

**City of Delano  
County of Wright  
State of Minnesota**

**Ordinance O-24-05**

5.25 Any facility used by employees, or the general public must be designed with a flood warning system acceptable to the Zoning Administrator that provides adequate time for evacuation or be designed to ensure that within the area inundated during the base flood event, the depth (in feet) multiplied by the velocity (in feet per second) is less than four.

5.26 Fill and other land alteration activities must offer minimal obstruction to the flow of flood waters and be protected from erosion and sediment entering surface waters by the use of vegetative cover, riprap or other methods as soon as possible.

**5.3 Conditional Uses in Floodway.** The following uses and activities may be permitted as conditional uses, subject to the standards detailed in Sections 5.4:

5.31 Commercial extractive uses, and storage and stockpiling yards.

5.32 Structures accessory to uses detailed in Sections 5.11 and 5.31.

**5.4 Standards for Conditional Uses in Floodway.** In addition to the applicable standards detailed in Sections 4.0, 5.2 and 12.2:

5.41 Extractive uses and storage of materials require the completion of a site development and restoration plan, to be approved by the City of Delano.

5.42 Accessory Structures. Structures accessory to the uses detailed in Sections 5.11 and 5.31 must be constructed and placed so as to offer a minimal obstruction of flood waters and are subject to the standards in Section 6.23 of this ordinance.

**SECTION 6.0 FF-1 FLOOD FRINGE DISTRICT ONE DISTRICT.**

**6.1 Permitted Uses in Flood Fringe One District.** Any uses or activities allowed in any applicable underlying zoning districts may be allowed with a permit, subject to the standards set forth in Section 6.2.

**6.2 Standards for Permitted Uses in FF-1 Flood Fringe One District.** In addition to the applicable standards detailed in Section 4.0:

6.21 Residential Structures.

A. Elevation on Fill. Structures erected, constructed, reconstructed, altered, or moved on fill within the Flood Fringe District shall be placed so that the lowest floor, as defined in Section 2.0 of this ordinance, is elevated at or above the Regulatory Flood Protection Elevation (RFPE). The finished fill elevation shall be at

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or above the elevation associated with the base flood plus any stage increases that result from designation of a floodway.

B. Fill must extend at the same elevation at least 15 feet beyond the outside limits of the structure. Elevations must be certified by a registered professional engineer, land surveyor or other qualified person designated by the Zoning Administrator. Elevation methods alternative to these fill standards are subject to a Conditional Use Permit, as provided in Section 6.31 of this ordinance (Figure 2). Construction of this type shall only be permitted in locations where the natural ground is no lower than three feet below the base flood elevation.

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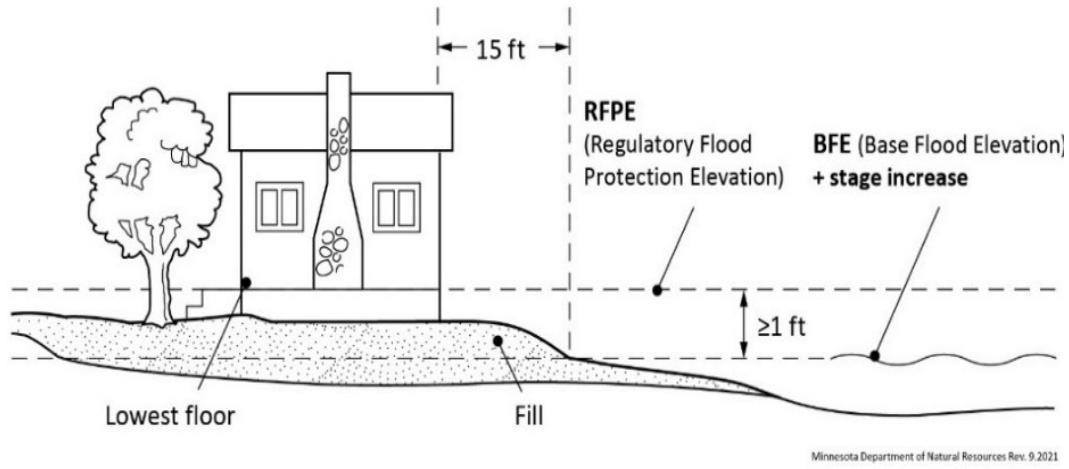
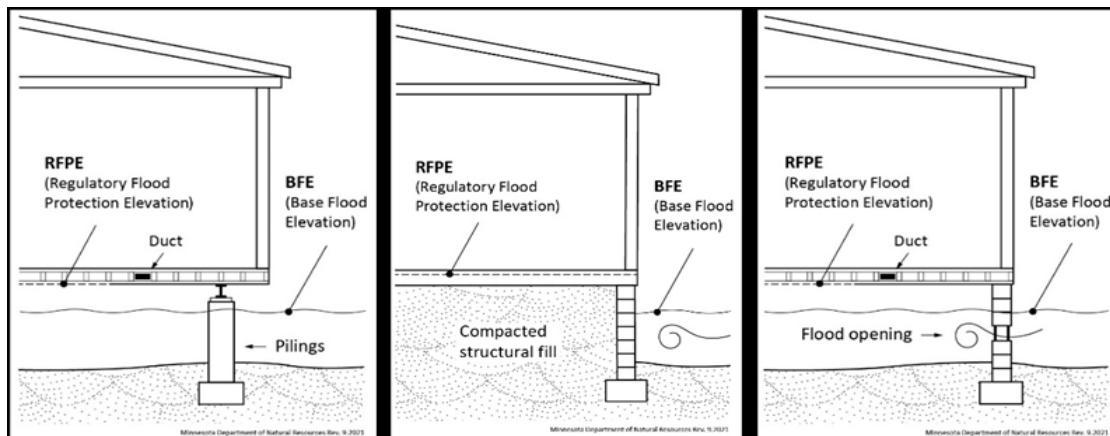


Figure 2: Overview of fill standards for Residential Structures.

6.22 Nonresidential Principal Structures. Nonresidential principal structures must meet one of the following construction methods:

- A. Elevation on Fill. Structures may be elevated on fill, meeting the standards in Section 6.21.A of this ordinance. Fill for nonresidential structures is not required to be extended 15 feet beyond the outside limits of the structure.
- B. Alternative Elevation Methods. Structures may be elevated using methods alternative to the fill standards in Section 6.21.A of this ordinance. Such methods include the use of blocks, pilings (Figure 3), filled stem walls (Figure 4), or internally flooded enclosed areas (Figure 5) such as crawl spaces, attached garages, or tuck under garages.



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**Figure 3: Blocks or pilings. Figure 4: Filled stem walls. Figure 4: Internally**

C. Designs accommodating for internally flooded enclosed areas must be certified by a registered professional engineer or architect, or meet or exceed the standards detailed in *FEMA Technical Bulletin 1*, as amended, as well as the following standards:

- (1) The lowest floor, as defined in Section 2.0 of this ordinance, shall be elevated at or above the Regulatory Flood Protection Elevation (RFPE).
- (2) The floor of the enclosed area must be at or above the exterior grade on at least one side of the structure.
- (3) To allow for the equalization of hydrostatic pressure, there shall be a minimum of two openings below the base flood elevation on at least two sides of the structure. The bottom of all openings shall be no higher than one-foot above grade. The openings shall have a minimum net area of not less than one square inch for every square foot of enclosed area subject to flooding, have a net area of not less than one square inch for every square foot of enclosed area subject to flooding, and shall allow automatic entry and exit of floodwaters without human intervention.
- (4) Internally flooded enclosed areas shall only be used for the parking of vehicles, building access, or storage. Bathrooms and toilet rooms shall not be allowed. Such areas shall be subject to a deed-restricted non- conversion agreement as well as periodic inspections with the issuance of any permit.

D. Dry Floodproofing. Structures having watertight enclosed basements or spaces below the Regulatory Flood Protection Elevation (RFPE) must meet the following standards:

- (1) Walls must be substantially impermeable to the passage of water, with structural components having the capacity of resisting hydrostatic and hydrodynamic loads and effects of buoyancy, at least up to the Regulatory Flood Protection Elevation (RFPE).
- (2) Must meet the standards of *FEMA Technical Bulletin 3*, as amended; and
- (3) A registered professional engineer or architect shall be required to certify that the design and methods of construction meet the standards detailed in this Section.

6.23 Accessory Structures. All accessory structures must meet the following standards:

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- A. Structures shall not be designed or used for human habitation.
- B. Structures will have a low flood damage potential.
- C. Structures with fewer than two rigid walls, such as carports, gazebos, and picnic pavilions, may be located at an elevation below the Regulatory Flood Protection Elevation.
- D. Structures with two or more rigid walls, must meet one of the following construction methods:
  - (1) Wet Floodproofing. Structures may be floodproofed in a way to accommodate internal flooding. Such structures shall constitute a minimal investment not to exceed 576 square feet in size, one-story in height, and shall only be used for parking and storage. To allow for the equalization of hydrostatic pressure, there shall be a minimum of two openings on at least two sides of the structure and the bottom of all openings shall be no higher than one-foot above grade. The openings shall have a minimum net area of not less than one square inch for every square foot of enclosed area subject to flooding and shall allow automatic entry and exit of floodwaters without human intervention.
  - (2) Elevation on Fill. Structures may be elevated on fill, meeting the standards in Section 6.21.A of this ordinance. Fill is not required to be extended 15 feet beyond the outside limits of the structure.
  - (3) Alternative Elevation Methods. Structures may have their lowest floor elevated above the Regulatory Flood Protection Elevation (RFPE) through methods alternative to the fill standards in Section 6.23.D(2) and must meet the standards in Section 6.22.B of this ordinance.
  - (4) Dry Floodproofing. Structures may be dry-floodproofed, or watertight, meeting the standards in Section 6.22.C of this ordinance.

6.24 All new principal structures must provide vehicular access no lower than one foot below the Base Flood Elevation (BFE), unless a flood warning/emergency evacuation plan has been approved by the City of Delano.

6.25 Any facilities used by employees or the general public must be designed with a flood warning system acceptable to the City of Delano that provides adequate time for evacuation, or be designed to ensure that within the area inundated during the base flood event, the depth (in feet) multiplied by the velocity (in feet per second) is less than four.

6.26 Manufactured homes and recreational vehicles must meet the standards of Section 11 of this ordinance.

6.3 **Conditional Uses in Flood Fringe.** The following uses and activities may be permitted as conditional uses, subject to the standards in Sections 6.4.

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6.31 Alternative Elevation Methods – Residential Structures. Residential structures with their lowest floor elevated above the Regulatory Flood Protection Elevation (RFPE) using methods alternative to the fill requirements in Section 6.21.

6.4 **Standards for Conditional Uses in Flood Fringe.** In addition to the applicable standards detailed in Sections 4.0, 6.2 and 12.2:

6.41 All residential structures with lowest floors elevated through alternative methods must meet the standards in Section 6.22.B and C of this ordinance.

## SECTION 7.0 FF-2 FLOOD FRINGE DISTRICT TWO DISTRICT.

**7.1 Permitted Uses in the Flood Fringe Two District:** Permitted uses within the FF-2 shall be limited to the following:

7.11 General farming, pasture, grazing, forestry, sod farming and wild crop harvesting.

7.12 Industrial or commercial loading areas, parking areas, and airport landing strips

7.13 Private and public golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, parks and open space, wildlife and nature preserves, game farms, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas.

7.14 Residential lawns, gardens, parking areas and play areas.

7.15 Railroads, streets, bridges, utility transmission lines and pipelines pursuant to Section 10.0 of this ordinance.

7.16 Stormwater management practices including the construction of ponding or drainage ways.

**7.2 Standards for Permitted Uses in FF-2 Flood Fringe Two District.** In addition to the applicable standards detailed in Section 4.0: All permitted uses shall comply with the standards for Flood Fringe District Two "Permitted Uses" listed in Section 7.1 and the standards for all Flood Fringe District Two "Permitted and Conditional Uses" listed in Section 6.4.

7.21 The use shall have a low flood damage potential.

7.22 Buildings for human habitation shall be prohibited.

7.23 The use shall not obstruct flood flows or increase flood elevations.

7.24 All lots in a subdivision within a floodplain approved after January 1, 2006, shall meet the minimum lot area standards of the underlying zoning district exclusive of land identified as flood fringe, as identified in the Flood Insurance Rate Map adopted in Section 3.2 of this Ordinance.