

**MIDDLE PAXTON TOWNSHIP,
DAUPHIN COUNTY, PENNSYLVANIA**

**Subdivision and Land
Development Ordinance**

September 2001

Amended September 6, 2005

Amended January 17, 2006

Amended August 4, 2008

Amended December 15, 2008

SUBDIVISION ORDINANCE AMENDMENTS

**Sub-Division and Land Development Ordinance
Amendment December 15, 2008**


**Add to Section 502 B New # 4 --see Amendments adopted August 4, 2008- Middle
Paxton Township Sub-Division Ordinance**

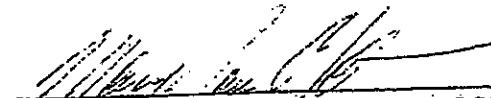
Temporary/ Permanent Cul-de-Sacs

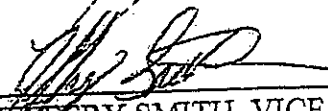
In the event a temporary cul-de-sac is approved to allow future street expansion into adjoining tracts of ground and subsequent land development and/or subdivision plans are approved which are incompatible with the extension of the street, the Developer of the temporary cul-de-sac shall improve the cul-de-sac to the standards of a permanent cul-de-sac as set forth in the Ordinance. In the event a temporary cul-de-sac is not extended into the adjoining tract within five years of the approval of the plan, or seven years in the case of a multi-phase plan, the Developer shall upon request of the township improve the cul-de-sac to the standards of a permanent cul-de-sac as set forth in the Ordinance.

DULY ENACTED AND ORDAINED this 15th day of December 2008, by the Board of Supervisors of the Township of Middle Paxton, Dauphin County, Pennsylvania, in lawful session, duly assembled.

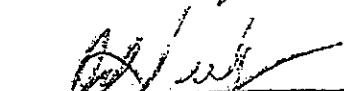
**TOWNSHIP OF MIDDLE PAXTON
DAUPHIN COUNTY, PENNSYLVANIA**

BY: 
SERELL I. ULRICH, CHAIRMAN

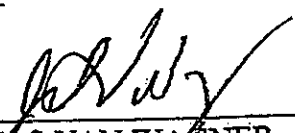
BY: 
MARY JANE DAVIS, SUPERVISOR

BY: 
JEFFERY SMITH, VICE CHAIRMAN

BY: 
RICHARD PEPPER, SUPERVISOR

BY: 
J. THOMAS VAN WAGNER,
SUPERVISOR

ATTEST:

BY: 
J. THOMAS VAN WAGNER,
SECRETARY

MAILING ADDRESS
P.O. BOX 277
DAUPHIN, PA 17018



OFFICE ADDRESS
1304 OVERLOOK ST.
DAUPHIN, PA 17018
PHONE (717) 921-8128
FAX (717) 921-3545

Middle Paxton Township

Ordinance # 82

**SUB-DIVISION ORDINANCE
AMENDMENTS** *Approved 8/4/08*

Add Section 502 F 5 which shall state:

In cases of Sub -divisions of 4 to 10 lots served by a private street Article 5 design Standards for the improvements shall apply. In addition a satisfactory maintenance agreement for the road / street in question must be in effect and be binding on all lots served by the private road / street. The total number of lots or dwelling units served by said road / street shall be defined to include all existing and / or proposed lots and dwellings utilizing the road / street for access.

Page 5-7 Section 502 F4 – Typo 6th line change “lost” to “lots”

Page 5-18 Section 503 Blocks and Lots
Section 503 D.4 add private street

Page 5-23 Section 509 1 change to section 509 “A”
Page 5-23 Section 509 C 2 – change beginning of 1st sentence to read
“Residential sub-division of land involving one (1) new building lot.

Section 509 C 2 – amend to reduce number of units in a residential land development from five (5) to four (4).

Appendix B page 1 of 3 replace word “ approved” with “recommend for approval”
in regard to the Planning Commission

SUB-DIVISION - *Approved*

502

Amendments

8/4/08

Delete current Section B 4 and 5 renumber Section appropriately and substitute the following:

new #4

1) Dead End Streets and Temporary Cul-de-Sacs

Dead end streets shall prohibited, except when the developer designs and constructs temporary cul-de-sacs streets on the developer's own land in order to permit future street extensions into adjoining properties. Temporary cul-de-sacs, upon approval of the Municipal Engineer, may be constructed without asphalt base or wearing course. The developer may be exempt from providing curbing at the terminus of temporary cul-de-sacs, unless curbs are required for drainage control. A temporary cul-de-sac shall be removed by the developer and replaced with the permanent street upon extension of the existing street.

new #5

2) Cul-de-sacs and Self - Looping Single Access Streets

- A) Cul-de-sac shall not be approved wherever a through street or loop is practicable, except where the cul-de-sac is clearly the only practical design for the sub-division or land development.
- B) Permanent cul-de-sacs and self-looping single access streets are limited to an average daily traffic volume (ADT) of 150 trips a day, which equals 15 Single Family Dwellings, based on a trip generation rate of ten (10) trips per day cul-de-sac street, and three hundred (300) trips a day which equals thirty (30) Single Family for self looping single access street. The length of cul-de-sac shall not exceed one thousand (1000) feet in length. The turnaround at the end of a cul-de-sac shall be designed for proper movements of emergency and fire truck apparatus. In developments with more than fifteen (15) dwellings, only twenty percent (20%) of the dwelling units in a development shall be served by streets terminating in cul-de-sacs. In a self-looping single access street, the number of single-family dwellings may be increased when the access from the street to the intersection to the loop is provided by a boulevard street with a median. An emergency access connected to the public street system should be considered which is usable by emergency vehicles and fire truck apparatus during all seasons.
- C) The minimum cul-de-sac length shall be two hundred and fifty (250) feet.
- D) Where the turnaround right-of-way of a cul-de-sac street approaches or abuts the tract boundary, a fifty (50) foot right-of-way shall be extended to the adjacent property to permit future extension of the street at full width, unless future extension is not possible.

- E) Cul-de-sac street, whether permanently or temporarily designed as such, shall be provided with a snow removal easement with a width of twenty (20) feet located at the terminus of the cul-de-sac street for plowed snow during the winter months.
- F) Drainage of cul-de-sac streets shall preferably be towards the open end. If drainage is toward the closed end it shall be conducted away in an underground storm sewer.
- G) Turnaround radius at the end of cul-de-sac shall comply with Article 5 of this Ordinance.

new #6 **3) Partial and Half Streets**


- A) New half or partial streets shall not be permitted, except where the Applicant justifies to the Municipality that it is essential to the reasonable subdivision of a tract in conformance with the other requirements and standards of these regulations, and where, in addition, satisfactory assurance for dedication of the remaining part of the street can be obtained.
- B) Whenever there is an existing half street adjacent to a parcel to be developed, then the other half of the street shall be platted and dedicated within such parcel, unless otherwise determined by the Board of Supervisors.

DULY ENACTED AND ORDAINED this 4th day of August 2008, by the Board of Supervisors of the Township of Middle Paxton, Dauphin County, Pennsylvania, in lawful session, duly assembled.

**TOWNSHIP OF MIDDLE PAXTON
DAUPHIN COUNTY, PENNSYLVANIA**

BY: 
SERELL I. ULRICH, CHAIRMAN

BY: 
MARY JANE DAVIS, VICE SUPERVISOR

BY: 
JEFFERY SMITH, SUPERVISOR
Vice Chairman

BY: 
RICHARD PEPPER, SUPERVISOR

BY: 
J. THOMAS VAN WAGNER,
SUPERVISOR

ATTEST:

BY: 
J. THOMAS VAN WAGNER,
SECRETARY

Amended 1-17-06

MAILING ADDRESS
P.O. BOX 277
DAUPHIN, PA 17018



OFFICE ADDRESS
1304 OVERLOOK ST
DAUPHIN, PA 17018
PHONE (717) 921-8128

Middle Paxton Township

**SPECIAL MEETING SUMMARY
STEEP SLOPE PROVISIONS**

ZONING ORDINANCE -

Strike C & D of Section 1104 Zoning Ordinance
Strike all of section 1104 B Zoning Ordinance. (B-1, 2, 3, 4)
Add to Section 1104 A. Compute average Slope using the above formula on a lot
by lot basis.

New Section 1104 B

<u>Average Slope</u>	<u>Maximum Disturbed Area</u>	<u>Maximum Impervious Surface</u>
12-14.99 %	40%	15%
15-19.99 %	25 %	15 %
20-24.99 %	15%	10 %

Over 25 % no construction

The above standards shall apply in all areas of the Township where the average slope is 12% or greater, such as to be considered a steep slope as defined in the Ordinance of Definitions.

Add to Section 1103 the phrase (in consultation with the Township Engineer).

Re letter all necessary Sections of Section 1104.

ORDINANCE OF DEFINITION

Change Severe Slope to Steep Slope in Ordinance of Definition.

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Middle Paxton Township

RIPARIAN CORRIDORS

ORDINANCE OF DEFINITION – Add the following definitions

Riparian Buffer Strip – A narrow strip of land along a stream, pond, lake quarry, or wetlands, including the 100-year floodplain, which contains or is replanted with native forest, shrubs and herbaceous species to stabilize erodable soils, improve surface and ground water quality, increase stream shading and enhance wildlife habitat.

Disturbance (Site) – Any activity involving the clearing, excavating, storing, grading, filling or transporting of soil, or any other activity which causes soil to be exposed to the danger of erosion.

ZONING ORDINANCE - Add the following new Section 1321

Section 1321- Riparian Buffer Strip

In all areas of the Township where streams or wetlands exist, a Riparian Buffer Strip, as defined in the Ordinance of Definition, shall be maintained.

A- Permitted uses.

Within the Riparian Buffer Strip the following uses/ activities shall be permitted:

1. Wildlife Sanctuaries, nature preserves, forest preserves, fishing areas, boat accesses and passive areas of Public parklands and reforestation.
2. Stream bank Stabilization.
3. Regulated activities permitted by the Commonwealth (e.g. permitted stream or wetland crossing or encroachment.)
4. Customary agricultural practices in accordance with a soil conservation plan approved by the Dauphin County Conservation District.
5. Forestry operations approved by the Dauphin County Conservation District.
6. Passive use such as campgrounds, picnic areas and golf courses.

7. Active recreation areas such as ball fields, playgrounds and courts provided that the uses are designed in a manner that will not permits a concentrated flow of stormwater or destroy existing stream bank vegetation unless proper mitigation and replanting of disturbed vegetation with native species occurs.
8. Installation of centralized sewer/water/utility lines when proposed as part of a subdivision. Proper mitigation and replanting of disturbed vegetation with native species is required.
9. Removal of noxious and invasive vegetation provided that the soil is not exposed to erosion.
10. Residential Accessory Structures less than 150 sq. feet in size.

B. PROHIBITED USES

Within the Riparian Buffer Strip the following uses shall be prohibited:

1. Clearing of all existing vegetation, except where such clearing is necessary to prepare land for a permitted use and where the effects of these actions are mitigated by re-establishment of native vegetation.
2. Sod Farming.
3. Parking Lots.
4. Storage of hazardous or noxious materials.
5. Site disturbance, which cause the soil to be exposed to the danger of erosion without proper mitigation.

C. GENERAL Regulation

- 1.) The riparian buffer strip shall include the 100-year floodplain, or be a minimum of 25 feet wide from the edge of the normal water level or wetland limits whichever is greater.
- 2.) Replanting of disturbed vegetation must be done utilizing native species as defined by DEP.
 - a.) Replanting must be accomplished within 30 days of disturbance within the growing season. If outside the growing season stabilization must be done in accordance with applicable DEP regulations.

Article 1 - Short Title, Purpose, Authority, and Jurisdiction

ORDINANCE NUMBER 60

SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

An ordinance repealing the Township of Middle Paxton, Subdivision of Land Ordinance of 1975, as amended, replacing said ordinance with an ordinance with the intent of establishing rules, regulations and standards governing the subdivision of land within the Township of Middle Paxton, Dauphin County, Pennsylvania, pursuant to the Authority granted in the Pennsylvania Municipalities Planning Code (Act of 1968, P.L. 805, No. 247), as enacted and amended, setting forth the procedure to be followed by the Planning Commission and the Township Supervisors applying and administering these rules, regulations and standards and providing penalties for the violation thereof.

Be it Ordained by the Board of Supervisors of the Township of Middle Paxton, Dauphin County, Pennsylvania as follows:

Section 101. Short Title

This Ordinance shall be known as and may be cited as the "Township of Middle Paxton Subdivision and Land Development Ordinance."

Section 102. Purpose

The purpose of these subdivision and land development regulations is to provide for the harmonious development of the Township by:

- A. Assisting in the orderly and efficient integration of land developments within the Township.
- B. Ensuring conformance of land development plans with public improvement plans and programs.
- C. Ensuring coordination of inter-municipal public improvement plans and programs.
- D. Securing the protection of water resources and drainage ways.
- E. Facilitating the efficient movement of traffic.
- F. Securing equitable handling of all land development plans by providing uniform standards and procedures.
- G. In general promoting greater health, safety, and welfare of the citizens of the Township.
- H. Securing adequate sites for recreation, conservation, and scenic and other open space purposes.

Article 1 - Short Title, Purpose, Authority, and Jurisdiction

Section 103. Authority and Jurisdiction

No subdivision and land development of any lot, tract or parcel of land shall be made, no street, sanitary sewer, storm sewer, water main, or other improvements in connection therewith shall be laid out, constructed, opened, or dedicated for public use or travel, or for the common use of occupants of buildings abutting thereon, except in accordance with the provisions of this Ordinance.

The authority for the control and regulation of subdivision and land development within the Township shall be as follows:

A. Review by the Township Planning Commission.

The Township of Middle Paxton Planning Commission, hereinafter referred to as the Planning Commission, shall be vested with the review of subdivision and land development plans.

B. Review by the County Planning Commission.

Plans for subdivision and land development located within the Township of Middle Paxton shall be forwarded upon receipt by the Township to the Dauphin County Planning Commission for review and report. The Middle Paxton Township Board of Supervisors shall not give final approval to such plans until the County report is received or until the expiration of thirty (30) days from the date the application was forwarded to the County.

C. Approval by the Township Board of Supervisors.

The Township of Middle Paxton Board of Supervisors, hereinafter referred to as the Board of Supervisors, shall be vested with the authority to approve or disapprove all subdivision and land development plans.

Article 3 - Plan Requirements and Processing Procedures

Section 301. Preparation and Filing of Plan

Whenever a subdivision of land or land development is desired to be effected in the Township of Middle Paxton, Dauphin County, Pennsylvania, a plan of the layout shall be prepared, filed, and processed with the Planning Commission and the Township Supervisors according to the requirements of the Subdivision and Land Development Ordinance.

Each applicant shall follow the procedures for the submission and processing of plans and specifications for such plans, as set forth in this Article.

Section 302. Sketch Plans and Data - Procedure

Prior to the preparation and filing of the preliminary plan, applicants may, but are not required, to submit to the Planning Commission the following plans and data, and may ascertain from the Planning Commission those elements which should be considered in the design of the subdivision or land development. These shall include any features of the Middle Paxton Township Comprehensive Plan or of any other plans of the Planning Commission, including, but not limited to proposed streets, recreation areas, drainage reservations, shopping centers, and school sites. Submission of a sketch plan shall not constitute formal filing of the plan with the Township.

If the applicant desires to submit a Sketch Plan and for the project to appear on the Township Planning Commission agenda, it is required that a request for Pre-Application Review include eight (8) copies of a Sketch Plan and one application form (See Appendix A). The request shall be submitted to the Township fourteen (14) days prior to the meeting of the Planning Commission.

Section 303. Sketch Plans and Data - Specifications

A. The Sketch Plan, which need not be drawn to scale, shall show the following information:

1. Name and address of developer and/or owner, name of municipality, proposed name of the development, north arrow and date.
2. Tract boundaries.
3. Number of acres in tract, average lot size, approximate number of lots, anticipated type of development.
4. Existing and proposed streets, highways, railroads, right-of-way, sewers, water mains, fire hydrants and storm sewers.
5. Proposed general lot layout.
6. All public reservations such as schools, parks, etc.
7. Predominant natural features such as wooded areas, streams, wetlands, floodplains, etc.

Article 3 - Plan Requirements and Processing Procedures

8. A location map for the purpose of locating other streets, developments, recreation areas and right-of-way to better plan the proper locations of the same.
- B. A land development sketch plan need not be drawn to scale. However, precise dimensions shall be shown if possible.

Section 304. Preliminary Plans - Application and Review Procedure

- A. Filing - A Preliminary Plan Application is required for the following:

1. Subdivision of residential land into more than five lots.
2. Subdivision of commercial or industrial land into new lots.
3. Land development with greater than ten (10) parking spaces.
4. Subdivision or land development which includes construction of public improvements as herein defined.

Preliminary Plans shall be submitted to the Township on any business day. However, Preliminary Plans must be submitted twenty (20) days prior to the Township Planning Commission meeting in order to be placed on the agenda.

Applicants are required to submit a Sewer Facilities Plan Revision or Supplement in conjunction with the Preliminary Plan to avoid unnecessary delays in attaining revision or supplement approval prior to the Final Plan stage.

- B. Application Requirements - All Preliminary Plan Applications shall include the following:

1. A minimum of twelve (12) copies of the Preliminary Plan and three (3) copies of all reports, notifications and certification which are specified in Sections 308 and 309. Additional copies of the Preliminary Plan and reports may be required by the Township.
2. One (1) application form (see Appendix A).
3. Filing fee as set by resolution of the Board of Supervisors.

The designated Township representative shall first determine that the Preliminary Plan application is substantially complete in accordance with Section 304.B, 1, 2, and 3. This determination does not constitute approval or disapproval of the Plan but is provided to assure the submission of sufficient data for the Board of Supervisors to make a formal action on the Plan. If the application is found to be incomplete, the applicant will be notified in writing that the submitted data does not constitute a formal filing of the Preliminary Plan and specify the deficiencies.

Article 3 - Plan Requirements and Processing Procedures

- C. Distribution - The designated Township representative shall distribute the Preliminary Plan to the Township Zoning Officer, Township Engineer, Township Planning Commission, County Planning Commission, Board of Supervisors, and if deemed necessary, other officials (e.g., adjacent municipalities, school board, PennDOT, Dauphin County Conservation District).
- D. Action by Township - The Township will review and comment concerning the conformance of the submitted plan with Township Ordinances governing design standards, improvements and construction requirements; and conformance with Township requirements for installation of individual approved sewage facilities. All costs incurred through the conducting of any engineering tests shall be the responsibility of the developer.
- E. Action by Planning Commission - The Planning Commission shall review and recommend approval to the Board of Supervisors or recommend changes necessary for approval of subdivision and land development plans. The Commission shall act on any such preliminary plan within seventy-five (75) days of its being filed or the plan will be presented to the Board of Supervisors as submitted.
- F. Action by Board of Supervisors - The Board of Supervisors shall approve or disapprove and shall give notice to the developer in the following manner:

At a public meeting the Board of Supervisors shall render its decision on the Preliminary Plan and communicate its decision to the applicant not later than ninety (90) days following the date of the regular meeting of the governing body or planning commission next following the date of application is filed, provided that should the next regular meeting occur more than thirty (30) days following the filing of the application, the said ninety (90) day period shall be measured from the thirtieth (30th) day following the day the application was filed.

The decision of the Board of Supervisors concerning Preliminary Plan approval, shall be in writing and shall be communicated to the applicant at his the last known address not later than fifteen (15) days following decision.

When the Plan is not approved in terms as filed the decision shall specify the defects found in the Plan and describe the requirements which have not been met and cite the provisions of the regulations relied upon.

Failure of the Board of Supervisors to render a decision and communicate it to the applicant within the time and in the manner required herein shall be deemed as approval of the application in terms as presented unless the applicant has agreed in writing to an extension of time or change in the prescribed manner of presentation of communication of the decision, in which case, failure to meet the extended time or change in manner of presentation of communication shall have like effect.

From the time a Preliminary Plan is submitted as provided in this Ordinance and while such Plan is pending approval or disapproval, no change or amendment of the Zoning, Subdivision and Land Development or other Township Ordinance or Plan shall affect the

Article 3 - Plan Requirements and Processing Procedures

decision on such Plan adversely to the applicant and the applicant shall be entitled to a decision in accordance with the provisions of the Township Ordinances or Plans as they stood at the time the application was duly submitted. In addition, when a Preliminary Plan has been duly approved, the applicant shall be entitled to final approval in accordance with the terms of the approved Preliminary Plan as hereinafter provided.

However, if a Plan is properly and finally denied, any subsequent Plan shall be subject to the intervening change in Township regulations. When an application for approval of a Plan, whether Preliminary or Final, has been approved without conditions or approved subject to conditions acceptable to the applicant no subsequent change or amendment in the Zoning, Subdivision and Land Development or other Township Ordinance or Plan shall be applied to affect adversely the right of the applicant to commence and to complete any aspect of the approved development in accordance with the terms of such approval within five (5) years from such approval. Where final approval is preceded by preliminary approval, the five-year period shall be counted from the date of the preliminary approval. In the case of any doubt as to the terms of a preliminary approval, the terms shall be construed in the light of the provisions of the Township Ordinances or Plans as they stood at the time when the Plan for such approval was duly submitted.

Approval of the Preliminary Plan by the Board of Supervisors constitutes conditional approval of the development as to the character and intensity of development, the general layout, and the approximate dimensions of streets, lots, and other planned features. This approval binds the developer to the general scheme shown on the Preliminary Plan.

Approval of the Preliminary Plan shall not constitute approval of the Final Plan, nor does it authorize recording of the Preliminary Plan or the sale of any lots. However, such approval does authorize the developer to proceed with the preparation of the Final Plan.

Section 305. Preliminary Plans - Specifications

The Preliminary Plan shall be submitted with an Application for Consideration of a Subdivision and Land Development Plan (see Appendix A).

The Preliminary Plan shall be drawn on Mylar material and at a scale of fifty (50) feet to one (1) inch or one hundred (100) feet to one (1) inch. Sheet size shall be 24" x 36". The Preliminary Plan shall show the following information.

- A. Proposed land development name or identifying title.
- B. Township in which the land development is located.
- C. North point, scale and date.
- D. Name and address of the owner of the property or authorized agent.
- E. Name, seal, and signature of the Registered Engineer or Registered Surveyor responsible for the plan.

Article 3 - Plan Requirements and Processing Procedures

- F. Total acreage of the tract.
- G. Number of lots, proposed density and minimum lot size.
- H. Signature blocks for approval by the Board of Supervisors and Planning Commission (see Appendix B, Plat Certificates).
- I. Length and width of new streets proposed.
- J. Type and location of water supply and sewage disposal facilities proposed, i.e., on-lot or public. For on-lot systems the location of percolation tests must be shown.
- K. Proposed use of land, existing zoning classification for the property and all surrounding properties and proof of any variances or special exceptions which may have been granted.
- L. A location map for the purpose of locating the site in relation to the surrounding neighborhood and community. The location map should be at a scale of not less than two thousand (2,000) feet to one inch.
- M. Tract boundaries clearly showing bearings and distances.
- N. Proposed contours at vertical intervals of five (5) feet.
- O. Percent slope of all lots.
- P. Datum to which contour elevations refer. Where reasonably practicable, data shall refer to U.S. Coastal and Geodetic Survey datum.
- Q. The names of owners of immediately adjacent land; the names of proposed or existing land developments immediately adjacent, and the locations and dimensions of any streets or easements shown thereon which abut the land to be developed.
- R. All existing watercourses, tree masses and other significant natural features, such as rock outcrops, springs, wetlands, and flood plains.
- S. All existing buildings, sewers, water mains, culverts, petroleum lines, telephone and electrical lines, gas lines, fire hydrants and other man-made features.
- T. All existing streets on, adjacent to or within four hundred (400) feet of any part of the tract, including name, right-of-way width and cartway width.
- U. All existing property lines, easements and right-of-way and the purpose for which the easements or rights-of-way have been established.
- V. Lots within the preliminary plan shall be numbered.
- W. Location of all proposed buildings.

Article 3 - Plan Requirements and Processing Procedures

- X. Location and width of all proposed streets, alleys, rights-of-way and easements; proposed lot lines with approximate dimensions; driveway access points on all lots where proposed; proposed minimum building setback line for each street; playgrounds, public buildings, public areas and parcels of land proposed to be dedicated or reserved for public use.
- Y. Where the Preliminary Plan covers only a part of the developer's entire holding, a sketch may be required of the prospective street layout for the remainder.
- Z. A notarized statement to the effect that the applicant is the owner of the land proposed to be developed and that the land development shown on the Preliminary Plan is made with the applicant's free consent.
- AA. Recreation Areas shall be shown on a separate drawing with contours to a scale in vertical increments of five (5) feet.
- AB. Location of driveway access points for land development plans.
- AC. When applicable plans should illustrate a phasing plan, including a time schedule for all improvements associated with the Plan.
- AD. Where the plan proposes the creation of any new streets, the application shall be accompanied by a listing of proposed street names which shall be reviewed by appropriate officials of Middle Paxton Township to determine that the same are not identical or deceptively similar to any existing street name.

The Preliminary Plan shall include thereon or be accompanied by:

- AE. Feasibility Study on sewer and water facilities for the tract (Section 308) and for land developments, a Plan Revision Module for Land Development along with recommendations from the regional office of the Pennsylvania Department of Environmental Protection.
- AF. Reports in accordance with Section 308 for subdivisions and land developments unless waived by the Board of Supervisors.
- AG. Profiles, typical cross sections and specifications for proposed street improvements.
- AH. Profiles and other explanatory data concerning the installation of water, sanitary and stormwater systems. Stormwater drainage plans shall comply with the Middle Paxton Township Stormwater Management Ordinance, as amended.
- AI. Preliminary engineering designs of any new bridges or culverts proposed in the tract.
- AJ. Drawings of all present and proposed grades and facilities for storm water drainage and supporting calculations shall comply with the Middle Paxton Township Stormwater Management Ordinance, as amended.

Article 3 - Plan Requirements and Processing Procedures

AK. Description of all landscaping and buffer yards proposed and their compliance with the requirements of this Ordinance.

AL. Provide an Erosion and Sedimentation Control Plan.

An Erosion and Sedimentation Control Plan must be provided for a Preliminary Plan.

Section 306. Final Plans - Procedure

A. Filing - A Final Plan Application is required for all subdivision and land development plans. When a Preliminary Plan application is required, in accordance with Section 304, an application for Final Plan approval can be submitted only after obtaining Preliminary Plan approval.

The Final Plan shall be substantially consistent with the Preliminary Plan. The Final Plan may include sections of an approved Preliminary Plan provided each section independently conforms to the Ordinance, regulations and other standards of the Township, and includes a reasonable portion of the Preliminary Plan.

Final Plans shall be submitted to the Township on any business day. However, final Plans must be submitted twenty (20) days prior to the Township Planning Commission meeting in order to be placed on the agenda.

B. Application Requirements - All Final Plan Applications shall include the following:

1. A minimum of thirteen (13) copies of the Final Plan and three (3) copies of all reports, notifications and certification which are specified in Section 308. Additional copies of the Final Plan and reports may be required by the Township.
2. One (1) application form (see Appendix A).
3. Filing fee as set by resolution of the Board of Supervisors

The designated Township representative shall first determine that the Final Plan application is substantially complete in accordance with Section 306B.1, 2, and 3. This determination does not constitute approval or disapproval of the Plan but is provided to assure the submission of sufficient data for the Board of Supervisors to make a formal action on the Plan. If the application is found to be incomplete, the applicant will be notified in writing that the submitted data does not constitute a formal filing of the Final Plan and specify the deficiencies.

C. Distribution - The designated Township representative shall distribute the Final Plan to the Township Zoning Officer, Township Solicitor, Emergency Management Coordinator, Township Engineer, Township Planning Commission, County Planning Commission, Board of Supervisors, Fire Chief of the local fire company, and if deemed necessary, other officials (e.g., Municipal Authority's engineer, adjacent municipalities, school board, PennDOT, Natural Resource Conservation Service.)

Article 3 - Plan Requirements and Processing Procedures

- D. Guarantee - Before recording an approved Final Plan, the Board of Supervisors shall be assured by means of a proper completion guarantee as provided in Section 412 of this Ordinance, that all improvements required by this Ordinance will be installed by the developer in strict accordance with the Supervisors' approval and within a specified time after approval of the Final Plan.
- E. Soil Percolation Tests shall be performed for all developments where structures at the time of construction will not be connected to any active public sewage disposal systems. Tests will be made in accordance with the procedure required by the Pennsylvania Department of Environmental Protection. The Township Sewage Enforcement Officer and/or a sanitarian of the Department of Environmental Protection shall certify that a location is available for the on-lot sewage disposal system for each lot. The minimum lot size where on-lot systems and wells are proposed shall be one (1) acre.
- F. Plans proposing earth disturbance shall comply with the requirements of the Pennsylvania Department of Environmental Protection Rules and Regulations, Chapter 102. Subdivision and land development plans shall address the requirements of Chapter 102.
- Submit evidence documenting the adequacy of Erosion and Sedimentation Pollution Control Plans from the Dauphin County Conservation District.
- Provide evidence of earth disturbance permits for earth moving activities that disturb more than 25 acres. These activities are roadside maintenance, timbering and land grading.
- The Township Planning Commission shall not recommend approval and the Board of Supervisors shall not approve the Plan unless it satisfies the requirements of Chapter 102.
- G. Any plan which will require access to a highway under the jurisdiction of the Pennsylvania Department of Transportation shall not be finally approved unless the highway occupancy permit has been acquired pursuant to Section 420 of the Act of June 1, 1945 (P.L. 1242, No. 428), known as the "State Highway Law".
- H. Approval - The Board of Supervisors shall determine whether final plans shall be approved or disapproved and shall give notice to the developer in the following manner:
1. Final Plan recording shall not take place until such improvements as required by this Ordinance and shown on such Final Plan have been completed or guarantee posted as required by Article 4. Recording of the Final Plan must be accomplished before the developer can proceed with the sale of any lots or the construction of buildings or structures, or land improvement.
 2. If approved, the Board of Supervisors and the Planning Commission shall sign and retain the original Final Plan mylar. The developer shall be notified in writing within fifteen (15) days of the decision whether the decision is approved or disapproved.

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3. If disapproved, the Board of Supervisors shall attach to the plan a statement of reasons for such actions with the provisions of the Ordinances relied upon cited.
 4. At a public meeting the Board of Supervisors shall render its decision on the Final Plan, and communicate its decision to the applicant not later than ninety (90) days following the date of the regular meeting of the governing body or planning commission next following the date of application is filed, provided that should the next regular meeting occur more than thirty (30) days following the filing of the application, the said ninety (90) day period shall be measured from the thirtieth (30th) day following the day the application was filed.
 5. Approval of the Final Plan by the Board of Supervisors constitutes final approval of the land development as to the character and intensity of development, the layout, and the dimensions of streets, lots and other planned features. This approval binds the developer to the scheme shown the Final Plan.
- I. Changes - No changes, erasures, modifications, or revisions shall be made on any Final Plan of a subdivision or land development after approval has been given by the Board of Supervisors, and endorsed in writing on the Plan, unless the Plan is first re-submitted to the Board of Supervisors.
 - J. Development Agreement - The Board of Supervisors in its final approval of a plan may condition such approval on the developer entering into a Development Agreement with the Township detailing the plan elements, specifications and improvements agreed upon. Such agreement shall be duly executed and acknowledged by the Developer and the Township and shall be binding upon the Developer and upon this Developer's heirs or successors and assigns. The failure or refusal of the Developer to sign the Development Agreement within ten (10) days of its presentation for signature shall result in a deemed denial of the plan.
 - K. Recording - Upon approval of the final plan by the Board of Supervisors and subsequent execution of the Development Agreement, the developer shall pay to the Township the recording fee and the Township shall have both the approved plan and the Development Agreement recorded within ninety (90) days of plan approval in the Office of the Recorder of Deeds of Dauphin County.

Section 307. Final Plans - Specifications

The Final Plan shall be drawn in ink on Mylar sheets (sheet size 18" x 24") at a scale of either fifty (50) feet to the inch or one hundred (100) feet to the inch and shall include all specifications shown under Section 305 for Preliminary Plans in addition to the following information:

- A. Land development name or identifying title.
- B. Township in which the land development is located.
- C. North point, scale and date.

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- D. Certification of title showing that the applicant is the owner of the land.
- E. For subdivisions, certification by a licensed surveyor or licensed engineer certifying to the accuracy of survey and plan. For a land development plan, certification by a licensed surveyor, licensed engineer, architect or landscape architect, certifying to the accuracy of the proposed development plan.
- F. Total acreage of the tract, number of lots, density and minimum lot size.
- G. Proposed use of land and existing zoning classification and proof of any variances or special exceptions which may have been granted.
- H. A location map for the purpose of locating the site to be developed in relation to the surrounding neighborhood and community. The location map should be at a scale of not less than 2,000 feet to the inch. In addition, a complete street layout shall be provided at a scale of one inch equals eight hundred feet (1" = 800').
- I. Names of owners of record of adjoining land.
- J. Tract boundary lines, right-of-way lines of streets, easements and other right-of-way, property lines of residential lots and other sites with accurate dimensions, bearings, or deflection angles and radii, arcs and central angles of all curves.
- K. Primary control points, approved by the Township Engineer or description and "ties" to such control points, to which all dimensions, angles, bearings and similar data on the plan shall be referred.
- L. Sufficient data to determine readily the location, bearing and length of every street, lot, and boundary line and to reproduce such lines upon the ground. Such data to be tied in to monuments as required.
- M. All dimensions and angles or bearings of the lines of each lot and of each area proposed to be dedicated to public use and the purpose for such areas.
- N. All dimensions shall be shown in feet and hundredths of a foot.
- O. The proposed building setback line for each street. The proposed placement of each building may be required.
- P. The point of access of all driveways.
- Q. Names of streets within and adjacent to the land development shall be shown. No street name shall be identical or deceptively similar to any existing street name as shall be determined by the Board of Supervisors.
- R. The location of permanent reference monuments shall be shown on the plan.
- S. Location, dimensions and purpose of all easements.

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- T. Statement of owner dedicating streets, right-of-way, and any sites for public use which are to be dedicated.
- U. Proposed contours at intervals of five (5) feet or at two (2) feet if the general slope of the site is less than ten (10) percent.
- V. Landscaping plan meeting the requirements of Section 409 of this Ordinance.
- W. Plans must be prepared in a permanent black opaque ink or in black print Mylar. Any information which appears translucent shall be grounds for rejection of the plan.
- X. Plans must contain original signatures signed in a permanent black opaque ink.
- Y. Plans which are not legible as a result of heavy background grain or smudged ink shall be rejected.
- Z. When applicable plans should illustrate a phase plan, including a time schedule for all improvements associated with the Plan.
- AA. Location of perks and probes, wells and minimum separation distances.
- AB. Plans must include the 1-800-242-1776 as the contact number prior to any excavation activities.
- AC. On the cover page of the Subdivision Plan provide the exact pages to be received with the Office of the Recorder of Deeds of Dauphin County. If not noted on the Subdivision Plan and the page is added after the fact, the added page must be signed with a full signature.

The Plan shall be accompanied by the following data in a form prescribed by the Engineering Specifications:

- AD. Profiles of streets showing grades at a minimum scale of twenty-five feet (25') horizontal and five feet (5') vertical.
- AE. Cross sections of streets showing the width of right-of-way, width of cartway, location and width of sidewalks, and location and size of utility mains.
- AF. Plans and profiles of proposed sanitary and/or storm water sewers, with grades and pipe sizes indicated, and a plan of any proposed water distribution system showing pipe sizes and location of valves and fire hydrants.
- AG. Location and method of street lighting facilities.
- AH. Other State and County certificates as may be required.
- AI. Proposed protective covenants running with the land, if any.

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- AJ. Such certificates, affidavits, endorsements, or dedications as may be required by the Planning Commission or the Board of Supervisors of the municipality in the enforcement of these regulations, and at least in the amount and form as provided for in Section 308.

Section 308. Reports

- A. Sanitary Sewer - A Sewer Facilities Plan Revision (Plan Revision Module for Land Development), or Supplement as required by the Pennsylvania Sewerage Facilities Act 537 of 1966, as amended.
- B. Groundwater Supply - A Water Supply Capacity Report for projects which propose a groundwater system of greater than ten (10) residential units (single or cumulative), or commercial uses or industrial uses which propose the single or cumulative groundwater system greater than seven thousand five hundred (7,500) gallons per day.

A Water Supply Capacity report shall be prepared by a registered professional engineer with expertise in hydrology, soils and geology. The Report must demonstrate that the groundwater recharge on the subject property after development, during drought conditions (precipitation at forty percent [40%] below normal) will exceed the anticipated water usage and that the project will not lower the groundwater table in the area to the extent of decreasing the groundwater supply available to other property below safe levels.

- C. Storm Water - A Storm Water Management Plan in accordance with Middle Paxton Township Stormwater Management Ordinance, as amended.
- D. Steep Slope - A Steep Slope report for all applications involving construction on lands that possess slopes exceeding twelve percent (12%). The Steep Slope report shall include the following: (Also see Section 1104 of the Middle Paxton Township Zoning Ordinance).
1. A topographic map of the site which highlights those areas that possess slopes exceeding twelve percent (12%). Also reflected on this map shall be all existing and proposed site alterations and improvements (e.g., buildings, streets, access drives, driveways, parking compounds, utilities, etc.) that are located within the steep slope area.
 2. Only in those instances where construction and/or modifications is proposed to the existing topography and vegetative cover within areas of twelve percent (12%) or greater slope, the applicant shall provide a detailed description of the methods that are being used to:
 - a. protect and stabilize areas that have a high potential for soil erosion;
 - b. accommodate storm water runoff;
 - c. assure structural safety and minimize harm to the environment associated with construction on steep slopes;

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- d. protection and preservation of on-site and off-site valuable natural wildlife, plant habitats, and water quality;
 - e. protection of steep slopes on adjoining properties; and
 - f. assure adequate foundations for buildings and/or structures.
3. Only in those instances where construction and/or modifications to the existing topography and vegetative cover in areas of twelve percent (12%) or greater slopes, the applicant shall provide a soils engineering report.

A soils engineering report shall be prepared by a registered professional engineer with expertise in soil, geology and construction. The report shall include:

- a. the nature, types, distribution and stability of the surface and subsurface soils for load bearing, stability and compaction;
- b. extent, description and location of exposed rock and bedrock;
- c. erodability of surface soil; and,
- f. depth to seasonal high water table.

- E. Traffic Impact Report - A traffic impact report shall be submitted for all residential land uses which exceed twenty (20) lots or units in whole or in part, nonresidential uses that require more than forty (40) parking spaces, or upon a determination by the Board of Supervisors that the volume or type of anticipated vehicle movements may adversely impact road conditions.

When establishing the study area boundaries, sufficient area shall be included to ensure that key corridors that afford access to the site and critical intersections that may be affected by the site generated traffic are taken into account. The exact limits of the study area shall be based on engineering judgement and an understanding of existing traffic conditions at and in the vicinity of the proposed site. In all instances, however, the study limits must be mutually agreed upon by the applicant and the Township prior to preparation of the traffic impact study.

- 1. Existing and Proposed Site Uses. The existing and proposed uses of the site shall be identified in terms of the various zoning categories in the jurisdiction. In addition, the specific use on which the request is made shall be identified. In the case where a current land use is being upgraded or modified, a description of the proposed improvements with respect to density changes shall be included. Such a density change may necessitate replacing existing traffic volumes generated by the current land use with increased volumes resulting from a change in land use and density.
- 2. Existing and Proposed Nearby Uses. A complete description of the existing land uses in the vicinity of the site, as well as their current zoning shall be included.

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The proposed uses for adjacent land in terms of zoning categories shall be included. This latter item is especially important where large tracts of undeveloped land are in the vicinity of the site and within the defined study area.

3. Existing and Proposed Roadways and Intersections. The study shall describe existing roadways and intersections within the study area with respect to geometrics and traffic signal control as well as any planned and committed roadway and traffic operational improvements by government agencies. In addition to critical intersections, high volume driveways adjacent to, or across from the site shall be identified.

An analysis of existing traffic conditions shall be prepared so that the impacts of the proposed development can be superimposed. The section shall describe the results of the volume studies and capacity analysis to be completed for the roadways, intersections and driveways in the vicinity of the site under existing conditions as well as any data collection efforts that are required. The source and/or method of computation for all traffic volumes and capacity analysis shall be included. Traffic studies are to comply with PennDOT Publication 201, as amended and the Institute of Transportation Engineers Guidelines.

The study shall include an executive summary. The summary shall be a clear, concise description of the study findings, recommendations, and where applicable, proposed improvements.

4. Waivers - The Board of Supervisors of Middle Paxton Township may waive or modify, in whole or in part, the requirement for a traffic impact report if enforcement will exact undue hardship because of peculiar conditions pertaining to the land in question, provided that such waiver or modification will not be contrary to the public interest and that the purpose and interest of this Article be observed.

In considering any waiver or modification, the Board of Supervisors may consider, in their discretion, but are not limited to considering, such factors as the location of the subject property, its proximity to intersections and major roadways, the size and density of the proposed subdivision or land development, the number and location of proposed accesses to the subject property and the nature of the use proposed.

- F. Park and Recreation - A Park and Recreation report for residential developments of fifty (50) or more units. Said report shall be prepared by a Certified Leisure Professional (CLP) with the following minimum considerations:

1. A description of the total projected number of residents in their respective age groups.
2. A description of those existing public recreation facilities located within a one-half mile radius of the site.

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3. A description of the adequacy of existing recreation facilities to serve the proposed residents, taking into consideration current usage.
4. A discussion of potential for any recreation facilities to be provided by the developer to accommodate new residents and/or compensate for any anticipated deficiencies of the Township's recreational facilities.
5. A description of any recreation facilities to be provided by the developer.
6. A discussion on the relationship of the proposal to other parks and recreation facilities located within the Township.
7. A description of responsibility for maintenance of any recreational facilities to be provided by the developer.
8. A description of accessibility of the proposed facilities to general Township residents.
9. Source of standards used in the data presented.

The Park and Recreation Report will be transmitted to the Township Planning Commission for review.

G. Archaeological Resources - All applications involving lands identified by the Pennsylvania Historical and Museum Commission (PHMC) as containing a potential or known site of archaeological significance shall plot the location of the archaeological resource.

H. Historical Features - All applications involving structures or lands that

1. are listed on the National Register of Historic Places;
2. have received a determination of eligibility from the National Register from the National Park Service; or
3. are identified by the PHMC

They shall be designed to preserve, adaptively reuse, or otherwise provide for the historic features. Modifications and exterior alterations to historic features or sites, or new construction adjacent to historic features, shall be consistent with the Secretary of the Interior's Standards for Rehabilitation of Historic Properties, as published by the National Park Service.

Subdivisions and land developments shall also be designed so that new structures do not block historic views, or obstruct the view of historic properties, and new construction shall be consistent with the Secretary of the Interior's Guidelines. If, because of size, construction material, or type of use a proposed land development or subdivision would jeopardize the historic value of a site or structure, such new construction shall be screened or otherwise visually buffered.

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I. Important Natural Habitats - All applications for lands that possess an important natural habitat, as defined herein, shall plot the location or report the presence of the natural resources. Important natural habitat is defined as follows:

1. Wetlands, as defined by criteria of the U.S. Army Corps of Engineers; or
2. Pennsylvania Natural Diversity Inventory (PNDI) confirmed extant plant and animal species and communities that are listed as Pennsylvania Threatened or Pennsylvania Endangered; or,
3. PNDI - confirmed extant plant and animal species and communities that have a State Rank of S1 or S2, which are defined as follows:

S1 - Critically Imperiled - Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer occurrences or very few remaining individuals or acres.

S2 - Imperiled - Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals or acres.

J. Public Facilities and Services. All plans with 25 lots or more shall require the preparation of a statement with the following minimum considerations:

1. A description of the effect of proposed use on the delivery of fire protection. This description shall include a letter from the Fire Chief of the local fire company describing the adequacy/inadequacy of existing facilities and service to accommodate the proposal use, and any suggestion that might enhance fire protection service to the proposed use.
2. A description of the effect of the proposed use on the delivery of public education. This description shall include a letter from the appropriate School District(s) describing the adequacy/inadequacy of existing or proposed facilities and services to accommodate the proposed use. In addition the letter should list any suggestions that could enhance the delivery of public education to residents of the proposed use.

Section 401. General

All improvements required by this Ordinance which are subject to public use shall be installed in accordance with Township specifications.

Section 402. Monuments and Markers

- A. Monuments must be so placed that the scored or marked point coincides exactly with the point of intersection of the lines being monumented. They must be set so that the top of the monument or marker is level with the surface of the surrounding ground. Monuments must be marked on top with a copper or brass dowel.
- B. Location of Monuments -
 - 1. At the intersection of lines forming angles in the boundaries of the subdivision; except in minor subdivisions this requirement shall not apply unless required by the Township Engineer.
 - 2. At the intersection of street right-of-way lines.
 - 3. At change in alignment of streets.
 - 4. At each lot in a subdivision having at least two monuments.
 - 5. At such intermediate points as may be required by the Township Engineer.
- C. Markers shall be set at the beginning and ending of all curves along street property lines; at all points where lot lines intersect curves, either front or rear; at all angles in property lines of lots; and at all other lot corners.
- D. Monuments and markers shall be made of the following size and material:
 - 1. Monuments shall be six (6) inches square or four (4) inches in diameter and shall be thirty (30) inches long. Monuments shall be made of concrete, stone, or by setting four (4) inch cast iron or steel pipe filled with concrete. Monuments must be marked on top with a copper or brass dowel.
 - 2. Markers shall be three-fourths ($\frac{3}{4}$) of an inch square or three-fourths ($\frac{3}{4}$) of an inch in diameter and fifteen (15) inches long. Markers shall be made of iron pipes or iron or steel bars.
- E. All monuments shall be placed by a registered engineer or surveyor so that the center of the monument shall coincide exactly with the point of intersection of the lines being monumented.
- F. Removal - Any monuments that are removed must be replaced by a registered engineer or surveyor at the expense of the person removing them.

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Section 403. Streets and Aprons

- A. Paving - All streets intended to be dedicated for public use shall be paved to full cartway width (as shown on the Final Plan). In all cases paving materials and workmanship shall conform to any and all Township regulations, and those provisions set forth in Article 5 hereof.
- B. Subsurface drainage and all utilities shall be installed prior to placing the street surface.

Section 404. Sewage Disposal

- A. The developer or owner of a lot shall provide for each lot, at the time improvements are erected thereon, a private sewerage disposal system consisting of a septic tank, tile absorption field or other sewerage disposal system approved by the Pennsylvania Department of Environmental Protection and the Township Sewage Enforcement Officer.
- B. If on-site subsurface or alternate sewage disposal systems are feasible, they must be laid out in accordance with minimum standards of the Sewage Facilities Act (Act 537) of the Pennsylvania Department of Environmental Protection. The Township and/or the Pennsylvania Department of Environmental Protection must inspect and approve each on-site sewage disposal system.
- C. Capped Sewer System - Where the sanitary sewer system is not yet accessible but is planned or anticipated by Act 537, Sewage Facilities Act Plan Update, for extension to the development, the developer shall install sewer lines including lateral connections in order to provide service to each lot. The sewer mains shall be capped at the limits of the land development and laterals shall be capped at the street right-of-way line when not extended to houses or other structures. The internal plumbing system shall be constructed to accommodate them as well as any septic systems required.

Section 405. Water Supply

- A. Where a public water system is within one thousand (1,000) feet of, or where plans approved by the Township provide for the installation of such public water system to within one thousand (1,000) feet of, a proposed subdivision, the subdivider shall provide the subdivision with a complete water system if, in the Board of Supervisors' opinion, on the recommendation of the Planning Commission, it is feasible.
- B. The Plan for the installation of a water supply system must be prepared for the development with cooperation of the appropriate water supplier and approved by the appropriate municipal authority. Upon completion of the water supply system, a reproducible as-built plan of the system must be filed with the Township.
- C. Where the connection to a public water supply system is not possible or feasible, each lot must be provided with an individual water supply system prior to the issuance of a building permit. All such individual systems shall meet all applicable regulations of the Pennsylvania Department of Environmental Protection.

Section 406. Fire Hydrants

- A. Where public and central community water systems are provided for subdivision and land development, fire hydrants suitable for coupling with fire equipment serving the Township shall be installed as specified by the Insurance Services Offices of Pennsylvania. The fire protection system shall be designed by a Registered Professional Engineer and approved by the Township Engineer.
- B. Fire hydrants shall meet the following standards and shall be approved by the Board of Commissioners upon review and recommendation by the Township Engineer.
 - 1. All fire hydrants will be located on an eight inch (8") line or a looped six inch (6") line. Where a dead end line is required to contain a fire hydrant, the portion of the line between the main loop and the hydrant shall have a minimum diameter of eight inches (8").
 - 2. Fire hydrants shall be spaced in a development so that all proposed buildings will be no more than six hundred feet (600') from the hydrant measured along traveled ways.
 - 3. All central community water systems must provide a minimum of 500 gallons per minute (GPM) at a residential pressure of 20 psi for a two (2) hour period.
- C. The developer shall post monies sufficient to cover the cost of the installation of said fire hydrants with the Board of Supervisors prior to the approval of the development plan.

Section 407. Storm Drainage

Storm drainage improvements shall be provided in accordance with the Middle Paxton Township Stormwater Management Ordinance, as amended.

Section 408. Stormwater Management

Stormwater management facilities shall be provided in accordance with the Middle Paxton Township Stormwater Management Ordinance, as amended.

Section 409. Street Names and Street Signs

- A. Names of new streets shall not duplicate or approximate existing or platted street names, or approximate such names by use of suffixes such as "land", "way", "drive", "court", and "avenue". In approving the names of new streets cognizance shall be given to existing or platted street names within the Township and postal district. New street names shall bear the same name or number of any continuation or alignment with an existing or platted street. All proposed street names must be approved by the Township.
- B. The contractor or developer, after the street is complete with binder course and after the performance bond has been provided and as soon as the first dwelling is being occupied,

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shall install a road sign and shall be required to pay the cost of the sign and of the installation of the work. The cost is to be the actual cost to the Township for the materials and labor. Following the installation of said sign and the payment of the costs for that installation, the Township shall thereafter be solely responsible for the maintenance thereof. All traffic control signs and devices are to be installed prior to any certificates of occupancy being issued.

C. Street Sign Specifications

Street signs shall conform to the Pennsylvania Department of Transportation's Publication 236M, dated April 1997, as amended, page D3-1, Street Name Sign.

Section 410. Landscaping and Bufferyards

In residential subdivision of ten (10) or more lots, all commercial and industrial subdivisions and land developments with greater than (10) parking spaces, the developer shall provide bufferyards and landscaping in accordance with this section. For commercial and industrial subdivisions and land developments, a minimum of ten (10) percent of the developed area shall be landscaped or in bufferyards. A Storm Water Management Plan in accordance with the Middle Paxton Township Stormwater Management Ordinance, as amended.

A. General Buffer and Screening Regulations

1. Buffers and Screening shall be installed in accordance with the Middle Paxton Township Zoning Ordinance, Section 1304.
2. All planting shall be performed in conformance with good nursery and landscape practice. Plant materials shall conform to the standards recommended by the American Association of Nurseryman, Inc., in the American Standard of Nursery Stock, ANSIZ60, current edition, as amended.

- B. Existing Wooded Areas. Existing wooded areas shall be protected to prevent unnecessary destruction. At least twenty-five (25%) percent of the number of trees (minimum trunk caliper of five (5) inches at six (6) inches above ground) that exist at the time of Plan submission shall be maintained or replaced immediately following construction. Replacement trees shall be a minimum trunk caliper of two (2) inches at a height of six (6) inches above finished grade and located within non-buildable sections of the site (i.e., floodplain, steep slope, and setback areas). Plans shall be submitted showing existing trees and proposed construction and be in conformance with this Section.

- C. Street Trees. Street trees shall be provided in all residential subdivisions with densities greater than one (1) dwelling per acre and all commercial and residential land developments. All street trees shall be provided by the applicant in accordance with the following standards:

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1. The trees shall be nursery grown in a climate similar to that of the locality of the project. Varieties of trees shall be subject to the approval of the authority which accepts ownership of the street.
2. All trees shall have a normal habit of growth and shall be sound, healthy, and vigorous; they shall be free from disease, insects, insect eggs, and larvae.
3. The trunk diameter, measured at a height of six (6) inches above finish grade, shall be a minimum of two (2) inches.
4. Trees shall be planted between the street right-of-way line and the building setback line except where the municipality has authorized placement of trees within the street right-of-way. The trees growth shall not interfere with the street cartway, sidewalk, or utility line. Street tree branching shall not interfere with clear sight triangles. Typical branching shall not be within ten (10) feet of ground level after ten (10) years of growth.
5. All planting shall be performed in conformance with good nursery and landscape practice and to the standards established by the authority which accepts ownership of the planting.
6. Requirements for the measurements, branching, grading, quality, balling, and the burlapping of trees shall follow the code of standards recommended by the American Association of Nurserymen, Inc., in the American Standard for Nursery Stock, ANSIZ60, current edition, as amended.
7. A minimum of two (2) canopy street trees shall be provided for every one hundred (100) feet of public right-of-way. Street trees shall be placed a minimum of forty (40) feet apart along the right-of-way, and shall be located so as to maximize the growth potential of the plant material, minimize the potential for root interference with public infrastructure, and enhance the quality of the development. Street trees shall be one of the following species:

<i>Acer saccharum</i>	Sugar Maple
<i>Aesculus hippocastanum</i>	Common Horse Chestnut
<i>Aesculus x cornea</i>	Red Horse Chestnut
<i>Cladrastus lutea</i>	American Yellowwood
<i>Fraxinus pennsylvanica</i>	Green Ash
<i>Gleditsia triacanthos inermis</i>	Thornless Honey Locust
<i>Liquidambar styraciflua</i>	Sweet Gum
<i>Ostrya virginiana</i>	Hop Hornbeam
<i>Quercus acutissima</i>	Sawtooth Oak
<i>Quercus palustris</i>	Pin Oak
<i>Quercus rubra</i>	Red Oak
<i>Tilia cordata</i>	Littleleaf Linden
<i>Tilia x euchlora</i>	Crimean Linden
<i>Tilia tomentosa</i>	Silver Linden

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Ulmus parvifolia
Zelkova serrata

Lacebark Elm
Japanese Zelkova

Other tree species may be used provided acceptable information is submitted to indicate that the species are hardy street trees. No one species shall compose more than twenty-five (25%) percent of the entire number of street trees in a particular development.

8. Street trees are to be maintained and guaranteed for a minimum of two years by the developer. Planting of trees shall occur within the standard planting season (March through November). No more than 1/3 of the tree shall be damaged or dead without replacement. Replacement trees shall conform to all requirements of this section and shall be maintained and guaranteed for a minimum of two planting seasons.

- D. Ground Cover - Ground cover shall be provided on all areas of the project to prevent soil erosion. All areas which are not covered by paving, stone, or other solid material shall be protected with a suitable ground cover, consisting of spreading plants including sods and grasses less than eighteen (18) inches in height.

Section 411. Changes

In cases where any of the foregoing requirements are not deemed appropriate by the Board of Supervisors to serve in the public interest, the Board of Supervisors reserves the right to increase, change, alter, or substitute materials, manner, and specifications for any utility or street improvement.

Section 412. Performance Requirements

No Final Plan shall be approved by the Board of Supervisors unless all monuments and markers, streets, roadways, walkways, sidewalks, curbs, gutters, street lights, fire hydrants, water mains, sanitary sewers, storm drains, storm water detention basins, storm water retention basins, or related drainage facilities, recreational facilities, open space improvements, landscaping and buffer yards required by this Ordinance, any other ordinance of the Township, or as specified by the Board, have been installed or the installation of the same has been guaranteed in writing by the developer with financial security as hereinafter provided.

- A. Upon making application for approval of a Preliminary Subdivision or Land Development Plan the developer shall notify the Township in writing that the developer elects, subject to the approval of the Board of Supervisors which will not be unreasonably withheld, one of the following:
 1. Completion of Improvements Prior to Final Approval. To install and complete all improvements required or specified on or for the plan within six (6) months of the date of preliminary approval in a manner satisfactory to the Board of Supervisors.

2. Guarantee of Future Performance. To file with the Township a written guarantee with financial security as hereinafter provided assuring the installation and completion of all improvements required or specified on or for the plan within one (1) year of the date of final plan approval in a manner satisfactory to the Board of Supervisors. The Board of Supervisors may extend the time period for placement of improvements for a period of up to one (1) year.

Such written guarantee shall be secured to the Township by one of the following forms of financial security in an amount equal to one hundred ten (110%) percent of the cost of the required improvements. "Cost" shall be determined from bona fide bid or bids from the contractor or contractors chosen by the developer to install and complete the improvements, and shall be in such amount as verifiable by the Township Engineer.

- a. Surety Bond - The developer shall obtain and file with the Township a corporate surety bond from a bonding company authorized to do business in the Commonwealth of Pennsylvania payable to the Township conditioned upon the developer installing and completing all required improvements.
- b. Escrow Account - The developer shall deposit with the Township or with a Federal or Commonwealth chartered banking institution authorized to do business in Pennsylvania cash or acceptable obligation instruments readily convertible into cash at face value to be held in escrow conditioned upon the developer installing and completing all required improvements. The Township, the developer and the escrow agent, if any, shall enter into a written agreement restricting and conditioning the escrow account in such a manner as the Township shall reasonably require to secure the installation and completion improvements.
- c. Letter of Credit - The developer shall provide and deposit with the Township an irrevocable letter of credit from a Federal or Commonwealth chartered lending institution authorized to do business in Pennsylvania payable to the Township conditioned upon the developer installing and completing all required improvements.

3. Long-Term Projects

- a. In the event that a developer providing financial security for the installation and completion of required improvements requires more than one (1) year to complete the same, the Board of Supervisors may, in its discretion require that the financial security be increased by an additional ten (10%) percent for each one year period beyond the first anniversary date from the posting of security. This amount shall not exceed one hundred ten (110) percent of the cost of completing the required improvements as reestablished on or about the expiration of the preceding one year period.

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- b. In the event that a developer, through no lack of diligence or good faith, shall have failed to complete required improvements within a one (1) year period, the Board of Supervisors may, in its discretion, permit the continuation of the original financial security in an amount not exceeding one hundred ten (110%) percent of the cost of completing the required improvements remaining uninstalled on or about the expiration of the initial one (1) year period.
- c. Where a Subdivision or Land Development is of such size as to justify the development of the same over a period of years, nothing contained in this Section shall, after approval of a preliminary plan for the entire development, preclude or prevent the developer from installing and completing required improvements in sections or stages with financial security posted therefore.

B. Release or Reduction of Financial Security

1. When the developer has completed all of the required improvements and desires a release of the financial security, or has completed a part of the required improvements and desires a partial release, written notice of the requested release shall be filed with the Township Secretary.
2. The Township Secretary shall, within ten (10) days after receipt of such request, direct the Township Engineer to inspect the completed improvements. Within thirty (30) days after receipt of such direction the Township Engineer shall prepare a report in writing and file the same with the Township Secretary certifying his approval or disapproval of the improvements. In the event such report and certification shall disapprove all or any part of the improvements, the Engineer shall detail his reasons therefor, and a copy shall be sent to the developer.
3. Within thirty (30) days following receipt of the Engineer's report for release of financial security, the Board of Supervisors shall either approve or disapprove the request in writing by certified or registered mail. In the event the Board of Supervisors or Township Engineer fails to act within the time provisions given herein, it will be deemed to have approved the request.
4. In the event the developer shall request a partial release of financial security at any time prior to requesting a final release, the Township Secretary may, in his/her discretion, require as a condition of such partial release, a retention of financial security equal to ten percent (10%) of the cost of the completed improvements as estimated by the Township Engineer. Any improvements requested for release shall be inspected by the Township Engineer.

C. Dedication and Maintenance

1. Dedication

Upon the installation and completion of all required improvements in a manner satisfactory to the Township evidenced by the Township's approval in writing or by inaction of the Board of Supervisors upon the developer's request for release of financial security, the developer shall make a written offer of dedication to the Township of all improvements intended for public use. The Board of Supervisors shall thereupon accept all or such portions of the improvements offered for dedication as the Board shall determine, provided the developer shall have filed with the Township financial security for the maintenance of the accepted improvements as hereinafter set forth. Offers of dedication to the Township of public improvements shall be made within eighteen (18) months of the installation and completion of all improvements.

2. Financial Security for Maintenance

Before the Board of Supervisors shall accept an offer of dedication for all or any portion of the public improvements installed and completed by the developer, the Board shall require the developer to file with the Township a written guarantee of the structural integrity of the offered improvements and the functioning of the same in accordance with the design and specifications of the approved plan for a period of eighteen (18) months, such written guarantee shall be secured to the Township by one of the forms of financial security specified in Section 411.A.2 of this Ordinance in an amount not exceeding fifteen (15%) percent of the actual cost of the dedicated improvements.

D. Public Utilities, Municipal Authorities and Homeowner Associations

Where water mains and/or sanitary sewers and such apparatus and facilities as relate thereto are to be installed and completed by the developer as a requirement of an approved plan, such improvements shall be installed under the jurisdiction and pursuant to the rules and regulations of the public utility, municipal authority or homeowner association to which such improvements are intended to be assigned or dedicated, and the financial security therefor shall be filed in accordance with the rules and regulations of the controlling public utility, municipal authority or homeowner association.

E. Building Permits

Where a developer has filed financial security as provided in the foregoing Section of this Ordinance, the issuance of building, grading, occupancy or other permits for or within the development shall not be withheld or conditioned upon the installation of the required improvements; provided, however, that occupancy permits for any buildings erected may be withheld until the improvement of the streets providing access to and from existing public streets and such building shall be mud-free or otherwise in a permanently passable condition and all other required improvements necessary for reasonable use or occupancy

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of such buildings have been installed. Roads must be maintained by the developer prior to dedication and before issuance of building or occupancy permits.

F. Default by Developer

1. In the event that a developer shall default on an agreement guaranteeing the installation and completion of any required improvements or shall default on an agreement guaranteeing the maintenance of any such improvements after acceptance of dedication by the Township, the Township shall cause any required improvements to be installed and completed, or maintenance performed, and enforce against the financial security recovery of the cost of the same by any appropriate legal or equitable remedy.
2. Where the financial security shall be a corporate surety bond, reasonable opportunity shall be given the surety company to install and complete the required improvements, or perform any required maintenance, but absent such performance by the surety company, the Township shall by its own personnel and equipment, or by contract with a responsible contractor, install and complete the improvements or perform the maintenance and collect all necessary cost thereof from the surety company.
3. Where the financial security shall be an escrow account or a letter of credit, the Township shall by its own personnel and equipment, or by contract with a responsible contractor, install and complete the improvements or perform the maintenance and collect all cost thereof from the escrow account or by presentation of the letter of credit.

Section 413. Utilities

Electric, telephone and all other utility facilities including cable television shall be installed underground unless, in the opinion of the Board of Supervisors, special conditions required otherwise. The developer shall also be required, prior to Township approval, to obtain a letter from the appropriate utility company confirming that developer has entered into an agreement to provide for an underground electric system in accordance with the Pennsylvania Public Utility Commission Investigation Docket No. 99-817, as amended from time to time, or has obtained a waiver from said Pennsylvania Public Utility Commission to allow overhead electric facilities.

Section 501. General

- A. The standards and requirements contained in this Article are intended as the minimum for the promotion of the public health, safety, and general welfare, and shall be applied as minimum design standards for subdivision and/or land developments. Land subject to hazards to life, health or property, such as may arise from fire, flood, diseases, or other causes, shall not be subdivided for building purposes unless the hazards have been eliminated or unless the plans show adequate safeguard against them. Land included as having unsuitable characteristics for development would be the following:
1. Land subject to flooding or which has a seasonal high groundwater table which will interfere with the construction of basements or habitable areas below grade.
 2. Land which, if developed, will create or aggravate a flooding condition upon other land.
 3. Land subject to subsidence.
 4. Land subject to underground fires.
 5. Land containing significant areas of slopes greater than twelve (12) percent.
 6. Land which, because of topography or means of access, is considered hazardous by the Township Board of Supervisors.
 7. Land which is subject to ground pollution or contamination.
 8. Land which is defined as wetland area.
- B. All improvements shall be in conformance with Township engineering standards and specifications, as contained herein.

Section 502. Streets and Roadways

A. Design Standards

The general arrangement, character, extent, and location of all streets proposed shall conform to the Township's Comprehensive Plan and shall be considered in their relation to existing or proposed streets, topographical conditions, the public convenience and safety, and in the appropriate relation to the proposed uses of land to be served by such streets. The arrangement, width, grade and other design standards of streets shall conform to the provisions found herein.

B. Design and Arrangement

1. In general, all streets shall be continuous and in alignment with existing streets and shall comprise a convenient system to ensure circulation of vehicular and pedestrian traffic.
2. Where a subdivision abuts or contains an existing or proposed street, the newly proposed streets shall be planned and designed in order to protect residential areas from heavy traffic and also to provide separation between local and through traffic.
3. Streets shall be logically related to the topography so as to produce usable lots and reasonable grades.
4. Half or partial streets shall not be permitted. Wherever a tract to be subdivided borders an existing half or partial street, the remaining portion of the street shall be platted within such tract.
5. Dead-end streets shall be prohibited except as stubs utilizing temporary cul-de-sac to permit future street extension into adjoining tracts of ground or when designed as permanent cul-de-sac of less than or equal to eight hundred (800) feet in length. Cul-de-sac shall be a minimum of two hundred fifty (250) feet in length, measured from the center line of the intersecting street to the end of the cul-de-sac. Cul-de-sac shall have a minimum radius of forty (40) feet to the outside edge of the cartway and fifty (50) feet to the outside edge of the right-of-way and tangent whenever possible to the right side of the street. Cul-de-sacs shall not exceed eight hundred (800) feet. Dead-end streets shall not discharge stormwater onto private property without approved storm drainage systems.
6. Streets shall be laid out to intersect as nearly as possible at right angles; in any event, no street shall intersect another at less than seventy-five degrees (75E). Intersections of more than two (2) streets shall be prohibited. Where this proves impossible, such intersections shall be designed with care for safety and suitable curbs, barriers, signs and other devices may be required. Streets entering opposite sides of another street shall be laid out directly opposite one another.
7. The vacation of any street or part of a street dedicated for public use shall not be approved if such vacation interferes with the uniformity of the existing street pattern or any future street plans prepared for the area.
8. Proposed streets shall be designed for 30 MPH speed limit. Intersections shall be designed according to the speed limit for the intersecting streets.
9. If undeveloped property has an alternative means of vehicular access, a single-family lot in an adjoining recorded plan shall not be used as a future right-of-way for a public street, private street or other vehicular access.

C. Street Grades

No street grade shall be less than one-half of one percent (0.5%) and shall not exceed ten percent (10%) for any street or roadway in the Township of Middle Paxton. Streets shall have a grade not to exceed five percent (5.0%) for a distance within fifty (50) feet of the street right-of-way line for any intersecting street.

D. Vertical and Horizontal Curve Design

1. Horizontal Curves

1. Horizontal Curves shall be used at all horizontal alignment deflections in excess of two (2) degrees.
2. The minimum radius at the centerline for the horizontal curves on arterial streets shall be six hundred (600) feet; for the collector streets, three hundred (300) feet; and for local streets, one hundred and fifty (150) feet. Proper superelevation shall be provided for curves on arterial streets.
3. There shall be tangent of at least one hundred (100) feet between reverse curves for all collector and arterial streets.
4. Proper sight distance shall be provided in the design considering both the horizontal and vertical alignment.

2. Vertical Curves

5. The minimum grade on all streets shall be seventy-five hundredths (0.75%) percent. The maximum grade exceeding on arterial and collector streets shall be six (6%) percent and on local streets, ten (10%) percent.
6. Vertical curves shall be used in changes of grade exceeding one (1%) percent. To provide proper sight distances, the minimum length (in feet) on vertical curves shall be as follows: for arterials, eighty-five (85) times the algebraic difference in grade; for collectors, fifty-five (55) times the algebraic difference in grade; for local streets, thirty (30) times the algebraic difference in grade.
7. The through street at intersections shall be approached by side streets in accordance with the following standards: where the grade of the side street exceeds seven (7%) percent, there shall be a leveling area on the side street with a minimum length of seventy-five (75) feet (measured from the intersection of the centerlines), within which no grade shall exceed a maximum of four (4) percent.

3. Clear Sight Triangle

Required clear sight triangles for proposed intersections and the horizontal and vertical alignment shall provide the minimum sight distances as follows:

TABLE 5-0
Minimum Stopping Sight Distance (Feet)
(Unless otherwise authorized by an approved Highway Occupancy Permit)
The greater of the
85th Percentile Speed
per the T.I.R.

or Legal Posted Speed (miles per hour)	Gr.= -10%	Gr.= -5%	Gr.= 0%	Gr.= +5%	Gr.= +10%
25	190	175	165	160	155
30	230	210	195	185	175
35	305	275	250	235	225
40	390	345	315	290	275
45	485	425	385	355	330
55	600	515	460	420	390

E. Intersections

1. No more than two (2) streets shall intersect at the same point.
2. Right angle intersections shall be used whenever possible. No street shall intersect another at an angle of less than seventy-five (75) degrees.
3. Two (2) streets intersecting at opposite sides of a through street shall intersect at their centerlines or their centerlines shall be off-set by a minimum of two hundred (200) feet.
4. Intersections with collector streets entering into arterial streets shall be located five hundred (500) feet or more apart on the same side of the arterial street measured from centerline to centerline of the collector streets. This shall be granted at the discretion of the Board of Supervisors.
5. A one hundred (100) foot clear sight triangle shall be provided and maintained at all street intersections. The triangle shall be provided and maintained at all street intersections. No building, planting or other obstruction above the height of three (3) feet and below ten (10) feet in height that would obscure the vision of a motorist shall be permitted within the area. The height shall be measured from the centerline grade of the intersecting streets. This requirement shall not apply to traffic signals, traffic signs, street name signs, public utility poles and similar type structures.

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6. The cartway edge at street intersections shall be rounded by a tangential arc with a minimum radius of twenty (20) feet for local streets and thirty (30) feet for intersections involving collector or arterial streets. The right of way radii at intersections shall be substantially concentric with the edge of the cartway.
7. At least two (2) street name signs shall be placed at each four-way street intersection, and one (1) street name sign shall be placed at each AT@ intersection. Signs shall be installed in a location and manner where they will be clearly visible at all hours. The design of street name signs shall be approved by the Board of Supervisors.
8. All streets intersecting a state highway shall be subject to the approval of the Pennsylvanian Department of Transportation.

F. Street Width and Types

The Board of Supervisors may require the installation of curbs and specified cartway widths in a subdivision where the bulk of the buildings, areas of parking, street grades exceeding six percent or other evidence indicates that such improvements are necessary for proper storm water drainage. Curbs shall be constructed in accordance with standards set forth herein.

Minimum street right-of-way and cartway widths shall be in accordance with Table 5-1.

Functional classifications are hereby established for the streets and roads in the Township of Middle Paxton.

1. **Arterial Streets.** This classification includes highways which are major traffic corridors or provide for inter-municipal traffic of substantial volumes where the average trip lengths are usually five miles or greater. Generally, these highways should accommodate operating speeds of 35 to 50 miles per hour and have an estimated Average Daily Traffic (ADT) count of 5,000 vehicles or greater after fully developed.

Table 5-1
Street Types and Widths

Street Type	Width
Arterial Streets	As determined by Commission after consultation with Township Supervisors and Pennsylvania Department of Transportation
Right-of-Way	
Cartway	
Collector Streets	
Right-of-Way	50 feet
Cartway	30 feet or 36 feet with vertical curbs
Berm (Shoulder)	4 feet on each side
Minor Streets	
Right-of-Way	50 feet
Cartway	20' with no on street parking
Alternate	30 feet with vertical curbs
Berm (Shoulder)	4 feet on each side
Turn Around or Cul-de-sac (diameter)	
Right-of-Way	100 feet
Cartway	80 feet
Marginal Access	
Right-of-Way	50 feet
Cartway	26 feet or 30 feet w/vertical
Berm (Shoulder)	4 feet on each side
Four (4) to Ten (10) Lots	
Right-of-Way	50 feet
Cartway	18 feet
Berm (Shoulders)	2 feet
Three (3) or Less Lots	
Right-of-Way	33 feet
Cartway	12 feet
Berm (Shoulders)	2 feet

2. Collector Streets. A major street or highway which carries traffic from minor streets to arterial streets including the principal entrance streets of a residential development and streets for circulation within such a development.
3. Minor Streets. This classification is intended to include streets and roads that provide direct access to abutting land and connections to higher classes of roadways. Traffic volumes will be low and travel distances generally short. These streets and roads should be designed for operating speeds of 25 miles per hour, and have an estimated Average Daily Traffic (ADT) count of less than 400 vehicles after being developed.

4. Improvement Standards for a Subdivision of 3 lots or less. In certain circumstances approved by the governing body, upon application made by the applicant, a private street or driveway providing access to 3 or less dwelling units may be considered for the following special specifications upon the condition that a satisfactory maintenance agreement for the roadway in question shall be in effect and binding upon all lots served by the private street or driveway. Such accesses are generally discouraged by this ordinance and will only be accepted under circumstances where the municipality does not desire to accept a proposed driveway access easement as a public street or under circumstances where the municipality believes a public street may be unnecessary. The total number of lots served or dwelling units served by said street or driveway shall be defined to include all existing and/or proposed lots and dwellings utilizing the private street or driveway for access. The private street or driveway access easement shall be designed to providing a driveway to accommodate the type and volume of traffic anticipated to be generated and shall be constructed to provide a sound, all-weather driving surface, reasonable smooth and free from mud, dust, or standing water. The private street or driveway maintenance agreement shall be in a form approved by the Township and all affected parties abutting and adjoining said easement shall be bound by said agreement which shall create a private right of way which shall be a covenant running with the land. This provision shall not apply to a street or driveway serving greater than three (3) dwelling units. For purposes of this section the term private driveway access easement means the right to use land of another for purposes of ingress and egress to the land of the holder of said right to the exclusion of the general/public and intended for vehicular access to said land.

G. Minimum Required Street Improvements

1. Standards. The gradations and consistency of all materials and the methods of construction, unless otherwise authorized herein, shall be in accordance with the Pennsylvania Department of Transportation Specifications, Publication 408, as amended, including the requirements shown on the approved plan.
2. Notice. No road construction activity shall be permitted in the Township of Middle Paxton until and unless the contractor shall notify the Township at least one (1) week in advance of commencing the work. The contractor shall at all times during the progress of the work have a competent superintendent or foreman on the job site. Inspection of the road work shall be done by the Board of Supervisors and/or the Township Engineer.
3. Grading
 - a. The entire width of a right-of-way for each street in a proposed subdivision shall be graded and suitably prepared for the installation of the road base, cartway pavement, shoulder/improved berms, drainage structures, curbs, gutters and sidewalks in accordance with the appropriate standards for the class of street.

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- b. The subgrade shall be free of sod, vegetation matter, boulders, spongy soil or other unsuitable 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.
- c. The subgrade shall not be prepared during freezing weather or when frozen or when it is unstable due to excessive moisture.
- d. All utility lines, under drains, sewer lines, including laterals and service lines, being placed in the roadway shall be installed prior to the commencement of road construction at the following minimum depths:

Gravity sewer lines: six (6) feet

Force main sewer: four (4) feet below finish grade

Water lines: four (4) feet

Gas lines: two and one-half (2 1/2) feet

Telephone, electrical and television cable: two (2) feet - Not to be located within paved cartway.

Sewer and water lines shall have a minimum separation distance of ten (10) feet or be located on opposite sides of the street or roadway.

PA Department of Environmental Protection and private utility regulations and procedures will prevail where required.

- d. All backfill for utilities under the roadway shall be only 2A modified stone compacted at the optimum material moisture content and placed in not greater than eight (8)-inch lifts.

4. Preparation of Road Subgrade.

- a. The subgrade shall be compacted and fine graded to a tolerance of not more than one-tenth (0.1) foot above and two-tenths (0.2) foot below the grade as shown on the plan.
- b. All soft, plastic or rock areas in the subgrade shall be undercut to a depth of at least twelve (12) 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 Board of Supervisors and/or the Township Engineer.
- c. The subgrade shall conform to the same crown as the paved surface.
- d. Prior to the placement of subbase or base course, the subgrade shall be proof-rolled with a vibratory roller. The roller mass shall be no less than 15 tons. The proofing rolling shall be observed by the Board of Supervisors and/or Township Engineer. In the alternative, in those circumstances where the Township Engineer shall deem necessary, the developer shall perform

necessary soil gradation, density and compaction tests including CBR test to ensure proper compaction of subgrade and fill prior to the placement of the subbase.

5. Preparation of road base. The base course material shall consist of compacted PennDOT No. 2A Modified meeting the specifications of Pennsylvania Department of Transportation Publication 408, as amended and shall be laid in the manner prescribed therein to the following thickness: a) Industrial/Commercial Areas - ten (10) inches; b) Private Roads - six (6) inches; c.) Shoulders/improved berms - same depth as road base; d) All other roads - eight (8) inches.

In wet areas, a four-inch (4") lift of open graded stone meeting Pennsylvania Department of Transportation specifications shall be placed in lieu of the top four (4) inches of base course material noted above.

6. Preparation of road surface.
 - a. The binder course shall consist of a minimum of two (2) inches of compacted ID No. 2; or Superpave PG 64 -22, 25.0 mm Binder Course hot bituminous concrete meeting the specifications the Pennsylvania Department of Transportation Publication 408, as amended, unless otherwise shown on the Plan specifications approved by the Supervisors. Course shall be laid in the manner prescribed in the Department=s specifications for placement of the mix as designed. The binder course shall be repaired if defects occurred prior to placement of wearing course. Where cracking or any other type of failure has occurred in the base course, the contractor shall completely remove the base course, stabilize the subgrade if necessary and construct new base course. Where the deficiency involves depressions or raveling in the surface of the base course, the repair may be made by skin patching with a suitable bituminous material.
 - b. The wearing course shall consist of a minimum of one and one-half (1-1/2) inches of compacted ID No. 2; or Superpave PG 64 - 22, 9.5 mm or 12.5 mm Wearing Course hot bituminous concrete meeting the requirements of the Pennsylvania Department of Transportation Publication 408, as amended, unless otherwise shown on the Plan specifications approved by the Supervisors. Course shall be laid in the manner prescribed in the Department=s specifications for placement of the mix as designed.
 - c. The wearing course shall only be placed after sufficient time has passed to ensure that no further settling will take place. The wearing course shall only be placed after an inspection has determined no sags, low spots, or depressions exist which could adversely affect the integrity of the wearing course. In the event of any deficiency in the wearing course such as raveling, depressions, cracking, etc., such deficiencies shall be repaired by removing the wearing course and replacing with new material. Subject to said inspection, the wearing course shall be placed no later than the time when

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ninety percent (90%) of the lots abutting on said road or portion thereof shall have been developed for residential purposes or when three (3) years have passed from the placement of the binder course, whichever first occurs.

H. All roadways and streets constructed in the Township of Middle Paxton shall provide for the proper flow of storm water runoff from the street into improved drainage facilities that convey street runoff, and, if necessary, natural runoff in accordance with the Middle Paxton Township Storm Water Management Ordinance.

I Shoulders/Improved Berms, Gutters, and Sidewalks

1. Shoulders/Improved Berms

1. Each street or road constructed in the Township of Middle Paxton shall have berms beyond the edges of the cartway consistent with those specified in Table 5-1, Street Types and Widths.

2. Berms along the edges of cartways shall be improved with full depth road base and road surface materials. Improved berms shall extend beyond the edge of the cartway.

3. Any slopes or embankments beyond the four-foot or ten-foot area shall be sloped at one (1) foot vertical to one and one-half (12) feet horizontal or better for cuts and 1 foot vertical to 2 feet horizontal for fills and shall be seeded with perennial rye grass at a rate of four (4) pounds per one thousand (1,000) square feet and covered with mulch.

2. Curbs and Gutters: When in the opinion of the Township Engineer curbs and gutters may be required along streets in proposed subdivisions or land developments, curbs and gutters shall be provided.

a. Curbs, gutters, or combination of curbs and gutters shall be constructed according to the specifications set forth in Section 630, Plain Cement Concrete Curb Gutters, in the APennsylvania Department of Highway Specifications, @ 2000, Form 408, as amended, of the Pennsylvania Department of Transportation.

b. Where vertical curbs are provided they shall be not less than six (6) inches wide at the top and seven (7) inches wide at the bottom. The curb reveal shall be eight (8) inches. The overall depth of the curb shall be not less than twenty (20) inches. The curb shall rest on a six (6) inch crushed stone base.

c. The cross sections of gutters and combination curbs and gutters shall be constructed in accordance with the details shown on the approved drawings.

d. Curbs and gutters shall be set and finished to the lines and grades given on the approved drawings.

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- c. The cross sections of gutters and combination curbs and gutters shall be constructed in accordance with the details shown on the approved drawings.
- d. Curbs and gutters shall be set and finished to the lines and grades given on the approved drawings.

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4. Joint filler shall be cellular compression material conforming to requirements of the Pennsylvania Department of Transportation.
5. Expansion joints, 2" thick pre-molded expansion joint material, shall be provided at intervals of 20 feet or when new construction abuts existing construction.
3. Sidewalks. In the event sidewalks are proposed and constructed in any development, said sidewalks shall be constructed and repaired upon the line and grade within the right-of-way of roadways and streets dedicated to Middle Paxton Township and shall be done as follows:
 - a. Sidewalks must be at least three (3) feet wide in residential districts. In commercial and industrial districts, sidewalks must be at least four (4) feet wide. In the vicinity of shopping centers, schools, recreation areas, and other such facilities, sidewalks must be at least five (5) feet wide and located within the street right-of-way.
 - b. Sidewalks shall be constructed according to the specifications as set forth in Section 676, ACement Concrete Sidewalks in the Pennsylvania Department of Highway Specifications, @ 2000, Form 408, as amended, of the Pennsylvania Department of Transportation.
 - c. Sidewalks shall follow the line or the grade of the street and shall not have contained therein any steps.
 - d. Sidewalks shall be sloped for proper water runoff as deemed appropriate by the Engineer of Middle Paxton Township.
 - e. There shall be one-half-inch expansion joints between the sections of sidewalk construction, at a maximum distance of every twenty (20) feet.
 - f. Sidewalks constructed of concrete or similar masonry material shall have reinforced wire or a fiberglass substitute or similar material contained therein for strengthening purposes.
 - g. Sidewalks shall have a minimum thickness of four (4) inches. Four inches of AASHTO No. 57 aggregate shall be placed under all sidewalks.
 - h. Sidewalks shall conform to the adjacent earthen areas as to elevations.
 - i. If sidewalks are made of concrete or similar masonry material, they shall be broom finished and not have a smooth surface.
 - j. All sidewalks shall be built no closer than four (4) feet from the curb line of the street or road adjacent to said sidewalk area.

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k. Sidewalks shall be maintained by the property owner.

l. All sidewalk shall meet Americans with Disabilities Act, Public Law 101-336.

4. Restricted On Street Parking: When deemed necessary by the Board of Supervisors and/or upon the recommendation by the Planning Commission, the developer shall provide improvements necessary to restrict on street parking on the cartway and the improved berms.

J. Bridges

1. All bridges or similar structures to be constructed on any Township roads or any road which is to be dedicated to the Township for acceptance must be designed in accordance with the requirements of the Pennsylvania Department of Transportation's Design Manual and Part 4, as amended, entitled AStructures@, as well as the requirements of the American Association of State and Highway Transportation Officials (AASHTO) AStandard Specifications for Highway Bridges@.

2. Plans and design calculations meeting the foregoing requirements shall be submitted for review and approval by the Township Engineer.

3. All materials and workmanship for construction must be in compliance with the Pennsylvania Department of Transportation Specifications Publication 408, as amended.

4. All bridges to be constructed in accordance with the terms hereof shall be of reinforced concrete, either poured-in-place or utilizing pre-cast concrete members. The use of steel beam structures will be subject to specific approval on a case by case basis by the Board of Supervisors.

K. Crown. There shall be a three inch (3") crown on all proposed twenty-four (24') foot cartways and four inch (4") crown on all proposed thirty foot (30') foot cartways. Street cross slope must be designed and constructed to discharge surface water from the paved surface. The slope of the crown shall be no less than 1/3" per foot for the cartway width and 2" per foot for the shoulder/improved berm width. The crown of the road shall be inspected by the Board of Supervisors and/or Township Engineer prior to the placement of the paving course.

L. Driveways. Driveways shall only be used to provide vehicular access between a parking area for a single residential unit of occupancy or agricultural use and a street or alley. Driveways shall conform to the following:

1. Only one (1) driveway connection per one hundred (100) feet of lot frontage.

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2. Driveways shall be laid out to intersect as nearly as possible at right angles; in event no driveway shall intersect another at less than seventy-five degrees (75°).
 3. Driveways shall not connect with a public street within fifty feet (50') of the right-of-way lines of any intersecting streets, nor within five (5) feet of a fire hydrant. Driveways shall be set back at least three (3) feet from any side lot line, unless a common or joint driveway location is proposed.
 4. Driveways shall be located and constructed so that a clear-sight triangle of seventy-five (75) feet, as measured along the street centerline, and five (5) feet along the driveway centerline is maintained; no permanent obstructions over three (3) feet above the street grade are permitted in the clear-sight triangle.
 5. Driveways shall have a leveling area within the initial twenty (20) feet measured along the driveway centerline. Driveway intersections with streets shall be constructed properly managing flow of stormwater and natural water and shall comply with the requirements of the Middle Paxton Township Stormwater Ordinance, as amended. The leveling area shall intercept run-off flow, preventing it from entering the road or street.
 6. Driveway access shall be provided to the street of lesser classification when there is more than one street classification involved.
 7. Driveways which intersect shall provide adequate turnaround within the lot so egress to the street is in a forward direction.
 8. No driveway width shall exceed twenty-four (24) feet between the street right-of-way and street cartway.
 9. All intersections with a State Route shall be subject to the approval of the Pennsylvania Department of Transportation (PennDOT). Any driveway intersecting with a State Route shall obtain a Highway Occupancy Permit from PennDOT prior to receipt of a Building Permit.
 10. Driveways shall be paved with bituminous concrete or an equivalent stabilized material from the edge of the street cartway a minimum distance of fifteen (15) feet toward the lot if the driveway is over an eight (8%) percent grade, and be provided in a manner consistent with the design, construction, and storm water drainage of the street, to prohibit runoff onto Township roadways.
 11. All driveways shall comply with the minimum stopping sight distance requirements in PennDOT Publication No. 201, Engineering and Traffic Studies.
- M. Access Drives, Parking and Loading Areas. Access drives are a paved surface or other surface, other than a street, which provides vehicular and/or pedestrian access from a street or a private road to a lot. Access drives shall conform to the following:

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1. The vertical alignments of access drives shall conform to the specifications for streets, as stated in Section 502 of this Ordinance.
2. The horizontal alignments of access drives shall be measured along the centerline. Horizontal curves shall be used at all angle changes in excess of two degrees (2E). All curves shall be tangential arcs. The minimum horizontal curve radius shall be seventy-five (75) feet.
3. All access drive intersections shall be:
 - a. Subject to approval of the Pennsylvania Department of Transportation (PennDOT) when intersecting a State Route. Copies of Highway Occupancy Permits from PennDOT shall be submitted for all proposed intersections with a State Route prior to Final Plan approval.
 - b. Setback fifty feet (50') from the intersection of any street right-of-way lines.
 - c. Setback one hundred (100) feet from the intersection of any other access drive located upon the same lot (measured from cartway edges).
 - d. Setback from any side and/or rear property lines per requirements contained in the Middle Paxton Zoning Ordinance, as amended.
 - e. Located in relationship to access drive intersections on adjacent properties to provide safe and efficient movement of vehicles.
 - f. Designed with right angle intersections whenever possible. No access drive intersection shall utilize an angle less than seventy-five degrees (75E), unless turning movement restrictions are imposed.
 - g. Rounded by a tangential arc with a minimum radius of thirty (30) feet. The Township may require fifty-five (55) foot radius where large vehicle turning movements are anticipated.
 - h. Provided with a clear-sight triangle, in accordance with Section 502 of this Ordinance.
 - i. All access drives shall comply with the minimum stopping sight distance requirements in PennDOT Publication No. 201, Engineering and Traffic Studies.
4. Access drives which form a cul-de-sac shall not exceed eight hundred (800) feet in length, measured from the centerline intersection of a street or access drive which is not a cul-de-sac. Access drive cul-de-sacs which do not terminate in a parking compound shall be provided at the terminus with a fully paved turnaround with a minimum diameter of eighty (80) feet.

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The Board of Supervisors, upon the recommendation of the Planning Commission may permit an alternative turnaround design, including a turnaround incorporated in a parking court or a landscaped island, provided safe movement of traffic is assured.

5. The grades on access drives shall not exceed the following:
 1. Eight percent (8%) when access is to an arterial street.
 2. Ten percent (10%) when access is to a collector or minor street.
6. When vehicular parking is prohibited along access drives, the prohibition must be acknowledged on the Plan and properly signed along the cartway.
7. The cartway of all access drives, and parking/loading areas shall be constructed on compacted subgrade and consist of the minimum thickness of six (6) inches of crushed aggregate base course and two and one half (2-1/2) inches of hot bituminous concrete surface course materials specified in the latest edition of the Pennsylvania Department of Transportation Publication 408. Additionally, all work procedures shall conform to the latest edition of the Pennsylvania Department of Transportation Publication 408.
8. Table 5-2 specifies various access drive width requirements.
9. The maximum slopes of banks located within twenty (20) feet of the cartway shall not exceed two to one (2:1) for fills, and one and one-half to one (1 1/2:1) for cuts.

Table 5-2
Access Drive Width Requirements

Function	Required Cartway
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Two lanes of traffic with parking on both sides	36-40 feet
Two lanes of traffic with parking on one side	36 feet
Two lanes of traffic without parking	24 feet
One lane of traffic with one lane of parking*	20 feet
One lane of traffic without parking*	12 feet

* The one-way direction of traffic must be identified along the cartway.

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N. Recreation or Non-Licensed Vehicle Crossings of Streets, Alleys, Access Drives, and Driveways.

The following standards shall apply for all recreation or non-licensed vehicle trail crossings (e.g., equestrian, golf carts, off-road vehicles, snowmobiles):

1. Crossings shall be provided in a manner consistent with the design, construction, and storm water drainage of the street, alley, access drive, or driveway.
2. Crossings shall be easily identifiable.
3. Crossings shall be perpendicular to the vehicular traffic movements.
4. No crossing shall be located between fifteen (15) feet and one hundred fifty (150) feet from the cartway edge of a street, alley, access drive, or driveway intersection.
5. Crossings shall be provided with a clear-sight triangle of seventy-five (75) feet measured along the centerline of the street, access drive, or driveway, and five (5) feet from the edge of the roadway at the centerline of the recreation vehicular crossing. No obstructions, grading and/or planting greater than three (3) feet above the cartway grade are permitted in the clear-sight triangle. A public right-of-way shall be reserved for the purpose of removing any object, material or other obstruction to the clear sight.
6. Crossings shall not exceed a slope of eight percent (8 percent) within twenty-five (25) feet of the cartway being crossed.
7. Crossings shall be signed to warn motorists and pedestrians of the crossing. The surface of the crossing shall be brightly painted with angle stripes.
8. Crossing of major streets shall consist of a tunnel, bridging or other suitable measures to assure safe crossing.

O. Calendar and Weather Limitations

Road construction work, such as filling, berming, subgrade, fine-grade construction, base construction, surface construction or paving, shall not be commenced before April 1 and shall be completed by October 31 of the same year. It is assumed that the weather conditions between these dates will be ideal for road construction. However, if adverse weather conditions occur between these dates, the contractor or builder must abide by the judgment of the Township Supervisors and/or Township Engineer in regard to permissible construction weather conditions. Work shall only be permitted before or after these dates on a day by day basis as approved by the Township Supervisors and/or Township Engineer.

P. Special Requirements and Services

Snow removal. The contractor or developer, after the street is complete with binder and wearing surface and having met all requirements may request that the Township provide

snow removal to the residents of the new street or road. This service is rendered by Township; provided, however, that the contractor or developer assumes all responsibility for the effect of the snow removal, including plowing, salt, cinders, etc., on the road surface. However, the contractor or developer is responsible for snow removal until the road is acceptable by the Township.

Q. Improvement Plans: Provide improvement plans with sufficient detail as required by the Township Engineer describing improvements to be dedicated to the Township.

1. Construction and paving plans. The paving width, curbing requirements, grades (existing and proposed), sight distance for the individual lots and type of paving shall be established by and noted on detailed plans and profiles submitted to the Board of Supervisors.
2. Drainage plans. Detailed plans of the existing and proposed drainage facilities of said street or road and contiguous territory shall be submitted to the Planning Commission prior to the Board of Supervisors for its approval. Said plans must cover a scope large enough to show the effect of the facility or facilities on any land or stream above and any land or stream below. This scope shall be determined by the Board of Supervisors and/or the Township Engineer and must be set forth on a separate plan.
3. Certification of plans. All plans, profiles or drawings required under the provision of this chapter shall include a certification by a Pennsylvania registered professional engineer attesting that all elements of the plan are in conformity with Township Code and any applicable state regulations.
4. Number of plans. Plans and profiles for streets, roadways, drainage or other items required under the terms of this chapter must be submitted to the Township on drawings not to exceed twenty-four by thirty-six (24 x 36) inches. Match sheets may be used where necessary. One (1) Mylar copy and two (2) prints must be provided.
5. As-built drawings. Within thirty (30) days of the completion of the street, roadway and/or drainage system, the Middle Paxton Township Engineer shall be supplied one (1) detailed drawings of said streets, roadways and/or drainage systems as the same have been completed. Said drawings must include a certification by a Pennsylvania registered professional engineer that all elements of the approved plan have been constructed as designed and approved.

R. Inspection Fees

Inspection fees. Inspection shall be required for all phases of road construction work: subgrading, storm water inlets, manhole and piping installation, base installation, binder placement and finish course applications. The contractor and/or builder, prior to any approval by the Board of Supervisors, must pay an inspection fee in an amount not less than the actual cost of the inspection.

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Section 503. Blocks and Lots

- A. General. The configuration of blocks and lots shall be based upon the lot area requirements, traffic circulation, salient natural features, existing man-made features, and land use. Lot configurations should provide for flexibility in building locations; while providing safe vehicular and pedestrian circulation.
- B. Residential Blocks. All blocks in a residential subdivision shall have a maximum length along any side of fifteen hundred (1,500) feet and shall be of sufficient depth to permit two (2) tiers of lots, except as otherwise provided for herein.
- C. Non-Residential Blocks. Block configurations in nonresidential areas shall be based primarily upon safe and efficient traffic circulation, and salient natural features.
- D. Lot Configuration
 - 1. Whenever practical, side lot lines shall be radial to street lines.
 - 2. In order to avoid jurisdictional problems, lot lines shall, whenever feasible, follow municipal boundaries rather than cross them. Where a lot is divided by a municipal boundary, the minimum standards of both municipalities shall apply.
 - 3. Lots with areas that are two or more times the minimum area requirements shall, whenever feasible, be designed with configurations that allow for additional subdivision. The Township may require a sketch plan of such large lots that indicates the potential future subdivision is generally in conformance with the design standards.
 - 4. All lots shall front on a public street. No residential lots shall be created which front upon a limited access highway. Furthermore, no lots in major subdivisions and/or land developments shall be created which front upon an arterial street. The only exception is reverse frontage lots.
 - 5. Double Frontage Lots are prohibited. A double frontage lot fronts upon two parallel streets or upon two streets which do not intersect and vehicular access is provided to both streets. The Township permits Reverse Frontage Lots as provided in Section 503.D.6.
 - 6. Reverse Frontage Lots front upon two parallel streets, or upon two streets which do not intersect, and vehicular access is provided to only one (1) of the streets. All residential Reverse Frontage Lots shall designate one (1) frontage as the rear yard with a minimum depth of seventy-five (75) feet. Vehicular access shall be prohibited from the rear of Reverse Frontage Lots.

All Reverse Frontage Lots shall include an identification of the frontage for use as a road access. The street designated for frontage must be consistent with contiguous lots.

7. **Flag-Lots.** Flag-lots shall only be permitted where specifically provided for within the Middle Paxton Township Zoning Ordinance, and then only in compliance with the following:
- a. Flag-lots shall only be permitted when they will enable the preservation of some important natural or cultural feature (including productive farmland), which would otherwise be disturbed by conventional lotting techniques. Further subdivision will require road frontage as specified in the Township Zoning Ordinance.
 - b. For the purposes of this Section a flag-lot shall be described as containing two parts: (1) the "flag" shall include that portion of the lot that is the location of the principal and accessory buildings; (2) the "pole" shall be considered that portion of the site that is used for vehicular access between the site and its adjoining road.
 - c. Requirements for the Flag.
 - 1. The minimum lot area and lot width requirements of the Township Zoning Ordinance shall be measured exclusively upon the flag.
 - 2. For purposes of determining required yards and setbacks, the following shall apply:
 - Front yard - the area between the principal structure and that lot line of the flag which is most parallel to the street providing vehicular access to the site. Additionally, all areas of the pole shall be considered to be within the front yard;
 - Rear yard - the area between the principal structure and that lot line of the flag that is directly opposite the front yard, as described above; and,
 - Side yards - the area between the principal structure and that one (1) outermost lot line which forms the flag and pole, plus the area on the opposite side of the principal structure.

The flag-lot shall contain adequate driveway dimension for vehicular backup so that ingress to, and egress from, the lot is in the forward direction.
 - d. Requirements for the Pole.
 - (1). The pole shall maintain a minimum width of fifty (50) feet.
 - (2). The pole shall not exceed eight hundred (800) feet in length.

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- (3). No part of the pole shall be used for any portion of an on-lot sewage disposal system, nor any other improvement except a driveway and other permitted improvements such as landscaping, fencing, utility connections to off-site facilities, mailboxes, and signs.
- (4). The cartway contained on the pole shall be located at least six (6) feet from any adjoining property line, and twenty (20) feet from any existing structures on the site or any adjoining property.

No pole shall be located within two hundred (200) feet of another on the same side of the street:

Section 504. Building Setback Lines and Building Separations

The building setback lines and building separations shall conform with the prevailing Middle Paxton Township Zoning Ordinance requirements.

Section 505. Sewage Disposal

- A. Sewage Disposal Requirements. Based upon the results of the feasibility report required in Section 308, the development must be provided with sanitary sewage disposal facilities as follows:
 1. Where a public sanitary sewer system is within one thousand (1,000) feet of, or where plans approved by the municipality provided for the installation of such public sanitary sewer facilities to within one thousand (1,000) feet of, a proposed subdivision, the subdivider shall provide the subdivision with a complete sanitary sewer system if, in the Township Supervisors' opinion, on the recommendation of the Planning Commission, is feasible.
 2. Storm sewers, sump pumps, floor drains and/or roof drains shall not be connected with sanitary sewers.
 3. Where there is no existing public sanitary sewer system and the feasibility report proves that a public sanitary sewer system and treatment plant is not feasible, the adequate provision of onsite subsurface or alternate sewage disposal systems approved by the Pennsylvania Department of Environmental Protection must be investigated.
 4. If on-site subsurface or alternate sewage disposal systems approved by the Pennsylvania Department of Environmental Protection or connection to a public sanitary sewer system or installation of a public sanitary sewer system are not feasible the development shall not be approved.

Section 506. Water Supply

- A. **Water Supply Requirements.** Based upon the results of the feasibility report required in Section 308, the development must be provided with water supply facilities as follows:
1. Where there is an existing public water supply system on or within one thousand feet (1,000') of the proposed development a complete water supply system connected to the existing public water supply system must be provided.
 2. If water is to be provided by means other than by private wells owned and maintained by the individual owners of lots within the subdivision or development, applicants shall present evidence to the Board of Supervisors or Planning Commission, as the case may be, that the subdivision or 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.
 3. Where there is no existing public water supply system and the feasibility report indicates that connection to a public water supply system is not feasible, each lot in the development must be provided with an individual water supply system in accordance with minimum standards approved by the Pennsylvania Department of Environmental Protection.

Section 507. Erosion and Sediment Pollution Control Plan

A. **General Requirements and Standards**

1. In conjunction with the submission of a subdivision and land development plan, an Erosion and Sediment Pollution Control (E&SPC) Plan must be submitted to the Dauphin County Conservation District for their review and approval in accordance with the requirements of Title 25 PA Code subsection 102.1 seq., Erosion and Sediment Control Regulations of the Department of Environmental Protection (DEP). A copy of the E&SPC plan must be provided to the Township.

In accordance with the above-referenced DEP regulations, construction and land development activity involving earth disturbances of five (5) acres or more will require a National Pollution Discharge Elimination System (NPDES) General Permit for Discharges of Stormwater Associated With Construction Activities (PAG-2) from the Department of Environmental Protection. Earth disturbance activities of five (5) acres or more which are not eligible for coverage under the NPDES General Permit will require a NPDES Individual Permit for Discharges of Stormwater Associated With Construction Activities from the DEP.

2. The applicant shall be responsible to prepare and forward all applicable E&SPC plan information and other data to the appropriate County and State agencies.

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3. The Township shall not issue a building permit to those engaged in earth moving activities requiring a DEP permit or other NPDES permits, until the DEP has reviewed and issued all applicable permits.
4. An E&SPC Plan must be prepared for a single lot or more where subdivision, land development, or other earth moving activity is proposed. The plan must be submitted (1) as required by the Erosion and Sediment Control Regulations of the DEP noted above, and (2) as required by the Pennsylvania Clean Streams Law, Act 222, July 31, 1970, as amended.
5. In the preparation of E&S Control Plans the person preparing such plans shall consult with the Dauphin County Conservation District to determine the measures needed to control erosion and sedimentation. The most recent version of the A Erosion and Sediment Pollution Control Program Manual, @ prepared by the DEP in accordance with Chapter 102 shall be used in the preparation of such plan. Copies are available in the Dauphin County Conservation District Office.
6. In the case of subdivision plans proposed for the sale of lots only, the subdivider/applicant shall include on the Final Plan a covenant with the land assuring the implementation of Erosion and Sediment Pollution Control Plans by lot owners.

Section 508. Utility Easements

- A. Easement with a minimum width of twenty (20) feet shall be provided for poles, wires, conduits, storm and sanitary sewers, gas, water and heat mains and/or other utility lines intended to service the abutting lots. No structures or trees shall be placed within such easements.
- B. To the fullest extent possible, easements shall be centered on or adjacent to rear or side lot lines.
- C. There shall be a minimum distance of fifty (50) feet measured the shortest distance, between any proposed dwelling unit and any petroleum, petroleum products, or natural gas transmission line which traverses the subdivisions.
- D. Developers are urged to avail themselves of the facilities provided by the various public utility companies in determining the proper locations for utility line easements.

Section 509. Parks and Open Space Requirements for Residential Development

1. Dedication

All plans for residential subdivision of land or residential land developments shall provide for the dedication of land for park and open space uses, and/or, upon agreement by the applicant, the construction of recreation facilities, the payment of fees in lieu thereof, the private reservation of land, or any combination thereof. All dedications of land for park and open space purposes shall be consistent with standards contained within the Middle Paxton

Article 5 - Design Standards

Township Comprehensive Plan and meet the intent and criteria of Section 503 (11) of Pennsylvania Municipalities Planning Code.

Any such dedications shall be determined to be accepted by the Board of Supervisors.

B. General Requirements

Applicants shall designate areas of residential subdivisions or residential land developments for parks, playgrounds, or other public open space and recreational uses in accordance with the provision of the Middle Paxton Township Comprehensive Plan. The applicant shall make an irrevocable offer of dedication of such land to the Township. Title to such land shall be good and marketable, free of liens or other defects, and acceptable to the Solicitor of the Township which will accept dedication of the land.

C. Amount of Land to be Dedicated

The amount of park and open space land to be dedicated shall be equal to, and in conformance with the following criteria:

1. Consistent with the National Recreation and Park Association the amount of park and open space land to be dedicated shall equal twenty-five hundredths (0.25) of an acre per each one hundred (100) projected residents or fraction thereof. The developer shall provide the Township with information concerning the density based upon the number and type of dwelling units proposed. In the event of a dispute as to the estimated population of the proposed residential subdivision or land development, the determination of the Township staff shall control.
2. Residential subdivision of land involving less than two (2) lots individually or cumulatively, and residential land developments consisting of less than five (5) units of occupancy individually or cumulatively, shall be exempt from this requirement.

D. General Design Criteria

All land dedicated pursuant to the provisions hereof shall meet the following criteria, unless the Board of Supervisors of Middle Paxton Township agrees to allow other land to be substituted in the interest of preserving unique natural features in Middle Paxton Township:

1. Location: Open space must be contiguous with the subdivision land to be developed. Land on the opposite side of streets shall not be acceptable. When public park and open space land exists adjacent to the tract to be subdivided, the dedicated land shall be located to adjoin and enlarge the existing public park and open space land.
2. Access: At least one side of the dedicated land shall abut a public street for the minimum required lot width. No roadways shall traverse the dedicated land. Open space must be accessible to pedestrians, with necessary foot bridges or tunnels or other means to be provided by the developer, including roads or easements. The dedicated land shall be accessible to utilities such as sewer, water and power.

Article 5 - Design Standards

3. Slope: Of the land to be dedicated, at least 50 percent of such land must be 0 percent to 8 percent slope; no more than 25 percent shall be 9 percent to 16 percent slope, and not more than 25 percent shall be in excess of 16 percent slope.
 4. Size: The dedicated land shall be part of a contiguous tract of at least one acre and never less than the minimum lot size for the underlying zoning district unless the land shall be developed as a trail or bike route. The land may be one parcel or a number of parcels strategically located, as subject to approval by the Board of Supervisors. Tot lots and/or a large facility may be required depending upon the number of lots proposed, the size of proposed dwellings, and projected densities for the proposed subdivision plan.
 5. Equipment: Each park, tot lot, or other form proposed for the mandatory open space shall be provided with modern recreational equipment at the expense of the developer. This shall include, without limitation, swings, sliding boards, sandboxes, ball fields, benches, concrete shuffleboard, tennis courts, shelters, basketball hoops or courts.
 6. Parking: On-site parking shall not be required provided that the open space is within a one-quarter mile radius of 75 percent of the lots to be served. Otherwise, one space shall be required for each dwelling unit to be served by said dedicated open space.
 7. Landscaping: No exposed surfaces are permitted, except for a softball/baseball field. All unused areas shall be planted and maintained in grass, crown vetch, or other typical ground cover. Flowers are encouraged. Shade trees are mandatory and shall be subject to a specific tree planting plan, varying with the size and other site characteristics.
 8. Condition: Under no circumstances will unclaimed or derelict land such as marshes, swamps, wetlands, or steep slopes (in excess of 16 percent slope and comprising more than 25 percent of the total proposed open space) be acceptable as mandatory open space. The land shall have soils suitable for the intended park and open space uses.
 9. Natural Features: The placement, development, and utilization of open space required under the terms of this section shall take into account the preservation of natural features, including large trees, groves, waterways, wetlands, historic sites, and other community assets located on the tract.
- E. Middle Paxton Township may accept such land for dedication by the developer, under certain circumstances deemed by the Board of Supervisors to be suitable and equitable for the Township, or the developer may assume maintenance of such land through an acceptable tenant organization. If it is determined that the land proposed for dedication shall be accepted by Middle Paxton Township, the Board of Supervisors shall officially accept the land at the time of final approval of the development plan and the owner/developer shall tender a deed conveying fee simple interest in said property at that time. Open space shall be

free of construction debris, excavated materials, and solid waste prior to dedication. The title to the dedicated land shall be good and marketable and free of all liens or other defects.

F. Fee-in-Lieu of Dedication

1. The Board of Supervisors shall require a payment of a fee-in-lieu of dedication of such land which shall be payable to the Township prior to approval of each final section of the overall plan. Such fee shall be calculated by multiplying the number of dwelling units in each section by the prevailing fee per dwelling unit. The amount of the fee shall be set by resolution by the Board of Supervisors
2. A fee authorized under this subsection shall, upon its receipt by the Township, be deposited in an interest-bearing account, clearly identifying the specific recreation facilities for which the fee was received. Interest earned on such accounts shall become funds of that account. Funds from such accounts shall be expended only in properly allocable portions of the cost to construct the specific recreation facilities for which the funds were collected.
3. Upon request of any person who paid any fee under this subsection, the Township shall refund such fee, plus interest accumulated thereon from the date of payment, if the Township has failed to utilize the fee paid for the purposes set forth in this Section within three (3) years from the date such fee was paid.

Section 510. Floodplain Area Standards

- A. It is the purpose of this section to promote the public health, safety, and general welfare and to minimize losses due to periodic inundation of certain areas of the Township of Middle Paxton as designated as being inundated by the 100 year flood (Regulatory Flood).
- B. No subdivision plan or proposed subdivision plan shall be approved by the Board of Supervisors of the Township of Middle Paxton in the areas designated by the official Flood Insurance Study referred to in Section 510.A unless and until compliance with the following requirements, in addition to all the other requirements of this Ordinance, have been established.
 1. The flood plain district shall be delineated on the preliminary and final subdivision or land development plan.
 2. No alteration or relocation of a watercourse, except as part of an overall drainage basin plan, may be undertaken by a developer or subdivider. In the event of an overall drainage basin plan, the developer or subdivider shall provide that the flood carrying capacity within the altered or relocated portion of the watercourse is maintained and shall be in accordance with Article 12 of the Middle Paxton Township Zoning Ordinance.

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3. In addition to the setbacks required in this Ordinance and in the Middle Paxton Township Zoning Ordinance, setbacks shall clearly take into consideration and be placed beyond the floodway.
4. Any subdivision or land development plan for a riverine area shall further contain a statement indicating that the subdivision or land development has been planned in such a manner as to avoid exposure to mudslide or mudflow hazards.
5. All proposals of subdivision plans submitted hereafter are consistent with a need to minimize flood damage.
6. All public and private utilities and facilities such as sewer, gas, electrical, and water systems are located, elevated and constructed to minimize or eliminate flood damage.
7. Adequate drainage is provided to reduce exposure to flood hazards.

Article 6 - Mobile Home/ Manufactured Home Park Regulations

Section 601. Purpose

Middle Paxton Township recognizes the importance of providing a variety of housing types, designs, and layouts to meet the housing needs of its residents. In accordance with the requirements of Article V, Section 501 of the Pennsylvania Municipalities Planning Code, Act 247, as reenacted and amended; Article VI is established to provide reasonable standards for the development of manufactured/mobile home parks which will be coordinated with the design and improvements requirements of this Ordinance, as a whole, and will encourage well coordinated, convenient, and safe environments for manufactured/mobile home residents.

Section 602. Plan Requirements and Processing Procedure

The plan requirements and processing for a manufactured/mobile home park as a land development shall be in accordance with the requirements contained in Article 3 of this Ordinance.

Section 603. Design Standards and Other Requirements

The arrangement and other design standards of streets, easements, blocks, lots, stormwater management, and erosion and sedimentation control shall be in accordance with the requirements of this Ordinance and the Middle Paxton Township Stormwater Management Ordinance, as amended, except as otherwise specified in this Article and, or the Middle Paxton Township Zoning Ordinance, as amended.

A. Site-Location and Design Standards:

1. Layout of Lots

- a. All manufactured/mobile home developments shall provide documentation that existing roads and streets will afford the development with satisfactory routes for transportation of the units.
- b. All manufactured/mobile home lots shall abut a street. Side lots laid out in rectangular blocks should be diagonal to the street at an angle no greater than 30 degrees from perpendicular. Front and rear lot lines in rectangular blocks shall be straight and continuous.
- c. In cul-de-sac arrangements, the side lot lines shall be radial to the street lines.

2. Lot Dimensions

The lot width shall not be less than seventy feet (70') at the minimum required building setback line for interior lots. Lot areas shall not be less than eighty-four hundred square feet (8,400'). In addition, each manufactured/mobile home lot shall:

Article 6 - Mobile Home/ Manufactured Home Park Regulations

- a. be designed to fit dimensions of mobile or manufactured homes anticipated.
- b. provide for each manufactured/mobile home all public utilities, pads, hookups, appurtenant structures, and other appendages.

3. Corner Lots

Corner lots for manufactured/mobile home use shall have the manufactured/mobile home situated to permit appropriate building setback from both streets and allow proper sight distance.

4. Building Setback Lines

- a. Park boundary property line - 35 feet
- b. The minimum front, side and rear yard distance setbacks from the lot line shall be in accordance with the provisions contained in the Middle Paxton Township Zoning Ordinance.
- c. Accessory structures shall be permitted in the rear yard no closer than five feet (5') from the rear or side lot lines of the manufactured/mobile home lot. Accessory structures shall not exceed 340 square feet and shall not exceed 12 feet in height.

5. Buffer Strips and Screening

Screening will be provided within a buffer area ten feet (10') in width along the entire perimeter of the manufactured/mobile home park in order to separate the manufactured/mobile home park from the adjacent land uses and roadways. Screening for the manufactured/mobile home park shall include one of the following screening options provided in Table 6-1.

Table 6-1
Buffer Strips and Screening Options for Manufactured/Mobile Home Parks

Options	Minimum Height	Minimum Spacing
<u>Option 1</u>		
Hedge	6' in height	N/A
<u>Option 2</u>		N/A
A Hedge, plus Evergreen Trees	6' in height 3' in height	N/A, 10' on center
<u>Option 3</u>		
Evergreen Trees, plus Deciduous Trees	3' in height 3' in height; 2" caliper	10' on center 15' on center

Article 6 - Mobile Home/ Manufactured Home Park Regulations

B. Manufactured/Mobile Home Park Street System:

1. General Requirements

A safe and convenient vehicular access shall be provided from abutting public streets or roads. Streets within the manufactured/mobile home park shall be privately owned.

2. Location Principles

The streets or roads in a manufactured/mobile home park shall be located and built with regard to:

- a. providing traffic ways for convenient access to each manufactured/mobile home lot and other important facilities in the park.
- b. recognizing existing easements which are to be preserved.
- c. permitting connection to existing facilities where necessary for the proper functioning of drainage and utility systems.

3. Circulation

The street system should provide convenient circulation by means of minor street and properly located collector streets. The following standards should also be applied to manufactured/mobile home park street systems.

- a. Closed ends of dead-end streets should be provided with a paved vehicular turning space having a minimum diameter of at least eighty feet (80') to the outside paving edge.
- b. Interior streets shall so be laid out in a manner which will reduce or eliminate through use by through traffic.
- c. The manufactured/mobile home park shall be provided with two entrances for emergency access.
- d. Where a manufactured/mobile home park abuts or contains an existing or proposed arterial street, the Board of Supervisors may require marginal access streets, reverse frontage with screen planting along the rear property line, or such other treatment as may be necessary to afford separation of through and local traffic.

Article 6 - Mobile Home/ Manufactured Home Park Regulations

4. Extent of Street Improvements

General Requirements

In addition to standards set forth in Article 5 of this Ordinance, the street improvements in manufactured/mobile home parks should conform to the following general design requirements:

- a. Extend continuously from the existing improved street to provide access to each manufactured/mobile home lot and other facilities in the park.
- b. Provide convenient circulation of vehicles.

5. Street Surfacing

Streets should be surfaced to the grades and dimensions shown on the street profile and cross-section plan submitted and approved with the final plan. The paving and wearing surface should be constructed according to the standards outlined in Section 502 of this Ordinance.

C. Blocks

The size and shape of blocks shall be determined with regard to:

1. Need for convenient access, automotive and pedestrian movement.
2. Providing desirable lot depths for interior walkways and easements for utilities to be located within the block.
3. Blocks shall not exceed a maximum length of six hundred feet (600').
4. Pedestrian paths should be designed within blocks to permit convenient access to other areas of the manufactured/mobile home park.

D. Sidewalks

Sidewalks may be required where essential to assist circulation or pedestrian movement and safety to common or important facilities in the park. Sidewalks shall be constructed in accordance with this Ordinance.

E. Easements

1. Easements shall be provided for all utilities not located in a street and fore well defined watercourses.
2. Utility, conservation, stormwater, drainage, pedestrian, and other easements shall be provided in accordance with Article 5 of this Ordinance.

Article 6 - Mobile Home/ Manufactured Home Park Regulations

3. Easements shall be centered on the utility or watercourse alignment.
4. Where necessary for access to public or common lands, a pedestrian easement shall be provided with a width of no less than ten feet (10'). Additional width may be required by the Board of Supervisors depending on the purpose and use of the easement.

F. Mailboxes

The owner shall provide and maintain a central location(s) for mailboxes for persons living within the park.

G. Off-Street Parking Requirements

Each mobile home/manufactured home shall have paved off-street parking areas. Parking shall be provided at the rate of at least two (2) vehicular parking spaces for each mobile home/manufactured home lot.

Each such off-street parking space shall contain at least two hundred (200) square feet and shall be located on the lot it is intended to serve.

Section 604. Fuel Supply and Storage

A. General

Natural gas, liquified petroleum gas, and oil fuel systems provided for manufactured/mobile homes, service buildings, or other structures when installed shall be maintained in conformity with the rules and regulations of any authority having jurisdiction over such systems and/or recommendations from any suppliers or manufacturers of such equipment or systems.

B. Natural Gas Systems

1. Natural gas piping systems when installed in manufactured/mobile home parks shall be maintained in conformity with accepted engineering practices.
2. Each manufactured/mobile home lot provided with gas shall have an approved shutoff valve installed upstream of the gas outlet. The outlet shall be equipped with an approved cap to prevent accidental discharge of gas when the outlet is not in use.

C. Liquified Petroleum Gas (LPG) Systems

1. Systems shall be provided with safety devices to relieve excessive pressures and shall be arranged so that the discharge terminates at a safe location.

Article 6 - Mobile Home/ Manufactured Home Park Regulations

2. Systems shall have at least one accessible means for shutting off gas. Such means shall be located outside the manufactured/mobile home and shall be maintained in effective condition.
3. All LPG piping outside the manufactured/mobile homes shall be well supported and protected against mechanical injury. Undiluted LPG in liquid form shall not be conveyed through piping equipment and systems in manufactured/mobile homes.
4. Vessels of more than 12 and less than 60 U.S. gallons gross capacity may be installed on a manufactured/mobile home lot and shall be securely, but not permanently, fastened to prevent accidental overturning.
5. No LPG vessel shall be stored or located inside or beneath any storage cabinet, carport, manufactured/mobile home, or any other structure.

C. Fuel Oil Supply Systems

1. All piping from outside fuel storage tanks or cylinders to manufactured/mobile homes shall be securely, but not permanently, fastened in place.
2. All fuel oil supply systems provided for manufactured/mobile homes, service buildings, and other structures shall have shut-off valves located within five inches (5") of storage tanks.
3. All fuel storage tanks or cylinders shall be securely placed and shall not be less than five feet (5') from any manufactured/mobile home exit.
4. Storage tanks located in areas subject to vehicular traffic shall be protected against physical damage.

Section 605. Solid Waste Disposal

- A. The applicant shall provide information to the Township regarding the treatment and disposal of solid waste and garbage related to the manufactured/mobile home.
- B. All solid waste storage facilities shall be located in areas conveniently located to park residents and shall not be less than fifty feet (50') from any manufactured/mobile home unit.

Section 606. Park and Recreation Facilities

A. General

All manufactured/mobile home park land development plans submitted after the effective date of this ordinance shall provide for suitable and adequate recreation for children and residents of the manufactured/mobile home park in order to (1) insure adequate recreational areas and facilities to serve the future residents of the Township; (2) reduce

Article 6 - Mobile Home/ Manufactured Home Park Regulations

increasing usage pressure on existing recreational facilities and areas; and (3) insure that all present and future residents have the opportunity to engage in many and varied recreational pursuits.

B. Exemptions and Requirements

The following are exempt or partially exempt from the provisions of this Article:

Any manufactured/mobile home park for which a preliminary or final plan has been submitted prior to the effective date of this Ordinance which is ultimately approved and development is substantially completed within five (5) years of approval.

C. Required Play Space Area

1. The amount of land required to be designed and provided for recreational purposes for manufactured/mobile home parks shall be three thousand square feet (3,000 ft²) for manufactured/mobile home parks with ten (10) or fewer lots, and an additional two hundred square feet (200 ft²) of play space shall be provided for each additional manufactured/mobile home lot.
2. A maximum of twenty-five percent (25%) of the total land area required by this ordinance section may consist of flood plain areas.
3. Such land set aside shall be suitable to serve the purpose of active and/or passive recreation by reason of its size, shape, location, and topography and shall be subject to the approval of the Board of Supervisors.

D. Recreation Area Location Criteria

The Board of Supervisors shall consider the following criteria in determining whether to approve the proposed location of recreation areas in the Applicant's subdivision or land development plans.

1. Sites should be easily and safely accessible from all areas of the manufactured/mobile home park, have good ingress and egress and have access to the park road system.
2. Site or sites should have suitable topography and soil conditions for use and development as a recreation area.
3. When designing and developing these recreation areas, it shall be done according to the standards established by the National Recreation and Parks Association.
4. Site or sites should, to the greatest extent practical, be easily accessible to essential utilities, such as water, sewer, and electric.
5. Site or sites should meet minimum size requirements for useable acreage with respect to the National Recreation and Parks Association standards with seventy-five percent (75%) of such area having a maximum slope of seven percent (7%).

Article 6 - Mobile Home/ Manufactured Home Park Regulations

E. Fee-in-Lieu of Private Reservation of Recreation Land

1. In a case where the Applicant does not wish to provide play space or recreation areas within the manufactured/mobile home park, and where the Board of Supervisors determines that because of shape, size, location, access, topography, or other physical features of the land that it is impractical to set aside a recreation area as required by this Article, the Board of Supervisors shall require a payment of a fee-in-lieu of required private reservation of such land which shall be payable to the Township prior to approval of each final section of the overall plan. Such fee shall be calculated by multiplying the number of manufactured/mobile home lots in the park by the fee per dwelling unit. The amount of the fee shall be set aside by resolution by the Board of Supervisors and shall bear a reasonable relationship to the use of the public park and recreational facilities by future inhabitants of the manufactured/mobile home park.
2. A fee authorized under this section shall, upon its receipt by the Township, be deposited in an interest-bearing account, clearly identifying the specific recreation facilities for which the fee was received. Interest earned on such accounts shall become fund of that account. Funds from such accounts shall be expended only in properly allocable portions of the cost to construct the specific recreation facilities for which the funds were allocated.
3. Upon request of any person who paid any fee under this subsection, the Township shall refund such fee, plus interest accumulated thereon from the date of payment, if the Township has failed to utilize the fee paid for the purposes set forth in this Ordinance within three (3) years from the date such fee was paid.

Section 607. Improvement and Construction Requirements

All improvements, construction requirements, and engineering specifications for the improvements required shall be provided in accordance with Article 5 of this Ordinance.

A. Street Lights

Street or on-site lights shall be provided to illuminate streets, driveways, and walkways for the safe movement of vehicles and pedestrians at night. Their type and location shall be in conformance with Section 1300.G of the Middle Paxton Township Zoning Ordinance and shall be shown on the lighting plan submitted with the final subdivision or land development plan.

B. Underground Utilities

Electric, telephone, and all other utilities shall be installed underground.

Article 6 - Mobile Home/ Manufactured Home Park Regulations

C. Tie-Downs

Tie downs to prevent the movement of the manufactured/mobile home by natural causes (wind, water, etc.) shall be provided for each manufactured/mobile home.

D. Enclosure

An enclosure of compatible design and material shall be erected around the entire base of each manufactured/mobile home. Such enclosure shall provide sufficient ventilation to inhibit decay and deterioration of the structure.

Section 608. Fire Protection

A. Manufactured/mobile home park areas shall be kept free of litter, rubbish, and other flammable materials.

B. Portable fire extinguishers of a type approved by the Township Fire Chief shall be kept in public service buildings under park control.

C. Fire Hydrants

1. Fire hydrants shall be installed in accordance with national standards and in no case less than the following:

a. The water supply source shall permit the operation of a minimum of two (2) one-and-one-half-inch hose streams.

b. Each of two (2) nozzles held four (4) feet above the ground shall deliver at least seventy-five (75) gallons of water per minute at a flowing pressure of at least thirty (30) pounds per square inch at the highest point of the park.

2. Fire hydrants, if provided, shall be located within six hundred (600) feet of any manufactured/mobile home, service building or other structure in the park.

Section 609. Responsibilities of Park Management

A. The person to whom a permit for a manufactured/mobile home park is issued shall operate the park in compliance with this chapter and shall provide adequate supervision to maintain the park, its facilities and equipment in good repair and in a clean and sanitary condition.

B. The park management shall supervise the placement of each mobile home on its manufactured/mobile home stand, which includes securing its stability and installing all utility connections.

Article 6 - Mobile Home/ Manufactured Home Park Regulations

- C. The park management shall give the Zoning Officer free access to all manufactured/mobile home lots, service buildings and other community service facilities for the purpose of inspection.
- D. The management shall maintain a register containing the names of all park occupants. Such register shall be available to any authorized person inspecting the park.

Section 610. Notices, Hearings, and Orders

- A. Whenever the Township determines there are reasonable grounds to believe there has been a violation of any provision of this ordinance or regulations issued hereunder, notice shall be given of such alleged violation to the person to whom the permit or license was issued, as hereafter provided.

Such notice shall:

1. Be in writing;
 2. Include a statement of the reasons for its issuance;
 3. Allow a reasonable time for the performance of any act it requires;
 4. Be served upon the owner or his agent as the case may require provided; however, that such notice or orders shall be deemed to have been properly served upon such owner or agent when a copy thereof has been sent by certified mail to his last known address, or when he has been served by such notice by any method authorized or required by the laws of the Commonwealth of Pennsylvania.
 5. Contain an outline of remedial action, which, if taken, will affect compliance with the provisions of this ordinance and regulations issued hereunder.
- B. Any person affected by any notice which has been issued in connection with the enforcement of any provisions of this Ordinance, or regulation issued hereunder, may request a hearing on the matter before the Board of Supervisors, provided that such a person file in the office of the Township a written petition requesting such hearing and setting forth a brief statement of the grounds within ten (10) days after the day the notice was served.

The filing of the request for a hearing shall operate as a stay of the notice and of the suspension except in the case of an order issued under Section 610.E. Upon receipt of such petition, the Board of Supervisors shall set a time and place for such hearing and shall give the petitioner written notice thereof. At such hearing the petitioner shall be given an opportunity to be heard and to show why such notice should be modified or withdrawn.

The hearing shall be commenced not later than ten (10) days after the day on which the petition was filed; provided, that upon application of the petitioner the Board of

Article 6 - Mobile Home/ Manufactured Home Park Regulations

Supervisors may postpone the date of the hearing for a reasonable time beyond such (10) day period when in their judgement the petitioner has submitted good and sufficient reasons for such postponement.

- C. After such hearing the Board of Supervisors shall make findings as to compliance with the provisions of this Ordinance and regulations issued hereunder and shall issue an order in writing sustaining, modifying, or withdrawing the notice which shall be served as provided in Section 610.A.4. Upon failure to comply with any order sustaining or modifying a notice the license of the manufactured/mobile park affected by the order shall be revoked.
- D. The proceedings at such hearing, including the findings and decision of the Board of Supervisors and together with a copy of every notice and order related thereto, shall be entered as a matter of public record in the office of the Board of Supervisors. Any person aggrieved by the decision of the Board of Supervisors may seek relief therefrom in any court of competent jurisdiction, as provided by the laws of the Commonwealth of Pennsylvania.
- E. Whenever the Township finds that an emergency exists which requires immediate action to protect the public, they may without notice or hearing issue an order reciting the existence of such an emergency and requiring that such action be taken as they may deem necessary to meet the emergency, including the suspension of the license. Notwithstanding any other provisions of this Ordinance, such order shall be effective immediately, but upon a petition to the Board of Supervisors shall be afforded a hearing as soon as possible. The provisions of Section 610.C and 610.D shall apply to such hearing and the order issued thereafter.

Section 611. Manufactured/Mobile Home Placement and Removal

- A. It shall be the responsibility of the manufactured/mobile home park owner to notify the Township when a privately owned manufactured/mobile home is placed in the manufactured/mobile home park. The notification of placement shall be forwarded to the Township Zoning Officer within thirty (30) days of the placement of the manufactured/mobile home.
- B. It shall be the responsibility of the manufactured/mobile home park owner to supply the Middle Paxton Township Tax Collector with a Status of Occupancy Report for new and vacated manufactured/mobile homes placed or leased within the manufactured/mobile home park. The Status of Occupancy Report shall be provided within ten (10) days of the new tenant occupancy.
- C. It shall be unlawful for the owner, tenant or custodian of a manufactured/mobile home to remove or attempt to remove from Middle Paxton Township a manufactured/mobile home without first obtaining a Removal Permit from the Middle Paxton Township Tax Collector. A Removal Permit shall be granted upon payment of a removal fee established by resolution, and submission of the following information:

Article 6 - Mobile Home/ Manufactured Home Park Regulations

1. The street address of the manufactured/mobile home.
2. Names and owners and of the occupants of the manufactured/mobile home.
3. Evidence of payment of all taxes duly assessed by the Township, the County of Dauphin and the School District.
4. A penalty fee, established by resolution, shall be applied to those individuals moving without obtaining a removal permit.

ANGELICA LAKE DAM

GF JOB NUMBER 39160

Scope of Services for Completion of Chapter 105 Environmental Assessment (EA)

Task 1 - Completion of Chapter 105 EA

Sub-Task A - Field View

Gannett Fleming (GF) will perform a field investigation to collect natural resources information that will be compiled for use in the DEP Chapter 105 Environmental Assessment (EA). Field investigations will include qualitative aquatic and terrestrial habitat assessments including stream macroinvertebrate assemblage descriptions necessary to complete the Chapter 105 EA. Photographs depicting features within and directly adjacent to the project site will be taken. GF assumes that no detailed studies will be required or performed for cultural resources (archaeological or historic structures) or for protected species. GF assumes that no wetlands will be located in the project area.

Sub-Task B - Agency Coordination

GF will prepare and send Pennsylvania Natural Diversity Inventory (PNDI) request letters, location maps, and information forms to the Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Game Commission (PGC), Pennsylvania Department of Conservation and Natural Resources (DCNR), and the U.S. Fish and Wildlife Service (USFWS). GF will prepare and transmit Act 14 letters and supporting documentation to the appropriate county and municipal government offices. GF will prepare and transmit a Cultural Resources Notice to request a determination of historic/archaeological sites to the Pennsylvania Historic and Museum Commission (PHMC). GF will request a computer search for protected species from a DEP representative. The search results will be included with the Chapter 105 EA. Written responses from agencies listed above may be received one month or more after completion of the EA, but will be forwarded to DEP upon receipt by GF.

Sub-Task C - Chapter 105 EA Composition

GF will utilize the information gathered in sub-tasks A and B, as well as existing sources of information for the project site to complete a Chapter 105 EA for inclusion into a DEP Dam Permit Application. GF will prepare the Chapter 105 EA within three weeks of notice to proceed from the City. GF assumes that the proposed project will result in temporary and permanent impacts of less than 1.0 acre, allowing DEP to issue the State General Programmatic Permit, or SPGP-2, on behalf of the U.S. Army Corps of Engineers for Section 404 authorization.

Total Billing Value = \$4,889

Section 701. Enforcement

It shall be the duty of the Board of Commissioners or duly appointed officer to enforce the provisions of this Ordinance, unless otherwise stated. The duly appointed officer shall require that the application for a building permit contain all information necessary to enable him/her to ascertain whether the proposed building, alteration, or use is located in an approved subdivision or land development. No building permit shall be issued until the duly appointed officer has certified that the site for the proposed building, alteration, or use complies with all the provisions of this Ordinance and conforms to the site description as indicated on the approval and recorded Final Plan.

A. Time Limitations and Ordinance Changes

1. When an application for approval of a plat, whether preliminary or final, has been approved without conditions or approved by the applicant's acceptance of conditions, no subsequent change or amendment in the zoning, subdivision or other governing ordinance or plan shall be applied to affect adversely the right of the applicant to commence and to complete any aspect of the approved development in accordance with the terms of such approval within five years from such approval.
2. Where final approval is preceded by preliminary approval, the aforesaid five-year period shall be counted from the date of the preliminary approval. In the case of any doubt as to the terms of a preliminary approval, the terms shall be construed in the light of the provisions of the governing ordinances or plans as they stood at the time when the application for such approval was duly filed.
3. Where the landowner has substantially completed the required improvements as depicted upon the final plan within the aforesaid five year limit or any extension thereof as may be granted by the Board of Supervisors, no change in Township ordinance or plan enacted subsequent to the date filing of the preliminary plan shall notify or revoke any aspect of the approved final plan pertaining to zoning classification or density, lot, building, street or utility location.
4. In the case of a preliminary plan calling for the installation of improvements beyond a five year period, a schedule shall be filed by the landowner with the preliminary plans delineating all proposed sections as well as deadlines within which applications for final plan approval of each section are intended to be filed. Such schedule shall be updated annually by the applicant on or before the anniversary of the preliminary plan approval, until final plan approval of the final section has been granted and any modification in the aforesaid schedule shall be subject to approval of the Supervisors in its discretion.
5. Each section in any residential subdivision, or land development, except for the last section, shall contain a minimum of twenty-five percent of the total number of the dwelling units as depicted on the preliminary plan, unless a lesser percentage

Article 7- Administration

is approved by the governing body in its discretion. Provided the landowner has not defaulted with regard to or violated any of the conditions of the preliminary plan approval, including compliance with landowner's aforesaid schedule of submission of final plans for the various sections, then the aforesaid protections afforded by substantially completing the improvements depicted upon the final plan within five years shall apply and for any section or sections, beyond the initial section, in which the required improvements have not been substantially completed within said five year period. The aforesaid protection shall apply for an additional term or terms of three years from the date of final plan approval for each section.

Section 702. Modifications

The provisions of this Ordinance are intended as minimum standards for the protection of the public health, safety, and welfare of the citizens of the Township. The Township Planning Commission shall have the right to recommend to the Board of Supervisors modifications to the regulations in the individual cases as may be necessary in the public interest, provided, however, that such variations shall not have the effect of nullifying the intent and purpose of these regulations. The list of suggested modifications and the specific reasons for such change shall be entered in the minutes of the Planning Commission and a copy of this entry shall be transmitted in the Board of Supervisors together with the approved plans for review and approval by the Township Supervisors. The Board of Supervisors may then alter any subdivision plans and specify changes or modifications therein, which it deems necessary and may make its approvals subject to such alterations, changes or modifications. Upon approval by the Board of Supervisors, said modifications shall be clearly defined and entered on the final plan and signed by the Chairman of the Board of Supervisors.

Section 703. Fees

- A. The Middle Paxton Township Board of Supervisors shall establish, by resolution, a collection procedure and schedule of fees to be paid by the developer at the time of filing of the sketch, preliminary, and final plan, and any other plans required by this Ordinance.

The following fees shall be submitted with the application:

1. Application Fee.

The Applicant shall pay an application fee by a check, payable to the Township of Middle Paxton.

2. Engineering Escrow.

The Applicant shall pay by check or establish an escrow account estimated by the Township Engineer to cover engineering review activities.

3. County Review Fee.

The Applicant shall provide a check payable to the Dauphin County Planning Commission, in the amount specified by the County, to cover the costs of County Planning Commission review and report.

- B. The applicant shall reimburse the Township for the reasonable and necessary expense incurred for the inspection of improvements. Such reimbursement shall be based upon a schedule established by resolution of the Board of Supervisors. Such expense shall be reasonable and in accordance with the ordinary and customary fees charged by the municipal engineer or consultant for work performed for similar services in the community, but in no event shall the fees exceed the rate or cost charged by the engineer or consultant to the Township when fees are not reimbursed or otherwise imposed on applicants.
- C. In the event the applicant disputes the amount of such expense in connection with the inspection of improvements, the applicant shall, within fourteen (14) working days of the date of billing, notify the Township that such expenses are disputed as unreasonable or unnecessary, in which case the Township shall not delay or disapprove a subdivision or land development application or any approval or permit related to development due to the applicant's request over disputed engineer expenses.
- D. If, within twenty (20) days from the date of billing, the Township and the applicant cannot agree on the amount of expenses which are reasonable and necessary, then the applicant and the municipality shall follow the procedure for dispute resolution set forth in Section 510(g) of the Pennsylvania Municipalities Planning Code, as amended, provided that the professionals resolving such dispute shall be of the same profession or discipline as the consultants whose fees are being disputed.
- E. No final plan shall be approved unless all fees and charges are paid in full.

Section 704. Penalties

- A. No lot in a subdivision shall be sold, rented, leased or conveyed in any manner; no permit to erect, alter or repair any building upon land in a subdivision or land development shall be issued; and no building shall be erected in a subdivision or land development until a Final Plan of such subdivision or land development has been approved and properly recorded and until improvements have been either constructed or guaranteed.
- B. Any person, co-partnership or corporation who shall subdivide any lot, tract, or parcel of land, layout, construct, open or dedicate any street, sanitary sewer, storm sewer or water mains, for public use or travel, or for the common use of occupants of buildings abutting thereon, sell, rent, lease, or convey in any manner any lot or erect any building in a subdivision without first having complied with the provisions of this Ordinance shall be guilty of a misdemeanor.

Article 7- Administration

- B. Any person, partnership or corporation who or which has violated the provisions of this Ordinance shall, upon being found liable therefore, in a civil enforcement proceeding commenced by the Township, pay a judgment of not more than \$500 plus all court costs, including reasonable attorney fees incurred by the Township as a result thereof. No judgment shall commerce or be imposed, levied or payable until the date of the determination of a violation by the district justice. If the defendant neither pays nor timely appeals the judgment, the Township may enforce the judgment pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless the district justice determining that there has been a violation further determines that there was a good faith basis for the person, partnership or corporation violating the ordinance to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation until the fifth day following the date of the determination of a violation by the district justice and thereafter each day that a violation continues shall constitute a separate violation.
- C. The Court of Common Pleas, upon petition, may grant an order to stay, upon cause shown, tolling the per diem judgment pending a final adjudication of the violation and judgment.
- D. Nothing contained in this section shall be construed or interpreted to grant to any person or entity other than the Township the right to commence any action for enforcement pursuant to this section.

Section 705. Appeals

The procedures for securing review of any ordinance, decision, or determination is set forth in Article X of the Pennsylvania Municipalities Planning Code (Act of 1968, P.L. 805, No. 247), as reenacted and amended.

Section 706. Repealer

All Ordinances or parts of ordinances inconsistent herewith are hereby repealed.

Section 707. Severability

If any section, clause, provision, or portion of this Ordinance shall be held invalid or unconstitutional by any court of competent jurisdiction, such decision shall not affect any other section, clause, provision or portion of this Ordinance.

Application for Consideration of a Subdivision and/or Land Development Plan

(For Township Use Only)

Plan No. _____

Date of Receipt/Filing _____

The undersigned hereby applies for approval under the Middle Paxton Township Subdivision and Land Development Ordinance for the Plan, submitted herewith and described below:

1. Plan Name: _____

Plan No: _____

Plan Date: _____

2. Project Location: _____

3. Name of Property Owner(s): _____

Address: _____ Phone No. _____

4. Land Use and Number of Lots and/or Units (indicate answer by number of lots or units):

_____ Single Family (Detached)

_____ Commercial

_____ Multi-Family (Attached-Sale)

_____ Industrial

_____ Multi-Family (Attached-Rental)

_____ Institutional

_____ Mobile Home Park

_____ Other (please specify)

5. Total Acreage: _____

6. Application Classification:

_____ Sketch Plan Review (Section 303)

_____ Revised Prelim. Plan (Section 303)

_____ Preliminary Plan (Section 304)

_____ Revised Final Plan (Section 306)

_____ Final Plan (Section 306)

7. Name of Applicant (if other than owner): _____

Address: _____ Phone No. _____

8. Firm Which Prepared Plan: _____

Address: _____ Phone No. _____

APPENDIX A

Application for Consideration of a Subdivision and/or Land Development Plan

Person Responsible for Plan: _____

9. Is a Zoning Variance, Special Exception, or Waiver Approval Necessary? _____ If yes, please specify: _____

10. Type of Water Supply Proposed: _____ Public
_____ Semi-Private

Please indicate if a capped system is proposed. _____ Individual

11. Type of Sanitary Sewage Disposal Proposed: _____ Public
_____ Semi-Private

Please indicate if a capped system is proposed. _____ Individual

12. Lineal Feet of New Street _____

13. Sewer Facilities Plan Revision or Supplement Number _____ and Date Submitted _____

The undersigned hereby represents that, to the best of his/her knowledge and believe, all information listed above is true, correct, and complete.

Date: _____
Signature of Landowner or Applicant

Revision
Date: _____
Signature of Landowner or Applicant

Revision
Date: _____
Signature of Landowner or Applicant

Revision
Date: _____
Signature of Landowner or Applicant

Revision
Date: _____
Signature of Landowner or Applicant

Appendix B - Plan Certificates

The following forms and space for the proper signatures shall be used or placed on the final plans:

- A. Each final plan submitted for approval shall carry a certification of approval in substantially the following form:

Approved by the Board of Supervisors of Middle Paxton Township, this _____ day of _____, 20____.

(Seal)

ATTEST: _____
Secretary

Chairman

Approved by the Planning Commission of Middle Paxton Township, this _____ day of _____, 20____.

(Seal)

ATTEST: _____
Secretary

Chairman

- B. Each final plan submitted for approval shall carry a certificate, signed by a surveyor in substantially the following form:

I, _____, hereby certify that I am a registered Land Surveyor, or registered Engineer in compliance with the laws of the Commonwealth of Pennsylvania; that this plan correctly represents a survey completed by me on _____; that all the monuments shown thereon actually exist; and that their location, size, type and material are accurately shown.

(SEAL) _____

- C. When required by the Township, a certificate must also be included attesting to maintaining private roads; indemnification of the Township; and others as required by the Township.
- D. Each final plan submitted for approval shall carry a deed of dedication in substantially the following form:

Appendix B - Plan Certificates

We, the undersigned _____, owners of the real estate shown and described herein, do hereby certify that we have laid off, platted and subdivided, and hereby lay off, plan and subdivide, said real estate in accordance with the within plan.

This subdivision shall be known and designated as _____, an addition to _____. All streets and alleys shown and not heretofore dedicated are hereby dedicated to the public.

Building setback lines are hereby established as shown on this plan, between which lines and the property lines of the street, there shall be erected or maintained no building or structure.

There are strips of ground _____ feet in width as shown on this plan and marked "Easement, reserved for the use of public utilities for the installation of water and sewer mains, poles, ducts, lines and wires, subject at all times to the proper authorities and to the easement herein reserved. No buildings or other structures are to be erected or maintained upon said strips of land, but owners of lots in this subdivision shall take their titles subject to the rights of the utilities.

(Additional dedications and protective covenants or private restrictions would be inserted here upon the subdivider's initiative or the recommendation of the Commission; important provisions are those specifying the use to be made of the property and, in the case of residential use, the minimum habitable floor area.) The final plan shall specify where each of these additional dedications and protective covenants have been recorded.

The foregoing covenants (or restrictions) are to run with the land and shall be binding on all parties and all persons claiming under them until January 1, 20____ (a twenty-five-year period is suggested), at which time said covenants (or restrictions) shall be automatically extended for successive periods of ten (10) years and shall remain in full force and effect unless changed at the end of such period of ten (10) years by vote of a majority of the then owners of the building sites covered by these covenants (or restrictions).

The right to enforce these provisions by injunction, together with the right to cause the removal, by due process of law, of any structure or part thereof erected or maintained in violation hereof, is hereby dedicated to the public and reserved to the several owners of the several lots in this subdivision and to their heirs and assigns.

Appendix B - Plan Certificates

Witness our Hands and Seals this _____ day of _____ 20____.

FOR CORPORATIONS:

Commonwealth of Pennsylvania :

: SS

County of Dauphin:

On this, the _____ day of _____, 20____, before me, _____, the undersigned officer, personally appeared _____ who acknowledged himself to be the President or Vice President of _____ a corporation, and that he as such President or Vice President, being authorized to do so, executed the foregoing instrument for the purpose therein contained by signing the name of the corporation by himself as President or Vice President.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Notary Public

My commission expires: _____

FOR OTHER THAN CORPORATIONS:

Commonwealth of Pennsylvania :

: SS

County of Dauphin:

On this, the _____ day of _____, 20____, before me, the undersigned officer, personally came _____, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that _____ executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Notary Public

My commission expires: _____

STORM WATER ORDINANCE AMENDMENT

Amendments to
Storm Water
Ordinance

MAILING ADDRESS
P.O. BOX 277
DAUPHIN, PA 17018



OFFICE ADDRESS
1304 OVERLOOK ST
DAUPHIN, PA 17018
PHONE (717) 921-8128

Middle Paxton Township

ORDINANCE 77.

AN ORDINANCE AMENDING THE MIDDLE PAXTON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE AS ENACTED JULY 5, 2005.

BE IT ENACTED AND ORDAINED by the Supervisors of the Township of Middle Paxton, Dauphin County, under and by virtue of the authority contained in the Second Class Township Code, and it is hereby **ENACTED AND ORDAINED** by the authority of the same as follows:

The Middle Paxton Township Stormwater Management Ordinance is hereby amended as follows:

- 1.) Create an Area "C" on Figure 1 of Table A-5. Area "C" will include all areas of Middle Paxton Township which were previously not delineated on this figure.
- 2.) Previous Section 302 D will become Section 302 E.
- 3.) Add a new Section 302 D as follows: Area C requires a 100% release rate requiring the post-development to match the pre-development peak flows and volumes.

DULY ENACTED AND ORDAINED this 5th day of June, 2006, by the Board of Supervisors of the Township of Middle Paxton, Dauphin County, Pennsylvania, in lawful session, duly assembled.

**TOWNSHIP OF MIDDLE PAXTON
DAUPHIN COUNTY, PENNSYLVANIA**

BY:


SERELL I. ULRICH, CHAIRMAN

BY:


JEFFREY SMITH, VICE-CHAIRMAN

BY:


MARY JANE C. DAVIS, SUPERVISOR

BY:


RICHARD PEFFER, SUPERVISOR

BY:


J. THOMAS VAN WAGNER, SUPERVISOR

ATTEST:

BY:


J. THOMAS VAN WAGNER
SECRETARY

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STORM WATER ORDINANCE

ARTICLE I- GENERAL PROVISIONS

Section 101. Statement of Findings

The governing body of the Municipality finds that:

- A. Inadequate management of accelerated stormwater runoff resulting from development throughout a watershed increases flood flows and velocities, contributes to erosion and sedimentation, overtakes the carrying capacity of existing streams and storm sewers, greatly increases the cost of public facilities to convey and manage stormwater, undermines floodplain management and flood reduction efforts in upstream and downstream communities, reduces groundwater recharge and threatens public health and safety.
- B. A comprehensive program of stormwater management, including reasonable regulation of development and activities causing accelerated erosion, is fundamental to the public health, safety, welfare and the protection of the people of the Municipality and all the people of the Commonwealth, their resources and the environment.

Section 102. Purpose

The purpose of this Ordinance is to promote health, safety and welfare within the so-called Mid-Dauphin watersheds by minimizing the damages described in Section 101.A of this Ordinance through provisions designed to:

- A. Manage accelerated runoff and erosion and sedimentation problems at their source by regulating activities that cause these problems.
- B. Utilize and preserve the existing natural drainage systems.
- C. Encourage recharge of groundwater where appropriate, and prevent degradation of groundwater quality.
- D. Maintain existing flows and quality of streams and watercourses in the municipality and the Commonwealth.
- E. Preserve and restore the flood-carrying capacity of streams.
- F. Provide proper maintenance of all permanent stormwater management facilities that are constructed in the Municipality.
- G. Provide performance standards and design criteria for watershed-wide stormwater management and planning.

Section 103. Statutory Authority

The Municipality is empowered to regulate land use activities that affect runoff by the authority of the Act of October 4, 1978 32 P.S., P.L. 864 (Act 167) Section 680.1 et seq., as amended, the "Storm Water Management Act", [and the applicable Municipal Code].

Section 104. Applicability

This Ordinance shall apply to those areas of the Municipality that are located within the Mid-Dauphin Watersheds, as delineated in Ordinance Figure 1 map or Plate 1 which is hereby adopted as part of this Ordinance. The watersheds include Fishing Creek, Stony Creek, Clark Creek, Powell Creek, Armstrong Creek and Gurdy Run.

This Ordinance shall only apply to permanent stormwater management facilities constructed as part of any of the Regulated Activities listed in this Section. Stormwater management and erosion and sedimentation control during construction activities are specifically not regulated by this Ordinance, but shall continue to be regulated under existing laws and Ordinances.

This Ordinance contains only the stormwater management performance standards and design criteria that are necessary or desirable from a watershed-wide perspective. Local stormwater management design criteria (e.g. inlet spacing, inlet type, collection system design and details, outlet structure design, etc.) shall continue to be regulated by the applicable Municipal Ordinances or at the municipal engineer's discretion.

The following activities are defined as "Regulated Activities" and shall be regulated by this Ordinance:

- A. Land development.
- B. Subdivision.
- C. Construction of new or additional impervious or semi-pervious surfaces (driveways, parking lots, etc.).
- D. Construction of new buildings or additions to existing buildings.
- E. Diversion or piping of any natural or man-made stream channel.
- F. Installation of stormwater management facilities or appurtenances thereto.

Section 105. Repealer

Any Ordinance or Ordinance provision of the Municipality inconsistent with any of the provisions of this Ordinance is hereby repealed to the extent of the inconsistency only.

Section 106. Severability

Should any section or provision of this Ordinance be declared invalid by a court of competent jurisdiction, that decision shall not affect the validity of any of the remaining provisions of this Ordinance.

Section 107. Compatibility with Other Ordinance Requirements

Approvals issued pursuant to this Ordinance do not relieve the Applicant of the responsibility to comply with or to secure required permits or approvals for activities regulated by any other applicable codes, rules, statutes or Ordinances.

ARTICLE II-DEFINITIONS

For the purposes of this chapter, certain terms and words used herein shall be interpreted as follows:

- A. Words used in the present tense include the future tense; the singular number includes the plural and the plural number includes the singular; words of masculine gender include feminine gender; and words of feminine gender include masculine gender.
- B. The word "includes" or "including" shall not limit the term to the specific example but is intended to extend its meaning to all other instances of like kind and character.
- C. The word "person" includes an individual, firm, association, organization, partnership, trust, company, corporation or any other similar entity.
- D. The words "shall" and "must" are mandatory; the words "may" and "should" are permissive.
- E. The words "used or occupied" include the words "intended, designed, maintained, or arranged to be used, occupied or maintained".

Accelerated Erosion - The removal of the surface of the land through the combined action of man's activity and the natural processes of a rate greater than would occur because of the natural process alone.

Agricultural Activities - The work of producing crops and raising livestock including tillage, plowing, disking, harrowing, pasturing and installation of conservation measures. Construction of new buildings or impervious area is not considered an agricultural activity.

Alteration - As applied to land, a change in topography as a result of the moving of soil and rock from one location or position to another; also the changing of surface conditions by causing the surface to be more or less impervious; land disturbance.

Applicant - A landowner or developer who has filed an application for approval to engage in any Regulated Activities as defined in Section 104 of this Ordinance.

BMP (Best Management Practice) - Stormwater structures, facilities and techniques to maintain or improve the water quality of surface runoff.

Channel Erosion - The widening, deepening and headward cutting of small channels and waterways, due to erosion caused by moderate to large floods.

Cistern - An underground reservoir or tank for storing rainwater.

Conservation District - The Dauphin County Conservation District.

Culvert - A structure with appurtenant works that carries a stream under or through an embankment or fill.

Dam - An artificial barrier, together with its appurtenant works, constructed for the purpose of impounding or storing water or another fluid or semifluid, or a refuse bank, fill or structure for highway, railroad or other purposes which does or may impound water or another fluid or semifluid.

Design Storm - The magnitude and temporal distribution of precipitation from a storm event measured in probability of occurrence (e.g. a 5-year storm) and duration (e.g. 24-hours), used in the design and evaluation of stormwater management systems.

Designee - The agent of the municipal planning commission and/or agent of the governing body involved with the administration, review or enforcement of any provisions of this Ordinance by contract or memorandum of understanding.

Detention Basin - An impoundment structure designed to manage stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate.

Detention District - Those sub-areas in which some type of detention is required to meet the plan requirements and the goals of Act 167.

Developer - A person, partnership, association, corporation, or other entity, or any responsible person therein or agent thereof, that undertakes any Regulated Activity of this Ordinance.

Development Site - The specific tract of land for which a Regulated Activity is proposed.

Diffused Drainage Discharge - Drainage discharge that is not confined to a single point location or channel, including sheet flow or shallow concentrated flow.

Downslope Property Line - That portion of the property line of the lot, tract, or parcels of land being developed located such that all overland or pipe flow from the site would be directed towards it.

Drainage Conveyance Facility - A Stormwater Management Facility designed to transmit stormwater runoff and shall include streams, channels, swales, pipes, conduits, culverts, storm sewers, etc.

Drainage Easement - A right granted by a landowner to a grantee, allowing the use of private land for stormwater management purposes.

Drainage Permit - A permit issued by the Township governing body after the drainage plan has been approved. Said permit is issued prior to or with the final Township approval.

Drainage Plan - The documentation of the stormwater management system, if any, to be used for a given development site, the contents of which are established in Section 403.

Earth Disturbance - Any activity including, but not limited to, construction, mining, timber harvesting and grubbing which alters, disturbs and exposes the existing land surface.

Erosion - The movement of soil particles by the action of water, wind, ice or other natural forces.

Erosion and Sediment Pollution Control Plan - A plan which is designed to minimize accelerated erosion and sedimentation.

Exceptional Value Waters - Surface waters of high quality which satisfies Pennsylvania Code Title 25 Environmental Protection, Chapter 93 Water Quality Standards ss 93.4b(b) (relating to anti-degradation)

Existing Conditions - The initial condition of a project site prior to the proposed construction. If the initial condition of the site is undeveloped land, the land use shall be considered as "meadow" unless the natural land cover is proven to generate lower curve numbers or Rational "C" value, such as forested lands.

Flood - A general but temporary condition of partial or complete inundation of normally dry land areas from the overflow of streams, rivers and other waters of this Commonwealth.

Floodplain - Any land area susceptible to inundation by water from any natural source or delineated by applicable Department of Housing and Urban Development, Federal Insurance Administration Flood Hazard Boundary - mapped as being a special flood hazard area. Also included are areas that comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania Department of Environmental Protection (PA DEP) Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time by PA DEP).

Floodway - The channel of the watercourse and those portions of the adjoining floodplains that is reasonably required to carry and discharge the 100-year frequency flood. Unless otherwise specified, the boundary of the floodway is as indicated on maps and flood insurance studies provided by FEMA. In an area where no FEMA maps or studies have defined the boundary of the 100-year frequency floodway, it is assumed - absent evidence to the contrary - that the floodway extends from the stream to 50 feet from the top of the bank of the stream.

Forest Management/Timber Operations - Planning and activities necessary for the management of forestland. These include timber inventory and preparation of forest management plans, silvicultural treatment, cutting budgets, logging road design and construction, timber harvesting, site preparation and reforestation.

Freeboard - A vertical distance between the elevation of the design high water and the top of a dam, levee, tank, basin, or diversion ridge. The space is required as a safety margin in a pond or basin.

Grade - A slope, usually of a road, channel or natural ground specified in percent and shown on plans as specified herein. (To) **Grade** - to finish the surface of a roadbed, top of embankment or bottom of excavation.

Grassed Waterway - A natural or constructed waterway, usually broad and shallow, covered with erosion-resistant grasses, used to conduct surface water from cropland.

Groundwater Recharge - Replenishment of existing natural underground water supplies.

High Quality Waters - Surface water having quality which exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water by satisfying Pennsylvania Code Title 25 Environmental Protection, Chapter 93 Water Quality Standards ss 93.4b(a)

Impervious Surface - A surface that prevents the percolation of water into the ground.

Impoundment - A retention or detention basin designed to retain stormwater runoff and release it at a controlled rate.

Infiltration Structures - A structure designed to direct runoff into the ground (e.g. french drains, seepage pits, seepage trench).

Inlet - A surface connection to a closed drain. A structure at the diversion end of a conduit. The upstream end of any structure through which water may flow.

Land Development - (i) the improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving (a) a group of two or more buildings, or (b) the division or allocation of land or space between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features; (ii) any subdivision of land; (iii) development in accordance with Section 503(1.1) of the PA Municipalities Planning Code.

Land/Earth Disturbance - Any activity involving grading, tilling, digging, or filling of ground or stripping of vegetation or any other activity that causes an alteration to the natural condition of the land.

Main Stem (Main Channel) - Any stream segment or other runoff conveyance facility used as a reach in the Mid-Dauphin Watershed hydrologic model.

Manning Equation in (Manning formula) - A method for calculation of velocity of flow (e.g. feet per second) and flow rate (e.g. cubic feet per second) in open channels based upon channel shape, roughness, depth of flow and slope. "Open channels" may include closed conduits so long as the flow is not under pressure.

Municipality - Middle Paxton Township, Dauphin County, Pennsylvania.

Nonpoint Source Pollution - Pollution that enters a watery body from diffuse origins in the watershed and does not result from discernible, confined, or discrete conveyances.

NRCS - Natural Resource Conservation Service (previously SCS).

Open Channel - A drainage element in which stormwater flows with an open surface. Open channels include, but shall not be limited to, natural and man-made drainage ways, swales, streams, ditches, canals and pipes flowing partly full.

Outfall - Point where water flows from a conduit, stream, or drain.

Outlet - Points of water disposal from a stream, river, lake, tidewater or artificial drain.

Parent Tract - The parcel of land from which a land development or subdivision originates, determined from the date of municipal adoption of this Ordinance.

Parking Lot Storage - Involves the use of impervious parking areas as temporary impoundments with controlled release rates during rainstorms.

Peak Discharge - The maximum rate of stormwater runoff from a specific storm event.

Penn State Runoff Model (calibrated) - The computer-based hydrologic modeling technique adapted to the Mid-Dauphin watersheds for the Act 167 Plan. The model has been "calibrated" to reflect actual recorded flow values by adjoining key model input parameters.

Pipe - A culvert, closed conduit, or similar structure (including appurtenances) that conveys stormwater.

Planning Commission - The planning commission of Middle Paxton Township

PMF - Probable Maximum Flood - The flood that may be expected from the most severe combination of critical meteorological and hydrologic conditions that are reasonably possible in any area. The PMF is derived from the probable maximum precipitation (PMP) as determined on the basis of data obtained from the National Oceanographic and Atmospheric Administration (NOAA).

Rational Formula - A rainfall-runoff relation used to estimate peak flow.

Regulated Activities - Actions or proposed actions that have an impact on stormwater runoff and that are specified in Section 104 of this Ordinance.

Release Rate - The percentage of predevelopment peak rate of runoff from a site or sub-area to which the post development peak rate of runoff must be reduced to protect downstream areas.

Retention Basin - An impoundment in which stormwater is stored and not released during the storm event. Stored water may be released from the basin at some time after the end of the storm.

Return Period - The average interval, in years, within which a storm event of a given magnitude can be expected to recur. For example, the 25-year return period rainfall would be expected to recur on the average once every twenty-five years.

Riser - A vertical pipe extending from the bottom of a pond that is used to control the discharge rate from the pond for a specified design storm.

Rooftop Detention - Temporary ponding and gradual release of stormwater falling directly onto flat roof surfaces by incorporating controlled-flow roof drains into building designs.

Runoff - Any part of precipitation that flows over the land surface.

Sediment Basin - A barrier, dam, retention or detention basin located and designed to retain rock, sand, gravel, silt, or other material transported by water.

Sediment Pollution - The placement, discharge or any other introduction of sediment into the waters of the Commonwealth occurring from the failure to design, construct, implement or maintain control measures and control facilities in accordance with the requirements of this Ordinance.

Sedimentation - The process by which mineral or organic matter is accumulated or deposited by the movement of water.

Seepage Pit/Seepage Trench - An area of excavated earth filled with loose stone or similar coarse material, into which surface water is directed for infiltration into the ground.

Sheet Flow - Runoff that flows over the ground surface as a thin, even layer, not concentrated in a channel.

Soil-Cover Complex Method - A method of runoff computation developed by the NRCS that is based on relating soil type and land use/cover to a runoff parameter called Curve Number (CN).

Soil Group, Hydrologic - A classification of soils by the Soil Conservation Service into four runoff potential groups. The groups range from A soils, which are very permeable and produce little runoff, to D soils, which are not very permeable and produce much more runoff.

Spillway - A depression in the embankment of a pond or basin that is used to pass peak discharge greater than the maximum design storm controlled by the pond.

Storage Indication Method - A reservoir routing procedure based on solution of the continuity equation (inflow minus outflow equals the change in storage) with outflow defined as a function of storage volume and depth.

Storm Frequency - The number of times that a given storm "event" occurs or is exceeded on the average in a stated period of years. See "Return Period".

Storm Sewer - A system of pipes and/or open channels that convey intercepted runoff and stormwater from other sources, but excludes domestic sewage and industrial wastes.

Stormwater - The total amount of precipitation reaching the ground surface.

Stormwater Management Facility - Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff. Typical stormwater management facilities include, but are not limited to, detention and retention basins, open channels, storm sewers, pipes and infiltration structures.

Stormwater Management Plan - The plan for managing stormwater runoff in the Mid-Dauphin Watersheds adopted by Dauphin County as required by the Act of October 4, 1978, P.L. 864, (Act 167) and known as the "Mid-Dauphin Watershed Action 167 Stormwater Management Plan".

Stormwater Management Site Plan - The plan prepared by the Developer or his representative indicating how stormwater runoff will be managed at the particular site of interest according to this Ordinance.

Stream Enclosure - A bridge, culvert or other structure in excess of 100 feet in length upstream to downstream which encloses a regulated water of this Commonwealth.

Subarea - The smallest drainage unit of a watershed for which stormwater management criteria have been established in the Stormwater Management Plan.

Subdivision - The division or re-division of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, transfer of ownership, or building or lot development: Provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or any residential dwellings, shall be exempt.

Swale - A low-lying stretch of land that gathers or carries surface water runoff.

Timber Operations - See Forest Management.

Time of Concentration (T_c) - The time it takes for surface runoff to travel from the hydraulically most distant point of the watershed to a point of interest within the watershed. This time is the combined total of overland flow time and flow time in pipes or channels, if any.

Watercourse - A stream of water; river; brook; creek; or a channel or ditch for water, whether natural or manmade.

Waters of the Commonwealth - Any and all rivers, streams, creeks, rivulets, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs and all other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth.

Wetland - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, ferns and similar areas.

ARTICLE III - STORMWATER MANAGEMENT

Section 301. General Requirements

- A. All regulated activities in the Mid-Dauphin Watersheds which are not granted a waiver in accordance with the provisions of this Ordinance, shall submit a drainage plan consistent with the Mid-Dauphin Watershed Stormwater Management Plan to the municipality for review. These criteria shall apply to the total proposed development even if development is to take place in stages. Impervious cover shall include, but not be limited to, any roof, parking or driveway areas and any new streets and sidewalks. Any areas designed to initially be gravel or crushed stone shall be assumed to be impervious for the purposes of comparison to the waiver criteria.
- B. Stormwater drainage systems shall be provided in order to permit unimpeded flow along natural watercourses, except as modified by stormwater management facilities or open channels consistent with this Ordinance.
- C. The existing points of concentrated drainage that discharge onto adjacent property shall not be altered without permission of the altered property owner(s) and shall be subject to any applicable discharge criteria specified in this Ordinance.
- D. Areas of existing diffused drainage discharge shall be subject to any applicable discharge criteria in the general direction of existing discharge, whether proposed to be concentrated or maintained as diffused drainage areas, except as otherwise provided by this Ordinance. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the Developer must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no erosion, sedimentation, flooding or other harm will result from the concentrated discharge.
- E. Where a development site is traversed by watercourses drainage easements shall be provided conforming to the line of such watercourses. The terms of the easement shall prohibit excavation, the placing of fill or structures and any alterations that may adversely affect the flow of stormwater within any portion of the easement. Also, maintenance, including mowing of vegetation within the easement shall be required, except as approved by the appropriate governing authority.
- F. When it can be shown that, due to topographic conditions, natural drainageways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainageways. Work within natural drainageways shall be subject to approval by PA DEP through the Joint Permit Application process, or, where deemed appropriate by PA DEP, through the General Permit process.
- G. Any stormwater management facilities regulated by this Ordinance that would be located in or adjacent to waters of the Commonwealth or wetlands shall be subject to approval by PA DEP through the Joint Permit Application process, or, where deemed appropriate by PA DEP, the General Permit process. When there is a question whether wetlands may be involved, it is the responsibility of the Developer or his agent to show that the land in

question cannot be classified as wetlands; otherwise approval to work in the area must be obtained from PA DEP.

- H. Any stormwater management facilities regulated by this Ordinance that would be located on State highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation (PA DOT).
- I. Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration trenches, etc. are encouraged, where soil conditions permit, to reduce the size or eliminate the need for detention facilities.
- J. Roof drains must not be connected to streets, sanitary or storm sewers or roadside ditches to promote overload flow and infiltration/percolation of stormwater where advantageous to do so. When it is more advantageous to connect directly to streets or storm sewers, then it shall be permitted on a case-by-case basis by the municipality.
- K. Developers are encouraged to incorporate designs to take advantage of the stormwater credits presented in Appendix D of the Mid-Dauphin Act 167 Stormwater Management Plan.
- L. Special Conditions for Areas Falling Within Defined Exceptional Value and High Quality Sub-Watersheds – The temperature and quality of water and streams that have been declared as exceptional value and high quality is to be maintained as defined in Chapter 93, Water Quality Standards, Title 25 of Pennsylvania Department of Environmental Protection Rules and Regulations. Temperature sensitive BMPs and stormwater conveyance systems are to be used and designed with storage pool areas and supply outflow channels and should be shaded with trees. This will require modification of berms for permanent ponds and relaxation of restrictions on planting vegetation within the facilities, provided the capacity for volumes and rate controls is maintained. At a minimum, the southern half on pond shorelines will be planted with shade or canopy trees within ten (10) feet of the pond shoreline. In conjunction with this requirement, the maximum slope allowed on the berm area to be planted is 10 to 1. This will lessen the destabilization of berm soils due to root growth. A long term maintenance schedule and management plan for the thermal control BMPs is to be established and recorded for all development sites.

Section 302. Stormwater Management Districts

- A. The Mid-Dauphin Watersheds have been divided into two stormwater management districts as shown on the Watershed Map in Ordinance Figure 1 map or Plate 1. Standards for managing runoff from each sub area in the Mid-Dauphin Watershed for the 2, 10 and 25-year design storms are shown below. The standards vary according to storm and location in the watershed. The release rate is a percent such that the post development peak flow must not exceed the release rate (as a decimal value) times the pre-development peak flow, with flows calculated at the mouth of a sub area.
- B. For the 2-year design storm, Areas A & B utilize a 30% release rate.

- C. For the 10 or 25-year design storms in Area A, utilize a 70% release rate. In Area B a 100% release rate may be used.
- D. For all storms in all areas, if the developer can show that the post-development hydrograph matches the pre-development hydrograph for peak flows and volume, additional release rates, as described in Sections 302.B and 302.C as described above are not required.

Section 303. Stormwater Management District Implementation Provisions (Performance Standards)

- A. **General - Post-development rates of runoff** from any regulated activity shall not exceed the peak release rates of runoff prior to development for the design storms specified on the Ordinance Figure 1 map or Plate 1 and Section 302, of the Ordinance.
- B. **District Boundaries** - The boundaries of the Stormwater Management Districts are shown on an official map, which is available for inspections at the municipal office. A copy of the official map at a reduced scale is included in the Ordinance Figure 1 map or Plate 1. The exact location of the Stormwater Management District boundaries as they apply to a given development site shall be determined by mapping the boundaries using the two-foot topographic contours (or most accurate data required) provided as part of the Drainage Plan.
- C. **Sites Located in More Than 1 District** - For a proposed development site located within two or more release category sub areas, the peak discharge rate from any sub area shall be the pre-development peak discharge for that sub area multiplied by the applicable release rate. The calculated peak discharges shall apply regardless of whether the grading plan changes the drainage area by sub area.
- D. **Off-Site Areas** - Off-site areas that drain through a proposed development site are not subject to release rate criteria when determining allowable peak runoff rates. However, on-site drainage facilities shall be designed to safely convey off-site flows through the development site.
- E. **Site Areas** - Where the site area to be impacted by a proposed development activity differs significantly from the total site area, only the proposed impact area shall be subject to the release rate criteria.
- F. **"No Harm" Option** - For any proposed development site, the developer has the option of using a less restrictive runoff control (including no detention) if the developer can prove that "no harm" would be caused by discharging at a higher runoff rate than that specified by the Plan. The "No Harm" option is used when a developer can prove that the post-development hydrographs can match pre-development hydrographs, or if it can be proven that the post-development conditions will not cause increases in peaks at all points downstream. Proof of "No Harm" would have to be shown based upon the following "Downstream Impact Evaluation" which shall include a "downstream hydraulic capacity analysis" consistent with Section 303H to determine if adequate hydraulic capacity exists.

The land developer shall submit to the municipality this evaluation of the impacts due to increased downstream stormwater flows in the watershed.

1. The "Downstream Impact Evaluation" shall include hydrologic and hydraulic calculations necessary to determine the impact of hydrograph timing modifications due to the proposed development upon a dam, highway, structure, natural point of restricted stream flow or any stream channel section, established with the concurrence of the municipality.
2. The evaluation shall continue downstream until the increase in flow diminishes due to additional flow from tributaries and/or stream attenuation.
3. The peak flow values to be used for downstream areas for the design return period storms (2-, 10-, 25- and 100-year) shall be the values from the calibrated model for the Mid-Dauphin Watershed. These flow values can be obtained from the watershed plan.
4. Developer-proposed runoff controls which would generate increased peak flow rates at storm drainage problem areas would, by definition, be precluded from successful attempts to prove "no-harm", except in conjunction with proposed capacity improvements for the problem areas consistent with Section 303.H.
5. A financial distress shall not constitute grounds for granting a no-harm exemption.
6. Capacity improvements may be provided as necessary to implement the "no harm" option, which proposes specific capacity improvements to provide that a less stringent discharge control would not create any harm downstream.
7. Any "no harm" justifications shall be submitted by the developer as part of the Drainage Plan submission per Article IV.

G. "Downstream Hydraulic Capacity Analysis" - Any downstream capacity hydraulic analysis conducted in accordance with this Ordinance shall use the following criteria for determining adequacy for accepting increased peak flow rates:

1. Natural or man-made channels or swales must be able to convey the increased runoff associated with a 2-year return period event within their banks at velocities consistent with protection of the channels from erosion. Acceptable velocities shall be based upon criteria included in the DEP *Erosion and Sediment Pollution Control Program Manual*.
2. Natural or man-made channels or swales must be able to convey the increased 25-year return period runoff without creating any hazard to persons or property.

3. Culverts, bridges, storm sewers or any other facilities which must pass or convey flows from the tributary area must be designed in accordance with DEP, Chapter 105 regulations (if applicable) and, at a minimum, pass the increased 25-year return period runoff rate.
- H. Regional Detention Alternatives - For certain areas within the study area, it may be more cost-effective to provide one control facility for more than one development site than to provide an individual control facility for each development site. The initiative and funding for any regional runoff control alternatives are the responsibility of prospective developers. The design of any regional control basins must incorporate reasonable development of the entire upstream watershed. The peak outflow of a regional basin would be determined on a case-by-case basis using the hydrologic model of the watershed consistent with protection of the downstream watershed areas. "Hydrologic model" refers to the calibrated model as developed for the Stormwater Management Plan.

Section 304. Design Criteria for Stormwater Management Facilities

- A. Any stormwater facility located on State highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation (PA DOT).
- B. Any stormwater management facility (i.e. detention basin) designed to store runoff and requiring a berm or earthen embankment required or regulated by this Ordinance shall be designed to provide an emergency spillway to handle flow up to and including the 100-year post-development conditions. The height of embankment must be set as to provide a minimum 1.0 foot of freeboard above the maximum pool elevation computed when the facility functions for the 100-year post-development inflow. Should any stormwater management facility require a dam safety permit under PA DEP Chapter 105, the facility shall be designed in accordance with Chapter 105 and meet the regulations of Chapter 105 concerning dam safety which may be required to pass storms larger than 100-year event.
- C. Any facilities that constitute water obstructions (e.g., culverts, bridges, outfalls, or stream enclosures) and any work involving wetlands as directed in PA DEP Chapter 105 regulations (as amended or replaced from time to time by PA DEP), shall be designed in accordance with Chapter 105 and will require a permit from PA DEP. Any other drainage conveyance facility that doesn't fall under Chapter 105 regulations must be able to convey, without damage to the drainage structure or roadway, runoff from the 25-year design storm with a minimum 1.0-foot of freeboard measured below the lowest point along the top of the roadway. Roadway crossings located within designated floodplain areas must be able to convey runoff from a 100-year design storm with a minimum 1.0-foot of freeboard measured below the lowest point along the top of roadway. Any facility that constitutes a dam as defined in PA DEP Chapter 105 regulations may require a permit under dam safety regulations. Any facility located within a PA DOT right of way must meet PA DOT minimum design standards and permit submission requirements.
- D. Any drainage conveyance facility and/or channel that doesn't fall under Chapter 105 Regulations, must be able to convey, without damage to the drainage structure or

roadway, runoff from the 25-year design storm. Conveyance facilities to or exiting from stormwater management facilities (i.e. detention basins) shall be designed to convey the design flow to or from that structure. Roadway crossings located within designated floodplain areas must be able to convey runoff from a 100-year design storm. Any facility located within a PA DOT right-of-way must meet PA DOT minimum design standards and permit submission requirements.

- E. Storm sewers must be able to convey post-development runoff from a 10-year design storm without surcharging inlets where appropriate.
 - 1. Minimum diameter for storm sewer pipes is to be 15-inch or equivalent arch or elliptical pipe.
 - 2. Sewers are to be designed to maintain a minimum full flow velocity of 2 feet per second.
 - 3. Storm sewers conveying runoff flows to stormwater management or treatment facilities are to be designed for the maximum design storm for such facilities.
- F. Adequate erosion protection shall be provided along all open channels and at all points of discharge.
- G. The design of all stormwater management facilities shall incorporate sound engineering principles and practices. The Municipality shall reserve the right to disapprove any design that would result in the occupancy or continuation of an adverse hydrologic or hydraulic condition within the watershed.

Section 305. Calculation Methodology

Stormwater runoff from all development sites shall be calculated using either the rational method or a soil-cover-complex methodology.

- A. Any stormwater runoff calculations involving drainage areas greater than 20 acres, including on- and off-site areas, shall use a generally accepted calculation technique that is based on the NRCS soil cover complex method. Table VIII-1 summarizes acceptable computation methods. It is assumed that all methods will be selected by the design professional based on the individual limitations and suitability of each method for a particular site.

The Municipality may approve the use of the Rational Method to estimate peak discharges from drainage areas that contain less than 20 acres.

- B. All calculations consistent with this Ordinance using the soil cover complex method shall use the appropriate design rainfall depths for the various return period storms presented in Table A-1 in Appendix A of this Ordinance. If a hydrologic computer model such as PSRM or HEC-1 is used for stormwater runoff calculations, then the duration of rainfall shall be 24 hours along with a Soil Conservation Service Type II 24-hour rainfall distribution.

- C. For the purposes of predevelopment flow rate determination, undeveloped land shall be considered as "meadow" good condition, unless the natural ground cover generates a lower curve number or Rational 'C' value (i.e. forest).
 - D. All calculations using the Rational Method shall use rainfall intensities consistent with appropriate times of concentration for overland flow and return periods from the Design Storm Curves from PA Department of Transportation Design Rainfall Curves (1986). Times of concentration for overland flow shall be calculated using the methodology presented in Chapter 3 of Urban Hydrology for Small Watersheds, NRCS, TR-55 (as amended or replaced from time to time by NRCS). Times of concentration for channel and pipe flow shall be computed using Manning's equation.
 - E. Runoff Curve Numbers (CN) for both existing and proposed conditions to be used in the soil cover complex method shall be obtained from Table A-2 in Appendix A of this Ordinance.
 - F. Runoff coefficients (c) for both existing and proposed conditions for use in the Rational method shall be obtained from Table A-3 in Appendix A of this Ordinance.
 - G. Where uniform flow is anticipated, Manning's equation shall be used for hydraulic computations and to determine the capacity of open channels, pipes and storm sewers. Values for Manning's roughness coefficient (n) shall be consistent with Table A-4 in Appendix A of the Ordinance.
- Outlet structures for stormwater management facilities shall be designed to meet the performance standards of this Ordinance using any generally accepted hydraulic analysis technique or method.
- H. The design of any stormwater detention facilities intended to meet the performance standards of this Ordinance shall be verified by routing the design storm hydrograph through these facilities using the Storage-Indication Method. For drainage areas greater than 20 acres in size, the design storm hydrograph shall be computed using a calculation method that produces a full hydrograph. The municipality may approve the use of any generally accepted full hydrograph approximation technique that shall use a total runoff volume that is consistent with the volume from a method that produces a full hydrograph.

**TABLE VIII-1
ACCEPTABLE COMPUTATION METHODOLOGIES FOR STORMWATER
MANAGEMENT PLANS**

METHOD	METHOD DEVELOPED BY	APPLICABILITY
TR-20 or Commercial Package Based on TR-20	USDA - NRCS	When use of full model is desirable or necessary
Tr-55 Or Commercial Package Based on TR-55	USDA - NRCS	Applicable for plans within the models limitations
HEC - 1 / HEC-HMS Or Commercial Package Based on HEC-1 / HEC-HMS	U.S. Army Corps of Engineers	When full model is desirable or necessary
HEC-RAS Or Commercial Package Based on HEC-RAS	U.S. Army Corps of Engineers	When applying for the No-Harm Option
PSRM	Penn State Univ.	When full model is desirable or necessary
Rational Method or Commercial Package based on Rational Method	Emil Kuiching (1889)	For sites less than 20 acres
Other Methods	Various	As approved by the municipal engineer

Section 306. Erosion and Sedimentation Requirements

- A. Whenever the vegetation and topography are to be disturbed, such activity must be in conformance with Chapter 102, Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania, Department of Environmental Protection, Subpart C, protection of Natural Resources, Article II, Water Resources, Chapter 102, "Erosion Control," and in accordance with the Dauphin County Conservation District and the standards and specifications of the appropriate municipal government.
- B. Additional erosion and sedimentation control design standards and criteria that must be or are recommended to be applied where infiltration BMPs are proposed and include the following:
 1. Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase so as to maintain their maximum infiltration capacity.
 2. Infiltration BMPs shall not be constructed nor receive runoff until the entire contributory drainage area to the infiltration BMP has received final stabilization.

3. Appropriate BMPs shall be used in conjunction with infiltration facilities such as: vegetated filter strips, bioretention, or leaf/debris separators to filter sediment or debris and maintain the full available design capacity.

Section 307. Water Quality Requirements

- A. In addition to the performance standards and design criteria requirements of Article III of this Ordinance, the land developer SHALL comply with the following water quality requirements unless otherwise exempted by provisions of this Ordinance.

For water quality, the objective is to provide adequate storage to capture and treat the runoff from 90% of the average annual rainfall. P represents the depth of rain associated with 90% of the total rainfall events over 0.11 inches.

1. The size of the water quality facility shall be based upon the following equation:

$$WQ_v = \frac{(1.1)(R_v)(A)}{12}$$

P = 1.1 inches of rainfall

Where:

WQ _v	= water quality volume (in ac-ft)
R _v	= 0.05 + 0.009(I) where I is percent impervious cover
A	= drainage area in ac

2. Treatment of the WQ_v shall be provided at all developments where stormwater management is required. A minimum WQ_v of 0.2 inches per acre shall be met at sites or in drainage areas that have less than 15% impervious cover.
3. Drainage areas having no impervious cover and no proposed disturbance during development may be excluded from the WQ_v calculations. Designers are encouraged to use these areas as non-structural practices for WQ_v treatment.
4. The design of the facility shall consider and minimize the chances of clogging and sedimentation potential. Orifices smaller than 3 inches diameter are not recommended. However, if the Design Engineer can provide proof that the smaller orifices are protected from clogging by use of trash racks, etc., smaller orifices may be permitted.

- B. To accomplish item A. stated above, the land developer MAY submit original and innovative designs to the Municipal Engineer for review and approval. Such designs may achieve the water quality objectives through a combination of BMPs.

- C. In selecting the appropriate BMPs or combinations thereof, the land developer SHALL consider the following:

1. Total contributing area.
2. Permeability and infiltration rate of the site soils.
3. Slope and depth to bedrock.
4. Seasonal high water table.

5. Proximity to building foundations and wellheads.
6. Erodibility of soils.
7. Land availability and configuration of the topography.

D. The following additional factors SHOULD be considered when evaluating the suitability of BMPs used to control water quality at a given development site:

1. Peak discharge and required volume control.
2. Stream bank erosion.
3. Efficiency of the BMPs to mitigate potential water quality problems.
4. The volume of runoff that will be effectively treated.
5. The nature of the pollutant being removed.
6. Maintenance requirements.

Section 308. Ground Water Recharge (Infiltration/Recharge/Retention)

A. The ability to retain and maximize the ground water recharge capacity of the area being developed is encouraged. Design of the infiltration/recharge stormwater management facilities shall give consideration to providing ground water recharge to compensate for the reduction in the percolation that occurs when the ground surface is paved and roofed over. These measures are encouraged, particularly in hydrologic soil groups A and B and shall be utilized wherever feasible. Soils used for the construction of basins shall have low-erodibility factors ("K" factors).

The criteria for maintaining recharge is based on the USDA average annual recharge volume per soil type divided by the annual rainfall in Dauphin County (41 inches per year) and multiplied by 90%. This keeps the recharge calculation consistent with the WQ_v methodology. Thus, an annual recharge volume requirement shall be specified for a site as follows:

1. Percent Volume Method

$$Re_v = [(S)(R_v)(A)]/12$$

where:

Re_v = Recharge Volume in acre-feet

$R_v = 0.05 + 0.009(I)$ where I is percent impervious cover

A = site area in acres

2. Percent Area Method

$$Re_v = (S)(A_i)$$

where:

A_i = the measured impervious cover in acres

Hydrologic Soil Group

Soil Specific Recharge Factor (S)

A	0.39
B	0.26
C	0.14
D	0.07

The recharge volume is considered part of the total WQ_v that must be provided at a site and can be achieved either by a structural practice (e.g., infiltration, bioretention), a non-structural practice (e.g., buffers, disconnection of rooftops) or a combination of both.

Drainage areas having no impervious cover and no proposed disturbance during development may be excluded from the Re_v calculations. Designers are encouraged to use these areas as non-structural practices for Re_v treatment.

Note: Re_v and WQ_v are inclusive. When treated separately, the Re_v may be subtracted from the WQ_v when sizing the water quality BMP.

B. Basis for Determining Recharge Volume

1. If more than one HSG is present at a site, a composite soil-specific recharge factor shall be computed based on the proportion of total site area within each HSG. The recharge volume provided at the site shall be directed to the most permeable HSG available.
2. The "percent volume" method is used to determine the Re_v treatment requirement when structural practices are used to provide recharge. These practices must provide seepage into the ground and may include infiltration and exfiltration structures (e.g., infiltration, bioretention, dry swales or sand filters with storage below the under drain). Structures that require impermeable liners, intercept groundwater or are designed for trapping sediment (e.g., forbays) may not be used. In this method, the volume of runoff treated by structural practices shall meet or exceed the computed recharge volume.
3. The "percent area" method is used to determine the Re_v treatment requirements when non-structural practices are used. Under this method, the recharge requirements are evaluated by mapping the percent of impervious area that is effectively treated by an acceptable non-structural practice, and comparing it to the minimum recharge requirements.
4. Acceptable non-structural practices include filter strips that treat rooftop or parking lot runoff, sheet flow discharge to stream buffers and grass channels that treat roadway runoff.
5. The recharge volume criterion does not apply to any portion of a site designated as a stormwater hotspot or any project considered as redevelopment, as identified by the Mid Dauphin Act 167 Plan. In addition, the Municipal Engineer may alter or eliminate the recharge volume requirement if the site is situated on unsuitable soils (e.g., marine clays, karst or in an urban redevelopment area). In this situation, non-structural

practices (percent area method) shall be implemented to the maximum extent practicable and the remaining or untreated Re_v included in the WQ_v treatment.

6. If Re_v is treated by structural or non-structural practices separate and upstream of the WQ_v treatment, the WQ_v is reduced accordingly.

C. Soils Evaluation

A detailed soils evaluation of the project site shall be performed to determine the suitability of recharge facilities. The evaluation shall be performed by a qualified professional and, at a minimum, address soil permeability, depth to bedrock, susceptibility to sinkhole formation and subgrade stability.

1. Extreme caution shall be exercised where infiltration is proposed in geologically susceptible areas such as strip mine or limestone areas. Extreme caution shall also be exercised where salt or chloride would be a pollutant since soils do little to filter this pollutant and it may contaminate the groundwater. It is also extremely important that the design professional evaluate the possibility of groundwater contamination from the proposed infiltration/recharge facility and recommend a hydro geologic justification study be performed if necessary. Whenever a basin will be located in an area underlain by limestone, a geological evaluation of the proposed location shall be conducted to determine susceptibility to sinkhole formations. The design of all facilities over limestone formations shall include measures to prevent ground water contamination and, where necessary, sinkhole formation.

a. The Municipality may require the installation of an impermeable liner in detention basins. A detailed hydro geologic investigation may be required by the Municipality. The Municipality may require the developer to provide safeguards against groundwater contamination for uses that may cause groundwater contamination, should there be a mishap or spill.

b. It shall be the developer's responsibility to verify if the site is underlain by limestone. The following note shall be attached to all drainage plans and signed and sealed by the developer's engineer/surveyor/landscape architect/geologist:

I, _____, certify to the best of my knowledge that the proposed detention basin (circle one) is/is not underlain by limestone.

2. Where pervious pavement is permitted for parking lots, recreational facilities, non-dedicated streets or other areas, pavement construction specifications shall be noted on the plan.
3. Recharge/infiltration facilities may be used in conjunction with other innovative or traditional BMPs, stormwater control facilities and nonstructural stormwater management alternatives.
4. All recharge/infiltration facilities shall be designed to completely drain within 72 hours of reaching maximum capacity.

5. Isolation distances consistent with Pennsylvania Code Title 25, Chapter 73.13 are required for the location of runoff infiltration / recharge facilities to limit the potential for adverse impact to dwellings, sanitary facilities, salient environmental features, etc.

Section 309. Stream Bank Protection (C_{pv}) Requirements

- A. Stream bank protection shall be considered in implementing performance standards pursuant to Section 302. If a stormwater storage facility needs to be constructed then, to protect channels from erosion, the outflow structure shall be designed to provide the 24 hour extended detention of the one-year 24-hour storm event. The method for determining the C_{pv} requirement is detailed in Appendix D of this Ordinance.

For discharges to streams having verified naturally reproducing wild trout or that is stocked with trout, only 12 hours of extended detention shall be provided. The rationale for this criterion is that runoff will be stored and released in such a gradual manner that critical erosive velocities during bankful and near-bankful events will seldom be exceeded in downstream channels.

B. Basis for Determining Channel Protection Storage Volume

1. The models HEC-1 / HEC-HMS, TR-55 and TR-20 (or an equivalent approved by the Municipal Engineer) shall be used for determining peak discharge rates.
2. Rainfall depth for the one-year, 24-hour storm event in Dauphin County is 2.5 inches.
3. Off-site areas shall be modeled as present land use in good condition for the one-year storm event.
4. The length of overland flow used in time of concentration (t_c) calculations is limited to no more than 150 feet.
5. The C_{pv} storage volume shall be computed using procedures outlined in Appendix D of this Ordinance.
6. C_{pv} is not required at sites where the one-year post development peak discharge (q_i) is less than or equal to 2.0 cfs. A C_{pv} orifice diameter (d_o) of less than 3.0 inches is subject to approval by the Municipal Engineer and is not recommended unless an internal control for orifice protection is used.
7. C_{pv} shall be addressed for the entire site. If a site consists of multiple drainage areas, C_{pv} may be distributed proportionately to each drainage area.
8. Extended detention storage provided for the C_{pv} does not meet the WQ_v requirement (i.e., C_{pv} and WQ_v shall be treated separately).
9. The stormwater storage needed for the C_{pv} may be provided above the WQ_v storage in stormwater ponds and wetlands; thereby meeting all storage criteria except Re_v in

ARTICLE IV-DRAINAGE PLAN REQUIREMENTS

Section 401. General Requirements

For any of the activities regulated by this Ordinance, the final approval of subdivision and/or land development plans, the issuance of any building or occupancy permit, or the commencement of any land disturbance activity may not proceed until the Property Owner or Developer or his/her agent has received written approval of a Drainage Plan from the Municipality.

Section 402. Waivers

A. Any Regulated Activity on parcels generating less than 5,000 square feet of total impervious area may be granted a waiver from the provisions of this Ordinance. This criterion shall apply to the total development even if development is to take place in phases. The date of the Municipal Ordinance adoption shall be the starting point from which to consider tracts as "parent tracts" in which future subdivisions and respective impervious area computations shall be cumulatively considered.

B. Prior to the granting of a waiver, the applicant must provide documentation that the increased flow(s) from the site leaves the site in the same manner as the pre-development condition and that there will be no adverse affects to properties along the path of flow(s), or that the increased flow(s) will reach a natural watercourse or an existing stormwater management structure before adversely affecting any property along the path of the flow(s).

C. No waiver shall be provided for Regulated Activities as defined in Section 104.E and 104.F of this Ordinance.

D. A waiver shall not relieve the applicant from meeting the special requirements for watersheds draining to high quality (HQ) or exceptional value (EV) waters as per section 301.L of this Ordinance, or from implementing groundwater recharge, water quality and channel protection requirements as per sections 307, 308 and 309 of this Ordinance.

Section 403. Drainage Plan Contents

The Drainage Plan shall consist of all applicable calculations, maps and plans. A note on the maps shall refer to the associated computations and erosion and sedimentation control plan by title and date. The cover sheet of the computations and erosion and sedimentation control plan shall refer to the associated maps by title and last revised date. All Drainage Plan materials shall be submitted to the municipality in a format that is clear, concise, legible, neat and well organized; otherwise, the Drainage Plan shall be disapproved and returned to the Applicant.

The following items shall be included in the Drainage Plan:

A. General

1. General description of project.

2. General description of permanent stormwater management techniques, including construction specifications of the materials to be used for stormwater management facilities.
 3. Complete hydrologic, hydraulic and structural computations for all stormwater management facilities.
- B. Map(s) of the project area shall be submitted on 24-inch x 36-inch or 30-inch x 42-inch sheets and shall be prepared in a form that meets the requirements for recording in the offices of the Recorder of Deeds of Dauphin County. The contents of the maps(s) shall include, but not be limited to:
1. The location of the project relative to highways, municipalities or other identifiable landmarks.
 2. Existing contours at intervals of two feet. In areas of steep slopes (greater than 15 percent), five-foot contour intervals may be used.
 3. Existing water bodies within the project area including streams, lakes, ponds, field delineated wetlands or other bodies of water.
 4. Other physical features including flood hazard boundaries, sinkholes, streams, existing drainage courses, areas of natural vegetation to be preserved and the total extent of the upstream area draining through the site.
 5. The locations of all existing and proposed utilities, sanitary sewers and water lines within 50 feet of property lines.
 6. An overlay showing soil names and boundaries and a table listing soil limitations.
 7. Proposed changes to the land surface and vegetative cover including the type and amount of impervious area that would be added.
 8. Proposed structures, roads, paved areas and buildings.
 9. Final contours at intervals of two feet. In areas of steep slopes (greater than 15 percent), five-foot contour intervals may be used.
 10. The name of the development, the name and address of the owner of the property and the name of the individual or firm preparing the plan.
 11. The date of submission and common date of last revision.
 12. A graphic and written scale of one (1) inch equals no more than fifty (50) feet; for tracts of twenty (20) acres or more, the scale shall be one (1) inch equals no more than one hundred (100) feet.

13. A North arrow.
14. The total tract boundary and size with distances marked to the nearest foot and bearings to the nearest degree.
15. Existing and proposed land use(s).
16. A key map showing all existing man-made features beyond the property boundary that would be affected by the project.
17. Horizontal and vertical profiles of all stormwater conveyance facilities, including hydraulic capacity.
18. Plan views, typical cross sections, and temporary and/or permanent lining specifications for open conveyance channels.
19. Overland drainage paths.
20. A fifteen-foot wide access easement around all stormwater management facilities that would provide ingress to and egress from a public right-of-way.
21. A note on the plan indicating the location and responsibility for maintenance of stormwater management facilities that would be located off-site. All off-site facilities managing/treating stormwater runoff from the Project Site shall meet the performance standards and design criteria specified in this Ordinance.
22. A construction detail of any improvements made to sinkholes and the location of all notes to be posted as specified in this Ordinance.
23. A statement, signed by the landowner, acknowledging the stormwater management system to be a permanent fixture that can be altered or removed only after approval of a revised plan by the municipality.
24. The following signature block for the Municipal Engineer:

(Municipal Engineer), on this date (date of signature), has reviewed and hereby certifies that the Drainage Plan to the best of his/her knowledge meets all design standards and criteria of the Mid-Dauphin Watershed Act 167 Stormwater Management Ordinance."
25. The location of all erosion and sedimentation control facilities.

C. Supplemental Information

1. A written description of the following information shall be submitted.

- a) The overall stormwater management concept for the project.
 - b) Stormwater runoff computations as specified in this Ordinance.
 - c) Stormwater management techniques to be applied both during and after development.
 - d) Expected project time schedule.
2. A soil erosion and sedimentation control plan, where applicable, including all reviews and approvals as required by PA DEP.
 3. A geologic assessment of the effects of runoff on sinkholes as specified in this Ordinance. The applicant may apply for a waiver of this requirement provided:
 - a) The Project Site is not underlain by carbonate geologic formations, as mapped by the Department of Conservation and Natural Resources (DCNR).
 - b) The Project Site is not located within 500 feet of known sinkholes or closed depressions, documented by visual inspection and as mapped by DCNR, Kochonov, et.al.
 - c) USDA soils data does not identify the soil types to be indicative of carbonate conditions.
 4. The effect of the project (in terms of runoff volumes and peak flows) on adjacent properties and on any existing municipal stormwater collection system that may receive runoff from the project site.
 5. A Declaration of Adequacy and Highway Occupancy Permit from the PA DOT District Office when utilization of a PA DOT storm drainage system is proposed.

D. Stormwater Management Facilities

1. All stormwater management facilities must be located on a plan and described in detail.
2. When groundwater recharge methods such as seepage pits, beds or trenches are used, the locations of existing and proposed septic tank infiltration areas and wells must be shown.
3. All calculations, assumptions and criteria used in the design of the stormwater management facilities must be shown.

Section 404. Plan Submission

For all activities regulated by this Ordinance, the steps below shall be followed for submission. For any activities that require a PA DEP Joint Permit Application and regulated under Chapter 105 (Dam Safety and Waterway Management) or Chapter 106 (Floodplain Management) of PA DEP's Rules and Regulations, require a PA DOT Highway Occupancy Permit, or require any other permit under applicable state or federal regulations, the permit(s) shall be part of the plan.

- A. The Drainage Plan shall be submitted by the Developer as part of the Preliminary Plan submission for the Regulated Activity.
- B. Four (4) copies of the Drainage Plan shall be submitted.
- C. Distribution of the Drainage Plan will be as follows:
 - 1. Two (2) copies to the Municipality accompanied by the requisite Municipal Review Fee; as specified in this Ordinance.
 - 2. One (1) copy to the Municipal Engineers.
 - 3. One (1) copy to the County Planning Commission/Department

Section 405. Drainage Plan Review

- A. The Municipal Engineer shall review the Drainage Plan for consistency with the adopted Mid-Dauphin Watershed Act 167 Stormwater Management Plan. The Municipality shall require receipt of a complete plan as specified in this Ordinance.
- B. The Municipal Engineer shall review the Drainage Plan for any submission or land development against the municipal subdivision and land development Ordinance provisions not superseded by this Ordinance.
- C. For activities regulated by this Ordinance, the Municipal Engineer shall notify the Municipality in writing, within 60 calendar days, whether the Drainage Plan is consistent with the Stormwater Management Plan. Should the Drainage Plan be determined to be consistent with the Stormwater Management Plan, the Municipal Engineer will forward an approval letter to the Developer with a copy to the Municipal Secretary.
- D. Should the Drainage Plan be determined to be inconsistent with the Stormwater Management Plan, the Municipal Engineer will forward a disapproval letter to the Developer with a copy to the Municipal Secretary citing the reason(s) for the disapproval. Any disapproved Drainage Plans may be revised by the Developer and resubmitted consistent with this Ordinance.
- E. For Regulated Activities specified in Sections 104.C and 104.D of this Ordinance, the Municipal Engineer shall notify the Municipal Building Permit Officer in writing, within a time frame consistent with the Municipal Building Code and/or Municipal Subdivision Ordinance, whether the Drainage Plan is consistent with the Stormwater Management Plan and forward a copy of the approval/disapproval letter to the Developer. Any disapproved drainage plan may be revised by the Developer and resubmitted consistent with this Ordinance.
- F. For Regulated Activities requiring a PA DEP Joint Permit Application, the Municipal Engineer shall notify PA DEP whether the Drainage Plan is consistent with the

Stormwater Management Plan and forward a copy of the review letter to the Municipality and the Developer. PA DEP may consider the Municipal Engineer's review comments in determining whether to issue a permit.

- G. The Municipality shall not approve any subdivision or land development for Regulated Activities specified in Sections 104.A and 104.B of this Ordinance if the Drainage Plan has been found to be inconsistent with the Stormwater Management Plan, as determined by the Municipal Engineer. All required permits from PA DEP must be obtained prior to approval.
- H. The Municipal Building Permit Office shall not issue a building permit for any Regulated Activity specified in Section 104 of this Ordinance if the Drainage Plan has been found to be inconsistent with the Stormwater Management Plan, as determined by the Municipal Engineer, or without considering the comments of the Municipal Engineer. All required permits from PA DEP must be obtained prior to issuance of a building permit.
- I. The Developer shall be responsible for completing an "As-Built Survey" of all stormwater management facilities included in the approved Drainage Plan. The As-Built Survey and an explanation of any discrepancies with the design plans shall be submitted to the Municipal Engineer for final approval. In no case shall the Municipality approve the As-Built Survey until the Municipality receives a copy of an approved Declaration of Adequacy, Highway Occupancy Permit from the PA DOT District Office and any applicable permits from PA DEP.
- J. The Municipality's approval of a Drainage Plan shall be valid for a period not to exceed three (3) years. This time period shall commence on the date that the Municipality signs the approved Drainage Plan. If stormwater management facilities included in the approved Drainage plan have not been constructed, or if an As-Built Survey of these facilities has not been approved within this time period, then the Municipality may consider the Drainage plan disapproved and may revoke any and all permits. Drainage Plans that are considered disapproved by the Municipality shall be resubmitted in accordance with Section 407 of this Ordinance.

Section 406. Modification of Plans

A modification to a submitted Drainage Plan for a development site that involves a change in stormwater management facilities or techniques, or that involves the relocation or re-design of stormwater management facilities, or that is necessary because soil or other conditions are not as stated on the Drainage Plan as determined by the Municipal Engineer, shall require a resubmission of the modified Drainage Plan consistent with Section 404 of this Ordinance and be subject to review as specified in Section 405 of this Ordinance.

A modification to an already approved or disapproved Drainage Plan shall be submitted to the Municipality accompanied by the applicable review fee. A modification to a Drainage Plan for which the Municipality has not taken a formal action shall be submitted to the Municipality, accompanied by the applicable Municipality Review Fee.

Section 407. Resubmission of Disapproved Drainage Plans

A disapproved Drainage Plan may be resubmitted, with the revisions addressing the Municipal Engineer's concerns documented in writing, to the Municipal Engineer in accordance with Section 404 of this Ordinance and be subject to review as specified in Section 405 of this Ordinance. The applicable Municipality Review Fee must accompany a resubmission of a disapproved Drainage Plan.

ARTICLE V-INSPECTIONS

Section 501. Schedule of Inspections

- A. The municipal Engineer or his/her municipal designee shall inspect all phases of the installation of the permanent BMPs and/or stormwater management facilities as deemed appropriate by the municipal Engineer.
- B. During any stage of the work, if the municipal Engineer or his/her municipal designee determines that the permanent BMPs and/or stormwater management facilities are not being installed in accordance with the approved stormwater management plan, the Municipality shall revoke any existing permits or other approvals and issue a cease and desist order until a revised drainage plan is submitted and approved, as specified in this Ordinance, and until the deficiencies are corrected.
- C. A final inspection of all BMPs and/or stormwater management facilities shall be conducted by the municipal Engineer or his municipal designee to confirm compliance with the approved drainage plan prior to the issuance of any occupancy permit.

ARTICLE VI-FEES AND EXPENSES

Section 601. General

The fees required by this Ordinance are the Municipal Review Fee and the Municipality Review Fee. The Municipal Review fee shall be established by the Municipality to defray review costs incurred by the Municipality and the Municipal Engineer. All fees shall be paid by the Applicant.

Section 602. Municipality Drainage Plan Review Fee

The Municipality shall establish a Review Fee Schedule by resolution of the municipal governing body based on the size of the Regulated Activity and based on the Municipality's costs for reviewing Drainage Plans. The Municipality shall periodically update the Review Fee Schedule to ensure that review costs are adequately reimbursed.

Section 603. Expenses Covered by Fees

The fees required by this Ordinance shall at a minimum cover:

- A. Administrative Costs.
- B. The review of the Drainage Plan by the Municipality and the Municipal Engineer.
- C. The site inspections.
- D. The inspection of stormwater management facilities and drainage improvements during construction.
- E. The final inspection upon completion of the stormwater management facilities and drainage improvements presented in the Drainage Plan.
- F. Any additional work required to enforce any permit provisions regulated by this Ordinance, correct violations and assure proper completion of stipulated remedial actions.

ARTICLE VII-MAINTENANCE RESPONSIBILITIES

Section 701. Performance Guarantee

The applicant should provide a financial guarantee to the Municipality for the timely installation and proper construction of all stormwater management controls as required by the approved stormwater plan and this Ordinance equal to the full construction cost of the required controls. Financial securities shall include, but are not limited to:

- A. Stormwater management / treatment facilities,
- B. Erosion and sediment pollution control facilities,
- C. Construction inspection, and
- D. Maintenance inspections for the first five (5) years.

Section 702. Maintenance Responsibilities

- A. The Drainage Plan for the development site shall contain an operation and maintenance plan prepared by the developer and approved by the municipal engineer. The operation and maintenance plan shall outline required routine maintenance actions and schedules necessary to insure proper operation of the facility(ies).

B. The Drainage Plan for the development site shall establish responsibilities for the continuing operating and maintenance of all proposed stormwater control facilities, consistent with the following principals:

1. If a development consists of structures or lots that are to be separately owned and in which streets, sewers and other public improvements are to be dedicated to the municipality, stormwater control facilities may also be dedicated to and maintained by the municipality.
2. If a development site is to be maintained in a single ownership or if sewers and other public improvements are to be privately owned and maintained then the ownership and maintenance of stormwater control facilities shall be the responsibility of the owner or private management entity.

C. The governing body, upon recommendation of the municipal engineer, shall make the final determination on the continuing maintenance responsibilities prior to final approval of the stormwater management plan. The governing body reserves the right to accept the ownership and operating responsibility for any or all of the stormwater management controls.

D. The owner of record is responsible for contacting the municipality for annual maintenance inspections of facilities during the first five (5) year period. Inspections thereafter are the responsibility of the facility owner or operator; however, the municipality retains the right of access and inspection if the owner or operator is not maintaining facilities in accordance with the recorded requirements.

Section 703. Maintenance Agreement for Privately Owned Stormwater Facilities

- A. Prior to final approval of the site's stormwater management plan, the property owner shall sign and record a maintenance agreement covering all stormwater control facilities that are to be privately owned. Said agreement, designated as Appendix C, is attached and made part hereto.
- B. Other items may be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities. The maintenance agreement shall be subject to the review and approval of the municipal solicitor and governing body.

Section 704. Municipal Stormwater Maintenance Fund

- A. If stormwater facilities are accepted by the municipality for dedication, persons installing stormwater storage facilities shall be required to pay a specified amount to the Municipal Stormwater Maintenance Fund to help defray costs of periodic inspections and maintenance expenses. The amount of the deposit shall be determined as follows:

1. If the stormwater facility is to be owned and maintained by the municipality, the deposit shall cover the estimated costs for maintenance and inspections for ten (10) years. The municipal engineer will establish the estimated costs utilizing information submitted by the applicant.
 2. The amount of the deposit to the fund shall be converted to present worth of the annual series values. The municipal engineer shall determine the present worth equivalents, which shall be subject to the approval of the municipal governing body.
- B. If a storage facility is proposed that also serves as a recreation facility (e.g. ball field, lake), the municipality may reduce or waive the amount of the maintenance fund deposit based upon the value of the land for public recreation purposes.
- C. If at some future time a storage facility (whether publicly or privately owned) is eliminated due to the installation of storm sewers or other storage facility, the unused portion of the maintenance fund deposit will be applied to the cost of abandoning the facility and connecting to the storm sewer system or other facility. Any amount of the deposit remaining after the costs of abandonment are paid will be returned to the depositor.

Section 705. Post-Construction Maintenance Inspections

- A. Basins should be inspected by the land owner/developer or responsible entity (including the municipal engineer for dedicated facilities) on the following basis:
1. Annually for the first 5 years by the municipal engineer.
 2. Once every 2 years thereafter by the landowner or operator,
 3. During or immediately after the cessation of a 100-year or greater storm event (by the municipal engineer during the initial 5-year period and by the landowner or operator thereafter).
- B. The entity conducting the inspection should be required to submit a report to the municipality regarding the condition of the facility and recommending necessary repairs, if needed.

ARTICLE VIII-ENFORCEMENT AND PENALTIES

Section 801. Right-of-Entry

Upon presentation of proper credentials, duly authorized representatives of the municipality may enter at reasonable times upon any property within the municipality to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Ordinance.

Section 802. Notification

In the event that a person fails to comply with the requirements of this Ordinance, or fails to conform to the requirements of any permit issued hereunder, the municipality shall provide written notification of the violation. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of these violations(s). Failure to comply within the time specified shall subject such person to the penalty provision of this Ordinance. All such penalties shall be deemed cumulative and shall not prevent the municipality from pursuing any and all other remedies. It shall be the responsibility of the owner of the real property on which any Regulated Activity is proposed to occur, is occurring or has occurred to comply with the terms and conditions of this Ordinance.

Section 803. Enforcement

The municipal governing body is hereby authorized and directed to enforce all of the provisions of this Ordinance. All inspections regarding compliance with the drainage plan shall be the responsibility of the municipal engineer or other qualified persons designated by the municipality.

- A. A set of design plans approved by the municipality shall be on file at the site throughout the duration of the construction activity. Periodic inspections may be made by the municipality or designee during construction.
- B. Adherence to Approved Plan
It shall be unlawful for any person, firm or corporation to undertake any regulated activity under Section 104 on any property except as provided for in the approved drainage plan and pursuant to the requirements of this Ordinance. It shall be unlawful to alter or remove any control structure required by the drainage plan pursuant to this Ordinance or to allow the property to remain in a condition that does not conform to the approved drainage plan.
- C. At the completion of the project and as a prerequisite for the release of the performance guarantee, the owner or his representatives shall:

1. Provide a certification of completion from an engineer, architect, surveyor or other qualified person verifying that all permanent facilities have been constructed according to the plans and specifications and approved revisions thereto.
 2. Provide a set of as-built drawings.
- D. After receipt of the certification by the municipality, a final inspection shall be conducted by the governing body or its designee to certify compliance with this Ordinance.
- E. Prior to revocation or suspension of a permit, the governing body will schedule a hearing to discuss the non-compliance if there is no immediate danger to life, public health or property.
- F. Suspension and Revocation of Permits
1. Any permit issued under this Ordinance may be suspended or revoked by the governing body for:
 - a) Non-compliance with or failure to implement any provision of the permit.
 - b) A violation of any provision of this Ordinance or any other applicable law, Ordinance, rule or regulation relating to the project.
 - c) The creation of any condition or the commission of any act during construction or development which constitutes or creates a hazard or nuisance, pollution or which endangers the life or property of others, or as outlined in Article IX of this Ordinance.
 2. A suspended permit shall be reinstated by the governing body when:
 - a) The municipal engineer or his designee has inspected and approved the corrections to the stormwater management and erosion and sediment pollution control measure(s) or the elimination of the hazard or nuisance and/or;
 - b) The governing body is satisfied that the violation of the Ordinance, law, or rule and regulation has been corrected.
 - c) A permit that has been revoked by the governing body cannot be reinstated. The applicant may apply for a new permit under the procedures outlined in this Ordinance.

G. Occupancy Permit

An occupancy permit shall not be issued unless the certification of compliance pursuant to Section 902.D has been secured. The occupancy permit shall be required for each lot owner and/or developer for all subdivisions and land development in the municipality.

Section 804. Public Nuisance

- A. The violation of any provision of this Ordinance is hereby deemed a Public Nuisance.
- B. Each day that a violation continues shall constitute a separate violation

Section 805. Penalties

- A. Anyone violating the provisions of this Ordinance shall be guilty of a misdemeanor and upon conviction shall be subject to a fine of not more than \$ 300.00 for each violation, recoverable with costs or imprisonment of not more than 90 days, or both. Each day that the violation continues shall be a separate offense.
- B. In addition, the municipality, through its solicitor, may institute injunctive, mandamus or any other appropriate action or proceeding at law or in equity for the enforcement of this Ordinance. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.

Section 806. Appeals

- A. Any person aggrieved by any action of the Municipality or its designee, relevant to the provisions of this Ordinance, may appeal to the Municipal Zoning Hearing Board within thirty (30) days of that action.
- B. Any person aggrieved by any decision of the Municipal Zoning Hearing Board, relevant to the provisions of this Ordinance, may appeal to the Dauphin County Court of Common Pleas within thirty (30) days of the Zoning Hearing Board's decision.

ENACTED and ORDAINED at a regular meeting of the Supervisors of Middle Paxton on the 5 th day of July, 2005. This Ordinance shall take effect immediately.

[Signature]
[Name],[Title]

[Signature]
[Name],[Title]

[Signature]
[Name],[Title]

[Signature]
[Name],[Title]

[Signature]
[Name],[Title]

ATTEST:

[Signature] J. Thomas
Vern Wagner
[name], Secretary (type or print)

I hereby certify that the foregoing Ordinance was advertised in the ^{Paxton News} [name of newspaper] on [date], a newspaper of general circulation in the municipality and was duly enacted and approved as set forth at a regular meeting of the Supervisors of Middle Paxton Township held on [date]. 7/5/05

[Signature]
[name], Secretary

APPENDIX A-STORMWATER MANAGEMENT DESIGN CRITERIA

TABLE A-1

DESIGN STORM RAINFALL AMOUNT

Return Interval (Year)	24-hour Rainfall Total (inches)
2	3.00
5	3.60
10	4.60
25	5.50
50	6.50
100	7.40

TABLE A-2
RUNOFF CURVE NUMBERS
(FROM NRCS (SCS) TR-55)

Runoff Curve Numbers for Urban Areas					
Cover Description		Curve Numbers for Hydrologic Soil Groups			
Cover Type and Hydrologic Condition	Average % Impervious Area	A	B	C	D
<i>Fully Developed Urban Areas (Vegetation Established)</i>					
Open Space (lawns, parks, golf courses, etc)					
Poor Condition (grass cover < 50%)					
Fair Condition (grass cover 50% to 75%)		68	79	86	89
Good Condition (grass cover > 75%)		49	69	79	84
Impervious Areas		39	61	74	80
Paved Parking Lots, Roofs, Driveways, etc.					
Streets and Roads		98	98	98	98
Paved: Curbed and Storm Sewers					
Paved: Open Ditches		98	98	98	98
Gravel		83	89	92	93
Dirt		76	85	89	91
Western Desert Urban Areas		72	82	87	89
Natural Desert Landscaping (pervious area only)					
Artificial Desert Landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		63	77	85	88
Urban Districts					
Commercial and Business					
Industrial	85%	89	92	94	95
Residential Districts by Average Lot Size	72%	81	88	91	93
1/8 Acres					
1/4 Acre	65%	77	85	90	92
1/3 Acre	38%	61	75	83	87
1/2 Acre	30%	57	72	81	86
1 Acre	25%	54	70	80	85
2 Acres	20%	51	68	79	84
	12%	46	65	77	82
Runoff Curve Numbers for Cultivated Agricultural Lands					

Cover Description			Curve Numbers for Hydrologic Soil Groups			
Cover Type	Treatment	Hydrologic Condition	A	B	C	D
Fallow	Bare Soil	--	77	86	91	94
	Crop Residue Cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row Crops	Straight Row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & Terraced (C & T)	Poor	66	74	80	82
		Good	62	71	78	81
	C & T + CR	Poor	65	73	79	81
		Good	61	70	77	80
Small Grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C & T	Poor	61	72	79	82
		Good	59	70	78	81
	C & T + CR	Poor	60	71	78	81
		Good	58	69	77	80
Close Seeded or Broadcast Legumes Or Rotation Meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C & T	Poor	63	73	80	83
		Good	51	67	76	80

Runoff Curve Numbers for Other Agricultural Lands

Cover Description		Curve Numbers for Hydrologic Soil Groups			
Cover Type	Hydrologic Condition	A	B	C	D
Pasture, Grassland, or Range – Continuous Forage for Grazing	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow – Continuous Grass, Protected from Grazing and Generally Mowed for Hay	--	30	58	71	78
Brush – Brush, Weed, Grass Mixture with brush the major element	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30	48	65	73
Woods – Grass Combination (orchard or tree farm)	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30	55	70	77
Farmsteads – Buildings, Lanes, Driveways and Surrounding Lots.	--	59	74	82	86
Runoff Curve Numbers for Cultivated Agricultural Lands					
Cover Description		Curve Numbers for Hydrologic Soil Groups			
Cover Type	Hydrologic Condition	A	B	C	D
Herbaceous – Mixture of Grass, Weeds and Low-Growing Brush, With Brush the Minor Element.	Poor	--	80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-Aspen – Mountain Brush Mixture of Oak Brush, Aspen, Mountain Mahogany, Bitter Brush, Maple and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-Juniper – Pinyon, Juniper, or both; Grass under story.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush With Grass under story.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert Shrub – Major Plants Include Saltbrush, Greasewood, Creosotebush, Blackbrush, Bursage, Palo Verde, Mesquite and Cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

TABLE A-3

RATIONAL RUNOFF COEFFICIENTS

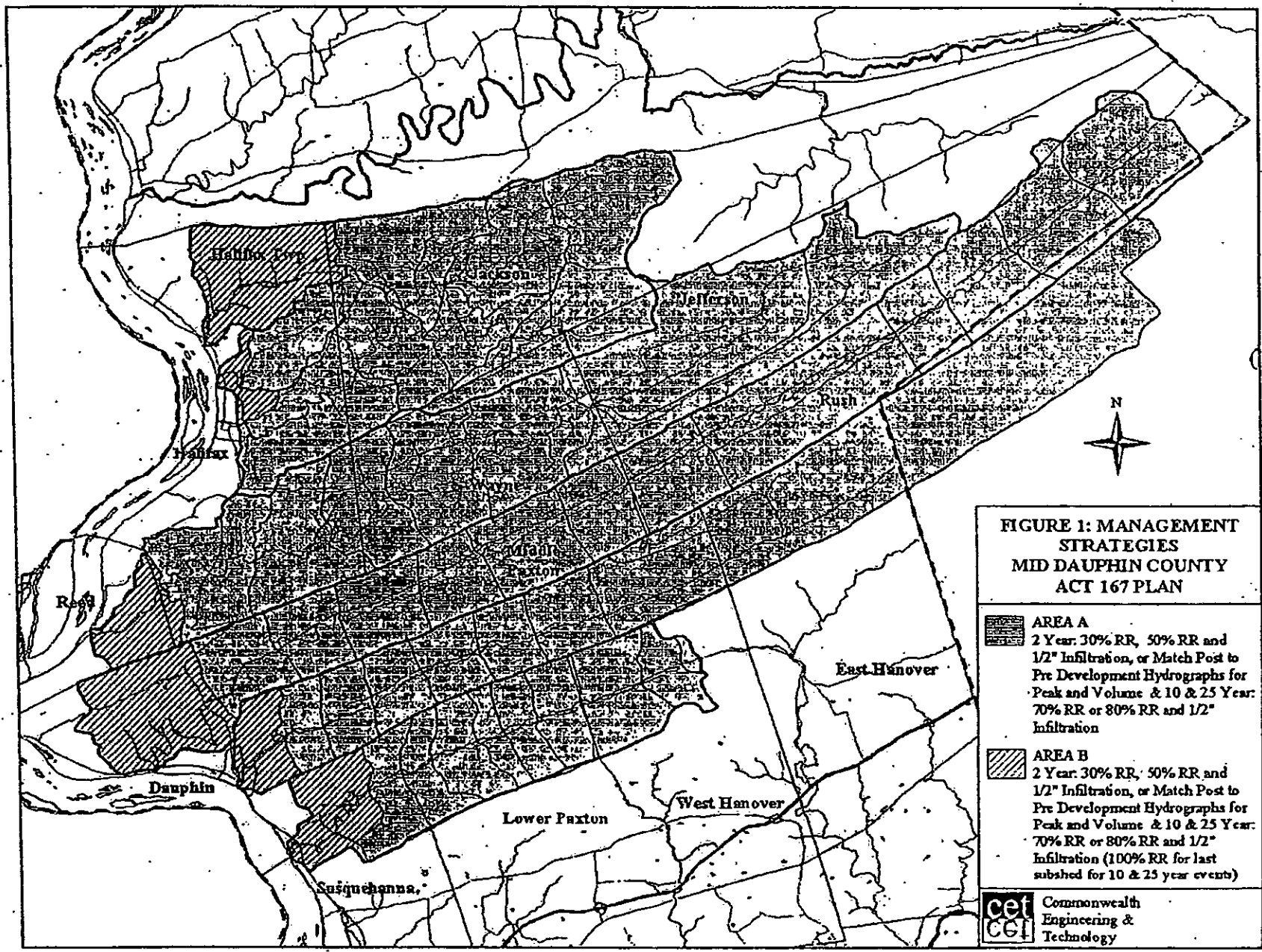
Character of Surface	Return Period (Yrs)						
	2	5	10	25	50	100	500
Developed							
Asphaltic	0.73	0.77	0.81	0.86	0.90	0.95	1.00
Concrete/Roof	0.75	0.80	0.83	0.88	0.92	0.97	1.00
Grass Areas (<i>lawn, parks, etc</i>)							
Poor condition (grass cover less than 50% of the area)							
Flat, 0-2%	0.32	0.34	0.37	0.40	0.44	0.47	0.58
Average, 2-7%	0.37	0.40	0.43	0.46	0.49	0.53	0.61
Steep, over 7%	0.42	0.43	0.45	0.49	0.52	0.55	0.62
Fair condition (grass cover on 50% to 75% of the area)							
Flat, 0-2%	0.25	0.28	0.30	0.34	0.37	0.41	0.53
Average, 2-7%	0.33	0.36	0.38	0.42	0.45	0.49	0.58
Steep, over 7%	0.37	0.40	0.42	0.46	0.49	0.53	0.60
Good condition (grass cover larger than 75% of the area)							
Flat, 0-2%	0.21	0.23	0.25	0.29	0.32	0.36	0.49
Average, 2-7%	0.29	0.32	0.35	0.39	0.42	0.46	0.56
Steep, over 7%	0.34	0.37	0.40	0.44	0.47	0.51	0.58
Undeveloped							
Cultivated Land							
Flat, 0-2%	0.31	0.34	0.36	0.40	0.43	0.47	0.57
Average, 2-7%	0.35	0.38	0.41	0.44	0.48	0.51	0.60
Steep, over 7%	0.39	0.42	0.44	0.48	0.51	0.54	0.61
Pasture/Range							
Flat, 0-2%	0.25	0.28	0.30	0.34	0.37	0.41	0.53
Average, 2-7%	0.33	0.36	0.38	0.42	0.45	0.49	0.58
Steep, over 7%	0.37	0.40	0.42	0.46	0.49	0.53	0.60
Forest/Woodlands							
Flat, 0-2%	0.22	0.25	0.28	0.31	0.35	0.39	0.48
Average, 2-7%	0.31	0.34	0.36	0.40	0.43	0.47	0.56
Steep, over 7%	0.35	0.39	0.41	0.45	0.48	0.52	0.58

TABLE A-4

MANNING ROUGHNESS COEFFICIENTS

Material	Typical Manning Roughness Coefficient
Concrete	0.012
Gravel Bottom with Sides - Concrete	0.02
- Mortared Stone	0.023
- RipRap	0.033
Natural Stream Channels	
Clean, Straight Stream	0.030
Clean, Winding Stream	0.040
Winding With Weeds and Pools	0.050
With Heavy Brush and Timber	0.100
Flood Plains	
Pasture	0.035
Field Crops	0.040
Light Brush and Weeds	0.050
Dense Brush	0.070
Dense Trees	0.100

TABLE A-5



ERODIBLE SOILS IN PENNSYLVANIA
(PA DEP Erosion and Sediment Pollution Control Program Manual, March 2000)

Series	Texture	K
Abbotstown	Loam, Silty Loam	43
Aldino	Silt, Silt Loam	43
Alto	Silt Loam, Silty Clay Loam	43
Baile	Silt Loam, Loam, Silty Clay Loam	43
Bedford	Silt Loam	43
Beltsville	Silt Loam, Loam	43
Birdsall	Silt Loam, Very Fine Silt Loam	49
Blairton	Silt Loam, Loam	43
Brooke	Silty Clay Loam, Clay Loam, Silty Clay	43
Bullertown	Silt Loam, Loam, very fine sandy Loam	43
Cambridge	Silt Loam, Loam	43
Cambridge	Gravelly Silt Loam, Gravelly Loam	43
Canadota	Silty Clay Loam, Silt Loam	49
Canadota	Silt Loam, Silty Clay Loam	43
Captina	Silt Loam	43
Chalfont	Silt Loam	49
Cobowinbo	Silt Loam, Silty Clay Loam	43
Croton	Silt Loam, Silty Clay Loam	43
Delton	Silt Loam, Very Fine Sandy Loam	49
Dormont	Silt Loam	43
Doylestown	Silt Loam, Silty Clay Loam	43
Ernest	Silt Loam, Loam	43
Giral	Silt Loam, Loam	43
Guernsey	Silt Loam, Silty Clay Loam	43
Guthrie	Silt Loam	43
Haven	Loam, Silt Loam, Very Fine Sandy Loam	43
Hollinger	Silt Loam, Loam	43
Howell	Fine Sandy Loam, Loam, Silt Loam	43
Karona	Silty Clay Loam, Loam, Silt Loam	43
Karona	Shaly Silty Clay Loam, Shaly Loam, Shaly Silt Loam	43
Lawrence	Silt Loam	43
Lawrenceville	Silt Loam, Loam	43
Leadville	Silt Loam, Loam, Fine Sandy Loam	43
Leont	Silt Loam, Loam	43
Lickdale	Loam, Silt Loam	43
Mahoning	Silt Loam, Loam	43
Mahoning	Loam, Silt Loam	43
Melvin	Silt Loam, Loam, Fine Sandy Loam, Silty Clay Loam	43
Monongahela	Fine Sandy Loam, Loam, Silt Loam	43
Newark	Silt Loam, Loam, Silty Clay Loam	43
Noll	Silt Loam, Silty Clay Loam	43
Opequot	Silt Loam	43
Pakitz	Silt Loam, Loam	43
Penlaw	Silt Loam	43
Pequea	Silt Loam, Loam	43

Unlisted soils and textures have K factors < 0.37 and are considered to be erosion resistant.

**TABLE A-5
ERODIBLE SOILS IN PENNSYLVANIA**

(PA DEP Erosion and Sediment Pollution Control Program Manual, March 2000)

Series*	Texture	K
Plateau	Silt Loam	43
Purdy	Silt Loam, Loam, Silty Clay Loam	43
Rainsboro	Silt Loam	43
Readington	Silt Loam, Loam	43
Reaville	Silt Loam	43
Rohrerstown	Silty Clay Loam, Silt Loam	43
Rowland	Silt Loam, Loam, Sandy Loam	43
Scio	Silt Loam, Very Fine sandy Loam	49
Steff	Silt Loam, Loam	43
Tilgh	Silt Loam, Loam	43
Towhee	Silt Loam	43
Tygart	Silt Loam, Loam	43
Tyler	Silt Loam	43
Unadilla	Silt Loam, Very Fine sandy Loam	49
Upshur	Silt Loam, Silty Clay Loam	43
Urbana	Silt Loam	43
Wallington		49
Warners		43
Watchung	Silt Loam, Loam, Silty Clay Loam	43
Watchung	V. Stony Silt Loam, v. St'y Loam, St'y Silty Clay Loam	43
Watchung	Ex. St'y Silt Loam, Ex. St'y Loam, Ex. St'y Silty cl. Loam	43
Wayland	Silt Loam, Silty clay Loam	43
Williamson	Silt Loam, fine sandy Loam, very fine sandy Loam	49
Zipp	Silt Loam, Loam, Silty clay Loam	43

* Unlisted soils and textures have K factors ≤ 0.37 and are considered to be erosion resistant

APPENDIX B-SAMPLE DRAINAGE PLAN APPLICATION AND FEE SCHEDULE

DRAINAGE PLAN APPLICATION

(To be attached to the "land subdivision plan or development plan review application
Or "minor land subdivision plan review application")

Application is hereby made for review of the stormwater management and erosion and
Sedimentation control plan and related data as submitted herewith in accordance with
The Middle Paxton Township Stormwater Management and Earth Disturbance
Ordinance.

_____ final plan _____ preliminary plan _____ sketch plan

Date of submission: _____ submission no.: _____

1. Name of subdivision or
development _____

Name of applicant _____ Telephone No. _____

(If corporation, list the corporation's name and the names of two officers of the corporation)

Address _____

City _____ Zip Code _____

Applicant's interest in subdivision or development _____
(If other than property owner give owners name and address)

3. Name of property owner _____ Telephone No. _____
Address _____ City _____
Zip Code _____

Name of engineer or surveyor _____

Telephone no. _____ Address _____

City _____ Zip Code _____

4. Type of subdivision or development proposed:

<input type="checkbox"/> Single Family lots	<input type="checkbox"/> Townhouses	<input type="checkbox"/> Commercial (multi lot)
<input type="checkbox"/> Two Family lots	<input type="checkbox"/> Garden Apartments	<input type="checkbox"/> Commercial (one lot)
<input type="checkbox"/> Cluster lots	<input type="checkbox"/> Campground	<input type="checkbox"/> Industrial (one lot)
<input type="checkbox"/> Planned Residential	<input type="checkbox"/> Other	

If other, describe type of development _____

6. Lineal feet of new road proposed? _____ l.f.

7. Area of proposed and existing impervious area on entire tract.

a. Existing (to remain) _____ s.f. _____ % of property

b. Proposed _____ s.f. _____ % of property

8. Stormwater

a. Does the peak rate of runoff from proposed conditions exceed that flow which occurred for predevelopment conditions for the designated design storm?

b. Design storm utilized (on-site conveyance systems) (24 hr.)
(Check one)

- no. of sub area _____
- watershed name _____
- If other, explain:

c. Does the submission meet the release rate and/or district criteria for the applicable sub area?

d. Number of sub areas from Plate 1, of the _____ Watershed
Stormwater Management Plan.

e. Type of proposed runoff control _____

f. Does the proposed stormwater control criteria meet the requirement/guidelines of the stormwater Ordinance? _____

g. Does the plan meet the requirements of Article III of the stormwater Ordinance? _____

h. Was TR-55, June 1986 utilized in determining the time of concentration? _____

i. What hydrologic method was used in the stormwater computations?

j. Is a hydraulic routing through the stormwater control structure submitted?

k. Is a construction schedule or staging attached? _____

l. Is a recommended maintenance program attached? _____

9. Has an Erosion and sediment pollution control (E&S Plan) been submitted to the County Conservation District?

a. Total area of earth disturbance _____ s.f.

10. Wetlands

a. Have the wetlands been delineated by someone trained in wetland delineation?

b. Have the wetland lines been verified by a state or federal permitting authority?

c. Have the wetland lines been surveyed? _____

d. Total acreage of wetland within the property _____

e. Total acreage of wetland disturbed _____

f. Supporting documentation _____

11. Filing

a. Has the required fee been submitted? _____

amount \$ _____

b. Has the proposed schedule of construction inspection to be performed by the applicant's engineer been submitted? _____

c. Name of individual who will be making the inspections _____

d. General comments about stormwater management at development site

CERTIFICATE OF OWNERSHIP AND ACKNOWLEDGMENT OF APPLICATION:
COMMONWEALTH OF PENNSYLVANIA COUNTY OF _____

On this the _____ day of _____, 20____, before me, the undersigned officer, personally appeared _____ who being duly sworn, according to law, deposes and says that _____ owners of the property described in this application and that the application was made with _____ knowledge and/or direction and does hereby agree with the said application and to the submission of the same.

Property Owner(s)

My Commission Expires _____, 20____

Notary Public

THE UNDERSIGNED HEREBY CERTIFIES THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF THE INFORMATION AND STATEMENTS GIVEN ABOVE ARE TRUE AND CORRECT.

SIGNATURE OF APPLICANT _____

This Information To Be Completed By The Municipality

Middle Paxton Township Official Submission Receipt

Date complete application received _____ plan number _____

Fees _____ date fees paid _____ received by _____

Official submission receipt date _____

Received by _____

FEE SCHEDULE

Middle Paxton Township

Drainage Plan Schedule of Fees

	<u>Residential</u>	<u>Non-Residential</u>
<u>Filing Fee</u>	\$50.00	\$100.00
<u>Deposit Amounts*</u>		
1-3 Lots or less than 10 acres	\$500.00	\$1000.00
4-10 Lots or less than 20 acres	\$1000.00	\$1500.00
11+ Lots or more than 20 acres	\$1500.00 plus \$50.00 per acre or lot	\$2000.00 plus \$50.00 per acre or lot
<u>Modification Requests (per request)</u>	\$25.00	\$50.00
<u>Sketch Plan Concept Reviews</u>	\$200.00	\$500.00
<u>Construction Inspection Fee</u> Estimated amount needs to be Included in Improvement Guarantee	Actual cost incurred	
<u>Post Construction Inspection Fee</u> five year review period, posted at completion of work before occupancy permit issued, and must be noted on approved plan with responsible person noted.	\$300.00 per lot or \$500.00 for 1-4 lot Subdivision with combined B.M.P.'s, \$750.00 for 4-10 lots, \$1000.00 for subdivision greater than 10 lots plus \$100.00 per B.M.P.	

Notes:

Filing Fee -- Non-refundable

*Deposit Amounts -- If cost incurred is less than deposit, a refund will be issued.

If the Deposit balance falls below \$200.00, an additional \$500.00 will be requested to cover any future engineering review fees.

If the Deposit account has a negative balance, no extension of time request will be granted, or permits issued until the account is paid in full.

CALCULATED SUBMISSION FEE

Middle Paxton Township

Drainage Plan

Subdivision name _____ Submittal No. _____

Owner _____ Date _____

Engineer _____

Filing Fee..... _____

Deposit Amount- #Lots _____ - Base..... _____

Additional Amount..... _____

Modification Request - #..... _____

Other..... _____

TOTAL..... _____

Appendix C

STANDARD STORMWATER FACILITIES MAINTENANCE AND MONITORING AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 20____, by and between _____, (hereinafter the "Landowner") and Middle Paxton Township, Dauphin County; Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of _____ County, Pennsylvania, Deed Book _____ at Page _____, (hereinafter "Property").

WHEREAS, the Landowner is proceeding to build and develop the Property; and

WHEREAS, the Subdivision/Land Management Plan (hereinafter "Plan") for the _____ Subdivision which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for detention or retention of stormwater within the confines of the Property; and

WHEREAS, the Municipality and the Landowner, his successors and assigns agree that the health, safety and welfare of the residents of the Municipality require that on-site stormwater management facilities be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of the _____ Watershed Stormwater Management Plan, that stormwater management facilities as shown on the Plan be constructed and adequately maintained by the Landowner, his successors and assigns.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management facilities shall be constructed by the Landowner, his successors and assigns, in accordance with the terms, conditions and specifications identified in the Plan.
2. The Landowner, his successors and assigns, shall maintain the stormwater management facilities in good working condition, acceptable to the Municipality so that they are performing their design functions
3. The Landowner, his successors and assigns, hereby grants permission to the Municipality, his authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times to inspect the stormwater management facilities whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper

functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access roads, etc. When inspections are conducted, the Municipality shall give the Landowner, his successors and assigns, copies of the inspection report with findings and evaluations. At a minimum, maintenance inspections shall be performed in accordance with the following schedule:

- Annually for the first 5 years after the construction of the stormwater facilities,
 - Once every 2 years thereafter, or
 - During or immediately upon the cessation of a 100 year or greater precipitation event.
4. All reasonable costs for said inspections shall be born by the Landowner and payable to the Municipality.
 5. The owner shall convey to the municipality easements and/or rights-of-way to assure access for periodic inspections by the municipality and maintenance if required.
 6. In the event the Landowner, his successors and assigns, fails to maintain the stormwater management facilities in good working condition acceptable to the Municipality, the Municipality may enter upon the property and take such necessary and prudent action to maintain said stormwater management facilities and to charge the costs of the maintenance and/or repairs to the Landowner, his successors and assigns. This provision shall not be construed as to allow the Municipality to erect any structure of a permanent nature on the land of the Landowner outside of any easement belonging to the Municipality. It is expressly understood and agreed that the Municipality is under no obligation to maintain or repair said facilities and in no event shall this Agreement be construed to impose any such obligation on the Municipality.
 7. The Landowner, his successors and assigns, will perform maintenance in accordance with the maintenance schedule for the stormwater management facilities including sediment removal as outlined on the approved schedule and/or Subdivision/Land Management Plan.
 8. In the event the Municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials and the like on account of the Landowner's or his successors' and assigns' failure to perform such work, the Landowner, his successors and assigns, shall reimburse the Municipality upon demand, within 30 days of receipt of invoice thereof, for all costs incurred by the Municipality hereunder. If not paid within said 30-day period, the Municipality may enter a lien against the property in the amount of such costs or may proceed to recover his costs through proceedings in equity or at law as authorized under the provisions of the _____ Code.
 9. The Landowner, his successors and assigns, shall indemnify the Municipality and his agents and employees against any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the Municipality for the construction, presence, existence or maintenance of the stormwater management facilities by the Landowner, his successors and assigns.

10. In the event a claim is asserted against the Municipality, his agents or employees, the Municipality shall promptly notify the Landowner, his successors and assigns and they shall defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, his agents or employees shall be allowed, the Landowner, his successors and assigns shall pay all costs and expenses in connection therewith.
11. In the advent of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Landowner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the landowner of any inspection, maintenance, or repair undertaken within 5 days of the activity. The Landowner shall reimburse the Municipality for his costs.

This Agreement shall be recorded among the land records of Dauphin County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude and shall be binding on the Landowner, his administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

ATTEST:

WITNESS the following signatures and seals:

(SEAL)

For the Municipality:

Landowner:

(SEAL)

For the

ATTEST:

_____ (City, Borough, Township)

County of _____, Pennsylvania

I, _____, a Notary Public in and for the County and State aforesaid, whose commission expires on the _____ day of _____, 20__, do hereby certify that _____ whose name(s) is/are signed to the foregoing Agreement bearing date of the _____ day of _____, 20__, has acknowledged the same before me in my said County and State.

GIVEN UNDER MY HAND THIS _____ day of _____, 20__.

NOTARY PUBLIC (SEAL)

Figure D.1 SCS Graphical Method of Determining Peak Discharge (q_u) in csm/in
For 24-Hour Type II Storm Distribution

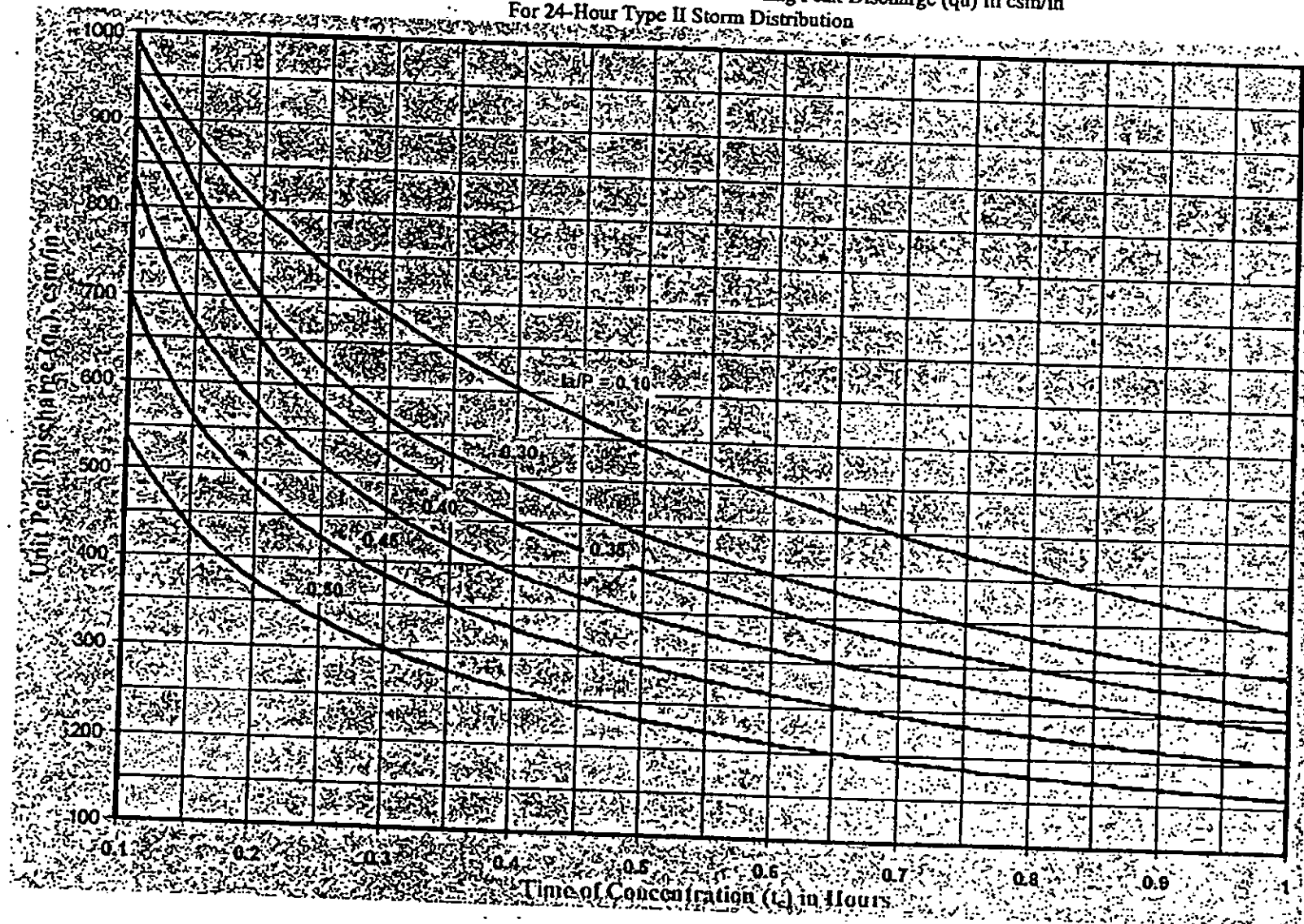


Figure D.2 Detention Time Versus Discharge Ratios (q_0/q_i)

