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ARTICLE 6

DESIGN AND IMPROVEMENTS STANDARDS

103.601. RELATIONSHIP TO ZONING ORDINANCE

103.601.1. Proposed DEVELOPMENTS and SUBDIVISIONS shall comply with all provisions of the TOWNSHIP Zoning Ordinance, including, but not limited to the provisions which establish standards for the following: **(Amended 6-14-00 by Ord. No. 292)**

OFF-STREET PARKING (Section 117.314)
SIGNS (Section 117.315)

103.601.2. In addition to any requirements established in this Ordinance, all proposed DEVELOPMENTS and SUBDIVISIONS shall comply with the standards established in the OVERLAY DISTRICTS (Article 5) of the TOWNSHIP Zoning Ordinance, including the following:

Aviation Essential Land (Section 506)
AIRPORT NOISE EXPOSURE AREA (Section 505)
Airport Flight Ceiling and Navigation (Section 504)
FLOODPLAIN Areas (Section 507)
LANDFILLS (Section 508)
MINED LAND (Section 509)
STEEP SLOPES and Slide Prone Land (Section 510)
Stormwater Management Districts (Section 511)
WETLANDS (Section 512)

103.602. LAND, BLOCK AND LOT

103.602.1. LAND

103.602.1.1. Land shall be suited for the purpose for which it is to be developed, and all SITES proposed for DEVELOPMENT shall comply with the minimum SITE area and other requirements prescribed by the zoning Ordinance.

103.602.1.2. SITES unsuited for DEVELOPMENT which would entail hazards to life, health or property or would be uneconomic to provide with PUBLIC services shall not be subdivided.

103.602.1.3. Those areas of SITES having slopes of twenty-five (25) percent or more or having land subject to flooding shall not be subdivided unless such deficiencies can be avoided or eliminated and shall comply with all applicable sections of

the Zoning Ordinance, including the STEEP SLOPES overlay, BASE SITE AREA and minimum LOT area requirements.

103.602.2. BLOCKS

103.602.2.1. The length, width, and shape of BLOCKS shall be determined with due regard to:

103.602.2.1.1. Provision of adequate SITES for type of BUILDING proposed.

103.602.2.1.2. Topography.

103.602.2.1.3. Requirements for safe and convenient vehicular and pedestrian circulation and ACCESS.

103.602.2.1.4. Zoning requirements as to BASE SITE AREA, LOT size, dimension and minimum LOT area per dwelling.

103.602.2.2. BLOCKS shall have a maximum length of twelve hundred (1,200) feet and, as far as practicable, a minimum length of five hundred (600) feet. In design of BLOCKS longer than eight hundred (800) feet, special consideration should be given to the requirements for satisfactory fire protection as per Section 103.609.1 of this Ordinance.

103.602.2.3. Interior pedestrian walks may be required in BLOCKS more than eight hundred (800) feet long. The RIGHT-OF-WAY of such walks shall not be less than fifteen (15) feet with a minimum paved SIDEWALK of four (4) feet. Greater width may be required as necessary to facilitate pedestrian circulation. Interior walks shall be maintained by the ABUTTING property OWNERS in the same manner as SIDEWALKS on PUBLIC or private STREETS, or by a community association or other similar OWNER.

103.602.2.4. Residential BLOCKS shall be of sufficient depth to accommodate two (2) tiers or LOTS, except where DOUBLE FRONTAGE LOTS are permitted to border an ARTERIAL ROAD or COLLECTOR ROAD, railroad, watercourse or other natural barrier.

103.602.2.5. Where a SUBDIVISION abuts an ARTERIAL ROAD or COLLECTOR ROAD, the greater dimension of the BLOCKS shall front along such ROAD and/or STREET so as to minimize the number of points of ACCESS. Such ACCESS shall comply with the provisions of this Ordinance and other applicable codes of the TOWNSHIP. The purpose of this provision is to reduce the number of STREETS

intersecting and taking ACCESS from major highways and to increase the distance between such intersections.

103.602.2.6. SIDE LOT LINES shall be substantially at right angles or radial to STREET RIGHT-OF-WAY lines.

103.602.2.7. No remnants of land shall exist after subdividing; all portions of a PLAN shall be incorporated into existing or proposed LOTS unless special usage is applied as part of a LAND DEVELOPMENT proposal. Any areas reserved for a special purpose which may revert to an unintended nuisance area shall not be permitted. Remnant land areas shall be distinguished on the PLAT from BUFFERYARD, OPEN SPACE or environmental RESOURCE PROTECTION LAND areas established by the ZONING ordinance.

103.602.2.8. DOUBLE FRONTAGE LOTS shall be avoided except where essential to provide separation of residential DEVELOPMENT from traffic arteries or to overcome specific disadvantages of topography and orientation. A BUFFERYARD as required by the Zoning Ordinance, shall be provided along the line of LOTS ABUTTING such traffic artery or other disadvantageous use. There shall be no right of ACCESS across the BUFFERYARD.

103.602.2.9. The LOT LINES of all CORNER LOTS located at the intersection of the RIGHTS-OF-WAY of two STREETS or of an ALLEY and a STREET, shall have a curve with a minimum radius of twenty-five (25) feet joining the two (2) intersecting RIGHTS-OF-WAY lines.

103.602.2.10. LOTS for NON-RESIDENTIAL USES shall be of such size and shape as may be suitable for their prospective use and to provide sufficient space for OFF-STREET PARKING and loading, and water supply and sanitary SEWAGE disposal (if either or both are to be provided by individual ON-LOT facilities). The minimum LOT dimensions shall be in accordance with the applicable zoning regulations or as approved by the BOARD OF SUPERVISORS.

103.602.3. LOTS

103.602.3.1. LOT dimensions and areas exclusive of EASEMENTS shall not be less than specified by provisions of the Zoning Ordinance and shall further conform to the following requirement designed to abate health hazards:

Where either or both water supply and sanitary SEWAGE disposal are provided by individual ON-LOT facilities, the BOARD OF SUPERVISORS shall require that the APPLICANT have such tests made as are necessary to determine the adequacy of the proposed facilities in relation to the proposed LOT size and existing grade and soil conditions. In all such cases, certification by the COUNTY Health Department that the

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proposed facilities will be adequate shall be a prerequisite to FINAL APPROVAL of the PLAN.

103.603.3.2. LOTS shall be laid out and graded to provide positive DRAINAGE away from BUILDINGS and water wells.

103.603.3.3. The LOT arrangement and design shall be such that all LOTS will provide satisfactory and desirable BUILDING SITES, properly related to topography and the character of surrounding DEVELOPMENT.

103.603.3.4. Minimum BUILDING SETBACKS shall be controlled by the ZONING ORDINANCE.

103.603.3.5. Every LOT shall abut on a PUBLIC STREET with the exception of suitably designed residential courts or other PLANNED DEVELOPMENTS having acceptable means of ACCESS provided by private STREETS.

103.603.3.6. LOTS fronting directly on existing or proposed ARTERIAL ROADS or COLLECTOR ROADS shall be avoided. ACCESS to such LOTS shall be from service or MARGINAL ACCESS ROADS wherever possible.

103.603.3.7. In cases where LOTS have FRONTAGE along two or more STREETS, the minimum SETBACK requirements along each STREET shall be equal to the FRONT SETBACK requirements for the ZONING DISTRICT in which the LOT is located.

103.603. EASEMENTS

103.603.1. EASEMENTS with a minimum width of twenty (20) feet shall be provided as necessary for storm DRAINAGE STRUCTURES, swales, sanitary SEWERS and other utilities.

103.603.2. To the fullest extent possible, EASEMENTS shall be centered on or adjacent to REAR LOT LINES or SIDE LOT LINES.

103.603.3. Nothing shall be permitted to be placed, planted (except grass), set or put within the area of an EASEMENT.

103.603.4. The DEVELOPER shall properly GRADE and stabilize slopes and open ditches and provide fencing when deemed necessary by the TOWNSHIP ENGINEER.

103.603.5. Where a SITE 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 as

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determined by the TOWNSHIP ENGINEER, or as may be required or directed by the Pennsylvania Department of Environmental Resources. These stream EASEMENTS shall be in accordance with this Section and with FLOODPLAIN and WETLAND provisions of the ZONING ORDINANCE.

103.603.6. Where storm water or surface water will be gathered within the SUBDIVISION or LAND DEVELOPMENT and discharged or drained in volume over lands within or beyond the boundaries of the SUBDIVISION or LAND DEVELOPMENT before discharging into an existing stream or storm water management STRUCTURE, the APPLICANT or OWNER shall reserve or obtain EASEMENTS over all affected lands. Such EASEMENTS shall be adequate for such discharge of DRAINAGE; for carrying such water off-site; and for the maintenance, repair, and reconstruction of the EASEMENT, including provision for the right of passage by vehicles, machinery and other equipment. Such EASEMENTS shall be of sufficient width, as determined by the TOWNSHIP ENGINEER. The OWNER shall convey such EASEMENTS to the TOWNSHIP upon demand and at no cost to the TOWNSHIP.

103.603.7. The EASEMENTS at the rear of LOTS facing on curvilinear streets should consist of straight lines with a minimum number of points of deflection.

103.603.8. RIGHTS-OF-WAY or EASEMENTS for any purpose whatsoever shall be described in the deed, and such RIGHTS-OF-WAY or EASEMENTS shall be shown on the approved PLAN.

103.603.9. The APPLICANT shall provide a method of physically delineating pedestrian EASEMENTS across private LOTS. Such method shall include shrubbery, trees, MARKERS, or other method acceptable to the BOARD OF SUPERVISORS.

103.604. BUFFERYARDS (Amended 12-9-92 by Ord. No. 219, Amended 6-14-00 by Ord. No. 292, Amended 6-13-07 by Ord. No. 345)

BUFFERYARDS shall be required in the DEVELOPMENT of any SITE within the TOWNSHIP with the exception of the following:

103.604.1. SITES or LOTS having USES established prior to the adoption of this ORDINANCE, which at the time of the adoption of this ORDINANCE would have required a BUFFERYARD. Any change in the nature or intensity of USE, any enlargement of any STRUCTURE or any increase in IMPERVIOUS SURFACES, storage areas, or LIGHTING after the adoption of this ORDINANCE shall require the SITE or LOT to be brought into compliance with this ORDINANCE.

103.604.2. BUFFERYARDS are required to separate different land USES to minimize or eliminate any potential negative impacts on adjacent USES. The location, required PARCEL to be designated as a BUFFERYARD, and the type and amount of planting is specified for each BUFFERYARD.

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103.604.3. Location. BUFFERYARDS shall be located along the outer perimeter of a LOT or SITE extending to the LOT LINE or SITE LINE.

103.604.4. Determination of Type. To determine type of BUFFERYARD required between two adjacent LOTS or between LOT and a STREET, the following procedure shall be followed:

103.604.4.1. Identify land USE category of the proposed USE;

103.604.4.2. Identify the land USE of all adjacent PARCELS; and

103.604.4.3. Determine the BUFFERYARD types required along each boundary by referring to the BUFFERYARD types list. Each letter designates a specific BUFFERYARD type.

103.604.5. BUFFERYARDS are defined by their width and the number of plant units required for each 100 lineal feet of BUFFERYARD. Plant unit equivalence is equal to the following formula:

- 1 shade tree = 10 plant units
- 1 evergreen = 5 plant units
- 1 ornamental = 5 plant units
- 1 shrub = 1 plant unit

Any combination of shade tree, ornamental, evergreen, and shrubs may be used to achieve the minimum total number of plant units required. A minimum of one tree, evergreen, ornamental, and shrub must be used in the combination for every required 100 lineal feet.

The following classes of BUFFERYARD as listed in Table 103.604.11 are defined.

103.604.5.1. BUFFERYARD "A" - This BUFFERYARD shall be required where adjacent land USES are similar in type and intensity to those proposed for DEVELOPMENT.

- BUFFERYARD Minimum Width - 10 feet
- Required plant units per every 100 lineal feet - 40 units

103.604.5.2. BUFFERYARD "B" - This BUFFERYARD shall be required where adjacent land USES are of less intensity or of a type similar to those proposed for DEVELOPMENT. This BUFFERYARD is intended to provide greater privacy and protection to the affected adjacent properties.

- BUFFERYARD Minimum Width - 20 feet
- Required plant units per every 100 lineal fee - 80 units

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103.604.5.3. BUFFERYARD "C" - This BUFFERYARD shall be required where adjacent land USES may experience significant negative effects from differences in the land USE, intensity, traffic, noise, or glare as a result of the proposed DEVELOPMENT.

BUFFERYARD Minimum Width - 30 feet
Required plant units per every 100 lineal feet - 120 units

103.604.5.4. BUFFERYARD "D" - This BUFFERYARD shall be required where adjacent land USES differ substantially or would experience negative or objectionable effects from the OCCUPANCY or operation of the proposed land USE. Such effects include, but are not limited to, traffic, noise, odor, glare from LIGHTING or from paved areas.

BUFFERYARD Minimum Width - 40 feet
Required plant units per every 100 lineal fee - 160 units

103.604.6. Single family Planned Developments, Minor Subdivisions and Major Subdivisions shall provide the following BUFFERYARDS when adjacent to a Collector Road, Arterial Road, or Expressway.

Adjacent to a Collector Road
BUFFERYARD Minimum Width - 35 Feet
Required plant units per every 100 lineal feet - 4 shade trees
- 15 evergreens
- 30 shrubs

Adjacent to an Arterial Road
BUFFERYARD Minimum Width - 50 Feet
Required plant units per every 100 lineal feet - 6 shade trees
- 18 evergreens
- 40 shrubs

Adjacent to a Collector Road
BUFFERYARD Minimum Width - 75 Feet
Required plant units per every 100 lineal feet - 8 shade trees
- 20 evergreens
- 40 shrubs

103.604.7. Single family detached dwellings proposed with Planned Developments, Minor Subdivision, and Major Subdivisions shall provide two (2) shade trees plus one (1) ornamental tree for every dwelling lot. A minimum of one (1) required tree must be provided in the front yard. If less than 25% of the area of the lot is occupied by a bufferyard, none of the

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required trees may be located within the bufferyard. If more than 25% of the area of the lot is occupied by the bufferyard, one (1) shade tree may be located within the bufferyard and count towards fulfillment of the bufferyard requirement.

103.604.8. All residential uses, other than single family detached dwellings proposed on existing lots or part of a simple subdivision, shall provide 1.5 shade trees plus one (1) ornamental tree per dwelling. If less than 25% of the area of the lot is occupied by a bufferyard, none of the required trees may be located within the bufferyard. If more than 25% of the area of the lot is occupied by the bufferyard, one (1) shade tree may be located within the bufferyard and count towards fulfillment of the bufferyard requirement.

103.604.9. All non-residential uses must provide the appropriate bufferyard as outlined in Section 103.604.11 unless an existing wooded area exists on the lot, a minimum 25 foot wide existing wooded area may be designated as a bufferyard.

103.604.10. All non-residential uses must provide the appropriate bufferyard adjoining a street as outlined in Section 103.604.11 or provide one of the following as approved by the Planning Commission (See Addendum "A")

- Option 1. A 10 foot wide bufferyard with one (1) shade tree and 10 shrubs per 35 lineal feet of street frontage.
- Option 2. Provide a berm at least 2 ½ feet higher than the adjacent parking lot, slope not to exceed 33% (3:1) with one (1) shade tree and five (5) shrubs per 35 lineal feet of frontage. Berms planted with ground cover (not grass) may be 50% (2:1) sloped.
- Option 3. A six (6) foot wide bufferyard with a minimum three (3) foot drop from adjacent ground level with one (1) shade tree and five (5) shrubs per 35 lineal feet of frontage.
- Option 4. A four (4) foot wide bufferyard with a minimum three (3) foot high brick, stone, or finished concrete wall to screen the parking lot with one (1) shade tree per 35 lineal feet of frontage, located between the street and the wall.

103.604.11. Required BUFFERYARD types. The following BUFFERYARD types are minimum standards. If greater BUFFERYARD requirements are specified elsewhere in this ORDINANCE, the greater requirement shall prevail.

<u>Proposed DEVELOPMENT</u>	<u>Adjoining</u>	<u>BUFFERYARD</u>	
Single Family Detached	SINGLE-FAMILY DWELLING	A	
	Single-Family Attached	C	
	Multiple-Family	C	
	Undeveloped land	A	
	Streets	A	
	Commercial	D	
	Office	D	
	Light Manufacturing	D	
	Heavy Manufacturing	D	
	Single Family Attached	SINGLE-FAMILY DWELLING	C
		Single-Family Attached	C
Multiple-Family		C	
Commercial		B	
Office		B	
LIGHT MANUFACTURING		D	
HEAVY MANUFACTURING		D	
Vacant Land		C	
STREETS		B	
Commercial		SINGLE-FAMILY DWELLING	D
		Single-Family Attached	C
	Multiple-Family	C	
	Commercial	A	
	Office	B	
	LIGHT MANUFACTURING	B	
	HEAVY MANUFACTURING	B	
	Vacant Land	C	
	STREETS	C	
	Office	SINGLE-FAMILY DWELLING	D
		Single-Family Attached	C
Multiple-Family		C	
Commercial		B	
Office		A	
LIGHT MANUFACTURING		B	
HEAVY MANUFACTURING		B	
Vacant Land		C	
STREETS		C	

<u>Proposed DEVELOPMENT</u>	<u>Adjoining</u>	<u>BUFFERYARD</u>
LIGHT MANUFACTURING	SINGLE-FAMILY DWELLING	D
	Single-Family Attached	D
	Multiple-Family	D
	Commercial	B
	Office	B
	LIGHT MANUFACTURING	B
	HEAVY MANUFACTURING	B
	Vacant Land	D
	STREETS	D
	HEAVY MANUFACTURING	SINGLE-FAMILY DWELLING
Single-Family Attached		D
Multiple-Family		D
Commercial		C
Office		C
LIGHT MANUFACTURING		C
HEAVY MANUFACTURING		C
Vacant Land		D
STREETS		D

103.604.12. **BUFFERYARD Planting.** The exact placement of plant material shall be the decision of the property OWNER provided the following conditions are met:

103.604.12.1. Evergreens shall be planted in clusters to maximize survival.

103.604.12.2. Where berms and walls are required, the wall shall be located on the side of the most intense USE and at least five (5) feet of the BUFFERYARD and fifteen (15) percent of the plant material shall be located between the highest intensity USE and the retaining wall.

103.604.12.3. All BUFFERYARDS, other than those maintained in their natural state, shall be seeded with lawn or other permanent ground cover or shall be covered with a decorative mulch.

Section 103.604.13. If any required plant units within a bufferyard are inappropriate due to underground or overhead utilities, the following may be substituted as approved by the Planning Commission.

2 ornamental trees	=	1 shade tree
2 evergreens	=	1 shade tree
1 evergreen	=	5 shrubs

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103.604.14. No STRUCTURES or USES, including but not limited to, BUILDING, ACCESSORY STRUCTURES, PARKING SPACES or LIGHTING devices, shall be permitted within the BUFFERYARD. ACCESS drives shall only be permitted in BUFFERYARDS which separate a proposed development from a STREET. For the purposes of this Section, the definition of STRUCTURE shall not include walls or FENCES which are required by Section 103.604.12.2. to be located in the BUFFERYARD.

103.604.15. If the width of any required BUFFERYARD exceeds more than ten (10) percent of the width or depth of a LOT as it existed prior to the adoption of this ORDINANCE, the size of that BUFFERYARD may be modified by the PLANNING COMMISSION upon recommendation of the TOWNSHIP Engineer to a maximum of fifty (50) percent of the required BUFFERYARD depth. The required plant units may be reduced or increased if, in the judgment of the PLANNING COMMISSION and the TOWNSHIP Engineer, such, a reduction or increase would maintain the standard of protection established by the requirements of this section. A berm, FENCE, or wall may likewise be required as a condition for modification of the required BUFFERYARD depth.

103.604.16. BUFFERYARDS screening PARKING AREAS. In BUFFERYARDS adjacent to the PARKING AREAS of a proposed DEVELOPMENT, additional evergreen shrubs shall be planted or earthen berms shall be constructed which shall provide a visual screen capable of acting as a barrier to light beams emanating from the headlights of vehicles throughout the year. These low level shrubs, hedges, or mounds shall be at least four (4) feet in height and planted in a minimum of two (2) offset rows such that a PERSON facing a passenger car with the shrubs, hedges or mounds between him/her and the vehicle, shall observe the vehicle's low beam lights only as a result of the diffused or reflected light from the headlights and not because the main direct beam from those lights was observable.

103.604.17. Existing STRUCTURES in BUFFERYARD. Where an existing STRUCTURE housing the PRINCIPAL USE of the property is located within any required BUFFERYARD, a BUFFERYARD of not less than the minimum distance from the existing STRUCTURE to the property line shall be required. This reduced BUFFERYARD width shall apply only to the YARD area which the existing STRUCTURE encroaches upon. The required BUFFERYARD as determined by this section shall apply to all other YARD areas. All planting requirements shall be satisfied regardless of the BUFFERYARD width.

103.604.18. Trees in the BUFFERYARD

103.604.18.1. Any existing trees and shrubs within the required BUFFERYARD shall remain undisturbed except for maintenance activities and may satisfy the requirements of this section if they equal or exceed the plant unit standards required for that particular BUFFERYARD.

103.604.18.2. Any existing trees within the BUFFERYARD which are a minimum of four (4) inches in diameter at a point one (1) foot above the ground and shall count as a required tree within the BUFFERYARD.

103.604.18.3. No healthy trees shall be removed from a BUFFERYARD in conjunction with proposed DEVELOPMENT unless a written request for their removal has been submitted to and approved by the TOWNSHIP in compliance with Ordinance No. 183.

103.604.18.4. When any trees, regardless of their physical condition, are removed, they shall be replaced by trees suitable to the environment if needed to maintain the minimum number of trees required by this section. All such replacement planting shall be in accordance with accepted conservation practices.

103.604.19. Minimum plant size. Unless otherwise specifically indicated elsewhere in this ORDINANCE, all plant materials shall meet the following minimum size standards:

Shade Trees	-	2 ½ inch caliper 8-10 foot minimum height with branching height of 6 foot minimum
Ornamental Trees	-	1 ½ inch caliper 7-9 foot minimum height
Evergreens	-	6-8 foot minimum height
Shrubs	-	18-24 inches in height or spread

103.604.20. Use of BUFFERYARDS. A BUFFERYARD may be used for passive recreation or may contain pedestrian, bike, or equestrian trails, provided that:

- 103.604.20.1. No required plant material is eliminated;
- 103.604.20.2. The total width of the BUFFERYARD is maintained;
and
- 103.604.20.3. All other regulations of the ORDINANCE are met.

In no event, however, shall the following USES be permitted in BUFFERYARDS: ice skating rinks, play-fields, ski hills, stables, swimming pools and tennis courts.

103.604.21. Ownership of BUFFERYARDS. BUFFERYARDS may remain in the ownership of the original developer (and assigns) of a land USE, or they may be subjected to

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deed restrictions and subsequently be freely conveyed, or they may be transferred to any consenting grantees, such as adjoining LANDOWNERS, a park or forest preserve district, the TOWNSHIP or an open-space or conservation group, provided that any such conveyance adequately guarantees the protection of the BUFFERYARDS for the purposes of this ORDINANCE.

103.605. OPEN SPACE AND RECREATION LAND

103.605.1. OPEN SPACE and recreation land requirements for all SUBDIVISION and LAND DEVELOPMENT shall comply with the provisions of the ZONING ORDINANCE (Article 3) for the ZONING DISTRICT in which the DEVELOPMENT is proposed.

103.605.2. Areas provided or reserved as recreation land or community facilities shall be adequate to provide for BUILDING SITES, landscaping and OFF-STREET PARKING, as required by the ZONING ORDINANCE.

103.605.3. The preservation of natural features, including large trees, groves, waterways, WETLANDS, historic points and other community assets shall comply with applicable provisions of the ZONING ORDINANCE.

103.605.4. Where the SUBDIVISION contains a park, playground, school, or other public SITE shown in the COMPREHENSIVE PLAN, the DEVELOPER shall give consideration to the dedication of such to the PUBLIC or its reservation for purchase by the appropriate PUBLIC body within a specified period of time. Any such agreement shall be between the DEVELOPER or LANDOWNER and the BOARD OF SUPERVISORS and shall establish the SITE area, time and method of acquisition and the cost thereof.

103.605.5. Developed OPEN SPACE shall be designed to provide active recreational facilities to serve the residents of the DEVELOPMENT. Undeveloped OPEN SPACE shall be designed to preserve important SITE amenities and environmentally sensitive areas. Provisions for ownership and maintenance shall comply with the applicable section of the ZONING ORDINANCE.

103.605.6. The area of each PARCEL of OPEN SPACE within a DEVELOPMENT which is designed for active recreational purposes shall be of such minimum dimensions as to be functionally usable. In no case shall such a PARCEL be less than the minimum LOT size for that ZONING DISTRICT.

103.605.7. The PLANNING COMMISSION or the BOARD OF SUPERVISORS may require the installation of recreational facilities, taking into consideration:

103.605.7.1. The character of the OPEN SPACE land;

- 103.605.7.2. The estimated age and the recreation needs of PERSONS likely to reside in the DEVELOPMENT;
- 103.605.7.3. Proximity, nature, and excess capacity of existing municipal recreation facilities; and
- 103.605.7.4. The cost of the recreational facilities.

103.605.8. As a general principle, undeveloped OPEN SPACE should be left in its natural state. A DEVELOPER may make certain IMPROVEMENTS such as the cutting of trails for walking or jogging, or the provision of picnic areas. In addition, the PLANNING COMMISSION may require a DEVELOPER to make other IMPROVEMENTS, such as removing dead or diseased trees, thinning trees or other vegetation to encourage more desirable growth, and GRADING and seeding.

103.605.9. The BOARD OF SUPERVISORS may permit minor deviations from OPEN SPACE standards when it can be determined that; (a) The objectives underlying these standards can be met without strict adherence to them; and /or (b) because of peculiarities in the SITE or the facilities proposed, it would be unreasonable to require strict adherence to these standards. However, increasing financial gain to the OWNER from such a deviation alone shall not be sufficient reason for such modification.

103.606. FLOODPLAINS

103.606.1. In addition to the requirements of this Ordinance, all development in FLOODPLAIN areas shall comply with the standards of the TOWNSHIP ZONING ORDINANCE (Section 507), the Findlay Township FLOODPLAIN Management Ordinance and other applicable regulations of the TOWNSHIP, COUNTY, State and Federal codes and statutes.

103.606.2. No new CONSTRUCTION or DEVELOPMENT shall be allowed in a FLOODPLAIN unless a permit is obtained from the Pennsylvania Department of Environmental Resources, Bureau of Dams and Waterway Management, and unless a special permit has been obtained from Findlay TOWNSHIP in compliance with the Floodplain Management Ordinance.

103.607. MINED LAND AREAS

No CONSTRUCTION of any BUILDING or STRUCTURE of any type may be initiated on or within three hundred (300) feet of any subsurface mined area no on or within 50 feet of any surface mined area until a geotechnical investigation has been completed and the REPORT with recommendations has been approved by the TOWNSHIP ENGINEER.

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103.607.1. All proposed DEVELOPMENT in surface or subsurface mined areas shall comply with the provisions of the TOWNSHIP Mined Land Overlay District (Section 509).

103.607.2. Prior to the initiation of the CONSTRUCTION of any STRUCTURE or BUILDING in areas of known or suspected past surface or subsurface mining activity, a project geotechnical engineer shall be retained and a detailed geotechnical investigation and subsidence risk assessment report prepared by a Pennsylvania licensed engineer qualified in the field of mined land reclamation shall be submitted and approved as a part of the APPLICATION FOR PRELIMINARY APPROVAL. The REPORT shall include an evaluation of the potential. SITE engineering and structural modifications which would minimize any hazards of CONSTRUCTION on the SITE.

103.607.3. The geotechnical investigation for areas of past subsurface mining activity shall include a minimum of three (3) core borings for the first five acres and one (1) additional boring for each additional five acres uniformly spaced across the BUILDING SITE unless otherwise recommended by the project geotechnical engineer. The DEVELOPER shall submit a Mine Subsidence Risk Assessment REPORT which identifies and recommends the most suitable CONSTRUCTION location and practices for the proposed DEVELOPMENT of the SITE.

103.607.4. The geotechnical investigation for areas of past surface mining shall include a minimum of three (3) core borings for the first acre and one (I) additional boring for each additional acre of land proposed for DEVELOPMENT unless otherwise recommended by the project geotechnical engineer. Such borings shall be located in the areas of proposed STRUCTURES.

103.607.5. The Mine Subsidence Risk Assessment for subsurface mined areas shall include a detailed evaluation of the integrity and nature of the overburden and the risk of subsidence which may occur naturally or may be caused by the loading of the overburden. The REPORT shall include a review of the proposed CONSTRUCTION and shall recommend specific CONSTRUCTION and SITE DEVELOPMENT procedures for the proposed SITE DEVELOPMENT.

103.607.6. The Mine Subsidence Risk Assessment for surface mined areas shall include a detailed evaluation of the character and stability of the material used to fill the mine excavation and the risk of potential settlement which may be caused by the loading of said material by proposed STRUCTURES. The REPORT shall include a review of the proposed CONSTRUCTION and shall recommend specific CONSTRUCTION and SITE DEVELOPMENT procedures for the proposed SITE DEVELOPMENT.

103.607.7. The geotechnical investigation for all previously mined land shall accurately locate and map all known mine features within three hundred (300) feet of proposed STRUCTURES, whether on or off the DEVELOPMENT SITE. Such mapping shall include the

known limits of the mine, and any surface features resulting from mining activity such as mine waste dump areas, seepage areas and WETLANDS.

103.607.8. The geotechnical investigation shall identify any environmental problems associated with the previously mined land such as subsidence, acid run off, residual ponding, disturbed DRAINAGE patterns, unstable spoils piles or decreased water quality which may affect CONSTRUCTION occupation or environmental integrity of the SITE.

103.607.9. The APPLICATION FOR PRELIMINARY APPROVAL shall include the geotechnical investigation, Mine Subsidence Risk Assessment REPORT, all approvals for necessary permits or applications for such permits and a statement of the ways in which the proposed DEVELOPMENT avoids or eliminates potential hazards of the previously mined site which shall be certified by a Pennsylvania registered engineer having specialty in this area of practice.

103.607.10. All PLANS for STRUCTURES and IMPROVEMENTS on the SITE submitted with the APPLICATION FOR DEVELOPMENT shall clearly delineate the limits of the previous mining activity and the limits of the area susceptible to potential subsidence or settlement. All such delineations shall be clearly labeled as to effect, limitations, and existing conditions.

103.607.11. No FINAL APPROVAL shall be granted until the DEVELOPER proves to the satisfaction of the TOWNSHIP ENGINEER and the BOARD OF SUPERVISORS that:

103.607.11.1. No known hazard will result from the proposed DEVELOPMENT.

103.607.11.2. All modifications recommended in the Subsidence Risk Assessment REPORT have been incorporated into the DEVELOPMENT proposal.

103.607.11.3. All necessary permits and approvals have been granted and evidence of such has been presented by the DEVELOPER.

103.607.11.4. Any continuing negative effects of past mining activities will be eliminated by the proposed IMPROVEMENTS.

103.607.11.5. All current Federal, State, COUNTY, or TOWNSHIP standards for environmental and water quality shall be equaled or exceeded by the proposed DEVELOPMENT of the SITE.

103.608. STEEP SLOPES AND LANDSLIDE PRONE LAND

- (1) No alteration, disturbance or CONSTRUCTION of any type shall be approved or initiated, and no APPLICATION FOR FINAL APPROVAL shall be approved for SITES having any portion of their area on or within fifty (50) feet of any STEEP SLOPE until the provisions of the GRADING Ordinance, ZONING ORDINANCE and any other applicable Federal, State, COUNTY, or TOWNSHIP regulations have been satisfied.
- (2) No FINAL APPROVAL of the APPLICATION FOR DEVELOPMENT shall be given until all required State, COUNTY and TOWNSHIP GRADING and SEDIMENTATION and EROSION control permits have been issued and submitted to the TOWNSHIP.
- (3) The DEVELOPER shall clearly delineate all slide prone land and all existing or proposed slopes of 12% to 25% and all existing or proposed slopes of 25% and greater, on PLATS and on certified SURVEY maps submitted with all APPLICATIONS FOR DEVELOPMENT.
- (4) No BUILDING SITES shall be designated or improved in SLIDE PRONE or STEEP SLOPE areas except as permitted by the Findlay Township ZONING ORDINANCE (Section 510).
- (5) When visibly unstable soil conditions are present on a SITE or when the SITE exhibits evidence of active landslides a geotechnical investigation and report shall be required to assess the short and long term stability of the SITE and the possible effects on neighboring properties of developing the proposed SITE in the proposed manner.
- (6) Slopes in excess of twenty-five (25%) percent shall be investigated and documented in a statement by a registered engineer prior to FINAL APPROVAL. This slope investigation shall determine the engineering characteristics and physical properties of the slopes, soil deposits and underlying rock strata which are proposed for use in structural foundations. Materials used for earthwork CONSTRUCTION shall be similarly evaluated.
- (7) A geotechnical investigation REPORT prepared by or under the direction of a professional engineer, experienced in soil and foundation engineering, shall be submitted for SITE PLANS located

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in potentially injurious areas which are delineated and defined in the STEEP SLOPES and SLIDE PRONE Land Overlay District of the Findlay TOWNSHIP ZONING ORDINANCE (Section 510) and for such other SITES where special soil or water conditions are deemed by the TOWNSHIP ENGINEER to be potentially hazardous. The required soils report must be prepared in accordance with the provisions of the ZONING ORDINANCE and the GRADING Ordinance (Ordinance #148 as amended) and other applicable State, COUNTY or TOWNSHIP regulations.

- (8) The SITE geotechnical investigation should include, but not be limited to, the following detailed factual information, analysis, and recommendations:
- (a) Surface Features - Surface contours, old CONSTRUCTION, rock outcrops (if any), watercourses, ditches, ponds, wooded areas, filled-in areas, and old slide areas.
 - (b) Hydrologic Features - The presence of seepage zones, depth to groundwater, and the possible fluctuations with the seasons.
 - (c) Subsurface Features
 - (1) A plotted, horizontal and vertical record of the stratification of the soil and rock deposits;
 - (2) Information on the relative density of granular soils in the different strata and on the consistency of cohesive soils.
 - (3) Information on subsurface geologic features and past mining activity including depth of overburden.
 - (d) Exploration Methods - Physical explorations can be carried out by several methods. Field explorations should follow the applicable standards or the procedures and practices recommended by the American Society for Testing and Materials (ASTM). It is generally sufficient to secure soil samples at intervals of five feet in depth or at changes in the material. The intervals should be determined by such conditions as the soils encountered and/or the type of structure.

The spacing and depths of borings should also be based on SITE conditions and proposed construction. Maximum spacing between

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borings should not exceed 300 feet. One boring for every 6,000 to 10,000 square feet of building area should be a minimum for a high-rise structure, and a minimum of one boring per structure is recommended for single-family residences.

- (e) Groundwater Measurements - The guidelines require information on groundwater elevations, including depth of permanent and perched water tables. Water levels should be determined on completing the boring and approximately 24 hours later.
 - (f) Classifications and Descriptions - Direct observation of soils samples from various depths and locations will be required for correlation with the known geology of the area. Classification and description of soils will be done by the Unified Classification System (ASTM specification D2487), and by the Visual Manual Identification Procedure (ASTM specifications D2488).
 - (g) Laboratory Testing - The laboratory testing program should be dependent upon the characteristics of the soils and the anticipated geotechnical problems analysis.
- (9) The recommendations of all such investigations and reports of unstable soils, STEEP SLOPES and other identified soil or water condition hazards shall be reviewed by the TOWNSHIP ENGINEER. Incorporation of said recommendations may be required as conditions for PRELIMINARY APPROVAL and/or FINAL APPROVAL.
- (10) All PUBLIC and private ROADS, bridges, utilities and other facilities shall be located and designed and constructed to avoid SLIDE PRONE and STEEP SLOPE areas or to withstand any anticipated soil or rock movement.
- (11) ROAD and utility alignments and GRADES shall minimize cuts and fills.
- (12) Hazardous slope conditions that may be present on a SITE must be corrected prior to completion of the development.
- (13) Cut and Fill Slopes
- (a) General. The setbacks and other restrictions specified by this section are minimum and may be increased by the TOWNSHIP on the recommendation of the TOWNSHIP BUILDING INSPECTOR or by the recommendation of a civil engineer, geotechnical engineer, or engineering geologist with the approval of the TOWNSHIP ENGINEER, if necessary for safety and stability or to prevent damage of ABUTTING properties

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from SEDIMENTATION, or EROSION or to provide access for slope maintenance and DRAINAGE. Retaining walls may be used to reduce the required SETBACKS when approved by the building official.

- (b) Setbacks from Property Lines. The tops of cuts and toes of fill slopes shall be set back from the outer boundaries of the area for which a GRADING permit is sought including slope return areas and EASEMENTS, in accordance with the TOWNSHIP GRADING ORDINANCE.

103.608.1. CUTS

103.608.1.1. General. Unless otherwise recommended in the approved geotechnical engineering REPORT and/or engineering geology REPORT, cuts shall conform to the provisions of the TOWNSHIP GRADING ORDINANCE (Ordinance #148 as amended).

103.608.1.2. Slope. The slope of cut surfaces shall be no steeper than is safe for the intended use as documented by a stability analysis.

103.608.2. FILLS

103.608.2.1. General. Unless otherwise recommended in the approved geotechnical engineering REPORT, fills and preparation of the ground surface to receive fills shall conform to the provisions of the TOWNSHIP GRADING ORDINANCE (Ordinance #148 as amended).

103.608.2.2. Fill Material. Detrimental amounts of ORGANIC MATERIAL as determined by the TOWNSHIP ENGINEER shall not be permitted in random fills. ORGANIC MATERIAL of any kind shall not be permitted in structural fills. Except as permitted by the BUILDING INSPECTOR, no rock or similar irreducible material with a maximum dimension greater than 12 inches, or the nominal lift thickness, whichever is less, shall be buried or placed in fills.

103.608.2.3. The BUILDING INSPECTOR may permit placement of rocks larger than 12" or the lift thickness when the project geotechnical engineer properly devises a method of placement, continuously inspects its placement, and approves the fill stability. The following conditions shall also apply:

- 103.608.2.3.1. Prior to issuance of the GRADING permit, potential rock disposal areas shall be delineated on the GRADING PLAN.

103.608.2.3.2. Rock sizes greater than 12 inches in maximum dimensions shall be 10 feet or more below GRADE, measured vertically.

103.608.2.3.3. Rocks shall be placed so as to assure filling of all voids with compacted fines.

103.608.2.4. Compaction. All fills shall be compacted to a minimum of ninety (90%) percent of maximum density, as determined by UBC Standard No. 70-1 or as directed by the project geotechnical engineer.

103.608.2.5. The slope of fill surfaces shall be no steeper than is safe for the intended use as documented by a stability analysis.

103.608.3. DRAINAGE AND TERRACING

103.608.3.1. DRAINAGE FACILITIES and terracing shall conform to the provisions of PA DER regulations, Allegheny County EROSION and SEDIMENTATION Control Handbook, TOWNSHIP GRADING ORDINANCE and the Township Stormwater Management Ordinance.

103.608.3.2. Subsurface DRAINAGE. Cut and fill slopes shall be provided with subsurface DRAINAGE as necessary for stability. All runoff calculations shall be provided for review by the TOWNSHIP ENGINEER.

103.608.3.3. Disposal. All DRAINAGE FACILITIES shall be designed to carry waters to the nearest practicable DRAINAGE way approved by the TOWNSHIP ENGINEER and/or other appropriate jurisdiction as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of stilling basin, energy dissipaters or other approved devices at the out fall of storm pipes.

103.608.4. EROSION CONTROL

103.608.4.1. Slopes. The faces of cut and fill slopes shall be prepared and maintained to control against EROSION. All such slopes shall be protected in compliance with Allegheny County regulations and with the Township Grading Ordinance.

103.608.4.2. Temporary erosion control devices or methods shall be employed prior to and during site construction.

103.608.4.3. Permanent erosion control procedures or devices shall be established and approved prior to the release of any guarantees or securities.

103.608.5. SANITARY REGULATIONS

103.608.5.1. ON-SITE soil absorption and SEWAGE disposal systems or any part thereof shall be prohibited in SLIDE PRONE or STEEP SLOPE areas as regulated by the ZONING ORDINANCE.

103.608.5.2. ON-SITE soil absorption and SEWAGE disposal systems (septic tanks, absorption fields, and seepage beds and pits) shall require permit approvals before any part of any such system shall be installed within fifty (50) feet of SLIDE PRONE or STEEP SLOPE areas. The permit application shall include a map delineating the topography and the boundaries of regulated slopes and shall be in conformance with all PA DER and COUNTY regulations.

103.608.6. VEGETATION

All existing vegetation on LANDSLIDE or STEEP SLOPES shall be preserved in its natural condition. Where slope alteration necessitates disturbance of existing vegetation, both temporary and long-term vegetation shall be established within sixty (60) days of the initial disturbance. The Board of SUPERVISORS may extend this time limit at the request of the developer on the recommendation of the TOWNSHIP ENGINEER if such extension shall not contribute to increased potential for landslide activity, EROSION or lowside SEDIMENTATION.

103.608.7. ADMINISTRATION AND INSPECTION

103.608.7.1. Operations or activities which increase loads, reduce slope support or otherwise cause instability are prohibited.

103.608.7.2. The engineer who prepared the soils geotechnical REPORT shall review the preliminary and final DEVELOPMENT PLAN for compliance with recommendations expressed in the report.

103.608.7.3. Inspections shall be performed at critical stages of the work. Such inspections shall be at the expense of the DEVELOPER and/or OWNER who must notify the TOWNSHIP of the need for inspection at each of the following stages:

103.608.7.3.1. Initial Inspection - When work is ready to begin, but before any GRADING or brush removal is started.

103.608.7.3.2. Toe Inspection - After the natural ground is exposed and prepared to receive fill, but before any fill is placed.

103.608.7.3.3. Excavation Inspection - After the excavation is started, but before the vertical depth of the excavation exceeds 10 feet.

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103.608.7.3.4. Fill Inspection - After the fill emplacement is started, but before the vertical height of the lifts exceeds 10 feet. Structural fills shall be inspected more regularly by the ON-SITE inspector according to a schedule determined by the TOWNSHIP ENGINEER.

103.608.7.3.5. Drainage Device Inspection - After forms and pipes are in place, but before any concrete is poured.

103.608.7.3.6. Rough GRADING - When all rough GRADING has been completed.

103.608.7.3.7. Final - When all work has been completed, including installation of all DRAINAGE STRUCTURES and other protective devices, and the GRADING plan and required REPORTS have been submitted.

103.608.7.4. Certified record drawings or “as-built” drawings showing all completed work, including the topography, and all STRUCTURES and IMPROVEMENTS within one-hundred (100) feet of the STEEP SLOPES shall be provided to the TOWNSHIP prior to the issuance of any OCCUPANCY PERMITS and prior to the release of all guarantees and securities of the DEVELOPER by the TOWNSHIP.

103.608.8 Standards for Development in LANDSLIDE PRONE AREAS or STEEP SLOPES (**Amended 06-13-07 by Ord. No. 345**)

103.608.8.1. The applicant shall submit evidence acceptable to the Township that the proposed Development will be safe and that it will not contribute to or create conditions of increased susceptibility to LANDSLIDES, soil erosion or movement of earth, or an increase in the rate of storm water runoff. Such evidence shall be based on field investigation by a professional geologist, ENGINEER or other qualified expert.

103.608.8.2. On Site Areas where the SLOPES are less than twenty-five percent (25%), the GRADING and SITE preparation must comply with the provisions of the GRADING ORDINANCE.

103.608.8.3. No more than fifteen percent (15%) of SLOPES exceeding twenty-five percent (25%) shall be disturbed.

103.608.8.4. All design and construction practices shall be those which minimize or eliminate the hazards of LAND SLIDES as a result of construction or use of the SITE.

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103.608.8.5. All Applications for Development in LANDSLIDE PRONE AREAS or STEEP SLOPES shall include a statement from a registered ENGINEER that all standards and conditions for modification of the SLOPE have been met and that no adverse impact will occur as a result of the Development.

103.609. WATER

103.609.1. PUBLIC WATER SUPPLY

103.609.1.1. Where an approved PUBLIC water system is accessible or can be extended to the SITE, all necessary MAINS and LATERALS for connection from the system to the LOTS, as shown on the PRELIMINARY PLAN and FINAL PLANS, shall be installed by the DEVELOPER.

103.609.1.2. The DEVELOPER shall construct water MAINS in such a manner as to make adequate water service available to each principle BUILDING or dwelling unit within the SUBDIVISION or LAND DEVELOPMENT. The entire system shall be designed in accordance with the requirements and standards of the TOWNSHIP Water Authority and shall be subject to its approval. The water supply must comply with the regulations and standards of the Pennsylvania Department of Environmental Resources. **[Amended 6-8-05 by Ord. 329]**

103.609.1.3. MAINS must be sized to provide for adequate pressure and supply for the anticipated demands of the SUBDIVISION and to meet the minimum requirements for fire protection established by the American Insurance Association and the National Board of Fire Underwriters. Minimum MAIN size shall be six (6) inches.

103.609.1.4. If adequate source of supply is available, FIRE HYDRANTS shall be installed at a maximum spacing so that properties to be built upon shall be within five hundred (500) feet of the FIRE HYDRANT which shall also be in appropriate locations to prevent damage to same. If adequate supply is not available, FIRE HYDRANT connections shall be provided for future installation. Review and approval by the appropriate TOWNSHIP fire prevention official shall be required in order to insure that adequate fire protection is provided.

103.609.1.5. All water MAINS proposed to be installed in or along RIGHTS-OF-WAY shall be located 8 ½ feet away from the edge of the pavement but not under the CARTWAY or SIDEWALKS.

103.609.1.6. Water MAINS shall be extended to the SUBDIVISION boundary when required by the PLANNING COMMISSION.

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103.609.1.7. All water line design and CONSTRUCTION shall be reviewed and approved by the Findlay Township Water Authority Engineer. **[Amended 6-8-05 by Ord. 319]**

103.609.1.8. If a PUBLIC water supply system is to be provided to the site within a six-year period as indicated in an official document, the TOWNSHIP may require installation of a CAPPED SYSTEM, or DRY LINES (MAINS only), within the ROAD RIGHT-OF-WAY; or the TOWNSHIP may require a payment in lieu of the IMPROVEMENT.

103.609.1.9. Average daily residential demand shall be computed in accordance with the housing unit type and size data.

103.609.1.10. Nonresidential demand shall be computed in accordance with use and size data.

103.609.1.11. The entire cost of all work shall be borne by the DEVELOPER, except if approved for the difference in the cost of PUBLIC facilities required for the proposed use and the cost of more adequate PUBLIC FACILITIES requested by the TOWNSHIP that will permit additional service for other areas.

103.609.2. PRIVATE WATER SUPPLY

103.609.2.1. Where PUBLIC water is not accessible, or cannot be extended to the SITE, water shall be furnished by the DEVELOPER for all new SUBDIVISIONS and by the LOT OWNER on an individual LOT basis.

103.609.2.2. In all cases where the water supply is from a well, the OWNER shall obtain from the Allegheny COUNTY Health Department a certificate that he has complied with the applicable State and COUNTY health regulations and shall submit such certificate and copies of well logs from adjacent wells to the Board of Supervisors. This certificate will be a prerequisite to the final SUBDIVISION approval or issuance of a building permit for any and all BUILDINGS erected under approval of this Ordinance.

103.609.2.3. Individual private wells shall be located a horizontal distance of at least twenty-five (25) feet from property lines, approximately one hundred (100) feet from all tile disposal fields and other SEWAGE disposal facilities; ten (10) feet from all PVC or cast iron sewer lines; thirty (30) feet from any vitrified sewer tile lines; and shall not be located within any FLOODPLAIN.

103.609.2.4. As a precaution against seepage, a water-tight seal shall be provided around the pump mounting.

103.609.2.5. All abandoned wells shall be sealed in a manner that will render them water-tight in accordance with PA DER regulations.

103.609.2.6. In all cases where it has been determined that individual water supplied from private wells is not feasible, a PUBLIC water distribution system will be required.

103.609.2.7. Where no PUBLIC water supply is available to the SUBDIVISION, the Board of SUPERVISORS shall require the DEVELOPER to obtain from the proper health officer certificates of approval as to the quality and adequacy of the water supply proposed to be utilized by the DEVELOPMENT.

103.610. SANITARY SEWERS

103.610.1. PUBLIC SANITARY SEWERS

103.610.1.1. No sanitary SEWAGE facility shall be constructed until PLANS and specifications have been submitted to the Pennsylvania Department of Environmental Resources (PA DER) through the Allegheny COUNTY Department of Health and approved in accordance with existing laws and until such plans and specifications have been approved by the TOWNSHIP ENGINEER.

103.610.1.2. All sanitary sewers must be designed and constructed in accordance with PA DER regulations and shall meet the standards contained in the following:

103.610.1.2.1. PA DER Bureau of Water Quality Management Sewerage Manual, Publication No. I, latest edition.

103.610.1.2.2. Allegheny County Health Department, Rules and Regulations: Plumbing and Building Drainage Code, latest edition.

103.610.1.3. Where an approved sanitary sewer system is within one thousand (1,000) feet of the SUBDIVISION or LAND DEVELOPMENT, all necessary MAINS and LATERALS for connection from the LOTS to the system, shown on the PRELIMINARY PLAN and FINAL PLAN, shall be installed by the DEVELOPER, subject to review and approval by the COUNTY Health Department, the PA DER and the TOWNSHIP.

103.610.1.4. The TOWNSHIP shall determine, in writing, that a proposed SUBDIVISION or LAND DEVELOPMENT is or is not accessible for connection to its sewage system in the PRE-APPLICATION CONFERENCE communication.

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103.610.1.5. If no such existing sanitary sewer facilities are available, but will become available within ten (10) years, according to the Capital Improvements Plan for the TOWNSHIP, the DEVELOPER shall install sewer lines, including LATERAL connections, which will provide service to each LOT when connection with the PUBLIC sanitary sewerage system is made. The new sewer lines shall be suitably capped at the limits of the SUBDIVISION and the LATERALS shall extend from the new sewer line and be capped at the RIGHT-OF-WAY line. The sewer installation shall include CONSTRUCTION within RIGHT-OF-WAY or EASEMENTS to bring the new sewer to the future connection with the TOWNSHIP sanitary sewer system.

103.610.1.6. All capped PUBLIC sanitary sewer lines and LATERALS shall be tested for leaks and other deficiencies prior to connection to the PUBLIC sewage system. The DEVELOPER shall deposit funds in ESCROW, or furnish bonds or other security to meet the cost of such testing.

103.610.1.7. When capped sewers and LATERALS are required, on-site disposal facilities shall also be provided, in accordance with the provisions of this Ordinance (Section 103.610.2).

103.610.1.8. The DEVELOPER shall make the connection to the TOWNSHIP sanitary sewage facility for all dwellings within sixty (60) days after notification in writing that such connections are authorized. ESCROW funds or other GUARANTEE OF COMPLETION shall be established and remain in effect until permanent connection is made to the system. The amount of such security shall be determined by the Board of Supervisors but shall be no greater than 110% of the cost of such connection as estimated by the TOWNSHIP ENGINEER.

103.610.1.9. The DEVELOPER shall prepare PLANNING MODULE COMPONENTS (PMC) including PLANS and specifications for sanitary sewers, for submission to the PA DER and the Allegheny COUNTY Health Department. The PMC, along with any required fees, shall be submitted to the Township for transmission to the appropriate agencies. No APPLICATION FOR FINAL APPROVAL shall be approved and no work shall be done in connection with the SUBDIVISION until a permit is granted and submitted to the TOWNSHIP.

103.610.1.10. A full-time TOWNSHIP approved inspector shall be required during the entire CONSTRUCTION period for all lines and LATERALS intended for immediate or future connection to the PUBLIC wastewater treatment system. Said inspection shall be in compliance with Section 103.610.2 of this Ordinance.

103.610.2. PRIVATE SEWAGE DISPOSAL SYSTEMS

103.610.2.1. If PUBLIC sewer facilities are not available, the DEVELOPER shall provide for private sewage disposal in conformance with TOWNSHIP, COUNTY

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and State specifications prior to the approval of any APPLICATION FOR DEVELOPMENT.

103.610.2.2. All sewage disposal systems must be designed and constructed in accordance with DER regulations and shall meet the Standards contained in the following:

103.610.2.2.1. PA DER Bureau of Water Quality Management Sewerage Manual, Publication No. I, latest edition.

103.610.2.2.2. Allegheny COUNTY Health Department, Rules and Regulations: Plumbing and Building DRAINAGE Code, latest edition.

103.610.2.3. If PUBLIC sewer facilities are not available, the DEVELOPER shall install one of the following:

103.610.2.3.1. A wastewater treatment plant and sanitary sewer system intended to be owned and operated by the TOWNSHIP as a PUBLIC facility.

103.610.2.3.2. An individual ON-LOT SEWAGE DISPOSAL SYSTEM for each LOT.

103.610.2.4. All PLANS and specifications for ON-LOT SEWAGE DISPOSAL SYSTEMS, private sanitary SEWERS, sewage pumping stations, and sewage treatment plants shall be submitted and approved by the TOWNSHIP ENGINEER, the PA DER, the Allegheny COUNTY Health Department, and other regulatory agencies prior to the FINAL APPROVAL of any PLAT.

103.610.2.5 Where THE SUBDIVISION will be served by ON-LOT sewage disposal systems, the BOARD OF SUPERVISORS shall require the DEVELOPER to submit percolation tests and a sanitary feasibility REPORT prepared by a Pennsylvania licensed Professional Engineer in accordance with the methods and procedures set forth by the Allegheny COUNTY Health Department.

103.610.2.6 A written REPORT from the Allegheny COUNTY Health Department shall be submitted to the BOARD OF SUPERVISORS indicating the suitability of all LOTS for ON-LOT sewage disposal. The location of the ON-LOT sewage system and the well must be shown on the PLAN prior to the issuance of a BUILDING PERMIT and shall be reviewed and approved by the TOWNSHIP ENGINEER.

103.610.2.7. The DEVELOPER shall provide each OWNER or occupant of a dwelling unit with ON-LOT facilities with a PLAN of the system and an instruction manual for the use and maintenance of the system.

103.610.2.8. When PUBLIC sanitary sewage is available or becomes available all DEVELOPMENTS shall be required to connect to the PUBLIC system. Initial CONSTRUCTION and IMPROVEMENTS to the proposed DEVELOPMENT SITE shall include all connectors needed to facilitate the eventual connection to the PUBLIC sanitary sewage system, as required in Section 103.610.1.2 of this ORDINANCE.

103.610.2.9 A full-time TOWNSHIP approved inspector shall be required during the entire CONSTRUCTION period for all lines and LATERALS intended for immediate or future connection to the PUBLIC wastewater treatment system. Said inspection shall be in compliance with this ORDINANCE.

103.611. UTILITIES

103.611.1. Every LOT in a SUBDIVISION shall be capable of being served by a gas, electric and telephone distribution systems constructed and connected in accordance with the laws of the Commonwealth of Pennsylvania, the TOWNSHIP and appropriate PUBLIC utility where concerned.

103.611.2. The gas distribution system may be waived if the energy supply is to be all electric.

103.611.3. All utility lines including, but not limited to, electric, gas, street lighting, cable TV, and telephone shall be placed underground, except where it is demonstrated to the satisfaction of the BOARD OF SUPERVISORS that the underground installation required herein is not feasible because of the physical condition of the lands involved.

103.611.4. A cable television conduit to provide LATERAL connection between truck lines and each residential unit in the PLAN shall be required as a PUBLIC IMPROVEMENT. The design standards for such underground cable television lines shall be in accordance with the laws of the Commonwealth of Pennsylvania or, in lieu thereof, the standards shall comply with those for telephone lines or electric lines as they may reasonably apply.

103.611.5. Where practicable, all utilities shall be located within the STREET RIGHT-OF-WAY, but not under the CARTWAY or SIDEWALKS, otherwise, EASEMENTS or RIGHTS-OF-WAY of sufficient width for installation and maintenance shall be provided.

103.611.6. All utility EASEMENTS shall be a minimum of twenty (20) feet and placed so as to service the LOT involved with the least practical difficulty to the LOT owners and the TOWNSHIP, and all EASEMENTS shall be dedicated for municipal purposes.

103.611.7. LOTS that abut existing EASEMENTS or PUBLIC RIGHTS-OF-WAY where overhead electric or telephone distribution supply lines and service connections have previously been installed may be supplied with electric and telephone service from those overhead lines, but the service connections from the utilities' overhead lines shall be installed underground. In the case of existing overhead utilities, should a road widening, or an extension of service, or other such condition occur as a result of the SUBDIVISION and necessitate the replacement or relocation of such utilities, such replacement or relocation shall be underground.

103.611.8. Where overhead lines are permitted as the exception, the placement and alignment of poles shall be designed to lessen the visual impact of overhead lines. Alignments and pole locations shall be carefully routed to avoid locations along horizons; clearing swaths through treed areas shall be avoided by selective cutting and a staggered alignment; trees shall be planted in open areas and at key locations to minimize the view of the poles and the alignments; and alignments shall follow REAR LOT LINES and other alignments.

103.611.9. Year-round screening of any utility apparatus appearing above the surface of the ground, other than utility poles, shall be required.

103.611.10. FINAL PLANS shall be coordinated with required tree planting, and as-built PLANS shall show locations of all utilities and all STREET trees.

103.612. OFF-STREET PARKING

103.612.1. OFF-STREET PARKING AREAS shall be provided in accordance with the requirements and standards of the ZONING ORDINANCE, Section 314.

103.612.2. All OFF-STREET PARKING AREAS in NON-RESIDENTIAL USE districts shall be located to the side and rear of BUILDINGS wherever possible.

103.612.3. PARKING AREAS as a minimum specification, shall be constructed of a 6" Crushed Aggregate Base Course, 3" of ID-2 Bituminous Binder Course and 1 ½" of Bituminous Wearing Course, as defined by PA DOT Publication 408 latest edition and all modifications thereto.

103.612.4. Pedestrian crosswalks and refuge ISLANDS shall be provided at intervals not exceeding two hundred (200) feet along the length of each PARKING AREA.

103.612.5. The minimum width of ISLANDS shall be 10'.

103.612.6. PARKING AREAS shall be designed to permit each vehicle to proceed to and from the PARKING SPACE provided for it without requiring the moving of any other vehicle.

103.612.7. ACCESS shall be designed so as to allow vehicles to enter a PUBLIC STREET in a forward direction.

103.612.8. The edge of any PARKING AREA shall not be closer than 10' to the outside wall of the nearest BUILDING.

103.612.9. All dead-end PARKING AREAS shall be designed to provide sufficient area for backing and turning movements from the end PARKING SPACES of the PARKING AREA.

103.612.10. No less than a 10' radius of curvature shall be permitted for CURB lines in a PARKING AREA.

103.612.11. The layout of every PARKING AREA shall be such as to permit safe and efficient internal circulation in accordance with the accepted traffic engineering principles and standards, including truck traffic where applicable.

103.612.12. Every OFF-STREET PARKING AREA shall include sufficient stacking space to accommodate entering and exiting vehicles without overflowing into adjacent STREETS.

103.612.13. All PARKING SPACES shall be marked so that individual spaces are identifiable.

103.612.14. OFF-STREET PARKING shall be required in all ZONING DISTRICTS for all new, enlarged or modified AUTHORIZED USES and all new DEVELOPMENT **(Added 12-9-92 by Ord. No. 219)**

103.612.14.1. Each OFF-STREET PARKING SPACE shall have an area of not less than 162 square feet exclusive of ACCESS drives or aisles and shall be of usable shape and condition. The minimum size of each parking stall shall be nine (9) feet by eighteen (18) feet, exclusive of aisle width. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.2. All DRIVEWAY ACCESS from a PUBLIC or private STREET, alley or EASEMENT and all OFF-STREET PARKING SPACES shall have a paved surface extending from the residential STREET or alley to the GARAGE or PACING SPACE(S) (except for DRIVEWAYS in the LDR and AG ZONING DISTRICTS which must have a paved surface extending at least twenty-five (25) feet from the paved residential STREET). **(Added 12-9-92 by Ord. No. 219)**

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103.612.14.3. A DRIVEWAY must be ten (10) feet wide in the case of a DWELLING and not less than twenty-four (24) feet wide in all other cases, and shall give ACCESS to the required PARKING SPACES. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.4. The capacity of any facility used for calculating parking requirements shall be determined by the maximum number of persons permitted by its design or by fire code regulations, whichever is greater. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.5. Calculation of parking requirements shall include consideration of the number of employees on the largest work shift at the facility, regardless of the time period during which the largest shift occurs and regardless of whether any such person is a full-time employee. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.6. When the calculation of the number of required OFF-STREET PARKING SPACES results in a fractional space, any such fraction shall count as one full PARKING SPACE. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.7. OFF-STREET PARKING for RESIDENTIAL USES may provide required parking in SIDE or REAR YARDS. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.8. All SINGLE-FAMILY DWELLINGS shall provide a minimum of two OFF-STREET PARKING SPACES per DWELLING. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.9. PLANNED DEVELOPMENTS shall provide PARKING SPACES in compliance with this section except where the number of PARKING SPACES is specified as a condition of the PLANNED DEVELOPMENT process. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.10. Handicap PARKING SPACES shall be provided in accordance with the Uniform Federal Accessibility Standards. **(Added 12-9-92 by Ord. No. 219, Amended 6-14-00 by Ord. No. 292)**

103.612.14.11. Where a STRUCTURE or property is in MIXED USE ZONING DISTRICT the total parking requirements for the various USES shall be added together to determine the total parking required on the property. **(Added 12-9-92 by Ord. No. 219)**

103.612.14.12. Maximum distances of parking from various USES shall comply with the following standards: **(Added 12-9-92 by Ord. No. 219)**

103.612.14.12.1. Parking to serve any single-family residential cluster or any multiple-family residential BUILDING shall be located so that no required

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space is more than two hundred (200) feet from the BUILDING such space is designed to serve.

103.612.14.12.2. Parking to serve any non-residential USE shall be located so that no required space is more than six hundred (600) feet from the BUILDING or USE such space is designed to serve.

103.612.14.12.3. No required PARKING SPACE shall occur wholly or partly in the PUBLIC right-of-way.

103.612.15. CONSTRUCTION of PARKING AREAS.

103.612.15.1. Any OFF-STREET PARKING AREA for more than five (5) vehicles shall be sloped towards a stormwater management facility designed to meet the requirements of Chapter 100 "Stormwater Management" of the TOWNSHIP Code. **(Added 12-9-92 by Ord. No. 219)**

103.612.15.2. Any LIGHTING used to illuminate any OFF-STREET PARKING AREA shall comply with the LIGHTING standards of this ORDINANCE by directing light away from adjoining PARCELS. **(Added 12-9-92 by Ord. No. 219)**

103.612.15.3. Parking areas shall provide internal landscaping as follows: **(Amended 6-14-00 by Ord. No. 292)**

- * 7,000-49,999 sq/ft parking lot shall provide at a minimum 5%
- * 50,000-149,999 sq/ft parking lot shall provide at a minimum 8%
- * 150,000 sq/ft or greater parking lot shall provide at a minimum

103.612.15.3.1. Planting areas of at least 162 square feet shall be provided at both ends of any continuous row of ten (10) or more PARKING SPACES. **(Amended 6-14-00 by Ord. No. 292)**

103.612.15.3.2. PARKING AREAS shall be designed in such a manner that not more than 20 PARKING SPACES shall be placed in a continuous row without an intervening landscape island of at least 162 square feet. Landscape islands within PARKING AREAS shall include at the minimum, one (1) shade tree. **(Amended 6-14-00 by Ord. No. 292)**

103.612.15.3.3. Parking stalls adjacent to required landscaped islands with berms should provide stalls 10 foot in width to accommodate door openings. **(Added 6-14-00 by Ord. No. 292)**

103.612.15.3.4. Parking islands perpendicular to parking stalls shall be a minimum of 8 feet wide if parking stalls are on both sides of the island and a

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minimum of 6 feet wide for stalls only on one side of the island. (See Addendum A”, Parking Islands) **(Added 6-14-00 by Ord. No. 292)**

103.612.15.4. DRIVEWAYS and traffic aisles serving individual PARKING SPACES shall be not less than twenty-five (25) feet wide for ninety degree parking, twelve (12) feet wide for parallel parking, seventeen and one-half (17 ½) feet for sixty degree parking and thirteen (13) feet for forty-five degree parking. If PARKING SPACES are indicated by lines with angles other than ninety degrees (90°), then traffic lanes shall be restricted to one-way, permitting head-in parking. No DRIVEWAY or STREET used for interior circulation shall have traffic lanes less than ten (10) feet in width. **(Added 12-9-92 by Ord. No. 219)**

103.612.15.5. **(Eliminated on 1-9-02 by Ord. No. 302)**

103.612.16. Reduction of Required Spaces.

103.612.16.1. A reduction in the required number of OFF-STREET PARKING SPACES may be granted by the SUPERVISORS to meet the needs of USES over five hundred thousand (500,000) square feet of gross FLOOR AREA. Such a reduction shall be permitted subject to the following conditions: **(Added 12-9-92 by Ord. No. 219)**

103.612.16.1.1. A maximum reduction of one (1) PARKING SPACE per every one thousand (1,000) square feet of gross FLOOR AREA or twenty (20) percent of the total spaces required may be permitted provided that the following conditions are met:

103.612.16.1.1.1. Sufficient area must be reserved to provide for the total number of OFF-STREET PARKING SPACES required by this ORDINANCE. The purpose of this reservations is to insure adequate area to meet any future need for additional PARKING SPACES. This reservation shall be provided for by deed, restricting that portion of the SITE required to provide for the total number of PARKING SPACES on the same SITE as is being proposed for DEVELOPMENT. The reserved PARKING AREA shall not include areas for required BUFFERYARDS, SETBACK LINES, or areas which would otherwise be unsuitable for PARKING SPACES due to the physical characteristics of the land or other requirements of this ORDINANCE. The DEVELOPER shall provide a landscaping plan for the reserved area.

103.612.16.1.1.2. The DEVELOPER shall enter into written agreement with the TOWNSHIP that the additional PARKING SPACES up to the total spaces required shall be provide at the OWNER’S expense should the TOWNSHIP to determine that the total required PARKING

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SPACES are necessary to satisfy the needs of the particular USE pursuant to the standards imposed by this ordinance.

103.612.16.2. Two or more NONRESIDENTIAL USES may jointly provide and use PARKING SPACES when their hours of operation do not normally overlap, provided that a written agreement between the property OWNERS which has been approved by the SUPERVISORS shall be filed with application for a ZONING APPROVAL. **(Added 12-9-92 by Ord. No. 219)**

103.612.16.3. PARKING SPACES may be located on a LOT other than that containing the PRINCIPAL USE provided a written agreement approved by the SUPERVISORS shall be filed with the application for a zoning certificate. Said PARKING SPACES shall be located so that no required PARKING SPACE is more than six hundred (600) feet from the BUILDING or USE such PARKING SPACE is designed to serve. **(Added 12-9-92 by Ord. No. 219)**

103.612.16.4. A reduction in the number of PARKING SPACES for NONRESIDENTIAL USES may be granted if said USES establish active vanpool programs subject to the following conditions: **(Added 12-9-92 by Ord. No. 219)**

103.612.16.4.1. Van pool PARKING SPACES must be conveniently located within one hundred fifty (150) feet of the primary entrance.

103.612.16.4.2. The van pool program must be presented to the PLANNING COMMISSION and approved as to its workability.

103.612.16.4.3. Sufficient area must be reserved to provide for the total number of PARKING SPACES required by this ORDINANCE.

103.612.16.5. **(Eliminated 1-9-02 by Ord. No. 217)**

103.613. OFF-STREET LOADING. Off-street loading berths shall be provided to serve the needs of all new CONSTRUCTION or an increase in capacity of any BUILDING or STRUCTURE. The following standards shall establish the requirements in all districts within the TOWNSHIP.

103.613.1. Every RETAIL establishments industrial or MANUFACTURING USE, WAREHOUSE, wholesale USE, HOSPITAL, or sanitarium having an aggregate gross FLOOR AREA of six thousand (6,000) square feet or more shall provide off street loading facilities as follows:

Gross FLOOR AREA in Square Feet Number of Berths

6,000 - 24,999	1
25,000 - 79,999	2
80,000 - 127,999	3
128,000 - 198,999	4
199,000 - 255,999	5
256,000 - 319,999	6
320,000 - 391,999	7

For each additional seventy two thousand (72,000) square feet (or fraction thereof) of gross FLOOR AREA, one (1) additional berth shall be provided.

103.613.2. Every PUBLIC assembly USE, such as AUDITORIUMS, convention halls, exhibition halls, stadiums, or sports arenas, OFFICE BUILDINGS, welfare institutions, and restaurants and HOTELS with a gross FLOOR AREA of greater than thirty thousand (30,000) square feet shall provide off-street berths as follows:

Gross FLOOR AREA in Square Feet Number of Berths

6,000 - 29,999	1
30,000 - 119,999	2
120,000 - 197,999	3
198,000 - 290,999	4
291,000 - 389,999	5
390,000 - 488,999	6
489,000 - 587,999	7
588,000 - 689,999	8

For each additional one hundred and five thousand (105,000) square feet (or fraction thereof) of gross FLOOR AREA, one (1) additional berth shall be provided.

103.613.3. Each loading space shall be a minimum of twelve (12) feet by fifty (50) feet in dimension with a clear height of fourteen feet six inches (14' 6").

103.613.4. Maneuvering space shall be provided adjacent to the loading area so that vehicles may change direction and leave as well as enter the loading area moving in a forward direction. TOWNSHIP or State or COUNTY roads adjacent to a loading area shall not be used for maneuvering.

103.613.5. At not time shall any part of a truck or van be allowed to extend into the right-of-way of a PUBLIC thoroughfare while the truck or van is being loaded or unloaded.

103.613.6. Loading areas and adjacent maneuvering space shall be surfaced with a permanent all-weather material which is capable of bearing the weight of vehicles ordinarily traveling over or parking upon the surface.

103.613.7. All LIGHTING in the loading area shall be shielded to prevent glare on any adjacent property or STREET and shall comply with the exterior LIGHTING standards of this ORDINANCE.

103.613.8. Loading areas shall be adjacent to the USE or BUILDING served except that in a group of BUILDINGS in the same USE on the same property, one BUILDING may be designated to receive and dispatch goods, provided the total applicable FLOOR AREA in all BUILDINGS on the property is aggregated in determining the total required loading spaces.

103.613.9. Properties having land USES established prior to the adoption of this ORDINANCE are exempted from compliance with this section. Any change in the nature or intensity of USE or any enlargement of structure shall require that the property be brought into compliance with this section.

103.614. STORM WATER MANAGEMENT

103.614.1. General: The DEVELOPER shall construct and/or install such DRAINAGE STRUCTURES as necessary to:

103.614.1.1. Prevent EROSION damage and to carry off or to detain and control the rate of release of surface waters in compliance with the ZONING ORDINANCE and with the TOWNSHIP Stormwater Management Ordinance.

103.614.1.2. Encourage all run-off control measures to percolate the stormwater into the ground to aid in the recharge of ground waters.

103.614.1.3. Carry surface water to the nearest adequate street, storm drain, detention basin, natural watercourse or drainage facility.

103.614.1.4. Take surface water from the bottom of vertical grades, to lead water away from springs, and to avoid excessive use of cross GUTTERS at STREET intersections and elsewhere.

103.614.1.5. Handle the anticipated peak discharge from the SITE and also the existing run-off being contributed from all land at a higher elevation in the same watershed.

103.614.1.6. Maintains the adequacy of the natural stream channel. Accelerated bank EROSION shall be prevented by controlling the rate and velocity of

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run-off discharge to these water courses, so as to avoid increasing occurrence of stream bank overflow.

103.614.1.7. Preserve the adequacy of existing CULVERTS, and bridges by suppressing the new FLOOD peaks created by new LAND DEVELOPMENT.

103.614.2. RETENTION OF EXISTING WATERCOURSES AND NATURAL DRAINAGE FEATURES:

103.614.2.1. Whenever a watercourse, stream, or intermittent stream is located within a DEVELOPMENT site, it shall remain open in its natural state and location. It shall not be piped.

103.614.2.2. The existing points of natural DRAINAGE discharge onto adjacent property shall not be altered without the written approval of the affected OWNERS and the approval of the TOWNSHIP ENGINEER.

103.614.2.3. No stormwater run-off or natural DRAINAGE shall be so diverted as to overload existing drainage facilities, or to create flooding or the need for additional DRAINAGE structures on other private properties or PUBLIC lands.

103.614.3. STORMWATER MANAGEMENT

103.614.3.1. Any DEVELOPER proposing any LAND DEVELOPMENT or any land alterations which may effect stormwater run-off characteristics shall comply with the regulations of the TOWNSHIP Stormwater Management Ordinance (Ord. #195), the Township Zoning Ordinance (Ord. #196), the Pennsylvania Stormwater Management Act (Act 167), and other State, COUNTY and TOWNSHIP regulations as applicable.

103.614.4. Stormwater Management PLAN. The APPLICATION FOR FINAL APPROVAL shall include the Stormwater Management Plan and all information required by the TOWNSHIP Stormwater Management Ordinance in addition to indication the final location, nature, schedule of installation, survey of EASEMENTS, maintenance plan and guarantees.

103.614.5. EXEMPTIONS FOR MINOR SUBDIVISIONS

103.614.5.1. At the time of APPLICATION FOR DEVELOPMENT, the TOWNSHIP shall determine if the SUBDIVISION or LAND DEVELOPMENT qualifies as a MINOR SUBDIVISION and, therefore, is eligible for a simplified stormwater plan submission.

103.614.5.2. MINOR SUBDIVISIONS may be exempt from the preparation of a stormwater management plan as specified herein. However, such DEVELOPMENTS shall still provide safe management of stormwater runoff in accordance with the performance standards of the COUNTY and the TOWNSHIP and as approved by the TOWNSHIP ENGINEER. Any stormwater management facilities constructed as part of the DEVELOPMENT shall be designed in accordance with TOWNSHIP standards and applicable State and COUNTY laws.

103.614.5.3. Applications for MINOR SUBDIVISIONS shall include a PLAN which describes, in narrative and graphic form the type and location of proposed ON-SITE stormwater management techniques or the proposed connection to an existing storm sewer system. The PLAN should show accurately site boundaries; contours at five-foot intervals for areas of greater than twenty-five percent (25%) slope gradient and at two-foot intervals for areas with less than twenty-five percent (25%) slope; location of watershed and/or sub-shed boundaries on the site (if applicable); and any watercourses, FLOODPLAINS or existing DRAINAGE FACILITIES or structures located on the SITE.

103.614.5.4. Stormwater management provisions for MINOR SUBDIVISIONS do not have to be prepared by a Pennsylvania Registered Professional Engineer. Whenever the submission of runoff calculations are required by the TOWNSHIP ENGINEER, they shall be prepared in accordance with all applicable regulations.

103.614.5.5. The TOWNSHIP ENGINEER shall review for approval the proposed provisions for stormwater management for a MINOR SUBDIVISION. Where the DEVELOPER is proposing to connect to an existing storm SEWER, the DEVELOPER shall demonstrate that sufficient capacity exists in the storm SEWER from the point of connection to the point of outlet in the natural DRAINAGE SYSTEM. The TOWNSHIP ENGINEER shall determine if the proposed DEVELOPMENT SITE is part of a larger PARCEL or area for which a stormwater management plan was approved previously and, therefore, subject to any specific stormwater management control contained in the prior PLAN.

103.614.5.6. For a PARCEL held under single ownership, only one APPLICATION for a MINOR SUBDIVISION as defined above, shall be permitted before requiring a stormwater management PLAN for the entire PARCEL.

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103.614.6. STORMWATER COLLECTION FACILITIES

103.614.6.1. As a general rule, no stormwater may be discharged to protected areas, such as hillsides, without special EROSION and/or energy dissipation controls being installed. Stormwater shall either be conveyed to the nearest established stream CHANNEL, or provided with an approved energy dissipation device as approved by the TOWNSHIP ENGINEER. Conveyance shall be by pipe or EROSION protected ditch.

103.614.6.2. The design for CULVERTS, pipes and other stormwater conveyance STRUCTURES shall be consistent with the design of the other stormwater management facilities.

103.614.6.3. Storm DRAINAGE Pipe: The minimum diameter of all storm DRAINAGE pipes shall be twelve (12) inches or an equivalent thereto, with the exception of DETENTION BASINS where a controlled orifice shall be required to provide the required detention. The minimum grade of piping shall be one half of one percent (0.5%). STRUCTURES shall conform to PA DOT Specifications.

103.614.6.4. Storm sewers, as required, shall be placed in the RIGHT-OF-WAY, parallel to the ROAD and shall be designed as a combination storm SEWER and underdrain. When located in undedicated land, they shall be placed within an EASEMENT not less than twenty (20) feet wide, as approved by the TOWNSHIP ENGINEER.

103.614.6.5. Collection and conveyance facilities should not be installed parallel and close to the top or bottom of major embankments to avoid the possibility of embankment failure.

103.614.6.6. MANHOLES shall be not more than five hundred (500) feet apart. Inlets may be substituted for MANHOLES, on approval by the TOWNSHIP ENGINEER, at the same spacing as required for manholes. In no case shall inlets be spaced more than five hundred (500) feet apart.

103.614.6.7. Inlets and MANHOLE covers and frames shall conform to PA DOT specifications. At street intersections, inlets shall be placed in the tangent and not in the curved portion of the curbing.

103.614.6.8. Roof drains shall not discharge stormwater runoff directly onto a SIDEWALK or a STREET, and shall be constructed to retain all such water wholly on the SITE except where such stormwater can be conveyed to a storm sewer system.

103.614.6.9. LOTS located on the high side of STREETS shall extend roof and french drains at a properly sized storm SEWER located within the STREET RIGHT-OF-WAY. Low side LOTS shall extend roof and french drains to a stormwater

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collection and conveyance system or natural watercourse in accordance with the approved stormwater management plan for the DEVELOPMENT. Storm sewers serving low side LOTS shall be in EASEMENTS provided on the REAR YARDS for low side LOTS.

103.614.7. STORMWATER DETENTION AREAS

103.614.7.1. Design of stormwater detention areas shall be based upon criteria set forth in the latest edition of Urban Hydrology for Small Watersheds, Technical Release 55 and National Engineering Handbook, Section 4, Hydrology as published by the U.S. Department of Agriculture, Soil Conservation Service and/or as required by the TOWNSHIP Stormwater Runoff Management Ordinance.

103.614.7.2. As a general rule, detention facilities shall be designed as dry basins, although wet facilities shall be considered in specific situations where they can be shown to represent a significant amenity to the DEVELOPMENT and/or the TOWNSHIP.

103.614.7.3. When DETENTION BASINS are provided, they shall be designed to utilize the natural contours of the land whenever possible. When such design is impracticable, the CONSTRUCTION of the basin shall utilize slopes as flat as possible to blend the structure into the terrain. All basins shall have slopes in compliance with the TOWNSHIP Grading Ordinance and with fencing as required by the Stormwater Management Ordinance. (Ord #195)

103.614.7.4. Detention ponds shall be designed so that they return to normal conditions within approximately twelve (12) hours after the termination of the storm, unless the TOWNSHIP ENGINEER finds that downstream conditions may warrant other design criteria for stormwater release.

103.614.7.5. Prior to the granting of FINAL APPROVAL of any SUBDIVISION or LAND DEVELOPMENT PLAN, the TOWNSHIP must be satisfied through contractual arrangements as specified in the Stormwater Management Ordinance (Ord. #195) that all stormwater facilities will be properly maintained. If all or a portion of the facilities are on property which will be conveyed to an individual, homeowners association or any other eventual OWNER, the guarantees must be in a form that they will carry through to the new owners.

103.614.7.6. Where detention facilities are used, the design of multiple-use facilities, is encouraged wherever feasible.

103.614.7.7. In general, facilities should be designed to have design water depths as shallow as possible.

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103.614.7.8. Each inlet and outlet to the facility shall be provided with erosion control measures approved by the TOWNSHIP.

103.614.7.9. Outlet control structures shall be constructed of reinforced concrete (cast-in-place, precast, or block) and provided with debris GRATES as approved by the TOWNSHIP ENGINEER.

103.614.7.10. All detention facilities shall be provided with an ACCESS ROAD having a gravel base of 12"-15" depth as approved by the TOWNSHIP ENGINEER (with a legal easement) for maintenance purposes. Such ROADS shall be a minimum of ten feet wide and have a maximum GRADE of fifteen percent (15%).

103.614.7.11. An as-built drawing shall be required for each stormwater detention facility constructed. The drawing shall represent an engineering certification of the volume of the facility and the depth versus storage relationship. This relationship shall be shown on the drawing in table form. The drawing shall be stamped by a Registered Pennsylvania Professional Engineer and submitted to the TOWNSHIP within sixty days of the completion of the facility. No facility shall be accepted until this requirement has been fulfilled.

103.614.7.12. All detention facilities involving an earth embankment shall be designed with a minimum free board of one foot between the peak emergency spillway design flow elevation and the top of the embankment.

103.614.7.13. All embankments shall be designed according to sound engineering practice for such STRUCTURES and shall meet the approval of the TOWNSHIP ENGINEER. DRAINAGE STRUCTURES with a design water depth in excess of ten feet shall require a supporting report from an Professional Engineer experienced in the design of earth embankments, and shall be constructed under the supervision of the engineer. Such detention structures may require the approval of the PA DER and/or the Army Corps of Engineers.

103.614.7.14. DETENTION BASINS shall not be located within FLOODPLAINS; nor within areas with FLOODPLAIN soils with the exception that areas of alluvial soils may be utilized if proof is accepted that the area is not subject to flooding.

103.614.7.15. Maintenance of all DRAINAGE FACILITIES and watercourses, both existing and proposed, within any proposed SUBDIVISION or LAND DEVELOPMENT shall be the responsibility of the DEVELOPER until such time as one of the following is accomplished:

103.614.7.15.1. An EASEMENT for these facilities is offered for dedication by the DEVELOPER and is accepted by the TOWNSHIP; it shall then be the responsibility of the TOWNSHIP.

103.614.7.15.2. A LOT OWNERS EASEMENT acceptable to the TOWNSHIP is established and the maintenance shall then be the responsibility of the individual LOT OWNER over whose LOT the easement passes. For LAND DEVELOPMENTS, the maintenance shall then be the responsibility of the OWNER.

103.614.7.15.3. A HOMEOWNERS ASSOCIATION or other approved legal entity, approved by the TOWNSHIP, assumes the responsibility for the maintenance of the development, including the maintenance of the watercourses and/or DRAINAGE FACILITIES.

103.614.8. EASEMENTS

Requirements for DRAINAGE STRUCTURES and/or pipes:

103.614.8.1. DRAINAGE EASEMENTS: DRAINAGE EASEMENTS shall be provided to accommodate all storm DRAINAGE requirements and shall be a minimum of twenty (20) feet in width.

103.615. EROSION and SEDIMENTATION Controls

- (1) GRADING and EROSION and SEDIMENTATION control procedures and STRUCTURES shall comply with all applicable regulations and all required approvals shall be granted prior to FINAL APPROVAL of the proposed SUBDIVISION or LAND DEVELOPMENT.
- (2) In addition to applicable TOWNSHIP codes, including the TOWNSHIP GRADING ORDINANCE (Ordinance 148 as amended), the following shall apply to all SUBDIVISION and LAND DEVELOPMENT in the TOWNSHIP.
 - (A) Pennsylvania Stormwater Management Act Guidelines (P.L. 864, Act 167)
 - (B) PA DER Soil EROSION and SEDIMENTATION Control Manual, latest edition
 - (C) Allegheny COUNTY EROSION and SEDIMENTATION Control Handbook.

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103.615.1. General Provisions and Compliance

103.615.1.1. No changes shall be made to the contour of the SITE, and no GRADING, excavating, removal or destruction of the topsoil, trees or other vegetative cover of the SITE, shall be commenced until such time as a PLAN for minimizing EROSION and sedimentation has been processed, and reviewed by the PLANNING COMMISSION, the Allegheny COUNTY Conservation District and the Board OF SUPERVISORS.

103.615.1.2. Approval by the Board OF SUPERVISORS of all PRELIMINARY PLANS and/or FINAL PLANS does not relieve the DEVELOPER of his obligation to execute the EROSION and SEDIMENTATION control measures as contained in this Section.

103.615.1.3. FINAL APPROVAL of PLANS and specifications by the United States Department of Agriculture Soils Conservation Service for the control of EROSION and SEDIMENTATION shall be concurrent with the approval of the PLANS of SUBDIVISION or LAND DEVELOPMENT, and become a part thereof. FINAL PLANS for minimizing EROSION and SEDIMENTATION as approved, will be incorporated in the DEVELOPER'S AGREEMENT and bond as required by the TOWNSHIP.

103.615.1.4. At the time a BUILDING PERMIT is applied for, a review shall be conducted by the TOWNSHIP ENGINEER to insure conformance with the PLAN as approved. During CONSTRUCTION, further consultative/technical assistance may be required to insure compliance with the provisions of this ORDINANCE.

103.615.1.5. During the DEVELOPMENT phase, the TOWNSHIP ENGINEER shall inspect the DEVELOPMENT SITE and enforce compliance with the approved EROSION and SEDIMENTATION control plans.

103.615.1.6. EROSION and SEDIMENTATION controls shall be provided both during and after CONSTRUCTION in accordance with the provisions in this ORDINANCE.

103.615.1.7. Proposed EROSION and SEDIMENTATION controls should be submitted with the stormwater management plan as part of the applicant's PRELIMINARY PLAN.

103.615.1.8. No work shall commence on any subsequent phase until the preceding one has been inspected and approved. If there are deficiencies in any phase, the TOWNSHIP ENGINEER shall issue a written description of the required corrections and stipulate the time by which they shall be made.

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103.615.2. General Performance Standards

103.615.2.1. Measures used to control EROSION and reduce SEDIMENTATION shall, as a minimum, meet the standards and specifications of the Allegheny COUNTY Conservation District.

103.615.2.2. The following measures to minimize EROSION and SEDIMENTATION shall be included where applicable in the control plan:

103.615.2.2.1. Stripping of vegetation, GRADING or other development shall be done in a way that will minimize EROSION in compliance with the TOWNSHIP ZONING ORDINANCE, the TOWNSHIP GRADING ORDINANCE and the TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

103.615.2.2.2. The DEVELOPMENT PLAN shall preserve salient natural features, keep fill operations to a minimum, and ensure conformity with topography so as to create the least EROSION potential and adequately handle the volume and velocity of surface water run-off.

103.615.2.2.3. Whenever feasible, natural vegetation shall be retained, protected and supplemented.

103.615.2.2.4. The disturbed area and the duration of temporary exposure shall be kept to a practical minimum, but shall not exceed the time limits established in the PA DER Soil EROSION and SEDIMENTATION Control Manual, latest edition.

103.615.2.2.5. Disturbed soils shall be permanently stabilized as quickly as practical, but within a time not to exceed sixty (60) days.

103.615.2.2.6. Temporary vegetation and/or mulching shall be used to protect exposed critical areas during DEVELOPMENT.

103.615.2.2.7. The permanent vegetation and mechanical EROSION control and DRAINAGE shall be installed as soon as practical in the DEVELOPMENT.

103.615.2.2.8. Provisions shall be made to accommodate effectively the increased run-off caused by changed soil and surface conditions during and after DEVELOPMENT within the SITE. Where necessary, the rate of surface water run-off will be mechanically retarded.

103.615.2.2.9. Sediment in the run-off water shall be trapped until the disturbed area is stabilized by the use of debris basins, silt traps, or similar measures. Maintenance of these items is the responsibility of the DEVELOPER until the disturbed area is stabilized and approved by the TOWNSHIP ENGINEER.

103.615.3. Site Grading

103.615.3.1. In order to provide more suitable SITES for BUILDING and other uses, improve surface DRAINAGE, and control EROSION, the following requirements shall be met:

103.615.3.1.1. All SITES and LOTS shall be graded to provide proper DRAINAGE away from BUILDINGS and dispose of it without ponding, and all land within a DEVELOPMENT shall be graded to drain and dispose of surface water without ponding, except where ponding (detention basins, etc.) is part of the storm water management plan for the site.

103.615.3.1.2. Concentration of surface water run-off shall be permitted only in swales, watercourses, or DETENTION BASINS. Subject to the approval of the TOWNSHIP ENGINEER, swales shall be sodded, utilize jute matting, or other similar measures to insure proper growth of the GROUND COVER.

103.615.3.1.3. GRADING shall in no case be done in such a way as to divert water onto the property of another OWNER.

103.615.3.1.4. During GRADING operations, necessary measures for dust control must be exercised.

103.615.3.1.5. GRADING equipment will not be allowed to cross live streams. Provisions shall be made for the installation of temporary CULVERTS or bridges.

103.615.3.1.6. Tire cleaning areas shall be provided at each point of ACCESS on the DEVELOPMENT SITE.

103.615.4 Excavations and FILLS

103.615.4.1. No excavation shall be made on a slope with a face steeper than two (2) horizontal to one (1) vertical (2:1), except under the following conditions:

103.615.4.1.1. A concrete, timber, masonry or other approved retaining wall constructed in accordance with approved standards is provided to support the face of the excavation.

103.615.4.1.2. A soils (geotechnical) engineering report documents soil stability for the proposed slopes in excess of 2:1 on this site and the TOWNSHIP ENGINEER approves the proposed slopes and the proposed method of CONSTRUCTION.

103.615.4.2. Edges of slopes shall be a minimum of five (5) feet from property lines or RIGHT-OF-WAY lines of STREETS or as directed by the TOWNSHIP ENGINEER in order to permit the normal rounding of the edge without encroaching on the ABUTTING property.

103.615.4.3. Adequate provisions shall be made to prevent surface water from damaging the CUT face of excavations and the sloping surfaces of FILLS.

103.615.4.4. CUT and FILL shall not endanger adjoining property.

103.615.4.5. FILL shall be placed and compacted so as to minimize sliding or EROSION of the soil.

103.615.4.6. FILLS shall not encroach on natural watercourses or constructed CHANNELS.

103.615.4.7. FILLS ABUTTING natural watercourses or constructed CHANNELS shall have suitable protection against EROSION during periods of flooding.

103.615.5. Responsibility

103.615.5.1. Whenever SEDIMENTATION is caused by the stripping of vegetation, GRADING or other DEVELOPMENT, it shall be the responsibility of the DEVELOPER causing such SEDIMENTATION to remove it from all affected surfaces, DRAINAGE systems and watercourses on and OFF-SITE, and to repair any damage at his expense as quickly as possible.

103.615.5.2. It is the responsibility of the DEVELOPER doing any work on or across a stream, watercourse, or swale, or upon the FLOODPLAIN or RIGHT-OF-WAY during the period of the work, to return it to its original or equal condition after such activity is completed.

103.615.5.3. The DEVELOPER shall not block, impede the flow of, alter, construct any structure or deposit any material or thing or perform any work which will affect normal or FLOOD flow in any stream or watercourse without having obtained

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prior approval from the TOWNSHIP and/or PENNSYLVANIA DER WHICHEVER IS APPLICABLE.

103.615.5.4. The DEVELOPER who makes any surface changes shall be required to:

103.615.5.4.1. Collect ON-SITE surface run-off and control it to a point of discharge into the natural watercourse of the DRAINAGE area.

103.615.5.4.2. Handle existing OFF-SITE run-off through his DEVELOPMENT by designing it to adequately handle all upstream run-off.

103.615.5.4.3. Provide and install at his expense, in accordance with Township requirements, all DRAINAGE and EROSION control improvements (temporary and permanent) as required by the approved EROSION and SEDIMENTATION Control Plan and the approved Stormwater Management Plan.

103.616. MONUMENTS AND MARKERS

103.616.1. Permanent reference MONUMENTS or MARKERS shall be located at the boundary corners of each SITE or SUBDIVISION according to the following standards:

103.616.1.1. A minimum of two (2) or $1/3$ of the number of points of intersection, whichever is greater, shall be concrete MONUMENTS at least four (4) inches square at the top, six (6) inches square at the bottom and at least 30 inches in length. Any fraction resulting from computing the required number of reference MARKERS shall be raised to the next whole number.

103.616.1.2. The remaining intersection points shall be located with solid metal pins of at least $5/8$ inch diameter with a minimum length of thirty (30) inches.

103.616.2. All LOT corners shall be located with solid metal pins of at least five-eighths inch diameter with a minimum length of thirty (30) inches. Prior to the issuance of an OCCUPANCY PERMIT, it shall be the responsibility of the DEVELOPER to install the metal property pins.

103.616.3. MONUMENTS and MARKERS shall be placed so that the scored or marked point shall coincide exactly with the intersection of lines to be marked, and shall be set so that the top of the MONUMENT or MARKER is level with the surface of the surrounding ground as finally graded.

103.616.4. The MONUMENTS and pins as required shall be shown on the FINAL PLAT with the distance between them and with sufficient curve data plainly marked. If such

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MONUMENTS have not been set at the time the FINAL PLAT is submitted to the TOWNSHIP, a certified check, payable to the TOWNSHIP shall be deposited with the TOWNSHIP. The amount of the check shall be sufficient to cover the cost of setting the required MONUMENTS and pins as estimated by the TOWNSHIP. If the MONUMENTS and pins have not been set within thirty (30) days after the expiration of the street maintenance bond, they will be set by the TOWNSHIP and the check forfeited.