

NEWLIN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

Last Updated March 11, 2013

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ARTICLE I – PREAMBLE

SECTION 100 ADOPTION

The Newlin Township Board of Supervisors, pursuant to the provisions of the Pennsylvania Municipalities Planning Code, as amended, hereby enacts and ordains the following Ordinance governing all subdivisions and land developments within Newlin Township.

SECTION 101 TITLE

This Ordinance shall be known and may be cited as the **Newlin Township Subdivision and Land Development Ordinance of 1999, as amended.**

SECTION 102 PURPOSE

In accordance with the provisions of the Pennsylvania Municipalities Planning Code, it is the general intent, purpose and scope of this Ordinance to protect and promote safety, health and morals, to encourage coordinated development, and to provide for the general welfare. In specific, this Ordinance is adopted for the following purposes:

- A.** To ensure the compatibility of subdivision and land development plans by providing uniform procedures and standards.
- B.** To implement the policies and goals expressed in the Unionville Area Regional Comprehensive Plan and the Newlin Township Open Space, Recreation and Environmental Resources Plan of 1994.
- C.** To guide development in an orderly, efficient, integrated and harmonious fashion.
- D.** To assure that sites proposed for development is suitable for building purposes and human habitation.
- E.** To coordinate proposed streets with existing or other proposed streets, parks, or other features of the Unionville Area Regional Comprehensive Plan and the Newlin Township Open Space, Recreation and Environmental Resources Plan of 1994.
- F.** To provide for adequate traffic circulation, recreation, open space, and for appropriate population densities.
- G.** To ensure the conformance of subdivision and land development plans with the public improvements of Newlin Township, and to coordinate with the development plans of adjoining municipalities.
- H.** To encourage subdivisions and land developments to be harmonious with and protective of the existing natural features of Newlin Township.
- I.** To ensure that the layout and arrangement of the subdivision or land development plan is in conformance with the approved articles or chapters of the Unionville regional Comprehensive Plan and to any regulations or maps adopted in furtherance thereof.

- J.** To provide proper procedures for regulating and recording of all public and private easements and rights-of-way within Newlin Township.
- K.** To protect flood plains, wetlands, and all sensitive natural resources of Newlin Township.
- L.** To provide a procedure and establish responsibility for the completion of all public improvements.
- M.** To regulate the design of mobile home parks and sites.
- N.** To mitigate soil erosion and control the increase of sedimentation in streams and rivers.

SECTION 103 INTERPRETATION

The provisions of this Ordinance shall be held to be minimum requirements necessary to meet the purposes stated above. Where a provision of this Ordinance imposes greater restrictions than those of any other statute, ordinance or regulation, the provisions of this Ordinance shall prevail. Where the provisions of any other statute, ordinance or regulation imposes greater restrictions than those of this Ordinance, the provisions of such other statute, ordinance, or regulation shall prevail.

SECTION 104 SUBDIVISION AND LAND DEVELOPMENT CONTROL

- A. Subdivision Of A Lot For Construction, Opening, Or Dedication Of A Street.** No subdivision of any lot, tract, or parcel of land shall be permitted, and no street, alley, sanitary sewer, storm drain, water main, gas, oil or electric transmission line, or other associated facilities, shall be laid out, constructed, opened 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 shall be sold or conveyed, no deed shall be executed for any lot, and no permit to erect, alter, or repair any building upon land in a subdivision or land development shall be granted, unless and until a plan has been approved, and recorded when required. Furthermore, no such lot or land development may be sold or conveyed until all improvements as required in this Ordinance have either been constructed or the Board of Supervisors have been assured of such completion according to the provisions of Article 8 of this Ordinance.
- C. Conformance with the Township Zoning Ordinance.** All applications for subdivisions and land developments shall be in conformance with the Newlin Township Zoning Ordinance.

SECTION 105 VALIDITY AND CONSTITUTIONAL CONSTRUCTION

The provisions of this Ordinance shall be severable, and if any of its provisions shall be held to be invalid, the validity of any of the remaining portions of this Ordinance shall not be affected. It is declared to be Township intent that the remaining portions of this Ordinance would have been adopted in the absence of the invalid portion.

SECTION 106 REPEALER

This amendment to the Newlin Township Subdivision and Land Development Ordinance shall supersede all previous versions of this Ordinance. All other ordinances shall remain in full force and effect.

SECTION 107 EFFECTIVE DATE

This Ordinance shall take effect and be in full force five days after its passage by the Board of Supervisors. The provisions of this Ordinance shall not affect an application for approval of a plan for subdivision or land development which is currently pending official action at the time of the effective date of this Ordinance, in which case the applicant shall be entitled to a decision in accordance with the governing ordinances as they stood at the time the application was duly filed. Additionally, this Ordinance shall not affect any suit pending or to be instituted to enforce any provision of any previous ordinance, and shall not affect any act, contract, or liability incurred prior to the effective date of this Ordinance. No provision of this Ordinance shall be construed to waive any obligation imposed upon an applicant to complete a previously approved plan, including the installation of improvements, in accordance with the provisions of any governing ordinance that applied at the time of approval.

ARTICLE 2 – DEFINITIONS

SECTION 200 GENERAL TERMS

A. Interpretation of Terms. The following rules of construction and interpretation shall be used in this Ordinance.

1. The word "lot" shall be construed to include the words "plot" or "parcel."
2. The words "used" or "occupied" as applied to any land or building shall be construed to include the words "intended," "arranged," or "designed to be" prior to the words or phrase "used" or "occupied."
3. The words "building or structure" shall be construed as if followed by the words "or parts thereof."
4. Words in the singular may imply the plural, and the plural may imply the singular.
5. Words in the present tense may imply the future tense.
6. The masculine gender includes the feminine and neuter.
7. The word "person" shall be construed to include a partnership, corporation, association, trust, estate, or any legally recognized entity as well the officers of any corporation and the members of any partnership.
8. The word "shall" is mandatory; "should" and "may" are advisory.
9. References to ordinances, codes, rules, regulations, plans, maps, governmental bodies, commissions, and agencies apply to ordinances, codes, rules, regulations, plans, maps, governmental bodies, commissions, and agencies of the Township or the Commonwealth of Pennsylvania, as the case may be, unless the context indicates that another reference is intended.
10. All words and phrases shall have their common meanings unless the context indicates otherwise, or where such meanings as taken literally would be inconsistent with the intended meaning with the context of the section or where a more specific interpretation is included in the Pennsylvania Municipalities Planning Code.
11. Common terms are grouped alphabetically according to their root word.

SECTION 201 DEFINITIONS

The following terms shall have the corresponding meanings:

ABANDONMENT - The relinquishment of a use without the manifest intention to resume it.

ACCESSORY DWELLING- A subordinate single-family dwelling located on the same lot with and of a nature customarily incidental and subordinate to, a principal dwelling.

ACCESSORY USE OR STRUCTURE - A use or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.

ADAPTIVE REUSE - The development of a new use for a building originally designed or used for another purpose.

ADJUSTED TRACT AREA - See Tract Area, Adjusted.

ADMINISTRATIVE OFFICE - An establishment primarily engaged in management and general administrative functions such as executive, personnel, finance, and sales activities.

AGRICULTURE, INTENSIVE - Agricultural uses involving the accelerated processing or production of agricultural products which are likely to emit frequent, reoccurring odors or noises considered obnoxious to a residential environment including but not limited to mushroom production, chickenhouses, feedlots, facilities for the accelerated growth or raising of animals, commercial swine barns, and poultry houses.

AGRICULTURE, NON-INTENSIVE - The cultivation of soil and the raising and harvesting of products of the soil, including nurseries, horticulture, commercial greenhouses, forestry, and the raising of animals and poultry not to exceed a combined total of 1000 pounds per acre, but excluding intensive agriculture.

AGRICULTURAL RELATED BUSINESS - An establishment primarily engaged in the following activities: soil preparation services, crop services, landscaping, horticultural services, large-animal veterinary or other animal services, farm labor and management services, feed, seed and fertilizer stores, sale and repair of farm machinery and farm vehicles, stables, aquaculture, or apiaries.

AIRPORT, PERSONAL USE - An area for landing and take-off of aircraft (including ultra-lights and balloons, but not including helicopters) which is restricted solely for non-commercial use, is not conducted for financial return, and at which commercial flight operations are not conducted.

ALLEY - A minor right-of-way providing secondary vehicular access to the side or rear of two or more properties.

ALTERATION - Any change or rearrangement in the supporting members of an existing building, such as bearing walls, columns, beams, or girders, as well as any change in exterior doors or windows, or any enlargement to or diminution of a building or structure, whether horizontally or vertically, or moving of a building or structure from one location to another.

ANIMAL HOSPITAL/VETERINARY OFFICE - A place where animals or pets are given medical or surgical treatment and where the boarding of animals is limited to short-term care incidental to the hospital use.

ANTENNA, COMMERCIAL COMMUNICATIONS - A structure that includes a transmitting or receiving facility, or relay tower and support structures and accessory buildings that is licensed by

the Federal Communications Commission for the specified purpose of television, radio, telephone or other communications beyond that which would be used for normal personal or residential use. Such uses shall include a cellular, television, radio, or microwave tower.

ANTENNA HEIGHT - The vertical distance measured from grade to the highest point of the support structure or antenna, whichever is higher. If the support structure is on a sloped grade, then the lowest grade shall be used in calculating the height.

ANTENNA, MICROWAVE DISH - A parabolic earth-based reflector, together with its pedestal and any other attachments and parts thereof, commonly referred to as a "dish antenna," used or intended to receive microwaves, radio waves, or electromagnetic waves from an overhead satellite.

ANTENNA, RADIO OR TELEVISION - A device, either freestanding or attached to a building, used for receiving frequency signals, including television and radio antennae and which is not used for commercial purposes. Such devices shall also include ham and citizen band radio antennae used by amateur radio operators.

ANTENNA SUPPORT STRUCTURE - Any pole, telescoping mast, tower, tripod, or any other structure which supports a device used in the transmitting or receiving of radio frequency energy.

APPLICANT - A landowner or developer, as herein defined, who has filed an application for subdivision, land development or other development, including his heirs, successors and assigns or the equitable owner of property with the owner's permission.

APPLICATION FOR DEVELOPMENT - Every application, whether preliminary or final, required to be filed and approved prior to the start of construction or development, including, but not limited to an application for a building permit, for the approval of a subdivision plat or plan, or for the approval of a development plan.

AQUACULTURE - The cultivation of aquatic plant and animal species.

BASEMENT - Any area of the building having floor its below ground level on all sides.

BASE SITE AREA - The portion of a total tract that results after all existing and proposed road and utility rights-of-way are deducted.

BED AND BREAKFAST - A building occupied by a resident innkeeper containing eight or fewer guest rooms for the temporary lodging of guests for compensation and providing to the guests such lodging services as housekeeper service and accessory eating and drinking facilities limited to the serving of breakfast.

BILLBOARD - A sign that directs attention to a business, commodity, service or entertainment not conducted, sold or offered upon the premises where the sign is located.

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 the continuity of development.

BOARD OF SUPERVISORS - The Board of Supervisors of the Township of Newlin, Chester County, Pennsylvania.

BUFFER - An area that provides year-round visual isolation and/or sound attenuation between uses, through such means as vegetative plantings, earthen berms, depressions, fences, walls, etc.

BUILDING - Any permanent structure having enclosed walls and roof, including manufactured homes and trailers used for human habitation.

BUILDING, ACCESSORY - A structure that is subordinate to the principal building on a lot and used for purposes customarily incidental to those of the principal building.

BUILDING COVERAGE - The ratio of the total ground floor area of all buildings on a lot to the total area of the lot on which they are located.

BUILDING HEIGHT - The vertical measurement of a building from the mean level of finished grade surrounding the building, to the highest point of the roof, excluding the chimney and/or mechanical equipment above the roof.

BUILDING, PRINCIPAL - A building in which is conducted, designed to be conducted or intended to be conducted, the primary use of the lot on which it is located.

BUILDING SETBACK LINE – A line which designates the minimum distance between any building or structure and the adjacent street right-of-way or property line, as measured horizontally and at a right angle from any point formed by the intersection of a vertical building wall with the ground, to the street right-of-way or property line, whichever is closer. This line shall include patios, and covered porches, but not open steps.

- A. **Front Yard Building Setback Line** - The line parallel to the public or private street right-of-way line at a distance equal to the minimum depth of the front yard as designated in the Zoning Ordinance, also referred to as “required front yard.” All yards adjacent to a public or private street right-of-way shall be considered to be front yards.
- B. **Side Yard Building Setback Line** - The line parallel to the side lot line and equal to the minimum depth of the side yard as designated in the Zoning Ordinance, also referred to as “required side yard.”
- C. **Rear Yard Building Setback Line** - The line parallel to the rear lot line and equal to the minimum depth of the rear yard as designated in the Zoning Ordinance, also referred to as “required rear yard.”

BULK REGULATIONS - Standards that control the height, density, intensity and location of structures, i.e., setbacks or yard requirements.

BUSINESS OFFICE - An office where a particular kind of business is transacted or a service is supplied and shall be limited to offices for management, consulting, record keeping, and clerical work of a commercial, industrial, mercantile, or service enterprise.

CARTWAY - The paved portion of a street or right-of-way intended for vehicular use.

CELL SITE - A tract or parcel of land that contains the commercial communication antenna, its support structure, accessory buildings, and parking, and may include other uses associated with, and ancillary to, commercial communication transmission, but not a business office.

CEMETERY - Land used or intended to be used for burial of the deceased, including mausoleums and mortuaries when operated in conjunction with the cemetery and within its boundaries.

CLEAR CUTTING - The felling of all trees on a tract of land, or any portion thereof, at one time.

CLEAR SIGHT TRIANGLE - An area of unobstructed vision at a street intersection, defined by lines of sight between points at a given distance from the intersection down the centerlines of the street.

CLUB or LODGE - A building utilized as a private club or social organization offering restaurant or bar privileges for members.

COMMERCIAL - A use of land, or improvements thereto, for the purpose of engaging in retail, wholesale or service activities for profit.

COMMERCIAL COMMUNICATIONS ANTENNA - A device used to receive and/or transmit wireless communication or radio signals (commonly referred to as “antenna” within the context of wireless communication facilities).

COMMERCIAL COMMUNICATIONS ANTENNA SUPPORT STRUCTURE - A tower, pole, mast, tripod, and associated cable s or guy wires used to support the structure (commonly referred to as “tower” within the context of wireless communication facilities).

COMMERCIAL COMMUNICATIONS ANTENNA SUPPORT STRUCTURE HEIGHT - The vertical distance of a Commercial Communications Antenna Support Structure measured from the average undisturbed grade around the structure to the highest point of the structure, including its antenna.

COMMERCIAL PIGGERY - The raising of hogs or pigs on a commercial basis as the principal use.

COMMERCIAL USE, NEIGHBORHOOD - Commercial uses, located in Embreeville and Mortonville villages, intended primarily for the use of local residents. Neighborhood commercial uses include retail businesses for the sale of food, drugs, flowers, household goods, newspapers, stationary, art supplies, fine art sales, and tobacco; and personal service uses, including barber or beauty shops, tailor shop, photographic studios, shoe repair, and similar types of businesses, but shall not include convenience stores as defined elsewhere in this ordinance..

COMMUNITY WASTEWATER TREATMENT SYSTEM - A sewage disposal facility designed to serve a specific number of users in a particular development and which is permitted by the Pennsylvania Department of Environmental Protection and the Chester County Health Department, but which shall not include experimental permitting, and which is owned and operated by a private entity which may include a PUC-chartered entity limited to serve the particular development.

COMMUNITY WATER TREATMENT SYSTEM - A potable water supply facility designed to serve a specific number of users in a particular development and which is permitted by the Pennsylvania Department of Environmental Protection and the Chester County Health Department, and which is owned and operated by a private entity which may include a PUC-chartered entity limited to serve the particular development.

COMPLETELY DRY SPACE - A space that will remain totally dry during flooding, which is designed to prevent the passage of water and water vapor.

COMPREHENSIVE PLAN - The Newlin Township Comprehensive Plan of 1996.

CONSERVANCY LOT – An undeveloped, privately owned lot comprising part of an area of open land.

CONSERVATION AREAS, PRIMARY - Natural features of the highest importance, including the one hundred year floodplains, wetlands, and slopes over 25%.

CONSERVATION AREAS, SECONDARY - Natural and cultural resources that are identified by an applicant for land development in consultation with the Newlin Township Planning Commission according to the procedures identified in the Newlin Township Subdivision and Land Development Ordinance and which do not include primary conservation areas.

CONSERVATION LANDS - Areas within a development site that are identified as containing significant environmental features and on which development is prohibited.

CONSTRAINED LAND – The sum of land features, each of which is multiplied by a density factor set forth in this ordinance.

CONSTRUCTION - The erection, rebuilding, renovation, repair, extension, expansion, alteration, demolition, or relocation of a building or structure, including the placement of mobile homes.

CONVENIENCE STORE - A retail activity designed to serve a local market which involves, but is not limited to, any of the following uses: delicatessen, food market, sales of automotive fuel, or video tape rental.

CONVERSION - An alteration of an existing building, structure or land to a new use which imposes other special provisions of a law governing building construction, equipment, exits or zoning regulations.

CONVERSION, RESIDENTIAL - The subdivision of a single family detached dwelling into two or more dwelling units.

CUL-DE-SAC - A single access street intersecting another street at one end and terminated at the other by a vehicular turn-around, built to Newlin Township public street standards for vehicular traffic flow.

DAY CARE - Day Care shall include the following:

- A. Commercial Adult Day Care** - A commercial facility where daytime supervision is provided for adults.
- B. Commercial Child Day Care Center** - A facility which exclusively provides supplemental parental care and/or instruction to children who are not related to the caregiver or operator; where tuition, fees, or other forms of compensation are charged; and which is licensed or approved to provide child care by the Commonwealth of Pennsylvania.
- C. Home Day Care** - A major home occupation, in which a private residence is used for the care and supervision of between four to six children or adults, not related to the caregiver.

DENSITY, GROSS - The total land area divided by the total number of dwellings to be housed thereon, expressed in dwelling units (DU) per acre.

DENSITY, NET - The number of dwelling units per acre, including yards, off-street parking and driveway facilities directly serving those dwellings, but excluding common open spaces, permitted commercial uses, public streets, and other public grounds and rights-of-way.

DEPARTMENT OF HEALTH - The Department of Health of the Commonwealth of Pennsylvania or of Chester County, or their representative having jurisdiction in Newlin Township.

DEVELOPER - Any landowner, agent of such landowner, tenant with permission of such landowner, or equitable owner, who makes or causes to be made an application for a subdivision or land development. Also “applicant.”

DEVELOPMENT - Any man-made change to improved or unimproved real estate, including but not limited to the construction, reconstruction, renovation, repair, expansion, or alteration of buildings or other structures; the placement of manufactured homes; streets and other paving; utilities; filling, grading, and excavation; mining; dredging; drilling operations; storage of equipment or materials; and the subdivision of land.

DEVELOPMENT PLAN - The provisions for development, including a planned residential development, a plat of subdivision, all covenants relating to use, location and bulk of buildings and

other structures, intensity of use or density of development, streets, ways and parking facilities, common open space and public facilities.

DIAMETER (of plant materials) - The diameter of a tree trunk measured at a point halfway between grade and knee height.

DISCONTINUANCE - The cessation of the use of property evident from the continuous lack of maintenance or occupancy.

DRAINAGE - The movement of water from an area by stream or sheet flow, and removal of excess water from soil by downward flow.

DWELLING - Any building or other structure designed for, and occupied exclusively for, residential purposes, including an apartment and mobile home, but excluding rental units in a motel, rooming house, tourist home, institutional home, dormitory, and the like. It is the intention to include within the definition of dwelling, all recognized housing types, architectural types or styles, or combinations thereof, whether such housing units are for lease or for sale. Dwelling types include, but are not limited to, the following:

- A. Single-Family Detached.** A building designed for and occupied exclusively as a residence, containing one set of cooking, sleeping and bathroom facilities and having no common or party wall with an adjacent dwelling, and having yards on all sides. Where a private garage is structurally attached to such building, it shall be considered as a part of the building.
- B. Single-Family Semi-Detached (twin).** A building designed for and occupied exclusively as a residence, containing two individual dwellings separated by a vertical common or party wall and having yards on all but one side.
- C. Duplex.** A building designed for and occupied exclusively as a residence, containing two dwellings, in an "over and under" arrangement, separated by a horizontal common or party wall and having yards on all sides.
- D. Single-Family Attached (townhouse).** A building designed for and occupied exclusively as a residence, containing at least three but not more than eight dwellings each accommodating one family and which are attached by a vertical common party wall and which have side yards adjacent to each end unit.
- E. Multi-Family.** A building designed for and occupied exclusively as a residence, containing three or more dwellings, but which does not meet the definition of a "townhouse".

DWELLING UNIT - A single living space for one family, excluding individual rental units in a motel, rooming house, tourist home, institutional home, dormitory, and the like.

EASEMENT - An interest in land owned by a person who does not own fee title to the land, which entitles the holder of the easement to a specific use or enjoyment of the land.

EASEMENT, CONSERVATION - A voluntarily derived set of use restrictions placed on a parcel of land in perpetuity, through which no positive or appurtenant rights are conveyed to the grantee.

EATING ESTABLISHMENT - A place of business open to the public that dispenses prepared food and non-alcoholic drink.

EDUCATIONAL USE - Use of land or a building(s) for the establishment and maintenance of a public or private college, secondary or elementary school, or other educational institution for the primary purpose of instruction and learning.

EFFECTIVE DATE OF THE ORDINANCE - The date upon which this Ordinance officially comes into effect, except that with respect to the subject matter of any amendment, said date shall mean the date upon which the particular amendment became or becomes effective.

ELECTRIC SUBSTATION - Buildings or structures and equipment erected and used for the purposes of transmission, switching or transforming of electrical current between customers and the utility company facilities, not including the storage of materials, trucks, repair facilities or housing of repair crews or business offices.

ENGINEER, TOWNSHIP - A professional engineer, licensed by the Commonwealth of Pennsylvania, and duly appointed as the engineer for the Township of Newlin, Chester County.

ENVIRONMENTALLY SENSITIVE AREAS - Those areas of land the disturbance of that would contribute significantly to the degradation of environmental conditions or amenities. Environmentally sensitive areas include (but are not limited to) the natural resources identified in Section 304 C (Table 4) of the Newlin Township Zoning Ordinance.

EROSION - The process by which soils, vegetation, and man-made materials on the earth's surface are worn away by action of water, wind, frost or a combination of such by natural forces.

ESSENTIALLY DRY SPACE - A space which will remain dry during flooding, except for the passage of some water vapor or minor seepage, and which is designed to be substantially impermeable to the passage of water.

FAMILY - "Family" shall include the following:

- A. A single person occupying a dwelling unit;
- B. Two or more persons related by blood, marriage, or adoption occupying a dwelling unit, including not more than one boarder, roomer, or lodger;
- C. The occupants of a group home; or
- D. Not more than four unrelated persons occupying a dwelling unit, living together, excluding a rooming or boarding house, fraternity house, dormitory, or transitional housing.

FENCE OR WALL - Any freestanding and uninhabited structure erected to secure or divide a property from another, or part of a property from the remaining part of the same property.

FILL - Material, exclusive of structures, placed or deposited so as to form an embankment or to raise the surface elevation of the land.

FLOOD - A temporary inundation of normally dry land.

FLOOD, BASE - The flood which has been selected to serve as the basis upon which the flood plain management provisions of this Ordinance have been prepared. For the purposes of this Ordinance, the Base Flood shall be the One Hundred-Year Flood. (See **FLOOD, ONE HUNDRED YEAR**.)

FLOOD ELEVATION, BASE - The One Hundred Year Flood elevation. Within the Approximated Flood Plain, the Base Flood Elevation shall be established as a point on the boundary of the Approximated Flood Plain, which is nearest to the site in question.

FLOOD ELEVATION, REGULATORY - The One Hundred-Year Flood elevation, plus a freeboard safety factor of one and one-half feet.

FLOOD FRINGE - The remaining portions of the one hundred-year floodplain in those areas in the Flood Insurance Study where a floodway has been delineated. The basis for the outermost boundary of this area shall be the 100-year flood elevations as shown in the flood profiles contained in the Flood Insurance Study.

FLOOD, ONE HUNDRED YEAR - The highest level of flooding that, on the average, is likely to occur once every 100 years; that is, that has a one percent chance of occurring each year as delineated by the Federal Flood Insurance Rate Maps developed in the Flood Insurance Program (see also **BASE FLOOD**).

FLOOD PLAIN AREA - (also IDENTIFIED FLOODPLAIN AREA) A relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby river, stream, or watercourse; and/or any area subject to the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD PLAIN, APPROXIMATED - The areas identified as Zone A in the Flood Insurance Study for which 100-year flood elevations have been provided. When available, information from other Federal State, and other acceptable sources shall be used to determine the one hundred-year elevation, as well as a floodway area, if possible. When no other information is available, the one hundred-year elevation shall be determined by using a point on the boundary of the identified floodplain area that is nearest the construction site in question.

FLOOD PLAIN SOILS - See **ALLUVIAL SOILS**

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

FLOODWAY - The designated area of a floodplain required to carry and discharge floodwaters of the 100-year flood.

FLOODWAY - The areas identified as "Floodway" in the Flood Insurance Study prepared by FEMA. The term shall also include floodway areas that have been identified in other available studies or sources of information for those floodplain areas where no floodway has been identified in the Flood Insurance Study.

FLOOR AREA, GROSS - The sum of the gross horizontal areas of all floors of a building measured from the exterior face of exterior walls, or from the centerline of the wall separating two buildings, but not including interior parking spaces, interior loading space for motor vehicles, or any interior space where the floor-to-ceiling height is less than six feet.

FLOOR AREA, GROSS USABLE - That floor area within a building, on all floors of such building which are used for or related to the business or use conducted within the building, including all lavatory areas, corridors, storage areas and other areas used to keep stock and inventory, but exclusive of elevator shafts, stairwells, a first floor lobby, basement storage area, and any room or area dedicated to the heating plant, air conditioning equipment or other utility areas necessary for the operation of the building.

FLOOR AREA, HABITABLE - The floor area within exterior walls designed for year round human occupancy, excluding such spaces as garages, accessory buildings, basements, attics, patios and porches.

FORESTRY - The management of forests and timberlands when practiced in accordance with accepted silvicultural principles, through developing, cultivating, harvesting, transporting, and selling trees for commercial purposes, which does not involve any land development.

FRONTAGE - The length of a front lot line coinciding with a street line.

GARAGE, PRIVATE - An accessory building or part of a principal building used for the storage of motor vehicles owned and used by the owner or tenant of the premises, and for the storage of not more than two motor vehicles owned and used by persons other than the owner or tenant of the premises.

GARAGE, PUBLIC PARKING - A building other than a private garage, used for the commercial storage or parking of motor vehicles.

GARAGE/YARD SALE - The temporary display and sale of goods and craft items on a residentially used property.

GOLF COURSE - An organized, unlighted playing area containing a minimum of nine holes, constructed according to generally recognized golfing standards but excluding miniature golf courses and driving ranges.

GREENHOUSE, COMMERCIAL - A building whose roof and sides are made largely of glass or other transparent or translucent material and in which the temperature or humidity can be regulated for the commercial cultivation of plants or produce.

GREENWAY - Lands permanently protected as conservation areas by a perpetual easement that complies with Section 170 (h) of the Federal Internal Revenue Code of 1986, as amended.

GREENWAY LAND - That portion of a tract that is set aside for the protection of sensitive natural resources, farmland, scenic views, and other unique features.

GROUNDWATER RECHARGE - The replenishment of water, contained in interconnected pores located below the water table in an aquifer, from the infiltration of precipitation, streams, lakes, or other water sources.

GROUP HOME - A licensed community-based living arrangement functioning as a single household and providing habilitation services and which provides residential services to persons who, due to age, disability or handicap, are not able to live without professional care or supervision. Group homes shall not include alcoholism or drug treatment centers, work release facilities for convicts or ex-convicts, or other housing facilities serving as an alternative to incarceration. (See also **TRANSITIONAL HOUSING**)

HIGHWAY ACCESS POINT - The location or place of egress and ingress to a street or highway created by a driveway, alley, or other street.

HISTORIC RESOURCE (or Structure) - Any structure, parcel, or site that is:

- A. Listed individually on the National Register of Historic Places (a listing maintained by the Department of the Interior) or determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- B. Certified or preliminary determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- C. Individually listed on a state inventory of historic places in states with historic preservation programs that have been approved by the Secretary of the Interior;

- D. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
1. By an approved state program as determined by the Secretary of the Interior; or
 2. Directly by the Secretary of the Interior in states without approved programs, or
- E. Any building, site or parcel identified as having historic or cultural value in either the Chester County Newlin Township Historic Resource Atlas of 2010, the Unionville Area Regional Comprehensive Plan Chapter 4 of 2011 or the Newlin Township Open Space, Recreation and Environmental Resources Plan of 1994, and all locations listed in the National Register of Historic Places.

HOME OCCUPATION (NON-PROFESSIONAL) - An activity conducted for profit by persons residing on the premises that is clearly subordinate to the residential use of the property, which typically involves a trade, the storage of goods or materials, manufacturing, or the use of commercially registered vehicles, and which does not fall within the definition of Professional Home Occupation.

HOME OCCUPATION (PROFESSIONAL) - An activity conducted for profit by persons residing on the premises which is typically of a professional nature such as an attorney, engineer, architect, member of the clergy, and similar professions, and which do not fall within the definition of a Non-Professional Home Occupation.

HOMEOWNERS ASSOCIATION - A non-profit organization comprised of homeowners or property owners, planned and operated under negotiated and approved rules and regulations, for the purpose of administering the needs of residents through the maintenance of community-owner property. This term is synonymous with property-owners association.

HORTICULTURE - The cultivation of fruits, vegetables, flowers, or ornamental plants.

IMPERVIOUS SURFACES - Areas or materials, such as buildings, structures, and paved areas, which are impenetrable by liquid and that are incapable of allowing groundwater recharge or absorbing precipitation and liquids.

ITE TRIP GENERATION RATES - Vehicle trips generated for a particular size and type of land use published by the Institute of Transportation Engineers, ITE Trip Generation Manual, latest edition.

JUNK - Any worn out, cast off, discarded or stored material including unregistered vehicles, machinery, and equipment or material ready for destruction or which has been collected for salvage or conversion to another use.

KENNEL - The use of land, buildings or structures for the purpose of breeding, boarding, training or grooming customary household pets for compensation, or the maintenance of four or more dogs that are more than six months old on a single lot or contiguous lots under single ownership or lease.

LABORATORY - A building or group of buildings in which are located facilities for scientific research, investigation, testing and experimentation, but not including the manufacture of products for sale.

LAND DEVELOPMENT - "Land development" includes any of the following activities:

- A. The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:

1. 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
 2. The division or allocation of 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.
- B.** A subdivision of land.
- C.** Land development shall not include the following activities:
1. The conversion of an existing single-family detached dwelling or single-family semi-detached dwelling into not more than three residential units, unless such units are intended to be a condominium;
 2. The addition of an accessory building, including farm buildings, on a lot or lots subordinate to an existing principal building;
 3. The addition or conversion of buildings or rides within the confines of an enterprise that constitutes an amusement park. This exclusion shall not apply to newly acquired acreage by an amusement park until initial plans for the expanded area have been approved by the proper authorities.

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 a proprietary interest in land.

LANDSCAPING - The planting of turf-grass or other appropriate ground cover in all open areas of the lot, and in addition, the planting of evergreen and deciduous trees, and shrubs, including the maintenance thereof, for the control of erosion, retention of precipitation, protection against the elements, promotion of human comfort, and otherwise protecting the public health, safety and welfare. (Also see **SCREEN** and **LANDSCAPE SCREEN**).

LIVE/WORK UNIT – A single dwelling unit consisting of both a commercial/office and a residential component that is occupied by the same resident. The live/work unit shall be the primary dwelling of the occupant.

LOADING SPACE - A space, accessible from a street or accessway, in a building or on a lot, for the temporary use of vehicles, while loading or unloading merchandise or materials.

LOT - A designated parcel, tract or area of land established by a plat or otherwise as permitted by law and to be used, developed, or built upon as a unit, excluding any area within a public street right-of-way.

LOT AREA - The area contained within the lot lines of an individual parcel, excluding any street and railroad rights-of-way and common open space.

LOT, CORNER - A lot bounded by two or more intersecting streets, or at the point of change in direction of a single street when the interior angle of which is not greater than 135 degrees.

LOT COVERAGE - The ratio of the total ground floor area of all impervious surfaces to the total area of the lot on which they are located.

LOT, FLAG - A lot which provides access to a public road by a driveway which passes through a portion of the lot that does not meet minimum lot width requirements.

LOT LINE - A property boundary line of any lot held in single and separate ownership exclusive of a street right-of-way. When a recorded lot includes a lot line that is coincident with a street centerline, the lot line shall be construed to be coincident with the right-of-way line instead.

LOT LINE, "BUILD-TO" - A dimension from a lot line to which a structure shall abut.

LOT LINE, FRONT - The lot line abutting and coinciding with a street right-of-way line; in the case of a corner lot, each street on which the corner lot abuts shall be considered a front lot line and the remaining lots shall be deemed to be rear yard lines.

LOT LINE, REAR - A lot line opposite and most distant from the front lot line; if the rear lot line is less than ten feet in length, or if the lot forms a point at the rear, the rear lot line shall be deemed to be a line ten feet in length within the lot, parallel to and at the maximum possible distance from the front lot line. In the case of a corner lot, see "Yard, Front."

LOT LINE, SIDE - Any lot line not a front or rear lot line.

LOT, MOBILE HOME - A parcel of land in a mobile home park, improved with the necessary utility connections and other appurtenances necessary for the erection thereon of a single mobile home.

LOT WIDTH - The distance between the two opposite side lot lines, or between the rear lot line and the front lot line in the case of a corner lot, measured at the minimum front yard setback line, and parallel to the street line.

LOWEST FLOOR - The lowest floor of the lowest fully enclosed area (including the basement). An unfinished, flood-resistant partially enclosed area, used solely for the parking of vehicles, building access, and incidental storage, in an area other than a basement area is not considered the lowest floor of a building, provided that such space is not designed and built so that the structure is in violation of the applicable non-elevation design requirements of this ordinance.

MANUFACTURED HOME - A transportable, single-family dwelling intended for permanent occupancy, office, or place of assembly, contained in one or more sections, built on a permanent chassis, which arrives at a site complete and ready for occupancy except for minor and incidental unpacking and assembly operations, and constructed so that it may be used with or without a permanent foundation. Also includes park trailers, travel trailers, recreational and similar vehicles that are placed on a site for more than 180 consecutive days.

MINIMUM BUILDABLE AREA - That area of a lot that has no development restrictions. The minimum buildable area shall not include the area of any required setbacks (except driveways which cross yards), buffers, natural features with one 100% protection as specified in Section 304C (Table 4) of the Newlin Township Zoning Ordinance and the portion of other protected natural features that may not be developed or intruded upon.

MINOR REPAIR - The replacement of existing work with equivalent materials for the purpose of normal maintenance and upkeep, but not including the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or bearing support, or the removal or change or any required means of egress, or rearrangement of parts of a structure affecting egress; nor shall minor repairs include addition to, alteration or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, oil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

MIXED USE - The use of a building or a lot for two or more principal uses.

MOBILE HOME - A transportable, single-family dwelling intended for permanent occupancy contained in one unit, or in two units designed to be joined into one integral unit capable of again being separated for repeated towing, which arrives at a site complete and ready for occupancy except for minor and incidental unpacking and assembly operations, and constructed so that it may be used without a permanent foundation.

MOBILE HOME PARK (also MANUFACTURED HOME PARK) - A parcel of land under single ownership which has been planned and improved for the placement of mobile homes for non-transient use, consisting of two or more manufactured or mobile home lots for non-transient use.

MUNICIPAL USE - Any building, structure, facility, complex, area, or use, provided, constructed, or maintained by the municipal government of Newlin Township, Chester County, Pennsylvania.

NEW CONSTRUCTION - Structures for which the start of construction commences on or after December 19, 1979, and includes any subsequent improvements thereto.

NONCONFORMING LOT - A lot or site which does not comply with the applicable dimensional regulations, including those related to site area, lot area, and lot width, in this Ordinance or amendments hereafter enacted where such lot was lawfully in existence prior to enactment of this Ordinance or amendments.

NONCONFORMING SIGN - Any sign lawfully existing at the time of the passage of this Ordinance that does not conform in use, location, height, or size to the regulations of Article 9, Sign Regulations, of the Newlin Township Zoning Ordinance.

NONCONFORMING STRUCTURE - A structure which does not comply with the applicable dimensional regulations, including those relating to density, impervious surfaces, building coverage, building height, and setbacks in this Ordinance or amendments hereafter enacted where such structure was lawfully in existence prior to enactment of this Ordinance or amendment.

NONCONFORMING USE - A use, whether of land or of a structure, which does not comply with the applicable use provisions of this Ordinance or amendment heretofore or hereafter enacted, where such use was lawfully in existence prior to the enactment of such ordinance or amendment, or prior to the application of such ordinance or amendment to its location by reason of annexation.

NURSERY - Land or greenhouses used to raise flowers, shrubs, trees, and/or other plants for commercial purposes.

NURSING HOME OR CONVALESCENT HOME - A building or series of buildings for the housing and care of persons in need of specialized care and attention, but which does not necessarily meet hospital level of services.

OPEN SPACE, COMMON - A parcel or parcels of land or an area of water, or a combination of land and water, within a development site, designed and intended for the use and enjoyment by residents of such development. Common open space shall be substantially free of structures, but may contain such improvements as are in the finally approved development plan, and shall not include individually owned private yards, streets, and off-street parking areas unless provided in conjunction with a recreational facility.

OPEN SPACE PLAN - The Newlin Township Open Space, Recreation and Environmental Resources Plan of 1994.

OPEN SPACE RATIO - Total open space area divided by total site area.

PARENT TRACT - A tract or parcel of land in single and separate ownership as of the date of adoption of this Ordinance.

PARKING SPACE - A space located off the public right-of-way designed and designated for the transient storage of a motor vehicle.

PERSONAL SERVICE ESTABLISHMENT - A building in which limited services consistent with neighborhood needs are offered to the general public. Examples of such services include, but are not limited to: barber and beauty shops, pharmacies, dry cleaning and tailoring shops, shoe repair shops, travel agencies, or photocopy shops.

PLAN, AS-BUILT - A final plan showing actual and correct dimensions and locations of all streets, structures, improvements, and other constructed improvements.

PLAN, CONSERVATION - A plan showing how natural resources will be preserved and protected from erosion, deforestation, and other damage.

PLAN, EXISTING RESOURCES AND SITE ANALYSIS - A plan submitted as part of a preliminary and/or final subdivision or land development plan application, which includes a natural features inventory and analysis, conservation areas, and manmade features.

PLAN, FINAL - A subdivision or land development plat prepared under the provisions of Article V of the Pennsylvania Municipalities Planning Code and the Newlin Township Zoning Ordinance and the Newlin Township Subdivision and Land Development Ordinance, as may be amended.

PLAN, SKETCH - A drawing submitted to the Township for review and discussion prior to the application for preliminary plan approval, indicating the general location of a site's prominent environmental features including tree masses, scenic vistas, historic elements, and conceptual layout of a subdivision or land development. Sketch plans are voluntarily prepared and do not constitute an application for a plan approval.

PLAN, YIELD - A calculation and drawing that establishes a theoretical conceptual maximum development density of a particular parcel, which reflects a realistic layout that shows a development pattern that could reasonably be expected to be implemented, taking into account the presence of wetlands, floodplains, steep slopes, easements, areas for utilities, and any other site elements required in the Newlin Township Zoning Ordinance or Subdivision and Land Development Ordinance. The yield plan is not to be considered a preliminary plan.

PLANNING COMMISSION - The Planning Commission of Newlin Township.

PLANTING SCREEN - A wall, fence, plantings, earth works, or combinations thereof, which are arranged or placed so as to divert attention from and obstruct at least 50% of an otherwise clear view of an use or activity during all seasons of the year, as outlined by this Ordinance.

PLAT - The map or plan of a subdivision of land, whether preliminary or final.

PLAT, RECORDED - The final plat, or engineering layout of streets and lots, easements, common open space and public grounds, which has been duly approved by all necessary officials and bodies, and recorded in the Office of the Recorder of Deeds of Chester County.

POTENTIAL DEVELOPMENT AREAS - Portions of a site or parcel that are appropriate for development and which are exclusive of conservation areas.

PREMISES - A separate lot, tax parcel, tract, or plot of land together with the buildings and structures thereon. Premises may include more than one occupant on a lot or parcel, such as an office building or planned commercial center.

PROFESSIONAL OFFICE - The office of a member of a recognized and lawful profession maintained for the conduct of that profession, including, but not limited to, dentists, doctors, chiropractors, attorneys, and accountants.

PROTECTED AREA - Areas within a site that contain sensitive environmental conditions that are to be protected, fully or partially, from development.

PUBLIC GROUNDS - Includes parks, playgrounds and other public areas, and the sites for schools, sewage treatment, refuse disposal and other publicly owned or operated facilities.

PUBLIC HEARING - A formal meeting held pursuant to public notice by the governing body, intended to inform and obtain public comment prior to taking action.

PUBLIC MEETING - A forum held pursuant to notice under the act of July 3, 1996 (P.L. 388 No. 84), known as the "Sunshine Act."

PUBLIC NOTICE - Notice published once each week for two successive weeks in a newspaper of general circulation in Newlin Township. Such notice shall state the time and place of the hearing and the particular nature of the matter to be considered at the hearing. The first publication shall be not more than 30 days and the second publication shall be not less than seven days from the date of the hearing.

PUBLIC SERVICE FACILITIES - Telephone, electric and cable television lines, poles, equipment and structures; water or gas pipes, mains, valves or structures; sewer pipes, valves or structures; pumping stations; telephone exchanges and repeater stations; and all other facilities, equipment and structures necessary for conducting a service by a government or a public utility.

PUBLIC USE - Any building, structure, facility, complex, or area used by the general public or which provides a service to the public, whether constructed by a state, county, or municipal government agency, or any private individual, partnership, association, or corporation.

QUARRYING/MINING - Removal of sand, clay, gravel, topsoil, groundwater or similar commercial extractive operations including borrow pits or excavations for removing material for fill operations.

RECREATION, ACTIVE - Those leisure time activities which require physical alteration to the area in which they are performed. Such areas are intensively used and include, but are not limited to, playgrounds, ball courts and swimming pools, excluding amusement parks.

RECREATIONAL VEHICLE - A vehicle which is:

- A. Built on a single chassis;
- B. Not more than 400 square feet, measured at the largest horizontal projections;
- C. Designed to be self-propelled or towed by a light-duty truck;
- D. Not designed for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use; and
- E. Legally registered by a state department of motor vehicles.

RECREATION, OUTDOOR - A leisure time facility designed and equipped for the conduct of sports activities, including swimming, boating, tennis and other court games, baseball and other field sports, playground and other outdoor activities, but excluding amusement parks, go-cart tracks,

shooting ranges, fueling activity and other activities which generate noise objectionable to a residential environment.

RECREATION, PASSIVE - Leisure time uses which can be carried out with little alteration or disruption in the area in which they are performed. Such uses include, but are not limited to hiking, biking, and picnicking.

RECREATION USE, INDOOR - The use of a building or part thereof for indoor sports such as bowling, tennis, racquetball, squash, indoor basketball, indoor swimming, and those sports activities usually conducted indoors, but excluding target shooting or any other activities that create loud noises or which may be dangerous or disturbing to surrounding residents.

RECYCLING CENTER - An activity that accumulates material such as paper, glass, aluminum, and plastic that is no longer useful for its original purpose. The materials are then transported off the premises to be manufactured into a new product, or a place for the collection and storage of materials suitable for recycling into usable products.

REFORESTATION - The restocking of an area with trees, including natural regeneration, as well as tree planting.

RELIGIOUS USE - A nonprofit use of land or a building as a place of worship, convent, monastery or similar religious institution, including rectory and parish house.

RENTAL UNIT - An individual space offered for compensation or lease within a motel, hotel, rooming house, tourist home, institutional home, dormitory, or in a professional or commercial office building.

RESTAURANT - A facility serving food and beverages prepared for consumption on the premises, and providing table or sit-down service, but not including outdoor curb service.

RETAIL SERVICES - Establishments providing services or entertainment, as opposed to products, to the general public, real estate and insurance, personal service establishments, motion pictures, amusement and recreation service, educational and social services, museums and galleries.

RETAIL STORE/TRADE - Establishments engaged in selling goods or merchandise to the general public for personal or household consumption and rendering services incidental to the sale of such goods such as, but not limited to, hardware store, pharmacy, magazine or bookstore, florist, or clothing store.

RIGHT-OF-WAY - Land reserved or dedicated for use as a street, alley, walkway, or any other public or private purpose.

RIGHT-OF-WAY, FUTURE - The right-of-way deemed appropriate to provide adequate width for future street improvements.

RIGHT-OF-WAY, LEGAL - The existing right-of-way of dedicated streets as established by the Commonwealth of Pennsylvania or other appropriate governing authority.

ROOMING HOUSE - A dwelling in which weekly or monthly sleeping accommodations are provided for rent to more than two but less than ten persons, whether or not the serving of meals is included.

SCREEN (OR LANDSCAPE SCREEN) - Vegetative materials such as shrubs and trees (which may incorporate a berm) that shall grow to form a continuously opaque six-foot tall visual barrier within five years of planting.

SECONDARY FARM FAMILY BUSINESS - An agricultural accessory use, such as the repair of agricultural equipment, butcher shop, or processing of local agricultural products, which provide a secondary source of income to the primary agricultural use.

SEDIMENTATION – The process by which mineral or organic matter is accumulated or deposited by moving wind, water, or gravity. Once this matter is deposited it is usually referred to as “sediment”

SELECTIVE CUTTING - The felling of certain, but not all trees in an area for the purposes of:

- A. removing dead, diseased, damaged, mature or marketable timber;
- B. improving the quality of a tree stand or species; or
- C. meeting personal domestic needs.

SETBACK, LOT - The minimum building line measured along a line parallel to a lot line.

SEWAGE - Any substance that contains any of the waste products or excrement matter or other discharge from the bodies of human beings or animals and laundry, bathroom, and kitchen waste water.

SEWAGE DISPOSAL SYSTEM - “Sewage disposal systems” include the following:

- A. **Individual** - The disposal of sewage from one dwelling unit by use of septic tanks or other safe and healthful means, approved by the Chester County Health Department.
- B. **Central/Community Collection and Treatment (Centralized)** - A sanitary sewage system which carries sewage from individual sources by a system of pipes to one or more common treatment and disposal facilities, either on-site or off-site, and approved by the Pennsylvania Department of Environmental Protection.
- C. **Public Sewer System (Centralized)** - An off-site system for collection, treatment, and disposal of sewage in which sewage is conveyed to a common treatment facility, and disposed through means and approved by the Pennsylvania Department of Environmental Protection.

SIGHT DISTANCE - The maximum extent of unobstructed vision (in a vertical or horizontal plane) along a street from a vehicle located at any given point on the street, as defined by the Pennsylvania Department of Transportation.

SIGN - Any permanent or temporary structure or part thereof or any device attached, painted or represented, directly or indirectly, on a structure or other surface that displays or includes any letter, word, insignia, flag, or representation used as or which is in the nature of an advertisement, announcement, visual communication, direction, or which is designed to attract the eye or bring the subject to the attention of the public.

SIGN AREA - The area of the smallest rectangle, triangle, or circle that will encompass all elements of the sign, such as letters, figures, symbols, designs, or other display. The area shall not include any structural component, borders, or framing, unless it is in the form of a symbol or contains advertising elements.

SIGN HEIGHT - The distance from the existing ground elevation at the base of the sign, or immediately below the sign, to the highest point of the sign structure.

SIGN - (BUSINESS SIGN) - A sign which directs attention to any commercial, industrial or professional activity occurring on the premises on which the sign is located, but not including a home occupation sign.

SIGN - (SITE IDENTIFICATION SIGN) - A sign used to identify the name and display information about the individual, organization, agency, institution, or similar development located on the premises on which the sign is located, but not including a business sign.

SIGN - (SPECIAL EVENT SIGN) - A temporary sign that carries information about a transitory event such as an auction, flea market, festival, carnival, or similar event, but not including any business sign or "for-sale" signs.

SINGLE AND SEPARATE OWNERSHIP - The ownership of property by any person, partnership, or corporation, in which ownership is separate and distinct from that of any adjoining property.

SITE RESTORATION - Measures taken following completion of land disturbance activities that will stabilize the land surface and minimize possible erosion or sedimentation.

SOILS, ALLUVIAL (FLOOD PLAIN) - Areas subject to periodic flooding as listed in the Soil Survey of Chester and Delaware Counties, Pennsylvania, U.S. Department of Agriculture, Soil Conservation Service, May 1963.

SOILS, PRIME AGRICULTURAL - Soils of US Soil Conservation Service agricultural capability units I, II, and III.

SOLID WASTE - All refuse including garbage and trash, and all solid material which is putrescible and originating from the preparation, cooking and consumption of food and market produce.

STEEP SLOPES - Those areas of land where the grade is 25% or greater.

STORAGE - The keeping of new or used products, merchandise, materials, equipment or vehicles for a continuous period greater than eight hours. Excluded from this definition are the following:

- A. Equipment, vehicles and materials that are used in connection with a construction project during the period of construction.
- B. The unloading or loading of vehicles which are parked against a building so that all activity occurs within the building.

STORAGE, OUTDOOR - The keeping of goods or materials for present or future use in an area unprotected from the elements.

STORMWATER - Any precipitation, but usually rainfall, which is sufficient to flow on any natural or impervious surface creating erosion and sedimentation; frequently termed "runoff".

STORMWATER MANAGEMENT - The management and/or control of stormwater, erosion and sedimentation through the implementation of controls as required by either the Township Subdivision/Land Development Ordinance or Stormwater Management Checklist.

STREET - A public (dedicated) or private (undedicated) right-of-way intended for use as a means of vehicular and pedestrian circulation to provide access to more than one lot. The word "street" includes thoroughfare, avenue, boulevard, court, drive, expressway, highway, lane, alley, road, or similar terms. Streets are classified in the Newlin Township Comprehensive Plan as:

- A. **Local Street** - Those streets used primarily to provide access to abutting properties.

- B. Minor Collector Street** - Those streets which, in addition to giving limited access to abutting properties, intercept local or collector streets, carry considerable volumes of traffic to community facilities and to major traffic arteries.
- C. Major Collector Street** - Those streets serving large volumes of comparatively high-speed and long distance traffic and includes facilities classified as main and secondary highways by the Pennsylvania Department of Transportation.
- D. Lane** - A street serving a single development.

STREET, CENTERLINE - A line which is an equal distance from both street lines unless officially designated otherwise.

STREET LINE - The legal right-of-way line of a street dividing a lot from the boundary of a public or officially plotted street.

STREET, PRIVATE - A lane not deeded or dedicated to the Township.

STREET, PUBLIC - A public thoroughfare that has been dedicated, deeded and accepted by the Township and which affords the principal means of access to abutting property.

STREET, SINGLE ACCESS - A street which has access to an existing public road and circulation system only at one point. A single access street includes cul-de-sacs, loop roads, and dead end streets.

STRUCTURAL ALTERATION - Any change in, or addition to, the supporting or structural members of a building or other structure, such as the bearing walls, partitions, columns, beams or girders, or any change which could convert an existing building or other structure into a different structure, or adapt it to a different use, or which, in the case of a nonconforming building or other structure, would prolong the life of such building or other structure.

STRUCTURAL UNIT - One or more buildings enclosed by continuous exterior walls and a continuous roof.

STRUCTURE - Anything constructed or erected on or attached to the ground including, but not limited to buildings, sheds, manufactured homes, and other similar items.

STRUCTURE, TEMPORARY - A structure without foundation or footings which is removed within a designated time period, or after the activity or use for which the temporary structure was erected, has ceased.

SUBDIVISION - The division or redivision 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 devisees, transfer of ownership or building or lot development: Provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street, easement of access or residential dwellings shall be exempted.

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE - The Subdivision and Land Development Ordinance of Newlin Township, as adopted and amended from time to time.

SUBSTANTIAL DAMAGE - Damage from any cause sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50% or more of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT - Any repair, reconstruction, rehabilitation, addition, or other improvement of a structure to an extent or amount equaling 50% or more of the market value of the structure before the start of construction of the improvement. "Substantial Improvement" is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. This term includes structures that have incurred "substantial damage" regardless of the actual repair work performed. The term does not, however, include either of the following:

- A. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or
- B. Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure."

SURFACE RUNOFF – Water from precipitation that passes over the surface of the ground.

SWIMMING POOL - An enclosure, designed to be filled with water, permanently constructed or portable, with sides having a depth of more than 18 inches below the level of the immediate surrounding grade, or an above surface pool having a depth of more than 30 inches, designed, used, and maintained for swimming and recreation.

TELEPHONE EXCHANGE OFFICE - A building and its equipment used for the transmission and exchange of telephone or radio telephone messages between subscribers and other business of a telephone company.

TOPSOIL - Natural and friable loam containing sufficient nitrogen, phosphorus, and potassium to support plant growth and extending in depth to the extent of penetration of feeder roots of the prevailing native grasses.

TOWNSHIP - The Township of Newlin, Chester County, Pennsylvania.

TRACT AREA, ADJUSTED –The total area within a lot, exclusive of roads and rights-of-way, steep slopes, floodplains and wetlands, water courses, rock outcrops, and as identified in Table 3 of the zoning ordinance.

TRAIL - A right-of-way containing a marked or beaten path, either paved or unpaved, for pedestrians, equestrian or bicycle use.

TRAILER - A vehicle that is not self propelled, which is permitted on the highways when properly licensed.

TRANSFER STATION - A facility where municipal solid waste is delivered for the purpose of consolidating the material into larger vehicles for transport to a final disposal site or processing facility.

TRANSITIONAL HOUSING - Living arrangements for up to five unrelated individuals that do not meet the definition of "family" or "group home." Transitional housing may include a licensed community-based facility which provides lodging, habilitation services, or meals to clients where supervision is provided seven days a week, 24 hours a day, or is staffed continuously by the provider whenever the structure is occupied.

TREE DRIPLINE - A line on the ground representing the horizontal outer edges of the branches of a tree.

TREE HARVESTING OPERATION - The uprooting or removal of more than four trees per acre from any lot for the purpose of allowing or encouraging the natural regeneration or preservation of a tree stand on a lot which has a gross area prior to any subdivision or land development of more than three acres and which is undertaken in compliance with an approved woodland management plan.

TREE PROTECTION ZONE - An area that is radial to the trunk of a tree in which no construction activity shall occur. For the purposes of this Ordinance, the tree protection zone shall be 15 feet from the trunk of any tree to be retained, or the distance from the trunk to the dripline, whichever is greater. Where there is a group of trees or woodlands, the tree protection zone shall be the aggregate of the protection zones for individual trees.

TURF GRASS - Cultivated lawn grasses capable of being mowed to form a dense matting of roots and stems, other than the native, wild grasses or weeds.

TRACT AREA (ADJUSTED) - Land within a lot or parcel exclusive of constrained areas, as defined in this Ordinance.

TRACT AREA (GROSS) - The total amount of land within a lot or parcel.

UNIFIED RESIDENTIAL DEVELOPMENT - An area of minimum contiguous size to be planned, developed, operated, and maintained as a single entity and containing one or more residential clusters and areas of permanently maintained open space.

USES (Also LAND USES)- Any purpose for which a building or other structure or tract of land may be designed, arranged, intended, maintained or occupied, or any activity, occupation, business, or operation carried on in a building or other structure on a tract of land.

USE, ACCESSORY - A use of land or structure on the same lot with it, and of a nature customarily incidental and subordinate to the principal land use or structure.

USE, BY-RIGHT - A use which is permitted in a zoning district without the need for a special exception, variance, or conditional use permit.

USE, CONDITIONAL - A use which is generally not appropriate to a particular zoning district as a whole, but which may be suitable in certain places within the district only when specific conditions and factors, prescribed for such cases within this Ordinance, are present. Conditional uses are allowed or denied by the Board of Supervisors after a public hearing and review and comments from the Planning Commission.

USE, SPECIAL EXCEPTION - A use which is not permitted as a right, but which, when deemed suitable, with or without the imposition of conditions or restrictions under applicable standards, may be allowed by the Zoning Hearing Board after public hearing.

VARIANCE - A modification of the regulations of this Ordinance granted by the Zoning Hearing Board on grounds of physical conditions or unnecessary hardship, not self-imposed, pursuant to the provisions of this Ordinance and Act 247.

WALKWAY, PUBLIC - Any place designed or maintained for public pedestrian use, without regard to ownership.

WATERCOURSE - A stream, creek, run, or other body of running water with a defined bed and banks in which water flows in a definite direction or course, either continuously or intermittently, as depicted on the most current edition of the applicable U.S.G.S. Quadrangle Map.

WATERS OF THE COMMONWEALTH - Any and all rivers, streams, creeks, lakes, rivulets, dammed water, ponds, springs, and all other bodies of surface and underground water, or parts

thereof, whether natural or artificial, within or on the boundaries of the Commonwealth of Pennsylvania.

WATER SUPPLY - "Water supply" shall include the following:

- A. Individual** - A supply of water to a single use or dwelling from a private well or spring located on the lot in which the use is located and which does not fall under the definition of "community" water supply.
- B. Community** - A system for supplying water from a common source or sources to more than one dwelling and other buildings within a development. The water supply source may be located on-site or off-site and may be publicly or privately owned.
- C. Public** - A system for supplying water in sufficient quantities to more than one dwelling or other buildings of a development, which is administered by a municipal authority or by a municipality or public utility as defined and regulated by the Pennsylvania Public Utility Commission.

WATER TABLE - The upper surface of a zone of saturation, except where that surface is formed by an impermeable body.

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, including swamps, marshes, bogs, and similar areas. Any area meeting the official wetland definition of the U.S. Army Corps of Engineers or the Pennsylvania Department of Environmental Protection, as amended, shall be considered a wetland for the purposes of this Ordinance. In the event the definition of a wetland accepted by the U.S. Army Corps of Engineers conflicts with the definition of a wetland accepted by the Pennsylvania Department of Environmental Protection, the more restrictive definition shall apply.

WOODLAND - A plant community predominantly of healthy trees and other woody vegetation, well stocked and growing more or less closely together. Specifically, woodlands consist of one-quarter acre or more of continuous wooded land where the largest trees measure at least six inches diameter. The woodland shall be measured from the dripline of the outer trees. Woodlands are also a grove of trees forming one canopy where 10 or more trees measure at least six inches diameter.

WOODLAND MANAGEMENT PLAN - A description, by means of text and maps, of proposed actions involving the removal of trees from a tract of land, prepared by a qualified individual with demonstrable expertise in forest management, and documenting measures to be taken to: protect water quality; minimize impacts from skid trails and logging roads, land areas, and the tree removal process; and ensure site restoration.

WIRELESS COMMUNICATION FACILITY - The Commercial Communications Antenna, Commercial Communications Antenna Support Structure, Wireless Communications Equipment Building, parking areas, and other facilities, structures and equipment involved in receiving or transmitting wireless communications or radio signals on a site.

WIRELESS COMMUNICATIONS EQUIPMENT BUILDING - A structure or cabinet that contains equipment involved in receiving or sending wireless communications.

YARD - An open area around the periphery of a lot; a yard extends inward from and parallel to lot lines and street lines, and is measured as a distance perpendicular to lot and street lines.

YARD, FRONT - The required open space between the front set back line and the street right-of-way line projected along the full width of the lot. In the case of a corner lot, the yards extending along all streets shall be deemed to be front yards and the remaining yards shall be rear yards.

YARD, REAR - The required open space extending the full width of the lot along the rear lot line at a specified depth from such rear lot line.

YARD, SIDE - The required open space extending the full depth of the lot along a side lot line extending a specified depth from such side lot line.

YIELD CALCULATION - The conceptual calculation for a particular site that results after all protected areas are deducted from the gross site area.

ARTICLE 3 - INFORMATION TO BE SHOWN ON SUBDIVISION AND LAND DEVELOPMENT PLANS

SECTION 300 PURPOSES AND APPLICABILITY

The purposes of this Article are to list the information that is required as part of an application for subdivision and land development plan approval. The provisions of this Article shall apply to all subdivision and land development applications in Newlin Township. (Proposals for development shall follow the procedures specified in Section 401 B).

SECTION 301 SKETCH PLAN

- A. Optional Sketch Plan.** An optional Sketch Plan may be submitted by the applicant as a basis for informal discussions with the Board, the Planning Commission, and the County Planning Commission regarding the design of a proposed subdivision or land development. Sketch Plan submission is strongly encouraged as a way of helping applicants and officials develop a better understanding of the property and to help establish an overall design approach that respects its special or noteworthy features, while providing for the density and land uses permitted under the zoning ordinance.
- B. Information on Sketch Plan.** To provide a full understanding of the site's potential and to facilitate the most effective exchange with the Planning Commission, the Sketch Plan should include the information listed below. Many of these items can be taken from the Existing Resources and Site Analysis Plan, which shall be prepared and submitted no later than the date of the Site Inspection, which precedes the Preliminary plan (see Section 302 D). The Sketch Plan may be prepared as an overlay sheet on the Existing Resources and Site Analysis Plan.
1. Name and address of owner/applicant;
 2. Name and address of the professional engineer, surveyor, planner, architect, landscape architect, or site designer responsible for preparing the plan;
 3. Graphic scale (generally not greater than 1" = 200'; however, dimensions on the plan need not be exact at this stage) and north arrow;
 4. Approximate tract boundaries, sufficient to locate the tract on a map of the Township, and tax parcel numbers;
 5. Location map;
 6. Streets on and adjacent to the tract (both existing and proposed);
 7. 100-year floodplain limits, and approximate location of wetlands;
 8. Topographic, physical, and cultural features including fields, pastures, meadows, wooded areas, trees with a diameter of fifteen inches or more, hedgerows and other significant vegetation, slopes over 25%, rock outcrops, soil types, wetlands, ponds, ditches, drains, dumps, storage tanks, streams within 200 feet of the tract, existing rights-of-way and easements, and cultural features such as all structures, foundations, walls, wells, trails, and abandoned roads;

9. Schematic layout indicating a general concept for land conservation and development; and
10. Proposed general layout, including streets, building locations, parking lots, and open spaces.

SECTION 302 DOCUMENTS REQUIRED FOR THE PRELIMINARY PLAN

A. Preliminary Plan Elements. The submission requirements for a Preliminary plan shall consist of the following four elements, and shall be prepared in accordance with the drafting standards described herein:

1. Site Context Map (Section 302 C)
2. Existing Resources and Site Analysis Plan (Section 302 D)
3. Preliminary Resource Impact and Conservation Plan (Section 302 F)
4. Preliminary Improvements Plan (Section 302 G)

B. Drafting Standards. Plans shall be drawn to the following standards:

1. The plan shall be drawn to a scale of either 1"=100' or 1"=200', whichever would fit best on sheets not less than 17 by 22 inches and not larger than 34 by 44 inches, unless otherwise approved by the Township Planning Commission.
2. Each sheet shall be numbered and the plan shall provide a legend indicating existing and proposed features.

C. Site Context Map. A map showing the location of the proposed subdivision within its neighborhood context shall be submitted. For sites under 100 acres in area, such maps shall be at a scale not less than 1"= 500', and shall show the relationship of the site to natural and man-made features existing within 1000 feet. For sites of 100 acres or more, the scale shall be 1" = 1000', and shall show the above relationships within 2000 feet of the site. The features that shall be shown on Site Context Maps include topography (from USGS maps), stream valleys, wetland complexes (from maps published by the US Fish & Wildlife Service or the USDA Natural Resources Conservation Service), woodlands over one-half acre in area (from aerial photographs), ridge lines, public roads and trails, utility easements and rights of way, public land, and land protected under conservation easements.

D. Existing Resources and Site Analysis Plan. For all subdivisions (except those in which all proposed lots are to be ten or more acres in area), an Existing Resources and Site Analysis Plan shall be prepared to provide the applicant and the Township with a comprehensive analysis of existing conditions, both on the site and within 500 feet. Conditions beyond the site's boundaries may be described on the basis of existing published data and from aerial photographs. The following information shall be included in this Plan:

1. Topography, the contour lines of which shall generally be at two-foot intervals, determined by photogrammetry (although 10-foot intervals are permissible beyond the parcel boundaries, interpolated from published United States Geological Survey maps). The determination of appropriate contour intervals shall be made by the Planning Commission, which may specify greater or lesser intervals on

exceptionally steep or flat sites. Slopes between 15% and 25% and exceeding 25% shall be indicated by shading. Topography for subdivisions shall be prepared by a professional land surveyor or professional engineer from an actual field survey of the site or from stereoscopic aerial photography and shall be coordinated with official USGS benchmarks.

- a) Applications that are subject to the provisions of the Steep Slope Conservation Overlay District in Section 529 of the Newlin Township Zoning Ordinance may identify such steep slope areas in approximate terms and without meeting the provisions of Section 302D.1. of this Ordinance, provided that no disturbance shall occur within the steep slope areas as defined in the Zoning Ordinance, as well as a 35-foot wide buffer surrounding such areas.
 - b) Notwithstanding the provisions of Section 302D.1.(a) above, the Township Engineer may require applicants to comply with the provisions of Section 302D.1. where the Township Engineer determines that such information is necessary due to unusual geological, topographic or other physical circumstances.
2. The location and delineation of ponds, streams, ditches, drains, and natural drainage swales, as well as the 100-year floodplains and wetlands, as defined in the Township Zoning Ordinance. Additional areas of wetlands on the proposed development parcel shall also be indicated, as evident from testing, visual inspection, or from the presence of wetland vegetation.
 3. Vegetative cover conditions on the property according to general cover type including cultivated land, permanent grass land, meadow, pasture, old field, hedgerow, woodland and wetland, trees with a diameter in excess of fifteen inches, the actual canopy line of existing trees and woodlands. Vegetative types shall be described by plant community, relative age and condition.
 4. Soil series, types and phases, as mapped by the United States Department of Agriculture - Natural Resources Conservation Service in the published soil survey for Chester County, and accompanying data published for each soil relating to its suitability for construction and for septic suitability.
 5. Ridge lines, high points, elevations and watershed boundaries.
 6. A viewshed analysis showing the location and extent of views into the property from public roads and from public parks.
 7. Geologic formations on the site, including rock outcroppings, cliffs, sinkholes, and fault lines.
 8. The location and dimensions of all manmade improvements, including but not limited to streets, driveways, farm roads, woodland roads, buildings, foundations, walls, wells, drainage fields, dumps, and utilities.
 9. Locations of all historically significant sites or structures on the tract, including but not limited to cellar holes, stone walls, earthworks, and graves, and historic sites listed on the Township Open Space, Recreation and Environmental Rescues Plan.
 10. Existing trails that have been in public use (pedestrian, equestrian, bicycle, etc.).

11. All easements and other encumbrances of property that are or have been filed of record with the Recorder of Deeds of Chester County shall be shown on the plan.
- E. Four-Step Design Process for Subdivisions.** All Preliminary Plans shall include documentation of a four-step design process in determining the layout of proposed Greenway lands, house sites, streets and lot lines, as described in Section 602.
- F. Preliminary Improvements Plan.** This plan shall generally show areas of improvements, include the following items:
1. Historic resources, trails and significant natural features, including but not limited to topography, areas of steep slope, wetlands, 100-year floodplains, swales, rock outcroppings, vegetation, existing utilities, and other site features, as indicated on the Existing Resources and Site Analysis Plan.
 2. Existing and approximate proposed lot lines, existing easements and rights-of-way.
 3. Approximate location, alignment, width and tentative names of all proposed streets and street rights-of-way, including all street extensions or spurs that are necessary to provide adequate street connections and facilities to adjoining development or undeveloped areas; preliminarily-engineered profiles for proposed streets.
 4. Approximate location of proposed swales, drainage easements, and stormwater management facilities.
 5. Where community wastewater treatment systems are to be provided, the conceptual layout of proposed sewage systems, including but not limited to the tentative locations of conveyance lines and sewage treatment plants, showing the type and degree of treatment and the size and capacity of treatment facilities.
 6. Where central water service is to be provided, the conceptual layout of proposed water distribution facilities including water mains, fire hydrants, storage tanks and, where appropriate, wells or other water sources.
 7. Location of all percolation tests as may be required under this ordinance, including all failed test sites or pits as well as those that were approved and including an approved alternate site for each lot requiring an in-ground septic system. All approved sites shall be clearly distinguished from unapproved sites.
 8. Limit-of-disturbance line (must be exact in relation to the retention of existing trees to be preserved).
 9. Approximate location and dimensions of proposed playgrounds, public buildings, public areas and parcels to be dedicated or reserved for public use.
 10. If land to be subdivided lies partly in or abuts another municipality, the applicant shall submit information concerning the location and conceptual design of streets, layout and size of lots and provisions of public improvements on land subject to the applicant's control within the adjoining municipalities. The design of public improvements shall provide for a smooth transition where specifications vary between municipalities. Evidence of approval of this information by appropriate officials of the adjoining municipalities also shall be submitted.
 11. Where the applicant proposes to install the improvements in phases, he shall submit with the Preliminary Plan, pursuant to the Pennsylvania Municipalities Planning Code Section 508, a delineation of the proposed sections and a schedule

of deadlines within which applications for final approval of each section are intended to be filed.

12. Typical street cross-section drawing(s) for all proposed streets shall be shown, including details relating to thickness, crowning and construction materials.
13. Utilities and Easements.
 - a. Exact locations of existing utility easements and approximate locations of proposed utility easements.
 - b. Approximate layout of all proposed sanitary and storm sewers and location of all inlets and culverts, and any proposed connections with existing facilities. (These data may be on a separate plan.)
 - c. The tentative location of proposed on-site sewage and water facilities.
14. Approximate location of proposed shade trees, plus locations of existing vegetation to be retained.
15. Signature blocks for the Planning Commission, Board of Supervisors, and the County Planning Commission shall be provided on the right-hand side of the Preliminary Improvements Plan.

G. Preliminary Studies and Reports. When required by the Board of Supervisors, typically in cases involving large subdivisions of more than 25 lots or smaller development plans where the Township believes that potential impacts could be significant, the Preliminary plan submission shall include one or more of the following studies to assist in determination of the impact of the application upon municipal services and facilities:

1. Sewer Feasibility Report, which evaluates the ability of the tract to accommodate on-site sewage disposal facilities (if so proposed) without causing adverse effects on nearby properties.
2. Groundwater Protection and Replenishment Study, which evaluates the ability of the tract to accommodate on-site water supply facilities (if so proposed) without causing adverse effects on nearby properties.
3. Erosion and Sedimentation Control Plan, which evaluates measures to limit and control erosion and sedimentation.
4. Traffic Impact Analysis, as specified in Section 303 L of this Article.
5. Community Association Document:
 - a. A Community Association Document, (Homeowner's Association or a Condominium Association Document), shall be provided for all subdivision and land development applications which propose lands or facilities to be used or owned in common by all the residents of that subdivision or land development and not deeded to the Township.
 - b. The elements of the Community Association Document shall include, but shall not necessarily be limited to the following:
 - i. A description and the precise location of all lands and facilities to be owned by the Community Association.

- ii. Statements setting forth the powers, duties, and responsibilities of the Community Association, including the services to be provided.
- iii. A Declaration of Covenants, Conditions, and Restrictions, giving perpetual easement to the lands and facilities owned by the Community Association. The Declaration shall be a legal document which also provides for automatic Association membership for all owners in the subdivision or land development and shall describe the mechanism by which owners participate in the Association, including voting, elections, and meetings. Furthermore, it shall give power to the Association to own and maintain the common property and to make and enforce rules.
- iv. Statements prescribing the process by which Community Association decisions are made and establishing the authority to act.
- v. Statements requiring each owner within the subdivision or land development to become a member of the Community Association.
- vi. Statements setting cross covenants or contractual terms binding each owner to all other owners for mutual benefit and enforcement.
- vii. Requirements for all owners to provide a pro rata share of the cost of the operations of the Community Association.
- viii. A process of collection and enforcement to obtain funds from owners who fail to comply.
- ix. A process for transition of control of the Community Association from the developer to the unit owners.
- x. Statements describing how the lands and facilities of the Community Association will be insured, including limit of liability.
- xi. Provisions for the dissolution of the Community Association, in the event the Association should become not viable.

H. Preliminary Greenway Ownership and Management Plan. Using the Preliminary Plan as a base map, the boundaries, acreage and proposed ownership of all proposed Greenway areas shall be shown.

I. Preliminary Engineering Certification. Prior to approval of the Preliminary Plan, the applicant shall submit to the Planning Commission a "Preliminary Engineering Certification" that the approximate layout of proposed streets, house-tops, and Greenway lands complies with the Township's zoning and subdivision ordinances, particularly sections governing the design of subdivision streets and stormwater management facilities. This certification requirement shall to provide the Planning Commission with assurance that the proposed plan shall be completed according to the Township's regulations. The certification shall also note any waivers needed to implement the plan as drawn.

SECTION 303 FINAL PLAN

Final plans shall conform to the Preliminary Plan, including any conditions specified by the Township. A Final Plan shall consist of and be prepared in accordance with the following:

- A. Drafting Standards.** All drafting standards as required in Section 302 B shall apply. Final plans shall be prepared at the scale of 1"=100'. However, Final plans for low density "Option 4" subdivisions shall generally not be required to be prepared at scales finer than 1"=200', unless special conditions exist on the site.
- B. Information to be Shown.** The Final Plan shall show all items as required for a Preliminary Plan, and:
1. Courses and Distances. 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 one part in 10,000.
 2. Names of Owners. Names of abutting owners; names, locations, widths, and other dimensions of streets, including center line courses, distances, and curve data; descriptive data of ultimate right-of-way lines not parallel with or concentric with a center line; and location tie-ins by courses and distances to the nearest intersections of all existing, planned and approved streets, alleys, easements, recreational areas and other public improvements, within the land to be subdivided or developed.
 3. Conformance with Regulations. Evidence that the plans are in conformity with zoning, building, sanitation and other applicable Newlin Township ordinances and regulations. In any instance where such plans do not conform, evidence shall be presented that an exception or variance has been officially authorized.
 4. Monument Locations. Location, material, and size of all monuments with reference to them.
 5. Setback Lines. Building setback lines with distances from the ultimate right-of-way lines.
 6. Deed Restrictions. Restrictions in the deed affecting the subdivision of the property, or development of the property.
 7. Tree Locations. Location, size and species of all existing individual trees, tree clusters, noteworthy trees, and trees to be planted as per Article 5 of this Ordinance, unless provided on a separate landscaping plan. Noteworthy trees that are proposed to be removed shall be so designated on the plan.
 8. Improvement Construction Plan.
 - a. Drafting Requirements. The same requirements shall apply for an improvement construction plan as for a preliminary plan, except that the horizontal scale of the plan and profile shall be 40 feet or 50 feet to the inch, and the vertical scale of the profile shall be 4, 5, or 10 feet to the inch, whichever is most convenient.
 - b. Information to be Shown. The plan shall contain sufficient information to provide working plans for the construction of the proposed streets, or any portion thereof, including all appurtenances, sewers, and utilities, shown

on the approved preliminary plan, from one existing or approved street to another, or in the case of a cul-de-sac, to its turnaround and shall include:

- i. Horizontal Plan. The horizontal plan shall show details of the horizontal layout as follows:
 - (a) Information shown on the preliminary plan pertaining to the street to be constructed.
 - (b) Limits of areas of construction or disturbance.
 - (c) Stations corresponding to those shown on the profile.
 - (d) Elevation of the curb at tangent points of horizontal curves at street or alley intersections and at points approximately 10 feet apart on the curved curb.
 - (e) Location and size of sanitary sewers and lateral connections with distances between manholes, of water, gas, electric and other utility pipes or conduits, and of storm drains, inlets, and manholes.
 - (f) Location, types and size of curbs, and widths of paving.
 - (g) Location and species of street shade trees to be planted and location and type of fire hydrants and streetlights.
 - ii. Profile. The profile shall be a vertical section of the streets and utilities with details of vertical alignment as follows:
 - (a) Profiles and elevations of the existing and proposed grades along the centerlines of proposed streets.
 - (b) Profiles of sanitary sewers including present and finished ground surfaces showing manhole locations with stations beginning at the lowest manhole.
 - (c) Profiles of storm drains showing manhole and inlet locations.
 - iii. Cross-Section. The cross section shall comply with Newlin Township requirements and specifications as minimum requirements. It shall show a typical cross section across the street or alley with details of grading and constructions as follows:
 - (a) Ultimate right-of-way width and the location and width of paving within the ultimate right-of-way.
 - (b) Type, depth and crown of paving.
 - (c) Type and size of curb.
 - (d) When sidewalks are required, grading of sidewalk area shall be carried to the full width of the ultimate right-of-way and slopes of cut or fill extended beyond the ultimate right-of-way.
 - (e) Location, width, type and depth of sidewalks, when required.
 - (f) Typical location, size and depths of sewers and utilities.
- c. Final Stormwater Management Plan. The Stormwater Management Plan shall include the following:
- i. All stormwater management requirements as set forth for the Preliminary Plan;
 - ii. Plans and profiles of erosion and sedimentation controls, both temporary and permanent, including those contained in the

required Soil Erosion, Sediment Control and Grading Plan according to the requirements of Section 920 of this Ordinance.

- iii. Final location and layout of all existing and proposed impervious areas, including but not limited to:
 - (a) streets;
 - (b) buildings (including actual building dimensions);
 - (c) sidewalks;
 - (d) parking areas; and
 - (e) driveway/cartway intersection.
- iv. Detailed rainfall run-off calculations;
- v. Final ownership and maintenance provisions for all stormwater related facilities and a schedule of maintenance and inspection responsibilities; and,
- vi. Where the maintenance of stormwater management facilities and systems is the responsibility of an individual lot owner or of a homeowners' association, the terms of the maintenance agreement and a description of the facilities and systems on the lot shall be set forth in perpetual covenants or deed restrictions that are binding on the landowner's successors in interest and shall be noted on the Final Plan.

- 9. Sewage Disposal Authorization. The Final Plan shall be accompanied with planning modules, on-site sewage disposal system permits, or commitments from public utilities regarding the allocation of sewage treatment capacity, as necessary.
- 10. As-Built Plan. An As-Built Plan shall be submitted and prepared to the same requirements as the Improvement Construction Plan. The As-Built Plan may be an Improvement Construction Plan, which is annotated to reflect the actual dimensions and locations of the improvements, and should include the locations of survey monuments.

C. Lot Deeds. All lots shall be deeded to the edge of public ultimate rights-of-way so that a single deed may be drawn for the dedication of streets to the Township by the applicant.

D. Submission Information Requirements for Option 4 Subdivisions (Country Properties and Farmettes), Lot Add-On Plans, Incremental (Periodic) Subdivisions. Subdivisions that are submitted according to the provisions of Section 304 E "Option 4 Subdivisions (Country Properties and Farmettes)," Section 312 "Lot Add-On Plans," and Section 313 "Incremental (Periodic) Subdivisions" of the Newlin Township Zoning Ordinance, may be submitted as Final Plans according to the provisions of Section 303 of this Ordinance and shall not be required to comply with Section 302 A-J of this Ordinance.

E. When Approved, The Final Plan Shall Show:

- 1. The signature and seal of the Licensed Professional Engineer, Landscape Architect or Surveyor, certifying the survey, that the monuments shown thereon exist as located, and that all dimensional and geodetic data details are correct.
- 2. The signature of the applicant certifying his or her proffer of the plan.

3. The signatures of a majority of the Board of Supervisors certifying approval of the plan on the date shown.

F. Final Resource Impact and Conservation Plan. A Final Resource Impact and Conservation Plan shall be prepared, as follows:

1. This plan shall comply with (and be based on) all of the requirements for the Preliminary Resource Impact and Conservation Plan, as set forth in Section 302 F, to reflect all proposed improvements described in the other Final Plan documents as required under Section 303 herein.
2. In addition to the requirements of Section 302 F, the applicant shall submit an accompanying Resource Assessment Report divided into the following sections: (1) description of existing resources (as documented in Section 302 D, (2) impacts of the proposed subdivision on existing resources, correlated to the areas depicted in the Final Resource Impact and Conservation Plan, and (3) measures taken to minimize and control such impacts both during and following the period of site disturbance and construction. The qualifications and experience of the author of this report shall be provided.

G. Final Improvements Construction Plan. Where public or private improvements other than monuments and street traffic signs are to be required for any subdivision or land development, an Improvements Construction Plan and specifications, prepared by a registered professional engineer, shall be filed, setting forth the exact location of the work and all engineering data necessary for completion of the work. The improvements construction plan and specifications shall be subject to approval of the Township Engineer and Board of Supervisors as a prerequisite to approval of the Final Plan. The Improvements Construction Plan shall conform to the following standards and contain the following information:

1. All information required in Sections 301 B and 302 G relating to existing features and resources on the tract.
2. Detailed profile sheets for all proposed streets within the tract.
3. If required, a plan, details and specifications of street lights to be installed, together with the agreement for maintenance for approval by the Township.
4. Detailed design of any stormwater management facilities that may be required.
5. Where off-site or community sewer service is to be provided, the final detailed design of all facilities, including, but not limited to, sewer mains, manholes, pumping stations, and sewage treatment facilities.
6. Where off-site or central water service or water supply is to be provided, the final detailed design, including location and size of water service facilities within the subdivision, shall be shown, including wells, storage tanks, pumps, mains, valves, and hydrants.
7. Detailed designs for all other improvements as required by this ordinance.

H. Final Stormwater Management and Erosion & Sedimentation Control Plan. A final stormwater management and erosion and sedimentation control plan shall be submitted in accordance with Section 921 of this Ordinance.

- I. Final Greenway Ownership and Management Plan.** Using the Final Plan as a base map, the boundaries, acreage, and proposed ownership of all proposed Greenway areas shall be shown. A narrative report shall also be prepared indicating how and by whom such Greenway areas will be managed, and demonstrating compliance with the requirements of Article 3 of the Zoning Ordinance.
- J. Final Landscape Plan.** A final landscaping plan shall be provided as required in this Ordinance in accordance with Section 500 of this Ordinance.
- K. Additional Approvals, Certificates and Documents.** The following items shall be provided:
1. All offers of dedication of realty or structures and all declarations, easements and covenants governing the reservation and maintenance of undedicated open space, for the Final plan shall be in such form as shall be satisfactory to the Township.
 2. A copy of such deed restrictions, easements, covenants and declarations that are to be imposed upon the property to comply with the Final plan as approved by the Township. All such documents shall be in such form as is satisfactory to the Township.
- L. Environmental Impact Assessment.** An Environmental Impact Assessment (EIA) shall be provided, according to the following requirements:
1. Purpose - In order to more effectively evaluate subdivision and/or land development proposals, the applicant shall disclose the environmental consequences of such proposals through the submission of an Environmental Impact Assessment (EIA). The EIA is intended to provide the Township with information adequate to evaluate potential adverse impacts of the proposal and the proposed mitigation of adverse impacts. The EIA will help determine whether the overall objectives of the Zoning Ordinance, the Newlin Township Comprehensive Plan and the Newlin Open Space, Recreation and Environmental Resources Plans are met. The EIA is also intended to address the environmental protection objectives set forth in the Pennsylvania Municipalities Planning Code (MPC) and Article I, Section 27 of the Constitution of the Commonwealth of Pennsylvania.
 2. Applicability - An EIA shall be prepared for:
 - a. Any subdivision of more than 10 lots;
 - b. Any land development that would result in more than 10,000 square feet of non-residential floor space or more than five residential units;
 - c. Any subdivision or land development proposed on a parcel that consists of less than 60% Adjusted Tract Acreage, as determined by Table 4 of the Zoning Ordinance, or
 - d. Any subdivision or land development that, in the opinion of the Township Engineer and Board of Supervisors, may have a significant adverse impact on the project site or immediately surrounding area.
 3. Contents and Scope of the EIA - The EIA shall contain text, tables, maps, and analyses that document the existing resources of the subject site and the predicted impacts associated with the proposed subdivision and/or land development. The EIA shall be based on the Site Analysis Plan as required in Section 302 D. It is recommended that information contained in the Newlin Township Comprehensive

Plan and the Open Space, Recreation, and Environmental Resources Plan be utilized. Additionally, because the information presented in those Plans was developed for Township-wide rather than site-specific purposes, the applicant is encouraged to supplement or update that information as appropriate with any published reports, studies, or natural resource data as may be available, or with original, site-specific investigations. Prior to preparing the EIA, the applicant is strongly encouraged to meet informally with the Planning Commission to discuss the appropriate level of detail for the EIA for a particular project. The contents of the EIA shall also include the information specified below.

- a. Visual Resources and Aesthetics. The visual resources and scenic roads on or adjacent to the property shall be presented on a map and described. Such characteristics shall include areas that have a particular amenity value and areas that offer interest in viewing the property.
- b. Land Use. The land use conditions and characteristics of the site and adjacent parcels shall be presented on a map and described. Categories of land use shall include: paved or other impervious surfaces, lawns and other landscaped areas, croplands, pastures, woodlands, old fields, barren areas, easements, rights-of-way, and trails. The land use map may be combined with the vegetation map if appropriate. The generalized land uses on areas immediately adjacent to the subject property also shall be identified.
- c. Description of Proposal and Assessment of Impacts - The nature and purpose of the proposed subdivision or land development shall be described. An impact assessment of all potential adverse effects of the proposal on on-site and off-site (e.g., downstream) natural resources shall be prepared. The proposal shall be described in terms of the scale and/or magnitude of effects that it will have on each of the natural resources and features identified above. At a minimum, the EIA shall identify the following:
 - i. The location and acreage of each natural resource and feature that will be disturbed directly by the proposal, and a description of the nature of the disturbance.
 - ii. The location and acreage of each natural resource to be disturbed indirectly by the proposal, and a description of the nature of the disturbance.
 - iii. The nature of any effects on each resource and feature as to whether it is beneficial, adverse, or neutral.
 - iv. The magnitude, degree, or significance of any adverse effects identified, relative both to the resources of the site and to the resources of the Township.
 - v. The nature of each adverse effect as to whether it is temporary or permanent, short term or long term.
 - vi. The extent to which the subject proposal, in conjunction with other existing or proposed projects, may result in cumulative adverse effects on the natural resources and features of the property or in the Township.

- d. Alternatives - Alternatives that would preclude, reduce or lessen potential adverse impacts or produce beneficial effects, shall be discussed. Alternatives to the proposed subdivision and/or land development that were considered but rejected shall be discussed, and the reasons for their being rejected shall be given. The discussion shall address alternatives such as: revised location; redesign, layout, or siting of buildings, roads, and other structures; alternate methods for sewage disposal, water supply, and stormwater management; reduction in the number or size of proposed lots or structures.
- e. Measures To Mitigate Adverse Effects - For adverse effects which cannot be avoided by alternative design or method, the types of remedial, protective, or mitigation measures that will be implemented shall be identified and discussed. Such mitigation measures include those required through existing procedures, regulations, and standards, and those unique to a specific proposal.
 - i. Mitigation measures that pertain to existing procedures, regulations, and standards are those related to current requirements of federal, state, county, and/or township agencies for remedial or protective action such as: sedimentation and erosion control, stormwater runoff control, water quality control, creation of compensatory wetlands, air quality control, and the like.
 - ii. Mitigation measures that may be unique to a specific subdivision and/or land development proposal include additional efforts to minimize adverse effects, such as: revegetation; screening; fencing; emission control; traffic control; noise control; reduction in number or size of lots, buildings, or other structures; land acquisitions or donations; and the like.
- f. List and Qualifications of Authors - The names, addresses, telephone numbers, and qualifications of persons directly responsible for the preparation of the EIA.

M. Transportation Impact Assessment. A Transportation Impact Assessment (TIA) shall be provided according to the following:

- 1. Applicability - A TIA shall be prepared for any subdivision or land development proposal that will result in the development generating 100 new peak hour vehicle trips, according to the most recent trip generation standards of the Institute of Transportation Engineers. In addition, a TIA may be required if the Township Engineer and Board of Supervisors find that current transportation conditions exist in the area, such as a high-accident location, inadequate intersection geometry, or a congested intersection, which directly affect the proposed development and which would be further exacerbated by the development in the absence of improvements.
- 2. Requirements. The TIA shall include the following elements and be prepared to the following requirements:
 - a. Preparation Requirements. All transportation analyses shall be prepared by or under the supervision of qualified transportation engineers with specific training and experience in the preparation of transportation analyses for proposed developments.

- b. Study Area. The TIA study area shall be determined by the characteristics of the surrounding area. The intersections to be studied shall be mutually agreed upon between the Township Engineer and the transportation engineer preparing the analysis. Generally, intersections to be included in the analysis shall be adjacent to the site or shall directly affect access to the site, and shall include such intersections within one-quarter mile of the site.
- c. Horizon Year. Traffic forecasts shall be prepared for the anticipated year ("horizon year") of the development's completion, under conditions of expected occupancy and buildout.
- d. Background Traffic. Background traffic volumes shall be established for roads and intersections within the TIA Study Area for the horizon year, based on current traffic counts and an annual growth factor to be agreed upon between the Township Engineer, the transportation engineer preparing the analysis, and the PennDOT District Traffic Engineer.
- e. Non-Site-Generated Traffic Estimates. Horizon year traffic estimates shall be made of all non site-generated traffic and traffic generated by all other developments within the study area, for which preliminary or final approvals have been issued. This traffic is incremental to the background growth in traffic.
- f. Trip Generation Calculation. The TIA shall identify the categories and quantities of land uses that are proposed in the development, together with their corresponding trip generation rates and the resulting number of trips that are to be generated. Trip generation rates shall be referenced from the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual, from a local analysis of actual conditions at a similar development, or from another source acceptable to the Township Engineer. All sources shall be cited in the analysis. Unusual or special trip rates generated by uncommon land uses shall be explained in the analysis.
- g. Consideration of Pass-By and Shared-Use Trips. Pass-by trips or shared trips (i.e., when vehicles which are already using the roadway are attracted to the site) shall be calculated and accounted for using ITE standards, or studies and interviews at similar land uses may be required to substantiate the anticipated effects, as acceptable to the Township Engineer.
- h. Determination of Influence Area. Prior to the distribution of site-generated trips for non-residential developments, an influence area shall be defined which contains not less than 80% of the trip ends that will be attracted to the development. The influence area can be determined by the use of usual and customary studies or documented material, and which are acceptable to the Township Engineer. The influence area may also be based on a reasonable maximum convenient travel time to the site, or by delineating area boundaries based on locations of competing developments.
- i. Estimates of Trip Distribution. Trip distribution may be estimated by an ITE-endorsed method acceptable to the Township Engineer. A multi-use development may require more than one distribution and coinciding

assignments for each phase of completion. Consideration shall also be given to whether inbound and outbound trips will have similar distributions.

- j. Trip Assignments. Assignments shall be made considering logical routings, available roadway capacities, left turns at critical intersections, and projected travel times. Multiple paths between origins and destinations may be necessary to reflect realistic estimates, rather than assigning the routes with the shortest travel times. Multiple pathways shall be assigned to projects with multiple access points or with internal roads. Pass-by trip assignment shall consider the re-routing of existing traffic.

- k. Capacity Analysis. A capacity analysis shall be performed at each of the major street and project site intersections within the analysis area. In addition, capacity analyses shall be completed for those roadway segments within the study area that are determined by the Township Engineer to be sensitive to site traffic. These may include such segments as internal site roadways, parking facility access points, and for vehicles queuing off- and on-site. Studies of other locations may be required by the Township Engineer.

The recommended level-of-service analyses procedures in the most recent edition of the Institute of Transportation Engineers Highway Capacity Manual shall be followed. For purposes of the analysis, the overall level-of-service ratings of A, B, C and D shall be considered acceptable for signalized intersections, and levels E and F considered unacceptable.

- l. Level of Service Calculations. The recommendations of the traffic study shall be oriented towards the provision of safe and efficient movement of traffic to, from, within, and past the proposed development, while minimizing the impact on non-site trips. Levels of service should not degrade below D if they are D or better prior to development and should not be allowed to degrade further if they are already at E or F prior to development.
- m. Safety. The traffic study shall include an analysis of existing accident data in the study area, an identification of potentially hazardous road or intersection configurations, and an explanation of the anticipated impact from the proposed development on these locations.
- n. Documentation Required. The TIA shall document the purpose, procedures, findings, conclusions, and recommendations of the study.

- i. Required Documentation. The following documentation shall be provided at a minimum:

- (a) Study purpose and objectives
- (b) Description of the site and the study area
- (c) Existing conditions in the study area
- (d) Recorded or approved nearby developments
- (e) Trip generation, distribution, and modal split
- (f) Horizon year trip volumes on roadways in the study area
- (g) Assessment of any change in roadway operating conditions resulting from the development traffic

- (h) Recommendations for site access and transportation improvements needed to maintain traffic flow to, from, within, and past the site at an acceptable and safe level of service.
- ii. Sequence of Analysis. The analysis shall be presented in a logical sequence. It shall follow a step-by-step process through the study's various stages and its conclusions and recommendations.
- iii. Time Frame for Improvements. The recommendations shall specify the period within which the improvements should be made, in relation to the various stages of the development's construction, and any monitoring of operating conditions and improvements that may be required.
- iv. Data Presentation. Data shall be presented in the form of tables, graphs, maps, and diagrams whenever possible for clarity and ease of understanding and review.
- v. Executive Summary. An executive summary of one or two pages shall be provided, which concisely reviews the basic purpose, conclusions, and recommendations.
- vi. Unusual Situations. Unusual or complicated situations may require the use of expanded studies or reviews that involve analyses that extend beyond the minimal requirements in this Section.

ARTICLE 4 - PLAN PROCESSING PROCEDURES PLAN PROCESSING PROCEDURES

SECTION 400 INTENT

This Article includes procedures for processing and reviewing applications for subdivision and land development.

SECTION 401 GENERAL

A. Referrals. All preliminary and final subdivision or land development plans shall be referred to and reviewed by the Planning Commission and shall be approved or disapproved by the Board of Supervisors in accordance with the procedures specified in this Article and in other sections of this Ordinance.

B. Overview of Procedures. The following steps shall be followed sequentially, and may be combined only at the discretion of the Township. Items 1, 4, and 5 below (in Section 401 B of this Article) are optional but are encouraged as recommended steps that will speed the review process and may result in lower costs for the project. All plans shall be submitted in electronic format (the format is to be determined by contacting the Township Secretary).

1. Pre-Application Meeting (optional)
2. Submission of Existing Resources and Site Analysis Plan, as described in Section 403 C of this Article
3. Site Inspection by Planning Commission and Applicant
4. Sketch Plan Pre-Application Conference (optional)
5. Submission of Sketch Plan Overlay and Review (optional)
6. Submission of Preliminary Plan, Preliminary Resource Conservation Plan and Sewage Planning Module: Review by Township and County Planning Commissions, Township Engineer and County Health Department, and Approval by the Supervisors on advice of the Planning Commission. (In the Flexible Rural Residential District, the Four-Step Design Process described in Section 602 of this Ordinance shall be followed.)
7. Final Plan, including information contained in the Preliminary Plan
8. Approval Conditions, documentation of all other agency approvals, as applicable.
9. Final Plan Submission: Determination of completeness, review, and approval or disapproval.
10. Action and signature by Board of Supervisors
11. Recording of approved final plan by the Chester County Planning Commission and recording by Chester County Recorder of Deeds

SECTION 402 MINOR SUBDIVISIONS

Subdivisions that meet the following conditions shall be classified as minor subdivisions and may be submitted as Final Plans required in Section 303 of this Ordinance. The Board of Supervisors may waive the submission of any required item in Section 303 upon finding that the submission of such item is not necessary for the preservation of any sensitive environmental feature. All other plan shall be submitted pursuant to the requirements of Section 302 of this Ordinance.

- A. Size.**
1. Tracts subdivided into lots of not less than 20 acres each for agricultural or residential use and with not more than one dwelling unit per lot, or
 2. A subdivision of less than three residential lots.
- B. Lot Line Adjustments.** Changes to lot lines between existing lots in single and separate ownership shall be permitted when:
1. No lot or tract is created which is smaller than any minimum area as required by the Zoning Ordinance or which is capable of being further subdivided, and
 2. Drainage easements or rights-of-way are not altered, and
 3. Access to affected parcels is not altered, and
 4. Street alignments are not altered, and
 5. No new lots are created.

SECTION 403 SUBMISSION AND REVIEW OF SKETCH PLAN

- A. Applicability.** A sketch plan (Section 301 of this Ordinance) is strongly encouraged for all proposed minor or major subdivisions. Sketch Plan Overlay Sheets shall be submitted to the Board of Supervisors for review by the Planning Commission. Such plans are for informal discussion only. Submission of a Sketch Plan does not constitute formal filing of a plan with the Planning Commission, and shall not commence the review period as required by Section 508 of the Pennsylvania Municipalities Planning Code. The procedures for submission of a diagrammatic Sketch Plan Overlay Sheet are described below, and may be altered only at the discretion of the Township.
- B. Pre-Application Meeting.** A pre-application meeting is encouraged between the applicant, the site designer, and the Planning Commission (and/or its planning consultant), to introduce the applicant to the Township's zoning and subdivision regulations and procedures, to discuss the applicant's objectives, and to schedule site inspections, meetings and plan submissions as described below.
- C. Existing Resources and Site Analysis Plan.** Applicants shall prepare and furnish an Existing Resources and Site Analysis Plan in accordance with the requirements contained in Section 302 D of this Ordinance. The purpose of this submission is to familiarize Township officials with existing conditions on the applicant's tract and within its immediate vicinity, and to provide a complete and factual reference for them in making a site inspection. This Plan shall be provided prior to or at the site inspection, and shall form the basis for the diagrammatic Sketch Plan (or the Preliminary plan, if the optional Sketch Plan is not submitted).
- D. Site Inspection.** After preparing the Existing Resources and Site Analysis Plan, the applicant shall arrange for a site inspection by the Planning Commission and other Township officials. The applicant, site designers, and the landowner are encouraged to accompany the Planning Commission. The purpose of the visit is to familiarize Township

officials with the parcel's existing conditions and special features, to identify potential design issue and discuss site design concepts, including the general layout of Greenway lands (if applicable), and potential locations for proposed buildings and street alignments.

E. Pre-Sketch Conference. Following the site inspection and prior to the submission of a sketch plan, the applicant shall meet with the Planning Commission to discuss the findings of the site inspection and to develop a mutual understanding on the general approach for subdividing and/or developing the tract in accordance with the four-step design procedure described in this ordinance, where applicable. At the discretion of the Planning Commission, this conference may be combined with the site inspection.

F. Sketch Plan Submission and Review

1. The sketch plan, meeting the requirements set forth in Section 301 B of this Ordinance, should be submitted to the Township Secretary during business hours for distribution to the Board of Supervisors, the Planning Commission, and the Engineer at least seven days prior to the Planning Commission meeting at which the Sketch Plan is to be discussed. The Sketch Plan illustrates initial thoughts about a conceptual layout for Greenway lands, house sites, and street alignments, and shall be based closely upon the information contained in the Existing Resources and Site Analysis Plan. The Sketch Plan should also be designed in accordance with the four-step design process described in Section 602, and with the design review standards listed in this Ordinance.
2. The Planning Commission shall review the Sketch Plan in accordance with the criteria contained in this and other applicable ordinances. It shall provide informal dialogue with the applicant and advise him/her, as promptly as reasonably possible, of the extent to which the proposed subdivision or land development conforms to the standards of this Ordinance, and will discuss possible plan modifications that would increase its degree of conformance. Aspects of the Sketch Plan that shall specifically be evaluated include but are not limited to:
 - a. the location of all areas proposed for land disturbance (streets, foundations, yards, septic disposal systems, storm water management areas, etc.) with respect to notable features of natural or cultural significance as identified on the applicant's Existing Resources and Site Analysis Plan and on Map 3-4 ("Scenic, Historic and Cultural Resources Map") of the Newlin Township Open Space, Recreation and Environmental Resources Plan;
 - b. the potential for street connections with existing streets, other proposed streets, or potential developments on adjoining parcels;
 - c. the location of proposed access points along the existing road network;
 - d. the proposed building density and impervious coverage;
 - e. the compatibility of the proposal with respect to the objectives and policy recommendations of the Unionville Area Regional Comprehensive Plan and the Open Space, Recreation and Environmental Resources Plan; and
 - f. consistency with the zoning ordinance.

3. The Planning Commission may request the applicant to submit additional drafts of the Sketch Plan to ensure that its comments have been properly incorporated into the revised plan.

SECTION 404 SUBMISSION OF PRELIMINARY PLAN DOCUMENTS

- A. **Preliminary Plan.** Applicants shall submit to the Township Secretary, at least three weeks prior to the date of the next regularly scheduled Planning Commission meeting at which official review is requested, fifteen (15) copies of a complete Preliminary Plan and all other required documents and information, including the same number of copies of the Existing Resources and Site Analysis Plan drawn at the same scale (generally 1" = 100' or 1" = 200', at the discretion of the Zoning Officer). All applications shall be accompanied by full payment of the required fees and escrow deposits established in accordance with the terms of this ordinance for proposed subdivisions. The Township Secretary shall note the date of receipt of the application, fees, and escrow deposit.
- B. **Date of Receipt.** The said date of receipt is subject to review by the Township Secretary and the Board of Supervisors to determine if all required materials, fees and escrow deposits have been submitted by the applicant. If the application is defective or incomplete, the applicant shall be notified orally or in writing within 15 days of the date of receipt and the application shall be null and void, and shall be returned to the applicant. If no such notice is given to the applicant that the application is defective or incomplete, then the date of filing is the date of the Planning Commission meeting next following the Board of Supervisors' receipt of the complete application. The Planning Commission meeting date shall occur within 30 days of the date of the application's receipt by the Board of Supervisors.

SECTION 405 REVIEW OF PRELIMINARY PLAN

A. Planning Commission Review

1. The Planning Commission shall review the plan and any recommendations made by County, State and Federal agencies and the Township Engineer, to determine conformance of the Plan to this ordinance, the zoning ordinance, and any other relevant ordinances.
2. After such review, the Planning Commission shall forward its recommendations and comments both to the Board of Supervisors and to the applicant, and shall cite specific sections of the statutes or ordinances relied upon.
3. If the applicant authorizes an extension of this review period, a written authorization to this effect shall be signed in duplicate, with a file copy being retained by the Planning Commission and by the applicant.

B. Board of Supervisors Review

1. When the Planning Commission has officially submitted the recommendations on the Preliminary Plan to the Board of Supervisors, such recommendations shall be placed on the Board of Supervisor's agenda for review and action.
2. In acting on the preliminary subdivision or land development plan, the Board of Supervisors shall review the plan and the written comments of the Township Engineer, the Planning Commission, the County Planning Commission and

Health Department and all other reviewing agencies, and comments from public hearings. The Board of Supervisors may specify conditions, changes, modifications or additions which it deems necessary or appropriate, and may make its decision to grant preliminary approval subject to such conditions, changes, modifications or additions. Whenever the approval of a Preliminary Plan is subject to conditions, the written action of the Board of Supervisors shall:

- i. specify each condition of approval; and
 - ii. request the applicant's written agreement to the conditions within ten days of receipt of the Board of Supervisor's written decision.
3. If the Preliminary Plan is not approved, the Board of Supervisor's decision shall specify the defects found in the plan, shall describe the requirements that have not been met, and shall cite in each case the provisions of the Ordinance relied upon.
 4. Notwithstanding the foregoing procedure, unless the applicant extends the period for decision, the Board of Supervisors shall render a decision on all Preliminary Plans not more than 90 days from the date of the first regular meeting of the Planning Commission held after the complete application was filed. However, if that regular meeting of the Planning Commission occurred more than 30 days after the complete application was filed, the 90 day period shall be measured from the 30th day following the date the complete application was filed.
 5. The decision of the Board of Supervisors shall be in writing and shall be communicated to the applicant personally or mailed to him at his last known address not later than 15 days following the decision. The form and content of the decision shall comply with applicable requirements of the Municipalities Planning Code.
 6. At the time a revised plan is submitted, it shall be accompanied by the applicant's written and executed authorization of the period for decision.
 7. The decision of the Board of Supervisors shall also be communicated to the governing body of any adjacent municipality, if the plan includes land in that Township and/or directly abuts its boundaries.

SECTION 406 SUBMISSION OF FINAL PLAN

- A. Submission Within One Year of Approval of Conditional Plan.** Within one year after approval of the Preliminary Plan, a final plan and all necessary supplementary data shall be officially submitted to the Township Secretary. The Final plan shall meet the requirements set forth in this Ordinance. It shall also conform to the Preliminary Plan as previously reviewed by the Planning Commission and the Board of Supervisors, and shall incorporate all modifications required by the Township in its review of the Preliminary Plan.
- B. Phased Submission.** The Board of Supervisors may permit submission of the Final plan in phases, each covering not less than 25% of the entire proposed development as shown on the approved Preliminary Plan; provided that the first Final plan phase shall be submitted within one year after approval of the Preliminary Plan. Each subsequent phase shall be submitted within one year of approval of the previous phase, provided all phases have been submitted within five years of original approval.

- C. Failure to File Final Plan.** Unless the filing deadline in this Ordinance is waived or extended by the Board of Supervisors, failure to make timely submission of final plans renders void a Preliminary Plan, and the applicant shall be required to file a new application and fee for preliminary plan approval.
- D. Contents of Final plan.** Official submission of the Final Plan to the Township Secretary shall consist of:
1. Three copies of the application for review of final subdivision or land development plan.
 3. Copies of all applications made or notices provided to Federal, State and County agencies by or on behalf of the applicant for permits, certifications, approvals or waivers required or sought for either subdivision or land development as proposed in the Preliminary Plan or in the Final plan, including, but not limited to, applications or notices provided to the U.S. Army Corps of Engineers, the U.S. Department of Agriculture Soil Conservation District, the U.S. Environmental Protection Agency, PADEP, or the Department of Transportation (PennDOT) and the County Department of Health.
 4. Payment of application fees and deposit of escrow, if required, for plan review costs.
- E. Number of Copies.** Fifteen copies of the Final plan and all required supplementary data shall be submitted to the Township Secretary together with the required fees and escrow deposit as prescribed by resolution of the Board of Supervisors. The Township Secretary shall note the date of receipt and shall then forward:
1. Five copies of the Final plan and application to the Planning Commission; and
 2. One copy to the Township Engineer;
 3. Two copies to the Board of Supervisors;
 4. Two copies for the Township files;
 5. One copy, referral letter and sufficient fee to the Chester County Planning Commission;
 6. One copy to other state and county agencies, including the Chester County Health Department;
 7. One copy to governing body of any adjacent municipality if the tract to be subdivided abuts or lies partially in that municipality;
 8. One copy of the Sedimentation and Erosion Control Plan and application form to the U.S. Department of Agriculture's Soil Conservation District.
 9. One copy of Final As-Built Plan and Title Plan showing all final elements of the development approved addresses to the Township Secretary.
- F.** Where the final plan is for a minor subdivision, the applicant shall submit the plan in accordance with the requirements of Section 402 of this Ordinance.

SECTION 407 REVIEW OF FINAL PLAN

A. General

1. The Final Plan shall conform in all important respects to the Preliminary Plan as previously reviewed and approved by the Board of Supervisors, and shall incorporate all modifications and revisions specified by the Board in its approval.
2. The Final Plan and supporting data (including reports from PADEP, the Chester County Board of Health, the Chester County office of the USDA Natural Resources Conservation Service, and the Chester County Planning Commission) shall comply with the provisions of this Ordinance and those of the Zoning Ordinance.

B. Planning Commission Review.

1. The Planning Commission will review the Final Plan and the recommendations of the Township Engineer and any other reviewing agencies, to determine its conformance with the requirements of this Ordinance and with those of the Zoning Ordinance.
2. After such review, and within 60 days of the submission of a complete Final Plan package, the Planning Commission shall forward its recommendations, and its reasons to the Board of Supervisors and the applicant. If the plan includes land in any adjacent municipality and/or directly abuts its boundaries, then such notice and recommendation should also be transmitted to the governing body of the adjacent municipality.
3. No recommendations shall be made by the Planning Commission until the Township has received the written report of the County Planning Commission, the Township Engineer, PADEP, the Chester County Health Department and the Department of Transportation, if applicable, and the approval of the Chester County Soil Conservation District, provided, however, that if these reports are not received within 45 days after transmittal of the Final Plan to these agencies, then the Planning Commission may act without having received and considered such report.

C. Board of Supervisors Review.

1. During or before the Final plan review process, the Board of Supervisors should complete its review of the proposed Sewage Facilities Planning Module in accordance with PADEP and Chester County Health Department regulations and procedures. When approved or adopted by the Board of Supervisors, the Planning Module shall be forwarded to PADEP for review and approval.
2. No approval of the Final plan shall be granted by the Board of Supervisors until notification of PADEP's approval of the Sewage Facilities Planning Module has been received by the Board of Supervisors. Should such notification not be received within the time limitations for Final plan approval in accord with the Act, the time limitations shall be extended upon the authorization of the applicant.
3. When a recommendation on a Final plan has been submitted to the Board of Supervisors by the Planning Commission, such plan shall be placed on the agenda of the Board of Supervisors for review and action.

4. Upon receipt of the Planning Commission's recommendation and other supporting information, the Board of Supervisors may, at one or more regular or special public meetings, review the Final Plan and shall, within the time limitations set forth herein below, either approve, approve with conditions, or disapprove the plan. Whenever the approval of a Final plan is subject to conditions, the written action of the Board of Supervisors shall:
 - i. specify each condition of approval; and
 - ii. require the applicant's written agreement to the conditions within ten days of receipt of the Board of Supervisor's written decision.
5. If the Final Plan is not approved, the decision shall specify the deficiencies found in the plan, shall describe the requirements that have not been met, and shall, in each case, cite the provisions of the ordinance relied upon.
6. The decision of the Board of Supervisors shall be in writing and should be communicated to the applicant as required by the Pennsylvania Municipalities Planning Code.
7. If at any time the applicant submits a substantially revised Preliminary Plan, it shall be deemed a new application and shall not be accepted unless it is accompanied by the applicant's withdrawal of the previous plan. No new application fee shall be required for any revision submitted within two years of the first preliminary plan application.
9. Copies of the Final plan, as finally approved with the endorsement of the Board of Supervisors, shall be distributed as follows:
 - a. At least three copies to the applicant of which two shall be recorded in accordance with this Ordinance.
 - b. One copy to the Township Planning Commission.
 - c. One copy to the County Planning Commission.
 - d. One copy to the County Health Department.
 - e. One copy to be retained in the Township files.
 - f. One copy to the Township Engineer. If a new street is proposed, an additional "as built" plan with deed of dedication application shall be submitted.
10. The Board of Supervisors may require that the owners supply a Title Insurance Certificate from a reputable company before any property may be accepted by the Township.
11. Where a subdivision plan has been approved and recorded under the terms and conditions of this Ordinance, purchasers and mortgagees of lots in the subdivision shall be relieved of any and all liability from any deficiency in, lack of, or failure to complete, the necessary grading and paving of streets and other street improvements including, where specified in the approved plan, curbs, sidewalks, street lights, fire hydrants, water mains, sanitary sewers and storm sewers. Failure to complete or properly complete said improvements shall not encumber any or all of the lots in the subdivision.

D. Conditions of Final Plan Approval. Approval of any Final Plan shall, in addition to any other applicable provisions of this ordinance, be subject to the following conditions:

1. The landowner shall execute a Subdivision and Land Development Agreement in accordance with this Ordinance.
2. Where applicable, the landowner shall execute an Escrow Agreement in accordance with this Ordinance.
3. The landowner agrees, if requested, to tender to the Township a deed of dedication in a form satisfactory to the Township Solicitor for streets and improvements thereto, including street paving, water mains, fire hydrants, storm sewers, inlets, pumping stations and other appurtenances as shall be constructed as public improvements within the public right-of-way and are required for the promotion of public welfare, after all streets and improvements to be dedicated to the Township are completed and are certified as being satisfactory by the Township Engineer. The Board of Supervisors may require that the applicant provide a certificate from a duly licensed title insurance company certifying that the title to be conveyed is good and marketable, free of all liens and encumbrances, except utility easements, before any property is accepted by the Township.
4. Whenever the landowner is providing open space as part of the development, an easement in perpetuity restricting such open space against further subdivision or development shall be executed between the landowner and the Township or a conservation organization acceptable to the Township.
5. The landowner shall submit to the Township all required permits, approvals or waivers from agencies having jurisdiction over ancillary matters necessary to effect the subdivision or land development, such as Pennsylvania Departments of Transportation, Environmental Protection or Public Utility Commission, US Army Corps of Engineers or Department of Agriculture Soil Conservation District and Chester County Health Department.
6. All final approvals or waivers required by Federal, State and County agencies for development in accord with the Final Plan including, but not limited to, approval of the Sewage Facilities Planning Module by the PADEP, approval by the U.S. Department of Agriculture Soil Conservation District, and a highway occupancy permit, if required, from PennDOT shall be presented to the Township.

E. Disclosure of Plan Information. Prior to agreeing to the sale of any lot within a development plan, the developer shall provide to prospective purchasers a copy of the approved subdivision plan and all associated terms and conditions imposed on the plan as conditions of approval by the Township, and shall secure a statement from prospective purchasers that they have been offered an opportunity to review the plan.

**SECTION 408 PROCEDURE FOR REQUESTING WAIVERS OR
MODIFICATIONS TO THE PROVISIONS OF THIS ORDINANCE**

- A. Modifications.** Applicants may request that one or more of the provisions of this Ordinance be waived or modified by the Board of Supervisors when the literal enforcement and compliance with such provisions is shown to the satisfaction of the Board of Supervisors to be unreasonable, to cause undue hardship, or when an alternative can be demonstrated to provide equal or better results, provided that such modification is not contrary to the public interest and that the purpose and intent of this Ordinance is observed. Requests for waivers or modifications shall follow the following procedures:
1. Requests for Waivers. All requests for waivers or modifications shall be in writing and shall accompany and be a part of the application. The request shall fully state the grounds and facts of unreasonableness or hardship on which the request is based, the provisions of the Ordinance involved, and the proposed minimum modification or alternative standard. The request shall be accompanied by a plan prepared at least to the minimum standards as required for a sketch plan. Requests for waivers shall be submitted with the sketch plan or the preliminary plan.
 2. Waiver Requests Submitted to Planning Commission. The request shall be referred to the Newlin Township Planning Commission and Township Engineer for advisory comments.
- B. Action by the Board of Supervisors.** The Board of Supervisors shall review the request at a public meeting to determine if the literal compliance with any mandatory provision of this Ordinance is demonstrated by the applicant to be unreasonable or shall represent an undue hardship, and shall determine if the proposed alternative standard provides equal or better results, and whether the proposed modification is consistent with the public interest and that the intent of this Ordinance is preserved. The applicant shall demonstrate that the modification is the minimum necessary. If the Board of Supervisors finds that the applicant has met the standards in this paragraph, the Board shall grant the waiver.
- C. Written Records of Waivers.** The Board of Supervisors shall maintain a written record of all actions on all requests for modifications. Approvals shall be in writing, and shall describe the specific waiver that has been granted. Denials of requested waivers shall also be in writing, and shall specify the grounds for the denial.

ARTICLE 5 - LANDSCAPING REQUIREMENTS PLAN PROCESSING PROCEDURES

SECTION 500 LANDSCAPING REQUIREMENTS

A. Purpose and Intent. It is the purpose of these regulations to protect and preserve the natural resources of Newlin Township. Installation of ground cover and plant matter prevents erosion and reduces storm water management problems. These requirements are intended to improve groundwater recharge, and buffer and screening areas are intended to reduce glare, dust, noise, and heat in summer. Trees will provide screening as well as form wind breaks. Landscaping can provide food and shelter for wildlife and help decrease air pollution, and also help preserve the rural character of the Township and its scenic views while permitting the development by providing the amenities that property owners desire and that are in harmony with existing vegetation. It is the specific intent of this Article to preserve the Township's existing natural landscape and integrate the design of land developments into the natural landscape.

1. Landscape Plans. All applicants for subdivision or land development approvals for land uses other than agriculture or other than residential developments containing less than five dwellings or residential lots shall submit to the Township a landscape plan for the site, prepared to the requirements of Section 302D. Landscape plans shall include any required Greenbelt or Greenway. Landscaping plans shall include a Greenbelt Plan and Greenway Lands Plan:

a. Greenbelt Plans. Applicants for developments of five or more dwellings and all non-residential land uses (except agriculture) shall submit to the Township a Landscape Plan that includes a perimeter greenbelt, prepared to the requirements of Section 500 N of this Article. When the goal of the landscape plan is to maintain views from township roads into the site, the greenbelt need not be a screen.

b. Greenway Lands. Greenway lands shall be required in subdivision or land development plans and shall include the Prioritized List of Resources listed in this Ordinance-

2. Landscaping of Specific Areas. Certain additional areas and land uses as identified in this Section shall be landscaped according to the specifications herein.

B. Landscape Plans Required. Applicants shall submit landscape plans prepared according to the provisions of this Section.

1. Preliminary landscape plan. The applicant shall submit a preliminary landscape plan with the application for preliminary plan approval, containing the elements in this Ordinance below.

2. Final landscape plan. Applicants shall submit a final landscape plan at the time of submission of final plan approval, containing the elements in this Ordinance.

3. Modifications. Modifications or adjustments may be made at any time to any landscape plan to account for site-specific conditions or other factors that may not have been evident at the time of the plan's preparation.

4. Delays in installation of landscaping. The Zoning Officer may authorize the applicant to delay the installation of the landscaping until after the last frost, but shall condition the issuance of the certificate of occupancy upon proper installation of the landscaping. The Zoning Officer may issue a temporary Certificate of Use and Occupancy conditioned on the completion of planting by a certain date, after which date the temporary Certificate of Use and Occupancy shall expire. These conditions shall apply to landscaping materials placed on either areas that are proposed for dedication to the Township or to areas not intended for dedication.
 5. Exemptions. This Article shall not apply to proposals to expand existing non-residential land uses by not more than 50% of floor area or utilized area.
- C. Content of Preliminary Landscape Plans.** Preliminary landscape plans shall contain the following:
1. Parcel boundary lines and lot dimensions, existing and proposed streets, access drives and parking areas, and bulk and lot data.
 2. Existing and proposed easements.
 3. Location and species of existing trees having a minimum caliper of six inches diameter at grade.
 4. Adjacent land uses and zoning, including existing development, roadways, stream corridors, historic sites, and floodplains.
 5. Existing and proposed buildings and other significant structures.
- D. Content of Final Landscape Plans.** Final landscape plans shall be based on the preliminary landscape plan, and shall contain the following:
1. Location, sizes and type of proposed and preserved landscaping and the size of the proposed landscape area. Botanical nomenclature as well as common names shall be provided. Native plant materials shall be used.
 2. Canopy and evergreen trees shall be labeled as existing, containerized, or balled and burlapped.
 3. Description of the methods that will be used to protect existing trees during construction.
 4. Calculations showing that the minimum required landscaping has been provided according to the requirements of Section 500 I of this Ordinance, including a listing of the landscaping points provided for each lot.
 5. Sedimentation and erosion and control measures used prior, during and after construction.
 6. Name and seal of the landscape architect who prepared the plan.
 7. Location of irrigation systems or hose connections, if proposed.

E. Greenway Plan Design Review Standards - Prioritized List of Resources to be Conserved. The design of Greenway lands shall incorporate any of the following resources if they occur on the tract:

1. Stream channels, floodplains, wet soils, swales, springs and other lowland areas, including adjacent buffer areas which may be required to insure their protection.
2. Significant natural areas of species listed as endangered, threatened, or of special concern, such as those listed in the Pennsylvania Natural Diversity Inventory.
3. Steep slopes (over 25%) particularly those adjoining watercourses and ponds, where disturbance and resulting soil erosion and sedimentation could be detrimental to water quality.
4. Woodlands and Class I, II and III agricultural soils as defined by the USDA Soil Survey Natural Resource Conservation Service.
5. Soil conditions affording high rates of infiltration and percolation.
6. Hedgerows, groups of trees, large individual trees of botanical significance, and other vegetation features representing the site's rural past.
7. Moderate slopes (between 15% and 25%).
8. Visually prominent topographic features such as meadows, knolls, hilltops and ridges, and scenic viewsheds as seen from public roads (particularly those with historic features).
9. Historic structures and sites as identified in the Chester County Newlin Township Historic Resource Atlas of 2010, the Unionville Area Regional Comprehensive Plan Chapter 4 of 2011 or Newlin Township Open Space, Recreation and Environmental Resources Plan of 1994.
10. Existing trails connecting the tract to other locations in the Township.

F. Other Greenway Design Considerations. The configuration of proposed Greenway lands set aside for common use in residential subdivisions shall comply with the following standards:

1. Greenway lands shall be free of all structures except historic buildings, stone walls, and structures related to Greenway uses. The Township may grant approval of structures and improvements required for storm drainage, sewage treatment and water supply within the Greenway provided that such facilities would not be detrimental to the Greenway (and that the acreage of lands required for such uses is not credited towards minimum Greenway acreage requirements for the tract, unless the land they occupy is appropriate for passive recreational use).
2. Greenway lands should generally not include parcels smaller than three acres, have a length-to-width ratio of less than 4:1, or be less than 75 feet in width, except for such lands specifically designed as neighborhood greens, playing fields or trail links and where such lands link other open spaces.

3. Greenway lands shall be directly accessible to the largest practicable number of lots within the subdivision. Non-adjoining lots shall be provided with safe and convenient pedestrian access to Greenway land.
 4. Greenway lands shall be suitable for active recreational uses to the extent deemed necessary by the Township, without interfering with adjacent dwelling units, parking, driveways, and roads.
 5. Greenway lands shall be interconnected wherever possible to provide a continuous Greenway network within and adjoining the subdivision.
 6. Greenway lands shall provide buffers to adjoining parks, preserves or other protected lands.
 7. Except in those cases where part of the Greenway is located within private houselots, they shall provide for pedestrian pathways for use by the residents of the subdivision. Consideration shall be given to providing for public access on such trails if they are linked to other publicly accessible pathway systems within the Township. Provisions should be made for access to the Greenway lands, as required for land management and emergency purposes.
 8. Greenway lands shall be undivided by public or private streets, except where necessary for proper traffic circulation.
 9. Greenway lands shall be suitably landscaped either by retaining existing natural and native cover and wooded areas and/or according to a landscaping plan to protect Greenway resources.
 10. Greenway lands shall be made subject to such agreement with the Township and such conservation easements duly recorded in the office of the County Recorder of Deeds as may be required by the Township for the purpose of preserving the common open space for such uses.
 11. Greenway lands shall be consistent with the goals, objectives and policies of the Newlin Township Comprehensive Plan and Open Space, Recreation and Environmental Resources Plan.
 12. Greenways shall be designed to make maximum reasonable use of existing vegetation and shall maintain a natural appearance (as contrasted with a formal appearance).
- G. Ownership and Maintenance.** Applicants shall demonstrate compliance with Greenway ownership and maintenance standards of the Zoning Ordinance.
- H. Plan Referred to Planning Commission.** The Zoning Officer shall transmit two copies of the landscape plan to the Planning Commission upon receipt, as part of an application of a subdivision and land development. The Zoning Officer may, at the direction of the Supervisors, consult a registered landscape architect or other expert to assist in the review of the plan.
- I. Minimum Point Values Required.** Landscaping plans shall provide plant materials that meet the minimum requirements as expressed by point values.
1. Points for Lots. Each subdivision or land development shall provide plant materials representing not less than **400 points** per lot, composed of materials from the list expressed in Table 1 below. Not less than 40% of the total number

of landscaping points on any lot shall be provided through the use of canopy or evergreen trees meeting the standards of Section 500 L of this Article.

+Table 1 - Plant Material Point Values	
Plant Type and Qualification	Point Value
Protected (See Section 500 K below) existing canopy or evergreen tree with a minimum caliper of six inches	150
Unprotected existing canopy or evergreen tree with a minimum caliper of six inches at grade	125
New canopy or evergreen tree with a minimum caliper of 3.5 inches at grade	100
New canopy or evergreen tree with a minimum caliper of two inches at grade	75
New canopy or evergreen tree with a minimum caliper of 1.5 inches at grade	50
Non-canopy tree with minimum height of five feet	35
Shrub with minimum height of 18 inches	5
Ground cover or grass (per square yard) Grass and ground cover shall not be credited for more than 10% of the total required points per lot	1.0

2. Points for Parking Areas. In addition to the points required for each lot, each parking lot shall provide plant materials representing not less than the points as required in Table 2 below, composed of materials from the list expressed in Table 1 above. Points shall be computed cumulatively. For example, a land development requiring 50 parking spaces shall require a total of 880 points [(20x20)+(30x16)=880] for parking plus additional points for land area.

Table 2 - Points Required for Parking Lots	
Parking Spaces Required on Lot	Points Per Parking Space*
1 – 20	20
21-50	16
51-100	14
101 and greater	12
* plus 40 points per 1000 sf of lot area	

3. Additional standards for parking lots. Not less than one street tree (see Table 3) shall be distributed within islands in parking lots for each ten spaces.

J. Condition of Existing Plant Materials. Existing plant materials that are diseased or damaged shall not be assigned any points.

K. Preservation of Existing Trees. Existing trees shall be preserved as follows:

1. An existing tree shall be considered protected if it is surrounded with a barricade at the drip line (to a maximum of a 15-foot radius) or with a minimum unobstructed radius of seven feet, whichever is greater. The barricade shall be retained until all earth disturbance activities on the lot are completed. If the protected tree is located in a parking lot island, the protected area shall become the tree's island upon completion of construction. No utilities shall be located within the barricaded area, and the area shall not be used as a storage or disposal area during any phase of construction.
2. Not less than 50% of existing trees on a site shall be retained and flagged. Not less than 10 days prior to earth moving, the Zoning Officer shall be notified in order to inspect the designation and mapping of trees provided by the developer as well as conduct an on-site review.
3. All existing tree rows, wind breaks and hedges shall be retained when located along a tract boundary. Such features that may exist within the interior of a lot should be retained.

L. Street Trees Required. Street trees shall be provided as follows:

1. Street trees shall be placed a minimum of 10 feet and a maximum of 20 feet behind the right-of-way line. Preference is for a variety of species for a given area and a combination in that area. Street trees shall be planted according to the design of the street layout: tree lines shall be planted in curvilinear lines if roadways are curvilinear. Tree clusters are encouraged provided that they are separated by approximately 15 - 30 feet. Trees shall have a minimum height of eight feet with two inch trunk diameters measured at one foot above grade at time of planting, or with diameters as approved by the Township Zoning Officer.
2. Street trees that drop sap, seeds, and pods that might clog drains are prohibited.
3. Street trees shall tolerate salt and de-icing compounds and heat from large paved surfaces, and shall have deep root systems to prevent cracked pavements and sidewalks.
4. Species from Table 3 are acceptable. Other native species may be permitted, provided that the applicant demonstrates to the Board of Supervisors that such species meet the criteria contained in this Section.

Table 3 - Trees Acceptable for Streets and Parking Lot Landscaping		
Botanical Name	Common Name(s)	Mature Height
<i>Small Street/Urban Trees</i>		<i>15 - 45 feet</i>
Aralia spinosa	Devil's-walking stick, Hercules-club, Angelica Tree	35 - 50 feet
Carpinus caroliniana	Musclewood, Ironwood, Blue Beech, American Hornbeam, Water Beech	35 - 50 feet
Crataegus crusgalli*	Cockspur Hawthorn	20 - 35 feet
Ostrya virginiana	American Hophornbeam, Ironwood,	35 - 50 feet
Oxydendrum arboreum	Sourwood, Sorrel Tree, Lily-of-the-Valley Tree	35 - 50 feet
Quercus imbricaria*	Shingle Oak, Laurel Oak	30 - 45 feet
Sassafras albidum*	Common Sassafras	35 - 50 feet
<i>Medium - Large Street/Urban Trees</i>		<i>45 feet and greater</i>
Acer rubrum	Red Maple	75-100 feet
Acer saccharum (cultivars)	Sugar Maple, Rock Maple, Hard Maple	75 - 100 feet
Celtis occidentalis *	Hackberry, Sugarberry	75 - 100 feet
Diospyros virginiana	Common Persimmon	50 - 75 feet
Fraxinus americana *	White Ash	75 - 100 feet
Fraxinus pennsylvanica *	Green Ash, Red Ash	75 - 100 feet
Liquidambar styraciflua *	American Sweet Gum, Redgum	60 - 100 feet
Nyssa sylvatica	Black/Sour Gum, Pepperidge,	50 - 75 feet
Platanus occidentalis	Sycamore	75 - 100 feet
Pinus rigida	Pitch Pine	50 - 75 feet
Prunus serotina	Black Cherry, Wild Cherry	50 - 75 feet
Quercus alba *	White Oak	50 - 100 feet
Quercus coccinea *	Scarlet Oak	50 - 90 feet
Quercus macrocarpa *	Bur Oak, Mossycup Oak	75 - 100 feet
Quercus palustris	Pin Oak	75 - 100 feet
Quercus prinus	Chestnut Oak, White Chestnut Oak	50 - 75 feet
Quercus velutina	Black Oak	75 - 100 feet
Ulmus americana 'Liberty'	Liberty Elm	75 - 100 feet
*Varieties, Hybrids, and/or Cultivars are available		

M. Landscape Buffers and Screening. All lots that are required to contain buffers shall be provided with buffers as follows:

1. Landscape Buffer and Screening Standards. Landscape buffers shall be placed along side and rear boundaries of all developments except single-family detached residential and agricultural land uses. The buffer shall consist of one staggered row of mixed evergreen and deciduous trees which shall be not less than eight feet in height when planted, and shall be spaced not more than 10 feet apart on center, and two additional staggered rows, of mixed broadleaf and needle evergreen shrubs which shall be not less than three feet in height when planted and shall be spaced not more than five feet apart on center. The trees shall be of such species so as to attain a height at maturity of not less than 20 feet. The shrubs shall be of such species as to provide continuous and all-season screening from the ground to a height of six feet at maturity. Deciduous plant materials shall comprise not more than 30% of the number of plants in the buffer. Trees shall be planted so that at maturity no branches shall be closer than 10 feet to a property line. Drainage swales and easements should not be placed in buffer areas unless there is no alternative to such placement. When drainage swales or easements conflict with buffers or screening areas, additional buffer areas shall be added to the buffer to compensate for the easement area.
2. Overlap with Yard Areas. Landscape buffer areas may coincide with required yard areas. However, no decks, pools, sheds, or other accessory structures shall be placed within required buffer areas.
3. Preservation of Existing Natural Areas. When any area within or along the perimeter of a lot contains existing woodlands or other natural areas, the requirements for interior landscaping or perimeter buffering in such areas be waived by the Township when the existing natural landscaping will substantially meet the intent of this Section and is integrated into the design of the site.
4. Service Areas
 - a. Loading areas and trash containers shall be screened from view with architectural masonry walls (excluding any chain-link, fiberglass or metal), landscaping, or a combination. Such areas shall also be surrounded on three sides by a minimum of 15 feet wide landscape buffer, which shall not contain any storage, parking or loading areas.
 - b. Outdoor storage areas at industrial and commercial land uses shall be screened from view from adjacent properties with the use of a landscape screen, not less than 15 feet in width.

5. Parking Screen

- a. All vehicle parking and storage areas that abut streets or lot lines shall be screened along such streets and lot lines by the use of a landscape buffer and screen, not less than 15 feet in width, composed of an earthen berm and/or plant materials. Plant materials shall grow to achieve a dense visual screen to a height of not less than five feet not more than three years after planting. Plant materials shall be composed of staggered two rows of mixed evergreen trees, placed not less than six feet apart on center. Canopy trees may also be used, provided that the visual screen is maintained. This section shall not apply to single-family detached dwellings and agricultural land uses.
- b. If drainage swales conflict with the placement of the screen, compensating additional screening areas shall be placed nearby the drainage swale.
- c. Landscaped areas shall not be designed to permit vehicles to overhang more than one and one-half feet into the landscaped area.

N. Perimeter Greenbelt. Landscaped perimeter greenbelts shall be provided by the developer and shall extend along the front, side and rear perimeter of the development except where crossed by driveways, sidewalks, and roads. If drainage swales or stormwater easements conflict with the perimeter greenbelt, additional compensating landscaped areas shall be provided nearby. Perimeter greenbelts may be included in calculations of required minimum open spaces and may include Greenway lands. The minimum widths of perimeter greenbelts shall be as required in Table 4:

Table 4 - Minimum Perimeter Greenbelt Width (feet)			
Land Use	Front	Side	Rear
Option 1 Residential Developments (neutral density: see Zoning Ordinance Section 304)	15	10	15
Option 3 Residential Developments (estate lots: see Zoning Ordinance Section 304)	30 feet or one-half the distance between the perimeter lot line and the nearest dwelling, whichever is greater		
Option 4 Residential Developments (country properties)	Not Required		
Commercial	10	20 feet or one-half the distance between the perimeter lot line and the structure, whichever is greater	
Industrial	20	40 feet or one-half the distance between the perimeter lot line and the structure, whichever is greater	
Recreational	10	15	
All Other Land Uses (except agricultural)		20 feet or one-half the distance between the perimeter lot line and the structure, whichever is greater	

- O. Maintenance of Landscape Areas.** All greenbelt, buffer, landscape and screening areas shall be maintained and kept free of all invasive plant species, structures, rubbish, and debris. Required plant materials that have become diseased or have died shall be replaced by the owner within one year. Grass and ground covers shall achieve full coverage within one year after installation.

P. General Requirements.

1. All portions of all lots not occupied by buildings, structures, loading or parking spaces, aisles, sidewalks, or storage areas, shall be planted with trees, shrubs, and an all-season ground cover.
2. Each phase of a phased development shall comply with this Section.

3. If a utility, storm water, or other easement or right-of-way interferes with a required buffer, greenbelt or landscape area, compensating areas shall be placed along the inward portion of the easement or right-of-way that is located along the inner portion of the site. The easement or right-of-way may be planted subject to permission by the holder of the easement.
4. Notwithstanding other provisions of this Section, no portion of a canopy tree shall be placed where it will grow to within 20 feet of a parcel in agricultural use.
5. The developer shall post financial security with the Township as set forth in Section 509 of the Pennsylvania Municipalities Code for landscaped areas that are proposed for dedication to the Township.
8. Existing lots, facilities and developments shall not be required to comply with the provisions of this Section except in the case of enlargement or alteration or if required by a prior ordinance.

SECTION 501 RESOURCE CONSERVATION STANDARDS FOR SITE PREPARATION AND CLEANUP

- A. Conservation Practices During Site Preparation and Clean-Up.** Site grading and construction shall be conducted in a manner as to limit unnecessary disturbance to natural areas, limit soil erosion and decrease water runoff.
- B. Protection of Vegetation from Mechanical Injury.** Where earthwork, grading, or construction activities will take place in or adjacent to woodlands, old fields or other significant vegetation or site features, the Township may require that the limit of disturbance be delineated and vegetation protected through installation of temporary fencing or other approved measures. Such fencing shall be installed prior to commencing of and shall be maintained throughout the period of construction activity.
- C. Protection of Vegetation from Grading Change.** Grade changes to occur at any location of the property shall not result in an alteration to soil or drainage conditions which would adversely affect existing vegetation to be retained following site disturbance, unless adequate provisions are made to protect such vegetation and its root systems.
- D. Protection of Vegetation from Excavations.**
 1. When digging trenches for utility lines or similar uses, disturbances to the root zones of all woody vegetation shall be minimized.
 2. Where trenches must be excavated in the root zone, all disturbed roots shall be cut as cleanly as possible. The trench shall be backfilled as quickly as possible.
 3. Grading and earthmoving operations shall be scheduled to minimize site disturbance during the period November 1 to April 1 when revegetation of exposed ground surfaces is difficult avoiding soil compaction.
 4. Protection of Topsoil:
 - a. No topsoil shall be removed from the site.

- b. Prior to grading operations or excavation, topsoil in the area to be disturbed shall be removed and stored on site.
- c. Topsoil removed shall be redistributed and stabilized as quickly as possible following the establishment of required grades for a project or project phase. All exposed earth surfaces shall be stabilized by hydroseeding on slopes of less than 10%, and by installing sod, hydroseeding, or rip-rap on slopes exceeding ten percent.
- d. Grading and earthmoving operations shall be scheduled to minimize site disturbance during the period from November 1 to April 1, when revegetation of exposed ground is difficult.

SECTION 502 INTERCONNECTIONS BETWEEN WOODLANDS

Where possible, woodlands which remain undisturbed shall interconnect with existing woodlands or wooded areas of adjacent properties to preserve continuous woodland corridors and allow for the natural movement and migration of wildlife and the dispersion of native vegetation.

A. Protection of Vegetation. Trees, tree masses and their associated vegetation layers, mature trees, and other vegetation which are to be preserved shall be protected to the limits of a tree protection zone.

- 1. Trees within a tree protection zone shall be clearly marked, with landscape paint, colored tape or other appropriate marker, at breast height. Where tree masses are to be preserved, only the trees on the edge of the mass need to be marked.
- 2. During construction, trees within a tree protection zone shall be clearly delineated with a proper barrier and signage (such as: wood stakes and color tape) to the limits of a tree protection zone to ensure that there is no encroachment and/or compaction of soil and roots within this area by:
 - a. Change of grade;
 - b. Excavation or trenching; or,
 - c. Storage of building materials, topsoil, motor vehicles, or construction equipment.

In addition, there shall be no storage of toxic materials, including petroleum-based products, within 50 feet of a tree protection zone.

- 3. Trees that are scheduled to be removed that are adjacent to or within the tree protection zone of a tree that will be retained, should be left standing until grading is complete to further protect the tree to be left standing from grading related impacts.
- 4. Roots from trees within the tree protection zone, which must be trimmed as a result of earth disturbance outside a tree protection zone, shall be cut by a backhoe or similar equipment aligned radially to the tree. This method reduces the lateral movement of the remaining roots, reducing the possibility of damage to the intertwined roots of surrounding trees and other vegetation.
 - a. Within four hours of any severance of roots, all roots that have been exposed and/or damaged shall be trimmed cleanly and covered

temporarily with peat moss, moist burlap, or biodegradable material to keep them moist and protected from disease until permanent cover is installed. Permanent cover shall be installed within 72 hours of the initial severance of roots.

- b. Tree stumps, which are located within 10 feet of a tree protection zone, shall be removed by means of a stump grinder or similar device which will minimize the effect on existing, intertwined roots within a tree protection zone. A stump shall be ground and removed to a point at least six inches below ground level.
- 5. Trees that are to be removed shall not be felled, pushed, or pulled into a tree protection zone.

B. Standardized Note. A standardized note shall be required to be placed on all final plans stating: "The applicant is responsible to install street trees as depicted on the final plans and in accordance with the Newlin Township Subdivision and Land Development Ordinance." A Certificate of Occupancy for the development or a portion of the development shall not be issued by the Township Building Inspector until the required street trees are installed or until an escrow agreement satisfactory to the Township is finalized to assure installation of such street trees."

ARTICLE 6 - RESOURCE DELINEATION AND PROTECTION STANDARDS PLAN PROCESSING PROCEDURES

SECTION 600 APPLICABILITY

The standards for resource conservation, as set forth in this Article, shall apply to all land subdivision and developments in the Township. The standards for Greenway delineation shall apply to all land subdivision and developments within the Flexible Rural Residential District of the Zoning Ordinance.

SECTION 601 PLANNING AND DESIGN STANDARDS

- A. General Standards to Minimize Adverse Impacts.** All subdivisions and land developments shall avoid or minimize adverse impacts on the Township's natural, cultural and historic resources, as defined below.
- B. Groundwater Resources.** This section is intended to ensure that the Township's limited groundwater resources are protected for purposes of providing water supplies for its residents and businesses, and to protect the base flow of the Township's surface waters. These regulations shall be applied in conjunction with those provided for in this ordinance, dealing with groundwater conservation and replenishment. The proposed subdivision and land development of any tract shall be designed to cause the least practicable disturbance to natural infiltration and percolation of precipitation to the groundwater table, through careful planning of vegetation and land disturbance activities, and the placement of streets, buildings and other impervious surfaces.
- C. Stream Valleys, Swales, Springs, and Other Lowland Areas.** The Newlin Township Open Space, Recreation and Environmental Resources Plan describes and maps stream valleys (which include stream channels and flood plains), swales, springs and other lowland areas as resources that warrant restrictive land use controls because of flooding hazards to human life and property, their ground water recharge functions, their importance to water quality and the health of aquatic communities, and their wildlife habitats. They are generally poorly suited for on-site subsurface sewage disposal systems. The following activities shall be minimized:
1. Disturbance to streams and drainage swales
 2. Disturbance to year-round wetlands, areas with seasonally high water tables, and areas of surface water concentration.
 3. Because of their extreme limitations, stream valleys, swales and other lowland areas warrant designation as Greenway lands. They may also require adjoining buffer lands to be included in the Greenway, to be determined by an analysis of the protection requirements of such areas on a case-by-case basis. In certain instances, seasonal high water table soils may be excluded from the Greenway where it can be demonstrated that they are suitable for low-density residential uses and conventional on-site sewage systems.

D. Woodlands. Woodlands occur extensively throughout the Township, often in association with stream valleys and wet areas, poor and erodable agricultural soils, and moderate to steep slopes. Woodland conditions within the Township vary with respect to species composition, age, stocking, and health. They range from relatively recent post-agricultural young stands to mature mixed-age forests. Most woodlands in the Township represent one or more of the following resource values:

1. As soil stabilizers, particularly on moderate to steep slopes, thereby controlling erosion into nearby streams, ponds, impoundments and roads. A closely related function is their enhancement of ground water recharge.
2. As a means of ameliorating harsh microclimatic conditions.
3. As a source of wood products, i.e., poles, saw-timber, veneer and firewood.
4. As habitats for woodland birds, mammals and other wildlife.
5. As recreation resources for walkers, equestrians, picnickers and other related outdoor activities.
6. As visual buffers between areas of development and adjacent roads and properties.
7. Because of their resource values, all woodlands on any tract proposed for subdivision or land development shall be evaluated by the applicant to determine the extent to which such woodlands should be designated partly or entirely as Greenway or development lands. Evaluation criteria shall include:
 - a. Configuration and size.
 - b. Present conditions, i.e., stocking, health and species composition.
 - c. Site potential, i.e., the site's capabilities to support woodlands, based upon its topographic, soil and hydrologic characteristics.
 - d. Ecological functions: i.e., in protecting steep slopes, erodible soils, maintaining stream quality and providing for wildlife habitats.
 - e. Relationship to woodlands on adjoining and nearby properties and the potential for maintaining continuous woodland areas.
8. The evaluation of the tract's woodlands shall be undertaken by a qualified forester, landscape architect, horticulturist or another qualified professional acceptable to the Supervisors. This evaluation shall be submitted as a report and made a part of the application for a preliminary plan. At a minimum, that report shall include one or more maps indicating boundaries and conditions of woodland areas accompanied by a report addressing the criteria in paragraph 1 above.
9. In designing a subdivision and land development plan for any tract, the applicant shall be guided by the following standards:
 - a. Healthy woodlands exceeding one acre shall be preserved and designated as Greenway areas, to the maximum extent possible.

Proposed site improvements shall be located, designed and constructed to minimize the loss or degradation of woodland areas.

- b. Subdivisions shall be designed to preserve woodlands along roadways, property lines and lines occurring within a site such as streams, swales, stone fences and hedgerows. Such lines and the native vegetation associated with them shall be preserved as buffers between adjacent properties and between areas being subdivided within a property. Preservation shall include ground, shrub, understory and canopy vegetation.
- c. Disturbance or removal of woodlands occupying environmentally sensitive areas shall be undertaken only when approved by the Township and on a limited, selective basis to minimize the adverse impacts of such actions. This shall include but not necessarily be limited to, vegetation performing important soil stabilizing functions on wet soils, stream banks and sloping lands.
- d. No clearing or earth disturbance (except for soil analysis for proposed sewage disposal systems) shall be permitted on a site before the completion of subdivision and land development agreements. The determination of sight distance clearances along roadways shall be made graphically and not by clearing on-site prior to final plan approval.

E. Upland Rural-Agricultural Areas. These areas comprise fields, pastures, meadows, and former agricultural areas in early stages of woodland succession, with fences, stone walls, tree copses and hedgerows, typically bordered by stream valleys and upland woodlands. These comprise the Township's historic working landscape, dotted with historic houses, barns and other structures. They also contain the greatest concentration of prime agricultural soils. Because of their openness and high visibility, development in these areas is likely to be most readily seen and disruptive to the historic landscape. They sometimes provide habitat for wildlife, in conjunction with nearby woodlands and stream valleys. However, it is recognized that these areas also frequently offer the fewest constraints for development.

1. Several elements of these working landscapes lend themselves to incorporation into the Township's Greenway network. These include prime agricultural soils and natural features that visually punctuate the landscape, such as hedgerows, tree copses, stone walls, and visually prominent places such as knolls and hilltops.
2. These areas can also accommodate development, with preferred locations being the non-prime agricultural soils and lower topographic settings where development will be visually less obtrusive. Compact clustered residential designs, with coordinated architectural and landscape architectural themes, are encouraged in highly visible locations where future development cannot be avoided (such as at the far edge of open fields).

F. Slopes. Moderately sloping lands (15% to 25%) and steeply sloping lands (over 25%) are prone to severe erosion if disturbed. Erosion and the resulting overland flow of soil sediments into streams, ponds and public roads, are detrimental to water quality and aquatic life, and a potential hazard to public safety.

1. Areas of steep slope shall be preserved in accordance with the Zoning Ordinance and as required below.

2. All grading and earthmoving on slopes exceeding 15% shall be minimized.
3. No site disturbance shall be allowed on slopes exceeding 25% except grading for a portion of a driveway accessing a single family dwelling when it can be demonstrated that no other routing which avoids slopes exceeding 25% is feasible.
4. On slopes of 15% to 25%, the only permitted grading beyond the terms described above, shall be in conjunction with the siting of a single family dwelling, its access driveway and the septic system (which should typically be designed with a long, narrow drainage field following the land contours).
5. Grading or earthmoving on all sloping lands of 15% or greater shall not result in earth cuts or fills whose highest vertical dimension exceeds six feet, except where in the judgment of the Township no reasonable alternatives exist for the construction of roads, drainage structures and other public improvements, in which case such vertical dimensions shall not exceed 12 feet. Roads and driveways shall follow the line of existing topography to minimize the required cut and fill. Finished slopes of all cuts and fills shall be as required to minimize disturbance of natural grades.

G. Significant Natural Areas and Features. Natural areas containing rare or endangered plants and animals, as well as other features of natural significance exist throughout the Township. Some of these have been carefully documented, e.g., by the Pennsylvania Natural Diversity Inventory, whereas for others, only their general locations are known. Subdivision applicants shall take all reasonable measures to protect significant natural areas and features either identified by the Township's map of Potential Conservation Areas or by the applicant's Existing Resources and Site Analysis Plan by incorporating them into proposed Greenway areas or avoiding their disturbance in areas proposed for development.

H. Historic Structures and Sites. Historic structures and sites shall be protected as follows:

1. All subdivisions and land developments shall comply with all applicable provisions of the Pennsylvania Historical and Museum Commission.
2. Plans requiring subdivision and land development approval shall be designed to protect existing historic resources as listed in the Chester County Newlin Township Historic Resource Atlas of 2010, the Unionville Area Regional Comprehensive Plan Chapter 4 of 2011 or the Newlin Township Open Space, Recreation and Environmental Resources Plan of 1994. The protection of an existing historic resource shall include the conservation of the landscape immediately associated with and significant to that resource, to preserve its historic context. Where, in the opinion of the Township, a plan will have an impact upon an historic resource, the developer shall mitigate that impact to the satisfaction of the Township by modifying the design, relocating proposed lot lines, providing landscape buffers, or other approved means.
3. Township participation, review and approval of the applicant's interaction with the Pennsylvania Historical and Museum Commission with regard to the preservation of historic resources, as required for PADEP approval of proposed sewage disposal systems, shall be in accordance with Section 923, Sewage Disposal Facilities.

I. Historic Rural Road Corridors and Scenic Viewsheds. The Newlin Township Open Space, Recreation and Environmental Resources Plan identifies a number of historic rural roads in various parts of the Township. All applications for subdivision and land development shall attempt to preserve the scenic visual corridors along such roads by incorporating them into Greenway areas or otherwise providing for building setbacks and architectural designs to minimize their intrusion. In instances, where such designs fail to satisfactorily protect corridors, applicants will be required to provide naturalistic landscape buffers to minimize their adverse visual impacts. The species specified for such buffers shall be selected on the basis of an inventory of tree and shrub species found in existing hedgerows and along wooded roadside edges in the vicinity of the development proposal.

J. Trails.

1. When a subdivision or land development proposal is traversed by or abuts an existing trail customarily used by pedestrians and/or equestrians, the Township may require the applicant to make provisions for continued recreational use of the trail.
2. The applicant may alter the course of the trail within the tract for which development is proposed under the following conditions:
 - a. The points at which the trail enters and exits the tract remain unchanged.
 - b. The proposed alteration exhibits quality trail design according to generally accepted principles of landscape architecture (for example: PADEP, Bureau of State Parks' publication "Non-Motorized Trails").
 - c. The proposed alteration does not coincide with a paved road intended for use by motorized vehicles.
3. When trails are intended for public or private use, they shall be protected by a permanent conservation easement on the properties on which they are located. The width of the protected area in which the trail is located should be a minimum of ten feet. The language of the conservation easement shall be to the satisfaction of the Township upon recommendation of the Township Solicitor.
4. The land area permanently designated for trails for public use may be credited toward the open space requirement described in Article 3 of the Zoning Ordinance.
5. An applicant may propose and develop a new trail. If said trail is available for use by the general public and connects with an existing trail, the land area protected for said trail may be credited toward the open space requirement described in Article 3 of the Zoning Ordinance.
6. Trail improvements shall demonstrate adherence to principles of quality trail design.
7. Trails shall have grades not exceeding 30%.
8. Width of the trail surface may vary depending upon type of use to be accommodated, but in no case shall be less than three feet or greater than six feet.
9. No trail shall be designed with the intent to accommodate motorized vehicles.

SECTION 602 DESIGN PROCESS FOR RESIDENTIAL SUBDIVISIONS WITH GREENWAY LANDS

A. Resource Inventory and Analysis. The tract's resources shall be delineated on an Existing Resources and Site Analysis Plan (ER/SA Plan).

B. Four-Step Design Process. All residential subdivisions with Greenway lands shall follow the four- step design process described below.

1. Step 1: Delineation of Greenway Lands, including Stormwater and Wastewater Management Areas

General locations for Greenway land, including stormwater and wastewater management areas, shall be delineated according to the following procedure:

- a. Using the ER/SA Plan as a base map, Primary and Secondary Conservation Areas shall be delineated.
- b. Greenway land shall include all Primary Conservation Areas plus enough Secondary Conservation Area to meet or exceed the minimum acreage requirement for Greenway land set forth in the Zoning Ordinance.
 - 1) The applicant shall prioritize natural and cultural resources in terms of their highest to least suitability for inclusion in the proposed Greenway land in accordance with Section 601 of this ordinance and Sections 306.B and C in the Zoning Ordinance.
 - 2) The locations and boundaries of Primary Conservation Areas shall follow the actual boundaries of floodplains, wetlands, and steep slopes over 25 percent.
 - 3) The locations and boundaries of Secondary Conservation Areas shall be based on the priorities established above, practical considerations given to the tract's configuration, its context in relation to resources on adjoining properties, and the applicant's subdivision objectives. Secondary resources with the highest significance shall be included in the Greenway land. The applicant shall also be guided by any recommendations provided by the Township regarding the delineation of Secondary Conservation Areas, following the Site Visit and/or the Pre-Submission Conference.
 - 4) Greenway land shall be delineated in a manner clearly indicating Greenway land boundaries as well as the types of resources included within them.
- c. Preferred locations for stormwater and wastewater management facilities shall be identified using the ER/SA Plan as a base map. These facilities should be designed to improve the quality of stormwater runoff and wastewater effluent with emphasis placed on achieving maximum groundwater recharge.

- 1) The design of these facilities should strive to use the natural capacity and features of the site to facilitate the management of stormwater and wastewater generated by the proposal.
 - 2) Opportunities to use these facilities as a buffer between the proposed Greenway land and development areas are encouraged.
 - 3) Stormwater management facilities should be located in areas identified as groundwater recharge areas.
 - 4) Wastewater facilities shall comply with the requirements of the Township Sewage Facilities Plan.
 - 5) Such facilities located within the Greenway land may be counted toward the minimum Greenway land requirement as follows. The following stormwater management practices may be counted toward the minimum Greenway land requirement provided they meet the guidelines in the PA Stormwater Best Management Practices Manual: infiltration basin provided the berms do not exceed 36 inches in height; subsurface infiltration bed; Infiltration trench; rain garden; vegetated swale; infiltration berm provided the berms do not exceed 24 inches in height. The following elements of sewage disposal systems may be counted toward the minimum Greenway land requirement: soil absorption areas suitable for active or passive recreation; absorption fields serving individual dwelling units; drainage easements for sewer lines.
- d. Development areas constitute the remaining lands of the tract outside the Greenway land, where dwellings, streets, and lots are to be delineated in accordance with Steps 2, 3, and 4 below.
2. Step 2: Locations for Dwelling Units
- Dwelling units shall be tentatively located, using the proposed Greenway land from Step 1 as reference and orientation as well as other relevant data on the ER/SA Plan. Dwelling units shall be sited to:
- a. Fit the tract's natural topography;
 - b. Be served by adequate water and sewerage facilities;
 - c. Provide views of and access to adjoining Greenway land;
 - d. Avoid encroaching upon Greenway land in a manner visually intrusive to users of such areas; and
 - e. Be located at least 100 feet from Primary Conservation Areas and 50 feet from Secondary Conservation Areas
3. Step 3: Alignment of Streets and Trails

- a. Once dwelling units have been located, applicants shall delineate a street system that provides a safe pattern of vehicular and pedestrian access to each dwelling unit. Streets and trails shall conform to the tract's natural topography and provide for a safe pattern of circulation to, from and within the tract.
 - b. Streets and driveways crossing wetlands and traversing slopes over 15 percent shall be avoided to the greatest extent practicable.
 - c. Street connections are encouraged in order to minimize the number of new cul-de-sacs and to facilitate easy access to and from homes in different parts of the tract and on adjoining parcels. Three way intersections shall be preferred over 4-way intersections.
 - d. Lots shall generally be accessed from interior streets, rather than from roads bordering the tract. Conservancy lots may be exempt from this requirement, as determined by the Governing Body.
 - e. A tentative network of trails shall be shown, where appropriate, providing access to natural and cultural features in the Greenway land. Potential trail connections to adjacent parcels shall also be shown in areas where a county or municipal trail network is envisioned.
 - f. Common greens, shaped by the street system, shall meet the requirements of Section 306.B.5 and 6 of the Zoning Ordinance.
4. Step 4: Design of Lot Lines
Lot lines for the subdivision should be drawn as the last step in the design procedure. They shall follow the configuration of dwelling sites and streets in a logical and flexible manner,.

ARTICLE 7 - MOBILE HOMES AND MOBILE HOME PARKS

SECTION 700 PURPOSE

This Article contains minimum requirements for the design, construction, alteration and expansion of mobile home parks (including manufactured home parks) and related facilities.

SECTION 701 INTENT

In accordance with Articles I and V of the Pennsylvania Municipalities Planning Code, the following regulations are established to promote the safe use, efficient design, amenity, and coordination of mobile home parks in Newlin Township.

SECTION 702 GENERAL REQUIREMENTS

- A. **Applicability.** The provisions of this Article shall apply to all mobile home parks to be constructed, expanded, or added in the Township.
- B. **Applicability to Single Mobile Homes.** Except for Section 714 of this Ordinance, the provisions of this Article shall not apply to single mobile homes constructed on lots held in single and separate ownership, provided they do not abut any other lot containing a mobile home. When two or more mobile homes abut, the remaining provisions of this Article shall apply. In addition, single mobile homes constructed on lots held in single and separate ownership shall meet all other applicable provisions of this Ordinance.
- C. **Limitations on Non-Residential Uses.** No part of any mobile home park shall be used for non-residential purposes, except for approved accessory uses that are required for the direct servicing and amenity of the mobile home or mobile home park's residents and for the management and maintenance of the park.
- D. **Compliance with Flood Plain Regulations and Building Code.** Any mobile home park or manufactured home park shall be in compliance with the provisions of the Township Zoning Ordinance with respect to Flood Hazard District regulations and shall be in compliance with the Township Building Code, as amended, with respect to design, construction, and flood plain management.

SECTION 703 DESIGN REQUIREMENTS

- A. **Screening and Open Space.** Effective perimeter screening shall be placed along property boundary lines except where driveways access public roadways. Not less than 20% of the gross area of each mobile home park that remains after the subtraction of required buffering and greenbelt areas shall be set aside as common open space for the use and enjoyment of the residents of the mobile home park. Such common open space areas shall be substantially free of structures except for those designed for recreational purposes.
- B. **Base Enclosure.** An enclosure of compatible design and material shall be erected around the entire base of each mobile home. Such enclosure shall provide sufficient ventilation to inhibit decay and deterioration of the structure.

- C. **Pad Area.** All lots shall provide a pad area of not less than 800 sf, and constructed either of crushed stone or concrete.
- D. **Grade.** Each mobile home site shall be graded to a slope of not more than one percent.

SECTION 704 STREETS, WALKWAYS, AND OFF-STREET PARKING

- A. **Access.** A vehicular access roadway shall be provided from abutting public streets and shall provide access to each mobile home lot and all common facilities.

- B. **Street Construction and Design Requirements**

- 1. Specifications. Except as provided herein, all streets shall be constructed in accordance with the specifications applicable to streets in conventional residential developments, as specified in Article 9 of this Ordinance.
- 2. Street Plan. A street plan shall be provided with the land development plan.
- 3. Minimum Width. Notwithstanding provisions in this Ordinance to the contrary, cartways shall not be less than 20 feet in width (10 feet for each travel lane), and shall not include parking lanes.
- 4. On-street Parking Prohibited. All parking shall be located in designated off-street areas.
- 5. Street Construction and Design. Notwithstanding provisions in this Ordinance to the contrary, streets shall be constructed according to the following standards:
 - a. Grades. Street grades shall not exceed six percent. However short sections of roadway with a maximum grade of 10% may be permitted when topographic conditions make such grades necessary, provided that traffic safety is maintained.
 - b. Curves.
 - i. Horizontal curves: Horizontal curves shall provide minimum centerline radii of not less than 150 feet,
 - ii. Vertical curves: Vertical curves shall permit a sight distance of not less than 200 feet.
 - c. Intersections. Streets shall intersect at approximately right angles. Centerlines between offset intersecting streets shall not be less than 150 feet. Not more than two streets shall intersect.
 - d. Surface Construction. Internal streets shall be constructed of concrete or macadam of sufficient bearing strength and design to accommodate mobile home units. Dead end streets shall be avoided, but when necessary, the ends of such streets shall be provided with paved turn-around areas not less than 40 feet in radii.
 - e. Illumination. All mobile home parks shall be provided with fully shielded lighting facilities that will adequately illuminate all areas of vehicular and

pedestrian travel throughout the park, to the approval of the Township Engineer.

- f. Sight Line Preservation. Sight distances shall be preserved according to the provisions of Section 908 F of this Ordinance.

C. Off-Street Parking Areas

1. Parking Spaces. Off-street parking spaces shall be provided according to the provisions of the Township Zoning Ordinance. In addition to the off-street parking required in the Zoning Ordinance, supplemental off-street parking areas designated for use by park occupants and guests shall be provided at a rate of not less than one space for every two lots. No on-street parking is permitted in mobile home parks.
2. Location. No common off-street parking area shall be located less than 25 feet or more than 200 feet from any mobile home lot, and shall be screened in areas that abut home lots.

D. Sidewalks. Mobile home parks shall provide sidewalks with widths that relate to the amount of anticipated usage. All mobile home sites shall be connected to sidewalks and to streets and driveways connecting to a paved street. Sidewalks shall be constructed to the following minimum standards:

1. General Requirements: All parks shall contain individual pedestrian walkways that extend between pads to park streets, street walkways along at least one side of all park streets, and community walkways from street sidewalks to community buildings. All access ways shall be constructed of concrete or similar material. All walkways shall be constructed so as to be safe and convenient to use.
2. Individual Walkways: Individual walkways leading from pads to street walkways shall have a minimum width of two feet.
3. Street Walkways: Walkways along streets shall have a minimum width of three feet.
4. Community Walkways: Walkways leading from street walkways to community buildings shall have a minimum width of not less than three and one-half feet.

SECTION 705 SUBDIVISION PLAN REQUIRED

A. Plan Required. A subdivision plan or land development plan for all mobile home parks shall be submitted to the Board of Supervisors for approval prior to the construction of any such park. In addition to the information required in Article 3 of this Ordinance, the following shall be provided as part of any application for approval:

B. Plan Content. A plan containing the following:

1. number of lots
2. total acreage
3. number of lots per net acre

- 4. zoning district and bulk and lot regulations, as required and as provided
- 5. number of off-street parking spaces.
- C. Existing Trees.** Locations of all existing trees over six inches at grade.
- D. Fire Fighting Equipment.** The location and capacity of all fire fighting equipment serving the site.
- E. Refuse Collection Facilities.** Plans and locations of trash and garbage collection facilities serving the site.

SECTION 706 ARRANGEMENT AND CONSTRUCTION OF LOTS AND PADS

- A. Orientation of Dwellings.** Pads shall be oriented such that not more than two dwellings (long sides) shall be on any one plane.
- B. Dwelling Orientation to Streets.** Pads shall be oriented on angles of not less than 40 degrees or more than 60 degrees to internal streets.

SECTION 707 WATER SUPPLY

All water facilities shall be subject to the applicable provisions of the Building Code, as adopted by the Board of Supervisors.

SECTION 708 SEWAGE DISPOSAL

All sewage facilities shall be subject to the applicable provisions of the PADEP, the Chester County Health Department, and the Township Building Code, as applicable.

SECTION 709 ELECTRICAL DISTRIBUTION SYSTEM

All electrical facilities shall be subject to the applicable provisions of the National Electrical Code or the Township Building Code, as applicable, and shall be installed underground.

SECTION 710 STORM WATER COLLECTION

The provisions of Section 921 of this Ordinance shall apply to all mobile home parks.

SECTION 711 GRADING, EXCAVATION, EROSION AND SEDIMENTATION CONTROL

The provisions of Section 920 of this Ordinance shall apply to all mobile home parks.

SECTION 712 SERVICE BUILDINGS AND OTHER COMMUNITY SERVICE FACILITIES

- A. Applicability to Service Buildings.** The requirements of this Article shall apply to service buildings, recreational buildings and other common service facilities such as management offices, repair shops and storage areas, laundry facilities, indoor recreation areas, and commercial uses supplying essential goods or services for the exclusive use of park occupants.
- B. Service Buildings and Facilities to be Provided.** A service building shall be provided for mobile home parks with more than five dwellings. The building shall include a toilet and lavatory for each sex and individual fireproof storage areas for park occupants. The storage area shall include not less than 150 cubic feet per each mobile home lot. The service building may include laundry facilities, a management office, and indoor recreational facilities for mobile home park residents. The mobile home park shall include a sheltered waiting area for transportation and a mail box area for residents.
- C. Fire Protection Equipment.** Portable fire extinguishers, hydrants, and other fire suppression facilities shall be installed and maintained subject to the applicable rules and regulations of the Township Fire Code, the County Fire Marshall, and applicable regulations of the Pennsylvania State Fire Marshal.
- D. Fuel Supply, Storage and Fire Protection.**
1. Liquefied Petroleum Gas.
- a. The design, installation, construction and maintenance of containers and related equipment for the storage and handling of liquefied petroleum gas shall conform to the provisions of the Pennsylvania Act of December 27, 1951, P.L. 1793, as amended, and to the regulations promulgated pursuant thereto by the Pennsylvania Department of Labor and Industry, its successor, or other governmental agency having jurisdiction thereof.
- b. Liquefied petroleum gas systems provided for mobile homes, service buildings or other structures shall be maintained in conformance with the rules and regulations of the Pennsylvania Department of Labor and Industry and shall include the following:
- i. Liquefied petroleum gas systems shall be provided with safety devices to relieve excessive pressures and shall be arranged so that the discharge terminates at a safe location.
- ii. Liquefied petroleum gas systems shall have at least one accessible means for shutting off gas. Such means shall be located outside the mobile home and shall be maintained in effective operating condition.
- iii. All liquefied petroleum gas piping located outside mobile homes shall be stable and protected against damage. Undiluted liquefied petroleum gas in liquid form shall not be conveyed through piping equipment or systems in mobile homes.
- iv. Liquefied petroleum gas containers shall contain not more than 60 US gallons and shall be maintained in a vertical position and shall be securely, but not permanently, fastened to prevent overturning.

No container shall be placed closer than five feet to a mobile home exit or three feet to any window.

- v. No liquefied petroleum gas container shall be stored or located inside or beneath any storage cabinet, carport, mobile home or any other structure.
- vi. All pipe connections shall be of a flare type.

2. Fuel Oil Supply Systems.

- a. All fuel oil systems shall be installed and maintained in conformance with applicable building codes.
- b. All piping from outside fuel storage tanks or cylinders to mobile homes shall be securely, but not permanently, fastened in place.
- c. All fuel oil supply systems provided for mobile homes, service buildings and other structures shall have shut-off valves located within five inches of storage tanks.
- d. All fuel storage tanks or cylinders shall be securely placed and shall not be placed less than five feet from any mobile home exit, and not less than three feet from any window.
- e. Storage tanks located in areas subject to traffic shall be protected against physical damage and shall be screened from all streets.

3. Fire Protection.

- a. All mobile home parks shall be provided with fire hydrants to meet the specifications of the Pennsylvania State Insurance Services Office or its successors, but in any case, each existing or and proposed mobile home shall be within 600 feet of a fire hydrant as measured along accessible streets.
- b. Portable hand operated fire extinguishers of a type suitable for use on oil-fed fires and approved by the local fire prevention authority shall be provided in each service building, and the operator or owner of the mobile home park shall require not less than one such extinguisher to be placed in an appropriate location in each mobile home.

SECTION 713 OPEN SPACE AND RECREATIONAL AREAS

- A. Open Space.** Not less than 50% of the mobile home park shall be maintained as open space, and shall not include any mobile home site, parking area, sewage treatment facility, or service building, although recreational structures and facilities may be located in this area.
- B. Recreational Area.** Not less than 50% of open space areas shall be set aside for active or passive recreational use by residents of the mobile home park. Such open space areas shall be free from floodplains and slopes over 20% and shall be easily accessible to residents. No active recreational area shall be less than 10,000 sf.

- C. **Greenbelt.** A greenbelt buffer not less than 20 feet in width shall surround the mobile home park. The buffer shall consist of a visual screen of mixed native plant material that shall achieve a visual screen within three years of initial planting. Plantings shall not be placed within three feet from property lines.
- D. **Landscaping.** Landscaping shall be provided according to the provisions of this Ordinance.

SECTION 714 SINGLE MOBILE HOMES OUTSIDE MOBILE HOME PARKS

- A. **Single Family Use Only.** All mobile homes erected and maintained as single family dwellings outside a mobile home park shall conform with the following:
 - 1. Minimum Lot Size. The lot upon which the mobile home is installed shall conform to the minimum lot size requirement of the applicable zoning district.
 - 2. Set Back Lines. The mobile home shall meet all front yard, side yard and rear yard set back lines applicable to single-family dwellings in that district.
 - 3. Foundation. The mobile home shall be installed upon, and securely fastened to a foundation or footer which extends below the frost line, and in no event shall be erected on jacks, loose blocks, or with other temporary materials.
 - 4. Foundation Enclosure. The area between the surrounding grade and the bottom of the mobile home shall be enclosed with materials that are compatible with the materials used in the mobile home. The enclosure shall resist decay and deterioration.
 - 5. Utility Connections. The mobile home shall be connected to public water and sewer systems, if available. If not available, the owner shall provide a potable water supply and shall provide a septic system that shall meet the standards of the Chester County Health Department and/or the PADEP.
 - 6. Landscaping and Seeding. The tract shall be seeded, landscaped and planted with shrubs to prevent erosion and stabilize the ground surface.
 - 7. Outbuildings. All garages, utility sheds, or other outbuildings shall conform to the standards applicable to such structures as contained in the Newlin Township Zoning Ordinance.
 - 8. Other Standards. All mobile homes shall meet the specifications for mobile homes in the United States Standards Institute - Standards for Mobile Homes, USA Standard A 119.1-1969, NFPA No. 501B-1968, and any subsequent modification or amendment.
- B. **Township Permit Required.** No mobile home shall be erected on a single lot unless a building permit is first obtained in accordance with the Newlin Township Zoning Ordinance.

SECTION 715 MOBILE HOME PARK PERMITS, LICENSES, INSPECTIONS

- A. **Permits Required for Mobile Home Parks.**

1. Commonwealth Permits Required. It shall be unlawful for any person, firm or corporation or other entity to construct, maintain, alter, extend or operate a mobile home park unless and until a valid permit is issued by the of PADEP in the name of the landowner, for he specified construction, alteration, or proposed extension.
 2. Township Permit Required In addition to the initial permits, the landowner shall apply to the Township Secretary on or before the 15th day of each year for an annual permit to continue operation of the mobile home park. The Secretary shall issue to annual permit upon satisfactory proof that:
 - a. The mobile home park continues to meet the standards of the PADEP.
 - b. The mobile home park continues to meet the standard promulgated by any other state or county agency having jurisdiction.
 - c. The mobile home park continues to meet the standards and provisions of this Ordinance.
 - d. The landowner holds a current and valid certificate of registration issues annually by PADEP for the operation of the mobile home park.
 3. Fees.
 - a. Fees for the initial application and preliminary and final approvals shall be prescribed by regulations by the Board of Supervisors.
 - b. The fee for the annual license shall be as set forth in the fee schedule as established by the Board of Supervisors and shall be submitted to the Township Secretary with the application of the annual license.
 4. Inspections.
 - a. Upon notification to the licensee, manager of person in charge of a mobile home park, The Board of Supervisors may designate a representative of Newlin Township to inspect a mobile home park at any reasonable time to determine compliance with this Ordinance.
 - b. Upon receipt of the application for annual license and before issuing such annual license, the Township Secretary or other designated Township representative shall make an inspection of the mobile home park to determine compliance with this Ordinance. The Township Secretary or other designated Township representative shall therefore notify the licensee of any instances of non-compliance with the Ordinance and shall not issue the annual license until the licensee has corrected all such violations.
 5. Installation or Relocation of Mobile Homes. No individual mobile home shall be installed or relocated in a mobile home park unless the Township Secretary has issued a building permit therefor. No permit for the removal of a dwelling shall be issued until the Township Secretary receives a removal permit issued by the Tax Collector demonstrating compliance with the Act of December 15, 1969, P.L. 362, Section 1, as it may be amended.
- B. Registration of Occupants.** The operator shall maintain an updated and current list of occupants of the mobile home park. This list shall be presented for inspection by the Township upon request.

SECTION 716 MAINTENANCE

- A. Maintenance of Facilities.** The operator or licensee shall be responsible for maintaining all common facilities including but not limited to roads, parking areas, sidewalks and pathways, common open space, water supply and sewage disposal systems and service buildings, in a condition of proper repair, maintenance and cleanliness in compliance with applicable Township ordinances, codes or regulations. If upon inspection by a Township representative designated by the Board of Supervisors, it is determined that the mobile home park is not in compliance with this standard of maintenance, the operator or licensee shall be deemed to be in violation of this Ordinance and the Township Secretary shall notify the operator or licensee of the particulars of any such notification.
- B. Failure to Maintain.** The operator or licensee shall correct all violations within 30 days of notification, except that when the violation is determined by the Township representative to constitute a hazard to the health or safety, he shall order that the violation be corrected immediately.
- C. Continued Maintenance.** The licensee shall demonstrate to the satisfaction of the Township that funds in amount sufficient to maintain all common facilities for a period of not less than two years shall be maintained and reserved in perpetuity, or that the licensee and Township agree on another arrangement to ensure continued maintenance of the mobile home park. The provisions of this paragraph shall be in excess of any performance bonds that the applicant may establish in accordance with the provisions of this Ordinance.

ARTICLE 8 - IMPROVEMENT CONSTRUCTION REQUIREMENTS

SECTION 800 REQUIRED IMPROVEMENTS AND FINANCIAL GUARANTEES

No project shall be considered to be in compliance with this Ordinance until the streets, storm drainage facilities, sewer facilities, survey monuments, and other required facilities have been installed in compliance with the provisions of this Ordinance.

- A. Improvements to the Lot and Connections to Streets.** The applicant shall agree in writing to construct streets and other improvements from the lot or lots to be sold or built upon to an existing improved street, subject to the provisions of Article 9 of this Ordinance. The work shall be performed in strict accordance with approved plans and Newlin Township standards and specifications, and where applicable, the provisions of the Pennsylvania Department of Transportation Specifications 408, latest edition.
- B. Completion of Improvements and Deposit of Escrow Funds.** No plan shall be finally approved until the applicant has completed all of the necessary and appropriate improvements as required as a condition for final approval of a plan; or until such time as the applicant has provided for the deposit with the Board of Supervisors of escrow funds, or a security acceptable to the Board of Supervisors in an amount sufficient to cover 110% of the costs of any improvements which may be required, estimated as of 90 days following the date scheduled for completion by the applicant or developer. The escrow funds or security shall be posted prior to the initiation of construction.
- C. Type of Financial Security.** Such financial security shall be posted with a bonding company or Federal or Commonwealth-chartered lending institution chosen by the party posting the financial security, provided the bonding company or lending institution is authorized to conduct such business within the Commonwealth and shall conduct all legal activities regarding the security according to Pennsylvania laws.
- D. Intended Use of Bond.** Such bond or other security shall provide for, and secure to the public, the completion of any improvements, which may be required on or before the date fixed in the formal action of approval or accompanying agreement for completion of the improvements.
- E. Adjustments to Amount of Security.** The Board of Supervisors may annually adjust the amount of financial security by comparing the actual cost of the 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 either the original or rescheduled date planned for completion. Subsequent to this adjustment, the Board of Supervisors may require the applicant to post additional security in order to assure that the financial security equals the 110%. Any additional security shall be posted by the applicant in accordance with this Section.
- F. Computation of Financial Security.** The amount of financial security shall be based upon an estimate of the cost of completion of the required improvements, submitted by the applicant and prepared by a professional engineer licensed as such in this State and certified by such engineer to be fair and reasonable. The Board of Supervisors, upon the recommendation of the Township Engineer, may refuse to accept such estimate for good cause shown. If the applicant and the Board of Supervisors are unable to agree upon an estimate, then the estimate shall be recalculated by another professional engineer licensed

as such in this State and chosen mutually by the Board of Supervisors and the applicant. The estimate certified by the third engineer shall be presumed fair and reasonable and shall be the final estimate. In the event that a third engineer is so chosen, fees for the services of said engineer shall be paid equally by the Board of Supervisors and the applicant.

- G. Increase in Financial Security When Completion Requires More than One Year.** If the party posting the financial security requires more than one year from the date of posting of the financial security to complete the required improvements, the amount of financial security may be increased by an additional 10% for each one-year period beyond the first anniversary date from posting of the financial security or to an amount not exceeding 110% of the cost of completing the required improvements as reestablished on or about the expiration of the preceding one-year period by using the above bidding procedure.
- H. Staging of Final Plans.** In the case where development is projected over a period of years, the Board of Supervisors may authorize the submission of final plans by section or stages of development subject to such requirements or guarantees as to improvements in future sections or stages of development as it finds essential for the protection of any finally approved section of the development.
- I. Release of Financial Security.** As the required improvements are installed, the applicant posting the financial security may request the Board of Supervisors to release or authorize the release, from time to time, such portions of the financial security necessary for payment to the contractor or contractors performing the work. Any such requests shall be in writing, and the Board of Supervisors shall have 45 days from receipt of such request to allow the Township Engineer to certify, in writing, to the Board of Supervisors that such portion of the work has been completed in accordance with the approved plan. Upon such certification the Board of Supervisors may authorize release by the bonding company or lending institution of an amount as estimated by the Township Engineer fairly representing the value of the completed improvements. The Board of Supervisors may, prior to final release at the time of completion and certification by the Township Engineer, retain 10% of the estimated cost of the aforesaid improvements. This sum shall be returned upon the completion of all improvements.
- J. Financial Security for Water and Sewer Utilities.** If sanitary sewer lines or water supply systems and facilities are to be installed under the jurisdiction of any applicable authority, financial security to assure inspection, proper completion and maintenance thereof shall be posted in accordance with the regulations of the applicable authority and shall not be included within the financial security as otherwise required by this Section.
- K. Failure to Complete Improvements.** In the event that the applicant fails to satisfactorily complete any improvement in a timely manner, the Board of Supervisors may utilize all or a portion of the escrow funds or security to complete the improvement, stabilize any area of land disturbance, and abate or correct any hazardous condition that may arise from the development or construction.

SECTION 801 PERFORMANCE GUARANTEE

Where the Board of Supervisors accept dedication of all or some of the required improvements following completion, the Board of Supervisors may require the posting of a performance guarantee to secure the structural integrity and functioning of said improvements in accordance with the design and specifications as depicted on the final plan, for a term not to exceed 18 months from the date of acceptance of dedication. Such performance guarantee shall be of the same type as otherwise required in this Section with regard to installation of such improvements, and the amount

of the performance guarantee shall not exceed 15% of the actual cost of installation of said improvements.

SECTION 802 RELEASE FROM IMPROVEMENT BOND

When the applicant has completed all of the necessary and appropriate improvements, the applicant shall notify the Board of Supervisors, in writing, by certified or registered mail, of the completion of the aforesaid improvements and shall send a copy thereof to the Township Engineer. The Board of Supervisors shall, within ten days after receipt of such notice, direct and authorize the Township Engineer to inspect all of the aforesaid improvements. The Township Engineer shall then file a written report with the Board of Supervisors, and shall concurrently mail a copy to the applicant by certified or registered mail. The report shall be made and mailed within 30 days after the Township Engineer's receipt of the inspection authorization by the Board of Supervisors. The report shall recommend approval or rejection of the improvements, either in whole or in part. The Board of Supervisors shall either approve or reject the improvements and, if rejecting the improvements, shall indicate the reasons for such rejection.

- A. Notification of the Applicant.** The Board of Supervisors shall notify the applicant of any action taken by the Board of Supervisors in relation to the Township Engineer's report, in writing by certified or registered mail, within 15 days of receipt.
- B. Reimbursement of Inspection Expenses.** The Board of Supervisors may require the applicant to reimburse the Board of Supervisors for reasonable and necessary expense incurred for the inspection of improvements.
 - 1. If the applicant disputes the amount of any such expense in connection with the inspection of improvements, the applicant shall notify the Board of Supervisors that such expenses are unreasonable or unnecessary within ten days of the date of billing. The Board of Supervisors shall not disapprove or delay any application due to the notification of the dispute.
 - 2. If the Board of Supervisors and the applicant cannot agree upon the amount of reasonable and necessary expenses within 20 days from the date of billing, the applicant and the Board of Supervisors shall mutually agree to appoint another professional engineer to review the expenses and make a determination as to the amount which is reasonable and necessary. If the applicant does not agree that an engineer shall be appointed within 20 days from the date of billing, he shall be deemed to have waived his rights to have a neutral engineer.
 - 3. The engineer appointed by the Board of Supervisors and the applicant shall hear evidence and review documentation that the engineer deems necessary, and shall render a decision within 50 days of the billing date. The applicant shall be required to immediately pay the entire amount as determined in the decision.
 - 4. In the event that the Board of Supervisors and the applicant cannot agree upon the professional engineer to be appointed within 20 days of the billing date, the President Judge of the Court of Common Pleas or the district justice shall appoint the engineer upon application of either party.
 - 5. The fees of the appointed engineer for determining the reasonable and necessary expenses shall be paid by the applicant if the amount of payment required in the decision is equal to or greater than the original bill. If the amount of payment is less than the original bill by \$1000 or more, the Board of Supervisors shall pay the fee,

but otherwise the Board of Supervisors and the applicant shall each pay one-half of the fee.

SECTION 803 RELEASE FROM PERFORMANCE GUARANTEE

Upon the expiration of the 18-month period specified in Section 801 of this Ordinance, the applicant may request the Board of Supervisors to release the performance guarantee posted in accordance with Section 801. The release of such performance guarantee shall follow the provisions of Section 802, provided that references to "improvement guarantee" shall be interpreted as "performance guarantee".

SECTION 804 PUBLIC UTILITIES AND LATERALS

- A. Installation.** All water, gas, electric, and other pipes and conduits or other utilities that may be available, and all service connections or laterals shall be laid to the full width of the ultimate right-of-way, where the need can be reasonably anticipated, before streets are paved. The arrangements for said service connections or laterals shall be the responsibility of the applicant. All such installation shall be subject to all applicable ordinances, regulations or policies of the applicable authority or utility.
- B. Public Water Supply.** When water is to be provided by means other than by private wells owned and operated by the individual owners of lots within the subdivision or development, the applicant shall present evidence to the Board of Supervisors that the subdivision or development is to be supplied by a certified public utility, a bona fide cooperative association of lot owners, or by a municipal corporation, authority or utility. 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.

SECTION 805 INSPECTION OF WORK AND MATERIALS

- A. Notice.** The Township and/or the authority may inspect all plans for correctness and inspect all improvements that may be accepted under its jurisdiction for conformance with plans and compatibility with good construction practice. The applicant shall notify the Township Engineer 48 hours in advance of the commencement of any construction operation, in order that provision may be made for inspection by the Township or authority.
- B. Samples of Materials.** Samples of the materials shall be furnished to the Township Engineer in the same manner as is required of contractors under the Pennsylvania Department of Transportation Specifications.
- C. Sanitary Sewers.** When public sanitary sewer construction is a part of the project, certification of applicable materials and inspection of the sewers shall be carried out by the applicable Authority Engineer, which shall have the responsibility and authority granted to the Township Engineer under this Ordinance for purposes of complying with this Subsection.

SECTION 806 REQUIRED INSPECTION STAGES

The applicant shall permit the Township Engineer to inspect any improvement that may be accepted by the Board of Supervisors or applicable authority. Such inspections shall be conducted at a reasonable time, place and schedule as determined by the Township Engineer as being necessary to properly evaluate the improvement.

SECTION 807 DEDICATION OF IMPROVEMENTS

All improvements shall be deemed to be private improvements and only for the benefit of the specific project until such time as they have been offered for dedication and formally accepted by the Board of Supervisors or authority. No responsibility of any kind for any improvements shall fall onto the Township or authority until the improvements have been formally accepted. No improvement shall be accepted for dedication except upon the submission of as-built drawings by the applicant and upon inspection.

SECTION 808 CONDITIONS OF ACCEPTANCE

- A. Conditions.** The Township shall have no obligation to accept and make public any street or other improvement unless:
1. The required improvement, utility mains and laterals, and monuments, shown on an approved plan or plans have been constructed to the requirements of the Township.
 2. It is established to the satisfaction of the Board of Supervisors that there is a need for the improvements to be taken over and made public.
- B. Acceptance.** The Township 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 ordinance or resolution of the Board of Supervisors.

ARTICLE 9 - DESIGN STANDARDS

SECTION 901 PURPOSE

This article establishes and defines the public improvements and design standards that the Township shall require in the review, approval, and construction of any subdivision or land development.

SECTION 902 GENERAL PRINCIPLES

- A. Principles, Standards and Requirements.** The following principles, standards and requirements shall be met by applicants in preparing plans for proposed subdivisions and land developments.
- B. Minimum Standards.** The standards and requirements outlined herein shall be considered minimum standards and requirements for the promotion of public health, safety, morals and general welfare.
- C. Effect of Other More Restrictive Standards.** When other applicable regulations impose more restrictive standards than those specified herein, the more restrictive standards shall apply.
- D. Modifications and Waivers.** Where literal compliance with the standards herein specified is clearly impractical, the Township may modify or adjust the standards to permit reasonable use of property while securing substantial conformance with the objectives of these standards.
- E. Policy on Circulation and Road Improvements.** New streets proposed to be created as a part of any development proposal should be compatible with the Newlin Township Comprehensive Plan policy on circulation and road improvements (Chapter 5, page 66-67), and applicable policies in the Newlin Township Open Space, Recreation and Environmental Resources Plan.
- F. Interconnections.** Streets shall be interconnected as practicable (employing cul-de-sacs only where unavoidable according to the provisions of Section 907 E of this Ordinance), and they may also be supplemented with lanes or alleys to the rear of lots. Where cul-de-sacs are deemed to be unavoidable, continuous pedestrian circulation shall be provided by connecting sidewalks that link the end of the cul-de-sac with the next street (or open space).
- G. Visual Interest.** Street layouts shall include design elements to enhance visual interest, and street layouts shall be designed to interconnect and to produce terminal vistas of protected open space or prominent structures.
- H. Vistas.** Streets should be aligned so that their terminal vistas are of greens or other open space, or civic or institutional buildings, wherever possible. Where this is not possible, effort shall be made to terminate those streets with buildings of above-average size, whose architecture shall be encouraged to be distinctive or special.

- I. **Access Preferences.** For lots adjacent to any designated arterial or collector road, access to such road shall depend on whether alternative access points are available as well as sight and environmental conditions. The Applicant shall consider all of the options for accessing the arterial or collector from his or her lot and their feasibility. The preferences of the Township for providing access are listed below and ranked in descending order of desirability. The applicant shall use preference 1 unless he or she demonstrates to the Township's satisfaction that this preference option is not feasible, in which case preference 2 can be used. Option preference 3 shall only be used where the applicant can show to the Township's satisfaction that neither preference options 1 or 2 are feasible. It shall be the burden of the Applicant to demonstrate why preference options 1 and 2 cannot be achieved before 3 shall be considered.

1. Preference 1: Connection to Existing Access Point

Access points along any arterial or collector road shall not be established where access to a lot may be provided through the use of an existing access point which is either on-site or adjacent to the lot unless the Board of Supervisors determine that direct access to the arterial or collector will result in safer and more efficient traffic flow.

2. Preference 2: Creation of an Internal Access Road

Where access to a lot cannot be provided as described in Preference 1 above, then an internal access road shall be established.

3. Preference 3: Individual Access

Where access to a lot cannot be provided as described in Preferences 1 or 2 above, above, due to sight conditions, environmental constraints, or other reasons, then access may be provided to an arterial or collector road.

SECTION 903 LAND REQUIREMENTS

- A. **Suitability.** The proposed use shall be suited to the land to be subdivided and developed in conformance with the Township Comprehensive Plan, Zoning Ordinance, and other applicable regulations.
- B. **Removal of Hazards.** Land or properties subject to life, health or safety hazards shall not be subdivided or developed for residential purposes until all such hazards have been eliminated or unless adequate safeguards against such hazards are provided by the plan.
- C. **Preservation of Natural Features.** The design of the proposed subdivision and land development shall preserve, to the greatest extent possible, the natural features and topography of the site.
- D. **No Unusable Parcels Shall be Created.** No parcel of land shall be created, either by inclusion or exclusion from a proposed subdivision or land development, which cannot be properly used for a permitted use under the existing zoning regulations for that district.

SECTION 904 BLOCKS

- A. Block Length, Width, and Shape.** The length, width, and shape of blocks shall be determined with regard to:
1. The provision of adequate sites for buildings of the types that are proposed;
 2. The least adverse impact to topography and natural features;
 3. Safe and convenient vehicular and pedestrian circulation; and
 4. Thoughtful and innovative design to create an attractive community.
- B. Maximum and Minimum Block Length.** Blocks shall not exceed 1600 feet in length, or be less than 500 feet in length. In the design of blocks longer than 1000 feet, special consideration shall be given to access for fire protection.
- C. Minimum Block Width.** Wherever practicable, blocks shall be two lot depths wide. Except for lots located at street intersections or where reverse frontage lots are approved, no blocks shall have lots that front on more than one street.

SECTION 905 LOTS AND LOT AREA

- A. General Lot Design Standards**
1. Lot dimensions, areas, and minimum setback standards shall not be less than as required by the Zoning Ordinance.
 2. Lot dimensions, areas, and orientation shall be appropriate for the proposed type of development and use, and sufficient to provide satisfactory space for required off-street parking, accessory uses, and other applicable Township standards.
 3. Wherever practicable, the side property lines of lots shall be at right angles or radial to the right-of-way line.
 4. Lot lines shall follow municipal boundaries rather than cross them, to the greatest extent feasible.
 5. No remnants of land that do not meet minimum area and bulk requirements shall be created or remain after a subdivision approval.
- B. Lot Frontage Standards.**
1. Frontage Required on a Street. All lots shall have frontage along the right-of-way of a street and have direct access to an existing or proposed street. Each lot shall have, in addition to the minimum width at the front lot line, sufficient free and complete access to an existing or proposed cartway to avoid the need to cross any portion of another lot to reach such street.
 2. Access. Proposed subdivisions involving three or more residential lots (in total) abutting an arterial or major collector road, or five or more lots abutting a minor collector road, shall be designed to take access from an interior road. The applicant shall provide a local access street to connect the lots to the arterial or collector. Where a choice exists, the applicant shall connect to the street with the

lowest classification. Access and design for new residential streets shall be consistent with the requirements of Section 908 A.

C. Driveway Standards. Driveways that are proposed to intersect any arterial or collector road shall be designed in accordance with the standards set forth in this Article.

1. Number of Access Points per Lot.
 - a. Single Family. For single family residential uses, no more than one access point per lot shall be permitted.
 - b. Multi-Family. For multi-family residential and non-residential uses, two or more access points may be permitted unless the size of the property or other site condition limits the feasibility of more than one access point.
2. Future Access For Adjacent Properties. When a new access point is designed, consideration shall be given to establishing a joint accessway with a future adjacent use. The Board of Supervisors may require the dedication of a right-of-way extending to the property line to provide such future access.

D. Scenic Road Requirements. The following design requirements shall apply to any subdivision or land development proposal on any parcel adjacent to any road segment identified as a "scenic road" or "exceptionally scenic stream valley road" or containing a "vista point" on Map 3-4 ("Scenic, Historic and Cultural Resources Map") in the Township Open Space, Recreation, and Environmental Resources Plan:

1. Roadside Features. Any roadside feature adjacent to any road or road segment identified as a "scenic road" or "exceptionally scenic stream valley road" in the Township Open Space, Recreation, and Environmental Resources Plan, as amended, and located within the public right-of-way, including but not limited to fences and walls, hedgerows, trees, and topographic formations shall not be disturbed except to the extent necessary to provide safe and efficient ingress to and egress from the site, consistent with all applicable sight distance requirements. It shall be the burden of the applicant to demonstrate that any proposed disturbance is the minimum necessary to provide safe ingress and egress.
2. Vista Points. Any vista point identified in the Township Open Space, Recreation, and Environmental Resources Plan, as amended, not located within the public right-of-way should be disturbed to the minimum extent possible without affecting the amount of development permitted on the parcel. It shall be the burden of the applicant to demonstrate that the proposed site configuration causes the minimum possible disturbance to identified scenic vistas.
3. Location in Relation to Ridge Lines and Vistas. Every attempt shall be made to situate dwellings and accessory buildings below existing ridgelines or the tree line on ridges to preserve existing scenic vistas from public roads. To achieve this objective, dwellings and accessory buildings should be sited entirely below the elevation of the nearest ridgeline or ridgetop treeline whenever possible. Where the applicant claims that dwellings or accessory buildings cannot be situated below the ridgeline, it shall be the burden of the applicant to demonstrate why not and how the proposed design creates the minimum possible disturbance of views of the ridgeline.

To the extent that any portion of a structure is proposed to be located above a ridgeline elevation, such siting shall be contingent upon the submission and approval by the Board of Supervisors of a plan for the mitigation of such ridgeline

impacts. Such plans shall identify the locations and dimensions of the proposed structure(s), the architectural style proposed, and shall demonstrate how the structure(s) shall be effectively screened and/or designed to minimize disruption of views of the ridgeline from public roads.

SECTION 906 STREET SYSTEM

- A. Relationship to Street Plans as may be Adopted by the Township.** Proposed streets shall be properly related to such street plans or parts thereof as have been officially prepared and adopted by the Township, including recorded subdivision or land development plans or an Official Map.
- B. Relationship to County, State Road and Highway Plans.** Proposed streets shall further conform to such County, and State road and highway plans as have been prepared, adopted and/or filed as prescribed by law.
- C. Relationship to Topography.** Streets shall be logically related to the topography so as to produce usable lots, reasonable grades, proper alignment and drainage, and to provide for adequate sight distances.
- D. Through Traffic Discouraged.** Minor collector and local streets shall be so laid out as to not encourage through traffic, but provision for street connections into and from adjacent areas may be required. Collectors and arterials shall be connected with such existing streets and highways to form continuations thereof.
- E. Provisions for Access for Further Subdivision.** If lots resulting from the proposed subdivision are of sufficient area to permit further subdivision, or if a portion of the tract is not subdivided at the time of application, adequate street rights-of-way to permit further subdivision shall be provided as necessary, to be no less than the right-of-way required for minor collector or local streets. Remnants and landlocked areas shall not be created.
- F. Minor Access Streets.** Where a proposed subdivision or land development abuts or contains an existing or proposed arterial or collector street, the Township may require marginal access streets, rear service alleys, reverse frontage lots or such other treatment as will provide protection for abutting properties, reduction in the number of intersections or access points with the major street, and separation of local and through traffic.
- G. Reservation of Additional Right-of-Way.** Where a proposed subdivision or land development abuts or contains a collector or arterial street identified in Township, County or State plans for future road widening beyond normal Township design standards, the applicant shall be required to reserve additional right-of-way to provide for the planned widened street or highway.
- H. No Half or Partial Streets.** New half or partial streets shall not be permitted.
- I. No Reserve Strips.** A parcel of land separating a street from adjacent properties (reserve strips) including those controlling access to streets, shall be prohibited, unless dedicated to the Township.
- J. Continuations of Existing Streets.** Continuations of existing streets shall be known by the same name, but names for other streets shall not duplicate or closely resemble names for existing streets. All street names are subject to approval by the Board of Supervisors, the Township 911 Coordinator, and other emergency service providers as appropriate.

- K. Continuation into an Adjacent Municipality.** Where streets continue into adjoining municipalities, evidence of compatibility of design, particularly with regard to street widths, shall be submitted. The applicant shall coordinate such designs with both municipalities to avoid abrupt changes in cartway width, alignment, or in improvements provided.
- L. Continuations of Existing Streets.** New streets shall be laid out to continue existing streets at equal or greater width, in regard to both cartway and right-of-way, where such continuations are reasonable and practical. Minimum widths shall be as established in Section 908 below.
- M. Connection of Lower Order Streets to the Lesser of Higher Order Streets.** Lower order streets should be connected to the lesser of higher order streets.

SECTION 907 LOCAL STREETS

- A. No Dead-End Streets Allowed.** Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts, or when designed as a loop or cul-de-sac street in accordance with the requirements of this Section.
- B. Placement of Turn-Arounds.** Unless future extension is clearly impractical and undesirable, the cul-de-sac turnaround right-of-way shall be placed adjacent to a property line, and a right-of-way of the same width as the street shall be carried to the property line in such a way as to permit future extension of the street into the adjoining tract. The applicant shall have the burden of demonstrating the impracticality of extending a street to a property line in order to justify a shorter street.
- C. Township May Require Through Streets.** A loop or cul-de-sac street may not be permitted when, in the determination of the Township, a through street is feasible and more desirable. In order to justify a cul-de-sac street, the applicant shall have the burden of showing the impracticality of a through street.
- D. Length of Cul-de-Sac Streets.** Each permanently terminated cul-de-sac street shall serve not more than 24 single-family residential dwellings, not more than 50 two-family or multiple family dwellings, and not more than six non-residential lots. The cul-de-sac street shall be a minimum of 250 feet in length and a maximum of 1000 feet in length. A cul-de-sac street of greater length may be approved by the Township where the topography, shape or other limitations of the tract preclude the practicality of providing a second street. Subdivisions containing less than 15 dwellings shall not include more than one roadway entrance onto public roadways.
- E. Circular Turnaround Required.** Permanently terminated cul-de-sac streets shall have a circular turnaround with minimum rights-of-way and paving radii as prescribed below.

"Table 5 - Required Minimum Paving Radii for Cul-de-Sacs"				
Type of Cul-de-Sac	Right-of-Way Radius	Outer Paving Radius	Inner Paving Radius	Moving Lane
Residential	50 feet	40 feet	n/a	n/a
Residential with Center Island	55 feet	45 feet	25 feet	20 feet
Commercial/ Industrial	70 feet	60 feet	n/a	n/a
Commercial/Industrial with Center Island			35 feet	25 feet

- F. Center Islands.** Maintenance responsibility of center islands in the cul-de-sac turnaround shall be determined prior to final plan approval and recorded on the deed. The island shall be landscaped with a permanent groundcover subject to approval by the Township.
- G. Not More than Four Lots on a Cul-de-Sac Turnaround.** No more than four lots shall have frontage on the cul-de-sac turnaround and no more than four driveways shall have access to the cul-de-sac turnaround.
- H. Increased Radii.** Greater cul-de-sac radii may be required by the Board of Supervisors.
- I. Maximum Slope Across Cul-de-Sac.** The maximum slope across the diameter of a cul-de-sac turnaround shall not exceed five percent. The minimum grade around the curbing shall not be less than one percent.
- J. Temporary Road Ends.** Any street temporarily terminated either for access to an adjoining property or for authorized stage development shall be provided with a temporary all-weather turnaround within the subdivision or land development. The use of such a turnaround shall be guaranteed to the public until such time as the street is extended. The temporary turnaround shall be circular, with a minimum cartway radius of 40 feet, and shall remain completely within the right-of-way. The turnaround right-of-way shall be placed adjacent to the property line and a right-of-way of the same width as the street shall be carried to the property line in such a way as to permit future extension of the street into the adjoining tract
- K. Street Grades.** The street grade requirements of Section 910 shall apply to cul-de-sac streets.

SECTION 908 STREET WIDTHS

- A. New Residential Streets.** New residential streets shall be classified according to the expected Average Daily Trips (ADT) level of the street (See Section 908 A 4 below for ADT rates). If subdivision lots are of sufficient area for further subdivision, the Township may require that the street be constructed to the standards of a higher classification, unless deed restricted against further subdivision.
1. Purpose: The purpose of these provisions is to establish appropriate standards for the design of streets in residential subdivisions that will:
 - a. Protect the safety of neighborhood residents;
 - b. Protect the residential qualities of neighborhoods by limiting traffic volume, traffic speed, noise, and fumes;
 - c. Minimize maintenance and repair costs of streets;
 - d. Minimize impervious coverage, thereby protecting the quantity and quality of the Township's groundwater resources.
 - e. Promote the safety and convenience of vehicular and pedestrian traffic;
 - f. Encourage the efficient use of land.
 2. Applicability: The provisions of Section 908 A shall be applicable to all new residential streets. Except as otherwise stated in this section, new residential streets shall be constructed in accordance with the sections of this Article applicable to local road design standards.
 3. Street Hierarchy: Proposed residential streets are classified under the overall category of "local street." Each proposed residential street shall be further classified under the following sub-categories of local streets and designed for its entire length to meet the minimum standards for one of the street types listed below. The specific criteria used for determining street classification and the minimum required street widths are located in Sections 980 A 5, 6, 7, and 8, respectively.
 - a. Local Access Street. This is the lowest order residential street in the hierarchy and is intended to carry the least amount of traffic at the lowest speed. It will provide the safest and most desirable environment for a residential neighborhood. Developments should be designed so that all, or the maximum number possible, of homes front on this class of street. (See Section 908 A 5).
 - b. Secondary Distributor Street. This is the middle order residential street in the hierarchy and will carry more traffic than the local access street. It should provide an acceptable if not optimum environment for a residential neighborhood. (See Section 908 A 6).
 - c. Primary Distributor Street. This is the highest order of street that can be classified as residential and will carry the largest volume of traffic at higher speeds. In large residential developments, this class of street may be necessary to carry traffic from one neighborhood to another or from the

neighborhood to streets connecting other areas in the community. This level of street is the least suitable for providing direct access to homes and such access should be avoided to the extent possible. (See Section 908 A 7).

d. Special Purpose Streets:

- i. Alleys - An alley provides a secondary means of access to lots. It will normally be on the same level in the hierarchy as a local access street, although different design standards apply. (See Section 908 A 8).
- ii. Marginal Access Streets - A marginal access street is a street parallel and adjacent to a collector or higher-level street and provides access to abutting properties and separation from through traffic. It may be designed according to the standards for a local access street or a secondary distributor street, as traffic volumes dictate.

4. Trip Generation Rates. The following table shall be used to determine the ADT levels of proposed residential developments and streets. Any dwelling type not listed below shall use the traffic volume estimates based on the most current edition of the Institute of Transportation Engineer's (ITE) publication, Trip Generation.

Table 6 - Trip Generation Rates	
Housing Type	Average Weekday Trip Generation Rates
Single-Family Detached	9.6 trips/dwelling unit
Single-Family Semi-Detached (twin), Duplex, Attached (townhouse)	5.9 trips/dwelling unit
Multi-Family (apartments)	6.6 trips/dwelling unit
Mobile Home Park	4.8 trips/dwelling unit

5. Local Access Street Standards.

- a. Service Restrictions. A local access street is a frontage street that provides access to abutting properties; it shall be designed to carry no more traffic than is generated on the street itself. Each local access street shall be designed so that no section of the street carries an average daily traffic (ADT) volume of greater than 200. Each half of a loop street may be regarded as a single local access street and the total calculated traffic volume generated on a loop street shall not exceed 400 ADT.
- b. Street Access. Local access streets may take access from any street type. Both ends of a loop street, however, must intersect the same

collecting street and be laid out to discourage through traffic. Grid street patterns shall be laid out to discourage traffic other than those residents of the immediate neighborhood.

- c. Street Design Standards - Local Access Streets. Travel lane widths shall be determined on the basis of the intensity of development proposed and the manner in which parking shall be provided as follows:

Table 7 - Local Access Streets						
DESIGN FACTORS			STREET STANDARDS			
Development Type	Parking		Travel Lane Width ¹	Parking Lane Width	Total Cartway Width	Individual Driveway Access Permitted
	Off-Street	On-Street				
Permanent open space, no residential frontage	None	None	9 feet	n/a	18 feet	n/a
Lots 3 acres or more, deed restricted against further subdivision	Off-Street		10 feet		20 feet	Yes
Lot widths 100 feet or greater			One Side		8 feet (one side)	
Lot widths 40 to 100 feet	Off-Street using rear alley	Two Sides ²	11 feet	8 feet (both sides)	38 feet	No
Lot widths less than 40 feet w/ rear alley access				Parking lot provided for spillover parking	n/a	22 feet
Lot widths less than 40 feet or no individual lots (i.e. apartments)	Off-Street or parking lot provided					

¹ Where raised curbing is proposed, one additional foot shall be added to the minimum travel lane width. Where no curbing or flush curbing is being used, the minimum travel lane width shall be used.

² For this development type, a single parking lane may be provided if houses front on only one side of the street. In such cases, the total cartway width may be reduced by eight feet to a total width of 30 feet.

- d. Travel Lanes. All local access streets shall provide at least two travel lanes. Where a parking lane is not required to accommodate spillover parking, occasional short-term parking for service pick-up or delivery shall be permitted within the moving lanes.

- e. Minimum Right-of-Way Width: 50 feet
 - f. Cul-de-Sac Turnarounds. Cul-de-sac turnarounds shall be designed in accordance with the requirements of Section 907 E.
 - g. Engineering Criteria. Unless otherwise specified herein, local access streets shall meet the applicable design and construction standards of this ordinance.
6. Secondary Distributor Street Standards
- a. Service Restrictions
 - i. A secondary distributor street is a frontage street that provides access to abutting properties and also conducts traffic from local access streets intersecting it.
 - ii. Each secondary distributor street shall be designed so that no section of it will convey a traffic volume greater than 500 ADT. Each half of a loop secondary distributor street and the total traffic volume conveyed on a loop street shall not exceed 1000 ADT.
 - iii. Secondary distributor streets shall be designed so as not to encourage external through traffic that has neither origin nor destination on the secondary distributor or its tributary local access streets.
 - b. Street Access. Every secondary distributor must be provided with no less than two access intersections to streets of higher classification in the street hierarchy if the traffic volume exceeds 500 ADT on the street. For secondary distributor streets designed for 500 ADT or less, one access intersection to a street of higher order is allowed.
 - c. Street Design Standards - Secondary Distributor Streets. Travel lane widths shall be determined on the basis of the intensity of development proposed and the manner in which parking shall be provided as follows:

Table 8 - Secondary Distributor Street Standards

DESIGN FACTORS			STREET STANDARDS			
Development Type	Parking		Travel Lane Width ¹	Parking Lane Width	Total Cartway Width	Individual Driveway Access Permitted
	Off-Street	On-Street				
Permanent open space, no residential frontage	None	None	10 feet	n/a	20 feet	n/a
Lots 3 acres or more, deed restricted against further subdivision	Off-Street		11 feet		22 feet	Yes
Lot widths 100 feet or greater			One Side		8 feet (one side)	
Lot widths 40 to 100 feet	Off-Street from alley	Two Sides ²		8 feet (both sides)	40 feet	No
Lot widths less than 40 feet or no separate housing lots (apartments)				Off-Street or parking lot provided	Parking lot provided for spillover parking	n/a

¹ Where raised curbing is proposed, one additional foot shall be added to the minimum travel lane width. Where no curbing or flush curbing is being used, the minimum travel lane width shall be used.

² For this development type, a single parking lane may be provided if houses front on only one side of the street. In such cases, the total cartway width may be reduced by eight feet to a total width of 32 feet.

- d. Travel Lanes All secondary distributor streets shall be provided with two continuous travel lanes within which parking is not permitted.
- e. Minimum Right-of-Way Width: 50 feet.
- f. Cul-de-Sacs:
 - i. Cul-de-sac turnarounds shall be designed in accordance with the requirements of Section 907 E.
 - ii. Cul-de-sac secondary distributor streets with an anticipated traffic volume exceeding 500 ADT shall be prohibited.

- iii. In no case shall a secondary distributor cul-de-sac exceed 1000 feet in length.
 - g. Engineering Criteria. - Unless otherwise specified herein, secondary distributor streets shall meet the applicable design and construction standards of this ordinance.
7. Primary Distributor Street Standards.
- a. Service Restrictions. A primary distributor street is a street that carries residential neighborhood traffic but provides limited or no residential frontage.
 - i. Primary distributor streets shall be required when the average daily traffic anticipated on the street exceeds the limits for residential secondary distributor streets.
 - ii. Whenever possible, primary distributor streets shall be designed so that no residential lots directly front on them. When this is not possible, the amount of residential frontage shall not exceed the limits set forth in the accompanying chart. In addition, only lots having frontages of 100 feet or greater may front on primary distributor streets and space shall be provided on these lots for turnarounds so that vehicles do not have to back out onto primary distributor streets.

Table 9 - Primary Distributor Street Limitations				
Percent of Total Length of Primary Distributor Streets Permitted to Have Residential Lots Fronting On and Taking Access From the Primary Distributor Street				
ADT level	1000 to 1199	1200 to 1599	1600 to 1999	2000 and over
Allowable Access Frontage	20%	10%	5%	0%

- iii. Primary distributors shall be laid out to discourage through traffic unless linkage between streets outside of the subdivision is determined by the municipality to be desirable.
- iv. If the anticipated ADT exceeds 3000, the street shall be classified as a higher order than a primary distributor. The municipality, upon recommendation of their engineer, shall determine the required design standards. These standards may be in excess of the minimum standards established for primary distributors by this Ordinance.
- v. On-street parking shall be prohibited on primary distributor streets.

- b. Street Access Every primary distributor shall have no fewer than two access intersections to streets of equal or higher classification in the street hierarchy.
- c. Street Design Standards. Travel lane widths shall be based upon anticipated average daily trips as follows.

Table 10 – Minimum Street Widths		
Average Daily Trips (ADT)	Travel Lane Width	Total Cartway Width
2000 ADT or less	10 feet (no or flush curbs) 11 feet (raised curbs)	20 feet 22 feet
More than 2000 ADT	11 feet (no or flush curbs) 12 feet (raised curbs)	22 feet 24 feet

- d. Travel Lanes. Primary distributor streets shall be provided with two continuous travel lanes. Parking shall not be permitted on primary distributor streets.
 - e. Minimum Right-of-Way Width - 60 feet.
 - f. Engineering Criteria - Unless otherwise specified herein, primary distributor streets shall meet the applicable design and construction standards of this ordinance.
8. Alley Standards.
- a. Service Restrictions: Alleys are permitted under the following circumstances:
 - i. Frontage lot widths are less than 75 feet.
 - ii. Frontage on an alley shall not be construed to satisfy the requirements of this Ordinance for frontage on an approved street.
 - iii. No parking shall be provided for or permitted within the right-of-way of the alley.
 - iv. Street systems within which alleys are a part shall be designed to discourage through traffic on alleys.
 - v. Alleys shall be prohibited in developments of single-family detached dwellings unless such single-family detached dwellings are on lots of 12,500 square feet or less or are part of a Unified Residential Development as defined by the Zoning Ordinance.

- b. Street Access. Alleys may only intersect local access or secondary distributor streets.
- c. Alley Length. Alley length shall not exceed a distance of 800 feet.
- c. Alley Width. Alleys to be dedicated to the Township shall have a minimum paved width of 16 feet. Alleys not proposed for dedication shall have a minimum paved width of 12 feet.
- d. Minimum Right-of-Way Widths. Alleys shall provide the following rights-of-ways:

Dedicated -33 feet
Undedicated -16 feet
- e. Building Setback from Alley. Garages or parking stalls shall be set back a minimum of 20 feet from the centerline of any alley. In no case shall garages be located within the required right-of-way.

B. Existing Residential Streets and New Non-Residential Streets. Existing streets shall be as classified in the Newlin Township Comprehensive Plan of 1997 or as amended. New non-residential streets shall be classified by the Township Engineer according to function.

- 1. Widths. Minimum right-of-way and cartway widths for existing streets or new non-residential streets shall be as follows:
 - a. Local streets and marginal access streets - 50 foot right-of-way and 30-foot cartway.
 - b. Minor collector streets - 50 foot right-of-way and 34-foot cartway.
 - c. Major collector streets and minor arterial streets - 80 foot right-of-way and 40-foot cartway.
 - d. Arterials - standard widths established by PADOT.
- 2. New Streets Abutting Existing Streets of Substandard Width. Where a subdivision or land development abuts or contains an existing street of substandard width, all normally required public improvements and additional cartway width, in conformance with Township design standards, shall be constructed and additional right-of-way width, in conformance with Township design standards, shall be dedicated. The Board of Supervisors may approve, in lieu of immediate construction of the public improvements, a cash payment sufficient to cover the costs of the public improvements. The amount of such cash payment shall be determined by the Board of Supervisors in consultation with the Township Engineer. Any such payment shall be set aside in a Township fund for public improvements
- 3. Public Street Improvements. Public streets shall be constructed or improved in accordance with the applicable design and construction standards of this Article.
- 4. Private Street Improvements. Private streets shall adhere to the design standards and other requirements of Section 913, Private Streets.
- 5. Utility Relocations. Where it is necessary to relocate existing utility poles to make room for new or improved roads or for other improvements related to a

subdivision or development, the developer shall be fully responsible for relocating the utility poles and the associated costs.

SECTION 909 STREET ALIGNMENT

- A. Street Line Deflections.** Whenever street lines are deflected in excess of five degrees, connection shall be made by horizontal curves.
- B. Centerline Radii.** To insure adequate sight distance, minimum centerline radii for horizontal curves shall be as follows:
1. Local Streets.
 - a. Local streets (existing or non-residential) - 150 feet.
 - b. Local streets (new residential):
 - i. Local access street - 100 feet
 - ii. Secondary distributor street -150 feet.
 - iii. Primary distributor street - 350 feet.
 2. Collector Streets - 300 feet.
 3. Arterial Streets - 500 feet.
- C. Tangent Required Between Curves.** Except on local streets, a tangent shall be required between curves. A long radius curve shall be preferred in all cases to a series of curves and tangents. In addition, compound curves may be satisfactory in some instances. Tangents of 100 feet shall be required between reverse curves except as follows for new residential streets:
1. Local Access Streets - 50 feet
 2. Secondary Distributor Streets -100 feet
 3. Primary Distributor Streets -150 feet
- A. Superelevation.** Superelevation shall be required when curve radii are less than 600 feet on arterial or collector streets or as most currently specified by PennDOT.

SECTION 910 STREET GRADES

- A. Centerline Grades.** Centerline grades shall not be less than one percent.
- B. Maximum Centerline Grades.** Centerline grades shall be in conformance with the recommendations of the American Association of State Highway and Transportation Officials (AASHTO) but, in no case shall exceed the following:
1. Local Street - Eight percent.
 2. Collector - Seven percent.
 3. Arterial Streets - Four percent.

- C. Vertical Curves.** Vertical curves shall be used at changes of grade exceeding one percent and shall be designed in relation to the extent of the grade change (at a rate no more abrupt than one percent change in grade per 25 feet along centerline) provided that the following minimum sight distances are maintained. If the minimum sight distances using AASHTO formulas are greater than those listed below, the greater sight distances shall apply.
1. Local Street - 200 feet.
 2. Collector Street - 300 feet.
 3. Arterial Street - 400 feet.
- D. Leveling Area at Intersections.** Where the grade of any street at the approach to an intersection exceeds four percent, a leveling area shall be provided with not greater than four percent grades for a distance of 50 feet measured from the nearest right-of-way line in the intersecting street.
- E. No Maximum Grades with Minimum Curve Radii.** Under no conditions shall maximum grades be permitted with minimum curve radii.
- E. Grading.** Grading of one quarter of an inch per one foot shall be provided in the area from the back of the curb to at least ten feet from the face of the curb, or in the full right-of-way width from the back of the curb, whichever area is greater. This grading width shall be increased as necessary where sidewalks or planting strips, or sidewalks and planting strips, are to be provided. Beyond the limits of this grading, banks shall be sloped to prevent erosion, but this slope shall not exceed two horizontal to one vertical, with tops of slope in cuts rounded. All streets shall be graded to the grades shown on the street profile and the cross-section plan submitted and approved with the final plan. All grading of streets also shall meet the requirements of all Township Ordinances in the judgment of, and after inspection by, the Township Engineer or other person designated by the Board of Supervisors to inspect and check the grading of streets for accuracy.

SECTION 911 STREET INTERSECTIONS

- A. Right Angles.** Streets shall be laid out to intersect at right angles.
- B. Multiple Intersections.** Multiple intersections involving the junction of more than two streets shall not be permitted.
- C. Clear Sight Triangles.** Clear sight triangles shall be provided at all street intersections and driveway intersections with streets and shall be shown on the subdivision or development plan. Each side of the sight triangle shall be a minimum of 75 feet, measured from the point of intersection along each road centerline. Within such triangle, no vision-obstructing object shall be permitted which obscures vision above the height of 30 inches and below ten feet, measured from the centerline grade in intersecting streets. Deed restrictions shall be recorded to ensure that clear sight triangles are maintained.
- D. Intersection Separations at Arterials.** Intersections with arterial streets shall be located not less than 1000 feet apart, measured from centerline to centerline.
- E. Street Offset Alignments.** Streets entering opposite sides of another street shall be laid out either directly opposite one another or with a minimum offset of at least 150 feet on

local and collector streets and 300 feet on arterial streets, measured from centerline to centerline.

- F. Paving Radii at Intersections.** All street intersections shall have a minimum paving radius corresponding to the following corner curb radii: 25 feet for local streets, 30 feet for collector streets, and 40 feet for arterial streets. Where streets of different functional classifications intersect, the requirements for the higher classification shall hold.
- G. Sight Distances at Street Intersections.** In designing street intersections, the sight distance dimensions most currently recommended by PennDOT shall be used. Sight distance shall be measured from a point set back 15 feet from the intersected pavement edge on the street controlled by a stop sign or signal.
- H. Street Signs.** All necessary street name signs and traffic control signs shall be the responsibility of the applicant to provide and erect. The street signs shall meet PennDOT safety standards, and shall be subject to approval by the Board of Supervisors. Street signs and traffic control signs shall be erected before the issuance of any certificates of occupancy on that street.

SECTION 912 STREET CONSTRUCTION STANDARDS

All streets of any new subdivision or land development shall be built to the standards and specifications contained herein, and to applicable state and federal highway department specifications (e.g., Pennsylvania Department of Transportation Specifications, Publication 408, latest revision).

A. Subgrade.

- 1. Within Limits of Road Surface. The area within the limits of the proposed road surface shall be shaped to conform to the line, grade and cross-section of the proposed road.
- 2. Unsuitable Materials to be Removed. All unsuitable subgrade materials shall be removed or stabilized.
- 3. Permits Required for Encroachment into Wetland Areas. Encroachment into wetland areas or the Flood Plain Conservation District, where unavoidable, shall be done only after all required permits for such encroachment are obtained from PADEP, FEMA, U.S. Army Corps of Engineers, or other agency having jurisdiction over such areas. Where permitted, such areas shall be permanently drained and stabilized. Sub-base drains shall be installed where deemed necessary by the Township Engineer during construction. The proposed method of subgrade preparation for such areas shall be detailed on the subdivision or land development plan.
- 4. Fill Material: Suitable, Uniform and Compacted. Fill material shall be suitable and thoroughly compacted for its full width, including shoulder areas, in uniform layers of not more than eight inch thickness.
- 5. Subgrade Compacted. The subgrade beneath cartways, shoulders and sidewalks shall be thoroughly compacted to not less than 100 percent of the maximum modified proctor density.

6. Backfill Compacted. Backfill of trenches within the cartway and curb area shall be thoroughly compacted prior to application of the base course. Refer to Section 912 F for trench backfill specifications.
7. Township Inspection of Subgrade. The subgrade shall be checked and approved by the authorized Township Engineer for lines, grade, crown, contour, suitable materials and compaction before any succeeding courses are applied.
8. Township Inspection of Roads and Streets. Crown board and straight edge shall be used for checking road and street construction. Maximum deviation shall not exceed one-quarter of an inch.

B. Base Course.

1. Base Course Materials. Base course shall consist of one of the following materials, installed as specified by PennDOT to the thickness shown respectively below:
 - a. Crushed aggregate base course from PennDOT publication, "Seldom-Used Specifications"), eight inches thick installed.
 - b. PennDOT Schedule 3A modified stone base course, ten inches thick installed.
 - c. Bituminous Concrete Base Course (BCBC), four inches thick installed on top of six inches of PennDOT sub-base material.
2. Compaction of Base Course. The base course shall be rolled uniformly and thoroughly compacted according to requirements of PennDOT Publication 408. Rolling shall continue until the material does not creep or wave ahead of the roller wheels.
3. Extent of Base Course. The base course shall extend 12 inches beyond the edge of paving on all streets constructed without a curb.
4. Special Tests of Areas of Fill Over Three Feet. In fill areas over three feet thick, compaction tests are required in each eight-inch layer at one 150-foot intervals. The tests must be performed by a certified testing laboratory and results submitted to the Township Engineer. All compaction must be 100 percent of the maximum modified proctor density. Any layer not meeting this standard shall be removed or re-rolled until suitable compaction is obtained.
5. Filling of Voids. After compaction of the base stone, dry screenings shall be applied in sufficient quantity to fill all of the voids in the rolled stone base. A vibratory roller, of PennDOT approved design, must be used in this step of construction and rolling shall continue until all voids are filled. Small areas around inlets and manholes that cannot be reached by the vibratory roller shall be compacted with a mechanical tamper or whacker.
6. Removal of Loose Screenings. When the stone surface is tight and will accept no more screenings, all loose screenings shall be removed from the surface to expose the top one-half inch of the aggregate over at least 75 percent of the road.

7. No Placement of Materials on Wet or Frozen Surfaces. No base material shall be placed on a wet or frozen subgrade.
8. Tack Coat. When so required by the Township Engineer, a tack coat shall be applied.

C. Bituminous Surface.

1. Material. Bituminous material shall be PennDOT Schedule ID-2 with four inches of binder course and one and one-half inches of wearing course.
2. Uniform Slope. The completed road surface shall have a uniform slope of one-quarter inch per foot from edge to centerline, except that on super-elevated curves, this slope shall not be less than one-quarter inch per foot and shall extend up from the inside edge to the outside edge of the paving.
3. Restrictions on Laying of Courses. No visible moisture shall be present prior to the laying of each course. Road surface temperature shall be 50 degrees F. or greater prior to laying of the bituminous surface, with the air temperature rising.
4. Sealing of Wearing Courses. All wearing surface courses shall be sealed to the concrete curb and at its joint with existing streets and driveways with a one-foot wide PennDOT Schedule Class BM-1 asphalt gutter seal.
5. Inspection by Township. Application of all bituminous layers of roadway paving shall require full-time inspection by the Township or its authorized representative.

D. Verification of Materials. The Township shall require delivery slips for all materials used in the construction of streets.

E. Grading and Shoulders.

1. Supporting Shoulders. Supporting shoulders shall be constructed on all sections of projects where a base course or pavement is to be constructed without other permanent support along the sides.
2. Grading Beyond Edge of Paving Required. Roadways shall be graded for not less than eight feet beyond the edge of the proposed paving on each side. This grading width shall be increased as necessary where sidewalks and/or planting strips are to be provided. Shoulders shall be compacted and graded with a slope of one inch per foot, unless otherwise permitted in Section 912 E 3 below. Beyond the limits of this grading, banks shall be sloped to prevent erosion but this slope shall not exceed one vertical to three horizontal to one vertical, with tops of slopes in cuts rounded. Steeper slopes shall only be permitted where excessive cut or fill would otherwise be required.
3. Slopes of Swales. In cases where swales must be provided in the right-of-way area outside of the paved cartway, cut slopes shall be limited to one vertical to two horizontal and fills shall be limited to one vertical to three horizontal.

F. Backfilling of Road Excavations. All trenches or other excavations in existing or proposed roads shall be backfilled in accordance with the following:

1. Backfilling. Backfilling shall be done as promptly as possible.

2. Backfill Materials. The trench shall be backfilled with coarse aggregate consisting of screenings, 2RC, 2A modified or other aggregate as approved by the Township Engineer to a height of at least one-foot above the top of the conduit, pipe, or pipe bell. These screenings shall be placed with the hand shovels and not from trucks or with the use of power equipment and shall be free from refuse, boulders, rocks, unsuitable organic material or other material which, in the opinion of the Township, is unsuitable.
 3. Backfilling of Pipe Trenches. When the pipe is located in a dedicated street or any place where paving (including driveways) may be placed, the remainder of the trench shall be backfilled with 2RC or other approved materials and promptly compacted. The backfill material shall be mechanically tamped in approximately six-inch layers.
 4. Restoration of Openings in Existing Roads. Where openings have been made in existing Township roads, paving shall be restored in accordance with the paving standards contained in this Ordinance. Openings made in State roads shall be restored in accordance with the Pennsylvania Department of Transportation specifications. Permits shall be obtained before paving is opened in any existing State or Township road.
 5. Openings Beyond Curb Lines. Where openings are made behind the curb line, work shall be as specified below. The opening shall be covered with good topsoil to a depth of six inches and seeded or sodded to the satisfaction of the Township Engineer.
 6. Refilling, Recompanction, Regrading. Whenever the trenches have not been properly filled or if settlement occurs, they shall be refilled, compacted, and graded to conform to the surface of the ground.
 7. No Frozen Earth to be Used. Frozen earth shall not be used for backfilling, nor shall any backfilling be done when materials already in the trench are frozen.
 8. Unsuitable material to be Removed. Where excavated material, or any portion thereof, is deemed by the Township Engineer to be unsuitable for use as backfill, the applicant or applicant's agent shall replace backfill material with material approved by the Township.
- G. Notification of Emergency Services.** The applicant shall be responsible for notifying all emergency service agencies when construction will impact accessibility on existing roads.

SECTION 913 PRIVATE STREETS

Private streets will be permitted only when proper maintenance is guaranteed by the developer and when in accordance with the requirements outlined below. Private streets shall be clearly identified as such on each preliminary and final plan. Deeds transferring any lots served by such a private street shall identify the street as a private street to be privately maintained. Private streets shall be prohibited in non-residential subdivisions.

A. Design Standards.

1. Widths. Private streets shall have a right-of-way of 50 feet and a minimum paved cartway width of 16 feet. Shoulders shall be provided to a minimum width of four feet on either side of the paving. Curbing is not required except as deemed necessary under certain circumstances, such as to alleviate a critical stormwater condition, or as required by the Township Engineer.
2. Grades. Where no further subdivision is possible, the maximum allowable grade of the paved cartway shall be 15 percent; otherwise, the maximum allowable grade shall be as required by Section 910. The minimum centerline grade shall be one percent to facilitate drainage. A five percent grade or less shall be maintained within the public road right-of-way and for a minimum of 25 feet beyond. Where a greater than five percent grade is involved, one parking space per lot served shall be provided at the entrance from the public street, adjacent to but outside of the public right-of-way.
3. Cartway Construction Requirements.

a. Grades Up to Five Percent:

Subgrade	Construct according to Section 912 A of this Ordinance
Stone Base	3A modified, Six inches thick after compaction
Stone Surface	2A modified, Two inches thick after compaction

b. Grades Greater Than Five Percent and Up to 15 Percent:

Subgrade	Construct according to Section 912 A of this Ordinance
Base Course	Crushed aggregate base course consisting of AASHTO No. 1 Stone with screenings (from PennDOT publication "Seldom Used Specifications"), six inches thick after compaction
Stone Surface	2A modified, Two inches thick after compaction

c. Area Along First Fifty Feet from Public Street:

Subgrade	Construct according to Section 912 A of this Ordinance
Base Course	2A modified, Six inches thick after compaction
Paving	The base surface course shall be shaped and rolled to provide a two inch crown or shall be sloped laterally to facilitate drainage and shall be covered with one and one-half inches of ID-2 compacted binder course followed by one inch of ID-2 compacted wearing course. This requirement may be reduced or waived in the event the street that it intersects is not paved.

4. Other Construction Requirements:

- a. Intersection with Public Street. At the intersection with a public street, the private street shall be provided with paved 25-foot radii. The intersection shall meet the sight-distance criteria of Section 911 G of this Ordinance. The Township may consider waiving this requirement if the public street is not paved.
- b. Turnaround. A turnaround facility for use by passenger, service, and emergency vehicles shall be provided within the right-of-way, at the end of the private street most distant from the public street. A turnaround shaped in a "T" or a "Y" configuration shall be provided, with the top of the "T" being 50 feet long by 20 feet wide. In the event the private street does not initially, but is later to be extended to the last house or lot on the street, the interim turnaround may take the form of a street extension 20 feet beyond the second driveway with the "T" or "Y" configuration turnaround.
- c. Drainage. Drainage swales, culverts, and curbing shall be provided, when required, to minimize stormwater and icing problems at the intersection and along the private street length.
- d. Backfilling. Private streets shall comply with the requirements of 912 G for the backfilling of road excavations.

B. Agreement.

1. Maintenance, Repair, Construction and Reconstruction. As a condition to final plan approval, an agreement providing for maintenance, repair, construction, and reconstruction, including drainage facility maintenance and snowplowing of private streets, shall be submitted to the Township and recorded with the approved final plan. The deed for each new or existing lot fronting on the private street shall reference the agreement.
2. Conditions of Dedication Offer. The agreement shall also contain the conditions under which the street may later be offered for dedication. The conditions shall state that at the time or offer for dedication the street must conform to the Township public street specifications or that the owners of the abutting lots shall include with the offer of dedication sufficient money, as estimated by the

Township Engineer, for the Township to bring the street into conformance with Township specifications in effect at the time of dedication.

C. Information Required for Private Streets. The following information shall be included with the (preliminary/final) subdivision plan when a private street is proposed:

1. Existing and proposed contours at two foot contour intervals based upon an accurate field topographic survey.
2. Centerline profile of the street.
4. Drainage details for swales and culverts.
5. Typical cross-sections of the cartway and right-of-way.
6. Cartway construction specifications.

SECTION 914 ALLEYS

- A. Limitations on Use.** Alleys shall be prohibited in developments consisting entirely of single family detached dwellings except where the average lot size for such developments is 12,500 square feet or less.
- B. Standards.** Alleys proposed for new residential development shall be consistent with the standards of Section 908 A 8 of this Ordinance.
- C. Minimum Width.** Where alleys are permitted and are intended to be dedicated to the Township, they shall have a minimum right-of-way width of 33 feet and have a minimum paved cartway width of 16 feet.
- D. Setbacks.** No part of any dwelling, garage or other structure may be located within 20 feet of the centerline of the alley or within the applicable setback required by the Zoning Ordinance.
- E. No Dead-End Alleys.** Dead-end alleys shall be prohibited.
- F. Construction Standards.** Construction standards shall be the same as that required for public streets. Where alleys intersect other roads, such intersections shall be consistent with the standards for road intersections.

SECTION 915 DRIVEWAYS

- A. At Corner Lots.** Private driveways, where provided for corner lots, shall be located not less than 40 feet from the intersection corner.
- B. Grades.** Private driveways shall have such grades as to furnish a safe and convenient parking space.
- C. Surface Materials.** All driveways shall be paved with concrete or bituminous materials from the edge of the street cartway to a point in the lot 15 feet from the right-of-way line of any public or private road. The remainder of the driveway may be constructed of any suitable stone, pavement, or all-weather surface. The slope of the portion of the driveway required to be paved shall not exceed five percent grade. The Township may consider waiving this requirement if the road to which the driveway connects is not paved.

- D. Minimum Width.** The width of individual residential driveways within the legal right-of-way of the public road shall be a minimum of 12 feet and shall be a minimum of ten feet at all other points within the property line.
- E. Driveways at Multi-Family Entrances.** Driveway entrances into multi-family developments (with shared parking areas) or into non-residential properties shall be no less than 20 feet in width, shall not exceed 36 feet in width at the street line unless provided with a median divider, and shall be clearly defined by the use of curbing. The curbs of these driveway entrances shall be rounded with a minimum radius of 20 feet where they intersect a street.
- F. Turn-Around Areas.** Adequate turnaround surface shall be provided on the property so that egress to the street is in a forward direction.
- G. Sight Distances.** The sight distance at the intersection of the driveway with the public road shall be as required by Section 911 of this Ordinance.
- H. Angle of Intersection at Streets.** Driveways to single-family residences shall intersect streets at angles of no less than 60 degrees. All other driveways shall intersect streets at right angles, where practicable, and in no case less than 75 degrees. (The angle of intersection is the acute angle made by the intersection of the centerline of the driveway with the centerline of the road.)
- I. Grading.** Driveways shall be graded so that, wherever possible, surface drainage will remain on the owner's property; otherwise, adequately sized pipes, inlets, and/or headwalls shall be installed and gutter improvements shall be made to direct surface drainage into the road drainage system and not onto the paving of the intersecting road.

SECTION 916 EASEMENTS

- A. Utility Easements.** Where easements are required for utilities, such as water and/or sewer facilities intended for dedication, the requirements for easement shall be determined by the Township. Easement requirements for other utilities, and road construction and maintenance shall be similarly established.
- B. Minimum Width.** Utility easements and easements to community facilities shall be at least 20 feet wide to provide access for maintenance vehicles. Local utility companies shall be consulted when locating easements. Storm drainage easements shall be provided as required in Section 920, Stormwater Management.
- C. Location on Rear of Side Lot Lines.** To the fullest extent possible, easements shall be located along rear or side lot lines.
- D. Setbacks Measurements.** The required minimum setback and yard dimensions for any lot shall be measured from the lot line, except where the Township makes a determination that such dimension shall be measured from the edge of an easement.
- E. Easements Kept Free of Obstructions.** Except for driveways, nothing shall be constructed, placed, planted, set or installed within the area of an easement. The area shall be kept as lawn or, where required, vegetative buffer.
- F. Watercourse Easements.** Where a subdivision or land development is traversed by a watercourse, there shall be provided a drainage easement or right-of-way conforming

substantially with the line of such watercourse and of such width as will be adequate to preserve natural drainage and provide sufficient width for maintenance.

- G. All Easements to be Shown on Plans.** No right-of-way or easement shall be recited or described in any deed unless the same has been shown on the approved plan. Any easement or right-of-way required herein shall be made part of the deeds of all affected properties. Any error found in a deed shall be immediately corrected and re-recorded in the Chester County Recorder of Deeds office, at the sole expense of the applicant. The applicant shall be solely responsible to the buyer for any failure to record an easement or right-of-way shown on the approved plan. Failure to record an easement or right-of-way shown on the approved plan shall not prevent its intended use from being realized.

SECTION 917 SIDEWALKS AND PATHS

A. Sidewalks.

1. Requirements for Paved Sidewalks. Paved sidewalks shall be provided on both sides of all streets in all commercial developments; on both sides of all streets within 1000 feet of any school; and on both sides of all streets in all residential developments where the lot size is less than one-quarter acre.
 - a. Sidewalks may be required on only one side of the street in residential subdivisions where residential lots are located on only one side of the street.
 - b. Sidewalks may be required in non-residential developments unless it can be shown, to the satisfaction of the Board of Supervisors, that pedestrian traffic does not follow or mix with vehicular traffic and is not likely to in the future.
2. Minimum Width. Sidewalks shall have a minimum width of four feet except along collector and arterial streets and adjacent to schools, shopping centers, and community facilities where they shall be a minimum of five feet wide.
3. Sidewalk Placement. Sidewalks shall be placed within the street right-of-way not less than three feet from the cartway and a minimum of one foot from the right-of-way line; gradient and paving of such sidewalks shall be continuous across all private driveways. A grass planting strip shall be provided between the curb and the sidewalk.
4. Sidewalk Construction Specifications. All sidewalks shall conform to specifications for class A concrete, as specified by PennDOT, with six percent air entrainment and a minimum compressive strength of three-thousand 3300-psi after 28 days. Unless otherwise approved, cement concrete sidewalks shall be constructed on a four inch crushed stone or gravel base to ensure proper drainage. Concrete thickness shall be four inches except at driveway crossings where it shall be six inches thick. Welded wire fabric (6/6-10/10) shall be provided in all sidewalks constructed at driveways.
5. Expansion Joints. Expansion joints shall be placed at least every 20 feet and the sidewalk shall be scored at five foot intervals between such expansion joints. Expansion joints shall also be placed between all points where the concrete sidewalk abuts a concrete curb and as otherwise required by the Township

Engineer.

6. Verification of Materials. The applicant shall provide the Township copies of all delivery slips for all materials used in the construction of sidewalks within seven days of delivery

B. Paths and Walkways.

1. Requirement for Paths and Walkways. At the discretion of the Board of Supervisors, with recommendations from the Planning Commission, a system of bicycle, equestrian, and/or pedestrian paths for public use generally unrelated to and separate from streets shall be established and secured by dedication or easement. Such paths shall be consistent with the Township Open Space Plan or any other applicable plans specified by the Township, so as to encourage the formation of an interconnecting trail network both within and beyond the Township. Such paths normally shall not exceed ten feet in width and, at the option of the applicant, shall be located adjacent to existing or proposed lot lines, or in such manner as to minimize any obstruction to the development. Existing paths may be relocated if a connection with a path on an adjoining property is thereby established.
2. Pedestrian Walkways. To facilitate circulation, pedestrian walkways may be required to serve the interior of developments and link to outside trail networks. Such walkways shall be a minimum of four feet in width and shall be of a durable surface satisfactory to the Board. Where the walks are not within a street right-of-way, a separate right-of-way at least ten feet wide shall be designated on the subdivision or land development plan. As appropriate, the walks shall be maintained by the homeowners association (when the walks traverse common areas) or by the abutting property owners (when the walks traverse existing lots).

SECTION 918 CURBS

- A. **When Curbs are Required.** Curbs shall be required for new developments where necessary to facilitate drainage control, access control, pavement edge support, and the protection of pedestrians, signs, and vegetation. Curbs shall always be required wherever sidewalks are required (see Section 917).
- B. **Installation.** Concrete curbs shall be installed along each side of all streets and along the median island of divided streets. Curbs may be required along the inner radius of any cul-de-sac with an island.
- C. **Stabilization of Shoulders.** Where, in the opinion of the Board of Supervisors and upon recommendation of the Township Engineer, curbs are determined to be unnecessary, a stabilized shoulder shall be provided, subject to approval by the Township Engineer. In areas where curbs are not used, satisfactory provisions, such as drainage swales, shall be made to prevent erosion. The use of drainage swales shall be allowed only on streets with a grade of less than seven percent; otherwise, curbs shall be provided.
- D. **Curb Construction Specifications.** Except where State or federal highway department manuals require a greater standard, concrete curbs shall be 18 inches deep, seven inches wide at the top, eight inches wide at the gutter line, and at least eight inches wide at the base. The nominal distance from the top of the curb to flow line of the gutter shall be eight inches. Expansion and contraction joints shall be placed in accordance with PennDOT specifications. A combination curb and gutter may be used at the option of

- the developer when approved by the Township Engineer. Where combination curb and gutter is used, it must be placed on a minimum of four inches of crushed stone or gravel to provide adequate drainage beneath the curb.
- E. Reinforcements.** Where a curb joins a storm inlet or joins with a tangent curb on a sharp radius, two #4 steel reinforcing bars 24 inches in length shall be embedded in the concrete. Depressed curb at driveways shall also contain this steel reinforcement.
- F. Curb Strength.** All concrete used in the construction of improvements shall have six percent air entrainment and shall be certified to develop a compression strength of at least 3300 psi at 28 days, with certification of the mix furnished to the Township Engineer. Concrete shall be placed in forms that are straight and securely braced. Care shall be taken to control the water content to prevent separation of the aggregates. All the concrete shall be thoroughly vibrated into the forms. After the concrete has been set sufficiently, the form shall be removed and the exposed surface shall be rubbed to provide an even finish. All visible edges shall be finished with an edging tool. A continuous formless curb shall be permitted if PennDOT specifications are met.
- G. Joint Sealing.** After completion of bituminous paving, PennDOT Schedule BM-1 asphalt shall be applied to the joint between the curb and the bituminous paving for a distance of one foot from the curb toward the center of the road of sufficient thickness to effectively seal the joint between the curb and the bituminous paving.
- H. Depressed Curbing.** To provide for driveways and handicap access ramps, depressions in the curbing may be constructed and finished during the time of pouring.
- J. Verification of Materials.** The applicant shall provide the Township copies of all delivery slips for all materials used in the construction of curbs within seven days of delivery.
- K. Alternate Designs.** Alternate designs such as the use of asphalt rolled curbs, low-profile curbs, or other designs instead of the use of curbs, may be proposed by the applicant when such designs are compatible with local conditions.

SECTION 919 MONUMENTS AND MARKERS

- A. Placement Requirements.** Monuments or markers shall be placed in accordance with the requirements of this section. Monuments and markers shall be installed flush with the ground and meet the following minimum criteria:
1. A monument shall be a stone or concrete post, with a flat top at least four inches across and at least 24 inches in length with a permanently inscribed center mark on the top.
 2. A marker shall be a metal pipe or pin of at least one-half inch diameter and at least 24 inches in length.
- B. Locations of Monuments.** Monuments shall be placed at each change in direction of boundary; two to be placed at each street intersection and one on one side of each street at angle points and at the beginning and end of curves. Utility easements shall be monumented at their beginning and at their end; and areas to be conveyed for public use shall be fully monumented at their external boundaries.
- C. Substitution of Markers.** Markers may be substituted for monuments only when placed at individual lot corners within a subdivision.

- D. Placement by Surveyor.** All monuments and markers shall be set by a registered professional surveyor and placed in the ground after final grading is completed, at a time agreeable to the Township Engineer.
- E. Accuracy.** All monuments and markers shall have their accuracy certified by the applicant's engineer and be checked for accuracy by the Township Engineer. Accuracy of monuments shall be within three one-hundredths of a foot.
- F. Benchmarks.** The Township elevations are based on the 1929 mean sea level datum. All contours and elevations shown on plans submitted to the Township must be based on this system.

SECTION 920 STORMWATER MANAGEMENT

- A. Goals.** The goals for stormwater management in Newlin Township are:
 - 1. Health, Safety, And General Welfare. To protect the health, safety, and general welfare of the Township residents by protecting the surface and groundwater of the Township through effective stormwater management and control of sedimentation and erosion, as provided in this Ordinance.
 - 2. Limit Adverse Effects of Development. To limit the negative impacts of development that occur with inadequately managed stormwater. These negative impacts include but are not limited to, altered hydrology, lowering of the groundwater table, physical stream impacts, and biological impacts to non-point source pollutants.
- B. Purpose.** The purposes of stormwater management regulations in Newlin Township are:
 - 1. To maintain the pre-development water balance in watershed and sub-watersheds containing first-order and other especially sensitive streams in the Township, and to work to restore natural hydrologic regimes wherever possible throughout the stream system;
 - 2. To maintain the pre-development volume of groundwater recharge;
 - 3. To prevent significant increase in surface runoff volumes, pre-development to post-development, thereby mitigating, flooding downstream in the watershed, enlarging floodplains, eroding stream banks, and creating other flood-related health- welfare-property losses, and to work to reduce runoff volumes to natural levels;
 - 4. To maintain pre-development peak rates of discharge, site-by-site, so as not to worsen flooding adjacent to downstream sites, and to work to restore peak runoff rates to natural levels;
 - 5. To minimize non-point source pollutant loading to ground and surface waters generally throughout Newlin Township;
 - 6. To minimize impacts on stream temperatures;
 - 7. To minimize aesthetic impacts;
 - 8. To manage stormwater through approaches and practices which rely on natural process to the greatest extent possible and require a minimum of structures;

- C. Applicability.** The provisions of this Section shall apply to all subdivisions and land developments as defined by this Ordinance, or as otherwise required by the Township;
- D. General Provisions.** The following provision shall be followed and incorporated into the development review and construction process:
1. The choice and design of stormwater management systems used to meet the requirements of this Section shall be based on the system types and specifications set forth in the Pennsylvania Handbook of Best Management Practices for Developing Areas, published by the Commonwealth of Pennsylvania. The use of other control methods, such as those contained in the latest editions of the Current Assessment of Urban Best Management Practices, and Controlling Urban Run-off, published by the Metropolitan Washington Council of Governments, that meet the criteria established in this Section, may be permitted if approved by the Township Engineer. Various combinations of methods should be tailored to suit the particular requirements for the type of development and the local site conditions.
 2. The choice and design of stormwater management systems are to be developed through a procedure that selects and locates Best Management Practices, viewing components in the following priority:
 - a. Seeking to control runoff at its source through infiltration;
 - b. Improving the quality of the stormwater during conveyance;
 - c. Providing for detention.
 3. The selection of a competent and creative design engineer by the applicant clearly is critical to the success of an approach that emphasizes the use of Best Management Practices. In order to achieve the standards and construction and maintenance cost reductions which are intended in this Ordinance, additional time and money is required in the process in preliminary engineering and design. Review and approval of the stormwater management plan will be heavily dependent on the technical review by the Township Engineer and compliance with this Ordinance.
 4. The applicant or applicant's agent shall design, construct and/or install drainage facilities to prevent soil erosion, damage and siltation, and to manage stormwater in order to prevent the impairment of public safety or physical damage due to concentration of the stormwater runoff onto adjacent properties in accordance with this Ordinance and applicable rules and regulations of the PADEP, and the Chester County Conservation District. All land areas shall be graded to secure proper drainage away from buildings, on-site sewage disposal systems, and to prevent the uncontrolled collection of stormwater in pools. The system shall be designed to collect and recharge water to the greatest extent possible.
 5. The rate of stormwater runoff from any proposed subdivision or land development shall not exceed the rate of runoff prior to development. Requirements for design of stormwater management systems that incorporate groundwater recharge as an essential element in order to control quantity of discharge is outlined in this Ordinance. The distribution of drainage discharge from the developed properties shall replicate that of before development conditions to the maximum extent possible. The methodology and facilities used shall be based on the anticipated flows and conditions of each particular site.

6. The stormwater management plan for each subdivision or land development proposal shall take into account and provide for the peak rate and volume flows of other areas in the watershed to ensure that cumulative problems are not increased as a result of flows from the proposed project. This analysis shall also explore possibilities to share stormwater management facilities with other areas in the watershed, in which case, consultation with the Township shall be required prior to design.
7. Recharge facilities, detention facilities, storm sewers, culverts, bridges and related drainage installation shall be designed and constructed to meet the following purposes:
 - a. To permit unimpeded flow of natural watercourses. Such flow may be redirected as required, subject to the approval of the PADEP;
 - b. To insure adequate drainage of all low points as may be related to streets;
 - c. To intercept stormwater runoff along streets at intervals reasonably related to the extent and grade of the area drained to prevent flow of stormwater across intersections during the design storm;
 - d. To insure adequate and unimpeded flow of stormwater under driveways in, near, or across natural watercourses or drainage swales. Properly sized pipes or other conduits shall be provided as necessary;
 - e. To prevent excessive flow on or across streets, sidewalks, drives, parking areas, and any other paved surface or accessway;
 - f. To lead stormwater away from springs.
8. To this end, the storm drainage system serving the street shall be designed to collect water at any point where three to five cubic feet per second is accumulated, and the bottom of all vertical grades, and immediately upgrade of all street intersections. The system shall discharge any collected water that is not recharged into the nearest practical natural drainage channel or stormwater system.
9. All natural streams, channels, swales, drainage systems, and/or areas of concentration of surface water shall be maintained in their existing condition, unless alteration is approved by the Township. In any event, all encroachment activities shall comply with Chapter 105 of the Commonwealth of PADEP Dam Safety and Waterway Management Rules and Regulations.
10. Man-made structures shall be kept to a minimum and bridges, culverts, or riprap shall be constructed to maintain natural characteristics of the stream and shall meet the approval of the Township.
11. For the purpose of this subsection, streams and intermittent streams are defined as those watercourses depicted on the Township Zoning Map, the USGS Quadrangle maps of the area, and/or determined as such pursuant to an on-site survey by the Township or their representatives.
12. Retention/detention basins shall be designed to utilize the natural contours of the land. When such design is impracticable, the construction of the basin design

shall utilize slopes as shallow as possible to blend the structures into the existing terrain. The use of multiple retention/detention facilities, which are smaller and less intrusive on the site, is encouraged to meet the requirements of this Section.

13. All areas containing lakes, ponds, wetlands and watercourses shall be considered to be reserved for permanent open space. Any alteration, development, filling, piping, or diverting of such water resources shall be in strict compliance with the provision of the Zoning Ordinance, especially those pertaining to the Flood Hazard Overlay District, and all prevailing rules and regulations of federal and State agencies. The Township recognizes the use of wetlands as potential components of stormwater management facilities and encourages such innovative use if assurances are met that conservation measures are adequate and that all federal and State requirements are satisfied.
 14. The Township may require that a landowner or development provide reasonable corrective measures to alleviate any existing off-site drainage problem that may be affected by the proposed subdivision and/or land development. It shall be the responsibility of the landowner or developer to obtain all drainage easements on, over, or through other properties, and the Township, its agents, workmen, and employees shall be indemnified and held harmless from any liability.
 15. Any water originating from non-natural sources, such as swimming pools, air conditioning units, sump pumps, roof drains, or other similar flow, shall be properly discharged into a recharge facility or natural watercourses on the property or connected to an existing or proposed storm drainage system as approved by the Township. Polluting matter from such sources may not be deposited into natural watercourses or storm drains.
 16. Any water originating from non-natural sources, as referenced above, shall not be discharged onto any street or other public right-of-way used for pedestrian or vehicular access.
 17. All building foundations, grade slabs, and cellar floors located in soils that have a community development limitation degree of moderate to severe seasonal high water table (as defined in the Chester County Soil Survey) shall be provided with an underdrain system. This system shall provide for drainage of the enclosed volume above the slab, and relief of subsurface water to a depth of not less than 18 inches below the slab or foundation field of the herringbone or gridiron configuration in course, gravel-filled trenches that are in direct contact with the slab or foundation subbase. The excavation shall provide a minimum of five one-hundredths (0.05) foot/foot slopes to the gravel-filled trenches.
 18. To mitigate the potential polluting of surface and ground waters by pollutants such as salt, petroleum products, and anti-freeze flowing from paved parking lots, pre-treatment of the runoff shall be required. The extent of the treatment shall be set by the Township Engineer and will be determined by such factors as the area of the parking lot and the course of the runoff as it is recharged or flows into natural waterways.
- E. Permanent Stormwater Management Standards.** The following Standards shall be used to develop the stormwater management system.
1. Standard 1: After installation of impervious cover, there shall be no increase in the volume of stormwater runoff being discharged for up to the two year frequency rainfall, pre-development to post-development. If the Township Engineer determines that such a standard is not achievable on the site (all or in

part) based on the existing soil, bedrock, water table, or other conditions on the parcel, Standard 3 provisions apply. For preliminary design purposes, this volume can be initially estimated as a depth of two and one half inches per unit area of new impervious surface.

2. Standard 2: After installation of impervious cover and assuming full compliance with Standard 1, the peak rate of stormwater discharges from the site for all design storms up to and including a 100 year frequency rainfall shall not exceed the peak discharges from the site of the same storm before disturbance. Design storms include:
 - a. 1-year 24-hour storm 2.60 inches
 - b. 2-year 24-hour storm 3.20 inches
 - c. 5-year 24-hour storm 4.20 inches
 - d. 10-year 24-hour storm 5.00 inches
 - e. 25-year 24-hour storm 5.60 inches
 - f. 50-year 24-hour storm 6.30 inches
 - g. 100-year 24-hour storm 7.10 inches
3. Standard 3: If the volume standard set forth in Standard 1 cannot be achieved, then the peak rate standards are modified so that post-development peak rate discharges from the site for all storms up to the ten year storm must be equal to or less than 75 percent of the respective peak rates for these storms, pre-development.
4. Standard 4: Under certain conditions, the Township, upon recommendation of the Township Engineer, may impose the following additional restrictions on stormwater discharges;
 - a. Peak discharge may be further restricted when it can be shown that a probable risk to downstream structures or unique natural areas exists or that existing severe flooding problems could be further aggravated.
 - b. Measures shall be imposed to protect against ground or surface water pollution where the type of business activity may result in significant nonpoint source pollution or the nature of the soils or bedrock underlying a stormwater management structure constitutes substantial risk of contamination, such as might be the case in limestone formations. Special provisions to be followed in these cases will be provided by the Township Engineer.
 - c. Where groundwater yields are very low or where a groundwater supply already is heavily used, the Township may require that the entire volume of the two-year frequency rainfall (3.2 inches in 24 hours) be retained and infiltrated.
5. Standard 5: Significant loading of non-point source pollutants shall not be discharged into either surface or groundwater. Significant is defined as resulting in an increase greater than ten percent of existing background concentrations of all water quality parameters of consequence identified in federal and State criteria for the watershed. In particular, nutrients (nitrate and total phosphorus), metals (cadmium and lead), total petroleum hydrocarbons (PH) and synthetic organic compounds identified by the US Environmental Protection Agency (EPA) as toxic or hazardous substances must be controlled. If the volume and peak rate standards above (Standards 1 and 2) are met, then water quality impacts are assumed to be adequately controlled. If the volume standard (Standard 1)

above cannot be achieved, then a water quality impact analysis must be performed, at the direction of the Township Engineer, confirming prevention of any significant increase in non-point source pollution, with particular focus on the pollutants discussed above. Both structural and nonstructural (preventive) measures are to be considered for reduction and prevention of non-point source pollution.

F. Stormwater Management Calculation Methods.

1. In establishing the antecedent conditions for calculating runoff prior to land disturbance, the following assumptions shall apply:
 - a. Average antecedent moisture conditions;
 - b. A type II distribution storm;
 - c. Woodland shall be used as the prior condition for those portions of the site having trees of greater than six inches caliper or where such trees existed within three years of application;
 - d. Meadow shall be used for all other areas including areas of existing cultivation or impervious surface;
 - e. In performing the TR-55 calculations, all those areas to be disturbed during construction shall be assumed to be reduced one Hydrologic Soil Group category level during post-development runoff calculations (i.e., HSG B is reduced to HSG C and so forth).
2. In all plans and designs for stormwater management system and facilities submitted to the Township Engineer for approval, stormwater peak discharge and runoff shall be determined through the use of the Soil Cover Complex Method as set forth in Urban Hydrology for Small Watersheds, Technical Release No. 55, with specific attention given to antecedent moisture conditions, flood routing, and peak discharge specifications included therein and in Hydrology National Engineering Handbook, Section 4, both by the US Department of Agriculture, Natural Resources Conservation Service (Soil Conservation Service). Note that use of TR-55 with many of the natural system-based approaches and practices recommended by this Ordinance requires that calculations be performed on a detailed small sub-area basis. The Township Engineer may permit the use of the Rational Method for calculation of runoff on land developments of five acres or less and for the design of storm structures.
3. In calculating runoff after development, those areas covered by concrete lattice blocks on an appropriate base, porous pavement areas on an appropriate base, and roof areas which drain to properly designed and installed storage/groundwater infiltration beds, shall be considered adequate to infiltrate any increased runoff from a two year storm.

G. Specific Infiltration System Design Criteria

1. Infiltration devices shall be selected based on suitability of soils and site conditions. Measures may include porous pavement with underground infiltration beds, vegetated infiltration beds, swales and trenches, or other seepage structures as proposed in the Pennsylvania Handbook of Best Management Practices for Developing Areas (1998) and related references prepared by the

USEPA, the Washington Metropolitan Council of Governments, the Soil Conservation Services, the PADEP or other guidance documents.

2. Soil infiltration tests shall be performed for all proposed infiltration areas; these tests shall include evaluation of selected soil horizons by deep pits and percolation measurements. Testing shall be reviewed and approved by the Township Engineer. The soil infiltration rate of discharge from the infiltration area being used in the proposed design shall be based on these measurements.
3. The lowest elevation of the infiltration area shall be at least two feet above the Seasonal High Water Table and bedrock, except in the case of limestone formation, in which case the distance shall be three feet.
4. All roof drains shall discharge to infiltration systems with appropriate measures such as leaf traps and cleanouts taken to prevent clogging by vegetation.
5. All infiltration systems shall have appropriate positive overflow controls to prevent storage within one foot of the finished surface or grade.
6. All infiltration systems shall have a setback of 15 feet from all residential structures. Care should be taken to prevent any seepage into subgrade structures.
7. All infiltration systems shall be designed to infiltrate the stored volume within 48 hours.
8. All surface inflows shall be treated to prevent the direct discharge of sediment into the infiltration system; accumulated sediment reduces stormwater storage capacity and ultimately clogs the infiltration mechanism. No sand or other particulate matter may be applied to a pervious surface for winter ice conditions.
9. During site construction, all recharge system components shall be protected from compaction due to heavy equipment operation or storage of fill or construction material. Recharge areas shall also be protected from sedimentation. All areas designated for recharge shall not receive runoff until the contributory drainage area has achieved final stabilization.
10. The following procedures and materials shall be required during the construction of all subsurface facilities.
 - a. Excavation for the infiltration facility shall be performed with equipment, which will not compact the bottom of the seepage bed/trench, or like facility.
 - b. The bottom of the bed and/or trench shall be scarified prior to the placement of aggregate.
 - c. Only clean aggregate, free of fines, shall be allowed.
 - d. The top and sides of all seepage beds, trenches, or like facilities shall be covered with drainage filtration fabric. Fabric shall meet the specifications of PennDOT Publication 408, Section 735, Construction Class 1.

- e. Perforated distribution pipes connected to centralized catch basins and/or manholes with provision for the collection of debris shall be provided in all facilities. The perforated pipes shall distribute stormwater throughout the entire seepage bed/trench, or like facility.
11. All infiltration facilities, which service more than one lot and are considered a common facility shall have an easement provided to the Township for future access if necessary.

H. Additional Stormwater Detention Facilities Design Requirements

1. Setbacks. The following setbacks are required for stormwater management facilities:
 - a. Stormwater retention or detention basins shall be located at least 50 feet from any structure, whether existing or proposed.
 - b. Stormwater retention or detention basins shall be located at least 50 feet from any property boundary or right-of-way.
 - c. Stormwater retention or detention basins shall be located at least 50 feet from existing wetlands, or the banks of existing streams.
 - d. Recharge systems greater than three feet deep shall be located at least ten feet from any basement wall and 25 feet from wastewater treatment areas.
 - e. Any recharge system designed to handle run-off from any commercial or industrial impervious parking or outside storage area shall be a minimum of 50 feet from any water supply well or any wastewater treatment area.
2. Riser. A riser or other acceptable outfall shall be provided at the outlet of all detention basins. The riser shall be constructed of precast or poured in place concrete with controlled orifices. The riser shall extend to an elevation one foot below the crest elevation of the emergency spillway. The riser shall be designed so that the rate of outflow is controlled by the pipe barrel through the basin berm when the depth of water within the basin exceeds the height of the riser. A trash rack or similar appurtenance shall be provided to prevent debris from entering the riser. All risers shall have a concrete base attached with a watertight connection. The base shall be of sufficient weight to prevent flotation of the riser. An anti-vortex device, consisting of a thin vertical plan normal to the basin berm, shall be provided on the top of the riser.
3. Landscaping. All stormwater control systems, whether existing or proposed, shall be planted to effectively naturalize areas so as to become an integral and harmonious element in the local landscape. No trees shall be planted in dams more than 15 feet high.
4. Emergency Spillway. Whenever possible, the emergency spillway for detention basins shall be constructed on undisturbed ground. Emergency spillways shall be designed according to the Soil Conservation Service Engineering Field Manual. All emergency spillways shall be constructed so that the detention basin berm is protected against erosion. The minimum capacity of all emergency spillways shall be such that the combined capacity of the emergency spillway and the principal pipe barrel equal the peak flow rate from the 100 year design storm. Emergency spillways shall extend along the upstream and downstream

berm embankment slopes. The upstream edge of the emergency spillway shall be a minimum of two feet below the spillway crest elevation. The downstream of the spillway shall, at minimum, extend to the toe of the berm embankment. The emergency spillway shall not discharge over earthen fill and/or easily erodible material.

5. Anti-Seep Collars. Anti-seep collars shall be installed around the principal pipe barrel within the normal saturation zone of the detention basin berms. The anti-seep collars and their connections to the pipe barrel shall be watertight. The anti-seep collars shall extend a minimum of two feet beyond the outside of the principal pipe barrel. The maximum spacing between collars shall be 14 times the minimum projection of the collar measured perpendicular to the pipe.
6. Freeboard. Freeboard is the difference between the design flow elevations in the emergency spillway and the top of the settled detention basin embankment. The minimum freeboard shall be two feet.
7. Slope of Detention Basin Embankment. The maximum slope of earthen detention basin embankments shall meet the requirements contained in this subsection. Whenever possible, the side slopes and basin shape shall be amenable to the natural topography. Straight side slopes and rectangular basins shall be avoided.
8. Width of Berm. The minimum top width of detention basin berms shall be ten feet.
9. Slope of Basin Bottom. In order to insure proper drainage of the detention basin, a minimum grade of two percent shall be maintained for all sheet flow. A minimum grade of one percent shall be maintained for all channel flow.
10. Energy Dissipaters. Energy dissipating devices (riprap, end sills, etc.) shall be placed at all basin outlets. Any pipe or other component which discharges directly into the basin shall be equipped with energy dissipating devices and shall outlet into the bottom of the basin.
11. Landscaping and Grading of Detention Basin. All landscaping and grading standards shall be as follows:
 - a. Cuts. No excavation shall be made with a cut face steeper than three horizontal to one vertical, except under the condition that the material in which the excavation is made is sufficiently stable to sustain a slope of steeper than three horizontal to one vertical. A written statement to that effect is required from an engineer and must be submitted and approved by the Township Engineer. The statement shall affirm that the site has been inspected and that the deviation from the slope should not result in injury to persons or damage to property. Retaining walls shall be required if a stable slope cannot be maintained. Any retaining wall design must be approved by the Township Engineer. The toe of the slope or headwall of any cut must be located a minimum of five feet from property lines.
 - b. Fills. No fills shall be made which creates any exposed surfaces steeper in slope than three horizontal to one vertical, except where the fill is located so that settlement, sliding, or erosion will not result in property damage or be a hazard to adjoining property, streets, or buildings. A

written statement is required from an engineer certifying that s/he has inspected the site and that any proposed deviation from the slope specified above should not endanger any property or result in property damage, and must be submitted to and approved by the Township Engineer.

- i. A concrete or stone masonry wall designed and constructed in accordance with these specifications and standards may be required to support the face of the fill where the above-specified slopes are exceeded.
 - ii. The top of any fill or toe of the slope of any fill shall be located 25 feet from any property line with the exception of a downstream property line where the toe of the embankment shall be placed a sufficient distance to allow for energy dissipating devices, but in no case less than 40 feet unless approved otherwise by the Township.
 - c. Planting Requirements. All areas proposed for recreational use, whether active or passive, shall be planted to effectively naturalize the areas to become an integral and harmonious element in the natural landscape.
 - d. Drainage Channels and Retention Areas. All storm drainage channels and retention areas, whether existing or proposed, shall be graded and planted to effectively naturalize areas so as to become an integral and harmonious part of the landscape by contour and type of plant material employed.
 - e. Fence or Screening. A fence or suitable vegetation screen shall be provided around all detention basins as required by the Township Engineer. All vegetative screening shall be at least three and one-half feet in height and shall be composed of the following shrubs: Barberry (Barberis species); Eleagnus (Eleagnus species); Firethorn (Pyracantha species); or Rose (Rose species). All vegetative screening shall provide a barrier to prevent entrance to the detention basin area. The fencing or vegetative screening requirement shall be waived only upon approval by the Township.
11. Easements to be Provided. Easements for all basins and storm pipes not located with the public street right-of-way shall be provided.

I. Stormwater Drainage System Design Requirements.

1. Design Flow Rate. The storm drain system shall be designed to carry a 25 year peak flow rate, and a 50 year peak flow rate at the sump area. The design 25-year peak flow rate into each inlet shall be indicated on the stormwater management plan. The 25 year flow rate shall be determined by the rational formula, $Q=CIA$. Where:

Q = Peak runoff rate, cubic feet per second (CFS);

C = Runoff coefficient equal to the ratio of the runoff rate to the average rate of rainfall over a time period equal to the time of concentration;

I = Average rainfall intensity to inches per hour for a time equivalent to the time of concentration;

A = Drainage area in acres.

Approximate values for the runoff coefficient and runoff intensity is found in the following sources:

Commonwealth of Pennsylvania
Department of Transportation
Design Manual, Part 2, Chapter 12

2. Overflow System. An overflow system shall be provided to carry flow to the detention basin when the capacity of the storm drainpipe system is exceeded. The overflow system shall be of sufficient capacity to carry the difference between the 100-year and the 25-year peak flow rates.

3. Inlet Capacity. All inlets must be designed to accommodate the 25-year peak flow rate. The capacity of each inlet shall be indicated on the stormwater plan. The capacity of all C, M, or S type inlets shall be determined from the following source:

Commonwealth of Pennsylvania
Department of Transportation
Design Manual, Part 2
Highway Design

4. Straight Pipe Selections. Wherever possible, all storm drainpipes shall be designed to follow straight courses. No angular deflections of stormsewer pipe sections in excess of five degrees shall be permitted. No vertical curves shall be permitted in the storm drainpipe system.

5. Minimum Grade and Size. All storm drainpipes shall be designed to maintain a minimum grade of one-half percent. All storm pipes shall have a minimum inside diameter of 15 inches.

6. Pipe Material and Thickness. All storm sewers shall be a material which meets the 100 year life expectancy criteria contained in the following:

- i. Pennsylvania Department of Transportation (PADOT) strike-off letter Number 430-95-43, dated June 19, 1995 (Policy on Design, Fabrication, and Installation of Pipes), and any subsequent amendments;
- ii. Revisions made to the PADOT Design Manual Part 2, Chapter 10 after June 19, 1995.

7. Pipe Capacity. The capacity of all pipe culverts shall, as a minimum, provide the required carrying capacity as determined by the following source:

United States Department of Commerce
Bureau of Public Roads
Hydraulic Engineering Circular No. 5
Hydraulic Charts for the Selection of Highway Culverts

8. Pipe Arches. Where headroom is restricted, equivalent pipe arches may be used in lieu of circular pipes.

9. Allowable Headwater Depth. At all inlets or manholes, the maximum allowable headwater depth shall be one foot below the top of the inlet grate of the manhole cover.

10. Horizontal Pipe Deflections. A manhole or inlet shall be provided at all horizontal deflections in the storm pipe system exceeding five degrees.
11. Minimum and Maximum Cover. A minimum of 18 inches of cover shall be maintained over all storm drainpipes. The top of storm drainpipes shall be at least one-half foot below subgrade elevation.
12. Diversion or Runoff. All storm drainpipes shall be designed to carry the runoff into a detention basin or similar facility utilized to control the rate of runoff. No discharge at the top or side of basin embankments shall be permitted.
13. Culverts and Drainage Channels.
 - a. Design Flow Standards. All culverts and drainage channels shall be designed to carry a flow rate equal to a 50 year, 24 hour storm (Soil Conservation Service, Technical Release No. 55).
 - b. Erosion Prevention. All drainage channels shall be designed to prevent the erosion of the bed and bank areas. The flow velocity in all vegetated drainage channels shall not exceed three feet per second to prevent erosion unless special provisions are made to protect banks and channel bottoms against erosion. Suitable bank stabilization shall be provided where required to prevent erosion of the drainage channels. Where storm sewers discharge into existing drainage channels at an angle greater than 30 degrees from parallel with the downstream channel flow, the far side bank shall be stabilized by the use of rip-rap or masonry, and/or concrete walls. The stabilization shall be designed to prevent erosion and frost heave under and behind the stabilizing media.
 - c. Maximum Side Slope. Any vegetated drainage channel requiring mowing of the vegetation shall have a maximum grade of three horizontal to one vertical of those areas to be mowed.
 - d. Design Standard. Because of the critical nature of the vegetated drainage channels, the design of all vegetated channels shall, as a minimum, conform to the design procedure outlines in the PADEP manuals. Several acceptable sources outline procedures for non-vegetated drainage channels, including the following:

Bureau of Public Roads
Hydraulic Engineering Circular No. 5
Hydraulic Charts for the Selection of Highway Culverts

Federal Highway Administration
Hydraulic Engineering Circular No. 13
Hydraulic Design of Improved Inlets for Culverts
 - e. References to Publications and Source Documents. Reference to publications and source documents in this Section shall be deemed to include any amendments and revisions thereof.

J. Standards During Land Disturbance

1. Control of Runoff During land Disturbance. During the period of land disturbance, when significant sediment can be contained in runoff, this runoff shall be controlled prior to entering any proposed infiltration area. Specific requirements are outlined in Section 921, Soil Erosion and Sediment Control Requirements.
2. Additional Requirements. Peak discharges and discharge volumes from the site shall comply with the appropriate sections above, with the following additions.
 - a. For purposes of calculating required detention storage during land disturbance, peak discharges and discharge volumes shall be calculated based upon the runoff coefficients for bare soils during the maximum period and extent of disturbance. Controls shall insure that the difference in volumes and rates of peak discharge before disturbance and during shall not exceed those peak discharges and discharge volumes noted in this Ordinance. It should be understood that detention storage during the period of land disturbance and prior to establishment of permanent cover may require additional facilities on a temporary basis. Such measures shall be located so as to preserve the natural soil infiltration capacities of the planned infiltration bed areas.
 - b. Wherever soils, topography, cut and fill or grading requirements, or other conditions suggest substantial erosion potential during land disturbance, the Township, as recommended by the Township Engineer, may require that the entire volume of all storms up to a two year storm from the disturbed areas be retained on site and that special sediment trapping facilities (such as check dams, etc.) be installed.
3. Sediment to be Trapped. Sediment in runoff water shall be trapped in accordance with criteria of the County Conservation District and PADEP and removed through means approved by the Township Engineer to assure proper functioning and adequate capacity in the basins or traps.
4. Protection of Potential Water Supply Areas. Procedures shall be established for protecting soils or geologic structures with water supply potential from contamination by surface water or other disruption by construction activity.

SECTION 921 SOIL EROSION, SEDIMENT CONTROL AND GRADING REQUIREMENTS

- A. **Purpose.** The purpose of this Section is to regulate modification of natural terrain and alteration of drainage by providing for certain run-off, erosion and sediment control measures, as well as to regulate the maintenance of grading excavation and fill.
- B. **Applicability.** The requirements of this Section shall apply to all proposed subdivision or land development involving any land disturbance activity, including but not limited to: grading, excavating, or disturbance of the topsoil, trees, or other vegetative cover, or introduction of fill material.
- C. **Soil Erosion and Sediment Control Requirements.**
 1. Preparation of Soil Erosion and Sediment Control Plan. The applicant or applicant's agent shall prepare a soil erosion and sediment control plan in accordance with the provisions of this Section and in compliance with Section

(soil erosion and sediment control plan). All land disturbance activities shall be conducted in such a way as to minimize erosion and sedimentation on adjoining and downslope properties.

- a. The applicant or applicant's agent undertaking land disturbance activity including, but not limited to grading, excavating, or disturbance of topsoil or vegetative cover, or introduction of fill material that may affect the existing flow of surface water within or downslope from the subject parcel, shall be required to:
 - i. Collect on-site run-off and manage its release to a point of discharge into a natural watercourse of the drainage area,
 - ii. Protect and clean the downslope, and adjoining properties of slit and debris washed from the subject property as a result of land disturbance activities on the subject property,
 - iii. Install all drainage and erosion control improvements as required by the approved soil erosion and sediment control plan.
 - b. Measures to minimize soil erosion and sedimentation shall meet the standards and specifications contained in the PADEP, Soil Erosion and Sediment Pollution Control Manual, as amended, and the Pennsylvania Clean Streams Law, Chapter 102, Erosion and Sedimentation Control Rules and Regulations, as amended, and the specifications contained herein. The Township Engineer or other duly authorized agent shall ensure compliance with the appropriate specifications.
2. Disturbance to be Kept to a Minimum. The disturbed area and the duration of exposure shall be kept to a practical minimum and the disturbed soils shall be stabilized as quickly as practical.
 - a. The permanent or temporary vegetation, erosion control and stormwater management structures and systems shall be installed within 20 days of the initial ground breaking.
 - b. If located adjacent to a stream within a watershed classified as High Quality of Exceptional Value as designated by Pennsylvania Code 25, Chapter 93; Water Quality Standards, as amended, all graded surfaces shall be stabilized whether temporary or permanent, within three days of the initial ground breaking and, weather permitting, shall be watered, tended, and maintained until growth is well established.
 3. Retention of Natural Vegetation. Whenever feasible, natural vegetation shall be retained, protected and supplemented as provided in the Zoning Ordinance.
 4. Sediment to be Trapped Until Stabilization. Sediment in the run-off water shall be trapped until the disturbed area is permanently stabilized by the use of measures such as debris basins, sediment basins, silt traps, or similar measures. Accumulated sediment shall be kept removed to ensure continued adequate capacity in the basins or traps.
 5. Submission with Preliminary and Final Plans. A grading, excavation, erosion and sediment control plan shall be submitted with the preliminary and final plan applications. Such plan shall be submitted in accordance with the PADEP Erosion and Sediment Pollution Control Manual, as amended, and the Special

Protection Waters Implementation Handbook, as amended, and in compliance with the most current review requirements of the Chester County Conservation District.

- a. When required by the most current regulations of the PADEP, development plans will be filed by the Conservation District with the PADEP for issuance of a National Pollutant Discharge Elimination System (N.P.D.E.S.) permit.
- b. Soil erosion and sediment control plans shall incorporate facilities for stormwater management in accordance with the policies and regulations of the Chester County Conservation District and the stormwater management plan.
- c. Upon recommendation from the Township Engineer, the Township may require the submission of plans, regardless of their size or other outside review requirements, to the Chester County Conservation District for review and approval. In such a case, approval by the Chester County Conservation District shall be required before final approval of a subdivision or land development, or the issuance of a building permit in the case of a minor subdivision.

D. Standards for Grading: Excavation and Fill Requirements.

1. Limitations. No excavation or fill shall be made with an exposed face steeper in slope than three horizontal to one vertical, except under one or more of the following conditions:
 - a. The material in which the excavation or fill is to be made is sufficiently stable to sustain a slope of steeper than three horizontal to one vertical, and a written statement to that effect by a licensed professional engineer experienced in erosion control is submitted and approved by the Township Engineer. The statement shall certify that the site has been inspected and that the deviation from the slope specified will not result in injury to persons or damage to property or increased erosion and resulting sedimentation.
 - b. When a retaining wall is provided to support the face of the excavation at a maximum height of three feet or a stepped level or terraced retaining wall system with a combined maximum height of six feet.
2. Flatter Slopes may be Required by Township Engineer. The Township Engineer may require a flatter slope when it is found that the material in which the excavating is to be made is unusually subject to erosion or if other conditions exist which make such a shallower slope necessary for stability and safety.
3. Separation of Slope From Property Lines. The top or bottom edge of slopes shall be located at least five feet from property lines or from any ultimate right-of-way, whichever is more restrictive, in order to permit a gradual rounding of the edge without encroaching onto the abutting property. At property lines where resulting slopes are steeper than three horizontal to one vertical or a retaining wall system is three feet or more in height, a protective fence shall be located on top of the slope or retaining wall system. The fence shall be a minimum of four feet in height.

4. Protection of Angle of Repose. Excavation shall not exceed below the angle of repose or natural slope of the soil under the nearest point of any footing or foundation or any existing building or structure unless such footing or foundation is first properly underpinned or protected against settlement.
5. No Water to be Directed Towards Adjacent Properties. Grading shall not redirect or concentrate surface water onto an adjacent property.
6. Dust Control. During grading operations, necessary measures for dust control to prevent particulate matter from becoming airborne shall be followed. These measures shall include, but not be limited to the following:
 - a. A tire cleaning area shall be provided at each point of egress from the development areas;
 - b. Use, where possible, of water or other method approved by the Township Engineer for control of dust during any land disturbance activity; and
 - c. Prompt removal of earth or other material from paved streets.
7. Equipment Not to Cross Streams. Grading equipment shall not be allowed to cross permanent or intermittent streams without first obtaining appropriate permits from the PADEP.
7. No Danger to Adjoining Properties. No applicant shall engage in land disturbance activities that endanger any adjoining property, public street, sidewalk, alley or other property from settling, cracking or other damage which might result from such land disturbance. If, in the opinion of the Township Engineer, the land disturbance would create a hazard to life or property unless adequately safeguarded, the applicant shall construct walls, fences, guardrails, or other structures to safeguard the adjoining property, public street, sidewalk, alley, or other property and persons.
8. No Encroachment on Watercourses. Excavations or fills shall not encroach on natural watercourses, flood plain areas, constructed channels, or wetlands without the necessary state and federal permits. Excavations or fills located adjacent to natural watercourses or constructed channels shall have suitable protection against erosion.
10. Compaction of Fill. All fill shall be compacted to provide stability of material and to prevent undesirable settlements. The fill shall be spread in a series of layers, not exceeding 12 inches in thickness, and be compacted by a sheepfoot roller or other approved method after each layer is spread. The Township Engineer may require compaction tests and reports.
11. Protection of Erosion of Cuts. Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloping surface or a fill within the area of a proposed subdivision or land development. Slopes of more than ten feet in vertical height shall be separated by level berms of at least four feet in width within which ditches shall be constructed where necessary to prevent erosion and as a safe place to deposit and receive such water. The Township Engineer may require such drainage structures or pipes to be constructed or installed which are perceived necessary to prevent erosion damage and to satisfactorily carry off surface waters.

12. Good Conditions to be Maintained. When excavation or fill is proposed, all retaining walls, cribbing, drainage structures, fences or other protective devices shall be maintained in good condition and repair.

E. Grading for Drainage.

1. All lots, tracts or parcels shall be graded to provide property drainage away from buildings, and to dispose of water without ponding. All land within a development shall be graded to drain and dispose of surface water without ponding, except where ponding as in the case of detention basins, is part of the stormwater management system for the proposed subdivision or land development.
2. All drainage provisions shall be of such design to adequately handle the surface run-off and carry it to the nearest suitable outlet. Where drainage swales are used to direct surface waters away from buildings, they shall be sodded or planted as required.

F. Vegetative Cover.

1. Removal of trees, tree clusters and associated vegetation layers as a result of earth movement shall be kept to the absolute minimum as defined in Section 902 of the Zoning Ordinance. Wherever possible, existing vegetation shall be retained and protected.
2. Appropriate measures shall be taken to protect existing trees, tree clusters and associated vegetation.
3. Removal of any portion of existing vegetation shall be done in such a manner as to minimize erosion and sedimentation.

G. Responsibility.

1. Applicant Shall Remove Sedimentation from Adjacent Parcels. Whenever sedimentation is caused by the removal of vegetation, regrading or other development, it shall be the responsibility of the applicant or applicant's agent causing such sedimentation to remove it from all adjoining parcels or areas, drainage systems and watercourses and to repair any damage at his or her expense within a time period acceptable to the Township.
2. Permits Shall be Required. No applicant shall block, impede the flow of, alter, construct any structure, or deposit any material, or commit any act which will affect normal flood flow in any stream of watercourse without having obtained prior approval from the PADEP, and the Township. All such activity shall be in compliance with applicable provisions of the Newlin Township Zoning Ordinance.
3. Easements Shall be Provided. Where a subdivision or land development is traversed by a watercourse, a drainage easement or right-of-way shall be established along the line of such watercourse, and of adequate width to preserve the natural drainage.
4. Applicant's Responsibility to Install Improvements. All required drainage and erosion control improvements, whether temporary or permanent, shall be installed by the applicant or applicant's agent, at their expense, and in accordance with applicable requirements.

H. Compliance with Regulations and Procedures.

1. Approvals Conditioned Upon Soil Erosion And Sediment Control Measures. The Township, in considering preliminary subdivision and land development plans shall condition its approval upon the execution of soil erosion and sediment control measures as required by this Ordinance.
2. Submission Of A Modified Soil Erosion And Sediment Control Plan. Each application shall contain a commitment to submit for approval, a modified soil erosion and sediment control plan should the proposed plan prove to be inadequate prior to final release of escrow and dedication of improvements.

**SECTION 922 STORMWATER MANAGEMENT AND SOIL EROSION AND
SEDIMENT CONTROL PLAN INFORMATION REQUIREMENTS**

A. Relationship Of The Stormwater Management Plan To The Soil Erosion And Sediment Control Plan.

1. Stormwater Management Plan to be Prepared Prior to the Soil Erosion And Sediment Control Plan. The stormwater management plan shall be developed for a site before soil erosion and sediment control measures are considered to ensure that the standards for control of discharge can be established for each point or line of interest.
2. Maintaining the Distribution and Rates of Stormwater Discharge. In designing sediment control facilities, consideration should be given to maintaining the distribution and rates of discharge developed for the stormwater management plan at all times during the construction period. Where necessary to maintain this standard, sediment control facilities must be developed upstream of stormwater management facilities.
3. Protection of Subsurface Stormwater Management Facilities from Sedimentation. When preparing the sequences of construction, attention shall be given to protecting subsurface stormwater management facilities from sediments. Provisions for clearing sediments from surface stormwater management facilities upon completion of construction shall be included in the construction sequences.

B. Stormwater Management Plan Content. The Stormwater Management Plan shall consist of a narrative report describing the project and its compliance with the applicable sections of this Ordinance, and a map or maps describing the topography of the area, proposed alterations, and the location and description of permanent stormwater management measures and facilities. The following elements shall be included in the stormwater management plan.

1. The Narrative Summary Of The Project Shall Include:
 - a. General description of the project including;
 - i. Description of how the proposed project complies with all requirements of federal, State, County and Township agencies with regard to stormwater management,

- ii. Description of existing and proposed man-made features, including planned temporary and permanent stormwater management and soil erosion control measures on site.
 - iii. Plans and specifications of the stormwater management and soil erosion measures and facilities.
 - b. General description of stormwater management, both during and after construction;
 - c. Date project is to begin and expected date final stabilization will be completed;
 - d. A suitable map of the total watershed (a USGS quadrangle map is sufficient);
 - e. General description of on-site stormwater flows and their effect on neighboring properties;
 - f. A table of contents for the stormwater management report (all pages shall be numbered);
 - g. Seal and signature of the registered professional responsible for preparation of the plan and report.
2. Design Information. As part of the stormwater management plan and report, complete design calculations and analysis, as well as supplemental information, shall be submitted. The information shall show compliance with applicable federal, State, County and Township standards and regulations. The information shall include, but is not limited to the following:
- a. Analysis of the percentage of all pre-development and post-development stormwater that is recharged to groundwater, and all supporting material.
 - b. A sketch of the berm embankment and outlet structure indicating the embankment top elevation, embankment side slopes, top width embankment emergency spillway elevation, perforated riser dimensions, pipe barrel dimensions, and dimensions and spacing of anti-seep collars.
 - c. Design computations for the pipe barrel and riser.
 - d. A plot of the stage-storage (acre-feet vs. elevations) and all supporting computations.
 - e. Flood routing computations for before, during, and after development.
 - f. A detailed plan of the trash rack and anti-vortex device.
 - g. Design computations for energy dissipater devices located at pipe outclass.
 - h. Storm sewer and storm inlet design, capacity, efficient and other related calculations.
 - i. Design computations for all swales, waterways, channels or diversions.

3. Mapping Information. Map or maps showing the locations of all stormwater management system components shall be submitted. Details must be shown to define each and every proposed component of the stormwater management design. Details shall show dimensions, locations, specifications and other information as required by the Township Engineer to facilitate proper construction. The mapping shall include, but is not limited to, the following:
 - a. Location and description of the topographical features including streams, lakes, ponds, floodplains, swales or other existing watercourses located within 400 feet of the subject property, within the same watershed, that may be affected by run-off from the proposed subdivision or land development.
 - b. Slopes shall be identified with contours of two-foot vertical intervals, provided, however, that in areas where slopes exceed a 15 percent grade, slopes may be shown with contours of five-foot vertical intervals.
 - c. Location and description of rights-of-way or easements proposed to be created for drainage purposes, and proposed ownership and maintenance responsibility for those rights-of-way.

C. Maintenance Responsibilities.

1. General Responsibilities.
 - a. The owner of stormwater management facilities shall be responsible for their property maintenance during and after development. A maintenance plan shall be prepared for review and approval by the Township Engineer. Where appropriate, maintenance responsibilities must be included as deed restrictions on individual lots. During all subsequent real estate transactions, maintenance responsibilities shall be pointed out to new owners. All deeds shall incorporate these specified maintenance responsibilities, making explicit individual owners responsible for stormwater management measures and for the common property.
 - b. Upon or before completion of subdivision or land development improvements, the permanent stormwater management system for a tract shall be fully installed and functional in accordance with the approved stormwater management plan. Temporary sediment trapping facilities in detention basins, upon inspection and approval by the Township Engineer, shall be converted into permanent stormwater management basins; additional facilities designed to serve more than an individual lot shall begin operation. All such work shall be specified in the approved Plan.
6. Homeowners Association Ownership (Other than On-Lot Stormwater Facilities). A single entity taking the form of a private corporation, partnership firm, estate or other legal entity empowered to own real estate exclusive of individual lot owners (i.e. Homeowners Association) shall be set up to manage stormwater management facilities. The entity shall be suitable for such management and shall and able to perform other functions defined in this Ordinance. Responsibilities for ownership and management of facilities shall be defined in the stormwater management plan.

7. Individual Lot Stormwater Facilities. Stormwater management facilities and systems that are located on an individual lot are the responsibility of that landowner to maintain. As with non-individual lot situations, a stormwater management plan must be prepared, including a maintenance plan which shall include:
 - a. Any obligations concerning perpetuation of natural drainage or infiltration facilities, and/or the maintenance of facilities constructed by the individual lot owner under terms of the building permit (e.g., berms, cisterns, downspout connections, seepage pits, etc.)
 - b. Assurances that no action will be taken by the occupant to disrupt or in any way impair the effectiveness of any stormwater management system.
 - c. A description of the facilities and systems on the lot, as called for above, setting forth in deed restrictions binding on the landowner's successors in interest.
 8. Municipal Ownership. Where the Township has accepted an offer of dedication of the permanent stormwater management facilities, the Township shall be responsible for maintenance. Municipal ownership notwithstanding, the applicant is required to prepare a stormwater management plan including a maintenance plan component, as defined above. Upon approval of the stormwater management facilities by the Township, the applicant shall provide for maintenance guarantees as follows:
 - a. Long-Term Maintenance Bond - The long-term maintenance bond shall be in any amount equal to the present worth of maintenance of the facilities for a ten-year period. The estimated annual maintenance cost for the facilities shall be based on a reasonable fee schedule provided by the Township Engineer and adopted by the Board of Supervisors.
 - b. Documentation - The terms of the maintenance guarantees shall be documented as part of the stormwater management plan and the maintenance plan.
 9. Failure to Perform. Failure of any person, individual lot owner or private entity to properly maintain any stormwater management facility shall be construed to be a violation of this Ordinance and is declared to be a public nuisance.
- D. Soil Erosion and Sediment Control Plan Contents.** A soil erosion and sediment control plan shall accompany the preliminary and final plan. It shall be prepared by a professional engineer experienced in stormwater management and soil erosion control, and in accordance with federal, State, County and Township requirements and regulations.
1. Contents. The soil erosion and sediment control plan shall contain, at a minimum, the following information:
 - a. A description of proposed earth moving, grading, temporary erosion and sedimentation control facilities, and the relationship to permanent stormwater management facilities.

- b. Proposed alterations to the project area including changes to the surface and vegetative cover, areas of cut and fill, structures, roads, paved areas and buildings.
 - c. A description of the staging of earth-moving activities including the staging of cover removal and all cuts and fill, and installation of erosion and sediment control facilities and practices.
 - d. Installation of improvements including streets, storm sewers, underground utilities, sewer and water lines, buildings, driveways, parking areas, recreational facilities and other structures shall be described.
 - e. The program of operations to convert erosion and sedimentation controls to permanent stormwater management facilities, along with a schedule of the relative time sequence of activities.
2. Description of Earthmoving. A narrative description and a map illustrating temporary control measures and facilities to be used during earthmoving. The description shall include the following information:
- a. The type, location and dimensions of each measure and/or facility to be used, along with its purpose;
 - b. Design considerations and calculations of control measures and facilities;
 - c. The facilities or measures to be used to protect trees and existing vegetation;
 - d. Facilities or measures to prevent tracking of mud by construction vehicles.
3. Description of Maintenance Procedures. A narrative description of the maintenance procedures for temporary control facilities and the ownership arrangements including the methods and frequency of removal and ultimate disposal site for sediments and other material removed from control facilities both during and upon completion of the project.
4. Proof of Required Permits. The applicant or applicant's agent shall produce proof of the acquisition of all required permits or certificates for soil erosion and sedimentation controls including, but not limited to, permits required by:
- Pennsylvania Department of Environmental Protection (PADEP)
Pennsylvania Department of Transportation
Chester County Conservation District
Utility Companies
Public Utility Commission
5. Availability of Plan. The soil erosion and sediment control plan shall be available at all times on the construction site. The applicant or applicant's agent shall be responsible for correcting any stormwater runoff problems that arises from the subdivision or land development, even if final approval has been granted. The Township reserves the right to order a cease and desist of all construction where runoff problems arise.

SECTION 923 WATER SUPPLY

- A. Adequate and Potable Water Supply Systems Required.** Adequate and potable water supply system(s) shall be installed consistent with design principles and requirements contained in this Ordinance and Township standards, which are the U.S. Public Health criteria for drinking water, as administered by the Environmental Protection Agency's Safe Drinking Water Act.
- B. Public Water to be Used, When Available.** Where public water is available, the applicant or applicant's agent shall make use of such public water service to supply each lot in the subdivision or the land development.
- C. When No Public Water is Available.** Where no public water supply is available, the applicant or applicant's agent, upon approval of the Township, may be permitted to construct a well on each lot exclusively to serve that lot or a shared well or wells to exclusively serve that development. The Township may require that a well withdrawal impact study be prepared verifying the availability of a sufficient potable water supply. All wells shall be constructed according to all applicable rules and regulations of the PADEP, the Chester County Health Department, and the Township. The Township may also impose additional requirements to accommodate or mitigate the impacts of the proposed development.
- D. Proof of Adequacy of Water Supply Required.** The applicant or applicant's agent shall submit proof of the quality and adequacy of the water supply proposed to be utilized by the subdivision or land development and approval by the Chester County Health Department of the type and construction methods to be employed in the installation of the individual water supply systems. In cases where review by the Delaware River Basin Commission is required, proof of this review shall be submitted as well.
- E. All Wells shall be Shown.** The proposed location of the wells shall be shown on the preliminary plan for each lot. All existing wells shall also be shown.
1. The circular area with a radius conforming to the rules and regulations of the PADEP, the Chester County Health Department and the Township, shall be shown around each well to denote an area in which an on-site sewage disposal system shall not be located.
 2. Where public water is provided, depiction of the circular areas is not necessary except where existing wells on parcels adjacent to the subdivision may be affected by proposed on-site sewage disposal facilities. In any case, the usable area for on-site sewage disposal systems would still be limited by a clear zone surrounding the water service line to each house, as required by the PADEP, the Chester County Health Department and the Township.
- F. Fire Hydrants Required when Public Water Systems are Used.** Where public or a community water system is provided, fire hydrants or acceptable alternatives shall be installed for fire protection, as approved by the Township Fire Marshall and Township Engineer. Where fire hydrants are installed, they shall meet the specifications of the Insurance Services Offices of Pennsylvania. Location and number of the hydrants shall be approved by the Township Fire Marshall.
1. Fire hydrants, in general, will be located on an eight-inch line or looped six-inch line. Where a dead end line is required to contain a fire hydrant, the portion of the line between the main loop and the hydrant shall be an eight-inch minimum diameter.

2. Fire hydrants shall be spaced in a development so that all proposed building(s) shall be no more than 600 unobstructed feet from the hydrant measured along traveled ways to be used by fire apparatus.
3. All public or community water systems must provide a minimum of 500 gallons per minute at a residual pressure of 20 psi for a two hour period.
4. To provide additional protection, the Fire Marshall may require the incorporation of a dry hydrant into existing and proposed ponds or reservoirs and an access easement be provided for emergency use.

G. Alternate Sources of Groundwater. Two sources of groundwater are recommended for each public or community water system due to the unusual density and demand served by such systems. Each should be capable of supplying the average daily demand of the proposed dwelling units. A two well system is preferred; however, the following alternatives, which would ensure an adequate water supply, may be acceptable:

1. A single well, capable of providing twice the daily average demand, as demonstrated by a pumping test of at least 48 hours duration, producing a stabilized drawdown of unchanging water level for at least five hours duration.
2. A single well capable of supplying the average daily demand and an additional reliable surface water source.
3. A single well capable of supplying the average daily demand, plus a dependable connection to another satisfactory public water supply system.
4. A second well is recommended for use as a monitor of the aquifer and as a stand-by in the event of emergency.

H. Public-Community Well Certification and Permitting. Where water is to be provided by means other than private wells owned and maintained by the individual owners of lots within the subdivision or land development, the applicant or applicant's agent shall present evidence to the Township prior to final plan approval, that the subdivision or land development is to be supplied by a certified public utility, a bona fide cooperative association of homeowners, or by a municipal corporation, authority or utility. Written approval as required by Section 923 H 1 below for capacity and construction methods and details shall be provided prior to final plan approval. A copy of 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.

1. The design, installation, and construction of any such system shall be in accordance with the standards of the applicable authority or utility company and shall be subject to the approval of the PADEP, the Chester County Health Department and the Township. Construction details for all facilities shall be shown on the Final Plan. Such system shall be further subject to satisfactory provision for the maintenance thereof.
2. Where a permit is required by the PADEP, it shall be presented as evidence of such review and approval in the case of private or public systems before construction commences.

SECTION 924 SEWAGE DISPOSAL FACILITIES

A. General.

1. Each lot shall have a permitted sewage disposal facility in accordance with the PADEP rules and regulations.
2. Documented approval of the Sewage Facilities Planning Module for Land Development by the PADEP shall be required prior to final plan approval.
3. The proposed sewage disposal facilities shall be in accordance with the Township's Act 537 Sewage Facilities Plan.
4. The sewage facilities selected to serve a proposed use shall be determined based on the outcome of the Wastewater Treatment and Disposal Feasibility Report, as required by this Ordinance.
5. Sewage facilities shall be designed and constructed in strict accordance with PADEP, Chester County Health Department, applicable municipal authority, and Township requirements and specifications. A copy of the approval of such systems and all required permits shall be submitted prior to Final Plan approval.
6. Sanitary sewers shall not be used to carry stormwater nor shall floor drains be connected to the sanitary sewer.
7. Prior to the issuance of any permit for construction in any subdivision or land development, temporary toilet facilities shall be installed for the builders, contractors and subcontractors, unless the applicant or applicant's agent shows, to the satisfaction of the Township Supervisors, that other suitable toilet facilities will be made available during construction.

B. Public Sewage System.

1. Connection to Public Systems Required. Each property shall connect with the public sanitary sewer system according to State regulation, and if the extension of collection lines to serve the proposed use is consistent with the Township's Sewage Facilities Plan. Proposed sewer collection facilities and proposed extensions to existing facilities shall be subject to review and approval by the Municipal Authority. All proposed sewer lines shall extent to the far property line of the development.
 - a. A signed sewer connection agreement, containing terms and conditions for connection to the Municipal Authority system, shall be required. A satisfactory escrow agreement will also be required prior to granting final approval.
 - b. Authorization for capacity and approval of the construction design and details shall be obtained in writing from the Municipal Authority before the final plan is approved by the Township.
 - c. Construction details shall be shown on the final plan.
2. Provisions for Future Connection to Public Facilities. Where the public sewer system is not yet accessible but is planned for extension to the subdivision or land development, the applicant or applicant's agent shall install sewer lines,

including lateral connections, as may be necessary to provide adequate service to each lot when connection with the public sewer system is made in accordance with the following:

- a. The sewer lines shall be suitably capped at the limits of the subdivision or land development, and the laterals shall be capped at the street right-of-way. When capped sewers are provided, individual or community sewage disposal facilities shall be provided in the interim.
 - b. Where studies by the Township and/or Municipal Authority indicate that construction or extension of sanitary trunk systems to serve the property being subdivided, appear probable within a reasonably short time (ten years or less), the Township shall require the installation and capping of sanitary sewer mains and house connections, in addition to the installation of temporary individual sewage systems. The Township and Municipal Authority shall review and approve the design and installation of such sewers.
 - c. Design of capped sewer systems and the interim sewage facilities shall be subject to approval by the PADEP, the Chester County Health Department, the Municipal Authority and the Township.
3. When No Public System is Available. All lots which cannot be connected to a public sewage system in operation at the time of construction shall be provided with a community or individual sewage system meeting the design standards set forth by the PADEP, the Chester County Health Department and the Township.

C. Community Sewage System.

1. Governmental Reviews and Approvals Required. The planning, design and construction of any community sewage system shall be subject to the review and approval of the PADEP, Chester County Health Department, and the Township.
2. Subsurface Testing. Where surface or subsurface disposal of wastewater effluent is proposed, preliminary hydrogeologic and permeability testing shall be required as part of the planning module submission.
3. Sewage Management Program Required. A Sewage Management Program shall be prepared by the applicant or applicant's agent indicating the ownership, operation and maintenance responsibilities for the proposed system in accordance with the Title 25 of the Pennsylvania Code. This program shall be subject to Township approval.
4. Preservation of the Life of Community Sewage Systems. Each community sewage system shall, at a minimum, provide sand infiltration to extend the life of the disposal area and reserve area in the event the disposal area should fail. The reserve area shall be located within soils suitable to support such a system. Both the primary and reserve area shall be tested, preserved from construction damage, and locations noted on the final plan.

D. Individual Sewage System.

1. Primary And Alternate Sewage Disposal Areas Shall Be Identified. Where lots are to be served by individual on-site sewage facilities, a primary area and alternate area for the sewage disposal shall be identified on the preliminary plan, or final plan in the case of a minor subdivision. No construction or paving shall be

permitted on the primary or the alternate on-site sewage disposal areas and the final subdivision or land development plan shall note this restriction.

2. Design and Location of Drainage Facilities. Where individual on-lot sewage systems are to be used, each lot so served shall be the necessary size and shape to accommodate the required dimensions of the disposal area at a safe distance from, and at a lower elevation than, the proposed well and buildings in order to facilitate gravity flow where practical in accordance with State and Township regulations. Individual sewage systems shall be located upon the same parcel as the use that is served, unless the use of an off-site system is specifically approved by the Township.
3. Location of Drainage Facilities to be Shown. The surveyed location of the individual sewage system, back-up area, and well shall be shown prior to final plan approval.
4. Disposal Systems to be Installed Prior to Sale of Lots. Unless served by a public or community sewer system, the applicant or applicant's agent shall install or shall require by deed restriction, the installation of an approved system prior to the sale of each lot or parcel within the subdivision.
5. Location of Disposal Facilities in Option 5 Residential Developments. The individual sewage disposal systems serving the lots of an Option 5 subdivision or land development designed in accordance with the Zoning Ordinance may, upon approval of the Township Engineer, be located in the common open space. The applicant or applicant's agent shall be responsible for securing and recording all maintenance and access easements necessitated as a result of selecting this design alternative.

E. Soil Percolation Test Requirements.

1. Soil Percolation Tests Required. Unless served by a public or community sewer system, soil percolation tests shall be performed for all subdivision or land developments.
2. Soil Percolation Test Procedures. Soil percolation tests shall be made in accordance with the procedure required by the PADEP and the Chester County Health Department by either a licensed professional engineer, a Pennsylvania Sewage Facilities Act sewage enforcement officer, or similarly qualified professional.
3. Soil Percolation Test Locations. Soil percolation tests shall be performed within the site of the proposed on-site sewage facilities. Soil test pits shall be within ten feet of the absorption area.
4. Soil Percolation Test Analysis. The results of the soil percolation tests shall be analyzed in relation to the physical characteristics of the tract and the general areas surrounding the tract being subdivided. The final plan lot layout shall be based on this analysis.

SECTION 925 LIGHTING REQUIREMENTS AND DESIGN STANDARDS

A. Purpose. The purposes of this Section are to:

1. Provide lighting in outdoor public places where public health, safety and welfare are potential concerns.
2. Protect drivers and pedestrian from the glare of non-vehicular light sources that shine into their eyes and thereby impair safe traverse.
3. Protect neighbors and the night sky from nuisance glare and stray light from poorly aimed, placed, applied, maintained or shielded light sources.

B. Applicability.

1. Outdoor lighting shall be required for safety and personal security in areas of public assembly and traverse; including but not limited to the following: multi-family residential, other residential developments with lot sizes of 22,000 square feet or smaller, as well as commercial, industrial, public-recreational, and institutional uses.
2. The Board of Supervisors may require lighting be incorporated for other uses or locations, as they deem necessary.
3. The glare-control requirements herein contained apply to lighting in all above-mentioned uses as well as, but not limited to, sign, architectural, landscaping, and residential lighting.

C. Criteria.

1. Illumination Levels
 - a. Lighting, where required by this Ordinance, shall have intensities and uniformity ratios in accordance with the current recommended practices of the Illuminating Engineering society of North America (IESNA) as contained in the IESNA Lighting Handbook.
 - b. Future amendments to recommended practices shall become a part of this Ordinance without further action of the Township.

- c. Examples of intensities for typical outdoor applications, as extracted from the 8th Edition of the Lighting Handbook, are presented below.

Table 11 - Typical Outdoor Lighting Intensities		
Use /Task	Maintained Foot-Candles	Uniformity Average-Minimum
Streets, local residential	0.4 Avg.	6:1
Streets, local commercial	0.9 Avg.	
Parking, residential, multi-family - Low vehicular/pedestrian activity - Medium vehicular/pedestrian activity	0.2 Min. 0.6 Min	4:1
Parking, industrial/commercial/institutional/municipal - High activity, e.g., regional shopping centers/fast food facilities, major athletic/civic/cultural/recreational events - Medium activity, e.g., community shopping centers, office parks, hospitals, commuter lots, cultural/civic/recreational events - Low activity, e.g., neighborhood shopping, industrial employee parking, schools, church parking.	0.9 Min. 0.6 Min. 0.2 Min.	
Walkways and bikeways	0.5 Avg.	5:1
Building entrances	5.0 Avg.	----
Notes: - Illumination levels are maintained horizontal footcandles on the task, e.g., pavement or area surface. - Uniformity ratios dictate that average illumination values shall not exceed minimum values by more than the product of the minimum value and the specified ratio. E.g., for commercial parking high activity, the average footcandles shall not be in excess of 3.6 [0.9 x 4].		

2. Lighting Fixture Design.

- a. Fixtures shall be of a type and design appropriate to the lighting application and aesthetically acceptable to the Board of Supervisors
- b. For lighting horizontal tasks such as roadways, pathways and parking areas, fixtures shall meet IESNA "full cutoff" criteria (not have more than 2.5 percent of their light output emitted above 90 degrees at any lateral angle around the fixture.
- c. The use of floodlighting, spotlighting, wall-mounted fixtures, decorative globes and other fixtures not meeting IESNA "full cutoff" criteria shall be permitted only with the approval of the Board of Supervisors, based upon acceptable glare control.

- d. Fixtures shall be equipped with or be capable of being back-fitted with light directing devices such as shields, visors or hoods when necessary to redirect offending light distribution.

3. Control of Nuisance and Disabling Glare.

- a. All outdoor lighting, whether or not required by this ordinance; on private, residential, commercial, industrial, municipal, recreational or institutional property; 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, i.e., disabling glare, and so as not to create a nuisance by projecting or reflecting objectionable light onto a neighboring use or property, i.e., nuisance glare.
- b. Floodlights and spotlights shall be so installed or aimed that they do not project their output into the windows of neighboring residences, adjacent uses, directly skyward or onto a roadway.
- c. Unless otherwise permitted by the Board of Supervisors, e.g., for safety or security, lighting shall be controlled by automatic switching devices such as time clocks or combination motion detectors and photocells, to permit extinguishing offending sources between 11 p.m. and dawn to mitigate nuisance glare and sky-lighting consequences.
- d. Where all-night safety or security lighting is to be provided, the lighting intensity levels shall not exceed 25 percent of the levels normally permitted by this Ordinance for the use.
- e. Vegetation screens shall not be employed to serve as the primary means for controlling glare. Rather, 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.
- f. The intensity of illumination projected onto a residential use from another property shall not exceed 0.1 vertical footcandle, measured at thirty inches above the ground at the property line.
- g. Externally illuminated billboards shall be lighted by fixtures mounted at the top of the sign and aimed downward. Such fixtures shall be automatically extinguished between the hours of 11:00 p.m. and dawn.
- h. Fixtures meeting IESNA "full cutoff" criteria shall not be mounted in excess of 20 feet above grade. Fixtures not meeting IESNA "full cutoff" criteria shall not be mounted in excess of 16 feet above grade except as specifically approved by the Board of Supervisors.
- i. Fixtures used for architectural lighting, e.g., facade, fountain, feature and landscape lighting, shall be aimed so as not to project their output beyond the objects intended to be illuminated and shall be extinguished between the hours of 11 p.m. and dawn.

4. Installation.

- a. Electrical feeds for lighting standards shall be run underground, not overhead.

- b. Lighting standards in parking areas shall be placed a minimum of five feet outside paved area, or on concrete foundations at least 30 inches high above the pavement, or suitably protected by other approved means.

- 5. Maintenance. Lighting fixtures and ancillary equipment shall be maintained to always meet the requirements of this Ordinance.

D. Residential Development Fixture Placement. Street lighting fixtures in residential developments shall be placed at the following locations:

- 1. At the intersection of public roads with entrances roads to the proposed development.
- 2. Intersections involving proposed public or non-public primary distributor streets within the proposed development.
- 3. At the apex of the curve of any primary distributor street, public or non-public, within the proposed development, having less than 300-foot minimum centerline radius.
- 4. Cul-de-sac bulb radii.
- 5. Terminal ends of center median islands having concrete-structure curbing, trees and/or other fixed objects not having breakaway design for speeds of 25 miles per hour or greater.

E. Plan Submission.

- 1. Lighting Plan Contents. Lighting plans shall be submitted to the Township for review and approval and shall include:
 - a. Layout of the proposed fixture locations.
 - b. Iso-footcandle plots for individual fixture installations and 10' x 10' illuminance-grid plots for multi-fixture installations, which demonstrate compliance with the intensities and uniformities set forth in this Ordinance.
 - c. Description of the equipment, including fixture catalog cuts, photometrics, glare reduction devices, lamps, control devices, mounting heights and mounting methods proposed.
- 2. Visual Impact Plan. When requested by the Board of Supervisors, the applicant shall submit a visual impact plan that demonstrates appropriate steps have been taken to mitigate on-site and off-site glare.
- 3. Alterations After Approval. Post-approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the Township for review and approval.

F. Post Installation Inspection. The Township reserves the right to conduct a post-installation nighttime inspection to verify compliance with the requirements of this Ordinance, and if appropriate, to require remedial action at no expense to the Township.

G. Compliance Monitoring.

1. Safety Hazards

- a. If Township judges a lighting installation creates a safety or personal-security hazard, the person(s) responsible for the lighting shall be notified and required to take remedial action.
- b. If appropriate corrective action has not been effected within 30 days of notification, the Township may levy a fine for as long as the hazard continues to exist.

2. Nuisance Glare and Inadequate Illumination Levels

- a. When the Township judges an installation produces unacceptable levels of nuisance glare, skyward light, excessive or insufficient illumination levels or otherwise varies from this Ordinance, the Township may cause notification of the person(s) responsible for the lighting and require appropriate remedial action.
- b. If the infraction so warrants, the Township may act to have the problem corrected as in Section 925 G 1 b above.

H. Nonconforming Lighting. Any lighting fixture or lighting installation existing on the effective date of this Ordinance that does not conform with the requirements of this Ordinance, shall be considered as a lawful nonconformance subject to the following limitations:

1. A nonconforming lighting fixture or lighting installation shall be made to conform with the requirements of this Ordinance when:
 - i. The nonconformance is deemed to create a safety hazard
 - ii. It is replaced or relocated
2. Nonconforming lighting fixtures and lighting installations shall be made to conform with the requirements of this Ordinance or removed within ten years after the effective date of this Ordinance.

I. Street Lighting Dedication.

1. When Lights are to be Dedicated to the Township. When street lighting is to be dedicated to the Township, the applicant shall be responsible for all costs involved in the lighting of streets and street intersections until the street is accepted for dedication.
2. Payment of Costs Prior to Dedication. Prior to dedication and in the event of the formation of a homeowner's association and/or property management declaration, the Township shall require said agency to enter into an agreement guaranteeing payment of all costs associated with dedicated street lighting.
3. Assumption of Costs of Street Lighting Dedicated to the Township.
 - a. Upon dedication of public streets, the Township shall assess the homeowners' association, individual property owners, or corporations, as may be necessary to collect all revenues required that are directly or

indirectly associated with all costs of each specific street lighting fixture.
These costs shall include:

- i. Administration;
- ii. Collection;
- iii. Pro-ration of non payables;
- iv. Actual utility electrical charges;
- v. Maintenance and maintenance contracts for fixtures and associated equipment.

ARTICLE 10- AMENDMENT, ADMINISTRATION, AND ENFORCEMENT

SECTION 1000 PURPOSE

This Article outlines the procedures for enforcement and amendment of this Ordinance, as well as procedures for challenges and appeals of decisions rendered under this Ordinance.

SECTION 1001 PROCEDURE

11A. Amendment Procedure. The Board of Supervisors may, from time to time, amend, supplement, change, modify, or repeal this Ordinance by the following process. The Board of Supervisors, by resolution shall fix the time and place of a public hearing on the proposed amendment and give 30 days notice thereof as follows:

1. By publishing a notice not more than 60 days nor less than seven days prior to the passage of the amendment.
2. The notice shall state the time and place of the hearing and either the full text of the amendment or the title and a brief summary, prepared by the Township solicitor and setting forth all the provisions in reasonable detail, according to the provisions of the Section 506(a) of the Pennsylvania Municipalities Planning Code.
3. The Board of Supervisors shall submit the proposed amendment to the Chester County Planning Commission for recommendations not less than 30 days prior to the public hearing on the proposed amendment.
4. Within 30 days after adoption of the amendment, the Board of Supervisors shall forward a certified copy of the amendment to the Chester County Planning Commission.

B. 2 222.Referral to Township Planning Commission. In case of an amendment other than that prepared by the Township Planning Commission, the Board of Supervisors shall submit each such amendment to the Township Planning Commission for recommendations at least 30 days prior to the public hearing on the proposed amendment.

C. Publication, Advertisement and Availability of Proposed Amendments. Proposed amendments to this Ordinance shall follow the publishing, advertisement and availability requirements as specified in Section 506 of the Pennsylvania Municipalities Planning Code, as amended.

D. Challenges and Appeals. Any person aggrieved by a finding, decision, or recommendation of the Board of Supervisors pursuant to the administration of this Ordinance may appeal any such action as provided for in Article IX of the Pennsylvania Municipalities Planning Code.

E. Mediation. As an alternative to an appeal proceeding, a party entitled to appeal a decision of the Board of Supervisors under the provisions of this Ordinance may request the use of mediation as an aid in resolving the dispute. Participation in mediation shall be voluntary by both parties, and shall be conducted as prescribed in Article IX of the Pennsylvania Municipalities Planning Code.

F. Enforcement. The Board of Supervisors is authorized to enforce the provisions of this Ordinance. The Board of Supervisors may institute and maintain appropriate legal proceedings in law or in equity to restrain, correct or abate violations including but not limited to, requiring compliance with the provisions of this Ordinance, to recover damages, and to prevent the illegal occupancy of a building, structure or premises.

G. 7Penalties.

1. Imposition of Penalties. Any person, partnership, or corporation who or which has violated the provisions of this Ordinance shall, upon being found liable therefor in a civil enforcement proceeding commenced by the Board of Supervisors, pay a judgment of not more than \$500 plus all court costs, including reasonable attorney fees incurred by the Board of Supervisors as a result thereof. No judgment shall commence or be imposed, levied or payable until the date of the determination of a violation by the district justice. If the defendant neither pays nor timely appeals the judgment, the Board of Supervisors may enforce the judgment pursuant to the applicable rules of civil procedure. 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.
2. Legal Actions. In case any building, structure, landscaping or land is, or is proposed to be, erected, constructed, reconstructed, altered, converted, maintained or used in violation of this ordinance, the Board of Supervisors or, with the approval of the Board of Supervisors, an officer of the Township, or any aggrieved owner or tenant of real property who shows that his property or person will be substantially affected by the alleged violation, in addition to other remedies, may institute any appropriate action or proceeding to prevent, restrain, correct or abate such building, structure, landscaping or land, or to prevent, in or about such premises, any act, conduct, business or use constituting a violation. When any such action is instituted by a landowner or tenant, notice of that action shall be served upon the Township at least 30 days prior to the time the action is begun by serving a copy of the complaint on the Board of Supervisors. No such action may be maintained until such notice has been given.
3. Subsequent Owners Shall Comply with Regulations. The description by metes and bounds in the instrument of transfer or other document used in the process of selling or transferring shall not exempt the seller or transferor for such penalties or from the remedies herein provided.

H. Preventive Remedies.

1. Actions by Law. In addition to other remedies, the Board of Supervisors may institute and maintain appropriate actions by law or in equity to restrain, correct or abate violations, to prevent unlawful construction, to recover damages and to prevent illegal occupancy of a building, structure or premises.
2. Refusal of Permits for Developments in Violation of this Ordinance. The Board of Supervisors may refuse to issue any permit or grant any approval necessary to further improve or develop any real property which has been developed or which

has resulted from a subdivision or real property in violation of this Ordinance. The authority to deny such a permit shall apply to any of the following applicants:

- a. The owner of record at the time of such violation.
 - b. The vendee or lessee of the owner of record at the time of such violation without regard as to whether such vendee or lessee has actual or constructive knowledge of the violation.
 - c. The current owner of record who acquired the property subsequent to the time of violation without regard as to whether such current owner has actual or constructive knowledge of the violation.
 - d. The vendee or lessee of the current owner of record who acquired the property subsequent to the time of violation without regard as to whether such vendee or lessee had actual or constructive knowledge of the violation.
3. Compliance with Antecedent Conditions. As an additional condition for issuance of a permit or the granting of an approval to any such owner, current owner, vendee or lessee for the development of any such real property, the Board of Supervisors may require compliance with the conditions that would have been applicable to the property at the time the applicant acquired an interest in such real property.
- II. Abatement of Violations Prior to Subsequent Plan Approvals.** No approval shall be granted to any subsequent phase of a development until all outstanding violations are abated and the project is in full compliance with this Ordinance.