**ARTICLE 6**

**SUPPLEMENTARY FLOODPLAIN MANAGEMENT REGULATIONS**

# **STATUTORY AUTHORIZATION**

The Legislature of the Commonwealth of Pennsylvania has, by the passage of the Pennsylvania Flood Plain Management Act of 1978, delegated the responsibility to local governmental units to adopt floodplain management regulations to promote public health, safety, and the general welfare of its citizenry. Therefore, the *Board of Supervisors* of the *Township of Piatt* does hereby order as follows.

# **General Provisions**

## Intent

The intent of this Article is to:

1. Promote the general health, welfare, and safety of the community.
2. Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future.
3. Minimize danger to public health by protecting water supply and natural drainage.
4. Reduce financial burdens imposed on the community, its governmental units, and its residents, by preventing excessive development in areas subject to flooding.
5. Comply with federal and state floodplain management requirements.

## Applicability

It shall be unlawful for any person, partnership, business or corporation to undertake, or cause to be undertaken, any construction or development anywhere within the Township of Piatt unless a Permit has been obtained from the Floodplain Administrator Abrogation and Greater Restrictions

This Article supersedes any other conflicting provisions which may be in effect in identified floodplain areas. However, any other ordinance provisions shall remain in full force and effect to the extent that those provisions are more restrictive. If

there is any conflict between any of the provisions of this Article, the more restrictive shall apply.

## Severability

If any section, subsection, paragraph, sentence, clause, or phrase of this Article shall be declared invalid for any reason whatsoever, such a decision shall not affect the remaining portions of the Article, which shall remain in full force and effect, and for this purpose the provisions of this Article are hereby declared to be severable.

## Warning and Disclaimer of Liability

The degree of flood protection sought by the provisions of this Article is considered reasonable for regulatory purposes and is based on accepted engineering methods of study. Larger floods may occur or flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Article does not imply that areas outside any identified floodplain areas, or that land uses permitted within such areas will be free from flooding or flood damages.

This Article shall not create liability on the part of the Township of Piatt or any officer or employee thereof for any flood damages that result from reliance on this Article, or any administrative decision lawfully made thereunder.

# **ADMINISTRATION**

## Designation of the Floodplain Administrator

The Emergency Management Officer is hereby appointed to administer and enforce this Article and is referred to herein as the Floodplain Administrator. The Floodplain Administrator may: (A) Fulfill the duties and responsibilities set forth in these regulations, (B) Delegate duties and responsibilities set forth in these regulations to qualified technical personnel, plan examiners, inspectors, and other employees, or (C) Enter into a written agreement or written contract with another agency or private sector entity to administer specific provisions of these regulations. Administration of any part of these regulations by another entity shall not relieve the community of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 C.F.R. Section 59.22.

In the absence of a designated Floodplain Administrator, the Floodplain Administrator duties are to be fulfilled by the Chairman of the Board of Supervisors.

## Permits Required

A Permit shall be required before any construction or development is undertaken within any area of the Township of Piatt.

## Duties and Responsibilities of the Floodplain Administrator

1. The Floodplain Administrator shall issue a Permit only after it has been determined that the proposed work to be undertaken will be in conformance with the requirements of this and all other applicable codes and ordinances.
2. Prior to the issuance of any permit, the Floodplain Administrator shall review the application for the permit to determine if all other necessary government permits required by state and federal laws have been obtained, such as those required by the Pennsylvania Sewage Facilities Act (Act 1966-537, as amended); the Pennsylvania Dam Safety and Encroachments Act (Act 1978-325, as amended); the Pennsylvania Clean Streams Act (Act 1937-394, as amended); and the U.S. Clean Water Act, Section 404, 33, U.S.C. 1344. No permit shall be issued until this determination has been made.
3. In the case of existing structures, prior to the issuance of any Development/Permit, the Floodplain Administrator shall review the proposed cost of improvements or repairs and the pre-improvement market value of the structure, so that a substantial improvement/substantial damage determination can be made, in accordance with FEMA’s Substantial Improvement/Substantial Damage Desk Reference.
4. During the construction period, the Floodplain Administrator or other authorized official shall inspect the premises to determine that the work is progressing in compliance with the information provided on the permit application and with all applicable municipal laws and ordinances. He/she shall make as many inspections during and upon completion of the work as are necessary.
5. In the discharge of his/her duties, the Floodplain Administrator shall have the authority to enter any building, structure, premises or development in the identified floodplain area, upon presentation of proper credentials, at any reasonable hour to enforce the provisions of this Article.
6. In the event the Floodplain Administrator discovers that the work does not comply with the permit application or any applicable laws and ordinances, or that there has been a false statement or misrepresentation by any

applicant, the Floodplain Administrator shall revoke the Permit and report such fact to the Board of Supervisors for whatever action it considers necessary.

1. The Floodplain Administrator shall maintain in perpetuity, or for the lifetime of the structure, all records associated with the requirements of this Article including, but not limited to, finished construction elevation data, permitting, inspection and enforcement.
2. The Floodplain Administrator is the official responsible for submitting a biennial report to FEMA concerning community participation in the National Flood Insurance Program as requested.
3. The responsibility, authority and means to implement the commitments of the Floodplain Administrator can be delegated from the person identified. However, the ultimate responsibility lies with the person identified in the floodplain Article as the floodplain administrator/manager.
4. The Floodplain Administrator shall consider the requirements of the 34 PA Code and the 2015 IBC and the 2015 IRC, or the latest revision thereof as adopted by the Commonwealth of Pennsylvania.

## Application Procedures and Requirements

1. Application for such a Permit shall be made, in writing, to the Floodplain Administrator on forms supplied by the Township of Piatt. Such application shall contain the following:
   * + 1. Name and address of applicant.
       2. Name and address of owner of land on which proposed construction is to occur.
       3. Name and address of contractor.
       4. Site location including address.
       5. Listing of other permits required.
       6. Brief description of proposed work and estimated cost, including a breakout of flood-related cost and the market value of the building before the flood damage occurred where appropriate.
       7. A plan of the site showing the exact size and location of the proposed construction as well as any existing buildings or structures.
2. If any proposed construction or development is located entirely or partially within any identified floodplain area, applicants for Permits shall provide all the necessary information in sufficient detail and clarity to enable the Floodplain Administrator to determine that:
   * + 1. all such proposals are consistent with the need to minimize flood damage and conform with the requirements of this and all other applicable codes and ordinances;
       2. all utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damage;
       3. adequate drainage is provided so as to reduce exposure to flood hazards;
       4. structures will be anchored to prevent floatation, collapse, or lateral movement;
       5. building materials are flood-resistant;
       6. appropriate practices that minimize flood damage have been used; and
       7. electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities have been designed and located to prevent water entry or accumulation.
3. Applicants shall file the following minimum information plus any other pertinent information as may be required by the Floodplain Administrator to make the above determination:
   * + 1. A completed Permit Application Form.
       2. A plan of the entire site, clearly and legibly drawn at a scale of one (1) inch being equal to one hundred (100) feet or less, showing the following:
          1. north arrow, scale, and date;
          2. topographic contour lines, if available;
          3. the location of all existing and proposed buildings, structures, and other improvements, including the location of any existing or proposed subdivision and development
          4. the location of all existing streets, drives, and other access ways; and
          5. the location of any existing bodies of water or watercourses, identified floodplain areas, and, if available, information pertaining to the floodway, and the flow of water including direction and velocities.
       3. Plans of all proposed buildings, structures and other improvements, drawn at suitable scale showing the following:
          1. the proposed lowest floor elevation of any proposed building based upon North American Vertical Datum of 1988;
          2. the elevation of the base flood;
          3. supplemental information as may be necessary under 34 PA Code, the 2015 IBC or the 2015 IRC, or the latest revision thereof as adopted by the Commonwealth of Pennsylvania.
       4. The following data and documentation:
          1. detailed information concerning any proposed floodproofing measures and corresponding elevations.
          2. if available, information concerning flood depths, pressures, velocities, impact and uplift forces and other factors associated with a base flood.
          3. documentation, certified by a registered professional engineer or architect, to show that the effect of any proposed development within an AE Area/District Floodway Area (See section 603 B) will not increase the base flood elevation at any point. This includes a Floodway Area for areas where no FEMA maps or studies have defined the boundary of the 1 percent annual chance flood floodway, where 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/
          4. a document, certified by a registered professional engineer or architect, which states that the proposed construction or development has been adequately designed to withstand the pressures, velocities, impact and uplift forces associated with the base flood

Such statement shall include a description of the type and extent of flood proofing measures which have been incorporated into the design of the structure and/or the development.

* + - * 1. detailed information needed to determine compliance with Section 604 C.6, Storage, and Section 604 D, Development Which May Endanger Human Life, including:

the amount, location and purpose of any materials or substances referred to in Sections 604 C.6.and 604 D, which are intended to be used, produced, stored or otherwise maintained on site.

a description of the safeguards incorporated into the design of the proposed structure to prevent leaks or spills of the dangerous materials or substances listed in Section 604 C.6during a base flood.

* + - * 1. the appropriate component of the Department of Environmental Protection's "Planning Module for Land Development."
        2. where any excavation or grading is proposed, a plan meeting the requirements of the Department of Environmental Protection, to implement and maintain erosion and sedimentation control.
      1. Applications for Permits shall be accompanied by a fee, payable to the municipality as established by separate Township Ordinance or Resolution.

## Review of Application by Others

A copy of all plans and applications for any proposed construction or development in any identified floodplain area to be considered for approval may be submitted by the Floodplain Administrator to any other appropriate agencies and/or individuals (e.g. planning commission, municipal engineer, County Conservation District, etc.) for review and comment.

## Changes

After the issuance of a Permit by the Floodplain Administrator, no changes of any kind shall be made to the application, permit or any of the plans, specifications or other documents submitted with the application without the written consent or

approval of the Floodplain Administrator. Requests for any such change shall be in writing, and shall be submitted by the applicant to Floodplain Administrator for consideration.

## Placards

In addition to the Permit, the Floodplain Administrator shall issuea placard, or similar document, which shall be displayed on the premises during the time construction is in progress. This placard shall show the number of the Permit, the date of its issuance, and be signed by the Floodplain Administrator.

## Start of Construction

1. Work on the proposed construction or development shall begin within 180 days after the date of issuance of the development permit. Work shall also be completed within twelve (12) months after the date of issuance of the permit or the permit shall expire unless a time extension is granted, in writing, by the Floodplain Administrator. The issuance of development permit does not refer to the zoning approval.
2. The actual start of construction means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.  Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.  For a substantial improvement, the actual start of construction means the first, alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
3. Time extensions shall be granted only if a written request is submitted by the applicant, who sets forth sufficient and reasonable cause for the Floodplain Administrator to approve such a request and the original permit is compliant with the Article & FIRM/FIS in effect at the time the extension is granted.

## Enforcement

1. Notices

Whenever the Floodplain Administrator or other authorized municipal representative determines that there are reasonable grounds to believe that there has been a violation of any provisions of this Article, or of any regulations adopted pursuant thereto, the governing body or, with the approval of the governing body an officer of the municipality shall give written notice of such alleged violation in accordance with Article 12 of this Ordinance.

1. Causes of Action and Statutory Enforcement

The governing body or, with the approval of the governing body an officer of the municipality may take necessary action and enforcement measures in accordance with Article 12 of this Ordinance.

1. Appeals

Any person aggrieved by any action or decision of the Floodplain Administrator concerning the administration of the provisions of this Article, may appeal to the Township of Piatt Zoning Hearing Board in accordance with Article 10 of this Ordinance

# **IDENTIFICATION OF FLOODPLAIN AREAS**

## Identification

The identified floodplain area shall be:

1. any areas of the Township of Piatt, classified as Special Flood Hazard Areas (SFHAs) in the Flood Insurance Study (FIS) and the accompanying Flood Insurance Rate Maps (FIRMs) dated June, 02, 2016 and issued by the Federal Emergency Management Agency (FEMA) or the most recent revision thereof, including all digital data developed as part of the Flood Insurance Study and,
2. any area 50 feet from the top of bank of any watercourse without an established SFHA in the FIS. See Article IX Definitions for definition of Watercourse and Watercourse Top of Bank.

The above referenced FIS and FIRMs, and any subsequent revisions and amendments are hereby adopted by *the Township of Piatt* and declared to be a part of this Article.

## Description and Special Requirements of Identified Floodplain Areas

The identified floodplain area shall consist of the following specific areas:

1. The Floodway Area shall be those areas identified in the FIS and the FIRM as floodway and which represent the channel of a watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without increasing the water surface elevation by more than one (1) foot at any point.
   * + 1. This term shall also include floodway areas for areas where no FEMA maps or studies have defined the boundary of the 1 percent annual chance flood floodway, where 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.
       2. Within any floodway area, no new construction or development shall be allowed, unless the appropriate permit is obtained from the Department of Environmental Protection Regional Office.
       3. Applicants may submit evidence to the contrary for floodways assumed to be from the stream to 50 feet from the top of the bank of the stream to the municipality and/or Department of Environmental Protection Regional Office. Such evidence shall be in the form of hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed floodway boundary with all other existing and anticipated development, would not result in an increase in flood levels within the entire community during the occurrence of the base flood discharge.
2. The Floodway Fringe Area shall be those areas within the Special Flood Hazard Area adjacent to and outside of the Floodway Area.
3. The A Area/District shall be those areas identified as an A Zone on the FIRM included in the FIS prepared by FEMA and for which no base flood elevations have been provided. For these areas, elevation and floodway information from other Federal, State, or other acceptable sources shall be used when available. Where other acceptable information is not available, the base flood elevation shall be determined by using the elevation of a point on

the boundary of the identified floodplain area which is nearest the construction site.

In lieu of the above, the municipality may allow the applicant to determine the elevation with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the municipality. In the absence of any of the above data or documentation, the community may require elevation of the lowest floor to be at least three feet above the highest adjacent grade.

1. The Floodplain for any watercourse without an established SFHA in the FIS is the area from the stream to 50 feet from the top of bank on both sides, as established by field survey. See Article IX Definitions for definition of Watercourse and Watercourse Top of Bank.
   * + 1. No new construction or development shall be allowed, unless the appropriate permit is obtained from the Department of Environmental Protection Regional Office.
       2. Where other acceptable information is not available, the base flood elevation shall be determined by using the elevation of a point on the boundary of the identified floodplain area which is nearest the construction site
       3. The applicant may submit evidence to the contrary to the Department of Environmental Protection as indicated in Section 603 B, above.

## Changes in Identification of Area

The Identified Floodplain Area may be revised or modified by the Board of Supervisors where studies or information provided by a qualified agency or person documents the need for such revision. However, prior to any such change to the Special Flood Hazard Area, approval must be obtained from FEMA. Additionally, as soon as practicable, but not later than six (6) months after the date such information becomes available, a community shall notify FEMA of the changes to the Special Flood Hazard Area by submitting technical or scientific data. See 604 A.2 for situations where FEMA notification is required.

## Boundary Disputes

Should a dispute concerning any identified floodplain boundary arise, an initial determination shall be made by the Township of Piatt and any party aggrieved by this decision or determination may appeal to the Board of Supervisors. The burden of proof shall be on the appellant.

## Jurisdictional Boundary Changes

Prior to development occurring in areas where annexation or other corporate boundary changes are proposed or have occurred, the community shall review flood hazard data affecting the lands subject to boundary changes.  The community shall adopt and enforce floodplain regulations in areas subject to annexation or corporate boundary changes which meet or exceed those in CFR 44 60.3.

# **TECHNICAL PROVISIONS**

# General

1. Alteration or Relocation of Watercourse
   * + 1. No encroachment, alteration, or improvement of any kind shall be made to any watercourse until all adjacent municipalities which may be affected by such action have been notified by the municipality, and until all required permits or approvals have first been obtained from the Department of Environmental Protection Regional Office.
       2. No encroachment, alteration, or improvement of any kind shall be made to any watercourse unless it can be shown that the activity will not reduce or impede the flood carrying capacity of the watercourse in any way.
       3. In addition, FEMA and the Pennsylvania Department of Community and Economic Development, shall be notified prior to any alteration or relocation of any watercourse.
2. When Township of Piatt proposes to permit alteration or relocation of a stream (including but not limited to installing culverts and bridges): the **applicant** shall (as per 44 CFR Part 65.12):
   * + 1. apply to FEMA for conditional approval of such action prior to permitting the encroachments to occur
       2. Upon receipt of the FEMA Administrator’s conditional approval of map change and prior to approving the proposed encroachments, a community shall provide evidence to FEMA of the adoption of floodplain management ordinances incorporating the increased base flood elevations and / or revised floodway reflecting the post-project condition.
       3. Upon completion of the proposed encroachments, the applicant shall provide as-built certifications. FEMA will initiate a final map revision upon receipt of such certifications in accordance with 44 CFR Part 67.
3. Any new construction, development, uses or activities allowed within any identified floodplain area shall be undertaken in strict compliance with the provisions contained in this Article and any other applicable codes, ordinances and regulations.

# Elevation and Floodproofing Requirements

* + 1. Residential Structures
       1. In AE, A1-30, and AH Zones, any new construction or substantial improvement shall have the lowest floor (including basement) elevated up to, or above, the Regulatory Flood Elevation (Base Flood Elevation plus 1-1/2 feet of freeboard).
       2. In A Zones, where there are no Base Flood Elevations specified on the FIRM, any new construction or substantial improvement shall have the lowest floor (including basement) elevated up to, or above, the Regulatory Flood Elevation (Base Flood Elevation plus 1-1/2 feet of freeboard) determined in accordance with Section 603 B of this Article.
       3. In AO Zones, any new construction or substantial improvement shall have the lowest floor (including basement) at or above the highest adjacent grade at least as high as the depth number specified on the FIRM.
       4. The design and construction standards and specifications contained in the 2015 International Building Code (IBC) and in the 2015 International Residential Code (IRC) or the latest edition thereof adopted by the Commonwealth of Pennsylvania, and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized, where they are more restrictive.
    2. Non-residential Structures
       1. In AE, A1-30 and AH Zones, any new construction or substantial improvement of a non-residential structure shall have the lowest floor (including basement) elevated up to, or above, the Regulatory Flood Elevation (Base Flood Elevation plus 1-1/2 feet of freeboard), or be designed and constructed so that the space enclosed below the Regulatory Flood Elevation:
          1. is floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water and,
          2. has structural components with the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy:
       2. In A Zones, where no Base Flood Elevations are specified on the FIRM, any new construction or substantial improvement shall have the lowest floor (including basement) elevated or completely floodproofed up to, or above, the Regulatory Flood Elevation (Base Flood Elevation plus 1-1/2 feet of freeboard) determined in accordance with Section 603 B.3 of this Article.
       3. In AO Zones, any new construction or substantial improvement shall have their lowest floor elevated or completely floodproofed above the highest adjacent grade to at least as high as the depth number specified on the FIRM.
       4. Any non-residential structure, or part thereof, made watertight below the Regulatory Flood Elevation shall be floodproofed in accordance with the W1 or W2 space classification standards contained in the publication entitled "Flood-Proofing Regulations" published by the U.S. Army Corps of Engineers (June 1972, as amended March 1992) or with some other equivalent standard. All plans and specifications for such floodproofing shall be accompanied by a statement certified by a registered professional engineer or architect which states that the proposed design and methods of construction are in conformance with the above referenced standards. There should be a statement submitted with the permit application and a statement submitted with the as-built Floodproofing Certificate prior to the issuance of the Certificate of Occupancy.
       5. Any non-residential structure that will be floodproofed must submit the following to the Floodplain Administrator along with

the non-residential Floodproofing Certificate and prior to the issuance of the Certificate of Occupancy:

* + - * 1. An Inspection and Maintenance Plan detailing the annual maintenance of floodproofed components ensuring that all components will operate properly under flood conditions. Components that must be inspected include at a minimum:

Mechanical equipment such as sump pumps and generators,

Flood shields and closures,

Walls and wall penetrations, and

Levees and berms (as applicable)

* + - * 1. Flood Emergency Operation Plan detailing the procedures to be followed during a flooding event, and must include information pertaining to how all components will operate properly under all conditions, including power failures. The design professional must produce the plan. An adequate plan must include the following:

An established chain of command and responsibility with leadership responsibilities clearly defined for all aspects of the plan.

A procedure for notification of necessary parties when flooding threatens and flood warnings are issued. Personnel required to be at the building should have a planned and safe means of ingress and should have no other emergency response duties during a flood event. Alternates should be assigned in the event that the primary persons responsible are unable to complete their assigned duties under the plan.

A list of specific duties assigned to ensure that all responsibilities are addressed expeditiously. The locations of materials necessary to properly install all floodproofing components must be included in the list.

An evacuation plan for all personnel or occupants; those without duties for the flood emergency as well as those with duties for implementing the plan. All

possible ingress and egress routes must be identified.

A periodic training and exercise program to keep personnel and occupants aware of their duties and responsibilities. Training drills should be held at least once a year and should be coordinated with community officials.

The design and construction standards and specifications contained in the 2015 International Building Code (IBC) and in the 2015 International Residential Code (IRC) or the latest revision thereof as adopted by the Commonwealth of Pennsylvania, and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized, where they are more restrictive.

* + 1. Space below the lowest floor
       1. Fully enclosed space below the lowest floor (excluding basements) which will be used solely for the parking of a vehicle, building access, or incidental storage in an area other than a basement, shall be designed and constructed to allow for the automatic entry and exit of flood waters for the purpose of equalizing hydrostatic forces on exterior walls. The term "fully enclosed space" also includes crawl spaces.
       2. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
          1. a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space installed on two (2) separate walls
          2. the bottom of all openings shall be no higher than one (1) foot above grade.
          3. openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
    2. Historic Structures

Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined in this Article, must comply with all ordinance requirements that do not preclude the

structure’s continued designation as a historic structure. Documentation that a specific ordinance requirement will cause removal of the structure from the National Register of Historic Places or the State Inventory of Historic places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.

* + 1. Accessory structures
       1. Certain accessory structures located in the SFHA may be wet floodproofed in lieu of the elevation or dry floodproofing requirement, without a variance, under the following conditions:
          1. The structure must meet the definition of accessory structure in Article 13.
          2. The structure should be small, represent a minimal investment, and will have a low damage potential. Small for purposes of Floodplain Management accessory structures shall be less than or equal to the size of a one-story, two-car garage (600 square feet).
          3. the structure will be located on the site so as to cause the least obstruction to the flow of flood waters.
          4. the portions of the accessory structure located below the Regulatory Flood Elevation must be constructed with flood-resistant materials.
          5. Mechanical or utility equipment, including power lines, wiring, and outlets will be elevated to the Regulatory Flood Elevation or dry floodproofed.
          6. permanently affixed utility equipment and appliances such as furnaces, heaters, washers, dryers, etc. are prohibited.
          7. sanitary facilities are prohibited.
          8. the structure shall be adequately anchored to prevent flotation, collapse, and lateral movement and shall be designed to automatically provide for the entry and exit of floodwater for the purpose of equalizing hydrostatic forces on the walls. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:

a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.

the bottom of all openings shall be no higher than one (1) foot above grade.

openings may be equipped with screens, louvers, etc. or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

* + - * 1. Storage of Hazardous Materials as listed in Section 604 C.6 are strictly prohibited.
      1. Accessory structures that do not meet the requirements for wet floodproofing above, must comply with elevation/dry floodproofing requirements in Section 604 B.2, above, or obtain a variance.
    1. Agricultural Structures and Accessory Structures Larger than 600 square feet
       1. Certain agricultural structures and accessory structures located in the SFHA may be wet floodproofed in lieu of the elevation or dry floodproofing requirement, via variance, under the following conditions:
          1. The agricultural structure or accessory structure must meet the definition in Article 13.
          2. The agricultural structure or accessory structure has a low damage potential.
          3. the structure will be located on the site so as to cause the least obstruction to the flow of flood waters.
          4. the portions of the structure located below the Regulatory Flood Elevation must be constructed with flood-resistant materials.
          5. Mechanical or utility equipment, including power lines, wiring, and outlets will be elevated to the Regulatory Flood Elevation or dry floodproofed.
          6. the structure shall be adequately anchored to prevent flotation, collapse, and lateral movement and shall be designed to automatically provide for the entry and exit of floodwater for the purpose of equalizing hydrostatic forces on the walls. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:

a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.

the bottom of all openings shall be no higher than one (1) foot above grade.

openings may be equipped with screens, louvers, etc. or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

* + - * 1. Storage of Hazardous Materials as listed in Section 604 C.6 are strictly prohibited.
      1. The applicant must submit an application for a variance to the Township of Piatt Zoning Hearing Board. The application must provide a description of the exceptional hardship that the applicant would incur if a variance were not granted. The application must also provide sufficient documentation to show that the requested variance meets the conditions listed above.
      2. The Township of Piatt Zoning Hearing Board in approving a request for variance shall provide the minimum relief necessary. The Zoning Hearing Board may establish such other conditions and restrictions as deemed necessary to protect the safety, health, and welfare of the public.

# Design and Construction Standards

The following minimum standards shall apply for allconstruction and development proposed within any identified floodplain area:

* + 1. Fill
       1. If fill is used, it shall
          1. extend laterally at least fifteen (15) feet beyond the building line from all points;
          2. consist of soil or small rock materials only - Sanitary Landfills shall not be permitted;
          3. be compacted to provide the necessary permeability and resistanceto erosion, scouring, or settling;
          4. be no steeper than one (1) vertical to two (2) horizontal feet unless substantiated data justifying steeper slopes are submitted to, and approved by the Floodplain Administrator; and
          5. be used to the extent to which it does not adversely affect adjacent properties.
    2. Drainage Facilities

Storm drainage facilities shall be designed to convey the flow of storm water runoff in a safe and efficient manner. The system shall ensure proper drainage along streets, and provide positive drainage away from buildings. The system shall also be designed to prevent the discharge of excess runoff onto adjacent properties.

* + 1. Water and Sanitary Sewer Facilities and Systems
       1. All new or replacement water supply and sanitary sewer facilities and systems shall be located, designed and constructed to minimize or eliminate flood damages and the infiltration of flood waters.
       2. Sanitary sewer facilities and systems shall be designed to prevent the discharge of untreated sewage into flood waters.
       3. No part of any on-site waste disposal system shall be located within any identified floodplain area except in strict compliance with all State and local regulations for such systems. If any such system is permitted, it shall be located so as to avoid impairment to it, or contamination from it, during a flood.
       4. The design and construction provisions of the UCC and FEMA #348, “Protecting Building Utilities From Flood Damages” and “The International Private Sewage Disposal Code” shall be utilized.
    2. Other Utilities

All other utilities such as gas lines, electrical and telephone systems shall be located, elevated (where possible) and constructed to minimize the chance of impairment during a flood.

* + 1. Streets

The design of all new streets shall consider and provide for the safe evacuation and access to emergency services for all residents of Piatt Township during periods of flooding up to and including the 1% chance annual flood.

* + 1. Storage

All materials that are buoyant, flammable, explosive, or in times of flooding, could be injurious to human, animal, or plant life, and not listed in Section 604 C.6, Development Which May Endanger Human Life, shall be stored at or above the Regulatory Flood Elevation or floodproofed to the maximum extent possible.

* + 1. Placement of Buildings and Structures

All buildings and structures shall be designed, located, and constructed so as to offer the minimum obstruction to the flow of water and shall be designed to have a minimum effect upon the flow and height of flood water.

* + 1. Anchoring
       1. All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.
       2. All air ducts, large pipes, storage tanks, and other similar objects or components located below the Regulatory Flood Elevation shall be securely anchored or affixed to prevent flotation.
    2. Floors, Walls and Ceilings
       1. Wood flooring used at or below the Regulatory Flood Elevation shall be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain without causing structural damage to the building.
       2. Plywood used at or below the Regulatory Flood Elevation shall be of a "marine” or "water-resistant" variety
       3. Walls and ceilings at or below the Regulatory Flood Elevation shall be designed and constructed of materials that are "water-resistant" and will withstand inundation.
       4. Windows, doors, and other components at or below the Regulatory Flood Elevation shall be made of metal or other "water-resistant" material.
    3. Paints and Adhesives
       1. Paints and other finishes used at or below the Regulatory Flood Elevation shall be of "marine" or "water-resistant" quality.
       2. Adhesives used at or below the Regulatory Flood Elevation shall be of a "marine" or "water-resistant" variety.
       3. All wooden components (doors, trim, cabinets, etc.) used at or below the Regulatory Flood Elevation shall be finished with a "marine" or "water-resistant" paint or other finishing material.
    4. Electrical Components
       1. Electrical distribution panels shall be at least three (3) feet above the base flood elevation.
       2. Separate electrical circuits, installed with ground fault circuit interrupter (GFCI) circuit breaker, shall serve lower levels and shall be dropped from above.
    5. Equipment
       1. Water heaters, furnaces, airconditioning andventilating units, andother electrical,mechanical orutility equipment or apparatus shallnot be located belowthe Regulatory Flood Elevation and shall be anchored to resist floatation, collapse, and lateral movement
       2. Ductwork shall be elevated to or above the Regulatory Flood Elevation or floodproofed to remain water resistant.
    6. Fuel Supply Systems

All gas and oil supply systems shall be designed to prevent the infiltration of flood waters into the system and discharges from the system into flood

waters. Additional provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

* + 1. Uniform Construction Code Coordination

The Standards and Specifications contained in 34 PA Code (Chapters 401-405), as amended and not limited to the following provisions shall apply to the above and other sections and sub-sections of this ordinance, to the extent that they are more restrictive and supplement the requirements of this Article.

International Building Code (IBC) 2015 or the latest revision thereof as adopted by the Commonwealth of Pennsylvania:

Secs. 801, 1202, 1403, 1603, 1605, 1612, 3402, and Appendix G.

International Residential Building Code (IRC) 2015 or the latest revision thereof as adopted by the Commonwealth of Pennsylvania:

Secs. R104, R105, R109, R322, Appendix E, and Appendix J.

# Development That May Endanger Human Life

Within any Identified Floodplain Area, any structure of the kind described in Subsection A., below, shall be prohibited. If a variance is obtained in accordance with the criteria in Article 10, then the following provisions apply:

* + 1. In accordance with the Pennsylvania Flood Plain Management Act, and the regulations adopted by the Department of Community and Economic Development as required by the Act, any new or substantially improved structure which:
       1. will be used for the production or storage of any of the following dangerous materials or substances; or,
       2. will be used for any activity requiring the maintenance of a supply of more than 550 gallons, or other comparable volume, of any of the following dangerous materials or substances on the premises; or,
       3. will involve the production, storage, or use of any amount of radioactive substances;

shallbe subject to the provisions of this section, in addition to allother applicable provisions. Thefollowing list of materials and substances are considered dangerous to human life:

* + - Acetone
    - Ammonia
    - Benzene
    - Calcium carbide
    - Carbon disulfide
    - Celluloid
    - Chlorine
    - Hydrochloric acid
    - Hydrocyanic acid
    - Magnesium
    - Nitric acid and oxides of nitrogen
    - Petroleum products (gasoline, fuel oil, etc.)
    - Phosphorus
    - Potassium
    - Sodium
    - Sulphur and sulphur products
    - Pesticides (including insecticides, fungicides, and rodenticides)
    - Radioactive substances, insofar as such substances are not otherwise regulated.
    1. Within any Floodway Area, any structure of the kind described in Subsection A., above, shall be prohibited. Where permitted within any Identified Floodplain Area, any new or substantially improved residential structure of the kind described in Section 604 C.6 (A), above, shall be elevated to remain completely dry up to at least one and one half (1 ½) feet above base flood elevation and built in accordance with Sections 604 B, 604 C and 604 D.
    2. Where permitted within any Identified Floodplain Area, any new or substantially improved non-residential structure of the kind described in Section 604 C.6 (A) above, shall be built in accordance with Sections 604 B, 604 C and 604 D including:
       1. elevated, or designed and constructed to remain completely dry up to at least one and one half (1 ½) feet above base flood elevation, and
       2. designed to prevent pollution from the structure or activity during the course of a base flood.

Any such structure, or part thereof, that will be built below the Regulatory Flood Elevation shall be designed and constructed in accordance with the standards for completely dry floodproofing contained in the publication "Flood-Proofing Regulations

(U.S.Army Corps of Engineers, June 1972 as amended March 1992), or with some other equivalent watertight standard.

# Special Requirements for Subdivisions and Development

All subdivision proposals and development proposals containing at least 50 lots or at least 5 acres, whichever is the lesser, in Identified Floodplain Areas where base flood elevation data are not available, shall be supported by hydrologic and hydraulic engineering analyses that determine base flood elevations and floodway information. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR). Submittal requirements and processing fees shall be the responsibility of the applicant.

# Special Requirements for Manufactured Homes

* + 1. Within any Identified Floodplain Area, all manufactured homes, and any improvements thereto, shall:
       1. meet the elevation and floodproofing requirements of Section 604 B above.
       2. have all wheels and axles removed.
       3. be placed on a permanent foundation.
       4. meet the same requirements as any other residential structure.
       5. be anchored to resist flotation, collapse, or lateral movement.
    2. Installation of manufactured homes shall be done in accordance with the manufacturers’ installation instructions as provided by the manufacturer. Where the applicant cannot provide the above information, the requirements of Appendix E of the 2015 “International Residential Building Code” or the “U.S. Department of Housing and Urban Development’s Permanent Foundations for Manufactured Housing,” 1984 Edition, draft or latest revision thereto and 34 PA Code Chapter 401-405 shall apply.
    3. Consideration shall be given to the installation requirements of the 2015 IBC, and the 2015 IRC or the latest revision thereto as adopted by the Commonwealth of Pennsylvania, and 34 PA Code, as amended where appropriate and/or applicable to units where the manufacturers’ standards for anchoring cannot be provided or were not established for the proposed unit(s) installation.

# Special Requirements for Recreational Vehicles

* + 1. Recreational vehicle use within any Floodplain Areas must:
       1. be on the site for fewer than 180 consecutive days,
       2. be fully licensed and ready for highway use, and
       3. be removed from the floodplain when a flood warning is issued.
    2. Storage of Recreational vehicles within any Floodplain Area is prohibited.

# **ACTIVITIES REQUIRING SPECIAL PERMITS**

## General

In accordance with the administrative regulations promulgated by the Department of Community and Economic Development to implement the Pennsylvania Flood Plain Management Act, the following activities shall be prohibited within any Identified Floodplain Area unless a Special Permit has been issued by the *Township of Piatt:*

* + 1. The commencement of any of the following activities; or the construction, enlargement, or expansion of any structure used, or intended to be used, for any of the following activities:
       1. Hospitals
       2. Nursing homes
       3. Jails or prisons
    2. The commencement of, or any construction of, a new manufactured home park or manufactured home subdivision, or substantial improvement to an existing manufactured home park or manufactured home subdivision.

## Application Requirements for Special Permits

Applicants for Special Permits shall provide five copies of the following items:

* + 1. A written request including a completed Permit Application Form.
    2. A small scale map showing the vicinity in which the proposed site is located.
    3. A plan of the entire site, clearly and legibly drawn at a scale of one (1) inch being equal to one hundred (100) feet or less, showing the following:
       1. north arrow, scale and date;
       2. topography based upon the North American Vertical Datum (NAVD) of 1988, showing existing and proposed contours at intervals of two (2) feet;
       3. all property and lot lines including dimensions, and the size of the site expressed in acres or square feet;
       4. the location of all existing streets, drives, other access ways, and parking areas, with information concerning widths, pavement types and construction, and elevations;
       5. the location of any existing bodies of water or watercourses, buildings, structures and other public or private facilities, including railroad tracks and facilities, and any other natural and man-made features affecting, or affected by, the proposed activity or development;
       6. the location of the floodplain boundary line, information and spot elevations concerning the base flood elevation, and information concerning the flow of water including direction and velocities;
       7. the location of all proposed buildings, structures, utilities, and any other improvements; and
       8. any other information which the municipality considers necessary for adequate reviewof the application.
    4. Plans of all proposed buildings, structures and other improvements, clearly and legibly drawn at suitable scale showing the following:
       1. sufficiently detailed architectural or engineering drawings, including floor plans, sections, and exterior building elevations, as appropriate;
       2. for any proposed building, the elevation of the lowest floor (including basement) and, asrequired, the elevation of any other floor;
       3. complete information concerning flood depths, pressures, velocities, impact and uplift forces, and other factors associated with the base flood;
       4. detailed information concerning any proposed floodproofing measures, including the Flood Emergency Operation Plan and the Inspection and Maintenance Plan;
       5. cross section drawings for all proposed streets, drives, other accessways, and parking areas, showing all rights-of-way and pavement widths;
       6. profile drawings for all proposed streets, drives, and vehicular accessways including existing and proposed grades; and
       7. plans and profiles of all proposed sanitary and storm sewer systems, water supply systems, and any other utilities and facilities.
    5. The following data and documentation:
       1. certification from the applicant that the site upon which the activity or development is proposed is an existing separate and single parcel, owned by the applicant or the client he represents;
       2. certification from aregistered professional engineer, architect, or landscape architect that the proposed construction has been adequately designed to protect against damage from the base flood;
       3. a statement, certified by a registered professional engineer, architect, landscape architect, or other qualified person which contains a complete and accurate description of the nature and extent of pollution that might possibly occur from the development during the course of a base flood, including a statement concerning the effects such pollution may have on human life;
       4. a statement certified by a registered professional engineer, architect, or landscape architect, which contains a complete and accurate description of the effects the proposed development will have on base flood elevation and flows;
       5. a statement, certified by a registered professional engineer, architect, or landscape architect, which contains a complete and accurate description of the kinds and amounts of any loose buoyant materials or debris that may possibly exist or be located on the site

below the base flood elevation and the effects such materials and debris may have on base flood elevation and flows;

* + - 1. the appropriate component of the Department of Environmental Protection's "Planning Module for Land Development;"
      2. where any excavation or grading is proposed, a plan meeting the requirements of the Department of Environmental Protection to implement and maintain erosion and sedimentation control;
      3. any other applicable permits such as, but not limited to, a permit for any activity regulated by the Department of Environmental Protection under Section 302 of Act 1978-166; and
      4. an evacuation plan which fully explains the manner in which the site will be safely evacuated before or during the course of a base flood.

## Application Review Procedures

Upon receipt of an application for a Special Permit by the *Township of Piatt* the following procedures shall apply in addition to those of Article 10:

* + 1. Within three (3) working days following receipt of the application, a complete copy of the application and all accompanying documentation shall be forwarded to the County Planning Commission by registered or certified mail for its review and recommendations. Copies of the application shall also be forwarded to the *Township of Piatt* Planning Commission and *Township of Piatt* engineer for review and comment.
    2. If an application is received that is incomplete, the Township of Piatt shall notify the applicant in writing, stating in what respect the application is deficient.
    3. If the Township of Piatt decides to disapprove an application, it shall notify the applicant, in writing, of the reasons for the disapproval.
    4. If the *Township of Piatt* approves an application, it shall file written notification, together with the application and all pertinent information, with the Department of Community and Economic Development, by registered or certified mail, within five (5) working days after the date of approval.
    5. Before issuing the Special Permit, the Township of Piatt shall allow the Department of Community and Economic Development thirty (30) days, after receipt of the notification by the Department, to review the application and decision made by the *Township of Piatt*.
    6. If the *Township of Piatt* does not receive any communication from the Department of Community and Economic Development during the thirty (30) day review period, it may issue a Special Permit to the applicant.
    7. If the Department of Community and Economic Developmentshould decideto disapprovean application, it shallnotify the *Township of Piatt* andthe applicant, in writing, of the reasons for the disapproval,and the *Township of Piatt* shallnot issuethe Special Permit.

## Special Technical Requirements

* + 1. In addition to the requirements of Article 10 of this Ordinance, the following minimum requirements shall also apply to any proposed development requiring a Special Permit. If there is any conflict between any of the following requirements and those in Article 10 of this Ordinance or in any other code, ordinance, or regulation, the more restrictive provision shall apply.
    2. No application for a Special Permit shall be approved unless it can be determined that the structure or activity will be located, constructed and maintained in a manner which will:
       1. Fully protect the health and safety of the general public and any occupants of the structure. At a minimum, all new structures shall be designed, located, and constructed so that:
          1. the structure will survive inundation by waters of the base flood without any lateral movement or damage to either the structure itself, or to any of its equipment or contents below the BFE.
          2. the lowest floor (including basement) will be elevated to at least one and one half (1 ½) feet above base flood elevation.
          3. the occupants of the structure can remain inside for an indefinite period of time and be safely evacuated at any time during the base flood.
       2. Prevent any significant possibility of pollution, increased flood levels or flows, or debris endangering life and property.
    3. All hydrologic and hydraulic analysesshall beundertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted
    4. technical concepts. Studies, analyses, computations, etc. shall be submitted in sufficient detail to allow a thorough technical review by the *Township of Piatt* and the Department of Community and Economic Development.

# **EXISTING STRUCTURES IN IDENTIFIED FLOODPLAIN AREAS**

## Existing Structures

The provisions of this Section do not require any changes or improvements to be made to lawfully existing structures. However, when an improvement is made to any existing structure, the provisions of Section 606 B shall apply.

## Improvements

* + 1. The following provisions shall apply whenever any improvement is made to an existing structure located within any Identified Floodplain Area:
    2. No expansion or enlargement of an existing structure shall be allowed within any Floodway Area/District that would cause any increase in BFE.
    3. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure to an extent or amount of fifty (50) percent or more of its market value, shall constitute a substantial improvement and shall be undertaken only by bringing the entire structure in full compliance with the provisions of this Article.
    4. The above activity shall also address the requirements of the 34 PA Code, as amended and the 2015 IBC and the 2015 IRC or most recent revision thereof as adopted by the Commonwealth of Pennsylvania.
    5. Within any Floodway Area/District (See Section 4.02 A), no new construction or development shall be allowed, unless the appropriate permit is obtained from the Department of Environmental Protection Regional Office
    6. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure, to an extent or amount of less than fifty (50) percent of its market value, shall be elevated and/or floodproofed to the greatest extent possible.
    7. Any modification, alteration, reconstruction, or improvement, to an extent or amount less than fifty (50) percent of its market value, that results in an addition outside of the existing structure footprint, shall require the addition to be elevated and/or floodproofed according to the requirements of Section 603 B.1

# **VARIANCES**

## General

If compliance with any of the requirements of this Article would result in an exceptional hardship to a prospective builder, developer or landowner, the Township of Piatt Zoning Hearing Board may, upon request, grant relief from the strict application of the requirements.

## Variance Procedures and Conditions

* + 1. Requests for variances shall be considered by the Township of Piatt Zoning Hearing Board in accordance with the procedures contained in Article 10 and the following:
    2. No variance shall be granted for any construction, development, use, or activity within any Floodway Area/District that would cause any increase in the BFE.
    3. Except for a possible modification of the Regulatory Flood Elevation requirement involved, no variance shall be granted for any of the other requirements pertaining specifically to development regulated by Special Permit (Article VI) or to Development Which May Endanger Human Life (Section 604 C.6).
    4. If granted, a variance shall involve only the least modification necessary to provide relief.
    5. In granting any variance, the Township of Piatt Zoning Hearing Board shall attach whatever reasonable conditions and safeguards it considers necessary in order to protect the public health, safety, and welfare, and to achieve the objectives of this Article.
    6. Whenever a variance is granted, the *Township of Piatt* *Zoning Hearing Board* shall notify the applicant in writing that:
       1. The granting of the variance may result in increased premium rates for flood insurance.
       2. Such variances may increase the risks to life and property.
    7. In reviewing any request for a variance, the Township of Piatt Zoning Hearing Board shall consider, at a minimum, the following:
       1. That there is good and sufficient cause.
       2. That failure to grant the variance would result in exceptional hardship to the applicant.
       3. That the granting of the variance will
          1. neither result in an unacceptable or prohibited increase in flood heights, additional threats to public safety, or extraordinary public expense,
          2. nor create nuisances, cause fraud on, or victimize the public, or conflict with any other applicable state or local ordinances and regulations.
    8. A complete record of all variance requests and related actions shall be maintained by the Township of Piatt Zoning Hearing Board. In addition, a report of all variances granted during the year shall be included in the annual report to the FEMA.

Notwithstanding any of the above, however, all structures shall be designed and constructed so as to have the capability of resisting the one-percent (1%) annual chance flood.