



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION
WASHINGTON, D. C. 20410

cc: Pat Blomgren

February 1, 1979

IN REPLY REFER TO:
IFM

5I:LB

Mr. Scott A. Martin
Supervisor
Operational Planning Division
Olmsted County Consolidated Planning Department
1421 3rd Avenue, S.E.
Rochester, Minnesota 55901

Dear Mr. Martin:

This is in reply to your letter of August 9, 1978 which inquired about the Federal Insurance Administration (FIA) regulations concerning residential floodproofed basements below base flood elevation (BFE).

Currently, FIA is in the process of amending its regulations to routinely allow residential basements below BFE provided the basement is watertight without the need for human intervention prior to flooding. Until the rule change is effective, FIA cannot allow a community to routinely allow residential basements below BFE and cannot credit the floodproofing for insurance rating purposes.

However, to give participating communities some flexibility and to avoid forcing communities to individually go through the time-consuming exception procedures in Section 1910.6(b) of FIA regulations, the following clarification of our variance policy has been made.

As you know, a variance to a community's flood plain regulations can always be granted where justified. Section 1910.6(a) of FIA regulations indicates the criteria FIA staff will use to evaluate a community's enforcement efforts concerning variances. Although residential floodproofed basements are not specifically mentioned in 1910.6(a), FIA can assure you that variances granted to allow residential basements below BFE, which are watertight without the need for further human intervention, will not endanger a community's eligibility in the Program, provided the other applicable FIA requirements of Section 1910.3 are met (e.g., in floodways and V zones). An attachment to this letter suggests wording to insert into the variance section of your flood plain ordinance.

Since the floodproofing cannot be credited for insurance rating purposes until the rule change is effective, property owners building residential basements below BFE must be forewarned of the insurance ramifications. Your community is in the Regular Phase of the Program and all new construction is rated according to actuarial rate tables in the agents' manual. The following cases are offered for your consideration:

- 1) If the first floor is two feet above BFE with an unfinished basement below, then all rates are below 14¢ per \$100 of coverage, except in zones AO, AH and D which do not appear in your community.
- 2) If the first floor is one foot above BFE with an unfinished basement below, then all rates are below 31¢ per \$100 of coverage, except in zones A1, A2, A3, D, AH and AO, which do not appear in your community.
- 3) If the first floor is at BFE, with an unfinished basement below, the rates could go as high as \$4.78 per \$100 coverage, depending on the type of structure and the zone.
- 4) If the basement is finished and is below BFE, the rate could go as high as \$25 per \$100 of coverage.

It is apparent that during this interim period until FIA can change its regulations, any property owner planning a floodproofed basement would be wise to elevate the first floor to two feet above BFE and keep the basement unfinished. The property owner will also be eligible for low rates when FIA is able to credit the floodproofing. At that time, property owners with the first floor two feet above BFE will be eligible for rates ranging from 1¢ to 15¢ per \$100, depending on the zone and the type of structure. Also, when the regulations are changed and the floodproofing is credited, a floodproofed basement can be finished without incurring extremely high premium rates.

Any community granting variances for floodproofed residential basements will be expected to follow the procedures listed below:

- 1) Obtain a certification from a registered professional engineer or architect stating that the floodproofing meets the standards mentioned in the attachment to this letter.
- 2) Forewarn builders of residential floodproofed basements of the insurance ramifications in writing, especially the benefit of elevating the first floor to two feet above BFE. We strongly encourage you to require the first floor to be at least two feet above BFE. This safety factor will

minimize damages if the base flood is exceeded. One weakness of floodproofing is that floods greater than the protection level will fill the entire basement, causing extensive damage. A two foot safety factor helps to minimize this danger.

- 3) Maintain documentation in the permit files that a variance was granted, that the basement was certified to meet the floodproofing standard, and the builder was forewarned of the insurance ramifications.

We hope that this policy clarification will answer your questions concerning floodproofed basements. We have also enclosed a publication concerning construction of residential floodproofed basements for your consideration and for interested professional engineers and architects in your area. If you have any further questions, please contact Larry Bailey of my staff at (312) 353-5239

Sincerely,


Frank Finch
Regional Director, FIA

Enclosure

Floodproofed Residential Basements

Suggested Insert for Flood Plain Ordinance.

Description. Many flood plain ordinances have a section discussing the procedures for granting variances. FIA recommends that the following language is inserted in the variance section of the ordinance.

Insert:

Variances.

Residential Floodproofed Basements. A variance may be granted for residential basements below base flood elevation provided the following conditions are satisfied, in addition to the other standards normally required for granting a variance.

1. A registered professional engineer or architect must certify that the plans ensure the basement will be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy that would be caused by the flood depths, pressures, velocities, impact and uplift forces associated with the base flood. This degree of floodproofing must be achieved without reliance on human intervention prior to flooding. The certifier will indicate the floodproofed elevation and the first floor elevation.
2. The (Fill In Title Of Local Permit Official) shall advise permit applicants who propose to build floodproofed residential basements that the floodproofing cannot currently be credited for insurance rating purposes and that reasonable rates can be obtained by elevating the first floor to two feet above base flood elevation and by not finishing the basement floor. This advice will be in written form.
3. The (Fill In Title Of Local Permit Official) shall maintain documentation on file of the form certifying the degree of floodproofing, and record the elevation of the first floor, the elevation to which the structure is floodproofed, and the base flood elevation. The official shall also maintain a record that the applicant was advised of the insurance ramifications of building floodproofed basements.