

ARTICLE VIII. DESIGN STANDARDS
(Amended by Ordinance 2012-17, dated 11/26/12)

SECTION 801. APPLICABILITY

All SUBDIVISION and LAND DEVELOPMENT PLANS APPROVED by the Board of COMMISSIONERS shall comply with the following design standards. The standards outlined herein shall be considered minimum requirements for the promotion of the public health, safety, and general welfare.

SECTION 802. GENERAL STANDARDS

1. Land shall be developed in conformance with the TOWNSHIP Zoning ORDINANCE and all other ORDINANCES and regulations in effect in the TOWNSHIP.
 - A. Whenever the Zoning ORDINANCE provides that the use proposed by the APPLICANT for SUBDIVISION and/or LAND DEVELOPMENT approval shall constitute a use by SPECIAL EXCEPTION or a CONDITIONAL USE, the APPLICANT shall obtain such SPECIAL EXCEPTION or CONDITIONAL USE approval from the Zoning Hearing Board or the Board of COMMISSIONERS, as applicable, prior to the submission of the PRELIMINARY PLAN. The plan shall be designed and developed in accordance with any conditions which have been imposed upon the grant of such SPECIAL EXCEPTION or CONDITIONAL USE by the Zoning Hearing Board or the Board of COMMISSIONERS, as applicable.
 - B. Whenever the APPLICANT proposes to develop a SUBDIVISION and/or LAND DEVELOPMENT in a manner that would require a variance from any requirements of the Zoning ORDINANCE, the APPLICANT shall obtain such variance from the Zoning Hearing Board prior to the submission of the PRELIMINARY PLAN. The plan shall be designed and developed in accordance with any conditions which have been imposed upon the grant of such variance or variances by the Zoning Hearing Board.
 - C. Whenever all or a portion of the land contained within an application for SUBDIVISION or LAND DEVELOPMENT approval constitutes all or a portion of land included in a prior SUBDIVISION or LAND DEVELOPMENT PLAN APPROVED by the TOWNSHIP and recorded in the Office of the Recorder of Deeds in and for Lancaster County, Pennsylvania, the plan shall comply with all conditions, restrictions and notes imposed on the prior approval and/or included upon the recorded SUBDIVISION or LAND DEVELOPMENT PLAN. The APPLICANT shall identify all prior recorded SUBDIVISION and/or LAND DEVELOPMENT PLANS of which all or a portion of the land contained in the plan was a part and all conditions, restrictions and notes which affect the current application. Failure to identify all applicable conditions, restrictions and notes of record on prior plans constitutes a violation of this ORDINANCE. The APPLICANT shall submit with the application for PRELIMINARY PLAN

approval a statement identifying the prior plans reviewed; the conditions, restrictions and notes which would impact DEVELOPMENT in accordance with the plan for which approval has been requested; and an explanation of the manner in which the proposed plan has been designed to comply with such conditions, restrictions and notes. This information shall be signed by the APPLICANT or the APPLICANT'S ENGINEER or LANDSCAPE ARCHITECT.

2. Significant natural and historical features shall, insofar as possible, be preserved. DEVELOPMENTS should be designed to protect the natural terrain, natural drainage, existing topsoil and existing TREES of the DEVELOPMENT site.
3. Land subject to hazards to life, health, or property, such as may arise from fire, FLOODS, disease, or other causes, shall not be developed for BUILDING purposes unless such hazards have been eliminated or unless the plan shall show adequate safeguards against them, which shall be APPROVED by the appropriate regulatory agencies.
4. All portions of a tract being developed shall be utilized in LOTS, STREETS, public lands or other proposed uses so that remnants and landlocked AREAS shall not be created.
5. Where existing STRUCTURES on a tract being developed are intended to be demolished and removed by the DEVELOPER, such STRUCTURES shall be removed within such period as the Board of COMMISSIONERS may require, as a condition of final approval, following final approval of a FINAL PLAN application.
6. In order to ensure that the adopted minimum Level of Service for adjacent STREETS and intersections are met and to assure that the costs of the necessary transportation IMPROVEMENTS to accommodate the DEVELOPMENT consistent with said Levels of Service are funded and equitably apportioned based upon the traffic generation characteristics of the proposed use, FINAL PLAN approval of all plans shall be conditioned upon participation by the DEVELOPER in the Manheim TOWNSHIP Transportation Impact Fee. Participation shall be guaranteed by the execution of an agreement between the TOWNSHIP and the DEVELOPER, on a form provided by the TOWNSHIP, providing for payment of the applicable impact fee at the time of issuance of a BUILDING PERMIT for the DEVELOPMENT pursuant to the FINAL PLAN.
7. Improvement of Existing STREETS and Intersections. Where a SUBDIVISION or LAND DEVELOPMENT abuts an existing TOWNSHIP and/or state STREET or will have a traffic impact on an existing TOWNSHIP and/or state STREET or intersection as indicated by the Traffic Impact Study performed under Section 502.4 of this ORDINANCE, the DEVELOPER shall make the following IMPROVEMENTS:
 - A. Where the Traffic Impact Study indicates that IMPROVEMENTS are necessary or advisable to existing TOWNSHIP and/or state STREETS and/or intersections within the Traffic Impact Study AREA in order (i) to assure adequate, safe and convenient ACCESS to each LOT and/or STRUCTURE and/or parking compound proposed as part of the DEVELOPMENT of the tract, (ii) to

accommodate the traffic due to the proposed DEVELOPMENT, (iii) to provide for a level of service and delay for the horizon year, or years for phased projects, with the DEVELOPMENT which is at least equivalent to the protected level of service and delay for the horizon year(s) without the proposed SUBDIVISION or DEVELOPMENT, and/or (iv) to preserve the existing convenience of ACCESS to or ability to exit from abutting properties which gain ACCESS from the existing STREET, the DEVELOPER shall install all such indicated IMPROVEMENTS. The DEVELOPER shall install additional traffic lanes, traffic dividers, traffic control devices, traffic signals, and other measures as appropriate to ensure that the DEVELOPMENT of the tract does not adversely impact the existing STREET system and/or ACCESS to or the ability to exit from properties gaining ACCESS from an affected STREET. If the Traffic Impact Study indicates that IMPROVEMENTS must be made to a state STREET, the DEVELOPER shall also take all action necessary to obtain any PennDOT permits and/or approvals to install the necessary STREET widening and/or traffic signals or traffic control devices. If the Traffic Impact Study recommends installation of traffic signals or traffic signal MODIFICATIONS, the DEVELOPER shall prepare all studies and submit all necessary applications to enable the installation of the traffic signal or MODIFICATIONS and shall install the traffic signal or MODIFICATIONS at their cost and expense. If the Traffic Impact Study indicates that traffic control devices or regulations, including but not limited to stop intersections, speed limit reductions, or parking prohibitions, are required, the DEVELOPER shall prepare all studies necessary to justify imposition of such regulations in accordance with PennDOT regulations and shall pay all costs associated with the preparation and enactment of an ORDINANCE to establish such regulations.

- B. The DEVELOPER shall bear all costs and expenses in connection with the IMPROVEMENTS required by this Section. If the DEVELOPER requires the TOWNSHIP to submit any permit applications or requests for approvals in the name of the TOWNSHIP, the DEVELOPER shall reimburse the TOWNSHIP for all costs and expenses incurred by the TOWNSHIP in connection with its review of the application and submission of the application to the PennDOT or any other Governmental agency.
- 8. Specific Traffic Control and ACCESS Requirements. The following specific control and ACCESS requirements shall be met for DEVELOPMENTS which produce 100 peak hour directional trips.
 - A. If any traffic signals are to be installed, the distance between any new and/or existing signals shall be at least one thousand (1,000) feet unless it can be demonstrated that adjacent traffic signals can operate sufficiently at lesser distances.

B. Design of proposed DEVELOPMENT ACCESS points shall take into consideration the horizontal and vertical GRADES of the existing road network in the traffic impact study AREA to permit safe and convenient ACCESS to the site as defined in the latest PennDOT standards and regulations. All MODIFICATIONS required to meet these regulations will be the responsibility of the DEVELOPER.

C. The DEVELOPER shall demonstrate by using the latest PennDOT standards and regulations that the proposed use will not create traffic patterns and movements which will jeopardize the traveling public.

- (1) Stacking of sufficient length shall be provided in all traffic lanes on the site and off the site on adjacent roadways to insure that there shall be no blockage of through traffic. The design and length of the stacking lanes shall be justified and supported by the queuing analysis required as part of the traffic impact study.
- (2) STREET and/or ACCESS DRIVES to and within the site shall be designed in a manner that blockage of through traffic by vehicles attempting to enter or exit on these STREETS or ACCESS DRIVES will not occur.
- (3) Acceleration, deceleration and turning lanes shall be of sufficient lengths to accomplish their intended use.

D. If reduction of the speed limit, installation of traffic control devices, limitation of parking or turning, movements or similar measures are required to mitigate traffic impacts upon TOWNSHIP or State highways, the APPLICANT shall present traffic studies performed in accordance with PennDOT regulations and Publication No. 201, Engineering and Traffic Study Regulations. The erection or the installation of such traffic control devices shall be in accordance with Title 67, Chapter 211, Official Traffic Control Devices, of PennDOT regulations. If the enactment of an ORDINANCE is necessary to effectuate the traffic regulations or the installation of the traffic control device, the APPLICANT shall reimburse the TOWNSHIP for all expenses in the preparation and enactment of the necessary ORDINANCE.

E. No STREET shall be located in a manner which would limit ACCESS to or exiting from abutting properties gaining ACCESS from the existing STREET with which a proposed STREET will intersect unless the DEVELOPER provides such LOTS with alternate ACCESS from the proposed STREET system in a manner acceptable to each affected LOT owner. It shall be the burden of the APPLICANT to demonstrate that such ACCESS is acceptable to all owners of an affected LOT. For the purpose of this provision, limitation of ACCESS shall include the limitation of movements into or exiting the abutting property or properties gaining ACCESS from the existing STREET, whether by traffic regulations, installation

of barriers to prevent turning movements, installation of additional traffic lanes in front of a property, or difficulties or delays resulting from increased flows.

F. Where new intersections are being established to serve as ACCESS to the proposed DEVELOPMENT, these intersections must be designed to at least operate at Level of Service C or better.

G. For ACCESS points to the proposed DEVELOPMENT and any major intersections where signal control may be required or is being proposed, a traffic signal warrant analysis shall be performed in accordance with the requirements of PennDOT's Publication 201. A left turn lane shall be provided and an analysis shall be completed to determine the type of signal phasing required.

H. Emergency traffic signal preemption shall be addressed and provided as required.

I. Additional left and right turning lanes shall be provided to address the existing roadway site conditions and ACCESS to the proposed DEVELOPMENT.

J. An agreement between the TOWNSHIP and DEVELOPER shall be provided with regard to operating expenses and maintenance of proposed traffic signals.

K. Additional through lanes and lane transitions of sufficient length shall be provided to allow smooth traffic flow to existing traffic lanes thus minimizing congestion, delays and or blockage of through traffic within the proposed improvement AREA. The design and length should be justified and supported by the queuing analysis required as part of the traffic impact study and PennDOT standards.

SECTION 803. STREETS

1. Table of Roadway Design Criteria:

<u>Criteria</u>	<u>Collector</u>	<u>Local</u>
Number of Travel Lanes	2	2
Roadway Width, Public (Min.)		
No Parking	38 ft. *	34 ft. *

<u>Criteria</u>	<u>Collector</u>	<u>Local</u>
Parking, One Side	38 ft. *	34 ft. *

Parking, Two Sides	38 ft. *	34 ft. *
Roadway Width, Private (Min.)		
No Parking	--	27 ft. *
Parking	--	34 ft. *
Cross Slope		
(Ft. per ft.)	.021	.021
Horizontal Clearance		
(beyond edge of Road)	R/W limits	R/W limits
Horizontal Curvature		
Desirable	500 ft.	175 ft.
Minimum	500 ft.	175 ft.
Vertical GRADE		
Range	1% - 6%	1% - 10%
Sight Distance (Min.)		
Stopping	275 ft.	200 ft.
Passing	1,500 ft.	1,100 ft.
Intersection		
(for passenger cars)	440 ft.	250 ft.
Intersection Curb		
Radii (Min.)	50 ft.	30 ft.
RIGHT-OF-WAY Width		
Typical	55 ft.	50 ft.
At Intersection		
(width 300 ft.)	55 ft. (min)	50 ft. (min)

* Curb Line Width

2. General STREET Arrangement

- A. The location, width and classification of all STREETS shall conform to the Manheim TOWNSHIP COMPREHENSIVE PLAN, Manheim TOWNSHIP Comprehensive Traffic Study, the Zoning ORDINANCE of the TOWNSHIP and Appendix I, attached to and made a part of this ORDINANCE with respect to STREET classification.
- B. Proposed STREETS shall further conform to such County and State STREET and highway plans as have been prepared, adopted and/or filed as prescribed by law.
- C. STREETS shall be logically related to the topography so as to produce reasonable GRADES, satisfactory drainage and suitable BUILDING sites.
- D. Residential STREETS shall be designed to discourage through traffic; however, the arrangement of STREETS shall provide for the continuation of existing or platted STREETS and proper ACCESS to adjoining undeveloped tracts suitable for future SUBDIVISION.
- E. All required IMPROVEMENTS including but not limited to existing and new STREETS, sanitary sewer and water line interceptor systems, storm drainage systems and all other IMPROVEMENTS shall be installed in the RIGHTS-OF-WAY of existing and /or new STREETS, and shall be extended to the boundary line of the DEVELOPMENT, as required, to provide ACCESS to adjacent lands. All such existing and/or new STREETS and all required IMPROVEMENTS to be located within the RIGHTS-OF-WAY of such existing and/or new STREETS shall be so designed as to accommodate the future needs of the TOWNSHIP with respect to STREET circulation patterns and utility alignment.
- F. If LOTS resulting from original SUBDIVISION are large enough to permit re-SUBDIVISION or if a portion of the tract is not subdivided, adequate RIGHTS-OF-WAY for STREETS and other required IMPROVEMENTS shall be provided as necessary to permit further SUBDIVISION.
- G. Half STREETS at the perimeter of the DEVELOPMENT or partial STREETS with less than required right of way or CARTWAY width shall not be permitted.
- H. Where a DEVELOPMENT abuts a collector major or ARTERIAL STREET, the Board of COMMISSIONERS may require the use of local STREETS, REVERSE FRONTAGE LOTS or such other treatment that will provide protection for abutting properties, reduce the number of intersections with the major STREET, and separate the local and through traffic.

- I. STREETS that are extensions of or obviously in alignment with existing STREETS shall bear the names of the existing STREETS. STREET names shall not be repeated within the TOWNSHIP and all STREET names shall be subject to the approval of the appropriate local postmaster.
- J. Whenever design standards for required STREET IMPROVEMENTS are not specified by the Board of COMMISSIONERS, the applicable standard requirements of the Pennsylvania Department of Transportation shall govern.
- K. All existing TOWNSHIP STREETS at the perimeter and/or through the DEVELOPMENT shall be reconstructed according to TOWNSHIP specifications: (1) if an existing TOWNSHIP STREET lies at the perimeter of the DEVELOPMENT, it shall be to the center line of the STREET; and (2) if an existing TOWNSHIP STREET lies through the DEVELOPMENT, it shall be reconstructed to the full width of the STREET as required by the TOWNSHIP specifications and design standards.

3. Cul-de-sac and Dead-End STREETS

- A. The center line distance of CUL-DE-SAC STREETS shall be greater than two hundred fifty (250) feet in length and shall not exceed eight hundred (800) feet in length. The length of the CUL-DE-SAC STREET shall be measured from the intersection of the intersecting STREETS edge of CARTWAY and centerline of cul-de-sac to the terminace of the cul-de-sac CARTWAY. CUL-DE-SAC STREETS must be provided with a paved turn-around with a minimum diameter of eight-four (84) feet to the outside curb and of one hundred (100) feet to the STREET RIGHT-OF-WAY line (For Measurement See Appendix IX).
- B. The minimum GRADE on cul-de-sacs shall be designed to ensure a minimum of one (1%) percent along the curb line to the designed low points.
- C. Dead-end STREETS shall be prohibited except when designed for the future STREET extension into adjoining tracts or APPROVED for staged DEVELOPMENT.
- D. Any STREET temporarily dead-ended in order to provide for future continuation of the STREET into adjoining property or for authorized stage DEVELOPMENT shall be fully constructed and all utilities installed. A barrier to prevent vehicular ACCESS to adjoining property shall be constructed at the termination point of the STREET.
- E. Where any adjacent stub STREET is not proposed for extension as through STREETS, a cul-de-sac shall be constructed in compliance with TOWNSHIP standards.

4. Horizontal Alignment

- A. Horizontal curves shall be used at all horizontal alignment deflections in excess of two (2) degrees.
- B. There shall be a tangent of at least hundred (100) feet between reverse curves for all local and COLLECTOR STREETS.

5. Vertical Alignment

- A. Vertical curves shall be used in charges of GRADE exceeding one (1%) percent. To provide proper sight distances, the minimum length (in feet) of vertical curves shall be as follows: for collectors, eighty - five (85) times the algebraic difference in GRADE; for local STREETS, thirty (30) times the algebraic difference in GRADE.
- B. At STREET intersections, the through STREET shall be approached by side STREETS in accordance with the following standards; where the GRADE of the side STREET exceeds four (4%) percent, there shall be a leveling AREA on the side STREET within which no GRADE shall exceed a maximum of four (4%) percent for a minimum distance of one hundred (100) feet (measured from the intersection of the centerlines of the STREETS). No side STREET shall intersect a through STREET when the through STREET exceeds seven (7%) percent in GRADE.

6. Intersections

- A. No more than two (2) STREETS shall intersect at the same point.
- B. Right angle intersections shall be used.
- C. Two (2) STREETS intersecting at opposite sides of a through STREET shall intersect at their centerlines or their centerlines shall be offset by a minimum of two hundred (200) feet.
- D. Intersections with COLLECTOR STREETS entering into collector and ARTERIAL STREETS shall not be located less than one thousand (1,000) feet apart as measured from centerline to centerline of the intersecting STREETS.
- E. With the exception of an intersection of an ACCESS DRIVE and STREET or ACCESS DRIVE and ACCESS DRIVE, a one hundred (100) foot clear SIGHT TRIANGLE shall be provided and maintained at all intersections, the triangle shall be established by measuring one hundred (100) feet from the point of intersection of the center lines of the STREETS. These lines shall be indicated on all plans. No BUILDING, planting, fencing or other OBSTRUCTION that would obscure the vision of a motorist within the clear sight AREA shall be permitted. This

requirement shall not apply to traffic signals, traffic signs, STREET name signs, public utility poles and similar type STRUCTURES.

- F. All intersections shall be designed to provide minimum Safe Stopping Sight Distance (SSSD) with regard to both horizontal and vertical alignment. The sight distance shall be measured at the centerline of the CARTWAY from a height of three and one-half (3.5) feet above the pavement and ten (10) feet from the edge of the paving to an object located along the adjacent STREET, six (6) inches above the pavement see Appendix IV which identifies the location of the measurements and Appendix III which identifies the minimum sight distances. No OBSTRUCTIONS, grading and/or plantings shall be placed within the determined sight distances that would obscure the vision of a motorist.
- G. STREET name signs shall be installed at all intersections and their design shall be APPROVED by the TOWNSHIP. All signing shall identify both intersecting STREETS. Regulatory signs shall be installed at all locations identified by a traffic circulation study prepared by the DEVELOPER and deemed appropriate by the Board of COMMISSIONERS and shall conform to TOWNSHIP specifications.
- H. All STREETS intersecting a State Highway shall be subject to the approval of the Pennsylvania Department of Transportation.
- I. Handicapped accessible ramps shall be provided at each proposed intersection, at the principal entrances to BUILDINGS which front on PARKING LOTS, and at all CROSSWALKS. All ramps are to be in accordance with the Manheim TOWNSHIP IMPROVEMENTS Specifications Manual.

7. PRIVATE STREETS

- A. PRIVATE STREETS are to be discouraged within SUBDIVISIONS, unless adequate off-STREET parking is shown to exist and the DEVELOPER provides adequate evidence to guarantee proper maintenance of all IMPROVEMENTS in the form of deed restrictions, LOT owner association agreements or other acceptable provisions.
- B. STREETS providing circulation between adjacent LAND DEVELOPMENTS (existing or proposed) shall be public STREETS and shall be connected directly to another public STREET. All other STREETS within a LAND DEVELOPMENT are permitted to remain private.
- C. PRIVATE STREETS shall not be offered for dedication in the future unless they meet all public STREET design standards in effect at the time of offer of dedication.

- D. There shall be a note on each preliminary and FINAL PLAN indicating those STREETS that are not intended for dedication.
- E. PRIVATE STREETS shall adhere to all design, CONSTRUCTION and sign standards applicable to a public STREET except for those standards which PRIVATE STREETS are specifically excluded in this ORDINANCE.
- F. Traffic signals shall be prohibited at all proposed private entrances to public STREETS. Traffic signals shall also be prohibited at all intersections involving two PRIVATE STREETS.

8. ACCESS DRIVES

- A. Any property which utilizes an ACCESS DRIVE shall have frontage along a public or PRIVATE STREET.
- B. A note shall be included on the plan indicating that the ACCESS DRIVE will not be dedicated to the TOWNSHIP and that the owner of the property will own and maintain the ACCESS DRIVE.
- C. Each travel lane shall be a minimum of twelve (12) feet wide unless other conditions such as the intended use and function of the ACCESS DRIVE warrants additional CARTWAY or turning lanes.
- D. Vertical and horizontal alignment of ACCESS DRIVES shall be designed to conform to STREET standards as stated in Section 803.4. and 803.5. and to provide for safe and convenient movement of traffic within the developed site.
- E. Parking is prohibited along ACCESS DRIVES. Signage regarding the prohibition of parking along the ACCESS DRIVE shall be provided.
- F. ACCESS DRIVE intersection separation requirements shall be as follows:
 - (1) ACCESS DRIVE intersections with STREETS shall coincide with the intersection of existing ACCESS DRIVES and STREETS located on the opposite side of the STREET. If alignment is not possible, the intersections shall be offset 100' as measured along the centerline for local STREETS and 200' for major STREETS (See Appendix I for STREET Classifications).
 - (2) ACCESS DRIVES located on the same side of the intersecting STREET shall maintain a separation distance of fifty (50) feet measured from centerline to centerline along local STREETS and one-hundred (100) feet measured along centerline to centerline along collector or ARTERIAL STREETS. ACCESS DRIVE intersections with other ACCESS DRIVES

within the site shall not be subject to such restrictions.

- G. Wherever practical joint ACCESS DRIVES should be utilized for adjoining users to eliminate numerous ACCESS DRIVE intersections.
- H. Proper sight distance shall be provided at ACCESS DRIVE intersections with existing STREETS according to the requirements of Section 803.6.F.
- I. A seventy-five (75) foot clear SIGHT TRIANGLE should be provided at the intersection of an ACCESS DRIVE with an ACCESS DRIVE and at the intersection of an ACCESS DRIVE with a STREET. The triangle shall be established by measuring seventy-five (75) feet from the point of intersection of the centerlines of the ACCESS DRIVES or STREET. These lines shall be indicated on all plans. No BUILDING, planting, fencing or other OBSTRUCTION that would obscure the vision of a motorist within the clear sight AREA shall be permitted.
- J. ACCESS DRIVE separation requirements shall comply with Manheim TOWNSHIP Zoning ORDINANCE
- K. The CARTWAY of all ACCESS DRIVES that are located within TOWNSHIP STREET RIGHTS-OF-WAY shall be constructed to STREET standards.
- L. Curb and sidewalk should be provided along all ACCESS DRIVES.

9. STREET Widths

- A. Provisions for additional RIGHT-OF-WAY and/or CARTWAY width may be required by the Board of COMMISSIONERS in specific cases for:
 - (1) Public safety and convenience;
 - (2) ACCESS to off-STREET parking in commercial and industrial AREAS and in AREAS of high DENSITY residential DEVELOPMENT.
 - (3) The addition of a BICYCLE LANE.

- B. The extension of existing STREETS which are presently constructed with a CARTWAY different from the standards of this ORDINANCE shall be provided with a transition AREA, the design of which shall be subject to approval by the Board of COMMISSIONERS.

10. CONSTRUCTION

- A. STREETS shall be installed in accordance with the specifications and standards of the TOWNSHIP as set forth in the Manheim TOWNSHIP IMPROVEMENTS

Specifications Manual or in lieu of such standards, in accordance with the standards of the Pennsylvania Department of Transportation Form 408, as amended.

- B. STREETS shall be finish graded to the full width of the right of way, surfaced, and improved to the GRADES and dimensions shown on the plans, profiles, and cross-sections submitted by the DEVELOPER and APPROVED by the Board of COMMISSIONERS.
- C. Maximum slopes of banks measured perpendicular to the center line of the STREET shall be three to one (3:1) in FILL AREAS and two to one (2:1) in cut AREAS beyond the RIGHT-OF-WAY limit line.
- D. Prior to placement of STREET sub-base a sub-surface drainage system shall be installed in all STREETS in accordance with the Manheim TOWNSHIP Improvement Specifications Manual.

SECTION 804. CURBS

- 1. Curbs shall be required along all proposed STREETS in SUBDIVISIONS, along all proposed STREETS and parking compounds in LAND DEVELOPMENTS, and along all existing STREETS in and abutting both SUBDIVISIONS and LAND DEVELOPMENTS. The DEVELOPER shall submit the location and GRADE of all curbs to the TOWNSHIP for consideration.
- 2. Curbs shall be installed to the dimensions and CONSTRUCTION standards of the TOWNSHIP or, in lieu of such standards, in accordance with the standards of the Pennsylvania Department of Transportation Form 408, as amended.
- 3. Standard straight curb shall be required along all State Highways and along all TOWNSHIP STREETS which the TOWNSHIP has classified as collector. Standard rolled curb shall be required along all other STREETS.
- 4. PIPES grates and other materials shall not be placed in the curb gutters to form a DRIVEWAY ramp.
- 5. The transition from one type of curb to another type shall occur at a STREET intersection as directed by the TOWNSHIP Board of COMMISSIONERS.
- 6. Depressed straight curb at DRIVEWAYS shall be a minimum of one (1) inch above the STREET surface. The length of this depressed curb shall not exceed thirty-five (35) feet without a safety island. This safety island shall not be less than fifteen (15) feet in length.
- 7. All curbs shall conform to specifications for Class A Concrete, as specified by the Pennsylvania Department of Transportation Form 408, as amended, with a minimum compressive strength of 4,000 pounds per square inch after twenty-eight (28) days.

SECTION 805. SIDEWALKS

1. Sidewalks shall be required along both sides of all STREETS in all SUBDIVISIONS and along all abutting existing or new STREETS of proposed SUBDIVISIONS and LAND DEVELOPMENTS.
2. Sidewalks shall be provided along all new STREETS and parking compounds located in LAND DEVELOPMENTS unless it can be shown to the satisfaction of the Board of COMMISSIONERS that the sidewalk is not located close to pedestrian generator, will not continue a sidewalk on an existing road, will not provide a link between existing and/or proposed sidewalks.
3. When sidewalks are required, they shall be installed to the dimensions and CONSTRUCTION standards of the TOWNSHIP or, in lieu of such standards, in accordance with the standards of the Pennsylvania Department of Transportation Form 408, as amended.
4. Sidewalks shall be four (4) feet wide, except along COLLECTOR STREETS, and adjacent to shopping centers, schools, recreation AREAS, and other community facilities, where they shall be a minimum of five (5) feet wide.
5. Sidewalks shall be located within the STREET right of way one (1) foot from the right of way line. A grass planting strip shall be provided between the curb and sidewalk unless otherwise APPROVED by the Board of COMMISSIONERS.

SECTION 806. MONUMENTS AND MARKERS

1. Permanent frost-proof monuments shall be accurately placed along the streetline at least on one side of each STREET at the beginning and end of all curves and at all curves and at all angles.
2. Markers shall be set at locations shown on the FINAL PLANS as follows:
 - A. At all points where LOT lines intersect curves, either front or rear;
 - B. At all angles in property lines of LOTS;
 - C. At all other LOT corners.
3. Monuments shall have a flat top having a minimum width or diameter of four (4) inches and a minimum length of forty-two (42) inches. They shall also be marked on the top with a proper inscription or a drill hole. Markers shall consist of iron PIPES or steel bars at least thirty (30) inches long and not less than three-quarters (3/4) of an inch in diameter and frost-proof.

4. 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 on the surrounding ground.

SECTION 807. BLOCKS

1. In general all BLOCKS in a residential SUBDIVISION shall have a maximum length of one thousand two hundred (1,200) feet. BLOCK lengths shall be measured along the STREET centerlines from intersection to intersection. BLOCKS subdivided into LOTS shall be two (2) LOT depths in width, except REVERSE FRONTAGE LOTS along a collector or ARTERIAL STREET which front on a local interior STREET.
2. In all DEVELOPMENTS, the BLOCK layout shall consider the topography and character of the site, protect environmentally sensitive AREAS, minimize clearing, grading and the removal of TREES, provide for sufficient traffic circulation and ACCESS for emergency vehicles and reinforce the best design of units in the AREA. Additionally, in commercial and industrial AREAS, the BLOCK layout shall be designed to make delivery and pick-up efficient and allow for the most efficient arrangement of space for present use and future expansion, with due regard for worker and customer ACCESS and parking.
3. In large BLOCKS with interior parks and playgrounds, in exceptionally long BLOCKS where ACCESS to a school or shopping center is necessary, or where cross STREETS are impractical or unnecessary, a cross-walk with a minimum right of way width of twelve (12) feet and a minimum paved CARTWAY width of five (5) feet may be required by the Board of COMMISSIONERS.

SECTION 808. LOTS

1. LOTS proposed shall conform to the TOWNSHIP Zoning ORDINANCE.
2. All LOTS shall abut on a public STREET, or shall have ACCESS to an APPROVED PRIVATE STREET.
3. In general, side LOT lines shall be at right angles or radial to STREET LINES.
4. If, after subdividing, there exist remnants of land, they shall be included in the AREA of proposed or existing LOTS.
5. DOUBLE FRONTAGE LOTS are prohibited.
6. Flag LOTS are prohibited.
7. REVERSE FRONTAGE LOTS are permitted.

8. LOT lines shall, where possible, follow TOWNSHIP boundary lines rather than cross them. All LOTS in the TOWNSHIP must front along a STREET in the TOWNSHIP in order to facilitate provision of services by the TOWNSHIP.

SECTION 809. PARKS AND RECREATION DEDICATION AND FEES IN LIEU OF DEDICATION (Amended by Ordinance 2012-17, dated 11/26/12)

1. Purpose – The parks and recreation system enriches the community through the conservation of natural resources, recreation opportunities and support active healthy lifestyles, and connections that bring together people, places and our heritage. The purpose of this Section is to implement Section 501 (11) of the MUNICIPALITIES PLANNING CODE and the findings and recommendations found in the Manheim Township Comprehensive Plan of 2010, the Manheim Township Recreation, Park, Greenways & Open Space Plan of 2011 and the Lancaster Intermunicipal Committee Regional Parks and Open Space Plan, or any corresponding future laws or plans whereby this Section sets forth the regulations to:
 - A. Acquire parkland through the mandatory dedication of land when residential or mixed use development is proposed or expanded;
 - B. Secure parkland for the protection of important OPEN SPACES and natural resources through acquisition of conservation and access easements;
 - C. Expand existing park sites through acquisition of contiguous acreage where possible; and
 - D. When appropriate, collect a fee-in-lieu of dedication in order to help accomplish the following:
 - (1) Provide for adequate recreational areas and facilities to serve the residents of the TOWNSHIP.
 - (2) Provide for larger more usable recreational areas.
 - (3) Protect natural resources and environmentally sensitive areas.
 - (4) Provide residents the opportunity to engage in a variety of active and passive recreational leisure activities where residents can have fun, experience nature, socialize and exercise in harmony with nature and the environment.
 - (5) Provide recreational activities that include parks, playgrounds, playing fields swimming pools, golf courses, hiking and biking trails, picnic areas, scenic outlooks, and landscaped plazas, GREENWAYS and OPEN SPACES.

- (6) Provide interconnectivity to OPEN SPACE within a development, to link OPEN SPACE between developments, to like OPEN SPACE with our neighboring municipalities and to create over time, a continuous system development and to the community.
- (7) These requirements are intended primarily for recreation purposes rather than environmental protection purposes; however, it is not the intent to prohibit parks, OPEN SPACE or recreation facilities in environmentally sensitive areas if compatible with the primary recreation goals of this Section.

2. The provisions herein shall apply to subdivision and land development proposals that would create new or expand existing residential and mixed use development.
3. The herein provisions are in addition to any clustering provisions or COMMON OPEN SPACE requirements applicable to Planned Residential Developments, Planned Commercial Developments and R-5 Overlay – Oregon Village Overlay developments that are outlined in the Manheim Township Zoning Ordinance.
4. The herein provisions shall not apply to the following:
 - A. Any residential subdivision or land development project or any mixed use subdivision or land development project with a residential component which is protected by the MUNICIPALITIES PLANNING CODE from these intervening ordinance amendments.
 - B. Any residential subdivision or land development project or any mixed use subdivision or land development project with a residential component that contains less than one hundred (100) dwelling units. However the fee-in-lieu of dedication shall apply as specified in Section 809.8. If the APPLICANT or DEVELOPER is unwilling to pay the applicable fee-in-lieu of dedication, then this exemption shall not apply and land must be dedicated to the TOWNSHIP as otherwise required by this ORDINANCE.
 - C. Any lot add-on subdivision plans or lot line adjustments plan where no new residential or mixed use development is proposed.
5. Amount - The TOWNSHIP shall calculate the amount of land needed for park, playground, OPEN SPACE or other recreational use as follows:
 - A. Residential or Mixed Uses
 - (1) Verifying the number of DWELLING units which are proposed to be constructed or LOTS which are to be subdivided as shown on the FINAL PLAN application;

- (2) For residential or mixed use SUBDIVISIONS a minimum of 0.04 acres or approximately 1,742.4 square feet of land for each LOT shall be dedicated for recreational use.
- (3) For residential or mixed use LAND DEVELOPMENT, a minimum 0.04 acres or approximately 1,742.4 square feet of land for each DWELLING unit shall be dedicated for recreational use.

6. Characteristics - Land proposed to be dedicated for park and recreation purposes shall not be accepted unless the COMMISSIONERS determine that it meets the following standards:

- A. The OPEN SPACE/recreational area shall provide access to existing OPEN SPACE and recreational uses and shall be conveniently accessible to residents throughout the development.
- B. The OPEN SPACE/recreational area may be used to protect environmentally sensitive lands or resources with approval from the COMMISSIONERS.
- C. Minimum Size. All land proposed to be dedicated for park and recreation purposes shall be of sufficient size for the proposed active or passive recreation uses.
- D. Slope. At least half of any land area proposed for park and recreation purposes shall have a slope of less than ten (10) percent and shall be appropriate for active recreation uses. Steep slopes of ten (10) percent or greater, may be accepted if they are suitable for passive recreation.
- E. Floodplain. At least half of any land area proposed to be dedicated for park and recreation purposes shall be above the 100 year flood elevation and shall be appropriate for active recreation uses. Up to fifty (50) percent of land below the 100-year flood elevation may be accepted if it is suitable for passive recreation activities.
- F. WETLANDS. Some types of WETLANDS may also be applied towards an OPEN SPACE/recreation requirement, so long as no more than twenty-five (25) percent of the dedicated area is composed of WETLANDS.
- G. Accessibility and Usability. Land shall be usable, accessible to the development required to dedicate the land and to the general public for active or passive recreation activities. No public street shall traverse the recreational area.

- H. Applicants designing and developing public OPEN SPACE and recreation areas shall design such facilities in accordance with the standards established by the National Recreation and Park Association or other similar standards and provide evidence as to how these standards were incorporated into the reservation and design of the public OPEN SPACE and recreation areas.
- I. Sites for public use shall be easily accessible to essential utilities, such as public water, public sewer and electric.
- J. Land for dedication shall not contain stormwater management facilities.
- K. Land shall be configured to serve the residents adequately and conveniently.
- L. If adjacent property to the subject parcel is undeveloped, the COMMISSIONERS may require that recreation areas for the subject development be provided at the property boundary of the development so that additional lands for park and recreational purposes may be added to the lands in the future when the adjacent property is developed.
- M. If adjacent property to the subject parcel is developed and recreation areas are provided at the boundary of the previously developed property, the COMMISSIONERS may require that recreation areas for the subject property be provided at the property boundary adjacent to the existing recreational land.
- N. Pedestrian connections shall be provided from the subject property to adjacent parks, schools, recreational facilities, GREENWAYS, neighborhoods, shopping areas, town centers, public facilities and other destinations.
- O. All publicly dedicated OPEN SPACES and recreational facilities shall be Americans with Disabilities Act compliant.

7. Private Reservation of Land or Construction of Recreational Facilities in lieu of Dedication - In lieu of dedicating land, a developer may voluntarily agree with the consent of the TOWNSHIP to construct recreational facilities or reserve private land as COMMON OPEN SPACE, subject to the standards of this subsection.

- A. Construction of Recreational Facilities.
 - (1) Character of Facilities. A developer may construct any facilities identified in the Manheim Township Recreation, Park, Greenways and Open Space Plan or as approved by the COMMISSIONERS.
 - (2) Accessibility. Any recreation facility shall be accessible to residents of the subdivision or development and other members of the general public.

B. Reservation of Private OPEN SPACE.

- (1) Amount. The amount of land required to be dedicated under Section 809.5, above, shall be reserved as private OPEN SPACE.
- (2) Dimensions and Character. The amount, dimensions and character of the reserved OPEN SPACE shall meet the standards for dedicated OPEN SPACE, as set forth in Subsection 809.6, above.
- (3) Accessibility. Private OPEN SPACE shall consist of land or water within the site, designed and intended for the use of enjoyment of residents of the subdivision or development.
- (4) Ownership. Ownership shall be provided in accordance with Section 2215. OWNERSHIP OF COMMON OPEN SPACE of Manheim Township Zoning Ordinance or any corresponding future section of the Manheim Township Zoning Ordinance.
- (5) Maintenance
 - (a) Maintenance of OPEN SPACE areas intended to remain in a natural condition is limited to removal of litter, dead trees, brush and plant materials. Natural WATERCOURSES are to be maintained as free-flowing and devoid of debris. Stream channels shall be maintained so as not to alter FLOODPLAIN levels.
 - (b) Trees, shrubs and other living vegetation in landscaped areas shall be properly pruned, kept in a neat appearance and removed and replaced if dead.
 - (c) Recreation facilities and equipment shall be kept in good repair. Concrete or asphalt surfaces shall be repaired to eliminate cracks, potholes or other potential hazards to park users.
 - (d) Sidewalks, bike lanes, and other pathways shall be maintained in a clean and safe condition, free of cracks, chuck holes, glass, debris and other potential hazards to users.
 - (e) In the event that any private owner of OPEN SPACE fails to maintain the OPEN SPACE according to the standards of this section, the TOWNSHIP may, following reasonable notice, demand that the maintenance deficiency be corrected or enter the OPEN SPACE to maintain it. The cost of such maintenance shall be charged to those persons having primary responsibility for maintenance of the OPEN SPACE and, in default of such payment,

the TOWNSHIP may cause a municipal lien to be imposed upon such OPEN SPACE.

8. Fees in Lieu of Land Dedication.

A. In lieu of dedicating land, a developer may agree with the consent of the TOWNSHIP to pay fees-in-lieu of land dedication, subject to the standards of this subsection.

(1) Amount. The amount of the fee shall be equal to the fair market value of land based on the unimproved land value.

(a) The amount of the fee in lieu of payment, shall represent the fair market value of the land required to be dedicated as specified in Section 809.5, above.

(b) The APPLICANT shall provide the TOWNSHIP with all information necessary to determine the fair market value of the land, including, but not limited to, the following:

[i] If the APPLICANT is the equitable owner, or purchased the land in fee simple less than two (2) years prior to the Preliminary or Final Plan submission, a copy of the agreement of sale or real estate transfer tax affidavit of value.

[ii] If the APPLICANT is the equitable owner, or purchased the land in fee simple more than two (2) years prior to the Preliminary or Final Plan submission, an opinion of value of the property by a state certified appraiser acceptable to the TOWNSHIP.

(c) The fair market value shall be computed by dividing the total price for the tract by the number of acres within the tract and then multiplying that number by the amount of land required to be dedicated.

(d) Any APPLICANT aggrieved by the fee established by the TOWNSHIP shall have the right to secure a second opinion of value of the property by a state certified appraiser acceptable to the TOWNSHIP. The two (2) estimated values shall be averaged, with the result being the amount upon which the fee will be based.

B. Timing of Payment. The fee-in-lieu of dedication shall be paid to the TOWNSHIP in one lump sum prior to the recording of the FINAL PLAN.

- C. Earmarking. All monies paid to the TOWNSHIP in this manner shall be placed in an interest bearing-account as provided by law, which shall clearly identify the facility for which the fee was collected. Interest earned on the account shall become part of that account. Fees collected shall be expended only in properly allocable portions of the cost incurred to construct the specific recreation facilities for which the funds were collected.
- D. Use of Funds. All fee-in-lieu of dedication payments received pursuant to this Section shall be used solely and exclusively for the acquisition of land for parks, playground, OPEN SPACE or other recreational sites and the CONSTRUCTION of IMPROVEMENTS thereon, and for costs incidental and ancillary to such purposes, including, but not necessarily limited to planning, engineering, and design of the park and IMPROVEMENTS, utility relocation, provision of pedestrian and/or vehicular ACCESS and purchase of park equipment. Payments received pursuant to this Section shall only be used for land or IMPROVEMENTS specifically included in the Manheim Township Recreation, Park, Greenways and Open Space Plan and accessible to the DEVELOPMENT.
- E. Refunds. Upon request of any person who paid any fee-in-lieu of dedication, the TOWNSHIP shall refund such fee-in-lieu of dedication, plus interest accrued in accordance with the MUNICIPALITIES PLANNING CODE if a timely written claim therefor is filed.
- F. Waiver. An APPLICANT, DEVELOPER or other person paying any fee under this Section may waive any right to refund the fee in whole or in part, any limitations on the use of the fee, the time within which the fee must be utilized or any other requirement pertaining to the payment and use of fees-in lieu of dedication.

SECTION 810. GREENWAYS/LINEAR TRAILS

(Amended by Ordinance 2012-17, dated 11/26/12)

- 1. Purpose. The establishment of GREENWAYS and LINEAR TRAILS provide an important means to accomplish the following:
 - A. Implement the findings and recommendations found in the Manheim Township Comprehensive Plan of 2010, the Manheim Township Recreation, Park, Greenways & Open Space Plan of 2011 and the Lancaster Inter-Municipal Committee Regional Parks and Open Space Plan.
 - B. Conservation of environmentally sensitive lands and natural resource areas.
 - C. Preservation of vegetation and wildlife habitat.

- D. Connection between parks, schools, recreational facilities, GREENWAYS, neighborhoods, shopping areas, town centers, public facilities and other destinations.
- E. Connection between OPEN SPACE and recreation areas in neighboring municipalities.
- F. Coordination with neighboring municipalities, Lancaster Inter-Municipal Committee and Lancaster County regarding regional GREENWAYS and other LINEAR TRAILS opportunities.

2. The establishment of GREENWAYS and LINEAR TRAILS which are available for public use also provide a variety of recreational and educational benefits. LINEAR TRAILS for walking, hiking, biking, and equestrian use, whether located within GREENWAYS or in more urban locations, are important facilities for recreation as well as for non-motorized transportation. Both GREENWAYS and LINEAR TRAILS must occupy continuous, linear land corridors and cannot be effectively contained within individual parcels of land. The purpose of this Section is therefore to provide that land which is delineated as GREENWAYS or LINEAR TRAILS in the adopted Manheim Township Comprehensive Plan of 200, Manheim Township Recreation, Park, Greenways and Open Space Plan of 2011 or on an official map of Manheim Township, be dedicated or reserved for such use when land is subdivided or developed.

3. Dedication or Reservation of Proposed GREENWAYS and LINEAR TRAILS. The COMMISSIONERS may require as a condition of final plan approval the dedication, reservation and/or improvement of LINEAR TRAILS and GREENWAYS which traverse a proposed subdivision or land development. The land and improvements required by this Section may be credited pro tanto against, but does not replace, the requirements of Section 809 of this ORDINANCE for the provision of dedication of OPEN SPACE, recreational facilities, and OPEN SPACE amenities in residential and mixed use subdivisions and land developments, or the payment of fee-in lieu thereof provided:

- A. That the land offered for dedication, reservation and/or improvement is designated as a LINEAR TRAIL or GREENWAY on an adopted Manheim Township Comprehensive Plan, Manheim Township Recreation, Park, Greenways and Open Space Plan or official map of Manheim Township.
- B. The ownership of the land for GREENWAYS and LINEAR TRAILS not publicly dedicated is established and is consistent with Section 2215. OWNERSHIP OF COMMON OPEN SPACE, of the Manheim Township Zoning Ordinance.
- C. The agreement addressing ownership responsibilities shall also clearly define the maintenance responsibilities.
- D. Any LINEAR TRAIL intended for dedication to the TOWNSHIP shall be designed in accordance with TOWNSHIP standards.

- E. Any GREENWAY whether intended for dedication or intended for private reservation shall contain a vegetated riparian buffer consisting primarily of native species.
- F. The minimum width of an easement containing a LINEAR TRAIL which crosses private land is twenty (20) feet. The minimum width of an easement containing a GREENWAY shall be dependent on the WATERCOURSE.

4. Limits on Requirement. The TOWNSHIP shall not require the dedication or reservation of land for GREENWAYS or LINEAR TRAILS which exceeds the requirements of Section 809 of this ORDINANCE for the provision of OPEN SPACE in residential and mixed use developments which are applicable to the property being developed.

SECTION 811. BUILDING SETBACK LINES

BUILDING SETBACK LINES shall comply with the requirements of the Manheim TOWNSHIP Zoning ORDINANCE.

SECTION 812. EASEMENTS

- 1. To the fullest extent possible, EASEMENTS shall be centered on or be adjacent to LOT lines.
- 2. Nothing shall be placed, planted, set or put within the AREA of an EASEMENT that would adversely affect the function of the EASEMENT or conflict with the EASEMENT agreement.
- 3. All proposed and existing utilities which are not to be dedicated shall be located outside the STREET RIGHT-OF-WAY, except for perpendicular crossing. Mainline crossings shall be encased in conduit.
- 4. Utility companies who have registered with the Lancaster County Recorder of Deeds indicating they have utilities located within the TOWNSHIP shall be contacted by the DEVELOPER prior to any CONSTRUCTION.
- 5. The APPLICANT shall reserve EASEMENTS where storm water or surface water management facilities are existing or proposed in accordance with the Manheim TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.
- 6. The plans shall clearly identify who has the right of ACCESS and responsibility of maintaining all EASEMENTS.

SECTION 813. SANITARY SEWAGE DISPOSAL

1. The method of sanitary sewage disposal shall be APPROVED by the Board of COMMISSIONERS.
2. Public sanitary sewerage IMPROVEMENTS shall be constructed in accordance with the standards of the appropriate sewer AUTHORITY. Whenever standards for such sanitary sewerage IMPROVEMENTS are not specified by the sewer AUTHORITY, the applicable standard requirements of the Pennsylvania Department of Environmental Protection shall govern, and all work shall be performed in the manner prescribed in the standard specifications for sanitary sewer CONSTRUCTION of said Department for the type of CONSTRUCTION under consideration.
3. When a public sanitary sewerage system is not available, each LOT in a DEVELOPMENT shall be provided with an individual on-LOT sanitary sewage disposal system in accordance with all applicable standards of the Pennsylvania Department of Environmental Protection.
4. If an on-site sewage disposal system is to be used, APPLICANT shall certify the following:
 - A. That all Pennsylvania Department of Environmental Protection requirements then in effect for on-site sewer systems have been met.
 - B. Plan approval will be granted only upon such certification and upon the written verification of the TOWNSHIP Sewage Enforcement Officer.
 - C. If the certification/verification called for in the preceding paragraphs cannot be supplied, then APPLICANT must provide written proof that the site will be served by PUBLIC SEWER by the time any application for a CERTIFICATE OF USE AND OCCUPANCY is filed by APPLICANT or its successors.
 - D. If PUBLIC SEWER is required as provided herein, no CERTIFICATE OF USE AND OCCUPANCY shall be issued by the TOWNSHIP until the APPLICANT certifies that all fees, including, but not limited to, tapping and impact fees as may be required by this ORDINANCE, the Manheim TOWNSHIP Zoning ORDINANCE or other TOWNSHIP ORDINANCES or regulations have been paid as required therein. The CERTIFICATE OF USE AND OCCUPANCY shall not be issued until such PUBLIC SEWER is actually available at the site.

5. Where feasibility studies of the TOWNSHIP indicate that CONSTRUCTION or extension of a public sewerage system appears probable within a reasonable time, the Board of COMMISSIONERS may require the installation of capped sewer mains and house connections in addition to the installation of individual on-LOT sanitary sewage disposal systems. It shall be the responsibility of the TOWNSHIP to inspect and approve the design and installation of such facilities.
6. Prior to the CONSTRUCTION of any PUBLIC SEWER extension, a pretreatment plant, or other similar sewer facility, a water quality management application or a sewer extension application, where applicable, shall be submitted by the DEVELOPER to the appropriate AUTHORITY.
7. Where LOTS are being served with a private force lateral sewer system, and where the ownership and maintenance of such private systems shall be the responsibility of the LANDOWNERS of the LOTS, a description of such private sewer system and the terms of the LANDOWNER'S required maintenance shall be noted on the recorded plan and shall be incorporated as part of the deed to each affected LOT.
8. Sanitary sewer EASEMENTS shall be no less than thirty (30) feet in width, the sewer PIPE shall be centered within the EASEMENT. The EASEMENT shall be reserved only for sanitary sewer.
9. All required sanitary sewer IMPROVEMENTS shall be extended to the boundary line of the DEVELOPMENT, as required, to provide ACCESS to sewer service by adjacent lands. All such IMPROVEMENTS shall be so designed as to accommodate the future needs of the TOWNSHIP with respect to sewer service.

SECTION 814. WATER SUPPLY

1. Whenever feasible, all SUBDIVISION and LAND DEVELOPMENT shall be provided with a complete water distribution system which will be connected to a PUBLIC WATER system. The design and installation of such system shall be subject to the approval of the appropriate municipal, governmental or private AUTHORITY.
2. When connection to an existing water supply system is proposed, the FINAL PLAN application shall include a copy of a Certificate of Public Convenience from the Pennsylvania Public Utility Commission or an application for such certificate, a cooperative agreement of a commitment or agreement to serve the AREA in question, whichever is appropriate, shall be acceptable evidence.
3. The design and installation of any local community water distribution system shall be subject to the requirements of the Pennsylvania Department of Environmental Protection, and such systems shall be further subject to satisfactory provision for the maintenance thereof.

4. When a municipal or community water supply system is not available each LOT in a DEVELOPMENT shall be provided with an individual water supply system in accordance with all applicable standards of the Pennsylvania Department of Environmental Protection.
5. If an on-site water system is to be used, APPLICANT shall certify the following:
 - A. That all Pennsylvania Department of Environmental Protection requirements then in effect for on-site water systems have been met.
 - B. That the water supply on the site has been tested according to the standards of the Federal Safe Drinking Water ACT (P.L. 93-523 (1974)), as amended, and the Pennsylvania Safe Drinking Water ACT (P.L. 206, No. 43 (1984)), as amended, and any rules or regulations promulgated thereunder, and that the quality of the water meets the requirements of those ACTS and those rules or regulations.
 - C. Compliance shall include meeting both the Primary and Secondary quality levels in effect at the time the site plan is submitted. Test methods and data shall accompany the site plan. A map or drawing showing the location of any on-site water supply system and the place or places where any test wells or holes were dug to meet the requirements of the aforesaid ACTS and rules or regulations shall also accompany the site plan.
 - D. That there shall be adequate water pressure for the proposed use.
 - E. Plan approval will be granted only upon such certification and upon the written verification of the TOWNSHIP ENGINEER to the Board of COMMISSIONERS.
 - F. If the certifications and verifications called for in the preceding paragraphs cannot be supplied, then no BUILDING PERMIT shall be granted unless APPLICANT shall provide written proof that the site will be supplied by PUBLIC WATER by the time any application for a CERTIFICATE OF USE AND OCCUPANCY is filed by APPLICANT or APPLICANT'S successors.
 - G. If PUBLIC WATER is required as provided herein, no CERTIFICATE OF USE AND OCCUPANCY shall be issued by the TOWNSHIP until such PUBLIC WATER supply is actually available at the site.
6. The TOWNSHIP has adopted a plan to extend water lines in an orderly manner and in certain AREAS of the TOWNSHIP. Where such plan, as the same may be amended, appears probable within a reasonable time, whether or not such systems shall be owned or operated by the TOWNSHIP or other municipal or governmental AUTHORITY, the Board of COMMISSIONERS shall require the installation of a complete, capped water distribution system in addition to the installation of individual on-LOT water supply systems.

7. All required water line IMPROVEMENTS shall be extended to the boundary line of the DEVELOPMENT, as required, to provide ACCESS to water service by adjacent lands. All such IMPROVEMENTS shall be so designed as to accommodate the future needs of the TOWNSHIP with respect to water service.

SECTION 815. STORMWATER MANAGEMENT

1. All storm water management facilities, including but not limited to, storm water carrying STRUCTURES, debris or SEDIMENT BASINS, and retention and detention STRUCTURES, shall be designed in accordance with the Manheim TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

SECTION 816. EROSION AND SEDIMENT CONTROL

1. All earth moving activities shall be conducted in such a way as to minimize ACCELERATED EROSION and resulting sedimentation. Measures to control EROSION and sedimentation shall, at a minimum, meet the standards of the Lancaster County Conservation District and Chapter 102 (EROSION Control) of Title 25, Rules and Regulations of the Pennsylvania Department of Environmental Protection, as amended.
2. The EROSION and sedimentation control plan must be available at all times at the site of the activity. When required, a permit allowing earth moving activity shall be obtained by the DEVELOPER before any CONSTRUCTION on the site shall begin.
3. Approval of an EROSION and sedimentation control plan by the TOWNSHIP shall not be construed as an indication that the plan complies with the standards of any agency of the Commonwealth.

SECTION 817. UTILITY TRANSMISSION LINES

When any natural gas line, petroleum or PETROLEUM PRODUCTS transmission line, electric transmission line or any other cable or pipeline, traverses a DEVELOPMENT, the DEVELOPER shall confer with the applicable AUTHORITIES of the utility transmission or distribution provider to determine the minimum distance which shall be required and maintained between each proposed STRUCTURE or improvement and the transmission line, cable or pipeline.

SECTION 818. STREET LIGHTING

When STREET lights are proposed by the DEVELOPER, a plan for such STREET lights, APPROVED by the appropriate utility company, shall be provided by the DEVELOPER to the PLANNING COMMISSION for review and recommendation to the Board of COMMISSIONERS.

SECTION 819. LANDSCAPING

1. All ground surfaces in a DEVELOPMENT that are neither paved nor covered with some other solid material shall be protected with vegetative growth that is capable of preventing soil EROSION and the emanation of dust during dry weather.
2. Landscaping plans, when required, shall include a planting schedule and show locations, size and name of all TREES, shrubs, vegetative SCREENS and ground covers proposed to be installed in the DEVELOPMENT. Such plans shall be sealed by a LANDSCAPE ARCHITECT licensed to practice in the Commonwealth of Pennsylvania.
3. Only nursery-grown plant materials shall be acceptable, and all TREES, shrubs and ground covers shall be planted according to accepted horticultural standards. Dead or dying plants shall be replaced by the DEVELOPER during the following planting season.
4. TREES, shrubs or any such plantings shall not be permitted in any public STREET RIGHT-OF-WAY or public or private EASEMENT.
5. Maintenance of all landscaping done in accordance with permanent commercial, industrial and residential DEVELOPMENT identification signs shall be adequately secured by deed restrictions, LOT owner association agreement and/or other acceptable provision.

SECTION 820. PUBLIC UTILITIES

Except as prohibited by the Public Utility Commission, all on-site lines for public utilities, including, but not limited to, electricity, telephone, gas, and the like shall be laid underground in an APPROVED method. No FINAL PLAN approval shall be granted by the TOWNSHIP until the APPLICANT provides a letter from each such utility certifying compliance with that utilities requirement for underground lines.

SECTION 821. TREE PROTECTION

1. The TREE PROTECTION ZONE. Prior to CONSTRUCTION the TREE PROTECTION ZONE shall be delineated by the following methods:
 - A. The TREE PROTECTION ZONE that is delineated on the site prior to CONSTRUCTION shall conform to the APPROVED DEVELOPMENT PLANS.
 - B. All TREES scheduled to remain shall be marked; where groups of TREES exist, only the TREES on the edge need to be marked.
 - C. A forty-eight inch high snowfence mounted on steel posts, located eight feet on center, shall be placed along the boundary of the TREE PROTECTION ZONE;

- D. In addition to the TREE PROTECTION ZONE, TREES may be left standing as protection between the trunks of the TREES to be retained and the limits of grading. When additional TREES are used as protection, the TREE PROTECTION ZONE on the APPROVED plan shall be marked in the field so that the additional buffer AREA is delineated. When this method of protection is used, these additional TREES shall be removed at the time of completion of the project.
- E. When the snowfence has been installed the fencing along the TREE PROTECTION ZONE shall be maintained until all work/CONSTRUCTION has been completed; any damages to the protective fencing shall be replaced and repaired before further CONSTRUCTION shall begin.
- F. TREE being removed shall not be felled, pushed or pulled into a TREE PROTECTION ZONE or into TREES that are to be retained.

2. Retaining Walls

- A. When the original GRADE can not be retained at the TREE PROTECTION ZONE line, a retaining wall shall be constructed outside of the TREE PROTECTION ZONE.
- B. In addition the following methods shall be used to ensure survival of the TREES.
 - (1) The top of the wall shall be four inches above the finished GRADE line.
 - (2) The wall shall be constructed of large stones, brick, BUILDING tile, concrete BLOCKS, or treated woodbeams not less than six inches by six inches" a means for drainage through the wall shall be provided so water will not accumulate on either side of the wall; weep holes shall be required with any wall.
 - (3) Any severed roots as a result of excavation shall be trimmed so that their edges are smooth and are cut back to a lateral root if exposed.
 - (4) A layer of clean stone (sized three-quarter to one inch) shall be placed one (1) foot out from the wall to aid to drainage.

3. Trenching and Tunneling

- A. If there is no alternative but to locate a utility line through a TREE PROTECTION ZONE, tunneling shall be used instead of trenching except where the survival of the TREE would not be affected by either method.
- B. Trenches shall be filled as soon as possible, and tamped lightly to avoid air space.