

**BOARD OF SUPERVISORS  
WEST WHITELAND TOWNSHIP  
CHESTER COUNTY, PENNSYLVANIA**

**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE AMENDING CHAPTER 325, "ZONING," OF THE WEST  
WHITELAND TOWNSHIP CODE OF ORDINANCES BY REVISING ARTICLE II  
THEREOF PERTAINING TO DEFINITIONS AND BY REVISING ARTICLE XIII  
THEREOF PERTAINING TO FLOODPLAIN CONSERVATION FOR  
COMPLIANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM AND  
THE PENNSYLVANIA FLOODPLAIN MANAGEMENT ACT**

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**BE IT HEREBY ENACTED AND ORDAINED** by the Board of Supervisors of West Whiteland Township, Chester County, Commonwealth of Pennsylvania as follows:

**Section 1.** Section 325-8 of Chapter 325, "Zoning," of the West Whiteland Township Code of Ordinances, "Definitions," is hereby amended to revise the definitions of the terms shown.

BASE FLOOD - A flood which has a one percent chance of being equaled or exceeded in any given year; also called the "100-year flood" or "one percent (1%) annual chance flood."

BASE FLOOD ELEVATION ("BFE") - The elevation shown on the Flood Insurance Rate map (FIRM) for Zones AE, AH, and A1-30 that indicates the water surface elevation resulting from a flood that has a one percent or greater chance of being equaled or exceeded in any given year.

FLOODWAY - The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

IDENTIFIED FLOODPLAIN AREA - This term is an umbrella term that includes all of the areas within which the Township has selected to enforce floodplain regulations. It will always include the area identified as the Special Flood Hazard Area on the Flood Insurance Rate Maps and Flood Insurance Study, but may include additional areas identified by the Township. See §325-62.A and §325-62.B for the specifics on what areas the Township has included in the Identified Floodplain Area.

MANUFACTURED (MOBILE) HOME PARK or SUBDIVISION - A parcel or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.

NEW CONSTRUCTION - Structures for which the start of construction commenced on or after the most recent amendment to Article XIII herebelow and includes any subsequent improvements to such structures. Any construction started May 2, 1977 and before the most recent amendment to Article XIII herebelow is subject to the flood-

plain regulations in effect at the time the permit was issued, provided the start of construction was within 180 days of permit issuance.

**REGULATORY FLOOD ELEVATION** - The base flood elevation or estimated flood height as determined using simplified methods plus a freeboard safety factor of one and one-half (1½) feet. The freeboard safety factor also applies to utilities and ductwork.

**SUBSTANTIAL IMPROVEMENT** - Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the start of construction of the improvement. This term includes structures that have incurred “substantial damage” or “cumulative substantial damage” regardless of the actual repair work performed. This term does not include any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the Township and that are the minimum necessary to assure safe living conditions.

**Section 2.** Section 325-8 of Chapter 325, “Zoning,” of the West Whiteland Township Code of Ordinances, “Definitions,” is hereby amended to add the following new terms.

**BASE FLOOD DISCHARGE** - The volume of water resulting from a base flood as it passes a given location within a given time, usually expressed in cubic feet per second (cfs).

**CUMULATIVE SUBSTANTIAL DAMAGE** - Flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds twenty-five percent of the market value of the structure before the damages occurred.

**DECLARATION OF LAND RESTRICTION (NON-CONVERSION AGREEMENT)** - A form signed by the property owner to agree not to convert or modify in any manner that is inconsistent with the terms of the permit and the regulations of Article XIII herebelow, certain enclosures below the lowest floor of elevated buildings and certain accessory structures. The form requires the owner to record it on the property deed to inform future owners of the restrictions.

**EXISTING MANUFACTURED HOME PARK OR SUBDIVISION** - A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by the Township.

**EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION** - The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FLOOD INSURANCE RATE MAP (“FIRM”) - The official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the Township.

FLOOD INSURANCE STUDY (“FIS”) - The official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Insurance Rate Map, the Flood Boundary and Floodway Map, and the water surface elevation of the base flood.

HIGHEST ADJACENT GRADE - The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

NEW MANUFACTURED (MOBILE) HOME PARK or SUBDIVISION - A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of the most recent amendment to Article XIII herebelow.

POST-FIRM STRUCTURE - A structure for which construction or substantial improvement occurred on or after May 2, 1977 and, as such, would be required to be compliant with the regulations of the National Flood Insurance Program.

PRE-FIRM STRUCTURE - A structure for which construction or substantial improvement occurred on or before May 2, 1977 and, as such, would not be required to be compliant with the regulations of the National Flood Insurance Program.

SPECIAL FLOOD HAZARD AREA - An area in the floodplain subject to a one percent or greater chance of flooding in any given year. It is shown on the FIRM as Zone A, AO, A1-A30, AE, A99, or AH.

START OF CONSTRUCTION - Regarding substantial improvement and other proposed new development, the date the Floodplain Permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days after the date of the Floodplain Permit and shall be completed within twelve (12) months after the date of issuance of the Floodplain Permit unless a time extension is granted, in writing, by the Floodplain Administrator. The actual start 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 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.

VIOLATION - Within Article XIII herebelow, a “violation” shall be interpreted as the failure of a structure or other development to be fully compliant with that Article. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR §60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

**Section 3.** Article XIII, Sections 325-59 through 325-67 of Chapter 325, Zoning, of the West Whiteland Township Code of Ordinances, is hereby deleted in its entirety and replaced with the following.

**§325-59: 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 West Whiteland does hereby order as follows.

**§325-60: General Provisions**

- A. 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.
- B. 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 West Whiteland unless a Permit has been obtained from the Floodplain Administrator.
- C. 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.

- D. 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 Ordinance, which shall remain in full force and effect, and for this purpose the provisions of this Article are hereby declared to be severable.
- E. 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 West Whiteland or any officer or employee thereof for any flood damages that result from reliance on this Article or any administrative decision lawfully made thereunder.

### **§325-61: Administration**

- A. Designation of the Floodplain Administrator. The Zoning Officer is hereby appointed to administer and enforce this Article and is referred to herein as the Floodplain Administrator. The Floodplain Administrator may:
- Fulfill the duties and responsibilities set forth in these regulations;
  - Delegate duties and responsibilities set forth in these regulations to qualified technical personnel, plan examiners, inspectors, and other employees; or
  - 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 CFR Section 59.22.

In the absence of a designated Floodplain Administrator, the Floodplain Administrator duties are to be fulfilled by the Township Manager.

- B. Permits required. A Permit shall be required before any construction or development is undertaken within any area of the Township of West Whiteland.
- C. Duties and responsibilities of the Floodplain Administrator
- (1) The Floodplain Administrator shall issue a Floodplain 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 Floodplain 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 Floodplain 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) In the case of existing structures, prior to the issuance of any Floodplain Permit, the Floodplain Administrator shall review the history of repairs to the subject building, so that any cumulative substantial damage concerns can be addressed before the permit is issued.
- (5) 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. The Administrator or their designee shall make as many inspections during and upon completion of the work as are necessary.
- (6) In the event the Floodplain Administrator or their designee discovers that the work does not comply with the Floodplain Permit application or any applicable law or ordinance, or that there has been a false statement or misrepresentation by any applicant, the Floodplain Administrator shall revoke the Floodplain Permit and report such fact to the Board of Supervisors for whatever action it considers necessary.
- (7) 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.
- (8) 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.
- (9) 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 Floodplain Administrator.

- (10) The Floodplain Administrator shall consider the requirements of 34 PA Code and the 2009 IBC and the 2009 IRC, or the latest revision thereof as adopted by the Commonwealth of Pennsylvania.

D. Application procedures and requirements

- (1) Application for a Floodplain Permit shall be made in writing to the Floodplain Administrator on forms supplied by the Township. Such application shall contain the following:
  - (a) Name and address of applicant.
  - (b) Name and address of owner of land on which proposed construction is to occur.
  - (c) Name and address of contractor.
  - (d) Site location including address.
  - (e) Listing of other permits required.
  - (f) 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.
  - (g) 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 Floodplain Permits shall provide all the necessary information in sufficient detail and clarity to enable the Floodplain Administrator to determine that:
  - (a) 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;
  - (b) all utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage;
  - (c) adequate drainage is provided so as to reduce exposure to flood hazards;
  - (d) structures will be anchored to prevent floatation, collapse, or lateral movement;
  - (e) building materials are flood-resistant;

- (f) appropriate practices that minimize flood damage have been used; and
  - (g) 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:
- (a) A completed Floodplain Permit application form.
  - (b) 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.
  - (c) 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 2009 IBC, or the 2009 IRC, or the latest revision thereof as adopted by the Commonwealth of Pennsylvania.
  - (d) 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 cumulative effect of any proposed development within any identified floodplain area (see **§325-62.A**) when combined with all other existing and anticipated development, will not cause any increase in the base flood elevation.
  - [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.
  - [5] detailed information needed to determine compliance with **§325-63.C(6)**, "Storage," and **§325-63.D**, "Development that may endanger human life," including:
    - [A] the amount, location and purpose of any materials or substances referred to in **§325-63.C(6)** and **§325-63.D** which are intended to be used, produced, stored or otherwise maintained on site.
    - [B] 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 **§325-63.D** during a base flood.
  - [6] the appropriate component of the Department of Environmental Protection's "Planning Module for Land Development."
  - [7] 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.
- (4) Applications for Floodplain Permits shall be accompanied by a fee, payable to the Township, based upon the estimated cost of the proposed construction as determined by the Floodplain Administrator.
- E. Review by County Conservation District. A copy of all applications and plans for any proposed construction or development in any identified floodplain area to be considered for approval may be submitted by the Floodplain Administrator to the County Conservation District for review and comment prior to the issuance of a Permit. The

recommendations of the Conservation District shall be considered by the Floodplain Administrator for possible incorporation into the proposed plan.

- F. 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, Township Engineer, etc.) for review and comment.
- G. 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.
- H. Placards. In addition to the Floodplain Permit, the Floodplain Administrator shall issue a 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 shall be signed by the Floodplain Administrator.
- I. Start of Construction
  - (1) Work on the proposed construction or development shall begin within 180 days after the date of issuance of the Floodplain Permit. Work shall also be completed within twelve (12) months after the date of issuance of the said Permit or such Permit shall expire unless a time extension is granted, in writing, by the Floodplain Administrator. The issuance of Floodplain 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 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 Ordinance and the FIRM/FIS in effect at the time the extension is granted.

- J. Enforcement. Refer to Article XX, “Administration,” §325-119: Applicability; administration, and enforcement; violations and penalties.
- K. Appeals
  - (1) 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 Zoning Hearing Board. Such appeal must be filed, in writing, within thirty (30) days after the decision, determination, or action of the Floodplain Administrator.
  - (2) Upon receipt of such appeal the Zoning Hearing Board shall consider the appeal in accordance with the provisions of Article XIX, Zoning Hearing Board.
  - (3) Any person aggrieved by any decision of the Zoning Hearing Board may seek relief therefrom by appeal to court, as provided by the Pennsylvania Municipalities Planning Code and the Pennsylvania Flood Plain Management Act.

**§325-62: Identification of Floodplain Areas**

- A. Identification. The identified floodplain area shall be:
  - (1) Any area of the Township classified as a Special Flood Hazard Areas (“SFHA”) in the Flood Insurance Study (“FIS”) and the accompanying Flood Insurance Rate Maps (“FIRM’s”) dated September 29, 2017 and issued by the Federal Emergency Management Agency (“FEMA”), or the most recent revision thereof, including all digital data developed as part of the FIS; and
  - (2) any Community Identified Flood Hazard Area.

The above referenced FIS and FIRM’s, including any subsequent revisions or amendments, are hereby adopted by the Township and declared to be a part of this Article.
- B. 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. This term shall also include floodway areas which have been identified in other available studies or sources of information for those Special Flood Hazard Areas where no floodway has been identified in the FIS and FIRM.
    - (a) Within any Floodway Area, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering

practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

- (b) 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.
- (2) The AE Area/District shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided.
- (a) The AE Area adjacent to the floodway shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided and a floodway has been delineated.
  - (b) AE Area without floodway shall be those areas identified as an AE zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided but no floodway has been determined.
- [1] No permit shall be granted within any AE Zone without floodway, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed development together with all other existing and anticipated development, would not result in an increase in flood levels of more than one foot within the entire community during the occurrence of the base flood discharge.
  - [2] No new construction or development shall be located within the area measured fifty (50) feet landward from the top-of-bank of any watercourse, unless the appropriate permit is obtained from the Department of Environmental Protection Regional Office.
- (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 Township may require 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 Township. In the absence of any of the above data or documentation, the Township may require elevation of the lowest floor to be at least three feet above the highest adjacent grade.

- (4) The AO and AH Area/ District shall be those areas identified as Zones AO and AH on the FIRM and in the FIS. These areas are subject to inundation by 1-percent-annual-chance shallow flooding where average depths are between one and three feet. In Zones AO and AH, drainage paths shall be established to guide floodwaters around and away from structures on slopes.
  - (5) Community Identified Flood Hazard Areas shall be those areas where the Township has identified local flood hazard or ponding areas, as delineated and adopted on a "Local Flood Hazard Map" using best available topographic data and locally derived information such as flood of record, historic high water marks, soils, or approximate study methodologies.
- C. 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 **§325-63.A(2)** for situations where FEMA notification is required.
- D. Boundary disputes. Should a dispute concerning any identified floodplain boundary arise, an initial determination shall be made by the Township; any party aggrieved by this decision or determination may appeal to the Board of Supervisors. The burden of proof shall be on the appellant.
- E. Jurisdictional boundary changes. Prior to development occurring in areas where annexation or other corporate boundary changes are proposed or have occurred, the Township shall review flood hazard data affecting the lands subject to boundary **changes**. The Township 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.

### **§325-63: Technical Provisions**

#### A. General

- (1) Alteration or relocation of watercourse
  - (a) 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 Township and until all required permits or approvals have first been obtained from the Department of Environmental Protection Regional Office.

- (b) 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.
- (c) 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 the Township proposes to permit the following encroachments:

- any development that causes a rise in the base flood elevations within the floodway; or
- any development occurring in Zones A1-30 and Zone AE without a designated floodway, which will cause a rise of more than one foot in the base flood elevation; or
- 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):

- (a) Apply to FEMA for conditional approval of such action prior to permitting the encroachments to occur.
- (b) Upon receipt of the FEMA Administrator's conditional approval of map change and prior to approving the proposed encroachments, the Township 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.
- (c) 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 all other applicable codes, ordinances, and regulations.

B. Elevation and floodproofing requirements. Within any identified floodplain area all new construction and substantial improvements shall be prohibited. If a variance is obtained for new construction or substantial improvements in an identified floodplain area in accordance with the criteria in **§325-66**, then the following provisions apply:

- (1) Residential structures
  - (a) 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.
  - (b) 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 determined in accordance with **§325-62.B(3)** of this Article.
  - (c) 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.
  - (d) The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 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
  - (a) 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, 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.
  - (b) 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 determined in accordance with **§325-62.B(3)**.
  - (c) 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.

(d) 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. Such statement shall be submitted with the Floodplain Permit application and a subsequent statement confirming proper construction of the floodproofing elements shall be provided with the as-built Floodproofing Certificate, prior to the issuance of the Certificate of Occupancy.

(e) 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:

[A] Mechanical equipment such as sump pumps and generators,

[B] Flood shields and closures,

[C] Walls and wall penetrations, and

[D] Levees and berms (as applicable).

[2] A Flood Emergency Operation Plan detailing the procedures to be followed during a flooding event, which must include information pertaining to how all components will operate properly under all conditions, including power failures. A design professional must produce the plan. An adequate plan must include the following:

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

[B] 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.

- [C] 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.
- [D] An evacuation plan for all personnel and occupants, including 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.
- [E] 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.

- (f) The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 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.

(3) Space below the lowest floor

- (a) Basements are prohibited.
- (b) 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" includes crawl spaces.
- (c) 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.

(4) 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.

C. Design and construction standards. The following minimum standards shall apply for all construction and development proposed within any identified floodplain area:

(1) Fill. Within any identified floodplain area the use of fill shall be prohibited. If a variance to allow fill is obtained in accordance with the criteria in §325-66, then the following provisions shall apply:

If fill is used, it shall:

- (a) extend laterally at least fifteen (15) feet beyond the building line from all points;
- (b) consist of soil or small rock materials only; sanitary landfills shall not be permitted;
- (c) be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling;
- (d) 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
- (e) be used only to the extent to which it does not adversely affect adjacent properties.

(2) Drainage facilities. Stormwater management facilities shall be designed to convey the flow of stormwater 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.

- (3) Water and sanitary sewer facilities and systems.
  - (a) 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.
  - (b) Sanitary sewer facilities and systems shall be designed to prevent the discharge of untreated sewage into flood waters.
  - (c) 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.
  - (d) 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.
- (4) Other utilities. All other utilities such as gas lines and electrical and telephone systems shall be located, elevated (where possible), and constructed to minimize the chance of impairment during a flood.
- (5) Streets. The finished elevation of all new streets shall be no more than one (1) foot below the Regulatory Flood Elevation.
- (6) Storage. All materials that are buoyant, flammable, explosive, or that in times of flooding could be injurious to human, animal, or plant life, and not listed in **§325-63.D**, Development that may endanger human life, shall be stored at or above the Regulatory Flood Elevation or floodproofed to the maximum extent possible.
- (7) 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.
- (8) Anchoring
  - (a) All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.
  - (b) 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.

- (9) Floors, walls, and ceilings
  - (a) 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.
  - (b) Plywood used at or below the Regulatory Flood Elevation shall be of a "marine" or "water-resistant" variety.
  - (c) 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.
  - (d) Windows, doors, and other components at or below the Regulatory Flood Elevation shall be made of metal or other "water-resistant" material.
- (10) Paints and adhesives
  - (a) Paints and other finishes used at or below the Regulatory Flood Elevation shall be of "marine" or "water-resistant" quality.
  - (b) Adhesives used at or below the Regulatory Flood Elevation shall be of a "marine" or "water-resistant" variety.
  - (c) 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.
- (11) Electrical components
  - (a) Electrical distribution panels shall be at least three (3) feet above the base flood elevation.
  - (b) Separate electrical circuits shall serve lower levels and shall be dropped from above.
- (12) Equipment
  - (a) Water heaters, furnaces, air conditioning and ventilating units, and other electrical, mechanical, or utility equipment or apparatus shall not be located below the Regulatory Flood Elevation and shall be anchored to resist floatation, collapse, and lateral movement.
  - (b) Ductwork shall be elevated to or above the Regulatory Flood Elevation or floodproofed to remain water resistant.

- (13) 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.
- (14) 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 subsections of this Article, to the extent that they are more restrictive and supplement the requirements of this Article.
  - International Building Code (IBC) 2009 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) 2009 or the latest revision thereof as adopted by the Commonwealth of Pennsylvania, Secs. R104, R105, R109, R322, Appendix E, and Appendix J.

D. Development that may endanger human life. Within any identified floodplain area, any structure of the kind described in subsection D(1), below, shall be prohibited. If a variance is obtained in accordance with the criteria in **§325-66**, then the provisions of **§§325-63.D(2), -63.D(3), and -63.D(4)** shall 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 that:
  - (a) will be used for the production or storage of any of the following dangerous materials or substances; or
  - (b) 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
  - (c) will involve the production, storage, or use of any amount of radioactive substances

shall be subject to the provisions of this section in addition to all other applicable provisions. The following 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.
- (2) Within any identified floodplain area, any new or substantially improved structure of the kind described in subsection D(1), above, shall be prohibited within the area measured fifty (50) feet landward from the top-of-bank of any water-course.
- (3) Within any floodway area, any structure of the kind described in subsection D(1), above, shall be prohibited. Where permitted within any identified floodplain area, any new or substantially improved residential structure of the kind described in subsection D(1), above, shall be elevated to remain completely dry up to at least one and one-half (1½) feet above base flood elevation and built in accordance with subsections A, B, and C, above.
- (4) Where permitted within any identified floodplain area, any new or substantially improved non-residential structure of the kind described in subsection D(1), above, shall be built in accordance with subsections A, B, and C, above, including:
- (a) elevated, or designed and constructed to remain completely dry up to at least one and one-half (1½) feet above base flood elevation, and
  - (b) 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.

- E. Special requirements for subdivisions and land developments. All subdivision proposals and land 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.
- F. Special requirements for manufactured homes
- (1) Within any identified floodplain area manufactured homes shall be prohibited. If a variance is obtained in accordance with the criteria in **§325-66**, then the following provisions apply:
  - (2) Within any Floodway Area/District, manufactured homes shall be prohibited. If a variance is obtained in accordance with the criteria in **§325-66**, then the following provisions apply:
  - (3) Within any identified floodplain area manufactured homes shall be prohibited within the area measured fifty (50) feet landward from the top-of-bank of any watercourse.
  - (4) Where permitted within any identified floodplain area, all manufactured homes and any improvements thereto shall be:
    - (a) placed on a permanent foundation;
    - (b) elevated so that the lowest floor of the manufactured home is at least one and one-half (**1½**) feet above base flood elevation; and
    - (c) anchored to resist flotation, collapse, or lateral movement.
  - (5) Equipment requirement
    - (a) Water heaters, furnaces, air conditioning and ventilating units, and other electrical, mechanical or utility equipment or apparatus shall not be located below the Regulatory Flood Elevation and shall be anchored to resist floatation, collapse, and lateral movement.
    - (b) Ductwork shall be elevated to or above the Regulatory Flood Elevation or floodproofed to remain water resistant.
  - (6) Installation of manufactured homes shall be done in accordance with installation instructions provided by the manufacturer. Where the applicant cannot provide the above information, the requirements of Appendix E of the 2009 “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.

- (7) Consideration shall be given to the installation requirements of the 2009 IBC, and the 2009 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 manufacturer's standards for anchoring cannot be provided or were not established for the proposed unit(s) installation.
- G. Special requirements for recreational vehicles. Within any identified floodplain area the storage of recreational vehicles shall be prohibited. If a variance is obtained in accordance with the criteria in **§325-66**, then recreational vehicles in Zones A, A1-30, AH, and AE must:
- (1) be on the site for fewer than 180 consecutive days, and
  - (2) be fully licensed and ready for highway use.

#### **§325-64: Prohibited Activities**

- A. 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:
- (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:
    - (a) Hospitals
    - (b) Nursing homes
    - (c) 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.

#### **§325-65: Existing structures in identified floodplain areas**

- A. Existing structures. The provisions of this Article 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 **§325-65.B** shall apply.

- B. Improvements. The following provisions shall apply whenever any improvement is made to an existing structure located within any identified floodplain area.
- (1) No expansion or enlargement of an existing structure shall be allowed within any identified floodplain area that would cause any increase in BFE. In A Area/District(s), BFEs are determined using the methodology in **§325-62.B(3)**.
  - (2) 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 in full compliance with the provisions of this Article.
  - (3) The above activity shall also address the requirements of the 34 PA Code, as amended and the 2009 IBC and the 2009 IRC or most recent revision thereof as adopted by the Commonwealth of Pennsylvania.
  - (4) Within any Floodway Area/District (see **§325-62.B(1)**), no new construction or development shall be allowed unless the appropriate permit is obtained from the Department of Environmental Protection Regional Office.
  - (5) Within any AE Area/District without Floodway (see **§325-62.B(2)**), no new construction or development shall be located within the area measured fifty (50) feet landward from the top-of-bank of any watercourse, 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 of any kind occurring as a result of “cumulative substantial damage” shall be undertaken only in full compliance with the provisions of this Article.

#### **§325-66: Variances**

- A. 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 Zoning Hearing Board may, upon request, grant relief from the strict application of the requirements.
- B. Variance procedures and conditions. Requests for variances shall be considered by the Zoning Hearing Board in accordance with the procedures contained in **§325-61.K** and the following:

- (1) No variance shall be granted within any identified floodplain area that would cause any increase in BFE. In an A Area/District, BFE's are determined using the methodology in **§325-62.B(3)**.
- (2) Except for a possible modification of the Regulatory Flood Elevation requirement, no variance shall be granted from any of the other requirements of **§325-63.D**, "Development that may endanger human life."
- (3) No variance shall be granted from **the provisions of §325-64**, "Prohibited activities."
- (4) If granted, a variance shall involve only the least modification necessary to provide relief.
- (5) In granting any variance, the 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 from any provision of this Article, the Zoning Hearing Board shall notify the applicant in writing that:
  - (a) The granting of the variance may result in increased premium rates for flood insurance.
  - (b) Such variances may increase the risks to life and property.
- (7) In reviewing any request for a variance, the Zoning Hearing Board shall consider, at a minimum, the following:
  - (a) That there is good and sufficient cause.
  - (b) That failure to grant the variance would result in exceptional hardship to the applicant.
  - (c) 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 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.

§325-67: (RESERVED)

**Section 4.** The provisions of this Ordinance are severable, and if any section, sentence, clause, part, or provision thereof shall be held illegal, invalid, or unconstitutional by any court of competent jurisdiction, such decision of the court shall not affect or impair the remaining sections, sentences, clauses, parts, or provisions of this Ordinance.

**Section 5.** This Ordinance shall take effect and be in force five (5) days from the date of enactment.

**ENACTED AND ORDAINED** this \_\_\_\_ day of \_\_\_\_\_, 2017.

**BOARD OF SUPERVISORS  
WEST WHITELAND TOWNSHIP**

\_\_\_\_\_  
**Steve Soles, Chairman**

\_\_\_\_\_  
**George Turner, Vice-Chairman**

\_\_\_\_\_  
**Joseph Denham, Supervisor**

**ATTEST:**

\_\_\_\_\_  
**Mimi Gleason, Township Manager**