

## ARTICLE XVII

### GENERAL REGULATIONS & DESIGN STANDARDS

#### Section 1700. PURPOSE

This Article contains certain general regulations and design standards that are common to all zoning districts unless stated as pertinent to a specific district herein.

#### Section 1701. PROJECTIONS INTO REQUIRED YARDS

Projections into required yard areas shall be permitted in all zoning districts in accordance with the following provisions:

1. Open fire escapes, unroofed porches, chimneys and bay windows may project a maximum of four (4) feet into any side or rear yard.
2. Awnings or movable canopies may project into any yard a maximum of twelve (12) feet, provided they extend no closer than fifteen (15) feet from the property line.
3. Arbors, open trellises, unroofed steps or terraces, decks, and similar uninhabitable accessory structures and projecting flagpoles shall be permitted within side and rear yard areas provided that they are not more than twelve (12) feet in height and are set back a minimum of ten (10) feet from the lot line.

Section 1702. This section deleted per Ordinance No. 141, adopted December 16, 2008

#### Section 1703. HEIGHT LIMITATIONS OF FENCES AND WALLS

Except for the requirements of Section 1819, pertaining to junkyards, no fence or wall (except a retaining wall or a wall of a building permitted under the provisions of this Ordinance) over six (6) feet in height shall be erected within any required yard area unless that portion of the fence or wall that exceeds six (6) feet in height has a ratio of open area to solid area of a minimum of four to one (4:1).

#### Section 1704. EXEMPTIONS TO HEIGHT RESTRICTION

The height limitations of this Ordinance shall not apply to church spires, belfries, cupolas, ventilators, HVAC equipment, water towers, parapet walls less than six feet in height, elevators, flagpoles or other appurtenances usually located above the roof of a building or structure and not intended for human occupancy. The total height of such structures shall be no greater than the smallest horizontal distance between any facade of the structure and the property line closest thereto. When authorized by the Zoning Hearing Board as a special exception, an increase to this maximum height limit may be permitted where it is demonstrated that the structure incorporates safety features, which, in the event the structure is toppled, will prevent it from falling beyond the boundaries of the property. Additionally,

the granting of such exception is contingent upon adherence to other applicable Township codes.

Section 1705. PROHIBITED USES

No use shall be permitted which is noxious or offensive by reason of odor, dust, smoke, gas, vibration, illumination or noise or which constitutes a public hazard whether by fire, explosion or otherwise.

Section 1706. ACCESS, HIGHWAY FRONTAGE & INTERIOR CIRCULATION

In order to minimize traffic congestion and hazard, control street access and encourage orderly development of street highway frontage, the following shall apply:

1. Unless clearly impractical or inappropriate, lots which abut two (2) or more streets shall have direct access only to the street of lesser functional classification.
2. Unless clearly impractical, all lots in a residential subdivision shall have direct access only to a minor street.
3. Where lots are created having frontage on existing major highways, secondary roads or minor roads, as listed in the East Pikeland Township Comprehensive Plan, any proposed subdivision street pattern shall provide reverse frontage to minor streets within the subdivision, and all such lots shall be provided with a minimum rear yard of one hundred (100) feet from the street line of any principle arterial, minor arterial or major collector, and fifty (50) feet from the street line of any minor collector or local road, as described in the East Pikeland Township Comprehensive Plan.
4. All lots radiating from a cul-de-sac shall have a minimum of fifty (50) feet frontage at the street right-of-way line.
5. No driveway shall be situated within five (5) feet of a side or rear property line, except where common driveways are utilized. Shared access to parking and/or loading areas on two (2) or more lots are subject to review and approval by the Township of a site plan and an agreement indicating the extent of the joint use. The method of accessing, repair and maintenance costs shall be set forth in recorded deed restrictions so as to be binding on all successors or assigns.
6. All driveways, aisles, maneuvering spaces, vehicular service areas or spaces between or around buildings, other than those relating to a dwelling, shall be adequately illuminated according to Section 1711.
7. No loading or service area shall be located within front yard setback areas in any Commercial or Industrial Districts, except that, where this restriction is clearly impractical, the Zoning Hearing Board may authorize parking, loading or service areas therein as a Special Exception.
8. In the case of a shopping center, industrial park, professional office park or similar groupings of buildings constructed as part of an integrated plan, and in any other use where practicable, there shall not be more than two (2) access ways to any public street or highway for each four hundred (400) feet of frontage except where more specifically regulated by other provisions

herein. All parking, loading or service areas, used by motor vehicles shall be located entirely within the lot line of the property. All access ways to a public street or highway shall be located not less than two hundred (200) feet from the intersection of any street lines. All access ways shall be designed to conform to Penn DOT specifications with regard to State roads and the subdivision requirements of the Township for local roads.

9. The developer shall be responsible for the design, construction and installation, and the cost thereof, for any necessary traffic control devices and/or highway modifications required by the Township and/or Penn DOT. Provision shall be made for safe and efficient ingress and egress to and from public streets without undue congestion and interference with the normal flow of traffic.
10. Non-residential developments shall provide cross easements for vehicles and pedestrians when required by the Board of Supervisors to reduce the number of driveways and provide for efficient traffic circulation.
11. All vehicular access ways to or from any public street shall be located not less than one hundred (100) feet, centerline to centerline, from any intersecting street.
12. Interior drives shall be designed to prevent blockage of vehicles entering or leaving the site. Drives may be one-way or two-way. Areas designed for loading and unloading, refuse collection, fuel delivery, and other service vehicles shall be arranged as to prevent blocking or interfering with access ways, the use of automobile parking facilities or pedestrian ways, and shall have adequate turnaround surface so egress to the street is in a forward direction.
13. No multi-family residential, institutional, commercial, or industrial building shall be located more than one hundred fifty (150) feet from a duly dedicated, improved and accessible fire lane easement as defined herein and no more than six hundred (600) feet from a duly dedicated, accessible and improved approved public or private street. The Zoning Hearing Board may grant relief from the dimensional standards when the applicant has shown that safe and convenient access for emergency vehicles can be provided. All required fire lanes shall be subject to the review and written approval of the Fire Chief of the appropriate fire company prior to Preliminary Plan approval by the Township.
14. Fire lane easements shall have a minimum unobstructed right-of-way width of forty (40) feet and there shall be constructed within this right-of-way an all-weather and well-drained surfaced cart way with a minimum width of twenty (20) feet as approved by the Chief of the appropriate Fire Company and the Board of Supervisors. The extension of fire lane easements shall begin from one or more existing and improved public streets.
15. Fire easements that curve, turn or change direction shall have a minimum radius of fifty-five (55) feet of pavement. Fire lane easements containing reverse curves shall have a minimum centerline tangent length of fifty (50) feet between curves.
16. Dead-end fire lane easements shall be terminated with an unobstructed vehicular turnaround or cul-de-sac with a minimum right-of-way radius of forty-five (45) feet and shall have a minimum surfaced radius of thirty-five (35) feet. Dead-end fire lane easements shall have a maximum length of five hundred (500) feet. The location of fire lane easements shall conform to plans for extension of streets, sanitary sewers, water mains, storm sewers, and other drainage facilities and public utilities as contained in this and other Ordinances of the Township and shall provide adequate access to buildings by firemen or other emergency services.

17. All interior drives and accessways shall have an approved all weather surface, and shall be graded, properly drained, and maintained in good condition. Interior drives shall have a maximum grade of eight percent (8%), measured along the centerline, for a distance of not less than twenty-five (25) feet from the street right-of-way line. Beyond that point, interior roads and drives shall have a maximum grade of ten percent (10%).
18. Pedestrian Circulation.

The following regulations shall apply to all uses, as applicable:

- A. The landowner or developer shall preserve existing trails or install trails and pathways or other pedestrian facilities as necessary and desirable to achieve the following:
  - (1) Logically continue, link, or expand existing pedestrian facilities on, across, and abutting the site.
  - (2) Provide pedestrian access to existing or anticipated public transportation pick-up points, public parks, community facilities and, where practical, commercial areas.
  - (3) Provide convenient and logical walkway connections between the entrances of a principal building and its required parking spaces, preferably in conjunction with landscaped planting islands that provide shade, visual relief from glare, and physical separation from vehicular areas.
- B. Maximum separation of pedestrian and vehicular routes shall be encouraged, where space permits, for safety and comfort of pedestrians. Separation can be in the form of any one (1) or combination of the following:
  - (1) Horizontal distance;
  - (2) Vertical separation and level changes;
  - (3) Street trees, landscaping, and other barriers such as berms and fences.

#### Section 1707. PARKING STANDARDS

No building or structure shall hereafter be constructed, enlarged or altered and no use or activity shall be conducted or expanded unless provision is made for off-street parking facilities, either within a structure or in the open, and with proper and safe access from a street, to adequately serve the uses within the district according to the provisions of this Section.

1. Location.
  - A. All required parking shall be on the same lot as the principal buildings except when permitted by the Board of Supervisors per Section 1707.6, subject to the following conditions:
  - B. No parking lot for off-street parking or for the storage or movement of motor vehicles shall occupy any area of the required front or side yard between the street line and a line that is

equal to fifty percent (50%) of the required setback distance.

- C. The area of the required front or side yard within which a parking lot for Off-street parking or for the storage or movement of motor vehicles is prohibited by Section 1707.1.B shall be landscaped in accordance with the provisions of Section 1709 of this Ordinance.
- D. A parking garage or the parking of vehicles in a building is not permitted in any required front, side or rear yard.

2. Size.

- A. Parking spaces shall have an approved all-weather surface, shall have convenient access in all seasons and shall meet the following dimensional standards:

Angle of Parking Row to Parking Aisle				
	30	45	60	90
Depth of Parking Row	18'	20'	21'	18'
Width of Parking Space	9'	9'	9'	9'
Width of Aisle	11' One way	13' One Way	18' One Way	24' One or Two Ways
Parallel Parking Spaces Shall be a Minimum of Twenty Four (24) Feet in Length and Nine (9) Feet in Width.				

- B. The Board of Supervisors may approve the use of continuous curbs as wheel stops in which case the length of the parking space may be two (2) feet less than otherwise required, provided that the parking lot layout allows for a vehicle to overhang the continuous curb by two (2) feet. The overhang area shall be clear of all obstructions and shall not be regarded as any required landscape area or pedestrian circulation space.

3. Access and Interior Drives.

- A. Interior drives shall be clearly marked and maintained by adequate painting, marking, curbing and signs so that operators of vehicles intending to patronize such parking areas shall not impede traffic as a result of any confusion as to location of entrances and exits and manner of reaching them.
- B. All parking lots shall be so divided by permanent raised perimeter curbing and/or planting strips that access lanes are clearly defined and that moving traffic will be confined to designated access lanes.
- C. Driveways shall be so constructed as to permit vehicles to turn around on the lot so as to eliminate the necessity of backing either on or off the lot.

4. Design and Maintenance.

A. General On-Site Circulation.

- (1) There shall be an adequate, safe and convenient arrangement of pedestrian circulation facilities, roadways, driveways, off-street parking and loading space. Pedestrian circulation between buildings shall be designed to prevent the unnecessary exposure of pedestrians to vehicular traffic.
- (2) Roads, pedestrian walks, bicycle facilities and open space shall be designed as integral components of the overall site design and shall be properly related to existing and proposed buildings and appropriately landscaped.
- (3) Landscaped, paved and comfortably graded pedestrian walks, appropriate also for wheelchairs, shall be provided along the paths of the most intense use, particularly from building entrances to parking areas and adjacent buildings. Such walks shall have a minimum width of four (4) feet.
- (4) The materials used in the design of paving, lighting fixtures, retaining walls, fences, curbs and benches shall be of good appearance, easily maintained and appropriate to their function.
- (5) Ramps, providing access from parking areas to buildings, shall be provided for persons with disabilities using wheelchairs.
- (6) Parking areas shall be designed so that a vehicle within the parking area will not have to enter a street to gain access to another part of the parking area.
- (7) Access ways, parking areas and loading areas shall have clearly defined parking bays and traffic circulation lanes designated by markings, curbs, barriers, and/or landscaped islands. To assist in traffic channelization, raised islands shall be placed at the ends of parking bays so that the end of the bay adjacent to a driving aisle or ring road is clearly delineated. Such islands shall be designed and landscaped so as not to impair visibility needed for traffic flow and turning movements.
- (8) The design of access and traffic control and of interior circulation shall, in all other respects, comply with the requirements of Section 1705.

B. General On-site Parking Design.

Parking areas shall have a dust-free, all-weather surface that shall be paved unless otherwise approved by the Board of Supervisors. Where appropriate, the use of porous pavement and/or specially designed brick or block should be considered to increase on-site water retention for plant material and groundwater supplies and to reduce problems associated with runoff.

- (1) Parking areas shall have a minimum slope of one percent (1%) in any direction to provide for drainage and a maximum slope of five percent (5%) for convenience and storm water management.

- (2) All parking bays shall be marked by durable painted lines at a minimum of four (4) inches in width and extending the entire length of the parking space or by curbs or other means to clearly indicate individual spaces. Signs or markers located on the surface of the parking lot shall be used as necessary to assure efficient and safe traffic operation.
  - (3) Lighting shall be provided to illuminate any off-street parking spaces to be used at night. Lighting facilities shall comply, in all applicable respects, with the standards and requirements of Section 1711.
  - (4) Parking area landscaping and screening shall be provided in accordance with Sections 1708 and 1709.
  - (5) Any person operating or owning a parking lot shall keep it free of dust and loose particles and shall promptly remove snow and ice from the surface. Such person shall also keep all adjacent sidewalks free from dirt, ice, sleet and snow and shall keep sidewalks in a safe condition for use by pedestrians. All signs, markers or any other method use to indicate the direction of traffic movement and the location of parking spaces shall be maintained in a neat and legible condition. Any walls or landscaping as well as surfacing and curbing of the parking lot shall be maintained in good condition throughout their use. In the event that a parking area is improperly maintained, The Board of Supervisors shall have the authority to prohibit the use of the area for parking purposes unless and until the proper maintenance, repair or rehabilitation has been completed.
- C. Any parking for five (5) or more vehicles on a lot which abuts a residential district or a lot for residential purposes, whether single-family or multifamily, shall be screened from the adjacent property by an effective screen the entire length of the parking lot, according to the requirements of Section 1708.
- D. Handicapped Parking. Handicapped parking shall be in accordance with the requirements of the Americans with Disabilities Act and the following provisions:
- (1) The number, location and markings of handicapped accessible parking spaces shall be provided to be in compliance with ADA Standards for Accessible Design and ANSI Publication ICC/ANSI A117.1-2003. All land development and subdivision plans shall define the location of handicap spaces as well as the ADA and ANSI required slopes, grades and elevations from the parking spaces to the building entrances.
  - (2) Each handicapped space or group of spaces shall be identified with a clearly visible vertical sign displaying the international symbol of access.
  - (3) Where possible, handicapped spaces shall be located so that persons in wheelchairs or using braces or crutches are not compelled to wheel or walk behind parked cars.
  - (4) Curb ramps shall be provided to permit handicapped people access from the parking lot to the sidewalk or building entrance.

5. Minimum Off-Street Parking Space Requirement.

Following shall be the minimum number of off-street parking spaces required for each land use, activity, building or structure permitted by this Ordinance. When the determination of the number of off-street parking spaces results in the requirement of a fractional space, any fraction shall count as one (1) space. Parking spaces required on an employee basis shall be based upon the projected maximum number of employees on duty or residing, or both, on the premises at any one (1) time and include any overlap of employees due to a shift change.

Use	Parking Spaces per 1000 sq. ft. gross floor area	Other Standards
<b>Residential Uses</b>		
Single Family Detached, Mobile Homes, Vacation Houses	-	2.0 per dwelling unit
Multi Family, studio and 1 bedroom apartments	-	1.5 per dwelling unit
Multi Family, 2 or more bedroom dwelling unit	-	2.0 per dwelling unit
Retirement, Age Restricted Development	-	1.5 per dwelling unit plus 0.5 per d.u. visitor spaces
<b>Industrial Uses</b>		
Warehouse, Storage Establishment, Wholesaling, Manufacturing	0.5	Plus 5.0 spaces
Mini-warehouse/Self storage	-	3.5 per 1000 sq. ft. of office
Research and Development, Laboratories	3.0	-
Electric Utility Facility	-	1.0 per employee greatest shift plus 10% for visitors
<b>Office Uses</b>		
General	4.0	-
Government	4.0	-
Medical	4.5	-
Bank/Financial	4.6	Plus 6.0 stacking per drive-in lane
<b>Commercial Retail Uses</b>		
General	4.0	-
Shopping Center	4.5	-
Furniture Carpet	1.0	Plus 5.0 spaces
Roadside Stand	-	1.0 per 250 sq. ft. of sales/display
Hardware, Home Improvement	4.0	-
Building Materials	2.0	Plus 5.0 spaces
Automobile, Truck, Boat, Mobile Dwelling Unit, Trailer, Outdoor Equipment, Motorcycle Sales	-	5.0 space minimum plus 1.0 per 1000 sq. ft. of floor and ground area of sales, service, display, and/or storage

Laundromat	20.	-
Convenience Store	5.0	Gas sales calculated separately
Supermarket	5.0	-
<b>Commercial Service Uses</b>		
Personal Service Businesses	4.0	-
Funeral Homes	8.0	-
Fitness Center/Health Club	7.0	-
Restaurant, fine or casual dining with bar	20.0	Plus parking for one quarter of outdoor seating area
Restaurant, family	15.0	-
Restaurant/fast food/take-out	15.0	Plus 6.0 stacking spaces per drive through lane
Veterinary Services, pet grooming	3.5	-
Kennel	0.5	Plus 5.0 space minimum
Drive-In Facility	-	6.0 per drive-in lane
All other	4.0	-
<b>Commercial Auto Service</b>		
General, including vehicle repair	1.5	Or 4.0 per bay, whichever greater
Carwash (single car, automatic bay)	2.0	Plus 6.0 stacking spaces per bay and 2.0 drying spaces per bay
Carwash (multiple car, automatic bay)	4.0	Plus 12.0 stacking spaces per bay and 2.0 drying spaces per bay
Carwash (self wash bay)	-	3.0 per bay
Gas station	-	1.0 per pump plus 6.0 stacking spaces per island
<b>Commercial Lodging</b>		
Hotel, Motel	-	1.0 per guest room and 1.0 per employee, plus required spaces for any other facility
Bed & Breakfast	-	1.0 per guest room, plus 2.0 per dwelling unit
Campground	-	1.0 per camp space plus 1.0 per employee
<b>Institutional Uses</b>		
Place of Public Assembly, Church	-	1.0 per 4 permanent seats or 10.0 per 1000 sq. ft. of assembly area, whichever is greater
Club, Association (no food service)	6.0	-
Club, Association (with food service)	10.0	-
Fire Station	-	4.0 per vehicle bay plus 10.0 per 1000 sq. ft. public assembly area
Library, Museum	3.5	Plus 7.5 per 1000 sq. ft public assembly area
Assisted Living Facility, Nursing Home	-	0.33 per bedroom
Day Care, Kindergarten, Preschool	3.5	-
School; Elementary or Junior High	-	2.0 per classroom plus 7.5 per 1000 sq. ft. public assembly

School; Senior High, Trade, Vocational, College, University	-	10.0 per classroom plus 7.5 per 1000 sq. ft. public assembly
Group Homes, Institutional, Monasteries, Convents	-	0.75 per bedroom
Rooming and Boarding Houses	-	1.25 per guest room
Police Station	4.0	-
Post Office	5.0	-
Hospital, Sanitarium	-	1.0 per 3 beds, plus 1.0 per employee greatest shift

<b>Outdoor Recreation and Amusement</b>		
Camps; day or youth	-	0.66 per 1000 sq. ft. of area
Golf course	-	3.0 per hole
Golf driving range, rifle range	-	1.0 per station
Park, playground	-	0.2 per 1000 sq. ft. of area
Equestrian facilities	-	1.0 per 4 stalls, plus 0.5 per 1000 sq. ft. of riding area
Swimming Pool	-	2.5 per 1000 sq. ft. of pool surface
Tennis courts	-	3.0 per court
Athletic fields	-	15.0 per field plus 1.0 per 4 permanent seats
All other active uses	-	0.1 per 1000 sq. ft. of area
All other passives uses	-	5.0 minimum plus 1.0 per acre (under 50 acres) or 1.0 per 3 acres (over 50 acres)

<b>Indoor Recreation and Amusement</b>		
Swimming pool	-	1.0 per 1000 sq. ft. of pool surface
Indoor court games	-	3 per court
Community center, auditorium, stadium, gymnasium	-	1.0 per 4 permanent seats or 10.0 per 1000 sq. ft. of public assembly, whichever greater
All other	-	1.0 per 4 permanent seats or 10.0 per 1000 sq. ft. of public assembly, whichever greater.

<b>Outdoor Commercial Recreation and Amusement</b>		
General	-	5.0 minimum plus 0.66 per 1000 sq. ft. of area
Outdoor Court Games	-	3.0 per court plus 1.0 per 4 permanent seats
Miniature golf course	-	3.0 per hole
Outdoor arenas	-	1.0 per 3 permanent seats
Country club, golf club	-	4.0 per hole, plus ancillary use requirements

<b>Indoor Commercial Recreation and Amusement</b>		
General	6.0	-
Amusement park	-	Determined by Township
Bowling lanes, pool room	-	4.0 per lane, 2.0 per pool table
Skating rink	-	0.1 per 1000 sq. ft. of skating surface
Theater, Assembly room	-	1.0 per 4 permanent seats or 10.0 per 1000 sq. ft. of public assembly

Other Uses. The Board of Supervisors shall determine with which of the preceding categories of parking regulation any unlisted use shall comply or may designate a standard for a use that does not conform to the preceding categories.

6. Shared Parking. A reduction in the required number of parking spaces is permitted when there will be a sharing of parking spaces by uses with different periods of peak parking demand, and where the applicant can provide justification for reduced parking based upon Urban Land Institute (ULI) standards for shared parking as set forth in its publication Shared Parking, most recent edition. This analysis shall include a submission of calculations indicating that available parking will be sufficient during peak demand periods for parking. Approval of such shared parking may be rescinded by the Board of Supervisors and additional parking obtained by the owners in the event that the Board determines that the joint use of parking facilities is resulting in a public nuisance or otherwise adversely affecting the public health, safety or welfare.
7. Parking Reserve Area. The number of parking spaces to be constructed may be up to twenty-five percent (25%) less than the number required herein only when the following conditions are met to the satisfaction of the Board of Supervisors:
  - A. Evidence is submitted firmly documenting that the special nature of the proposed occupancy or use of the building requires less parking area or spaces than required by Section 1707.5.
  - B. The land development plan submitted by the Applicant indicates that the location and layout of that portion of the required parking or loading area deemed unnecessary at the time of the application can and will be constructed on the site, according to the requirements of this Section 1707, during the first six (6) years following full development of the lot. If, at the end of the sixth (6<sup>th</sup>) year following full the development of the approved plan, the parking reserve area or any part thereof has not been developed as an additional parking area, the Applicant or the then present landowner may petition the Board of Supervisors for permission to develop or otherwise utilize the parking reserve area in accordance with the provisions of this Ordinance, if the Board of Supervisors determines that this parking or loading is not necessary to the interest of the public health, safety or welfare.
  - C. In no event shall that authorized portion of the required parking area that is not to be constructed, but reserved for possible future use, be counted as open space or other non-paved area required by other provisions of this Ordinance.
  - D. The parking reserve area shall be designed so that any required minimum area of vegetative cover would be maintained in the event that the parking reserve area is subsequently developed.
  - E. The parking reserve area shall be landscaped according to an approved plan and the provisions of Section 1709.
  - F. The parking reserve area shall have no building, whether temporary or permanent, erected on it at any time.

8. Pervious Parking. Pervious parking surfaces are encouraged in order to protect surface and ground water resources, and may be constructed using porous asphalt or concrete, concrete pavers, polymer-based grass pavers, grids, or geocells.
  - A. Where testing demonstrates to the satisfaction of the Township Engineer that stormwater will be infiltrated from pervious parking surfaces at a rate at least equal to pre-development good meadow conditions, such areas will not be considered impervious in determining allowable lot development. However, applicants shall comply with the Township's Act 167 Stormwater Management Ordinance.
  - B. Parking that is necessary only to accommodate seasonal peak demands, as opposed to daily or weekly peak demands, shall be pervious when soils have adequately permeability and where groundwater quality is protected.
9. Special Exception or Conditional Use. For any use permitted by special exception or conditional use, it shall be the burden of the applicant to present evidence of the parking needs of the proposed use. The Zoning Hearing Board, in granting a special exception, or the Board of Supervisors in granting conditional use approval, may attach specific parking requirements that vary from the requirements of this Article where the Board of Supervisors makes a decision using the Conditional Use criteria set forth in Section 2000.6 or the Zoning Hearing Board uses the Special Exception criteria set forth in Section 2208.
10. Parking in the Kimberton Historic District. Parking in the Kimberton Historic District, as defined on the map titled "East Pikeland Township Cultural, Historical and Architectural Resources Map" shall comply with the provisions of Section 1707, Parking Standards, unless otherwise approved by the Board of Supervisors. The Kimberton Historic District is located within the Kimberton Retail Zoning District and it is the intent to provide opportunities for redevelopment of underutilized or otherwise blighted properties consistent with the historic nature of the Kimberton Village. The Board of Supervisors shall consider the following when reviewing a request.
  - A. Comments from the Township Historic Commission.
  - B. The impact of the proposed use on public health, safety and welfare.
  - C. The ability of Emergency Service vehicles to access the site.
  - D. The impact of the use on adjacent property owners.
  - E. Up to 50% of the required number of parking spaces may be provided offsite provided, however, that written agreement assuring the retention for such purpose shall be properly drawn and executed by the parties concerned and approved as to form and execution by the Township Solicitor. Such an agreement shall be filed and made part of the application for a building permit. Approval of such shared parking may be rescinded by the Board of Supervisors and additional parking obtained by the owners in the event that the Board determines that the joint use of parking facilities is resulting in a public nuisance or otherwise adversely affecting the public health, safety and welfare.

Section 1708. OFF-STREET LOADING

Adequate space shall be provided to accommodate the loading and unloading of trucks, tractors and trailers servicing any commercial, industrial or large-scale residential or institutional use. Loading berth space that is utilized for the location of trash collection or compaction facilities shall be provided for and shall be in addition to the loading space requirements of this Section 1707.

1. Area of Loading Berths or Spaces. A required off-street loading berth or space shall be a minimum of fourteen (14) feet in width and sixty-five (65) feet in length, exclusive of aisle and maneuver area and shall have a vertical clearance of a minimum of sixteen (16) feet.
2. Access to Loading Area. Each required off-street loading berth or space shall be afforded appropriate means of vehicular access to a street, highway or alley in a manner that will least interfere with traffic movement.
  - A. Loading Area Surfacing. All open off-street loading areas shall be constructed with a compacted select gravel base and surfaced with an all-weather dustless material, suitably designed for the intended use to a standard approved by the Township Engineer.
  - B. Loading Area Screening. All loading berths or spaces and truck circulation areas that abut a residential district or residential use shall be set back a minimum of fifty (50) feet therefrom unless completely screened by walls, solid fence, landscaping or a combination thereof, not less than six (6) feet in height. In no case shall loading berths or spaces and circulation areas be closer than fifteen (15) feet to a residential district or use.
  - C. Number of Loading Berths or Spaces. Buildings or uses with commercial, industrial or storage use, that exceed six thousand (6,000) square feet of gross leasable area, shall be provided with a minimum of one (1) off-street loading berth or space.
  - D. Location of Loading Berths or Spaces and Loading Circulation Areas. All required loading areas including loading spaces and loading circulation areas shall be located on the same lot as the use to be served and no portion of vehicles to be loaded or unloaded shall project into any traffic lane. Loading, unloading and their circulation areas shall not be located between the building setback line and the street line.
  - E. Repair and Service. No storage of any kind, nor motor vehicle repair work of any kind, except emergency work, shall be permitted within any required loading area.
  - F. Space Allowed. Space allowed to any off-street loading berth shall not, while so allocated, be used to satisfy the space requirements of any off-street parking facilities or portions thereof. Required off-street parking spaces shall not be used for loading and unloading purposes except during hours when business operations are suspended.
  - G. Special Exception or Conditional Use. For any use permitted by special exception or conditional use, it shall be the burden of the applicant to present evidence of the loading needs of the proposed use. The Zoning Hearing Board, in granting a special exception, or the Board of Supervisors in granting conditional use approval, may attach specific loading requirements that vary from the requirements of this Article where the Board of

Supervisors makes a decision using the Conditional Use criteria set forth in Section 2000.6 or the Zoning Hearing Board uses the Special Exception criteria set forth in Section 2208.

Section 1709. LANDSCAPING, SCREENING AND BUFFERING

1. General Applicability. All persons undertaking any of the following activities shall comply with the standards of the procedures in items 1709.2 through 1709.4 below.
  - A. Building Construction
    - (1) All non-residential buildings, excluding agricultural buildings and buildings accessory to single-family residential uses.
    - (2) All multi-family residential buildings.
  - B. Construction of the following streets, parking areas, loading and storage areas.
    - (1) All streets to be dedicated to the Township.
    - (2) All private streets and driveways with cartways eighteen (18) feet or more.
    - (3) Any parking area that exceeds eight thousand (8000) square feet.
    - (4) Any loading or storage area, for equipment and materials, which exceeds eight thousand (8000) square feet.
  - C. Construction of any of the following structures or facilities when it exceeds four thousand (4000) square feet in ground coverage:
    - (1) Public utility facilities and structures.
    - (2) Liquid and solid waste collection, storage, conveyance, and treatment facilities.
    - (3) Stormwater management basins and related facilities.
  - D. Earthmoving and grading areas exceeding one (1) acre, excluding those areas associated with on-lot site preparation for single-family and two-family residential lots, and further excluding agricultural operations.
  - E. Any activities for which a landscaped buffer or screening is required by this Ordinance or would be imposed by the Zoning Hearing Board for a Special Exception or by the Board of Supervisors for a Conditional Use.

The Board of Supervisors may reduce a required perimeter buffer where a tract abuts a use similar to the proposed use where the Board finds that screening is not necessary or where the Applicant can demonstrate to the satisfaction of the Board that existing vegetation, structural and/or topographic conditions will conceal, on a year-round basis, development from view of adjacent tracts and roads.

- F. All mechanical equipment not enclosed in a structure of residential appearance shall be fully and completely screened from view from any point in a manner compatible with the architectural and landscaping style of the remainder of the lot. Such screening shall be subject to site plan and architectural review by the Township.
  - G. Water towers, storage tanks, processing equipment, fans, HVAC, skylights, cooling towers, vents, and any other structures or equipment that rise above the crest of a building's roof line shall be architecturally compatible or effectively shielded from view from any point by an architecturally sound method, such as a parapet wall, or similar method.
2. All required Landscaping, Screening and Buffering shall be installed in accordance with a Landscape Plan prepared by a Landscape Architect registered in the Commonwealth of Pennsylvania. Such Landscape Plans shall be based on and reflect the following objectives:
- A. A design that is responsive to the functional and aesthetic characteristics of the tract or lot, and existing and proposed principle and accessory buildings and other structures.
  - B. A design that respects/incorporates existing topography, landscape, and other natural features such as hedgerows and woodlands.
  - C. A design that demonstrates an effective proposal for screening the proposed use or activity from the adjoining properties.
  - D. A design that creates visual interest for the users and/or residents of the proposed project, and enhances views.
  - E. A design that promotes effective management of storm water to minimize soil erosion and sedimentation and creates opportunities for infiltration to the groundwater system.
  - F. The use of plant material which is: acclimated to local conditions; located and spaced to achieve required screening, compatible groupings and other effective purposes; and not injurious of persons or pedestrians and vehicular circulation.
3. Mitigation of Visual Impacts.
- A. Consistent with the visual impact plan developed under Section 1709.4 below, the applicant shall plant trees and shrubs and make other landscape improvements (e.g. berms, fences) as necessary to mitigate the adverse visual impacts which the proposed actions will have on the subject property, adjoining properties, and the Township in general.
  - B. In demonstrating compliance with Section 1709.2, above, the applicant shall follow the Minimum Planting Guidelines set forth in the table below. When the proposed landscape improvements do not conform to these guidelines, the applicant shall undertake other design measures (site planning, architectural, landscape architectural) which, in the judgment of the Board, achieve comparable results or which render the guidelines unnecessary or inappropriate.

<b>Minimum Planting Guidelines</b>				
<b>Improvement/Condition</b>	<b>Deciduous</b>		<b>Evergreen</b>	
	<b>Trees</b>	<b>Shrubs</b>	<b>Trees</b>	<b>Shrubs</b>
Per 1000 sq. ft. of gross building area	2	4	2	4
Per 1000 sq. ft. of paved area	1	2	1	2
Per 100 lineal feet of existing road frontage				
With hidden view	*	*	*	*
With filtered view	*	*	*	5
With Unobstructed View	1	5	1	5
Per 100 linear feet of property boundary along adjoining Residential or Institutional properties				
With hidden view	*	*	*	*
With filtered view	*	*	2	5
With Unobstructed view	*	*	3	10

Explanatory Notes for Table

- (1) Asterisk (\*) indicates additional plantings at the Township's discretion.
  - (2) Minimum sizes of plantings should be:  
Trees: Two (2") inches dbh, six (6) feet in height  
Shrubs: Twenty-four (24") inches in height
  - (3) The left column description of views from public road frontages and property boundaries refers to views of the proposed improvements as they would exist without any additional plantings. The proposed additional plantings for road frontages would achieve a more highly filtered view; those for property boundaries would achieve a hidden view.
  - (4) In the case of public roads with existing filtered views of the proposed improvements, plantings are indicated to be evergreen shrubs. Deciduous shrubs may be substituted by the Applicant, if acceptable to the Township.
  - (5) Fractions of plants calculated from Table 1 should be rounded up to the nearest whole number.
- C. Where the Applicant can demonstrate to the satisfaction of the Board of Supervisors that existing vegetation, structural and/or topographic conditions on the tract being developed and located within one hundred (100) feet of existing tract boundaries or within one hundred (100) feet of the cartway of existing or new road segments will conceal, on a year-round basis, development from view from an adjacent tract boundary or road segment, the linear footage of such tract boundary or road segment may be excluded from calculation or the required plantings.
- D. In addition to the standards in Minimum Planting Guidelines Table 1, these minimum guidelines shall be followed for parking areas:

- (1) Parking areas exceeding eight thousand (8,000) square feet:
  - a. Fifty percent (50%) of the parking area net perimeter (total perimeter less street access lanes) should be bordered by planting areas at least ten (10) feet in width.
  - b. Fifty percent (50%) of the parking area net perimeter should be bordered by planting areas at least fifteen (15) feet in width.
- (2) No more than twelve (12) parking spaces shall be placed in a continuous row without an intervening planting area of at least ninety (90) square feet.
- (3) Landscaped islands a minimum of ten (10) feet in width shall be provided between each set of two (2) parking bays.
- (4) Landscaped islands at the end of each parking bay shall be provided and shall be the length of two (2) parking spaces and a minimum of ten (10) feet in width.

E. Because of the benefits of planting native plants (price, longevity, wildlife habitat), the applicant is urged to conform to the minimum planting guidelines in Table 1 through the use of native trees and shrubs. Recommended native trees are found in Appendix E of the Subdivision and Land Development Ordinance.

F. Species selected by the Applicant should reflect the following considerations:

- (1) Existing site conditions and suitability for the plant materials, based upon the site geology, hydrology, soils, and microclimate.
- (2) Specific functional objectives of the plantings, which may include, but not necessarily be limited to, visual screening, noise abatement, energy conservation, wildlife habitats, and aesthetic values.
- (3) Maintenance and replacement considerations such as hardiness, resistance to insects and disease, longevity, and availability of plant materials.

G. For the purpose of promoting disease resistance, minimum maintenance, diverse natural plant associations, and long-term stability of plantings, the applicant is encouraged to choose those combinations of species which may be expected to be found together under natural conditions.

H. Plantings and their measurement shall conform to the standards of the publication "American or U.S.A Standard for Nursery Stock", ANSI or U.S.A.S. Z60.1 of the American Association of Nurserymen, as amended. All plant material used on site shall have been grown within the same USDA hardiness zone as the site, shall be free of disease and shall be nursery grown.

#### 4. Landscape Design Guidelines.

A. Plantings should be provided in arrangements and locations that best mitigate the adverse

impacts of the proposed site disturbance.

- B. Planting areas should be selected and designed to reflect natural landscape characteristics existing prior to site disturbance, as well as those environmental conditions to be created following disturbance by the applicant.
  - C. The locations, dimensions, and spacing of required plantings should be adequate for proper growth and maintenance, taking into account the sizes of such plantings at maturity and present and future environmental requirements, such as moisture and sunlight.
  - D. All landscape plans shall be designed in accordance with the provisions of Section 404 of this Ordinance regarding the conservation of woodlands. Applicants shall make all reasonable efforts to harmonize landscape plans with the conservation of the existing vegetation and natural features of the site. Care shall be taken to protect remaining vegetation from damage during site disturbance and construction.
5. Visual Impact Plan. For all activities identified in Section 1709.1, above, the applicant shall submit a plan that includes provisions for impact mitigation and long-term maintenance, as follows:
- A. Depiction on the property base map of all mitigation measures proposed by the applicant, including number and placement of plantings and of other landscape or design improvements as specified in Section 1709.2.
  - B. Delineation of the Applicant's property as it would be developed, as seen from adjoining properties used or zoned for residential or institutional purposes, and from existing adjoining public roads. Such views shall be classified according to whether views of the applicant's proposed improvements would be hidden, filtered, or obstructed. With respect to adjoining roads, such views shall be based on the viewer's location at the far edge of the road cartway, the opposite edge of which directly abuts the property. With respect to adjoining properties, the viewer's location shall be along the lines established by the minimum front, side, and rear yard distances as required by existing zoning for those properties.
  - C. A delineation of views of the Applicant's property as seen at the time of the applicant's mitigation improvements in place.
  - D. Documentation demonstrating the extent to which the landscape planting and design measures conform to the guidelines in the Minimum Planting Guidelines, Table 1. Where they do not conform, the applicant shall demonstrate one (1) or more of the following:
    - (1) That other mitigation measures chosen will produce comparable or superior results;
    - (2) That, through design excellence in site planning, landscape architecture, and/or architecture, the guidelines in the Minimum Planting Guidelines Table, would be unnecessary or inappropriate;
    - (3) That the need to mitigate in accordance with the guidelines constitutes an unreasonable or unnecessary financial burden.

- E. Sufficient information to demonstrate compliance with all maintenance standards in Section 1709.5.
- F. Graphic demonstration that the proposed development has considered the location of the views and vistas illustrated on the Scenic Resources Map of the "Open Space, Recreation and Environmental Resources Plan" as adopted by the Township.

6. Site Maintenance Standards.

- A. All landscape improvements to be provided in accordance with this Section shall be installed and maintained by accepted practices as recognized by the American Society of Landscape Architects. Planting and maintenance of vegetation shall include, as appropriate, but not necessarily be limited to, provisions for: surface mulch, guy-wires and stakes, irrigation, fertilization, insect and disease control, and pruning.
- B. The Applicant shall make arrangements acceptable to the Township that all landscape improvements installed in accordance with this Section shall be maintained in a healthy and/or sound condition, or otherwise be replaced by equivalent improvements, for a period of at least eighteen (18) months following installation, except as otherwise required by the Township Subdivision and Land Development Ordinance.
- C. The applicant shall make arrangements acceptable to the Township for the long-term maintenance of the property. The applicant shall provide the names, addresses, and telephone numbers of those persons or organization that will be assuming such responsibilities.
- D. Installation of landscape improvements shall be guaranteed along with all other site improvements in accordance with Section 606 of the East Pikeland Township Subdivision and Land Development Ordinance. The costs of landscape material and installation shall be considered in determining the amount of any performance guarantee required. The applicant shall be required to provide a letter of credit or escrow sufficient additional funds for the maintenance and/or replacement of the proposed vegetation during the 18-month replacement period. In addition, a letter of credit or escrow may be required for the removal and replacement of specimen vegetation damaged during construction. At its sole discretion, the Township may remedy failure to complete installation or to maintain required landscape improvements in accordance with the provisions of the East Pikeland Township Subdivision and Land Development Ordinance.

7. Additional Screening Requirements. In addition to meeting applicable standards of this Section, certain uses permitted under terms of this Ordinance shall be required to comply with specific screening standards necessitated by the nature of the use. In such cases, compliance with those standards shall be in addition to meeting the applicable standards of this Section. Where standards appear to be in conflict, compliance shall be with the more stringent requirement.

- A. Screens or buffer plantings are required under the following circumstances:
  - (1) Where any non-residential use, excluding agricultural uses and uses accessory to single-family residential uses, however including any utility use abuts any residential

use, or abuts any land in any residential zoning district;

- (2) Where any mobile home park abuts any other residential use, or any land in any residential zoning district;
  - (3) Where any multiple family use abuts any other residential use or any land in any residential zoning district
  - (4) Where required by the Zoning Hearing Board or where stipulated as a condition of conditional use approval by Board of Supervisors.
  - (5) Where otherwise required by this Ordinance.
- B. Required screens shall consist of opaque fences or walls, vegetative plantings, landscaped berms or any combination thereof, providing a year round visual screen, but in no case shall a screen interfere with motorists' visibility. Design of screens and selection of plant materials to be used shall be in accordance this Section 1709 and shall be subject to review and approval by the Board of Supervisors.
- C. Where berms are to be used, they shall be designed in accordance with the East Pikeland Township Subdivision and Land Development Ordinance and shall be low-profile and supplemented with plantings so that an effective visual barrier of a minimum of eight (8) feet in height measured from the crown of an adjoining public street is created in appropriate locations to screen from public view outdoor storage areas, truck or heavy equipment parking, loading areas, trash dumpsters or other permitted activities conducted outside of residential, commercial, institutional or industrial buildings. If berms are used as a landscape or screening feature, plantings shall be installed on both sides of the berm, not solely at the ridgeline or top of the berm, and shall be subject to the review and approval of the Township. Side slopes shall not exceed a three to one (3:1) ratio, and berms shall be designed to blend with adjoining property topographic conditions or similarly landscaped rather than end abruptly at the property line.
- D. Shade trees of varying species shall be planted along all streets between the cartway and sidewalk, where required, or lot line.
- E. Planting areas shall be selected and designed to reflect the natural landscape characteristics existing prior to site disturbance, as well as those environmental conditions to be created by the Applicant following disturbance.
- F. The locations, 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 their present and future environmental requirements, such as moisture and sunlight. In selecting locations for shade trees, consideration also shall be given to aesthetic qualities of the site and to the protection of solar access. In selecting the layout for landscape buffers or the location and mix of required plantings, consideration shall be given to the natural topography of the setting and the texture, coloration and compatibility of different plant species; it is strongly encouraged that improved landscapes be designed in such a manner as to be creative and attractive while maintaining the integrity of the natural landscape within which such work is proposed.

- G. Plantings shall be limited or carefully selected for locations where they may not be disturbed or contribute to conditions hazardous to public safety. Examples of such locations include but shall not be limited to: the edges of parking areas; public street rights-of-way; underground and above ground utilities; and sight triangle areas required for unobstructed views at street intersections. No trees shall be planted closer than fifteen (15) feet from fire hydrants, streetlights, or stop signs.

#### Section 1710. MINIMUM HABITABLE FLOOR AREAS

The minimum habitable floor area of a principle single-family attached or detached dwelling unit shall be seven hundred fifty (750) square feet. The minimum habitable floor area for apartments shall be four (400) square feet.

#### Section 1711. LIGHTING

##### 1. Purposes.

- A. To require and set minimum standards for outdoor lighting to provide lighting in outdoor public places where public health, safety and welfare are potential concerns.
- B. To protect drivers and pedestrians from the glare of non-vehicular light sources which shine into their eyes and thereby impair safe traverse.
- C. To protect neighbors and the night sky from nuisance glare and stray light from poorly aimed, placed, applied, maintained or shielded light sources.
- D. To provide for outdoor lighting in a manner consistent with Township objectives to protect and retain desired character.

##### 2. Applicability.

- A. Outdoor lighting shall be required for all uses where necessary to provide for public safety and personal security during hours of darkness where there is public assembly and traverse, including but not limited to the following uses: multi-family residential, commercial, industrial, public-recreational and institutional.
- B. The glare-control requirements contained herein shall apply to lighting in all above-mentioned uses as well as, but not limited to, signs, architectural lighting, landscape lighting, and residential lighting.

3. Criteria.

- A. Illumination Levels. Lighting, where required by this Ordinance, shall have intensities and uniformity ratios in accordance with the current recommended practices of the Illuminating Engineering Society of North America (IESNA) as contained in the IESNA Lighting Handbook, as amended from time to time, including but not limited to the following examples:

Use/Task	Maintained Foot Candles	Uniformity, Average:Minimum
<b>Streets:</b>		
Local Commercial	0.9 Avg.	6:1
Residential	0.4 Avg.	6:1
<b>Parking:</b>		
<b>Multi-Family Residential</b>		
Low Vehicular/Pedestrian Activity	0.2 Mm.	4:1
Medium Vehicular/Pedestrian Activity	0.6Mm.	4:1
<b>Industrial/Commercial/Institutional/Municipal</b>		
High Activity (e.g. Regional Shopping, Fast Food, Major Event Venues)	0.9Mm.	4:1
Medium Activity (e.g. Community Shopping, Office Parks, Hospitals, Commuter Lots, Cultural/Civic/Recreational Events)	0.6Mm.	4:1
Low Activity (e.g. Neighborhood Shopping, Industrial Employment, Schools, Churches)	0.2Mm.	4:1
<b>Sidewalks</b>	0.5Avg.	5:1
<b>Building Entrances, Commercial, Industrial, Institutional</b>	5.0Avg.	NA

Notes:

- 1) Illumination levels are maintained horizontal foot-candles on the task, e.g., pavement or area surface;
- 2) Uniformity ratios dictate that average illuminance values shall not exceed minimum values by more than the product of the minimum value and the specified ratio, e.g., for commercial parking high activity, the average foot candles shall not be in excess of 3.6 (0.9 x 4).

B. Lighting Fixture Design

- (1) Fixtures shall be of a type and design appropriate to the specific lighting application.

- (2) For lighting horizontal tasks such as roadways, sidewalks, entrances and parking areas, fixtures shall meet IESNA "full-cutoff" criteria (no light output emitted above 90 degrees at any lateral angle around the fixture).
- (3) The use of floodlighting, spotlighting, wall-mounted fixtures, decorative globes and spheres and other fixtures not meeting IESNA "full-cutoff" criteria, shall be permitted only with the approval of the Township, based upon applicability in retaining the desired character of the Township and achievement of acceptable glare control.
- (4) Where requested by the Township, all fixtures shall be equipped with or be modified to incorporate light directing and/or shielding devices such as shields, visors, skirts or hoods to redirect offending light distribution and/or reduce direct or reflected glare.
- (5) For residential applications, omni-directional fixtures, e.g., post top, wall bracket, wallpack, globe and sphere shall have a cumulative lamp output per fixture not to exceed 1000 lumens or a 60-watt incandescent bulb.
- (6) NEMA-head fixtures, a.k.a. "barn lights" or "dusk-to-dawn lights," shall not be permitted where they intrude into other uses, unless fitted with a reflector to render them full cutoff.
- (7) Theme lighting, as a supplement to regular site lighting, is encouraged in the Township villages and in new residential or commercial developments, subject to Board of Supervisors approval. Theme lights shall have good shielding and lamp-hiding qualities to be of low brightness, or lamped with the lowest possible wattage bulb so as not to produce distracting and potentially hazardous glare at night.

C. Control of Glare

- (1) All outdoor lighting, whether or not required by this ordinance, on private, residential, commercial, industrial, recreational or institutional property; shall be aimed, located, designed, fitted and maintained so as not to present a hazard to drivers or pedestrians by impairing their ability to safely traverse and so as not to create a nuisance by projecting or reflecting objectionable light onto a neighboring use or property.
- (2) All outdoor lighting fixtures shall be shielded in such a manner that the edge of the shield shall be level with or below the light source, so that direct light emitted above the horizontal is eliminated.
- (3) Floodlights and spotlights shall be so installed or aimed that they do not project their output into the windows of neighboring residences, adjacent uses, skyward or onto a public roadway.
- (4) Unless otherwise permitted or limited by the Township, e.g., for safety or security or all-night operations, lighting for commercial, industrial, public recreational and institutional applications shall be controlled by automatic switching devices such as time clocks or combination motion detectors and photocells, to permit extinguishing outdoor lighting fixtures between 11 p.m. and dawn, to mitigate glare and sky-lighting consequences.

- (5) Lighting proposed for use after 11 p.m., or after the normal hours of operation for commercial, industrial, or institutional applications shall be reduced by seventy five percent (75%) from then until sunrise, unless supporting a specific purpose and approved by the Township.
- (6) All illumination for advertising signs, buildings and/or surrounding landscapes for decorative, advertising or esthetic purposes between 11:00 p.m. and sunrise shall be by permit, except that such lighting situated on the premises of a commercial establishment may remain illuminated while the establishment is actually open for business, and until one hour after closing. All signs shall meet the standards of Article XIX of the Zoning Ordinance.
- (7) Light output for flagpole lighting may not cumulatively exceed 10,000 lumens.
- (8) Vegetative screens shall not be employed to serve as the primary means for controlling glare. Rather, glare control shall be achieved primarily through the use of such means as cutoff fixtures, shields and baffles, and appropriate application of fixture mounting height, wattage, aiming angle and fixture placement.
- (9) The intensity of illumination projected onto a residential use from another property shall not exceed 0.1 vertical foot-candle measured along the line-of-sight at the property line.
- (10) Externally illuminated signs and billboards, where permitted, shall be lighted by fixtures mounted at the top of the sign and aimed downward. Such fixtures shall be automatically extinguished between the hours of 11 p.m. and dawn except as specifically approved by the Township to illuminate necessary directional information.
- (11) Except as specifically approved by the Township, fixtures meeting IESNA "cutoff" criteria shall not be mounted in excess of twenty (20) feet above finished grade, but shall not exceed sixteen (16) feet if within one hundred (100) feet of any existing residential property line, and fixtures not meeting IESNA "cutoff" criteria shall not be mounted in excess of sixteen (16) feet above grade.
- (12) Directional fixtures for such applications as facade, fountain feature and landscape illumination shall be aimed so as not to project their output beyond the objects intended to be illuminated, and shall be extinguished between the hours of 11 p. m. and dawn, unless permitted by the Township.
- (13) Canopy lighting, e.g., for service stations, fuel dispensing facilities and bank drive-ups, shall be accomplished using flat-lens full cutoff down-lighting fixtures, shielded in such a manner that the edge of the fixture shield shall be level with or below the light source envelope.
- (14) The use of white strobe lighting for tall structures such as smokestacks, chimneys, and radio, communications and television towers is prohibited, except as otherwise required under Federal Aviation Administration regulations.

D. Installation

- (1) For new and replacement installations, electrical feeds for fixtures mounted on poles shall be run underground, not overhead.
- (2) Poles, supporting lighting fixtures for the illumination of parking areas and located directly behind parking spaces, shall be placed a minimum of five (5) feet outside paved area, or on concrete pedestals at least thirty (30) inches high above the pavement, or suitably protected from potential vehicular impact by other approved means.
- (3) Lighting fixtures shall not be mounted in excess of twenty (20) feet above the grade of the task being illuminated by that fixture. Artificial elevation of the grade at the base of the light fixture shall be prohibited.

E. Maintenance. Lighting fixtures and ancillary equipment shall be maintained so as always to meet the performance requirements of this Ordinance, and be in acceptable aesthetic condition.

4. Plan Submission.

- A. Lighting Plans shall be submitted to the Township for review and approval with any preliminary or final subdivision/land development plan submission and with any conditional use, special exception, or variance application where applicable, and shall include:
- (1) A site plan, showing all structures, parking spaces, building entrances, traffic areas (both vehicular and pedestrian), vegetation that might interfere with lighting, and adjacent use that might be adversely impacted by the lighting, containing a layout of all proposed fixtures by location and type.
  - (2) Iso-foot candle plots for individual fixture installations, or 10' x 10' illuminance-grid plots for multi-fixture installations, that demonstrate compliance with the intensity and uniformity requirements as set forth in this Ordinance.
  - (3) Description of the proposed equipment, including fixture catalog cuts, photometrics, glare reduction devices, lamps, on/off control devices, mounting heights, pole foundation details and mounting methods.
- B. The Zoning Officer may require submission of Lighting Plans for review and approval by the Township, as stipulated above, with any building permit application for other than single-family residential use.
- C. When requested by the Township, applicant shall also submit a visual-impact plan that demonstrates appropriate steps have been taken to mitigate on-site and off-site glare and to retain the character the Township is attempting to achieve.
- D. The following note shall be placed on the Lighting Plan: Post-approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the Township for review and approval prior to installation.

5. Post Installation Inspection.

The following note shall be placed on the Lighting Plan: The Township reserves the right to conduct post-installation nighttime inspections to verify compliance with the commitments made on the approved Lighting Plan, and if appropriate, to require remedial action at no expense to the Township.

6. Compliance Monitoring.

A. Safety Hazards.

If the Zoning Officer judges a lighting installation to create safety or personal-security hazard(s), the person(s) responsible for the lighting and the property owner shall be notified in writing and required to take remedial action. The Zoning Officer shall follow the enforcement provisions of Article XXV of this Ordinance.

B. Glare and Inadequate Illumination Levels.

When the Codes Enforcement Officer judges a lighting installation to produce unacceptable levels of glare, excessive skyward light, or insufficient illumination levels, or otherwise varies from the provisions of this Ordinance, the Township may notify the person(s) responsible for the lighting and require appropriate remedial action. The Zoning Officer shall follow the enforcement provisions of Article XXV of this Ordinance.

7. Nonconforming Lighting. Any lighting fixture or lighting installation existing on the effective date of this Ordinance that does not conform with the requirements of this Ordinance shall be considered as a lawful nonconformance. Unless minor corrective action is deemed by the Township to be an acceptable alternative, a nonconforming lighting fixture or lighting installation shall be made to conform with the applicable requirements of this Ordinance when:

A. It is deemed by the Township to create a safety hazard.

B. It is replaced, abandoned or relocated.

C. There is a change in use.

8. Residential Development Fixture Placement.

A. Where required by this Ordinance, street lighting fixtures shall be installed in residential developments and placed at the discretion of the Township.

(1) At the intersection of public roads with entrance roads to the proposed development.

(2) At intersections involving proposed public or non-public major-thoroughfare road within the proposed development.

9. General Standards for Recreational Lighting.

- A. The use of outdoor recreational facilities during hours of darkness is permitted or denied strictly at the discretion of the Township. Where the use of such facilities is specifically permitted by the Township, the lighting shall comply with the following requirements:
  - (1) Lighting shall be accomplished only through the use of “cutoff” fixtures or as otherwise approved by the Township.
  - (2) Except as otherwise permitted by the Township, sporting events shall be timed so that all area lighting in the sports facility is extinguished by 10:00 p.m.
  - (3) Light levels at the property line of the activity shall not exceed 0.1 foot-candles.
- B. No outdoor recreational facility with night lighting shall be permitted in an agricultural, residential or in a non-residential district within 500 feet of the property line of a residential use.
- C. Mounting Heights.

Maximum mounting heights for outdoor recreational lighting shall be generally in accordance with the following:

Sport	Maximum Mounting Height
Basketball	20 feet
Football/Other field sports	50 feet
Organized Baseball/Softball*	
200' Radius	60 feet
300' Radius	70 feet
Miniature Golf	20 feet
Tennis	30 feet
*Minimum mounting heights in accordance with league regulations shall prevail.	

10. Temporary Lighting.

- A. Temporary lighting shall comply with the provisions of this Ordinance.
- B. Temporary lighting that does not comply with the provisions of this ordinance shall be allowed by permit only.

Section 1712. SEWER AND WATER SERVICE

All uses within East Pikeland Township shall be served by adequate water supply and sewage disposal in accordance with all applicable regulations, including but not limited to Section 419, Sewage Treatment and Disposal, and Section 420, Water Supply, of the East Pikeland Township Subdivision and Land Development Ordinance. In addition all sewage disposal systems shall be in conformance with the Township's Act 537 Plan.

Section 1713. ENVIRONMENTAL STANDARDS

1. Air Quality.

- A. There shall be no emission of smoke, ash, dust, fumes, vapors, gases or other matter toxic or noxious to air that violates the Pennsylvania Air Pollution Control Laws, including the standards set forth in Chapter 123, Standards for Contaminants and Chapter 131, Ambient Air Quality Standards of Article III, Title 25 of the Pennsylvania Code.
- B. Visible air contaminants shall not be emitted to the extent that the opacity of the emissions is equal to or greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any one (1) hour or equal to or greater than sixty percent (60%) in any one time and shall comply with the Pennsylvania Code Title 25, Chapter 127.A (7) or its most recent revision.
- C. No user shall operate or maintain or be permitted to operate or maintain any equipment, installation or device that, by reason of its operation or maintenance, will discharge contaminants to the air in excess of the limits prescribed herein unless he shall install and maintain in conjunction therewith such control as will prevent the emission into the open air of any contaminant in a quantity that will violate any provision of this Ordinance.

2. Noise.

No person shall operate or cause to be operated on private or public property any source of continuous sound (any sound that is static, fluctuating or intermittent with a recurrence greater than one (1) time in any fifteen (15) second interval) in such a manner as to create a sound level that exceeds the limits set forth in the receiving land use category in the following table when measured at or within the property boundary of the receiving land use.

Continuous Sound Levels by Receiving Land Use		
Receiving Land Use Category	Time	Sound Level Limit
Residential, Public Space, Open Space, Agriculture, Institutional	7:00am to 10:00pm	55 dBA
	10:00pm to 7:00am Plus Sundays and Legal Holidays	50dBA
Commercial or Business	7:00 am to 10:00pm	65 dBA
	10:00 pm to 7:00am Plus Sundays and Legal Holidays	60 dBA
Industrial	At all times	70 dBA

- A. For any source of continuous sound that emits a pure or continuous tone the maximum sound level limits set forth in the above table shall be reduced by five (5) dBA. For any source of sound that emits an impulsive sound (a sound of short duration with an abrupt onset and rapid decay and an occurrence of not more than one (1) time in any fifteen (15) second interval) the excursions of sound pressure level shall not exceed twenty (20) dBA over the ambient sound level regardless of the time of day or night or receiving land use using the “faster” meter characteristic of a Type II meter meeting the ANSI specifications S1.4-1971.
- B. In no case shall impulsive sounds exceed the continuous sound level limits established in this Section between the hours of 10:00 p.m. and 7:00 a.m.
- C. The maximum permissible sound levels by the receiving land use category as listed in the table, above, shall not apply to the following noise sources:
- (1) The emission of sound for the purpose of alerting persons to the existence of an emergency.
  - (2) Emergency work to provide electricity, water or other public utilities, when public health or safety is involved.
  - (3) Normal and legally permitted residential activities customarily associated with residential use.
  - (4) Domestic power tools.
  - (5) Explosives and construction operations.
  - (6) Agriculture.
  - (7) Motor vehicle operations on public streets. Such noise shall be regulated by Pennsylvania Transportation Regulations, Title 67, Chapter 450, governing established sound levels.
  - (8) Public celebrations, specifically authorized by the Township.
  - (9) Surface carriers engaged in commerce by railroad.
  - (10) The un-amplified human voice.
- D. Additional Noise Standards.
- (1) Except as noted below, the following shall apply to specified uses and properties within the Township, between the hours of 10:00 PM and 7:00 AM, plus all day Sunday and legal holidays.
    - a. There shall be no non-residential off-street loading operation.

- b. There shall be no operation of a vehicle in excess of eight thousand six hundred (8600) pounds on the property, nor idling of any engine of such vehicle.
  - c. There shall be no outside operation for non- residential purposes of any powered equipment, mobile refrigeration unit, powered hand tool, forklift, tractor, or other similar vehicle except for lawn maintenance, snow removal, or emergency services or repairs.
  - d. Other than police, fire, public service or ambulance operators, no person shall sound any horn, bell, gong, siren, or whistle or make other unnecessarily loud noises except when reasonably required to prevent accidents.
  - e. There shall be no outdoor loudspeakers or similar amplification that may be heard beyond the property line.
- (2) The restrictions established in Subsection (1) above shall not be applied to agricultural operations on properties within the Township. Agriculture shall be as defined and regulated by this Ordinance.
- (3) For any purpose or existing use of land in which potential or actual noise impacts need amelioration, the means to ameliorate such impacts shall be proposed by the applicant and reviewed by the Township on a case-by-case basis. The use of berms, existing and installed vegetation, fencing or similar enclosure, etc., shall be considered by the Township and, where deemed suitable, may permit modification or waiver of restriction in Subsection (1) above.
3. Odor.
- A. No uses, except agricultural operations, shall emit odorous gases or other odorous matter in such quantities to be offensive at any point at or beyond its property lines.
  - B. The guide for determining such quantities of offensive odors shall be the fifty percent (50%) response level of Table 1, Odor Thresholds in Air, *Research of Chemical Odors: Part I – Odor Thresholds for 53 Commercial Chemicals*, October, 1968, Manufacturing Chemists Association, Inc., Washington D.C.
4. Vibration. No vibration shall be produced that is transmitted through the ground and is discernible without the aid of instruments at or beyond the property lines nor shall any vibration produced exceed a 0.002 g peak measured at or beyond the property line using either seismic or electronic vibration measuring equipment.
5. Radioactivity.
- A. There shall be no activities that emit dangerous levels of radioactivity at any point.
  - B. No operation involving radiation hazards shall be conducted that violates the regulations and standards established in Title 10, Part 20, Code of Federal Regulations, *Standards for Protection Against Radiation*, in its latest revised form.

- C. Any proposed use that incorporates the use of radioactive material, equipment or supplies shall be in conformity with the applicable provisions of Subpart D, Environmental Health and Safety, Article V, Radiological Health, Title 25, of the Pennsylvania Code.
6. Electrical and Electromagnetic Interference.
- A. There shall be no radio or electrical disturbance adversely affecting the operation of equipment belonging to someone other than the creator of the disturbance.
- B. No use, activity or process shall be conducted that produces electromagnetic interference with normal radio or television reception from off the premises where the activity is conducted.
7. Industrial and Sanitary Waste. All uses shall be in conformity with the applicable regulations of the Pennsylvania Department of Environmental Protection and the Chester County Health Department regarding the treatment and disposal of industrial or sanitary wastes from industrial plant operations.
8. Non-Hazardous Waste. No use shall engage in the storage of non-hazardous waste material as defined by the Pennsylvania Solid Waste Management Act of 1980 (Act 97) on the property for any period beyond thirty (30) days.
9. Toxic and Hazardous Waste. No use shall engage in the production, treatment or storage of toxic or hazardous waste as defined by the Solid Waste Management Act of 1980 (Act 97). Any use or disposal of toxic or hazardous material or waste shall conform to the provisions of Section 1306.6.
10. Explosive Material. No use shall engage in the production or storage of any material designed for use as an explosive or in any way create any other danger to the safety of the surrounding area.
11. Lighting. All uses shall comply with the standards and requirements for exterior lighting as established in Section 1711 of this ordinance.
12. Public Health and Safety. No use shall create any other objectionable condition in an adjoining area that will endanger public health or safety or be detrimental to the proper use of surrounding areas.
13. Existing and proposed perimeter and internal roads must meet specifications determined by the Township Engineer as adequate for the proposed use and such road specifications may exceed those set forth in the East Pikeland Township Subdivision and Land Development Ordinance.
14. All utilities shall be placed underground.
15. Groundwater Supply and Protection.
- A. For any use permitted under the terms of this Ordinance that will necessitate approval as a subdivision or land development, the standards governing water supply contained in the

East Pikeland Township Subdivision and Land Development Ordinance shall be applicable.

- B. For any non-residential use that does not involve approval as a subdivision or land development, including in particular any individual commercial structure or water-related outdoor recreation use that utilizes on-site water, the following shall apply:
- (1) The standards of the East Pikeland Township Subdivision and Land Development Ordinance shall be complied with, as appropriate.
  - (2) The Zoning Officer may, as a prerequisite to the issuance of a building permit or use and occupancy permit, advise the Board to require of the Applicant additional information on the adequacy of the proposed water source, and the potential impacts of the proposed groundwater removal on any wells relied upon by neighboring properties.
- C. For any use authorized under the terms of this Ordinance, stormwater shall be managed in compliance with Chapter 22, Grading, Erosion and Sediment Control and Stormwater Management, of the Code of Ordinances of East Pikeland Township. Emphasis shall be on retention and infiltration of stormwater on-site, unless this is deemed by the Township to be clearly impractical or inappropriate in relation to site conditions. Any alternative shall be approved by the Township Engineer.
- D. Where a permit is required for any aspect of the water supply system from the Delaware River Basin Commission (including regulations as they may be amended), the Chester County Health Department, or any other agency, such permit shall be a prerequisite to the issuance of a building permit or use and occupancy permit.
- E. Any of the following facilities may be installed, and any of the activities undertaken, in conjunction with any non-residential use authorized under the terms of this Ordinance, only upon demonstration by the Applicant that all reasonable measures will be taken to minimize the adverse impacts of the proposed action on the Township's groundwater resources. To minimize shall not mean to eliminate, but to make the most substantial effort possible under the circumstances to reduce the adverse effect of the action required to be minimized.
- (1) The below ground storage of heating oil, gasoline, chemical solution or other substances which, if released, would constitute pollutants to groundwater. If warranted, as determined by the Township, the applicant may be required to place tank(s) in a concrete vault, install other impervious lines, and/or install monitoring devices. The applicant shall also demonstrate compliance with all applicable regulations of the Pennsylvania State Police, Fire Marshall Division.
  - (2) The use of fill, containing any material that could represent a potential contamination hazard to groundwater. Material shall include but not necessarily be limited to wastes identified as hazardous by the Pennsylvania Department of Environmental Protection.
  - (3) Storage, handling, processing or disposal of toxic materials or any other substance

with the potential to contaminate groundwater. The applicant shall also demonstrate compliance with Chapter 75 of the Rules and Regulations of the Pennsylvania Department of Environmental Protection and with the Resource Conservation and Recovery Act of 1976 (P.L. 94-580, as amended).

- (4) Land grading or construction of buildings or other site improvements that would directly or indirectly diminish the flow of natural springs. If warranted, as determined by the Township, the applicant shall provide water table data from observation wells.
- F. Any existing or proposed underground storage tank shall comply with the requirements of the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act, unless specifically exempted thereunder. Any Applicant shall present documentation of his compliance with notification and design/construction requirements of the Act and any regulations promulgated by the U.S. Environmental Protection Agency, and documentation of approval by that Agency.

#### Section 1714. PARK, RECREATION, OPEN SPACE, GREENWAY AND TRAIL STANDARDS

The following standards for the calculation, design, location, provision of facilities, and ownership of parks, recreation areas, open space, greenways and trails shall be applicable to all Major Subdivisions and Land Developments.

1. Calculation of Open Space. Land and facilities for parks, recreation areas, open space and trails, or a fee-in-lieu when determined by the Board of Supervisors, shall be provided in accordance with the provisions of Sections 424.C and 424.E of the East Pikeland Township Subdivision and Land Development Ordinance.
2. Park, Recreation Areas, Open Space and Trail Areas and Facilities Design Standards. All land required for park, recreation, open space and trails shall be located and designed in accordance with the provisions of Sections 424.D and 424.E of the East Pikeland Township Subdivision and Land Development Ordinance.
3. In any use or development of a tract where permanent open space is to be created and/or retained, the applicant shall include in such open space those prime agricultural soils, as herein defined, whose acreage, configuration and location offer future opportunity for agricultural use.

Areas of prime agricultural soils shall be left free of structures, paving, stormwater management facilities, and utilities to allow opportunities for agricultural uses.

#### 4. Greenway Standards

- A. All major subdivisions and land developments shall be required to preserve greenway lands in accordance with the provisions of this Section 1714.3 and Section 304.C.5 of the East Pikeland Township Subdivision and Land Development Ordinance.

- B. The following uses may be permitted on Greenway Lands:
- (1) Conservation of open land in its natural state, including, but not limited to, woodlands, fallow fields and meadow.
  - (2) Pastureland for horses, excluding commercial stables.
  - (3) Agriculture
  - (4) Silviculture
  - (5) Community open space, such as common greens, picnic areas, community gardens, trails and similar low-impact passive recreational uses.
  - (6) Water supply and sewage disposal fields, excluding lagoons, structures and access facilities, provided that such facilities occupy no more than forty percent (40%) of the required greenway lands.
  - (7) Underground utility rights-of-way.
- C. Greenway Lands shall be located in accordance with the delineation of Conservation Lands in the East Pikeland Township Open Space, Recreation and Environmental Resources Plan.
- D. The minimum amount of required Greenway Lands to be conserved shall consist of all land within the tract's primary conservation area as defined in Section 304.C.3 of the East Pikeland Township Subdivision and Land Development Ordinance. Land required for active public recreation shall be in addition to the provision of Greenway Lands.
- E. The Greenway Lands shall be identified and designed in accordance with the four-step design process as provided in Section 304.C.5(a) of the East Pikeland Township Subdivision and Land Development Ordinance.
- F. Greenway Lands shall be owned, managed and maintained in accordance with the provisions of Section 424.F of the East Pikeland Township Subdivision and Land Development Ordinance.
5. Park, Recreation, Open Space, Greenway and Trail Areas and Facilities Ownership Standards.  
The ownership of parks, recreation areas, open space, greenways and trails shall be in accordance with the provisions of Section 424 of the East Pikeland Township Subdivision and Land Development Ordinance.
6. Maintenance of Parks, Recreation, Open Space, Greenways and Trail Areas and Facilities
- A. In the event that the organization established to own and maintain open space areas and facilities, or any successor organization fails, at any time, to maintain such areas and facilities in sound order and condition and in accordance with the subdivision or land development plan, the Board of Supervisors may serve written notice upon such organization or the residents of such subdivision or land development, such notice to include:

- (1) The manner in which the organization has failed to maintain the open space areas and facilities in a sound condition and a list of the deficiencies.
- (2) A demand that such deficiencies of maintenance be corrected within thirty (30) days.
- (3) The date and place of a public hearing that shall be held within fourteen (14) days of the notice.

- B. Public Hearing. The Board of Supervisors shall hold a public hearing after notice of deficient maintenance of open space areas and facilities and at such hearing may modify the terms of the notice concerning deficiencies and may provide an extension of time for correction of such deficiencies. If the deficiencies or modifications thereof shall not be corrected within thirty days of the public hearing, or within any extension, the Township may enter upon the open space and maintain such open space and facilities thereon for a period of one (1) year. Such maintenance by the Township shall not constitute a taking of the open space nor vest in the public any rights to use such open space.
- C. Burden of Proof. Before the expiration of the one (1) year maintenance period by the Township, the Board of Supervisors of the Township shall, upon its initiative, or upon the request of the organization responsible for the maintenance of the open space, hold a public hearing upon notice to the organization and to the residents of the subdivision or land development in which the open space is located. At such hearing, the organization responsible for the open space maintenance of the residents shall show cause why such maintenance by the Township shall not, at the option of the Township, continue for a succeeding year. If the Board of Supervisors determines that the organization responsible for the open space and facilities maintenance is ready and able to maintain the open space areas and facilities in sound condition, the Township shall cease to maintain the open space areas and facilities at the end of the one (1) year maintenance period. If the Board of Supervisors determines that the organization responsible for the open space areas and facilities is not ready and able to provide such maintenance, the Township may, at its discretion, continue to maintain the open space areas and facilities during the next succeeding year and, subject to a similar hearing and determination, in each year thereafter.
- D. Cost of Maintenance. The cost of the maintenance and the enforcement proceedings by the Township shall be assessed, ratably, in accordance with the prevailing tax assessments, against the properties in the subdivision or land development, within which the open space is located. Such assessment shall become a lien on said properties. The Township, upon entering the open space and facilities thereon for the purpose of maintenance, shall file a notice of such lien in the County Office of the Prothonotary.

## 7. Open Space Standards

- A. No more than thirty-five percent (35%) of the required minimum amount of open space may be comprised of floodplains, wetlands and slopes of twenty-five percent (25%) or more.
- B. A minimum of thirty-five percent (35%) of the area designated for open space shall have environmental characteristics that make such area suitable for active recreational uses.

- C. Areas designated as open space shall not be a collection of scattered small pieces and narrow strips of land. A minimum of fifty percent (50%) of the open space shall be compact and contiguous. Although trails or bands of land should interconnect multiple areas of open space, the interconnections do not facilitate contiguousness. At least one (1) open space area shall be not less than two (2) acres in size, have a width of not less than two hundred (200) feet, and be suitable for active recreational facilities.

## Section 1715 WATER DEVELOPMENT

Water development shall be subject to the following requirements:

### 1. Application

- A. Except for the requirements of Section 1715.1.E below and subject to the limitations as set forth herein this Section shall apply to:
  - (1) Subdivisions and land development.
  - (2) All new wells.
  - (3) Modifications to existing wells.
- B. The term "well" shall include a groundwater withdrawal of any kind or shall refer collectively to a series of wells within a subdivision or land development. Such a series of wells shall be treated as one well for purposes of this Section.

Notwithstanding the foregoing, no withdrawal shall be subject to these requirements unless:

- (1) It has a one thousand (1,000) gallon per day or more cumulative draw and more than one hundred (100) gallons per acre per day withdrawal, or
  - (2) It is part of the development approval process involving four (4) or more lots proposed of less than twenty (20) acres each, or
  - (3) It has a two thousand (2,000) gallon per day withdrawal.
- C. A modification to an existing well to increase draw to one thousand (1,000) gallons or greater per day by well modification or change of use is also a new well for purposes of this Section, but only if associated with a subdivision, land development or change of use on the property.
  - D. A well to which this Section applies shall be exempt if all of the lots are deed restricted against further subdivision and additional water extraction and consists of five acres or more and the well draw is predicted to be 100 gallons or less per day, per acre.

- E. Prior to the granting of a building permit, a pump test for single-family dwellings, as provided in Section 1715.10 herein, shall be performed. Where an existing lot fails to meet East Pikeland Township's well standards, the property owner shall provide a written acknowledgement to the Township.

2. Hydrogeological Analysis.

For each well that is proposed, a local hydrogeological analysis including a pump test shall be submitted to the Township prior to approval. A hydrogeological analysis shall include, but not be limited to:

- A. A pump or aquifer test, those items listed in this ordinance as being required to be conducted.
- B. A recommendation concerning the ability of the well(s) to provide the water required for its intended use along with any potential off-site impacts.
- C. Copies of all data generated during the analysis.
- D. A properly conducted two-part certification.
- E. A site plan showing the location of the well(s) as drilled.
- F. Any additional information requested by the Township.

The initial standards shall be as provided in Section 1715.10 herein. The analysis shall provide a hydrogeologically quantified estimate of the maximum aquifer depletion caused by the proposed wells after a period of one (1) year and five (5) years. The analysis shall include values for the maximum and minimum cumulative pumping rates and water budget estimates for precipitation, recharge, infiltration, evapotranspiration and baseflow. The analysis shall include an estimate of the effects of pumping on the local groundwater level and stream baseflow during the fifty (50) year drought event. In addition, the zone of capture and the zone of influence shall be determined for the proposed well. The zone of influence is defined as the zone in which an incremental change in groundwater level of 6 inches or more is expected. The zone of capture is defined as the aerial extent of the waters (i.e. ground water, surface water, etc.) captured by the pumping of water.

- 3. Water Quality Analysis. The analysis shall include a quality analysis for the dry year nitrate impact of on-site sewage disposal systems within the proposed subdivision or land development on the underlying groundwater quality. In particular, the analysis must include an estimate of the increase in nitrogen (including at least nitrate and ammonia) concentrations in the groundwater and also provide a discussion of background nitrogen concentrations. The analysis shall also provide an estimate of the nitrogen concentration in the ground water beneath the downgradient property boundaries during the fifty (50) year drought using the methodology prescribed in Section 1715.11 herein.
- 4. Biological Analysis. If the reduction in the stream baseflow affected area exceeds twenty percent (20%) in any location, a biological impact analysis shall also be provided, as per U.S.

EPA's *Rapid Bioassessment Protocols for Use in Streams and Rivers*. Specifically, Protocol II, as updated for macroinvertebrate identification and analysis will be conducted. The data collected will be used to calculate macroinvertebrate densities, percent dominant taxa, and percent EPT richness, which is an estimate of the number of ephemeroptera, plecoptera, and trichoptera relative to the total number of macroinvertebrates. Stream baseflow affected area is the area of the stream flow that a pumping well impacts.

5. Methodology. The standards for conducting the above analyses shall be those adopted from time to time by the Board of Supervisors based on the evolution of professional standards. The initial standards are contained in Sections 1715.10 (pumping test report) and 1715.11 (nitrate analysis report) herein which shall be changed from time to time by resolution of the Board of Supervisors. An Applicant may employ an equivalent or better analytical methodology, as may be accepted by the Board of Supervisors as such, upon advice of the Township engineer, and associated other applicable professional review, upon request of the Applicant documenting the proposed methodology.
6. Approvability.
  - A. In order to assure the availability of reliable, safe and adequate water supplies to support the intended land uses within the capacity of available water resources and to protect the aquifer, no development shall be approved which is:
    - (1) Predicted to reduce the site's attributed stream baseflow by more than fifty percent (50%) of the Q750 using the following formula:
$$\text{Allowable Withdrawal} = \frac{\text{Net site acreage} \times \text{Q750} \times 0.5}{\text{Total Watershed Acreage}}$$
and/or,
      - (2) Reduce the water table on adjoining properties by more than two (2) feet and/or to increase nitrates the lower of an increment of two (2) mg/L or a total of ten (10) when added to background nitrate condition at the downgradient property lines or streams by two (2) mg/L and/or which reduces yields of present wells more than one hundred (100) feet beyond the property line.
  - B. Developments affecting groundwater which fail to meet the standards may be modified to meet the standard set forth in Section 1715.6.A. In the alternative, if there will be no significant stream impact as set forth in Section 1715.6.A (1), the developer may secure releases from all owners, accompanied by deed restrictions against all further development affecting groundwater within the zone of influence.
7. Changes in Methodology. The assumptions to be utilized in the analysis shall be set forth by the Board of Supervisors from time to time and in the absence thereof, by accepted or demonstrated professional standards. The applicant may utilize other assumptions than those set forth by the Board, if any, if the applicant establishes to the Board upon advice of the Township Engineer, and other applicable professional review, that different assumptions are warranted.

8. Approved Data. The data prepared by the United States Geological Survey in the water study known as the *Hydrogeology and Ground-Water Quality of Chester County, Pennsylvania, Water Resources Investigations Report 94-4109 and Hydrologic Data for Chester County, Pennsylvania, Open-File Report 94-381*, and/or the *U. S Army Corps of Engineers Philadelphia District/ Final Market Feasibility Study*, and *Groundwater Monitoring Options, (MFS Study, October, 1996)* shall be considered authoritative unless shown to be wrong. The soils data provided by the United States National Resource Conservation Service and the geologic data provided by the Pennsylvania Geological Survey, Map of Pennsylvania 1981, shall be considered authoritative unless disproved by satisfactory evidence.
9. Construction Standards. In the construction of wells, standards satisfactory to the Board of Supervisors shall be employed and monitored. Standards which are acceptable shall be adopted by the Board from time to time. The initial standards are set forth in Section 1715.12, Well Standards. To the extent that an analysis depends on water conservation and recycling, the standards shall include guarantees of implementation, well construction data and maintenance which guarantees, satisfactory to the Township, shall be provided. All well drillers are required to get an annual permit from the Zoning Officer.
10. Pumping Test Requirements.
- A. Pumping Test for a Single Residence Development  
As part of the approval process for any one-residence development, a two-part pumping test must be completed on the potable well. Developments with greater than 5 residences or anticipated water use of 4,000 gallons per day must complete a development-wide pumping test and the procedures detailed in this Section shall not be applicable.
- The purpose of the two-part test is to determine if the underlying aquifer provides a sufficient yield for the residence's domestic needs. The developer or developer's contractor must conduct the two-part pumping test as outlined below:
- (1) The required pumping test consists of two parts. The second part must be performed immediately upon completion of the first part.
  - (2) Part 1, Peak Demand Test  
  
The first portion of the pumping test measures the ability of the well to meet the predicted water demand of a household during the twice-daily peak use periods.
  - (3) Part 2, Constant Head Test  
  
The second portion of the pumping tests measures the aquifer's ability to supply water to the well sufficient to meet the total daily water demand for the household.

B. Two-Part Pumping Test Procedure.

- (1) Calculate the Peak Demand Rate and Peak Time according to the following formula:

Minimum Well Formula Assumptions:

Water usage is 100 gallons per day (gpd) per person;

Two persons occupy one bedroom; additional bedrooms are occupied by one person;

Two Peak Water Use Periods per day, and

Flow through plumbing fixtures = 3 gallons per minute (gpm) in bathrooms.

Peak Load = (no. of bedrooms) (no. of persons/bedroom) (gpd/person) peak periods/day

= (no. of bedrooms) (2) (100) = (no. of bedrooms) (100 gallons)

Peak Demand Rate = (gpm/bathroom) (no. of bathrooms) = (3 gpm) (no. of bathrooms)

Peak Time =  $\frac{\text{peak load}}{\text{peak demand rate}}$

- (2) Part 1, Perform peak demand pumping test:

- a. Measure static water level in the well prior to the initiation of pumping;
- b. Pump at peak demand rate for peak time and measure the water level in the well at the completion of the test.

To pass, the well must be able to supply water at peak demand rate for peak time.

- (3) Part 2, Perform the constant head pumping test immediately upon completion of the peak demand test, regardless of whether or not the test was passed. The water level must not be allowed to recover from the first test. The constant head pumping test must be completed under the following procedures:

- a. Adjust the pumping rate to a constant head pumping rate. The change in head must be less than 0.50 feet per hour;
- b. Convert the constant head pumping rate to gpd and compare to total household demand.

To pass the test, the constant head pumping rate must equal the total demand.

All wells must also meet the 5 gpm minimum as specified in the well construction standards. The well shall be flushed at a rate at least equal to two hundred percent (200%) of the expected pump capacity for a minimum of two (2) hours, or until the water discharging is clear and free from sand. During the flushing operation the amount of drawdown and stability of the yield shall be determined.

C. Aquifer Test Requirements for Multi-Dwelling Developments.

As part of the approval process for developments with greater than 5 dwellings, or 4,000 gallons per day, whichever is less, a development-wide pumping test must be performed. A work plan for the pumping test must be submitted to East Pikeland Township and written approval must be granted prior to the initiation of the test. A forty-eight (48) hour commencement notice shall be provided to East Pikeland Township. The working plan shall include estimates of initiation and completion dates of the tests. The purpose of the development-wide pumping test is to determine the off-site impact of pumping and whether or not increased water usage will adversely impact off-site well yields and stream flows.

The pumping test must be conducted by a well driller licensed to do business in Pennsylvania using the procedures detailed below:

- (1) Characterize the underlying geologic formation with available information, including literature, field observations and well logs to obtain the following:
  - a. Aquifer thickness;
  - b. Thickness of overburden;
  - c. Known hydraulic conditions of the aquifer such as confined, semi-confined or water table;
  - d. Depth to the water table or potentiometric surface;
  - e. Known permeable and semi-permeable zones;
  - f. Orientations of joints, fractures, and bedding planes;
  - g. Recharge areas;
  - h. Anticipated values of well yield, hydraulic conductivity, transmissivity and storage coefficient;
  - i. Estimated groundwater flow directions, and
  - j. Locations of off-site potable wells within a five thousand (5,000) foot radius of the proposed development.
  - k. Locations of streams, ponds, and other surface water bodies within a five thousand (5,000) foot radius of the proposed development
- (2) Design an appropriate pumping test using best professional judgment. The pumping rate should be sufficient to supply water to meet twice the total daily water demand for all the dwellings in the development. For example, if the development includes ten (10) dwellings with a total of thirty-five (35) bedrooms, the pumping rate must be at least fourteen thousand (14,000) gallons per day or nine and three-quarters (9.75)

gallons per minute (gpm). If one well cannot yield sufficient water, additional wells may be used for the test. The test should last for seventy-two (72) hours or until equilibrium conditions are established, or a minimum of thirty-six (36) hours.

(3) General Requirement

- a. A minimum of four observation wells must be installed for or used in the test. Existing wells may be used with approval from East Pikeland Township. Locks shall be installed on the top of all casings of observation wells. The observation wells may coincide with locations for future potable wells and after completion of the test, be converted to potable wells. However, at least two observation wells must be located along the downgradient property boundary of the development;
- b. To determine ambient conditions, water-level measurements must be collected from the pumping well(s) and observation wells at one (1) week, forty-eight (48) hours and twenty-four (24) hours prior to the initiation of the test;
- c. Water from the pumping test must be discharged to an area away from the pumping well, preferably an off-site downgradient location which will not impact the result of the test;
- d. Well casings and ground surface elevations for the pumping well and observation wells shall be surveyed to a common datum.

(4) Submission Requirements

- a. A map showing all water withdrawal points and surface-water bodies within one-quarter ( $\frac{1}{4}$ ) mile of the proposed development;
- b. A scaled site map showing the locations of the pumping well and observation wells, and proposed locations of other wells expected to be installed in the development;
- c. Well logs and well construction specifications;
- d. Field data, including depth to water and discharge rate, the times the measurements were taken, and the methods of obtaining the measurements;
- e. A plot of drawdown versus time for the pumping well(s) and observation wells;
- f. A plot of drawdown versus distance for specific times during the test;
- g. Method of analysis of data (such as Theis, Jacob or other applicable methodologies);
- h. The zone of capture (ZOC) and zone of influence (ZOI) of the pumping well(s);
- i. Analytical results of the test and conclusions.

- D. Pumping Test Criteria. The developer or the developer's contractor must calculate the potential ZOC and ZOI of the pumping well(s). To pass the test, the calculated ZOC must not include any off-site potable wells.

The magnitude of water-level drawdown must be calculated for the downgradient edge of the development. To pass the test, a drawdown of less than 1 foot must be apparent at the downgradient property boundary during the last hour of the pumping test.

## 11. Well Standards

### A. Definitions as used in this Section:

- (1) ADEQUATE WATER SUPPLY means that, where obtainable, the yield of a well or the capacity of a pump and distribution system shall be sufficient to meet the requirements which the user has stated are necessary for drinking, culinary, and other purposes for which well water is intended to be used in the opinion of the Township.
- (2) ANNULAR SPACE means the space between two circular objects, one of which surrounds the other, such as the opening between a drill hole and a casing pipe or between a casing pipe and a liner pipe.
- (3) APPROVED means sanctioned by East Pikeland Township, in conformity with applicable laws and regulations.
- (4) CONTAMINATION means any matter which will render water unsafe for human consumption.
- (5) DRAWDOWN means the extent of lowering of the water level or potentiometric level in a well when water flows or is pumped from it.
- (6) DRILLHOLE:
  - a. Lower drill hole means that part of the drill hole below the vertical zone of contamination.
  - b. Upper drill hole means that part of a drill hole, auger hole or excavation established through the vertical zone of contamination.
- (7) DRIVEN POINT WELL means a well constructed by joining a "drive point" with a length of pipe, extended as may be necessary, and driving the assembly into the ground without a preliminary excavation in excess of ten(10) feet depth.
- (8) ESTABLISHED GRADE means the permanent point of contact of the ground or artificial surface with the casing pipe or curbing of the well.
- (9) FLUSHING means the act of causing a rapid flow of water from a well by pumping, bailing or similar operation.

- (10) NEAR SURFACE WATER means water in the zone immediately below the ground surface. It may include seepage from barnyards, leaching pools and disposal beds or leakage from sewers, drains and similar sources of contaminated water.
- (11) PUMPING WATER LEVEL means that elevation of the surface of the water in a well when water flows or is pumped from it at a given rate.
- (12) SAFE WATER means water that is sufficiently free from contamination to be safe for human consumption.
- (13) SANITARY CONDITION:
  - a. When referring to a well it means that the construction of the well and the installation of the pumping equipment are such that the well is effectively protected against entrance of contaminating matter in the opinion of the Township.
  - b. When referring to the surrounding of a well it means that the location and surrounding area are free from debris or filth of any character and not subject to flooding.
- (14) SEWER means a conduit used or intended for conveying sewage or other wastes.
- (15) SPECIFIC CAPACITY means the continuous yield of a well at a given drawdown expressed in gallons per minute per foot of drawdown.
- (16) STATIC WATER LEVEL means that elevation of the surface of the water in a well when no water flows or is being pumped therefrom.
- (17) STUFFING BOX means an approved receptacle in which packing may be compressed to form a water or airtight junction between two objects.
- (18) TOWNSHIP means the Board of Supervisors of the Township or any properly authorized official to the Township who may be designated to act for the Township by the Board.
- (19) VERTICAL ZONE of CONTAMINATION means that depth of near surface formations containing connecting pore spaces, crevices or similar opening, including artificial channels such as unprotected wells, through which contaminated water may gain access to a well or the groundwater body.
- (20) WATERTIGHT CONSTRUCTION implies cased and grouted construction through firm foundations like clay or rock. Through granular material like sand or gravel, it implies that the casing pipe is of approved quality and assemble watertight.
- (21) WELL is any excavation whether drilled, bored, driven, or cored that is less in its diameter than its depth.

- (22) WELL SEAL means an approved, removable arrangement or device used to cap a well or to establish and maintain a junction between the casing or curbing of a well and the piping or equipment installed therein, so as to prevent water from entering the well at the upper terminal.
  - (23) WELL VENT means an outlet at the upper end of the well casing to allow equalization of air pressure in the well.
  - (24) YIELD means the quantity of water per unit of time, which may flow or be pumped from a well at a constant specified drawdown.
- B. Construction standards of wells therefore requiring permits and filing of well driller's report with Pennsylvania Geological Survey, Pennsylvania Department of Conservation & Natural Resources, and East Pikeland Township.
- C. Zoning Permit Required. No person shall construct or install any well on any lot on which a structure, which will be supported by such systems, is to be constructed, unless the well driller has first obtained a zoning permit pursuant to the provisions of the Zoning Code.

Where no public water is accessible, water shall be furnished by the owner on an individual lot basis. If a well is installed on a lot which contains sewage disposal facilities, the well shall be of the drilled type, cased and grout sealed into the bedrock. The well shall have a production of not less than five (5) gallons per minute as established by bailor tests certified by the well driller or an equivalent test satisfactory to the Township. Prior to the issuance of a building permit and upon completion of the installation of any well, the owner of the premises upon which the well has been installed shall produce a certificate of potability for water within the well, a certificate setting forth the rate of flow of water from the well, and information stating the depth to water and the geologic description. In addition, the quality of the water produced by the well shall be tested to determine compliance with the following maximum contaminant limits by a Water Quality Laboratory certified by the Department of Environmental Protection of the Commonwealth of Pennsylvania:

(1) Physical Characteristics

Turbidity	5 Units
Color	15 Units
Threshold Odor Number	3 Units
pH	6.5 - 8.5

(2) Chemical Characteristics

Chloride	250.00 mg/l (ppm)
Nitrate/Nitrite Nitrogen	10.00 mg/l (ppm)
Iron	0.30 mg/l (ppm)
Sodium	20.00 mg/l (ppm)
Manganese	0.05 mg/l (ppm)
Copper	1.00 mg/l (ppm)
Hardness	250.00 mg/l (ppm)
Detergent	0.05 mg/l (ppm)
Total Dissolved Solids	500.00 mg/l (ppm)
TCE (Trichloroethylene)	4.50 mcg/l (ppb)
Phenol	5.00 mg/l (ppm)
Lead	15.00 mcg/l (ppb)

(3) Bacteriological Characteristics

Total Plate Count	Less than 500 counts per ml.
Fecal Coliform	Less than 1 colony per 100 ml.

A certificate indicating a representative sample of the well water that was taken by the testing laboratory and compliance or lack of compliance of the well water (specifying each contaminant which does not comply) shall be supplied to the Township together with the application for an occupancy permit not more that 30 days prior to occupancy.

No occupancy permit will be issued for any lot unless the lot contains a well which has a production of not less than five (5) gallons per minute as established by the bailor test or an equivalent test satisfactory to the Township and unless the water quality of the well meets the aforementioned standards or unless the plans for the building includes detailed plans for a treatment system which is certified by a professional engineer to bring the water into compliance with the aforementioned standards.

In addition, the applicant for an occupancy permit must agree that in the event, the water is not in compliance with the aforementioned standards, that he will give the purchasers of the property (if different than the applicant) a copy of the water certification specifying each contaminant which does not comply with the standards and a written description (including plans) of the system which will be installed to bring the water quality into compliance together with instructions as to how the system must be maintained.

D. General Construction Principles.

The following basic principles, general in scope and fundamental in character, shall govern the location, construction or reconstruction and maintenance of wells, installation and maintenance of pumping equipment, and supervision of well constructors and pumping equipment installers.

- (1) Wells shall be:
  - a. Located in such a manner that the well and its surrounding can be kept in sanitary condition; and
  - b. Constructed in such a manner as to provide protection against cross-contamination of impacted and pristine aquifers.

(2) Pump Installation.

The installation of the pumping equipment shall be:

- a. Located in such a manner that the pumping equipment and its surroundings can be kept in a sanitary condition;
  - b. Adequate in capacity to supply the required volume of water, where available, for the maintenance of sanitary conditions, all ordinary domestic purposes and other specified uses;
  - c. Designed to meet the well characteristics, durable in character and made in such a manner that continued operation without priming is assured at the time of installation; and
  - d. Made in such a manner as to provide adequate protection against contamination from any surface or subsurface sources.
- E. Well Yields. All individual private on-lot wells shall have a minimum flow for each residential unit of five (5) gallons per minute. The flow of water shall be determined as follows:
- (1) Upon the drilling of the well, a static water level measurement shall be taken and the well shall then be pump tested at five (5) gallons per minute for a minimum of two (2) hours; and ;
  - (2) Thereafter, the water level recovery rate in the well shall be measured for a minimum period of two (2) hours. All calculations shall be submitted to the Township at the time that the certificate of potability for water within the well is submitted to the Township.
- F. Well Depth. All wells shall be drilled to a minimum depth of 100 feet or to a greater depth to provide adequate drawdown in response to the minimum pumping rate of five (5) gallons per minute and to provide for seasonal fluctuations of the water table.
- G. Well Location.
- (1) Every well shall be located in keeping with the following principles:
    - a. At the highest point in the premises consistent with general layout and surroundings, but in any case protected against surface wash; and

- b. As far removed from any known or probable source of contamination as the general layout of the premises and the surroundings permit.
  - c. At a distance of at least one hundred (100) feet from the septic system and located on the opposite side of the dwelling from the septic system and upgradient.
- (2) Relation to Pollution Sources. Minimum distances between wells and sources of contamination shall be in accordance with requirements of the Chester County Health Department and the Township.
- (3) Relation to Buildings. With respect to buildings, the location of a well shall be made as follows:
- a. When a well is located adjacent to a building, it shall be located so that the centerline of the well extended vertically will clear any projection from the building by not less than two (2) feet.
  - b. Every well shall be located so that it will be reasonably accessible with proper equipment for cleaning, treatment, repair, test, inspection and such other attention as may be necessary.
  - c. No well shall be located so that the top thereof will be within the basement of any building or under a building having no basement.

#### H. Well Design and Construction.

##### (1) Well Casings

All wells shall be cased for a minimum of ten (10) feet into bedrock or a minimum of fifty (50) feet from land surface, whichever is deeper. All casings shall be provided with a pitless adapter or a sanitary seal. All casings shall be cemented in place to form a seal between the casing and the bedrock. All casings shall be raised above final grade; a minimum of one (1) foot when a pitless adapter is utilized.

- (2) Well Casing Pipe. The minimum standard of quality for well casing pipe shall be new steel or new wrought iron equivalent to American Standard Schedule 30 pipe, six (6) inches or greater in diameter.
- (3) Connections and Joints. All connections to a well casing shall be correctly mated threaded pipe fittings, welded connections, sanitary well seals or other approved connections.
- (4) Driving or Installation of Pipe. Well casing pipe shall be driven or installed so that no injury, affecting the safety of the water supply, results.
- (5) Watertight Caps or Plugs. Upon completion of drilling, the well shall be equipped with a suitable watertight cap or plug to protect the well from tampering or from the entrance of foreign matter.

- (6) Provision for Sounding Water Levels and Water Level Indicating Device.
  - a. A well used for domestic purposes shall be equipped with an access opening extending a least to ground level to permit sounding of water level in the well. This opening shall be three-eighths (3/8) of an inch or larger pipe, properly sealed with a watertight cap or plug to prevent access of surface water. This access pipe may be a part of the well venting system.
  - b. A well used for commercial or industrial purposes shall, in addition, be equipped with an approved water level indicating device.
- (7) Preparation for Deepening. In the preparation for deepening, any sediment or debris in the bottom of the dug well shall be removed. The bottom shall be disinfected by distributing a chlorine solution over the bottom or adding such solution to water in the well. A concentration of twenty three hundred (2300) parts per million of chlorine should be attained for disinfection.

I. Miscellaneous Well Construction Requirements.

(1) Alignment.

The centerline of a drilled or bored well shall no be out of plumb more than twelve (12) inches per 100 feet of depth.

(2) Caving Protection.

When caving or sloughing formations that would interfere with the proper functioning of a well or the pumping equipment are encountered, the entrance of foreign material shall be prevented by means of liner pipe, cementing or other approved methods.

(3) Finishing Operation.

Upon completing construction or reconstruction operations, the constructor of the well shall carry out finishing operations as follows:

a. Flushing and Testing.

The well shall be flushed at a rate at least equal to two hundred percent (200%) of the expected pump capacity for a minimum of two (2) hours, or until the water discharging is clear and free from sand. During the flushing operation the amount of drawdown and stability of the yield shall be determined.

b. Sealing.

After testing and sampling, the well constructor shall seal the well watertight.

c. Safe Water.

If the results of the analysis required in indicate unsafe water in the well, the well constructor shall take such additional measures as approved by the Township to assure a safe water supply. The safety of the water shall be judged by additional sampling and analysis as required by the Township. The cost per analysis is nominal, and all such costs shall be borne by the applicant.

- (4) Blasting. No person shall engage in the use of explosives for increasing or recovering the yield of any well in which casings and liners are not grouted or in which the diameter of the drill hole is larger than that of casings or liners above the point of shooting, without first giving notice of such use to the Township, and without first having obtained a license therefore from the applicable State agency and a zoning permit from the Township.
- (5) Increasing Well Yields. No person shall engage in the use of technology such as hydrofracturing or similar means to increase or recover the yield of any well without first giving notice of such to the Township, and without first having obtained a license therefore from the applicable State agency and a Zoning Permit from the Township.