.

- B. Prior to recording, the applicant shall present the approved plan to the Lehigh Valley Planning Commission for its stamp and seal, with one paper copy given to the County Planning Commission for its files.

**Section 309. Minor Plan Filing Requirements and Review Procedure.**

Minor Plans may be filed and processed only for Lot Line Adjustments, Simple Conveyances, Minor Subdivisions, or Minor Land Developments as characterized herein, in accordance with the standards and requirements in this Section.

A. Standards for Qualification as a Minor Plan Submission.

1. Lot Line Adjustment.

- a. A proposal between two abutting, existing, legally approved and recorded lots.
- b. A common lot line is proposed to be adjusted in terms of its location or configuration or eliminated.
- c. The land area of each lot may be different after adjustment, but the total lot area of the 2 lots will be unchanged.
- d. No alteration will occur to the perimeter boundary lines of the 2 lots.
- e. Neither lot shall violate the applicable dimensional requirements of the zoning ordinance as a result of the lot line adjustment.
- f. Possible reasons for lot line adjustments include, but are not necessarily limited to:
  - 1) Correcting errors regarding locations of existing improvements (e.g. if the driveway for Lot #1 is located on Lot #2);
  - 2) Relating the line to definitive physical characteristics (e.g. to adjust the line to run along an existing hedgerow);
  - 3) Preferences of the landowners involved.

2. Simple Conveyance.

- a. A proposal between two abutting, existing, legally approved and recorded lots.
- b. A portion of one lot is being divided off to be conveyed to the owner of the abutting lot.
- c. The land area of each lot will be different after conveyance, but the total lot area of the two lots will be unchanged.
- d. The lot from which the land is being conveyed must be suitable in terms of the applicable dimensional requirements of the zoning ordinance, so that after conveyance, it will remain in compliance with those requirements.
- e. The land area being conveyed need not satisfy any of the dimensional requirements applicable to lotting in the district in which it is located, nor the street frontage requirements of the zoning ordinance, provided that it shall be deed restricted to the extent that it may not be transferred independently, but must be transferred together with the lot to which it is being functionally added by the process of simple conveyance.

3. Minor Subdivision.

- a. A subdivision proposal which would divide one existing lot into not greater than 3 lots, each of which will comply with the applicable dimensional requirements of the zoning district in which the existing lot is located.
- b. The existing lot has sufficient frontage on an existing, improved public street to satisfy the applicable Borough requirements for lot frontage and access to a public street for both proposed lots.

- c. The existing lot has not been a part of an approved subdivision proposal during the five (5) years previous to the current application.
- d. The subdivision will not require new road construction, road improvements, or the extension of existing public utility lines.
- e. The proposal will not involve significant stormwater and/or erosion control issues, as determined by the Borough Engineer.
- f. Disqualification. Borough Council may require standard Preliminary Plan submission in place of a Minor Plan when conditions warrant it, at the advice of the Planning Commission or Engineer.

**4. Minor Land Developments**

- a. A land development proposal where it is found that the intended development or modification of a site, or use and occupancy of an existing structure will create a minimal impact upon traffic, drainage, visual image, landscaping, buffering, lighting or other elements described within the purposes of the Ordinance.
- b. Parking lot expansions.
- c. Additions to existing non-residential buildings provided that the addition is less than 5,000 gross square feet and involves no more than a 25% increase in the size of the existing building.
- d. The conversion of a residential dwelling that results in the creation of no more than four (4) new dwelling units.
- e. The addition of tenants to an existing non-residential building when minimal structural improvements are required.

**B. Submission Requirements and Review Procedure**

- 1. All Minor Plans shall be considered to be Preliminary Plans for the purposes of submission for review and approval, and shall comply with the requirements of Section 304, Preliminary Plan Submission Requirements and Section 305, Preliminary Plan Filing and Review Procedure.
- 2. When a Minor Plan qualifies for approval, or for approval subject to conditions, in accordance with Section 309.A, herein, the Minor Plan may be granted concurrent Preliminary and Final Plan approvals, provided that the plan includes the Final Plan Certifications required by Section 306.D herein, and complies with Section 307.C and 307.D, herein.
- 3. A Minor Plan is not required to include an Improvements Construction Plan or a Record Plan as required by Sections 306.B and 306.C, herein.
- 4. A Minor Plan which will require access to a State highway shall provide the "highway access" statement on the plan, as required by Section 306.B.

**Section 310. Resubmission of Plans.**

The Borough may consider changes to plans that are submitted as Preliminary or Final Plans if they are resubmitted in the following manner:

- A. Twenty (20) copies of resubmitted plans must be filed with the staff person designated during regular business hours and stamped with the plan filing date.
- B. The applicant shall grant an extension of the ninety (90) day review time as a condition of filing a resubmission that involves substantial changes to the current plan if requested by the Borough.
- C. All plans or other supporting studies or materials being replaced by the resubmission shall be officially withdrawn from the filed application by the applicant and will no longer be considered by the Borough.
- D. Additional review fees may be required by the Borough.

### **Section 311. Excluded Land Developments**

The following activities shall be excluded from the land development review and approval requirements:

- A. The conversion of a single family detached or semi-detached home into not more than three residential units unless they are intended to be condominiums.
- B. The addition of an accessory building less than 5,000 square feet in size that is proposed on a lot or lots subordinate to an existing principal building at that same location.

### **Section 312. De minimis Improvement Process.**

No subdivision or land development approval is needed for a de minimis improvement as defined in Section 201. An applicant who wishes to proceed under these provisions shall submit to the Borough Zoning Officer the following for review:

- A. A building permit application setting forth the proposed improvement, the cost thereof, and any changes to be made to the land.
- B. Where the project has a previously recorded land development plan, the applicants must file an amended land development plan for the record.
- C. The Plan, when filed, shall undergo engineering and zoning review to address all zoning issues such as trash enclosures, landscaping, site access, and stormwater management. An escrow shall be established with the Borough to cover appropriate fees for plan review as determined by staff.
- D. Any given building may have no more than three de minimis improvements including the current application, provided that they, taken together require less than five additional parking spaces and the total footprint of the de minimis additions does not exceed 1,000 square feet.
- E. Upon completion of the appropriate staff review, if the applicant agrees in writing to the conditions, improvements, and/or requirements determined by the review, the application will be approved and the appropriate permits will be issued. In the event that the applicant does not agree with the review conclusions, the application is deemed denied and the applicant may elect to resubmit the application under the standard land development procedures as set forth herein.

### **Section 313. Other Approvals.**

The applicant is responsible for making the appropriate applications for various federal, state, county, and municipality permits or other approvals from governments or private utilities or service providers. These should be sought in a timely manner that fits into the overall plan review and approval process described in this Article. To the extent that the applicant is required to modify the plan as a result of permits or other approvals, the applicant is still required to comply fully with the Borough Subdivision and Land Development and Zoning Codes.

## **ARTICLE FOUR - DESIGN STANDARDS**

### **Section 400. General Standards.**

The following principles, standards, and design requirements shall be used in the evaluation of all subdivision and land development proposals. Other design requirements as established in the Zoning Ordinance or other municipal ordinances shall be used in addition to the following:

- A. All portions of a tract shall be designated as to its use, such as lots, roads, open space, parking areas, etc.
- B. Applicants shall preserve scenic areas, historic sites, other community assets and landmarks, and natural amenities such as trees and waterways.
- C. Plans shall be designed to avoid excessive disturbance of vegetation and movement of earth.

- D. Development and disturbance of floodplain land areas shall be governed by additional standards contained in this Ordinance, the Borough Zoning Ordinance, Floodplain Ordinances, and the Borough Building Code.
- E. The applicant shall construct, install, and guarantee, at no expense to the Borough or its authorities, all improvements required as part of plan approval, including, but not limited to, streets, curbs, sidewalks, water and sewage facilities, stormwater management facilities, street lights, fire hydrants, road signs, monuments, lot pins, utilities, and shade trees.
- F. The standards contained within this Article are the minimum standards and requirements for the protection of the health, safety, and welfare of the residents of the Borough and are to be used in all subdivisions and land developments. In addition, the Borough Council reserves the right to require standards in excess of the minimum requirements if warranted to protect the health, safety, and general welfare of the community.

**Section 401. Conformance with Plans.**

- A. **Comprehensive Plans.** Proposals for land development or subdivision shall be generally consistent with the Borough Comprehensive Plan, especially as to the use of land, intensity of development, transportation, community facilities, and resource protection. Residential development should also be consistent with the housing element of the plan. All proposals should be located in areas designated for development in the future land use plan element and be serviced by currently available infrastructure or infrastructure that will be developed concurrent with the development.
- B. **Other Plans.** Proposals shall be generally consistent with the appropriate state, regional, county, and the municipally adopted comprehensive plan and other plans. Where regional facilities are proposed in the plan, such as highways, effort shall be made to preserve needed right-of-way for future infrastructure projects in the proposed land development or subdivision.

**Section 402. Site Organization.**

Proposed land developments and subdivisions shall be designed to address the opportunities and limitations present on a site and its adjacent surroundings. The plan shall use site opportunities to enhance the overall quality of the development and lessen potential negative impacts upon a site and the surrounding community. The physical, social, and psychological needs of the users of the site should be evaluated and appropriately incorporated into the final subdivision layout or site design. The impacts of the proposed development on the natural environment and surrounding land uses shall be given a high priority and made an integral part of the overall design for the land development and subdivision. The following site organization guidelines shall be used:

- A. **Site Improvement Layout.** The buildings shall be placed in consideration with the site's topography, existing vegetation, and surrounding land uses, taking into account energy conservation, solar access, and pertinent natural features.
- B. **Existing Natural Features.** Existing natural features should be recognized and integrated into the site layout. Natural features such as streams, hillsides, wetlands, unique habitat, woods, and similar natural resources should be considered strong design determinants and be incorporated into the overall site plan to strengthen the unique quality of the land.
- C. **Open Space and Scenic Views.** The placement of open space and preservation of scenic views should be a fundamental design decision. Open space lands should provide for a variety of benefits including recreation, natural resource protection, scenic views and vistas, and buffers for site elements and land uses.

- D. **Circulation.** Movement within a site and access to the site should be designed for the safety and convenience of various types of users. Cross access between properties and joint access are encouraged to improve circulation and improve access safety.
- E. **Relationship to Surrounding Uses.** The proposed design should complement appropriate surrounding uses through building setbacks, buffers, and separation of uses. Various potential negative impacts upon surrounding land uses including noise, light, and loss of privacy should be mitigated.
- F. **Health Hazards.** The configuration of a subdivision or land development should reduce potential health hazards to the future users of the subdivision or land development and to the community as a whole.

#### **Section 403. Lots.**

- A. **Lot Size and Width.** Each lot shall comply with the minimum area and width requirements of the Zoning Ordinance and be generally sufficient in size and shape to adequately accommodate the development or use proposed for it. Lots that contain natural restrictions such as wetlands, water bodies, steep slopes, or other features shall be made large enough to provide suitable area for the intended use of the lot without requiring encroachment upon natural amenities. Lots with existing or planned public improvements such as fuel pipe lines, underground utility easements, stormwater detention/infiltration basins, high voltage power lines, or other facilities should be sized to allow suitable room for the intended use of the lot without requiring encroachment on the public facilities or easements.
- B. **Lot Shape.** Deep, narrow lots and wide, shallow lots are to be avoided except that lots containing uniquely designed structures, such as certain types of attached dwelling units, may receive special consideration. The depth of a lot for a single family detached home should not exceed two and one half (2.5) times its width at the building line. Every lot shall contain a building envelope suitable for the type(s) of development proposed.
- C. **Lot Lines.** Lot lines shall be drawn parallel, concentric, at right angles, or radial to the street right-of-way line unless not feasible or undesirable due to existing, permanent, natural or man-made features. Where possible, lot lines shall coincide with abutting lot lines and lot lines across streets. Generally, lot corners of several lots should coincide.

#### **Section 404. Blocks**

- A. The ideal block length measured along the building frontages is 1000' feet. The minimum block length shall be 400' feet and the maximum block length shall be 1600' feet unless the zoning ordinance specifies different minimum/maximum lengths.
- B. A block shall be two (2) lots in depth when the lots are laid out back to back according to the requirements of the Zoning Ordinance.
- C. Blocks shall be designed to continue the municipality's existing street pattern and provide efficient, convenient, and safe pedestrian and vehicular circulation, including the reduction of intersections with arterial streets.
- D. Blocks shall be designed to reflect natural features that may constrain subdivision and land development. Unless a watercourse is located along the rear of lots in the block, drainage should be away from the interior of the block toward the abutting streets.
- E. Where blocks are longer than 1200' feet, direct pedestrian access to commercial, institutional, or open space/recreation areas may be required as determined by the Borough. Walkways should be designed into the block area. The walkways should extend straight from one street to the other on an easement or public right-of-way at least fifteen (15') feet in width.



**Section 405. Community Facilities**

- A. The Borough Council shall determine the need for additional community facilities to serve the proposed subdivision or land development.
- B. Areas provided or reserved for such community facilities shall be adequate to provide for building sites, related activity areas, landscaping, and off-street parking as appropriate to the use proposed.

**Section 406. Open Space**

- A. Open space shall protect the environmental, scenic, historical, and cultural features of the Borough.
- B. Conservation of Natural Resources in Open Space. Environmentally sensitive features should be conserved based on the natural tolerances to encroachment and development as follows:

Natural Feature	Minimum % to be preserved
Flood Plains and watercourses	100%
Wetlands	100%
Ponds	100%
Steep Slopes (15-25%)	70%
Very Steep Slopes (25%)	80%
Woodlands	50%

Where features overlap, the greater percentage shall be conserved. The percentage of each feature is the extent that it shall not be altered, regraded, filled or built upon. The land shall be permanently restricted by an easement preventing further development. The deed restrictions shall be in a form acceptable to the Borough.

- C. Open Space Designation. All land held for open space shall be so designated on the plans. The plans shall contain the following statement for any open space designated: "Open space land may not be separately sold, nor shall such land be further developed or subdivided." All plans shall further designate the use of open space, the type of maintenance to be provided and a planting plan or schedule. In designating use and maintenance, the following classes may be used.

- 1. Natural Area. Land which is left predominately in a natural condition and managed to protect significant natural resources in accordance with a natural areas management plan.
- 2. Lawn. A grass area with or without trees which may be used by the residents for a variety of informal purposes and which shall be mowed regularly to insure a neat and orderly appearance.
- 3. Recreation Area. An area designated for a specific recreational uses including, but not limited to, tennis, athletic fields and tot lots. Such areas shall be maintained so as to avoid creating a hazard or nuisance, and shall perpetuate the proposed use.

- D. Open Space Restrictions.

Every property proposed for open space shall be restricted in the following manner:

- 1. The property deed shall contain the following deed restriction:

This property was established as permanent open space through the approval of the [subdivision or land development name] and recorded in Deed Book and Page, and shall be maintained as open space in accordance with the approved plan. No change of use, transfer of ownership, or sale of this property shall occur without the written consent of the Borough in accordance with requirements of the Zoning Ordinance. This restriction shall have the effect of a covenant running with the land, and shall otherwise be binding upon the Grantee, and shall be enforceable only by the Borough, its residents or former owners of the property.

2. The Borough is authorized to make random inspections of any open space property created through municipal actions to ensure that the owner and any successors duly perform, abide by, and complete any duties, obligations, or requirements as set forth in the Final Plan and/or deed restrictions.
3. The Borough may require financial security to ensure appropriate long term maintenance of the open space depending upon the ultimate owner of the open space. The amount of financial security shall be established necessary to reimburse the Borough for its expense of performing remedial measures if not performed by the owner.

**Section 407. Recreation Land Dedication Criteria and Standards.**

- A. Suitable recreation land shall be dedicated to the Borough according to the provisions of the Borough Zoning Ordinance regarding minimum open space requirements. Nothing herein shall be construed as limiting the ability of the Borough, based upon the recommendation of the Borough Planning Commission, to waive all or a portion of the recreation land set aside requirements.
- B. Location and Criteria for Dedicated Recreation Land. Lands to be dedicated shall:
  1. Comply with the recreation criteria set out in the Borough Zoning Ordinance.
  2. Implement the findings of the Borough open space and recreation plan.
  3. Be suitable for the location of facilities which can meet the various recreational needs of the residents, businesses, and industries.
  4. Consist of a single contiguous tract of land.
  5. Be readily accessible with at least fifty (50') feet of public road frontage.
  6. Be generally well drained and suitable for different forms of active and passive recreation.
- C. Acceptance and Use of Park and Recreation Land.
  1. Any land dedicated to the Borough shall be used only for the purpose of providing park and recreational facilities and for the preservation of open space and shall be available for use by all residents of the Borough.
  2. When land is dedicated, acceptance by the Borough shall be by means of a signed resolution to which a property description of the dedicated area shall be attached. A fee simple warranty deed conveying the property shall be delivered to the Borough with title free and clear of all liens, encumbrances and conditions excepting public utility easements.
- D. Alternatives to the Dedication of Park and Recreational Land. Upon agreement of both the Borough and the applicant, the applicant may pursue the following alternatives:
  1. Fee in Lieu. The applicant may pay a fee in lieu of dedication of park and recreational land. The amount of the fee shall be established by resolution of the Borough Council and modified from time to time, based upon the estimated market value of suitable recreation land.
  2. Improvements to Other Recreation Sites. The applicant may, through an agreement with the Borough, construct recreational facilities on existing or proposed parkland that is readily accessible to residents of the proposed development as defined in this section. The value of such improvements shall be comparable to the fee in lieu of dedication that would have otherwise been required, based upon the applicant's estimates, as reviewed by the Borough Engineer.

## **Section 408. Reserved for Future Use**

### **Reserved**

## **Section 409. Preservation and Protection of Existing Vegetation**

### **A. Preservation of Existing Vegetation.**

1. All subdivisions and land developments shall be laid out in such a manner as to minimize the removal and/or disturbance of healthy trees, shrubs, and other vegetation on the site. Special consideration shall be given to mature specimen trees and ecologically significant vegetation.
2. Removal or disturbance of vegetation in environmentally sensitive areas, including wetlands, floodplains, steep slopes, riparian corridors, wildlife habitats, and ecologically significant woodlands as identified in the Northampton County Natural Areas Inventory or other sources shall be undertaken only as permitted in Section 409 D.1. to minimize the adverse effects of such actions.
3. The applicant shall prove to the satisfaction of the Borough Council that vegetation removal is minimized. A written document or plan may be requested to be prepared by a registered landscape architect or other qualified professional showing that no more desirable layouts are possible and no alternative clearing or grading plan would reduce the loss of mature trees, tree masses, and woodlands.
4. Each freestanding mature tree, tree mass, or woodland on the site shall be designated "TO REMAIN" or "TO BE REMOVED" in accordance with the following criteria:
  - a. A mature tree, tree mass, or woodland may be designated "TO BE REMOVED" only if it meets all of the following criteria:
    - 1) The outermost branches of the tree(s) are less than five (5') feet or the trunk of the tree is less than twenty (20') feet, whichever is less, from any proposed buildings, structures, paving, parking, or utilities (overhead or underground).
    - 2) The outermost branches of the tree(s) are less than five (5') feet or the trunk of the tree is less than twenty (20') feet, whichever is greater from any proposed changes in grade or drainage such as excavations, mounding, or impoundments.
    - 3) The tree(s) interfere with traffic safety or are located within proposed sight triangles.
    - 4) The tree(s), by its location or apparent health, poses any undue threat to the health, safety, and welfare of the community.
    - 5) The tree(s) block(s) required solar access.
  - b. Mature trees, tree masses, or woodlands that do not fit the above criteria should be designated "TO REMAIN."
  - c. Unique or Specimen Trees should be preserved

### **B. Protection of Existing Vegetation**

Existing vegetation designated "TO REMAIN," in accordance with Section 409 D.1., as part of the landscaping of a subdivision or land development, shall be identified in the field prior to any clearing and shall be physically protected throughout the construction process. A temporary, sturdy physical barrier, such as a snow fence, shall be erected a minimum of one foot outside the drip line or a minimum of twenty (20') feet from the tree's trunk, whichever is greater, on all sides of freestanding trees, tree masses, or woodlands prior to major clearing or construction. The barrier shall be placed to prevent disturbance to or compaction of soil inside the barrier and shall remain until construction is complete. The barrier shall be shown on the erosion and sedimentation control plan and the landscape plan.

Reference to the installation of tree protection should be included in the sequence of construction notes to insure incorporation of tree protection before the earliest stages of site disturbance.

**C. Credit for Preserved Trees**

Requirements for street trees and buffer plantings may be met, whenever possible, by preserving existing trees. Credit for existing trees which are "To Remain", as determined in Section 409 A.4, to offset either the street tree or buffer planting requirements are to be calculated as follows:

<b>Preserved tree (dbh)</b>	<b>Number of Trees Credited (2 ½" caliper)</b>
36" or greater	8 trees
18-35"	6 trees
12- 17"	4 trees
8-11"	2 trees

**D. Tree Replacement Planting Requirements**

1. Any subdivision or land development proposal which will result in the destruction of 25 (%) percent of the existing trees six (6) inches dbh or greater on a lot shall replace the removed trees. The total tree removal impact of woodland areas designated "TO BE REMOVED" shall be measured by a forest density survey that calculates the approximate quantity of trees (with 6" or greater dbh) per square foot area. Calculated woodland tree removals and individual mature tree removals shall be listed on the plan. Tree replacement shall occur in the following manner:
  - a. Each tree six (6) inches dbh or greater that is destroyed shall be replaced with one tree with a caliper of 2½ inch caliper.
  - b. Replacement trees shall generally comply with the general landscape design criteria in Section 438 of this ordinance.
2. Replacement trees shall be planted on the site to mitigate for the existing trees removed, in addition to other landscaping requirements. Proposed replacement tree plantings shall be listed on the plan.
3. If the site does not reasonably contain enough room for the required replacement trees, the Borough Council may allow the developer to locate some or all of the replacement trees on public lands or accept an equivalent fee-in-lieu of plantings, at their discretion.
4. Calculation and estimation of existing trees shall be performed before any clearing commences and shall be documented on the plan.
5. Calculation and estimation of the existing trees remaining after construction shall be performed and compared with the calculations of the approved plan. Any tree removals additional to those on the approved plan shall be replaced as required by this section prior to the issuing of any occupancy permits.

**Section 410. Wetland Protection.**

- A. The presence of hydric soils may indicate wetlands. When hydric soils are indicated on the site, a wetlands study should be conducted in accordance with the federal Corps of Engineers Wetlands Delineation Manual (1987 Manual) and the January 2012, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. In the event no wetland study is undertaken, the location of soils with soils rated as all hydric in the county soil survey on site will be assumed to be wetlands for the purpose of this ordinance and so noted on the plan.
- B. Wetlands as defined by the U.S. Army Corps of Engineers and the Commonwealth of Pennsylvania in accordance with Section 404 of the Federal Clean Water Act of 1977 and the Pennsylvania Clean

Streams Act shall be preserved in subdivisions and land developments. Required permits shall be obtained at an early stage to determine the extent and location in the proposed subdivision and/or land development.

- C. A twenty-five (25')-foot setback shall be maintained around the perimeter of all wetlands. This area will be known as the Wetland Buffer. No removal of vegetation, except the selective removal of dead trees and or other noxious vegetation in the wetland area or buffer shall take place without the specific permission of the Borough.
- D. Required building setbacks as described in the Zoning Ordinance shall be measured from the edge of the Wetland Buffer.

**Section 411. Riparian Corridor Management.**

- A. Whenever a pond, watercourse, stream, or intermittent stream as identified by the USGS and/or PADEP is located within a development site, it shall remain open in its natural state and location.
- B. Unless otherwise described in the Zoning Ordinance or separate code, a fifty (50') foot buffer (twenty-five (25') feet from each bank of the water body) shall be maintained along all intermittent or perennial water courses and ponds. This buffer area will be known as the Riparian Corridor. No removal of vegetation, except for removal of dead trees and shrubs or periodic mowing of existing lawns or fields, shall take place within this buffer area without the specific permission of the Borough.
- C. No stormwater detention/retention basins shall be allowed within the twenty-five (25') feet from each bank of the water body.
- D. Within any Riparian Corridor, no construction, development, use, activity, or encroachment shall be permitted unless a Corridor Management Plan is submitted and approved by the Borough Council and the impacts of such development are mitigated by the implementation of the Corridor Management Plan.

**Section 412. Top Soil Protection and Grading.**

- A. Minimal Grading: Grading shall be limited to the minimum amount of disturbance of soil or natural topography.
- B. Top Soil Protection. The top six (6") inches of soil that existed naturally on the site prior to subdivision or land development shall be managed in the following way:
  - 1. In areas to be graded, the top soil shall be stripped off and stockpiled on the site in accordance with the erosion and sediment control plan.
  - 2. Following construction, the stockpiled soil shall be redistributed uniformly on the site to a minimum depth of six (6") inches.
  - 3. Any topsoil in excess of soil needed for the reestablishment of six (6") inches depth in areas of the site that will not be paved may be removed from the site based upon the determination of the Borough Engineer, and where permitting is required, the Northampton County Conservation District.
- C. Grading. All permanent and temporary cutting, filling, grading, regrading, and/or other forms of earth-moving activities shall be known as "grading" and shall be conducted only in compliance with the standards as described below.
  - 1. All grading shall be set back from property lines at least three (3') feet, or a sufficient distance to prevent any adverse effects on adjacent properties.

2. No permanent excavation shall be made with a cut face steeper in slope than three (3) horizontal to one (1) vertical. For steeper slopes, a soils report prepared by a qualified engineer or geologist experienced in performing such studies and registered in the Commonwealth of Pennsylvania shall be prepared to document the soil stability.
3. Wherever grading will increase the volume or velocity of stormwater flow toward a property line, the applicant shall install and maintain drainage facilities sufficient to prevent adverse effects on the adjoining property. The construction and operation of these drainage facilities shall not cause any adverse effects on abutting properties.
4. Within the property proposed for development or along property lines, where grading creates an abrupt drop-off in contrast to a previously existing gradual change or where a wall is being installed, the applicant shall be required to install a fence or other suitable protective barrier.

#### **Section 413 Erosion and Sediment Control.**

##### **A. General. Erosion and Sediment Control must be addressed in the following manner:**

1. An Erosion and Sediment Control Plan, which meets the requirements of the Chapter 102 regulations, must be approved by the Northampton County Conservation District and available on site for all earth disturbance activities over one (1) acre.
2. All construction activities proposing to disturb one (1) acre or more of land must be authorized by a National Pollutant Discharge Elimination System (NPDES) permit.
3. No subdivision or land development plan shall be approved unless:
  - a. There has been a plan approved by the Borough Council that provides for minimizing erosion and sedimentation consistent with this Section, and an improvement bond or other acceptable securities are deposited with the Borough in the form of an escrow guarantee which will insure installation and completion of the required improvements; or
  - b. There has been a determination by the Borough Council that a plan for minimizing erosion and sedimentation is not necessary.
4. The Borough Council, in its consideration of any Preliminary Plan of subdivision and land development, shall condition its approval upon the execution of measures designed to prevent accelerated soil erosion and resulting sedimentation, as required by DEP. All applicable regulations and permit requirements of DEP as stipulated in its Soil Erosion and Sedimentation Pollution Control Manual shall be followed for all earth-moving activities.

##### **B. Performance Principles.**

1. Any appropriate action which minimizes erosion and sedimentation as described in the Pennsylvania Erosion and Sediment Pollution Control Program Manual can be included in the plan. Alternative methods should be discussed with the Borough Engineer prior to the preparation of an erosion and sediment control plan.
2. No unfiltered stormwater coming from an area which has been disturbed shall be permitted onto an adjacent tract or allowed to be discharged into any waterbody.

##### **C. Responsibility.**

1. Whenever sedimentation is caused by stripping vegetation, regrading or other development activity, it shall be the responsibility of the applicant to remove it from all adjoining surfaces, drainage systems and watercourses and to repair any damage at their expense as quickly as possible.

2. It is the responsibility of applicant doing any act on or across a stream, watercourse, or swale or upon the floodplain to maintain, as nearly as possible, in its present state, the stream, watercourse, swale, floodplain or right-of-way during the activity and to return it to its original or equal condition after such activity is completed. Adjacent to the watercourse, dominant vegetation shall be composed of a variety of native riparian tree and shrub species and appropriate plantings necessary for stream bank stabilization.
  3. Disturbed areas shall be re-vegetated with riparian corridor plants, in compliance with Section 437 (B).
- D. Areas that cannot be re-vegetated shall be restored using management practices accepted by experts qualified in riparian corridor management.

#### **Section 414. Preservation of Existing Structures and Historic Features**

The design of subdivisions and land developments should be done to preserve desirable structures containing cultural and historic features wherever reasonably possible. Buildings constructed before 1940 shall be maintained and restored to their original character if physically and economically feasible. An owner, after presenting sufficient evidence of costs, may argue that repairs are economically infeasible when the cost of maintenance and restoration exceed the value of the building after making needed repairs. The building owner is required to provide the fair market value of the building and the cost of all repairs prepared by certified professionals to the Borough Council to determine the economic feasibility.

- A. No proposal will be approved with a property line extending through any portion of an existing building, except where that property line follows a party wall separating semi-detached or attached units, in accordance with the Borough Zoning Ordinance.
- B. When existing buildings are retained:
  1. Minimum building setbacks shall be met or exceeded, in respect to all new lot lines created, for the district in which the buildings are located, even if this results in a lot area or dimensions in excess of the otherwise applicable minimums.
  2. Structurally deficient buildings shall be rehabilitated in conformance with the Borough Building Code.
  3. Additions to retained buildings shall conform in all respects to the requirements of the Zoning Ordinance applicable to the district in which the building is located, and shall be in harmony with the character, design, building materials, and other architectural features of the building.
  4. Historical or culturally significant buildings shall retain their respective character, to the greatest extent practical.
  5. New buildings abutting any retained building should reflect their respective characters, to the greatest extent practical.
  6. In non-residential districts, retained buildings shall be provided with adequate parking, service, and landscaped areas in accordance with the zoning ordinance provisions for the intended use. If the applicant cannot specify the intended use, then the most land consumptive provisions shall be applied, to ensure sufficient land area for uses permitted in that district.
- C. When existing buildings will be removed:
  1. The plan must show the location and include a brief description of the building(s) to be removed.
  2. Final plan approval will be conditioned upon written agreement to the expeditious removal of buildings intended for removal, in conformance with Borough demolition permits requirements.

3. All applicable Borough requirements and procedures regarding demolition of buildings and disposition of the reusable parts and/or disposal of the rubble shall be complied with.
4. If the building will not be removed immediately, it shall be secured in a manner that it is not a public safety hazard and a financial guarantee must be posted for its removal, in compliance with Section 702, herein.
5. An application for demolition must be approved as per requirements in the Borough Zoning Ordinance.
6. A Historic and Cultural Resources Survey must be prepared as set forth in the Borough Zoning Ordinance.

**Section 415. New and Existing Streets Design Standards**

- A. All new streets and additions to existing streets shall:
1. Be offered for dedication to the Borough. The Borough may accept or refuse dedication of any street.
  2. Conform with the transportation element of the Borough Comprehensive Plan and county or state highway plans, and be designed to conform with the existing street system.
  3. Provide appropriate access between abutting tracts of land for immediate or future use.
  4. Create a road hierarchy among interior subdivision and land development streets and exterior streets to insure proper through-traffic flow, local access, and internal traffic distribution and flow.
  5. Conform to existing topography to assure reasonable grades, alignment and drainage, appropriate access to lots, and to minimize regrading and removal of vegetation.
  6. Be designed to continue existing streets at equal or greater right-of-way and cartway width, as recommended by the Borough Engineer and Planning Commission.
  7. Include curbs and sidewalks installed along all existing and proposed public and private streets and common parking areas except when this requirement is waived at the discretion of the Borough Council, upon recommendation of the Borough Planning Commission and Borough Engineer.
- B. Street names shall be assigned in accordance with Section 616.

**Section 416. Private Streets:**

Whenever an applicant proposes to establish a street which is not offered for dedication of public use or when dedication is not accepted, the Borough Council shall require the applicant to submit, and also to record with the plan, a copy of the agreement made with the Borough addressing the ownership, access rights, and maintenance responsibilities for that street. Such streets shall be constructed in conformance with the Borough Engineering standards for public streets. Maintenance responsibility shall be outlined and defined by the applicant and reviewed by the Borough prior to final approval. When, in the determination of the Borough Council, it becomes necessary for the Borough to assume responsibility for a private street in order to maintain the health, safety, and welfare of the residents of the Borough, the Borough may do so and assess the property owner(s) or abutting owners who use the street for any improvements necessary to restore the street to conformance with Borough specifications.

- A. Residential Private Streets. Private streets may be permitted by Borough Council to provide access to land which abuts its right-of-way. Private streets shall comply with the following:
1. The minimum right-of-way or equivalent right-of-way shall be fifty (50') feet.



2. Minimum paved cartway width shall be eighteen (18') feet.
  3. Streets shall be built in accordance with the Construction and Engineering Standards in Article Six of this ordinance.
  4. An irrevocable right-of-access shall be guaranteed to all properties whose access depends upon the private street, by means of legal agreement or covenants, subject to approval by the Borough Council as advised by the Borough Solicitor.
  5. The legal access agreements and/or covenants shall be:
    - a. Clearly noted on the subdivision or land development plans for all properties using private streets for access.
    - b. Included in the deeds for all properties having these access rights.
    - c. Recorded in the Northampton County Office of the Recorder of Deeds.
    - d. Clear and specific with regard to property owner's rights to further subdivision or land development, especially in regard to the need to receive approval from the private street owner and/or waiver from the requirement of this ordinance.
  6. The private street may be owned by one or more of the property owners who have right-of-access or may be jointly owned by an association of these property owners.
- B. Non-residential Private Streets. Private streets may be permitted by the Borough Council to provide access to various non-residential developments or lots.

#### **Section 417. Street Classifications.**

Every street, road, or highway within the Borough shall be classified by its function, and shall be subject to the requirements for its classification as contained in this Article. These classifications are based on the Comprehensive Plan the Lehigh Valley which incorporates standards established by the American Association of State Highway and Transportation Officials (AASHTO), and used by PENNDOT. Street classifications are intended to provide appropriate standards for each road, as well as to coordinate street functions and improvements among neighboring municipalities, the region, and the state. The classifications are as follows:

- A. **Minor Arterials.** Minor Arterials interconnect with and augment Principal Arterials in serving major activity centers. They typically accommodate trips between three (3) and five (5) miles in length. They are spaced at intervals consistent with population density and carry vehicles within or between several municipalities of the county. The only difference between rural and urban design for minor arterials is the location of a parking lane on urban arterials. Lastly, they link other communities not connected by principal arterial and provide key connections between roads of higher classification. The design standards for minor arterials are included in Figure 4.2.
- B. **Collectors (Urban):** These types of roads provide a combination of mobility and access with a priority on mobility. Ideally access is partially controlled with preference given to through traffic. Access is permitted with at grade intersections and major access driveways of selected land uses such as a retail or employment center. Few if any individual driveways should be permitted off of urban collections. Urban collectors may accommodate trips within and between neighboring municipalities and may serve as the major road through large industrial complexes or office parks or provide key connections between roads of higher classification. The typical posted speed is thirty-five (35) to forty (40) miles per hour. The design standards for urban collectors are in Figure 4.2.

**Figure 4.2. Road Design Standards**

Functional Classification	Right of Way <sup>1</sup>	Number of Lanes <sup>2</sup>	Travel Lane Width <sup>3</sup>	Left Turn Width	Paved Shoulder Width <sup>4</sup>	Parking Lane Width <sup>5</sup>	Bicycle Lane Width <sup>6</sup>	Border Area <sup>7</sup>	
								Grass Strip	Sidewalk/ Pathways <sup>8</sup>
Minor	80'-100'								
Urban		2-5	11'-14'	11'-12'	8'-10'	8'-10'	5'-6'	5'	5'-8'
Rural		2-3	11'-14'	11'-12'	4'-10'	N/A	5'-6'	5'	5'-8'
Urban	60'-80'	2-3	11'-14'	10'-12'	6'-10'	8'-10'	5'-6'	4'	5'-8'
Urban	50'		[Total Cartway Width 26 to 30 Feet] <sup>9</sup>					4'	4'-8'

- 1) Right-of-Way: The right-of-way may adjusted to accommodate highly urbanized and laterally restricted areas as well as unrestricted areas.
- 2) Number of Lanes: The number of lanes vary in order to accommodate the traffic volume, turning movements, and land capacity demand for selected level of service. This number does not include right-turn lanes where needed.
- 3) Range of Lane Width: Lane width is based upon minimum and desirable standards as well as other conditions such as being adjacent to a curb or the anticipation of heavy truck traffic. When feasible, a 14 foot lane should be located next to a curb.
- 4) Shoulder: Shoulder width is based upon minimum and desirable standards as well as other conditions such as highly urbanized and laterally restricted areas, or the anticipation of heavy truck traffic. Wide shoulders may function as bike lanes.
- 5) Parking Lane: Parking lane width is based upon minimum and desirable standards as well as other conditions such as lot size, intensity of development, or potential for use as a traffic lane where required by future demand.
- 6) Bicycle Lane: A portion of a roadway that has been designated by striping, signing, or pavement markings for the preferential or exclusive use of bicyclists. Width specifications must be in accordance with FHWA / AASHTO standards. Wide shoulders may function as bike lanes.
- 7) Border Area: The presence of curbing, grass planter strips and sidewalks will depend upon adjacent land uses and site conditions. Otherwise, the border area would consist of a drain- age swale and slope.
- 8) Sidewalks/ Pathway: Sidewalk width is based upon minimum desirable standards for use along each particular roadway. Under certain circumstances, the location, feasibility, and other site specific conditions may require deviations from these guidelines.
- 9) Cartway Width: For local roads, the total cartway width generally includes travel lanes, parking lanes, and/or shoulders.

**C. Local Roads.** Local roads and streets have relatively short trip lengths, generally not exceeding one mile. Because property access is their main function, there is little need for mobility and high operating speeds. This function is reflected by use of lower posted speed between twenty-five (25) and thirty-five (35) miles per hour. Through traffic is discouraged from using local roads. Local roads can only provide a link between individual properties and the collector road network. Rural local roads can be more narrow due to the lower volumes of traffic expected on them. Local roads should be oriented on an east-west axis to maximize the potential solar access on adjoining lots

1. **Residential Streets.** New streets or extensions of existing streets in residential developments function primarily to provide vehicular access and street frontage for each lot. The design standards for residential streets are in Figure 4.2. Parking on both sides will be assumed on residential streets unless no driveways take access on them or the development otherwise provides significant off street public parking which is convenient to all the proposed houses.

2. **Non-residential Access Streets:** These streets shall function primarily to provide vehicular access and street frontage for industrial, office, institutional, and commercial lots and land uses. The standards for non-residential access streets are in Figure 4.2.
3. **Alleys:** Alleys are small service roads which provide a secondary access to lots and buildings. They should not be more than 800' feet in length and should have a paved cartway of twelve (12') feet with two-foot clear stabilized grass or gravel shoulder area.

**Section 418. Street Alignment.**

Sight distance, horizontal, and vertical curvature, super-elevation, and maximum and minimum street grades shall be determined by the Borough Engineer in compliance with the standards contained in A Policy on Geometric Design of Highways and Streets, published by the American Association of State Highway Transportation Officials (AASHTO), most recent edition, or PENNDOT standards, whichever is more suitable to site conditions. In addition, the following standards and guidelines shall be complied with:

- A. Minimum horizontal and vertical curvature for all local access streets shall conform with the standards in Figure 4.3.
- B. Long radius, gentle curves shall be used rather than shorter radius curves connected by tangents particularly where truck traffic is anticipated.
- C. Curve-tangent relationships shall follow accepted engineering guidelines for safety and efficiency. For example, minimum radius curves shall not be used at the ends of long tangents.
- D. Street grades shall be measured along the centerline in accordance with the following:
  1. Minimum grade for all streets shall be one (1%) percent.
  2. Maximum grades for arterials and collectors shall be five (5%) percent and for residential streets shall be ten (10%) percent.
  3. Curve-grade combinations shall follow accepted engineering guidelines for safety and efficiency. For example, minimum-radius horizontal curves will not be permitted in combination with maximum grades.
  4. At all approaches to intersections, street grades shall not exceed four (4%) percent for a minimum distance of fifty (50') feet from the intersection of curb lines or the edges of cartways.

**Section 419. Street Intersection Design.**

**Figure 4.3. Street Alignment and Intersection Standards**

Functional Classification	Intersection Spacing		Clear Sight Triangle	Corner Radius	Vertical Curve Length		Horizontal Curve Radius (centerline)
	Urban	Rural			Crest 3%/5%/7%	Sag 3%/5%/7%	
Minor Arterial	400	800	125	30	NA	NA	NA
Collector (Urban)	300	400	100	25	90/145/ 205	145/245/ 345	420
Local Road - Residential	125	125	75	15	90/145/ 205	145/245/ 345	420
Local Road-Nonresidential	125	125	75	75	90/145/ 205	145/245/ 345	420

All street intersections shall be governed by the standards of this section and the appropriate PENNDOT or AASHTO Standards.

- A. **Number of Streets.** Not more than two streets shall intersect at the same point.
- B. **Three-Way/Four-Way Intersections.** Three-way or "T" intersections should be used instead of four-way intersections involving local streets intersecting arterial or collector streets unless the four-way intersection would promote necessary and desirable traffic movements or where traffic signals or four way stop signs are proposed.
- C. **Angle of Intersections.**
  - 1. All intersection approaches shall be designed at ninety (90) degree angles for a minimum of fifty (50') feet from the edge of the cartway.
  - 2. Where angled intersections are used they should be no less than sixty-five (65°) degrees and designed so that the heavier traffic flow will make the obliquely angled turn rather than the acutely angled turn.
- D. **Improvements to Existing Intersections.** When existing streets intersect at odd angles or have more than four approaches, the applicant shall improve the intersection, to bring it into compliance with this Ordinance, as required by the Borough Council, based upon advice of the Borough Engineer and Planning Commission and other technical advisors or agencies, as appropriate.
- E. **Radii of Pavement and Right-of-Way at Intersections.** Street intersections shall be rounded with tangential arcs at pavement edge (curb line) and right-of-way lines as indicated in Figure 4.3.
- F. All radii specified herein must be increased if large trucks, fire trucks, or other emergency vehicles would have difficulty with ingress or egress as determined by the Borough Fire Marshal.
- G. **Single-access Street Intersections.**
  - 1. Single access streets shall be established beginning at a three-way intersection perpendicular to a through street.
  - 2. Four-way intersections may be created using two permanent single access streets intersecting directly opposite one another along a through street, when the through street is a local street.
- H. All intersections shall provide clear sight distance in compliance with AASHTO and PENNDOT standards.
- I. **Street intersection spacing shall be in compliance with the regulations contained in this section, measured from centerline to centerline.**
  - 1. The spacing's listed Figure 4.3 shall be considered minimum spacing. Where greater spacing is required in compliance with AASHTO or PENNDOT standards, the greater spacing distances shall be applied, as determined by the Borough Engineer.
  - 2. **Offset Intersections.** In any case where the centerlines of street intersections are, or would be, within 150' feet of each other, they shall be made to coincide by relocating the street within the applicant's land, unless additional problems of sight distance or other safety-related problems would be created. As an alternative, relocation further away from the offset intersection may be done in compliance with the Intersection Spacing requirements contained herein, when approved by the Borough Council.

## **Section 420. Single-access Street Standards.**

Any street which is served by only one (1) intersection with a through-street shall be considered a single-access street, regardless of the street's configuration within the proposed subdivision or land development.

- A. Single-access streets shall be classified as one of the following:
1. Single-access loop streets.
  2. Cul-de-sac street.
  3. Stub streets.
- B. Single-access loop streets shall be subject to the requirements for their street classification and the following additional requirements.
1. Shall not serve more than 300 average daily trips.
  2. In addition to required sidewalks, shall be served by an appropriately located pedestrian access when required by the Borough Council to connect surrounding neighborhoods and pedestrian destinations.
  3. Shall not exceed 2,000' feet in length, measured from the intersection with the through street, along the entire centerline around to its intersection with itself.
- C. Cul-de-Sac Streets.
1. Shall be permanently closed to vehicular traffic at one end.
  2. Shall be identified by a standard warning sign stating "No Outlet" when deemed appropriate by the Borough Council to help avoid mistaken turning movements.
  3. Shall not be permitted when a through street is possible for the tract under consideration. All cul-de-sac streets must be approved by the Borough Council, with the Borough reserving the right to reject any and all cul-de-sac streets proposed. The following shall be used to determine the necessity of the cul-de-sac:
    - a) Adverse topography such as steep slopes, floodplain, streams, etc.
    - b) The shape of the tract does not lend itself to a through street.
  4. Shall be a minimum 250' feet but not exceed 800' feet in length. Measurement of the length shall be made from the centerline of the abutting through road or point of intersection with another cul-de-sac to the centerline of the turnaround, measured along the cul-de-sac street's centerline, or otherwise measured in accordance with PA Liquid Fuels Tax funding requirements.
  5. Shall be provided with a vehicular turnaround at the closed end with a right-of-way radius of at least fifty (50') feet, and a paved radius of at least forty (40') feet. Alternative vehicular turnaround designs are encouraged to improve traffic flow and overall design of the subdivision. If an off-set bulb turnaround is used, the bulb should be configured to the left of the approaching road center line. In addition, parking may be prohibited on the cul-de-sac by order of the Fire Marshal or Borough Engineer.
  6. No more than five lots shall have frontage on the circular turnaround portion of a cul-de-sac street, and no more than five (5) driveways shall have access to the circular turnaround portion unless an expanded radius and island is incorporated into the turn around.
  7. A permanent easement for snow removal may be required at cul-de-sac bulb. The easement shall have a minimum length along the right-of-way line of forty (40') feet and a depth of fifteen (15') feet. When curbing is required, a curb depression shall also be placed in this easement

area. No shrubbery, fence, mailbox, or any other obstruction shall be placed within the easement to hinder the placement of the snow.

8. Shall not extend from a single-access loop street.
9. Shall be served by an appropriately located and constructed emergency access way when required by the Borough Council.
10. Landscaped cul-de-sac islands are encouraged and shall conform to the following standards.
  - a. Shall be located within the bulb of a cul-de-sac and be concave for use as part of the stormwater management infrastructure. Efforts should be made to retain the existing vegetation on the site within these islands.
  - b. Shall have a maximum radius of twenty-four (24') feet and be surrounded by paving on all sides.
  - c. Shall be designed to allow for emergency vehicle access into the cul-de-sac.

**D. Stub Streets or temporary cul-de-sacs**

1. Shall be provided in appropriate locations for vehicular access to abutting undeveloped lands when required by the Borough Council, upon advice of the Borough Planning Commission and Engineer.
  - a. The length shall be designed in accordance with cul-de-sac street standards.
  - b. The width and other road improvements of temporary stub streets or temporary cul-de-sacs shall generally conform with the future functional classification of the roadway once it is fully connected.
2. Shall be provided with a vehicular turnaround that meets cul-de-sac standards.
3. Shall be constructed to the property line in accordance with the standards of this Ordinance applicable to the classification of streets it will be upon extension.
4. Right-of-way for future extension must be established and delineated on the plans.

**Section 421. Driveway Access and Design**

- A. The term "driveway" as used here refers to every entrance or exit used by vehicular traffic to or from properties abutting a Borough, county, or state road. The term includes proposed private streets, lanes, alleys, courts, and other ways.
- B. Driveways with the following characteristics will be reviewed in the manner prescribed below:
  1. When any residential dwelling driveways will access an existing Arterial or Collector street.
  2. For all non-residential proposals which require a new driveway or upgrading of an existing driveway.
  3. For all proposals where driveways would generate twenty-five (25) or more vehicular trips per day, based on I.T.E. trip generation standards.
- C. Following evaluation by the Borough, the applicant may submit plans to the state, county, or Borough for formal review and, as appropriate, approval and issuance of permits.
- D. No driveway location, classification, or design shall be considered finally approved by the Borough unless highway occupancy or access permits have been granted by the state, county, and/or Borough and Preliminary Plan approval has been granted by the Borough Council for the subdivision and/or land development which the driveway(s) will serve.
- E. Driveway intersections with streets:

1. Shall provide adequate sight distance in compliance with the standards established by PennDOT and this Ordinance.
  2. Shall not cause or contribute to:
    - a. hazards to the free movement of normal street traffic.
    - b. traffic congestion on the street.
    - c. interference with the design, maintenance, and/or drainage of the street.
  3. Shall be designed and constructed in compliance with Title 67, Chapter 441 of the Pennsylvania Code unless Borough standards are more restrictive.
- F. In order to facilitate safe and efficient access between streets and driveways, the number of driveways permitted to serve individual parcels of land shall be kept to the minimum needed to adequately serve the parcel in question. Shared access between adjoining lots should be considered first.
1. Properties with frontages of 100' feet or less may be permitted not more than one driveway intersection with a street. Exceptions may be made when adjacent property owners share parking, or when the need is determined in a traffic study prepared by a qualified traffic engineer.
  2. Not more than two (2) driveway intersections with the same street may be permitted for any parcel of land unless anticipated traffic volumes warrant more than two (2), and then only when supported by a traffic study prepared by a qualified engineer warrants more than two driveway intersections.
- G. Driveway intersections serving individual parcels of land may be prohibited by the Borough Council where such intersections would create congestion, interference, and/or hazards to traffic flow and safety by reason of street grades, land forms, vegetation, frequency of driveway intersections, limited sight distances, and/ or high speed traffic flow. In such cases, the Borough Council may permit reasonable alternative forms of vehicular access to the parcel of land by means of:
1. Marginal access streets or driveways.
  2. Other means which are legally and technically suitable in the opinions of the Borough Solicitor and Engineer.
- H. Where driveway intersections are prohibited by the Borough Council and alternative forms of vehicular access would cause an undue burden upon an applicant, the Borough Council may permit an alternative interim access solution in compliance with the following:
1. It is the safest feasible alternative, acceptable to the Borough Engineer and/or PENNDOT.
  2. Suitable provisions are made for a preferable permanent access solution, consistent with Section 421.G, including legal agreements to enable implementation of the permanent solution.
- I. Distance from Street Intersections. Driveways shall be located as far from street intersections as is reasonably possible.
- J. Choice of Streets. When a lot adjoins streets of different classes, the driveway shall provide access to the street of lesser classification unless this requirement is waived by the Borough Council for reasons of sight distance, incompatibility of traffic, grading, drainage, or other major reasons.
- K. Stopping Areas. Regardless of the driveway classification, all driveways shall be provided with a stopping area within which the grade shall not exceed six (6%) percent. The stopping area shall be measured as follows:
1. The length of stopping area shall be a minimum of twenty (20') feet, or the length of the longest vehicles anticipated to use the driveway, whichever is greater.

2. Stopping areas shall be measured from the cartway line for all streets.

**L. Maximum Grades for Driveways.**

1. Residential driveways shall not exceed fifteen (15%) percent grade.
2. All other driveways shall not exceed ten (10%) percent grade.

**M. Sight Distance Determinations. Determination of sight distances at intersections of new driveways and streets with existing Borough roads shall be in accordance with the following provisions.**

1. Access driveways shall be located at a point within the property frontage limits which provides at least the minimum safe stopping sight distance (SSSD), as determined by the standards within PA Chapter 441 (Access to and Occupancy of Highways by Driveways and Local Roads) Title 67 of the Pennsylvania Code.
2. The calculated minimum SSSD shall be measured from a point ten (10') feet back of the pavement edge and three and one half (3.5') above the road surface.
3. If the minimum required SSSD's cannot be achieved, the Borough may exercise one (1) or more of the following options:
  - a. Prohibit left turns by exiting vehicles.
  - b. Restrict turning movements to right turns in and out of a driveway.
  - c. Require installation of a right turn acceleration lane or deceleration lane.
  - d. Require installation of a separate left turn standby lane.
  - e. Alter the horizontal or vertical geometry of the roadway.
  - f. Deny access to the road.

**Section 422. Bridges and Culverts.**

- A. Bridges and culverts shall be designed to meet current AASHTO or PENNDOT Standards to support expected loads and to pass design stormwater flows. They shall be constructed to the full width of the planned cartway. Allowance for safe pedestrian crossing must also be made.
- B. Where County owned roads or bridges are involved, the County Roads and Bridges Division must review and approve all proposals. Where State owned roads or bridges are involved, the PENNDOT must review and approve all proposals.
- C. It is unlawful to construct any bridge, culvert, or other water obstruction, or to make any change in or addition to, any existing water obstruction, or in any manner change or diminish the course, current, or cross-section of any stream or body of water, without first having made written application to and obtained a permit or consent in writing from DEP.
- D. The following information is required when a bridge is to be constructed:
  1. Drawings to include:
    - a. location plan;
    - b. cross-section of present bridge if one exists;
    - c. profile of stream for a reasonable distance above and below bridge site, showing slopes of bed, normal water surface and flood water surface.
  2. The total drainage area above the bridge site;
  3. Description of watershed;
  4. Length of stream from source to bridge site and to the mouth;
  5. Character of stream bed and banks;



6. Extent and depth of overflow during floods;
7. Effect of previous floods upon bridges, their span and clearance;
8. Whether bridge will be within backwater influence of the stream.

E. A complete set of structural computations and drawings shall be submitted with plans involving construction of bridges and culverts.

**Section 423. Parking and Related Internal Driveways.**

Parking and related internal driveways shall be governed by the following regulations.

**A. General.**

1. The specific purposes to be served by these requirements are:
  - a. To add visual character and improve the appearance of parking areas by reducing their massiveness into smaller units.
  - b. To integrate parking areas into the pedestrian circulation system.
  - c. To provide shade for parked cars and reduce heat islands, stormwater runoff, and air pollution.
  - d. To reduce random vehicular flow across parking areas.
  - e. To permit a high level of visibility for those uses for which visibility is an important factor.
  - f. To facilitate snow removal and storm drainage, and to conserve energy in construction and resurfacing operations, by laying out the paving surface with minimal obstructions.
2. Off-street parking facilities shall be provided in compliance with the parking requirements of the Borough Zoning Ordinance and the regulations contained herein.
3. Parallel parking shall be used along roads where needed. Angled parking may be permitted along public or private streets or within parking lots, when it is specifically designed to address potential safety issues associated with vehicles using the parking. Perpendicular parking shall not be permitted along public or private streets though angled parking may be used in select locations.
4. Stormwater storage/infiltration facilities, such as vegetated swales, infiltration galleries, or seepage beds beneath parking areas should be used. These facilities avoid the generally negative visual impacts of surface detention or retention facilities, and enhance groundwater recharge, with the attendant positive effects on stream flows and quality.

**B. All Parking Lots.**

1. Parking shall not be permitted along driveways which serve as the entrance(s) or exit(s) to parking areas with a capacity of fifty (50) vehicles or more.
2. Parking areas shall be set back from tract boundary lines and ultimate right-of-way lines in compliance with the requirements of the Zoning Ordinance. In any case not regulated by the Borough Zoning Ordinance, parking areas shall not be located closer than ten (10') feet from any tract boundary line unless it is along a street.
3. Where the edge of an existing parking area is located close to a street, driveway, or other parking area and the property is proposed for subdivision and/or land development, a minimum separation of ten (10') feet shall be provided between these features unless a shared parking or cross access arrangement is proposed. This spacing shall consist of a landscaped area with planting in conformance with Section 433, herein.

4. Dead-end parking areas shall not be used when the required parking capacity can be accommodated in a layout that permits more convenient vehicular movements. However, extraneous through-traffic flow should be avoided.
5. Parking spaces designed for the exclusive use by disabled persons shall be installed in all parking lots as close and convenient to building entrances as is reasonable. The specific number and locations of handicapped stalls shall be in conformance with the Americans with Disabilities Act (ADA).
6. Provisions for pedestrian safety within a parking lot shall be required by providing sidewalks, delineated crosswalks, traffic calming devices, and other measures.
7. Stormwater management controls shall be provided for the parking lot(s).

**C. Parking Area Dimensions.**

1. Parallel parking stalls shall have minimum dimensions of nine (9') feet width by twenty-two (22') feet length.
2. Perpendicular parking stalls shall have minimum dimensions of (9') feet width by eighteen (18') feet length with a twenty-two (22') feet aisle.
3. At the discretion of the Borough Council the minimum length of parking stalls may be reduced by one (1') foot if stalls are designed to allow vehicles to overhang an area of grass or other pervious surface. Bumper stops shall be provided which allow the parked vehicle to extend at least one (1') foot over the edge of the pavement.
4. Where parking stalls abut sidewalks, parked vehicles shall not overhang the sidewalks unless the sidewalk is widened by two (2') feet. Wheel stops are required in order to allow for full pedestrian use of the sidewalks.
5. Parking spaces for physically disabled persons shall be, at minimum, equal in depth to the spaces abutting them and sized in accordance with standards developed under the Americans with Disabilities Act (ADA) and applicable Building Codes.
6. Long-Term Parking Areas. In parking lots which service the parking needs of commuters or employees and have limited turnover of vehicles or where vehicles are stored such as auto dealers, parking stalls may have minimum dimension of eight and one-half (8 1/2') feet width by nineteen (19') feet length with a twenty-two (22') feet aisle. The Borough Council may allow a twenty (20') feet aisle if recommended by the Borough Engineer.
7. Short-Term Parking Areas. In parking lots that service retail areas with high turn-over or where shoppers are loading merchandise into vehicles, stalls shall have a minimum dimension of ten (10') feet width by twenty (20') feet length with a twenty-two (22') foot aisle.
8. Angled parking shall have the same width dimensions as 90-degree parking and the following depth and aisle dimensions:
  - a. For 75°(degree) parking– the length measured at right angles to the edge of parking shall be nineteen and one-half (19½) feet with an aisle dimension of twenty (20') feet.
  - b. For 60° (degree) parking– the length measured at right angles to the edge of parking shall be nineteen (19') feet with an aisle dimension of fourteen (14') feet.
  - c. For 45° (degree) parking– the length measured at right angles to the edge of parking shall be seventeen (17') feet with an aisle dimension of eleven (11') feet.

- D. Driveways Within Sites Proposed for Non-residential Development.** The following requirements apply to all driveways within all sites proposed for non-residential land development.

1. A smooth transition shall be provided between the driveway section required for access to a public street and other driveway(s) required for internal site circulation.
2. Main access driveways (entrance-exit) and service driveways handling large trucks shall be a minimum paved width of thirty (30') feet, with one lane in each direction, unless otherwise required by PENNDOT standards governing the volume of traffic anticipated.
3. Access driveways for cars and other small vehicles which are clearly secondary in importance may be reduced to twenty (20') feet in paved width, unless otherwise required by PENNDOT standards governing the volume of traffic anticipated.
4. Interior storefront driveways in shopping centers shall be a minimum paved width of twenty-eight (28') feet, to allow one lane in each direction and a drop-off/pick-up lane along the sidewalks.
5. Driveways along other non-residential buildings shall be a minimum paved width of twenty-two (22') feet, except where a drop-off/pick-up lane is proposed.
6. Parking Aisles shall be a minimum twenty-two (22') feet wide with two-way traffic flow for convenience and efficiency except where one-way traffic is used to access angled or parallel parking.
7. Wherever feasible, internal circulation driveways shall extend from access drives in locations which permit and encourage entering traffic to turn and enter the parking aisles without first travelling along a building-front driveway. This feature is intended to reduce the volume of vehicular traffic along building-front driveways to make it safer for pedestrian traffic.

#### **Section 424. Curbing.**

Curbing shall be installed along all existing and proposed public and private streets, common driveways, and common parking areas.

- A. When utilizing an approved stormwater management technique, Borough Council may waive curbing requirements in full or partially. Grass swales and infiltration trenches along streets are encouraged in appropriate locations in the Borough provided that pedestrian safety and traffic circulation is addressed.
- B. Borough may waive the installation of sections of curbing when adjoining sections of the road do not have curbing and in the opinion of the engineer it would be better to install the curbing at the same time that curbing is installed along the adjoining sections of the road way. In these cases, payments shall be required to fund the installation of the curbing at a future time when other sections of curbing along the roadway are installed.
- C. Handicap accessible curb cuts that meet the requirements of the American Disabilities Act shall be installed at all Intersections where sidewalks are provided or proposed.
- D. Curbing shall meet the specifications of Section 607.

#### **Section 425. Sidewalks and Border Areas.**

Sidewalks shall be installed along all existing and proposed public and private streets, common driveways, and common parking areas.

- A. **General.**
  1. The Borough Council may waive the sidewalk requirements if an alternative pedestrian circulation system can be shown to be more desirable, especially when using open space areas, provided that appropriate connections are provided between the open space walkways and the

surrounding pedestrian origins and destinations or when it is determined that sidewalks are only necessary on one side of the street.

2. Borough may waive the installation of sections of sidewalks when adjoining sections of the road do not have sidewalks and in the opinion of the engineer it would be better to install the sidewalks at the same time sidewalks are installed in adjoining sections of the road. In these cases, payments shall be required to fund the installation of the sidewalks at a future time when other sections of sidewalks along the roadway are installed.
3. Installation of sidewalks, subject to approval by the Borough Council upon recommendation of the Municipal Engineer and Solicitor, shall be in accordance with Section 602 of this Ordinance.

**B. Design and Layout**

1. Sidewalks and border areas shall be provided in appropriate locations to provide safe and efficient pedestrian access between parking areas, buildings, and other pedestrian destinations.
2. Sidewalk and border areas widths are to follow the guidelines set forth in Figure 4.2.
3. The grass strip/border area shall exist between the curb line or edge of cartway and the sidewalk.
  - a. Border areas between a sidewalk and the curb may contain street lights, trees, benches, trash cans, parking meters, mailboxes, or newspaper boxes. No obstacle in the border area may reduce the required sidewalk width for use by pedestrians.
  - b. Border areas shall be maintained as a grass strip between the sidewalk and the curb. If grass is impractical at the site, brick pavers or similar surface may be used at the discretion of the Borough Council upon the recommendation of the Borough Planning Commission and Engineer. In this case, a wider sidewalk may be necessary in place of a border area to create a safer pedestrian environment. Border areas can also be used for stormwater management structures such as rain gardens.
  - c. Border areas shall be at least four (4') feet wide.
4. The Borough Council may require additional sidewalk width in areas where higher volumes of pedestrian traffic are anticipated.

**Section 426. Crosswalks.**

- A. Crosswalks shall be clearly delineated at all intersections and marked to the width of the largest contributing sidewalk or trail. In no case shall crosswalk width be less than five (5') feet.
- B. Crosswalks and their transition to adjacent sidewalks or trails shall be designed to facilitate access and use by persons that are physically disabled, in compliance with the American with Disabilities Act.
- C. Where a crosswalk is located at an arterial or collector street, Borough Council may require one or more additional measures as described in the Pennsylvania Traffic Calming Handbook based upon the recommendation of the Borough Planning Commission and Borough Engineer.

**Section 427. Trails and Pathways.**

- A. When a subdivision or land development includes an existing or a proposed trail with public access customarily used by pedestrians or bicyclists, as delineated in the municipality's adopted open space or recreation plans, the applicant shall make provision for the continued recreational use of the trail subject to alterations of the course of the trail within the boundaries of the development.
- B. Trail widths shall be a minimum of six (6') feet wide with a cleared area of two (2') feet on either side.

- C. When a subdivision or land development lies adjacent to a park, school, or other pedestrian destination, pedestrian connections should be made to that destination.
- D. When trails are intended for public use they shall be protected by a permanent access easement on the properties on which they are located. The width of the protected area in which the trail is located shall be a minimum of twenty (20') feet. The language of the easement shall be to the satisfaction of the Borough Council upon recommendation of the Borough Solicitor.
- E. Trails and pathways shall have adequate access for use by all residents of the development or, preferably, the general public.
- F. Trails shall be landscaped in accordance with the specifications described in Section 434. Landscaping shall help delineate the route of the trail and screen surrounding properties from trail users.
- G. The land area permanently designated for trails for public use may be credited toward any open space requirement as described in the Zoning Ordinance.
- H. No trail shall be designed with the intent to accommodate motorized vehicles except for emergency or maintenance access.

**Section 428. Bicycle Routes and Bicycle Lanes.**

Reserved for future use.

**Section 429. Water Supply.**

- A. Applicants shall provide a safe, reliable, and adequate water supply from public water service to support the intended uses approved as part of a development plan. When water is to be provided by means other than private wells owned and maintained by the individual owners of lots within a subdivision or land development, applicants shall present evidence to the Borough Council that the subdivision or land development is to be supplied by Pennsylvania American Water or other suitable water supplier. A copy of a Certificate of Public Convenience from the Pennsylvania Public Utility Commission or an application for such certificate, a cooperative agreement, or a commitment or agreement to serve the area in question, whichever is appropriate, shall be acceptable evidence.
- B. When individual private water supply wells are proposed, the applicant shall provide evidence that adequate potable water supplies are reasonably available for each lot. This can be performed in the following ways:
  - 1. Performance of a groundwater study in accordance with Section 803, when applicable;
  - 2. Drilling and testing water supply wells for each lot; or
  - 3. Providing suitable documentation based upon local geology and adjoining wells demonstrating availability of potable water in the vicinity of the proposed lots.
- C. Fire hydrants shall be located at accessible points throughout the subdivision and land development and shall be located according to the Borough Engineer in consultation with the Borough Fire Marshal. As a general rule, hydrants should be located at each street intersection and at intermediate points as recommended by the Borough Fire Marshal. Generally, hydrant spacing may range from 350' to 600' feet depending upon the area being serviced. The type and methods of construction to be employed in the installation of fire hydrants shall be in accordance with current State and local regulations.
- D. Public Water Supply Facilities Design. The design for public water supply facilities shall be in accordance with DEP Water Supply Manual, the specifications of the utility providing water service, or Article Six—Construction and Engineering Standards.

## **Section 430. Wastewater Disposal.**

- A. All lots created through subdivision or all proposed land developments must have a suitable method for the management of wastewater.**
- 1. The applicant shall demonstrate suitable management of wastewater for each lot of a subdivision or land development through one of the following ways:**
    - a. If the site falls within the sewage facilities growth area established in the Borough Act 537 Sewage Facilities Plan, the following options should be pursued in the order listed:**
      - 1) Where suitable collection system infrastructure and treatment facilities are reasonably available with adequate capacity, the applicant shall connect the proposed lots or land development to the collection system and treatment plant after complying fully with any permit or fee requirements established by the owner of the collection and treatment facility.**
      - 2) Where suitable collection system infrastructure and treatment facilities are not reasonably available with adequate capacity to allow the applicant to connect the proposed lots or land development, the applicant may petition the owner of the collection system and treatment facility to extend the system or rectify the inadequacies of the treatment facility to enable future connection.**
      - 3) Where connections cannot be made to the system by the applicant or through an expansion of the system by its owner, the applicant may install capped sewers in accordance with the specifications for public sewers in this ordinance which shall extend from each lot or building into a system that will terminate at the property boundary in a manner in which future connection to public sewers can be made at some point in the future. Each lot of the land development would have to be serviced with suitable on-lot disposal systems or a community system approved by the Northampton County Health Department or DEP until such time as the capped sewers are connected. In limited situations, holding tanks may be used in accordance with Borough and Pennsylvania laws.**
    - b. If the site does not fall within the sewage facilities growth area established in the Borough Act 537 Sewage Facilities Plan, the following options should be pursued:**
      - 1) The applicant may request a revision to the Borough Sewage Facilities Plan to add the site to the sewer growth area. If the revision is not made, the applicant should pursue the on-lot disposal options.**
      - 2) The applicant shall evaluate the feasibility of on-lot disposal options in the following order: On-lot subsurface disposal; Community subsurface disposal.**
  - 2. Sewage Facilities Plan Revision. Planning approval shall be obtained for the selected option from the DEP or Northampton County Health Department**
  - 3. Sewage Facilities Plan Revision Exceptions include:**
    - a. Minor subdivisions where no additional lots are created including lot line adjustments, simple conveyances, and mortgage subdivisions. The impact of existing wastewater facilities shall be considered in the placement of new lot lines in these types of subdivisions.**
    - b. Non-building lots provided a properly executed Request for Planning Waiver and Non-building declaration has been submitted to and approved by DEP. Where the waiver is approved by DEP, the Final Plan and the deed for the lot shall contain the following notation:  
As of the date of this deed/ plot plan recording, the property/ subdivision described herein is and shall be dedicated to the express purposes of use. No portion (or lot number(s)) of this property are approved by Borough or the Department of**

Environmental Protection (DEP) for the installation, construction, connection, to or use of any sewage treatment facility. No permit will be issued for the installation, construction, connection to, or use of any sewage collection, conveyance, treatment, or disposal system (except for repairs of existing systems) unless the municipality and DEP have both approved sewage facilities planning for the property/ subdivision described herein in accordance with the Pennsylvania Sewage Facilities Act (35 P.S. Sections 750.1 et seq.) and regulations promulgated thereunder. Prior to signing, executing, implementing, or recording any sales contract or subdivision plan, any purchaser or subdivider or any portion of this property should contact the appropriate officials of Borough who are charged with administering the Sewage Facilities Act to determine the form of sewage facilities planning required and the procedure and requirements for obtaining appropriate permits or approvals.

- B. **Sewage Facilities Design.** The design and installation of domestic sewage facilities shall be done in accordance with the Pennsylvania Domestic Wastewater Facilities Manual prepared by DEP and Article Six-Construction and Engineering Standards.
- C. Existing on-lot sewage disposal systems that will remain in use shall be inspected and certified as to their satisfactory functioning, in accord with the Municipal Sewage Facilities Plan, Northampton County Health Department, and DEP standards. Malfunctioning systems shall be repaired or replaced with systems designed and constructed to current standards

**Section 431. Solid Waste Management.**

All lots and land developments must contain proper facilities for the management of solid waste including recycling in accordance with the following:

- A. Residential developments with single family homes may manage solid waste through a curbside collection service.
- B. Developments without regular curbside collection shall have solid waste collection containers within enclosures. Enclosures should be made of durable material in accordance with Article Six- Construction and Engineering Standards.
- C. **Solid Waste Storage Facilities** shall be located in the following manner:
  - 1. Convenient to portions of the development where solid waste is generated.
  - 2. Setback from adjoining property and adjoining structures in accordance with the Zoning Ordinance.
  - 3. Accessible for trash collection trucks.
  - 4. Solid Waste storage may be placed near building service entrances or loading docks, but may not be placed in any area used for parking or loading requirements.
  - 5. In apartment or condominium complexes with centralized waste storage, containers should be located in an area which is convenient to each grouping of ten (10) to fifteen (15) units or be located in a large enclosed facility at the entrance to the development.
  - 6. During the servicing of these containers (up to 5 minutes) it is important that internal circulation at the site is not impeded.
- D. **Operations.** Trash storage containers should be serviced at least once a week. Recycling containers may be serviced at a less frequent interval. If a dumpster contains food it should be serviced every three days. A storage container should have tight fitting lids, secured at all times, and be leak free.

### **Section 432. Stormwater Management and Drainage.**

- A. The stormwater management system should be designed in accordance with the Borough's adopted Act 167 Stormwater Management Ordinance, as amended and the Pennsylvania Stormwater Best Management Practices Manual.
- B. Existing natural stormwater drainage systems should be preserved and incorporated into the overall site stormwater management system.
- C. New stormwater conveyance and control devices should be designed to be compatible with natural site conditions.
- D. When subdivisions or land developments are submitted to the Borough Engineer for approval in sections, a complete storm sewer design for the entire proposed subdivision and land development shall be submitted.
- E. If only a section of a subdivision or land development is contemplated for construction, the applicant's engineer shall show how storm water from each section will be managed to protect adjacent properties. If temporary construction is required, the engineer shall include such structures in the plan submitted.
- F. Minimum grades inside stormwater basins and conveyance structures shall be two (2%) percent and maximum side slopes of any stormwater device should be 33 % percent (3:1 slope).
- G. Appropriate stormwater controls, best management practices, and conveyance facilities should be dispersed throughout the site and generally located close to the sources of stormwater release such as downspouts, culverts, and parking lots.
- H. Any Maintenance Plan, Maintenance Agreement or Stormwater Management Easement required by the Borough's adopted Act 167 Stormwater Management Ordinance, as amended, must be completed and recorded prior to the granting of final approval of any subdivision or land development plan. The Borough must be satisfied through contractual arrangements that all stormwater facilities will be properly maintained. If all, or a portion, of the facilities will be on property which will be conveyed to an individual homeowner's association or any other eventual owner, the guarantees must be in such a form that they will carry through to the new owners.
- I. Storm Drainage Directed into an Adjacent Municipality. When storm drainage will be directed into an adjacent municipality, all provisions for accommodating such storm drainage shall be submitted to the governing body of that municipality for review.
- J. Discharge of Roof Runoff. Stormwater runoff from roofs shall not be discharged into the street right-of-way without approval by the Borough upon review by the Borough Engineer, nor concentrated onto adjacent properties. It shall be returned to sheet flow or discharged into a structure adequately designed and approved by the Borough.
- K. Properties shall be graded to secure proper drainage away from buildings and to allow the collection of stormwater in catch basins. Minimum two (2%) percent slopes away from structures shall be required.
- L. Drainage from Non-Natural Sources. Water originating from onsite machinery or filtration systems, such as air conditioning units, sump pumps, or other dry weather flow, wherever practicable, shall be discharged into landscaped or grass areas on the property. The discharge of water from these sources into the street is prohibited.
- M. Storm Sewers
  - 1. Existing Storm Sewer Accessibility. Where existing storm sewers are reasonably accessible and of adequate capacity, subdivisions and land developments shall connect to the existing storm sewers.



2. All storm sewer pipes shall have a minimum diameter of fifteen (15") inches.
3. **Drainage Easements.** Drainage easements shall be provided to accommodate all storm drainage requirements and shall be a minimum of thirty (30') feet in width. Storm sewers, as required, shall be placed in the road right-of-way, parallel to the roadway and shall be designed as a combination storm sewer and underdrain if necessary. When located in undedicated land, they shall be placed within an easement not less than twenty (20') feet wide, as approved by the Borough Engineer.
4. **Drainage Facilities Design Requirements.** All drainage facilities shall be designed to adequately handle surface runoff and carry it to suitable outlets and shall be designed in accordance with the following minimum design standards:
  - a. All storm drains and drainage facilities such as gutters, catch basins, bridges, inlets, and culverts shall be installed and the land graded for adequate drainage as shown on the grading plan submitted and approved with the Final Plan. Construction of these facilities shall generally conform with PENNDOT Specifications Publication 408, latest version. Storm drains and appurtenances shall be required to be constructed by the applicant to take surface water from the bottom of vertical grades to lead water away from springs, and to avoid use of cross gutters at street intersections and elsewhere.
  - b. The existing points of natural drainage discharge onto adjacent property shall not be altered without the written approval of the affected landowners.
  - c. No storm water run-off or natural drainage shall be so diverted as to overload existing drainage systems, or create flooding or the need for additional drainage structures on the other private properties or public lands. In cases where additional stormwater flows will overload adjacent structures, the applicant shall be responsible for enlarging the facilities.
  - d. **Manholes.** Manholes shall be constructed at all changes in horizontal or vertical alignment and otherwise required in Section 609.
  - e. **Location within Borough Rights-of-Way.** Storm sewer lines within street rights-of-way shall be placed at locations acceptable to the Borough. They shall be protected by a cover of at least eighteen (18") inches.
  - f. **Location within State Rights-of-Way.** Drainage structures that are to be located within state rights-of-way shall be approved by PENNDOT, and a letter from the Department indicating such approval shall be submitted to the Borough.

#### **Section 433. Street Trees**

- A. Street trees shall be required along:
  1. All existing streets when they abut or lie within the proposed subdivision or land development except where existing trees serve to meet the planting requirement.
  2. All proposed streets.
  3. Access driveways that serve five (5) or more residential dwelling units.
  4. Access driveways that serve two (2) or more nonresidential properties.
  5. Major walkways through parking lots and between nonresidential buildings, as recommended by the Borough Council.
- B. The street tree requirement may be waived by the governing body to maintain scenic views of open space, farmland, hedgerows, natural features, or other valued features.
- C. Street trees shall be located between the ultimate right-of-way line and the building setback line and shall meet the following standards:

1. Trees shall be planted a minimum distance of five (5') feet and a maximum distance of fifteen (15') feet outside the ultimate right-of-way line. However, in certain cases, as follows, the governing body may permit trees to be planted within the ultimate right-of-way:
  - a. In areas, such as existing downtowns, where planting areas may be located within the ultimate right-of-way.
  - b. In cases where closely spaced rows of street trees may be desirable and future street widening is considered unlikely.
  - c. Where there are existing trees along the road, new trees should supplement them.
3. In nonresidential developments, trees shall be located within a planting area within the front yard setback, at least ten (10') feet in width, planted in grass or groundcover. In areas where wider sidewalks are desirable, or space is limited, tree-planting pits may be used.
4. Trees shall be located so as not to interfere with the installation and maintenance of sidewalks and utilities. Trees shall be planted such that their trunks are a minimum distance of three (3') feet from curbs and sidewalks, twelve (12') feet from overhead utilities, and six (6') feet from underground utilities.
5. Tree species shall be selected based on appropriate growth rates and mature heights for use adjacent to overhead utility lines.
6. Trees shall be planted at a rate of at least one tree per forty (40') feet of street frontage or fraction thereof. Trees shall be distributed along the entire frontage of the property, although they need not be evenly spaced.
7. Trees shall comply with the requirements of Section 438, herein. The use of tree species selected from the List of Recommended Plant Materials is encouraged/required.

**Section 434. Buffer Plantings.**

Use Requirements. Buffer plantings shall be installed in subdivisions and land developments to integrate new development with its surroundings, to separate incompatible land uses by providing screening, to reduce wind, and to minimize or eliminate views to certain site elements in compliance with the following regulations:

- A. Buffer plantings shall be required for the following types of development and as otherwise specified in the Borough Zoning Ordinance:
  1. All nonresidential development.
  2. All single family detached development, with more than two lots.
  3. All multi-family, single-family attached, and semi-attached development.
  4. All cluster development.
  5. All mobile home parks.
  6. Active recreational facilities
  7. Construction of any of the following items which exceeds 400 square feet in ground coverage:
    - a. public utility facilities or structures,
    - b. waste collection, storage and/or treatment facilities
    - c. any other structure of similar character or impact.
- B. An on-site investigation by the applicant shall determine the adjacent land uses along each property boundary. In the case of vacant land, the existing zoning shall be used. The existing or zoned uses shall be noted on the plan. In the case when several uses are allowed on a site, the most restrictive landscaping requirements shall apply as determined by the Borough.

**Existing Uses**

<b>Proposed Use</b>	<b>Office/ Institutional Private Recreation</b>	<b>Commercial/ Industrial</b>	<b>Multi-family/ SFA/ MHP</b>	<b>Twins/ Duplexes/ SFDs</b>
Office/ Institutional	Softening	Softening	Filtering	Screening
Commercial/ Industrial	Filtering	Softening	Screening	Screening
Residential	Softening	Filtering	Softening	Filtering
Active Recreation	Softening	Filtering	Softening	Softening

**C. Buffer Area Location and Dimensions**

- a. A buffer planting area of not less than fifteen (15') feet in width shall be established along all property lines and external street boundaries of the tract proposed for subdivision or land development, unless otherwise specified in the zoning ordinance. Where zoning regulations allow building setbacks less than fifteen (15') feet, the buffer area may be reduced to equal the width of the minimum building setback.
- b. The buffer area may be included within the front, side, or rear yard setback.
- c. The buffer area shall be a continuous pervious planting area consisting of canopy trees, small understory trees, and shrubs, with grass or groundcover. No paving shall be permitted within the buffer areas except for driveway crossing and/or walkways.
- d. Parking is not permitted in the buffer area.
- e. Stormwater basins are permitted in the buffer area provided that the visual screening requirements of the buffer is met.

**D. Minimum Buffer Planting Requirements.** The minimum planting requirements shall be determined by the intensity of the proposed land use and the adjacent land use, vacant land, or zoning district.

**E. Minimum Plant Material Requirements.** The following requirements are minimum standards; additional plant material, grading treatments, or architectural elements may be included in the plan, at the applicant's discretion. Every 100' linear feet of property line or external street boundaries of the tract proposed for subdivision or land development shall be buffered with the following minimum quantities, types, and sizes of plant material:

**Softening Buffer:**            1 canopy tree (2-2 1/2" min. caliper)  
    2 understory trees (1 1/2" min. caliper)  
    2 evergreen trees (8' min. ht.)

**Filtering Buffer:**            2 canopy tree (2-2 1/2" min. caliper)  
    2 understory trees (1 1/2" min. caliper)  
    5 evergreen trees (8' min. ht.)  
    5 shrubs (24" min. ht.)

**Screening Buffer: \***        8 evergreen trees (8' min. ht.)  
    2 understory trees (1 1/2" min. caliper)  
    2 canopy trees (2-2 1/2" min. caliper)  
    10 shrubs (24" min. ht.)  
    -or-  
    30 upright evergreen shrubs (4' min. ht.)  
    -or-  
    15 upright evergreen shrubs (4' min. ht.)

4 ornamental trees (1 ½" min. caliper) or

3 canopy trees (2-2 ½" min. caliper)

-or-

an alternative planting design that will result in at least an equivalent degree of visual screening to one of the above screening buffers.

Limited Area/Buffer\*\* 1 upright evergreen shrub per three (3') feet (4' min. ht.)

-or-

4-6 foot solid fence or wall

\*A screening buffer must be adequate to visually screen the proposed land use or development from off-site view. Several different planting options could be used to create an effective buffer. Grading treatments and architectural features, such as walls, fences and/or naturally undulating berms may be required in addition to the minimum planting quantities in order to effectively provide a visual screen.

\*\*The limited area buffer can be used in older developed areas where space for planting is severely restricted. The planting screen would be equivalent to an evergreen hedge planting. Alternative planting arrangements, such as shade or flowering trees with deciduous shrubs, could be considered in conjunction with a fence or wall, at the discretion of municipality.

F. Mitigation of Visual Impacts.

1. The use of a screening buffer planting shall be required to mitigate the adverse visual impacts that the proposed land uses or site elements have on the subject tract, adjoining properties and the community in general. In addition to the requirements for buffer plantings as listed in figure, the following proposed land uses and site elements shall be screened from off-site with a screening buffer planting:
  - a. Dumpsters, trash disposal, recycling areas, and mechanical equipment.
  - b. Service and loading docks.
  - c. Outdoor storage areas.
  - d. Sewage treatment plants and pump stations.
2. Existing topographic conditions, such as embankments or berms, in conjunction with existing vegetation, may be substituted for part or all of the required buffers at the discretion of the governing body. The minimum visual effect shall be equal to or exceed that of the required buffer or screen.
3. Constructed berms or other architectural elements such as walls or fencing may be substituted for part of the landscape buffering requirements.

**Section 435. Parking Lot Landscaping**

Parking lots should be effectively landscaped with trees and shrubs to reduce the visual impact of glare from headlights, and parking lot lights; to delineate driving lanes; and define rows of parking. Furthermore, parking lots should be adequately landscaped to provide shade in order to reduce the amount of reflected heat and to improve the aesthetics of parking lots.

A. Planting Regulations. All parking lots shall be landscaped according to the following regulations:

1. Planting islands shall be the dimensions of one parking stall or a nine (9') feet by eighteen (18') feet area whichever is greater, underlain by soil and shall be protected from vehicle traffic with curbing, wheel stops, or bollards. Each planting island shall contain one shade tree plus low-growing shrubs and/or groundcover over the entire area.

2. All planting strips shall be a minimum of fifteen (15') feet wide. Strips shall run the length of the parking row, underlain by soil, and shall be protected with curbs, wheel stops, or bollards. Planting strips shall contain plantings of one canopy tree every twenty-five (25') feet, plus shrubs and/or groundcover to cover the entire area at maturity.
3. The placement of light standards shall be coordinated with the landscape plan to avoid a conflict with the effectiveness of light fixtures.
4. Plant materials shall comply with the requirements of Section 617, herein and shall be selected from the List of Recommended Plant Material.

B. Screening Requirement. All parking lots shall be screened from public roads and from adjacent properties according to the following:

1. The perimeter of all parking lots shall be planted with a filtering buffer as per Section 434.
2. The perimeter planting area around all parking lots shall be a minimum of ten (10') feet in width.

#### **Section 436. Additional Plantings.**

Reserved for future use.

#### **Section 437. Stormwater Basin and Natural Areas Planting.**

Landscaping shall be required in and around all stormwater management basins and natural areas according to the following:

- A. All areas of stormwater management basins, including basin floors, side slopes, berms, impoundment structures, or other earth structures, shall be planted with suitable vegetation such as naturalized meadow plantings or lawn grass specifically suited for stormwater basins.
  1. Trees and shrubs shall be planted in and around stormwater basins if they do not interfere in the proper function of the basin and no trees are planted within thirty (30') feet of an outlet/drain structure, emergency spillway, or dam. A minimum of two (2) trees and ten (10) shrubs per 100' linear feet of basin perimeter shall be planted in and around the basin.
  2. Naturalized ground cover plant species, such as wildflowers, meadows, and nonaggressive grasses specifically designed for the permanently wet, intermittently wet, and usually dry areas of stormwater basins, shall be seeded in the floors and slopes of the basin and meet the following requirements:
    - a. The plantings provide a satisfactory continuous cover for all areas of the basin.
    - b. The plantings do not interfere with the safe and efficient function of the basin as determined by the Borough Engineer.
  3. Lawn grass areas may be sodded or hydro-seeded to minimize erosion during the establishment period. Once established, these turf grass areas shall be maintained at a height of not more than six (6") inches.
- B. Additional vegetation shall be planted in natural resource protection areas including riparian corridors wherever existing trees do not meet the minimum tree planting requirements.
  1. Existing trees within natural resource areas shall be preserved and retained. Existing tree cover should be surveyed and inventoried to assess the need for any new plantings. Existing tree species included on the noxious/invasive plant species list, Appendix B, should be removed where conditions warrant.
  2. Planting Requirements.

- a. New trees shall be planted at a minimum rate of fifteen (15') feet on center or one tree per 225 square feet in staggered rows or an equivalent informal arrangement within the riparian area.
- b. New trees shall be a variety of sizes ranging from a minimum four (4') to five (5') foot branched whip to an approximate one and a half inch (1 ½") balled and burlapped planting stock.
- c. New tree plantings shall be composed of native riparian tree species.
- d. Tree plantings in riparian areas shall be located along the stream bank to provide shade for the stream, soil erosion control and stormwater benefits, according to accepted stream bank restoration practices.

**Section 438. General Landscape Design Criteria.**

- A. Plantings shall be placed in arrangements and locations to best mitigate the adverse impacts of the proposed site development. The required plant material shall be distributed over the entire length and width of any required buffer area.
- B. Plantings shall be spaced to comply with the visual mitigation requirements with consideration given to the provision for the future growth habits and mature sizes of selected plant species.
- C. Plant species selection shall be based on the following considerations:

- 1. Existing site conditions and their suitability for the selected plants based on the site's soils, hydrology and microclimate.
- 2. Specific functional objectives of the plantings which may include but not be limited to visual screening, noise abatement, energy conservation, wildlife habitat, erosion control, stormwater management, and aesthetic value.
- 3. Maintenance and replacement considerations such as hardiness, resistance to insects and disease, longevity, availability, and cost of plant materials
- 4. A minimum variety of tree species is required as follows:

NUMBER OF TREES	MINIMUM NUMBER OF TREE SPECIES	MAXIMUM % OF ANY ONE SPECIES
0-5	1	100%
6-15	2	50%
16-30	3	40%
31-50	4	30%
51+	6	20%

- D. Existing healthy trees, shrubs, or woodlands may be substituted for part or all of the required plant material at the discretion of the Borough Council. The minimum quantities and/or visual effect of the existing vegetation shall be equal to or exceed that of the required buffer. In order for existing vegetation to qualify for required buffer plantings, proof must be provided to demonstrate that adequate protection measures, particularly in the plant's root zone, are incorporated into the plan.
- E. Plant materials shall meet the specifications of Section 617.

## **ARTICLE FIVE - MOBILE HOME PARK STANDARDS**

### **Section 500. Applicability**

- A. **Individual Mobile Homes.** Individual mobile homes or manufactured housing, as defined in Section 201, may be erected on any lot where the use is permitted in compliance with the Borough Zoning Ordinance, all sections of this Ordinance which apply to subdivisions and development of single-family detached dwellings, and applicable local or federal building codes.
- B. **Mobile Home Parks.** The provisions of this Article shall be followed in the construction or alteration of all mobile home parks, as defined in Section 201. These provisions are in addition to other applicable regulations of this Ordinance. Compliance with the Borough Zoning Ordinance is also required.

### **Section 501. Site Design**

The following site design standards shall apply to mobile home parks:

- A. **Arrangement of Structures and Facilities.** The tract, including mobile home stands, patios, other dwellings and structures, and all tract improvements, shall be organized in relation to topography, the shape of the property, and common facilities. Special attention shall be given to new mobile home designs and to common appurtenances that are available.
- B. **Adaptation to Property Assets.** Each mobile home unit or other dwelling or structure shall be fitted to the terrain with a minimum disturbance of the land and a minimum elevation difference between the floor level of the unit and the ground elevation under it. Existing trees and shrubs, rock formations, streams, floodplains, steep slopes, and other natural features of the property shall be preserved to the maximum extent practical.
- C. **Courts and Spaces.** Groups or clusters of units shall be placed to create interior spaces and courtyards.
- D. **Orientation.** Mobile homes shall be arranged in a variety of orientations so that many units face the street with their long sides rather than their ends, in order to provide variety and interest.
- E. **Street Layout.** Street patterns should relate to the topography.
- F. **Roadways.**
  - 1. **Standards.** All municipal standards for the construction of streets contained in this Ordinance shall be adhered to for all public streets in and abutting a mobile home park. In those parks where streets are to be maintained by the mobile home park owner or owned and maintained in common by the residents/ owners of the individual lots, the following standards shall apply:
    - a. **Right-of-Way.** There shall be an equivalent right-of-way (as defined under street rights-of-way in Section 201) reserved along streets which are designed to function as collector streets, and which connect exterior roadways, form major internal loops, traverse the majority of the development, or provide access to adjoining parcels of land. No equivalent rights-of-way are required on other streets. On those streets where an equivalent right-of-way is required, parallel parking may be permitted, but perpendicular or angled parking is not permitted.
    - b. **Pavement.** Pavement or cartway width of all residential streets serving as access to mobile home lots shall be not less than twenty-six (26') feet. Pavement may be reduced to no be less than twenty (20') feet on a street serving as access to not greater than ten (10) mobile home lots where parking is prohibited along the road and off-street visitor parking is provided in common areas within at least 300 feet of all dwelling units. One off-street parking space is required for each three (3) mobile homes.
    - c. **Grades.** Gradients on all residential streets shall not exceed ten (10%) percent.

- d. **Cul-de-Sac Streets.** A paved turnaround area with a minimum radius of forty (40) feet shall be provided at the closed end of any cul-de-sac street serving as a sole access to four (4) or more mobile home lots. No permanently-closed cul-de-sac street shall exceed six-hundred (600) feet in length or serve as the only access to more than twenty (20) mobile home lots.
2. **Access Limitations.** Mobile home lots may have direct access only onto streets internal to the development. Direct access from a mobile home lot shall not be permitted onto the streets surrounding the mobile home park.
3. **Conversions.** Any road built as a private road, and later proposed for conversion to a public road, shall be brought up to the applicable standards for public streets prior to being dedicated as a public way, unless this requirement is waived by the Borough Council subsequent to determining that compliance with the requirement would have a negative effect on the mobile home park.

### **Section 502. Common Open Space**

In addition to any requirements of the Borough Zoning Ordinance, the following regulations shall also apply:

#### **A. Open Space System**

1. **Arrangement.** The common space shall be designed as a contiguous area unless the applicant demonstrates to the satisfaction of the Borough Council that two or more separate areas would be preferable. The open space shall also have easily identifiable pedestrian and visual accessibility for all residents of the mobile home park, although all units do not have to abut the common open space.
2. **Recreation.** Recreation areas and facilities shall be provided to meet the anticipated needs of the residents of the mobile home park. Not less than twenty-five (25%) percent of the required open space area exclusive of lands within the required buffers, shall be devoted to recreation use. Recreation areas should be of a size, shape, and topography that is conducive to active and passive recreation, in compliance with applicable zoning requirements.

#### **B. Buffers**

1. **General Requirements.** A permanent buffer shall be provided along all exterior property boundary lines.
2. **Existing Buffers.** In cases where the property line of a mobile home park occurs along natural features which function as buffers, including but not limited to mature vegetation, significant grade changes or stream valleys which are likely to be permanently preserved, buffering may be waived along that property line with approval of the Borough Council based upon recommendation of the Borough Planning Commission.
3. **Buffer Landscape Plan.** A landscaping plan shall be submitted in accordance with the provisions of Section 434 of this Ordinance.

### **Section 503. Common Elements**

- A. **Ownership.** Common open space and roadways shall be offered for dedication to the Borough or open for public use through easements or other appropriate means in any mobile home park where all lots will be sold, or where the Borough Council determines those areas to be key elements in the open space and/ or circulation systems of the Borough. In all other cases, these and other common elements may be retained in private ownership, or may be owned jointly by the residents of the development.



- B. **Maintenance.** Prior to development plan approval, provisions acceptable to the Borough Council and Borough Solicitor for the maintenance of all common elements which will not be owned and maintained by a governmental agency shall be established.
- C. **Service Building.** The structure or structures containing the management office and other common facilities shall be conveniently located for the use intended.

**Section 504. Utilities**

**A. Water Supply**

- 1. **General Requirements.** An adequate water supply for domestic, auxiliary, and fire-fighting uses shall be provided throughout the mobile home park, including service buildings and accessory facilities, in accordance with the Borough Zoning Ordinance.
- 2. **Water Distribution System.** All water piping, fixtures, and other equipment shall be constructed and maintained in accordance with state and local regulations as well as those of the servicing utility.
- 3. **Individual Water-Riser Pipes and Connection.**
  - a. Individual water-riser pipes shall be located within the confined areas of the mobile home stand at a point where the water connection will approximate a vertical position, thereby insuring the shortest water connection possible and decreasing susceptibility to water pipe freezing.
  - b. The water-riser pipe shall have a minimum inside diameter consistent with the standards of the servicing public utility, or in lack thereof, of the Borough Engineer, and terminate at least four (4") inches above the ground surface. The water outlet shall be provided with a cap when a mobile home does not occupy the lot.
  - c. Adequate provisions shall be made to prevent freezing of service lines, valves, and riser pipes and to protect risers from heaving and thawing actions of ground during freezing weather. Surface drainage shall be diverted from the location of the riser pipe.
- 4. **Fire Protection.** All mobile home parks shall be provided with fire hydrants to meet the specifications of the National Fire Protection Association. In addition, those hydrants shall be in sufficient numbers to be within six-hundred (600) feet of all existing and proposed mobile homes and other dwellings and structures, measured by way of accessible streets or common areas.

**B. Sewage Disposal**

- 1. **General Requirements.** An adequate and safe sewerage system shall be provided throughout the mobile home park for conveying and disposing of sewage from dwellings, service buildings, and accessory facilities in accordance with the state requirements.
- 2. **Sewer System.** All sewer lines shall be located in trenches of sufficient depth to be free of breakage from traffic or other movements and shall be separated from the water supply system. The system shall be constructed and maintained in accordance with all state regulations, as well as those of the servicing utility.
- 3. **Individual Connections.**
  - a. Each mobile home shall have a sewer riser pipe consistent with the standards of the servicing utility or Borough Plumbing Code. The sewer riser pipe shall be located on each stand to connect vertically with the mobile home.
  - b. The connection shall have an inside diameter and slope as required by the servicing utility or Borough Plumbing Code. All joints shall be watertight.

- c. All material used for sewer connections shall be semi-rigid, corrosive resistant, nonabsorbent, and durable. The inner surface shall be smooth.

C. **Underground Utilities.** All electric, natural gas, telephone, cable television and any other utility lines shall be placed underground in all mobile home parks and each shall have the necessary shut-off valves and other safety requirements normally associated with safe operations.

#### **Section 505. Permits, Licenses, Fees and Inspections**

##### **A. Permits Required**

1. **Lots for Sale.** In those mobile home parks wherein some or all of the mobile home lots will be sold individually (whether totally fee simple, fee simple with a homeowners association, condominium, or cooperative), no lot to be conveyed shall be developed or a mobile home or other structure placed or constructed thereon until the subdivision and/or land development plan has been properly approved and the proper building and construction permits have been issued to the lot in accordance with standard procedures for any building activity in the Borough. No mobile home or other structure shall be occupied until a valid occupancy permit has been issued by the Borough.
2. **Lots for Lease.** In those mobile home parks wherein some or all of the mobile home lots will be leased, the following regulations shall apply to the entire development exclusive of the lots being sold individually:
  - a. **Initial Permits.** It shall be unlawful for any person or group to construct, alter, extend, or operate a mobile home park unless and until that person or group obtain:
    - 1) Valid permit(s) authorizing construction or initial occupancy issued by the Borough Code Enforcement Officer in the name of the operator. All permits for water supply and sewage systems shall have been obtained.
    - 2) Compliance with all other requirements contained herein.
    - 3) Final approval of the application by the Borough Council.

B. **Mobile Home Inspections.** The applicant or developer shall inform the Borough when mobile homes are connected to water supply, sewer, and electrical service to schedule inspection of these connections and to determine that the mobile home is anchored and located in accordance with this Ordinance. The Code Enforcement Officer will not inspect the mobile home unit but shall determine if it bears a label indicating that it complies with the appropriate federal safety standards promulgated by the US Department of Housing and Urban Development and Pennsylvania regulations issued under the "Manufactured Housing Construction and Safety Act."

#### **Section 506. Additional Requirements**

- A. **Mobile Home Stands.** A concrete mobile home pad shall be properly graded, placed, and compacted so as to be durable and adequate for the support of the maximum anticipated loads during all seasons.
- B. **Anchoring.** Every mobile home placed within a mobile home park shall be anchored to the mobile home stand where it is located prior to the unit being occupied or used in any other way. The anchoring system shall be designed to resist a minimum wind velocity of 90 miles per hour.
- C. **Stability.** All mobile homes placed within a mobile home park shall, prior to occupancy or other use, be affixed to their mobile home stands in such a way so as to prevent tilting of the unit. No mobile home shall permanently rest on the wheels used to transport the unit.
- D. **Skirts.** All mobile homes placed within a mobile home park shall, prior to occupancy or other use, have skirts installed for protection of the utility connections.

- E. Hitch. The hitch or tow bar attached to a mobile home for transport purposes shall be removed and remain removed from the mobile home when it is placed on its mobile home stand.

**ARTICLE SIX - ENGINEERING AND CONSTRUCTION STANDARDS**

**Section 600. Purpose and Contents**

This Article contains the construction and engineering standards for required improvements, utilities, grading and erosion control, survey detail, stormwater drainage, paving, curbing, pathways and sidewalks, emergency access, bridges, signage and markings, lighting, solid waste storage, street names, and easements.

**Section 601. Asphalt Roadway Improvements**

- A. All adjacent structures and areas disturbed or damaged during construction shall be properly repaired, restored, or replaced to the satisfaction of the Borough by the party causing the damage.
- B. All trees, roots, stumps, brush, down timber, wood, rubbish and any objectionable material shall be removed from the full legal right-of-way, or as approved by the Borough Engineer. Efforts shall be made during construction of roadways to preserve any vegetation, specifically for preservation as identified in the landscaping plan.
- C. Paving. The pavement of all streets and all commercial, industrial, and multifamily parking areas and driveways into and out of parking areas shall be installed as shown on the Final Plan and in accordance with the following standards:
  - 1. General. All paving shall be constructed both as to materials and methods, generally in conformance with applicable portions of PENNDOT Specifications Publication 408.
  - 2. Pavement Design. Pavement construction shall conform to the minimum standards for different types of streets and parking areas as indicated in Table 6-1.

**Table 6-1. Minimum Street Construction Standards**

	Local Road	Arterial or Collector Road
ID-2 Surface Course	1 1/2"	1 1/2"
ID-2 Binder Course	2"	2"
Bituminous Concrete Base Course	3"	5"
PennDOT No. 2A Coarse Aggregate Subbase	6"	6"
Minimum Design Structural Number	2.8	3.5

**NOTES**

- All thickness specifications are for compacted materials.
- Permanent cul-de-sac street, marginal access street, service street, and off-street parking construction shall conform to standards for local roads.
- All base courses and/or ID-2 binder course shall be overlaid with a wearing course no later than one year after installation unless approved otherwise. Binder course to be installed immediately following base course installation. Parking construction shall conform to standards for local roads.

- 3. Alternative Paving. Alternative paving specifications may be approved for roads, driveways, and parking lots not intended for dedication to the Borough, in commercial, industrial, rural, multifamily and mobile home park areas.

4. Aggregates, coarse and fine, for binder coarse shall be made from stone, gravel, or other recycled aggregate, and shall meet the quality requirements for Type A stone and Type A gravel. Fine aggregate shall be natural sand, manufactured sand composed of free hard, durable, uncoated particles and free of from lumps of clay and organic material. Fine sand shall meet the gradation requirements in Table A, Section 703, Penn DOT Publication 408, latest revision. The coarse aggregates shall meet the grading requirements indicated above.

- D. Pavement Cross Slopes. The typical pavement cross slope on proposed streets shall not be less than one fourth (1/4") inch per foot and not more than one half (1/2")-inch per foot. The typical slope of the shoulder areas shall not be less than three fourth (3/4")-inch per foot and not more than one (1")-inch per foot.

#### **Section 602. Concrete Sidewalk Improvements**

Concrete sidewalks shall be constructed as follows:

- A. Sidewalk construction shall conform with standards developed under the Americans with Disabilities Act.
- B. Sidewalks shall be four (4") inches thick and made with four-thousand (4,000) psi compression strength concrete, placed upon a minimum four (4") inch layer of AASHTO #57 stone bedding.
- C. The sidewalk shall be built as to discharge drainage to the street, the grade of which shall be one-fourth (1/4") inch per foot. The finished grade between the outside of the sidewalk to the curb line (edge of the cartway) shall never exceed a total vertical elevation change of one (1') foot.
- D. Expansion joints shall be placed every thirty (30') feet, with contraction joints every five (5') feet at a minimum of one (1") inch in depth. Additional expansion materials shall be placed between any sidewalk, curb and driveway apron and in the sidewalk at driveway limits. A contraction joint shall be cut between the sidewalk and apron.
- E. All sidewalks shall receive a broom finish unless otherwise approved by the Borough.
- F. An access ramp for physically disabled persons shall be placed at all sidewalk intersections with roads.

#### **Section 603. Crosswalk Improvements**

- A. Marked crosswalks shall be provided in cartways where sidewalks intersect with roads.
- B. Raised speed table crosswalk shall be three (3") inches or less in height, extend twenty-two (22') feet in length and have a flat surface stripped for a crosswalk ten (10') in width.

#### **Section 604. Pathways and Trails**

- A. Asphalt Trails shall be developed in accordance with the following standards.
1. Pathways shall be six (6') to eight (8') feet wide and consist of two (2") inches of ID-2 wearing course over a six (6") inch layer of AASHTO #57 stone.
  2. Where the edge of the trail is above the surrounding grade, bituminous pavement shall be feathered.
- B. Crushed Stone Trails shall be developed with the following standards.
1. The base course should be comprised of four (4") inches of 2A modified gravel.
  2. The wearing surface should be a two (2") inch mixture of quarry fines and clay material laid flat and rolled.
  3. Generally vertical slopes shall be less than five (5%) percent.

- C. The vertical clearance above the trail shall be maintained at a minimum ten (10') foot height.
- D. The trail should be laid out in such a manner that trail users are visible to other trail users and vehicles on intersecting roads. Sharp curves and excessive grade change should also be avoided.

#### **Section 605. Bicycle Parking Facilities**

Bicycle parking facilities for non-residential structures should include a secure device to which the bicycle frame and one (1) wheel of the bicycle can be attached with a cable or locking device. The device should be suitable to keep bicycles erect when they are locked to it.

#### **Section 606. Driveways**

- A. **Driveway Apron.** The apron in the driveway area shall be six (6") inches thick concrete 4000 psi compression strength concrete reinforced with wire six (6") inches by six (6") inches, ten (10) gauge wire (minimum). The wire shall be installed so that it is not closer than two (2") inches from the top or bottom surfaces of the driveway. Six (6") inches crushed stone shall be used as a bedding under the driveway apron.
- B. Driveways normally used by not more than twenty-five (25) vehicles per day shall comply with the standards contained in the Pennsylvania Code, Title 67, Transportation, Chapter 441, Access to and Occupancy of Highways by Driveways and Local Roads, Section 441.8, (i), (5), Grade Requirements Where Curbs and Sidewalks are Present. Driveways normally used by more than twenty-five (25) vehicles per day shall comply with standards appropriate for their anticipated traffic volumes in conformance with accepted engineering standards and practices.
- C. **Maximum Grades for Driveways.**
  - 1. Residential driveways shall not exceed ten (10%) percent grade.
  - 2. All other driveways shall not exceed seven (7%) percent grade.
- D. All driveways shall be provided with a stopping area within which the grade shall not exceed four (4%) percent. The stopping area shall be measured as follows:
  - 1. The length of stopping area shall be a minimum of twenty (20') feet, or the length of the longest vehicles anticipated to use the driveway, whichever is greater.
  - 2. Stopping areas shall be measured from the ultimate right-of-way line for all streets.
- E. Maximum grade requirements shall not be waived unless extremely difficult circumstances exist and cannot be mitigated by alternative locations, designs, or lotting, in which case a safe, practical alternative may be permitted by the [municipal governing body], upon recommendation of the Borough Engineer.

#### **Section 607 Curb Construction**

- A. **Curb Construction.** All curbing shall be constructed both as to materials and methods, generally in conformance with applicable portions of PENNDOT Specifications Publication 408, current edition. Curbs shall be vertical profile with a minimum of eighteen (18") inch structure height, with a six (6") inch reveal. Expansion joints shall be placed every thirty (30') feet, at structures and at the end of the day's work. Contraction joints shall be saw cut every ten (10') feet at a minimum of two (2") inches. Concrete shall be a minimum 4000 psi in compression strength. Intersections where sidewalks are to be provided at some point in the future shall have depressions for wheel chair use at each corner and opposite each corner on "T" intersections.
- B. Alternative Curb Construction with granite blocks shall be permitted along roads and parking lots not being dedicated to the Borough.

## **Section 608. Drainage and Stormwater Management**

- A. Stormwater control structures shall be designed in accordance with the Borough Act 167 Stormwater Management Ordinance and the Pennsylvania Stormwater Best Management Practices Manual.
- B. All storm drains and drainage facilities such as gutters, catch basins, bridges, inlets, and culverts shall be installed and the land graded for adequate drainage as shown on the grading plan submitted and approved with the Final Plan. Construction of these facilities shall conform with the PennDOT Specifications Publication 408, latest version.
1. Location. Wherever practicable, storm sewers shall be located within the right-of-way of the street. They shall be protected by a cover of at least eighteen (18") inches.
  2. Size and Grade. Storm sewers shall be adequate for the anticipated runoff when the area is fully developed as permitted by zoning, and capable of carrying a ten-year design storm. They shall have a minimum internal diameter of fifteen (15") inches and a minimum grade of one-half (½%) percent unless otherwise approved by the Borough Engineer. Maximum internal pipe diameter shall be sixty (60") inches. Special box culverts or open channels shall be used when a sixty (60") inch pipe is not capable of carrying the design storm.
  3. Storm Drainage Pipe Materials. All storm drainage pipes up to but not including forty-two (42") inches in equivalent diameter shall be constructed of the following materials
    - a. Reinforced concrete, rubber gasketed conforming to AASHTO M170, M198 and M207.
    - b. Reinforced concrete, tongue and groove conforming to AASHTO M170 and M207.
    - c. Corrugated polyethylene (PE) N12 smooth interior only, or approved equal, conforming to ASTM D1248, ASTM D2412, AASHTO M252 and 294. A PE pipe shall be placed on a minimum of six (6") inches of AASHTO #57 stone and backfilled with same to a foot above the crown of the pipe or per manufacturers specifications (whichever is more stringent).
    - d. Corrugated polyethylene (PE) perforated underdrain shall conform to AASHTO M252.
  4. All storm drainage pipe and/or culverts forty-two (42") inches in equivalent diameter and above shall be constructed of either of the following materials:
    - a. Reinforced concrete tongue and groove conforming to AASHTO M170 and M207.
    - b. Reinforced concrete piping, rubber gasketed, shall conform to AASHTO M170, M198 and M207.
    - c. Precast reinforced concrete box sections in accordance with AASHTO M259.
    - d. Cement concrete cast in place, mix design strength of 4,000 pounds per square inch (psi).
  5. Manholes. Manholes shall be constructed at all changes in horizontal or vertical alignment; spaced not more than 300' feet apart on pipe of twenty-four (24") inches internal diameter or less, and not more than 450' feet apart where larger sizes are installed. Inlets may be substituted for manholes where they will serve a useful purpose. Manhole frames and covers shall be good quality cast iron; covers shall be marked "STORM" and have a minimum weight of two hundred and twenty (220) pounds.
  6. Inlets. Inlet spacing shall be so arranged that ninety-five (95%) percent of the gutter flow will be captured. No inlet smaller than PENNDOT Type 4 Foot Special Inlet shall be used. Double four (4) foot inlets separated by twenty (20') linear feet of pipe shall be required if adequate efficiency is not realized with the PENNDOT Type 4 Foot Special Inlet. Inlets at street intersections shall be placed on the tangent and not on the curved portions. The gutter adjacent to and immediately upgrade from the inlet shall be so warped as to direct the water into the inlet. Inlets shall have a metal marking with the message: "Don't dump, drains to the river (or similar notation)."

7. **Castings.** Manhole and inlet castings, together with their covers or gratings shall conform to PENNDOT or Borough Standards, as may be in effect at the time the design of the sewer is submitted. Castings should indicate "storm."
8. **Drainage from Non-Natural Sources.** Water originating from other than natural sources, such as air conditioning units, sump pumps, or other dry weather flow, wherever practicable, shall be discharged into natural watercourses on the property. The discharge of water under the sidewalk through the curb into the gutter, is prohibited.
9. **Design Criteria**
  - a. Permissible channel velocities, slopes, and cover shall be in accordance with the NRCS Engineering Field Manual, Chapter 7, "Grassed Waterways and Outlets, and the Pennsylvania Stormwater Best Management Practices Manual."
  - b. Existing stream channels shall be maintained in their natural state. Only under unusual circumstances will a developer be permitted to line, straighten, or relocate an existing stream, with approval of the Department of Environmental Protection (DEP) and the Northampton County Conservation District.
  - c. Acceptable energy dissipation devices shall be installed to bring discharge velocities down to limits specified in the NRCS Engineering Field Manual, Chapter 7 and the Pennsylvania Stormwater Best Management Practices Manual. Rip rap, natural stabilization structures, and/or gabions may be required by the Borough Engineer where erosion potential is great.

#### **Section 609. Utility Locations, Easements, and Rights-of-Way.**

Widths and locations of easements and rights-of-way shall be determined by the Borough Engineer or the appropriate authority or utility company for all utilities, including stormwater facilities. The location and design of the utilities shall be governed by the requirements herein.

- A. **General Standards.**
  1. Easements and required front, side or rear yards may co-occupy the same land as utilities.
  2. Nothing shall be permitted to be placed, planted, set or put within the areas of an easement unless it is a portable or removable object. The area shall be kept as lawn.
  3. The owner of any lot, upon written request by the Borough and at the owner's sole expense, shall remove anything placed, planted, set or put, (with or without knowledge of these regulations) within the area of any easement.
  4. To the fullest extent possible, easements shall be adjacent to rear or side lot lines, and occupying only a portion of one (1) lot (not centered on 2 lots).
- B. No right-of-way or easement for any purpose whatsoever shall be recited or described in any deed unless the same has been shown on the approved plan. Any error found in a deed shall be immediately corrected and re-recorded in the Office of the Recorder of Deeds for Northampton County, at the sole expense of the applicant.
- C. **Utility Easements.** A minimum width of twenty (20') feet shall be provided for common utilities and drainage when provided in undedicated land for one use. Multiple utility uses within one easement require additional easement width.
- D. **Public Utilities.** All water, sewer, and gas mains and other underground facilities shall be installed prior to street paving at locations approved by the Borough Engineer.
- E. **Underground Utilities.** All water, sewer, and gas mains shall be installed underground. All electric, telephone and communication services, both main and service lines, shall be provided by underground

cables, installed in accordance with the prevailing standards and practices of the utility or other companies providing such services, except where it is demonstrated to the satisfaction of the Borough Council that underground installations herein required are not feasible because of physical conditions of the lands involved. All main underground cables which are within the right-of-way of a street shall be located as specified by the utility company, subject to approval by the Borough Council, upon recommendation of the Borough Engineer.

#### **Section 610. Domestic Wastewater Facilities**

- A. **Sewage Facilities Design.** The design and installation of domestic sewage facilities shall be done in accordance with the Pennsylvania Domestic Wastewater Facilities Manual prepared by the Department of Environmental Protection.
- B. **On-site Sewage Facilities Design.** The design and installation of on-lot subsurface disposal systems shall be done in accordance with PA Title 25 Chapter 73 regulations and the Technical Manual for Sewage Enforcement Officers.
  - 1. The Sewage Enforcement Officer or Code Enforcement Officer shall require percolation and deep-hole tests, as required by DEP, in order to determine the size, extent, and nature of disposal facilities. Such tests shall be conducted for each lot proposed for building.
  - 2. Existing on-lot sewage disposal systems that will remain in use shall be inspected and certified as to their satisfactory functioning, in accord with current industry, DEP standards, and the Northampton County Health Department rules and regulations. Malfunctioning systems shall be replaced with systems designed and constructed to current standards.
  - 3. After assuring that all requirements have been met, the Sewage Enforcement Officer shall issue a certificate of approval to the Borough as a requirement for Final Plan approval.
  - 4. In no instance shall an on-lot septic system be located nearer to a drilled well than one hundred (100') feet, unless approved by Borough Council upon recommendation of the Sewage Enforcement Officer or Borough Engineer after applying PADEP Best Technical Guidance.
- C. **Community Sewage Facilities.** Sewage disposal for more than one lot on a shared basis, by means of community sewage facilities may be permitted in compliance with DEP regulations and Borough Sewage Facilities Plan.
- D. **Sewage Collection System.** All elements of the sewage facilities collection system including laterals, sewer mains, manholes, force mains, and pump stations should be designed in accordance with the following requirements.
  - 1. One lateral made of schedule SDR-35 PVC or cast iron shall be installed from the building to the septic tank or sewer main.
  - 2. Connection to the sewer main shall be made at a previously installed Wye connection point or the existing sewer main shall be tapped in accordance with Borough requirements.

#### **Section 611. Water Supply**

- A. Public water service, community water system service, or and individual well should be installed for each inhabitable building.
- B. **Individual Wells.** All individual wells shall be installed in accordance with the Northampton County Health Department. A circular area with a hundred (100') foot radius conforming to the rules and regulations of the Department of Environmental Protection and Northampton County Health Department shall be shown around each well to denote clear space in which no on-lot sewage system is to be located.



- C. **Public Water Supply Facilities Design.** The design for all community and public water supply facilities shall be in accordance with the DEP Water Supply Manual.
- D. Fire hydrants shall be located at accessible points throughout the subdivision when centralized water supply is available, and shall be located according to the Borough Engineer and Fire Code Official. As a general rule, hydrants should be located at each street intersection and at intermediate points as recommended by the State Insurance Services Office. Generally, hydrant spacing may range from 600'-1000' feet apart.

**Section 612. Bridges and Culverts.**

- A. Bridges and culverts shall be designed to meet current Pennsylvania Department of Transportation Standards to support expected loads and to pass design stormwater flows. They shall be constructed to the full width of the planned cartway. Allowance for sidewalk must also be made, if required by the Borough.
- B. Where County-owned roads or bridges are involved, the County Engineer shall review and approve all proposals.
- C. A permit from the Pennsylvania Department of Environmental Protection shall be obtained to make any change in or addition to, any existing water obstruction, or in any manner change or diminish the course, current, or cross-section of any stream or body of water.
- D. Drawings to include location plan; cross-section of present bridge if one exists; profile of stream for a reasonable distance above and below bridge site, showing slopes of bed, normal water surface and flood water surface. If the bridge is on a skew, give the angle of the center line of the bridge with the direction of the line of flow. In addition, the following information is required for new bridge construction: the total drainage area above the bridge site; description of watershed; length of stream from source to bridge site and to the mouth; character of stream bed and banks; extent and depth of overflow during floods; effect of previous floods upon bridges, their span and clearance; whether bridge will be within backwater influence of parent stream.

**Section 613. Survey Monuments.**

- A. Permanent monuments shall be indicated on the record plan. All monuments shall be constructed of precast concrete or durable stone with metal insert(s), and be four (4") inches square with at least twenty (20") inches extending below ground level, or an alternate design approved by the Borough Council. Street right-of-way reference monuments shall be located on the right-of-way lines at corners, angle points, beginning and end of curves, and as otherwise required by the Borough Engineer for all new and existing streets. They shall be placed after a new street and/or lot grading has been completed. The centerline of all new streets shall be marked with spikes (P.K. nails) and referenced to permanent monuments or structures. Certified copies of this reference information shall be given to both the Borough Engineer and the Borough Office. When final lot grading has been completed and before the issuance of occupancy permits, permanent monuments shall be set by the applicant at all lot corners and angle points, and at all street intersections and intermediate points as may be required.
- B. **Lot Pin Requirements.** All lots upon which construction is planned shall be temporarily staked or pinned, or permanently monumented and certified to such by a registered surveyor for the owner, applicant, builder, or developer, before issuance of a building permit. Temporary stakes or pins with a surveyor's ribbon attached may be acceptable on existing lots where construction of an accessory building or an addition to the primary structure is proposed. Temporary stakes or pins shall remain in place until witnessed and accepted by the Borough Building Inspector. All new lot corner markers shall be marked with a minimum 5/8-inch diameter metal pin extending at least twenty-four (24") inches into the ground and at least one inch revealed above the ground surface, or an equivalent metal marker, approved by

the Borough Engineer. Borough Council, upon recommendation by the Borough Engineer, may require placement of permanent concrete monuments at critical reference points.

- C. **Original Monuments.** In situations where they may be of legal or historical importance, the original monuments and marks must not be destroyed, defaced, hidden, or possibly confused by creating new monuments and marks unless absolutely necessary, eg: the originals are decayed, destroyed, or unsafe. In some cases, to be determined by the Borough Engineer, new monuments should be set as a reference or witness to the original monument to avoid disturbing the original. When in the opinion of the Borough Engineer, the angle point falls in a location that is not appropriate to set a concrete monument, a written request for a waiver shall be submitted for consideration by the Borough Council.

**Section 614. Emergency Accessways.**

- A. Minimum cartway width for the emergency access shall be twelve (12') feet.
- B. When paved, pavement shall conform to Section 601(C), Pavement Design.
- C. When not paved, the cartway shall be constructed of crushed stone of appropriate size, depth, and compaction to support the largest emergency response vehicle in the vicinity of the site under all weather conditions. The emergency access may also be constructed from fiber reinforced polyethylene or concrete grass pavers. All void areas shall be filled with topsoil and seeded with an appropriate grass mix.
- D. Markings or the appropriate form of identification shall be placed at the entrance to the emergency access way. If necessary, breakaway bollards shall be installed at each end of the emergency access way.
- E. Emergency access ways shall be maintained through properly recorded easements or deed restrictions which at a minimum prohibit the planting of any vegetation except grass within the access way and a buffer area of five (5') feet on either side.

**Section 615. Outdoor Lighting.**

All outdoor lighting must comply with the Borough Zoning Ordinance.

**A. Illumination Levels**

1. Lighting, where required by this Ordinance or otherwise required by the Borough Council, shall have intensities and uniformity ratios in accordance with the recommended practices of the Illuminating Engineering Society of North America (IESNA) Lighting Handbook, 9th edition, Chapters 21 & 22. (i.e. Minimum Average = 0.5 fc; Minimum = 0.1 fc; Uniformity = 6:1)
2. Future amendments to said Lighting Handbook and Recommended Practices shall become a part of this Ordinance without further action by the municipality.

**B. Lighting Fixture Design**

1. Street lighting supplied with unmetered electric service shall meet the specifications of the electric utility.
2. Building entrances, sidewalks, paths, site entrances and parking areas, fixtures shall be aimed straight down and shall be full cutoff or fully shielded. For the use of reflector lamps, a maximum of 14,000 center-beam-candlepower (CBCP) shall be permitted.
3. For the lighting of non-horizontal surfaces such as, but not limited to, facades, landscaping, signs, fountains, displays, flags and statuary, the use of lighting fixtures that are not full cutoff or fully shielded, shall be permitted only with the approval of the municipal governing body, based upon acceptable shielding and other glare control. At a minimum, shielding shall render the light source not visible from neighboring properties.

4. "Barn lights," (fixtures which are not full-cutoff, or cutoff, but which have a diffuser which transmits the light at angles above full-cutoff or cutoff angles) shall not be permitted where they are visible from other uses unless fitted with a reflector or other device to render them fully shielded or full cutoff.

**C. Control of Nuisance and Disabling Glare (Excessive Brightness in the Field of View)**

1. All lighting shall be aimed, located, designed, fitted and maintained so as not to present a hazard to drivers or pedestrians by impairing their ability to safely traverse and so as not to create a nuisance by projecting or reflecting objectionable light onto a neighboring use or property.
2. Floodlights and spotlights that are not full-cutoff or fully shielded, where specifically approved by the municipality, shall be so installed and aimed that they do not project their output into the windows of neighboring properties, adjacent uses, past the object being illuminated, skyward or onto a public roadway. Authorities having jurisdiction shall take specific care to ensure this criterion by requiring submission of photometric plots of the illuminated surface and its surroundings.
3. Glare control shall be achieved primarily through the use of such means as cutoff fixtures, shields and baffles, and appropriate application of fixture mounting height, wattage, aiming angle and fixture placement. Vegetation screens shall not be employed to serve as the primary means for controlling glare, except that the use of dense evergreen hedges, such as yew or juniper, to shield ground-mounted floodlights may be used with signs up to 15 feet in height, provided such planting is maintained in a manner that shields the fixture from view of traffic and pedestrians at an angle below 45 degrees above horizontal.
4. Canopy lighting, for such applications as gas/service stations, bank, drugstore and fast-food drive-thru, shall be accomplished using flat-lens full-cutoff fixtures aimed straight down and shielded in such a manner that the lowest opaque edge of the fixture shall be level with or below the light source.

**D. Recreational Uses**

1. When facilities for such outdoor recreational activities as baseball, tennis, football, miniature golf or any other recreational use permitted under the Borough's Zoning Ordinance, are specifically permitted by the municipality for operation during hours of darkness, the following requirements shall apply:
  - a. Lighting shall be accomplished only through the use of fixtures conforming to IESNA criteria, or as otherwise approved by the municipality based on suitable control of glare and light trespass. Flood-lighting for sports or recreational facilities shall not be aimed above a beam-center angle of 45 degrees from vertical, nor shall the level of illumination on neighboring properties exceed the limits specified in Section 615C.
  - b. For new recreational facilities and existing recreational facilities wishing to change their hours of operation during hours of darkness, sporting events shall be timed so that all lighting in the sports facility, other than lighting for safe exit of patrons, shall be extinguished by 11:00 p.m., regardless of such occurrences as extra innings or overtimes.

**E. Street and Parking Lot Lighting for Residential Applications**

1. For residential developments where lot sizes are or average less than 20,000 square feet, street lighting shall be provided as follows:

- a. At the intersection of public roads with entrance roads to the development
  - b. At the intersection of roads within the development
  - c. At cul-de-sac bulb radii
  - d. At terminal ends of center median islands having concrete structure curbing, trees, signs or other fixed objects, and at cul-de-sac center islands with curbing
  - e. At defined pedestrian crossings located within the development
  - f. At other locations along the street as deemed necessary by Borough Council.
  - g. Where lot sizes permit the parking of less than two (2) vehicles on the lot, thereby necessitating on-street parking, street lighting shall be provided along the length of the street, in accordance with the illuminance requirements contained in Section 615 (A) 1, above.
  - h. In multi-family developments, common parking areas shall be illuminated in accordance with the luminance requirements contained in Section 6.15 (A)1, above.
2. In residential developments with lots of less than twenty thousand (20,000) square feet, where six (6) or more contiguous parking spaces are proposed, such spaces shall be illuminated in accordance with the illuminance requirements contained in Section 615 (A) 1, above.
  3. Lighting fixtures for parking lots and roadways in residential developments shall be mounted not more than fourteen feet (14') above finished grade.

**F. Signs and Billboards**

1. For the lighting of billboards and externally illuminated signs, fixtures shall be designed, fitted and aimed to limit the light pattern to the sign or billboard, so as not to project their output into the windows of neighboring residences, adjacent uses, past the face of the billboard or sign, skyward or onto a public roadway.
2. Billboards and externally illuminated signs shall be lighted by fixtures mounted at the top of the billboard or sign and aimed downward. Non-billboard business and similar use signs may utilize ground-mounted fixtures if shielded by evergreen plantings as described in Section 615 (C) 5, above, or such devices as masonry enclosures providing equivalent shielding. Fixture type, application, and mounting shall meet the requirements of Section 615 (B), herein.

**Section 616. Street Names.**

- A. **Street Signs.** The developer shall erect a street sign or street signs at every intersection. At intersections where streets cross, there shall be at least two such street signs and at the intersections where one street ends or joins another street, there shall be at least one sign. Street signs shall be erected when the first dwelling on the street is occupied or when streets are paved with their base course whichever comes first. Temporary street signs may be erected with the permission of the Borough Council. Any temporary signs will be replaced prior to roadway dedication.
- B. **Street Names.** Street names shall be determined in consultation with the Borough. Street names should bear a reasonable relationship to significant natural features or the history of the community. Efforts should be made to reduce the occurrence of similar names or similar sounding names within the Borough or postal delivery area.

## **Section 617. Plant Materials Specifications.**

### **A. General Requirements.**

1. Tree species shall be selected from the tree listing in the appendix.
2. The location, dimensions, and spacing of required plantings should be adequate for their proper growth and maintenance taking into account the sizes of such plantings at maturity and their present and future environmental requirements and tolerances including wind, moisture, and sunlight.
3. Plantings should be selected and located where they will not contribute to conditions hazardous to public safety. Such conditions include, but are not limited to, public street rights-of-way, underground and above ground utilities, and sight triangle areas required for unobstructed views at street intersections.

### **B. Plant Specifications.**

1. All plants shall meet the minimum standards for health, form, and root condition as outlined in the American Association of Nurserymen AAN Standards.
2. All plant material shall be hardy and within the USDA hardiness Zone 6 applicable to Northampton County, Pennsylvania.
3. Canopy trees or shade trees, shall reach a minimum height and spread of thirty (30') feet at maturity as determined by the AAN Standards and shall be deciduous. New trees shall have a minimum caliper of two and a half (2 ½") inches at planting. Larger size trees may be required as street trees in commercial areas.
4. Ornamental trees or large shrubs shall reach a typical minimum height of fifteen (15') feet at maturity, based upon AAN Standards. Trees and shrubs may be deciduous or evergreen and shall have a distinctive ornamental characteristic such as prominent flowers, fruit, habitat, foliage or bark. New ornamental trees shall have a minimum height of six (6') feet or one and a half (1 ½") inch caliper at the time of planting. New large shrubs shall have a minimum height of two and a half (2 ½') feet at the time of planting.
5. Small shrubs may be evergreen or deciduous and shall have a minimum height at maturity of four (4') feet based upon AAN Standards. New shrubs shall have a minimum height of eighteen (18") inches at the time of planting.
6. Evergreen trees shall reach a typical minimum height of twenty (20') feet at maturity based upon AAN standards for that species and shall remain evergreen throughout the year. New evergreens shall have a minimum height of seven (7') feet at the time of planting.

### **C. Maintenance.**

1. Safety. All sight triangles shall remain clear, and any plant materials that could endanger safety such as unstable limbs shall be removed and the plant materials shall be replaced if necessary. It shall be the responsibility of all property owners to maintain all plantings and architectural elements to insure a safe environment.
2. Maintenance guidelines for the plantings should be developed by the planting plan designer to be used by grounds maintenance personnel.

## **Section 618. Solid Waste Storage Facilities**

- A. All trash collection equipment should be placed within enclosures. Enclosures should be at least large enough to adequately contain all trash and recyclable material containers. Generally, the sizing and type

of storage containers will depend upon the amount of trash and recyclables expected to be generated in the buildings they service.

- B. Enclosures should be six (6') feet high or at least one (1') foot higher than the proposed collection container.
- C. Enclosures should be made of durable material including masonry blocks or steel reinforced wood fencing. In most cases, garden type fencing or landscaping is not durable enough.
- D. The entrance to the enclosure should be at least ten (10') feet wide to accommodate front loading trucks. Gates placed on the entrance should be durable and equipped with piston type bolts to secure gates in both a closed and open position.
- E. The trash storage area should be placed on a concrete pad. The dimensions of the pad are dependent on the number and size of proposed containers. The pad should extend six (6') to ten (10') feet in front of where the proposed container is to be placed to support the front wheels of the trash truck servicing the site. The area above the container should be free of obstructions for at least fifteen (15') foot clearance above the storage area.

## **ARTICLE SEVEN - IMPROVEMENT CONSTRUCTION REQUIREMENTS**

### **Section 700. Applicability.**

Before the Final Plan is signed and made ready for recording or prior to the issuance of any permits needed for construction or occupancy of any subdivision or land development, all applicants are required to complete to the satisfaction of Borough Council or ensure the completion of all required public improvements in manner set forth in this Article.

### **Section 701. Completion or Guarantee of Required Improvements.**

The applicant shall comply with the public improvement construction requirements in the following ways:

- A. Complete all of the improvements required by Borough Council for Final Plan Approval, in compliance with the requirements of this Ordinance; or
- B. Provide proper financial security in a manner acceptable to the Borough to ensure the completion of all improvements, as required by this Article, in compliance with the Pennsylvania Municipalities Planning Code.
  - 1. The work completed or guaranteed shall be in strict accordance with the conditionally-approved plans and the requirements of this Ordinance.
  - 2. No lot in a subdivision may be sold, and no permit to erect, alter, or repair any building upon land in a subdivision or land development will be issued unless and until a subdivision and/or land development plan has been approved, and where required, recorded, and until the required improvements in connection therewith have either been completed or guaranteed for completion as required herein.
  - 3. The applicant shall also guarantee that no lot will be sold or building constructed in any floodplain area except in compliance with the floodplain management requirements of this Ordinance, the Zoning Ordinance, and the Borough Building Code.
  - 4. The Borough Council may defer at the time of Final Plan approval, subject to appropriate conditions, the provision of any or all required improvements, as in its judgment, are not requisite in the interests of public health, safety and welfare, or which are inappropriate due to

the inadequacy or nonexistence of connecting facilities. A separate public improvement agreement may be executed by Borough Council guaranteeing completion of any deferred improvement at some later date.

#### **Section 702. Financial Security.**

- A. In lieu of the completion of improvements required for Final Plan approval, financial security, in an amount required, shall be guaranteed to the Borough in compliance with the applicable requirements of the Pennsylvania Municipalities Planning Code. Such financial security shall assure the complete installation of all the required improvements to be completed on or before the date fixed in the conditional plan approval, subdivision agreement, and/or development agreement for completion of such improvements.
- B. The amount of such security to be posted for the completion of required improvements shall be equal to 110% of the cost of completion estimated as of ninety (90) days following the date scheduled for completion by the developer. Annually, the Borough may adjust the amount of the required financial security by comparing the actual cost of improvements which have been completed and the estimated cost for the completion of the remaining improvements as of the expiration of the 90th day after the original scheduled date for completion or a rescheduled completion date.
- C. Determination of the cost of the completion of improvements used for setting the amount of financial security shall be based upon an estimate of the cost of completion of required improvements submitted by the applicant or developer, and prepared by a professional engineer and certified to be fair and reasonable. The Borough under recommendation of the Borough Engineer may refuse to accept the estimate for good reasons provided to the applicant. If the applicant or developer and the Borough are unable to agree upon an estimate, then the estimate shall be recalculated and recertified by another professional engineer which is mutually chosen by the Borough and the applicant. The estimate certified by the third engineer shall be presumed to be fair and reasonable and shall be the final estimate.
- D. When requested by the applicant in order to facilitate financing, the Borough Council shall furnish the applicant with a signed copy of a resolution indicating approval of the Final Plan contingent upon the applicant obtaining a satisfactory financial security. Final Plans will not be signed or recorded until the financial improvements agreement is executed.
- E. The Borough at its option, may accept financial security in the form of cash escrow placed with the municipality, irrevocable letter of credit, escrow account, or surety bond with a bonding company or chartered lending institution chosen by the party posting financial security provided said institution or company is authorized to conduct such business in the Commonwealth of Pennsylvania.

#### **Section 703. Release of Financial Security.**

The Borough Council may release all or parts of the posted financial security as completion of improvements proceeds, in compliance with the applicable requirements of the Pennsylvania Municipalities Planning Code.

- A. **Partial Release of Security.** As the work of the installation of the required public improvements proceeds, the party posting the financial security may request the Borough to release or authorize the release, from time to time, such portions of the financial security necessary for the payment of the contractor or contractors performing the work. Any such request shall be done in writing addressed to the municipality. Upon receipt of the request for release of a portion of the improvement security, the municipality shall within forty-five (45) days allow the Borough Engineer to certify, in writing, that such portion of the public improvements has been completed in accordance with the approved plan at which time the Borough shall authorize the release to the applicant or his designee by the bond company or lending institution of an amount of funds that the Borough Engineer feels fairly represents the value of

the work completed. If the municipality fails to act upon a request for release of security within forty-five (45) days, the Borough shall be deemed to have approved the full release of security as requested.

- B. **Incomplete Improvements.** If the required improvements are not completely installed within the period fixed or extended by Borough Council, Borough Council may take one or more of the following actions:
1. Declare the financial security in default and require that all improvements be installed regardless of the extent of the building development at the time the agreement is declared in default;
  2. Suspend Final Plan approval until the development improvements are completed and record a document to that effect for the purpose of public notice;
  3. Obtain funds under the security and complete improvements;
  4. Assign the right to receive funds under the security to any third party, including a subsequent owner of the property wherein improvements were not completed in exchange for that subsequent owner's promise to complete improvements;
  5. Exercise any other available rights under the Pennsylvania Municipalities Planning Code.
- C. **Post-Completion Security.** The applicant shall be responsible for maintenance of all improvements for a period of eighteen (18) months after final acceptance and certification of project completion, including snow removal.
- D. **Landscaping Security.** The applicant shall be responsible for the full replacement of all dead or diseased trees or shrubs for eighteen (18) months after final acceptance and certification of project completion. Final inspection of landscaping shall be performed while trees are fully leafed out— typically May 1 through November 1.

#### **Section 704. Inspection of Work and Materials.**

- A. **Notice.** The Borough Engineer shall be notified forty-eight (48) hours in advance of the commencement of any construction or installation operation, to schedule an inspection by the Borough. Construction and installation operations shall also be subject to inspection by the Borough during the progress of the work. The applicant, developer, or builder shall pay the reasonable and necessary expenses for inspections.
- B. **Improvement Specifications.** All required road improvements should be constructed in accordance with the applicable provisions of the PENNDOT, Publication 408, current edition, including the latest revisions and other applicable regulations. All other required improvements shall be constructed in accordance with approved specifications found in Articles Four, Five, and Six of this Ordinance. If the appropriate standards are not provided in this Ordinance, the following procedures shall be used.
1. **Specifications.** The specifications will be furnished to the applicant by the Borough. If any of the specifications are unavailable at the Borough office, the Borough Engineer shall provide the applicable specifications.
  2. **Sample of Materials.** During or after construction of any required improvement, if the Borough requires a sample of materials, said sample shall be furnished by the appropriate contractor, in a form specified by the Borough Engineer.
- C. **Delivery Slips.** Copies of all delivery slips for materials used in the construction of any storm sewers, sanitary sewers, roads, curbs, sidewalks, or any other facility within a Borough right-of-way or easement or in areas proposed for future dedication to the Borough shall be supplied to the Borough.



### **Section 705. Off-Site Improvements.**

Certain improvements beyond the geographical boundaries of a site to be subdivided and/or developed, including but not limited to road improvements, may be requested by the Borough where it can clearly be demonstrated that such improvements have been made necessary solely through the additional burden imposed by the subdivision and/or development of the site. All such improvements or contributions for future offsite improvements shall be considered voluntary and will not be refunded to the developer. The developer may also be requested to cover certain costs which must be incurred by the Borough or other governmental jurisdiction in order to make these improvements feasible. The legal and financial arrangements to cover costs of the offsite improvements shall be the same as those prescribed in Section 702.

### **Section 706. Conditions of Acceptance.**

- A. Conditions. The Borough shall have no obligation to accept dedication of any street or other improvement unless:
  - 1. The required improvements, utility mains and laterals, and monuments, shown on the approved plan or plans have been constructed to meet all requirements, and are free of defects or deterioration.
  - 2. It is established to the satisfaction of Borough Council that there is a need for the dedication of improvements.
- B. Acceptance. The Borough shall have no responsibility with respect to any street or other improvement, notwithstanding the use of the same by the public, unless the street or other improvement is accepted by the Borough through the passage of an ordinance or resolution adopted by Borough Council.
- C. Offer of Dedication
  - 1. The applicant shall submit a written offer of dedication to the Borough for the streets or other improvements, including the following:
    - a. A Deed of Dedication covering the improvements.
    - b. A copy of a title insurance policy establishing the applicant's clear title to the property.
  - 2. The items required in 706 (C) 1, above, shall be submitted to the Borough Engineer and Solicitor for their review and recommendations.
  - 3. Borough Council may accept dedication of the streets or other improvements by passing an ordinance (or resolution) to that effect.

### **Section 707. Guarantee of Completed Improvements.**

When the Borough Council accepts dedication of required improvements following their completion or certifies project completion, the Borough Council may require posting of financial security by the applicant to secure the structural integrity and functioning of these improvements in accordance with the design and specifications as depicted on the approved Final Plan.

- A. Said financial security shall be of the same type as otherwise required by Section 702, herein.
- B. The amount of financial security shall be fifteen (15 %) percent of the actual cost of installation of the improvements.
- C. The term of the guarantee shall be eighteen (18) months from the date of acceptance of dedication or certification of project completion.

### **Section 708. Private Maintenance of Improvements.**

Where the maintenance of improvements is to be the responsibility of individual lot owners, a homeowners' association or similar entity, or an organization capable of carrying out maintenance responsibilities, the

Borough Council shall require that maintenance responsibilities be set forth in perpetual covenants or deed restrictions binding on the landowners' successors in interest, and may further require that an initial maintenance fund be established in a reasonable manner.

**Section 709. Required Contracts.**

Before the Borough Council shall cause its approval to be endorsed upon the Final Plans of any subdivision or land development (except in the case of minor subdivisions wherein Borough Council may impose no condition or conditions for the approval of the plan), and as a requirement for the approval thereof, the owners shall enter into a written agreement with the Borough in the manner and form set forth by the Borough Solicitor which shall include but not be limited to the following:

- A. To construct or cause to be constructed or installed, at the owners' expense, all streets, curbs, sidewalks, fire hydrants, street lights, stormwater facilities, water and sewer facilities, street signs, monuments, capped sewers, parks, landscaping, line painting, and other improvements shown the Final Plan when required to do so by Borough Council in accordance with the standards and specifications of the Borough.
- B. To maintain at the owners' expense all streets, curbs, sidewalks, stormwater facilities, water and sewer facilities, street signs, parks, monuments, fire hydrants, street lights, capped sewers, line painting, landscaping, and other improvements, until the same are accepted or condemned by the Borough for public use, and for a period of eighteen (18) months thereafter to repair and reconstruct the same of any part of one of them when such repair or reconstruction shall be specified by Borough Council as necessary by reason of faulty construction, workmanship, or materials, or the structural integrity or functionality of the improvements are not satisfactory as determined by the Borough or Borough Engineer.
- C. To pay all costs, charges, or rates, of the utility furnishing electric service for the lighting of the streets on or abutting said subdivision, from the lights installed by the owner, until such time as the streets shown on the subdivision plans shall be accepted as public streets of the Borough by ordinance (or resolution), and to indemnify and hold harmless the Borough from and against all suit, actions, claims, and demands for electric service to the streets shown on said plans, or any part thereof, to the time that said streets shall be accepted as public streets of the Borough in the manner hereinabove set forth.
- D. Pay the inspection fees required by the Borough.
- E. To obtain the easements and releases required when any street, drainage facility or other improvement wherein a subdivision abuts or traverses land of persons other than the person holding legal title to the lands of the subdivision at his own cost, and obtain from the owner of the lands so abutted or traversed full releases from all damages which may change in grade, construction, or other-wise, of the street, drainage facility or other improvements and such releases shall insure to the benefit not only of the owner of the subdivision but to the Borough as well.
- F. To promptly remove or cause to be removed snow from the streets as may be required for safe traverse of the streets prior to dedication.
- G. To promptly reimburse to the Borough reasonable Solicitor's and Engineers' fees.
- H. To provide in a timely manner, all construction and shop drawings and plans including a full set of "as built" plans in paper and in appropriate electronic format as specified by the Borough Engineer.
- I. Such other provision(s) as deemed necessary or desired by Borough Council.

## **ARTICLE EIGHT - SPECIAL STUDIES AND REPORTS**

### **Section 800. Applicability**

The following special studies or reports to be developed by qualified professionals may be required to support and justify subdivision and land development proposals as required by this Ordinance and the Zoning Ordinance.

### **Section 801 Traffic Impact Study**

- A. Purpose. The Traffic Impact Study will enable the Borough to assess the impact of the proposed development on the transportation system, both highways and public transportation, in the Borough. The purpose of the impact study is to insure that proposed developments do not adversely affect the transportation network and to identify any traffic problems associated with access between the site and the existing transportation network. The study's purpose is also to delineate solutions to potential problems and to present improvements to be incorporated into the proposed development. The study shall assist in the protection of air quality, conservation of energy, and encouragement of public transportation use.
- B. Applicability. A Traffic Impact Study shall be submitted as part of all subdivision, land development, and conditional use applications that are reasonably expected to meet the following:
1. Generate 1,500 average trips per day;
  2. Generate 100 or more vehicle trips entering or exiting in any hour;
  3. Generate 100 or more additional vehicle trips in a redevelopment site; or
  4. Sites that do not meet the three criteria, but in the opinion of Borough Council may have a significant impact on traffic flow and safety.
- C. A Traffic Impact Study shall be prepared by a qualified traffic engineer and/or transportation planner with previous traffic study experience. Procedures and standards for a Traffic Impact Study are as set forth herein. The applicant may provide funds to the Borough to enable the Borough to hire a traffic engineer of its choice to conduct the study, if this procedure is deemed appropriate and approved by the Borough.
- D. A Traffic Impact Study prepared in accordance with the guidelines of the Pennsylvania Department of Transportation as part of an application for a state highway occupancy permit should be submitted to the Borough in fulfillment of this requirement.
- E. An application which requires a Traffic Impact Study shall not be considered complete until the Traffic Impact Study is submitted to the Borough in accordance with the provisions of this section.
- F. Time of Submission. The Traffic Impact Study shall be submitted to the Borough with the preliminary plan submission. Revisions to preliminary plans may constitute the need for re-submission of the traffic impact study for the revised conditions. The applicant shall coordinate the submission of plans and highway occupancy permit applications to PennDOT with the Borough review process.
- G. Implementation. The Borough Council shall review the Traffic Impact Study to analyze its adequacy in solving any traffic problems that will occur due to the land development or subdivision. The Borough Council may determine that certain improvements on and/or adjacent to the site are necessary requirements for land development or subdivision plan approval and may attach these as conditions to the approval. If the Borough Council determines that such additional improvements are necessary, the developer shall have the opportunity to submit alternative improvement designs to obtain plan approval. When PennDOT maintains the road upon which access from a development is sought, the Borough and applicant shall coordinate with the appropriate entity.

- H. **Emergency Response Organizations.** The Borough shall submit all land development plans to the fire department, police department, and any other emergency response organization having jurisdiction within the area of the proposed development for review and comment. If requested by them, the Borough Council may require the developer of a land development to provide emergency signal preemption for any traffic signals located within or immediately adjacent to the development.

**Section 802. Stormwater Management Reports and Hydrologic Calculations.**

- A. The stormwater management report shall be a self-contained report with all calculations and design elements. All plans showing the proposed storm sewer construction must be accompanied by a complete design prepared by a registered engineer. The report shall contain the following elements:

1. Design for Stormwater Control Structures
2. Design of Stormwater Conveyance System
3. Design to Address Stormwater Quality Controls
4. Proposed Stormwater System Management Requirements

- B. Design of Stormwater Control Structures

1. Calculation. The quantity of runoff shall be computed using the following methods for stormwater control structures:
  - a. NRCS Soil Cover Complex Method (TR-55 or TR-20 or commercial equivalent) for drainage areas up to 100 acres
  - b. NRCS Soil Cover Complex Method (TR-20 or commercial equivalent) or one of the hydrologic methods implemented in HEC-HMS or HEC-1 for drainage areas over 100 acres.
  - c. A rational hydrograph method (Modified Rational or Universal Rational) may be used for any site equal to or less than 2 acres.
  - d. Other methods as approved by the Borough engineer.
2. Assumptions. The following assumptions shall be used in the appropriate stormwater computational method.
  - a. Design runoff hydrographs shall be based upon the most current PennDOT regional twenty-four (24) hour rainfall depths or NOAA Atlas 14 data.
  - b. NRCS Type II distribution shall be used to establish the rainfall distribution for stormwater management hydrologic analysis.
  - c. The NRCS dimensionless unit hydrograph "k" factor of 484 shall be used for both pre- and post-development stormwater analysis unless a different value is found to be more appropriate based upon watershed analysis.
3. Stormwater Volume Control design shall be based upon a two (2) year, 24-hour storm event.
4. Stormwater Peak Runoff Control design shall be based upon the two (2), ten (10), twenty-five (25) and one-hundred (100) year 24-hour storm events.

- C. Water Quality Control

1. Demonstration that the design capture volume is completely removed and 90% of the disturbed area in a site is drained through a water quality BMP; or
2. Computationally demonstrate compliance with the water quality standard by estimating pollutant loadings for the proposed development and pollutant load reductions by selected BMPs

3. Post development pollutant loadings shall be computed based upon the land cover classifications and loading rates in the Pennsylvania Stormwater Design Manual or other sources provided by the Borough Engineer.

D. Stormwater Conveyance Design. The storm drainage system consisting of storm sewer pipes, swales, and open channels shall be based upon the following design standards:

1. Design Frequency. All stormwater facilities shall be designed to transport a ten (10)-year frequency storm. Provision must also be made to transport a 50-year frequency storm so that surface waters will not damage property or flood roads, and that the 50-year frequency storm shall be transported to the appropriate stormwater management facility.
2. The quantity of runoff in conveyance systems shall be computed using the following methods for stormwater control structures:
  - a. Rational Method for drainage areas up to 200 acres in size.
  - b. HEC-1, PSRM, or TR-20 for drainage areas between 200 acres and one-and-one-half (1.5) square miles.
  - c. Over one and-one-half (1.5) square miles PSU- IV or equivalent.
  - d. Other methods as approved by the Borough Engineer.
3. Rainfall intensities in the most recent edition of the Pennsylvania Highway Design Manual Part 2 shall be used (PennDOT).
4. Rational Method Coefficients shall be based upon the Pennsylvania Highway Design Manual Part 2 or the recommendation of the Borough Engineer.
5. Hydraulic design computations for stormwater conveyance systems shall follow appropriate methods provided in the NRCS National Engineering Handbook, Part 640, Hydrology, The Federal Highway Administration's Urban Drainage Design Manual, HEC-22, PennDOT Design Manual Part 2, the Pennsylvania Stormwater Best Management Practices Manual, or other technical manuals as recommended by the Borough Manager and shall be submitted in a manner acceptable to the Borough Engineer. Inlet design data shall be submitted on a separate sheet, on the standard PennDOT design form, or similar form acceptable to the Borough Engineer.

#### **Section 803. Groundwater Study**

- A. Purpose. Groundwater studies are intended to determine if there is an adequate supply of water for a proposed use and to estimate the impact of additional water withdrawals on existing nearby wells, underlying aquifers, and streams.
- B. Applicability. All projects with wells withdrawing 100,000 gallons per day over any 30 consecutive day period will require permitting through the Delaware River Basin Commission (DRBC). In addition, the applicant must acquire all other permits which may be required through PADEP or other agency having jurisdiction (AHJ). Copies of all submissions to the DRBC, PADEP or any other AHJ as well as all correspondence received by the applicant from those agencies and/or AHJ shall be forwarded to the Borough.

### **ARTICLE NINE - ADMINISTRATION, FEES, AND ENFORCEMENT**

#### **Section 900. General Administration.**

All provisions of this ordinance shall be administered by Borough Council or their officially designated representatives. All matters relating to this ordinance shall be submitted to the Borough Manager who will

handle the matter in accordance with current Borough policies, procedures, and guidelines established by Borough Council.

#### **Section 901. Records.**

The Borough shall keep a public record of its correspondence, findings, recommendations, and actions relating to plans filed for review, in accordance with the policies, procedures, and guidelines established by the Borough Council and Planning Commission.

#### **Section 902. Fees and Costs.**

- A. No application for preliminary or final plan approval shall be filed and processed until the fees and/or escrow deposit, as set forth below, shall have been paid.
- B. Borough Council shall adopt and amend by resolution a schedule of fees, payable by the applicant to the Borough for the filing of preliminary and final plans.
- C. Borough Council shall adopt and amend by resolution a schedule of escrow deposits to be paid by the applicant to the Borough at the time of the filing of an application, sufficient to pay all Borough expenditures anticipated in the course of its review and disposition of plans.
  1. Costs incurred by the Borough in excess of the escrowed amount shall be paid by the applicant prior to the granting of approvals or permits.
  2. If costs incurred by the Borough are less than the escrowed amount, the difference shall be refunded to the applicant following disposition of the plans.
- D. Borough expenditures subject to escrow as in Section 902 (C), above, include but are not limited to the following:
  1. Engineering and other technical services performed by landscape architects, geologists, planners, and other professionals during the plan review.
  2. Construction inspection and the testing of materials.
  3. Services of the Borough Solicitor in reviewing and/or preparing documents related to the plan reviews.
  4. Actual costs of recording
  5. An administrative charge of fifteen (15%) percent of the total costs described in the previous four subsections.
- E. Escrow accounts for fees to conduct the necessary inspection and review services provided by the Borough during the construction of improvements approved in the final plan shall be established as part of the developers' agreement required in Section 709.
- F. Disputes. In the event that the applicant disputes the amount of any such review fee, the applicant shall, within forty-five (45) days of the billing date or the notice of withdrawal by the Borough of an amount held in escrow, notify the Borough and their consultant that the fees are disputed. In such case the Borough shall not delay or disapprove a subdivision or land development due to the applicant's request regarding disputed fees. The applicant shall within thirty (30) days after the transmittal date of a bill for inspection services or forty-five (45) days of the date of transmittal of a final bill for inspection services, notify the Borough and their professional consultant that the fees are disputed. The fee dispute process shall be followed as established in the Pennsylvania Municipalities Code.

### **Section 903. Waiver of Requirements.**

Upon review and recommendation by the Borough Planning Commission, the Borough Council may grant a modification of the requirements of one or more provisions of this ordinance, if the literal enforcement of them would exact undue hardship because of peculiar conditions pertaining to the land in question, provided that such modification(s) will not be contrary to the public interest and that the purpose and intent of this ordinance is observed. All requests for modification(s) shall:

- A. Be in writing and part of an application for subdivision and/or land development;
- B. State the grounds and facts of unreasonableness or hardship on which the request is based or the public benefit of an alternative design standard;
- C. List the provision(s) of the Ordinance involved; and
- D. State the minimum modification necessary.

### **Section 904. Enforcement.**

- A. Preventative Remedies.
  - 1. In addition to other remedies, the Borough may institute and maintain appropriate actions by law or in equity to restrain, to correct or abate violations, to prevent unlawful construction, to recover damages and to prevent illegal occupancy of a building.
  - 2. The Borough may refuse to issue any permit or grant any approval necessary to further improve any real property which has been developed or has resulted from a subdivision in violation to this Ordinance. As an additional condition for the issuance of any permit or approval, the Borough may require compliance with the conditions that would have been applicable to the property at which time the applicant acquired it.
- B. Any person, partnership, or corporation who or which has violated the provisions of this Subdivision and Land Development Ordinance shall, upon being found liable therefore in a civil enforcement proceeding commenced by the Borough, pay a judgment of not more than \$500 for each violation plus all court costs, including the reasonable attorney fees incurred by the Borough as a result thereof.
- C. No judgment shall commence or be imposed, levied, or be payable until the date of the determination of a violation by the district justice.
- D. If the defendant neither pays nor timely appeals the judgment, the Borough may enforce the judgment pursuant to the applicable rules of civil procedure.
- E. Each day that a violation continues shall constitute a separate violation, unless the district justice determining that there has been a violation further determines that there was a good faith basis for the person, partnership, or corporation violating the Ordinance to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation until the fifth day following the date of the determination of a violation by the district justice and thereafter each day that a violation continues shall constitute a separate violation.
- F. All fines collected for such violations shall be paid to the Borough.

## **ARTICLE TEN - AMENDMENTS, VALIDITY, AND REPEALER**

### **Section 1000. Amendment Procedure.**

The Borough Council may, from time to time, amend, supplement, change, modify, or repeal this ordinance by proceeding in accordance with the Pennsylvania Municipalities Planning Code. The Borough Council shall, by

resolution adopted at a regular or special meeting, fix the time and place of a public hearing on the proposed amendment and cause public notice thereof to be given as follows:

- A. By publishing a notice thereof once each week for two successive weeks in a newspaper of general circulation within the Borough. The first notice shall not be more than thirty (30) days or less than seven (7) days from the date of the hearing.
- B. The notice shall state the time and place of the hearing, the general nature of the proposed amendment and that full opportunity to be heard will be given to any citizen and all parties with an interest in attending such hearing.
- C. Whenever a proposed amendment affects a particular property, there shall be posted upon said property or premises at such place or places as the Borough Council may direct, notice of said proposed amendment.

**Section 1001. Referral to Planning Commission.**

All proposed amendments before adoption shall be referred to the Borough Planning Commission and Lehigh Valley Planning Commission at least thirty (30) days prior to the public hearing, for recommendation and report, which shall be advisory.

**Section 1002. Validity.**

Should any section of this Ordinance be declared to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the Ordinance as a whole or any other part thereof.

**Section 1003. Repealer.**

All Ordinances and parts of Ordinances inconsistent herewith are repealed upon the legally effective date of this Ordinance.

**Section 1004. Effective Date.**

This Ordinance shall become effective concurrently herewith.

ORDAINED AND ENACTED into an Ordinance this 28th day of November, 2016.

Borough Council of the Borough of Bangor

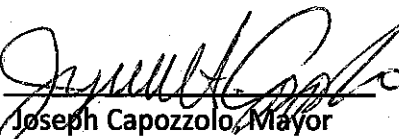
BY:   
James W. Kresge, President

ATTEST:

  
Janelle Hauff, Secretary

APPROVED by the Mayor this 30<sup>th</sup> day of November, 2016.

BY:

  
Joseph Capozzolo, Mayor