

Gaining Approval for Single Family Houses and Associated Buildings

Date: _____

Completed By: _____

1. Application: Completed and signed Joint Application Form Submitted (required)? Yes No

Please indicate if the project site is within the incorporated limits of a city by using the word 'in' when listing the city in Item 7 of the application. The application can be found online at the following link. <http://floodplain.iowadnr.gov/>

A copy of the application and supporting documentation must be sent to:

- Iowa DNR, Flood Plain Permit Program
- Iowa DNR, Sovereign Lands (Submit with the copy for the Flood Plain Management Program)
- U.S. Army Corps of Engineers (Submit to the address listed in the instructions)

Applicant Name:					
Location (in Quarter-Section-Tier-Range format):	Qtr.	Sec.	T	N	R
County:	Stream(s):				

2. Flood Protection Method Checklist: Building and Houses

Two sets of plans submitted? Yes No

Note: A pre-application consultation with the Iowa DNR to discuss the level of design necessary for your project can be scheduled by calling (866) 849-0321.

Buildings and residential structures must be protected to the appropriate minimum protection level (MPL) by one of the following methods. For example, houses are classified as “high damage potential” and the MPL for houses is the 100-year flood elevation plus 1 foot. There are several methods of meeting the MPL requirement. Please indicate how your building will be protected from flooding and provide all additional information (as indicated by any additional checkboxes) required for the specific flood protection method.

- Building elevated on fill with a slab on grade type construction.
 - Building elevated on stilts (piers, pilings, etc.).** * (With area below the elevated building remaining open).
 - Building with a Basement.** A basement is defined as any fully enclosed area that has its lowest floor below adjacent grades on all sides. A basement must satisfy the following criteria:
 - Basement walls and floors below the applicable minimum protection level (MPL) shall be structurally designed and constructed to be watertight to the MPL with walls and floors that are substantially impermeable to the passage of water.
- All structural components must be able to withstand debris impact forces, and hydrostatic and hydrodynamic forces, including the effects of buoyancy, associated with a water table elevation equivalent to the minimum protection level.
- All utilities located below the MPL (such as sanitary sewer drains) shall be equipped with automatic closure valves to prevent backflow.

Structural design plans for the basement must be provided. The design must be certified by a professional engineer licensed in the State of Iowa. At minimum the certification must provide that the basement walls and floors below the applicable minimum flood protection level shall be structurally designed and constructed to be flood proof and able to withstand hydrostatic pressure and buoyant forces associated with a water table elevation equivalent to the minimum flood protection level.

Please note that many communities prohibit construction of basements in the flood plain. You should check with

your local building or zoning official prior to having a structural design completed for your basement.

- Building elevated on an extended footing* where the area below the lowest living floor will be enclosed. The floor of the lower enclosed area must be at or above the lowest ground elevation at the exterior of the building otherwise the area would be considered a basement as defined above. The lower enclosed area must satisfy all of the criteria listed below:
 - The enclosed area must be designed to equalize hydrostatic pressure during floods by providing a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic entry and exit of floodwaters. Windows and doors are not considered acceptable openings under this requirement because they require manual operation.
 - The bottom of all openings shall be no higher than one foot above the adjacent grade.
 - The enclosed area must remain unfinished (not carpeted, dry walled, etc.) and used solely for low damage potential uses such as building access, parking or storage.
 - Machinery and service facilities (e.g., hot water heater, furnace, electrical service) contained in the enclosed area must be situated at least one (1) foot above the 100-year flood level.

The following must be clearly indicated on the plans for a building with a lower enclosed area:

- Number and size of flood vents: _____ The total area for the proposed vents or openings must equal or exceed the minimum opening area determined above. Please note that standard windows, service doors and overhead doors do not meet the requirements of flood vents since they require manual operation.
- Location of the flood vents shown on the floor plan.
- Total area of flood vents/openings: _____ square inches.
- Total enclosed area subject to flooding: _____ square feet.
- All utilities (furnace, air conditioner, hot water heater, water softener, non-submersible water pump, electrical services and other utilities) are elevated above the MPL.
- Sanitary sewer drains below the MPL are provided with automatic closure valves to prevent backflow.

*Please note that the department does not undertake a review of the structural aspects of the stilts, piers, pilings or other extended footing plans. The applicant should have the structural stability of such a plan reviewed by a structural engineer or other qualified individual.