

**ARTICLE VI  
DESIGN STANDARDS AND SPECIFICATIONS**

**601 General Design Standards; Zoning Requirements**

In addition to the standards in this Article VI, all subdivisions and land developments shall be designed in accord with the applicable requirements of the Township's Zoning Ordinance.

601.1 Application

The standards and requirements contained in this Article VI shall apply to all subdivisions and land developments and are intended as the minimum for the preservation of the environment and promotion of the public health, safety, and general welfare; and, then shall be applied as such by the Planning Commission and Supervisors in reviewing and evaluating plans for all proposed subdivisions and/or land developments. Compliance with all standards shall be documented by the Applicant at the time of initial application.

A. Planning

The development shall conform to the proposals and conditions shown in the Township Comprehensive Plan and any local or regional plans adopted by the Township. The streets, drainage, rights-of-way, school sites, public parks and playgrounds shown on the officially adopted plan or the Township's Official Map shall be considered in the approval of all plans. In the case of major subdivisions and land developments, the Applicant shall submit a narrative detailing how the development conforms to any applicable plan.

B. Contiguous Lands

Where the owner of the site under consideration owns contiguous land suitable for development, the subdivision plan shall cover all such contiguous lands. This provision, however, may be waived in full, or in part, by the Supervisors if it is not considered essential to the evaluation of the plans for the current development tract.

C. Improvements, Specifications

Additional improvements, or improvements of more stringent specifications, may be required in specific cases where, in the opinion of the Supervisors, such specifications are necessary to create conditions essential to the health, safety, and general welfare of the citizens of the Township and/or to protect the environment of the Township.

D. Hazard Areas

Those areas which may present such hazards to life, health, or property as may arise from fire, flood or noise, or are considered to be uninhabitable for other reasons, shall not be subdivided for building purposes unless the hazards have been eliminated or the plans show adequate safeguards against the hazards. Sources for determining and evaluating potential hazards may include historical records, soil evaluations, engineering studies, expert opinions, standards used by licensed insurance companies, and adopted regional, county or local municipal policies.

E. Development Design; Remnants; Neighboring Development

All portions of a tract being subdivided shall be taken up in lots, streets, open lands, or other proposed uses, so that remnants and landlocked areas shall not be created. The layout of a subdivision shall also be planned with consideration for existing nearby developments or neighborhoods so that they are coordinated in terms of interconnection of open space, traffic movement, drainage, and other reasonable considerations.

F. Natural Features

Care shall be taken to preserve natural features such as agricultural land, woodland and specimen trees, wetlands, water courses, views, and historical features, such as buildings and stone walls, which will maintain the attractiveness and value of the land. Damming, filling, relocating or otherwise interfering with the natural flow of surface water along any surface water drainage channel or natural water course shall not be permitted except with the approval of the Township and, where appropriate, the PA DEP and the US Army Corps of Engineers.

1. Groundwater Resources - This section is intended to ensure that the Township's limited groundwater resources are protected for purposes of providing water supplies for its residents and businesses, and to protect the base flow of surface waters. These regulations shall be applied in conjunction with those provided for in other sections of this Ordinance, dealing with groundwater conservation and replenishment. The proposed subdivision and land development of any tract shall be designed to cause the least practicable disturbance to natural infiltration and percolation of precipitation to the groundwater table, through careful planning of vegetation and land disturbance activities, the use of bio-retention areas and infiltration trenches, and the placement of streets, buildings and other impervious surfaces in locations other than those identified on the Existing Resources and Site Analysis Plan as having the greatest permeability where precipitation is most likely to infiltrate and recharge the groundwater.
2. Stream Valleys, Swales, Springs, and Other Lowland Areas - Stream valleys (which include stream channels and flood plains), swales, springs and other lowland areas are resources that warrant restrictive land use controls because of flooding hazards to human life and property, ground water recharge functions, importance to water quality, and the health of aquatic communities and wildlife habitats. Such areas are generally poorly suited for on-site subsurface sewage disposal systems. The following activities shall be minimized:
  - a. Disturbance to streams and drainage swales.
  - b. Disturbance to year-round wetlands, areas with seasonally high water tables, and areas of surface water concentration.
  - c. Stream valleys, swales and other lowland areas warrant designation as conservation open space because of extreme limitations. They may also require adjoining buffer lands to be included in the conservation open space, to be determined by an analysis of the protection requirements of such areas on a case-by-case basis. In certain instances, hydric soils may be excluded from the conservation open space where it can be demonstrated that they are suitable for low density residential uses and on-site sewage systems.
3. Woodlands - Woodlands occur extensively throughout the Township, often in association with stream valleys and wet areas, poor and erodible agricultural soils, and moderate to steep slopes.
  - a. Woodland conditions within the Township vary with respect to species composition, age, stocking, and health. They range from relatively recent post-agricultural young stands to mature mixed-age forests. Most woodlands in the Township represent one or more of the following resource values:
    - 1) As soil stabilizers, particularly on moderate to steep slopes, thereby controlling erosion into nearby streams, ponds, impoundments and roads. A closely related function is their enhancement of ground water recharge.
    - 2) As a means of ameliorating harsh micro-climatic conditions, in both summer and winter.
    - 3) As a source of wood products (i.e., poles, saw timber, veneer and firewood).
    - 4) As habitats for woodland birds, mammals and other wildlife.
    - 5) As recreation resources for walkers, equestrians, picnickers, and other related outdoor activities.
    - 6) As visual buffers between areas of development and adjacent roads and properties.
  - b. Because of their resource values, all woodlands on any tract proposed for subdivision or land development shall be evaluated by the Applicant to determine the extent to which such woodlands should be designated partly or entirely as conservation open space or development lands. Evaluation criteria shall include:
    - 1) Configuration and size.
    - 2) Present conditions (i.e., stocking, health and species composition).
    - 3) Site potential (i.e., the site's capabilities to support woodlands, based upon its topographic, soil and hydrologic characteristics).

- 4) Ecological functions (i.e., in protecting steep slopes, erodible soils, maintaining stream quality, and providing for wildlife habitats).
  - 5) Relationship to woodlands on adjoining and nearby properties and the potential for maintaining continuous woodland areas.
- c. The evaluation of the tract's woodlands shall be undertaken by a forester, landscape architect, horticulturist or another qualified professional acceptable to the Township. This evaluation shall be submitted as a report and made a part of the application for a preliminary plan. At a minimum, that report shall include one or more maps indicating boundaries and conditions of woodland areas accompanied by a report addressing the criteria in §601.1,F,3.
- d. In designing a subdivision and land development plan for any tract, the applicant shall be guided by the following standards:
- 1) Healthy woodlands exceeding one acre shall be preserved and designated as conservation open space areas, to the maximum extent possible. Proposed site improvements shall be located, designed, and constructed to minimize the loss or degradation of woodland areas.
  - 2) Developments shall be designed to preserve woodlands along roadways, property lines and lines occurring within a site such as streams, swales, stone fences and hedgerows. Such lines and the native vegetation associated with them shall be preserved as buffers between adjacent properties and between areas being subdivided within a property. Preservation shall include ground, shrub, understory, and canopy vegetation.
  - 3) Disturbance or removal of woodlands occupying environmentally sensitive areas shall be undertaken only when approved by the Planning Commission and on a limited, selective basis to minimize the adverse impacts of such actions. This shall include, but not necessarily be limited to, vegetation performing important soil stabilizing functions on wet soils, stream banks, and sloping lands.
  - 4) No clearing or earth disturbance (except for soil analysis for proposed sewage disposal systems) shall be permitted on a site before the completion of subdivision and land development agreements. The determination of sight distance clearances along roadways shall be made graphically and not by clearing on-site prior to final plan approval.
4. Upland Areas - These areas comprise fields, pastures, meadows, and former agricultural areas in early stages of woodlands succession, with fences, stone walls, tree copses and hedgerows, typically bordered by stream valleys and upland woodlands. These comprise the Township's historic working landscape, dotted with historic houses, barns and other structures. They give the Township much of its rural character. They also contain the greatest concentration of prime agricultural soils. Because of their openness and high visibility, development in these areas is likely to be most readily seen and disruptive to the historic landscape. Such areas sometimes provide habitat for wildlife, in conjunction with nearby woodlands and stream valleys. However, it is recognized that these areas also frequently offer the fewest constraints for development. Several elements of these working landscapes lend themselves to incorporation into the Township's conservation open space network. These include prime agricultural soils and natural features which visually punctuate the landscape, such as hedgerows, tree copses, stone walls, and visually prominent places such as knolls and hilltops. These areas can also accommodate development, with preferred locations being the non-prime agricultural soils and lower topographic settings where development will be visually less obtrusive. Compact clustered residential designs, with coordinated architectural and landscape architectural themes, are encouraged in highly visible locations where future development cannot be avoided (such as at the far edge of open fields).

5. Slopes - Moderately sloping lands (15 to 25 percent) and steeply sloping lands (over 25 percent) are prone to severe erosion if disturbed. Erosion and the resulting overland flow of soil sediments into streams, ponds, and public roads are detrimental to water quality and aquatic life, and a potential hazard to public safety.
  - a. Areas of steep slope shall be preserved in accordance with the Township Zoning Ordinance and as required below.
  - b. All grading and earthmoving on slopes exceeding fifteen (15) percent shall be minimized.
  - c. No site disturbance shall be allowed on slopes exceeding twenty-five (25) percent, except grading for a single family dwelling and the required driveway.
  - d. On slopes of fifteen (15) percent or greater, the Developer shall submit detailed plans to document how all grading, filling, and building development will address steep slope concerns.
  - e. Grading or earthmoving on all sloping lands of fifteen (15) percent or greater shall not result in earth cuts or fills whose highest vertical dimension exceeds six (6) feet, except where, in the judgment of the Planning Commission no reasonable alternatives exist for construction of roads, drainage structures and other required improvements, in which case such vertical dimensions shall not exceed twelve (12) feet.
  - f. Roads and driveways shall, to the greatest extent possible, follow the line of existing topography to minimize the required cut and fill. Finished slopes of all cuts and fills shall be as required to minimize disturbance of natural grades.
  
6. Significant Natural Areas and Features - Natural areas containing rare or endangered plants and animals, as well as other features of natural significance exist throughout the Township. Some of these have been carefully documented (e.g., by the Statewide Natural Diversity Inventory), whereas for others, only the general locations are known. Subdivision applicants shall take all reasonable measures to protect significant natural areas and features either identified by the Township's Map of Potential Conservation Lands or by the Applicant's Existing Resources and Site Analysis Plan by incorporating them into proposed conservation open space areas or avoiding their disturbance in areas proposed for development.

**G. Historic Structures and Sites**

The Township's documented historical resources begin with the Native Americans in the early 18th century and extend through its colonial agricultural, residential and industrial development in the late 18th and 19th centuries. Plans requiring subdivision and land development approval shall be designed to protect existing historic resources. The protection of an existing historic resource shall include the conservation of the landscape immediately associated with, and significant to, that resource, to preserve its historic context. Where, in the opinion of the Commission, a plan will have an impact upon an historic resource, the Developer shall mitigate that impact to the satisfaction of the Commission by modifying the design, relocating proposed lot lines, providing landscape buffers, or other approved means. Township participation, review and approval of the Applicant's interaction with the State Historical and Museum Commission with regard to the preservation of historic resources, as required for PA DEP approval of proposed sewage disposal systems, shall be required prior to Preliminary Plan approval.

**H. Scenic Viewsheds**

The Township has identified a number of scenic viewsheds in the Regional Recreation and Open Space Plan. All applications for subdivision and land development shall attempt to preserve the viewsheds by incorporating them into conservation open space or otherwise providing for building setbacks and architectural designs to minimize their intrusion. In instances where such designs fail to satisfactorily protect viewsheds, applicants will be required to provide landscape buffers to minimize their adverse visual impacts. The buffers shall be provided in accord with the Township Zoning Ordinance and Township landscaping requirements.

**I. Trails**

When a subdivision or land development proposal is traversed by or abuts an existing trail customarily used by pedestrians and/or equestrians, the Supervisors may require the Applicant to make provisions for continued recreational use of the trail.

1. The Applicant may alter the course of the trail within the tract for which development is proposed under the following conditions:
  - a. The points at which the trail enters and exits the tract remain unchanged.
  - b. The proposed alteration exhibits quality trail design according to generally accepted principles of landscape architecture.
  - c. The proposed alteration does not coincide with a paved road intended for use by motorized vehicles.
2. When trails are intended for public or private use, they shall be protected by a permanent conservation easement on the properties on which they are located. The width of the protected area in which the trail is located should be a minimum of ten feet. The language of the conservation easement shall be to the satisfaction of the Planning Commission upon recommendation of the Township Solicitor.
3. The land area permanently designated for trails for public use may be credited toward the conservation open space requirement of the Zoning Ordinance.
4. An Applicant may propose and develop a new trail. If said trail is available for use by the general public and connects with an existing trail, the land area protected for said trail may be credited toward the conservation open space requirement of the Zoning Ordinance.
5. Trails shall have a vertical clearance of no less than ten (10) feet.
6. Width of the trail surface may vary depending upon type of use to be accommodated, but in no case shall be less than three (3) feet or greater than six (6) feet.
7. No trail shall be designed with the intent to accommodate motorized vehicles.

**J. Boundary Lines and Reserve Strips**

Lot lines should follow municipal and county boundary lines, rather than cross them. Reserve strips controlling access to lots, public rights-of-way, public lands or adjacent private lands are prohibited.

**K. Water Frontage and Surface Drainage**

The damming, filling, relocating, or otherwise interfering with the natural flow of surface water along any surface water drainage channel or natural watercourse shall not be permitted except with approval of the Township, and, where required by state statute, the PA DEP, or other applicable state agencies.

**L. Community Facilities and Adopted Plan Requirements**

Where a proposed park, playground, school, or other public use is shown in an adopted plan of the Township and is located in whole or in part in a proposed development, the Supervisors may require the reservation of such area provided that such reservation is acceptable to the developer.

**M. Walkways**

Pedestrian interior walks may be required, where necessary, to assist circulation or provide access to community facilities (e.g., a park or school).

**N. Storm Drainage**

Lots and/or parcels shall be laid out and graded to provide positive drainage away from buildings and to prevent damage to neighboring lots, tracts, or parcels.

**601.2 Planned Improvements**

Physical improvements to the property being subdivided and/or developed shall be provided, constructed and installed

as shown on the approved Preliminary Plan.

**601.3 Improvements Specifications**

All improvements installed by the Developer shall be constructed in accordance with the design specifications and construction standards of the Township and advice of the Township's Engineer.

- A. Where there are no applicable Township specifications, improvements shall, if approved by the Supervisors, be constructed in accordance with specifications furnished by the Township's Engineer, Monroe County Conservation District, PA Department of Transportation, Pennsylvania Department of Environmental Protection, Bureau of Forestry or such other County, State or Federal agency as may be applicable.
- B. If there are no applicable Township or State specifications, the Supervisors may authorize that such specifications be prepared by the Township's Engineer or an Engineering Consultant.

**601.4 Other Ordinances**

Whenever other Township ordinances and/or regulations impose more restrictive standards and requirements than those contained herein, such other ordinances and/or regulations shall be observed; otherwise, the standards and requirements of this Ordinance shall apply.

**602 Four-Step Design Process**

All Preliminary Plans (including standard subdivisions, conservation design subdivisions, and land developments) shall include documentation of a four-step design process in determining the layout of proposed conservation open space, house and development sites, streets and lot lines, as described below.

**602.1 Resource Inventory and Analysis**

The tract's resources shall be delineated on an Existing Resources and Site Analysis Plan, as required in §402.3.

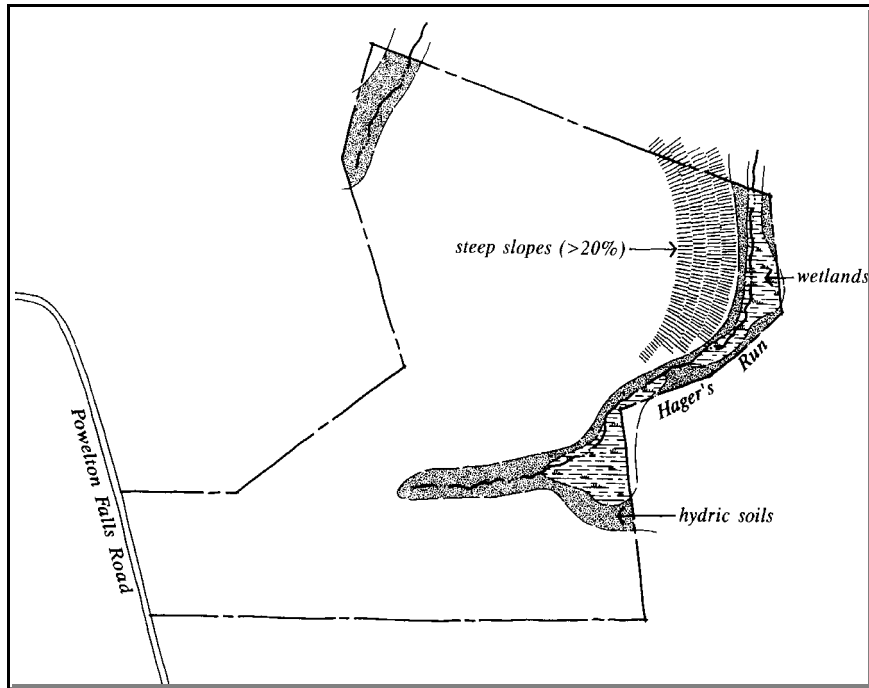
**602.2 Four-Step Design Process**

**A. Step 1: Delineation of Conservation Open Space**

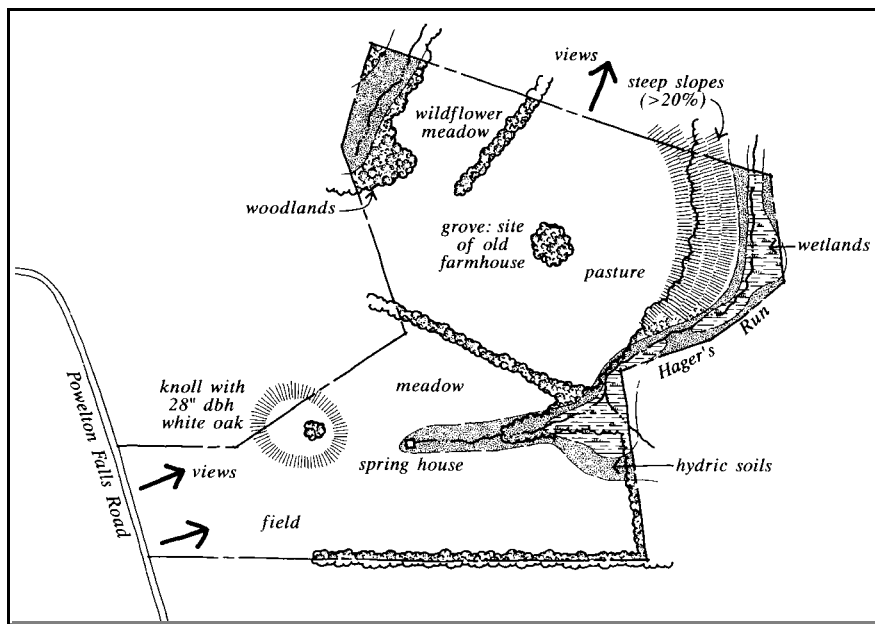
- 1. The minimum percentage and acreage of required conservation open space shall be calculated by the Applicant and submitted as part of the Sketch Plan or Preliminary Plan in accord with the provisions of this Ordinance and §601 of the Zoning Ordinance. Conservation open space shall include all primary conservation areas and those parts of the remaining buildable lands with the highest resource significance, as described below and in §603.1 and §603.2.
- 2. Proposed conservation open space shall be designated using the Existing Resources and Site Analysis Plan as a base map and complying with §601 of the Zoning Ordinance and this §602 and §603, dealing with resource conservation and conservation open space delineation standards. The Township's Map of Potential Conservation Lands shall also be referenced and considered. Primary conservation areas shall be delineated comprising floodplains, wetlands and slopes over twenty-five (25) percent.
- 3. In delineating secondary conservation areas, the applicant shall prioritize natural and cultural resources on the tract in terms of their highest to least suitability for inclusion in the proposed conservation open space, in consultation with the Planning Commission and in accordance with §603.1 and §603.2.
- 4. On the basis of those priorities and practical considerations given to the tract's configuration, its context in relation to resources areas on adjoining and neighboring properties, and the applicant's subdivision objectives, secondary conservation areas shall be delineated to meet at least the minimum area percentage requirements for conservation open space and in a manner clearly indicating their boundaries as well as the types of

resources included within them.

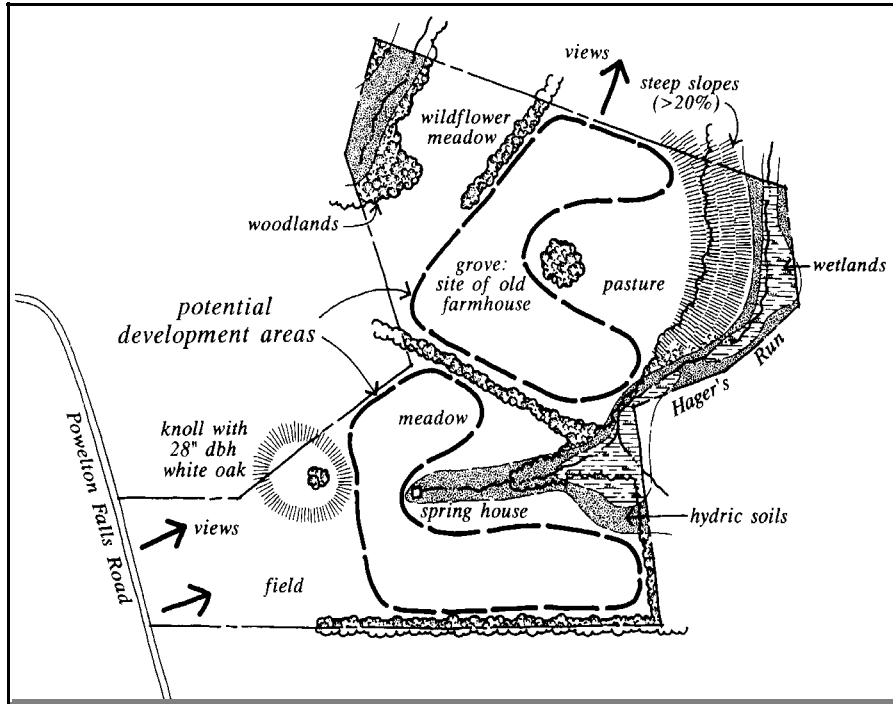
5. Development areas constitute the remaining lands of the tract outside of the designated conservation open space areas.



Step 1, Part 1 – Identifying Primary Conservation Areas



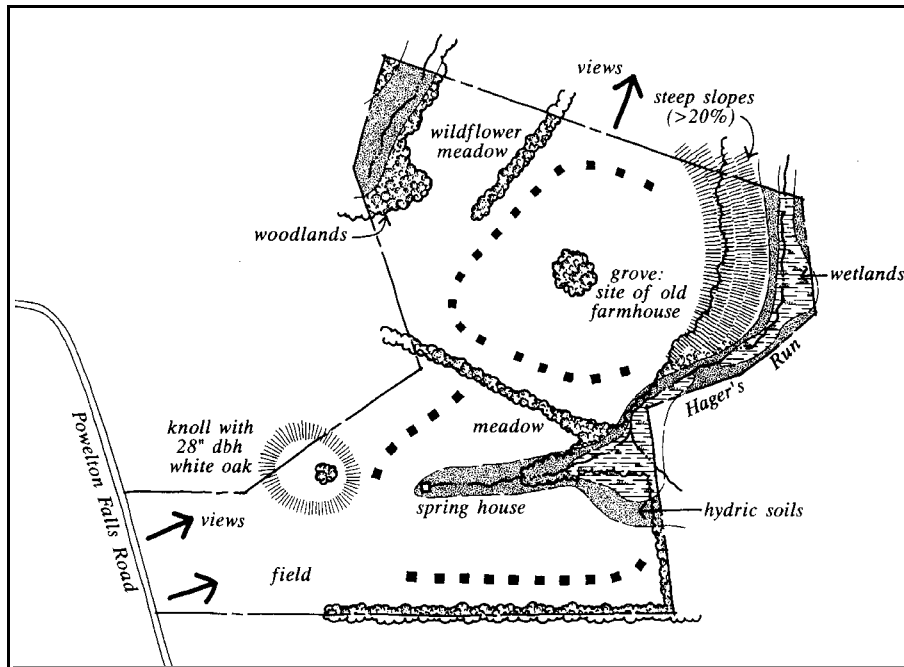
Step 1, Part 2 – Identifying Secondary Conservation Areas



Step 1, Part 3 – Identifying Potential Development Areas

**B. Step 2: Location of House Sites**

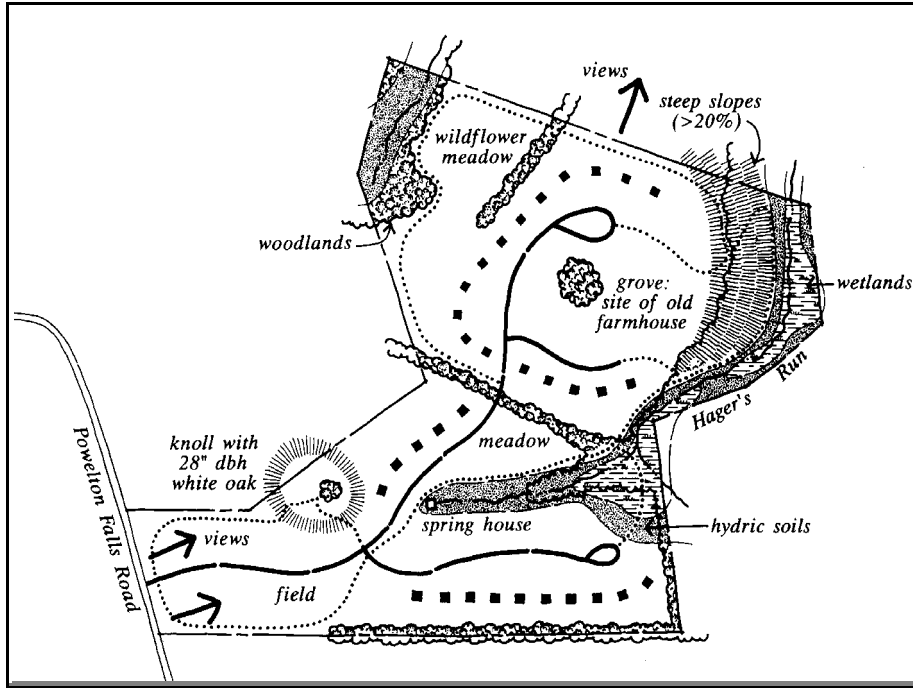
Potential house sites shall be located, using the proposed conservation open space as a base map as well as other relevant data on the Existing Resources and Site Analysis Plan such as topography and soils. House sites should generally be located not closer than 100 feet to Primary Conservation Areas and 50 feet to Secondary Conservation Areas, taking into consideration the potential negative impacts of residential development on such areas as well as the potential positive benefits of such locations to provide attractive views and visual settings for residences.



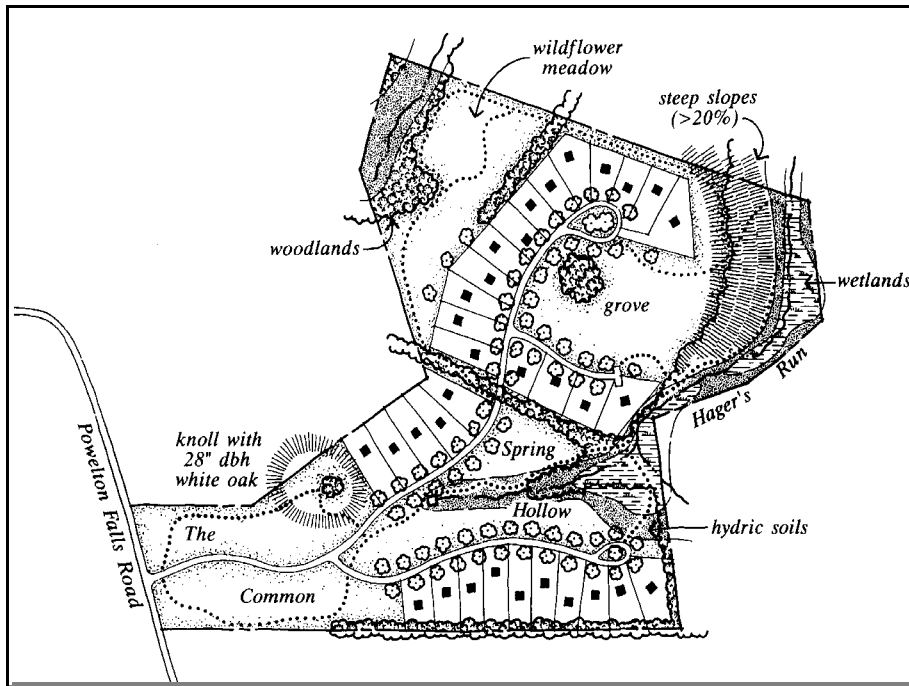
Step 2 – Location of House Sites

C. Step 3: Alignment of Streets and Trails

1. With house site locations identified, applicants shall delineate a street system to provide vehicular access to each house in a manner conforming to the tract's natural topography and providing for a safe pattern of circulation and ingress and egress to and from the tract.



Step 3 – Alignment of Streets and Trails



Step 4 – Drawing in the Lot/Development Lines

2. Streets shall avoid or at least minimize adverse impacts on the Conservation open space areas. To the greatest extent practicable, wetland crossings and new streets or driveways traversing slopes over 15 percent shall be avoided.
3. Street connections shall generally be encouraged to minimize the number of new cul-de-sacs and to facilitate easy access to and from homes in different parts of the tract and on adjoining parcels.
4. A tentative network of trails shall also be shown, connecting streets with various natural and cultural features in the conserved conservation open space. Potential trail connections to adjacent parcels shall also be shown, in areas where a municipal trail network is envisioned.

**D. Step 4: Drawing in the Lot/Development Lines**

Upon completion of the preceding three steps, boundaries are drawn as required to delineate the boundaries of individual lots or development areas, following the configuration of house sites and streets in a logical and flexible manner..

**603 Conservation Open Space Standards**

Conservation open space shall be preserved in accord with §507 of this Ordinance and the Township's Zoning Ordinance; and, not less than thirty (30) percent of the conservation open space shall be accessible to the residents of the subdivision or land development.

**603.1 Prioritized List of Resources to be Conserved**

The design of conservation open space in any subdivision or land development plan shall reflect the standards set forth in §601, resources identified on the Township's Map of Potential Conservation Lands and, to the fullest extent possible, incorporate any of the following resources if they occur on the tract (listed in order of significance):

- A. Stream channels, floodplains, wetlands, vernal ponds, wet soils, swales, springs, and other lowland areas, including adjacent buffer areas which may be required to ensure their protection.
- B. Significant natural areas of species listed as endangered, threatened, or of special concern, such as those listed in the Statewide Natural Diversity Inventory.
- C. Moderate to steep slopes, particularly those adjoining water courses and ponds, where disturbance and resulting soil erosion and sedimentation could be detrimental to water quality.
- D. Healthy woodlands, particularly those performing important ecological functions such as soil stabilization and protection of streams, wetlands, and wildlife habitats.
- E. Areas where precipitation is most likely to recharge local groundwater resources because of topographic and soil conditions affording high rates of infiltration and percolation.
- F. Hedgerows, groups of trees, large individual trees of botanic significance, and other vegetational features representing the site's rural past.
- G. Class I, II and III agricultural soils as defined by the USDA Natural Resource Conservation Service.
- H. Historic structures and sites.
- I. Visually prominent topographic features such as knolls, hilltops and ridges, and scenic viewsheds as seen from public roads (particularly those with historic features).

J. Existing trails connecting the tract to other locations in the Township.

**603.2 Other Design Considerations**

The configuration of proposed conservation open space set aside for common use in residential subdivisions and conservation open space in non-common ownership shall comply with the following standards:

- A. Be free of all structures except historic buildings, stone walls, and structures related to conservation open space uses. The Supervisors may grant approval of structures and improvements required for storm drainage, sewage treatment and water supply within the conservation open space provided that such facilities are not detrimental to the conservation open space (and that the acreage of lands required for such uses is not credited towards minimum conservation open space acreage requirements for the tract, unless the land they occupy is appropriate for passive recreational use).
- B. Generally not include parcels smaller than three (3) acres, have a length-to-width ratio of less than four-to-one (4:1), or be less than seventy-five (75) feet in width, except for such lands specifically designed as neighborhood greens, playing fields or trail links.
- C. Be directly accessible to the largest practicable number of lots within the subdivision. Non-adjoining lots shall be provided with safe and convenient pedestrian access to conservation open space.
- D. Be suitable for active recreational uses to the extent deemed necessary by the Supervisors, without interfering with adjacent dwelling units, parking, driveways, and roads.
- E. Be interconnected wherever possible to provide a continuous network of conservation open space within and adjoining the subdivision.
- F. Provide buffers to adjoining parks, preserves or other protected lands.
- G. Except in those cases where part of the conservation open space is located within private house lots, provide for pedestrian pathways for use by the residents of the subdivision. Provisions should be made for access to the conservation open space, as required for land management and emergency purposes.
- H. Be undivided by public or private streets, except where necessary for proper traffic circulation.
- I. Be suitably landscaped either by retaining existing natural cover and wooded areas and/or according to a landscaping plan to protect conservation open space resources.
- J. Be made subject to such agreement with the Township and such conservation easements duly recorded in the office of the Monroe County Recorder of Deeds as may be required by the Planning Commission for the purpose of preserving the common open space for such uses.
- K. Be consistent with the Township's Comprehensive Plan and any other duly adopted Township or regional plan.

**604 Reserved**

**605 Resource Conservation Standards For Site Preparation and Cleanup**

**605.1 Protection of Vegetation from Mechanical Injury**

Where earthwork, grading, or construction activities will take place in or adjacent to woodlands, old fields or other significant vegetation or site features, the Planning Commission may require that the limit of disturbance be delineated and vegetation protected through installation of temporary fencing or other approved measures. Such fencing shall

be installed prior to commencing of, and shall be maintained throughout, the period of construction activity.

**605.2 Protection of Vegetation from Grading Change**

Grade changes to occur at any location of the property shall not result in an alteration to soil or drainage conditions which would adversely affect existing vegetation to be retained following site disturbance, unless adequate provisions are made to protect such vegetation and its root systems.

**605.3 Protection of Vegetation from Excavations**

When digging trenches for utility lines or similar uses, disturbances to the root zones of all woody vegetation shall be minimized. If trenches must be excavated in the root zone, all disturbed roots shall be cut as cleanly as possible. The trench shall be backfilled as quickly as possible.

**605.4 Protection of Topsoil**

- A. Except as approved on the Preliminary Plan, no topsoil shall be removed from the and shall be retained on the site as necessary for proper site stabilization.
- B. Prior to grading operations or excavation, topsoil in the area to be disturbed shall be removed and stored on site, except as approved on the Preliminary Plan.
- C. Topsoil removed shall be redistributed and stabilized as quickly as possible following the establishment of required grades for a project or project phase. All exposed earth surfaces shall be stabilized in accord with best management practices.
- D. Grading and earthmoving operations shall be scheduled to minimize site disturbance during the period from November 1 to April 1, when re-vegetation of exposed ground is difficult.

**606 Blocks and Lots**

**606.1 Configuration**

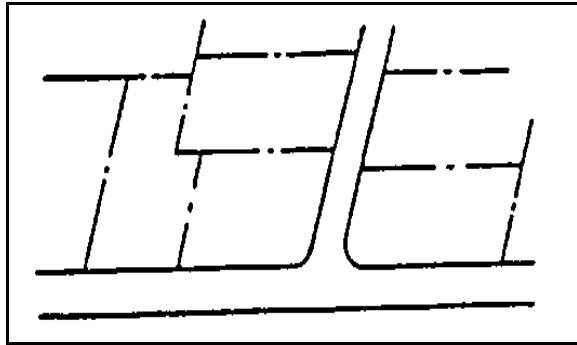
The configuration of blocks and lots shall be based upon the lot area requirements, the salient natural features, open land requirements, the existing man-made features, and the proposed type of structure. Lot configurations should provide for flexibility in building locations, while providing safe vehicular and pedestrian circulation.

**606.2 Blocks**

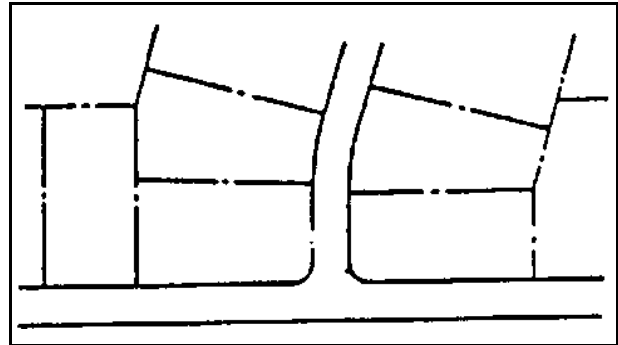
- A. Residential and commercial blocks shall have a maximum length of one thousand (1,000) feet.
- B. Blocks shall be of sufficient width to permit two (2) tiers of lots except where a public street, stream, other natural barrier or unsubdivided land prevents the platting of two (2) tiers of lots.

**606.3 Lots**

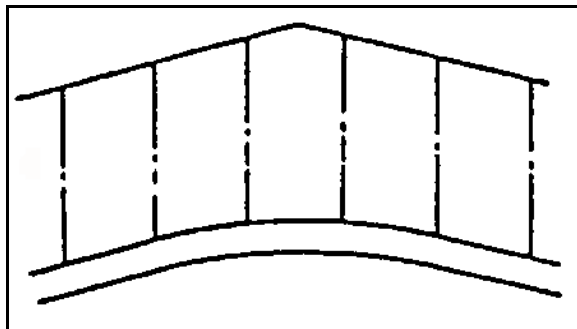
- A. Lot sizes and dimensions shall comply with the requirements of the Township's Zoning Ordinance.
- B. Lots divided by municipal boundaries shall be avoided. Where a subdivision is divided by a municipal boundary, the Applicant shall so notify the governing body of each municipality affected so that an administrative agreement for the platting and taxing of lots between the municipalities can be executed, if such agreement is necessary.
- C. All lots shall front on an approved street.



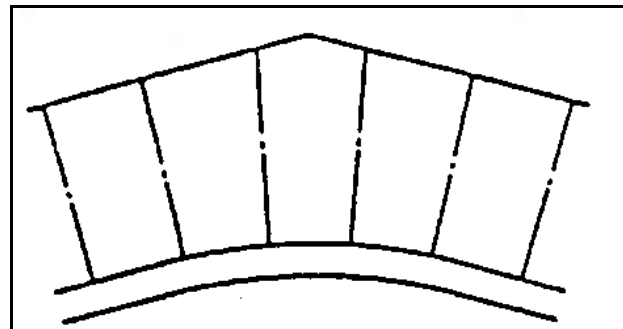
Unacceptable Lot Layout



Acceptable Lot Layout

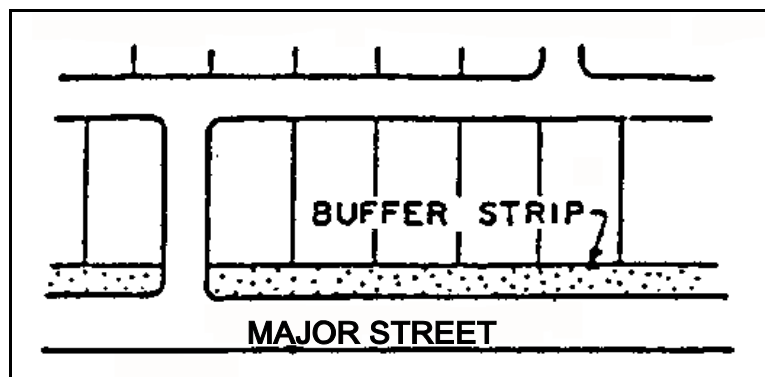


Unacceptable Lot Layout



Acceptable Lot Layout

- D. All side lines of lots shall be at right angles to straight street lines and radial to curved street lines.
- E. Double frontage lots shall not be platted except as reverse frontage lots where access to the lots is restricted to the interior development streets, and the lot is increased twenty (20) feet in depth to provide for a buffer strip along the exterior street.



Reverse Frontage Lots

- F. All lands in a subdivision shall be included in platted lots, roads, common areas and other improvements; and, no remnants of land or reserve strips controlling access to lots, public rights-of-way, public lands or adjacent private lands shall be permitted.
- G. Lots shall be laid out to the edge of any road; and, lot lines along existing public or private roads shall be maintained as they exist.

- H. No corner lot shall have road frontage of less than one hundred (100) feet.
- I. All corner lots shall have a curve with a minimum radius of ten (10) feet adjoining the intersecting road edge or right-of-way lines.

606.4 Lot Width Modifications

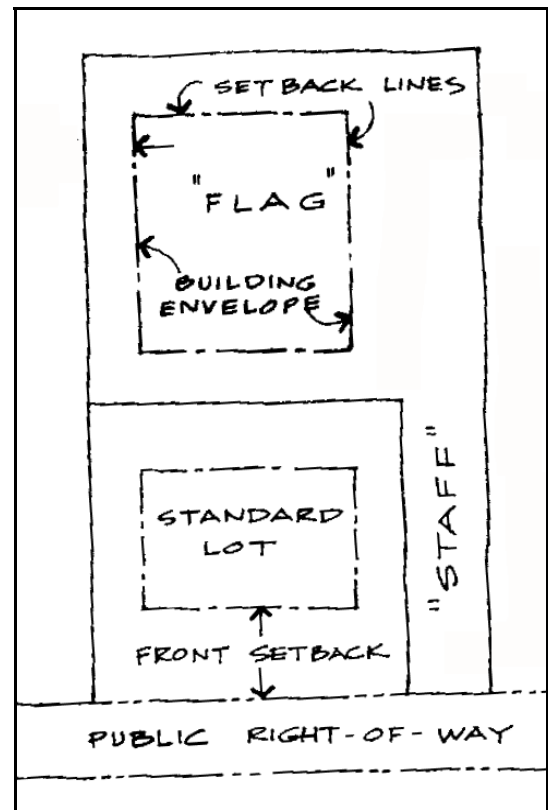
The required minimum lot width may be reduced in accord with the following:

- A. Along the curve of a cul-de-sac turnaround, the minimum lot width may be reduced to sixty (60) percent of the standard lot width requirement provided the required minimum width is achieved at the required front setback line.
- B. Along the outside of a curve in a street, the minimum lot width may be reduced to eighty (80) percent of the standard lot width requirement provided the required minimum width is achieved at the required front setback line.

606.5 Flag Lots (See also §607.7, Private Access Drives.)

Flag lots shall be permitted by modification/waiver only in accord with the following:

- A. The Applicant shall prove to the satisfaction of the Supervisors that the flag lot is necessary to minimize the environmental impacts (e.g., disturbance of conservation areas); and, that it would not result in a greater number of lots on the tract than would otherwise be feasible and permitted.
- B. Not more than twenty (20) percent of the lots within a subdivision may be approved as flag lots.
- C. The access corridor portion of the lot is the area of the lot that extends between the street and main portion of the lot, and shall not exceed three hundred (300) feet in length, as measured from the street right-of-way.
- D. The access corridor shall, at a minimum, meet the right-of-way width requirement for private access drives. (See §607.7.)
- E. The Applicant shall prove to the satisfaction of the Supervisors that the proposed driveway would provide adequate access for emergency vehicles.
- F. The lot width measurement shall be made on the main portion of the lot and shall not include the access corridor.
- G. The lot line where the narrow access corridor widens shall be considered the front lot line for applying setback requirements.
- H. A flag lot shall only be approved for a lot that is protected by a deed restriction or conservation easement from further subdivision.



Flag Lot

**607 Streets/Roads**

- A. Every subdivision and land development shall have access to a public road.
- B. In general, all streets shall be continuous and in alignment with existing streets and shall compose a convenient system to ensure circulation of vehicular and pedestrian traffic, with the exception that minor streets shall be laid out, including the use of loop streets and cul-de-sacs, so that their use by thorough traffic will be discouraged.
- C. Roads shall be graded, improved and surfaced to the grades and specifications shown on the plans, profiles, and cross sections as required by this Ordinance.
- D. Proposed streets shall further conform to such Township, County and State highway plans as have been prepared, adopted and/or filed as prescribed by law.

**607.1 Topography**

Roads shall be logically related to topography to produce reasonable grades, minimize site disturbance, and provide suitable building sites.

**607.2 Existing Access**

Existing private roads or private rights-of-way proposed to provide access to a subdivision and/or land development shall meet all the requirements of this §607 or shall otherwise be improved to such standards.

**607.3 Street Continuation**

Residential streets shall be planned to discourage through traffic; however, the arrangement of streets, wherever possible, shall provide for continuation of existing or platted streets and for adequate access to adjoining undeveloped tracts suitable for future subdivision by reserving rights-of-way to the adjoining undeveloped tracts.

**607.4 Subdivision Names and Street Names**

Streets that are extensions of, or obviously in alignment with, existing streets shall bear the names of the existing streets. Subdivision and street names shall not be repeated or be similar to those existing within the Township or adjacent areas; and, all street names shall be subject to the approval of the Township for conformance with the enhanced 911 emergency call system. Street name signs of a design approved by the Township shall be installed by the developer at his expense at each street intersection.

**607.5 Further Subdivision**

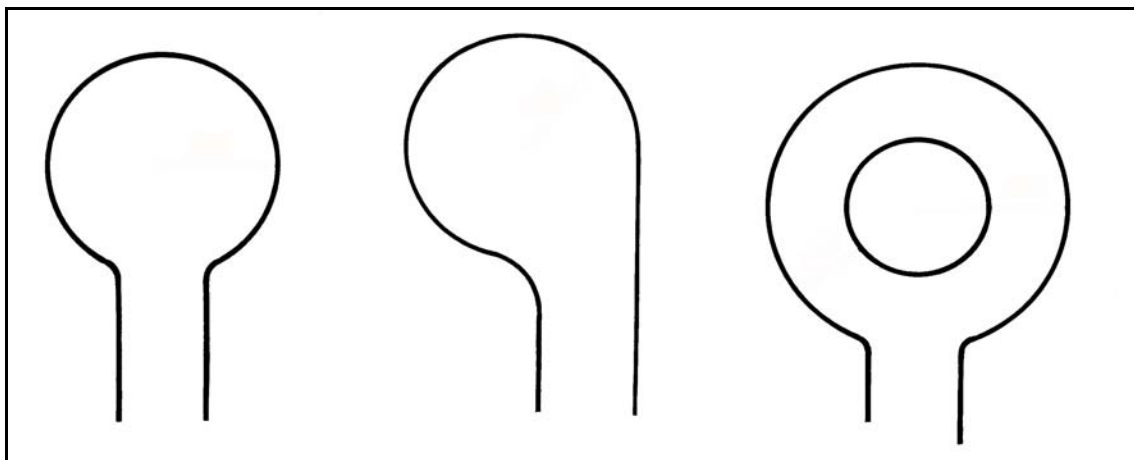
If lots resulting from the original subdivision are large enough to permit re-subdivision or, if a portion of the tract is not subdivided, adequate street rights-of-way to permit further subdivision shall be provided as necessary.

**607.6 Cul-de-Sac Streets**

Cul-de-sac streets shall be permitted only in cases where the property configuration does not permit the logical use of continuous streets; and, the Township shall have the right to deny the use of cul-de-sac streets in cases where the Township determines that the use of continuous streets is practical. Cul-de-sac streets, where permitted, shall meet the following design regulations:

- A. Any temporary dead end street, if designed to provide future access to adjoining properties, shall be provided with a temporary all-weather turn-around within the subdivision with a surfaced area with a radius equal to that required for a permanent turnaround; and, the use of such turnaround shall be guaranteed to the public but shall be removed when the street is extended.
- B. Cul-de-sac streets, permanently designed as such, shall not serve more than twenty-five (25) lots and shall not exceed a length of one thousand (1,000) feet.

- C. All cul-de-sac streets, whether permanently or temporarily designed as such, shall terminate in a turnaround. ( See illustrations.) One (1) of the following turnarounds shall be provided:
  - 1. A circular turnaround or off-center circular turnaround having a right-of-way with a minimum outside radius of fifty (50) feet, an outer pavement edge or curb line having a minimum radius of thirty (30) feet and be improved to the required construction specifications.
  - 2. A circular turnaround with a center island having a right-of-way with a minimum outside radius of fifty-five (55) feet, an outer pavement edge or curb line having a minimum radius of forty-five (45) feet, and a pavement width of twenty (20) feet improved to the required construction specifications. The center island shall be landscaped with low maintenance vegetation.
- D. The turnaround right-of-way of the cul-de-sac shall be connected to the approach right-of-way by an arc having a radius of not less than twenty-five (25) feet and the pavement by an arc of not less than thirty (30) feet.
- E. When the Planning Commission determines that a cul-de-sac street may be required to be converted to a through street to provide access to adjoining property, a right-of-way equal to the width of the cul-de-sac street shall be provided to the perimeter boundary of the development parcel.



Cul-de-sac Turnarounds

607.7 Private Access Drives

Private access drives may be used to provide access to residential lots which do not front on a public or approved private street in accord with the following:

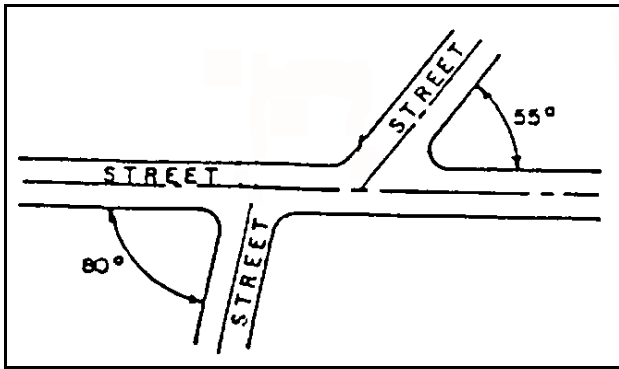
- A. Number of Dwelling Units - A private access drive shall be used only to provide access to one (1) lot which cannot legally be further subdivided or improved with more than one (1) dwelling unit. If any of the lots are of such size to allow further subdivision or the development of one (1) or more additional dwelling units, a note such as follows shall be included on the plan and in the deed of conveyance for the lot: *Lot \_\_\_ shall be restricted from further subdivision and shall be limited to the development of one (1) dwelling unit unless otherwise approved by the Board of Supervisors pursuant to the terms of the Township's Subdivision and Land Development Ordinance in effect at the time application is made for any such approval.*
- B. Length and Width - The private access drive shall not exceed eight hundred (800) feet in length as measured from the edge of the right-of-way of the abutting public street to the point of connection to the lot. Any subdivision proposing a street exceeding these limits shall be considered a major subdivision and all normal standards shall

apply to the lot and drive construction. The width of the drive shall conform to Table VI-1 and Table VI-2:

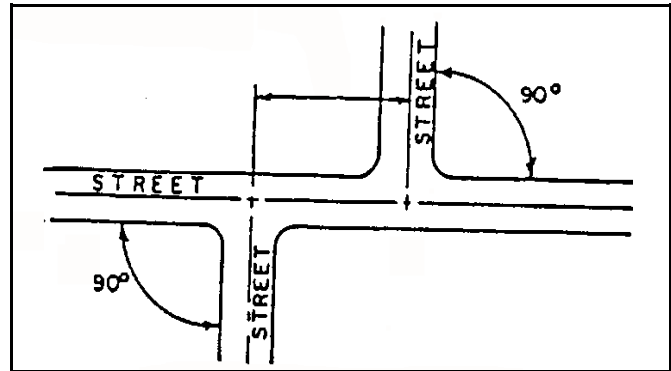
- C. Turnaround - The private access drive shall be provided with a *T-* or *Y-shaped* turnaround, with a length of sixty (60) feet and a width of twenty (20) feet improved to the required construction specifications.
- D. Further Development - If there is a potential for subdivision or development of any of the lots created such that eventually more than one (1) lot and/or dwelling unit might result, the subdivider shall provide additional right-of-way width as necessary to serve the maximum potential number of lots/dwelling units. Cartway and travelway widths may remain the same until such time as additional lots are platted or units proposed, at which time all development and street standards applicable to a major subdivision shall apply.
- E. Drive Construction - Private access drive entrances and aprons within the adjoining street right-of-way shall be installed by the Developer as required in this Ordinance. Construction of the remaining length of the private access drive and the turnaround shall be the responsibility of the buyer or buyers of the served lot or lots; and, no building permit shall be issued until the private access drive is constructed or guaranteed in accord with Article V of this Ordinance. The private access drive shall not under any circumstances be offered to the Township as a municipal street. The Applicant shall agree to the terms of this §607.7, in writing, and a covenant such as follows shall be placed on the final plan and the deed of conveyance clearly assigning responsibility for construction and maintenance of the private access drive and turnaround, establishing its future private ownership status, and noting the condition of a building permit issuance: *The construction and maintenance of the private access drive and turnaround shall be the responsibility of the owner(s) of the lots served by the drive. No building permit shall be issued for any improvements on lots served by the drive until such time as the drive and turnaround is constructed. The private access drive shall remain private and shall not be offered for dedication to the Township as a public street.*
- F. Leveling Area - A leveling area not exceeding four (4) percent in grade and not less than forty (40) feet in length shall be provided where the private access drive intersects with the right-of-way of the adjoining street.
- G. Storm Water; Soil Erosion - Storm water management and soil erosion and sedimentation control shall be addressed in accord with §605 of this Ordinance.
- H. Through Street Grade - A private access drive shall not be permitted to intersect the through street where the tangent grade of the through street at the point of intersection of the center-lines of the two streets exceeds eight (8) percent for the private access drive intersection.

#### 607.8 Intersections

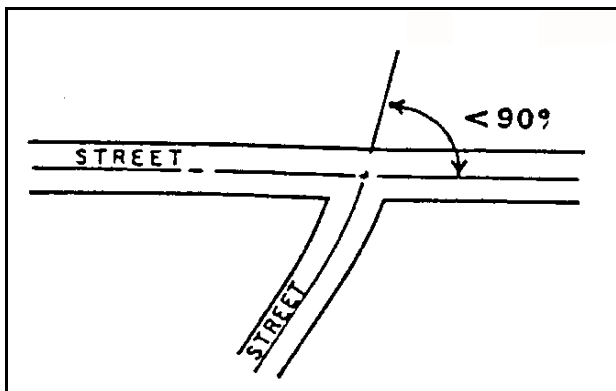
- A. Center-Lines - Center-lines of streets shall intersect as nearly at right angles as possible. Center-line intersection angles of less than sixty (60) degrees shall not be approved under any condition.
- B. More Than Two Streets - Intersections of more than two (2) streets at one (1) point are not permitted.



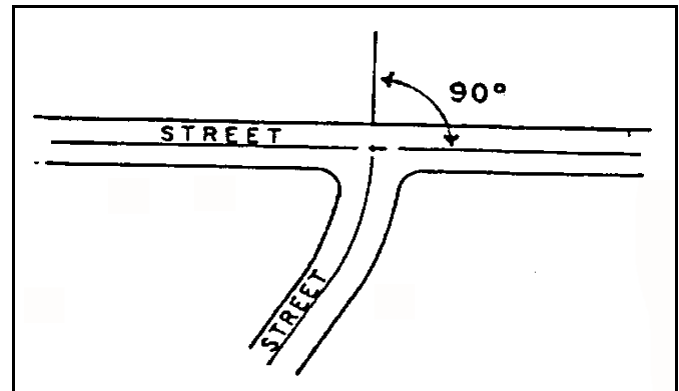
Unacceptable Street Intersection Design



Acceptable Street Intersection Design



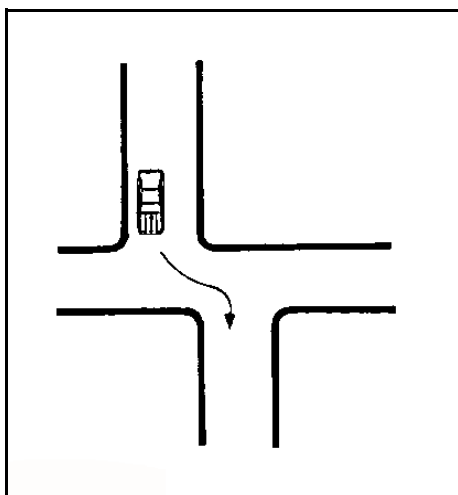
Unacceptable Street Intersection Design



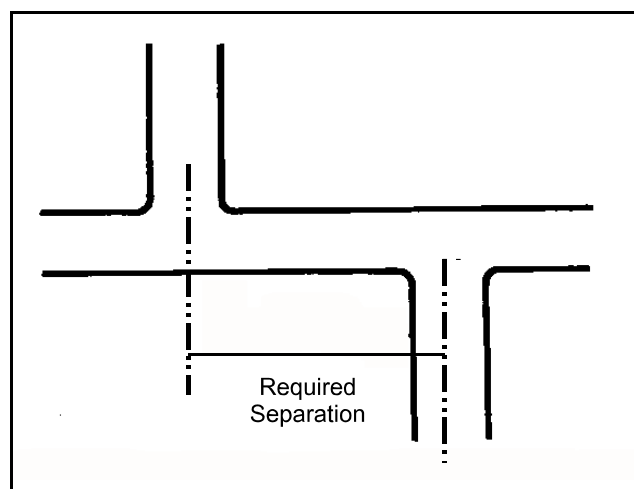
Acceptable Street Intersection Design

C. Minimum Offset - Where streets intersect other streets, the minimum offset or distance between center-lines of parallel or approximately parallel streets intersecting a cross street from opposite directions shall be as follows:

1. One hundred fifty (150) feet for minor, local access and marginal access streets.
2. Four hundred (400) feet for collector and connector streets.

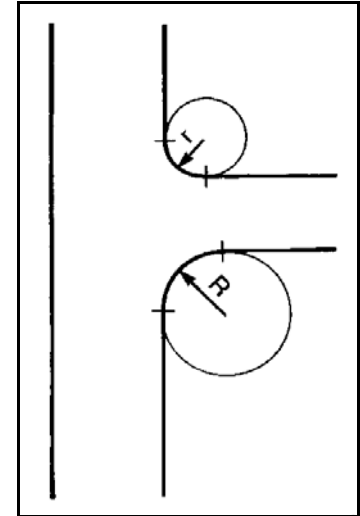


Corner Cutting



Required Centerline Separation

D. Cartway Edge Arc - The cartway edge at intersections shall be rounded by a tangential arc with a minimum radius of forty (40) feet for minor streets and streets of lesser classification and fifty (50) feet for collector streets and streets of higher classification. The right-of-way arc shall be congruent with the cartway arc.

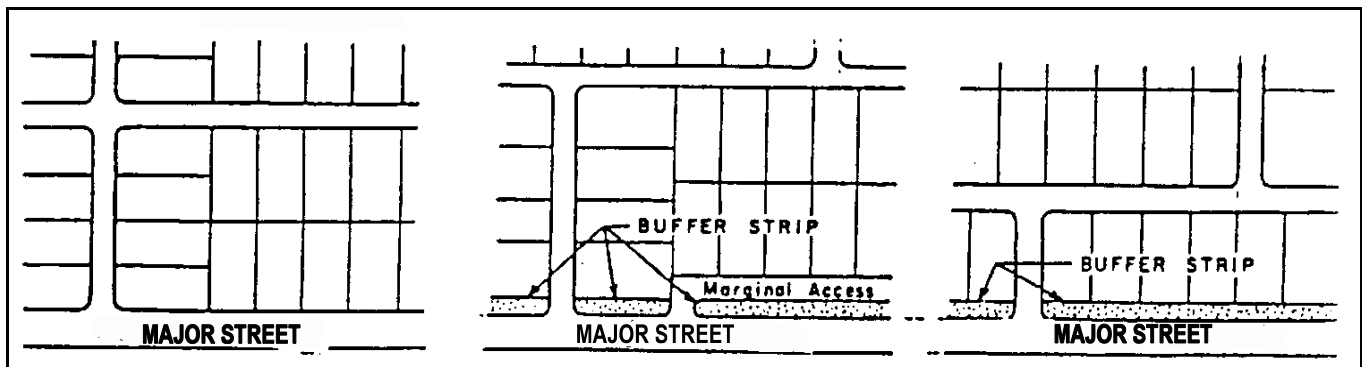


Cartway Edge Arc

E. Traffic Signs and Signals - Traffic signs and traffic signals shall be required in accord with §617.

**607.9 Major Street Frontage**

Where a subdivision and/or land development abuts or contains an existing or proposed collector street, or Township, or State road, the Township may require reverse frontage lots with access from interior subdivision streets, marginal access streets, or such other treatment as will provide protection for abutting properties, reduction in number of intersections with the collector or arterial street, and separation of local and through traffic.



Unacceptable Design

Acceptable Marginal Access Street

Acceptable Reverse Frontage Lots

**607.10 Street Right-of-Way, Travelway, and Shoulder Widths; and, Cross Sections**

Street right-of-way, travelway and shoulder widths shall be provided to the minimum standards provided in Table VI-1 and Table VI-2.

- A. Shoulder surfaces shall be graded at a slope of three-fourths (0.75) inch per foot away from the pavement edge.
- B. The finished paved travelway surface of tangent sections and curve sections not required to be superelevated shall be crowned at one-quarter (0.25) inch per foot away from the center-line.
- C. Properly superelevated cross sections shall be required on collector streets in accord with most current AASHTO standards. The maximum permissible superelevation shall be 0.08 feet per foot.

**607.11 Easements**

Easements for utilities shall be provided and shall conform in width and alignment to the recommendations of the appropriate utility company. Easements in the name of the Township or POA, as applicable, shall also be provided for all storm water drainage ditches, sewers, and watercourses. All easements shall be shown on the Preliminary and Final Plans; and, the Township or its agents shall have the right to enforce the restrictive easements relative to the water supply and sewage disposal in the event that the developer and/or lot owners fail, or are unable to do so. The Township shall further have free access to all developments and lots at all times for the purpose of inspection and enforcement.

<b>TABLE VI-1 DESIGN STANDARDS FOR STREETS</b>				
DESIGN SPECIFICATION	COLLECTOR (e)	MINOR	LOCAL	PRIVATE ACCESS (f) (g)
Number of dwelling units served	> 200	26 - 200	#25	#3
Average daily traffic	>2,000	#2,000	#400	NA
Design speed, mph	50	40	30	NA
Posted speed, mph	40 - 45	35	25	NA
<b>CROSS SECTION STANDARDS</b>				
Street right-of-way width (feet) (a)	60	50	50	25
Additional road width (a)	as required for drainage, slope and utility easements			
Travelway width, feet	24	22	20	12
Shoulder width, each side, feet (h)	6	4	4	NA
Cartway width, feet	36	30	28	NA
Crown, feet/foot	0.02	0.02	0.02	0.02
Superelevation, maximum, feet/foot	0.08	0.08	NA	NA
Shoulder slope, feet/foot	0.04 (i)	0.04 (i)	0.04 (i)	NA
Clear zone width, feet	per PennDOT Design Manual, Part 2, Chapter 12		10	NA
<b>GEOMETRIC STANDARDS</b>				
Grade, maximum, percent	7 (b) (d)	12 (c) (d)	12 (c) (d)	14
Grade, minimum, percent	1	1	1	1
Center line radius, minimum, feet (b)	750	475	250	75
Stopping sight distance, minimum, feet	425	305	200	100
Tangent between reverse curves, minimum, feet	100	50	NA	NA
Vertical curves	see §607.14	see §607.14	see §607.14	see §607.14
Swale grade, minimum, percent	1	1	1	1
<p><b>Notes:</b>  <b>a.</b> Right-of-way width does not include slope, drainage or utility easements. Additional road width and cartway widths may be required by the Township to provide for additional construction requirements such as cuts, fills and embankment areas, or to lessen traffic congestion, to secure safety from fire, panic, or other dangers, to facilitate the adequate provision for transportation and other public requirements and to promote the general welfare. Or, in cases where topography or other physical conditions make a street required width impractical, the Township may modify the above requirements.</p>	<p><b>b.</b> 10% for up to 500 feet in distance.  <b>c.</b> 14% for up to 500 feet in distance.  <b>d.</b> The maximum grades in c. and d. above may be repeated if separated by distances of five hundred (500) feet meeting the standard grade requirements for the class of road.  <b>e.</b> Collector standards apply to all commercial and industrial subdivisions and land developments.  <b>f.</b> See also §607.7.  <b>g.</b> Curbs not permitted.  <b>h.</b> If curbs are provided, shoulders shall not be provided.  <b>i.</b> 0.06 where warranted</p>			

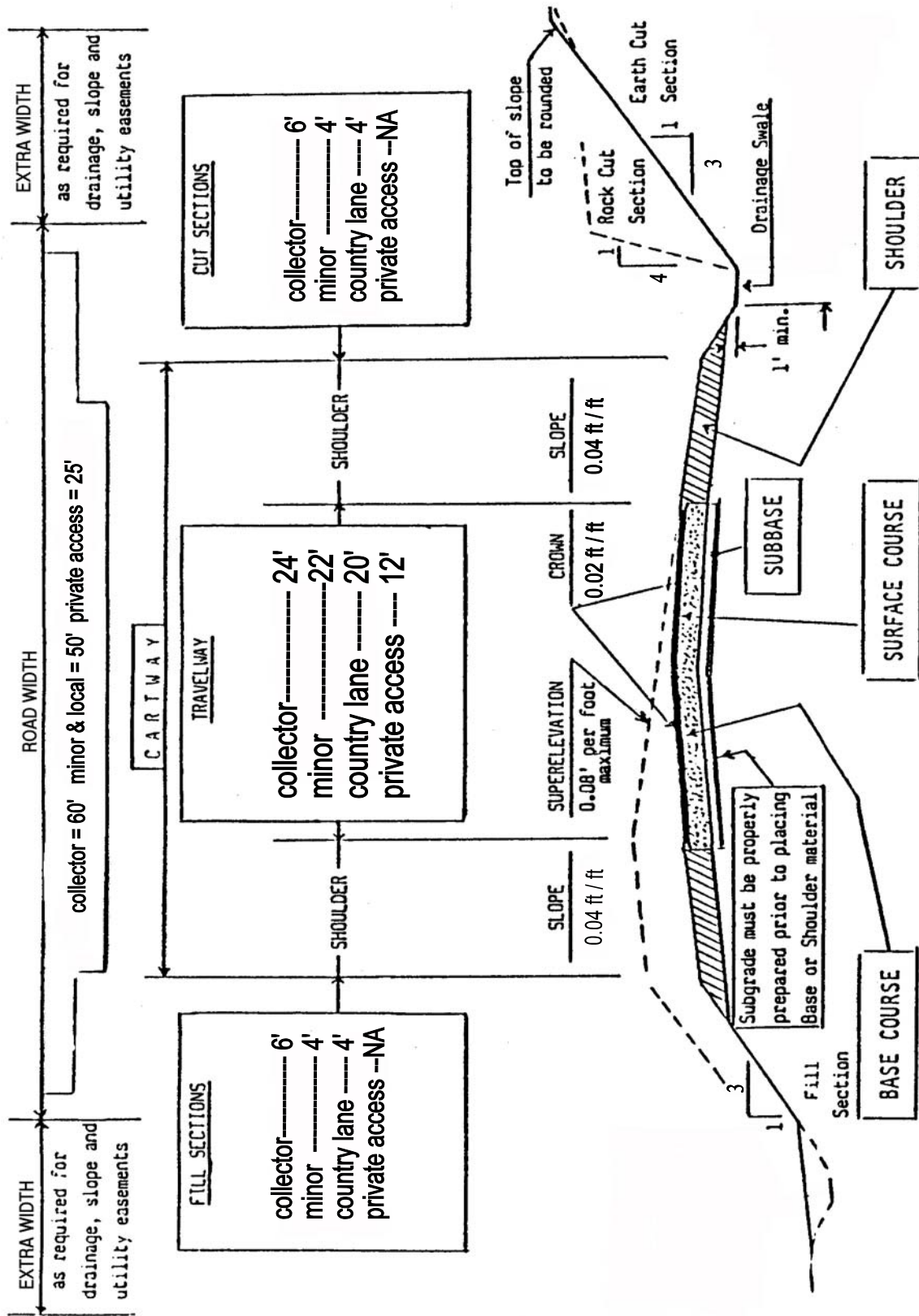


TABLE VI-2 TYPICAL STREET CROSS SECTION

TABLE VI-2 CONTINUED					
Residential Subdivisions and Land Developments					
TRAVELWAY CROSS SECTION					
COURSE	MATERIAL*	MINIMUM DEPTHS (inches)			
		ROAD CLASSIFICATION			
		Collector	Minor	Local	Private Access ***
Surface	2A Coarse Aggregate**	NA	NA	NA	6
Bituminous Surface	ID-2 Wearing	1.5	1.5	1.5	NA
Bituminous Base	Bituminous Concrete Base Course (BCBC)	4.5	4.5	4.5	NA
Subbase	Subbase (No. 2A)	4	4	4	4
Aggregate Base	AASHTO #1 Coarse Aggregate with #10 Choke	12	12	12	6
Shoulders	2A Coarse Aggregate**	6	6	6	NA
MODIFICATION FOR PRIVATE ROADS - In the case where a residential road will not be offered for dedication and will remain private, the bituminous surface and bituminous base may be replaced by a total of eight (8) inches of 2A Coarse Aggregate.** All other standards shall apply to private roads.					
SHOULDERS					
2A Coarse Aggregate**		6	6	6	NA
Commercial And Industrial Subdivisions And Land Developments					
TRAVELWAY CROSS SECTION					
COURSE	MATERIAL*	MINIMUM DEPTHS (inches)			
Bituminous Surface	ID-2 Wearing	1.5			
Bituminous Base	Bituminous Concrete Base Course (BCBC)	4.5			
Subbase	Subbase (No. 2A)	6			
Aggregate Base	AASHTO #1 Coarse Aggregate with #10 Choke	12			
Shoulders	2A Coarse Aggregate**	6			
NOTES: * All material shall meet PennDOT specifications, Publication 408, latest edition. ** 2A Coarse Aggregate = Coarse aggregate treated with PennDOT-approved oil for dust control at the application rate specified by PennDOT. ***Not eligible for dedication.					

A. Access Easements

1. Access easements shall be shown and labeled on the plans to indicate the purpose, easement users, and the rights of said users.
2. Ownership and maintenance responsibility shall be noted on the plans for each easement.

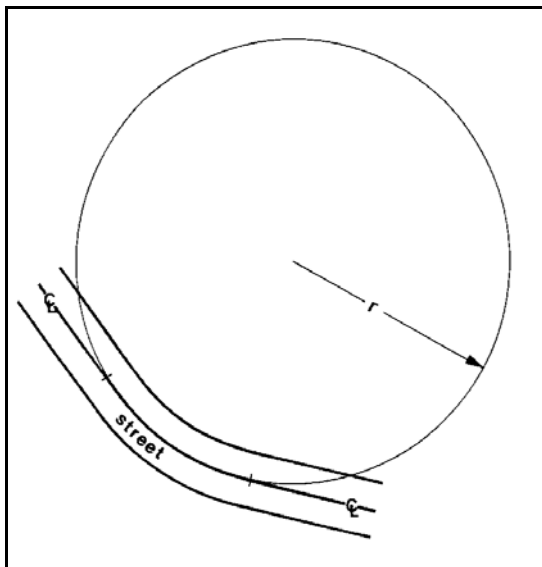
B. Utility Easements

1. Utility easements shall be a minimum of ten (10) feet in width and shall be provided along all street rights-of-way in addition to the required street width.
2. All existing and proposed utility easements shall be shown and labeled on the plan and included in the restrictive covenants as appropriate.
3. Existing and proposed utility easements shall be included in lot sizes unless otherwise restricted by the utility.

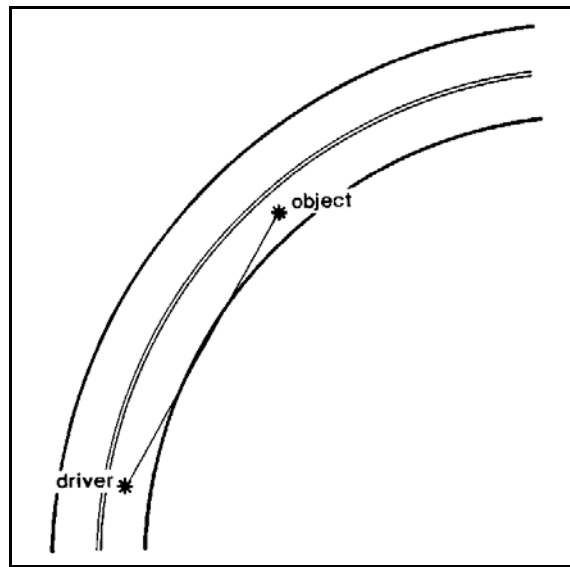
607.12 Street Alignment

Street alignment shall be designed as follows:

- A. Deflection - Whenever street lines are deflected in excess of five (5) degrees within one hundred (100) feet, connection shall be made by horizontal curves.
- B. Sight Distances - Streets shall be designed so that there will be unobstructed sight distances along the center-line thereof as set forth in Table VI-1.



Horizontal Curves - the radius of the circle formed by the centerline of the curve.



Horizontal Curves - sight distance limited by sharpness, or radius, of the curve.

- C. Stopping Sight Distance - Stopping sight distance is the length of highway over which an object is visible to the driver at all times. For the purpose of measuring the available stopping sight distance at a particular location, the driver's eye height is assumed to be three and one-half (3.5) feet above the roadway surface and the object height

is assumed to be six (6) inches above the roadway surface.

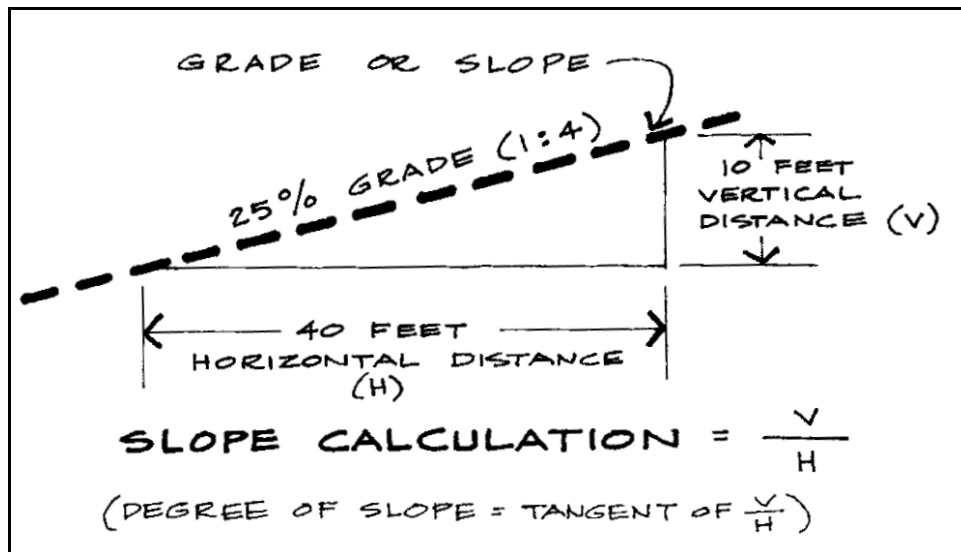
D. Tangents - Between reversed curves the following minimum tangents shall be provided:

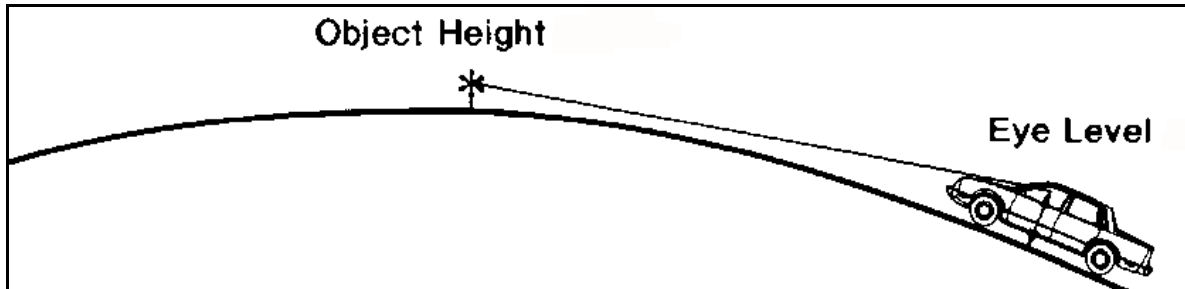
1. Two hundred (200) feet on arterial streets.
2. One hundred (100) feet on collector and connector streets.
3. Fifty (50) feet on minor, local access, and marginal access streets.

607.13 Street Grades

Street grades shall be designed as follows:

- A. Center-line grades shall not exceed the grades set forth in Table VI-1.
- B. The maximum grade across the turnaround on a cul-de-sac street shall not exceed four (4) percent.
- C. To provide for adequate drainage, the minimum grade of any street gutter shall not be less than one (1) percent.
- D. To provide for adequate drainage, the minimum grade of any parallel ditch along a street shall be not less than one (1) percent.
- E. A leveling area for all street intersections shall be provided as follows:
  1. The tangent grade of the through street at the point of intersection of the center-lines of the two streets shall not exceed eight (8) percent for collector, minor, local access, and marginal access street intersections; and, all other intersections shall comply with the grades as required on Table VI-1. Crest and sag vertical curves shall be provided in accordance with §607.14.
  2. The tangent grade of the connecting street(s) shall not exceed four (4) percent within twenty-five (25) feet of the right-of-way lines of the through street. Crest and sag vertical curves shall be provided in accordance with §607.14. The point of vertical curvature or tangency shall not be within the through street right-of-way.





Sight Distance - on crest of hill (vertical curve).

#### 607.14 Vertical Curves

Vertical curves shall be used at changes of grade exceeding one (1) percent and shall be designed as follows:

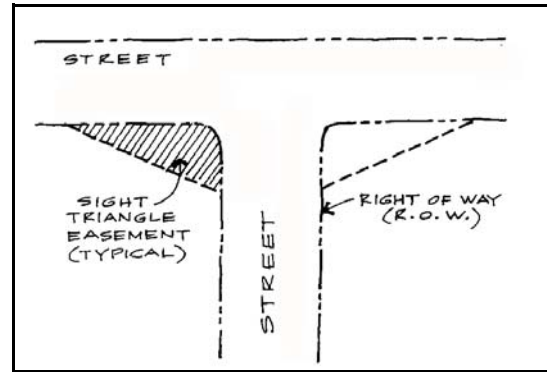
- A. Crest vertical curves shall be designed in relation to the road classification to provide vertical sight distance consistent with the horizontal sight distances as set forth in Table VI-1.
- B. On minor, local access and marginal access, and private access streets, sag vertical curves shall have a minimum length of fifteen (15) feet for each one (1) percent algebraic difference in tangent grade with an absolute minimum length of seventy-five (75) feet. (Example: 5% = 75' v.c.; 5.1% to 6% = 90' v.c.; etc.)
- C. On all other streets, sag vertical curves shall have a minimum length of twenty-five (25) feet for each one (1) percent algebraic difference in tangent grade with an absolute minimum length of one hundred (100) feet. (Example: 4% = 100' v.c.; 4.1% to 5% = 125' v.c.; etc.)
- D. The following vertical curve information shall be shown on the street profiles:
  1. Length of vertical curve.
  2. Elevation and stationing of the Vertical Point of Intersection, Vertical Point of Curvature, Vertical Point of Tangency, and Middle Offset.
  3. Street grades.
  4. Sight distances.

#### 607.15 Clear Sight Triangles

At all intersections, a triangular area shall be graded and/or other sight obstructions removed in such a manner as not to obscure vision between a height of from two (2) to ten (10) feet above the center-line grades of the intersecting streets.

- A. The clear sight triangle shall be guaranteed either by deed restriction, by lease restriction or by plan reference, whichever method is applicable. Vegetation shall not be planted or allowed to grow in such a manner as to obscure said vision.
- B. Such triangular area shall be determined by the intersecting street center-lines and a diagonal connecting the two points, one point at each street center-line. The point along the secondary street centerline shall be ten (10) feet back from the pavement line of the through street. The points along the centerline of the through street shall be set in accordance with the following table.
- C. Whenever a portion of the line of such triangle occurs behind (from the street) the building setback line, such portion shall be shown on the final plan of the subdivision and shall be considered a building setback line.

Road Classification	Speed (miles/hour)	Distance (feet)
Local	30	335
Minor	40	445
Collector	50	555
Higher classes	50	555



Clear Sight Triangle

607.16 Driveways

The Developer shall install driveway entrances, aprons, leveling areas, and required drainage for all proposed driveways. Driveways shall comply with the following standards:

- A. Driveways shall not be permitted to have direct access to public streets unless authorized by the Township or the Pennsylvania Department of Transportation, as applicable, via issuance of a highway occupancy permit.
- B. Lots shall not be platted which would result in driveways which would exceed fifteen (15) percent in grade or as otherwise required by state or Township regulations.
- C. Entrances shall be rounded at a minimum radius of five (5) feet or shall have a flare construction that is equivalent to this radius at the point of intersection with the cartway edge.
- D. Future driveways which are to be constructed adjacent to a street intersection shall be shown on the Preliminary and Final Plans.
- E. A leveling area not exceeding four (4) percent in grade and not less than twenty-five (25) feet in length shall be provided where a driveway intersects with the right-of-way of the adjoining road.
- F. Adequate provision shall be made for parallel drainage facilities.
- G. The minimum vertical curve for residential driveways shall be two (2) feet per one (1) percent change in grade.
- H. The minimum distance between a driveway or point of access and the nearest intersecting street shall be as follows:

Type of Subdivision or Land Development	Distance between center-lines of driveway and nearest intersecting street right-of-way by type of intersecting street. The nearest intersecting street shall be construed as being on the same or the opposite side of the street on which the driveway is proposed.		
	Arterial	Connector Collector	Minor Local Access Marginal Access
Residential	150 ft.	100 ft.	75 ft.
Nonresidential	300 ft.	200 ft.	150 ft.

I. Driveways shall maintain a setback of not less than then (10) feet from adjoining properties.

**607.17 Bridges and Stream Crossings**

Bridges and other stream crossing structures which are part of the proposed street system shall be designed and constructed in accordance with the current Pennsylvania Department of Transportation Standards and Specifications for the proposed load. Evidence of compliance with any state or federal requirements shall be provided.

**607.18 Clearing and Grubbing**

The right-of-way for all streets shall be cleared of vegetation to the full width of the right-of-way and grubbed only to the extent necessary to provide the required street cartway, cuts and fills, and associated drainage facilities.

- A. All trees, stumps, roots, and other material deemed unsuitable by the Township for underlying the street improvements shall be removed from the grading area and shall be properly disposed of.
- B. Voids created by the removal of stumps or roots shall be backfilled and compacted to the satisfaction of the Township.
- C. Rocks greater than twelve (12) inches in diameter shall be removed to a minimum depth of six (6) inches below the finished subgrade.
- D. All cleared and grubbed areas shall be inspected and approved by the Township Engineer prior to the subbase installation.

**607.19 Cuts and Fills**

All cuts and fills shall be constructed as follows:

- A. The maximum slope of any earth embankment or excavation shall not exceed one foot vertical to two (2) feet horizontal unless stabilized by a retaining wall or cribbing, except as approved by the Supervisors for special conditions.
- B. The maximum slope of any rock excavation shall not exceed four (4) feet vertical to one (1) foot horizontal.
- C. All embankments shall be compacted to prevent erosion.
- D. Cuts and fills shall be stabilized to prevent surface water from damaging the cut face of excavations of the sloping surfaces of fills.
- E. Fills shall be placed in lifts and compacted in accord with specifications of PA DOT Publication 408, latest edition, to minimize sliding or erosion of the soil.
- F. Fills shall not encroach on natural watercourses or constructed channels; and, fills placed adjacent to such natural watercourses or constructed channels shall have suitable protection against erosion during periods of flooding.
- G. Grading shall be done in a manner so as not to divert water onto the property of another landowner without the written consent of the landowner.
- H. During grading operations, necessary measures for dust control shall be exercised.
- I. Grading equipment shall not be allowed to cross streams except by PA DEP permit; and, adequate provisions shall be made for the installation of culverts and bridges.

607.20 Sub-Grade, Base and Surface

A. Subgrade

1. The design and construction of the road bed shall take into consideration the supporting capacities of the subgrade, with particular attention to those soils which are subject to frost heave.
2. Subgrade, parallel and cross drainage facilities shall be provided when necessary and shall be located, designed and installed to maintain proper drainage.
3. Unsuitable soils, as identified by the Project Engineer and confirmed by the Township's Engineer, shall be removed and replaced, drained or otherwise stabilized to provide adequate support for the roadbed and anticipated loads. If construction of a road bed in such locations, and particularly, on soils identified in the Monroe County Soil Survey as subject to frost heave is proposed, the Township shall require such drainage facilities and/or underdrains and subgrade drains as necessary to stabilize the subgrade. The design of such facilities shall be approved by the Township.

B. Subbase and Base Course - Subbase and base course aggregate material shall conform in type and be compacted to the depths shown in Table VI-2 of this Ordinance in accordance with the latest specifications of PA DOT (Form 408) and the requirements of the Township.

C. Surface Course - The bituminous surface course shall conform in type and be compacted to the depths shown in Table VI-2 of this Ordinance in accordance with the latest specifications of the PA DOT (Form 408) and the requirements of the Township.

D. Shoulders - Where curbs are not required or provided, shoulders shall be provided and shall be constructed of the material and compacted to the width and depth shown in Table VI-2 of this Ordinance.

E. Commercial/Industrial Areas - Any street serving a commercial or industrial area shall be designed and constructed to collector street standards.

F. Parking Lanes - Where curbs are required and/or provided for collector streets, if a parking lane (between the travelway and the curb) is approved by the Township, it shall be not less than ten (10) feet wide and shall be constructed to the same standards as the travelway. Such parking lane shall be not less than eight (8) feet wide for minor streets and six (6) feet wide for local and marginal access streets; and, it shall be constructed of the same material and to the same depth as required for shoulders and be stabilized by the application of bituminous product.

G. Alternative Designs - Alternative road bed designs may be proposed and will be considered in accord with §1003. The alternate design must provide load capabilities equivalent to or higher than the capabilities of the designs set forth above. Alternate designs will be reviewed on the basis of design recommendations of the Asphalt Institute.

607.21 Walls, Slopes, and Guide Rails

A. Where the grade of the street is above or below the grade of the adjacent land, walls or slopes shall be constructed in a manner satisfactory to the Township to support the street or the adjacent land, as the case may be.

B. Guide rails shall be installed in accord with the most current PennDOT standards.

607.22 Curbs, Gutters, and Swales

- A. In nonresidential developments, or higher density residential developments, or where other similar intensive uses exist or are anticipated, curbs shall be required if deemed necessary by the Supervisors for public safety.
- B. Minimum curb or pavement edge radii at street intersections shall equal that required for the cartway edge.
- C. Where curbs exist on abutting properties, their extension shall ordinarily be required throughout the proposed subdivision.
- D. Where curbs are not required, adequate gutters shall be graded and protected by seeding, or appropriate surfacing.
- E. Curbs shall be constructed in accord with the most current Pennsylvania Uniform Construction Code and Americans With Disabilities Act standards.
- F. If gutters are provided, they shall be in conformance with good engineering practice and subject to the approval of the Township's Engineer. Gutters and/or drainage swales shall be designed to prohibit erosive velocities and paving may be required if runoff velocities exceed 5.0 fps when calculated in accordance with PA DOT Manual, Part 2. Swales shall be triangular or parabolic in design to facilitate maintenance and the invert of the swale shall be below the subbase course to prevent saturation of the roadway. Swales shall be deep enough to accommodate driveway and other culverts.
- G. Velocity calculation shall be placed on the centerline profile drawings, or shall be submitted separately with the profiles.

607.23 Sidewalks; Crosswalks

Sidewalks and street cross walks may be required where necessary to provide proper pedestrian circulation or to provide access to community facilities and common areas. Sidewalks, where required or provided, shall be located within the street right-of-way immediately adjacent to the curbs, except as may be approved by the Township to accommodate street trees or other landscaping. Sidewalks and street cross shall be constructed in accord with the most current Pennsylvania Uniform Construction Code and Americans With Disabilities Act standards.

607.24 Parking On Streets

Off-street parking for all uses shall be provided in accord with the Township's Zoning Ordinance; and, streets shall not be designed to accommodate on-street parking except in accord with §607.20,F.

607.25 Driveway and Cross Drainage

At each point where a street is intersected by a driveway that requires surface drainage water to be carried under the driveway at the intersection, a culvert pipe shall be installed across the width of the driveway to meet the drainage requirements determined in accord with §609 of this Ordinance. Such cross drains as may be necessary shall also be installed under the street in accord with the drainage plan. Pipes shall be installed at such depth and in such manner as dictated by the site; and, no pipe shall be installed that is less than eighteen (18) inches in diameter. (See §609 for additional requirements.)

607.26 Alleys

Alleys shall not be permitted.

607.27 Street, Parking Area and Building Lighting

Street lights may be required when considered necessary by the Supervisors and shall be of such design and spacing as required by the Supervisors in accord with current Township specifications. A lighting plan shall be provided by the Developer for all subdivisions and land development and shall include details for lighting of streets, parking areas

and buildings. Street lights shall be required for all major subdivisions unless the Developer documents that such lighting is not necessary and a modification is granted by the Board of Supervisors. All lighting shall comply with §701.8 of the Township Zoning Ordinance and the standards of the Illuminating Engineering Society (IES) of North America.

**607.28 Traffic Signs and Signals**

Traffic signs and traffic signals shall be required when considered necessary by the Supervisors to ensure safe traffic or pedestrian circulation. All traffic signs and signals shall meet the most current requirements of PA DOT. In the case of traffic signals, the Developer, any subsequent owner, or any subsequent Property Owners Association or similar entity shall be responsible for the long term operation, maintenance, and replacement of the traffic signal and all associated facilities, signs, and pavement markings.

**607.29 Road Striping**

All roads constructed or improved as part of any subdivision or land development shall be striped in accord with the most current PennDOT requirements.

**608 Monuments and Markers**

Monuments and markers shall be placed so that the center, scored, or marked point shall coincide exactly with the intersection of the lines being monumented or marked and shall conform to the following:

**608.1 Placement**

Monuments and markers shall be placed so that the center or a scored or marked joint shall coincide exactly with the intersection of the lines to be marked.

**608.2 Monuments**

**A. Type - Monuments shall consist of either:**

1. Solid steel rods not less than one-half (1/2) inch in diameter and not less than twenty-four(24) inches in length centered in a cylinder of concrete poured in place, not less than nine (9) inches in diameter nor less than forty-eight (48) inches in depth.
2. Steel pipes not less than three-fourths (3/4) inch in diameter and not less than twenty-four(24) inches in length centered in a cylinder of concrete poured in place, not less than nine (9) inches in diameter nor less than forty-eight (48) inches in depth.
3. Such other monuments as the Township Engineer may approve.

**B. Placement**

1. Monuments, including the rod or pipe and the concrete, shall be placed flush with the ground.
2. Monuments shall not be placed until road grading has been completed.
3. Monuments shall be set as follows:
  - a. One in each quadrant of a street intersection., (in the instance of a *T* intersection, one shall also be placed at the lot corner most nearly opposite the intersecting street.)
  - b. One at a lot corner on each side of the street approximately midway through the block when the distance between intersecting streets exceeds eight hundred (800) feet.

- c. One at the intersection of street right-of-way lines with exterior property lines. (iv) At all exterior property corners where permanent corners did not exist at the time of the perimeter survey. (Existing corners shall not be removed.)

608.3 Markers

A. Type - Markers shall consist of either:

- 1. Solid steel rods not less than one-half (1/2) inch in diameter nor less than twenty-four (24) inches in length.
- 2. Steel pipes not less than three-quarters (3/4) inch in diameter nor less than twenty-four (24) inches length.
- 3. Such other markers as the Township Engineer may approve.

B. Placement:

- 1. Markers normally shall be set two (2) inches above the surrounding grade.
- 2. Markers shall be set as follows:
  - a. At all points where lot lines intersect street right-of-way lines, except for monument locations.
  - b. At all other lot corners.

**609 Storm Water and Drainage Control**

Storm water management facilities shall be provided in accord with the applicable Township storm water ordinance.

**610 Soil Erosion and Sedimentation Controls**

All soil erosion and sedimentation control plans shall meet the specifications of and shall be approved by the Monroe County Conservation District and PA DEP. Said Plan shall comply with Commonwealth of Pennsylvania, Title 25, Chapter 102 Department of Environmental Protection regulations for soil erosion and sedimentation control. Erosion and sedimentation controls shall be installed according to the approved Plan and shall be maintained by the developer in proper functioning condition until stabilization of the area is completed as determined by the Monroe County Conservation District. Preliminary Plan approval shall be conditioned on all required approvals and permits from the Monroe County Conservation District and/or PA DEP.

**611 Water Supply and Sewage Disposal**

611.1 General Standards

- A. All subdivisions and land developments shall be served by an adequate water supply and sewage disposal system; and the developer shall provide evidence documenting said adequacy.
- B. All suppliers of non-municipally owned, central water and/or sewer services shall be organized in such a fashion as may be required by the Pennsylvania Public Utility Commission and the Developer shall provide for operation, maintenance and continuity of services in a manner which is acceptable to the Township.
- C. One (1) copy of all correspondence, supporting documentation, applications for permits and certificates for operation submitted to the Pennsylvania Department of Environmental Protection and/or the Pennsylvania Public

Utilities Commission for the right to provide such services shall be forwarded to the Township as a part of the public record. One (1) copy of the permit and/or certificate of convenience issued by the Pennsylvania Department of Environmental Protection and/or the Pennsylvania Public Utilities Commission authorizing such services shall be forwarded upon receipt to the Township as a part of the public record.

- D. In the case of utilization of a publically owned or other existing central water supply and/or sewage disposal system the developer shall submit at the preliminary stage a letter from the operator of such utility indicating the utility owner's willingness to supply service to the development and including a verification of the adequacy of the utility system to serve the proposed development. At the final approval stage an executed agreement with the service supplier shall be submitted.
- E. All required Certificates of Convenience, approvals and permits shall be obtained by the developer and/or the utility owner as a condition of preliminary approval and shall be submitted with the final plan application.
- F. All water supply and sewage disposal systems shall be designed and certified by a Registered Professional Engineer or other individual otherwise certified for such design work; and all systems shall be designed in accord with all applicable federal, state and local standards.
- G. Pressure testing of all collection/conveyance of any central water supply or central sewage disposal system lines shall be required as part of the inspections required in accord with Article VI of this Ordinance. All such testing shall be conducted in accord with the procedures specified by the Township Engineer.
- H. All sewage disposal systems shall be consistent with the Township Sewage Facilities Plan.

#### 611.2 On-Site Water Supply

All on-site water supply systems shall comply with the requirements of Pennsylvania Department of Environmental Protection and/or applicable Township Ordinances. The requirement for the installation of on-lot wells shall be noted on the development plan and shall be required by restrictive covenant to be approved by the Township prior to preliminary plan approval.

#### 611.3 Shared Water Supply

Shared water supply systems shall only be permitted to serve a minor (residential) land development or a non-residential land development and the standards in this §611.3 shall apply. In the case of non-residential land developments, the Township may, based on the nature and scale of development, apply any or all of the standards contained in §611.4 of this Ordinance.

611.3.1 Well Capacity - The capacity of the well shall be certified by a licensed well driller to be adequate for the use proposed.

#### 611.3.2 Water Distribution System

- A. The system design shall follow good engineering practice and the requirements of the Pennsylvania Department of Environmental Protection. The distribution system shall be designed and sized to provide the design flows at a minimum pressure of twenty-five (25) pounds per square inch at curb stops.
- B. Pipe classes shall be consistent with design pressures.
- C. Before being placed into service, the system must be tested and disinfected by procedures established by Department of Environmental Protection.
- D. Service connections shall be a minimum of three-fourths (3/4) inch diameter.

611.3.3 Other Standards - All shared water supply systems shall comply with the requirements of Pennsylvania Department of Environmental Protection and/or applicable Township Ordinances.

611.4 Central Water Supply

611.4.1 Public Supply - If a central water system is proposed and an existing public or private central water supply exists within one-thousand (1,000) feet of the proposed development, said development shall connect to such system in accord with the requirements of the system owner, the PA PUC and the PA DEP; provided, the owner of the existing system agrees to such connection.

611.4.2 Project Supply - If an approved public water supply is not accessible and water is to be furnished on a project basis, the Applicant shall, upon submission of the subdivision or land development plan, submit written evidence that he has complied with all Township, County and State regulations, and that the proposed system to be installed meets the requirements of the PA PUC, PA DEP, and any other applicable regulations.

611.4.3 Deep Well Source

- A. Wells shall be sited, drilled and tested under the direct supervisor of a Registered Professional Engineer and/or a Professional Groundwater Geologist.
- B. Wells shall be located away from potential source of pollution on a reserved parcel of not less than five thousand (5,000) square feet in size.
- C. The capacity of the well(s), as certified by a professional engineer, shall be sufficient to produce at least one hundred ten (110) gallons per capita per day and/or four hundred (400) gallons per day for each residential dwelling unit to be served. Adequate capacity of any well(s) to service industrial or commercial establishments shall be documented by the Applicant to the satisfaction of the Township and the Township Engineer.
- D. Wells shall be pump tested utilizing a controlled step-draw down test to establish the specific capacity of each well and to establish a long term pumping rate. The well shall be pumped at the above determined long term pumping rate for a sufficient period of time for stabilization to occur and the recovery noted. In no case will a pumping rate greater than the recharge rate be allowed.
- E. Well construction shall be consistent with generally accepted practice and the guidelines of the PA Department of Environmental Protection.
- F. Documentation of the effect of the projected area-wide draw down of the water table may be required by the Township if the anticipated pumping of groundwater warrants such documentation.

611.4.4 Water Distribution System

- A. The system design shall follow good engineering practice and the requirements of the PA DEP and/or the Public Utilities Commission. The distribution system shall be designed and sized to provide the design flows at a minimum pressure of twenty-five (25) pounds per square inch at curb stops.
- B. Pipe classes shall be consistent with design pressures.
- C. Before being placed into service, the system must be tested and disinfected by procedures established by Department of Environmental Protection.

- D. The proposed utility shall provide for adequate flow of water for the subdivision supplied, by interconnecting two or more wells or by providing storage for a minimum of one (1) day's demand.
- E. Service connections shall be a minimum of three-fourths (3/4) inch diameter.

#### 611.4.5 Flow Rates

- A. Distribution systems serving residential developments shall provide for a minimum flow rate of at least one and one-fourth (1.25) gallons per minute for each lot or proposed dwelling unit for domestic purposes only.
- B. Distribution systems serving commercial or industrial developments shall provide for a minimum flow rate of at least twenty-five (25) times the projected average daily flow rate.
- C. Distribution systems intended to provide for fire flow shall provide for minimum flow rates in accordance with the standards of the National Fire Underwriters Association.

#### 611.5 On-Lot Sewage Disposal

- A. Standards - All on-site sewage disposal systems shall comply with the applicable PA DEP standards, the Township Sewage Facilities Ordinance, and all other applicable standards.
- B. Site Suitability
  - 1. All residential lots in developments proposing the use of on-site sewage disposal shall contain at least one (1) area suitable for such a disposal system as tested by the Township SEO in accord with DEP requirements. Such areas shall be shown on the Preliminary Plan and Final Plan. All sewage disposal areas shall remain undisturbed and this shall be assured via a covenant placed on the plan.
  - 2. Prior to any action on the Preliminary Plan by the Township, the Applicant must document that all lots in subdivisions proposing on-site sewage disposal contain a suitable area as tested by the Township SEO in accord with DEP requirements and this §611.5, or are already served by an adequate, existing sewage disposal system.
  - 3. Should the Applicant propose the use of individual systems which do not require soil testing, documentation shall be provided that the affected lots are suitable for the proposed system. In addition, a note shall be placed on the Preliminary Plan and Final Plan detailing the type of system(s) proposed and stating that the affected lots have not been tested for a soil-based system.
- C. Conservation Design Subdivisions - In the case of conservation design subdivisions the primary and reserved on-site sewage disposal areas may be located on common land provided the necessary easements for construction and maintenance of such systems are provided.
- D. System Maintenance - In order to extend the useful life of on-site sewage disposal systems and minimize on-site disposal system problems, the developer shall, for all subdivisions of ten (10) lots or more, provide for on-site system maintenance via the creation of a Property Owners Association (POA). This requirement shall also apply to any subdivisions of less than ten (10) lots if a POA is otherwise required or proposed. Such POA shall be created in accord with §506 of this Ordinance, and shall provide for the inspection of the on-site systems and the pumping of septic tanks at intervals of not less than three (3) years from the date of the operation of each system. The POA shall file with the Township an annual report detailing which systems have been inspected and pumped, showing receipts for same from a septage hauler disposing of the septage at a DEP licensed facility. Failure of the POA to comply with this Subsection C shall be considered a violation of this Ordinance.

**611.6 Central Sewage Disposal System**

In addition to the following standards, the Township Sewage Facilities Ordinance shall govern all central sewage disposal facilities, as defined by the said Ordinance.

611.6.1 Public Sewage Disposal - If a central sewage disposal system is proposed and an existing public sewage disposal system or an existing private sewage disposal system identified as a "regional system" by the Township Sewage Facilities Plan, said development shall connect to such system in accord with the requirements of the Township Sewage Facilities Plan, the system owner, the PA PUC and the PA DEP.

611.6.2 Project System - If an approved sewage disposal system is not accessible and sewage disposal is to be furnished on a project basis, the Applicant shall, upon submission of the subdivision or land development plan, submit written evidence that he has complied with all Township, County, and State regulations, and that the proposed system to be installed meets the requirements of the Pennsylvania Department of Environmental Protection and any other applicable regulations.

- A. All central sewage disposal systems shall be consistent with the sewage feasibility studies and plans of the Township.
- B. All sewage collection and treatment facilities shall be designed and constructed in accordance with regulations and requirements of PA DEP and applicable Township Ordinances.
- C. All central sewage disposal systems shall be designed and constructed to provide adequate capacity for the ultimate flow of the subject development. The Township may also require that any central sewage disposal system be designed and constructed to provide for service to adjacent or nearby properties. In such instances, developers shall be financially responsible solely for those costs associated with their individual development.
- D. All central sewage disposal systems using subsurface or land application of sewage effluent shall be designed and constructed in accord with applicable PA DEP standards; and, a suitable replacement area for the effluent disposal area shall be provided.

**611.7 Community System Maintenance**

In order to extend the useful life of community sewage disposal systems and minimize disposal system problems, the developer shall, for all subdivisions or land developments using a community system, provide for system maintenance via the creation of a Property Owners Association. Such POA shall be created in accord with §506 of this Ordinance, and shall provide for the inspection of the community system each year and the pumping of septic tanks at intervals as required but not less once every three (3) years from the date of the operation of each system. The POA shall file with the Township an annual report detailing which systems have been inspected and pumped, showing receipts for same from a septage hauler disposing of the septage at a DEP licensed facility. Failure of the POA to comply with this §611.7 shall be considered a violation of this Ordinance.

**612 Reserved**

**613 Utilities**

All utility lines required to service the subdivision shall be planned in cooperation with the respective utility companies. A letter shall accompany the subdivision or land development plan stating that the utility plan has been reviewed by the applicable utility company, such plan is approved, and service will be available. All cables, wires, conduits, pipes, and lines servicing the development shall be subject to the requirements set forth in this Ordinance.

**614 Sidewalks**

See §607.23.

**615 Landscape Requirements; Trees and Vegetation**

A landscape plan meeting the requirements of this section shall be prepared for all land developments and major subdivisions; and, no land development or major subdivision shall be finally approved until all landscaping has been installed or guaranteed in accord with this Ordinance.

**615.1 Legislative Intent**

It is the intent of these landscape planting requirements to conserve existing healthy plant communities, such as woodlands, and to require new landscape plantings in critical areas of new developments in order to:

- A. Reduce soil erosion and protect surface water quality by minimizing stripping of existing woodlands or tree masses.
- B. Reduce storm water runoff velocity and volume by providing planting areas where storm water can infiltrate.
- C. Improve air quality by conserving existing or creating new plantings, which produce oxygen and remove carbon dioxide from the atmosphere.
- D. Encourage tree planting and landscaping along public streets. (See definition of *improvement*.)
- E. Provide wind breaks, shade, and the other microclimate benefits of trees and landscape plantings.
- F. Conserve historically, culturally, or environmentally important landscapes such as wooded hillsides, scenic views, or aesthetic natural areas.
- G. Preserve and enhance property values through the implementation of good landscape architectural standards.
- H. Provide planted buffers between land developments, which act to visually integrate a development into the existing landscape.
- I. Provide planted and architectural visual screens around visually obtrusive site elements within development.
- J. Enhance the aesthetic appearance of the community and provide privacy and beauty.
- K. Improve traffic flow in parking lots by requiring planted parking islands and medians to separate traffic.
- L. Conserve energy by moderating solar radiation and providing shade.
- M. Improve the environment for pedestrians along streets, parking lots, and other pedestrian areas
- N. Aesthetically improve storm water management facilities, such as detention basins, without impairing function.

**615.2 Minimum Number of Trees; Preservation of Existing Vegetation**

Unless other provisions of this ordinance require more trees or vegetation, each development site shall include a minimum of twelve (12) deciduous or evergreen trees for each one (1) acre. Each deciduous tree shall be two and one-half (2.5) inch caliper or greater and each evergreen tree shall be six to seven (6 to 7) feet in height or greater. As an alternate, ten (10) trees for each one (1) acre shall be required if deciduous trees are four (4) inches in caliper or greater and evergreen trees are eight to ten (8 to 10) feet in height or greater. Five (5) shrubs two and one-half (2.5) feet in height or greater may be substituted for one tree of two and one-half (2.5) inch caliper for a maximum of twenty (20) percent of the tree requirement.

- A. Preservation of Existing Vegetation - Each mature tree, tree mass, or woodland on the site shall be designated "TO REMAIN" or "TO BE REMOVED" and shall be shown on the plan in accord with the following criteria:

1. All subdivisions and land developments shall be laid out in such a manner as to minimize the removal of healthy trees and shrubs on the site. Mature trees (6" or greater DBH) shall be preserved insofar as possible; and, special consideration shall be given to major specimen trees (12" or greater DBH). The plan shall show the location of major specimen trees in areas of the site proposed for development, and the edge of existing woodlands.
  2. The applicant shall document that vegetation removal is minimized. If challenged by the Township, the applicant shall produce evidence, such as written documents or plans certified by a registered landscape architect or other person deemed qualified by the Township, showing that no alternative layouts are possible and that no alternative clearing or grading plan would reduce the loss of mature trees, tree masses, and woodlands.
  3. The following criteria shall be used by the Township to make the final determination of which mature trees, tree masses, or woodland shall be designated "TO REMAIN":
    - a. The outermost branches of the tree(s) are at least five (5) feet from any proposed buildings or structures.
    - b. The outermost branches of the tree(s) are at least five (5) feet from any proposed changes in grade, drainage structure, utility corridor, parking or load/unloading area, sidewalk, on site sewage system, or any other excavations.
    - c. The tree(s) are clear of any proposed sight triangles and do not, by their location or apparent health, pose any undue threat to the public health, safety, or welfare. The Township may permit some landscape material to be placed in the clear sight triangle when it determines that the type of material and its location will not create a hazard to motorists or conflict with utility locations.
    - d. If these trees are diseased or are excessive in number and thinning will promote and enhance the healthy development of the remaining trees the Township may require the removal of the trees.
  4. Mature trees, tree masses, or woodland that are not designated "TO REMAIN" shall be designated "TO BE REMOVED." These trees shall be removed in the field during the construction process.
  5. Specimen tree preservation or removal shall be considered on an individual basis and site conditions.
- B. Protection of Existing Vegetation - Existing vegetation designated "TO REMAIN" in accord with Subsection A.3, above shall be identified in the field prior to any clearing and shall be physically protected throughout the construction process. A temporary physical barrier, such as a snow fence, shall be erected a minimum of one (1) foot outside the drip line on all sides of individual trees, tree masses, or woodlands prior to major clearing or construction. The barrier shall be placed to prevent disturbance to, or compaction of, soil inside the barrier and shall remain until construction is complete. The barrier shall be shown on the landscape plan.
- C. Credit for Existing Trees - If healthy, existing trees will be preserved which will generally meet the requirements of this Section, the Supervisors may, in its discretion, permit the existing tree(s) to serve as a credit toward the number of shade trees required to be planted. In addition, the Supervisors, in its discretion, may permit existing trees which would otherwise be required to be maintained by this Ordinance to be removed in exchange for the Developer planting replacement trees in accord with this Section. To be eligible for use as credit toward a required tree, a preserved tree shall be maintained in such a manner that a minimum of fifty (50) percent of the ground area under the tree's drip line shall be maintained in natural ground cover and at the existing natural ground level. The following standards shall be used to determine the extent of credit:

<b>DBH of Approved Preserved Tree</b>	<b>Number of Credited Trees</b>
greater than 30 inches	4
15 to 29 inches	3
7 to 14 inches	2
2to 6 inches	1

- D. Hydrology - Alteration of existing drainage patterns and water supply for the protected vegetation shall be minimized.
- E. Transplanting Existing Plants - Specimen trees or individual trees from woodlands or tree masses designated "TO BE REMOVED" are encouraged to be transplanted from one area of the site to another. Transplanted trees must conform to the requirements of §615.7 and §615.8.
- F. Clear Sight Triangles - All landscaping shall comply with the sight distance requirements of this Ordinance, including intersections of public streets and access drives of commercial, industrial and multi-family developments. The Township may permit some landscape material to be placed in the clear sight triangle when it determines that the type of material and its location will not create a hazard to motorists or conflict with utility locations.
- G. Topsoil Protection - Topsoil shall not be permanently removed from a lot except from areas that will be covered by buildings or paving. This shall not prohibit the temporary movement and storage of topsoil during construction.
- H. Tree Removal - Trees within the street right-of-way and all other plantings required by this §615 shall not be removed without a permit from the Zoning Officer, except for trees removed by the Township or the State and for trees approved to be removed under this §615.

**615.3 Parking Lot Landscaping**

- A. Landscaping Benefits - Parking lots shall be landscaped with trees and shrubs to reduce the impact of glare, headlights, and parking lot lights; to delineate driving lanes; define rows of parking; and facilitate pedestrian circulation. Furthermore, parking lots shall be landscaped to provide shade in order to reduce the amount of reflected heat and to improve the aesthetics of parking lots.
- B. Lots With Ten or More Stalls - All parking lots with ten (10) or more stalls shall be landscaped in accord with the criteria in this Section.
  - 1. One (1) planting island shall be provided for every ten (10) parking stalls. There shall be no more than fifteen (15) contiguous parking stalls in a row without a planting island.
  - 2. The ends of all parking rows shall be divided from drives by planting islands.
  - 3. In residential developments, large parking lots shall be divided by planting strips into smaller parking areas of no more than forty (40) stalls.
  - 4. In nonresidential developments, large parking lots shall be divided by planting strips into smaller parking areas of no more than one hundred (100) stalls.

5. Planting islands shall be a minimum of nine (9) feet by eighteen (18) feet in dimension, underlain by soil (not base course material); mounded at no more than a three-to-one (3:1) slope, nor less than a five-to-one (5:1) slope; and shall be protected by curbing or bollards. Each planting island shall contain a minimum of one (1) shade tree plus shrubs and/or ground cover sufficient to cover the entire area.
  6. All planting strips shall be a minimum of eight (8) feet wide. Strips shall run the length of the parking row, underlain by soil (not base course material), shall be designed to encourage the infiltration of storm water insofar as possible, and shall be protected by curbs, wheel stops, or bollards. Planting strips shall contain plantings of street-type shade trees at maximum intervals of tree per thirty (30) feet, plus shrubs and/or ground cover, as approved by the Township, to cover the entire area.
  7. The placement of light standards shall be coordinated with the landscape plan to avoid a conflict with the effectiveness of light fixtures.
  8. Plants shall comply with the requirements of §615.7 of this Ordinance. The use of plants selected from the *List of Acceptable Plants* in §615.8 is required.
  9. In the case where this or another Township ordinance requires a buffer or other landscaping at the end of a parking lot, such buffer or landscaping may take the place of the planting strip provided the buffer or landscaping meets the minimum requirements of this §615.3.
- C. Buffers - All parking lots shall be buffered from public roads and from adjacent properties as required in §615.6.
- D. Reserved Parking Areas - The number of trees in parking areas which have been reserved in accord with §504.6,D of the Township's Zoning Ordinance shall not be counted toward the minimum required by this §615. This area shall remain undisturbed or shall be landscaped in accord with the minimum requires specified in §615.2.

615.4 Street Trees

- A. Street Trees Required - Street trees shall be required:
1. Along all existing streets abutting or within the proposed subdivision or land development.
  2. Along all proposed streets.
  3. Along access driveways that serve five (5) or more residential dwelling units.
  4. Along access driveways that serve two (2) or more nonresidential properties.
  5. Along major walkways through parking lots and between nonresidential buildings, as recommended by the Planning Commission.
- B. Waiver for Existing Vegetation - The street tree requirement may be waived by the Supervisors where existing vegetation is considered sufficient to provide effective screening and to maintain scenic views of open space, natural features, or other valued features.
- C. Standards - Street trees shall be located between the ultimate right-of-way line and the building setback line and shall meet the following standards:
1. Trees shall be planted a minimum distance of five (5) feet and a maximum distance of fifteen (15) feet outside the ultimate right-of-way line. However, in certain cases, as follows, the Supervisors may permit trees to be planted within the ultimate right-of-way:

- a. In areas, such as existing neighborhoods where front yards may be located within the ultimate right-of-way.
  - b. In cases where closely spaced rows of street trees may be desirable and future street widening is considered unlikely.
2. In nonresidential developments, trees shall be located within a planting bed within the front yard setback, at least ten (10) feet in width, planted in grass or ground cover. In areas where wider sidewalks are desirable, or space is limited, tree planting pits within the sidewalk may be approved.
  3. Trees shall be located so as not to interfere with the installation and maintenance of sidewalks and utilities. Trees shall be planted a minimum distance of three (3) feet from curbs and sidewalks, fifteen (15) feet from overhead utility poles with appropriate species selection for trees under utility wires, and six (6) feet from underground utilities.
  4. Trees shall be planted at a ratio of at least one (1) tree per fifty (50) linear feet of frontage or fraction thereof. Trees shall be distributed along the entire frontage of the property, although they need not be evenly spaced.
  5. Trees shall comply with the requirements of §615.7. The use of tree species selected from the *List of Acceptable Plants* in §615.8 is required.

#### 615.5 Storm Water Basins and Associated Facilities

Landscaping shall be required in and around all storm water management basins according to the following:

- A. Vegetative Cover Required - All areas of storm water management basins, including basin floors, side slopes, berms, impoundment structures, or other earth structures, shall be planted with cover vegetation such as lawn grass or naturalized plants specifically suited for storm water basins. (See §615.8 for plants for storm water basins.)
  1. Lawn grass areas shall be sodded or hydro-seeded to minimize erosion during the establishment period; and, once established, these areas shall be maintained at a height of not more than six (6) inches.
  2. Naturalized cover plants, such as wild flowers, meadows, and nonaggressive grasses specifically designed for the permanently wet, intermittently wet, and usually dry areas of storm water basins, may be planted as an alternative to lawn grass provided:
    - a. The plantings provide continuous cover to all areas of the basin.
    - b. The plantings do not interfere in the safe and efficient function of the basin as determined by the Township Engineer.
  3. Trees and shrubs shall be allowed in and around storm water basins provided no interference is caused to the proper function of the basin; and, trees or shrubs shall not be planted on an impoundment structure or dam.
- B. Basin Shape - Basin shape shall incorporate curvilinear features to blend with the natural surrounding topography; and, the use of sharp geometric shapes shall be avoided.
- C. Basin Grades - Minimum grades inside storm water basins shall be one (1) percent unless infiltration is an integral part of the design; and, maximum side slopes of the basin shall be thirty-three (33) percent (3:1 slope).
- D. Buffers - Storm water basins shall be buffered with landscaping from adjacent properties in accord with §615.6.

615.6 Buffers and Screens

- A. Property Lines and Site Elements - All subdivisions and land developments shall be landscaped with the following two (2) components:
1. Property line buffers that act to integrate new development with its surroundings and to separate incompatible land uses.
  2. Site element screens that act to minimize or eliminate views to certain other site elements.
- B. Minimum Requirements - The requirements in this §615.6 are minimum standards; additional plants, berms, or architectural elements may be required by the Township as necessary to meet the intent of this §615 or may be included in the plan at the applicant's discretion.

TABLE 615-1 PROPERTY LINE AND ROAD RIGHT-OF-WAY BUFFERS (See §615.6,C for buffer intensity requirements.)				
PROPERTY LINE BUFFERS – applies to side and rear property lines				
PROPOSED USE	ADJACENT USE			
	Office/Institutional Public Recreation	Commercial/ Industrial	Multi-Family Mobile Home Park	Single-Family Two-Family
	BUFFER TYPE / WIDTH (feet)			
Office/Institutional	Low / 10	Low / 10	Medium / 15	High / 20
Commercial/Industrial	Medium / 15	Low / 10	High / 20	High / 20
Residential*	Low / 10	Medium / 15	Low / 10	Medium / 15
Active Recreation (play fields, golf courses, swim clubs, etc.)	Low / 10	None	Low / 10	Low / 10
*Buffers are required for all multi-family and mobile home parks.				
PARKING LOT BUFFERS ALONG ROAD RIGHTS-OF-WAY				
SIZE OF PARKING LOT	BUFFER TYPE / WIDTH (feet)			
10 spaces or less	Low / 5			
11 to 50 spaces	Medium / 10			
more than 50 spaces	High / 15			

C. Property Line and Road Right-of-Way Buffer Requirements

1. Property line and road right-of-way buffers shall be required for the following types of development:
  - a. All nonresidential development.
  - b. All multi-family development.

- c. All single-family detached developments unless a better design is approved by the Board of Supervisors.
  - d. All mobile home parks.
2. An on-site investigation by the applicant shall identify the adjacent land uses along each property boundary. In the case of vacant land, the uses permitted by the Zoning Ordinance shall be used. The existing or zoned uses shall be noted on the plan; and, in the case of several permitted uses on a site, the most restrictive requirements shall apply. The Supervisors shall make the final determination of the designation of the existing or zoned land uses.
  3. The width and quantity and type of plants required shall be determined by the intensity of the proposed land use and the adjacent land use, vacant land, or zoning district, according to Table 615-1.
  4. Buffer Area Location and Dimensions
    - a. The buffer area may be included within the front, side, or rear yard setback.
    - b. The buffer area shall be a continuous pervious planting bed consisting of trees and shrubs, grass or ground cover.
    - c. Parking shall not be permitted in the buffer area.
    - d. Site element screens shall be permitted in the buffer area.
    - e. Storm water basins shall be permitted in the buffer area.
  5. Plant Quantities and Types - In accord with Table 615-1, for every one hundred (100) linear feet of property line to be buffered, the following minimum quantities and types of plants shall be required:

<b>BUFFER TYPE</b>	<b>PLANTS (per 100 linear feet)</b>
Low	2 canopy trees; and 1 ornamental tree
Medium	2 canopy trees; 2 ornamental trees; and 2 evergreen trees (15 shrubs may be substituted for 1 ornamental tree)
High	5 evergreen trees; 2 ornamental trees; and 2 canopy trees (30 shrubs may be substituted for 1 ornamental tree)

6. Design Criteria:
  - a. The required plants shall be distributed over the entire length and width of the buffer area.
  - b. Buffer plants may be arranged symmetrically (formal) or asymmetrically (informal) and may be grouped to form plant clusters. However, informal groupings that reflect the natural character of the region are encouraged.

- c. Plants shall be spaced to provide optimum growing conditions.
- d. A variety of tree species is required as follows:

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

- e. All plants shall meet the requirements of §615.7.
7. Existing healthy trees, shrubs, or woodlands may be substituted for part or all of the required plants with the approval of the Supervisors. The minimum quantities and/or visual effect of the existing vegetation shall be equal to or exceed that of the required buffer as determined by the Township.
  8. Existing topographic conditions, such as embankments or berms, in conjunction with existing vegetation, may be substituted for part or all of the required property line buffers with the approval of the Supervisors. The minimum visual effect shall be equal to or exceed that of the required buffer.

**D. Site Element Screens**

1. Site element screens shall be required in all proposed land developments around the following site elements, when these are located partially or fully within one hundred (100) feet of a property line or existing road right-of-way:
  - a. Parking lots.
  - b. Dumpsters, trash disposal, or recycling areas.
  - c. Service or loading docks.
  - d. Outdoor storage.
  - e. Vehicle storage.
  - f. Multifamily rear yards.
  - g. Active recreation facilities.
  - h. Detention basins.
  - i. Sewage treatment plants and pump stations, lagoons, storage basins, and settling ponds.
2. An on-site investigation by the applicant shall identify the adjacent land uses along each property boundary. In the case of vacant land, the uses permitted by the Zoning Ordinance shall be used. The existing or zoned uses shall be noted on the plan; and, in the case of several permitted uses on a site, the most restrictive requirements shall apply. The Supervisors shall make the final determination of the designation of the existing or zoned land uses.
3. The type of site element screen required shall be determined by the site element and the adjacent existing land use or zoned use in the case of vacant land, according to Table 615-2.
4. Site elements not included in the above list that have similar visual impact shall be screened in accord with

requirements for the most similar elements as determined by the Supervisors.

- The site element screen shall be placed between the site element and the property line and shall be designed to block views to the maximum extent possible. Unless the screen is most effective at another location, it shall be located as close as possible to the site element and shall surround the element without impeding function or encroaching on sight triangles.

TABLE 615-2 SITE ELEMENT SCREENS (See §615.6,D,6 for screen types and design criteria.)				
PROPOSED USE	EXISTING ADJACENT LAND USE (OR ZONED USES WHEN UNDEVELOPED*)			
	Office or Institutional	All Other Nonresidential	Single-Family, Two-Family, Townhouses	All Roads
Dumpster, trash, or recycling area	4 or 8	3 or 4	4 or 8	4 or 8
Service or loading docks	2 or 5	--	2 or 5	2 or 5
Outdoor sales yard and vehicle storage (excluding vehicle sales areas)	1	1	1	1, 7 or 9
Multi-family rear yards	--	--	--	6
Active recreation facilities (tennis, basketball, court games, etc.)	--	--	7	--
Retention or detention basins	6	--	6	--
Sewage treatment plants and pump stations	1 or 8	--	1 or 8	1 or 8
*When residential and nonresidential uses are allowed by the zoning district on undeveloped adjacent land, the residential requirements shall apply.				

- Screen Types and Design Criteria - The following types of screens shall be used where specified in Table 615-2.

SCREEN TYPE	DESIGN CRITERIA
Screen Type #1 <i>Evergreen or Deciduous Shrubs</i>	Shrubs shall be placed three feet on center in a minimum 5-foot-wide bed surrounding the site element and arranged to provide a continuous hedge-like screen up to a minimum height of 3.5 feet at maturity. Shrubs may be clipped to form a hedge or left in their natural habit.
Screen Type #2 <i>Double Row of Evergreen Trees.</i>	A double row of evergreen trees shall be placed 10 feet on center and offset 10 feet to provide a continuous screen at a minimum height of 12 feet at maturity.
Screen Type #3 <i>Opaque Fence</i>	A six-foot opaque fence surrounding the site element on at least three sides.

SCREEN TYPE	DESIGN CRITERIA
Screen Type #4 <i>Opaque Fence with Ornamental Trees and Shrubs</i>	A 6-foot opaque fence surrounding the site element on at least 3 sides with additional plantings at the minimum rate of 3 shrubs and 2 ornamental trees or large shrubs for each 10 linear feet of proposed fence, arranged formally or informally next to the fence.
Screen Type #5 <i>Architectural Extension of the Building</i>	An 8-foot minimum height architectural extension of the building (such as a wing wall) shall enclose service or loading docks. The building materials and style of the extension shall be consistent with the main building.
Screen Type #6 <i>Berm with Ornamental Trees</i>	A 2-to-3-foot-high continuous curvilinear berm with ornamental trees at the rate of 1 tree for every 20 feet, clustered or arranged informally. The maximum slope of the berm shall be 3: 1.
Screen Type #7 <i>A 2-to-3-foot-high continuous curvilinear berm with grass alone.</i>	The maximum slope of the berm shall be 3: 1.
Screen Type #8 <i>Evergreen Hedge</i>	An evergreen hedge (such as arborvitae, chamaecyparis, etc.) with a minimum height at planting of 6-foot plants, 4 feet on center maximum.
Screen Type #9 <i>Low Wall</i>	A wall of brick or stone (not concrete block), at least 50 percent opaque, no less than 3 and no more than 4 feet in height.

7. Existing healthy trees, shrubs, or woodlands may be substituted for part or all of the required plants with the approval of the Supervisors. The minimum quantities and/or visual effect of the existing vegetation shall be equal to or exceed that of the required screen.
8. Existing topographic conditions, such as embankments or berms may be substituted for part or all of the required screen with the approval of the Supervisors. The minimum visual effect shall be equal to or exceed that of the required screen.
9. The applicant may propose the use of alternative screen types or changes in plants or designs which fulfill the intent of this Ordinance, with the approval of the Supervisors.
10. Plants shall meet the specifications of §615.7. Use of plants selected from the *List of Acceptable Plants* in §615.8 is recommended.

615.7 Materials Specifications, Maintenance, and Guarantee

The following standards shall apply to all plants or trees as required under this Ordinance:

A. General Requirements

1. The location, dimensions, and spacing of required plantings shall be adequate for their proper growth and maintenance, taking into account the sizes of such plantings at maturity and present and future environmental requirements, such as wind, soil, moisture, and sunlight.
2. Plants shall be selected and located where they will not contribute to conditions hazardous to public safety. Such locations include, but are not limited to, public street rights-of-way, underground and aboveground

utilities, and sight triangle areas required for unobstructed views at street intersections.

3. Plastic or other artificial materials shall not be used in place of plants.

**B. Plant Specifications**

1. All plants shall meet the minimum standards for health, form, and root condition as outlined in the latest edition of the American Association of Nurserymen (AAN) Standards.
2. All plants shall be selected for hardiness and shall be suitable for planting in the United States Department of Agriculture Hardiness Zone applicable to the Township, and to the specific localized microclimate and micro environment of the planting site..
3. Canopy trees, sometimes called shade trees, shall reach a minimum height or spread of thirty (30) feet at maturity as determined by the AAN Standards and shall be deciduous. New trees shall have a minimum caliper of two and one-half (2.5) inches at planting.
4. Ornamental trees or large shrubs shall reach a typical minimum height of fifteen (15) feet at maturity, based on AAN Standards. Trees and shrubs may be deciduous or evergreen and shall have a distinctive ornamental character such as showy flowers, fruit, habit, foliage, or bark. New ornamental trees shall have a minimum height of six (6) feet or one and a half inch caliper. New large shrubs shall have a minimum height of two and one-half (2.5) to three (3) feet at the time of planting.
5. Small shrubs may be evergreen or deciduous and shall have a minimum height at maturity of four (4) feet based on AAN Standards. New shrubs shall have a minimum height of eighteen (18) inches at the time of planting.
6. Evergreen trees shall reach a typical minimum height of twenty (20) feet at maturity based on AAN Standards for that species and shall remain evergreen throughout the year. New evergreens shall have a minimum height at planting of six to seven (6 to 7) feet.

**C. Maintenance**

1. Required plants shall be maintained in a healthy, vigorous condition and be kept free of refuse and debris for the life of the project to achieve the required visual effect of the buffer or screen. It shall be the ultimate responsibility of successive property owners to ensure that the required plants are properly maintained. Dead or diseased plants shall be removed or treated promptly by the property owner and replaced at the next growing season.
2. All sight triangles shall remain clear; and, any plants that could endanger safety such as unstable limbs shall be removed and the plants replaced if necessary. It shall be the responsibility of the property owner to maintain all plants and architectural elements to assure public safety.
3. Maintenance guidelines for the plants are encouraged to be published by the planting plan designer and be used by grounds maintenance personnel to ensure that the design's buffering and screening concepts are continued.

**D. Landscape Replacement; Performance Guarantee**

1. Any tree or shrub that dies within eighteen (18) months of planting shall be replaced by the current landowner or Developer. Any tree or shrub that within eighteen (18) months of planting or replanting is deemed, in the opinion of the Township, not to have survived or not to have grown in a manner characteristic of its type shall

be replaced. Substitutions for certain species of plants may be made only when approved by the Supervisors.

2. Landscaping shall be considered an improvement for the purposes of installation and the provision of a performance guarantee in accord with of this Ordinance. In addition, the Developer or landowner shall provide to the Township a performance guarantee equal to the amount necessary to cover the cost of purchasing, planting, maintaining, and replacing all vegetative materials for a period of eighteen (18) months following the installation and approval of the landscaping.

615.8 List of Acceptable Plants

All plants used for landscaping and vegetative cover shall be selected from the *List of Acceptable Plants* established by resolution of the Supervisors. The list is intended to offer a broad selection of plants suitable for the various required landscapes required by this Ordinance. Native plants are indicated for use in natural or naturalized settings. Plants not found on the list may be substituted, provided that the Supervisors determines that the requirements of §615.7,B, are satisfied and the plants are suitable for the proposed purpose and location.

615.9 Plan Requirements

All areas of the site shall be included in the landscaping plan, and buffers, screening, and those areas immediately adjacent to buildings and walkways shall be given extra consideration. Landscape plans shall be submitted concurrently with all Preliminary and Final Plans. Landscape plans shall be prepared by a landscape architect licensed and registered to practice by the Commonwealth of Pennsylvania or other person deemed qualified by the Township. In addition to the information required by the other plan information provisions of this Ordinance, the following information shall be provided:

- A. The preliminary landscape plan shall show the following:
  1. Existing Features - The location and character of existing buildings; mature trees standing alone; location and elevation of major specimen trees (12" or greater DBH) in any area of the site proposed for development; outer limits of tree masses and other existing vegetation; and, the location of floodplain, wetlands, and other natural features that may affect the location of proposed streets, buildings, and landscape plantings.
  2. Proposed Landscaping
    - a. Approximate location of all proposed landscaping required by this Ordinance.
    - b. Demarcation of existing vegetation "TO REMAIN" or "TO BE REMOVED" and the means of protecting existing vegetation during construction.
    - c. Approximate location of proposed buildings, paving, utilities, or other improvements.
- B. The final landscape plan shall show the following:
  1. Location of all outside storage and trash receptacle areas.
  2. Sidewalks, berms, fences, walls, free-standing signs, and site lighting.
  3. All existing and proposed contours at an interval deemed adequate by the Township to determine the relationship of planting and grading areas with slopes in excess of 3:1.
  4. Existing mature trees, woodland, and tree masses to remain.
  5. Existing mature trees, woodland, and tree masses to be removed.

6. Location of all proposed landscaping, including required street trees, storm water basin landscaping, parking lot landscaping, property line buffers, and site element screen landscaping.
7. A planting schedule listing the scientific and common name, size, quantity, and root condition of all proposed plants.
8. A schedule showing all landscape requirements and plants proposed for each category.
9. Planting details, including method of protecting existing vegetation, and landscape planting methods.
10. Information in the form of notes or specifications concerning seeding, sodding, ground cover, mulching, and the like, etc.
11. A detailed cost estimate shall be submitted, showing the value of all proposed landscaping, including all labor and materials.

**616 Street, Parking Area and Building Lighting**

Street lights may be required when considered necessary by the Supervisors and shall be of such design and spacing as required by the Supervisors in accord with current Township specifications. A lighting plan shall be provided by the Developer for all subdivisions and land development and shall include details for lighting of streets, parking areas and buildings. Street lights shall be required for all major subdivisions unless the Developer documents that such lighting is not necessary and a modification is granted by the Board of Supervisors. All lighting shall comply with §701.8 of the Township Zoning Ordinance and the standards of the Illuminating Engineering Society (IES) of North America.

**617 Traffic Signs and Signals**

Traffic signs and traffic signals shall be required when considered necessary by the Supervisors to ensure safe traffic or pedestrian circulation. All traffic signs and signals shall meet the most current requirements of PA DOT. In the case of traffic signals, the Developer, any subsequent owner, or any subsequent Property Owners Association or similar entity shall be responsible for the long term operation, maintenance, and replacement of the traffic signal and all associated facilities, signs, and pavement markings.

**618 Wetlands**

618.1 Identification

If a proposed subdivision or land development includes any area that is suspected of being a wetland, then a professional wetland delineation shall be required. The Planning Commission or Board of Supervisors may require that the applicant obtain a Jurisdictional Determination from the U.S. Army Corps of Engineers. Until such time as the Board of Supervisors has approved application, the wetland limits shall be visibly identified in the field.

618.2 State and Federal Regulations

Any approval under this Ordinance shall be conditioned upon compliance with federal and state wetland regulations. The Board of Supervisors may refuse to approve a plan for recording or delay the issuance of permits until an applicant documents such compliance.

618.3 Zoning Ordinance.

Wetland buffers shall be provided in accord with §704.2 of the Township's Zoning Ordinance.

**619 Multi-Family Dwellings**

In addition to the applicable requirements of this Ordinance, multi-family dwelling projects shall comply with all applicable requirements of the Township's Zoning Ordinance.

**620 Community Facilities and Recreation Fees**

**620.1 Purposes**

The purpose of this section is to provide adequate community facilities and active and passive recreational facilities to serve the occupants of new developments; and, to recognize and accomplish the goals and policies of the Township's Comprehensive Plan, Recreation Plan, or Regional Recreation and Open Space Plan.

**620.2 Applicability**

This section shall apply to any subdivision or land development for which a Preliminary Plan or a combined Preliminary/Final Plan is required.

**620.3 School Sites**

The Board of Supervisors with the advice of the School District serving the Township may require the Developer of residential subdivisions or land developments to reserve land to be conveyed for a consideration to the School District for school sites.

**620.4 Fire, Police, Library and Other Public Buildings**

The Board of Supervisors may require the Developer to reserve land to be conveyed for a consideration or dedication to the Township as open land provision for future facilities to be located on public grounds.

**620.5 Street Rights-of-Way Reservations**

The Board of Supervisors may require the Developer to dedicate land to the Township for future street widening for the purpose of the protection and preservation of the public health and safety, and to conform to the Township and/or Regional Comprehensive Street Plans.

**620.6 Recreation Fees**

The Developer of any subdivision or land development governed by this §620 shall pay a recreation fee in accord with the following:

- A. **Fee Amount** - The fee amount shall be established by resolution of the Board of Supervisors.
  - 1. Fees for dwelling lots and units shall be assessed on a per lot and per unit basis.
  - 2. Fees for nonresidential development shall be assessed on a per square foot of impervious area basis. No fee shall be assessed for developments of less than one thousand (1,000) square feet of impervious area, nor for any development which does not require approval under this Ordinance.
- B. **Accounting** - Any fees collected under this section shall be deposited in an interest bearing account, clearly identifying the specific recreation facilities for which the fee was received. Interest earned on such accounts shall become funds of that account. Funds from such accounts shall be expended only in properly allocable portions of the cost incurred to construct the specific recreation facilities for which the funds were collected.
- C. **Use of Fees** - The fees shall be used for Township or other public recreation facilities located in the Township. In addition, the Supervisors may commit fees to a recreation area open to the public in an adjacent municipality that would serve the inhabitants of the development that paid the fees. Such fees shall only be used for the acquisition of public open space and related debt payments, development of public recreational facilities, landscaping of public open space, and related engineering and design work.
- D. **Time Limit on Use** - Upon request of any person who paid any recreation fee, the Township shall refund such fee, plus interest accumulated thereon from the date of payment, if the Township has failed to use the fee for the purposes set forth in this §620 within three (3) years from the date such fee was paid.

- E. Timing of Fees - Fees shall be paid prior to the approval of the Final Plan. The Developer and the Supervisors may mutually agree to provisions in a binding development agreement to enable the payment of all applicable recreation fees prior to the issuance of any building permit within each clearly defined phase of the development. In such a case, the time limitation established in Subsection D above shall not begin until all such fees are paid for all development phases.

**620.4 Facilities in Place of Fees**

An applicant may submit a written request for a modification of the requirements of this §620 by offering to construct recreation facilities open to the general public within the proposed subdivision or land development or on public parkland. Such modification shall only be approved if the Developer clearly proves to the satisfaction of the Supervisors that the facilities will serve a valid public purpose, will be designed following modern standards in a durable manner, and will have an equal or higher value than the fees that would otherwise be required. The Supervisors shall determine whether facilities construction would be in the public interest, or whether the payment of fees is required. The Supervisors shall, at a minimum, consider the following in this decision:

- A. Whether the facilities in the proposed location would serve a valid public purpose.
- B. Whether the facilities are a desirable addition to an existing public park.
- C. Whether the proposed facilities meet the objectives and requirements of this §620 and any relevant goals and policies of the Township’s Comprehensive Plan, Recreation Plan, or Regional Recreation and Open Space Plan.
- D. Whether the facilities, if proposed within the development, will be easily accessible to other Township residents.
- E. Any recommendations from the Planning Commission, the Township Engineer, the School District, or the County Parks and Recreation Board.

**621 Floodplain**

The Township’s Zoning Ordinance creates the Floodplain Overlay District which is coterminous with the areas which are subject to the one hundred (100) year flood as identified in the most current *FIRM - Flood Insurance Rate Map* issued by the Federal Emergency Management Agency. In addition to all other applicable standards of this Ordinance the floodplain regulations in the Township’s Floodplain Ordinance shall apply in the Floodplain Overlay District. The identified floodplain area may be modified only in accord with the requirements of the Township’s Floodplain Ordinance and the Federal Emergency Management Agency.