

Floodplain Checklist – for Residential Construction

- 1. Municipal approval **Land Use Permit** signed by a representative of the municipality. [Will only accept if signed by the municipality]
- 2. **All applicable requirements of the municipalities floodplain ordinance must be met.** You must include a copy of your municipalities floodplain ordinance with the **Floodplain Development Permit Application**. (a copy is available from your municipality or from PMCA) most municipalities have special requirements for construction within the floodplain. Some municipalities require review by the planning commission, local conservation district and the municipal engineer.
- 3. **Plot Plan** of the proposed location prepared by a registered surveyor or a licensed engineer, plan must clearly define flood boundaries (including floodways & floodplain). Location of the proposed structure must be clearly defined on plan.
- 4. **Elevation Certificate** prepared by a registered surveyor or a licensed engineer, all applicable sections must be completed, certificate must include base flood elevation (if the proposed structure is located in Zone-A the elevation must be established by the surveyor/engineer of record), all applicable elevations in section C must be completed (a-h). **At the completion of the project an As-Built certificate verifying all elevations must be provided before occupancy will be granted. [Is required if in the Floodway or Flood Zone]**
- 5. **No Rise Certificate** prepared by a licensed engineer must be completed when the proposed structure is located within the floodway or within 50' of the creek bank. (Copy available from your local PMCA office). *[Is mandatory if in the Floodway]*
- 6. Work on Existing Buildings in Special Flood Hazard Areas of Substantial Improvement / Substantial Damage Worksheets. **Substantial improvement** means 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.]
- 7. Detailed foundation/pier drawings signed and sealed by a licensed engineer must be provided, foundation drawings must include method to securely anchor propose structure to the foundation.
- 8. All mechanical & electrical systems must be located at least 18" above the base flood elevation, mechanical system are permitted below the base flood elevation provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic & hydrodynamic loads and stresses including the effects of buoyancy. Electrical systems are permitted to be located below the base flood elevation provided they conform to the provisions of the 2008 NEC for wet locations. (Some local ordinances require electrical distribution panels to be located above the base flood elevation. Locating mechanical & electrical systems below the base flood elevation could adversely affect cost of flood insurance.)
- 9. Location of propane or fuel oil tanks (if applicable) must be defined on the plot plan; tanks must be securely anchored to prevent uplift from the effects of buoyancy in a flood event.
- 10. Water supply systems must be designed to eliminate infiltration of floodwaters into the system in compliance with all applicable requirements in the 2009 IPC. Sanitary sewage system must be designed to eliminate infiltration of floodwaters into the system and discharges from the system into the floodwaters.
- 11. Landings & stairways must be provided at all exits, detailed plans that comply with all applicable requirements in the 2009 IRC must be provided.
- 12. All enclosed areas below the base flood elevation including basements, crawl spaces, garages and areas below decks and porches that are enclosed must be provided with at least 2 openings (floodgates) that meet requirements of section 322.2.2 IRC. The design of the openings must provide for equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters. The net area of opening shall be at least 1 in.² for each square foot of enclosed area. The bottom of each opening shall be 1 foot or less above the adjacent ground level. (Location and size of flood openings must be clearly depicted on the drawings.)

► Commercial Projects have similar requirements – Reference local ordinance, International Building Code & DHS-FEMA ◀

FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION

Application No. _____

Date Received in Office _____

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be in accordance with the requirements of the Floodplain Management Ordinance and with all other applicable municipal ordinances, federal programs, and the laws and regulations of the Commonwealth of Pennsylvania. I certify that the Code official or his representative shall have the authority to enter the property and structures, at any reasonable hour during the permit process, to enforce the provisions of the Codes & Ordinances governing this project. I understand and assume responsibility for the establishment of official property lines for required setbacks prior to the start of construction, and agree to conform to all applicable laws of this jurisdiction. I further certify that this information is true and correct to the best of my knowledge and belief.

Signature of Owner or Authorized Agent _____ Date _____ Print Name _____ Email _____

Complete Address (Street, City, State, Zip) _____ Phone _____ Cell _____

Builder, Contractor, Company _____ Person in Charge _____ Date _____ Email _____

Complete Address (Street, City, State, Zip) _____ Phone _____ Cell _____

SITE DATA Municipality: _____ County: _____ Tax Parcel/I.D.# _____
On the property tax notice

Address: Street _____ City _____ State _____ Zip _____

▶▶ Please submit additional information on additional sheet(s) if needed. ◀◀ Additional sheet(s) attached

1. Type of Development: Filling Grading Excavation Minimum Improvement Routine Maintenance
 Substantial Improvement New Construction Other: _____

2. Description of Development: _____

3. Premise Details: Structure Size _____ ft. by _____ ft. Area of Site: _____ Sq. Ft.

Principal Use: _____ Accessory Use (storage, parking, etc.): _____

4. Value of Improvement (fair market value): \$ _____ Pre-Improvement/Assessed Value of Structure: \$ _____

5. Property Located in a Designated FLOODWAY? YES NO

IF ANSWERED YES, CERTIFICATION MUST BE PROVIDED INDICATING THE PROPOSED DEVELOPMENT WILL RESULT IN NO INCREASE IN THE BASE (100-YEAR) FLOOD ELEVATIONS, PRIOR TO THE ISSUANCE OF A PERMIT TO DEVELOP

6. Property Located in a Designated Floodplain FRINGE? YES NO

7. Elevation of the 100-Year Flood (ID source): _____ NGVD

8. Elevation of the Proposed Development Site: _____ NGVD

9. Local Ordinance Elevation/Flood proofing Requirement: _____ NGVD

10. Other Floodplain Elevation Information (ID and describe source): _____

11. Other Permits Required:
- | | | | |
|---|------------------------------|-----------------------------|-----------------------------------|
| US Army Corps of Engineer 404 Permit: | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> PROVIDED |
| DEP Permit: | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> PROVIDED |
| Environmental Protection Agency NPDES Permit: | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> PROVIDED |
| Building Permit per PA Uniform Construction Code: | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> PROVIDED |

All Provisions of Ordinance Number: _____, the "Floodplain Management Ordinance," shall be in Compliance.

Official Use Only

PERMIT APPROVAL/DENIAL

Plans and Specifications: Approved Denied this _____ Day of _____, 20____

THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST HABITABLE FLOOR OF ANY NEW OR SUBSTANTIALLY IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED 1.5 FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED 1.5 FEET ABOVE THE BASE FLOOD ELEVATION. ALL OTHER LOCAL, STATE, AND FEDERAL PERMITS THAT MAY BE REQUIRED ARE THE RESPONSIBILITY OF THE APPLICANT TO OBTAIN AND COMPLY WITH.

THIS PERMIT IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY IMPROVED BUILDING COVERED BY THIS PERMIT.

Signature of Municipal Official/Agent _____ Date _____ Print Name and Title _____ (Rev 5-22-18 PMCA - rcm)

Notice for Property Owners, Contractors, and Design Professionals Regarding Regulations on Substantial Improvement in the Flood Hazard Areas

[This example is based on the NFIP (National Flood Insurance Program) minimum requirements.]

TO: Property Owners, Contractors, and Design Professionals

FROM: R. Clem Malot, Building Code Official, PMCA 380 Wayne Avenue, Chambersburg, Pa. 17201

SUBJECT: Notice for Work on Existing Buildings in Special Flood Hazard Areas Substantial Improvement / Substantial Damage Worksheets

The *Community's* floodplain management regulations and codes specify that all new buildings to be constructed in Special Flood Hazard Areas (SFHAs) (regulated floodplains) are required to have their lowest floors elevated to or above the base flood elevation (BFE). The regulations also specify that **substantial improvement** of existing buildings (remodeling, rehabilitation, improvement, or addition) or buildings that have sustained **substantial damage** must be brought into compliance with the requirements for new construction. Please note that a building may be substantially damaged by any cause, including fire, flood, high wind, seismic activity, land movement, or neglect. It is important to note that all costs to repair a substantially damaged building to its pre-damage condition must be identified. There are several aspects that must be addressed to achieve compliance with the floodplain management requirements. The requirements depend on several factors, including the flood zone at your property. The most significant compliance requirement is that the lowest floor, as defined in the regulations/code, must be elevated to or above the BFE. Please plan to meet with this department to review your proposed project, to go over the requirements, and to discuss how to bring your building into compliance.

Regulations define these terms:

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means 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. This term includes structures that have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

- (1) 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 local code enforcement official and that are the minimum necessary to assure safe living conditions or
- (2) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

To make the substantial improvement determination or the substantial damage determination, we compare the cost of the proposed improvement or repairs to the market value of the building (excluding land, accessory structures, and landscaping). If the resulting ratio equals or exceeds 50 percent, the existing building must be brought into compliance with the floodplain management requirements for new buildings.

$$\frac{\text{Cost of Improvement or Cost to Repair to Pre-Damage Condition}}{\text{Market Value of Building}} \geq 50\%$$

Please note:

- You must provide an estimate of the cost to perform the proposed improvements or repairs. If your building has been damaged, the cost estimate must include all work required to repair the building to its pre-damage condition. The cost estimate must include all labor and materials. If the work will be done by a contractor, the contractor's overhead and profit must be included. If the work will be done by the owner or volunteers, market rates must be used to estimate the cost of materials and the value of labor. Attached to this notice is a list of costs that must be included and costs that are excluded. After we review the cost estimate, we may require that it be broken down to show all materials and labor estimates.
- You must provide a market value appraisal of the building that is prepared by a professional appraiser according to standard practices of the profession. We will review the appraisal to determine that it accurately describes your building and does not include the value of the land, accessory buildings, and landscaping. Alternatively, we will use the tax assessment value of your building as the estimate of the market value of the building before the work is performed.

► If you have any questions regarding this information, please contact the office closest to the site:

Chambersburg Office : 717 496-4996 Bedford Office: 814 310-2326 Somerset Office: 814 444-6112

Attachments:

- Requirements for Applications for Permits for Substantial Improvements and Repair of Substantial Damage
- Costs for Substantial Improvements and Repair of Substantial Damage
- Owner's Affidavit
- Contractor's Affidavit

Please contact our office if you have questions about the substantial improvement and substantial damage requirements. Your building may have to be brought into compliance with the floodplain management requirements for new construction.

Applications for permits to work on existing buildings that are located in Special Flood Hazard Areas must include the following:

- Current photographs of the exterior (front, rear, sides)
- If your building has been damaged, include photographs of the interior and exterior; provide pre-damage photos of the exterior, if available
- Detailed description of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs n Cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its before-damage condition
- Elevation certificate or elevation survey - You may submit a market value appraisal prepared by a licensed professional appraiser or we will use the tax assessment value of the building
- Owner's affidavit (signed and dated)
- Contractor's affidavit (signed and dated)

Costs for Substantial Improvements and Repair of Substantial Damage

Included Costs

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not in-tended to be exhaustive, but characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements) Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- **Structural elements and exterior finishes, including:**
 - Foundations (e.g., spread or continuous foundation footings, perimeter walls, chain walls, pilings, columns, posts, etc.)
 - Monolithic or other types of concrete slabs
 - Bearing walls, tie beams, trusses n Joists, beams, subflooring, framing, ceilings
 - Interior non-bearing walls
 - Exterior finishes (e.g., brick, stucco, siding, painting, and trim)
 - Windows and exterior doors n Roofing, gutters, and downspouts
 - Hardware
 - Attached decks and porches
- **Interior finish elements, including:**
 - Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
 - Bathroom tiling and fixtures
 - Wall finishes (e.g., drywall, paint, stucco, plaster, paneling, and marble)
 - Built-in cabinets (e.g., kitchen, utility, entertainment, storage, and bathroom)
 - Interior doors
 - Interior finish carpentry
 - Built-in bookcases and furniture
 - Hardware
 - Insulation
- **Utility and service equipment, including:**
 - HVAC equipment n Plumbing fixtures and piping
 - Electrical wiring, outlets, and switches
 - Light fixtures and ceiling fans
 - Security systems
 - Built-in appliances
 - Central vacuum systems
 - Water filtration, conditioning, and re-circulation systems

Excluded Costs

Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:

- Clean-up and trash removal
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs n Permit fees and inspection fees
- Carpeting and recarpeting installed over finished flooring such as wood or tiling
- 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 n Plug-in appliances such as washing machines, dryers, and stoves

Sample Owner's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address / Parcel ID Number:

Owner's Name / Owner's Address/Phone:

Contractor / Contractor's License Number:

Date of Contractor's Estimate:

I hereby attest that the description included in the permit application for the work on the existing building that is located at the property identified above is all of the work that will be done, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement. I further attest that I requested the above-identified contractor to prepare a cost estimate for all of the work, including the contractor's overhead and profit. I acknowledge that if, during the course of construction, I decide to add more work or to modify the work described, that the *[insert community]* will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements. I also understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Owner's Signature

Date:

Notarized

Contractor's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address / Parcel ID Number:

Owner's Name / Owner's Address/Phone:

Contractor / Contractor's License Number:

Date of Contractor's Estimate:

I hereby attest that I have personally inspected the building located at the above-referenced address and discussed the nature and extent of the work requested by the owner, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement. At the request of the owner, I have prepared a cost estimate for all of the improvement work requested by the owner and the cost estimate includes, at a minimum, the cost elements identified by the *[community]* that are appropriate for the nature of the work. If the work is repair of damage, I have prepared a cost estimate to repair the building to its pre-damage condition. I acknowledge that if, during the course of construction, the owner requests more work or modification of the work described in the application, that a revised cost estimate must be provided to the *[insert community]*, which will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements. I also understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Owner's Signature

Date:

Notarized

