FLOODPLAIN FORMS: Floodplain Management Streamlined
FLOOD MANAGEMENT PROGRAM
City of Philadelphia

PUBLIC INFORMATION
Create a variety of communication tools to promote education around flood hazards.

EDUCATION
- Guides
- Courses
- Training

TECHNICAL ASSISTANCE
- Workshops
- One-on-one

OUTREACH
- Website
- Newsletter
- Social media
- Press releases
- Public meetings
- Conferences
- Public advisory/stakeholder committee

ADVOCACY
- Disclosure
- Notification

MAPPING + REGULATIONS
Develop higher standards as well as adaptable mapping.

DEVELOPMENT SERVICES
- Pre-application consultation
- Training
- Permits
- Inspections

CODES/REGULATIONS
- Zoning
- Building
- Plumbing
- Stormwater (PWD lead)

MAPPING - flood hazard areas
- FIRM maps
- Sea Level Rise/Inundation
- Community identified flood hazards (existing infrastructure related)

MAPPING - planning/analysis
- Public assets/infrastructure
- Repetitive Loss Properties
- Historic
- Insurance

FLOOD PREPAREDNESS
Prioritize the need to address a variety of flood concerns.

PLANNING
- OEM- Philadelphia Severe Weather Response Plan
- OEM- Emergency Operation Plan

DAMS/LEVEES
- Maintenance
- Inundation mapping

FLOOD WARNING
- Pre-storm event protocol

Philadelphia Water Department

OFFICE OF WATERSHEDS
- Watershed Protection
- Watershed Monitoring & Modeling
- Climate Change Adaptation

OFFICE OF XX
- Capital Projects
- Coordination with Streets Dept.
- Storm Flood Relief Planning

FLOOD DAMAGE REDUCTION
Enhance the City’s resiliency to flooding through mitigation.
TITLE 14. ZONING AND PLANNING

Editor's note: To view the historical version of Title 14 (repealed as of August 22, 2012), please click here.

Preface: Bill No. 110645

Chapter 14.100. General Provisions


§ 14.102. Citation and Title.

§ 14.103. Authority.

1. Authority.
2. Construction of Authority.
3. Department of Licenses & Inspections.
4. Zoning Board of Adjustment.

§ 14.104. Applicability and Jurisdiction.

1. Applicability.
2. Compliance Required.
3. Property Owned, Leased, or Operated by Public Agencies.

§ 14.105. Relationship to Plan Documents.

1. The Comprehensive Plan.
2. Amendments to the Comprehensive Plan.


1. Zoning Districts.
2. Official Zoning Map.


1. Boundaries of Districts.
2. Multiple Districts or Provisions.

§ 14.108. Relationship to Other Regulations.

1. Conflict.
IBC Appendix G - Flood-Resistant Construction

- Addresses flood-related administrative requirements
- The only place in the I-Code that addresses development other than buildings

<table>
<thead>
<tr>
<th>G101 Administration</th>
<th>G501 Manufactured Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>G102 Applicability</td>
<td>G601 Recreational Vehicles</td>
</tr>
<tr>
<td>G103 Powers and Duties</td>
<td>G701 Tanks</td>
</tr>
<tr>
<td>G104 Permits</td>
<td>G801 Other Building Work</td>
</tr>
<tr>
<td>G105 Variances</td>
<td>G901 Temp Structures &amp; Temp Storage</td>
</tr>
<tr>
<td>G201 Definitions</td>
<td>G1001 Utility &amp; Miscellaneous Group U</td>
</tr>
</tbody>
</table>
FLOODPLAIN MANAGEMENT

CODES + REGULATIONS

FEMA: Building Code Resources

QUICK REFERENCE GUIDE
Comparison of Select NFIP and 2018 I-Code Requirements for Special Flood Hazard Areas

DID YOU KNOW?
The NFIP refers to the Base Flood Elevation (BFE) for flood risk assessment and other requirements, while the I-Codes and ASCE 24 refer to the BFE for Design Flood Elevations (DFE). The DFE is always the BFE or higher. Additional height above the BFE is known as "floodproofing." The ISO/ASCE 24 limits construction in high-risk flood hazard areas, including alluvial fans, flash floods, mudslides, stream areas, high velocity flows, ice jams, and debris areas.

FEMA Quick Reference Guide: Comparison of Select NFIP and 2018 I-Code Requirements for Special Flood Hazard Areas

Floodproofing Non-Residential Buildings
FEMA P-936 / July 2013

This document contains excerpts of the flood provisions from the 2018 editions of the IBC, IRC, IEBIC, IMC, IPC, IFGC, IFC, ISPSC, IPSDC, and ICC Performance Code.

2018 International Building Code
[a compilation of flood resistant provisions, prepared by FEMA]

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CHAPTER 1 ADMINISTRATIVE

The provisions of this code shall apply to the construction, alteration, relocation, improvement, repair, equipment, use and occupancy, location, maintenance, removal and use of building or structures or any appurtenances connected or attached to such buildings or structures in the special flood hazard areas. Detached one- and two-family dwellings and townhouses not more than three stories in height with a separate means of egress, and their accessory structures not more than one story in height, shall comply with this code or the International Residential Code for One- and Two-Family Dwellings. Provisions in the appendices shall not apply unless specifically adopted.

SECTION 104 DUTIES AND POWERS OF THE BUILDING OFFICIAL

The building official shall not grant modifications to any provisions of this code for existing buildings or structures located in flood hazard areas, unless it is determined that the proposed work constitutes substantial improvement or repair of a building or structure. The building official shall not grant the requirements of Section 1012.

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NFIP Participation
Key Dates

PRE-FIRM

BUILT BEFORE DECEMBER 31, 1979

Or structures mapped into SFHA’s Post construction, see historical FIRM maps

虽然NFIP是在1968年创建的，但费城在1979年12月31日加入。

虽然NFIP是在1968年创建的，但费城在1979年12月31日加入。

Regulations do not apply unless substantially improved, but mitigation is always highly suggested.

POST-FIRM

BUILT AFTER DECEMBER 31, 1979

- December 31, 1979 to August 2012 = BFE+12”
- September 2012 to present = BFE+18”

MUST maintain compliance from date of initial construction and/or substantial improvement.
• **RESIDENTIAL** - building or structures and portions thereof where people live or that are used for sleeping purposes on a transient or non-transient basis - including but not limit to 1-family, 2-family, townhouses, condominiums, multifamily dwellings, apartments, congregate residences, boarding houses, lodging houses, rooming houses, hotels, motels, convents, monasteries, dormitories, fraternity houses, sorority houses, vacation time-share properties and institutional facilities: halfway houses, social rehabilitation facilities, alcohol and drug centers, detoxification facilities (ASCE 24-14)

• **NON-RESIDENTIAL** – not mentioned above

• **NON-RESIDENTIAL** (required to have 24” freeboard) - Generally structures needed in emergency events (see ASCE 24-14 for full list)
<table>
<thead>
<tr>
<th>DEPARTMENT OF LICENSES AND INSPECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CODE BULLETIN</td>
</tr>
<tr>
<td>No. A-1702R</td>
</tr>
<tr>
<td>SUBJECT OF BULLETIN:</td>
</tr>
<tr>
<td>DEVELOPMENT IN SPECIAL FLOOD HAZARD AREAS</td>
</tr>
<tr>
<td>ISSUED BY</td>
</tr>
<tr>
<td>NSH Lippert, CFM</td>
</tr>
<tr>
<td>TITLE:</td>
</tr>
<tr>
<td>Floodplain Manager, Department of Licenses and Inspections</td>
</tr>
<tr>
<td>CODE OF GENERAL ORDINANCES OF THE CITY OF PHILADELPHIA</td>
</tr>
<tr>
<td>TITLE 4 — BUILDING CONSTRUCTION AND OCCUPANCY CODE</td>
</tr>
<tr>
<td>TITLE 14 — ZONING AND PLANNING</td>
</tr>
<tr>
<td>REFERENCE CODE SECTION(S):</td>
</tr>
<tr>
<td>Zoning, IBC</td>
</tr>
<tr>
<td>ISSUE DATE</td>
</tr>
<tr>
<td>August 24, 2017</td>
</tr>
<tr>
<td>REVISION DATE</td>
</tr>
<tr>
<td>October 19, 2018</td>
</tr>
</tbody>
</table>

- Code and process clarifications
- Higher Standards
Forms

- **Flood Protection Acknowledgement Form – ZONING (FP-Z)** (Appendix A)
  - For the acknowledgement of all applicable floodplain regulations in the City of Philadelphia’s Zoning Code as well as building regulations (IRC 2015, IBC 2018, Administrative Codes, ASCE 24, and Appendix G) associated with a development site located in the Special Flood Hazard Area (SFHA).

- **Flood Protection Form – EXISTING BUILDINGS (FP-EX)** (Appendix B)
  - For an existing building(s) in the Special Flood Hazard Area (SFHA) being renovated/altered and/or an addition being constructed. The form serves to determine whether the development will constitute a substantial improvement, as well as establish which floodplain regulations apply.

- **Flood Protection Form – GENERAL (FP-G)** (Appendix C)
  - For building permit applications to confirm all development meets the City of Philadelphia’s Zoning Code as well as additional building regulations (IRC 2015, IBC 2018, Administrative Codes, ASCE 24, and Appendix G) associated with a development site located in the Special Flood Hazard Area (SFHA).

- **Flood Protection Form – EZ PERMITS (FP-EZ)** (Appendix D)
  - For building permit applications to confirm all development meets the City of Philadelphia’s Zoning Code as well as additional building regulations (IRC 2015, IBC 2018, Administrative Codes, ASCE 24, and Appendix G) associated with a development site located in the Special Flood Hazard Area (SFHA).

- **Flood Protection – KEY TERMS** (Appendix E)
  - Definitions for terms found in the above forms.
FORMS
Components

- Name w/dates (issued and expiration)
- Description
- Resources (website)
- Contact information
- Contents (source: codes/regulations)
- Disclaimer
- Signature
- Instructions
- Definitions

INSTRUCTIONS: FLOOD PROTECTION ACKNOWLEDGEMENT FORM – ZONING (FP-Z)

SECTION A
This section is for general project information.

SECTION B
This section identifies the type of development. Select all that apply to your proposed development. Follow the “Proceed to” prompts to next applicable section of the application. If none of these development types apply to your development, insert a description of the development in “Other.”

SECTIONS C-I
This form is for the acknowledgement of all applicable floodplain regulations in the City of Philadelphia's Zoning Code as well as building regulations (IRC 2015, IBC 2018, Administrative Codes, ASCE 24, and Appendix G) associated with a development site located in the Special Flood Hazard Area (SFHA).

The Flood Protection Acknowledgement Form – ZONING (FP-Z) is to be completed by the development applicant, to acknowledge all applicable floodplain regulations in the City of Philadelphia's Zoning Code as well as additional building regulations (IRC 2015, IBC 2018, Administrative Codes, ASCE 24, and Appendix G) associated with a development site located in the SFHA prior to submitting for a zoning permit.

Where you see "Proceed to" see additional requirements on:

- Flood Protection Form – GENERAL (FP-G)
- Flood Protection Form – EXISTING BUILDINGS (FP-EX)

The above form(s) will be required when submitting for building permits, if they apply to your development.

In some cases, your parcel may be in the floodplain, but not the development itself. Any part of a building/structure that touches a SFHA Zone: floodway, A and/or AE will be considered in the SFHA.

To find the City's Flood Insurance Rate Maps (FIRM's) and Flood Insurance Studies (FIS's) please see the FEMA Flood Map Service Center https://msc.fema.gov/portal/home.

Please fill in the box below to confirm your development is mapped in or out of the SFHA.

**FLOOD HAZARD INFORMATION**
- confirm that development is in the SFHA

1. **Flood Risk Zone (proposed development that touches any of these Zones)** – select all that apply
   - FEMA Mapped SFHA - A Zone – Complete Form
   - FEMA Mapped SFHA - AE Zone – Complete Form
   - FEMA Mapped - AE/Floodway – Complete Form
   - FEMA Mapped 0.02% or X – Proceed to section H, development not regulated for floodplain codes/regulations, must Attach Site Plan illustrating development in Zone X

2. Attach a Site Plan illustrating the SFHA on your development site

**Site Plan Requirements**:
- Plans must be signed/sealed by a PA registered design professional
- Plans must be of professional quality and drawn to scale (e.g. 1/4″ = 1′–0″)
- Minimum sheet size is 18" x 24".
- Elevations must use NGVD 29 as per FIRM panels
- The following information must be included on the plan:
  - Special Flood Hazard Zones (A, AE, Floodway, X, 0.2%) from effective Flood Insurance Study (FIS), and when a FIS is not available from the Flood Insurance Rate Maps (FIRM)
  - Existing topography
  - Building footprints (including accessory structures)
  - Property boundaries

For full floodplain codes/regulations visit the Floodplain Management webpage at http://www.phila.gov/li/Pages/FloodplainManagement.aspx for more information.

**For Submission**:
The Philadelphia Department of Licenses and Inspections is located at:
1401 John F. Kennedy Boulevard - Concourse Level
Philadelphia, PA 19102
Counter Hours:
Monday – Friday, 8:00am – 3:30pm (*closes at 12:00pm/noon last Wednesday of every month)

**J. SIGNATURE**
I hereby affirm that all statements above are correct and complete to the best of my knowledge and that the design plans/additional documents, that were submitted, are consistent with these statements. Furthermore, I affirm that I acknowledge all applicable building and zoning code/regulations (listed in Code Bulletin A-1702R) will comply with the proposed development.

<table>
<thead>
<tr>
<th>Applicant Signature</th>
<th>Print Name</th>
<th>Date</th>
</tr>
</thead>
</table>
# B. EXISTING BUILDING INFORMATION

For Historic Structures – see FP-G E4. Prior to completing this form

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Year Constructed</td>
<td>□ 1978 or before</td>
<td>□ 1979 or after</td>
</tr>
<tr>
<td>2. Elevation Certificate</td>
<td>□ Yes - Attach to Application, Proceed to Section C</td>
<td>□ No</td>
</tr>
<tr>
<td>3. Scope of work over $25,000</td>
<td>□ Yes - Design Professional Required</td>
<td>□ No</td>
</tr>
<tr>
<td>5. Detailed Cost Estimate or Signed Contract is required</td>
<td>□ Yes - Attach to Application, see instructions for details</td>
<td>□ No</td>
</tr>
<tr>
<td>6. Value of work (from B5 attachment)</td>
<td>$____________________</td>
<td></td>
</tr>
<tr>
<td>7. To challenge, OPA value in B4 - Certified Appraisal (for existing structure/building only) - Attach to Application</td>
<td>□ Yes</td>
<td>□ No</td>
</tr>
</tbody>
</table>

**SUBSTANTIAL IMPROVEMENT DETERMINATION** Substantial improvement refers to any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement.
# FORMS

## Existing Buildings

<table>
<thead>
<tr>
<th>Pre-FIRM (constructed 1978 or before)</th>
<th>□ Yes □ No □ N/A</th>
<th>□ Yes □ No □ N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Renovation not over 50% (see B8) – compliance not required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Renovation over 50% (see B8) – compliance required</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
<tr>
<td>11. Lateral addition and renovation of existing over 50% (see B8) – Addition &amp; Building: compliance required</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
<tr>
<td>12. Lateral addition over 50% (see B8) - Addition: compliance not required</td>
<td>□ Yes □ No □ N/A</td>
<td></td>
</tr>
<tr>
<td>13. Lateral addition over 50% (see B8) &amp; not structurally connected – Addition: compliance not required; Building: compliance not required</td>
<td>□ Yes □ No □ N/A</td>
<td></td>
</tr>
<tr>
<td>14. Lateral addition over 50% (see B8) &amp; structurally connected – Addition: compliance required; Building: compliance required</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
<tr>
<td>15. Vertical addition above building not over 50% (see B8) – compliance not required</td>
<td>□ Yes □ No □ N/A</td>
<td></td>
</tr>
<tr>
<td>16. Vertical addition above building over 50% (see B8) Building: compliance required</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-FIRM (constructed 1979 and after)</th>
<th>□ Yes □ No □ N/A</th>
<th>□ Yes □ No □ N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Renovation not over 50% (see B8)–Work shall not be allowed to make the building non-compliant with any aspect of the building that was required for compliance</td>
<td>□ Yes □ No □ N/A</td>
<td></td>
</tr>
<tr>
<td>18. Renovation over 50% (see B8)–Work shall comply and shall not be allowed to make the building non-compliant with any aspect of the building that was required for compliance*</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
<tr>
<td>19. Lateral addition and renovation of existing over 50% (see B8)–Addition required to comply; building required to comply*</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
<tr>
<td>20. Lateral addition over 50% (see B8)-Addition required to be elevated to at least the elevation of the existing lowest floor</td>
<td>□ Yes □ No □ N/A</td>
<td></td>
</tr>
<tr>
<td>21. Lateral addition over 50% (see B8) &amp; not structurally connected – Addition required to comply; building not required to comply</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
<tr>
<td>22. Lateral addition over 50% (see B8) &amp; structurally connected – Addition required to comply; building required to comply*</td>
<td>□ Proceed to FP-G</td>
<td>□ N/A</td>
</tr>
<tr>
<td>23. Vertical addition above building not over 50% (see B8) - Work shall comply and shall not be allowed to make the building non-compliant with any aspect of the building that was required for compliance</td>
<td>□ Yes □ No □ N/A</td>
<td></td>
</tr>
<tr>
<td>24. Vertical addition above building over 50% (see B8) - Work shall comply and shall not be allowed to make the building non-compliant with any aspect of the building that was required for compliance*</td>
<td>□ Yes □ No □ N/A</td>
<td></td>
</tr>
</tbody>
</table>

*If a map revision has resulted in a higher BFE, a post-FIRM building must comply based on the new BFE. Generally, 1979-2012: BFE + 12’ 2013-present: BFE+18” for design flood elevation (DFE)
GUIDE
Substantial Improvements - Improvement Costs

1. Complete Flood Protection Form - EXISTING BUILDINGS [FP-EX]

2. Attach Cost Estimate

3. Substantial Improvement Calculation

ESTIMATED COST

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteer labor, plus sales tax
- Site preparation related to the improvement or repair (e.g., foundation excavation or filling in basements)
- Demolition and construction debris disposal
- Construction management and supervision
- Structural elements and exterior/interior finishes
- Utility and service equipment

Items that can be excluded:

- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes
GUIDE
Substantial Improvements - Existing Market Value

2301 MARKET ST
Philadelphia, PA 19103-1338

OWNER
PECO

REAL ESTATE TAX BALANCE
Real Estate Tax account balances have not yet been added to this application.

VALUATION HISTORY

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Value</th>
<th>Taxable Land</th>
<th>Taxable Improvement</th>
<th>Exempt Land</th>
<th>Exempt Improvement</th>
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<tbody>
<tr>
<td>2019</td>
<td>$121,612,200</td>
<td>$24,537,640</td>
<td>$97,074,560</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>2018</td>
<td>$110,000,000</td>
<td>$23,100,000</td>
<td>$86,900,000</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>2017</td>
<td>$75,000,000</td>
<td>$33,057,600</td>
<td>$41,942,400</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>2016</td>
<td>$74,000,000</td>
<td>$33,057,600</td>
<td>$40,942,400</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>2015</td>
<td>$72,000,000</td>
<td>$33,057,600</td>
<td>$40,942,400</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

ADD TO GET MARKET VALUE

WWW.ATLAS.PHILA.GOV
GUIDE

Substantial Improvements - Existing Market Value

IF 1 PARCEL & MULTIPLE STRUCTURES, THEN:

2018 MARKET VALUE OF TAXABLE IMPROVEMENT (STRUCTURE/BUILDING ONLY)

/ IMPROVEMENT AREA (SQFT) ______ PRICE PER SQFT

THEN:

PRICE PER SQFT X EACH STRUCTURE/ BUILDING SQFT = EXISTING MARKET VALUE

DETERMINING EXISTING MARKET VALUE

(CONDO)

TO CHALLENGE THE MARKET VALUE: CERTIFIED APPRAISAL

• Licensed Appraiser in Pennsylvania

• Report

  • Identify intended user (including property owner)
  • Completed less than 1 year before floodplain application
  • “Market Approach” is preferred - for structure only, land must be broken out (NOTE: to separate the market value of a structure from the value of the land on which it is located, appraisers may need to do more research than is normally undertaken in order to reasonably allocate the total value between the structure and the land) - for multiple buildings on one parcel, each must be assessed for existing market value
  • “Income Capitalization Approached” is not acceptable
  • All values must be for existing conditions, without any proposed improvements

ADD ALL UNITS’ MARKET VALUE TOGETHER FOR EXISTING MARKET VALUE OF STRUCTURE/BUILDING
FORMS
Building Permits

FLOOD PROTECTION FORM - GENERAL (FP-G)
Expires January 1, 2020
SUBMIT WITH BUILDING PERMIT APPLICATION

Residential
Non-Residential
Below-grade Parking
Accessory Structures
Historic
Fill
Machinery/Equipment
Storage
Seasonal/Temporary
Construction Offices/Staging
Demolition
Floodway
Coastal Hazard Zones
Other Permits (State/federal)
**Building Permits**

<table>
<thead>
<tr>
<th>FORMS</th>
<th>E5. ACCESSORY STRUCTURE (use can only be for incidental storage or parking, for enclosed inhabitable/livable accessory structures see E1 or E2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Applies to all accessory structures: anchored, withstand the hydrostatic &amp; hydrodynamic loads as well as not become buoyant (applies to all below) (Appendix G901)</td>
</tr>
<tr>
<td>2.</td>
<td>Enclosed (including 2 sides or more) (use only as parking and incidental storage)</td>
</tr>
<tr>
<td>3.</td>
<td>Enclosed areas below BFE + 18&quot; (no areas below grade on all sides allowed) allows for the automatic entry and exit of floodwater (Appendix G901 &amp; ASCE 24)</td>
</tr>
<tr>
<td>4.</td>
<td>Engineered opening certifications and/or manufacturers documentation (ASCE 24: Ch. 2)</td>
</tr>
<tr>
<td>5.</td>
<td>Non-engineered openings (ASCE 24: Ch. 2)</td>
</tr>
</tbody>
</table>
| 6.    | Openings: (ASCE 24: Ch. 2)  
- 1SQ/FT for every 1SQ/FT of enclosed space, shall not be less than 3in. in any direction, louvers/blades/screens/faceplates shall not block or impede automatic exit/entry of water  
- Min. of 2 opening for each enclosed space (including storage closets)  
- On at least 2 walls of each enclosed area  
- Bottom of each opening no higher than 1FT above the higher of the final interior grade or floor and the finished exterior grade immediately under each opening (only openings below BFE can count towards the required net open area) |
| 7.    | Flood Resistant Materials, must be used in spaces BFE + 18" and below when wet floodproofed (ASCE 24: Ch. 6) |
| 8.    | Retaining Walls - unless fill is placed, compacted and sloped to minimize shifting, slumping and erosion during the rise and fall of flood water |
| 9.    | Deck, porches and patios (ASCE 24: Ch. 9) |
| 10.   | Pools and Spas (ASCE 24: Ch. 9) |
| 11.   | Machinery/equipment (no HVAC or fuel systems) at BFE+18" |
| 12.   | Electrical below BFE+18", supplied by branch circuits and GFCI protection |
| 13.   | Non-conversion note on CERTIFICATE OF OCCUPANCY, for structures over 200 SF |
Floodplain Management

Floodplain Development

The Flood Protection Forms below must be submitted with all Zoning and Building Permit applications in the Special Flood Hazard Area (SFHA) or floodplain.

- **Flood Protection Acknowledgement Form – ZONING (FP-Z)**
  - For zoning applications, the acknowledgement of all applicable floodplain regulations in the City of Philadelphia’s Zoning Code as well as building regulations (IRC 2015, IBC 2016, Administrative Codes, ASCE 24, Appendix G) associated with development site located in the Special Flood Hazard Area (SFHA).

- **Flood Protection Form – EXISTING BUILDINGS (FP-EX)**
  - For building permit applications of an existing building(s) in the Special Flood Hazard Area (SFHA) being renovated/ altered and/or an addition being constructed. The form serves to determine whether the development will constitute a substantial improvement, as well as establish which floodplain regulations apply.

- **Flood Protection Form – GENERAL (FP-G)**
  - For building permit applications to confirm all development meets the City of Philadelphia’s Zoning Code as well as additional building regulations (IRC 2015, IBC 2016, Administrative Codes, ASCE 24, and Appendix G) associated with a development site located in the Special Flood Hazard Area (SFHA).

- **Flood Protection Form – EZ PERMITS (FP-EZ) – Coming Soon**
  - For building permit applications to confirm all development meets the City of Philadelphia’s Zoning Code as well as additional building regulations (IRC 2015, IBC 2016, Administrative Codes, ASCE 24, and Appendix G) associated with a development site located in the Special Flood Hazard Area (SFHA).

- **Flood Protection - KEY TERMS**
  - Definitions for terms found in the above forms.

The Code Bulletin: Development in Special Flood Hazard Areas serves to address recommendations from FEMA as they relate to the enforcement of code provisions through the issuance of zoning and building permits by clarifying and improving upon the collection of compliance documentation regarding development in the floodplain.
• **Zoning Maps**
• **Repetitive Loss**
• **Other flood hazards**
TECHNOLOGY
Permitting Software

• “Flagging” parcels in the SFHA
• Upload requirements
TRAINING
Content

- NATIONAL FLOOD INSURANCE PROGRAM [NFIP]
- FLOOD HAZARD INFORMATION
- CODES + REGULATIONS
- ELEVATION CERTIFICATE
- LETTER OF MAP REVISION [LOMC]
- RESOURCES

- 1 Hour
- Continuing Education Credits
Mandatory Floodplain Scoping Meeting Required

Effective March 15, 2019, a Floodplain Scoping Meeting is required for all projects in the Special Flood Hazard Area with an associated cost of work of $50,000 or more. The meeting will provide early direction on floodplain requirements to avoid delays in the project.

Review the Floodplain Scoping Meeting Information Sheet for more details or submit a request for a mandatory Scoping Meeting.

Mandatory Scoping Meeting for Floodplain Projects

Please fill out the form to register for a Tuesday (AM) or Thursday (PM) project meeting. You will receive an confirmation with the event details and time within 7 days of receipt.

Applicant Name *

First Name

Last Name
THANK-YOU!

Questions?