

## Section 409. Preservation and Protection of Existing Vegetation

### A. Preservation of Existing Vegetation.

1. All subdivisions and land developments shall be laid out in such a manner as to minimize the removal and/or disturbance of healthy trees, shrubs, and other vegetation on the site. Special consideration shall be given to mature specimen and/or Heritage trees and ecologically significant vegetation.
2. Removal or disturbance of vegetation in environmentally sensitive areas, including wetlands, floodplains, steep slopes, riparian corridors, wildlife habitats, and ecologically significant woodlands as identified in the Montgomery County Natural Areas Inventory or other sources shall be undertaken only as permitted in Section 409.D.1. to minimize the adverse effects of such actions.
3. The applicant shall prove to the satisfaction of the Springfield Township Board of Commissioners that vegetation removal is minimized. A written document or plan may be requested to be performed by a registered landscape architect or other qualified professional showing that more desirable layouts are not possible ~~no more desirable layouts are possible~~ and no alternative clearing or grading plan would reduce the loss of mature trees, tree masses, and woodlands.
4. Each freestanding mature tree, tree mass, or woodland on the site shall be designated "TO REMAIN" or "TO BE REMOVED" in accordance with the following criteria:
  - a. A mature tree, tree mass, or woodland may be designated "TO BE REMOVED" only if it meets one or more ~~all~~ of the following criteria:
    - 1) The outermost branches of the tree(s) are within at least five (5') feet or the trunk of the tree is within at least twenty (20') feet, ~~whichever is less, from~~ of any proposed buildings, structures, paving, parking, or utilities (overhead or underground).
    - 2) The outermost branches of the tree(s) are within at least five (5') feet or the trunk of the tree is within at least twenty (20') feet, ~~whichever is less, from~~ of any proposed changes in grade or drainage such as excavations, mounding, or impoundments.
    - 3) The tree(s) interferes with traffic safety or are located within proposed sight triangles or by its location poses any undue threat to the health, safety, and welfare of the community.
    - 4) The tree(s), by its ~~location or~~ apparent health, poses any undue threat to the health, safety, and welfare of the community, and is declared a "dead tree" or has declined beyond recovery, to be determined by a certified arborist.
    - 5) The tree blocks required solar access as determined by and/or certified by a solar panel installer and with proof that solar panels

will be installed in a form deemed acceptable by the Planning Director.

- b. Mature trees, tree masses, or woodlands that do not fit the above criteria should be designated "TO REMAIN."
- c. Unique or Specimen Trees ~~shall should~~ be preserved. No Heritage tree is to be removed for any reason without the prior approval of the Board of Commissioners.

B. Protection of Existing Vegetation

- 1. Existing vegetation designated "TO REMAIN," in accordance with Section 409 D. 1., as part of the landscaping of a subdivision or land development shall be identified in the field prior to any clearing and shall be physically protected throughout the construction process.

- a. A temporary, sturdy physical barrier, such as a snow fence, shall be erected a minimum of one foot outside the drip line or a minimum of twenty (20') feet from the tree's trunk, whichever is greater on all sides of freestanding trees, tree masses, or woodlands prior to major clearing or construction.

- b. The barrier shall be placed to prevent disturbance to or compaction of soil inside the barrier and shall remain until construction is complete.

- c. The barrier shall be shown on the erosion and sedimentation control plan and the landscape plan. Reference to the installation of tree protection should be included in the sequence of construction notes to insure incorporation of tree protection before the earliest stages of site disturbance.

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

Preserved Tree (dbh)	Number of Trees Credited (2 ½" caliper)
30" or greater	8 Trees
18"-29"	6 Trees
12"-17"	4 Trees
6"-11"	2 Trees

D. Tree Replacement Planting Requirements

- 1. Any subdivision or land development proposal which will result in the destruction of 25 (%) percent of the existing trees six (6) inches dbh or greater on a lot shall replace the removed trees. The total tree removal impact of woodland areas designated "TO BE REMOVED" shall be measured by a forest density

survey that calculates the approximate quantity of trees (with 6" or greater dbh) per square foot area. Calculated woodland tree removals and individual mature tree removals shall be listed on the plan. Tree replacement shall occur in the following manner:

- a. Each tree six (6) inches dbh or greater that is destroyed shall be replaced with two or more ~~one~~ trees with a caliper of 2½ " inch caliper.
  - b. Replacement trees shall generally comply with the general landscape design criteria in Section 438 of this ordinance.
  - c. Replacement trees must be identified as a species native to the area or chosen from a List of Recommended Species.
2. Replacement trees shall be planted on the site to mitigate for the existing trees removed, in addition to other landscaping requirements. Proposed replacement tree plantings shall be listed on the plan.
  3. If the site does not reasonably contain enough room for the required replacement trees, the Springfield Township Board of Commissioners may allow the developer to locate some or all of the replacement trees on public lands or accept an equivalent fee-in-lieu of plantings dedicated to the future planting of vegetation by the Township, at their discretion.
  4. Calculation and estimation of existing trees shall be performed before any clearing commences and shall be documented on the plan.
  5. Calculation and estimation of the existing trees remaining after construction shall be performed and compared with the calculations of the approved plan. Any tree removals additional to those on the approved plan shall be replaced as required by this section prior to the issuing of any occupancy permits.
  6. The species of replacement trees are to be hardy to the area and noninvasive and 50% shall be native, consistent with the provisions of this section. The applicant can refer to the Pennsylvania Department of Conservation and Natural Resources Bureau of Forestry's latest publication of tree species for listing of selections.
  7. Replacement of removed trees shall be made within one year during the spring or fall planting season following the completion of the development project. The cost of such replacements shall be borne by the applicant.

#### Section 410. Wetland Protection.

- A. The presence of hydric soils may indicate wetlands. When hydric soils are indicated on the site, a wetlands study shall ~~should~~ be conducted in accordance with the federal Corps of Engineers Wetlands Delineation Manual (1987 Manual). In the event no wetland study is undertaken, the location of soils with soils rated as all hydric in the county soil survey on site will be assumed to be wetlands for the purpose of this ordinance and so noted on the plan.

- B. Wetlands as defined by the U.S. Army Corps of Engineers and the Commonwealth of Pennsylvania in accordance with Section 404 of the Federal Clean Water Act of 1977 and the Pennsylvania Clean Streams Act shall be preserved in subdivisions and land developments. Required permits shall be obtained at an early stage to determine the extent and location in the proposed subdivision and/or land development.
- C. A twenty-five (25')-foot setback shall be maintained around the perimeter of all wetlands. This area will be known as the Wetland Buffer. No removal of vegetation, except the selective removal of dead trees and or other noxious vegetation in the wetland area or buffer shall take place without the specific permission of the Township.
- D. Required building setbacks as described in the Zoning Ordinance shall be measured from the edge of the Wetland Buffer.

#### Section 411. Riparian Corridor Management.

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

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

- A. Minimal Grading: Grading shall be limited to the minimum amount of disturbance of soil or natural topography.
- B. Top Soil Protection. The top six (6") inches of soil that existed naturally on the site prior to subdivision or land development shall be managed in the following way:
  - 1. In areas to be graded, the top soil shall be stripped off and stockpiled on the site in accordance with the erosion and sediment control plan.
  - 2. Following construction, the stockpiled soil shall be redistributed uniformly on the site to a minimum depth of six (6") inches.
  - 3. Any topsoil in excess of soil needed to for the reestablishment of six (6") inches depth in areas of the site that will not be paved may be removed from the site based upon the determination of the Township Engineer.

- C. Grading. All permanent and temporary cutting, filling, grading, regrading, and/or other forms of earth-moving activities shall be known as "grading" and shall be conducted only in compliance with the standards as described below.
1. All grading shall be set back from property lines at least three (3') feet, or a sufficient distance to prevent any adverse effects on adjacent properties.
  2. No permanent excavation shall be made with a cut face steeper in slope than three (3) horizontal to one (1) vertical. For steeper slopes, a soils report prepared by a qualified engineer or geologist experienced in performing such studies and registered in the Commonwealth of Pennsylvania shall be prepared to document the soil stability.
  3. Wherever grading will increase the volume or velocity of stormwater flow toward a property line, the applicant shall install and maintain drainage facilities sufficient to prevent adverse effects on the adjoining property. The construction and operation of these drainage facilities shall not cause any adverse effects on abutting properties.
  - ~~4. Within the property proposed for development or along property lines, where grading creates an abrupt drop-off in contrast to a previously existing gradual change or where a wall is being installed, the applicant shall be required to install a fence or other suitable protective barrier.~~
  5. A permit shall be required for grading operations. Permits shall be issued by the Planning Director upon recommendation of the Township Engineer for each tract, lot, parcel, or site which comprises a separate operation, unrelated to or not contiguous with nearby grading proposed or performed by the applicant. A permit shall not be required in the following situations, however:
    - a. For an excavation that does not exceed twenty (20) cubic yards total material removed.
    - b. For a fill that does not exceed twenty (20) cubic yards of material deposited.
    - c. For an excavation below finished grade for basements and footings for a single-family detached or two-family dwelling, swimming pool, or underground-structure authorized by building permits, excavation for a driveway for a single-family detached or two-family dwelling, or the regrading of such excavated materials into the site from which they were excavated.
  6. Each application for an earth disturbance permit shall include a tree survey plan comprised of existing and proposed topographic information at two-foot contour intervals, existing and proposed building and structures, driveways, and parking areas, drainage structures, water detention/retention areas, utilities, construction material staging area, and all limits of grading.

## Section 413 Erosion and Sediment Control.

- A. General. Erosion and Sediment Control must be addressed in the following manner:
1. An Erosion and Sediment Control Plan, which meets the requirements of the Chapter 102 regulations must be approved by the Montgomery County Conservation District (MCCD) and available on site for all earth disturbance activities greater than or equal to over 5,000 sq. ft.
  2. All construction activities proposing to disturb more than one (1) acre between one and five acres with point source discharge to surface waters of the Commonwealth, or projects disturbing five (5) or more acres of land must be authorized by a National Pollutant Discharge Elimination System (NPDES) permit.
  3. No subdivision or land development plan shall be approved unless:
    - a. There has been a plan approved by the MCCD and/or Township Engineer Board of Commissioners that provides for minimizing erosion and sedimentation consistent with this Section, and an improvement bond or other acceptable securities are deposited with the township in the form of an escrow guarantee which will insure installation and completion of the required improvements; or
    - b. There has been a determination by the MCCD and/or Township Engineer Board of Commissioners that a plan for minimizing erosion and sedimentation is not necessary.
  4. The Board of Commissioners, in its consideration of any Preliminary Plan of subdivision and land development, shall condition its approval upon the execution of measures designed to prevent accelerated soil erosion and resulting sedimentation, as required by PADEP. All applicable regulations and permit requirements of PADEP as stipulated in its Soil Erosion and Sedimentation Pollution Control Manual shall be followed for all earth-moving activities.
- B. Performance Principles.
1. Any appropriate action which minimizes erosion and sedimentation as described in the Pennsylvania Erosion and Sediment Pollution Control Program Manual can be included in the plan. Alternative methods should be discussed with the Township Engineer prior to the preparation of an erosion and sediment control plan.
  2. No unfiltered stormwater coming from an area which has been disturbed shall be permitted onto an adjacent tract or allowed to be discharged into any waterbody.
- C. Responsibility.
1. Whenever sedimentation is caused by stripping vegetation, regrading or other development activity, it shall be the responsibility of the applicant to remove it from all adjoining surfaces, drainage systems and watercourses and to repair any damage at their expense as quickly as possible.

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

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

The design of subdivisions and land developments should be done to preserve desirable structures containing cultural and historic features wherever reasonably possible.

- A. No proposal will be approved with a property line extending through any portion of an existing building, except where that property line follows a party wall separating semi-detached or attached units, in accordance with the Springfield Zoning Ordinance.
- B. When existing ~~structures buildings~~ are retained:
  1. Minimum building setbacks shall be met or exceeded, in respect to all new lot lines created, for the district in which the buildings are located, even if this results in a lot area or dimensions in excess of the otherwise applicable minimums.
  2. ~~When new lot lines are created,~~ building setbacks in excess of the applicable minimums are encouraged, ~~in respect to all new lot lines created,~~ when the height of the existing building significantly exceeds that of proposed, abutting development. For tall buildings, a setback equal to the height of the building is recommended. should be used. For proportionally wide or deep structures, a setback at least equal to one-half the width or depth of the structure is suggested.
  3. Structurally deficient buildings shall be rehabilitated in conformance with the Township Building Code.
  4. Additions to retained buildings shall conform in all respects to the requirements of the Zoning Ordinance applicable to the district in which the building is located, and shall be in harmony with the character, design, building materials, and other architectural features of the building.
  5. ~~The design of subdivisions and land developments shall preserve notable structures containing cultural and historic features, wherever reasonably possible. Historical or culturally significant buildings shall retain their respective character, to the greatest extent practical.~~

6. New buildings abutting any retained building should reflect the retained structure's character ~~their respective characters~~, to the greatest extent practical.
  7. In non-residential districts, retained buildings shall be provided with adequate parking, service, and landscaped areas in accordance with the zoning ordinance provisions for the intended use. ~~If the applicant cannot specify the intended use, then the most land consumptive provisions shall be applied, to ensure sufficient land area for uses permitted in that district.~~
- C. When existing structures buildings will be removed:
1. The plan must show the location and include a brief description of the structure(s) building(s) to be removed.
  2. Final plan approval will be conditioned upon written agreement to the expeditious removal of structures buildings intended for removal, in conformance with township demolition permits requirements.
  3. All applicable township requirements and procedures regarding demolition of structures buildings and disposition of the reusable parts and/or disposal of the rubble shall be complied with.
  4. If the structure building will not be removed immediately, it shall be secured in a manner that it is not a public safety hazard and a financial guarantee must be posted for its removal, in compliance with Section 702, herein.

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

- A. All new streets and additions to existing streets shall:
1. be offered for dedication to the township. The township may accept or refuse dedication of any street.
  2. conform with the transportation element of the most recently adopted Springfield Township Comprehensive Plan and county or state highway plans, and be designed to conform with the existing street system.
  3. provide appropriate access between abutting tracts of land for immediate or future use.
  4. create a road hierarchy among interior subdivision and land development streets and exterior streets to ensure proper through-traffic flow, local access, and internal traffic distribution and flow.
    - i. On tracts of fifteen (15) acres or more, new streets shall have a street connectivity index of 1.4 or more. The street connectivity index shall be computed by dividing the number of new street links (defined as street segments between intersections and/or cul-de-sac heads) by the number of new street intersections/permanent cul-de-sac heads.
  5. conform to existing topography to assure reasonable grades, alignment and drainage, appropriate access to lots, and to minimize regrading and removal of vegetation.



6. ~~be designed to~~ continue existing streets at equal or greater right-of-way and cartway width, as recommended by the Township Engineer and Planning Commission.
  7. include curbs and sidewalks installed along all existing and proposed public and private streets and common parking areas. ~~except when this requirement is waived at the discretion of the Springfield Township Board of Commissioners, upon recommendation of the Township Planning Commission and Engineer.~~
- B. Street names shall be assigned in accordance with Section 616.

#### Section 416. Private Streets:

- A. Private streets shall be designed and constructed in conformance with all design and engineering regulations of the Township Code and this chapter that apply to public streets, unless otherwise provided herein.
- B. Whenever dedication of a street is not accepted by the Board of Commissioners, the applicant shall submit and record with the plan a covenant address the ownership, access rights, and maintenance responsibilities for that street.
- C. When, in the determination of the Board of Commissioners, it becomes necessary for the Township to assume responsibility for a private street in order to maintain the health, safety, and welfare of the residents of the township, the township may do so and assess the property owner(s) or abutting owners who use the street for any improvements necessary to restore the street to conformance with township specifications.

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

- A. ~~Residential Private Streets. Private streets may be permitted by the Board of Commissioners to provide access to land which abuts its right of way. Private streets shall comply with the following:~~
  1. ~~The minimum right of way or equivalent right of way shall be fifty (50') feet.~~
  2. ~~Minimum paved cartway width shall be eighteen (18') feet.~~

- ~~3. Streets shall be built in accordance with the Construction and Engineering Standards in Article Six of this ordinance.~~
- ~~4. An irrevocable right of access shall be guaranteed to all properties whose access depends upon the private street, by means of legal agreement or covenants, subject to approval by the Board of Commissioners as advised by the Township Solicitor.~~
- ~~5. The legal access agreements and/or covenants shall be:
  - ~~a. Clearly noted on the subdivision or land development plans for all properties using private streets for access.~~
  - ~~b. Included in the deeds for all properties having these access rights.~~
  - ~~c. Recorded in the Montgomery County Office of the Recorder of Deeds.~~
  - ~~d. Clear and specific with regard to property owner's rights to further subdivision or land development, especially in regard to the need to receive approval from the private street owner and/or waiver from the requirement of this ordinance.~~~~
- ~~6. The private street may be owned by one or more of the property owners who have right of access or may be jointly owned by an association of these property owners.~~
- ~~7. When several properties use a private street, maintenance shall be guaranteed by the formation and administration of an association or other legally binding organization of all land owners with access rights.
  - ~~a. Documents governing such associations shall be subject to approval of the Board of Commissioners upon the advice of the Township Solicitor, shall be filed with the township, and shall be recorded with the deed for each property with access rights.~~
  - ~~b. All property owners in such an association or other type of organization shall have a share in the rights and bear a share of the costs and other burdens of maintenance, as specified in the access agreements and/or covenants. This share shall also apply to the assessed costs for upgrading to public street standards, in accordance with the Construction and Engineering Standards in Article Six of this ordinance.~~
  - ~~c. If one or more property owners in the association or other type of organization believe that the street is not being properly maintained, and cannot succeed in having the association or other type of organization authorize or conduct proper remedies, then that/those property owner(s) may request the Township to authorize an inspection of the street by the Township Engineer. The cost of the inspection shall be paid by those property owners requesting the inspection. If the Township Engineer determines that the street is not being properly maintained, the Township may take corrective actions against the entity maintaining the road.~~~~

~~8. The Board of Commissioners reserves the right to order the private street to be upgraded to meet all of the standards and requirements for a public street, if, at any time, they deem the road to be a health or safety hazard for reasons of improper or inadequate maintenance.~~

~~a. The full costs of upgrading the street, including engineering, legal and related costs, shall be assessed against the owner of the road. The share of the assessment to be determined by the association's legal access agreements and/or covenants recorded for the private street.~~

~~b. Prior to such action by the Board of Commissioners, the landowners with access rights shall be notified, in writing, by certified mail, of the pending action. The landowners will have thirty (30) days from the date of such notice to propose an alternative solution acceptable to the Board of Commissioners.~~

~~9. Additional Provisions~~

~~a. Any vehicular access way which provides the primary access to more than three (3) lots or housing units, but is not offered for dedication as a public street, shall be considered a private street subject to these requirements.~~

~~b. Not more than ten (10) dwelling units may be served by a private street which has access to a public street (private dead end or cul-de-sac street) if the street is not owned and managed by a homeowners association or owner of the entire property.~~

~~c. Emergency access to a private street which has only one public street access may be required.~~

~~d. For private cul-de-sac streets, a suitable turnaround shall be provided, subject to the approval of the Township Engineer. A forty (40') foot radius paved bulb turn around is preferred, but other configurations may be used if acceptable to the Township Engineer.~~

~~10. Further subdivision or land development of any lot depending upon a private road for vehicular access where properties and streets are under multiple ownership or not subject to a homeowners association is prohibited if it would exceed the number of lots permitted, maximum length of a cul-de-sac, or any other applicable requirements contained in this ordinance. If an applicant requests such further subdivision, the following standards shall apply:~~

~~a. The street must be upgraded to meet all the standards and requirements for public street construction, and must be offered for dedication to the township, or~~

~~b. Further subdivision may be permitted and the street may remain private, if the Board of Commissioners approves the waiver of necessary design standards.~~

- ~~c. The applicant shall apply in writing to the Board of Commissioners for approval to upgrade the street or to be granted appropriate waivers.~~
- ~~d. Application to the Board of Commissioners shall include written approval from the association or organization which controls the street for the applicant to seek township approval for upgrading or waivers.~~
- ~~e. Upgrade of the street or waivers should not be approved by the Board of Commissioners unless approval is first received from the association or other organization which controls the street.~~
- ~~f. The costs of upgrading a private street to public street standards including the dedication, and/or costs involved in granting waivers shall be borne by the association of individual property owners in accordance with the association's legal access agreements and/or covenants.~~

~~11. An Individual private driveway may be legally reclassified and physically upgraded and improved to become a private street upon approval of the Board of Commissioners.~~

- ~~a. A right of way shall be established to contain the private street in compliance with the requirements herein.~~
- ~~b. The private driveway shall be physically improved to comply with private street construction and paving width standards, as well as applicable dimension standards.~~
- ~~c. Maintenance shall be guaranteed as established for a private street in this ordinance.~~
- ~~d. Upgrading of existing individual driveways to private street status is encouraged where it would take the place of several individually owned and maintained access strips.~~

~~12. Parking shall not be permitted within the minimum eighteen (18') foot wide cartway of a private street, but may be permitted outside the cartway in a manner that does not interfere with the free movement of emergency vehicles along the private street.~~

- ~~a. The legal access agreements and/or covenants shall guarantee free unobstructed access throughout the minimum eighteen (18') foot wide cartway. If violations occur, attempts should be made to resolve the problems within the structure of the association or organization which controls the street. Under situations of repeated and/or flagrant violations, individual property owners may request police enforcement of free and unobstructed access.~~
- ~~b. If there is a continuing access problem caused by improper parking, the Board of Commissioners shall notify the owner of the private street or homeowners association, in writing, that the problem must be corrected by some means satisfactory to the Township Engineer or~~

~~Solicitor, depending upon whether the solution is a physical or legal remedy.~~

~~c. If, after written notification, the owner or association or organization which controls the road fails to correct the parking problem, the Board of Commissioners may order the upgrading of the private street to public street standards as specified herein. The owner or association or organization which controls the road shall have thirty (30) days from the date of written notification to propose a solution to the parking problem.~~

~~13. In considering applications for waivers of private street standards, the Board of Commissioners shall consider the following:~~

~~a. Number of lots and/or dwelling units in excess of the permitted maximum.~~

~~b. Whether or not more lots could be proposed along the private street, in conformance with the applicable zoning, in addition to those proposed in conjunction with the waiver application. For example, one additional unit may be acceptable in itself, but may not be acceptable if a potential would exist for five more lots.~~

~~1) The Board of Commissioners may require the applicant to submit a sketch plan and/or information showing the approximate maximum number of lots and/or dwelling units which could be created under the applicable zoning requirements, on all lands serviced by the private street.~~

~~2) When conditions are considered favorable for limited additional subdivision under the private street access, the Board of Commissioners may request deed restrictions against further subdivision as a condition of final approval of the subdivision.~~

~~c. Ability of a private street to be served by an emergency access as a condition of granting a waiver.~~

~~d. Characteristics of properties, neighborhood and private street(s) involved:~~

~~1) Configuration of the properties.~~

~~2) Lot sizes and development characteristics, with particular regard to avoiding congested appearance and functioning.~~

~~3) Topography, including vegetation and other environmental characteristics.~~

~~4) Character of land and development surrounding the properties in question, including their development status and potential development.~~

~~e. Whether or not requiring a public street would have an appreciable benefit to the properties and/or the township in terms of access and traffic circulation.~~

~~f. The economic impact of permitting the waiver compared to requiring a public street.~~

- B. ~~Non-residential Private Streets. Private streets may be permitted by the Board of Commissioners to provide access to various non-residential developments or lots.~~

#### Section 417. Street Classifications.

Every street, road, or highway within the township shall be classified by its function as shown on the Functional Classification Map in the most recently adopted Springfield Township Comprehensive Plan, and shall be subject to the requirements for its classification as contained in this Article. ~~These classifications are based on the Montgomery County Comprehensive Plan which incorporates standards~~ established by the American Association of State Highway and Transportation Officials (AASHTO), and used by PADOT, ~~and~~ Street classifications are intended to provide appropriate standards for each road, as well as to coordinate street functions and improvements among neighboring municipalities, the region, and the state. The classifications are as follows:

- A. General. The design standards for each road classification are contained in Table 417.1.
- B. Expressways. ~~The highway carrying the largest traffic volume is an expressway which is a~~ Expressways are multi-lane divided highway with fully controlled access provided only at grade separated interchanges. Expressways serve high volumes of traffic at high speeds while providing high levels of safety and efficiency. ~~The typical posted speed is fifty five (55) miles per hour.~~
- C. Arterials. Arterial roads provide a high degree of mobility in order to better serve trips of longer length. Since access to abutting property is not their major function, access controls are desirable to enhance mobility. They are further classified as follows:
1. Principal Arterials. ~~The design standards for principal arterials are contained in Figure 4.2.~~ Principal arterials generally provide between two (2) and four (4) lanes of travel depending upon traffic volume and land use density. ~~Urban~~ Principal arterials may have wider travel lanes and should have parking lanes. ~~Both urban and rural principal arterials generally have posted speeds of forty five (45) miles per hour dependent upon local site conditions. Bicycles and pedestrians should be accommodated with dedicated bicycle lanes and sidewalks or with a multi-use side-path separated from traffic. Intersections should have high-visibility crosswalks and other pedestrian safety features.~~
  2. Minor Arterials. Minor Arterials interconnect with and augment Principal Arterials in serving major activity centers. They typically accommodate trips between three (3) and five (5) miles in length. They are spaced at intervals consistent with population density and carry vehicles within or between several municipalities of the county. ~~The only difference between rural and urban design for minor arterials is the location of a parking lane on urban arterials.~~ Lastly, they link other communities not connected by a principal arterial and provide key

connections between roads of higher classification. Minor arterials should have parking lanes. The design standards for minor arterials are included in Figure 4.2.

D. Collectors. Collector roads provide serve a dual function of providing a mix of accessibility and mobility. They typically serve trips of up to four (4) miles in length and channel or distribute traffic to or from a road of a higher classification. Collectors may accommodate trips within and between neighboring municipalities. They are further sub classified as Major and Minor Collectors. Sidewalks should be provided. On-street parking may be permitted where practical.

1. Urban Collectors: These types of roads provide a combination of mobility and access with a priority on mobility. Ideally access is partially controlled with preference given to through traffic. Access is permitted with at grade intersections and major access driveways of selected land uses such as a retail or employment center. Few if any individual driveways should be permitted off of urban collections. Urban collectors may accommodate trips within and between neighboring municipalities and may serve as the major road through large industrial complexes or office parks or provide key connections between roads of higher classification. The typical posted speed is thirty five (35) to forty (40) miles per hour. The design standards for urban collectors are in Figure 4.2.
2. Rural Collectors: Rural collectors provide a combination of access and mobility with more emphasis on access. They allow more access to abutting properties with little or no restriction. Individual driveway access is permitted. Generally rural collectors accommodate trips only within a small segment of a municipality. They are spaced at intervals to collect traffic from local roads and neighborhoods and channel it to urban collectors and arterials. Finally rural minor collectors may serve as a major road through a residential neighborhood. Rural minor collectors serve the same function as urban collectors, though due to their location, they handle smaller volumes of traffic and generally have smaller travel lanes and shoulders. The typical posted speed is twenty five (25) to thirty five (35) miles per hour. The design standards for minor collectors are in Figure 4.2.

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

1. Residential Streets. New streets or extensions of existing streets in residential developments function primarily to provide vehicular access and street frontage for each lot. The design standards for residential streets are in Figure 4.2. Parking

on both sides will be assumed on residential streets unless no driveways take access on them or the development otherwise provides significant off street public parking which is convenient to all the proposed houses.

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



**Table 417.1.1 Road Design Standards**

Functional Classification	Right of Way <sup>1</sup>	Number of Lanes <sup>2</sup>	Travel Lane Width <sup>3</sup>	Left Turn Width	Paved Shoulder Width <sup>4</sup>	Parking Lane Width <sup>5</sup>	Bicycle Lane Width <sup>6</sup>	Border Area <sup>7</sup>	
								Grass Strip	Sidewalk/ Pathways <sup>8</sup>
<b>Arterials</b>									
Principal	80'-100'	4-6	12'-14'	11'-12'	8'-10'	8'-10'	5'-6'	5'	5'-8'
Minor	80'-100'	2-5	11'-14'	11'-12'	8'-10'	8'-10'	5'-6'	4'	5'-8'
Collectors	60'-80'	2-3	11'-14'	10'-12'	8'-10'	8'-10'	5'-6'	4'	4'-8'
Local	50'	Total Cartway Width <b>28 to 32 feet 26 to 30 Feet<sup>9</sup></b>							
<b>Alley</b>	<b>33'</b>	<b>Total Cartway Width 16 Feet</b>							

<sup>1</sup>The right-of-way may be adjusted to accommodate highly urbanized and laterally restricted areas as well as unrestricted areas.

<sup>2</sup>The number of lanes vary in order to accommodate the traffic volume, turning movements, and land capacity demand for selected level of service. This number does not include right-turn lanes where needed.

<sup>3</sup>Lane width is based upon minimum and desirable standards as well as other conditions such as being adjacent to a curb or the anticipation of heavy truck traffic. When feasible, a 14 foot lane should be located next to a curb.

<sup>4</sup>Shoulder width is based upon minimum and desirable standards as well as other conditions such as highly urbanized and laterally restricted areas, or the anticipation of heavy truck traffic. Wide shoulders may function as bike lanes.

<sup>5</sup>Parking lane width is based upon minimum and desirable standards, as well as other conditions such as lot size, intensity of development, or potential for use as a traffic lane where required by future demand. For principal arterials, parking lanes are only recommended in highly developed areas.

<sup>6</sup>A portion of a roadway that has been designated by striping, signing or pavement markings for the preferential or exclusive use of bicyclists. Width specifications must be in accordance with FHWA / AASHTO standards. Wide shoulders may function as bike lanes.

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<sup>7</sup> The presence of curbing, grass planter strips, and sidewalks will depend upon adjacent land uses and site conditions. Otherwise, the border area would consist of a drainage swale and slope.

<sup>8</sup> Sidewalk width is based upon minimum desirable standards for use along each particular roadway. Under certain circumstances, the location, feasibility, and other site-specific conditions may require deviations from these guidelines.

<sup>9</sup> For local roads, the total cartway width generally includes travel lane, parking lanes, and/or shoulders.