

**PENN TOWNSHIP LAND DEVELOPMENT REVIEW CHECKLIST
MINIMUM REQUIRED IMPROVEMENTS**

Name of Land Development: _____

Date Land Development Plans Received by EADS: _____

Developer's Contact Person: _____

Land Development Plans Reviewed by: _____ Date of Review: _____

Development Review Acknowledged: _____ Date Acknowledged: _____

Developer's Email Address: _____

Code Section	Code Requirement	Plans Meet Code	Plans Do Not Meet Code	Other	Comments, if any	Sheet/s on which Requirement is Met	Developer's Comments, if any
156-24	Bond required. Prior to the granting of final approval, the developer shall have installed or shall have furnished adequate bond to cover 110% of the cost of installing the improvements listed and described in the sections of this chapter. All of the required improvements shall be made in full compliance with the specifications for each of the various units of work, as required by the governmental authority having jurisdiction.						
156-25	Street Improvements.						
156-25 A	Grading.						
156-25 A(1)	The entire width of the right-of-way of each street in a proposed subdivision shall be graded and suitably prepared for the installation of paving, drainage structures, curbs, gutters, and sidewalks in accordance with the appropriate standards for the class of street.						
156-25 A(2)	The subgrade shall be free of sod, vegetation matter, or other similar material. Where poor subsurface drainage conditions exist, adequate drainage shall be installed. The subgrade construction shall conform to minimum standards as adopted by the Township.						
156-25 A(3)	All utility lines, underdrains, sewer lines, including laterals, and service lines being placed in the roadway shall be installed prior to the commencing of road construction. All backfill for utilities under the roadway shall be only suitable material compacted at the optimum material moisture content and placed at not greater than four-inch lifts.						

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156-25 B	Preparation of subgrade.						
156-25 B(1)	The subgrade shall be well-rolled and fine graded to a tolerance of not more than 0.1 foot above and 0.2 foot below the grade as shown on the plan.						
156-25 B(2)	All soft, plastic, or rock areas in the subgrade shall be undercut to a depth of at least nine inches or more if deemed necessary by the Township Engineer and shall be refilled with approved materials (including possible use of geotextiles) and by methods approved by the Township Engineer.						
156-25 B(3)	The subgrade shall conform to the same crown as the paved surface.						
156-25 B(4)	The subgrade shall be proof-rolled with a loaded single-axle truck carrying a gross weight of 18,000 pounds and approved by the Township Engineer or Director of Public Works prior to the placement of subbase or base course material.						
156-25 B(5)	Underdrains shall be six-inch nominal diameter perforated polyvinyl chloride (PVC) drainpipe of suitable strength to withstand anticipated loadings. Pipe is to be laid in a shallow twelve-inch trench bedded in 2-B stone. Underdrains are to be installed with Class I geotextile around the outside perimeter of the trench. Underdrains are to be provided on both sides of all roads running parallel with the road, unless otherwise directed by the Township. Cross drains may be required as directed by the Township during plan review.						
156-25 C	Pavement.						
156-25 C(1)	The minimum pavement width shall be 24 feet.						

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156-25 C(2)	The pavement shall be constructed pursuant to the Typical Roadway Cross-Section as provided in Appendix A and as follows:						
156-25 C(2)(a)	Roadway subbase. Roadway subbase shall consist of six-inch depth of No. 2A stone. Subbase shall be proof-rolled prior to placement of asphalt pursuant to §156-25 B(4). [Added 7-21-1998 by Ord. No. 708]						
156-25 C(2)(b)	Roadway base.						
156-25 C(2)(b)[1]	Roadway base course shall be constructed of 4-1/2 inches of bituminous concrete base course (BCBC). Depth shall be measured after compaction.						
156-25 C(2)(b)[2]	Bituminous concrete base course material shall conform to PennDOT Form 408, Section 305, and shall be placed on the prepared subbase material.						
156-25 C(2)(c)	Roadway wearing course.						
156-25 C(2)(c)[1]	Roadway wearing course shall consist of ID-2 bituminous wearing material rolled to a finished depth of 1-1/2 inches. ID-2 PennDOT wearing material shall conform to PennDOT Publication 408, Section 420.						
156-25 C(2)(c)[2]	Wearing course shall only be placed on the base course after sufficient time has passed to ensure that no base course settling will take place. Wearing course shall only be placed on the base course after an inspection has determined that no sags, low spots, or depressions exist which could affect the integrity of the wearing course. Any defects found shall be repaired prior to the wearing course placement.						

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156-25 C(2)(d)	Alternate roadway construction. As an alternate to the above-described roadway, the Township will accept the following as an acceptable roadway:						
156-25 C(2)(d)[1]	The subbase course shall consist of an eight-inch depth of No. 1 stone. The top two inches shall be choked with fines.						
156-25 C(2)(d)[2]	The base course shall consist of 2-1/2 inches of ID-2 bituminous binder material.						
156-25 C(2)(d)[3]	The wearing course shall consist of 1-1/2 inches of ID-2 bituminous wearing material.						
156-25 C(3)	Roadway pavement and subbase shall have a slope of 0.02 foot per foot from the roadway crown to the curb. [Amended 7-21-1998 by Ord. No. 708]						
156-25 D	Shoulders and embankments.						
156-25 D(1)	Street shoulders shall be constructed to the width specified on the Typical Cross-Section in Appendix A.						
156-25 D(2)	Street shoulders shall be constructed with suitable materials from roadway or structure excavation supplemented by additional suitable material, if directed, from borrow excavations. The entire shoulder area shall be uniformly and thoroughly compacted by rolling and shall be level with the tops of curbs as directed by the Engineer.						
156-25 D(3)	Embankments at the sides of streets and cross-sections of drainage ditches shall not exceed a maximum slope of two feet horizontally to one foot vertically in a cut section and two feet horizontally to one foot vertically in a fill section; in special cases the Engineer may require more rigid standards.						
156-25 E	Curbs and gutters.						
156-25 E(1)	Six-inch high by twelve-inch wide wedge curbs shall be required on all streets.						

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156-25 E(2)	The minimum curb or pavement edge radii at street intersections shall be 30 feet.						
156-25 F	Walls, slopes, and traffic guards. Where the grade of the street is above or below the grade of the adjacent land, walls, or slopes shall be constructed in a manner satisfactory to the Engineer and shall be sufficient to support the street or the adjacent land, as the case may be.						
156-25 G	Calendar and weather limitations.						
156-25 H	Street name signs. Four-way street name signs with reflective white lettering, a green background, and a breakaway pole design shall be installed at each street intersection by the developer at his own expense. Signs shall be erected once the street is paved and prior to any structure being built.						
156-25 I	Residential plan identification signs.						
156-25 J	Snow removal.						
156-25 K	Re: impacts of development on levels of service for local roads.						
156-25 L	Re: payment of traffic impact fees.						
156-25 M	All streets shown on any plat shall be of sufficient width and proper grade as outlined in this article and shall be so located as to accommodate the probable volume of traffic thereon, facilitate fire protection, provide access for fire-fighting equipment to buildings, and provide a coordinated system of streets conforming to the Township's plan of streets. [Added 6-18-1997 by Ord. No. 683]						

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156-26	Drainage. All necessary facilities, including underground pipe, inlets, catch basins, or open drainage ditches, as determined by the Township Engineer, in accordance with the requirements of Chapter 144, Stormwater Management, as amended, shall be installed to provide for the adequate disposal of subsurface and surface water and maintenance of natural drainage courses. All storm drainage facilities within the subdivision shall connect to an adequate drainage course.						
156-26 A	Storm sewers and stormwater drainage. A drainage system adequate to serve the needs of the proposed new streets and the entire subdivision will be required in new subdivisions. Where an adequate public storm sewer main is available at the plat boundary, the developer shall construct a storm sewer system and connect with such storm sewer main. If such storm sewer systems are not accessible, adequate stormwater drainage shall be provided by natural drainage channels with easements of adequate width.						

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156-26 B	Culverts and bridges. When natural drainage channels intersect any street right-of-way, it shall be the responsibility of the developer to have satisfactory bridges and culverts designed and constructed. Where culverts are required, the following minimum requirements shall be observed.						
156-26 B(1)	All culverts shall extend across the entire right-of-way width of the proposed road. The cover over the culvert and its capacity shall be determined by the responsible governmental official, depending on jurisdiction. The minimum diameter of a culvert pipe shall be 18 inches. Headwalls, depending on existing drainage conditions, may be required.						
156-26 B(2)	Driveway culverts shall have a minimum length of 20 feet. The diameter of driveway culverts shall be subject to the determination of the responsible governmental official, depending upon jurisdiction. The driveway culverts shall be laid so as to maintain the flow lines of the ditch or gutter. Headwalls may be required.						
156-26 C	The construction of stormwater drainage improvements shall be subject to compliance with Chapter 144, Stormwater Management, as amended. (Refer to Stormwater Management Review Checklist.)						

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156-27	Water supply.						
156-27 A	Public water supply. The developer shall construct a system of water mains and connect with such public water supply and provide a connection for each lot. Mains shall be extended to the subdivision boundary when required by the Commission. If water is to be provided from a source other than private wells owned and maintained by individual owners of lots, evidence shall be submitted that the subdivision or land development is to be supplied by a certificated public utility, a bona fide cooperative association of lot owners or by a municipal corporation, authority, or utility. A copy of a certificate of public convenience from the Pennsylvania Public Utility Commission or an application for such certificate, a cooperative agreement, or a commitment or agreement to serve the area in question, whichever is appropriate, shall be acceptable evidence.						
156-27 A(1)	Fire hydrants. In all subdivisions where public water is provided, fire hydrants shall be installed. Every lot in the subdivision shall be within 600 feet of a fire hydrant.						
156-27 B	Individual water supply.						
156-27 B(1)	Individual private wells shall be located in accordance with the requirements of the Pennsylvania DEP.						
156-27 B(2)	As a precaution against seepage, a watertight seal shall be provided around the pump mounting.						
156-27 B(3)	All abandoned wells shall be sealed in a manner that will render them watertight.						

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156-27 B(4)	In all cases where it has been determined that individual water supplied from private wells is not feasible, a public water distribution system will be required.						
156-28	Sewage disposal.						
156-28 A	Sanitary sewers. If a subdivision can be reasonably served by the extension of an existing public sanitary sewer, or separate treatment works are to be constructed, the developer shall provide, where necessary, the separate treatment sewage plant and a system of sanitary sewer mains and shall provide lateral connection for each lot. Sewer mains and sewer easements shall be extended to the subdivision boundaries when required by the Board based on the recommendation of the Planning and Zoning Commission.						
156-28 B	If on-lot sewage disposal systems are to be used, septic tanks shall be installed as approved by the Pennsylvania DEP.						
156-29	Monuments and markers.						
156-29	All subdivisions and land developments within the Township of Penn shall conform to the following standards:						
156-29 A	Monuments and markers shall be placed so that the scored or marked point shall coincide exactly with the intersection of lines to be marked and shall be set so that the top of the monument or marker is level with the surface of the surrounding ground.						

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156-29 B	Visibility.						
156-29 B(1)	Monuments marking common green areas or dedicated recreation areas shall be so marked and readily visible at a height of six (6) feet. The monument for said marking may be a wooden post or other similar object.						
156-29 B(2)	Monuments shall be readily visible and set at the intersection of all lines forming angles in the boundary of the subdivision or land development.						
156-29 C	Markers shall be set at the beginning and ending of all curves along the street property lines; at all points where lot lines intersect curves, either front or rear; at all angles in property lines of the lots; and at all other lot corners.						
156-29 D	Monuments may be of the following two (2) types:						
156-29 D(1)	Cut stone six by six (6X6) inches by three (3) feet long with a three (3) inch diameter aluminum or bronze marker grouted on top;						
156-29 D(2)	Concrete six by six (6X6) inches by three (3) feet long with a one-half (1/2) inch diameter brass bar being the entire length having a three (3) inch diameter brass top attached to the bar; or grout a three (3) inch diameter aluminum or bronze marker on top.						

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156-29 E	It shall be unlawful for any person, individual, partnership, corporation, or other entity to remove either a marker or monument, which has been set and established as required herein. Any person, individual, corporation, partnership, or other entity which shall violate the prohibition set forth herein shall be subject to the fines and penalties as set forth in §156-42 of the Code of the Township of Penn.						
156-29 F	Markers shall consist of iron pins or steel bars five-eighths (5/8) of an inch diameter, eighteen inches long. Markers shall have a rebar cap placed on top.						
156-29 G	There shall be placed next to each monument a Carsonic witness post or equivalent, which shall designate the subdivision name and the name of the professional land surveyor that set the monument in place.						
156-29 H	All monuments and markers shall be placed by a registered professional land surveyor.						
156-29 I	With the filing of a request for final approval, the applicant shall provide as part of its financial security a bond in the amount of one hundred ten percent (110%) of the cost to install the monuments and markers.						
156-29 J	Upon placement of the monuments and markers, the Township shall be notified by the applicant or his representative, and the same shall be inspected by the Township of Penn or its designated representative. Upon satisfactory inspection by the Township, the financial security required in Subsection I shall be released.						

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156-30	Utilities and other improvements.						
156-30 A	Every lot in a subdivision shall be capable of being served by utilities, and easements acceptable to the utility companies shall be provided.						
156-30 B	Electric, gas, and other utility distribution lines shall be installed within public rights-of-way or within properly designated easements.						
156-30 C	Underground utility lines located in street rights-of-way shall not be installed beneath existing or proposed paved areas.						
156-30 D	Fire hydrants, at a maximum distance of 1,200 feet between each hydrant, shall be installed in each new residential subdivision or in each addition to an existing residential subdivision at the expense of the developer.						
156-31	Improvement completion certification; guaranty of installation.						
156-31 A	Prior installation. Before approval of a final plat of a subdivision, the Engineer shall furnish the Commission and the governing body with a certificate stating that all the improvements set forth in Article IV of this chapter have been completed.						

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156-31 B	Guaranty of installation.						
156-31 B(1)	Re: deposit of completion guaranty.						
156-31 B(2)	Re: Township adjusting amount of completion guaranty.						
156-31 B(3)	The amount of the completion guaranty required shall be based upon a written estimate of the cost of completion of the required improvements, submitted by the applicant or the developer and prepared by an engineer and certified by such engineer to be a fair and reasonable estimate of such cost. The Township, upon recommendation of the Township Engineer, may refuse to accept such estimate for good cause shown. If the applicant or developer and the Township are unable to agree upon an estimate, then the estimate shall be recalculated and recertified by another professional engineer licensed as such in the commonwealth and chosen mutually by the Township and the applicant or developer. The estimate certified by the third engineer shall be presumed fair and reasonable and shall be the final estimate. In the event that a third engineer is so chosen, fees for the services of said engineer shall be paid equally by the Township and the applicant or developer.						
156-31 B(4)	Re: increasing amount of completion guaranty for work in excess of one-year's time.						

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156-32	Acceptance of public improvements.						
156-32 A	When the developer has completed the required public improvements in a plan, the developer shall notify the Township, in writing, by certified or registered mail and shall send a copy thereof to the Township Engineer. Within 10 days of the receipt of such notification, the Board shall authorize the Township Engineer to conduct a final inspection of the public improvements to determine compliance with the requirements of this chapter and the specifications shown on the approved construction drawings.						
156-32 B	Upon completion of the public improvements in a plan, as-built plans and profiles of the public improvements, as constructed, shall be filed with the Township Engineer, by the developer, within 10 days following the date of mailing of the notice of completion.						
156-32 C	Re: final inspection and acceptance as specified by the PA Municipalities Planning Code.						
156-32 D	Re: acceptance of dedication of the public improvements.						
156-32 E	Re: final acceptance of dedication of the public improvements.						
Reviewer's Additional Comments, Questions, or Concerns							