

- (a) Not designed for human habitation, does not have a high flood damage potential and is constructed to minimize flood damage;
 - (b) Shall have a minimum of two openings on different walls having a total net area not less than one square inch for every square foot of enclosed area, and the bottom of all such openings being no higher than one foot above grade. The openings shall be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
 - (c) Must be anchored to resist flotation, collapse, and lateral movement;
 - (d) Mechanical and utility equipment must be elevated or flood proofed to or above the flood protection elevation; and
 - (e) It must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.
- (3) PUBLIC UTILITIES, STREETS AND BRIDGES
Public utilities, streets and bridges may be allowed by permit, if:
- (a) Adequate floodproofing measures are provided to the flood protection elevation; and
 - (b) Construction meets the development standards of s. 2.1.
- (4) FILLS OR DEPOSITION OF MATERIALS
Fills or deposition of materials may be allowed by permit, if:
- (a) The requirements of s. 2.1 are met;
 - (b) No material is deposited in navigable waters unless a permit is issued by the Department pursuant to ch. 30, Stats., and a permit pursuant to s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344 has been issued, if applicable, and all other requirements have been met;
 - (c) The fill or other materials will be protected against erosion by riprap, vegetative cover, sheet piling or bulkheading; and
 - (d) The fill is not classified as a solid or hazardous material.
- (e) A permit under this chapter is not required for the maintenance of existing agricultural service roads, drainage systems and dikes provided such activity meets the following standards.
- (1) The maintenance dredging of farm drainage ditches is limited to re-establishing the pre-existing ditch cross-section. If the dredging exceeds pre-existing dimensions, a zoning permit shall be obtained under section 7.1(2)

- (2) Excavated dredge spoils from maintenance dredging shall be removed or leveled in low lying areas immediately adjacent to the ditch to no more than 6 inches in height above the existing grade.
- (3) Ditch banks and dikes shall be maintained at a slope of 3 horizontal to 2 vertical (67% grade) or flatter.
- (4) Ditch banks and a 10 foot wide adjacent buffer shall be maintained in a sod cover free of woody vegetation, except adjacent to County Forest Land.
- (5) Dike and road grade maintenance is limited to maintaining the pre-existing elevation and dimensions of the dike or road. If the construction exceeds the pre-existing dimensions or elevation, a zoning permit shall be obtained.

3.4 PROHIBITED USES

All uses not listed as permitted uses in s. 3.2 are prohibited, including the following uses:

- (1) Habitable structures, structures with high flood damage potential, or those not associated with permanent open-space uses;
- (2) Storing materials that are buoyant, flammable, explosive, injurious to property, water quality, or human, animal, plant, fish or other aquatic life;
- (3) Uses not in harmony with or detrimental to uses permitted in the adjoining districts;
- (4) Any private or public sewage systems, except portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and ch. SPS 383, Wis. Adm. Code;
- (5) Any public or private wells which are used to obtain potable water, except those for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code;
- (6) Any solid or hazardous waste disposal sites;
- (7) Any wastewater treatment ponds or facilities, except those permitted under s. NR 110.15(3)(b), Wis. Adm. Code; and
- (8) Any sanitary sewer or water supply lines, except those to service existing or proposed development located outside the floodway which complies with the regulations for the floodplain area occupied.

4.0 FLOODFRINGE DISTRICT (FF)

4.1 APPLICABILITY

This section applies to all floodfringe areas shown on the floodplain zoning maps and those identified pursuant to s. 5.4.

4.2 PERMITTED USES

Any structure, land use, or development is allowed in the Floodfringe District if the standards in s. 4.3 are met, the use is not prohibited by this or any other ordinance or regulation and all permits or certificates specified in s. 7.1 have been issued.

4.3 STANDARDS FOR DEVELOPMENT IN THE FLOODFRINGE

S. 2.1 shall apply in addition to the following requirements according to the use requested. Any existing structure in the floodfringe must meet the requirements of s. 6.0 *Nonconforming Uses*;

(1) RESIDENTIAL USES

Any structure, including a manufactured home, which is to be newly constructed or moved into the floodfringe, shall meet or exceed the following standards. Any existing structure in the floodfringe must meet the requirements of s. 6.0 *Nonconforming Uses*;

- (a) The elevation of the lowest floor shall be at or above the flood protection elevation on fill unless the requirements of s 4.3 (1)(b) can be met. The fill shall be one foot or more above the regional flood elevation extending at least 15 feet beyond the limits of the structure.
- (b) The basement or crawlway floor may be placed at the regional flood elevation if it is dry floodproofed to the flood protection elevation. No basement or crawlway floor is allowed below the regional flood elevation;
- (c) Contiguous dryland access shall be provided from a structure to land outside of the floodplain, except as provided in subd. (d).
- (d) In developments where existing street or sewer line elevations make compliance with subd. (c) impractical, the municipality may permit new development and substantial improvements where roads are below the regional flood elevation, if:
 - 1. The county has written assurance from police, fire and emergency services that rescue and relief will be provided to the structure(s) by wheeled vehicles during a regional flood event; or
 - 2. The county has a DNR-approved emergency evacuation plan.

ACCESSORY STRUCTURES OR USES

- (a) Except as provided in par. (b), an accessory structure which is not connected to a principal structure may be constructed with its lowest floor at or above the regional flood elevation.

An accessory structure which is not connected to the principal structure and which is less than 600 square feet in size and valued at less than \$10,000 may be constructed with its lowest floor no more than two feet below the regional flood elevation if it is subject to flood velocities of no more than two feet per second and it meets all of the provisions of Sections 3.3 (2) (a), (b), (c) and (d) and 4.3 (5) below.

- (2) COMMERCIAL USES
Any commercial structure which is erected, altered or moved into the floodfringe shall meet the requirements of s. 4.3(1). Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.
- (3) MANUFACTURING AND INDUSTRIAL USES
Any manufacturing or industrial structure which is erected, altered or moved into the floodfringe shall have the lowest floor elevated to or above the flood protection elevation or meet the floodproofing standards in s 7.5. Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.
- (4) STORAGE OF MATERIALS
Materials that are buoyant, flammable, explosive, or injurious to property, water quality or human, animal, plant, fish or aquatic life shall be stored at or above the flood protection elevation or floodproofed in compliance with s. 7.5. Adequate measures shall be taken to ensure that such materials will not enter the water body during flooding.
- (5) PUBLIC UTILITIES, STREETS AND BRIDGES
All utilities, streets and bridges shall be designed to be compatible with comprehensive floodplain development plans; and
- (a) When failure of public utilities, streets and bridges would endanger public health or safety, or where such facilities are deemed essential, construction or repair of such facilities shall only be permitted if they are designed to comply with s. 7.5.
- (b) Minor roads or non-essential utilities may be constructed at lower elevations if they are designed to withstand flood forces to the regional flood elevation.
- (6) SEWAGE SYSTEMS
All sewage disposal systems shall be designed to minimize or eliminate infiltration of flood water into the system, pursuant to s. 7.5(3), to the flood protection elevation and meet the provisions of all local ordinances and ch. SPS 383, Wis. Adm. Code.
- (7) WELLS
All wells shall be designed to minimize or eliminate infiltration of flood waters into the system, pursuant to s. 7.5(3), to the flood protection elevation and shall meet the provisions of chs. NR 811 and NR 812, Wis. Adm. Code.
- (8) SOLID WASTE DISPOSAL SITES
Disposal of solid or hazardous waste is prohibited in floodfringe areas.
- (9) DEPOSITION OF MATERIALS
Any deposited material must meet all the provisions of this ordinance.

(11) **MANUFACTURED HOMES**

- (a) Owners or operators of all manufactured home parks and subdivisions shall provide adequate surface drainage to minimize flood damage, and prepare secure approval and file an evacuation plan, indicating vehicular access and escape routes, with local emergency management authorities.
- (b) In existing manufactured home parks, all new homes, replacement homes on existing pads, and substantially improved homes shall:
 - 1. have the lowest floor elevated to the flood protection elevation; and
 - 2. be anchored so they do not float, collapse or move laterally during a flood
- (c) Outside of existing manufactured home parks, including new manufactured home parks and all single units outside of existing parks, all new, replacement and substantially improved manufactured homes shall meet the residential development standards for the floodfringe in s. 4.3(1).

(12) **MOBILE RECREATIONAL VEHICLES**

All mobile recreational vehicles that are on site for 180 consecutive days or more or are not fully licensed and ready for highway use shall meet the elevation and anchoring requirements in s. 4.3 (11)(b) and (c). A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.

5.0 GENERAL FLOODPLAIN DISTRICT (GFP)

5.1 APPLICABILITY

The provisions for this district shall apply to all floodplains mapped as A, AO or AH zones.

5.2 PERMITTED USES

Pursuant to s. 5.4, it shall be determined whether the proposed use is located within the floodway or floodfringe.

Those uses permitted in the Floodway (s. 3.2) and Floodfringe (s. 4.2) Districts are allowed within the General Floodplain District, according to the standards of s. 5.3, provided that all permits or certificates required under s. 7.1 have been issued.

5.3 STANDARDS FOR DEVELOPMENT IN THE GENERAL FLOODPLAIN DISTRICT

S. 3.0 applies to floodway areas, s. 4.0 applies to floodfringe areas. The rest of this ordinance applies to either district.

- (1) In AO/AH Zones the structure's lowest floor must meet one of the conditions listed below whichever is higher:
 - (a) at or above the flood protection elevation; or
 - (b) two (2) feet above the highest adjacent grade around the structure; or

(c) the depth as shown on the FIRM

- (2) In AO/AH zones, provide plans showing adequate drainage paths to guide floodwaters around structures.

5.4 DETERMINING FLOODWAY AND FLOODFRINGE LIMITS

Upon receiving an application for development within the general floodplain district, the zoning administrator shall:

- (1) Require the applicant to submit two copies of an aerial photograph or a plan which shows the proposed development with respect to the general floodplain district limits, stream channel, and existing floodplain developments, along with a legal description of the property, fill limits and elevations, building floor elevations and flood proofing measures; and the flood zone as shown on the FIRM.
- (2) Require the applicant to furnish any of the following information deemed necessary by the Department to evaluate the effects of the proposal upon flood height and flood flows, regional flood elevation and to determine floodway boundaries.

(a) A Hydrologic and Hydraulic Study as specified in s. 7.1(2)(c).

(b) Plan (surface view) showing elevations or contours of the ground; pertinent structure, fill or storage elevations; size, location and layout of all proposed and existing structures on the site; location and elevations of streets, water supply, and sanitary facilities; soil types and other pertinent information;

(c) Specifications for building construction and materials, floodproofing, filling, dredging, channel improvement, storage, water supply and sanitary facilities.

6.0 NONCONFORMING USES

6.1 GENERAL

(1) APPLICABILITY

If these standards conform with s. 59.69(10), Stats., for counties or s. 62.23(7)(h), Stats., for cities and villages, they shall apply to all modifications or additions to any nonconforming use or structure and to the use of any structure or premises which was lawful before the passage of this ordinance or any amendment thereto.

- (2) The existing lawful use of a structure or its accessory use which is not in conformity with the provisions of this ordinance may continue subject to the following conditions:

(a) No modifications or additions to a nonconforming use or structure shall be permitted unless they comply with this ordinance. The words "modification" and "addition" include, but are not limited to, any alteration, addition, modification, structural repair, rebuilding or replacement of any such existing use, structure or accessory structure or use. Maintenance is not considered a modification; this includes painting, decorating, paneling and other

nonstructural components and the maintenance, repair or replacement of existing private sewage or water supply systems or connections to public utilities. Any costs associated with the repair of a damaged structure are not considered maintenance.

The construction of a deck that does not exceed 200 square feet and that is adjacent to the exterior wall of a principal structure is not an extension, modification or addition. The roof of the structure may extend over a portion of the deck in order to provide safe ingress and egress to the principal structure.

- (b) If a nonconforming use or the use of a nonconforming structure is discontinued for 12 consecutive months, it is no longer permitted and any future use of the property, and any structure or building thereon, shall conform to the applicable requirements of this ordinance;
- (c) The municipality shall keep a record which lists all nonconforming uses and nonconforming structures, their present equalized assessed value, the cost of all modifications or additions which have been permitted, and the percentage of the structure's total current value those modifications represent;
- (d) No modification or addition to any nonconforming structure or any structure with a nonconforming use, which over the life of the structure would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1). The costs of elevating the lowest floor of a nonconforming building or a building with a nonconforming use to the flood protection elevation are excluded from the 50% provisions of this paragraph;
- (e) No maintenance to any nonconforming structure or any structure with a nonconforming use, the cost of which would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1).
- (f) If on a per event basis the total value of the work being done under (d) and (e) equals or exceeds 50% of the present equalized assessed value the work shall not be permitted unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1).
- (g) Except as provided in subd. (h), if any nonconforming structure or any structure with a nonconforming use is destroyed or is substantially damaged, it cannot be replaced, reconstructed or rebuilt unless the use and the structure meet the current ordinance requirements. A structure is considered

substantially damaged if the total cost to restore the structure to its pre-damaged condition equals or exceeds 50% of the structure's present equalized assessed value.

- (h) For nonconforming buildings that are substantially damaged or destroyed by a nonflood disaster, the repair or reconstruction of any such nonconforming building shall be permitted in order to restore it to the size and use in effect prior to the damage event, provided that the minimum federal code requirements below are met and all required permits have been granted prior to the start of construction.

1. Residential Structures

- a. Shall have the lowest floor, including basement, elevated to or above the base flood elevation using fill, pilings, columns, posts or perimeter walls. Perimeter walls must meet the requirements of s. 7.5(2).
- b. Shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy and shall be constructed with methods and materials resistant to flood damage.
- c. Shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.
- d. In A Zones, obtain, review and utilize any flood data available from a federal, state or other source.
- e. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.3(1).
- f. In AO Zones, shall have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.

2. Nonresidential Structures

- a. Shall meet the requirements of s. 6.1(2)(h)1a-f.
- b. Shall either have the lowest floor, including basement, elevated to or above the regional flood elevation; or, together with attendant utility and sanitary facilities, shall meet the standards in s. 7.5(1) or (2).
- c. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.3(1).

- (3) A nonconforming historic structure may be altered if the alteration will not preclude the structures continued designation as a historic structure, the alteration will comply with s. 3.3(1), flood resistant materials are used, and construction practices and floodproofing methods that comply with s. 7.5 are used. Repair or rehabilitation of historic structures shall be exempt from the

development standards of s. 6.1(2)(h) if it is determined that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure.

6.2 **FLOODWAY DISTRICT**

- (1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in the Floodway District, unless such modification or addition:
 - (a) Has been granted a permit or variance which meets all ordinance requirements;
 - (b) Meets the requirements of s. 6.1;
 - (c) Shall not increase the obstruction to flood flows or regional flood height;
 - (d) Any addition to the existing structure shall be floodproofed, pursuant to s. 7.5, by means other than the use of fill, to the flood protection elevation; and
 - (e) If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:
 1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of two openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;
 2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;
 3. Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and
 4. The use must be limited to parking, building access or limited storage.
- (2) No new on-site sewage disposal system, or addition to an existing on-site sewage disposal system, except where an addition has been ordered by a government agency to correct a hazard to public health, shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing on-site sewage disposal system in a floodway area shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and ch. SPS 383, Wis. Adm. Code.
- (3) No new well or modification to an existing well used to obtain potable water shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing well in the Floodway District shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and chs. NR 811 and NR 812, Wis. Adm. Code.

6.3 FLOODFRINGE DISTRICT

- (1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use unless such modification or addition has been granted a permit or variance by the municipality, and meets the requirements of s. 4.3 except where s. 6.3(2) is applicable.
- (2) Where compliance with the provisions of subd. (1) would result in unnecessary hardship and only where the structure will not be used for human habitation or be associated with high flood damage potential, the Board of Adjustment/Appeals, using the procedures established in s. 7.3, may grant a variance from those provisions of subd. (1) for modifications or additions using the criteria listed below. Modifications or additions which are protected to elevations lower than the flood protection elevation may be permitted if:
 - (a) No floor is allowed below the regional flood elevation for residential or commercial structures;
 - (b) Human lives are not endangered;
 - (c) Public facilities, such as water or sewer, shall not be installed;
 - (d) Flood depths shall not exceed two feet;
 - (e) Flood velocities shall not exceed two feet per second; and
 - (f) The structure shall not be used for storage of materials as described in s. 4.3(5).
- (3) All new private sewage disposal systems, or addition to, replacement, repair or maintenance of a private sewage disposal system shall meet all the applicable provisions of all local ordinances, 7.5(3) and ch. SPS 383, Wis. Adm. Code.
- (4) All new wells, or addition to, replacement, repair or maintenance of a well shall meet the applicable provisions of this ordinance, s. 7.5(3) and ch. NR 811 and NR 812, Wis. Adm. Code.

7.0 ADMINISTRATION

Where a zoning administrator, planning agency or a board of adjustment/appeals has already been appointed to administer a zoning ordinance adopted under ss. 59.69, 59.692 or 62.23(7), Stats., these officials shall also administer this ordinance.

7.1 ZONING ADMINISTRATOR

(1) DUTIES AND POWERS

The zoning administrator is authorized to administer this ordinance and shall have the following duties and powers:

- (a) Advise applicants of the ordinance provisions, assist in preparing permit applications and appeals, and assure that the regional flood elevation for the proposed development is shown on all permit applications.

- (b) Issue permits and inspect properties for compliance with provisions of this ordinance and issue certificates of compliance where appropriate.
 - (c) Inspect and assess all damaged floodplain structures to determine if substantial damage to the structures has occurred.
 - (d) Keep records of all official actions such as:
 - 1. All permits issued, inspections made, and work approved;
 - 2. Documentation of certified lowest floor and regional flood elevations;
 - 3. Floodproofing certificates.
 - 4. Water surface profiles, floodplain zoning maps and ordinances, nonconforming uses and structures including changes, appeals, variances and amendments.
 - 5. All substantial damage assessment reports for floodplain structures.
 - 6. List of nonconforming structures and uses. .
 - (e) Submit copies of the following items to the Department Regional office:
 - 1. Within 10 days of the decision, a copy of any decisions on variances, appeals for map or text interpretations, and map or text amendments;
 - 2. Copies of case-by-case analyses and other required information including an annual summary of floodplain zoning actions taken.
 - 3. Copies of substantial damage assessments performed and all related correspondence concerning the assessments.
 - (f) Investigate, prepare reports, and report violations of this ordinance to the municipal zoning agency and attorney for prosecution. Copies of the reports shall also be sent to the Department Regional office.
 - (g) Submit copies of amendments to the FEMA Regional office.
- (2) LAND USE PERMIT
 A land use permit shall be obtained before any new development; repair, modification or addition to an existing structure; or change in the use of a building or structure, including sewer and water facilities, may be initiated. Application to the zoning administrator shall include:
- (a) GENERAL INFORMATION
 - 1. Name and address of the applicant, property owner and contractor;
 - 2. Legal description, proposed use, and whether it is new construction or a modification;
 - (b) SITE DEVELOPMENT PLAN
 A site plan drawn to scale shall be submitted with the permit application form and shall contain:

1. Location, dimensions, area and elevation of the lot;
2. Location of the ordinary high water mark of any abutting navigable waterways;
3. Location of any structures with distances measured from the lot lines and street center lines;
4. Location of any existing or proposed on-site sewage systems or private water supply systems;
5. Location and elevation of existing or future access roads;
6. Location of floodplain and floodway limits as determined from the official floodplain zoning maps;
7. The elevation of the lowest floor of proposed buildings and any fill using the vertical datum from the adopted study – either National Geodetic Vertical Datum (NGVD) or North American Vertical Datum (NAVD);
8. Data sufficient to determine the regional flood elevation in NGVD or NAVD at the location of the development and to determine whether or not the requirements of s. 3.0 or 4.0 are met; and
9. Data to determine if the proposed development will cause an obstruction to flow or an increase in regional flood height or discharge according to s. 2.1. This may include any of the information noted in s. 3.3(1).

(c) HYDRAULIC AND HYDROLOGIC STUDIES TO ANALYZE DEVELOPMENT

All hydraulic and hydrologic studies shall be completed under the direct supervision of a professional engineer registered in the State. The study contractor shall be responsible for the technical adequacy of the study. All studies shall be reviewed and approved by the Department.

1. Zone A floodplains:
 - a. Hydrology
 - i. The appropriate method shall be based on the standards in ch. NR 116.07(3), Wis. Admin. Code, *Hydrologic Analysis: Determination of Regional Flood Discharge*.
 - b. Hydraulic modeling

The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, *Hydraulic Analysis: Determination of Regional Flood Elevation* and the following:

 - i. Determination of the required limits of the hydraulic model shall be based on detailed study information for downstream structures (dam, bridge, and culvert) to determine adequate starting WSEL for the study.
 - ii. Channel sections must be surveyed.

- iii. Minimum four foot contour data in the overbanks shall be used for the development of cross section overbank and floodplain mapping.
 - iv. A maximum distance of 500 feet between cross sections is allowed in developed areas with additional intermediate cross sections required at transitions in channel bottom slope including a survey of the channel at each location.
 - v. The most current version of HEC_RAS shall be used.
 - vi. A survey of bridge and culvert openings and the top of road is required at each structure.
 - vii. Additional cross sections are required at the downstream and upstream limits of the proposed development and any necessary intermediate locations based on the length of the reach if greater than 500 feet.
 - viii. Standard accepted engineering practices shall be used when assigning parameters for the base model such as flow, Manning's N values, expansion and contraction coefficients or effective flow limits. The base model shall be calibrated to past flooding data such as high water marks to determine the reasonableness of the model results. If no historical data is available, adequate justification shall be provided for any parameters outside standard accepted engineering practices.
 - ix. The model must extend past the upstream limit of the difference in the existing and proposed flood profiles in order to provide a tie-in to existing studies. The height difference between the proposed flood profile and the existing study profiles shall be no more than 0.00 feet.
- c. Mapping
- A work map of the reach studied shall be provided, showing all cross section locations, floodway/floodplain limits based on best available topographic data, geographic limits of the proposed development and whether the proposed development is located in the floodway.
- i. If the proposed development is located outside of the floodway, then it is determined to have no impact on the regional flood elevation.
 - ii. If any part of the proposed development is in the floodway, it must be added to the base model to show the difference between existing and proposed conditions. The study must ensure that all coefficients remain the same as in the existing model, unless adequate justification based on standard accepted engineering practices is provided.