

regulations when all of the findings are met:

a. There is a good and sufficient cause other than or in addition to financial hardship.

b. Failure to grant the variance would result in exceptional hardship to the applicant;

c. There is no basement or residential dwelling that has the lowest floor elevation below the Base Flood Elevation.

d. Any enclosure including a crawl space must meet the requirements of Section 6-1662(b)(1)m., Wet Floodproof, if the enclosure interior grade is at or below the Base Flood Elevation

e. Granting of a variance will not result in increased flood heights to existing insurable buildings, additional threats to public safety, extraordinary public expense, the creation of any public nuisances, fraud upon or victimization of the public, or create any conflict with other existing local laws or ordinances;

f. The proposed use is adequately floodproofed;

g. The variance is the minimum necessary, considering the flood hazard, to afford relief;

h. Reasonable alternative locations are not available;

i. No encroachment that causes an increase to the Base Flood Elevation unless an Alteration has been approved pursuant to Section 6-1662(b); and

j. All other criteria for a Floodplain Permit besides the specific development standard requested by variance are met.

(d) Special Considerations for variance approval:

(1) If the new construction or substantial improvements on a lot of one-half (1/2) acre or less is contiguous to and surrounded by lots of existing structures constructed below the base flood elevation, a variance may be approved. However, as lot sizes increase beyond one-half (1/2) acre additional technical justification the Floodplain Administrator may require additional technical justification; and

(2) Historic Structures – variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum relief necessary to preserve the historic character and design of the structure. If the historic nature of the building has been designated as a preliminary or historic structure by U.S. Secretary of Interior or an approved state or local government historic preservation program.

(e) Decision. The Board of Adjustment shall:

(1) Evaluate the application using the criteria and findings in this section, the application requirements and minimum development standards in Division 9 and 10;

(2) Hear, make findings, and approve, conditionally approve or deny a variance within 60 days of a complete application.

(3) Attach conditions to the granting of variance including a project completion date and inspections during and after construction.

(4) Notify the applicant that the issuance of a variance and permit to construct a structure below the base flood level may result in increased premium rates for flood

insurance and that flood insurance premiums are determined by actuarial risk and will not be modified by the granting of a variance.

(5) Submit to the Floodplain Administrator a record of all actions involving a Floodplain Permit and Variance, including the findings and decision and send a copy of each variance granted to DNRC.

(f) Judicial review. Any person or persons aggrieved by the variance decision may appeal such decision in accordance with BMCC Section 6-1652, et seq.

Section 6-1652. APPEALS

(a) **GENERAL.** An appeal is a formal review by the Board of Adjustment of the Floodplain Administrator's order, or granting or denial of a Floodplain Development Permit or interpretation of the Regulated Flood Hazard Area boundary.

(b) **APPEALS REQUIREMENTS.** An Appeal to the Board shall include:

(1) An appeal shall include the basis of the appeal and supporting information including specific findings and conclusions of the Floodplain Administrator's decision being appealed;

(2) An appeal must be submitted by an applicant or anyone who may be aggrieved by the Floodplain Administrator's decision or order;

(3) Appeals must be received within 30 days of the date of the decision or order of the Floodplain Administrator; and

(4) Additional information specific to the appeal request may be requested.

(c) **NOTICE AND HEARING**

(1) Notice of the pending appeal and public hearing shall be provided pursuant to Section 6-1644. The Floodplain Administrator may notify DNRC and FEMA of pending appeals.

(2) A public hearing must be held within 30 days of the Notice unless set otherwise.

(d) **DECISION**

A judgment on an appeal shall be made within 30 days of the hearing unless set otherwise. The decision must grant the permit, modify or deny the permit or remand the application to the Floodplain Administrator with instructions or directions. A decision on an appeal of a permit cannot grant or issue a variance. A decision may support, reverse or remand an order or determination of a boundary of the Regulated Flood Hazard Area by the Floodplain Administrator.

(e) **JUDICIAL REVIEW**

Any person or persons aggrieved by the decision may appeal such decision to a court of competent jurisdiction.

Section 6-1653. ENFORCEMENT

(a) **INVESTIGATION REQUEST** An investigation of an artificial obstruction or nonconforming use within the Regulated Flood Hazard Area may be made either on the initiative of the Floodplain Administrator or on the written request of three (3) titleholders of land which may be affected by the activity within the Regulated Flood Hazard Area. The names and addresses of the persons requesting the investigations

shall be released if requested.

(b) NOTICE TO ENTER AND INVESTIGATE LANDS OR WATERS The Floodplain Administrator may make reasonable entry upon any lands and waters for the purpose of making an investigation, inspection or survey to verify compliance with these regulations.

(1) The Floodplain Administrator shall provide notice of entry by mail, electronic mail, phone call, personal delivery to the owner, owner's agent, lessee, or lessee's agent whose lands will be entered.

(2) If none of these persons can be found, the Floodplain Administrator shall affix a copy of the notice to one (1) or more conspicuous places on the property for five (5) days.

(3) If the owners do not respond, cannot be located or refuse entry to the Floodplain Administrator, the Floodplain Administrator may only enter the property through a Search Warrant.

(c) NOTICE TO RESPOND AND ORDER TO TAKE CORRECTIVE ACTION When the Floodplain Administrator determines that a violation may have occurred, the Floodplain Administrator may issue written notice to the owner or an agent of the owner, either personally or by certified mail. Such notice shall cite the regulatory offense and include an order to take corrective action within a reasonable time or respond requesting an administrative review.

(d) ADMINISTRATIVE REVIEW The order is final, unless within five (5) working days or any granted extension, after the order is received, the owner submits a written request for an administrative review before the Floodplain Administrator. A request for an administrative review does not stay the order.

(e) APPEAL OF ADMINISTRATIVE DECISION Within ten (10) working days or any granted extension of receipt of the Floodplain Administrator's decision concluding the administrative review, the property owner or owner's agent may appeal the decision to the Board.

(f) FAILURE TO COMPLY WITH ORDER TO TAKE CORRECTIVE ACTION If the owner fails to comply with the order for corrective action, remedies may include administrative or legal actions, or penalties through court.

(g) JUDICIAL REVIEW. Any person aggrieved by the decision may appeal to a court of competent jurisdiction.

(h) OTHER REMEDIES. This section does not prevent efforts to obtain voluntary compliance through warning, conference, or any other appropriate means. Action under this part shall not bar enforcement of these regulations by injunction or other appropriate remedy.

Sec. 6-1654. DECLARATION TO THE FEDERAL FLOOD INSURANCE ADMINISTRATOR

Upon finding of a violation and failure of the owner to take corrective action as ordered, the Floodplain Administrator may submit notice to the Federal Insurance Administrator and request that a Violation Declaration be issued. The Federal Insurance Administrator has the authority to deny the issuance of a new flood insurance

policy and the renewal of an existing flood insurance policy for a structure upon finding a valid violation declaration.

The Floodplain Administrator shall provide the Federal Insurance Administrator the following declaration:

(a) The name(s) of the property owner(s) and address or legal description of the property sufficient to confirm its identity and location;

(b) A clear and unequivocal declaration that the property is in violation of a cited State or local law, regulation or ordinance;

(c) A clear statement that the public body making the declaration has authority to do so and a citation to that authority;

(d) Evidence that the property owner has been provided notice of the violation and the prospective denial of insurance; and

(e) A clear statement that the declaration is being submitted pursuant to section 1316 of the National Flood Insurance Act of 1968, as amended.

Sec. 6-1655. Penalties.

Violation of the provisions of these regulations or failure to comply with any of the requirements, including failure to obtain permit approval prior to development in the Regulated Flood Hazard Area, shall constitute a misdemeanor and may be treated as a public nuisance. Each day such violation continues shall constitute a separate offense.

Secs. 6-1656—6-1660. Reserved.

DIVISION 5. SPECIFIC STANDARDS

Sec. 6-1661. FLOODWAY.

(a) Uses allowed without permits. The following open space uses shall be allowed without a permit in the Regulated Flood Hazard Area, provided that such uses are not prohibited by any other resolution or statute, do not require structures, and do not require alteration of the Floodplain such as fill, grading, excavation or storage of materials or equipment:

(1) Agricultural uses, not including related structures, such as tilling, farming, irrigation, ranching, harvesting, grazing, etc;

(2) Accessory uses, not including structures, such as loading and parking areas, or emergency landing strips associated with industrial or commercial facilities;

(3) Forestry, including processing of forest products with portable equipment;

(4) Recreational vehicle use provided that the use is on the site for fewer than 180 consecutive days and the vehicle is fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system with wheels intact, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions;

(5) Residential uses such as lawns, gardens, parking areas, and play areas;

(6) Maintenance of the existing state of an existing open space uses including preventive maintenance activities such as bridge deck rehabilitation and roadway

pavement preservation activities. Maintenance cannot increase the external size or increase the hazard potential of the existing open space use;

(7) Public or private recreational uses not requiring structures such as picnic grounds, swimming areas, parks, campgrounds, golf courses, driving ranges, archery ranges, wildlife management and natural areas, alternative livestock ranches (game farms), fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, and hiking and horseback riding trails;

(8) Fences that have a low impact to the flow of water such as barbed wire fences and wood rail fences, and not including permanent fences crossing channels. Fences that have the potential to stop or impede flow or debris such as a chain link or privacy fence requires a Floodplain Permit;

(9) Addition of highway guard rail, signing and utility poles that have a low impact to the flow of water along an existing roadway.

(10) Irrigation and livestock supply wells, provided that they are located at least 500 feet from domestic water supply wells and with the top of casing 18" above the Base Flood Elevation.

(b) Uses requiring permits. Uses specifically listed in this section may be allowed by permit within the Floodway, subject to the described requirements.

(1) General Requirements. An application for a permit shall meet the following requirements:

a. The project is designed and constructed to ensure that they do not adversely affect the flood hazard on other properties and are reasonably safe from flooding; and

b. The project assures that the carrying capacity of the Floodway is not reduced. All projects in the Floodway must be supported as shown by an encroachment analysis, a thorough hydrologic and hydraulic analysis prepared by an engineer to demonstrate the effect on flood flows, velocities and the Base Flood Elevation, and this documentation must meet all of the following criteria:

1. No increase (0.00 feet) to the Base Flood Elevation is allowed, unless approval of an alteration of the Regulated Flood Hazard Area pursuant to Section 1624 and an approved FEMA Conditional Letter of Map Revision occurs before permit issuance; and

2. Although all other development standards herein apply, a minimal or qualitative encroachment analysis may be accepted when the project or development does not require a structure, alteration of the Floodway, involve fill, grading, excavation or storage of materials or equipment and also is certified by an engineer to not exceed the allowable encroachment.

c. An application for a Floodplain Permit must also demonstrate the following factors are considered and incorporated into the design of the use or artificial obstruction in the Floodway:

1. The danger to life and property due to backwater or diverted flow caused by the obstruction or use is reduced;

2. The danger that the obstruction or use may be swept downstream to the injury of others is reduced;

3. Alternative locations for the project were considered and evaluated;

4. The construction or alteration of the obstruction or use will be done in such manner as to lessen the flooding danger;

5. The permanence of the obstruction or use;

6. The impact the anticipated development will have in the foreseeable future of the area which may be affected by the obstruction or use;

7. Relevant and related permits for the project have been obtained;

8. Such other factors as are in harmony with the purposes of these regulations, the Montana Floodplain and Floodway Management Act, and the accompanying Administrative Rules of Montana;

(2) Mining of material requiring excavation from pits or pools provided that:

a. A buffer strip of undisturbed land of sufficient width as determined by an engineer to prevent flood flows from channeling into the excavation is left between the edge of the channel and the edge of the excavation;

b. The excavation meets all applicable laws and regulations of other local and state agencies; and

c. Excavated material may be processed on site but is stockpiled outside the Floodplain.

(3) Railroad, highway and street stream crossings provided that:

a. Crossings are designed to offer minimal obstructions to the flood flow;

b. Where failure or interruption of public transportation facilities would result in danger to public health or safety and where practicable and in consideration of FHWA Federal-Aid Policy Guide 23 CFR 650A:

1. Bridge lower chords shall have freeboard to at least two (2) feet above the Base Flood Elevation to help pass ice flows, the base flood discharge and any debris associated with the discharge; and

2. Culverts are designed to pass the base flood discharge and maintain at least two (2) feet freeboard on the crossing surface.

3. If possible, normal overflow channels are preserved to allow passage of sediments to prevent aggradations;

4. Mid stream supports for bridges, if necessary, have footings buried below the maximum scour depth; and

5. An encroachment analysis is prepared by an engineer.

(4) Limited filling for road, and railroad embankments not associated with stream crossings and bridges provided that:

a. The fill is the suitable fill;

b. Reasonable alternate transportation routes outside the floodway are not available; and

c. The encroachment is located as far from the stream channel as possible.

(5) Buried or suspended utility transmission lines provided that:

a. Suspended utility transmission lines are designed such that the lowest point of the suspended line is at least six (6) feet higher than the Base Flood Elevation;

b. Towers and other appurtenant structures are designed and placed to withstand and offer minimal obstruction to flood flows;

c. When technically feasible, the crossing will not disturb the bed and banks

of the stream and alternatives such as alternative routes, directional drilling, and aerial crossings are considered; and

d. Utility transmission lines carrying toxic or flammable materials are buried to a depth of at least twice the calculated maximum scour depth determined by an engineer for the base flood.

(6) Storage of materials and equipment provided that:

a. The material or equipment is not subject to major damage by flooding and is properly anchored to prevent flotation or downstream movement; and

b. The material or equipment is readily removable within the limited time available after flood warning. Storage of flammable, toxic or explosive materials shall not be permitted.

(7) Domestic water supply wells provided that:

a. They are driven or drilled wells located on ground higher than surrounding ground to assure positive drainage from the well;

b. They require no other structures (e.g. a well house);

c. Well casings are water tight to a distance of at least twenty-five (25) feet below the ground surface and the well casing height shall be a minimum of eighteen (18) inches above the base flood elevation or capped with a watertight seal and vented eighteen (18) inches above the Base Flood Elevation;

d. Water supply and electrical lines have a watertight seal where the lines enter the casing;

e. All pumps and electrical lines and equipment are either of the submersible type or are adequately floodproofed; and

f. Check valves are installed on main water lines at wells and at all building entry locations.

(8) Buried and sealed vaults for sewage disposal in campgrounds and recreational areas provided they meet applicable laws and standards administered by Montana Department of Environmental Quality. Only those wastewater disposal systems that meet the requirements and separation distances under the appropriate health and sanitation regulations are allowed.

(9) Public and private campgrounds provided that:

a. Access roads require only limited fill and do not obstruct or divert flood waters;

b. Meet the accessory structures requirements;

c. No dwellings or permanent mobile homes are allowed; and

d. Recreational vehicles and travel trailers are ready for highway use with wheels intact, with only quick disconnect type utilities and securing devices, and have no permanently attached additions

(10) Structures accessory or appurtenant to permitted uses such as boat docks, loading and parking areas, marinas, sheds, emergency airstrips, permanent fences crossing channels, picnic shelters and tables and lavatory, that are incidental to a principal structure, provided that:

a. The structures are not intended for human habitation or supportive of human habitation;

b. The structures will have low flood damage potential;

c. The structures will, insofar as possible, be located on ground higher than the surrounding ground and as far from the channel as possible;

d. The structures will be constructed and placed so as to offer a minimal obstruction to flood flows;

e. Any wastewater disposal systems meet the requirements and separation distances under health and sanitation regulations are allowed;

f. Service facilities within these structures such as electrical, heating and plumbing are floodproofed according to the requirements in Section 6-1662(b)(1)(i);

g. Structures are firmly anchored to prevent flotation;

h. The structures do not require fill or substantial excavation; and

i. The structures or use cannot be changed or altered without permit approval.

(11) Construction of or modifications to surface water diversions provided that the design is prepared and approved by an engineer and includes:

a. Measures necessary to minimize potential erosion from a base flood;

b. Plans that demonstrate any permanent structure crossing the stream is designed to substantially resist or withstand the forces associated with hydrodynamic and hydrostatic pressures, including flood depths, velocities, impact, ice, buoyancy, and uplift forces associated with the base flood.

(12) Flood control and bank protection measures. A design must be reviewed and approved by an engineer and constructed to substantially resist or withstand the forces associated with hydrodynamic and hydrostatic pressures, including flood depths, velocities, impact, ice, buoyancy, and uplift forces associated with the Base Flood in addition to an encroachment analysis. The design must also comply with the following applicable criteria:

a. Levee and floodwall construction or alteration:

1. Must be designed and constructed with suitable fill and to safely convey a base flood;

2. Must be constructed at least 3 feet higher than the elevation of the base flood except when protecting agricultural land only;

3. That protects structures of more than one (1) land owner must be engineered and constructed to meet state and federal levee standards and be publicly owned for the purpose of construction, operation and maintenance; and

4. For any increase in the elevation of the base flood the following information must be provided:

a. The estimated cumulative effect of other reasonably anticipated future permissible uses;

b. The type and amount of existing flood prone development in the affected area; and

c. Impacts to existing or foreseeable development.

d. Bank stabilization projects, pier and abutment protection projects if:

1. The materials for the project should be the least environmentally damaging and practicable designed to withstand a base flood within five (5) years or other time as required by the Floodplain Administrator and does not require substantial yearly

maintenance after that period.

2. Materials for the project may be designed to erode over time but not fail catastrophically and impact others. Erosions, sedimentation, and transport of the materials may be designed to be at least similar in amount and rate to existing natural stream banks during the base flood.

3. The project must not increase erosion upstream, downstream, or adjacent to the site in excess of the existing stable natural stream bank during the Base Flood.

4. Materials for the project may include but not limited to rip rap, root wads, brush mattresses, willow wattles, woody debris or combinations of analogous materials.

c. Channelization projects where the excavation and/or construction of an artificial channel is for the purpose of diverting the entire flow of a stream from its established course the project must:

1. Not increase the magnitude, velocity, or elevation of the Base Flood; and

2. Meet the requirements of Section 6-1661(b)(12)(b).

d. Dams provided:

1. The design and construction is in accordance with the Montana Dam Safety Act and applicable safety standards; and

2. The project will not increase flood hazards downstream either through operational procedures or improper hydrologic/hydraulic design.

(13) Stream and bank restoration projects intended to reestablish the terrestrial and aquatic attributes of a natural stream and not for protection of a structure or development provided:

a. The project will not increase velocity or erosion upstream, downstream, across from or adjacent to the site;

b. Materials may include but are not limited to boulders, rock cobble, gravel, native stream bed materials, root wads, brush mattresses, willow wattles, natural woody debris or combinations of analogous materials;

c. Erosion, sedimentation, and transport of the materials are not more than the amount and rate of existing natural stream banks during the Base Flood;

d. The project may be designed to allow vegetative materials to mature within a period up to 5 years or other time as required by the Floodplain Administrator. Once vegetation is mature and established it should not require substantial yearly maintenance after the initial period.

(14) Alterations to existing residential and non-residential buildings in the floodway where any change or addition to an existing building either increases the external dimensions or increases the potential flood hazard, provided the requirements of Section 6-1661(b)(1) and the applicable requirements for residential and non-residential buildings in Section 1662 are met.

(e) Prohibited Uses. The following obstructions and nonconforming uses are prohibited in the Floodway within the Regulated Flood Hazard Area:

(1) A building for residential or non-residential purposes;

(2) A structure, fill or excavation that would cause water to be diverted from the Floodway, cause erosion, obstruct the natural flow of waters or reduce the carrying capacity of the Floodway. Notwithstanding these requirements, excavation or fill may be

allowed when it is a component to a permitted use allowed in these regulations;

(3) The construction or storage of an object (artificial obstruction) subject to flotation or movement during flood level periods;

(4) Solid and Hazardous waste disposal and individual and multiple family sewage disposal systems unless the systems meet the local health and sanitation regulations and when permitted pursuant to these regulations and are designed to minimize or eliminate infiltration of flood waters and avoid impairment or contamination; and

(e) Storage of toxic, flammable, hazardous or explosive materials.

Sec. 6-1662. FLOOD FRINGE OR REGULATED FLOOD HAZARD AREA WITHOUT A FLOODWAY.

(a) Uses allowed without permits. All uses allowed in the floodway, according to the provisions of section 6-1661(a) of these regulations, shall also be allowed without a permit in the flood fringe or flood hazard area without a floodway. In addition, individual or multiple family subsurface sewage disposal systems are allowed only when they are reviewed and approved under laws and regulations administered by the Department of Health and Environmental Sciences or the local health board.

(b) Uses requiring permits. All uses allowed by permit in the Floodway shall also be allowed by permit within the Flood Fringe or Regulated Flood Hazard Area with no Floodway. Such uses are subject to the requirements in Section 6-1661, with the exception of the encroachment limit of Section 6-1661(b)(1)b. Instead, such uses are subject to the encroachment limits of this Section.

Except for artificial obstructions in Sections 6-1661(e) and 6-1662(c), all other artificial obstructions including new construction, substantial improvements, alterations to residential, and nonresidential structures including manufactured homes, and related suitable fill or excavation shall be allowed by permit and are subject to the requirements in this Section and General Requirements of Section 6-1662(b)(1), with the exception of the encroachment limit of Section 6-1662(h).

(1)General requirements:

a. Base Flood Elevation. The appropriate base flood elevation(s) shall be determined by appropriate methods and utilized in the design and layout of the project by an engineer demonstrating the appropriate design and construction criteria herein are met. Regulated Flood Hazard Areas that do not have computed and published base flood elevations in the adopted flood hazard study referenced in Division 4, Jurisdictional Area, the Base Flood Elevation must be computed as well, utilizing appropriate engineering methods and analysis;

b. Flood Damage. Projects must be constructed by methods and practices that minimize flood damage and are reasonably safe from flooding

c. Surface Drainage. Adequate surface drainage must be provided around structures

d. Materials. Structures are reasonably safe from flooding and constructed with materials resistant to flood damage; and

e. Artificial Obstructions. Structures or fill must not be prohibited by any other

statute, regulation, ordinance, or resolution; and must be compatible with subdivision, zoning and any other land use regulations, if any;

f. Anchoring. All construction and substantial improvements shall be designed and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

g. Certification. Certification by an engineer, architect, or other qualified person must accompany the application as to an encroachment analysis where required, adequacy of structural elevations, determination of the base flood elevation, floodproofing, wet floodproofing, dry floodproofing, design and construction to withstand the flood depths, hydrodynamic and hydrostatic pressures, velocities, impact, buoyancy, and uplift forces associated with the base flood. A certification is not intended to constitute a warranty or guarantee of performance, expressed or implied;

h. Encroachment Analysis.

1. All applications in the Regulated Flood Hazard Area without a Floodway must be supported by an encroachment analysis of the proposed use, a thorough hydrologic and hydraulic analysis except as provided in following paragraph 4, Section 1662(b)(1)h., prepared by an engineer to demonstrate the effect of the structure on flood flows, velocities and the Base Flood Elevation;

2. The maximum allowable encroachment is certified to be at or less than 0.5 feet increase to the Base Flood Elevation unless approval of an alteration of the Regulated Flood Hazard Area pursuant to Section 6-1621 and an approved FEMA Conditional Letter of Map Revision occurs before permit issuance;

3. An encroachment analysis is not required for any development in the Flood Fringe where an accompanying Floodway has been designated within the Regulated Flood Hazard Area; and

4. Although all other development standards herein apply, a minimal or qualitative encroachment analysis may be accepted when the project or development does not require a structure, alteration of the Floodplain, involve fill, grading, excavation or storage of materials or equipment and also is certified by an engineer to not exceed the allowable encroachment.

i. Electrical Systems Floodproof. All electrical service materials, equipment and installation for uses in a Regulated Flood Hazard Area must be certified to meet the following requirements:

1. All incoming power service equipment including all metering equipment, control centers, transformers, distribution and lighting panels and all other stationary equipment must be located at least two (2) feet above the Base Flood Elevation.

2. Portable and movable electrical equipment may be placed below the elevation of the Base Flood Elevation, provided that the equipment can be disconnected by a single plug and socket assembly of the submersible type;

3. The main power service lines must have automatically operated electrical disconnect equipment or manually operated electrical disconnect equipment located at an accessible remote location outside the Floodplain or two (2) feet above the Base Flood Elevation; and

4. All electrical wiring systems installed below the base flood elevation must be suitable for continuous submergence and may not contain fibrous components.

j. Heating and Cooling Systems Floodproof Heating and cooling systems for uses in a Regulated Flood Hazard Area must be certified to meet the following requirements:

1. Be installed with float operated automatic control valves so that fuel supply is automatically shut off when flood waters reach the floor level where located;

2. Have manually operated gate valves installed in gas supply lines. The gate valves must be operable from a location above the Base Flood Elevation;

3. Be installed in accordance with the provisions of Electrical Systems Floodproof; and

4. Have furnaces and cooling units and ductwork installed at least two (2) feet above the Base Flood Elevation.

k. Plumbing Systems Floodproof. Plumbing systems for uses in the Regulated Flood Hazard Area must be certified to meet the following requirements

1. Sewer lines, except those to be buried and sealed, must have check valves installed to prevent sewage backup into permitted structures; and

2. All toilets, stools, sinks, urinals, vaults, and drains must be located so the lowest point of possible entry is at least two (2) feet above the Base Flood Elevation.

l. Structural Fill Floodproof: Fill used to elevate structures, including but not limited to residential, commercial, and industrial structures must be suitable and meet the following requirements:

1. The filled area is at or above the Base Flood Elevation and extends at least 15 feet beyond the structure in all directions;

2. Fill material must be suitable fill, that is stable, compacted, well graded, and pervious, not adversely affected by water and frost, devoid of trash or similar foreign matter, tree stumps or other organic material; and is fitting for the purpose of supporting the intended use and/or permanent structure;

3. The fill is compacted to minimize settlement and compacted to 95 percent of the maximum density. Compaction of earthen fill must be certified by a registered professional engineer;

4. No portion of the fill is within the floodway;

5. The fill slope must not be steeper than 1 ½ horizontal to 1 vertical unless substantiating data justifying a steeper slope is provided and adequate erosion protection is provided for fill slopes exposed to floodwaters.

m. Wet Floodproof. Building designs with an enclosure below the lowest floor must be certified to meet the following:

1. The use of the enclosure is limited to parking, loading areas, building access, and storage of equipment or materials not appreciably affected by floodwaters;

2. Materials used for walls and floors are resistant to flooding to an elevation two (2) feet or more above the Base Flood Elevation;

3. The enclosure must be designed to equalize hydrostatic forces on walls by allowing for entry and exit of floodwaters. Opening designs must either be certified by an engineer or architect or meet or exceed the following:

i. Automatically allow entry and exit of floodwaters through screens, louvers, valves, and other coverings or devices;

ii. Have two (2) or more openings with a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area below the Lowest Floor, except if the enclosure is partially subgrade, a minimum of 2 openings may be provided on a single wall; and

iii. Have the bottom of all openings no higher than one (1) foot above the exterior or interior adjacent grade or floor immediately below the openings.

n. Dry Floodproof. Building designs that do not allow internal flooding must be certified to meet the following:

1. Be for non-residential use only;

2. Be floodproofed to an elevation no lower than two (2) feet above the Base Flood Elevation;

3. Be constructed of impermeable membranes or materials for floors and walls and have water tight enclosures for all windows, doors and other openings; and

4. Be designed to withstand the hydrostatic pressures and hydrodynamic forces resulting from the Base Flood and the effects of buoyancy.

o. Elevation. The lowest floor elevation (including basement) must be two (2) feet above the Base Flood Elevation. A determination of the Base Flood Elevation is SHALL BE certified by an engineer. Elevating may be by either suitable fill, stem walls, pilings or other acceptable means;

p. Enclosure. Any enclosure below the lowest elevated floor must be designed to meet the wet floodproof requirements and the enclosure floor must be at or above the Base Flood Elevation.

q. Basement. Basements are not allowed in the Floodplain except where the basement floor is two (2) feet or more above the Base Flood Elevation;

r. Crawl Spaces. Crawl space foundation enclosures including sub grade crawlspace enclosures below the lowest floor must meet the wet floodproof requirements and be designed so that the crawl space floor is at or above the Base Flood Elevation. Crawl space foundations must have an inside dimension of not more than five (5) feet from the ground to the top of the living floor level and a sub grade crawlspace must also have the interior ground surface no more than two (2) feet below the exterior lowest adjacent ground surface on all sides. A sub grade foundation exceeding either dimension is a basement;

s. Variance. Where strict compliance with floodproof provisions is impossible because of existing streets, utilities, lot dimensions, or additions onto existing structures, alternative fill or floodproof measures may be permitted only by variance approval;

t. Manufactured Home Anchors. For new placement, substantial improvement or replacement of manufactured homes for residential or nonresidential use including additions, the chassis must be secure and must resist flotation, collapse or lateral movement by anchoring with anchoring components capable of carrying a force of 4,800 pounds and as follows:

1. For manufactured homes less than fifty (50) feet long, over-the-top ties to ground anchors are required at each of the four (4) corners of the home, with two (2)

additional ties per side at intermediate locations; or

2. For manufactured homes more than fifty (50) feet long, frame ties to ground anchors are required at each corner of the home with five (5) additional ties per side at intermediate points.

(2) Additional requirements for residential buildings.

a. New construction, alterations, and substantial improvements of residential dwellings manufactured homes, including replacement of manufactured homes, must be constructed such that:

1. Floodproofing. The Lowest Floor must be two (2) feet or more above the Base Flood Elevation and cannot be wet floodproofed or dry floodproofed;

2. Enclosure. Use for a crawlspace enclosure is limited to facilitating building component access. The enclosure cannot be dry floodproofed. An attached garage must meet the wet floodproof requirements except for both the required flood openings and limits on use but the attached garage floor must be two (2) or more feet above the Base Flood Elevation; and

b. Recreation Vehicles. Recreational vehicles on site for more than 180 days or not ready for highway use must meet the requirements for manufactured homes for residential use.

c. Non-residential building, exceptions or additional requirements. New construction, alterations, and substantial improvements of non-residential including agricultural, commercial and industrial buildings must be constructed in accordance with the following requirements:

1. Floodproof. The Lowest Floor of the building must be elevated two (2) feet above the Base Flood Elevation or adequately dry floodproofed according to this Section;

2. Enclosure. Enclosures below the Lowest Floor on elevated buildings must be wet floodproofed and the use must be limited to parking, access or storage or dry floodproofed;

d. Manufactured homes. Manufactured homes proposed for use as commercial or industrial buildings cannot be dry floodproofed; and

e. Agricultural structures. Agricultural structures which are not intended to be insurable, which are used solely for agricultural purposes, have low flood damage potential, which are used exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities including raising of livestock, and which are not intended for human habitation are exempt from the elevation requirement, dry floodproofed or wet floodproof, but shall:

1. Be located on higher ground and as far from the channel as possible;
2. Offer minimal obstruction to flood flows;
3. Be adequately anchored to prevent flotation or collapse;
4. Where electrical, heating and plumbing systems are installed, meet the floodproof requirements in this Section; and

5. Meet the elevation or dry floodproof requirements if the structure is an animal confinement facility.

(c) Prohibited uses. The following artificial obstructions and nonconforming uses

are prohibited in the Flood Fringe or Floodplain without a Floodway of the Regulated Flood Hazard Area:

(1) Solid and hazardous waste disposal and individual and multiple family sewage disposal systems unless the systems meet the local health and sanitation regulations and when permitted pursuant to these regulations and are designed to minimize or eliminate infiltration of flood waters and avoid impairment or contamination; and

(2) Storage of toxic, flammable, hazardous or explosive materials.

Secs. 6-1663 – 6-1670. Reserved.”

Section 3. EFFECTIVE DATE. This ordinance shall be effective thirty (30) days after second reading and final adoption as provided by law.

PASSED by the City Council on first reading this 15th day of October, 2013.

PASSED, ADOPTED and APPROVED on second reading this 28th day of October, 2013.



CITY OF BILLINGS

By Thomas W. Hanel
Thomas W. Hanel, Mayor

ATTEST:

By: Cari Martin
Cari Martin, City Clerk