

**AGENDA  
CITY OF STURGEON BAY  
ZONING BOARD OF APPEALS**

Tuesday, August 28, 2018  
12:00 Noon  
Council Chambers, City Hall  
421 Michigan Street

1. Roll call.
2. Adoption of agenda.
3. Approval of minutes from July 24, 2018.
4. Public Hearing:     Petition for variance from Sections 23.04(3)(a)(1),  
                              23.06(1)(b)(4), and 23.06(3)(a) of the Municipal Code  
                              (Floodplain Zoning Code), for a 22' x 40' addition, located at  
                              719 Memorial Drive.
5. Consideration of:   Petition for variance from Sections 23.04(3)(a)(1),  
                              23.06(1)(b)(4), and 23.06(3)(a) of the Municipal Code  
                              (Floodplain Zoning Code), for a 22' x 40' addition, located at  
                              719 Memorial Drive.
6. Adjourn.

*NOTE: DEVIATION FROM THE AGENDA ORDER SHOWN MAY OCCUR.*

ZBA Board Members  
William Murrock, Chair  
James Goodwin  
Andrew Starr  
Bill Chaudoir  
Wayne Spritka  
Dave Augustson, Alternate  
Justin Kirwen, Alternate

08/22/18  
1:30 p.m.  
CN

ZONING BOARD OF APPEALS  
Tuesday, July 24, 2018

The City of Sturgeon Bay Zoning Board of Appeals meeting was called to order at 12:00 noon by Chairperson William Murrock in Council Chambers, City Hall, 421 Michigan Street.

Roll call: Members Wayne Spritka, James Goodwin, William Murrock, and Alternate Justin Kirwen were present. Excused: Members Andrew Starr and Bill Chaudoir. Also present were Community Development Director Marty Olejniczak, Planner/Zoning Administrator Chris Sullivan-Robinson, and Community Development Secretary Cheryl Nault.

**Adoption of agenda:** Moved by Mr. Spritka, seconded by Mr. Kirwen to adopt the following agenda:

1. Roll call.
2. Adoption of agenda.
3. Approval of minutes from January 30, 2018.
4. Public Hearing: Petition for variance from Section 27.12(4) of the City of Sturgeon Bay Sign Code, to install an Electronic Variable Message Sign for the Sturgeon Bay United Methodist Church, located at 836 Michigan Street.
5. Consideration of: Petition for variance from Section 27.12(4) of the City of Sturgeon Bay Sign Code, to install an Electronic Variable Message Sign for the Sturgeon Bay United Methodist Church, located at 836 Michigan Street.
6. Adjourn.

Carried.

**Approval of minutes from January 30, 2018:** Moved by Mr. Goodwin, seconded by Mr. Murrock to approve the minutes from January 30, 2018. All ayes. Carried.

**Public Hearing: Petition for variance from Section 27.12(4) of the City of Sturgeon Bay Sign Code, to install an Electronic Variable Message Sign for the Sturgeon Bay United Methodist Church, located at 836 Michigan Street:** Chairperson Murrock opened the public hearing at 12:04 p.m.

Mark Holey, Chairman of Trustees Committee for Sturgeon Bay United Methodist Church, stated that they just completed a campaign to raise money for improvements on their property, including a new driveway and a redesigned parking lot. They also want to install a 30 square-foot electronic variable message sign since there are many groups that use their church for different events. Their current sign, which is located on the corner of 9<sup>th</sup> Avenue and Michigan Street, is small and unlit. Mr. Holey also mentioned that the proposed sign will help visitors locate the church. He is sure that membership will increase after installation of this sign. The church is in a residential location. Other churches have those type of signs and feel it is unfair to them. Sturgeon Bay Schools had also received permission for an EVMS.

Mr. Holey said the church has always been a good neighbor. They will abide by the rules. The proposed sign would be located in the middle of the property. He mentioned that they could install a lit sign and would not have to go through a variance. With the capital campaign they are looking at the future with an EVMS. The sign would be used as an outreach to let people know what programs they have. It is not intended as a marque sign. They would also work with the neighbors in regard to lighting.

Mr. Sullivan-Robinson stated that the United Methodist Church is in the middle of a residential corridor. The proposed sign would front Michigan Street west of the bell tower. The Aesthetic Design & Site Plan Review Board approved the sign, but required nighttime dimming and opaque background. Previously, the ZBA approved an EVMS for St. Peters Church, which fronts both residential and commercial corridors.

Mr. Sullivan-Robinson spoke with some of the neighboring property owners. They were concerned with lighting. Time limits could be considered.

Mr. Olejniczak stated that an EVMS was allowed in commercial districts, but not residential. The maximum size allowed is 32 square-feet. This proposal is for 30 square-feet.

No one spoke in favor of the variance request. There were no letters in favor of the request.

Steve Graf, 833 Michigan Street, spoke in opposition. There would be a lot of light pollution. It would be a driving hazard.

Shelly Kerwin Phelps, 727 Michigan Street, spoke in opposition. The lit flame symbol in front of the church is very large and a very visual denote for the church. She wondered if they already had more signage than allowed. Safety is a concern.

Kathy White, 833 Michigan Street, stated that the church is lit all night long. The flame shines in her bedrooms. She does not want an EVMS lit all day. Safety is an issue. Parking on the street is dangerous.

Jerod Santek, 907 Michigan Street, read a letter that he submitted in opposition. The lighting and messaging system would be distracting. Property values will be decreased.

Allison Roemer, 827 Michigan Street, agreed with everyone's testimony. It is residential property. She doesn't want another driveway across from her house or a bright sign in her face.

Mr. Goodwin read one letter in opposition from Diane Evenson, 32 N. 9<sup>th</sup> Avenue. Another letter that was received from Brian Bergee and Jerod Santek, 907 Michigan Street, had been read by Jerod Santek during testimony.

Mr. Murrock offered a chance for rebuttal.

Mr. Holey stated that they are not a commercial operation. He will meet with the concerning neighbors. Two lights will be eliminated in the new parking lot. The sign will be perpendicular to the street and could be turned off at night. It is important for the church to get the message out.

Mr. Murrock allowed the following two citizens to speak, even though it was not rebuttal testimony:

Marianne Bennett, 819 Michigan Street, stated she does not want lights shining on her porch.

Lou Ferarri, 827 Michigan Street, stated he is legally blind in his right eye. The double lane driveway will be a hazard.

Rebuttal testimony continued.

Shelly Kerwin Phelps, 727 Michigan Street, wondered if it is valid to have another sign. This is precedence setting for a two block area. It always comes back to safety.

Steve Graf, 833 Michigan Street, wanted to make sure that there were no members of the ZBA that were members of the United Methodist Church or that would be a conflict of interest.

Chairperson Murrock closed the public hearing at 12:48 p.m.

**Consideration of: Petition for variance from Section 27.12(4) of the City of Sturgeon Bay Sign Code, to install an Electronic Variable Message Sign for the Sturgeon Bay United Methodist Church, located at 836 Michigan Street:** Mr. Olejniczak stated that the existing flame sign is considered a wall sign. Their existing ground sign would be replaced by the proposed sign.

Mr. Spritka pointed out that the Board needs to go back to the original petition. There are a lot of other issues being talked about. The variance is for the EVMS.

Mr. Kirwen stated that we need to look at what opposing people are saying.

Mr. Sullivan-Robinson stated that the Aesthetic Board preferred to only have the lettering lit, with a darker background. The bottom half of the sign is 6 feet x 2.5 feet. They are allowed to have a ground sign.

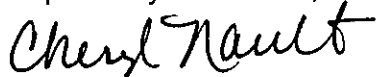
Discussion continued. Moved by Mr. Murrock, seconded by Mr. Goodwin to deny the variance request because of the lighting, adverse effect of the neighborhood, Michigan

Street is the main artery for the school, there is a lot of traffic on Michigan Street, and could cause distraction of drivers.

Roll call vote: All ayes. Carried.

**Adjourn:** Moved by Mr. Goodwin, seconded by Mr. Kirwen to adjourn. All ayes. Carried.  
Meeting adjourned at 12:58 p.m.

Respectfully submitted,

A handwritten signature in black ink that reads "Cheryl Nault". The signature is written in a cursive, flowing style.

Cheryl Nault  
Community Development Secretary

STAFF REPORT  
ZONING BOARD OF APPEALS  
PETITION OF FLOODPLAIN CODE VARIANCE AT 719 MEMORIAL DRIVE  
BY CHRISTOPHER SULLIVAN-ROBINSON

The property owner (Bob LeCapitaine) is petitioning for a Floodplain Zoning Code variance from the Zoning Board of Appeals to allow a home addition at the existing house elevation. There are three sections of the code (23.04(3)(a)(1), 23.06(1)(b)(4) and 23.06(3)(a)) that variances are being requested for in this application, which include:

1. To allow the construction to match the floor elevation of the existing dwelling of 585'. This in turn will mean that a variance from the crawl space elevation is also needed.
2. To allow the construction without the extra one foot of fill around the base of the building and extended 15 feet outward.
3. To allow the construction without being subject to the non-conformity rules, which states that no addition / modification can exceed 50% of the equalized assessed value of the building. The building is assessed at \$126,000 and the addition is estimated to cost over 100,000.

The addition is approximately 22' x 40'. The property owner intends to build at the current elevation of the house, which is represented on the site plan in your packets. The first floor will be at an elevation of 585', which is the base flood elevation for this region. The existing crawl space sits below the base flood elevation and there is no basement. This is a slab on grade construction.

The property is currently zoned R-2, which is single-family residential. The property contains a legal non-conforming structure due to not meeting the standards of the Floodplain Code. As shown on the provided map, the floodplain extends into the street centerline and covers most of the neighboring residential properties.

In regard to general zoning requirements, all zoning is met for setbacks and dimensions for an R-2 district. What is in question is not the building itself, but value of construction, the elevation, and grading around the building.

Staff has heard from neighboring property owners that are concerned about the effect of elevating a property when neighboring properties also sit below the base flood elevation.

**CITY OF STURGEON BAY  
VARIANCE APPLICATION  
ZONING BOARD OF APPEALS**

Date Received: 7.12.18  
Fee Paid \$ 350  
Received By: CHRIS

	APPLICANT/AGENT	LEGAL PROPERTY OWNER (if different)
Name	Svet Bob LeCapitaine	
Company		
Street Address	719 Memorial Drive	
City/State/Zip	Sturgeon Bay, WI. 54235	
Daytime Telephone No.	920-680-1009	
Fax No.		

STREET ADDRESS OF SUBJECT PROPERTY: \_\_\_\_\_  
Location if not assigned a common address: \_\_\_\_\_

TAX PARCEL NUMBER: 281-62-32000108 R

CURRENT ZONING CLASSIFICATION: R-2

CURRENT USE AND IMPROVEMENTS:  
SINGLE FAMILY RESIDENCE / NO CHANGE TO ORIGINAL STRUCTURES

IDENTIFY MUNICIPAL CODE SECTION PERTINENT TO REQUEST AND STATEMENT OF SPECIFIC ITEM BEING REQUESTED FOR REVIEW: \_\_\_\_\_  
23.04(a)(1), 23.06(1)(B)(4)  
23.06(3)(a)

ZONING AND USES OF ADJACENT SURROUNDING PROPERTIES:  
North: RESIDENTIAL PROPERTIES (R-2)  
South: WATERWAY  
East: RESIDENTIAL PROPERTIES R-1 & R-2  
West: RESIDENTIAL PROPERTIES R-2

**VARIANCE STANDARDS**

Please address how the proposed variance meets each of the three required standards for authorizing variances. (Attach additional sheets, if necessary)

1. Unnecessary hardship: SEE ATTACHED DOCUMENT

2. Unique physical property limitation: "

3. Protection of public interest: "

HAVE THERE BEEN ANY VARIANCES, CONDITIONAL USE PERMITS, ETC. GRANTED PREVIOUSLY FOR THIS PROPERTY? NO IF YES, EXPLAIN: \_\_\_\_\_

Attach an 8-1/2" X 11" detailed site plan (if site plan is larger than 8-1/2" x 11", also include 15 large sized copies), full legal description (preferably on disk), 8-1/2 x 11" location map, construction plans for the proposed project, and Agreement for Reimbursement of expenses. Site plan shall include dimensions of property, pertinent structures and buildings, proposed site improvements, signature of person who drew plan, etc.

Sve LeCapitaine  
Property Owner (Print Name)

Sve LeCapitaine  
Signature

7/12/18  
Date

Bob LeCapitaine  
Applicant/Agent (Print Name)

Robert LeCapitaine  
Signature

7/12/18  
Date

I, BOB LECAPITAINE, have attended a review meeting with at least one member of staff and understand that I am responsible for sign placement and following all stages listed on the check list in regard to the applicant.

JULY 12, 2018  
Date of review meeting

Robert LeCapitaine  
Applicant Signature

[Signature]  
Staff Signature

**Attachments:**

Procedure & Check List

Agreement For Reimbursement of Expenses

**STAFF USE ONLY**

Application conditions of approval or denial:

Date

Community Development Director



July 12, 2018

1. **Unnecessary Hardship:** My wife and I purchased this house a few years ago and have been using this property as our summer home. We have decided that we want to remodel to make this our permanent residence, but we have been educated on the flood plain restrictions imposed on this property. In order to do our addition we would need to raise the current grade and add additional fill. If we were to raise the existing structure, the contractor could not guarantee against cracking walls or uneven floors. Also, this would be a very expensive option. We believe this home fits this neighborhood, which is why we didn't pursue new construction options. This house has existing much longer than the code, which is why we are nonconforming.
2. **Unique Physical Property Limitation:** We had an elevation survey done on the property by local surveyor, Baudhuin Incorporated. The main floor of the house is at 585 feet which is the current base flood elevation. The flood proof elevation is 587 feet. According to the Community Development Department, FEMA is in the process of approving new maps that could effectively lower the base flood elevation 2 feet. This would take most of my property out of the flood fringe area. The current house is exactly at the flood elevation, so any addition would not be lower than the current elevation. The way this house is configured on this property makes the back yard the only buildable direction.
3. **Protection of Public Interest:** The property located at 713 Memorial Drive is about one foot lower than our property. If we build up to the 587 foot elevation, creating a steep slope, we would essentially be directing water to their property. Their basement was flooded last spring, and their sump pump runs almost all the time. Whenever it rains the water would run from our property down into theirs increasing their issues. Additionally, almost all of the addition would not be visible from the road or impinge on our neighbors views.

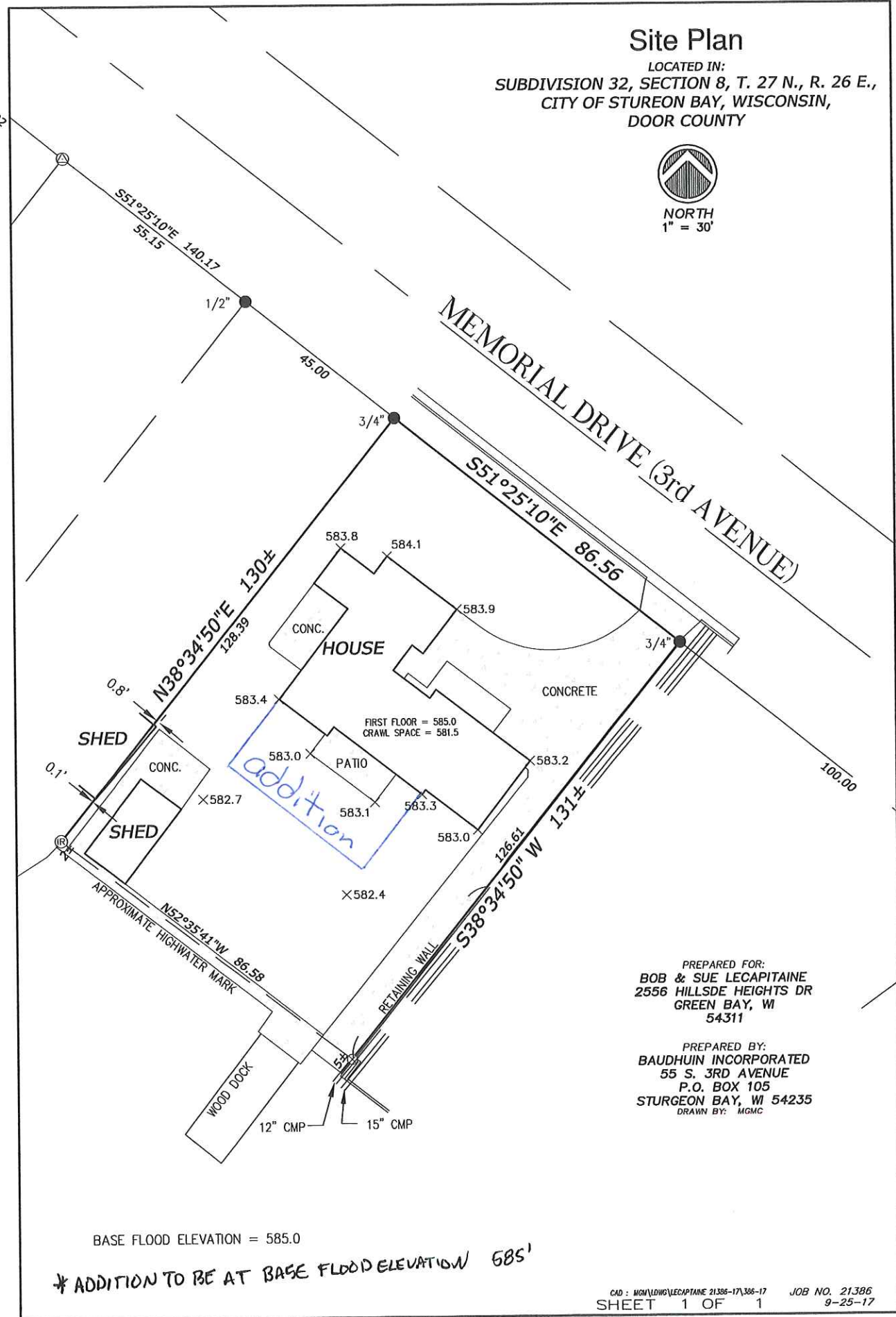
Sue & Robert LeCapitaine

# Site Plan

LOCATED IN:  
SUBDIVISION 32, SECTION 8, T. 27 N., R. 26 E.,  
CITY OF STURGEON BAY, WISCONSIN,  
DOOR COUNTY



NORTH  
1" = 30'

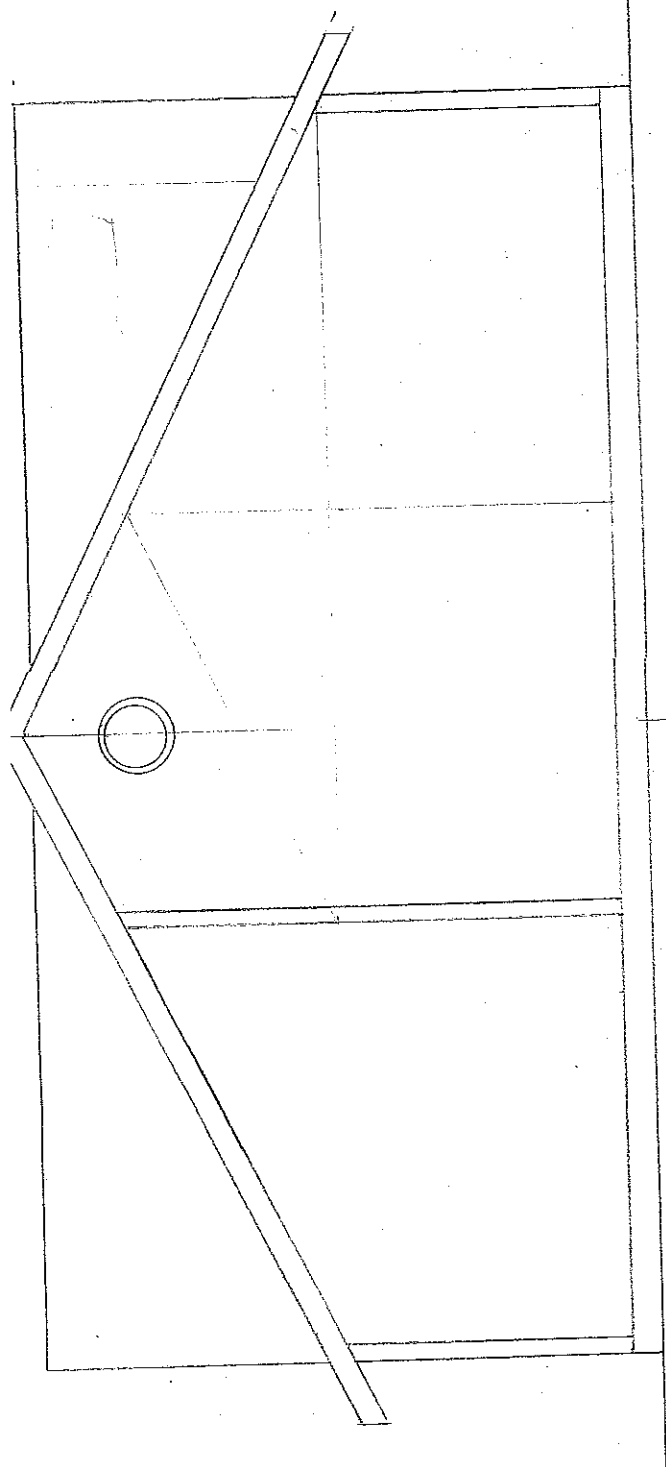


BASE FLOOD ELEVATION = 585.0

\* ADDITION TO BE AT BASE FLOOD ELEVATION 585'

PREPARED FOR:  
BOB & SUE LECAPITAINE  
2556 HILLSIDE HEIGHTS DR  
GREEN BAY, WI  
54311

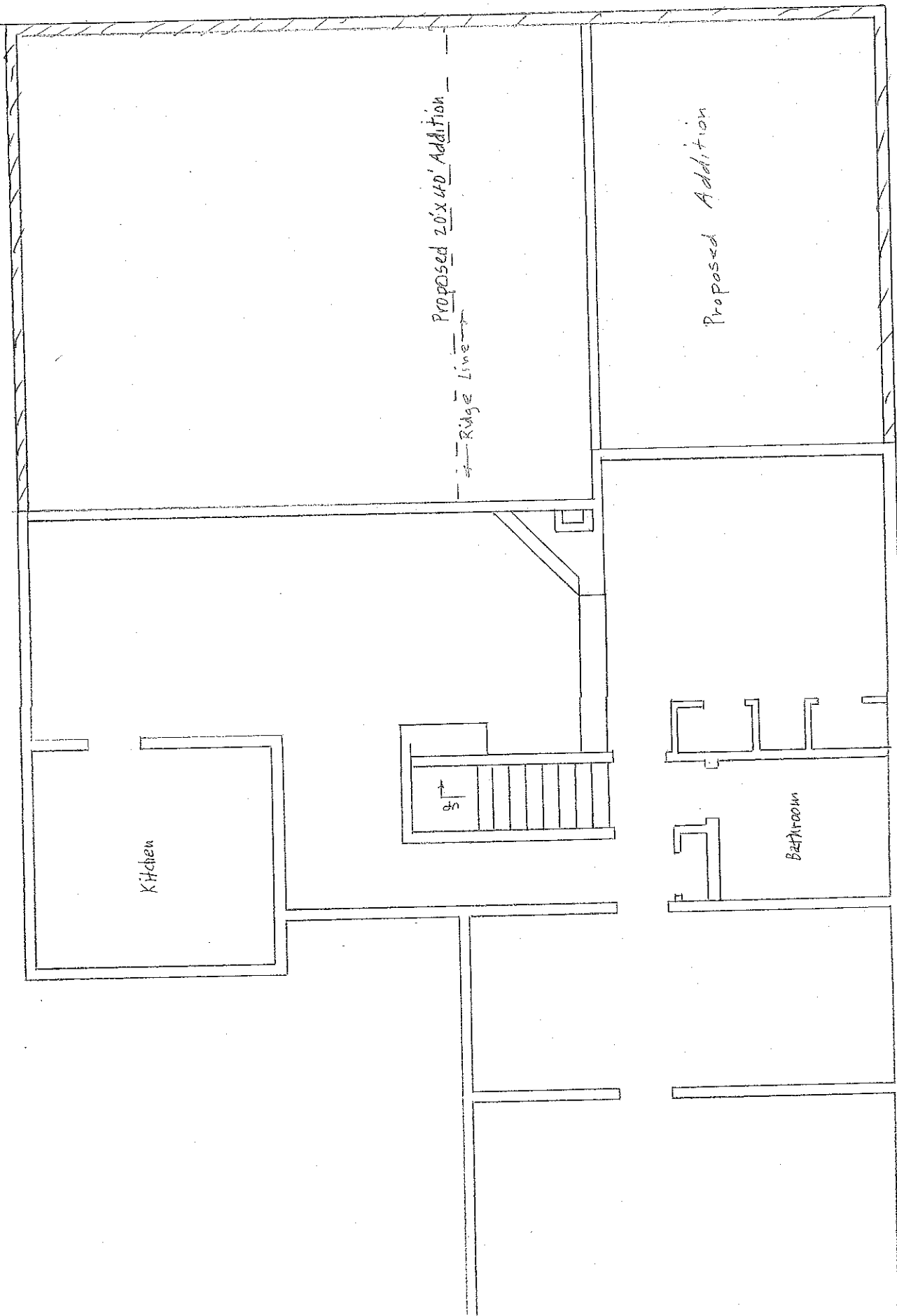
PREPARED BY:  
BAUDHUIN INCORPORATED  
55 S. 3RD AVENUE  
P.O. BOX 105  
STURGEON BAY, WI 54235  
DRAWN BY: MGMC



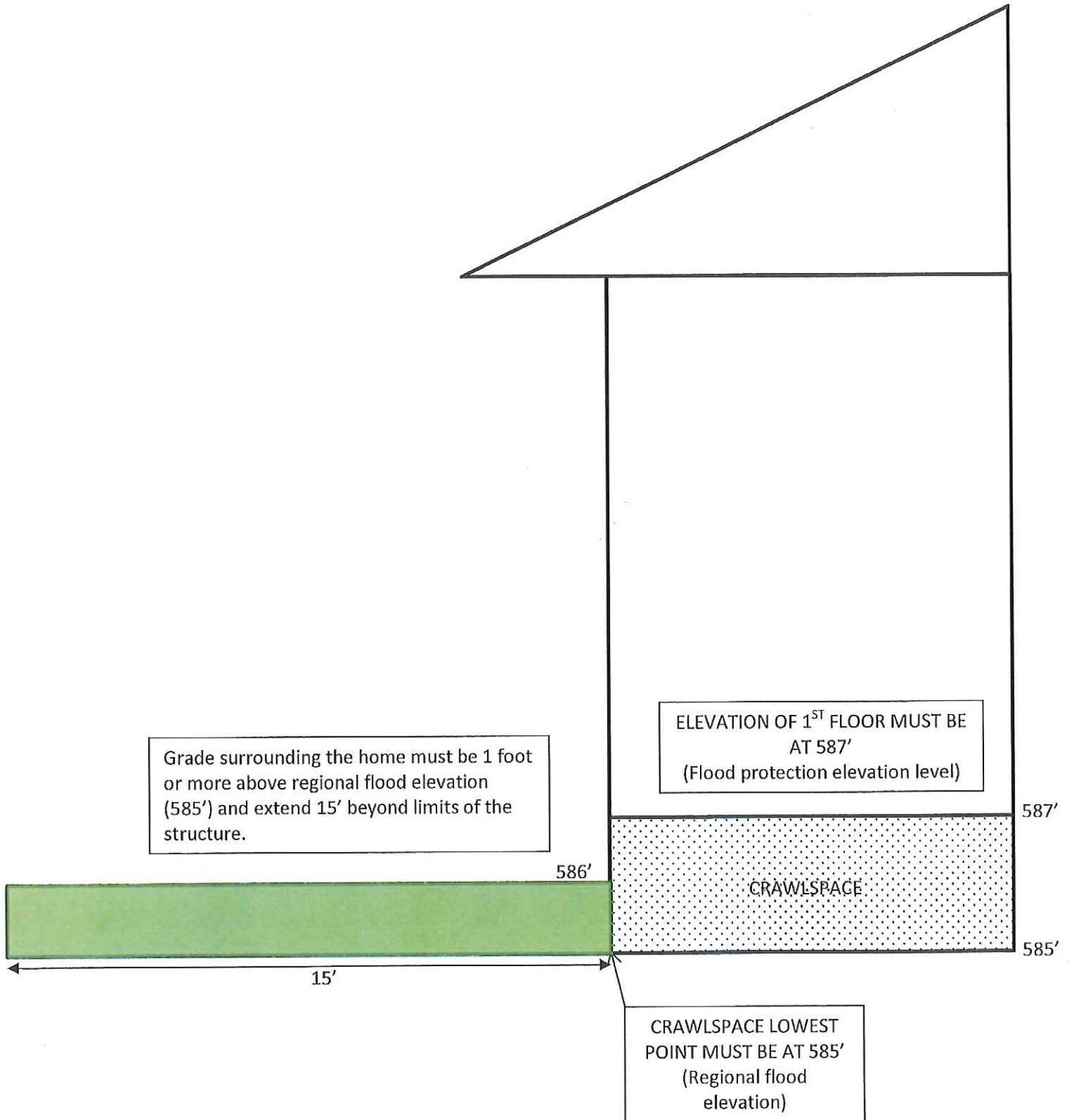
40'-5"

21'-0"

40'-5" 25'-10" 13'-0"



20'-0"





# Location Map

## Notice of Public Hearing

### Variance Request



Subject\_Property







# Legend

- BFE 585
- 2ft Contours
- 719 Memorial Drive
- Roads
- Parcels



City of Sturgeon Bay  
Community Development Department  
421 Michigan Street  
Sturgeon Bay, WI 54235  
www.sturgeonbaywi.org  
PH:920-746-2910  
FAX:920-746-2905

**State of Wisconsin**  
**DEPARTMENT OF NATURAL RESOURCES**  
101 S. Webster Street  
Box 7921  
Madison WI 53707-7921

**Scott Walker, Governor**  
**Daniel L. Meyer, Secretary**  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



August 22, 2018

William Murrock, Chair  
City of Sturgeon Bay Board of Appeals  
421 Michigan Street  
Sturgeon Bay, WI 54235

Subject: Variance Appeal request for Robert & Sue LeCapitaine – 719 Memorial Drive, Parcel# 281-66-12003301F1

Dear Mr. Murrock:

This letter is in regard to the variance request submitted by Robert & Sue LeCapitaine for the property located at 719 Memorial Drive, Sturgeon Bay, WI. The FEMA FIRM Panel 55029C0478C with the effective date of March 2, 2009 indicates that this property is located in a Zone AE, flood fringe and is a legal non-conforming structure. Zoning nonconformities are existing uses, structures or lots that were legally established prior to a change in floodplain provisions and do not comply with today's ordinance standards. Section 23.06 of the Sturgeon Bay Floodplain Ordinance outlines the requirements for existing non-conforming structures.

The intent of this ordinance provision is to prevent existing buildings from being turned into a new or substantially improved building. Increasing the value of the structure without protecting them from flood risk and does not meet new development standards. New development standards are designed to reduce risk and mitigate loss during a flood events. The proposed improvements constitute development per Federal, State, and local floodplain management regulations. The variance standards are based on the general principal of zoning law that variances pertain to the piece of property and are not personal in nature.

The National Flood Insurance Program (NFIP) is based on a mutual agreement between the Federal Government and the community. In addition, the State of Wisconsin has floodplain management requirements located in State Statute (Chapter 87.30) and the Wisconsin Administrative Code (NR116). The floodplain ordinance the City adopted incorporates both Federal and State minimum standards. Federally-based flood insurance is made available in those communities that agree to regulate and enforce their floodplain ordinance.

FEMA initiated the coastal analysis and mapping study to produce updated Flood Insurance Rate Maps (FIRMs) for coastal counties along all the Great Lakes. The states included in this study are Michigan, Wisconsin, New York, Illinois, Indiana, Minnesota, Pennsylvania and Ohio. Different States are at different stages of the updating process. As explained by FEMA Region V Floodplain Management and Insurance Branch Chief at the Flood Risk Review meetings on August 22, 2017, the maps presented were only draft maps and could not be used for insurance or regulatory purposes. Until the data go through due process and the new BFEs are published through the federal register, any BFEs that are less restrictive than what is presented on the current effective FIRM cannot be utilized for regulatory purposes. The timing for map competition is based upon availability of federal funding.



**Unique Property Limitations:** The applicant must demonstrate unique property conditions which are not common to adjacent lots or premises. There are no unique characteristics to the property in this case that differs from any other property within the floodplain. All non-conforming floodplain properties within the City of Sturgeon Bay are subject to the same 50% limitation. In fact, these floodplain standards are applied throughout the State of Wisconsin in all municipalities. There are no unique property limitations preventing the applicant from meeting the ordinance requirements.

**No Harm to Public Interest:** A variance may not be granted which results in harm to public interest. Public interest can be determined from the general purpose of the floodplain ordinance as well as the purpose of a specific ordinance provision. It can be analyzed as the short-term, long-term, and cumulative impacts of the variance request on the neighbors, community, and statewide public interest. The incremental benefits of allowing the development are outweighed by the increased costs of future flood damage.

**Unnecessary Hardship:** An unnecessary hardship exists only if the property owner shows that they would have no reasonable use of the property without a variance. A variance is intended to provide only the minimum relief necessary to preserve a reasonable use of the property. In all applicable Federal, State and local variance criteria, a variance cannot be granted for an economic gain or loss. Granting a variance for construction in the floodplain based on financial hardship only increases the probability that the owner will suffer high health and safety risk as well as monetary adversity.

Floodplain variances should be a rare occurrence, as outline in the "FEMA P-993 FPM Bulletin- Variances and the National Flood Insurance Program" and should not be used as a tool for relief of the two foot of freeboard in this situation. Keep in mind that the applicant has the burden of proving that their application meets all of the statutory requirements for the granting of a variance for each variance request. The floodplain variance criteria are very specific on the situations where relief should be granted. In fact, the Federal Code 44 CFR 60.6, Wisconsin State Statutes 59.694, Wisconsin Administrative Code NR116.21(4) and City of Sturgeon Bay Floodplain Ordinance Section 23.07(3)(d) outlines specific variance criteria for granting floodplain variances. A potential map change is not a criterion to waive the floodplain ordinance requirements.

Please be aware that Wisconsin Statutes provides the opportunity for certiorari review of the variance under s. 62.23(7)(e). NR116.22 outlines additional enforcement actions that the Department may take to ensure community compliance with the Ordinance. In addition, if the variance was granted as is, The City of Sturgeon Bay Board of Appeals may encounter difficulty meeting NFIP standards. FEMA can review a community's findings justifying the granting of variances, and if that review indicates a pattern inconsistent with the objectives of sound floodplain management, FEMA may take appropriate action up to and could suspend the community from the National Flood Insurance Program (NFIP).

It is the responsibility of the Board of Appeals to assure that the statutory standards for the granting of a variance are met. The Department appreciates your commitment to City of Sturgeon Bay floodplain management program and the continuing protection of life, health and property.

Sincerely,



Michelle J. Staff, CFM  
State National Flood Insurance Program Coordinator  
Dam Safety and Floodplain Section

Cc: Christopher Sullivan-Robinson, City of Sturgeon Bay Environmental Planner (via-email)  
Miles Winkler, DNR, regional Water Management Engineer (via-email)  
Tina McGee, FEMA Region V Floodplain Management and Insurance Branch (via-email)



Floodplain Management Bulletin

# Variances and the National Flood Insurance Program

FEMA P-993 / July 2014



FEMA



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# SECTION 1

## Purpose and Background

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The National Flood Insurance Program (NFIP) variances procedures are designed to help local governments protect their citizens and property from flood damages. Allowing variances to the local floodplain management standards may significantly increase the property's flood insurance rate and decreased the community's resilience. Therefore, by implementing the NFIP variance procedures, a community will ensure that alternative actions are taken that protect and encourage safe development in the floodplain. This publication outlines the floodplain management variance criteria as set forth in Title 44 Code of Federal Regulations (CFR) Part 60, Criteria for Land Management and Use, Subpart A – Requirements for Floodplain Management Regulations, Section 60.6 (44 CFR §60.6).

This publication is not intended to offer legal advice.

### 1.1 Purpose

This guidance will assist local government officials in reviewing requests for variances and determining if a request meets the minimum requirements of the NFIP. The variance regulation set forth in 44 CFR §60.6 is not absolute; State zoning enabling legislation or State floodplain management regulations and local case law<sup>1</sup> may take precedence and may be more restrictive. Therefore, community officials should consult their local attorney or State Attorney General regarding the specific requirements of State and local variance regulations.

### 1.2 Background and Meaning of Variance

A variance is an authorization for the construction or maintenance of a structure or other land uses that would otherwise be prohibited by a land use regulation such as a zoning ordinance. Local floodplain regulations may complement and be augmented by zoning regulations to reduce the community's overall risk to flooding. Relevant to this guidance, 44 CFR §59.1 defines "variance" as "a grant of relief by a community from the terms of a floodplain management regulation." Variances are meant to address unique, site-specific and individual circumstances where the strict application of the ordinance may result in an extreme hardship to a property owner. While the variance is intended to provide relief, it still enables the community to:

- Preserve the purpose and intent of the zoning law/ordinance;
- Minimize legal challenges to the zoning law or floodplain management regulations and avoid an unconstitutional "taking" of private property without compensation; and
- Protect the safety, health, and welfare of the public and emergency responders.

<sup>1</sup> Case law dictates following the due process of law detailed in the floodplain ordinance, enforcing regulations consistently, and acting under the advisement of the community's attorney. For more information, consult with your community's attorney.



## SECTION 2

# Evaluating the General Merits of a Floodplain Management Variance

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The floodplain management variance requirements are based on the general principles of zoning laws in State statutes. The minimum floodplain requirements for communities participating in the NFIP are designed to ensure the practice of sound floodplain management. (See 44 CFR §60.6.) To grant a variance from floodplain ordinances, in addition to meeting the requirements set out by State law, the community must determine:

- Good and sufficient cause and exceptional hardship exist;
- The variance will not result in additional threats to public safety, extraordinary public expense, or fraud or victimization of the public; and
- The variance is the minimum action necessary to afford relief.

If the required standards of State law, local ordinances, and 44 CFR §60.6 are closely adhered to, granting variances from floodplain ordinances should be rare. Additionally, where a variance is granted, some level of flood protection and hazard mitigation should always be required.

## 2.1 Floodplain Regulations versus Zoning Regulations

Floodplain regulation and zoning regulations, when applicable, are land use and development controls that should be administered in concert to promote the general welfare by minimizing the threat from natural hazards to life and property.

Floodplain regulations are similar in nature and function to zoning regulations in that both involve land use regulation and control, have benefits and performance expectations, and are often implemented under the same legislative authorities at the local or State level. However, floodplain regulations differ from zoning regulations because they specifically address human safety and property protection in relation to a known and defined natural hazard. Furthermore, in accordance with the provisions of 44 CFR Part 60, the local jurisdiction must enforce floodplain regulations for all development in the Special Flood Hazard Area (SFHA).

### **SPECIAL FLOOD HAZARD AREA (SFHA)**

Land areas subject to a 1 percent or greater chance of flooding in any given year. These areas are indicated on Flood Insurance Rate Maps (FIRMs) as Zone AE, A1-A30, A99, AR, AO, AH, V, VO, VE, or V1-30. Mapped zones outside of the SFHA are Zone X (shaded or unshaded), B, or C.

For example, variances are granted for the structure and not associated with the property owner. As such, when communities review a variance request, they should consider the life expectancy of a building. A home built today is expected to last an average of about 100 years; shopping malls with traditional parking lots have a life expectancy of about 12 to 20 years; commercial structures have a life expectancy of about 25 to 75 or more years, depending on building type. If the structure is located within a floodplain, the cumulative effects of development will increase possible flood damage to the structure.

are usually related to aesthetic concerns, and may affect property values. Variances from floodplain management criteria are not related to aesthetics, but rather may affect the safety and protection of the public, the environment, and the flood risk of a community.

Any variance from local floodplain management standards must be closely scrutinized to determine if it meets State and local standards for variance issuance, as well as the minimum standards adopted by the community in the variance requirements of the floodplain management ordinance.

Variances can be granted for new construction and Substantial Improvements only if *all* the other NFIP requirements in the local floodplain management ordinance are met. If even one criterion is not met, the variance should not be granted.

### DEFINITIONS

**Substantial Damage:** Defined by the National Flood Insurance Program (NFIP) as *"damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred."*

*or exceeds 50 percent of the market value of the structure (or smaller percentage if established by the community) before the 'start of construction' of the improvement. This term includes structures that have incurred 'Substantial Damage,' regardless of the actual repair work performed."*

**Substantial Improvement:** Defined by the NFIP as *"any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals*

*Refer to FEMA P-758, Substantial Improvement/ Substantial Damage Desk Reference (2010) for more information.*

## 3.2 NFIP Variance Standards

The NFIP does not set forth an absolute criterion for granting variances from the minimum floodplain management provisions. NFIP regulations provide the basis for each participating community to determine whether construction or other development activities qualify for a variance from the local floodplain management regulations.

The authority and the responsibility to approve or disapprove a variance rest with the local government. However, because variances may expose insurable property to a higher flood risk, the Federal Emergency Management Agency (FEMA) evaluates variances granted by a community to determine whether they are consistent with sound floodplain management standards as required for participation in the NFIP. The floodplain management variance criteria contained in the NFIP regulations are intended to:

- Provide specific floodplain management input to the community criteria for approving variances;
- Inform participating communities of FEMA's guidelines for evaluating local compliance with the standards required for participation in the NFIP;
- Ensure appropriate notification of the issuance of a variance; and
- Advise applicants and future owners of potentially high flood insurance rates.



## 3.3 NFIP Variance Regulations

The following sections describe each criterion of the variance regulations as stated in 44 CFR §60.6.

### 3.3.1 Floodways

Communities should not issue variances for construction within a floodway if the variance will result in an increase in flood levels during the base flood event.

#### 44 CFR 60.6(A)(1)

Variances shall not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.

#### Floodway Definition and Background

The floodway is defined in the NFIP regulations as:

*...the channel of a river or other water course and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. (44 CFR §59.1)*

The floodway is designated on FEMA's Flood Insurance Rate Maps (FIRMs) for riverine areas based on a detailed study called a Flood Insurance Study. It is important to reserve the floodway as a water conveyance area because any encroachments or obstructions placed in the floodway will increase flood heights and/or water velocities, and consequently increase flood damage to other properties.

#### BASE FLOOD ELEVATION (BFE)

Elevation of flooding, including wave height, having a 1 percent chance of being equaled or exceeded in any given year. The BFE is the basis of insurance and floodplain management requirements and are shown on FIRMs.

#### Floodway Variance Requests

The intent of this variance criterion is to prohibit development that may increase flood levels which, in turn, could increase potential flood damage to the development and to structures of other property owners. In most cases, alternative locations for the proposed development are available outside the limits of the floodway. Other actions may also be taken or required as a condition of approval to compensate for increased flood levels, such as requiring the applicant to install flood-control measures to accommodate increased discharge.

The burden of proof rests on the applicant or developer, not FEMA, the local community, State, or other agency, to demonstrate that scientific data were used to determine that no increase in flood levels would result from the proposed development. Sufficient proof may include, but is not limited to, studies provided by an appropriately licensed professional.

If no feasible or practical alternative location for the proposed development is available, the variance applicant must demonstrate that it conforms to all of the requirements stipulated in NFIP variance regulations and is in accord with other floodplain management regulations such as:



### 3.3.2 Lots of One-Half Acre or Less

This variance criterion specifies that variances should generally be granted only for lots that are one-half acre or less; variances for lots of larger sizes must include significant technical justification. The intent of this variance provision is not to place a lesser burden of justification on one-half acre lots, but a greater burden on lots larger than one-half acre.

#### Variance Requests for Lots One-Half Acre or Less

Common misinterpretations of this variance criterion include using it to justify variance requests related to personal convenience, preference, or aesthetics, e.g., the height inconsistency that would result between adjacent structures if the middle one were elevated to or above the BFE. Aesthetics or other personal preferences should never be a consideration when making variance determinations. This variance criterion addresses the physical, not the aesthetic, characteristics of a lot in relation to the adjacent lots. When balancing an applicant's personal issues with issues related to public health and safety, such as the minimum NFIP criteria, a community should always choose public safety and the protection of lives and property.

Some communities misinterpret this variance criterion to mean that variances can be granted systematically for all remnant or "in-fill" lots of less than one-half acre located in subdivisions built prior to the effective date of the community's current FIRM. Granting a variance on an "in-fill" lot of less than one-half acre is not automatic.

The granting of variances for small lots where elevation on fill will pose an exceptional hardship due to drainage problems should be rare. Variances for "in-fill" lots of one-half acre or less should be granted on the basis of potential drainage problems only if, as 44 CFR § 60.6(a)(2) explicitly states, all other variance criteria are met. In addition, communities should grant variances for "in-fill" lots only if a professional engineer or architect has prepared and certified data demonstrating that no technically feasible methods are available to alleviate or mitigate the drainage problems.

#### Variance Requests for Lots Larger Than One-Half Acre

The 44 CFR §60.6(a) specifically states that "as the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases." The one-half acre threshold is meant to be a *general* cutoff point and is related to the intrinsic qualities of the site or parcel; as the regulations state, "deviations from that limitation may occur" provided sufficient cause has been demonstrated by the applicant in accordance with the variance criteria. However, lots larger than one-half acre, in nearly all instances, have sufficient space to elevate structures on fill to or above the BFE without resulting in adverse drainage impacts on adjacent properties and structures, whether or not the adjacent structures' lowest floor elevations are at or below grade. Because of the additional storage and infiltration capacity on

#### 44 CFR 60.6(A) AND (A)(2)

While the granting of variances generally is limited to a lot size less than one-half acre (as set forth in paragraph (a)(2) of this section), deviations from that limitation may occur. However, as the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases.

Variances may be issued by a community for new construction and substantial improvement to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the procedures of paragraphs (a)(3), (4), (5) and (6) of this section.



physical handicaps, personal preferences, the disapproval of one's neighbors, or homeowners association restrictions do not qualify as "good and sufficient" causes. In addition, the financial hardship of the property owner is never a "good and sufficient" cause for granting a variance. Granting a variance for construction in a flood hazard area based on financial hardship only increases the probability that the owner will suffer high health and safety risks as well as monetary adversity when the structure is damaged during a flood. In addition, the structure will be subject to higher insurance premiums.

The justification for granting a variance based on physical characteristics should be such that it remains valid over time. In contrast, personal difficulties of the owner and intended uses of buildings can change dramatically with changes in ownership. For example, once the personal circumstances of the owner changes (e.g., the property is sold or leased, or the owner no longer suffers from financial hardship) the justification for the variance may no longer exist, but the structure remains, exposing future owners/occupants to the nonconforming nature of the property and any hazards and public safety problems associated with it. This exposure of life and property to risk from flood damage would be directly attributable to a variance issued based on the personal difficulty of the previous owner.

### 3.3.4 Exceptional Hardship

The hardship that would result from failure to grant a requested variance must be exceptional, unusual, and specific *to the property involved*, not the personal circumstances of the applicant. When determining whether an applicant has established an exceptional hardship sufficient to justify a variance, the local variance appeal board or other governing body must weigh the applicant's hardship against the community-wide flood damage prevention requirements.

#### 44 CFR 60.6(A)(II)

Variances shall only be issued by a community upon a determination that failure to grant the variance would result in exceptional hardship to the applicant.

As stated in Section 3.3.3, inconvenience, aesthetic considerations, physical handicaps, personal preferences, the disapproval of one's neighbors, or homeowners association restrictions do not qualify as exceptional hardships. This applies even if the alternative means of construction are more expensive or complicated than building the structure with a variance, or if they require the property owner to use the parcel differently than originally intended or build the home elsewhere.

Two examples are provided below to illustrate situations in which variances should not be granted:

1. *A property owner requests a variance to the elevation requirement because it will cost the owner several thousand dollars to elevate the house to comply with an ordinance and an additional several thousand to build a wheelchair ramp to provide access for a handicapped family member.*

While financial considerations are always important to property owners, and the needs of the handicapped person certainly must be accommodated, these difficulties are not in the category of "exceptional hardships" as they relate to floodplain management variances. These characteristics result in personal hardships (the physical condition and financial situation of the homeowner) rather than pertaining to the property itself.

and emergency services personnel. The potential for loss of life is greatest in structures where the lowest floor is below the BFE, and where flood depths are greater than 3 feet or where high velocity floodwater is present.

structured below the flood elevation, the variance then raises public safety concerns for the homeowner and adjacent properties.

In addition to potentially increasing public safety concerns, granting variances for elevation requirements often results in abandonment when non-elevated structures are damaged during flood events, thereby creating a public nuisance.

### 3.3.7 Public Expense

Extraordinary public expenses may include protection and/or repairs to structures, time and materials expended by emergency service personnel, the expense involved in operating disaster assistance programs, and the cost to communities to:

#### 44 CFR 60.6(A)(3)(III)

Variances shall only be issued by a community upon a determination that the granting of a variance will not result in extraordinary public expense.

- Repair or replace public facilities and infrastructure that continue to be exposed to flood damage because a variance was issued;
- Publically fund emergency flood protection measures, such as sandbags and temporary floodwalls, used to protect structures exposed to flooding as a result of the issuance of an elevation variance;
- Accommodate time and equipment expended by emergency services personnel to evacuate an area or rescue occupants of flooded structures;
- Identify public disaster assistance needed by occupants of structures exposed to increased flooding following the issuance of a variance; this assistance may be in the form of various Federal disaster assistance programs (e.g., FEMA, Small Business Administration), non-government organization assistance (e.g., Red Cross), and denominational and other private donations; and
- Repair or demolish flood-damaged properties when such properties were granted variances and the owners, unable to afford repairs, abandon them.

### 3.3.8 Fraud and Victimization

Local governments should be careful to never grant variances that have the potential to cause public victimization or fraud. Public fraud or victimization can result when a property that was granted a variance changes ownership.

An unsuspecting buyer may be unaware that the structure is subject to flood damage and costly flood insurance rates. Frequently, unsuspecting buyers of previously flooded homes are not aware of the

#### 44 CFR 60.6(A)(3)(III)

Variances shall only be issued by a community upon a determination that the granting of a variance will not cause fraud on or victimization of the public.



State and Federal laws that may apply even if a variance has been granted include, but are not limited to:

- State health department requirements for well or septic systems, or other requirements
- Threatened and Endangered Species Act of 2005
- National Historic Preservation Act of 1966
- National Environmental Policy Act of 1970
- Clean Water Act
  - Federal and State wastewater or stormwater discharge requirements and permits
  - Clean Water Act, Section 404 permits

A variance to the floodplain ordinance cannot be used to waive compliance or development requirements for other local, State, or Federal requirements.

When it is not feasible to secure all other permits prior to consideration of a variance and issuance of a floodplain development permit, the local jurisdiction may condition issuance of a flood development permit on receipt of these permits. In these instances, it is important to have administrative procedures established to:

1. Identify which permits are required;
2. Refer and notify the applicable authorities and jurisdictions of permit issuance;
3. Specify within the floodplain development permit, as conditions of approval, the expectation and need to secure and provide copies of these permits in a timely fashion;
4. Communicate these requirements to the applicant and provide contact information to initiate the permitting process with other applicable authorities; and
5. Follow up with the applicant to complete the file with copies of the permits from the other applicable jurisdictions.

### 3.3.10 Minimum Necessary to Afford Relief

A variance granted by a community must be the absolute minimum needed to minimize or reduce future flood damage and still relieve the hardship, as defined by the previous provisions. In considering variances, the community review board should use local technical staff expertise and recommendations from the building, planning, zoning, or engineering departments.

A “blanket variance” that would waive all NFIP requirements could never meet all of the requirements of a variance. There will always be some feasible action that can be taken to reduce the potential for flood damage.

#### **44 CFR 60.6.(A)(4)**

Variances shall only be issued by a community upon a determination that the granting of a variance is the minimum necessary, considering the flood hazard, to afford relief.

### 3.3.12 Functionally Dependent Uses

The NFIP regulations define a “functionally dependent use” as one that cannot perform its intended purpose unless it is located or carried out near water. The term includes only docking facilities necessary for loading and unloading cargo or passengers, and ship building and repair facilities.

The definition of “functionally dependent use” limits variances to the practical problems of building and repairing ships, loading and unloading cargo and passengers from vessels, moving the cargo onto other forms of transportation, and moving the cargo to long-term storage facilities that fully comply with NFIP criteria.

The term does not include long-term storage or related manufacturing facilities since these uses can be located outside the floodplain or fully comply with all NFIP requirements, and are therefore excluded from the definition of functionally dependent use. In accordance with this variance provision, variances for new construction, Substantial Improvements, and any other development necessary for the conduct of a functionally dependent use must meet all other floodplain development and applicable variance requirements. In addition, the structures or other development must be protected by methods that minimize flood damage during the base flood and create no additional threats to public safety.

In many cases, such as port facilities, the seafood industry, or shipbuilding, NFIP floodplain management criteria can be met with the industry still being able to operate as intended. However, because functionally dependent uses must be located on or adjacent to water, practical and operational difficulties may result from the physical characteristics of the property. One way to meet the floodplain management requirements is to use wet floodproofing techniques, such as installing flood damage-resistant materials, elevating mechanical equipment, locating offices above the BFE, using ground fault circuit interrupters, or developing an emergency plan to remove contents before a flood.

If a variance is used to address the unique challenges of functionally dependent uses, it must include only the minimum necessary to afford relief considering the flood hazard. When evaluating variances for functionally dependent uses, the primary concerns should be:

- Preserving human health and safety, both within and surrounding the proposed development, including emergency responders;
- Minimizing flood damage during the base flood;
- Ensuring that no ancillary or additional threats to public welfare will be created; and
- Ensuring that only minimum deviation from the NFIP requirements is made to allow the intended use of the facility.

#### 44 CFR 60.6(A)(7)

Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria of paragraphs (a)(1) through (a)(4) of this [60.6] section are met, and (ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.



- Elevate all utilities and finished interior workings to or above the BFE or to the maximum extent possible or practically feasible;
- Use flood damage-resistant materials for interior and exterior improvements wherever possible; and
- Raise the interior floors to or above the BFE or to the maximum extent possible (this is often technically feasible in older structures with high ceilings).

If repair or improvements result in the loss of the structure's historic designation, the structure would no longer qualify for the variance and would be required to meet the NFIP floodplain regulations.

### **Community Considerations**

In addition to this "historic structure" variance criterion, another provision of the NFIP also provides relief for historic structures located in the SFHA. The definition of Substantial Improvement at 44 CFR 59.1 excludes historic structures from its definition by excluding "any alteration of an historic structure provided that the alteration will not preclude the structure's continued designation as 'historic structure.'" The same exclusion also applies to historic structures that have incurred Substantial Damage.

In regulating historic structures, communities have the option of using the provisions as stated in the variance criteria at CFR 60.6(a) or the definition of Substantial Improvement to address the unique needs of historic structures. Communities should adopt only one option to regulate historic structures. Some communities have chosen to adopt the variance criteria in their ordinance, while other communities have chosen to include the historic structure exemption as part of their Substantial Improvement definition. In either case, historic structures can be excluded from the NFIP elevation and floodproofing requirements (non-residential only). When a community exempts a historic structure from the NFIP floodplain management requirements, it should document the process and maintain the documents in the community permit files.

### **Property Owner Considerations**

Owners of historic structures should be aware that physical alterations made to a historic structure may cause the structure to be removed from the National Register of Historic Places, DOI-certified State Inventory of Historic Places, or local inventory. If such alterations cause the structure to lose its official listing or historic status, the structure would no longer be a historic structure for the purposes of the NFIP and would be required to meet the minimum floodplain management requirements of the local ordinance. A determination of whether the structural alternations would forfeit the historic designation should be made before requesting a permit.

Communities should not grant variances to entire subdivisions for accessory structures, especially detached garages. As with any other structure type, variances should only be reviewed and issued on an individual or case-by-case basis and be based on the unique characteristics of the site.

Accessory structures located in Zone V areas are subject to excessive hydrodynamic forces associated with wave action and cannot meet the variance conditions described above. In these locations, communities should prohibit accessory structures in Zone V areas, or allow only very low value, “disposable” storage sheds unless the sheds are elevated to or above the BFE. For additional information, see FEMA NFIP Technical Bulletin 5, *Free-of-Obstruction Requirements for Buildings Located in Coastal High Hazard Areas*.

## 4.2 Boat Storage Facilities

Many boat storage facilities constructed in SFHAs are steel-framed buildings with sheet metal exterior walls, a roof, and a concrete floor at ground elevation. Some of these facilities store boats vertically from the ground to the roof on multi-tiered overhead racks using a hydraulic forklift to hoist the boats. Other facilities are simpler in design and function, storing boats on wheeled trailers at ground level.

For the purposes of NFIP floodplain management requirements, boat storage facilities that are walled and roofed buildings are by definition “structures” and must comply with the NFIP requirements. For boat storage facilities to comply with the minimum NFIP requirements, the lowest floor must be elevated to the BFE, or the walls must be floodproofed to be watertight to the BFE.

### LOWEST FLOOR

The “lowest floor” of a structure is defined by the NFIP as the lowest floor of the lowest enclosed area.

In determining whether the construction of a boat storage facility is in compliance with minimum NFIP regulations as adopted by the local ordinance, the following factors should be considered:

- Are the construction materials and architectural design of the structure flood resistant?
- Does the proposed operating plan include storage position and techniques (e.g., vertical racks, ground level) and transporting procedures (e.g., forklift, trailers)?
- What is the distance from the water source and the intermediate terrain?
- What is the lot size and orientation?
- What is the severity of the flood hazard (e.g., height of the BFE above natural grade and risk zone designation, Zone V, Zone A, floodway)?
- What is the anticipated water velocity during flood conditions?
- Are the utilities elevated above the BFE?

If the community determines that a variance is warranted, the variance should be issued

### WET FLOODPROOFING

Wet floodproofing involves purposely designing a building to withstand inundation by floodwaters and constructing it with materials resistant to or minimally damaged by floods. FEMA’s Technical Bulletin No. 7-93, *Wet Floodproofing Requirements for Structures Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program*, provides technical information on wet floodproofing.



- The magnitude of the impact (i.e., the potential height of the increase in WSEL) caused by the temporary project; and
- The number of insurable structures that would potentially be affected by such an increase during the base flood, and the severity of the impact.

Before granting a variance for temporary development, communities should consider issuing a temporary permit. The greater the increase in WSEL and number of potentially affected structures, the stricter the temporary performance requirements (e.g., sizing of temporary bridge openings) and the less justification for a variance. If the affected area has a low population density and one or more of the following factors are present, the community may want to consider allowing construction of a temporary project or other temporary development using a less restrictive standard:

- The increased flood hazard would be limited to property owned or leased by the State transportation agency or variance applicant, or property for which the owner has acquired “flowage” easement;
- The increased flood hazard would be limited to undeveloped community areas that the local government judges to have no development potential during the time the temporary measure would be in place;
- The increased flood hazard would not affect insurable structures (i.e., cause an increase in flood levels for structures that are already floodprone or cause non-floodprone structures to become floodprone); or
- The State or county transportation authority, another government agency with the power of eminent domain, or a private applicant has agreed to one of the following actions: (1) purchase or relocate structures affected by the proposed project, (2) elevate such structures to the temporary BFE, (3) purchase flowage or flooding easements, or (4) provide other forms of equivalent mitigation such as purchasing flood insurance for the duration of the temporary increase.

If one or more of the above factors are met, any increase in the BFE for the duration of the temporary permit should not adversely affect insurable structures in the community. In this case, the community may decide to grant a variance allowing a temporary project.

#### **4.4.2 Storage of Equipment and Material in Temporary Development Projects**

Per the NFIP definition of development, the storage of equipment and materials is subject to local floodplain development permit requirements. Continuous storage operations—such as lumber yards, landscape material yards, recreational vehicle/automobile storage and sale, and junk yards—are also considered development and are subject to floodplain development permit requirements. The storage of equipment and materials should not increase flood heights in the floodway and should meet the other required standards of the floodplain management ordinance.

It is a community's responsibility to make a prudent and reasonable distinction between types of storage activities. This distinction should be based on considerations such as the length of storage time, nature of the materials or equipment being stored, physical characteristics of the floodplain, and characteristics of the flood flows. As a guide, the smaller the SFHA and longer the storage time, the more concerned a



## SECTION 5

# NFIP Flood Insurance Implications of Variances

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Property owners should understand the financial consequences of constructing or repairing a building using an approved variance. While an approved variance may allow development within the SFHA to deviate from specific performance and building standards specified in a local floodplain ordinance, NFIP flood insurance rates and the flood insurance purchase requirement enforced by lending institutions cannot be waived. As described in Section 3.3.11, Disclosure, the variance regulations require that the community notify the applicant that flood insurance rates will likely be substantially higher than rates for a comparable structure that is fully compliant. A variance from elevation requirements—the most common kind of variance requested—increases the risk to a building, and that increased risk is reflected in higher annual insurance premiums. Insurance rates for a building built below the BFE can be substantially higher than those for elevated buildings.

If a local government receives a variance request to construct a building below the BFE, it must notify the applicant (in writing) that granting the variance will result in increased flood insurance premium rates, up to \$25 per \$100 of coverage. The variance-induced flood insurance premium rates may increase to a level beyond affordability for the owners. For example, a marine supply store on the Gulf Coast was built 14 feet below the BFE in Zone V, resulting in an annual flood insurance premium of \$25,000 on a building valued at \$100,000. In some cases, the applicant for the variance may not care about the cost of flood insurance. However, if the variance is approved, the impact of the variance on flood insurance premiums may affect future owners who, if they cannot afford the property's high flood insurance rates, may abandon the building and leave the community with a vacant, flood damaged, and essentially uninsurable building.

Property owners seeking to obtain a variance to reduce construction costs should understand that a variance may save money in the short term, but may result in higher costs over the long term as a result of higher insurance premiums or, if uninsured, in flood losses.

The insurance premiums for a single-family home are directly affected by the elevation of the first floor in relation to the BFE. Figure 1 shows a pre-FIRM building constructed with the lowest floor 7 feet below the BFE and an annual premium of \$830 that is flooded by the base flood event, incurring Substantial Damage. Figures 2 and 3 show different reconstruction scenarios and the resulting flood premiums. The illustrations provide a clear picture of the cost of actuarial post-FIRM flood insurance rates and, therefore, the true risk to which the building is exposed.

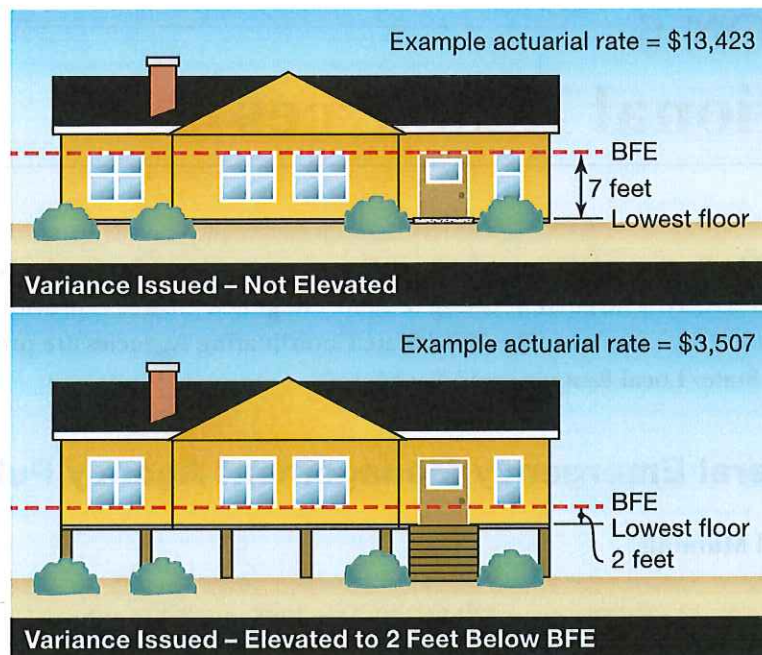


Figure 2: Two examples of repairs requiring a variance to the building shown in Figure 1. Note the example actuarial rates based on \$100,000 in building coverage.

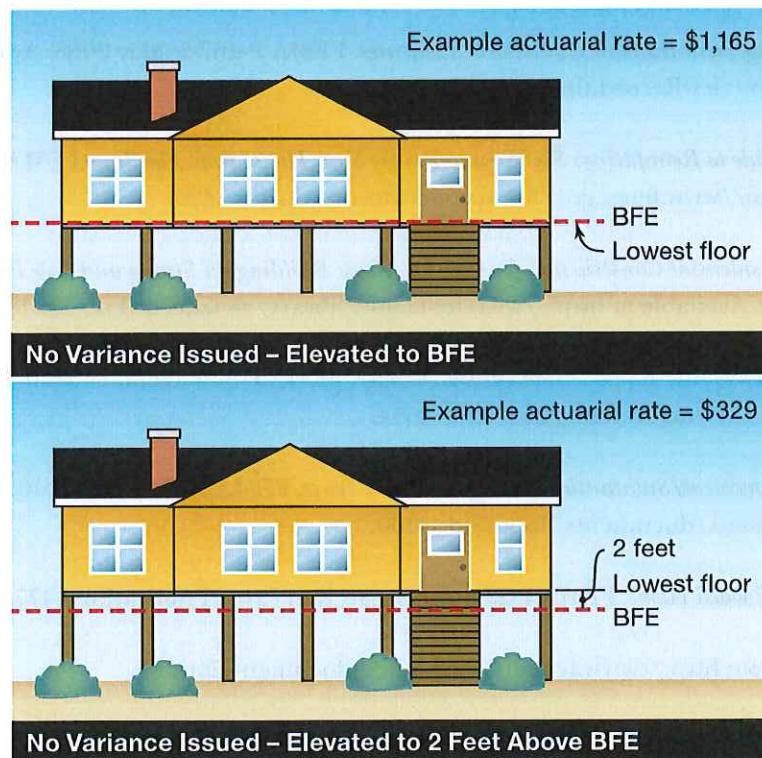


Figure 3: Two examples of repairs where no variance to the building shown in Figure 1. Note the example actuarial rates based on \$100,000 in building coverage.



## National Flood Insurance Program (NFIP) Technical Bulletins

Available at <http://www.fema.gov/national-flood-insurance-program-2/nfip-technical-bulletins>:

- *Below-Grade Parking Requirements for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program.* FEMA Technical Bulletin-6-93 (FIA-TB-6). April 1993.
- *Non-Residential Floodproofing – Requirements and Certification for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program.* FEMA Technical Bulletin 3-93 (FIA-TB-3). April 1993.
- *Wet Floodproofing Requirements for Structures Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program.* Technical Bulletin 7-93 (FIA-TB-7). December 1993.
- *Corrosion Protection for Metal Connectors in Coastal Areas for Structures Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program.* FEMA Technical Bulletin 8-96 (FIA-TB-8). August 1996.
- *Ensuring That Structures Built on Fill In or Near Special Flood Hazard Areas Are Reasonably Safe From Flooding in accordance with the National Flood Insurance Program.* FEMA Technical Bulletin 10-01 (FIA-TB-10). May 2001.
- *Design and Construction Guidance for Breakaway Walls Below Elevated Buildings Located in Coastal High Hazard Areas in accordance with the National Flood Insurance Program.* FEMA Technical Bulletin 9. August 2008.
- *Openings in Foundation Walls and Walls of Enclosure Below Elevated Buildings in Special Flood Hazard Areas in accordance with the National Flood Insurance Program.* FEMA NFIP Technical Bulletin 1. August 2008.
- *Flood-Damage Resistant Materials Requirements for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program.* FEMA NFIP Technical Bulletin 2. August 2008.
- *Free-of-Obstruction Requirements for Buildings located in Coastal High Hazard Areas in accordance with the National Flood Insurance Program.* FEMA NFIP Technical Bulletin 5. August 2008.

## 6.2 Comments

Any comments on the Floodplain Management Bulletin should be directed to:

DHS/FEMA  
Flood Insurance and Mitigation Directorate  
500 C St., SW  
Washington, D.C. 20472