

## ***Community Development Department***

**DATE:** May 28, 2009  
**TO:** Joel Walinski, City Administrator  
**FROM:** Brian P. O'Connell, Community Development Director  
**RE:** Flood Plain Analysis Existing Safety Center Site

The following represents an analysis of the current safety center site and structure as they are affected by existing floodplain regulations of the City of Northfield.

A portion of the Safety Center site is located within the floodway fringe of the 100 year flood plain of the Cannon River as defined by the Type 15 Flood Insurance Study (FIS) dated April 2, 2003, and illustrated on community panel number 2704060008 C, (Attachment #1).

The base flood elevation (BFE) on the Safety Center site is actually defined by two elevation cross sections indicated in the FIS as cross section N and O.

The BFE at cross section N is elevation 907.7 and the BFE at cross section O is 908.1 (Attachment #2).

Section 34-885(b)(1) which address the regulatory flood protection elevation standard indicates that all structures are to be elevated on fill so that the lowest floor, including the basement floor, is one foot above the base flood elevation on fill that extends out from the building a distance 15 feet.

Using the standard from Section 34-885(b)(1) the regulatory protection elevation for the Safety Center site is between 908.7 and 909.1.

Based on what appears to be a set of "as built" plans for the Safety Center, the lowest floor elevation of the building was to have been constructed at an elevation of 906. A recent elevation determination tied to the bench mark system of the City indicates that the lowest floor elevation is at 905

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In comparing the elevation of the lowest floor of the Safety Center building with the regulatory flood protection elevation it appears that the lowest floor of the building is below the regulatory protection elevation by a distance 3.7 feet. Based on this, the existing Safety Center building would be classified as being non-conforming to the adopted flood plain regulations and would be subject to Section 34-891 which addresses what can be done to a building that is not in conformity with flood plain regulations.

Section 34-891 limits the amount of additions, rehabilitation, reconstruction, alteration or other improvements that collectively is defined as substantial improvement. Section 34-891 limits the amount of substantial improvements that can be made to a building that is non-conforming to flood plain regulations to no more than 50% of the market value of the building (Attachment #3).

An appraisal of the Safety Center building and property was conducted in 2006 that established a market value of \$865,000. Therefore, the cost of all substantial improvements to the existing Safety Center building cannot exceed \$432,500 based on the 2006 appraisal. In more general terms, assuming a slight increase in the value of the property, the cost of substantial improvements should not exceed approximately \$500,000.

There is an option that may involve the construction of a levee to protect the existing Safety Center structure from flooding. Generally speaking, levees must be constructed to three feet above the base flood elevation plus the levee must meet all other design standards found in Title 44 of the Code of the Federal Register applicable to levees along a river (Attachment #4).