

## Prototypical Analysis Site Narratives & Illustrations: Overview

As detailed further in **Chapter 1, “Project Description,”** owing to the generic nature of the Proposed Action, there are no known or projected as-of-right development sites identified as part of the Proposed Action’s Reasonable Worst-Case Development Scenario (RWCDS). To produce a reasonable analysis of the likely effects of the Proposed Action, 14 representative prototypical sites containing either new developments, infill, reconstructions, or retrofits of existing buildings in the city’s 1% and 0.2% annual chance floodplains have been identified to demonstrate the wide range of proposed regulations for sites that would be able to develop as-of-right in the future with the Proposed Action. The existing, No-Action, and With-Action conditions of each Prototypical Analysis Site are illustrated and discussed below.

Additionally, for illustrative purposes, diagrams and charts of the 2013 Flood Text (also known as “Flood Text 1” or “FT1”) regulations in the 1% annual chance floodplain are provided below for each Prototypical Analysis Site. However, as the FT1 regulations are not analyzed in this Environmental Impact Statement (EIS), narratives of the FT1 regulations are not included below.

### Prototypical Site Selection

<b>ID</b>	<b>Zoning District</b>	<b>Building Typology</b>	<b>Construction Type</b>	<b>Lot Area (sf)</b>	<b>Width (feet)</b>	<b>Depth (feet)</b>
<i>1</i>	R3-1	Single-family detached residence	Retrofit	4,000	40	100
<i>2</i>	R3-1	Single-family semi-detached residence	New Construction	2,500	25	100
<i>3</i>	R4 (Infill)	Two-family attached residence	Reconstruction	2,000	20	100
<i>4</i>	R5 (Infill)	Low-rise multi-family building	Retrofit	2,500	25	100
<i>5</i>	R7A	High-rise multi-family building	New Construction	10,000	100	100
<i>6</i>	R6	Campus-style housing	Retrofit	50,000	500	100
<i>7</i>	C1-2/R5	Low-rise mixed-use building	New Construction	12,000	120	100
<i>8</i>	C1-2/ R7A	High-rise mixed-use building	Retrofit	2,500	25	100
<i>9</i>	C1-2/ R3-1	Commercial building	Retrofit	10,000	100	100
<i>10</i>	M1-1	Industrial building	Retrofit	10,000	100	100
<i>11</i>	R4	Single-family detached residence	New Construction	2,500	25	100
<i>12</i>	R3A	Single-family detached residence (non-compliant)	Retrofit	2,500	25	100
<i>13</i>	R3X	Two-family detached (non-conforming/non-compliant)	Retrofit	2,000	20	100
<i>14</i>	C2-4/R8	Waterfront site	Site Modification	50,000	250	200

## **Prototype 1**

*R3-1 Residence District, 40-foot x 100-foot Interior Lot  
Single-Family Detached Residence, Retrofit*

### **Introduction**

Prototypical Analysis Site 1 utilizes a generic 40-foot by 100-foot interior lot (4,000 square feet [sf]) in an R3-1 contextual residential zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 1 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) “reference planes” for retrofits; and
- Floor area exemption for wet-floodproofed ground floors.

### **Existing Condition**

The existing condition on Prototypical Analysis Site 1 is a single-family detached residence with two stories and a cellar, which complies with all underlying zoning regulations. The zoning lot is built with 1,800 sf of zoning floor area, less than the maximum permitted within an R3-1 zoning district, which allows a maximum floor area ratio (FAR) of 0.50 (Zoning Resolution Section [ZR] 23-142). The building’s gross floor area is 2,900 sf. Floor spaces used for an enclosed garage (200 sf) in the rear yard, along with that used for mechanical equipment (135 sf) and storage within the cellar (765 sf) are exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

This existing building on Prototypical Analysis Site 1 does not meet the minimum Appendix G requirements in the New York City Building Code, as it was constructed prior to the adoption of these regulations. The total building height is 28 feet above grade, with a perimeter wall of 20 feet, fitting within the permitted building envelope of an R3-1 zoning district, which allows for a maximum building height of 35 feet and a maximum perimeter wall height of 21 feet (ZR 23-63). The building’s mechanical, electrical, and plumbing (MEP) equipment is located in the cellar. Prototypical Analysis Site 1 contains one parking space in detached garage in the rear yard, connected to the street via a driveway; one parking space would be required for one dwelling unit at this density (ZR 25-22, 25-621).

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

For a conservative analysis, the No-Action scenario does not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with Appendix G requirements. The permitted building envelope of an R3-1 residence district measured from the “base flood elevation” (BFE) (ZR 12-10 Definition of a Base Plane) allows for a maximum building height of 40 feet (35 feet plus five feet BFE) and a maximum perimeter wall height of 26 feet (21 feet plus five feet BFE) (ZR 23-631 and ZR 12-10 Definition of Floor Area), as measured above grade.

#### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 1 would be retrofitted to elevate the habitable portions of the existing home above the “flood-resistant construction elevation”

(FRCE). A horizontal enlargement would be added to relocate mechanical space from the cellar. The single-family detached residence on the site would contain three stories. Under With-Action conditions, the below-grade cellar space would be filled-in to comply with Appendix G requirements. The zoning lot would continue to contain 1,800 sf of zoning floor area, less than the maximum 0.50 FAR permitted within an R3-1 zoning district (ZR 23-142). The building's gross floor area would be 2,835 sf. As a result of the Proposed Action, floor spaces used for MEP equipment in the horizontal enlargement (135 sf) and the wet-floodproofed ground floor (900 sf), which contains garage/storage space, would be exempted from the zoning floor area.

Prototypical Analysis Site 1 is mapped with a BFE of five feet above grade, according to the Federal Emergency Management Agency's (FEMA's) flood maps, resulting in a FRCE of seven feet above grade. In order to floodproof the building for the long term and exceed minimum Appendix G requirements, the home is utilizing the "reference plane" allowance of 10 feet in the 1% flood zone, which results in the "first story above flood elevation" (FSAFE) being located 10 feet above grade in the future with the Proposed Action. Everything below this floor would be wet-floodproofed. In the future with the Proposed Action, the total building height on Site 1, as measured from grade, would be 36 feet with a perimeter wall of 28 feet, fitting within the permitted building envelope of an R3-1 zoning district as measured from a reference plane of 10 feet above grade, which allows for a maximum building height of 45 feet (35 feet plus 10 feet) and a maximum perimeter wall height of 31 feet (21 feet plus 10 feet) (ZR 23-631). Additionally, in the future with the Proposed Action, the MEP equipment would be relocated from the cellar to the rear yard and would be elevated 10 feet above grade to match the first occupiable floor. The MEP equipment room would be attached to the building.

The With-Action scenario on Prototypical Analysis Site 1 would relocate the parking from the rear yard to underneath the elevated building; containing one parking space in the enclosed garage within the building. As new dwelling units would not be created on Site 1 in the future with the Proposed Action, the parking spaces on Prototypical Analysis Site 1 would continue to meet the underlying zoning requirements of the site (ZR 25-22). The building would continue to comply with all other underlying zoning regulations in the future with the Proposed Action.

### ***Increment***

As a result of the Proposed Action, there would be a reduction of 65 sf of gross floor area due to the removal of the detached garage and exempted floor area on Prototypical Analysis Site 1 in the 1% annual chance floodplain. The Proposed Action would permit horizontal and vertical enlargements to the building. The With-Action building would have an additional eight feet of building height as compared to the No-Action building on the site. No additional zoning floor area, dwelling units, or parking spaces would be added on the lot as a result of the Proposed Action. In the future with the Proposed Action, lot coverage on Prototypical Analysis Site 1 would increase from 23 percent to 24 percent.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 1 is the same as the existing condition because buildings in the 0.2% annual chance floodplain don't have to meet the minimum Appendix G requirements. The permitted building envelope of an R3-1 residence district allows for a maximum building height of 35 feet and a maximum perimeter wall height of 21 feet (ZR 23-631). Since there is no BFE in the 0.2% flood zone, this is measured from grade.

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 1 would be retrofitted to elevate the habitable portions of the existing home. A horizontal enlargement would be added to relocate mechanical space from the cellar. The site would accommodate a single-family detached residence with three stories. The below-grade cellar space would be filled-in to comply with Appendix G requirements. The floor area lost due to the filled-in cellar would be added as a horizontal enlargement in the rear yard and as a partial story to the top of the building. The zoning lot would continue to contain 1,800 sf of zoning floor area, less than the maximum permitted within an R3-1 zoning district, which allows for an FAR of 0.50 (ZR 23-142). The building's gross floor area would be 2,835 sf. As a result of the Proposed Action, spaces used for MEP equipment in the horizontal enlargement (135 sf) and the wet-floodproofed ground floor (900 sf), which contains garage/storage space, would be exempted from the zoning floor area.

In order to floodproof the building for the long term, the home is utilizing the reference plane allowance of five feet in the 0.2% flood zone and the FSAFE would be located 8 feet above grade in the future with the Proposed Action. The total building height on Prototypical Analysis Site 1, as measured from grade, would be 34 feet with a perimeter wall of 26 feet, fitting within the permitted building envelope of an R3-1 zoning district measured from a reference plane of five feet above grade, which allows for a maximum building height of 40 feet (35 feet plus five feet) and a maximum perimeter wall height of 26 feet (21 feet plus five feet) (ZR 23-631). In the future with the Proposed Action, the MEP equipment on Prototypical Analysis Site 1 would be relocated from the cellar to the rear yard and would be elevated five feet above grade to match the first occupiable floor. The MEP equipment room would be attached to the building.

The With Action scenario on Prototypical Analysis Site 1 would relocate the parking from the rear yard to underneath the elevated building; containing one parking space in an enclosed garage within the building. As new dwelling units would not be created as a result of the Proposed Action, the provided parking spaces would continue to meet the underlying zoning requirements in the future with the Proposed Action (ZR 25-22). The building on Site 1 would continue to comply with all other underlying zoning regulations in the future with the Proposed Action.

### ***Increment***


As a result of the Proposed Action, there would be a reduction of 65 sf of gross floor area and exempted floor area on Prototypical Analysis Site 1 in the 0.2% annual chance floodplain. The Proposed Action would permit horizontal and vertical enlargements to the building. In the future with the Proposed Action, there would be an increase of six feet of building height and a horizontal enlargement on Prototypical Analysis Site 1 in the 0.2% annual chance floodplain as compared to the No-Action condition. Lot coverage on the site would increase from 23 percent to 24 percent between No-Action and With-Action conditions on Site 1. No additional zoning floor area, dwelling units, or parking spaces would be added on the lot as a result of the Proposed Action.

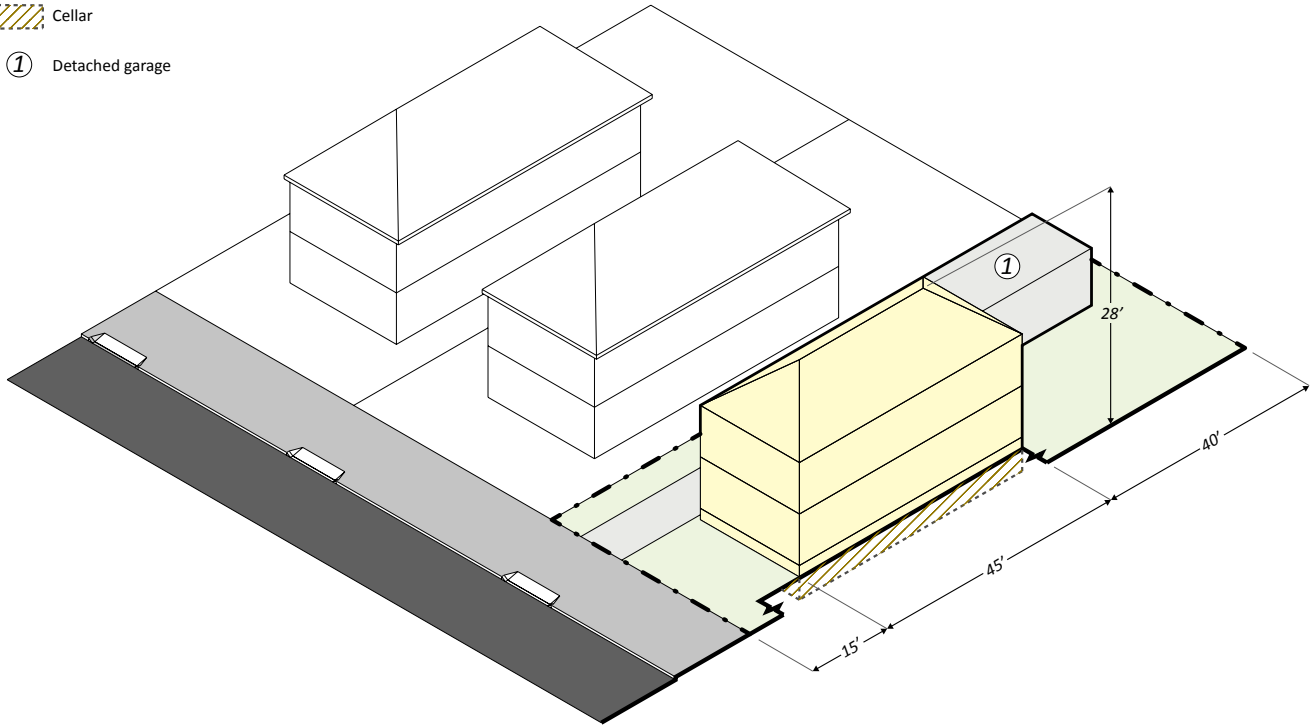
Existing Condition

Legend

 Residential

 Cellar

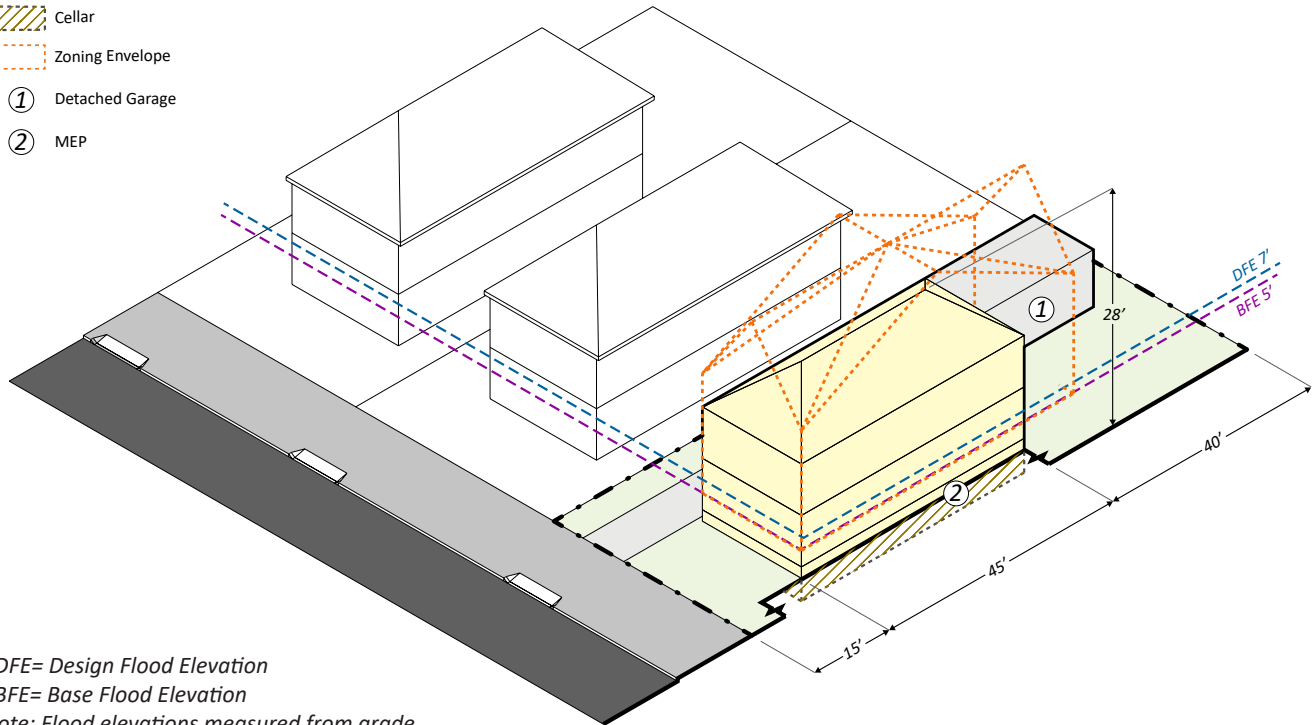
 Detached garage



1% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Cellar
- Zoning Envelope
- ① Detached Garage
- ② MEP



\*DFE= Design Flood Elevation

\*BFE= Base Flood Elevation

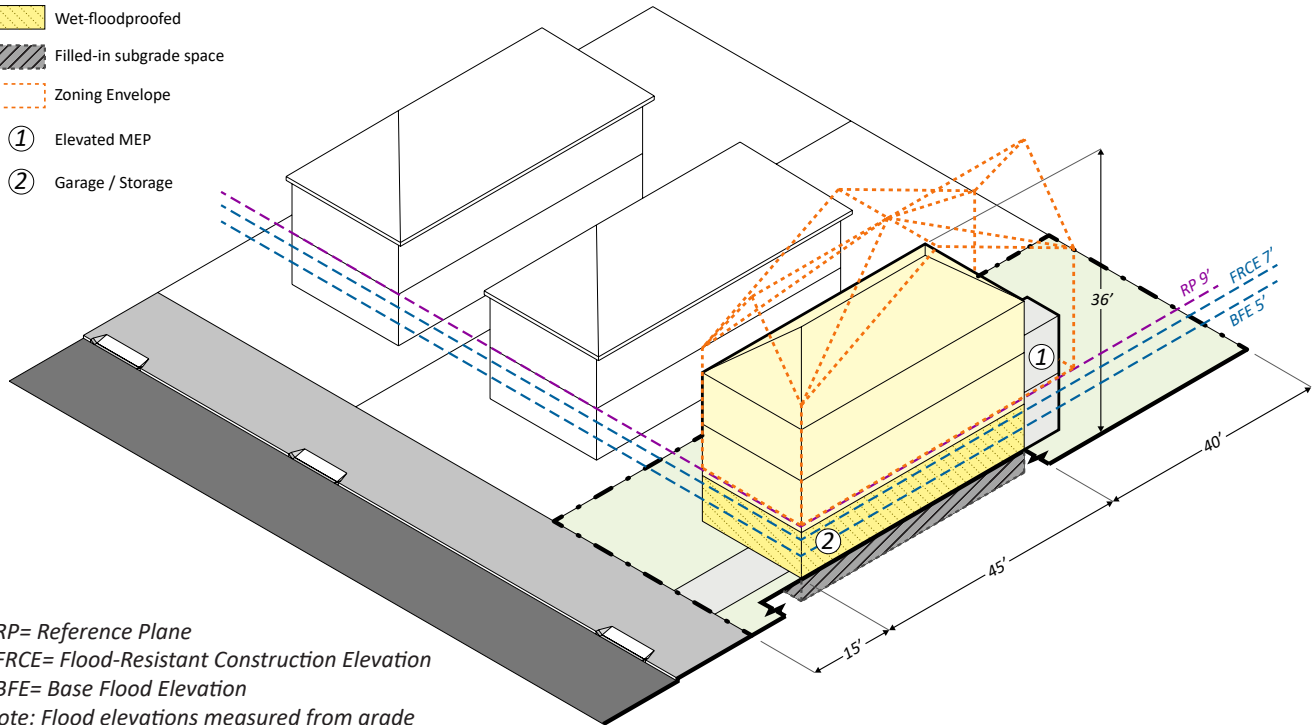
Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	4,000 sf	4,000 sf	0
<b>Zoning Floor Area</b>	1,800 sf	1,800 sf	0
<i>Zoning Residential Floor Area</i>	1,800 sf	1,800 sf	0
<b>Gross Floor Area</b>	2,900 sf	2,835 sf	- 65 sf
<i>Gross Residential Floor Area</i>	2,900 sf	2,835 sf	- 65 sf
<b>Exempted Floor Area</b>	1,100 sf	1,035 sf	- 65 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	28 ft	+ 8 ft
<b>Provided Overall Height</b>	28 ft	36 ft	+ 8 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	23 % / 77 %	24 % / 76 %	+ 1% / - 1%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

1% Annual Chance Floodplain: FT1

Legend

- Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① Elevated MEP
- ② Garage / Storage



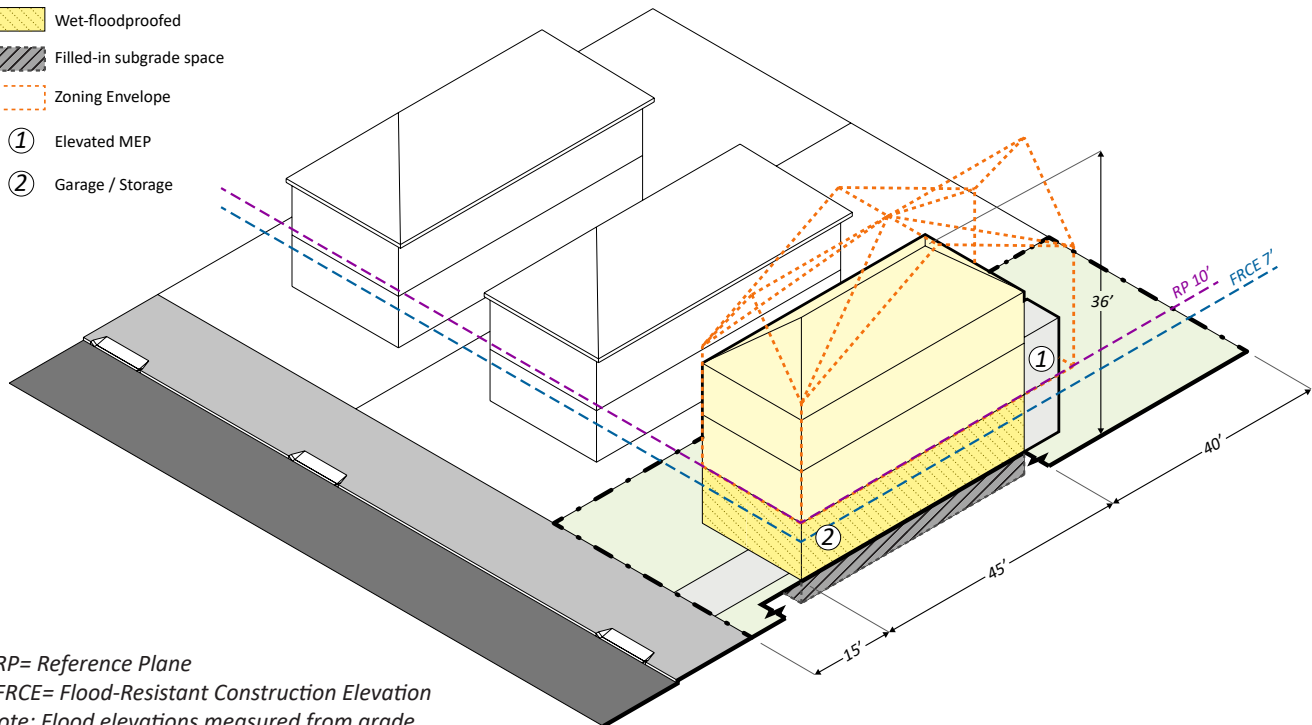
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	4,000 sf	4,000 sf	4,000 sf	0	0	0
<b>Zoning Floor Area</b>	1,800 sf	1,800 sf	1,800 sf	0	0	0
<i>Zoning Residential Floor Area</i>	1,800 sf	1,800 sf	1,800 sf	0	0	0
<b>Gross Floor Area</b>	2,900 sf	2,835 sf	2,835 sf	- 65 sf	0	- 65 sf
<i>Gross Residential Floor Area</i>	2,900 sf	2,835 sf	2,835 sf	- 65 sf	0	- 65 sf
<b>Exempted Floor Area</b>	1,100 sf	1,035 sf	1,035 sf	- 65 sf	0	- 65 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	28 ft	28 ft	+ 8 ft	0	+ 8 ft
<b>Provided Overall Height</b>	28 ft	36 ft	36 ft	+ 8 ft	0	+ 8 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	3 (No Cellar)	+ 1	0	+ 1
<b>Lot Coverage / Open Space</b>	23 % / 77 %	24 % / 76 %	24 % / 76 %	+ 1% / - 1%	0 / 0	+ 1% / - 1%
<b>Dwelling Units</b>	1	1	1	0	0	0
<b>Parking Spaces</b>	1	1	1	0	0	0

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

Legend

- Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① Elevated MEP
- ② Garage / Storage



\*RP= Reference Plane

\*FRCE= Flood-Resistant Construction Elevation

Note: Flood elevations measured from grade

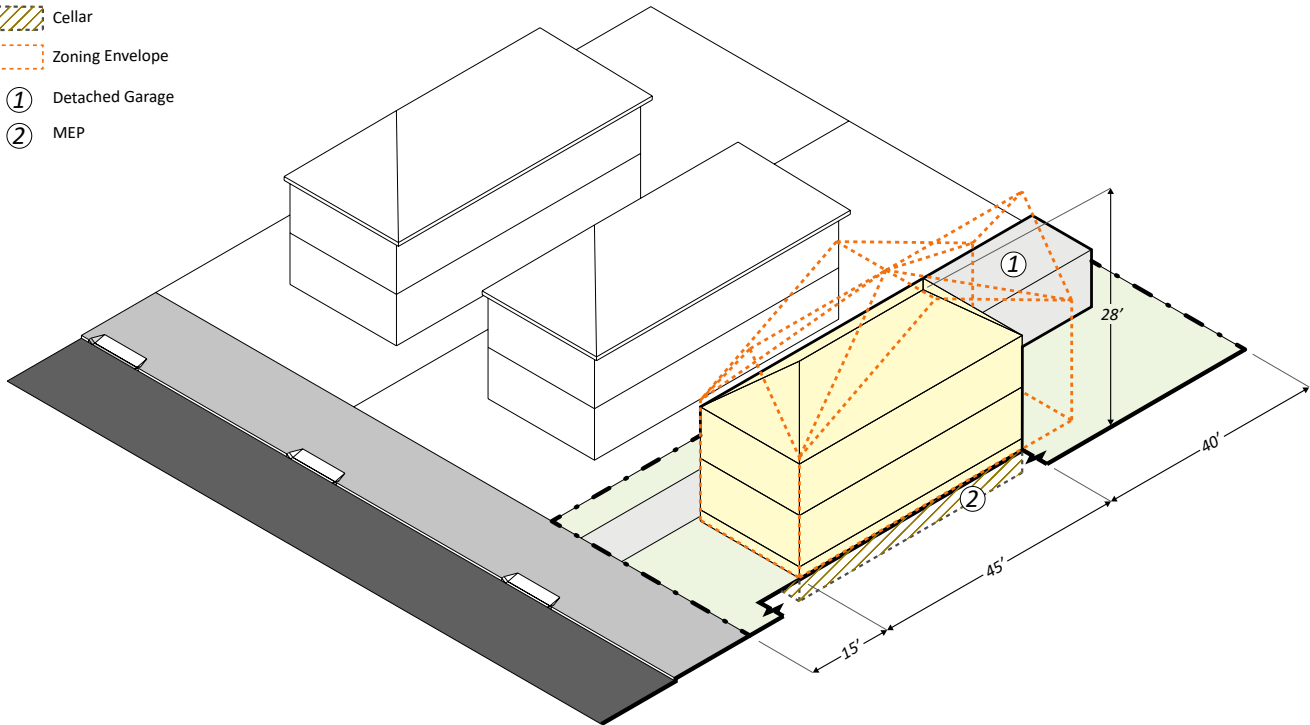
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	4,000 sf	4,000 sf	0 sf
<b>Zoning Floor Area</b>	1,800 sf	1,800 sf	0 sf
<i>Zoning Residential Floor Area</i>	1,800 sf	1,800 sf	0 sf
<b>Gross Floor Area</b>	2,900 sf	2,835 sf	- 65 sf
<i>Gross Residential Floor Area</i>	2,900 sf	2,835 sf	- 65 sf
<b>Exempted Floor Area</b>	1,100 sf	1,035 sf	- 65 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	28 ft	+ 8 ft
<b>Provided Overall Height</b>	28 ft	36 ft	+ 8 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	23 % / 77 %	24 % / 76 %	+ 1% / - 1%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0



0.2% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Cellar
- Zoning Envelope
- ① Detached Garage
- ② MEP

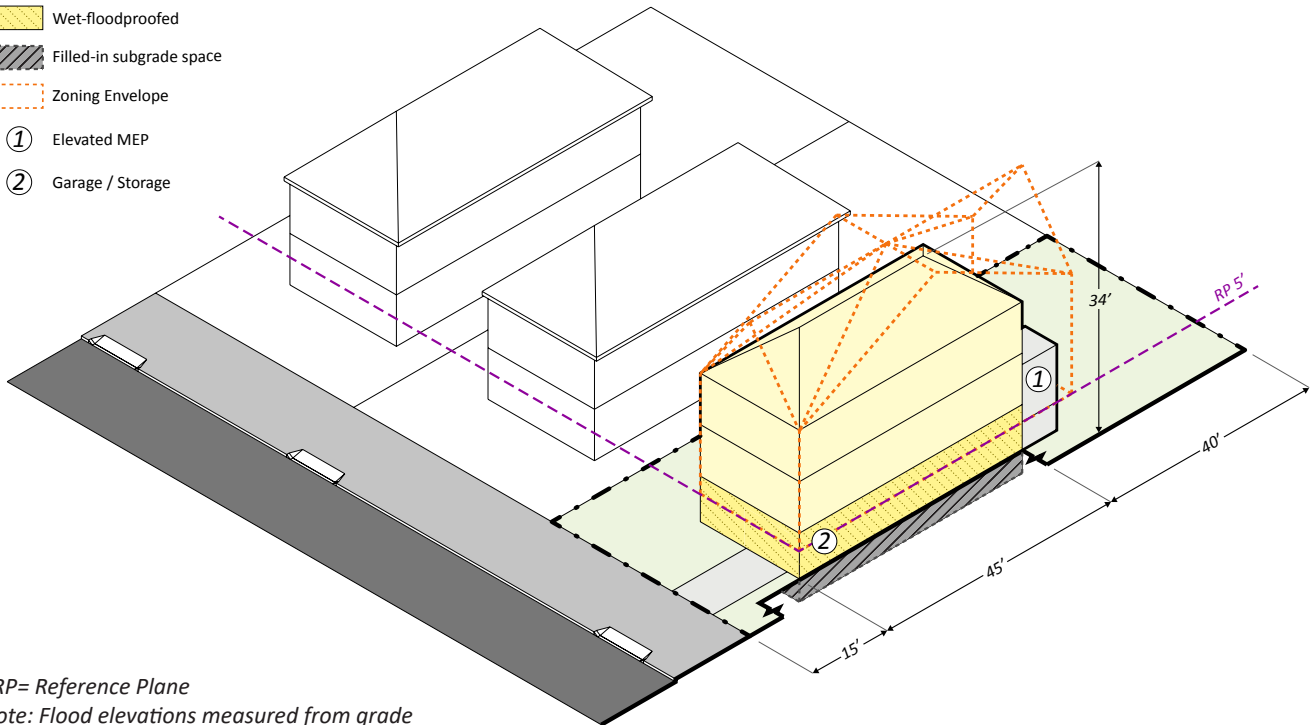


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	4,000 sf	4,000 sf	0
<b>Zoning Floor Area</b>	1,800 sf	1,800 sf	0
<i>Zoning Residential Floor Area</i>	1,800 sf	1,800 sf	0
<b>Gross Floor Area</b>	2,900 sf	2,835 sf	- 65 sf
<i>Gross Residential Floor Area</i>	2,900 sf	2,835 sf	- 65 sf
<b>Exempted Floor Area</b>	1,100 sf	1,035 sf	- 65 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	26 ft	+ 6 ft
<b>Provided Overall Height</b>	28 ft	34 ft	+ 6 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	23 % / 77 %	24 % / 76 %	+ 1% / - 1%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① Elevated MEP
- ② Garage / Storage



\*RP= Reference Plane  
 Note: Flood elevations measured from grade

	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	4,000 sf	4,000 sf	0 sf
<b>Zoning Floor Area</b>	1,800 sf	1,800 sf	0 sf
<i>Zoning Residential Floor Area</i>	1,800 sf	1,800 sf	0 sf
<b>Gross Floor Area</b>	2,900 sf	2,835 sf	- 65 sf
<i>Gross Residential Floor Area</i>	2,900 sf	2,835 sf	- 65 sf
<b>Exempted Floor Area</b>	1,100 sf	1,035 sf	- 65 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	26 ft	+ 6 ft
<b>Provided Overall Height</b>	28 ft	34 ft	+ 6 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	23 % / 77 %	24 % / 76 %	+ 1% / - 1%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

## **Prototype 2**

*R3-1 Residence District, 25-foot x 100-foot Interior Lot  
Single-Family Semi-Detached Residence, New Construction*

### **Introduction**

Prototypical Analysis Site 2 utilizes a generic 25-foot by 100-foot interior lot (2,500 sf) in an R3-1 contextual residential zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 2 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) “reference planes;”
- Floor area exemption for wet-floodproofed ground floors; and
- Minor FAR exemption allowance for MEP equipment.

### **Existing Condition**

Under existing conditions, Prototypical Analysis Site 2 is a 2,500 sf vacant lot.

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

Under No-Action conditions, Prototypical Analysis Site 2 would be developed with a new, single-family semi-detached residence with two stories and a detached garage. The zoning lot would be built with 1,250 sf of zoning floor area (0.5 FAR), the maximum permitted within an R3-1 zoning district, which may be increased by up to 300 square feet for the inclusion of a detached garage (ZR 23-142). Under No-Action conditions, the building’s gross floor area would be 1,600 sf. Floor spaces used for the MEP equipment (50 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). While the total space used for MEP equipment is 75 sf, only 50 sf would be exempt.

Prototypical Analysis Site 2 is mapped with a BFE of two feet above grade, according to FEMA’s flood maps resulting in a DFE of four feet. In order to meet the minimum Appendix G requirements in the future without the Proposed Action, the crawlspace of Prototypical Analysis Site 2 would be wet-floodproofed, and the first occupiable floor of the residence would be placed at four feet above grade. The total building height would be 29 feet with a perimeter wall height of 13 feet, fitting within the permitted building envelope of an R3-1 zoning district as measured from the BFE, which allows for a maximum building height of 37 feet (35 feet plus two feet BFE) and a maximum perimeter wall height of 23 feet (21 feet plus two feet BFE) (ZR 23-63 and ZR 12-10 Definition of a Base Plane).

Under No-Action conditions, Prototypical Analysis Site 2’s MEP equipment would be located in the building above the DFE. The No-Action scenario would provide one parking space in detached garage in the rear yard, connected to the street via a driveway, complying with the number of parking spaces required in the underlying zoning (ZR 25-22, 25-621). The building on Prototypical Analysis Site 2 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 2 would be developed with a new single-family, semi-detached residence with three stories and an attic. Under With-Action conditions, the first floor of the building would be a wet-floodproofed garage and storage space to comply with Appendix G requirements. The zoning lot would be built with 1,500 sf of zoning floor area (0.6 FAR), the maximum permitted within an R3-1 zoning district with an attic allowance for the inclusion of space beneath a pitched roof (ZR 23-142). The building's gross floor area would be 2,231 sf. As a result of the Proposed Action, floor spaces used for MEP equipment in the horizontal enlargement (106 sf) and the wet-floodproofed ground floor (625 sf), which contains garage/storage space, would be exempted from the zoning floor area. The floor space used for the MEP equipment for the With-Action is larger because the MEP is calculated based on the gross floor area of the building and the With-Action MEP equipment is also servicing the wet-floodproofed ground floor space.

Under With-Action conditions, Prototypical Analysis Site 2 would have a FRCE of four feet. In order to floodproof the building for the long term and exceed the minimum Appendix G requirements, the home is utilizing the "reference plane" allowance of 8 feet in the 1% flood zone, which results in the FSAFE being located 8 feet above grade and everything below would be wet-floodproofed. In the future with the Proposed Action, the total building height on Site 2 would be 34 feet with a perimeter wall of 26 feet, fitting within the permitted building envelope of an R3-1 zoning district as measured from a "reference plane" of 8 feet above grade, which allows for a maximum building height of 43 feet (35 feet plus 8 feet) and a maximum perimeter wall height of 29 feet (21 feet plus 8 feet) (ZR 23-631). The ground floor of the building would have a wet-floodproofed garage and storage space with a floor-to-floor height of 10 feet. Additionally, the MEP equipment on Site 2 would be relocated from the basement to the rear yard and would be elevated 8 feet above grade to match the FSAFE. The MEP equipment would be attached to the building.

In the future with the Proposed Action, one parking space would be located on Prototypical Analysis Site 2 in the enclosed garage within the building. As new dwelling units would not be created by the Proposed Action on Site 2, the provided parking spaces would continue meet the underlying zoning requirements (ZR 25-22).

### ***Increment***

As a result of the Proposed Action, there would be an increase of 250 sf of zoning floor area, an increase of 631 sf of gross floor area, and an increase of 681 sf of exempted floor area on Prototypical Analysis Site 2 in the 1% annual chance floodplain. The Proposed Action would permit horizontal and vertical enlargements to the building. The With-Action building on Site 2 would have an additional five feet of building height and an additional 13 feet of base height as compared to the No-Action building on the site. No additional zoning floor area, dwelling units, or parking spaces would be added on the lot as a result of the Proposed Action. Lot coverage on Prototypical Analysis Site 2 would not change as a result of the Proposed Action.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

Under No-Action conditions, a new, single-family, semi-detached residence with two stories, a basement, and a detached garage would be developed on Prototypical Analysis Site 2. The zoning lot would be built with 1,250 sf of zoning floor area (0.5 FAR), the maximum permitted within an R3-1 zoning district, which may be increased by up to 300 square feet for the inclusion of a detached garage (ZR 23-142). The detached garage also allows an additional 300 sf of floor area on the zoning lot (ZR 23-142). The building's gross

floor area would be 1,600 sf. Floor spaces used for the MEP equipment (50 sf total) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). While the total space used for MEP equipment is 78 sf, only 50 sf would be exempt.

Under the No-Action condition, since there is no BFE in the 0.2% flood zone, the total building height on Prototypical Analysis Site 2 would be 26 feet with a base height of 13 feet, as measured from grade, fitting within the permitted building envelope of an R3-1 zoning district, which allows for a maximum building height of 35 feet and a maximum perimeter wall height of 21 feet (ZR 23-63). The building's MEP equipment would be located in the basement of the building. The No-Action scenario would provide one parking space in detached garage in the rear yard, connected to the street via a driveway, complying with the number of parking spaces required in the underlying zoning (ZR 25-22). The building on Prototypical Analysis Site 2 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 2 would be developed with a new single-family, semi-detached residence with three stories and an attic. The first floor of the building would be a wet-floodproofed garage and storage space to comply with Appendix G requirements. The zoning lot would be built with 1,500 sf of zoning floor area (0.6 FAR), the maximum permitted within an R3-1 zoning district, with an attic allowance for the inclusion of space beneath a pitched roof (ZR 23-142). The building's gross floor area would be 2,231 sf. As a result of the Proposed Action, floor spaces used for the MEP equipment (106 sf) and the wet-floodproofed ground floor (625 sf), which contains garage/storage space, would be exempted from the zoning floor area.

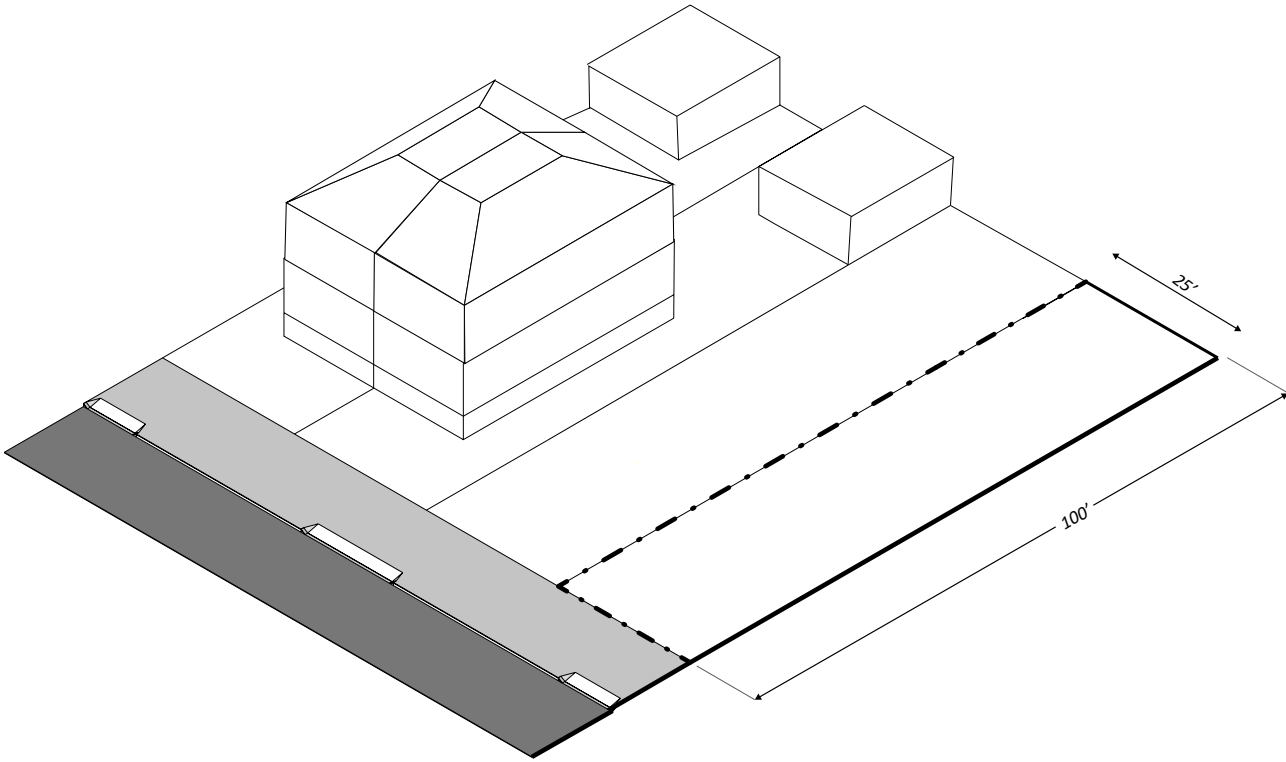
In order to floodproof the building for the long term, the home is utilizing the "reference plane" allowance of five feet in the 0.2% flood zone and the FSAFE would be located 8 feet above grade and everything below would be wet-floodproofed. The total building height would be 34 feet with a perimeter wall of 26 feet, as measured from grade, fitting within the permitted building envelope of an R3-1 zoning district as measured from a "reference plane" of five feet above grade, which allows for a maximum building height of 40 feet (35 feet plus five feet) and a maximum perimeter wall height of 26 feet (21 feet plus five feet) (ZR 23-631). Additionally, in the future with the Proposed Action, the ground floor of Site 2 would have a wet-floodproofed garage and storage space, and the MEP equipment would be relocated from the basement to the rear yard and would be elevated 10 feet above grade to match the FSAFE. The MEP equipment would be attached to the building.

The With-Action scenario on Prototypical Analysis Site 2 would provide one parking space in the enclosed garage within the building. As new dwelling units would not be created, the provided parking spaces on Prototypical Analysis Site 2 would continue meet the underlying zoning requirements (ZR 25-22) in the future with the Proposed Action.

### ***Increment***

As a result of the Proposed Action, there would be an increase of 250 sf of zoning floor area, an increase of 631 sf of gross floor area, and an increase of approximately 681 sf of exempted floor area on Prototypical Analysis Site 2 in the 0.2% annual chance floodplain. The Proposed Action would permit vertical and horizontal enlargements to the building. The With-Action building on Site 2 would have an additional eight feet of building height and an additional 13 feet of base height as compared to the No-Action building on the site. No additional dwelling units or parking spaces would be added on the lot as a result of the Proposed Action. Lot coverage on Site 2 would increase by eight percent.

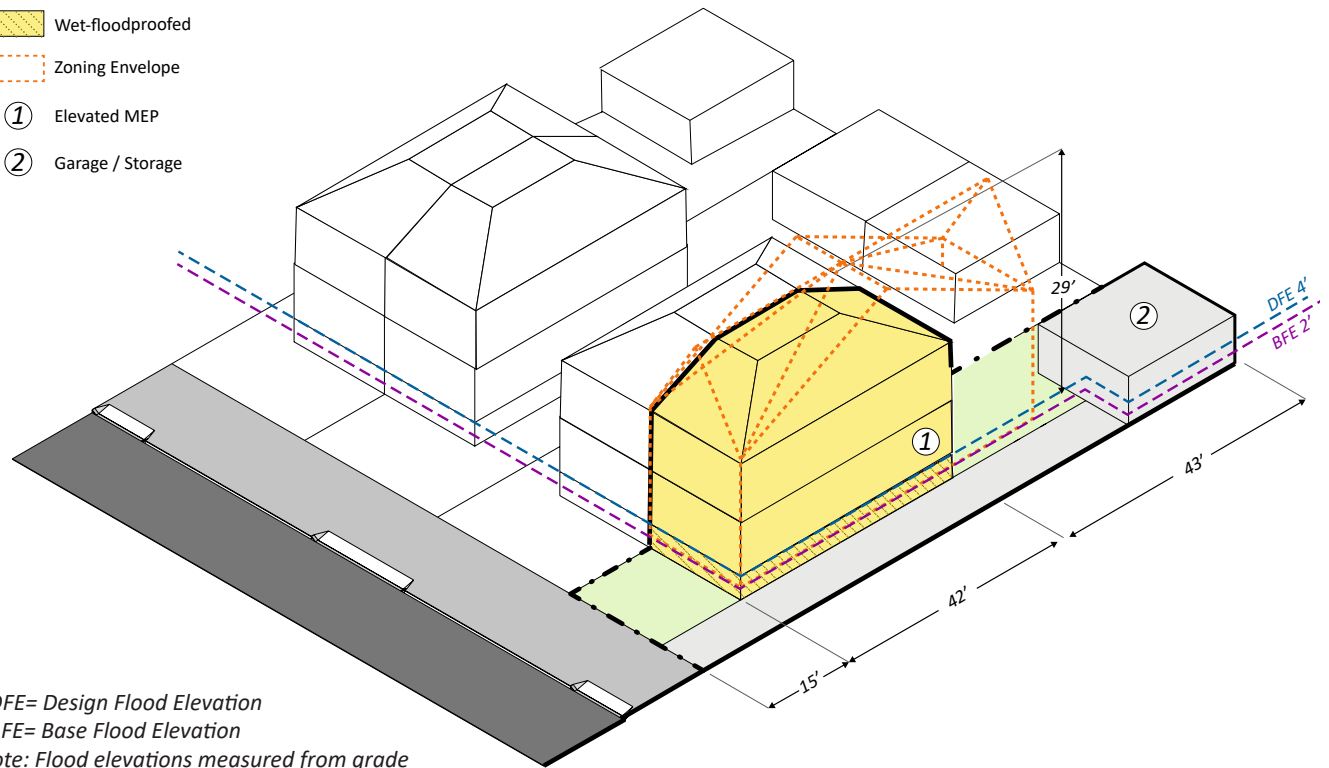
Existing Condition



1% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Elevated MEP
- ② Garage / Storage



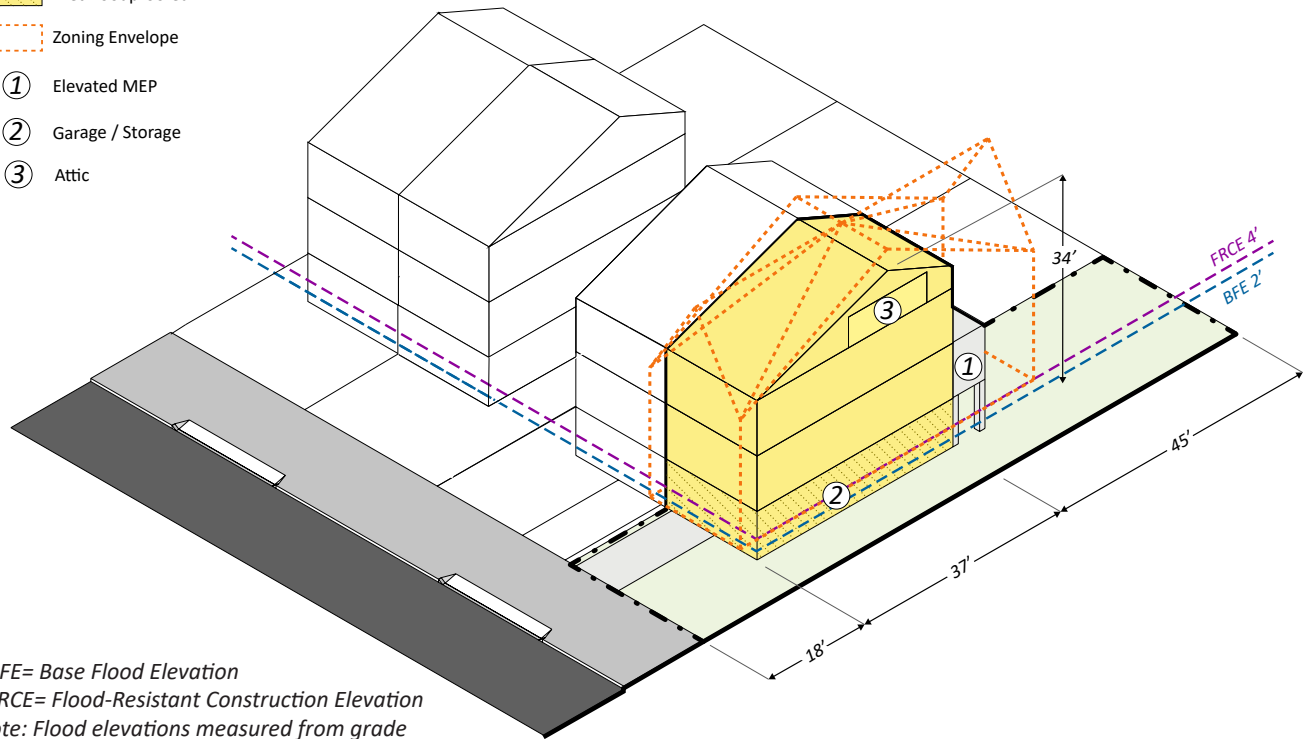
\*DFE= Design Flood Elevation  
 \*BFE= Base Flood Elevation  
 Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	1,250 sf	1,500 sf	+ 250 sf
<i>Zoning Residential Floor Area</i>	1,250 sf	1,500 sf	+ 250 sf
<b>Gross Floor Area</b>	1,600 sf	2,231 sf	+ 631 sf
<i>Gross Residential Floor Area</i>	1,600 sf	2,231 sf	+ 631 sf
<b>Exempted Floor Area</b>	50 sf	725 sf	+ 681 sf
<b>Provided Perimeter Wall/Baseheight</b>	13 ft	26 ft	+ 13 ft
<b>Provided Overall Height</b>	29 ft	34 ft	+ 5 ft
<b>Provided Number of Stories</b>	2	3	+ 1
<b>Lot Coverage / Open Space</b>	29 % / 71 %	29 % / 71 %	0 / 0
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

1% Annual Chance Floodplain: FT1

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Elevated MEP
- ② Garage / Storage
- ③ Attic



	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	2,500 sf	0 sf	0	0 sf
<b>Zoning Floor Area</b>	1,250 sf	1,500 sf	1,500 sf	+ 250 sf	0	+ 250 sf
<i>Zoning Residential Floor Area</i>	1,250 sf	1,500 sf	1,500 sf	+ 250 sf	0	+ 250 sf
<b>Gross Floor Area</b>	1,600 sf	2,231 sf	2,231 sf	+ 631 sf	0	+ 631 sf
<i>Gross Residential Floor Area</i>	1,600 sf	2,231 sf	2,231 sf	+ 631 sf	0	+ 631 sf
<b>Exempted Floor Area</b>	50 sf	731 sf	731 sf	+ 681 sf	0	+ 681 sf
<b>Provided Perimeter Wall/Baseheight</b>	13 ft	26 ft	26 ft	+ 13 ft	0	+ 13 ft
<b>Provided Overall Height</b>	29 ft	34 ft	34 ft	+ 5 ft	0	+ 5 ft
<b>Provided Number of Stories</b>	2	3	3	+ 1	0	+ 1
<b>Lot Coverage / Open Space</b>	29 % / 71 %	29 % / 71 %	29 % / 71 %	0 / 0	0 / 0	0 / 0
<b>Dwelling Units</b>	1	1	1	0	0	0
<b>Parking Spaces</b>	1	1	1	0	0	0

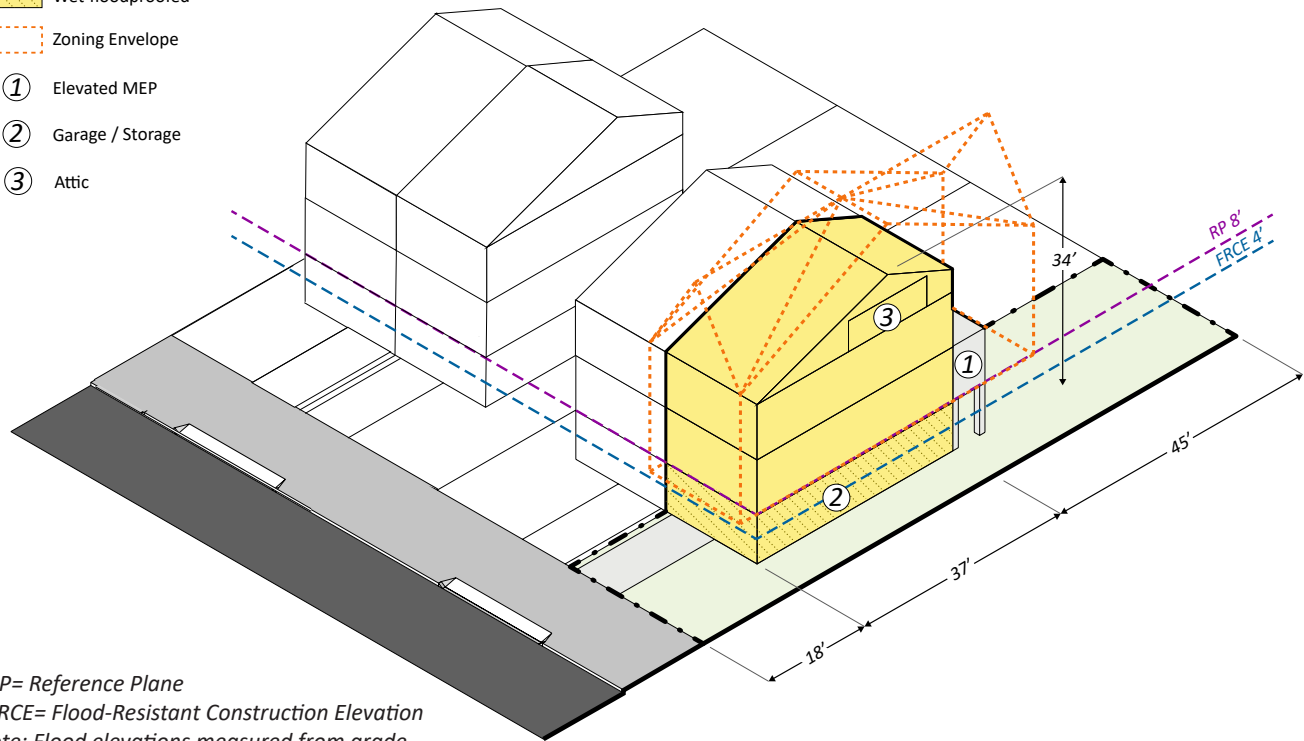
**\*\* FT1 diagrams for illustrative purposes only\*\***



1% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Elevated MEP
- ② Garage / Storage
- ③ Attic



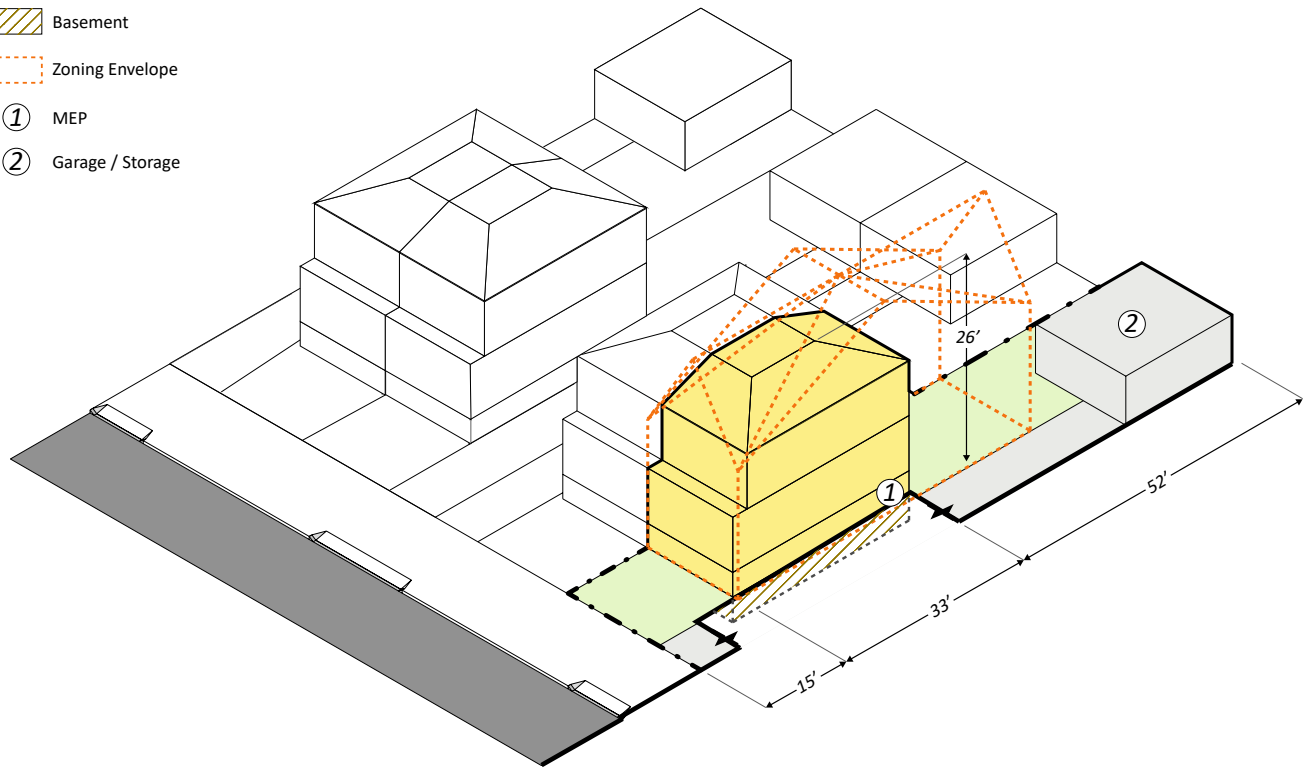
\*RP= Reference Plane  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	1,250 sf	1,500 sf	+ 250 sf
<i>Zoning Residential Floor Area</i>	1,250 sf	1,500 sf	+ 250 sf
<b>Gross Floor Area</b>	1,600 sf	2,231 sf	+ 631 sf
<i>Gross Residential Floor Area</i>	1,600 sf	2,231 sf	+ 631 sf
<b>Exempted Floor Area</b>	50 sf	731 sf	+ 681 sf
<b>Provided Perimeter Wall/Baseheight</b>	13 ft	26 ft	+ 13 ft
<b>Provided Overall Height</b>	29 ft	34 ft	+ 5 ft
<b>Provided Number of Stories</b>	2	3	+ 1
<b>Lot Coverage / Open Space</b>	29 % / 71 %	29 % / 71 %	0 / 0
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- Basement
- Zoning Envelope
- ① MEP
- ② Garage / Storage

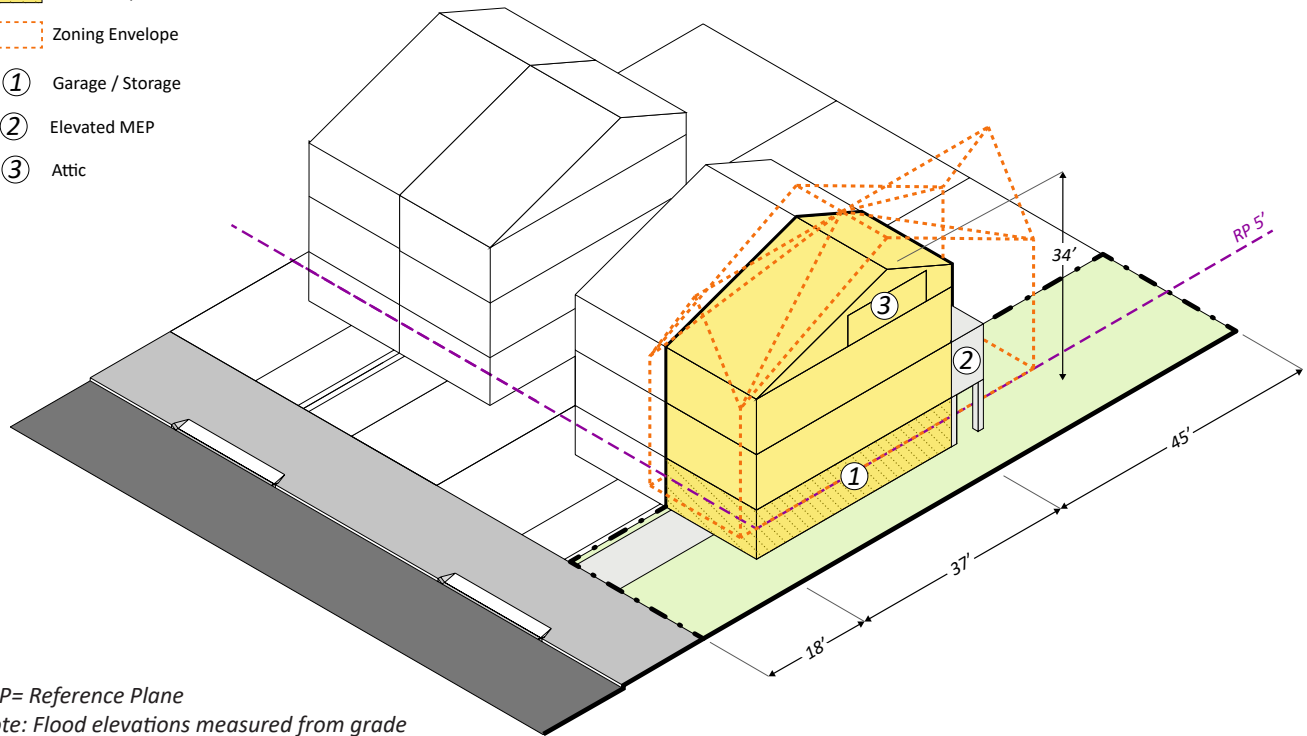


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	1,250 sf	1,500 sf	+ 250 sf
<i>Zoning Residential Floor Area</i>	1,250 sf	1,500 sf	+ 250 sf
<b>Gross Floor Area</b>	1,600 sf	2,231 sf	+ 631 sf
<i>Gross Residential Floor Area</i>	1,600 sf	2,231 sf	+ 631 sf
<b>Exempted Floor Area</b>	50 sf	731 sf	+ 681 sf
<b>Provided Perimeter Wall/Baseheight</b>	13 ft	26 ft	+ 13 ft
<b>Provided Overall Height</b>	26 ft	34 ft	+ 8 ft
<b>Provided Number of Stories</b>	2 (+ Basement)	3 (+ Attic)	+ 1
<b>Lot Coverage / Open Space</b>	21 % / 79 %	29 % / 71 %	+ 8% / - 8%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Garage / Storage
- ② Elevated MEP
- ③ Attic



\*RP= Reference Plane  
 Note: Flood elevations measured from grade

	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	1,250 sf	1,500 sf	+ 250 sf
<i>Zoning Residential Floor Area</i>	1,250 sf	1,500 sf	+ 250 sf
<b>Gross Floor Area</b>	1,600 sf	2,231 sf	+ 631sf
<i>Gross Residential Floor Area</i>	1,600 sf	2,231 sf	+ 631 sf
<b>Exempted Floor Area</b>	50 sf	731 sf	+ 681 sf
<b>Provided Perimeter Wall/Baseheight</b>	13 ft	26 ft	+ 13 ft
<b>Provided Overall Height</b>	26 ft	34 ft	+ 8 ft
<b>Provided Number of Stories</b>	2 (+ Basement)	3 (+ Attic)	+ 1
<b>Lot Coverage / Open Space</b>	21 % / 79 %	29 % / 71 %	+ 8% / - 8%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

## **Prototype 3**

*R4 Infill Residence District, 20-foot x 100-foot Interior Lot  
Two-Family Attached Residence, Reconstruction*

### **Introduction**

Prototypical Analysis Site 3 utilizes a generic 20-foot by 100-foot interior lot (2,000 sf) in an R4 infill residence zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 3 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) “reference planes” for retrofits;
- Floor area exemption for wet-floodproofed ground floors;
- Permitted obstructions of MEP equipment in the rear yard; and
- Streetscape improvements.

### **Existing Condition**

The existing condition on Prototypical Analysis Site 3 is a two-family attached residence with two stories and a basement where one residential unit is in the basement. The zoning lot is built with 2,700 sf of zoning floor area, the maximum permitted within an R4 zoning district, which allows a higher maximum FAR of 1.35 (ZR 23-143) for buildings in predominantly built-up areas. The building’s gross floor area is 2,835 sf. Floor spaces used for MEP equipment (135 sf) are exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). The side yard requirement is waived since the buildings are abutting at the lot line (ZR 23-49).

This existing building on Prototypical Analysis Site 3 does not meet the minimum Appendix G requirements, as it was constructed prior to the adoption of these regulations. The total building height is 22 feet above grade, with a perimeter wall of 22 feet. This fits within the permitted building envelope of an R4 zoning district, which allows for a maximum building height of 35 feet and a maximum perimeter wall height of 25 feet (ZR 23-631). All residential floors on Site 3 have a floor-to-floor height of nine feet, and the building’s MEP equipment is located in the basement.

The existing scenario provides one parking space in an unenclosed space in the front yard meeting the one parking space required in the underlying zoning for group parking facilities in predominantly built-up areas (ZR 25-621 and ZR 25-23). The building on Prototypical Analysis Site 3 complies with all other underlying zoning regulations in the existing condition.

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

For a conservative analysis, the No-Action scenario on Prototypical Analysis Site 3 would not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with Appendix G requirements. The permitted building envelope of an R4 infill residence district is measured from the BFE (ZR 12-10 Definition of a Base Plane), which allows for a maximum building

height of 40 feet (35 feet plus five feet BFE) and a maximum perimeter wall height of 30 feet (25 feet plus five feet BFE) (ZR 23-631) from grade.

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 3 would be reconstructed. The site would accommodate a two-family attached residence with four stories and a garage. The basement would be filled-in to comply with Appendix G requirements. The floor area lost due to the filled-in basement would be added as a horizontal enlargement in the rear yard and as a partial story to the top of the building. The zoning lot would be built with 2,700 sf of zoning floor area, the maximum permitted within an R4 zoning district, which allows a higher maximum FAR of 1.35 (ZR 23-143) for buildings in predominantly built-up areas. Under With-Action conditions, the building's gross floor area would be 3,927 sf. As a result of the Proposed Action, spaces used for MEP equipment (187 sf) and the wet-floodproofed ground floor (1,040 sf) would be exempted from the zoning floor area on Prototypical Analysis Site 3.

Prototypical Analysis Site 3 is mapped with a BFE of five feet above grade, according to FEMA's flood maps, resulting in a FRCE of seven feet above grade. In order to floodproof the building for the long term and exceed the minimum Appendix G requirements in the future with the Proposed Action, the home is utilizing the "reference plane" allowance of 10 feet in the 1% flood zone, which results in the FSAFE being located 10 feet above grade, with the below grade filled-in. The total building height would be 37 feet with a perimeter wall of 28 feet, as measured from grade, fitting within the permitted building envelope of an R4 infill zoning district as measured from a "reference plane" of 10 feet above grade, which allows for a maximum building height of 45 feet (35 feet plus 10 feet) and a maximum perimeter wall height of 35 feet (25 feet plus 10 feet) (ZR 23-631). The ground floor would have a wet-floodproofed garage with a floor-to-floor height of 10 feet, and all residential floors would have floor-to-floor heights of nine feet. In the future with the Proposed Action, the MEP equipment on Site 3 would be relocated from the basement to the rear yard as a permitted obstruction and would be elevated 10 feet above grade to match the FSAFE. Additionally, the MEP equipment room would be attached to the building.

The With-Action scenario on Prototypical Analysis Site 3 would contain two parking spaces, one existing unenclosed parking space in the front yard and one enclosed parking space in a garage within the building. The provided parking spaces would meet the underlying zoning requirements for a reconstruction (ZR 25-23). Under With-Action conditions, the building on Site 3 would comply with all other underlying zoning regulations.

### ***Increment***

As a result of the Proposed Action, there would be an additional 1,092 sf of gross floor area and exempted floor area on Prototypical Analysis Site 3 in the 1% annual chance floodplain, allowing for additional building height and a horizontal enlargement. The With-Action building would have an additional 15 feet of building height and an additional six feet of base height as compared to the No-Action building on the site. No additional zoning floor area or dwelling units would be added on the lot as a result of the Proposed Action. The With-Action building on Prototypical Analysis Site 3 would increase lot coverage by six percent as compared to No-Action conditions.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

For conservative analysis purposes, the No-Action scenario on Prototypical Analysis Site 3 would be the same as the existing condition, because buildings in the 0.2% annual chance floodplain don't have to meet

the minimum Appendix G requirements. The permitted building envelope of an R4 infill residence district is measured from grade, which allows for a maximum building height of 35 feet and a maximum perimeter wall height of 25 feet (ZR 23-631). Since there is no BFE in the 0.2% flood zone, this is measured from grade.

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 3 would be reconstructed. The site would accommodate a two-family attached residence with three stories. The basement would be filled-in to comply with Appendix G requirements. The floor area lost due to the filled-in basement would be added as a horizontal enlargement in the rear yard and as a partial story to the top of the building. Under With-Action conditions, the zoning lot would be built with 2,700 sf of zoning floor area, the maximum permitted within an R4 infill zoning district, which allows for an FAR of 1.35 (ZR 23-143) for buildings in predominantly built-up areas. The building's gross floor area would be 2,835 sf. As a result of the Proposed Action, spaces used for MEP equipment (135 sf) would be exempted from the zoning floor area on Site 3.

In order to floodproof the building on Site 3 for the long term, the home is utilizing the "reference plane" allowance of four feet in the 0.2% flood zone, and the FSAFE would be located four feet above grade, keeping the existing structure of the building. The space below would be an unoccupied wet-floodproofed crawl space. Under With-Action conditions, the total building height on Prototypical Analysis Site 3 would be 31 feet with a perimeter wall of 22 feet, as measured from grade, fitting within the permitted building envelope of an R4 infill zoning district measured from a "reference plane" of four feet above grade, which allows for a maximum building height of 39 feet (35 feet plus four feet) and a maximum perimeter wall height of 29 feet (25 feet plus four feet) (ZR 23-631). All residential floors on Site 3 would have floor-to-floor heights of nine feet. The MEP equipment would be relocated from the basement to the rear yard as permitted obstruction and would be elevated four feet above grade to match the FSAFE. In addition, the MEP equipment would be attached to the building.

As under No-Action conditions, the With-Action scenario on Prototypical Analysis Site 3 would contain one parking space in an unenclosed space in the front yard, meeting the one parking space required in the underlying zoning for group parking facilities in predominantly built-up areas (ZR 25-621 and ZR 25-23). The building on Prototypical Analysis Site 3 would comply with all other underlying zoning regulations in the future with the Proposed Action.

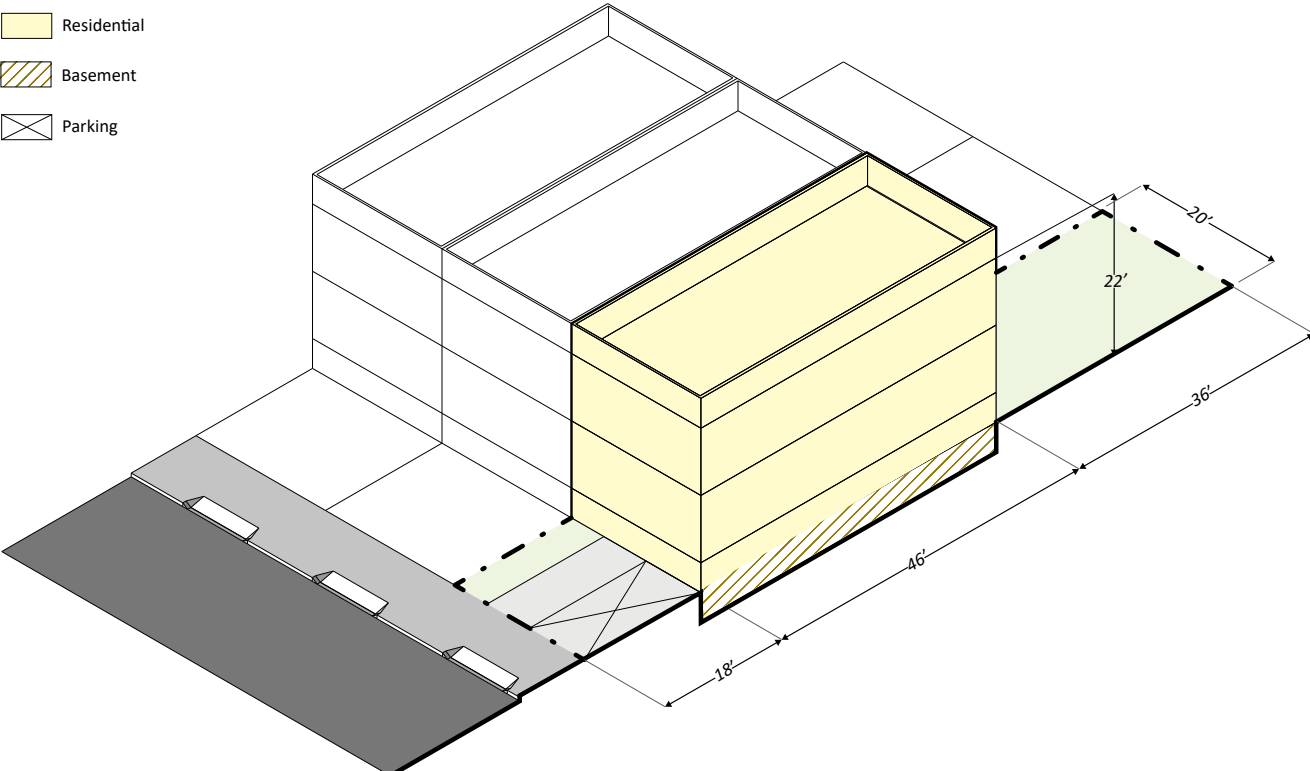
### **Increment**

As a result of the Proposed Action, there would be an increase of nine feet of building height and a horizontal enlargement on Prototypical Analysis Site 3 in the 0.2% annual chance floodplain as compared to No-Action conditions. No additional gross floor area, zoning floor area, dwelling units, or parking spaces would be added on the lot as a result of the Proposed Action. The With-Action building on Prototypical Analysis Site 3 would increase lot coverage by six percent over No-Action conditions.

Existing Condition

Legend

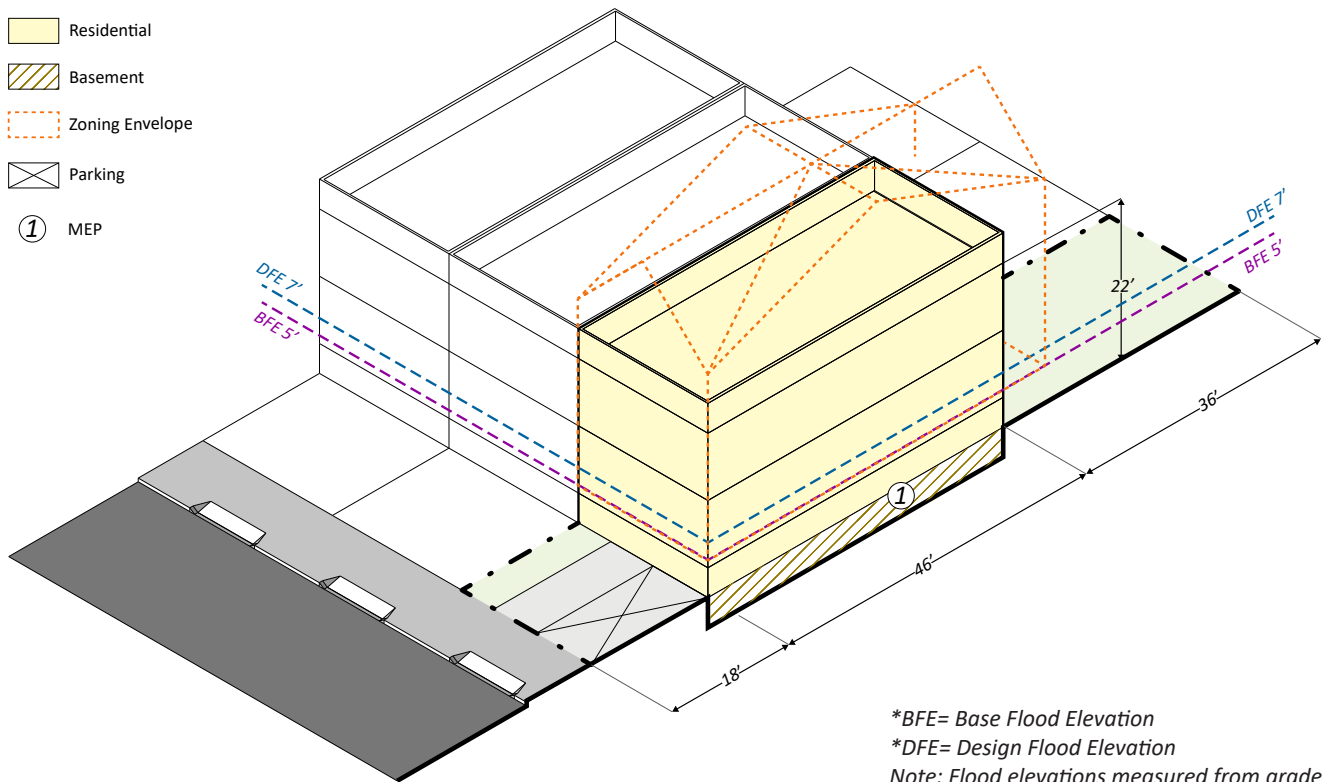
- Residential
- Basement
- Parking



1% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Basement
- Zoning Envelope
- Parking
- 1 MEP



\*BFE= Base Flood Elevation  
 \*DFE= Design Flood Elevation  
 Note: Flood elevations measured from grade

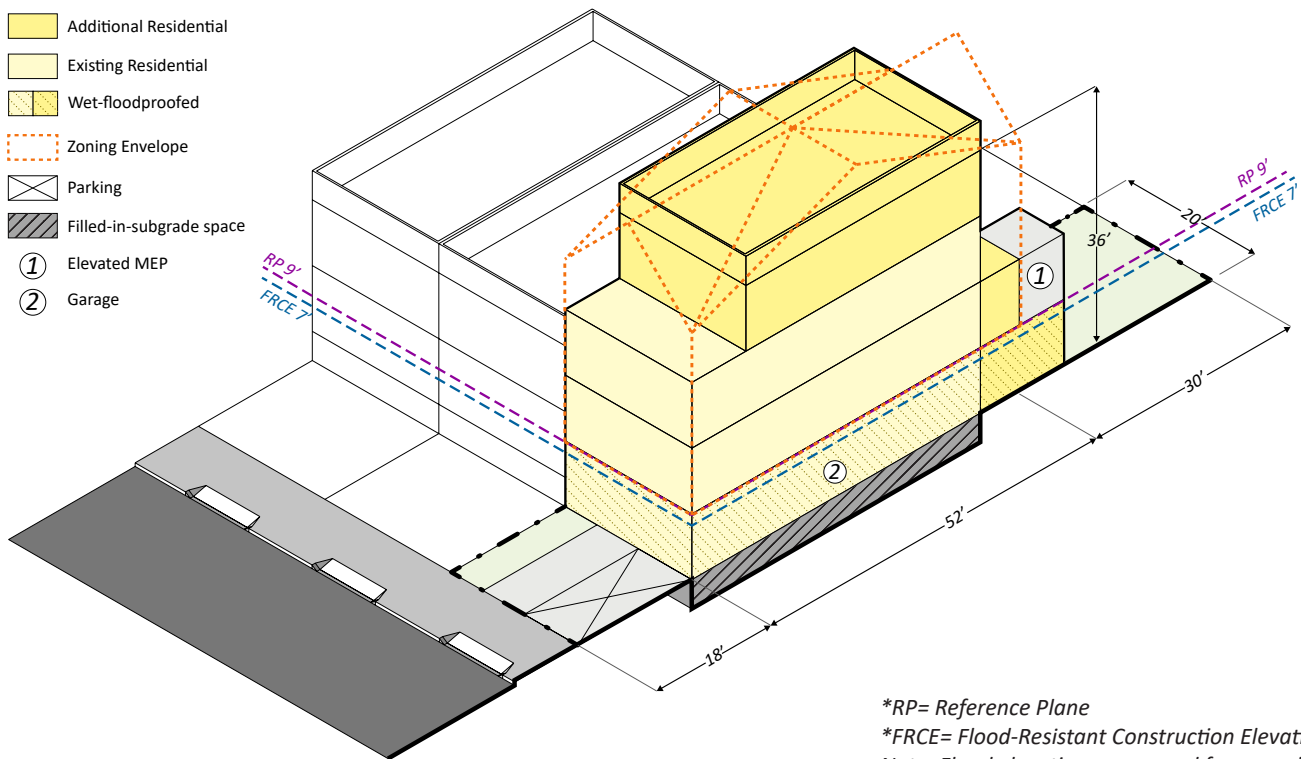
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,000 sf	2,000 sf	0 sf
<b>Zoning Floor Area</b>	2,700 sf	2,700 sf	0 sf
<i>Zoning Residential Floor Area</i>	2,700 sf	2,700 sf	0 sf
<b>Gross Floor Area</b>	2,835 sf	3,927 sf	+ 1,092 sf
<i>Gross Residential Floor Area</i>	2,835 sf	3,927 sf	+ 1,092 sf
<b>Exempted Floor Area</b>	135 sf	1,227 sf	+ 1,092 sf
<b>Provided Perimeter Wall/Baseheight</b>	22 ft	28 ft	+ 6 ft
<b>Provided Overall Height</b>	22 ft	37 ft	+ 15 ft
<b>Provided Number of Stories</b>	2 (+ Basement)	4 (No Basement)	+ 2
<b>Lot Coverage / Open Space</b>	46 % / 54 %	52 % / 48%	+ 6 % / -6%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	1	2	+ 1



1% Annual Chance Floodplain: FT1

Legend

- Additional Residential
- Existing Residential
- Wet-floodproofed
- Zoning Envelope
- Parking
- Filled-in-subgrade space
- ① Elevated MEP
- ② Garage



\*RP= Reference Plane  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

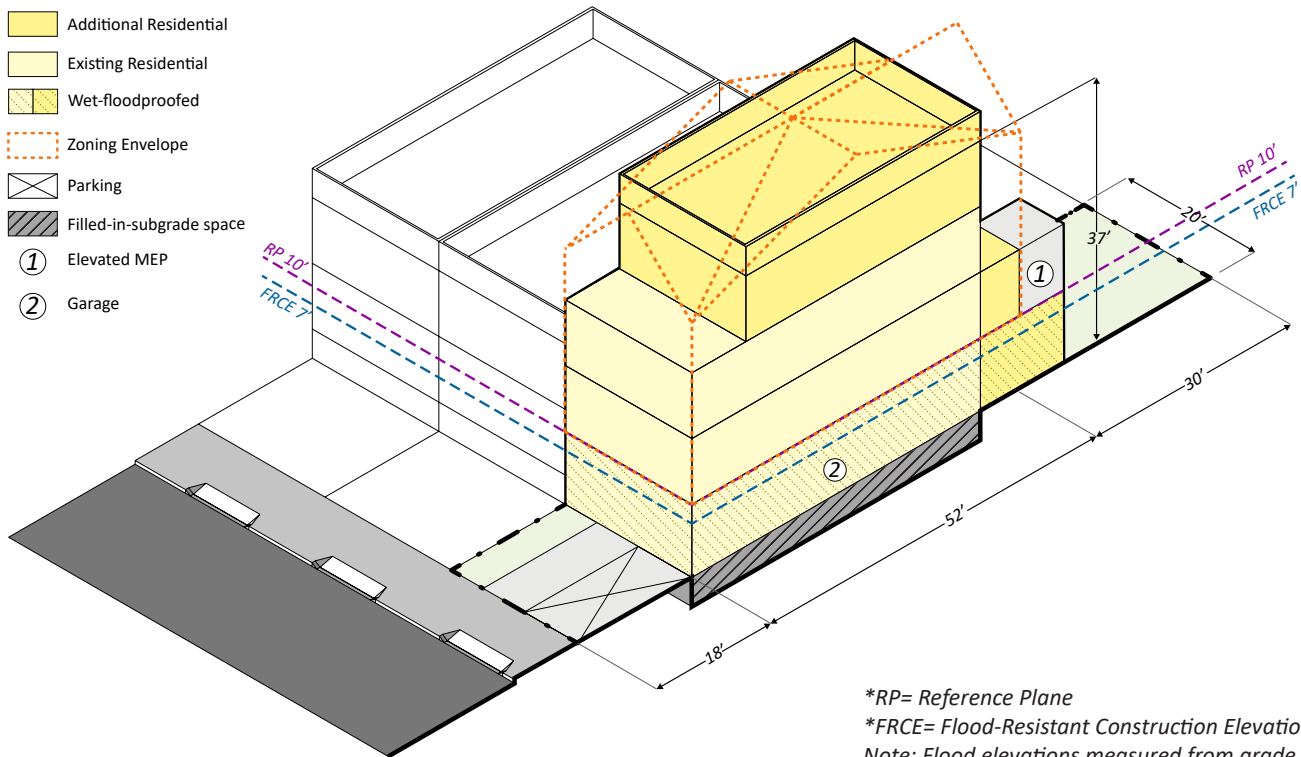
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	2,000 sf	2,000 sf	2,000 sf	0	0	0
<b>Zoning Floor Area</b>	2,700 sf	2,700 sf	2,700 sf	0	0	0
<i>Zoning Residential Floor Area</i>	2,700 sf	2,700 sf	2,700 sf	0	0	0
<b>Gross Floor Area</b>	2,835 sf	3,927 sf	3,927 sf	+ 1,092 sf	0 sf	+ 1,092 sf
<i>Gross Residential Floor Area</i>	2,835 sf	3,927 sf	3,927 sf	+ 1,092 sf	0 sf	+ 1,092 sf
<b>Exempted Floor Area</b>	135 sf	1,227 sf	1,227 sf	+ 1,092 sf	0 sf	+ 1,092 sf
<b>Provided Perimeter Wall/Baseheight</b>	22 ft	27 ft	28 ft	+ 5 ft	+ 1 ft	+ 6 ft
<b>Provided Overall Height</b>	22 ft	36 ft	37 ft	+ 14 ft	+ 1 ft	+ 15 ft
<b>Provided Number of Stories</b>	2 (+ Basement)	4 (No Basement)	4 (No Basement)	+ 2	0	+ 2
<b>Lot Coverage / Open Space</b>	46 % / 54%	52 % / 48%	52 % / 48%	+ 6% / - 6%	0	+ 6% / - 6%
<b>Dwelling Units</b>	2	2	2	0	0	0
<b>Parking Spaces</b>	1	2	2	+ 1	0	+ 1

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

Legend

- Additional Residential
- Existing Residential
- Wet-floodproofed
- Zoning Envelope
- Parking
- Filled-in-subgrade space
- ① Elevated MEP
- ② Garage



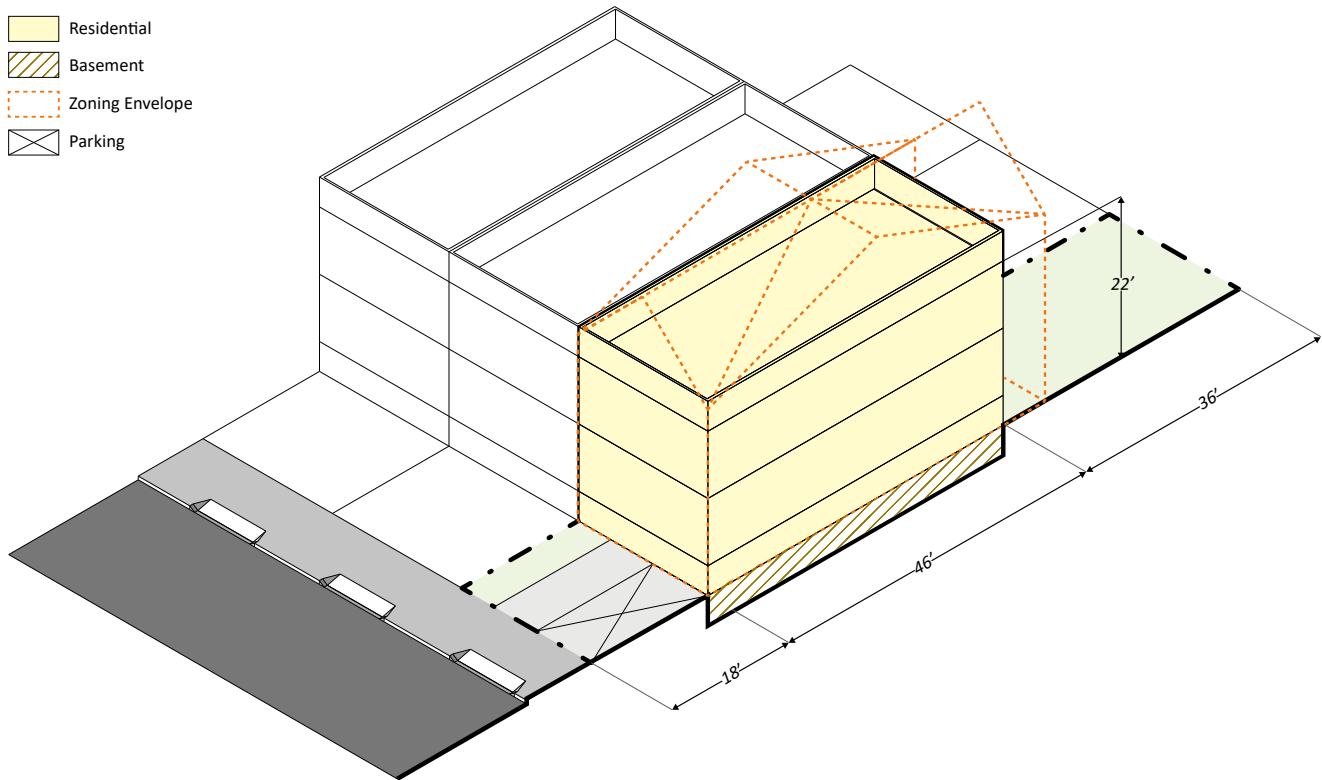
\*RP= Reference Plane  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,000 sf	2,000 sf	0 sf
<b>Zoning Floor Area</b>	2,700 sf	2,700 sf	0 sf
<i>Zoning Residential Floor Area</i>	2,700 sf	2,700 sf	0 sf
<b>Gross Floor Area</b>	2,835 sf	3,927 sf	+1,092 sf
<i>Gross Residential Floor Area</i>	2,835 sf	3,927 sf	+1,092 sf
<b>Exempted Floor Area</b>	135 sf	1,227 sf	+1,092 sf
<b>Provided Perimeter Wall/Baseheight</b>	22 ft	28 ft	+ 6 ft
<b>Provided Overall Height</b>	22 ft	37 ft	+ 15 ft
<b>Provided Number of Stories</b>	2 (+ Basement)	4 (No Basement)	+ 2
<b>Lot Coverage / Open Space</b>	46 % / 54%	52 % / 48%	+ 6% / - 6%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	1	2	+ 1

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Basement
- Zoning Envelope
- Parking

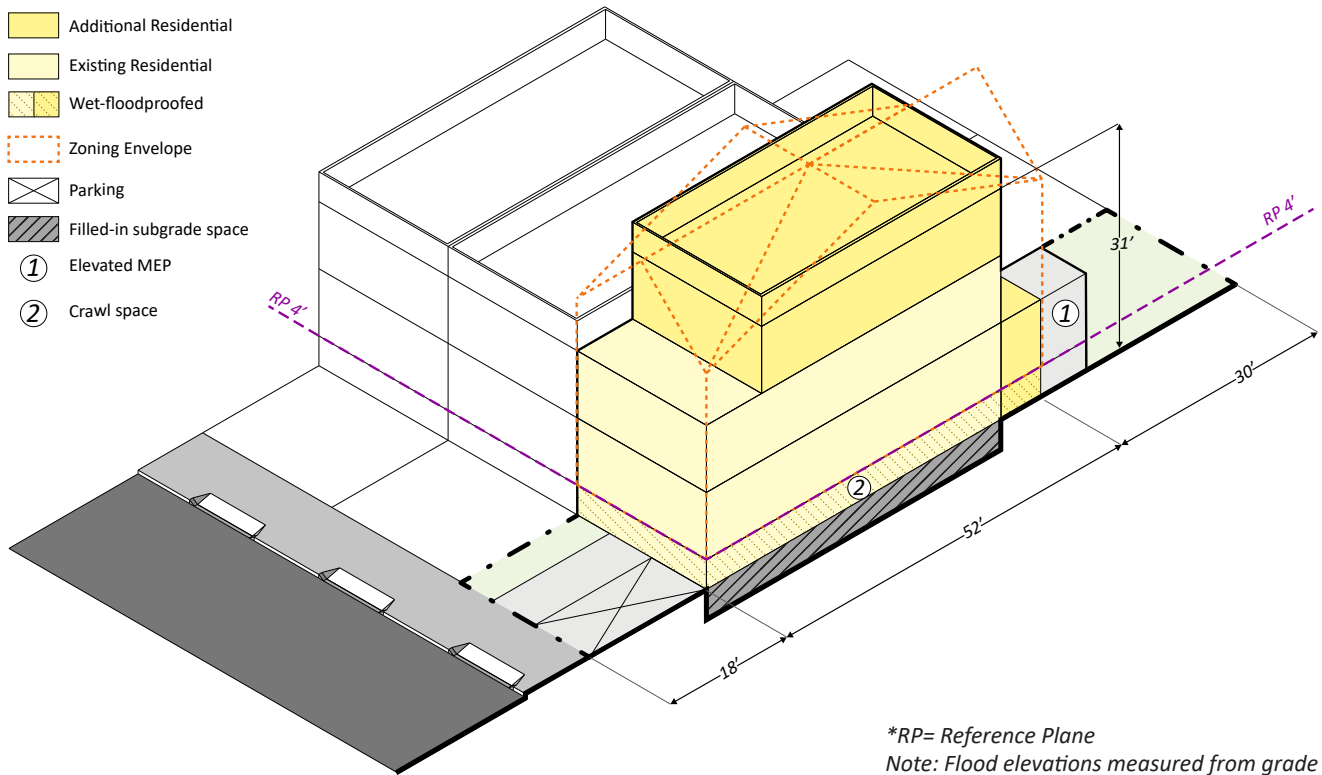


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,000 sf	2,000 sf	0 sf
<b>Zoning Floor Area</b>	2,700 sf	2,700 sf	0 sf
<i>Zoning Residential Floor Area</i>	2,700 sf	2,700 sf	0 sf
<b>Gross Floor Area</b>	2,835 sf	2,835 sf	0 sf
<i>Gross Residential Floor Area</i>	2,835 sf	2,835 sf	0 sf
<b>Exempted Floor Area</b>	135 sf	135 sf	0 sf
<b>Provided Perimeter Wall/Baseheight</b>	22 ft	22 ft	0 ft
<b>Provided Overall Height</b>	22 ft	31 ft	+ 9 ft
<b>Provided Number of Stories</b>	2 (+ Basement)	3 (No Basement)	+ 1
<b>Lot Coverage / Open Space</b>	46 % / 54%	52 % / 48%	+ 6% / - 6%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	1	1	0

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Additional Residential
- Existing Residential
- Wet-floodproofed
- Zoning Envelope
- Parking
- Filled-in subgrade space
- ① Elevated MEP
- ② Crawl space



	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,700 sf	2,000 sf	0 sf
<b>Zoning Floor Area</b>	2,700 sf	2,700 sf	0 sf
<i>Zoning Residential Floor Area</i>	2,700 sf	2,700 sf	0 sf
<b>Gross Floor Area</b>	2,835 sf	2,835 sf	0 sf
<i>Gross Residential Floor Area</i>	2,835 sf	2,835 sf	0 sf
<b>Exempted Floor Area</b>	135 sf	135 sf	0 sf
<b>Provided Perimeter Wall/Baseheight</b>	22 ft	22 ft	0 ft
<b>Provided Overall Height</b>	22 ft	31 ft	+ 9 ft
<b>Provided Number of Stories</b>	2 (+ Basement)	3 (No Basement)	+ 1
<b>Lot Coverage / Open Space</b>	46 % / 54 %	52 % / 48 %	+ 6% / - 6%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	1	1	0

## **Prototype 4**

### *R5 Infill Residence District, 25-foot x 100-foot Interior Lot Multi-Family Apartment Building, Retrofit*

#### **Introduction**

Prototypical Analysis Site 4 utilizes a generic 25-foot by 100-foot interior lot (2,500 sf) in an R5 infill residence zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 4 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes for retrofits; and
- Floor area exemption for wet-floodproofed ground floors.

#### **Existing Condition**

The existing condition on Prototypical Analysis Site 4 is a small multi-family apartment building with three stories and a cellar. The zoning lot is built with 4,125 sf of zoning floor area, exceeding the maximum permitted within an R5 residence zoning district, which allows a maximum FAR of 1.25 (ZR 23-142). The existing building was built prior to 1961 and thus legally non-complying. The building's gross floor area is 5,500 sf. The cellar used for MEP equipment (130 sf) and storage space (-1,245 sf) are exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

This existing building on Site 4 does not meet the minimum Appendix G requirements, as it was constructed prior to the adoption of these regulations. The total building height is 29 feet above grade, fitting within the permitted zoning envelope of an R5 residence district, which allows for a maximum building height of 40 feet and a maximum perimeter wall height of 30 feet (ZR 23-631). All residential floors have floor-to-floor heights of nine feet each. The cellar floor has a floor-to-floor height of six feet, with two feet above ground and four feet below.

The existing scenario on Site 4 does not include any parking spaces on the site and does not meet the parking requirements of the underlying zoning (ZR 25-621 and ZR 25-22) as the three existing dwelling units were created prior to December 15, 1961 (ZR 25-21).

#### **1% Annual Chance Floodplain Scenario**

##### ***No-Action Condition***

For a conservative analysis, the No-Action scenario on Prototypical Analysis Site 4 does not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with Appendix G requirements. The permitted building envelope of an R5 residence zoning district is measured from the BFE (ZR 12-10 Definition of a Base Plane), which allows for a maximum building height of 42 feet (40 feet plus two feet BFE) and a maximum perimeter wall height of 32 feet (30 feet plus two feet BFE) (ZR 23-631).

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 4 would be retrofitted. The site would accommodate a small multi-family apartment building with four stories. The cellar of the building would be filled-in to comply with Appendix G requirements. The floor area lost due to the filled-in cellar would be added as a nine-foot floor to the top of the building. The zoning lot would continue to be built with 4,125 sf of zoning floor area, the maximum permitted within an R5 infill district, which allows for a higher FAR of 1.65 for buildings in predominantly built-up areas (ZR 23-143). The building's gross floor area would be 5,630 sf under With-Action conditions. As a result of the Proposed Action, floor spaces used for MEP equipment (130 sf) and the wet-floodproofed ground floor (1,375 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

Prototypical Analysis Site 4 is mapped with a BFE of two feet above grade, according to FEMA's flood maps, resulting in a FRCE of three feet. In order to floodproof the building for the long term and exceed the minimum Appendix G requirements in the future with the Proposed Action, the ground floor of Site 4 would be wet-floodproofed, and everything below-grade would be filled-in. The home is utilizing the "reference plane" allowance of 10 feet in the 1% flood zone, and the FSAFE would be at 11 feet above grade to keep the existing building structure. The total With-Action building height would be 38 feet, fitting within the permitted building envelope of an R5 infill residence zoning district as measured from a "reference plane" of 10 feet above grade, which allows for a maximum building height of 43 feet (33 feet plus 10 feet) and a maximum perimeter wall height of 40 feet (30 feet plus 10 feet) (ZR 23-631). Under With-Action conditions, the ground floor of Prototypical Analysis Site 4 would have a wet-floodproofed garage, and the MEP equipment would be relocated from the basement to the roof of the building.

The With-Action scenario on Site 4 would contain two enclosed parking spaces in a garage within the ground floor of the building, meeting the underlying zoning requirements (ZR 25-23).

### **Increment**

As a result of the Proposed Action, there would be an additional 130 sf of both gross and incremental floor area on Prototypical Analysis Site 4 in the 1% annual chance floodplain, allowing for a vertical enlargement of the existing building. The With-Action building on Site 4 would have an additional nine feet of building height as compared to the No-Action building on the site. No additional zoning floor area or dwelling units would be added on the lot as a result of the Proposed Action, and the With-Action building would not change lot coverage as compared to the No-Action condition. Additionally, the With-Action building on Prototypical Analysis Site 4 would include two parking spaces as compared to the future without the Proposed Action in the 1% annual chance floodplain.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 4 would be the same as the existing condition, because buildings in the 0.2% annual chance floodplain don't have to meet the minimum Appendix G requirements. The permitted building envelope of an R5 residence district is measured from grade, which allows for a maximum building height of 40 feet and a maximum perimeter wall height of 30 feet (ZR 23-631). Since there is no BFE in the 0.2% flood zone, this is measured the grade.

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 4 would be retrofitted. The site would accommodate a retrofitted small multi-family apartment building with four stories. The cellar would be filled-in to comply with Appendix G requirements. The floor area lost due to the filled-in cellar would be added as a nine-foot-tall story to the top of the building. Under With-Action conditions, Site 4 would contain 4,125 sf of zoning floor area, meeting the maximum permitted within an R5 infill residence zoning district, which allows for a higher FAR of 1.65 for buildings in predominantly built-up areas (ZR 23-143). The building's gross floor area would be 5,630 sf. As a result of the Proposed Action, floor spaces used for MEP equipment (130 sf) and the wet-floodproofed ground floor (1,245 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

In order to floodproof the building for the long term, the cellar would be filled-in and the ground-floor would be wet-floodproofed in the future with the Proposed Action. The home is utilizing the "reference plane" allowance of five feet in the 0.2% flood zone, and the FSAFE would be at 11 feet above grade to keep the existing building structure. The total building height on Prototypical Analysis Site 4 in the With-Action scenario would be 38 feet with a perimeter wall of 29 feet, as measured from grade, fitting within the permitted building envelope of an R5 infill zoning district and a "reference plane" of five feet above grade, which allows for a maximum building height of 38 feet (33 feet plus five feet) and a maximum perimeter wall height of 35 feet (30 feet plus five feet) (ZR 23-631). Under With-Action conditions, the MEP equipment would be relocated from the cellar to the roof.

The With-Action scenario on Prototypical Analysis Site 4 would contain two enclosed parking spaces in a garage within the ground floor of the building meeting the underlying zoning requirements in the future with the Proposed Action (ZR 25-23).

### **Increment**

As a result of the Proposed Action, there would be an additional 130 sf of both gross and incremental floor area on Prototypical Analysis Site 4 in the 0.2% annual chance floodplain, allowing for a vertical enlargement. The With-Action building would have an additional nine feet of building height as compared to the No-Action building on the site. No additional zoning floor area or dwelling units would be added on the lot as a result of the Proposed Action, and the With-Action building would not change lot coverage as compared to the No-Action condition. Additionally, the With-Action building on Prototypical Analysis Site 4 would include two parking spaces as compared to the future without the Proposed Action in the 0.2% annual chance floodplain.

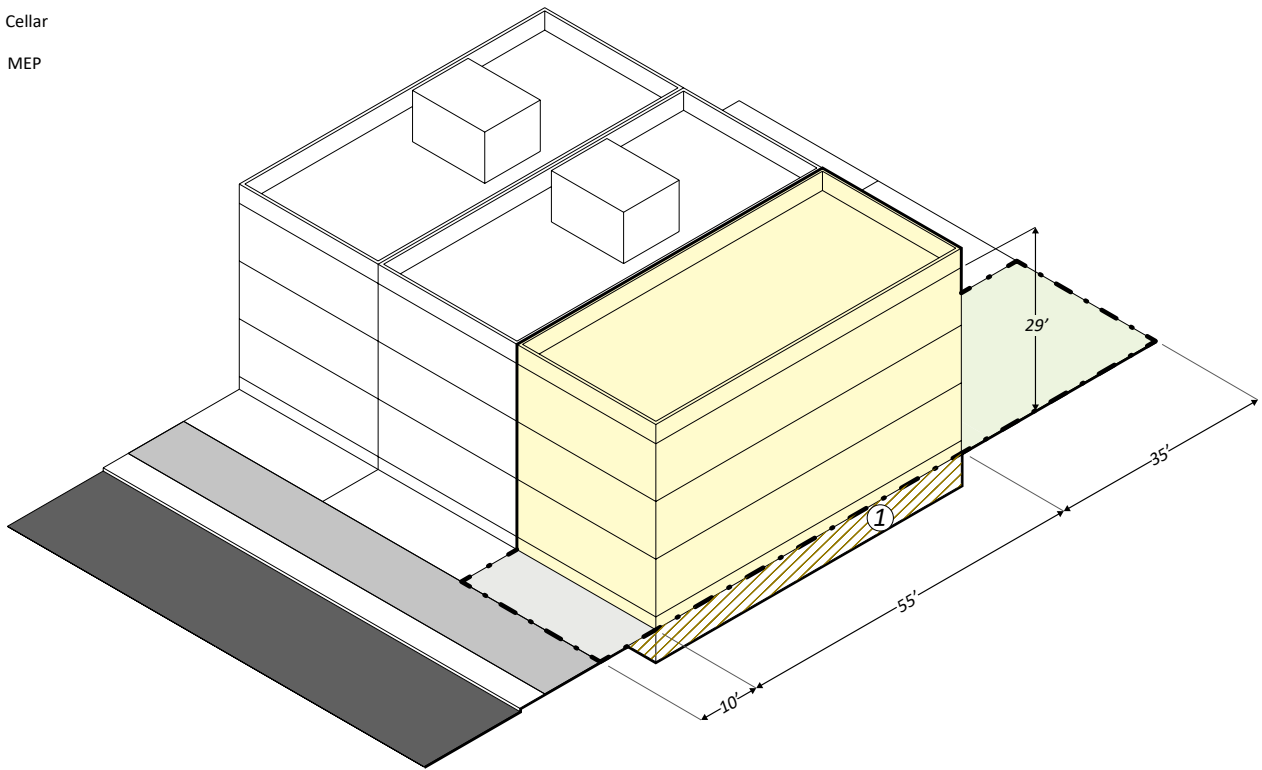
Existing Conditions

Legend

Residential

Cellar

MEP

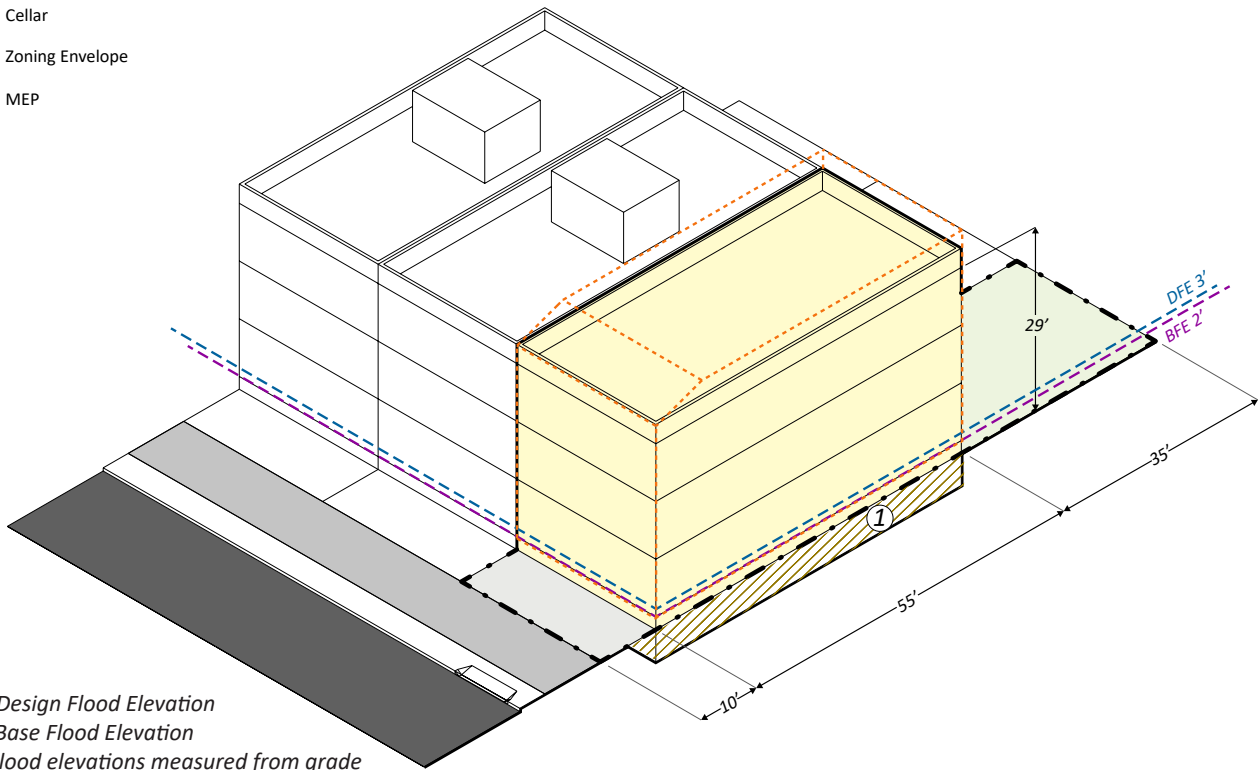




1% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Cellar
- Zoning Envelope
- 1 MEP



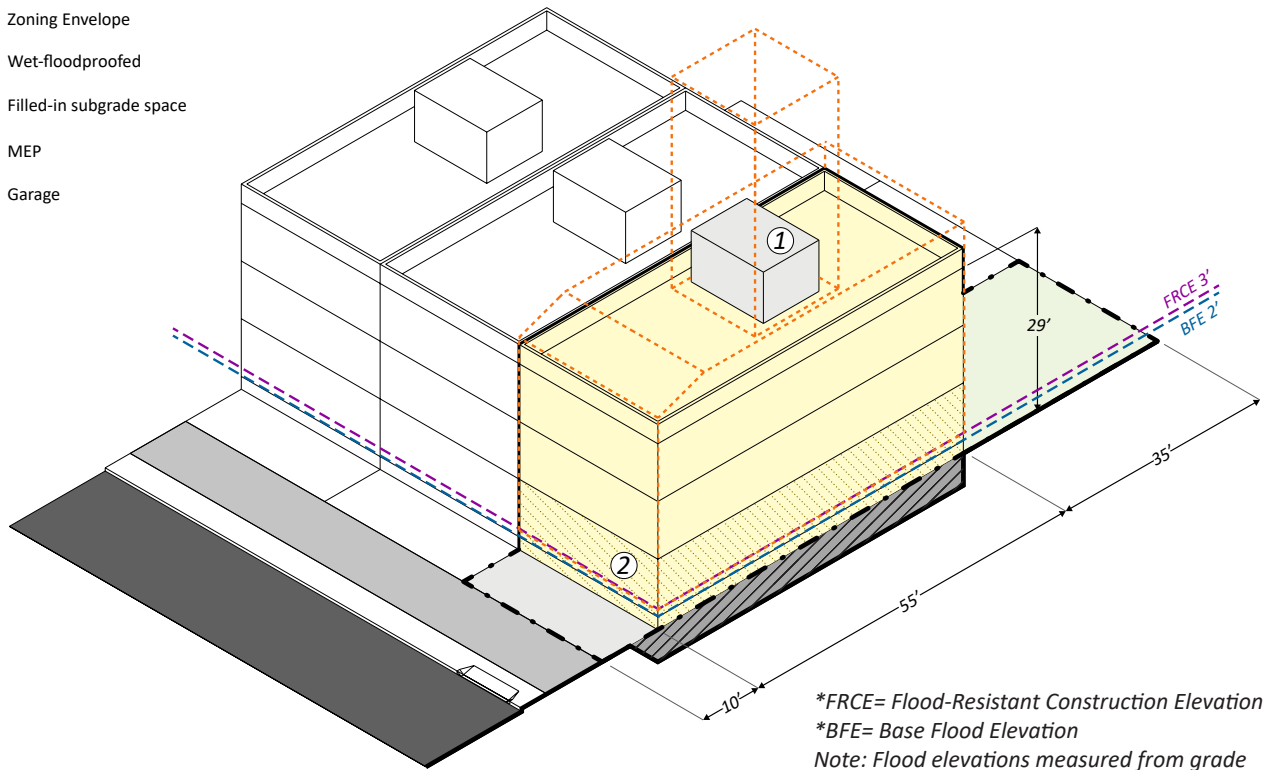
\*DFE= Design Flood Elevation  
 \*BFE= Base Flood Elevation  
 Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	4,125 sf	4,125 sf	0 sf
<i>Zoning Residential Floor Area</i>	4,125 sf	4,125 sf	0 sf
<b>Gross Floor Area</b>	5,500 sf	5,630 sf	+ 130 sf
<i>Gross Residential Floor Area</i>	5,500 sf	5,630 sf	+ 130 sf
<b>Exempted Floor Area</b>	1,375 sf	1,505 sf	+ 130 sf
<b>Provided Perimeter Wall/Baseheight</b>	29 ft	38 ft	+ 9 ft
<b>Provided Overall Height</b>	29 ft	38 ft	+ 9 ft
<b>Provided Number of Stories</b>	3 (+ Basement)	4 (No Basement)	+ 1
<b>Lot Coverage / Open Space</b>	55 % / 45 %	55 % / 45 %	0 / 0
<b>Dwelling Units</b>	3	3	0
<b>Parking Spaces</b>	0	2	+2

1% Annual Chance Floodplain: FT1

Legend

- Residential
- Zoning Envelope
- Wet-floodproofed
- Filled-in subgrade space
- ① MEP
- ② Garage



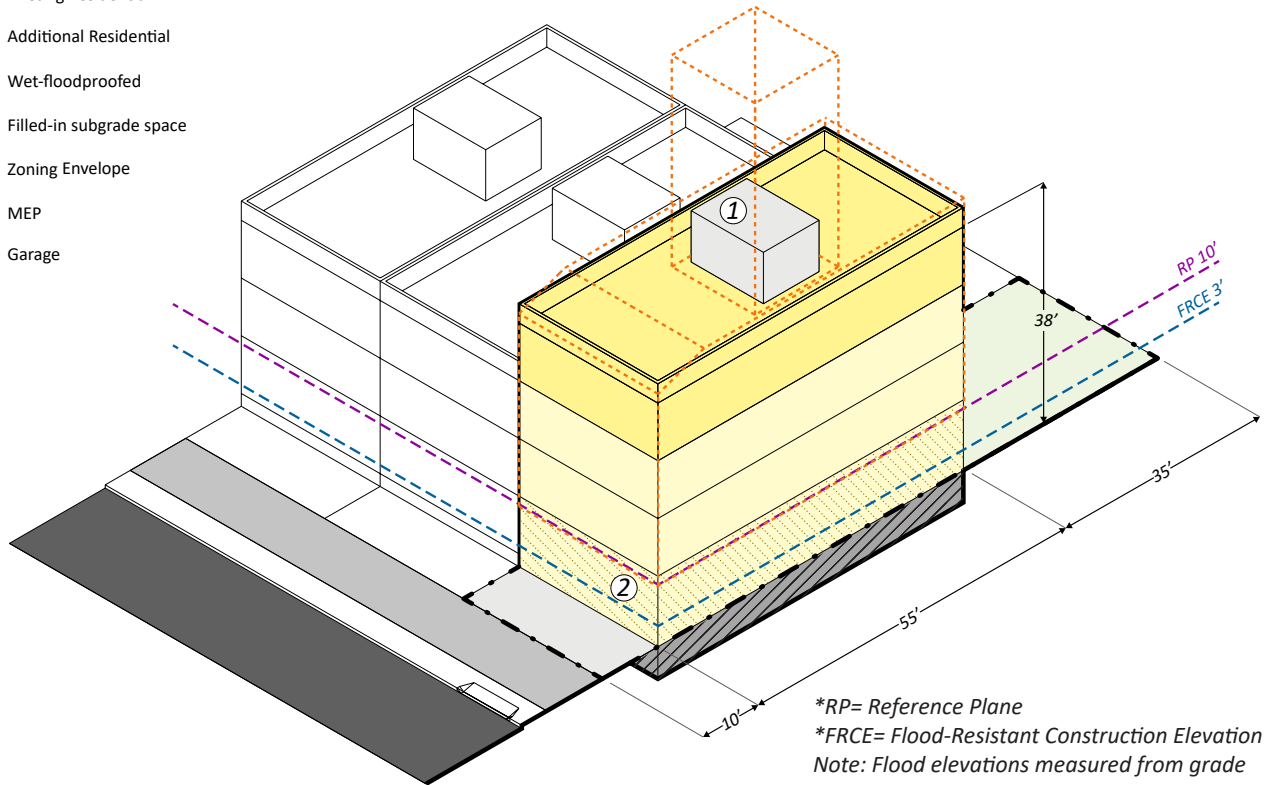
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	2,500 sf	0	0	0 sf
<b>Zoning Floor Area</b>	4,125 sf	2,750 sf	4,125 sf	- 1,375 sf	+ 1,375 sf	0 sf
<i>Zoning Residential Floor Area</i>	4,125 sf	2,750 sf	4,125 sf	- 1,375 sf	+ 1,375 sf	0 sf
<b>Gross Floor Area</b>	5,500 sf	4,125 sf	5,630 sf	- 1,375 sf	+ 1,505 sf	+ 130 sf
<i>Gross Residential Floor Area</i>	5,500 sf	4,125 sf	5,630 sf	- 1,375 sf	+ 1,505 sf	+ 130 sf
<b>Exempted Floor Area</b>	1,375 sf	1,375 sf	1,505 sf	0	+ 130 sf	+ 130 sf
<b>Provided Perimeter Wall/Baseheight</b>	29 ft	29 ft	38 ft	0	+ 9 ft	+ 9 ft
<b>Provided Overall Height</b>	29 ft	38 ft	38 ft	+ 9 ft	0	+ 9 ft
<b>Provided Number of Stories</b>	3 (+ Basement)	4 (No Basement)	4 (No Basement)	+ 1	0	+ 1
<b>Lot Coverage / Open Space</b>	55 % / 45 %	55 % / 45 %	55 % / 45 %	0 / 0	0 / 0	0 / 0
<b>Dwelling Units</b>	3	3	3	0	0	0
<b>Parking Spaces</b>	0	2	2	+ 2	0	+ 2

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

Legend

- Existing Residential
- Additional Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① MEP
- ② Garage

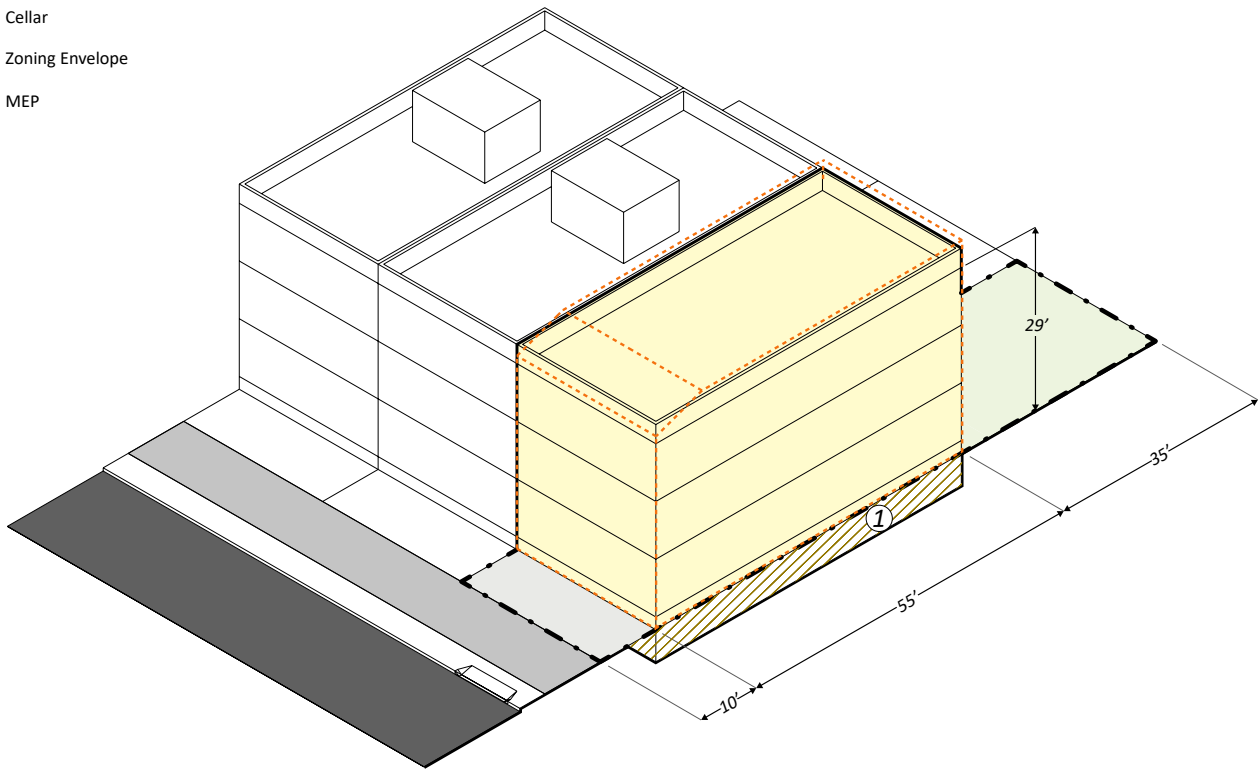


	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	4,125 sf	4,125 sf	0 sf
<i>Zoning Residential Floor Area</i>	4,125 sf	4,125 sf	0 sf
<b>Gross Floor Area</b>	5,500 sf	5,630 sf	+ 130 sf
<i>Gross Residential Floor Area</i>	5,500 sf	5,630 sf	+ 130 sf
<b>Exempted Floor Area</b>	1,375 sf	1,505 sf	+ 130 sf
<b>Provided Perimeter Wall/Baseheight</b>	29 ft	38 ft	+ 9 ft
<b>Provided Overall Height</b>	29 ft	38 ft	+ 9 ft
<b>Provided Number of Stories</b>	3 (+ Basement)	4 (No Basement)	+ 1
<b>Lot Coverage / Open Space</b>	55 % / 45 %	55 % / 45 %	0 / 0
<b>Dwelling Units</b>	3	3	0
<b>Parking Spaces</b>	0	2	+ 2

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Cellar
- Zoning Envelope
- 1 MEP

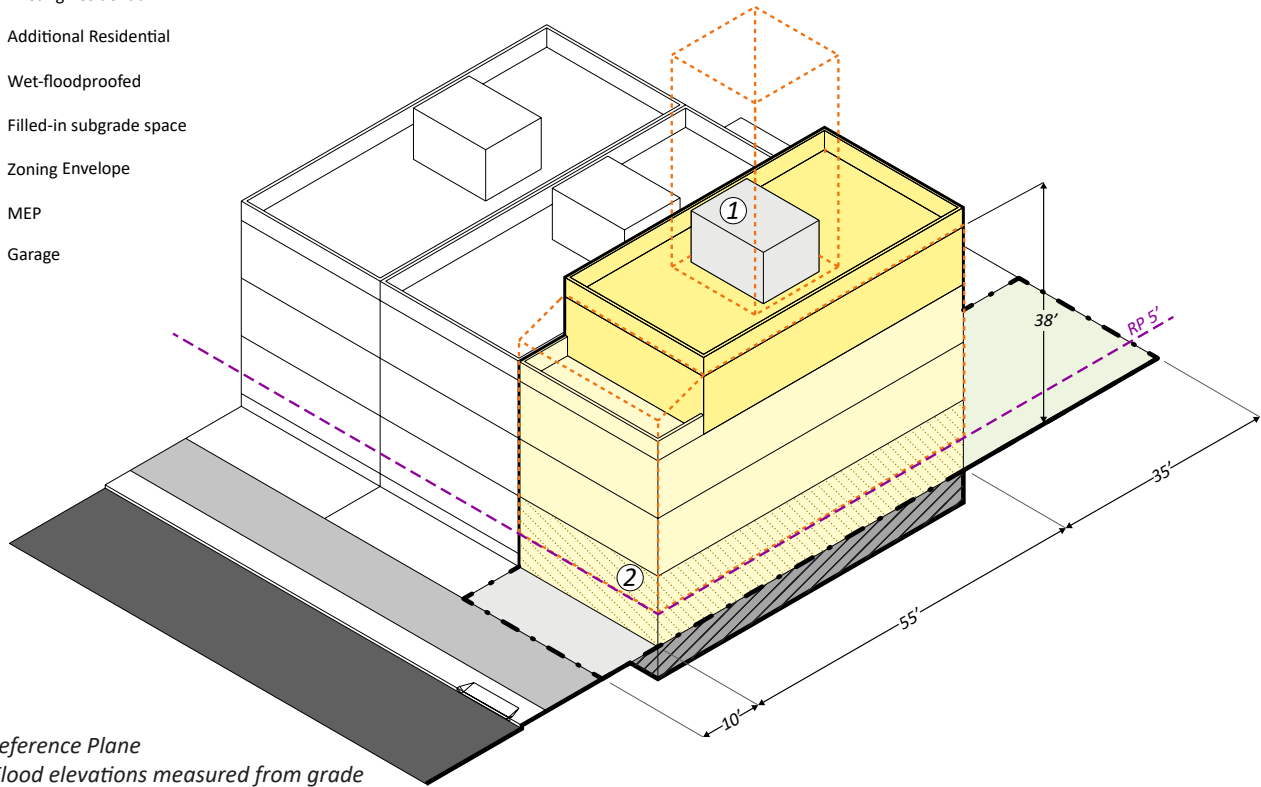


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	4,125 sf	4,125 sf	0 sf
<i>Zoning Residential Floor Area</i>	4,125 sf	4,125 sf	0 sf
<b>Gross Floor Area</b>	5,500 sf	5,630 sf	+ 130 sf
<i>Gross Residential Floor Area</i>	5,500 sf	5,630 sf	+ 130 sf
<b>Exempted Floor Area</b>	1,375 sf	1,505 sf	+ 130 sf
<b>Provided Perimeter Wall/Baseheight</b>	29 ft	38 ft	+ 9 ft
<b>Provided Overall Height</b>	29 ft	38 ft	+ 9 ft
<b>Provided Number of Stories</b>	3 (+ Basement)	4 (No Basement)	+ 1
<b>Lot Coverage / Open Space</b>	55 % / 45 %	55 % / 45 %	0 / 0
<b>Dwelling Units</b>	3	3	0
<b>Parking Spaces</b>	0	2	+ 2

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Existing Residential
- Additional Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① MEP
- ② Garage



	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	4,125 sf	4,125 sf	0 sf
<i>Zoning Residential Floor Area</i>	4,125 sf	4,125 sf	0 sf
<b>Gross Floor Area</b>	5,500 sf	5,630 sf	+ 130 sf
<i>Gross Residential Floor Area</i>	5,500 sf	5,630 sf	+ 130 sf
<b>Exempted Floor Area</b>	1,375 sf	1,505 sf	+ 130 sf
<b>Provided Perimeter Wall/Baseheight</b>	29 ft	38 ft	+ 9 ft
<b>Provided Overall Height</b>	29 ft	38 ft	+ 9 ft
<b>Provided Number of Stories</b>	3 (+ Basement)	4 (No Basement)	+ 1
<b>Lot Coverage / Open Space</b>	55 % / 45 %	55 % / 45 %	0 / 0
<b>Dwelling Units</b>	3	3	0
<b>Parking Spaces</b>	0	2	+ 2

## **Prototype 5**

*R7A Residence District, 115-foot x 100-foot Interior Lot  
Mid-Rise Multi-Family Building, New Construction*

### **Introduction**

Prototypical Analysis Site 5 utilizes a generic 115-foot by 100-foot interior lot (11,500 sf) facing a wide street in an R7A contextual residential zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 5 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes;
- Floor area exemption for wet-floodproofed ground floors; and
- Streetscape improvements.

### **Existing Condition**

In the existing condition, Prototypical Analysis Site 5 is an 11,500 sf vacant lot.

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

In the future without the Proposed Action, it is expected that a mid-rise, multi-family building with seven-stories and 54 dwelling units would be constructed on Prototypical Analysis Site 5. The zoning lot would be developed with 46,000 sf of residential zoning floor area, the maximum permitted within an R7A zoning district, which allows for a maximum FAR of 4.0 outside of Inclusionary Housing Designated Areas (IHDA) and Mandatory Inclusionary Housing (MIH) areas (ZR 23-153). The building's gross floor area would be 56,330 sf under No-Action conditions. Additionally, floor spaces used for MEP equipment (630 sf), ground level enclosed parking (6,670 sf), and five percent of the remaining gross floor area (2,990 sf) would be exempted from the zoning floor area on Site 5 in the No-Action condition to account for other deductions of the Quality Housing Program (ZR 12-10 Definition of Floor Area and ZR 28-10).

Prototypical Analysis Site 5 is mapped with a BFE of two feet above grade, according to FEMA's flood maps, resulting in a DFE of three feet. In order to meet the minimum Appendix G requirements in the future without the Proposed Action, the first occupiable floor of the building on Site 5 would be placed at three feet above grade. The total building height would be 73 feet with a base height of 63 feet, fitting within the permitted zoning envelope of an R7A zoning district as measured from the BFE, which allows for a maximum building height of 82 feet (80 feet plus two feet BFE) and a maximum base height of 67 feet (65 feet plus two feet BFE) without a qualifying ground floor (ZR 23-662 and ZR 12-10 Definition of Base Plane). While the ground floor would have a garage and lobby which does not qualify for Quality Ground Floor, the space still has a floor-to-floor height of 13 feet so that the dwelling units on the ground floor would be above the DFE. Residential units would have floor-to-floor heights of 10 feet under No-Action conditions.

In the future without the Proposed Action, Prototypical Analysis Site 5 would contain 27 enclosed parking spaces within a garage, as required in the underlying zoning (ZR 25-62 and ZR 25-23). The No-Action building on Site 5 would comply with all other underlying zoning regulations.

### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 5 would be developed with a mid-rise, multi-family building with eight stories and 54 dwelling units. The zoning lot would be developed with 46,000 sf of residential zoning floor area, the maximum permitted within an R7A zoning district, which allows for a maximum FAR of 4.0 outside of IHDA and MIH areas (ZR 23-153). The building's gross floor area would be 60,980 sf in the future with the Proposed Action. As a result of the Proposed Action, floor spaces used for MEP equipment (630 sf) and wet-floodproofed ground level enclosed parking, storage, lobby, and five percent of the remaining gross floor area (total 14,350 sf) would be exempted from the zoning floor area to account for other deductions of the Quality Housing Program (ZR 12-10 Definition of Floor Area and ZR 28-10).

In order to floodproof the building for the long term and exceed the minimum Appendix G requirements, the building is utilizing the "reference plane" allowance of 10 feet in the 1% flood zone, which results in the FSAFE being placed at 10 feet above grade. As such, the total building height on Prototypical Analysis Site 5 would be 80 feet with a base height of 70 feet, as measured from grade, fitting within the permitted zoning envelope of an R7A zoning district as measured from a "reference plane" of 10 feet above grade, which allows for a maximum building height of 90 feet (80 feet plus 10 feet) and a maximum base height of 75 feet without a qualifying ground floor (65 feet plus 10 feet) (ZR 23-662). The ground floor would have a lobby, storage and garage with a floor-to-floor height of 10 feet, while residential floors two through eight would have floor-to-floor heights of 10 feet each in the future with the Proposed Action.

Under With-Action conditions on Prototypical Analysis Site 5, the garage would contain 27 enclosed parking spaces, as required in the underlying zoning (ZR 25-62 and ZR 25-23). The building on Site 5 would comply with all other underlying zoning regulations in the future with the Proposed Action.

### ***Increment***

As a result of the Proposed Action, there would be an additional 4,650 sf of total gross floor area and exempted floor area on Prototypical Analysis Site 5 in the 1% annual chance floodplain. The Proposed Action would allow for the ground floor of the building to be wet-floodproofed and used for a lobby and enclosed parking. This would result in an increased building height of seven feet on Site 5. The first floor with dwelling units would be shifted from three feet above grade to the second floor of the building, which would be 10 feet above grade. No additional dwelling units or parking spaces would be added on the lot as a result of the Proposed Action. Additionally, lot coverage on Site 5 would not change in the future with the Proposed Action.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 5 illustrates the development of a mid-rise, multi-family building with seven stories and 54 dwelling units. In the future without the Proposed Action, Site 5 is expected to be developed with 46,000 sf of residential zoning floor area, the maximum permitted within an R7A zoning district, which allows for a maximum FAR of 4.0 outside of IHDA and MIH areas (ZR 23-153). The building's gross floor area would be 63,980 sf. Floor spaces used for MEP equipment (630 sf), ground level enclosed parking (6,070 sf), storage in the cellar (6,300 sf), and five percent of the remaining gross floor area (4,920 sf) would be exempted from the zoning floor area to account for other deductions of the Quality Housing Program on Site 5 in the future without the Proposed Action (ZR 12-10 Definition of Floor Area and ZR 28-10).

Under No-Action conditions on Prototypical Analysis Site 5, the first occupiable floor would be placed at grade. The total building height on Site 5 would be 70 feet with a perimeter wall of 60 feet, fitting within the permitted building envelope of an R7A zoning district, which allows for a maximum building height of 80 feet and a maximum perimeter wall height of 65 feet without a qualifying ground floor (ZR 23-662). In the future without the Proposed Action, the ground floor of Site 5 would have lobby and garage spaces with floor-to-floor heights of 10 feet, and residential floors with floor-to-floor heights of 10 feet each.

In the future without the Proposed Action, Site 5 would contain 27 enclosed parking spaces within a garage, as required in the underlying zoning (ZR 25-62 and ZR 25-23). The building on Prototypical Analysis Site 5 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 5 would be developed with a mid-rise, multi-family building with eight stories and 54 dwelling units. In the future with the Proposed Action, Site 5 would be developed with 46,000 sf of residential zoning floor area, the maximum permitted within an R7A zoning district, which allows for a maximum FAR of 4.0 outside of IHDA and MIH areas (ZR 23-153). The building's gross floor area would be 60,980 sf on Site 5 under With-Action conditions. As a result of the Proposed Action, floor spaces used for MEP equipment (630 sf) and wet-floodproofed ground level enclosed parking, storage, lobby, and five percent of the remaining gross floor area (total 14,350 sf) would be exempted from the zoning floor area to account for other deductions of the Quality Housing Program (ZR 12-10 Definition of Floor Area and ZR 28-10).

In order to floodproof the building for the long term, the building is utilizing the "reference plane" allowance of five feet in the 0.2% flood zone, and the FSAFE would be placed at 10 feet above grade. The total building height would be 80 feet with a perimeter wall of 70 feet, as measured from grade fitting within the permitted zoning envelope of an R7A zoning district as measured from a "reference plane" of five feet, which allows for a maximum building height of 85 feet (80 feet plus five feet) and a maximum perimeter wall height of 70 feet (65 feet plus five feet) without a qualifying ground floor (ZR 23-662). In the future with the Proposed Action, the ground floor of Site 5 would have a lobby, storage, and garage space with floor-to-floor heights of 10 feet, while residential floors two through eight would have floor-to-floor heights of 10 feet each.

Under With-Action conditions, Prototypical Analysis Site 5 would contain 27 enclosed parking spaces within a garage, as required in the underlying zoning (ZR 25-62 and ZR 25-23). The building on Site 5 would comply with all other underlying zoning regulations in the future with the Proposed Action.


### ***Increment***

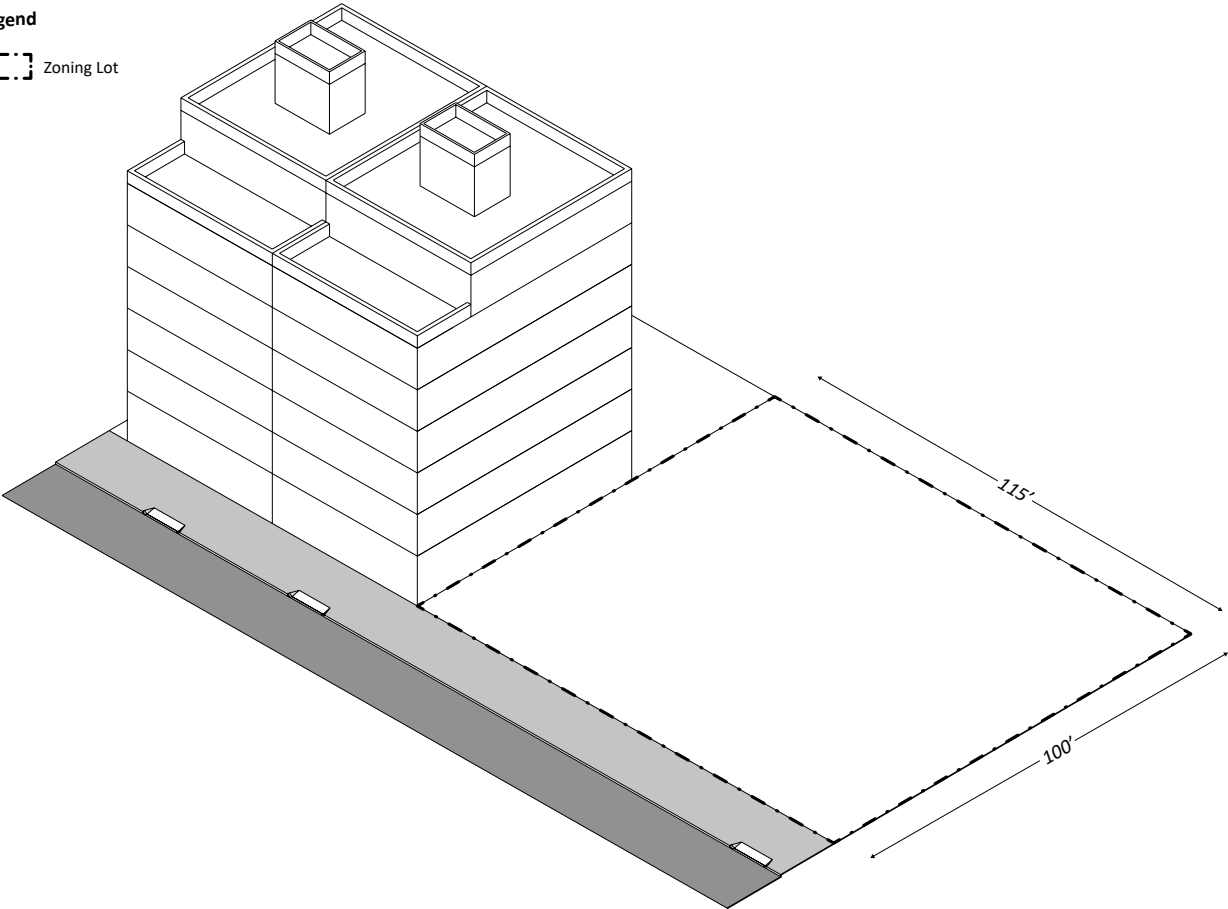
As a result of the Proposed Action, there would be a reduction of 2,940 sf of total gross floor area and exempted floor area on Prototypical Analysis Site 5 in the 0.2% annual chance floodplain. The Proposed Action would allow for the ground floor to be wet-floodproofed and used for a lobby and enclosed parking. This would result in an increased building height of 10 feet on Site 5. The first floor with dwelling units would be shifted from ground level to the second floor of the building, which would be 10 feet above grade. No additional dwelling units or parking spaces would be added to Prototypical Analysis Site 5 as a result of the Proposed Action. Additionally, lot coverage on Site 5 would not change in the future with the Proposed Action.



Existing Condition

Legend

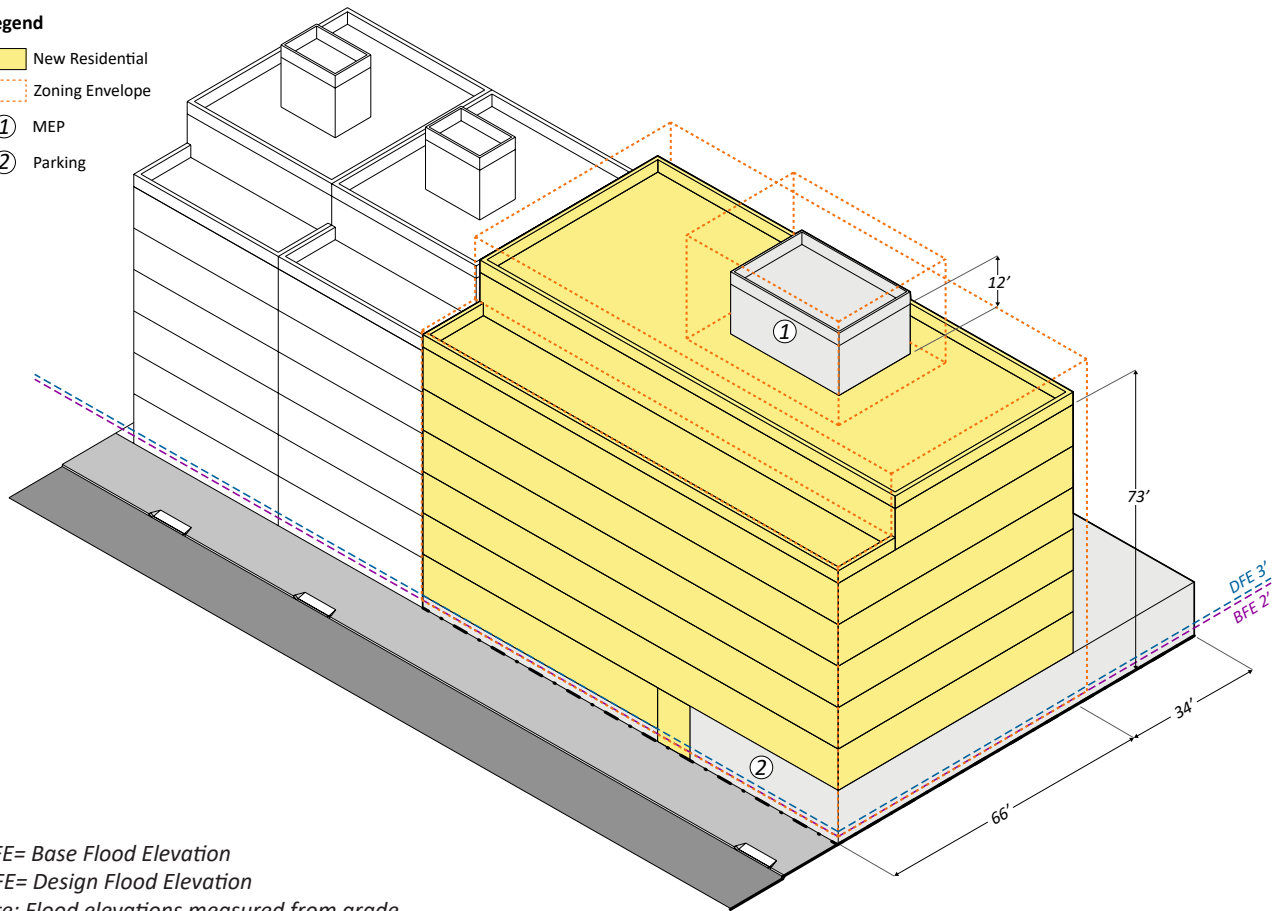
 Zoning Lot



1% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- Zoning Envelope
- ① MEP
- ② Parking



\*BFE= Base Flood Elevation

\*DFE= Design Flood Elevation

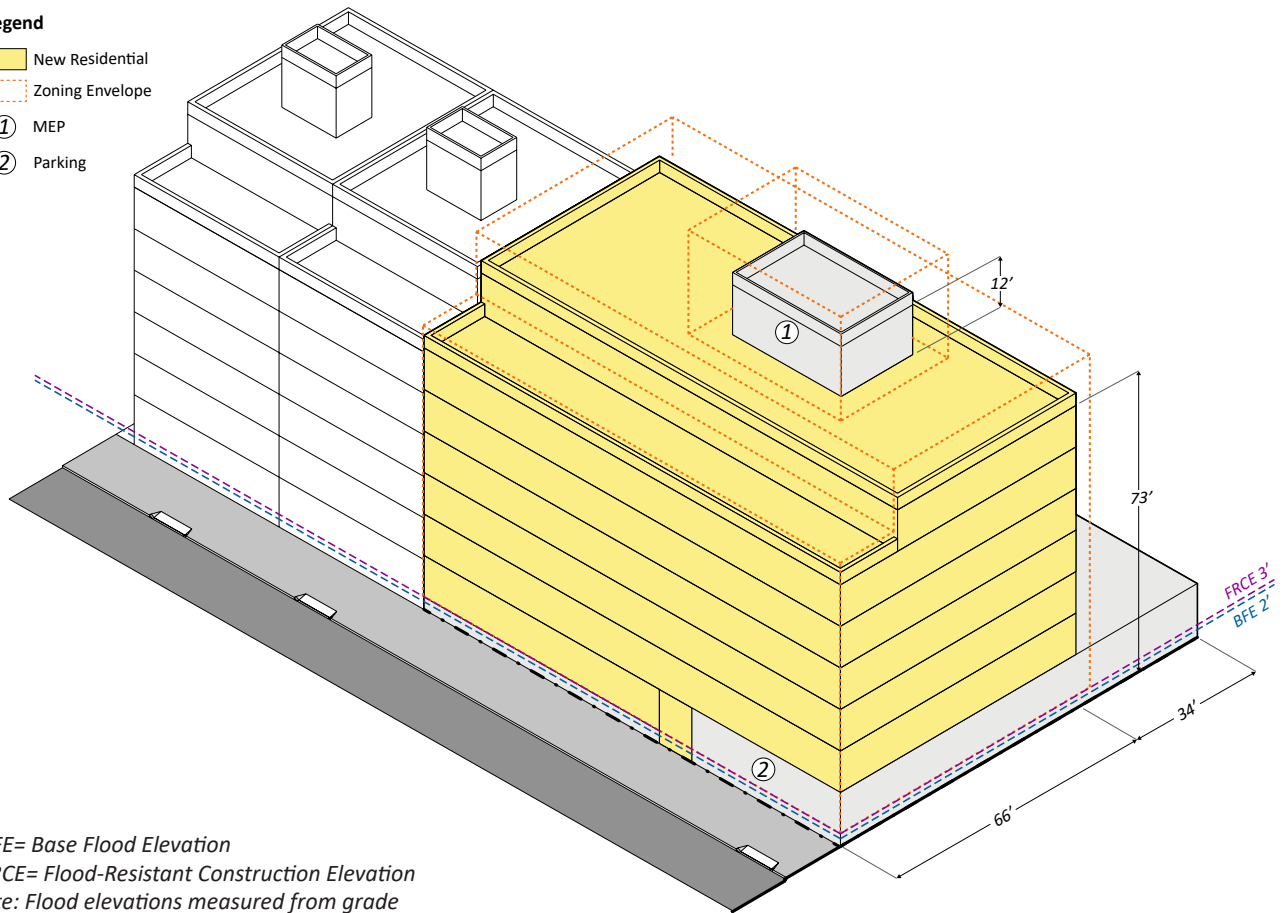
Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	11,500 sf	11,500 sf	0
<b>Zoning Floor Area</b>	46,000 sf	46,000 sf	0
<i>Zoning Residential Floor Area</i>	46,000 sf	46,000 sf	0
<b>Gross Floor Area</b>	56,330 sf	60,980 sf	+ 4,650 sf
<i>Gross Residential Floor Area</i>	56,330 sf	60,980 sf	+ 4,650 sf
<b>Exempted Floor Area</b>	10,330 sf	14,980 sf	+ 4,650 sf
<b>Provided Perimeter Wall/Baseheight</b>	63 ft	70 ft	+ 7 ft
<b>Provided Overall Height</b>	73 ft	80 ft	+ 7 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	65 % / 35 %	65 % / 35 %	0 / 0
<b>Dwelling Units</b>	54	54	0
<b>Parking Spaces</b>	27	27	0

1% Annual Chance Floodplain: FT1

Legend

- New Residential
- Zoning Envelope
- ① MEP
- ② Parking



\*BFE= Base Flood Elevation  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

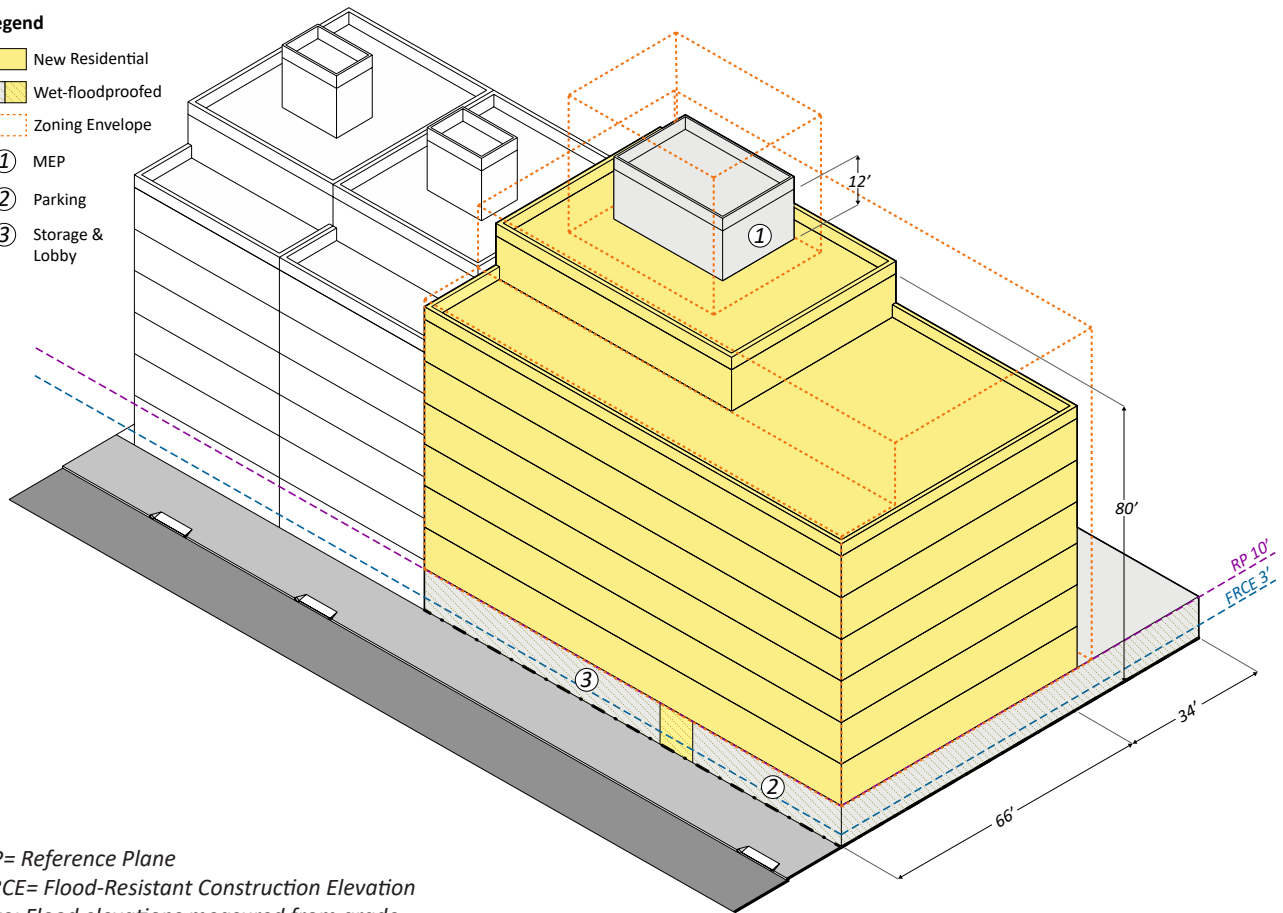
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	11,500 sf	11,500 sf	11,500 sf	0	0	0
<b>Zoning Floor Area</b>	46,000 sf	46,000 sf	46,000 sf	0	0	0
<i>Zoning Residential Floor Area</i>	46,000 sf	46,000 sf	46,000 sf	0	0	0
<b>Gross Floor Area</b>	56,330 sf	56,330 sf	60,980 sf	0	+ 4,650 sf	+ 4,650 sf
<i>Gross Residential Floor Area</i>	56,330 sf	56,330 sf	60,980 sf	0	+ 4,650 sf	+ 4,650 sf
<b>Exempted Floor Area</b>	10,330 sf	10,330 sf	14,980 sf	0	+ 4,650 sf	+ 4,650 sf
<b>Provided Perimeter Wall/Baseheight</b>	63 ft	63 ft	70 ft	0	+ 7ft	+ 7ft
<b>Provided Overall Height</b>	73 ft	73 ft	80 ft	0	+ 7 ft	+ 7 ft
<b>Provided Number of Stories</b>	7	7	8	0	+ 1	+ 1
<b>Lot Coverage / Open Space</b>	65 % / 35 %	65 % / 35 %	65 % / 35 %	0 / 0	0 / 0	0 / 0
<b>Dwelling Units</b>	54	54	54	0	0	0
<b>Parking Spaces</b>	27	27	27	0	0	0

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① MEP
- ② Parking
- ③ Storage & Lobby



\*RP= Reference Plane

\*FRCE= Flood-Resistant Construction Elevation

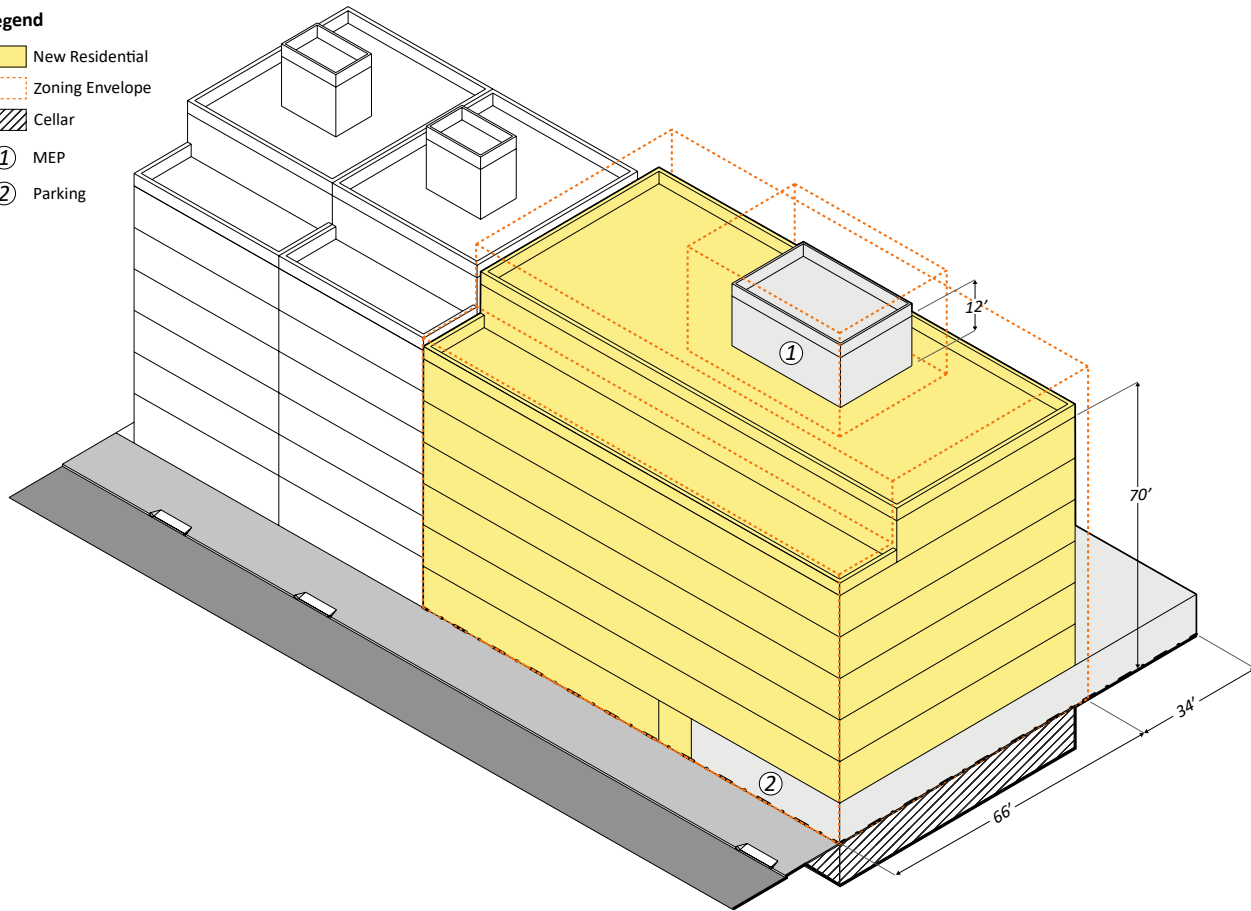
Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	11,500 sf	11,500 sf	0
<b>Zoning Floor Area</b>	46,000 sf	46,000 sf	0
<i>Zoning Residential Floor Area</i>	46,000 sf	46,000 sf	0
<b>Gross Floor Area</b>	56,330 sf	60,980 sf	+ 4,650 sf
<i>Gross Residential Floor Area</i>	56,330 sf	60,980 sf	+ 4,650 sf
<b>Exempted Floor Area</b>	10,330 sf	14,980 sf	+ 4,650 sf
<b>Provided Perimeter Wall/Baseheight</b>	63 ft	70 ft	+ 7 ft
<b>Provided Overall Height</b>	73 ft	80 ft	+ 7 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	65 % / 35 %	65 % / 35 %	0 / 0
<b>Dwelling Units</b>	54	54	0
<b>Parking Spaces</b>	27	27	0

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- Zoning Envelope
- Cellar
- ① MEP
- ② Parking

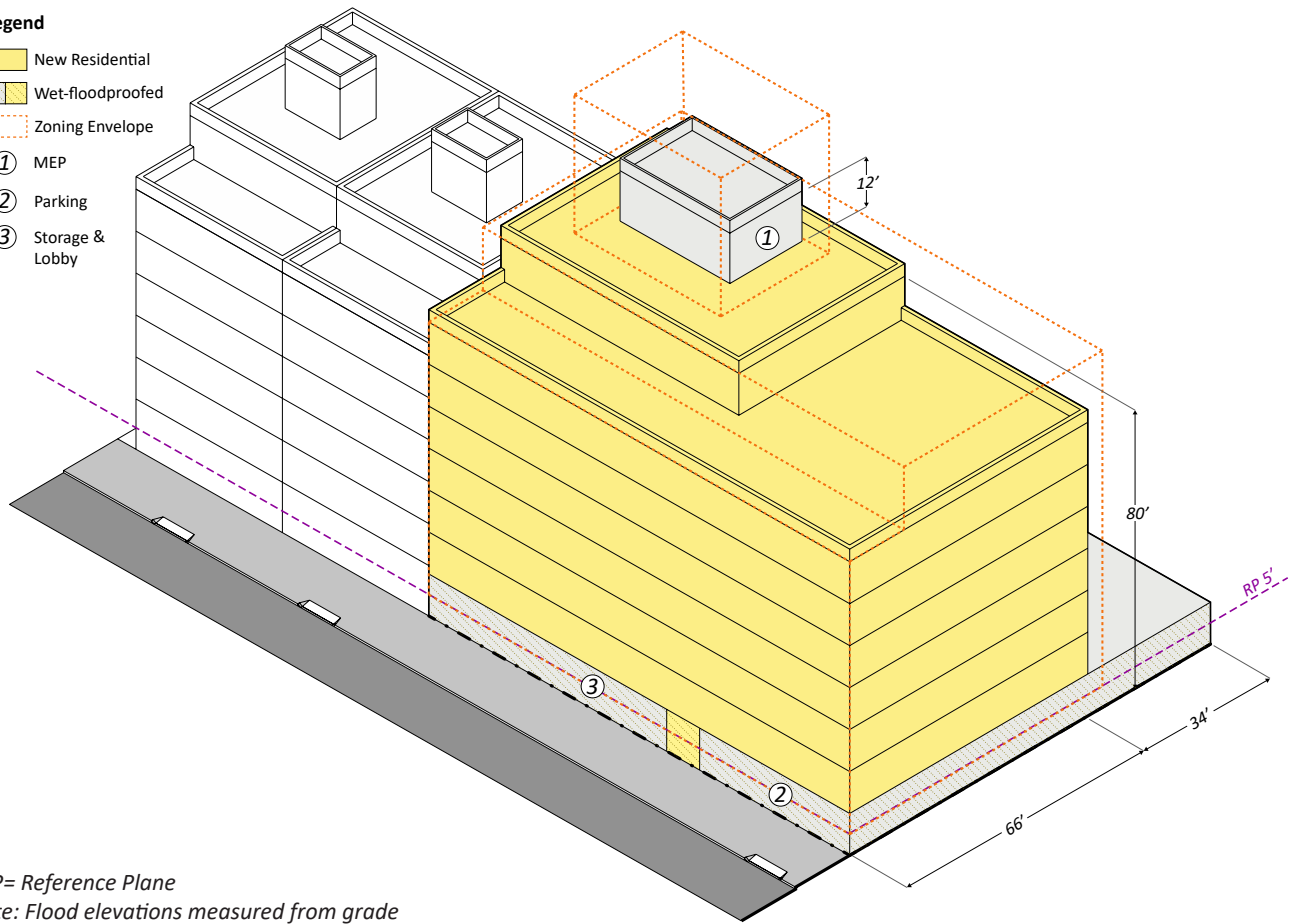


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	11,500 sf	11,500 sf	0
<b>Zoning Floor Area</b>	46,000 sf	46,000 sf	0
<i>Zoning Residential Floor Area</i>	46,000 sf	46,000 sf	0
<b>Gross Floor Area</b>	63,920 sf	60,980 sf	- 2,940 sf
<i>Gross Residential Floor Area</i>	63,920 sf	60,980 sf	- 2,940 sf
<b>Exempted Floor Area</b>	17,920 sf	14,980 sf	- 2,940 sf
<b>Provided Perimeter Wall/Baseheight</b>	60 ft	70 ft	+ 10 ft
<b>Provided Overall Height</b>	70 ft	80 ft	+ 10 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	65 % / 35 %	65 % / 35 %	0 / 0
<b>Dwelling Units</b>	54	54	0
<b>Parking Spaces</b>	27	27	0

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① MEP
- ② Parking
- ③ Storage & Lobby



\*RP= Reference Plane  
 Note: Flood elevations measured from grade

	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	11,500 sf	11,500 sf	0
<b>Zoning Floor Area</b>	46,000 sf	46,000 sf	0
<i>Zoning Residential Floor Area</i>	46,000 sf	46,000 sf	0
<b>Gross Floor Area</b>	63,920 sf	60,980 sf	- 2,940 sf
<i>Gross Residential Floor Area</i>	63,920 sf	60,980 sf	- 2,940 sf
<b>Exempted Floor Area</b>	17,920 sf	14,980 sf	- 2,940 sf
<b>Provided Perimeter Wall/Baseheight</b>	60 ft	70 ft	+ 10 ft
<b>Provided Overall Height</b>	70 ft	80 ft	+ 10 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	65 % / 35 %	65 % / 35 %	0 / 0
<b>Dwelling Units</b>	54	54	0
<b>Parking Spaces</b>	27	27	0

## **Prototype 6**

### *R6 Residence District, 500-foot x 200-foot Through Lot Campus-Style Housing, Retrofit*

#### **Introduction**

Prototypical Analysis Site 6 utilizes a generic 500-foot by 200-foot through lot (100,000 sf) in an R6 residential zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 6 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Added MEP building with generators as permitted obstruction on open space.

#### **Existing Condition**

Under existing conditions, Prototypical Analysis Site 6 contains campus-style housing with eight-stories and 320 dwelling units (no dwelling units on the ground floor). The zoning lot is developed with 240,000 sf of zoning floor area with an FAR of 2.40, complying with the permitted FAR within an R6 zoning district, which allows for a maximum FAR of 2.43 if the requisite amount of open space is provided under the height factor regulations (ZR 23-151). The building's gross floor area is 270,000 sf. Spaces used for the cellar (22,800 sf) and MEP equipment (7,200 sf) are exempted from the zoning floor area under existing conditions (ZR 12-10 Definition of Floor Area).

The total building height on Prototypical Analysis Site 6 is 80 feet under existing conditions, fitting within the permitted sky exposure plane of an R6 zoning district (ZR 23-631). All residential floors have floor-to-floor heights of 10 feet each. The MEP equipment is located in the cellar of Site 6.

The multi-family campus housing was built prior to December 15, 1961 and is outside the Transit Zone. The site's dwelling units would be affordable and thus meet the lower parking space requirements for income-restricted housing units. The existing scenario provides 78 parking spaces in an unenclosed parking lot on site meeting the minimum required parking spaces (ZR 25-251). The building complies with all other underlying zoning regulations in the existing condition.

#### **1% Annual Chance Floodplain Scenario**

##### ***No-Action Condition***

For a conservative analysis, the No-Action scenario on Prototypical Analysis Site 6 does not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with Appendix G requirements. The permitted sky exposure plane of an R6 residence district is measured from the BFE (ZR 12-10 Definition of a Base Plane).

##### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 6 would be retrofitted to elevate the mechanical equipment. The site would accommodate campus-style housing with eight stories, 320 dwelling units (no dwelling units on the ground floor), and a new detached building with MEP and generators. The zoning lot would be occupied with 240,000 sf of zoning floor area with an FAR of 2.40 under With-Action conditions, the maximum permitted within an R6 zoning district, which allows for a

maximum FAR of 2.43 (ZR 23-151). The building's gross floor area would be 247,200 sf. As a result of the Proposed Action, the MEP building (7,200 sf) would be exempted from the zoning floor area.

Prototypical Analysis Site 6 is mapped with a BFE of two feet above grade, according to FEMA's flood maps, resulting in a FRCE of three feet. The total building height on Prototypical Analysis Site 6 in the With-Action scenario would continue to be 80 feet, as measured from grade, fitting within the permitted sky exposure plane of an R6 zoning district (ZR 23-631). All residential floors would have a floor-to-floor height of 10 feet. Additionally, the MEP equipment on Site 6 would be relocated from the cellar to a new detached building located on-site and 30 feet from the existing residential building. The cellar would be filled-in, resulting in a reduction in the gross floor area of the site. The overall height of the MEP building would be 21 feet and the MEP equipment inside would be elevated above the FRCE in the future with the Proposed Action. In addition, the exhaust stack of the MEP building would be located above the adjacent residential building, and the generators would be enclosed.

Even with the addition of the MEP building on the site, Prototypical Analysis Site 6 would continue to provide 78 parking spaces in an unenclosed parking lot on site, continuing to meet the minimum required parking spaces (ZR 25-251). Under the Proposed Action, the reduction of open space on the site would not create a new non-compliance with open space requirements. The building on Site 6 would comply with all other underlying zoning regulations in the future with the Proposed Action.

### ***Increment***

As a result of the Proposed Action, there would be a reduction of 22,800 sf of gross floor area on Prototypical Analysis Site 6 in the 1% annual chance floodplain, because the cellar would be filled in to meet Appendix G requirements and the MEP equipment would be relocated into a new on-site building. There would be a seven percent decrease in the open space on the lot. No additional dwelling units, stories, or parking spaces would be added to Prototypical Analysis Site 6 as a result of the Proposed Action.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 6 would be the same as the existing condition, because buildings in the 0.2% annual chance floodplain don't have to meet the minimum Appendix G requirements. The permitted sky exposure of an R6 residence district is measured from grade because there is no BFE in the 0.2% floodplain (ZR 23-631).

#### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 6 would be retrofitted. The site would accommodate campus-style housing with eight stories, 320 dwelling units (no dwelling units on the ground floor), and a new detached MEP building with generators. The zoning lot would be occupied with 240,000 sf of zoning floor area with an FAR of 2.40 under With-Action conditions, the maximum permitted within an R6 zoning district, which allows for a maximum FAR of 2.43 (ZR 23-151). The building's gross floor area would be 247,200 sf. As a result of the Proposed Action, the MEP building (7,200 sf) would be exempted from the zoning floor area on Prototypical Analysis Site 6.

The total building height on Prototypical Analysis Site 6 in the With-Action scenario would continue to be 80 feet, fitting within the permitted sky exposure plane of an R6 zoning district (ZR 23-631). All residential floors would have floor-to-floor heights of 10 feet. Additionally, the MEP equipment on Site 6 would be relocated from the cellar to a new detached building located on-site and 30 feet from the existing residential



building. The cellar would be filled-in, resulting in a reduction in the gross floor area of the site. The overall height of the MEP building would be 21 feet and the MEP equipment inside would be elevated to five feet above grade in the future with the Proposed Action. In addition, the exhaust stack of the MEP building would be located above adjacent residential building.




Even with the addition of the MEP building on the site, Prototypical Analysis Site 6 would continue to provide 78 parking spaces in an unenclosed parking lot on site, continuing to meet the minimum required parking spaces (ZR 25-251). Under the Proposed Action, the reduction of open space on the site would not create a new non-compliance with open space requirements. The building on Site 6 would comply with all other underlying zoning regulations in the future with the Proposed Action.

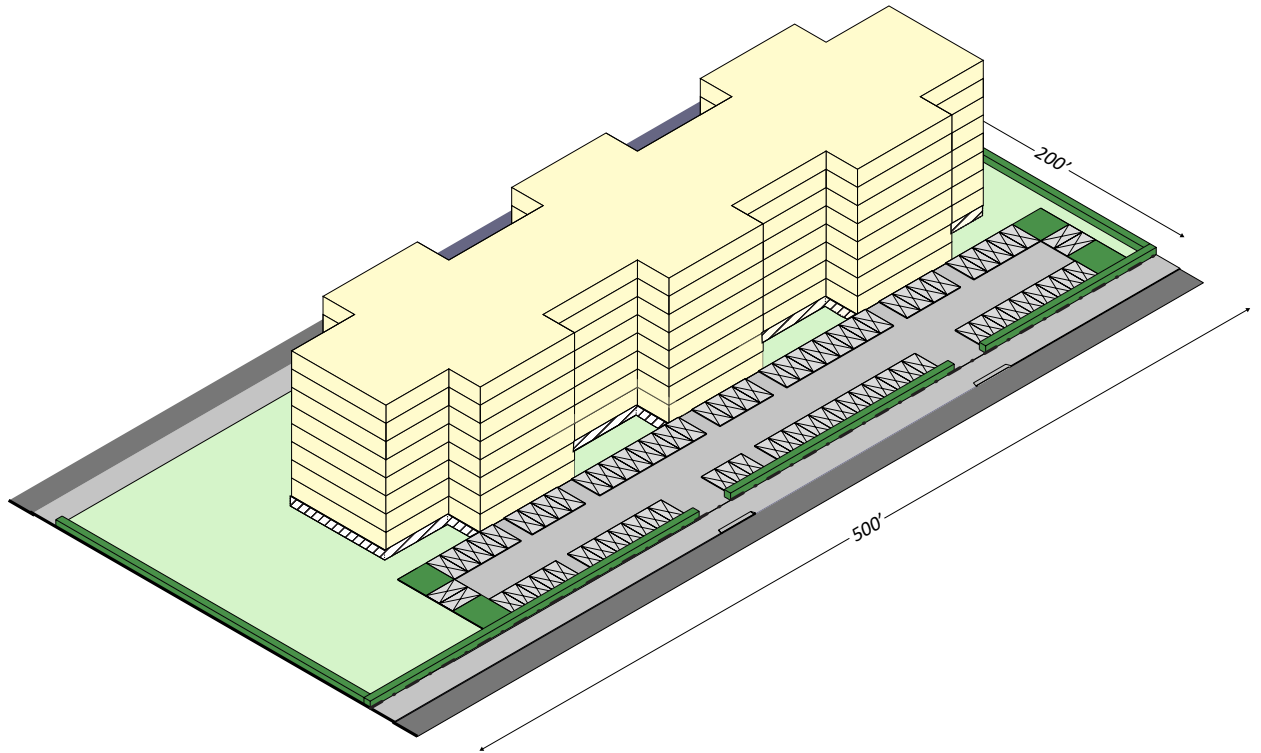
### ***Increment***

As a result of the Proposed Action, there would be a reduction of 22,800 sf of gross floor area on Prototypical Analysis Site 6 in the 0.2% annual chance floodplain, because the cellar would be filled in to meet Appendix G requirements and the MEP equipment would be relocated into a new on-site building. There would be a seven percent decrease in the open space on the lot. No additional dwelling units, stories, or parking spaces would be added to Prototypical Analysis Site 6 as a result of the Proposed Action.

Existing Condition

Legend

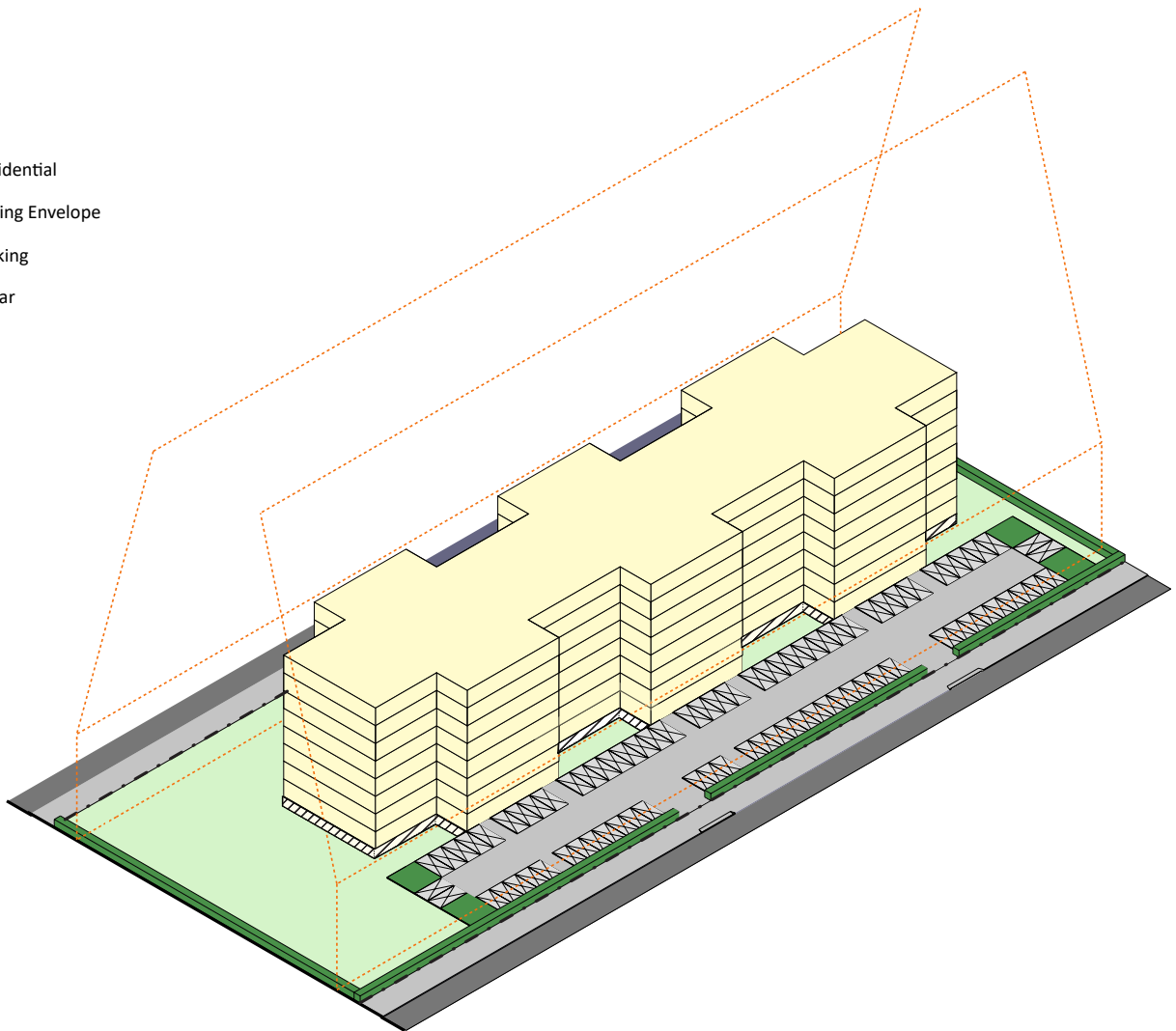
-  Residential
-  Parking
-  Cellar



1% & 0.2% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Zoning Envelope
- Parking
- Cellar

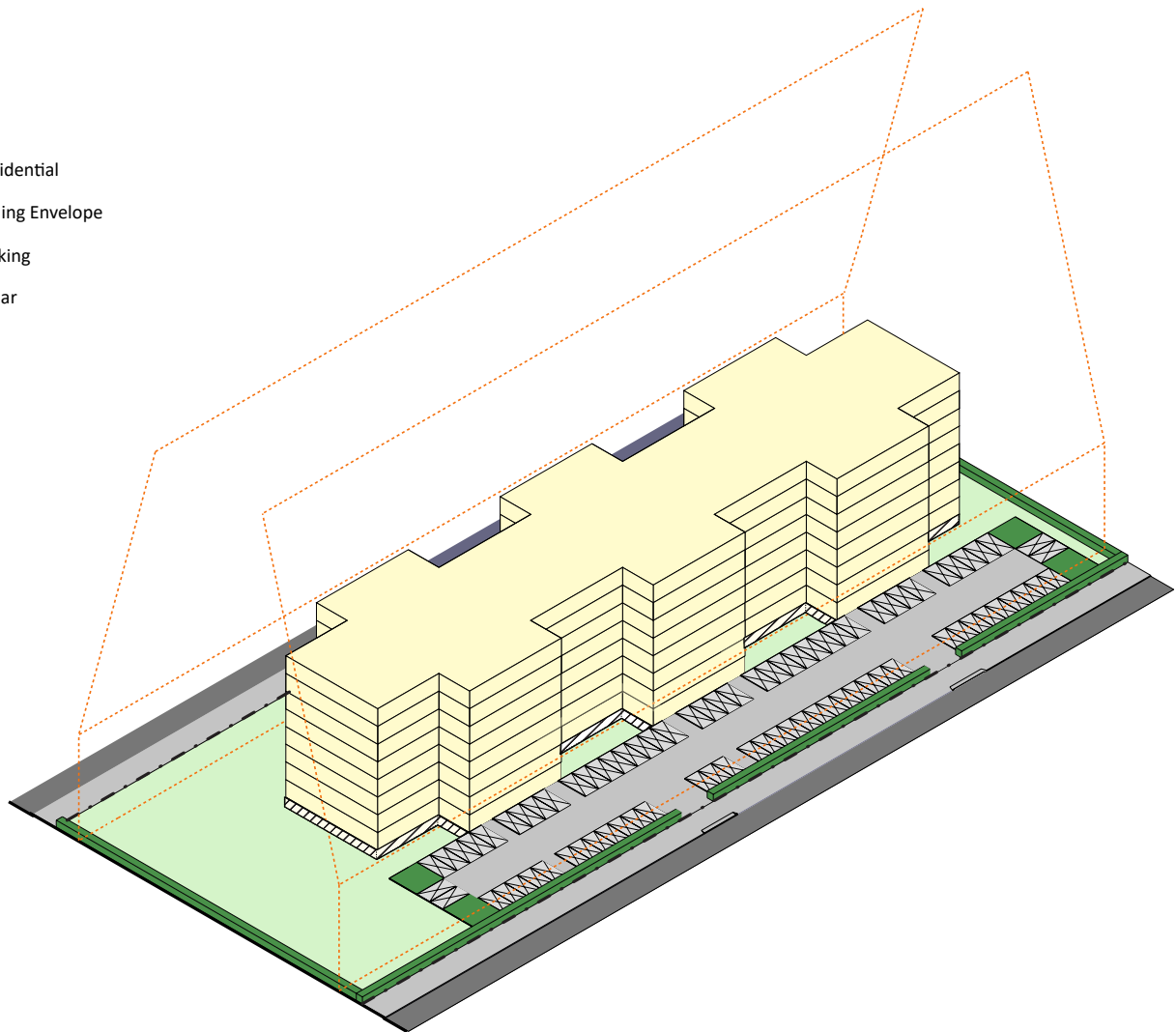


	No-Action Condition	With-Action Condition	Change N/A to W/A
<b>Lot Area</b>	100,000 sf	100,000 sf	0
<b>Zoning Floor Area</b>	240,000 sf	240,000 sf	0
<i>Zoning Residential Floor Area</i>	240,000 sf	240,000 sf	0
<b>Gross Floor Area</b>	270,000 sf	247,200 sf	- 22,800 sf
<i>Gross Residential Floor Area</i>	270,000 sf	247,200 sf	- 22,800 sf
<b>Exempted Floor Area</b>	30,000 sf	7,200 sf	- 22,800 sf
<b>Provided Overall Height</b>	80 ft	80 ft	0
<b>Provided Number of Stories</b>	8	8	0
<b>Open Space / Lot Coverage</b>	46 % / 54 %	39 % / 61 %	- 7 % / + 7 %
<b>Dwelling Units</b>	320	320	0
<b>Parking Spaces</b>	78	78	0

1% Annual Chance Floodplain: FT1

Legend

- Residential
- Zoning Envelope
- Parking
- Cellar



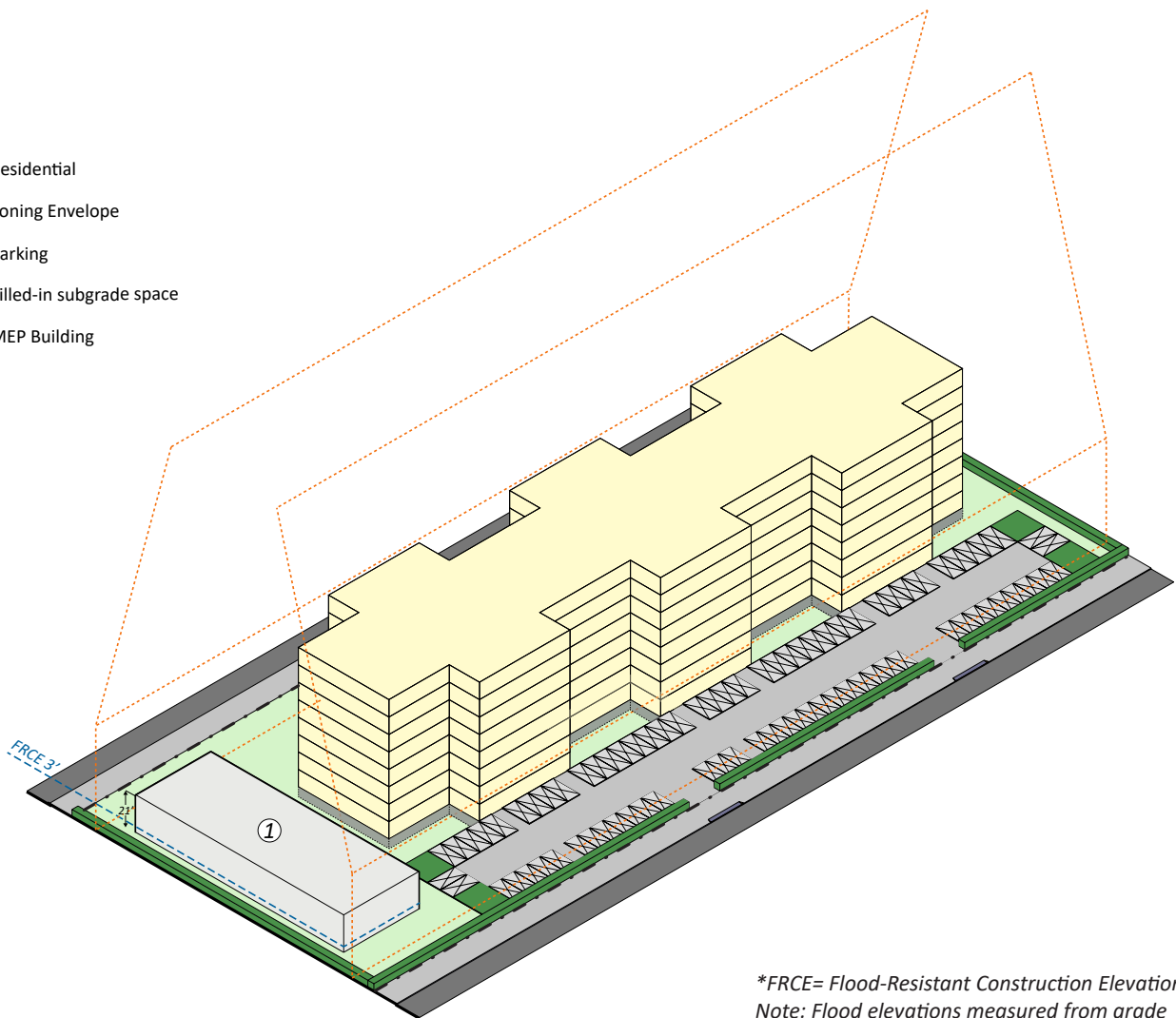
	No-Action Condition	1% Annual Chance Floodplain: FT1	With-Action Condition	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	100,000 sf	100,000 sf	100,000 sf	0	0	0
<b>Zoning Floor Area</b>	240,000 sf	240,000 sf	240,000 sf	0	0	0
<i>Zoning Residential Floor Area</i>	240,000 sf	240,000 sf	240,000 sf	0	0	0
<b>Gross Floor Area</b>	270,000 sf	270,000 sf	247,200 sf	0	- 22,800 sf	- 22,800 sf
<i>Gross Residential Floor Area</i>	270,000 sf	270,000 sf	247,200 sf	0	- 22,800 sf	- 22,800 sf
<b>Exempted Floor Area</b>	30,000 sf	30,000 sf	7,200 sf	0	- 22,800 sf	- 22,800 sf
<b>Provided Overall Height</b>	80 ft	80 ft	80 ft	0	0	0
<b>Provided Number of Stories</b>	8	8	8	0	0	0
<b>Open Space / Lot Coverage</b>	46 % / 54 %	46 % / 54 %	39 % / 61 %	0 / 0	- 7% / + 7%	- 7% / + 7%
<b>Dwelling Units</b>	320	320	320	0	0	0
<b>Parking Spaces</b>	78	78	78	0	0	0

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% & 0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Residential
- Zoning Envelope
- Parking
- Filled-in subgrade space
- ① MEP Building



	No-Action Condition	With-Action Condition	Change N/A to W/A
<b>Lot Area</b>	100,000 sf	100,000 sf	0
<b>Zoning Floor Area</b>	240,000 sf	240,000 sf	0
<i>Zoning Residential Floor Area</i>	240,000 sf	240,000 sf	0
<b>Gross Floor Area</b>	270,000 sf	247,200 sf	- 22,800 sf
<i>Gross Residential Floor Area</i>	270,000 sf	247,200 sf	- 22,800 sf
<b>Exempted Floor Area</b>	30,000 sf	7,200 sf	- 22,800 sf
<b>Provided Overall Height</b>	80 ft	80 ft	0
<b>Provided Number of Stories</b>	8	8	0
<b>Open Space / Lot Coverage</b>	46 % / 54 %	39 % / 61 %	- 7% / + 7%
<b>Dwelling Units</b>	320	320	0
<b>Parking Spaces</b>	78	78	0

## **Prototype 7**

*R5 / C1-2 District, 120-foot by 100-foot Subdivided Lot  
Low-Rise Mixed Use Building, New Construction*

### **Introduction**

Prototypical Analysis Site 7 utilizes a generic 120-foot by 100-foot interior lot (12,000 sf) that is subdivided into five tax lots. Site 7 is located in an R5 residential zoning district with a C1-2 commercial overlay. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 7 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes;
- Floor area exemption for dry-floodproofed commercial space; and
- Allowance of commercial use on the second floor.

### **Existing Condition**

Under existing conditions, Prototypical Analysis Site 7 is a 12,000 sf vacant lot. The lot is tentatively subdivided into five separate tax lots: three 20-foot by 100-foot (2,000 sf) lots and two 30-foot by 100-foot (3,000 sf) lots.

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

In the future without the Proposed Action, it is expected that Prototypical Analysis Site 7 would be developed with low-rise, mixed-use commercial and residential buildings with four stories and 10 dwelling units. Two dwelling units would be provided per building. While general development trends have shown that residential buildings are more viable due to the high costs of dry-floodproofing required for commercial uses at grade, the No-Action scenario for Site 7 depicts a mixed-use building for conservative analysis purposes.

Under No-Action conditions, Site 7 would be developed with 15,000 sf of zoning floor area, providing an FAR of 1.25, the maximum permitted within an R5/C1-2 zoning district not using infill regulations (ZR 23-142 and ZR 35-22). The building's gross floor area would be 21,600 sf (17,200 gsf residential and 4,400 gsf commercial). Additionally, floor spaces used for MEP equipment (1,100 sf) and the ground floor retail use (5,500 sf) would be exempted from the zoning floor area on Prototypical Analysis Site 7 in the future without the Proposed Action (ZR 12-10 Definition of Floor Area, Definition of Cellar).

Prototypical Analysis Site 7 is mapped with a BFE of five feet above grade, according to FEMA's flood maps resulting in a DFE of six feet. In order to meet the minimum Appendix G requirements and use the ground floor as retail space and internal residential access, the first occupiable floor of the building on Site 7 would be placed well above the DFE but slightly below 10 feet above grade to count as a cellar and exempt floor area. The total building height would be about 37 feet with a perimeter wall of about 28 feet, as measured from grade, fitting within the permitted building envelope of an R5 zoning district measured from the BFE. This would allow for a maximum building height of 45 feet (40 feet plus five feet BFE) and a maximum perimeter wall height of 35 feet (30 feet plus five feet BFE) (ZR 23-631, ZR 35-22, and ZR

12-10 Definition of a Base Plane). The ground floor of Prototypical Analysis Site 7 would have dry-floodproofed commercial space and internal residential access with floor-to-floor height of about 10 feet, and residential floor-to-floor heights of nine feet each.

The No-Action scenario on Site 7 would contain nine unenclosed parking spaces in the rear of the lot, as required in the underlying zoning for the provided dwelling units (ZR 25-23). There would be 13 required parking spaces for the retail use, however it is waived since it is below the waiver threshold of 15 spaces (ZR 36-21, 36-231). The building on Prototypical Analysis Site 7 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 7 would be developed with low-rise, mixed-use commercial and residential buildings with four stories and 10 dwelling units. Two dwelling units would be provided per building. Under With-Action conditions, the zoning lot would be developed with a total of 15,000 sf of zoning floor area, including 12,150 sf of residential zoning floor area and 2,860 sf of commercial zoning floor area, the maximum permitted within an R5 zoning district which allows for an FAR of 1.25 (ZR 23-142 and ZR 35-22). The building's gross floor area would be 19,800 sf (14,290 gsf residential and 5,510 gsf commercial). As a result of the Proposed Action, floor spaces used for MEP equipment (1,100 sf) and the first 30 feet of dry-floodproofed space from the street wall at ground level (total 3,690 sf) would be exempted from the zoning floor area on Prototypical Analysis Site 7. In the future with the Proposed Action, the exempted commercial floor area at the ground floor would be added to the second floor as commercial use that would most likely be used as an accessory space and as overall residential use.

In order to floodproof the building for the long term and exceed the minimum Appendix G requirements, in the future with the Proposed Action, the building on Prototypical Analysis Site 7 would utilize the "reference plane" allowance of 10 feet in the 1% flood zone. In order to get the proposed floor area exemption, the ground floor would be dry-floodproofed and the FSAFE would be at 15 feet above grade. The total building height would be 42 feet with a perimeter wall of 24 feet, as measured from grade, fitting within the permitted building envelope of an R5 zoning district as measured from a "reference plane" of 10 feet above grade, which allows for a maximum building height of 50 feet (40 feet plus 10 feet) and a maximum perimeter wall height of 40 feet (30 feet plus 10 feet). The ground floor would have a residential lobby and active commercial use with a floor-to-floor height of 15 feet, while residential floors two through four would have floor-to-floor heights of nine feet each on Site 7 in the future with the Proposed Action.

The With-Action scenario on Prototypical Analysis Site 7 would contain nine unenclosed parking spaces in the rear of the lot, as required in the underlying zoning (ZR 25-23). While the exempted ground floor retail space does not trigger parking requirements, the added second story commercial space does. There are 10 required parking spaces for the retail use, however, it is waived since it is below the waiver threshold of 15 spaces (ZR 36-21, 36-231). The building on Site 7 would comply with all other underlying zoning regulations in the future with the Proposed Action.

### ***Increment***

As a result of the Proposed Action, there would be a reduction of 1,800 sf of gross floor area and a reduction of 1,810 sf of exempted floor area on Prototypical Analysis Site 7 in the 1% annual chance floodplain, as well as a reduction of four feet of perimeter wall and an additional five feet of overall building height as compared to No-Action conditions. There would also be a reduction of 2,910 sf of gross residential floor area and an increase of 1,110 sf of gross commercial floor area on the site in the future with the Proposed

Action. There would be no changes to the number of dwelling units, parking spaces, or lot coverage on Site 7 as a result of the Proposed Action.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

In the future without the Proposed Action, Prototypical Analysis Site 7 would be developed with low-rise, mixed-use commercial and residential buildings with four stories and 10 dwelling units. Two dwelling units would be provided per building. While general development trends have shown that residential buildings are more viable due to the high costs of dry-floodproofing required for commercial uses at grade, the No-Action scenario for Site 7 depicts a mixed-use building for conservative analysis purposes.

Under No-Action conditions, Site 7 would be developed with 15,000 sf of zoning floor area, including 12,060 sf of residential zoning floor area and 2,940 sf of commercial zoning floor area, providing an FAR of 1.25, the maximum permitted within an R5/C1-2 zoning district (ZR 23-142 and ZR 35-22). The building's gross floor area would be 20,040 sf (12,480 gsf residential and 7,560 gsf commercial). Additionally, floor spaces used for MEP equipment (840 sf) and cellar (4,200 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). The cellar would be used for commercial accessory use.

Prototypical Analysis Site 7 would have the first occupiable floor at grade and the building would not meet the minimum Appendix G requirements under No-Action conditions. The total building height on Site 7 would be 37 feet with a perimeter wall of 28 feet, fitting within the permitted building envelope of an R5/C1-2 zoning district, which would allow for a maximum building height of 40 feet and a maximum perimeter wall height of 30 feet measured from grade since there is no BFE in the 0.2% floodplain (ZR 23-631 and ZR 35-22). The ground floor of Prototypical Analysis Site 7 would have a residential lobby and commercial use with a floor-to-floor height of 10 feet. The building would have residential floor-to-floor heights of nine feet each.

The No-Action scenario on Site 7 would contain nine unenclosed parking spaces in the rear of the lot, as required in the underlying zoning (ZR 25-23). There would be 10 required parking spaces for the retail use, however it is waived since it is below the waiver threshold of 15 spaces (ZR 36-21, 36-231). The building on Prototypical Analysis Site 7 would comply with all other underlying zoning regulations in the future without the Proposed Action.

#### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 7 would be developed with low-rise, mixed-use commercial and residential buildings with four stories and 10 dwelling units. Two dwelling units would be provided per building.

Under With-Action conditions, the zoning lot would be developed with a total of 15,000 sf of zoning floor area, including 11,550 sf of residential zoning floor area and 3,435 sf of commercial zoning floor area, the maximum permitted within an R5/C1-2 zoning district which allows for an FAR of 1.25 (ZR 23-142 and ZR 35-22). The building's gross floor area would be 19,850 sf (13,765 gsf residential and 6,085 gsf commercial). As a result of the Proposed Action, floor spaces used for MEP equipment (1,100 sf), the wet-floodproofed residential lobby, and the first 30 feet of dry-floodproofed space from the street wall at ground level (total 3,765 sf) would be exempted from the zoning floor area on Prototypical Analysis Site 7. The floor space used for the MEP equipment is larger because the With-Action building is larger and the MEP is calculated based on the gross floor area of the building. In the future with the Proposed Action, the



exempted commercial floor area at the ground floor would be added to the second floor as commercial use that would most likely be used as an accessory space and as overall residential use.

In order to floodproof the building for the long term, in the future with the Proposed Action, the building on Prototypical Analysis Site 7 would utilize the “reference plane” allowance of five feet in the 0.2% flood zone. In order to get the proposed floor area exemption, the ground floor would be dry-floodproofed and the FSAFE would be at 15 feet above grade. The total building height would be 42 feet with a perimeter wall of 24 feet, fitting within the permitted building envelope of an R5/C1-2 zoning district as measured from a “reference plane” of five feet above grade, which allows for a maximum building height of 45 feet (40 feet plus five feet) and a maximum perimeter wall height of 35 feet (30 feet plus five feet). The ground floor would have a residential lobby and active commercial use with floor-to-floor heights of 15 feet, while residential floors two through four have floor-to-floor heights of nine feet each on Site 7 in the future with the Proposed Action.

The With-Action scenario on Prototypical Analysis Site 7 would contain nine unenclosed parking spaces in the rear of the lot, as required in the underlying zoning (ZR 25-23). While the exempted ground floor retail space does not trigger parking requirements, the added second story commercial space does. There are 11 required parking spaces for the retail use, however, it is waived since it is below the waiver threshold of 15 spaces. (ZR 36-21, 36-231). The building on Site 7 would comply with all other underlying zoning regulations in the future with the Proposed Action.


### ***Increment***

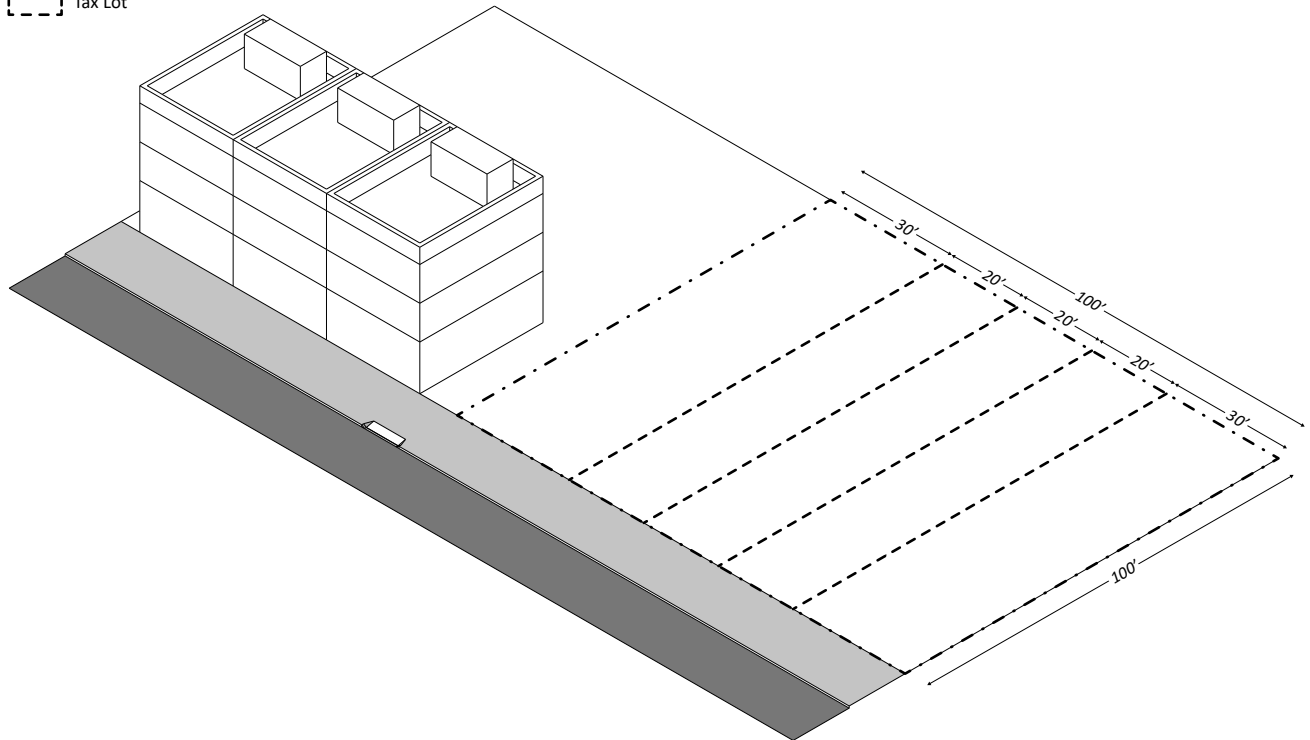
As a result of the Proposed Action, there would be a reduction of 190 sf of gross floor area and a reduction of 335 sf of exempted floor area on Prototypical Analysis Site 7 in the 0.2% annual chance floodplain, as well as a reduction of four feet of perimeter wall and an additional five feet of overall building height as compared to No-Action conditions. There would also be an increase of 1,285 sf of gross residential floor area and a decrease of 1,475 sf of gross commercial floor area on the site in the future with the Proposed Action. There would be no changes to the number of dwelling units, lot coverage, or parking spaces on Site 7 as a result of the Proposed Action.

Existing Condition

Legend

 Zoning Lot

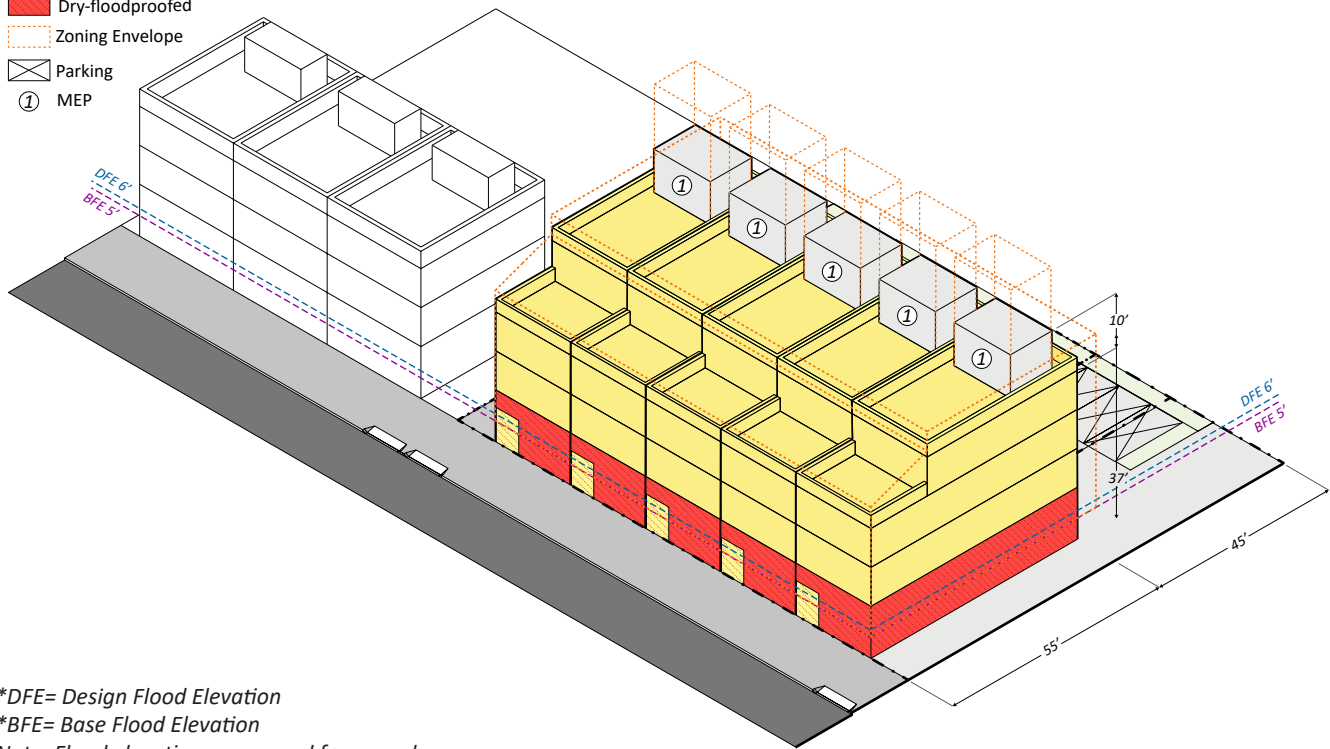
 Tax Lot



1% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- New Commercial
- Dry-floodproofed
- Zoning Envelope
- Parking
- ① MEP



\*DFE= Design Flood Elevation

\*BFE= Base Flood Elevation

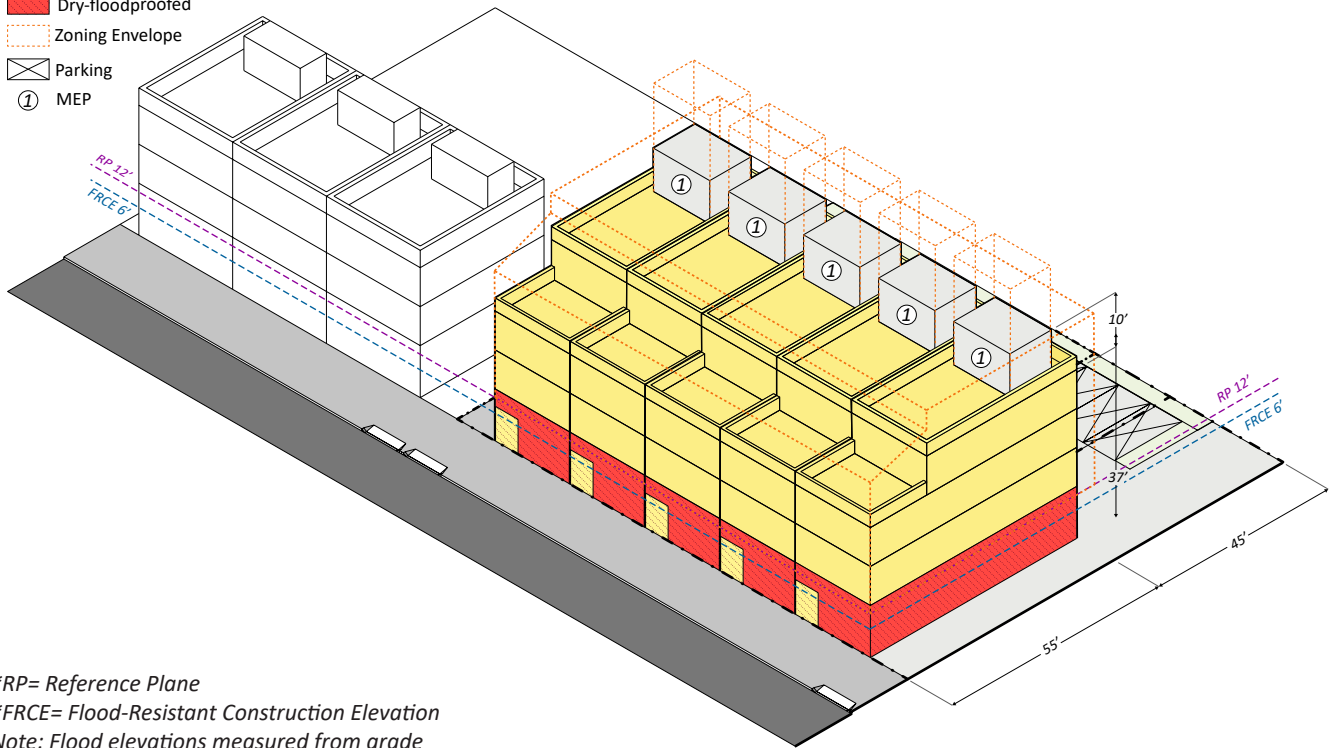
Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	12,000 sf	12,000 sf	0
<b>Zoning Floor Area</b>	15,000 sf	15,000 sf	0
Zoning Residential Floor Area	15,000 sf	12,150 sf	- 2,850 sf
Zoning Commercial Floor Area	0 sf	2,860 sf	+ 2,860 sf
<b>Gross Floor Area</b>	21,600 sf	19,800 sf	- 1,800 sf
Gross Residential Floor Area	17,200 sf	14,290 sf	- 2,910 sf
Gross Commercial Floor Area	4,400 sf	5,510 sf	+ 1,110 sf
<b>Exempted Floor Area</b>	6,600 sf	4,790 sf	- 1,810 ft
<b>Provided Perimeter Wall/Baseheight</b>	28 ft	24 ft	- 6 ft
<b>Provided Overall Height</b>	37 ft	42 ft	+ 3 ft
<b>Provided Number of Stories</b>	4	4	0
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54%	+ 2% / - 2%
<b>Dwelling Units</b>	10	10	0
<b>Parking Spaces</b>	9	9	0

1% Annual Chance Floodplain: FT1

Legend

- New Residential
- New Commercial
- Dry-floodproofed
- Zoning Envelope
- Parking
- MEP



\*RP= Reference Plane  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

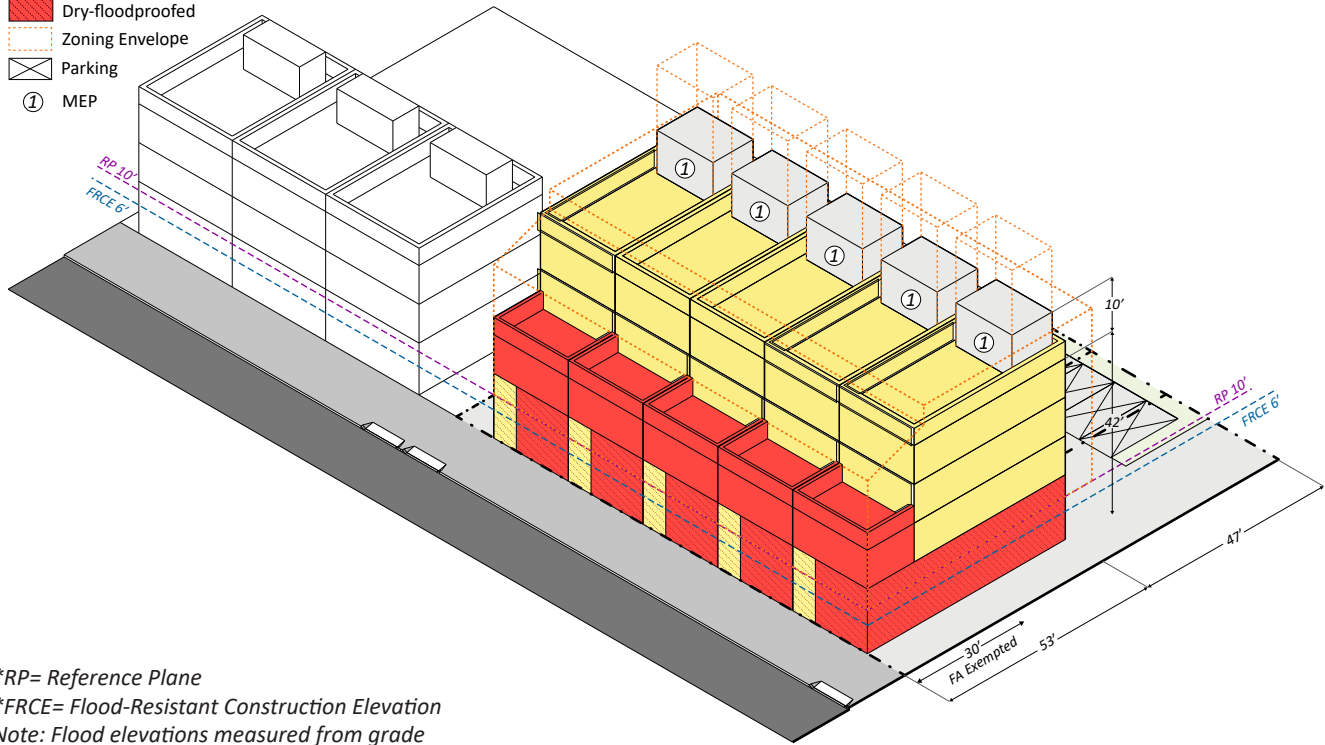
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	12,000 sf	12,000 sf	12,000 sf	0	0	0
<b>Zoning Floor Area</b>	15,000 sf	15,000 sf	15,000 sf	0	0	0
Zoning Residential Floor Area	15,000 sf	15,000 sf	12,150 sf	0	- 2,850 sf	- 2,850 sf
Zoning Commercial Floor Area	0 sf	0 sf	2,860 sf	0	+ 2,860 sf	+ 2,860 sf
<b>Gross Floor Area</b>	21,600 sf	21,600 sf	19,800 sf	0	- 1,800 sf	- 1,800 sf
Gross Residential Floor Area	17,200 sf	17,200 sf	14,290 sf	0	- 2,910 sf	- 2,910 sf
Gross Commercial Floor Area	4,400 sf	4,400 sf	5,510sf	0	+ 1,110 sf	+ 1,110 sf
<b>Exempted Floor Area</b>	6,600 sf	6,000 sf	4,790 sf	0	- 1,810 ft	- 1,810 ft
<b>Provided Perimeter Wall/Baseheight</b>	28 ft	28 ft	24 ft	0	- 4 ft	- 4 ft
<b>Provided Overall Height</b>	37 ft	37 ft	42 ft	0	+ 5 ft	+ 5 ft
<b>Provided Number of Stories</b>	4	4	4	0	0	0
<b>Lot Coverage / Open Space</b>	44 % / 56 %	44 % / 56%	46 % / 54 %	0	0	0 / 0
<b>Dwelling Units</b>	10	10	10	0	0	0
<b>Parking Spaces</b>	9	9	9	0	0	0

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential
- New Commercial
- Dry-floodproofed
- Zoning Envelope
- Parking
- MEP



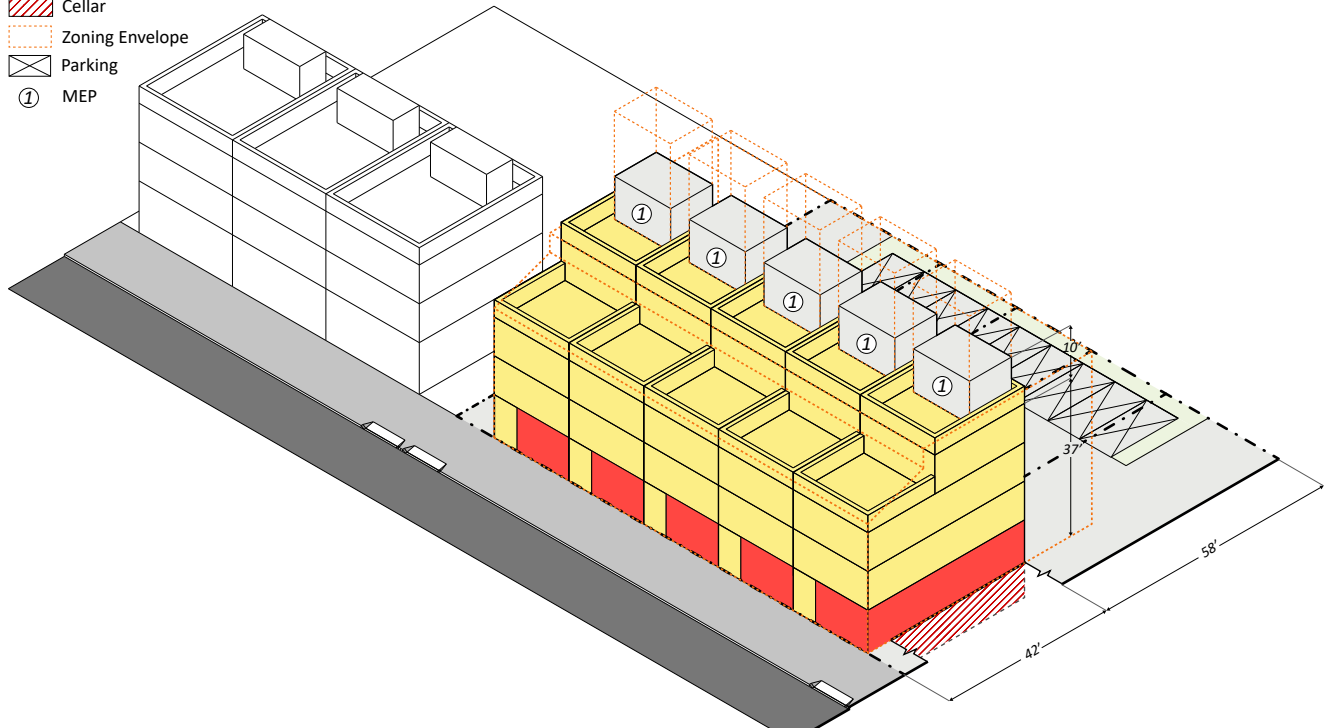
\*RP= Reference Plane  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	12,000 sf	12,000 sf	0
<b>Zoning Floor Area</b>	15,000 sf	15,000 sf	0
Zoning Residential Floor Area	15,000 sf	12,150 sf	- 2,850 sf
Zoning Commercial Floor Area	0 sf	2,860 sf	+ 2,860 sf
<b>Gross Floor Area</b>	21,600 sf	19,800 sf	- 1,800 sf
Gross Residential Floor Area	17,200 sf	14,290 sf	- 2,910 sf
Gross Commercial Floor Area	4,400 sf	5,510 sf	+ 1,110 sf
<b>Exempted Floor Area</b>	6,600 sf	4,790 sf	- 1,810 ft
<b>Provided Perimeter Wall/Baseheight</b>	28 ft	24 ft	- 4 ft
<b>Provided Overall Height</b>	37 ft	42 ft	+ 5 ft
<b>Provided Number of Stories</b>	4	4	0
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	+ 2% / - 2%
<b>Dwelling Units</b>	10	10	0
<b>Parking Spaces</b>	9	9	0

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- New Commercial
- Cellar
- Zoning Envelope
- Parking
- MEP

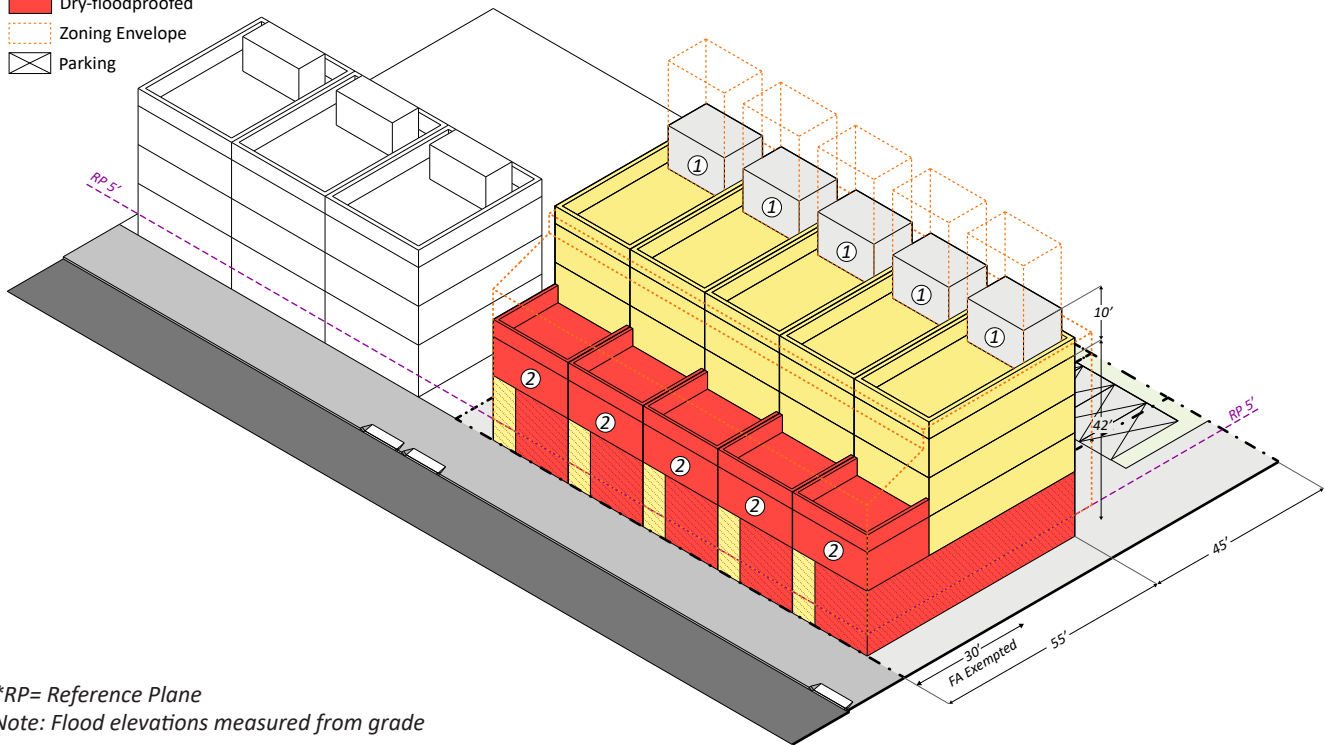


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	12,000 sf	12,000 sf	0
<b>Zoning Floor Area</b>	15,000 sf	15,000 sf	0
<i>Zoning Residential Floor Area</i>	12,060 sf	11,550 sf	- 510 sf
<i>Zoning Commercial Floor Area</i>	2,940 sf	3,435 sf	+ 495 sf
<b>Gross Floor Area</b>	20,040 sf	19,850 sf	- 190 sf
<i>Gross Residential Floor Area</i>	12,480 sf	13,765 sf	+ 1,285 sf
<i>Gross Commercial Floor Area</i>	7,560 sf	6,085 sf	- 1,475 sf
<b>Exempted Floor Area</b>	5,200 sf	4,865 sf	- 335 sf
<b>Provided Perimeter Wall/Baseheight</b>	28 ft	24 ft	- 4 ft
<b>Provided Overall Height</b>	37 ft	42 ft	+ 5 ft
<b>Provided Number of Stories</b>	4	4	0
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	+ 2% / - 2%
<b>Dwelling Units</b>	10	10	0
<b>Parking Spaces</b>	9	9	0

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential ① MEP
- New Commercial ② Accessory Use
- Dry-floodproofed
- Zoning Envelope
- Parking



\*RP= Reference Plane

Note: Flood elevations measured from grade

	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	12,000 sf	12,000 sf	0 sf
<b>Zoning Floor Area</b>	15,000 sf	15,000 sf	0 sf
Zoning Residential Floor Area	12,060 sf	11,550 sf	- 510 sf
Zoning Commercial Floor Area	2,940 sf	3,435 sf	+ 495 sf
<b>Gross Floor Area</b>	20,040 sf	19,850 sf	- 190 sf
Gross Residential Floor Area	12,480 sf	13,765 sf	+ 1,285 sf
Gross Commercial Floor Area	7,560 sf	6,085 sf	- 1,475 sf
<b>Exempted Floor Area</b>	5,200 sf	4,865 sf	- 335 sf
<b>Provided Perimeter Wall/Baseheight</b>	28 ft	24 ft	- 4 ft
<b>Provided Overall Height</b>	37 ft	42 ft	+ 5 ft
<b>Provided Number of Stories</b>	4	4	0
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	+ 2% / - 2%
<b>Dwelling Units</b>	10	10	0
<b>Parking Spaces</b>	9	9	0

## **Prototype 8**

*R7A / C1-2 District, 25-foot x 100-foot Interior Lot  
Mid-Rise Multi-Family Apartment Building, Retrofit*

### **Introduction**

Prototypical Analysis Site 8 utilizes a generic 25-foot by 100-foot interior lot (2,500 sf) in an R7A contextual residential zoning district with a C1-2 commercial overlay. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 8 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes;
- Floor area exemption for wet-floodproofed space and dry-floodproofed commercial space on the ground floor;
- Minor floor area exemption for flood panels; and
- Streetscape improvements.

### **Existing Condition**

Under existing conditions, Prototypical Analysis Site 8 contains a seven-story residential building with 13 dwelling units and ground-floor commercial space. The zoning lot is developed with 10,000 sf of zoning floor area (8,860 zsf residential and 1,140 zsf commercial) with an FAR of 4.0, the maximum permitted within an R7A/C1-2 zoning district outside of IHDA and MIH areas (ZR 23-153 and ZR 35-22). The building's gross floor area is 10,800 sf (9,660 gsf residential and 1,140 gsf commercial). Floor spaces used for MEP equipment (300 sf) and five percent of the remaining gross floor area (500 sf) would be exempted from the zoning floor area to account for other deductions of the Quality Housing Program (ZR 12-10 Definition of Floor Area and ZR 28-10).

The total building height is 75 feet above grade, fitting within the permitted building envelope of an R7A/C1-2 district, which allows for a maximum building height of 85 feet and a maximum base height of 75 feet with a qualifying ground floor (ZR 23-631 and ZR 35-22). The ground floor has a floor-to-floor height of 15 feet and all residential floors have floor-to-floor heights of 10 feet. The MEP equipment is located on the roof of the building, and there is no parking on the site. Because the building on Site 8 is a small lot and requires 4 parking spaces which is less than the waiver threshold of 15 parking spaces, the parking is waived for the residential portion of the building (ZR 25-241, 25-261). For the retail space, since the parking requirement is 4 parking spaces, which is less than the waiver threshold of 15 spaces, retail parking is also waived for Site 8 (ZR 36-21, 36-231).

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

For a conservative analysis, the No-Action scenario would not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with the requirements of Appendix G. The permitted building envelope of an R7A district is measured from the BFE (ZR 12-10 Definition of Base Plane), which allows for a maximum building height of 87 feet (85 feet plus two feet



BFE) and a maximum perimeter wall height of 77 feet (75 feet plus two feet BFE) with the qualifying ground floor (ZR 23-662).

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 8 would be retrofitted. The site would accommodate a total of 10,000 sf of zoning floor area, including 9,805 sf of residential zoning floor area and 195 sf of commercial zoning floor area, the maximum permitted within an R7A/C1-2 zoning district which allows for an FAR of 4.0 (ZR 23-153). The building's gross floor area would be 12,105 sf (10,665 gsf residential and 1,140 gsf commercial). As a result of the Proposed Action, floor spaces used for MEP equipment (300 sf), five percent of the remaining gross floor area (500 sf) to account for other deductions of the Quality Housing Program (ZR 12-10 Definition of Floor Area and ZR 28-10), the first 30 feet of dry-floodproofed space from the street wall at ground level and wet-floodproofed residential lobby (total 930 sf), and flood panel storage space at the ground level (375 sf) would be exempted from the zoning floor area.

The Prototypical Analysis Site is mapped with a BFE of two feet above grade, according to FEMA's flood maps resulting in a FRCE of three feet. In order to floodproof the building for the long term and exceed the minimum Appendix G requirements in the future with the Proposed Action, Prototypical Analysis Site 8 would utilize the maximum proposed "reference plane" of 10 feet above grade. In order to get the proposed floor area exemption, the commercial space on the ground floor would be dry-floodproofed and the FSAFE would be placed at 15 feet above grade following the existing building structure. The 570 sf of exempted floor area would be added to the building as a partial residential story (and increase of 10 feet), increasing the building height to 85 feet in the future with the Proposed Action. This fits within the permitted building envelope of an R7A/C1-2 zoning district as measured from a "reference plane" of 10 feet above grade, which allows for a maximum building height of 95 feet (85 feet plus 10 feet) and a maximum base height of 85 feet (75 feet plus 10 feet) with the qualifying ground floor. Under With-Action conditions, the ground floor of Prototypical Analysis Site 8 would have a residential lobby and active commercial use.

The MEP equipment on Site 8 would continue to be located on the roof of the building, and there would be no parking on the site under With-Action conditions. Because the building on Site 8 is a small lot and requires 4 parking spaces, which is less than the waiver threshold of 15 parking spaces, the parking is waived for the residential portion of the building (ZR 25-241, 25-261). For the retail space, the exempted floor area is not counted towards parking, so the parking requirement is 1 parking space which is less than the waiver threshold of 15 spaces, retail parking is also waived for Site 8 (ZR 36-21, 36-231).

### ***Increment***

As a result of the Proposed Action, there would be an increase of approximately 1,305 sf of gross floor area, an increase of approximately 505 sf of exempted floor area, and an increase of 10 feet on Prototypical Analysis Site 8 in the 1% annual chance floodplain, as compared to No-Action conditions. The Proposed Action would allow the ground floor of the building to be dry-floodproofed and the first 30 feet from the street wall to be exempted. There would be an increase of residential gross floor area (1,155 sf) and an increase of residential zoning floor area (945 sf) on the site. As a result of the Proposed Action, commercial gross floor area would increase by 150 sf and commercial zoning floor area would decrease by 945 sf. Additionally, there would be no change to the number of dwelling units, parking spaces, or lot coverage on Site 8 as a result of the Proposed Action.

## **0.2% Annual Chance Floodplain Scenario**

### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 8 is the same as the existing condition because buildings in the 0.2% annual chance floodplain don't have to meet the minimum Appendix G requirements. The permitted building envelope of an R7A/C1-2 zoning district is measured from grade since there is no BFE in the 0.2% floodplain, which allows for a maximum building height of 85 feet and a maximum base height of 75 feet with the qualifying ground floor (ZR 23-662).

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 8 would be retrofitted. The site would accommodate a total of 10,000 sf of zoning floor area, including 9,805 sf of residential zoning floor area and 195 sf of commercial zoning floor area, the maximum permitted within an R7A/C1-2 zoning district which allows for an FAR of 4.0 (ZR 23-153). The building's gross floor area would be 12,105 sf (10,815 gsf residential and 1,290 gsf commercial). As a result of the Proposed Action, spaces used for MEP equipment (300 sf), five percent of the remaining gross floor area (500 sf) to account for other deductions of the Quality Housing Program (ZR 12-10 Definition of Floor Area and ZR 28-10), the first 30 feet of dry-floodproofed space from the street wall at ground level and wet-floodproofed residential lobby (total 930 sf), and flood panel storage space at the ground level (375 sf) would be exempted from the zoning floor area.

In order to floodproof the building for the long term, in the future with the Proposed Action, Prototypical Analysis Site 8 would utilize the maximum proposed "reference plane" of five feet above grade. In order to get the proposed floor area exemption, the ground floor would be dry-floodproofed and the FSAFE would be placed at 15 feet above grade following the existing building structure. Under With-Action conditions, the 570 sf of exempted floor area would be added to the building as a partial residential story (an increase of 10 feet), increasing the building height to 85 feet. This would fit within the permitted building envelope of an R7A/C1-2 zoning district as measured from a "reference plane" of five feet above grade, which allows for a maximum building height of 90 feet (85 feet plus five feet) and a maximum base height of 80 feet (75 feet plus five feet) with the qualifying ground floor. Additionally, the ground floor would have a residential lobby and active commercial use in the future with the Proposed Action.

In the With-Action scenario, the MEP equipment on Site 8 would continue to be located on the roof of the building and there would be no parking on the site. Because the building on Site 8 is a small lot and requires 4 parking spaces, which is less than the waiver threshold of 15 parking spaces, the parking is waived for the residential portion of the building (ZR 25-241, 25-261). For the retail space, the exempted floor area is not counted towards parking, so the parking requirement is 1 parking space which is less than the waiver threshold of 15 spaces, retail parking is also waived for Site 8 (ZR 36-21, 36-231).

### ***Increment***

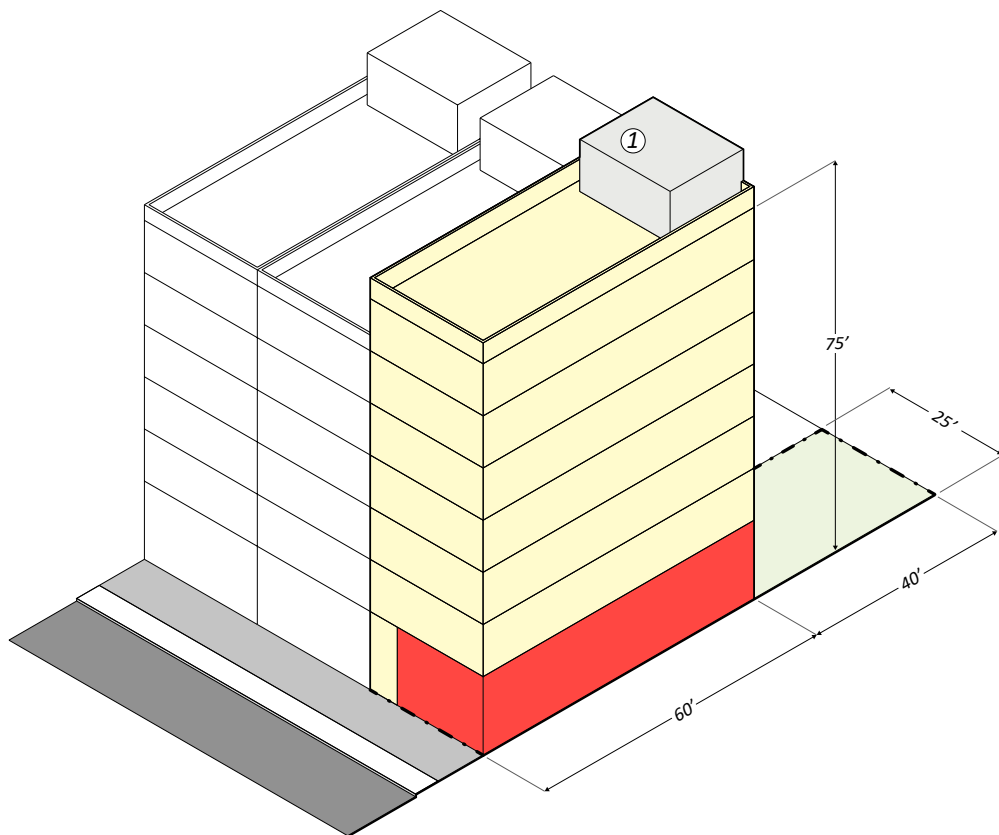
As a result of the Proposed Action, there would be an increase of approximately 1,305 sf of gross floor area, an increase of approximately 505 sf of exempted floor area, and an increase of 10 feet on Prototypical Analysis Site 8 in the 0.2% annual chance floodplain, as compared to No-Action conditions. The Proposed Action would allow the ground floor of the building to be dry-floodproofed and the first 30 feet from the street wall to be exempted. There would be an increase of residential gross floor area (1,155 sf) and an increase of residential zoning floor area (945 sf) on the site. As a result of the Proposed Action, commercial gross floor area would increase (150 sf) and commercial zoning floor area would decrease by 945 sf.

Additionally, there would be no change to the number of dwelling units, parking spaces, or lot coverage on Site 8 as a result of the Proposed Action.

Existing Condition

Legend

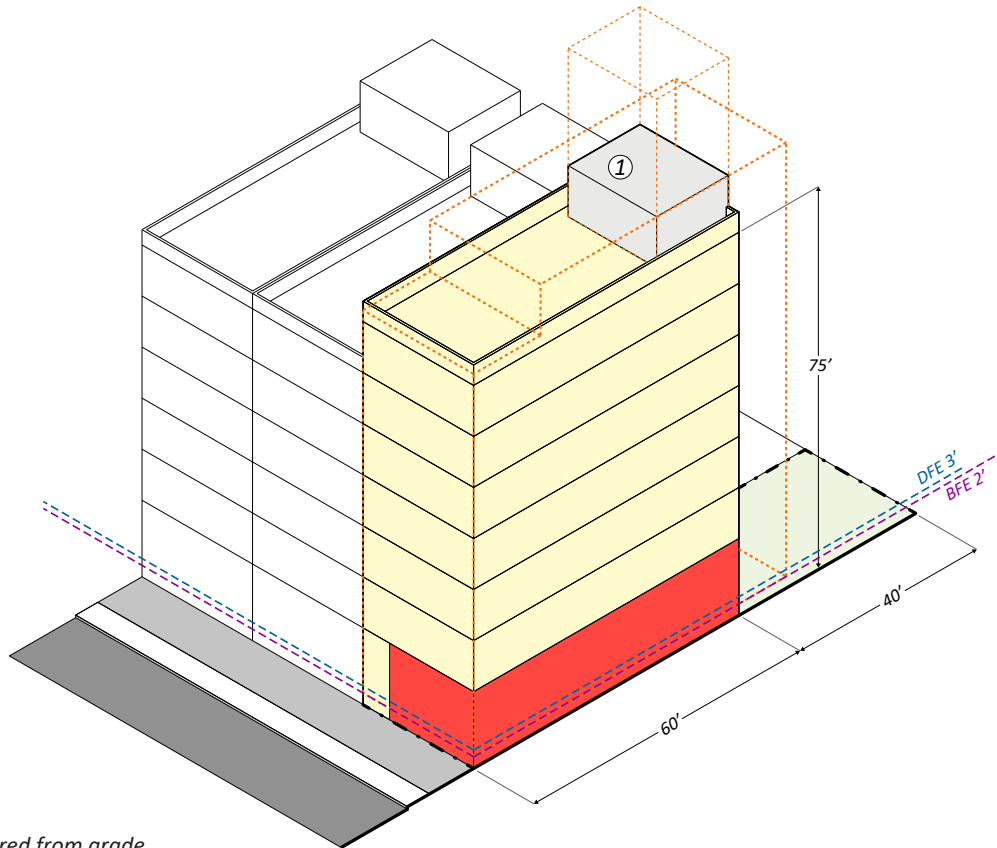
- Residential
- Commercial
- ① MEP



1% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Commercial
- Zoning Envelope
- 1 MEP



\*DFE= Design Flood Elevation

\*BFE= Base Flood Elevation

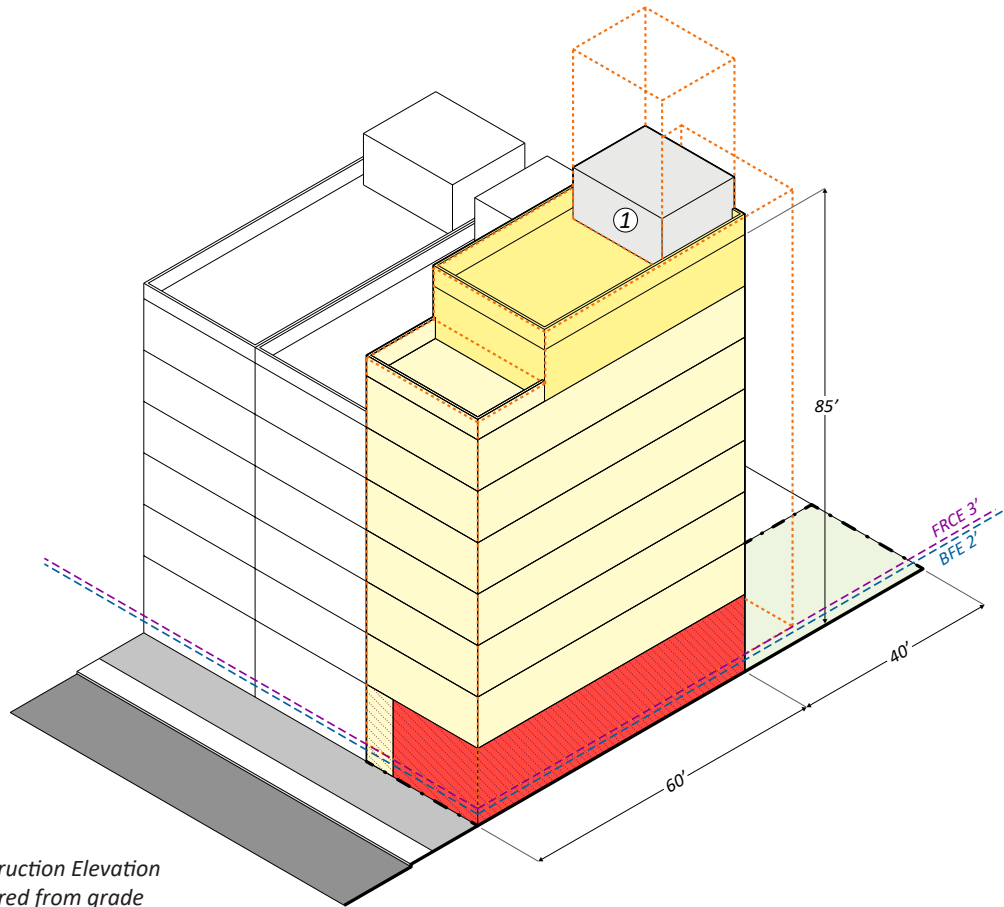
Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	10,000 sf	10,000 sf	0
Zoning Residential Floor Area	8,860 sf	9,805 sf	+ 945 sf
Zoning Commercial Floor Area	1,140 sf	195 sf	- 945 sf
<b>Gross Floor Area</b>	10,800 sf	12,105 sf	+ 1,305 sf
Gross Residential Floor Area	9,660 sf	10,815 sf	+ 1,155 sf
Gross Commercial Floor Area	1,140 sf	1,290 sf	+ 150 sf
<b>Exempted Floor Area</b>	800 sf	1,305 sf	+ 505 sf
<b>Provided Perimeter Wall/Baseheight</b>	75 ft	75 ft	0
<b>Provided Overall Height</b>	75 ft	85 ft	+ 10 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	62 % / 38 %	62 % / 38 %	0 / 0
<b>Dwelling Units</b>	13	13	0
<b>Parking Spaces</b>	0	0	0

1% Annual Chance Floodplain: FT1

Legend

- Residential
- Additional Residential
- Wet-flood proofed
- Commercial
- Dry-flood proofed
- Zoning Envelope
- ① MEP



\*BFE= Base Flood Elevation  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

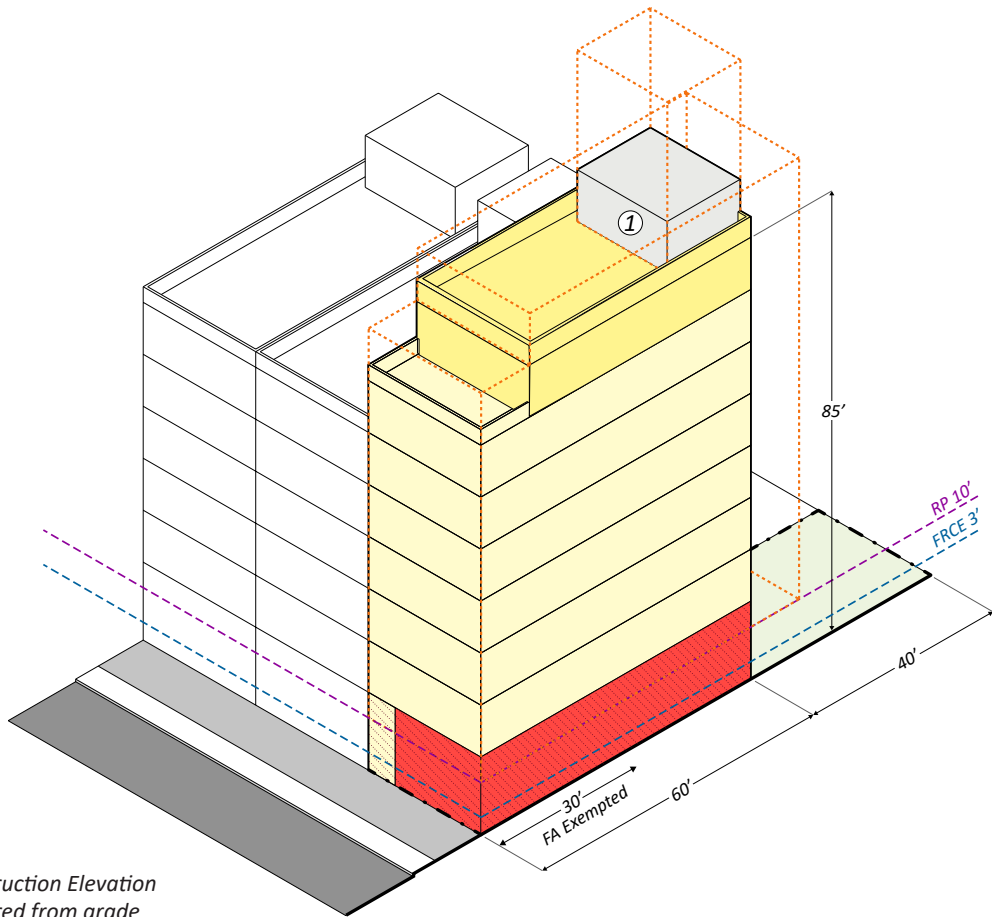
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	2,500 sf	0	0	0
<b>Zoning Floor Area</b>	10,000 sf	9,625 sf	10,000 sf	+ 375 sf	- 375 sf	0
Zoning Residential Floor Area	8,860 sf	9,625 sf	9,805 sf	+ 765 sf	+ 765 sf	+ 945 sf
Zoning Commercial Floor Area	1,140 sf	0 sf	195 sf	- 1,140 sf	- 1,140 sf	- 945 sf
<b>Gross Floor Area</b>	10,800 sf	11,925 sf	12,105 sf	+ 1,125 sf	+ 180 sf	+ 1,305 sf
Gross Residential Floor Area	9,660 sf	10,785 sf	10,815 sf	+ 1,125 sf	+ 30 sf	+ 1,155 sf
Gross Commercial Floor Area	1,140 sf	1,140 sf	1,290 sf	0	+ 150 sf	+ 150 sf
<b>Exempted Floor Area</b>	800 sf	2,300 sf	1,305 sf	+ 1,500 ft	- 995 ft	+ 505 sf
<b>Provided Perimeter Wall/Baseheight</b>	75 ft	75 ft	75 ft	0	0	0
<b>Provided Overall Height</b>	75 ft	85 ft	85 ft	+ 10 ft	0	+ 10 ft
<b>Provided Number of Stories</b>	7	8	8	+ 1	0	+ 1
<b>Lot Coverage / Open Space</b>	62 % / 38 %	62 % / 38 %	62 % / 38 %	0 / 0	0 / 0	0 / 0
<b>Dwelling Units</b>	13	13	13	0	0	0
<b>Parking Spaces</b>	0	0	0	0	0	0

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

Legend

- Residential
- Additional Residential
- Wet-floodproofed
- Commercial
- Dry-floodproofed
- Zoning Envelope
- 1 MEP



\*RP= Reference Plane

\*FRCE= Flood-Resistant Construction Elevation

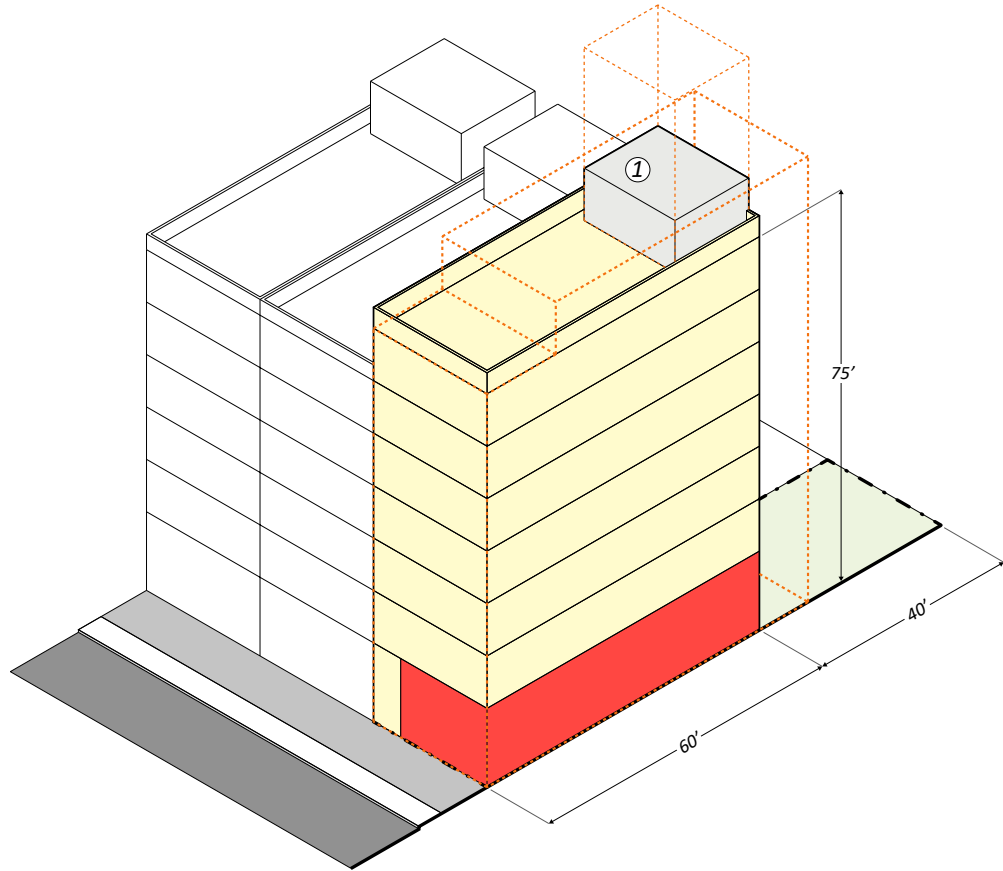
Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	10,000 sf	10,000 sf	0
Zoning Residential Floor Area	8,860 sf	9,805 sf	+ 945 sf
Zoning Commercial Floor Area	1,140 sf	195 sf	- 945 sf
<b>Gross Floor Area</b>	10,800 sf	12,105 sf	+ 1,305 sf
Gross Residential Floor Area	9,660 sf	10,815 sf	+ 1,155 sf
Gross Commercial Floor Area	1,140 sf	1,290 sf	+ 150 sf
<b>Exempted Floor Area</b>	800 sf	1,305 sf	+ 505 sf
<b>Provided Perimeter Wall/Baseheight</b>	75 ft	75 ft	0
<b>Provided Overall Height</b>	75 ft	85 ft	+ 10 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	62 % / 38 %	62 % / 38 %	0 / 0
<b>Dwelling Units</b>	13	13	0
<b>Parking Spaces</b>	0	0	0

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Commercial
- Zoning Envelope
- 1 MEP



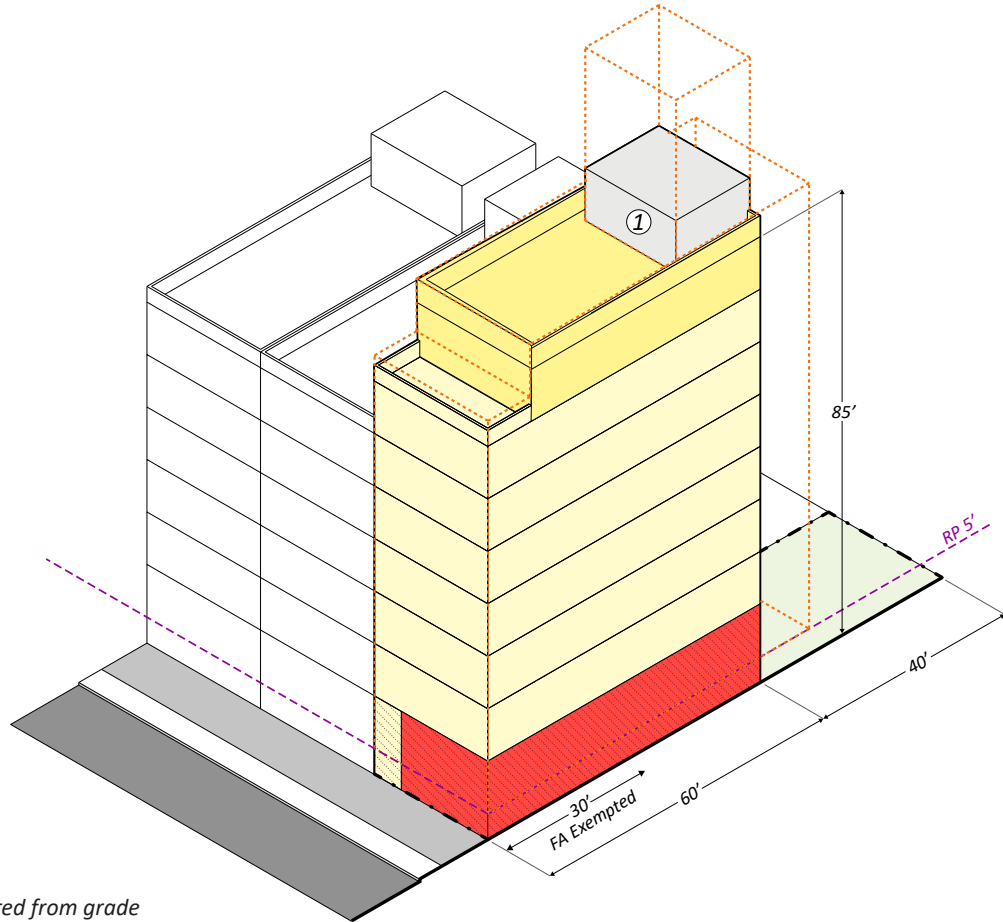
	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	10,000 sf	10,000 sf	0
<i>Zoning Residential Floor Area</i>	8,860 sf	9,805 sf	+ 945 sf
<i>Zoning Commercial Floor Area</i>	1,140 sf	195 sf	- 945 sf
<b>Gross Floor Area</b>	10,800 sf	12,105 sf	+ 1,305 sf
<i>Gross Residential Floor Area</i>	9,660 sf	10,815 sf	+ 1,155 sf
<i>Gross Commercial Floor Area</i>	1,140 sf	1,290 sf	+ 150 sf
<b>Exempted Floor Area</b>	800 sf	1,305 sf	+ 1,305 sf
<b>Provided Perimeter Wall/Baseheight</b>	75 ft	75 ft	0
<b>Provided Overall Height</b>	75 ft	85 ft	+ 10 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	62 % / 38 %	62 % / 38 %	0 / 0
<b>Dwelling Units</b>	13	13	0
<b>Parking Spaces</b>	0	0	0



0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Residential
- Additional Residential
- Wet-floodproofed
- Commercial
- Dry-floodproofed
- Zoning Envelope
- 1 MEP



\*RP= Reference Plane

Note: Flood elevations measured from grade

	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	10,000 sf	10,000 sf	0
<i>Zoning Residential Floor Area</i>	8,860 sf	9,805 sf	+ 945 sf
<i>Zoning Commercial Floor Area</i>	1,140 sf	194 sf	- 945 sf
<b>Gross Floor Area</b>	10,800 sf	12,105 sf	+ 1,305 sf
<i>Gross Residential Floor Area</i>	9,660 sf	10,815 sf	+ 1,155 sf
<i>Gross Commercial Floor Area</i>	1,140 sf	1,290 sf	+ 150 sf
<b>Exempted Floor Area</b>	800 sf	1,305 sf	+ 505 sf
<b>Provided Perimeter Wall/Baseheight</b>	75 ft	75 ft	0
<b>Provided Overall Height</b>	75 ft	85 ft	+ 10 ft
<b>Provided Number of Stories</b>	7	8	+ 1
<b>Lot Coverage / Open Space</b>	62 % / 38 %	62 % / 38 %	0 / 0
<b>Dwelling Units</b>	13	13	0
<b>Parking Spaces</b>	0	0	0

## **Prototype 9**

*R3-1 / C1-2 District, 100-foot x 100-foot Corner Lot  
Low-Rise Commercial Building, New Construction*

### **Introduction**

Prototypical Analysis Site 9 utilizes a generic 100-foot by 100-foot corner lot (10,000 sf) in an R3-1 contextual residential zoning district with a C1-2 commercial overlay. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 9 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes; and
- Floor area exemption for entry ways.

### **Existing Condition**

Under existing conditions, Prototypical Analysis Site 9 is a 10,000 sf vacant lot.

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario illustrates the development of a one-story commercial building on Prototypical Analysis Site 9. The zoning lot would be developed with 4,200 sf of zoning floor area, providing an FAR of 0.42, less than the maximum permitted within an R3-1/C1-2 zoning district, which allows a maximum residential FAR of 0.5 and commercial FAR of 1.0 (ZR 33-121). The building's gross floor area would be 5,040 sf. Floor spaces used for MEP equipment (840 sf) are exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). Additionally, in the future without the Proposed Action, the building's MEP equipment would be located on the roof, and the building would be elevated with a six feet high crawl space. External access would be provided adjacent to the building.

Prototypical Analysis Site 9 is mapped with a BFE of five feet above grade, according to FEMA's flood maps, resulting in a DFE of six feet. In order to meet minimum Appendix G requirements, there would be a crawl space provided and the first occupiable floor would be placed at six feet above grade. The total building height on Site 9 would be 21 feet, as measured from grade, fitting within the permitted sky exposure plane of an R3-1/C1-2 zoning district measured from BFE, which allows for an initial building height of 35 feet before the sky exposure plane (30 feet plus five feet BFE) (ZR 33-431). The first floor of the building on Site 9 would have a floor-to-floor height of 15 feet. Additionally, under No-Action conditions, Site 9 would include nine out of the 14 required accessory parking spaces for the retail space in an unenclosed parking lot at the rear of the building. While the parking spaces can be waived since it is less than the waiver threshold of 15, parking is still provided to represent a typical commercial development with parking (ZR 36-21, 36-231). The building on Prototypical Analysis Site 9 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 9 would be developed with a one-story commercial building. Under With-Action conditions, Site 9 would contain a total of 4,510 sf of zoning floor area (0.45 FAR), less than the maximum permitted within an R3-1/C1-2 zoning district, which allows for a maximum residential FAR of 0.5 and commercial FAR of 1.0 (ZR 33-121). Additionally, the building's gross floor area would be 6,000 sf. Floor spaces used for MEP equipment (840 sf) and the internal access and show pit (650 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). The internal access and show pit are exempted because they are wet-floodproofed spaces at grade.

The Prototypical Analysis Site 9 is mapped with a BFE of five feet above grade, according to FEMA's flood maps, resulting in a FRCE of six feet. In order to meet minimum Appendix G requirements, the building would utilize the proposed "reference plane" of six feet above grade. In order to have the access closer to grade, there would be a wet-floodproofed show pit at grade and the FSAFE would be placed at six feet above grade. As such, in the future with the Proposed Action, the total building height on Prototypical Analysis Site 9 would be 21 feet above grade, fitting within the permitted sky exposure plane of an R3-1/C1-2 zoning district (ZR 33-431) as measured from a "reference plane" of six feet. The first floor on Site 9 would have a floor-to-floor height of 15 feet, and the building access would be kept at grade by providing internal access with a show pit. In the future with the Proposed Action, Prototypical Analysis Site 9 would include 15 required accessory parking spaces (ZR 36-21).

### ***Increment***

As a result of the Proposed Action, there would be an additional 310 sf of zoning floor area, an increase of 960 sf of gross floor area, and an additional 650 sf of exempted floor area on Prototypical Analysis Site 9 in the 1% annual chance floodplain, as compared to No-Action conditions. The increase of zoning floor area on Site 9 would occur because the With-Action buildings provides internal access, allowing the building to extend to the street line, resulting in a larger building in comparison to the No-Action building, which provides access in the front of the building rather than internally. There would also be an increase of lot coverage from 42 percent of 50 percent of the lot in the future with the Proposed Action, and an additional six parking spaces on the lot. No changes to the number of dwelling units on Site 9 would occur as a result of the Proposed Action.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario illustrates the development of a one-story commercial building on Prototypical Analysis Site 9. Under No-Action conditions, the zoning lot would be developed with 4,200 sf of zoning floor area, providing an FAR of 0.42, less than the maximum permitted within an R3-1/C1-2 zoning district, which allows a maximum residential FAR of 0.5 and commercial FAR of 1.0 (ZR 23-121). The building's gross floor area would be 5,040 sf. Floor spaces used for MEP equipment (840 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). In the future without the Proposed Action, Prototypical Analysis Site 9's MEP equipment would be located on the roof.

Under No-Action conditions, the building on Site 9 would not meet the minimum Appendix G requirements. The first occupiable floor would be at grade, and the total building height on Site 9 would be 15 feet above grade, fitting within the permitted sky exposure plane of an R3-1/C1-2 zoning district, which allows for an initial building height of 30 feet before the sky exposure plane (ZR 33-431). Since there is no BFE in the 0.2% flood zone, this is measured the grade. The first floor has a floor-to-floor height of 15 feet. Additionally, under No-Action conditions, Prototypical Analysis Site 9 would include nine out of the 14

required accessory parking spaces for the retail space in an unenclosed parking lot at the rear of the building. While the parking spaces can be waived since it is less than the waiver threshold of 15, parking is still provided to represent a typical commercial development with parking (ZR 36-21, 36-231). The building on Prototypical Analysis Site 9 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

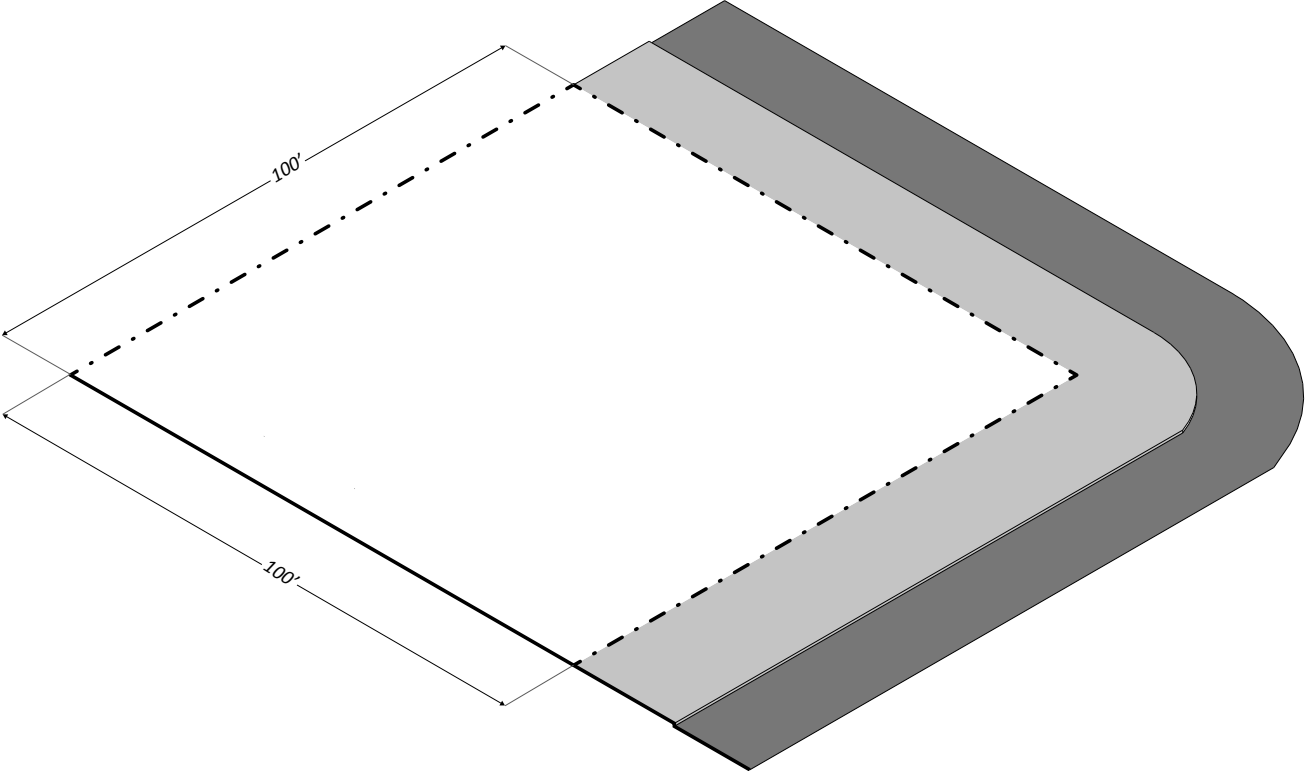
In the future with the Proposed Action, Prototypical Analysis Site 9 would be developed with a one-story commercial building. Under With-Action conditions, the zoning lot would be developed with a total of 4,510 sf of zoning floor area (0.45 FAR), less than the maximum permitted within an R3-1/C1-2 zoning district which allows for a maximum residential FAR of 0.5 and commercial FAR of 1.0 (ZR 23-121). The building's gross floor area would be 6,000 sf. Floor spaces used for MEP equipment (840 sf) and the internal access and show pit (650 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). The internal access and show pit are exempted because they are wet-floodproofed spaces at grade.

In order to floodproof the building for the long term in the future with the Proposed Action, the building would utilize the proposed "reference plane" of five feet above grade. In order to have the access closer to grade, there would be a wet-floodproofed show pit at grade on Site 9, and the FSAFE would be placed at six feet above grade. As such, the total building height on Prototypical Analysis Site 9 would be 21 feet above grade in the future with the Proposed Action, fitting within the permitted sky exposure plane of an R3-1/C1-2 zoning district (ZR 33-431) as measured from a "reference plane" of five feet. The first floor of Site 9 would have a floor-to-floor height of 15 feet, and access would be kept at grade by providing internal access with a show pit. In the future with the Proposed Action, Site 9 would contain 15 required accessory parking spaces (ZR 36-21).

### ***Increment***

As a result of the Proposed Action, there would be an additional 310 sf of zoning floor area, an increase of 960 sf of gross floor area, and an additional 650 sf of exempted floor area on Prototypical Analysis Site 9 in the 0.2% annual chance floodplain, as compared to No-Action conditions. The increase of zoning floor area on Site 9 would occur because the With-Action buildings provides internal access, allowing the building to extend to the street line, resulting in a larger building in comparison to the No-Action building, which provides access in the front of the building rather than internally. There would also be an increase of lot coverage from 42 percent of 50 percent of the lot in the future with the Proposed Action, an additional six parking spaces on the lot, and the total building height would increase by six feet. Additionally, there would be no change to the number of dwelling units as a result of the Proposed Action.

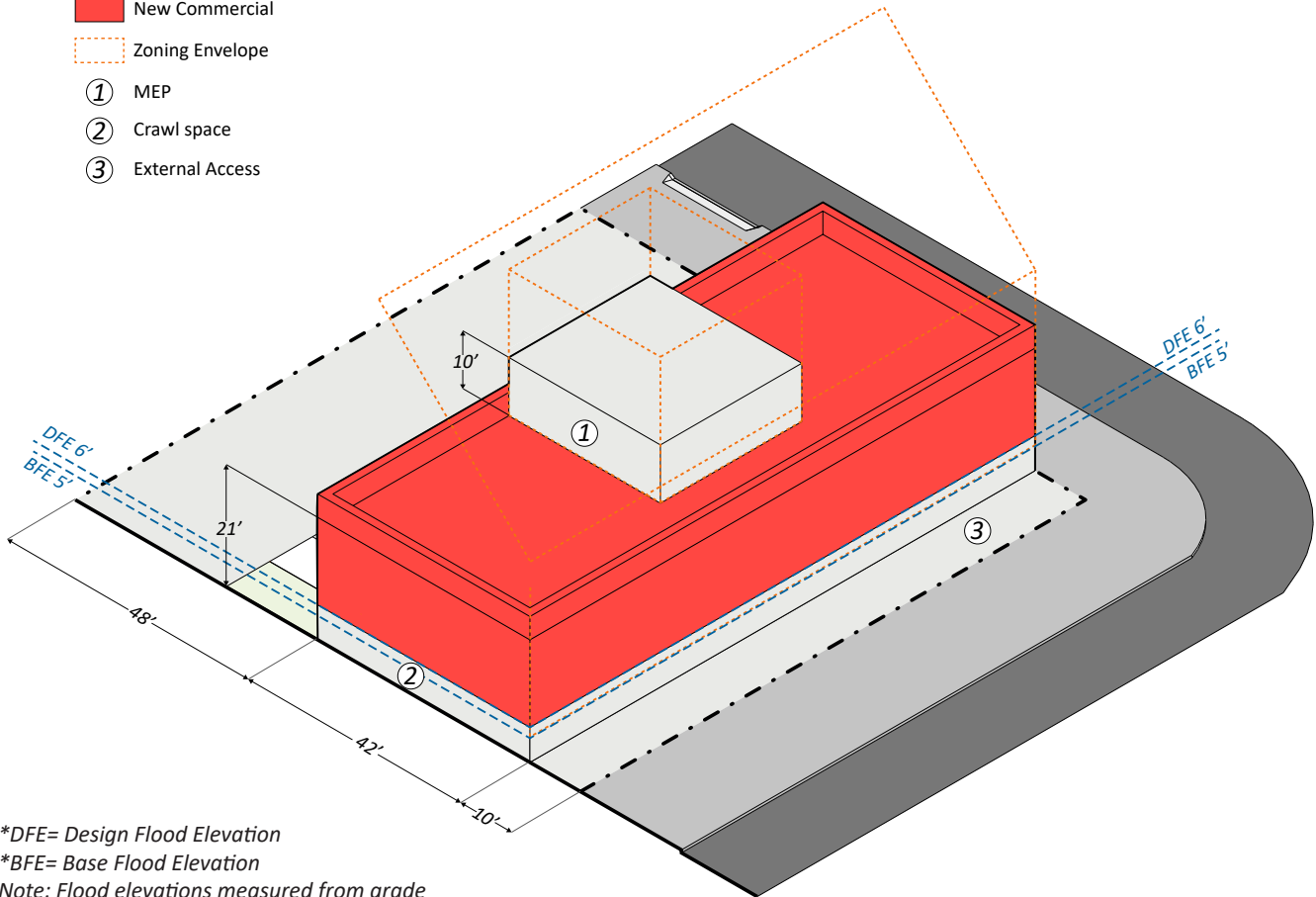
Existing Condition



1% Annual Chance Floodplain: No-Action Condition

Legend

- New Commercial
- Zoning Envelope
- ① MEP
- ② Crawl space
- ③ External Access

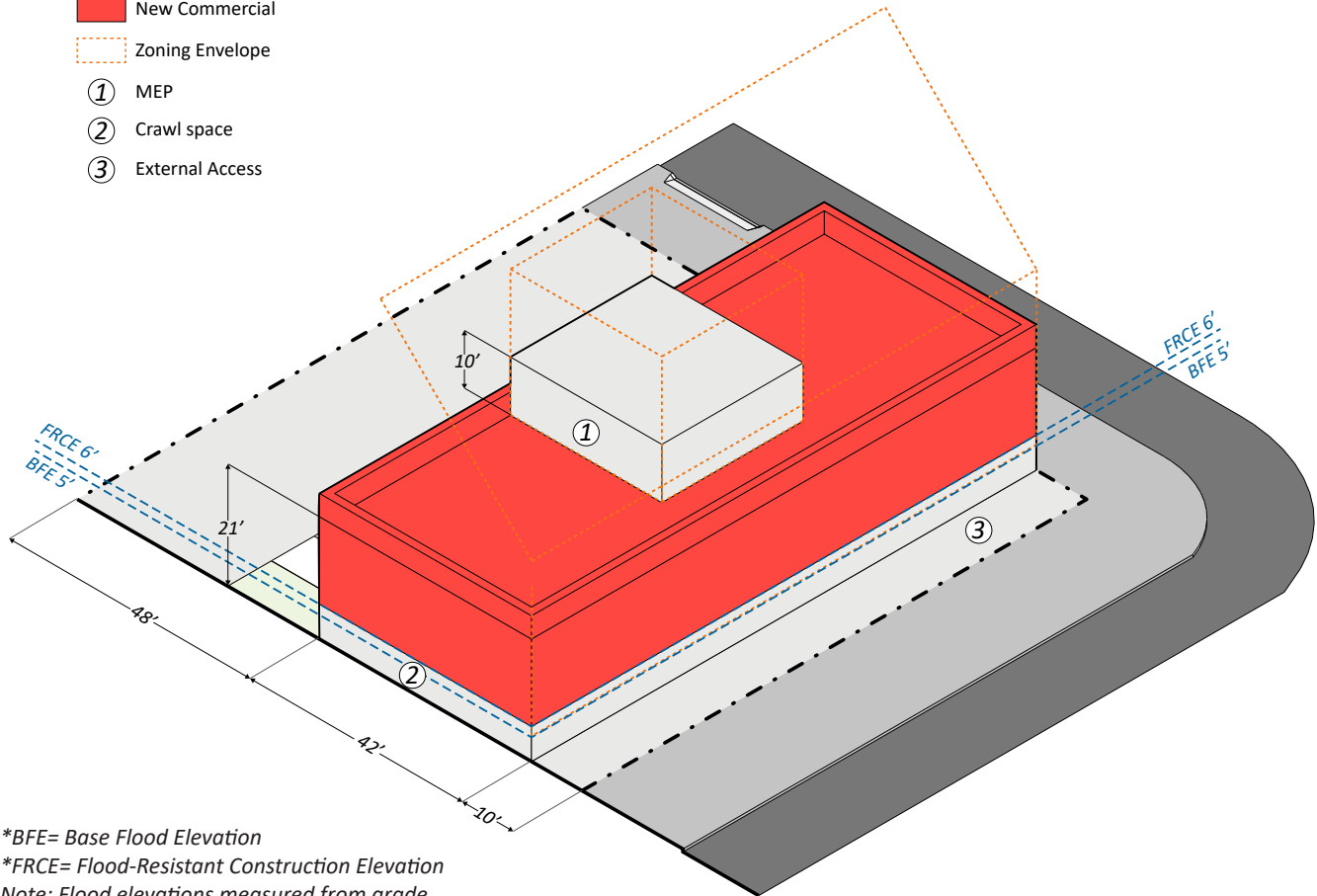


	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	0
<b>Zoning Floor Area</b>	4,200 sf	4,510 sf	+ 310 sf
<i>Zoning Commercial Floor Area</i>	4,200 sf	4,510 sf	+ 310 sf
<b>Gross Floor Area</b>	5,040 sf	6,000 sf	+ 960 sf
<i>Gross Commercial Floor Area</i>	5,040 sf	6,000 sf	+ 960 sf
<b>Exempted Floor Area</b>	840 sf	1,490 sf	+ 650 sf
<b>Provided Perimeter Wall/Baseheight</b>	21 ft	21 ft	0
<b>Provided Overall Height</b>	21 ft	21 ft	0
<b>Provided Number of Stories</b>	1	1	0
<b>Lot Coverage</b>	42 %	50 %	+ 8 %
<b>Parking Spaces</b>	9	15	+ 6

1% Annual Chance Floodplain: FT1

Legend

- New Commercial
- Zoning Envelope
- ① MEP
- ② Crawl space
- ③ External Access



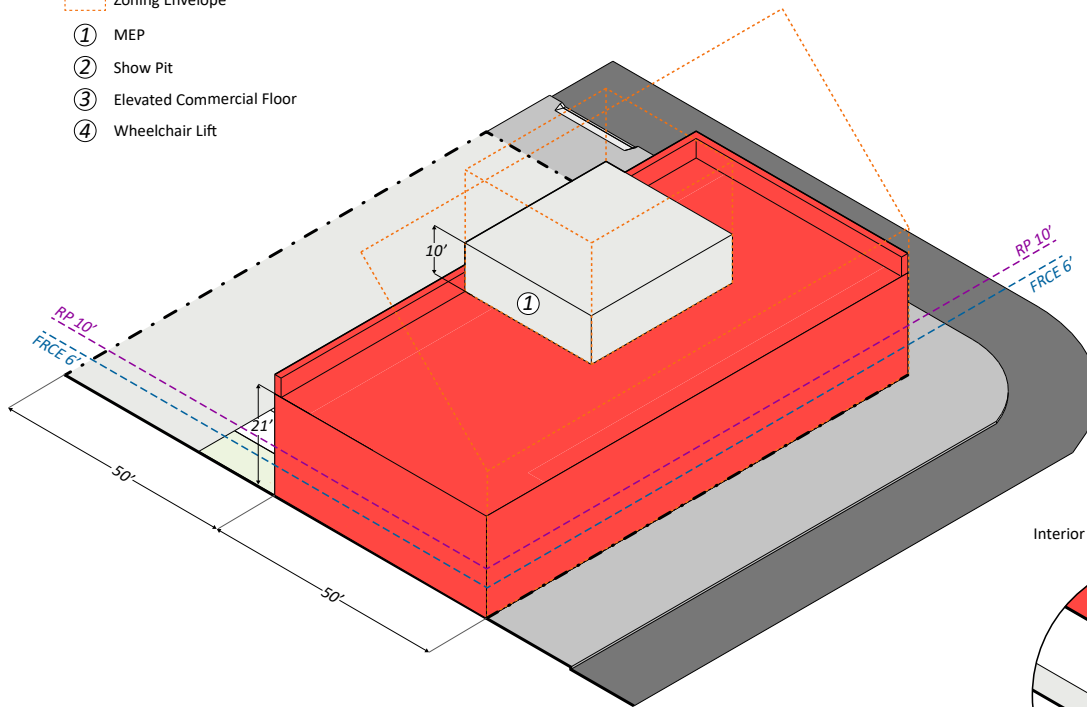
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	10,000 sf	0	0	0
<b>Zoning Floor Area</b>	4,200 sf	4,200 sf	4,510 sf	0	+ 310 sf	+ 310 sf
<i>Zoning Commercial Floor Area</i>	4,200 sf	4,200 sf	4,510 sf	0	+ 310 sf	+ 310 sf
<b>Gross Floor Area</b>	5,040 sf	5,040 sf	6,000 sf	0	+ 960 sf	+ 960 sf
<i>Gross Commercial Floor Area</i>	5,040 sf	5,040 sf	6,000 sf	0	+ 960 sf	+ 960 sf
<b>Exempted Floor Area</b>	840 sf	840 sf	1,490 sf	0	+ 650 sf	+ 650 sf
<b>Provided Perimeter Wall/Baseheight</b>	21 ft	21 ft	21 ft	0	0	0
<b>Provided Overall Height</b>	21 ft	21 ft	21 ft	0	0	0
<b>Provided Number of Stories</b>	1	1	1	0	0	0
<b>Lot Coverage</b>	42 %	42%	50 %	0	+ 8 %	+ 8 %
<b>Parking Spaces</b>	9	9	15	0	+ 6	+ 6

**\*\* FT1 diagrams for illustrative purposes only\*\***

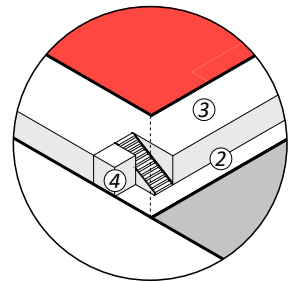
1% Annual Chance Floodplain: With-Action Condition

Legend

- New Commercial
- Zoning Envelope
- ① MEP
- ② Show Pit
- ③ Elevated Commercial Floor
- ④ Wheelchair Lift



Interior Elevated Commercial & Show Pit



\*RP= Reference Plane

\*FRCE= Flood-Resistant Construction Elevation

Note: Flood elevations measured from grade

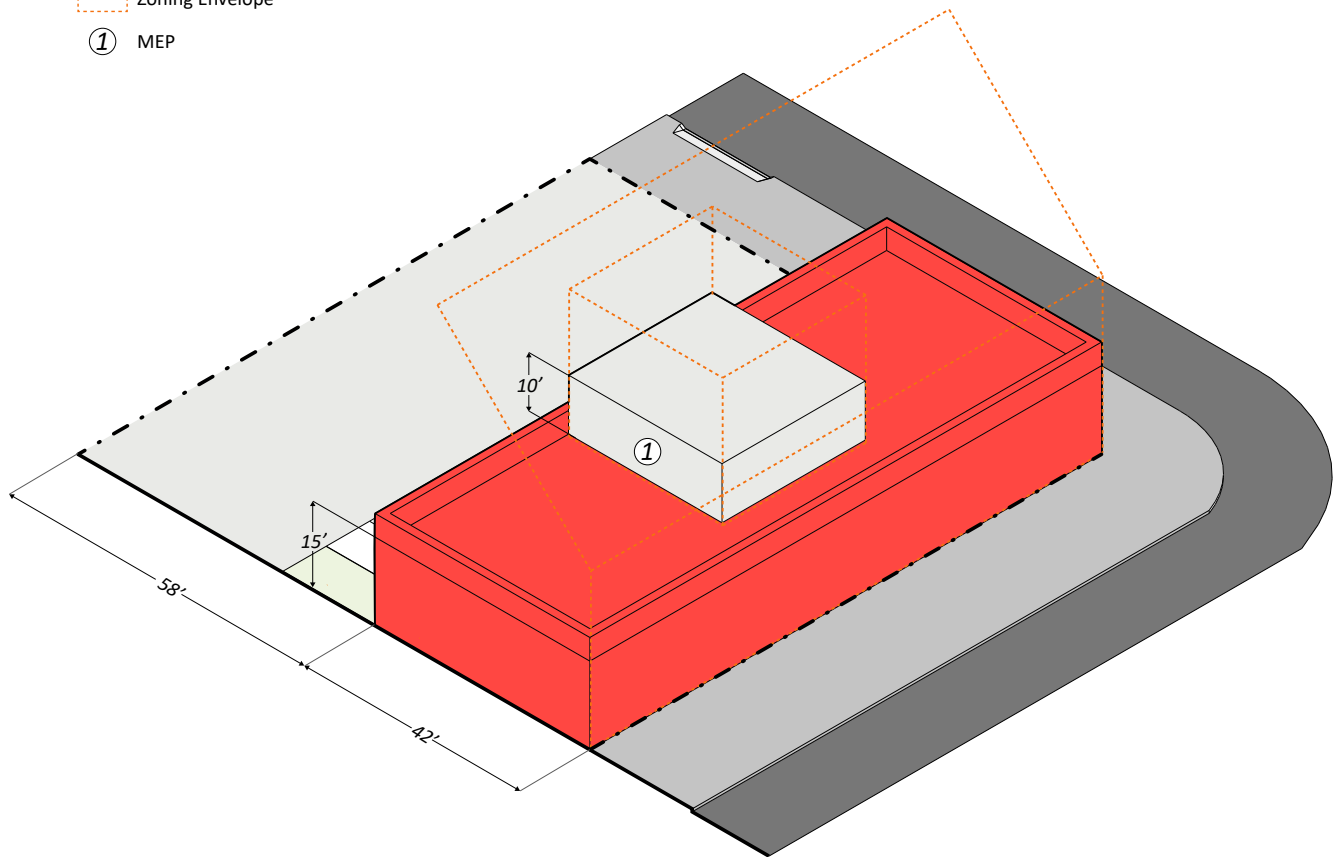
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	0
<b>Zoning Floor Area</b>	4,200 sf	4,510 sf	+ 310 sf
Zoning Commercial Floor Area	4,200 sf	4,510 sf	+ 310 sf
<b>Gross Floor Area</b>	5,040 sf	6,000 sf	+ 960 sf
Gross Commercial Floor Area	5,040 sf	6,000 sf	+ 960 sf
<b>Exempted Floor Area</b>	840 sf	1,490 sf	+ 650 sf
<b>Provided Perimeter Wall/Baseheight</b>	21 ft	21 ft	0
<b>Provided Overall Height</b>	21 ft	21 ft	0
<b>Provided Number of Stories</b>	1	1	0
<b>Lot Coverage</b>	42 %	50 %	+ 8 %
<b>Parking Spaces</b>	9	15	+ 6



0.2% Annual Chance Floodplain: No-Action Condition

Legend

- New Commercial
- Zoning Envelope
- 1 MEP

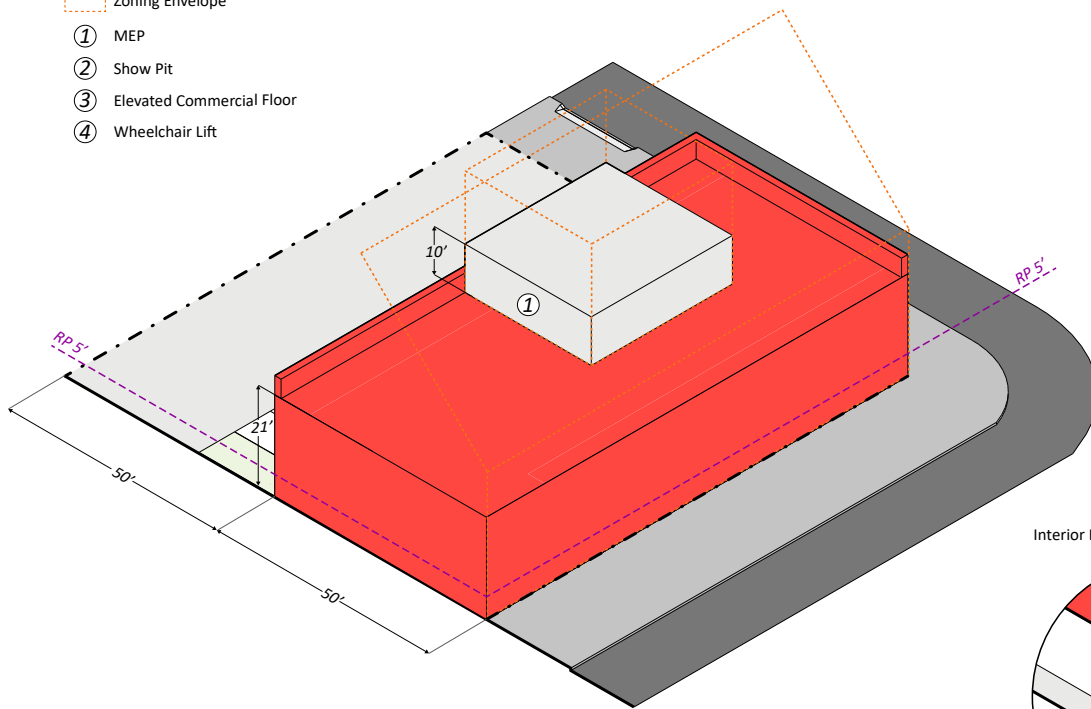


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	0
<b>Zoning Floor Area</b>	4,200 sf	4,510 sf	+ 310 sf
<i>Zoning Commercial Floor Area</i>	4,200 sf	4,510 sf	+ 310 sf
<b>Gross Floor Area</b>	5,040 sf	6,000 sf	+ 960 sf
<i>Gross Commercial Floor Area</i>	5,040 sf	6,000 sf	+ 960 sf
<b>Exempted Floor Area</b>	840 sf	1,490 sf	+ 650 sf
<b>Provided Perimeter Wall/Baseheight</b>	15 ft	21 ft	+ 6 ft
<b>Provided Overall Height</b>	15 ft	21 ft	+ 6 ft
<b>Provided Number of Stories</b>	1	1	0
<b>Lot Coverage</b>	42 %	50 %	+ 8 %
<b>Parking Spaces</b>	9	15	+ 6

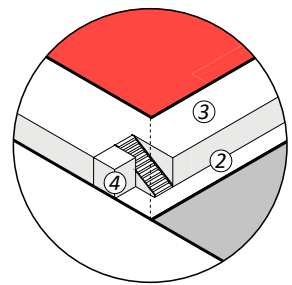
0.2% Annual Chance Floodplain: With-Action Condition

Legend

- New Commercial
- Zoning Envelope
- ① MEP
- ② Show Pit
- ③ Elevated Commercial Floor
- ④ Wheelchair Lift



Interior Elevated Commercial & Show Pit



\*RP= Reference Plane

Note: Flood elevations measured from grade

	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	0
<b>Zoning Floor Area</b>	4,200 sf	4,510 sf	+ 310 sf
<i>Zoning Commercial Floor Area</i>	4,200 sf	4,510 sf	+ 310 sf
<b>Gross Floor Area</b>	5,040 sf	6,000 sf	+ 960 sf
<i>Gross Commercial Floor Area</i>	5,040 sf	6,000 sf	+ 960 sf
<b>Exempted Floor Area</b>	840 sf	1,490 sf	+ 650 sf
<b>Provided Perimeter Wall/Baseheight</b>	15 ft	21 ft	+ 6 ft
<b>Provided Overall Height</b>	15 ft	21 ft	+ 6 ft
<b>Provided Number of Stories</b>	1	1	0
<b>Lot Coverage</b>	42 %	50 %	+ 8 %
<b>Parking Spaces</b>	9	15	+ 6

## **Prototype 10**

### *M1-1 Manufacturing District, 100-foot x 100-foot Interior Lot Low-Rise Industrial/Manufacturing Building, Retrofit*

#### **Introduction**

Prototypical Analysis Site 10 utilizes a generic 100-foot by 100-foot interior lot (10,000 sf) in an M1-1 light manufacturing zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 10 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Minor floor area exemption for manufacturing buildings.

#### **Existing Condition**

Under existing conditions, Prototypical Analysis Site 10 contains a one-story industrial building, which comprises the entire lot. The zoning lot is developed with 10,000 sf of zoning floor area with an FAR of 1.0, the maximum permitted FAR in M1-1 zoning districts (ZR 43-12). The building's gross floor area is 11,500 sf. Floor spaces used for MEP equipment (1,500 sf) are exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

The building has a total building height of 30 feet above grade, fitting within the permitted sky exposure plane of an M1-1 zoning district which allows for an initial building height of 30 feet before the sky exposure plane (ZR 43-43). The building contains a loading berth, but because the building was built prior to December 15, 1961, it does not comply with underlying parking regulations of M1-1 zoning districts and does not contain any accessory parking spaces (ZR 42-21).

#### **1% Annual Chance Floodplain Scenario**

##### ***No-Action Condition***

For a conservative analysis, the No-Action scenario would not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with Appendix G requirements. The permitted sky exposure plane of an M1-1 zoning district is measured from the BFE, which allows for an initial building height of 32 feet before the sky exposure plane (30 feet plus two feet BFE) (ZR 12-10 Definition of a Base Plane).

##### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 10 would be retrofitted to relocate the important spaces to a higher level. The site would accommodate a total of 10,000 sf of zoning floor area the maximum permitted within an M1-1 zoning district which allows for an FAR of 1.0 (ZR 43-12). The building's gross floor area would be 12,000 sf. Floor spaces used for MEP equipment (1,500 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). As a result of the Proposed Action, an additional 500 sf of exempted floor area would be included as a mezzanine level in the building above the FRCE.

Prototypical Analysis Site 10 is mapped with a BFE of two feet above grade, according to FEMA's flood maps, resulting in a FRCE of three feet. In the future with the Proposed Action, the building on Site 10 would continue to have a total building height of 30 feet, fitting within the permitted sky exposure plane of

an M1-1 zoning district (ZR 43-43). The building would contain a loading berth, but because the building was built prior to December 15, 1961, it would not comply with underlying parking regulations of M1-1 zoning districts and does not contain any accessory parking spaces (ZR 42-21).

### ***Increment***

As a result of the Proposed Action, there would be an additional 500 sf of gross floor area and exempted floor area on Prototypical Analysis Site 10 in the 1% annual chance floodplain as compared to No-Action conditions. No changes to use, building height, lot coverage, parking spaces, or zoning floor area would occur on the site in the future with the Proposed Action.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 10 is the same as the existing condition because buildings in the 0.2% annual chance floodplain don't have to meet the minimum Appendix G requirements. The permitted building envelope of an M1-1 zoning district, which allows for an initial building height of 30 feet before the sky exposure plane, is measured from grade since there is no BFE in the 0.2% annual chance floodplain (ZR 23-631).

#### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 10 would be retrofitted. The site would accommodate a total of 10,000 sf of zoning floor area, the maximum permitted within an M1-1 zoning district which allows for an FAR of 1.0 (ZR 43-12). The building's gross floor area would be 12,000 sf, and the building would continue to cover 100 percent of the lot. Floor spaces used for MEP equipment (1,500 sf) would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). As a result of the Proposed Action, an additional 500 sf of exempted floor area would be included as a mezzanine level in the building to partially floodproof the building for the long term.

In the future with the Proposed Action, the building on Site 10 would continue to have a total building height of 30 feet, fitting within the permitted sky exposure plane of an M1-1 zoning district, which allows for an initial building height of 30 feet above grade before the sky exposure plane (ZR 43-43). The building would contain a loading berth, but because the building was built prior to December 15, 1961, it would not comply with underlying parking regulations of M1-1 zoning districts and does not contain any accessory parking spaces (ZR 42-21).

### ***Increment***

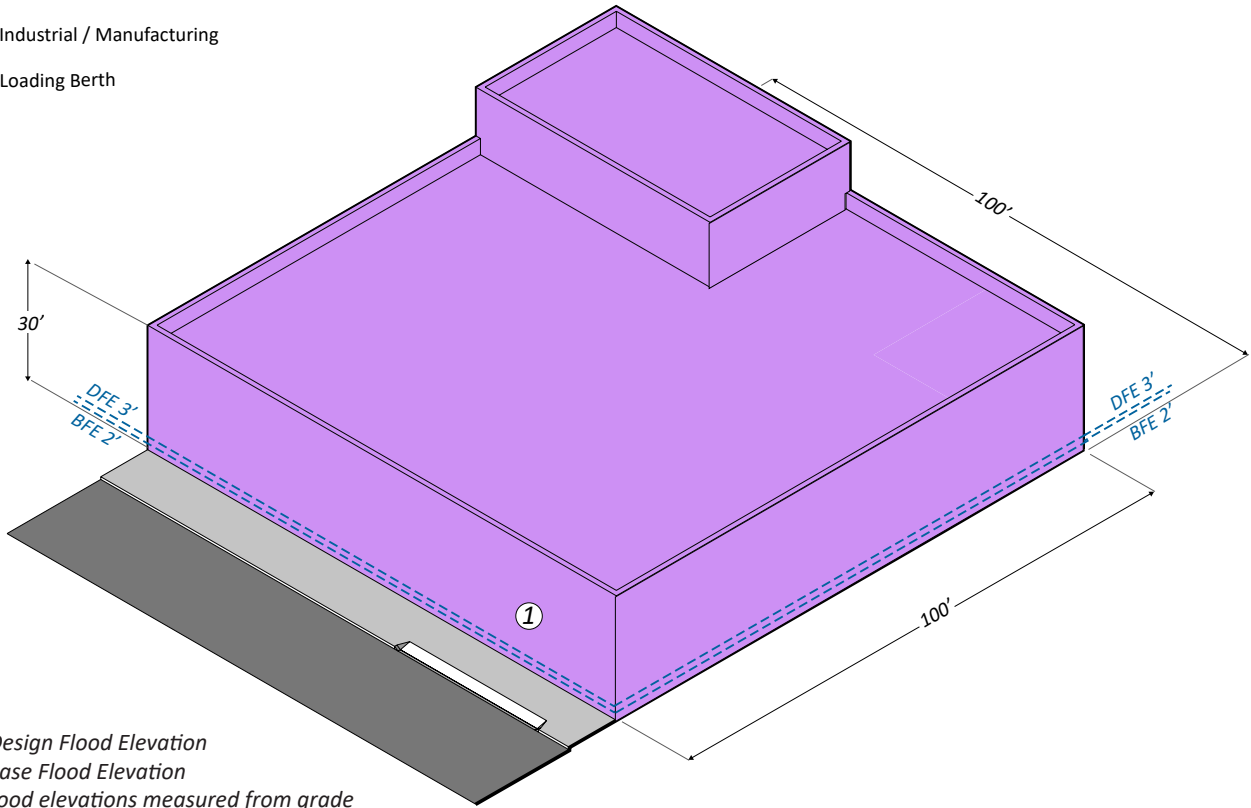
As a result of the Proposed Action, there would be an additional 500 sf of gross floor area and exempted floor area on Prototypical Analysis Site 10 in the 0.2% annual chance floodplain as compared to No-Action conditions. No changes to use, building height, lot coverage, parking spaces, or zoning floor area would occur on the site in the future with the Proposed Action.

Existing Condition

Legend

Industrial / Manufacturing

① Loading Berth



\*DFE= Design Flood Elevation

\*BFE= Base Flood Elevation

Note: Flood elevations measured from grade

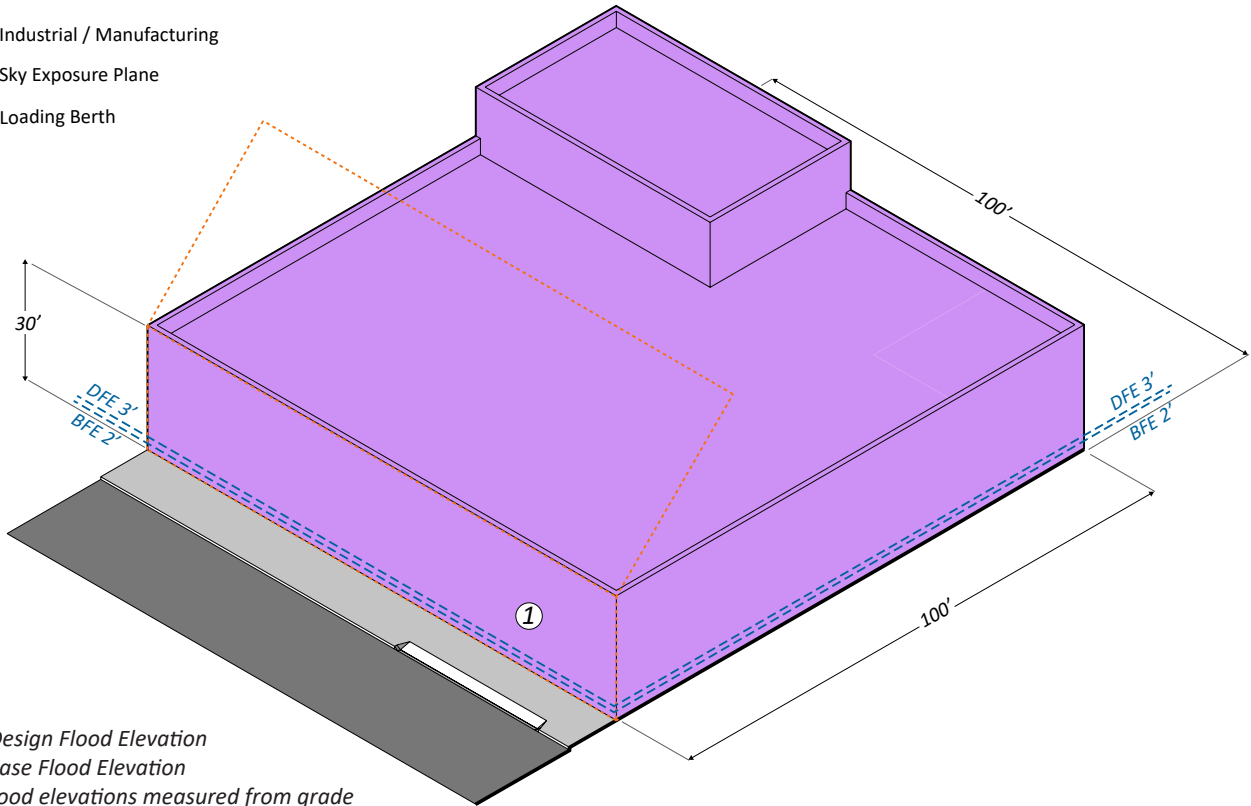
1% & 0.2 Annual Chance Floodplain: No-Action Condition

Legend

Industrial / Manufacturing

Sky Exposure Plane

① Loading Berth



\*DFE= Design Flood Elevation

\*BFE= Base Flood Elevation

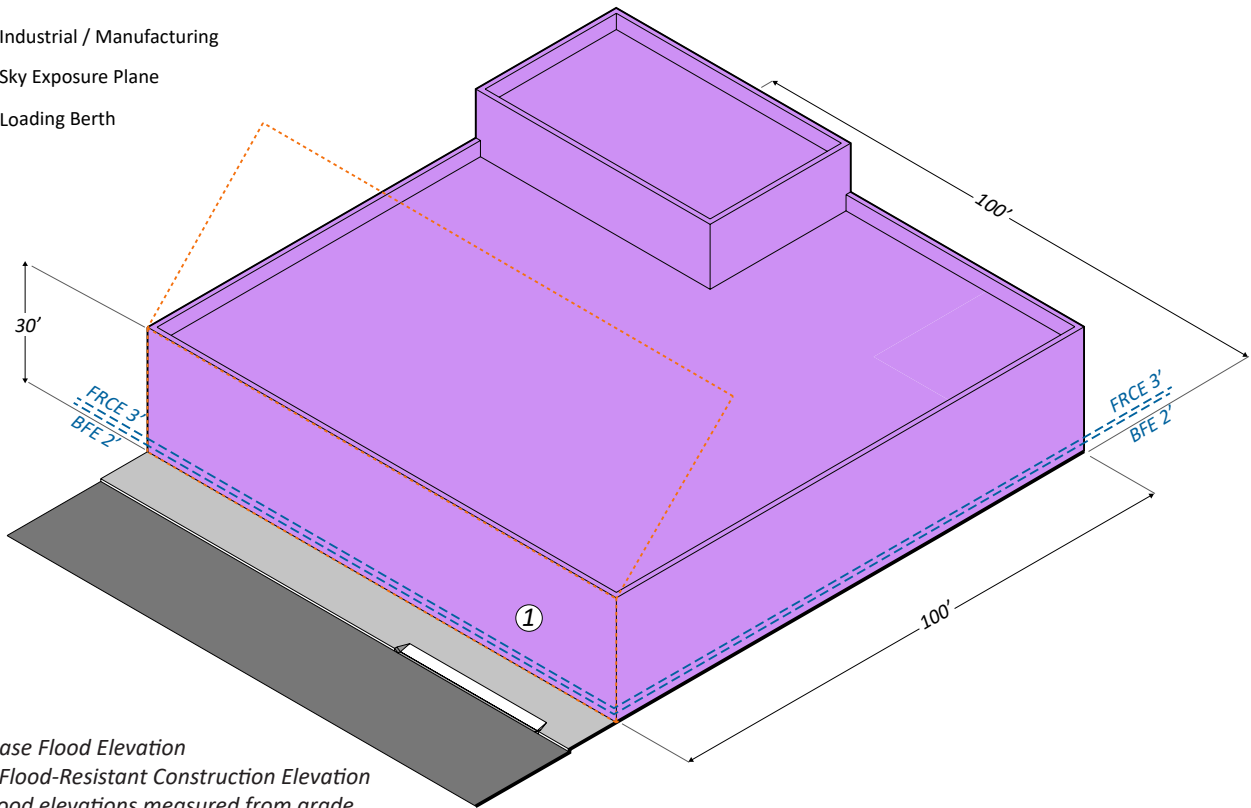
Note: Flood elevations measured from grade

	No-Action	With-Action	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	0
<b>Zoning Floor Area</b>	8,500 sf	8,500 sf	0
<i>Zoning Manufacturing Floor Area</i>	8,500 sf	8,500 sf	0
<b>Gross Floor Area</b>	10,000 sf	10,500 sf	+ 500 sf
<i>Gross Manufacturing Floor Area</i>	10,000 sf	10,500 sf	+ 500 sf
<b>Exempted Floor Area</b>	1,500 sf	2,000 sf	+ 500 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	20 ft	0
<b>Provided Overall Height</b>	30 ft	30 ft	0
<b>Provided Number of Stories</b>	2	2	0
<b>Lot Coverage</b>	100%	100%	0
<b>Parking Spaces</b>	0	0	0

1% Annual Chance Floodplain: FT1

Legend

- Industrial / Manufacturing
- Sky Exposure Plane
- 1 Loading Berth



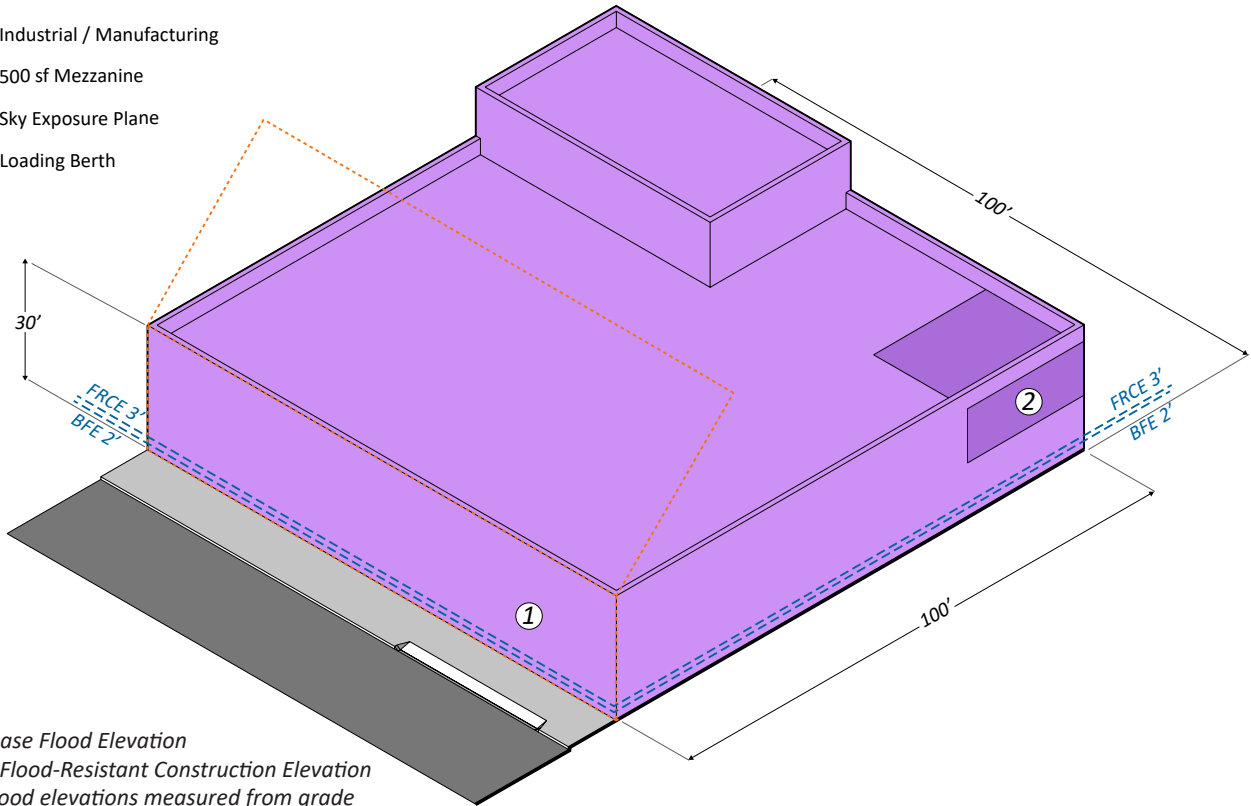
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	10,000 sf	0	0	0
<b>Zoning Floor Area</b>	8,500 sf	8,500 sf	8,500 sf	0	0	0
<i>Zoning Residential Floor Area</i>	8,500 sf	8,500 sf	8,500 sf	0	0	0
<b>Gross Floor Area</b>	10,000 sf	10,000 sf	10,500 sf	0	+ 500 sf	+ 500 sf
<i>Gross Residential Floor Area</i>	10,000 sf	10,000 sf	10,500 sf	0	+ 500 sf	+ 500 sf
<b>Exempted Floor Area</b>	1,500 sf	1,500 sf	2,000 sf	0	+ 500 sf	+ 500 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	20 ft	20 ft	0	0	0
<b>Provided Overall Height</b>	30 ft	30 ft	30 ft	0	0	0
<b>Provided Number of Stories</b>	2	2	2	0	0	0
<b>Lot Coverage</b>	100%	100%	100%	0	0	0
<b>Parking Spaces</b>	0	0	0	0	0	0

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% & 0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Industrial / Manufacturing
- 500 sf Mezzanine
- Sky Exposure Plane
- 1 Loading Berth



\*BFE= Base Flood Elevation  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

	No-Action	With-Action	Change N/A to W/A
<b>Lot Area</b>	10,000 sf	10,000 sf	0
<b>Zoning Floor Area</b>	8,500 sf	8,500 sf	0
Zoning Residential Floor Area	8,500 sf	8,500 sf	0
<b>Gross Floor Area</b>	10,000 sf	10,500 sf	+ 500 sf
Gross Residential Floor Area	10,000 sf	10,500 sf	+ 500 sf
<b>Exempted Floor Area</b>	1,500 sf	2,000 sf	+ 500 sf
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	20 ft	0
<b>Provided Overall Height</b>	30 ft	30 ft	0
<b>Provided Number of Stories</b>	1	1	0
<b>Lot Coverage</b>	100%	100%	0
<b>Parking Spaces</b>	0	0	0



## **Prototype 11**

*R4 Residence District, 25-foot x 100-foot Interior Lot  
Single-Family Detached Residence, New Construction*

### **Introduction**

Prototypical Analysis Site 11 utilizes a generic 25-foot by 100-foot interior lot (2,500 sf) in an R4 residential zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 11 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes;
- Cottage envelope building provisions;
- Additional floor area from attic allowance distributed within building as height mitigation;
- Floor area exemption for wet-floodproofed ground floor;
- Permitted obstructions of MEP equipment in the rear yard;
- Minor FAR exemption allowance for MEP equipment; and
- Streetscape improvements.

### **Existing Condition**

Under existing conditions, Prototypical Analysis Site 11 is a 2,500 sf vacant lot.

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

In the future without the Proposed Action, Prototypical Analysis Site 11 would be developed with a single-family detached residence with three stories, an attic, and a garage within the building. The zoning lot would be developed with 2,245 sf of zoning floor area with an FAR of 0.90; the maximum permitted FAR within an R4 zoning district for buildings not using infill regulations, including the attic allowance is 0.90 (ZR 23-142). The additional FAR from the attic allowance would be placed below the sloped roof. The building's gross floor area would be 3,195 sf. Under No-Action conditions, floor spaces used for MEP equipment (50 sf) and the wet-floodproofed ground floor (900 sf) on Site 11 would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). While the total space used for MEP equipment is 160 sf, only 50 sf would be exempt.

Prototypical Analysis Site 11 is mapped with a BFE of five feet above grade, according to FEMA's flood maps, resulting in a DFE of seven feet. In order to meet the minimum Appendix G requirements and use the ground floor as a garage, the first occupiable floor would be placed at eight feet above grade in the future without the Proposed Action. The total building height on Site 11 would be 40 feet with a perimeter wall of 26 feet, fitting within the permitted building envelope of an R4 zoning district as measured from the BFE, which would allow for a maximum building height of 40 feet (35 feet plus five feet BFE) and a maximum perimeter wall height of 30 feet (25 feet plus five feet BFE) (ZR 23-631 and ZR 12-10 Definition of a Base Plane). Because the lot width is less than the minimum required in the zoning district, the building would be allowed to reduce the width of the required side yards from eight to five feet on one side of the building (ZR 23-48). In the No-Action scenario, the ground floor of Site 11 would have a wet-floodproofed

garage with a floor-to-floor height of eight feet, all residential floors would have floor-to-floor heights of nine feet each, and the attic would have a floor-to-floor height of eight feet.

The No-Action scenario on Prototypical Analysis Site 11 would have one enclosed parking space in a garage within the building, as required in the underlying zoning (ZR 25-22). The building on Prototypical Analysis Site 11 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 11 would be developed with a single-family detached residence with three-stories and a garage within the building. Under With-Action conditions, the site would contain 2,250 sf of zoning floor area with an FAR of 0.90, the maximum permitted within R4 zoning district, including the attic allowance for buildings utilizing the cottage envelope. The additional FAR from the attic allowance would be distributed within the building, helping reduce the height of the overall building. The building's gross floor area would be 3,461 sf. As a result of the Proposed Action, floor spaces used for MEP equipment (165 sf) and the wet-floodproofed ground floor (1,046 sf) would be exempted from the zoning floor area. The space used for the MEP equipment for the With-Action is larger because the MEP is calculated based on the gross floor area of the building.

Prototypical Analysis Site 11 is mapped with a BFE of five feet above grade, according to FEMA's flood maps, resulting in a FRCE of seven feet. In order to floodproof the building for the long term, and exceed the minimum Appendix G requirements, the home is utilizing the "reference plane" allowance of 10 feet in the 1% flood zone, which results in the FSAFE being placed at 10 feet above grade. The total building height on the site would be 35 feet with a perimeter wall of 28 feet, fitting within the proposed cottage envelope measured from a "reference plane" of 10 feet, which allows for a maximum building height of 35 feet (25 feet plus 10 feet) and a maximum perimeter wall height of 29 feet (19 feet plus 10 feet). The ground floor of Prototypical Analysis Site 11 would have a wet-floodproofed garage with a floor-to-floor height of 10 feet; residential floors would have floor-to-floor heights of nine feet each; and the attic would have a floor-to-floor height of six feet. Additionally, the MEP equipment on Site 11 would be located in the rear yard as permitted obstruction and would be elevated 10 feet above grade to match the FSAFE. The MEP equipment would be attached to the building.

The With-Action scenario on Prototypical Analysis Site 11 would have one enclosed parking space in a garage within the building, as required in the underlying zoning (ZR 25-22). The building on Site 11 would comply with all other underlying zoning regulations in the future with the Proposed Action.

### ***Increment***

As a result of the Proposed Action, there would be an additional 50 sf of zoning floor area and an additional 266 sf of gross floor area and exempted floor area on Prototypical Analysis Site 11 in the 1% annual chance floodplain. As compared to No-Action condition, the perimeter wall would also be two feet higher and the overall height of the building would be five feet lower. No additional stories, dwelling units, or parking spaces would be added on the lot as a result of the Proposed Action. Additionally, lot coverage on Site 11 would increase from 36 percent to 42 percent.

## **0.2% Annual Chance Floodplain Scenario**

### ***No-Action Condition***

In the future without the Proposed Action, Prototypical Analysis Site 11 would be developed with a single-family detached residence with two-stories, an attic and a detached garage. Under No-Action conditions, the zoning lot would be developed with 1,880 sf of zoning floor area with an FAR of 0.75. The maximum permitted within an R4 zoning district for buildings not using infill regulations, including the attic allowance is an FAR of 0.90 (ZR 23-142). The additional FAR from the attic allowance would be placed below the sloped roof. The detached garage also allows up to 300 sf of additional floor area on the zoning lot (ZR 23-142). The building's gross floor area would be 2,110 sf. Floor spaces used for MEP equipment (50 sf) on Site 11 would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area). While the total space used for MEP equipment is 97 sf, only 50 sf would be exempt.

Under No-Action conditions on Site 11, the first occupiable floor would be located at grade and the building would not meet minimum Appendix G requirements. In the No-Action scenario, the total building height on Site 11 would be 28 feet with a perimeter wall of 18 feet, fitting within the permitted building envelope of an R4 zoning district, which allows for a maximum building height of 35 feet and a maximum perimeter wall height of 25 feet (ZR 23-631). Since there is no BFE in the 0.2% flood zone, this is measured the grade. Residential floors one through two would have floor-to-floor heights of nine feet each and the attic would have a floor-to-floor height of 10 feet on Site 11 in the future without the Proposed Action.

The No-Action scenario on Prototypical Analysis Site 11 would provide one enclosed parking space in a detached garage in the side yard, as required in the underlying zoning (ZR 25-22). The building on Site 11 would comply with all other underlying zoning regulations in the future without the Proposed Action.

### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 11 would be developed with a single-family detached residence with two stories, an attic, and a garage within the building. The zoning lot would contain 1,925 sf of zoning floor area with an FAR of 0.77 in the future with the Proposed Action. The maximum permitted within an R4 district including the attic allowance is an FAR of 0.90 (ZR 23-142). Additionally, the building's gross floor area would be 3,182 sf. As a result of the Proposed Action, floor spaces used for MEP equipment (150 sf) and the wet-floodproofed garage at ground level (1,105 sf) would be exempted from the zoning floor area on Prototypical Analysis Site 11.

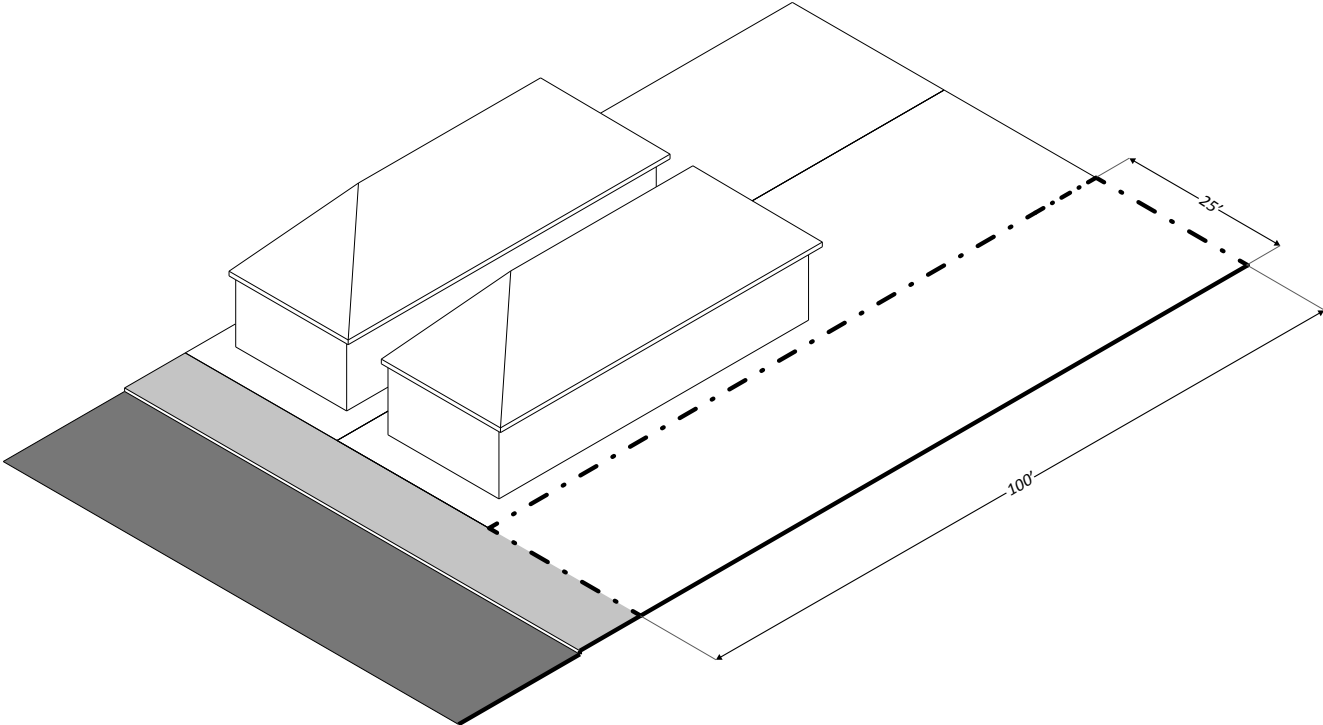
In order to floodproof the building for the long term, the home is utilizing the "reference plane" allowance of five feet in the 0.2% flood zone and the FSAFE would be placed at eight feet above grade. In the future with the Proposed Action, the total building height on Site 11 would be 27 feet with a perimeter wall of 17 feet, fitting within the proposed cottage envelope measured from a "reference plane" of five feet above, which allows for a maximum building height of 30 feet (25 feet plus five feet) and a maximum perimeter wall height of 24 feet (19 feet plus five feet). The ground floor would have a wet floodproofed garage with a floor-to-floor height of eight feet, the second floor would have a floor-to-floor height of nine feet, and the attic would have a floor-to-floor height of 10 feet in the With-Action scenario. Additionally, the MEP equipment on Site 11 would be located in the rear yard as permitted obstruction and would be elevated eight feet above grade to match the FSAFE. The MEP equipment would be attached to the building.

The With-Action scenario on Prototypical Analysis Site 11 would provide one enclosed parking space in the garage, as required in the underlying zoning (ZR 25-621 and ZR 25-22). The building on Site 11 would comply with all other underlying zoning regulations in the future with the Proposed Action.

### ***Increment***

As a result of the Proposed Action, there would be an additional 995 sf of gross floor area, an additional 35 sf of zoning floor area, and an additional 960 sf of exempted floor area on Prototypical Analysis Site 11 in the 0.2% annual chance floodplain. As compared to the No-Action condition, the perimeter wall would be one foot lower and the overall building height would be one foot lower on Site 11. No additional stories, dwelling units, or parking spaces would be added on the lot as a result of the Proposed Action. Additionally, lot coverage on the site would increase from 35 percent to 44 percent in the future with the Proposed Action.

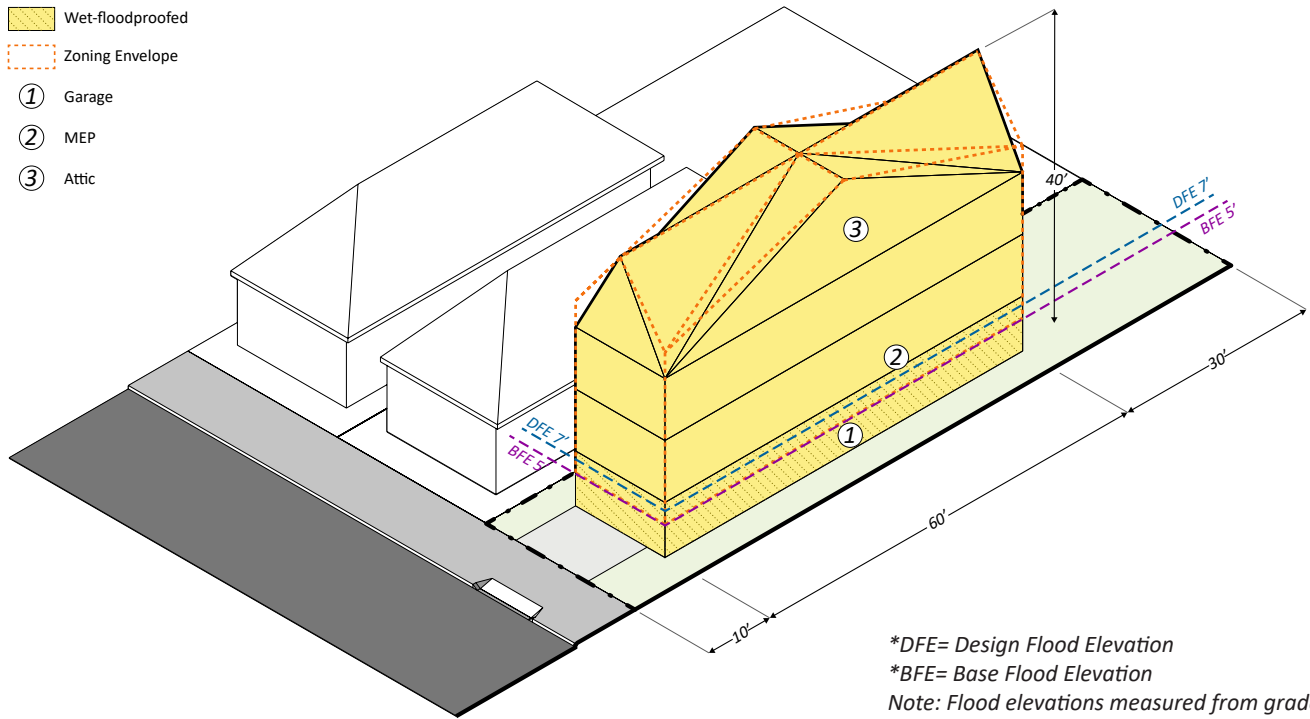
Existing Condition



1% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Garage
- ② MEP
- ③ Attic

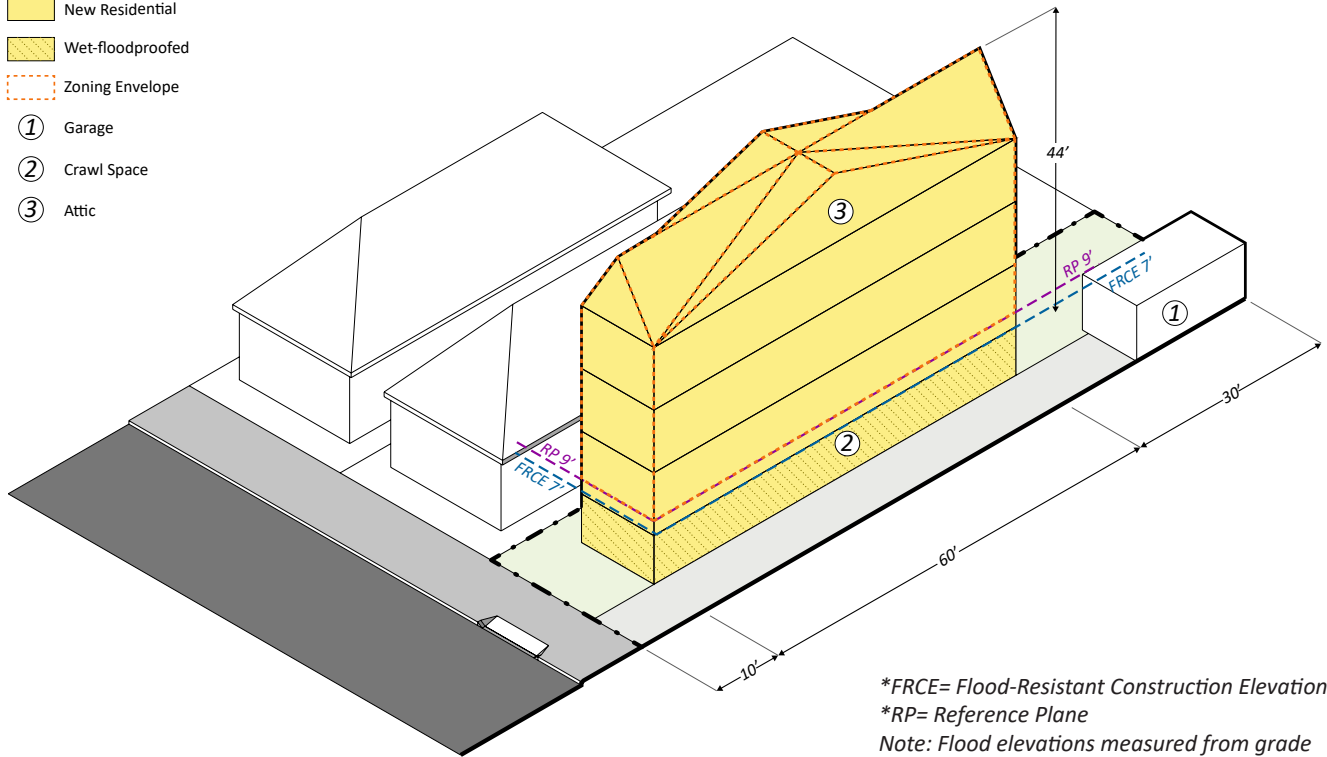


	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	2,245 sf	2,250 sf	+ 5 sf
<i>Zoning Residential Floor Area</i>	2,245 sf	2,250 sf	+ 5 sf
<b>Gross Floor Area</b>	3,195 sf	3,461 sf	+ 266 sf
<i>Gross Residential Floor Area</i>	3,195 sf	3,461 sf	+ 266 sf
<b>Exempted Floor Area</b>	950 sf	1,211 sf	+ 261 sf
<b>Provided Perimeter Wall/Baseheight</b>	26 ft	28 ft	+ 2 ft
<b>Provided Overall Height</b>	40 ft	35 ft	- 5 ft
<b>Provided Number of Stories</b>	3 (+ Attic)	3 (+ Attic)	0
<b>Lot Coverage / Open Space</b>	36 % / 64 %	42 % / 58 %	+ 8% / - 6%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

1% Annual Chance Floodplain: FT1

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Garage
- ② Crawl Space
- ③ Attic



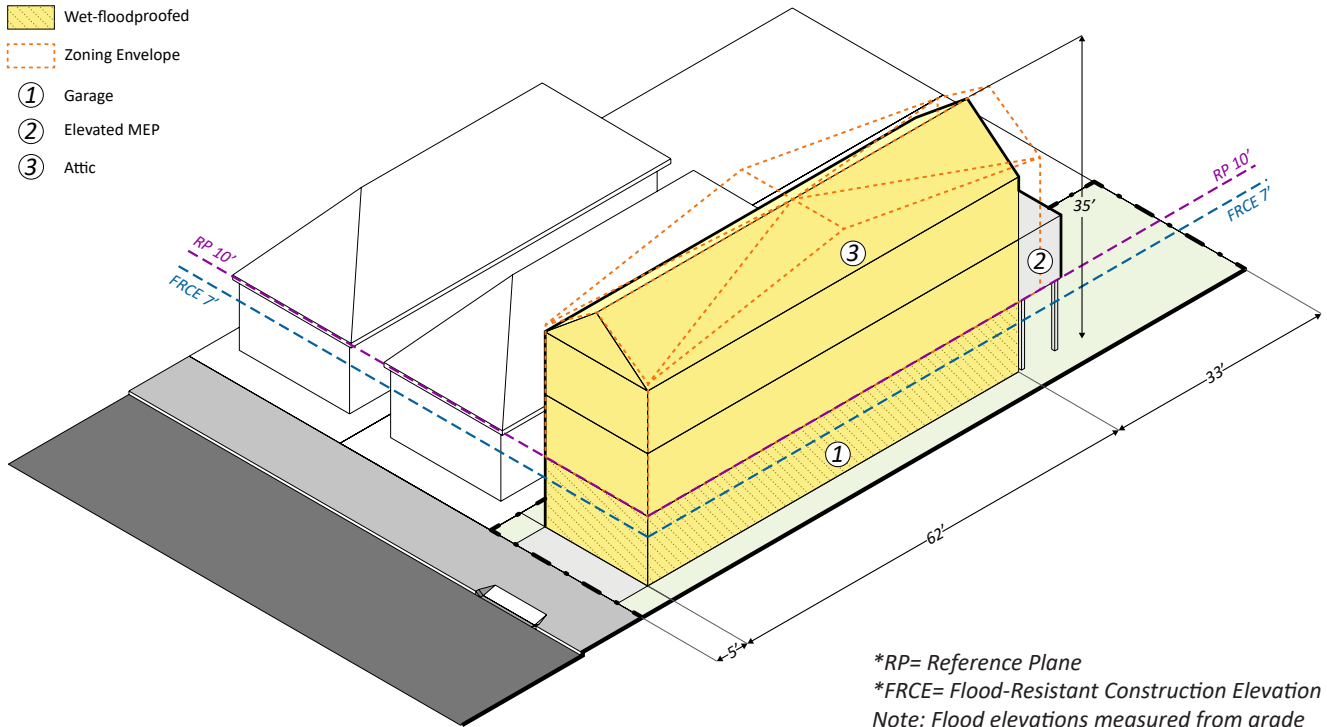
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	2,500 sf	0	0	0
<b>Zoning Floor Area</b>	2,245 sf	2,250 sf	2,250 sf	+ 5 sf	0	+ 5 sf
<i>Zoning Residential Floor Area</i>	2,245 sf	2,250 sf	2,250 sf	+ 5 sf	0	+ 5 sf
<b>Gross Floor Area</b>	3,195 sf	3,170 sf	3,461 sf	- 25 sf	+ 291sf	+ 266 sf
<i>Gross Residential Floor Area</i>	3,195 sf	3,170 sf	3,461 sf	- 25 sf	+ 291 sf	+ 266 sf
<b>Exempted Floor Area</b>	950 sf	920 sf	1,211 sf	- 30 sf	+ 291 sf	+ 261 sf
<b>Provided Perimeter Wall/Baseheight</b>	26 ft	34 ft	28 ft	+ 8 ft	- 8 ft	+ 2 ft
<b>Provided Overall Height</b>	40 ft	44 ft	35 ft	+ 4 ft	- 9 ft	- 5 ft
<b>Provided Number of Stories</b>	3 (+ Attic)	3 (+ Attic)	3 (+ Attic)	0	0	0
<b>Lot Coverage / Open Space</b>	36 % / 64 %	35 % / 65 %	42 % / 58 %	- 1% / + 1%	+ 7% / - 7%	+ 8% / - 6%
<b>Dwelling Units</b>	1	1	1	0	0	0
<b>Parking Spaces</b>	1	1	1	0	0	0

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Garage
- ② Elevated MEP
- ③ Attic



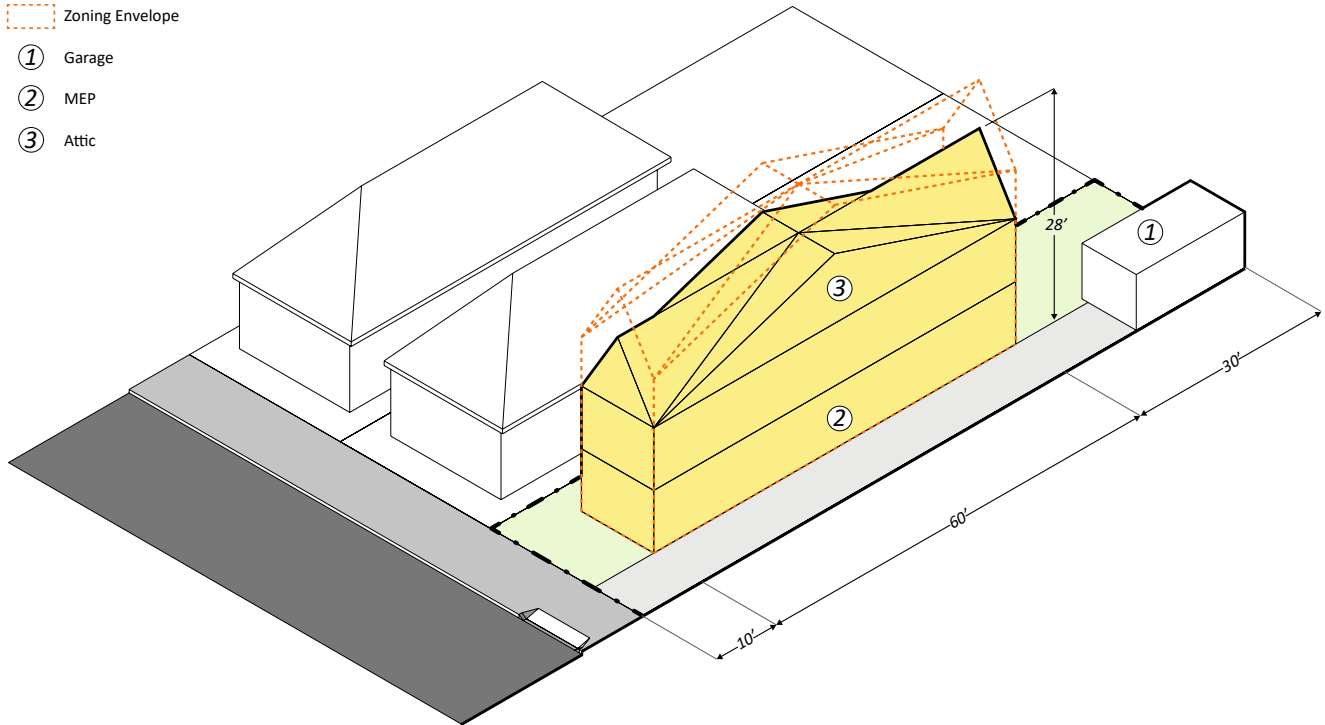
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	2,245 sf	2,250 sf	+ 5 sf
<i>Zoning Residential Floor Area</i>	2,245 sf	2,250 sf	+ 5 sf
<b>Gross Floor Area</b>	3,195 sf	3,461 sf	+ 266 sf
<i>Gross Residential Floor Area</i>	3,195 sf	3,461 sf	+ 266 sf
<b>Exempted Floor Area</b>	950 sf	1,211 sf	+ 261 sf
<b>Provided Perimeter Wall/Baseheight</b>	26 ft	28 ft	+ 2 ft
<b>Provided Overall Height</b>	40 ft	35 ft	- 5 ft
<b>Provided Number of Stories</b>	3 (+ Attic)	3 (+ Attic)	0
<b>Lot Coverage / Open Space</b>	36 % / 64 %	42 % / 58 %	+ 8% / - 6%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0



0.2% Annual Chance Floodplain: No-Action Condition

Legend

- New Residential
- Zoning Envelope
- ① Garage
- ② MEP
- ③ Attic

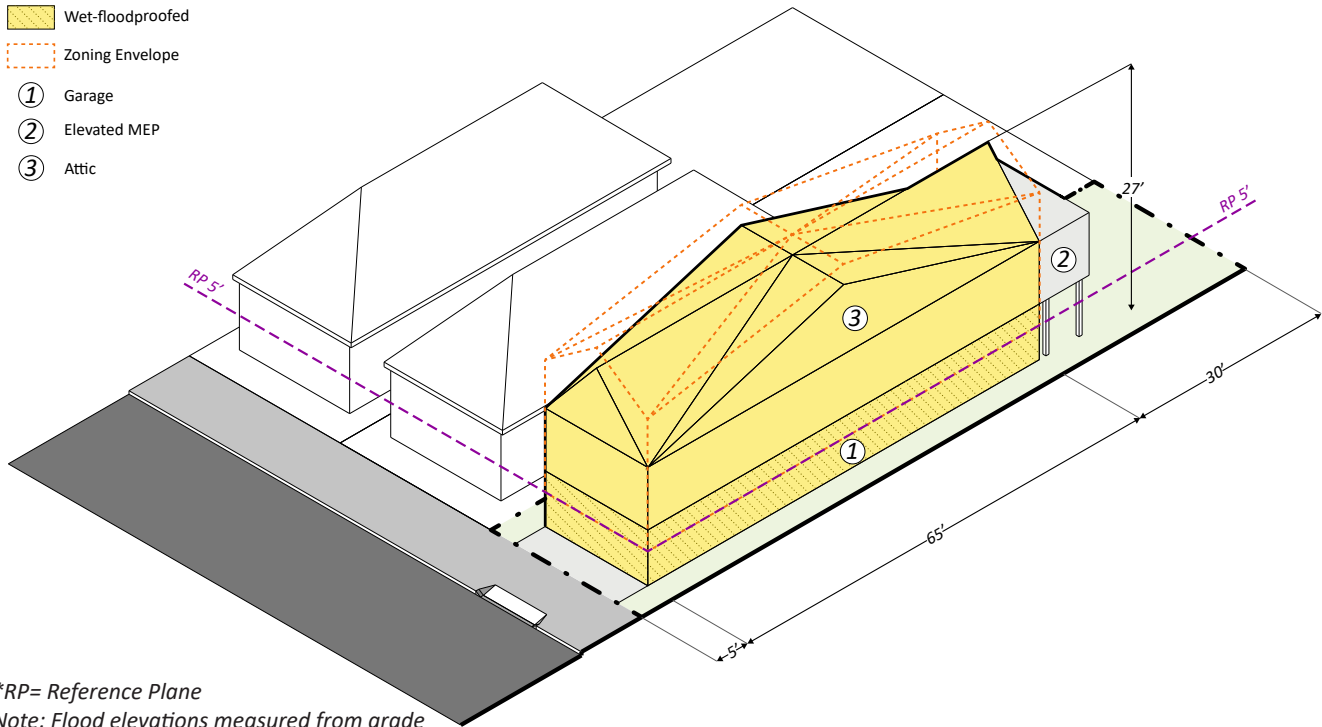


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	1,880 sf	1,925 sf	+ 45 sf
<i>Zoning Residential Floor Area</i>	1,880 sf	1,925 sf	+ 45 sf
<b>Gross Floor Area</b>	2,110 sf	3,182 sf	+ 1,072 sf
<i>Gross Residential Floor Area</i>	2,110 sf	3,182 sf	+ 1,072 sf
<b>Exempted Floor Area</b>	50 sf	1,257 sf	+ 1,207 sf
<b>Provided Perimeter Wall/Baseheight</b>	18 ft	17 ft	- 1 ft
<b>Provided Overall Height</b>	28 ft	27 ft	- 1 ft
<b>Provided Number of Stories</b>	2 (+ Attic)	2 (+ Attic)	0
<b>Lot Coverage / Open Space</b>	35 % / 65 %	44 % / 56 %	+ 9% / - 9%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- New Residential
- Wet-floodproofed
- Zoning Envelope
- ① Garage
- ② Elevated MEP
- ③ Attic



	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0 sf
<b>Zoning Floor Area</b>	1,880 sf	1,925 sf	+ 45 sf
<i>Zoning Residential Floor Area</i>	1,880 sf	1,925 sf	+ 45 sf
<b>Gross Floor Area</b>	2,110 sf	3,461 sf	+ 1,072 sf
<i>Gross Residential Floor Area</i>	2,110 sf	3,461 sf	+ 1,072 sf
<b>Exempted Floor Area</b>	50 sf	1,211 sf	+ 1,207 sf
<b>Provided Perimeter Wall/Baseheight</b>	18 ft	17 ft	- 1 ft
<b>Provided Overall Height</b>	28 ft	27 ft	- 1 ft
<b>Provided Number of Stories</b>	2 (+ Attic)	2 (+ Attic)	0
<b>Lot Coverage / Open Space</b>	35 % / 65 %	44 % / 56 %	+ 9% / - 9%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	1	1	0

## **Prototype 12**

*R3A Residence District, 25-foot x 100-foot Interior Lot  
Single-Family Detached Residence, Retrofit*

### **Introduction**

Prototypical Analysis Site 12 utilizes a generic 25-foot by 100-foot interior lot (2,500 sf) in an R3A contextual residential zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 12 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes;
- Allowances for non-complying buildings;
- Floor area exemption for wet-floodproofed ground floor; and
- Permitted obstructions of MEP equipment in the rear yard.

### **Existing Condition**

In the existing condition, Prototypical Analysis Site 12 contains a single-family detached residence with one story and a cellar with an attic. The zoning lot is developed with 1,052 sf of zoning floor area with an FAR of 0.42, less than the maximum permitted FAR of 0.50 in R3A zoning districts (ZR 23-142). The building's gross floor area is 2,204 sf. Floor spaces used for MEP equipment (50 sf) and the cellar (1,102 sf) on Site 12 are exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

Prototypical Analysis Site 12 is mapped with a BFE of five feet above grade, according to FEMA's flood maps, resulting in a DFE of seven feet. The total building height is 17 feet with a perimeter wall of 11 feet, fitting within the permitted building height of an R3A zoning district as measured from grade allowing for a maximum building height of 35 feet and a maximum perimeter wall height of 21 feet (ZR 23-631). However, the building does not comply with front or side yard requirements (ZR 23-45 and ZR 23-46).

There is no parking on the site. The building was built prior to December 15, 1961, and it does not comply with underlying parking regulations (ZR 25-22).

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

For a conservative analysis, the No-Action scenario would not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with Appendix G requirements. In addition, as the building on Site 12 is non-complying, it would not be able to elevate and increase the degree of existing non-compliances or create new non-compliances. The permitted building envelope of an R3A residence district measured from the BFE (ZR 12-10 Definition of a Base Plane) allows for a maximum building height of 40 feet (35 feet plus five feet BFE) and a maximum perimeter wall height of 26 feet (21 feet plus five feet BFE) (ZR 23-631, 12-10 Definition of a Base Plane).

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 12 would be retrofitted to elevate the habitable portions of the existing home above the FRCE. The site would accommodate a total of 1,102 sf of zoning floor area with an FAR of 0.44, less than the maximum permitted FAR of 0.50 in R3A zoning districts (ZR 23-142). The building's gross floor area would be 2,254 sf. Floor spaces used for MEP equipment (50 sf) and the wet-floodproofed ground floor (1,102 sf) on Site 12 would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

In the future with the Proposed Action, Prototypical Analysis Site 12 would be mapped with a BFE of five feet above grade, according to FEMA's flood maps, resulting in a FRCE of seven feet. In order to floodproof the building for the long term and exceed minimum Appendix G requirements, the home is utilizing the "reference plane" allowance of 10 feet in the 1% flood zone, which results in the FSAFE being placed at 10 feet above grade. The below-grade cellar would be filled-in, and the MEP equipment would be moved to the rear of the building as a permitted obstruction located at the "reference plane" of 10 feet above grade. In addition, the MEP equipment would be attached to the building. The total building height would be 25 feet with a perimeter wall of 19 feet, as measured from grade, fitting within the maximum permitted height as measured from a "reference plane" of 10 feet, which would allow for a maximum building height of 45 feet (25 feet plus 10 feet) and a maximum perimeter wall height of 31 feet (21 feet plus 10 feet). Additionally, the building would be allowed to relocate its footprint to the center of the lot, as the distance of the horizontal movement would fit within the regulation's parameters. In the future with the Proposed Action, the first floor of the building on Prototypical Analysis Site 12 would be wet-floodproofed and would include a parking garage with one parking space, complying with underlying zoning regulations (ZR 25-22).

### ***Increment***

As a result of the Proposed Action, there would be an additional 50 sf of zoning and gross floor area on Prototypical Analysis Site 12 in the 1% annual chance floodplain. The building on Site 12 would increase by eight feet, and lot coverage would increase from 44 percent to 46 percent as compared to No-Action conditions. Additionally, in the future with the Proposed Action, an enclosed garage would be included in the building on Prototypical Analysis Site 12, adding one parking space to the zoning lot.

## **0.2% Annual Chance Floodplain Scenario**

### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 12 is the same as the existing condition because buildings in the 0.2% annual chance floodplain don't have to meet the minimum Appendix G requirements. The permitted building envelope of an R3A residence district is measured from grade since there is no BFE in the 0.2% floodplain, which allows for a maximum building height of 25 feet and a maximum perimeter wall height of 21 feet (ZR 23-631).

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 12 would be retrofitted through an elevation. The site would accommodate a total of 1,102 sf of zoning floor area with an FAR of 0.44, less than the maximum permitted FAR of 0.50 in R3A zoning districts (ZR 23-142). Additionally, the building's gross floor area would be 2,254 sf. Floor spaces used for MEP equipment (50 sf) and the wet-floodproofed ground floor (1,102 sf) on Site 12 would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

In order to floodproof the building for the long term, the home is utilizing the “reference plane” allowance of five feet in the 0.2% flood zone, and the FSAFE would be placed at 10 feet above grad. , The below-grade cellar would be filled-in, and the MEP equipment would be moved to the rear of the building as a permitted obstruction located at the FSAFE. In addition, the MEP equipment would be attached to the building. In the future with the Proposed Action, the total building height on Site 12 would be 25 feet with a perimeter wall of 19 feet, fitting within the maximum permitted height as measured from a “reference plane” of five feet, which allows for a maximum building height of 30 feet (25 feet plus five feet) and a maximum perimeter wall height of 26 feet (21 feet plus five feet). Additionally, the building on Prototypical Analysis Site 12 would be allowed to relocate its footprint to the center of the lot, as the distance of the horizontal movement fits within the regulation’s parameters. In the future with the Proposed Action, the first floor of the building on Site 12 would be wet-floodproofed and would include an enclosed garage with one parking space, complying with underlying zoning regulations (ZR 25-22).

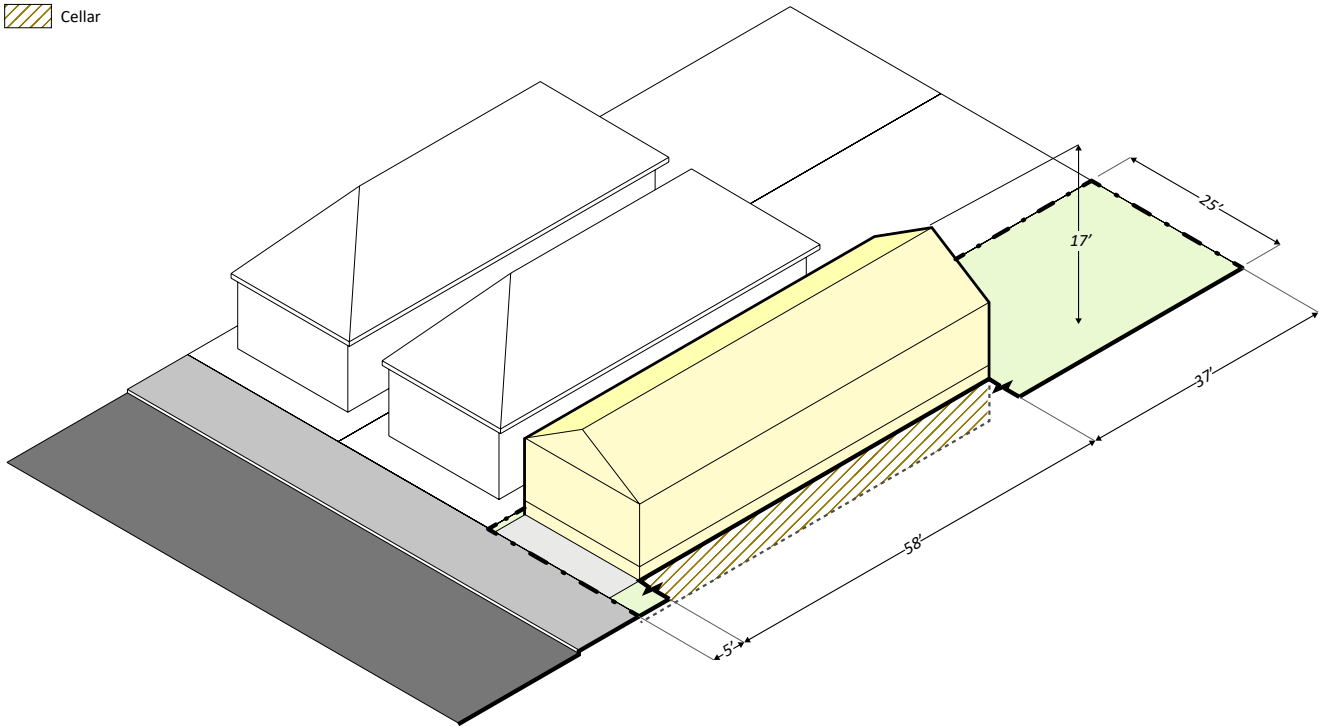
### ***Increment***

As a result of the Proposed Action, there would be an additional 50 sf of zoning and gross floor area on Prototypical Analysis Site 12 in the 0.2% annual chance floodplain. The building on Site 12 would increase by eight feet, and lot coverage would increase from 44 percent to 46 percent as compared to No-Action conditions. Additionally, in the future with the Proposed Action, an enclosed garage would be included on Prototypical Analysis Site 12, adding one parking space to the zoning lot.

Existing Condition

Legend

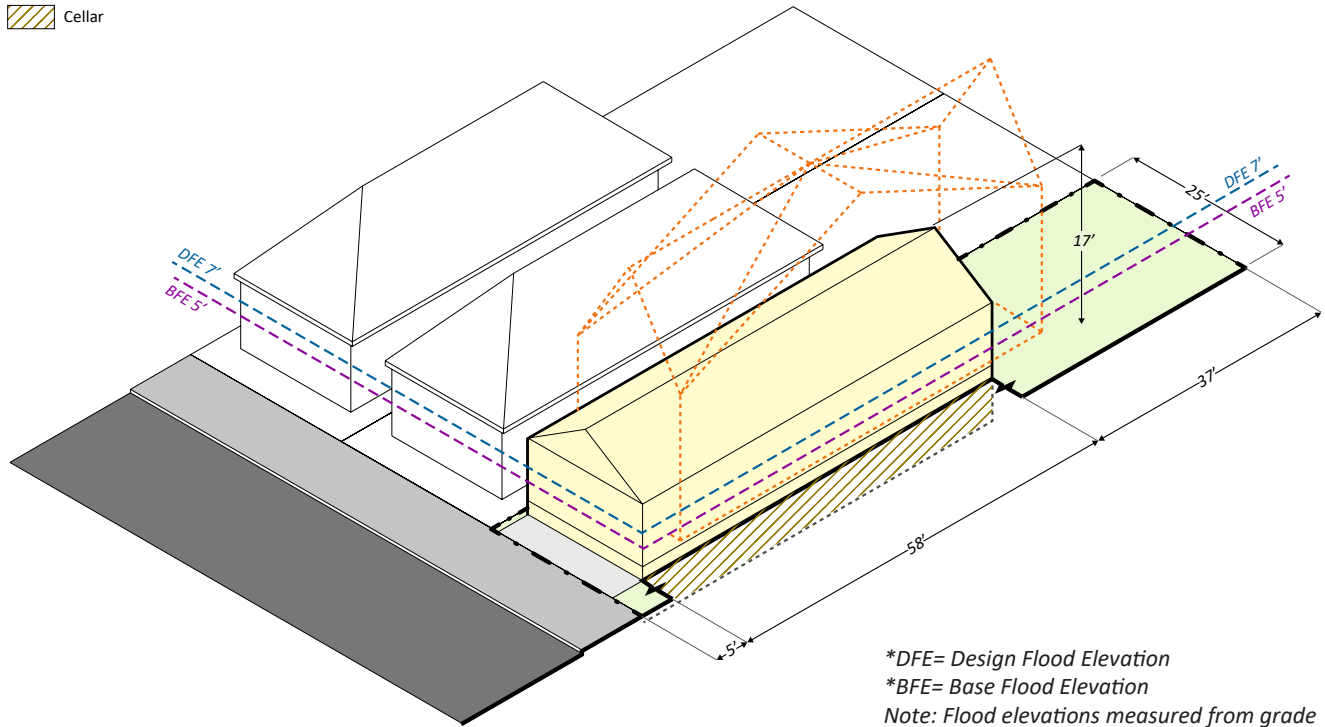
- Residential
- Cellar



1% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Cellar

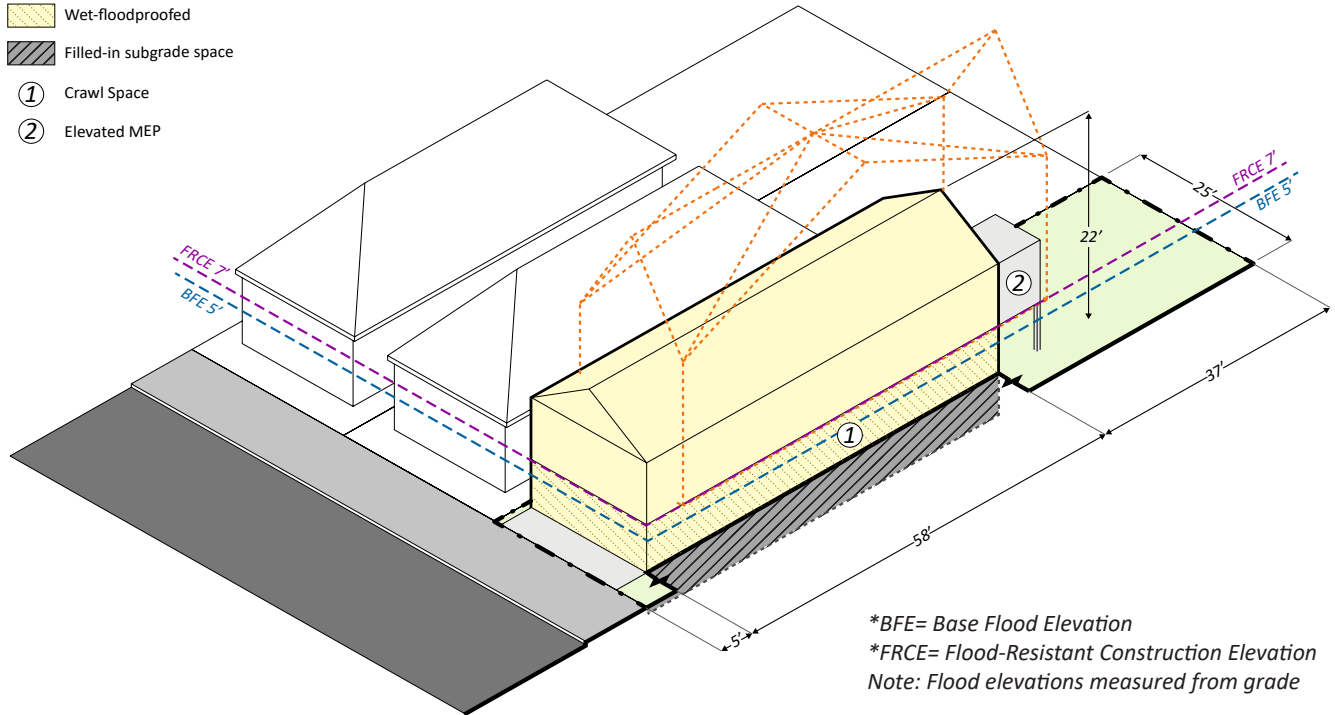


	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	1,052 sf	1,102 sf	+ 50 sf
<i>Zoning Residential Floor Area</i>	1,052 sf	1,102 sf	+ 50 sf
<b>Gross Floor Area</b>	2,204 sf	2,254 sf	+ 50 sf
<i>Gross Residential Floor Area</i>	2,204 sf	2,254 sf	+ 50 sf
<b>Exempted Floor Area</b>	1,152 sf	1,152 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	11 ft	19 ft	+ 8 ft
<b>Provided Overall Height</b>	17 ft	25 ft	+ 8 ft
<b>Provided Number of Stories</b>	1 (+ Cellar)	2 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	+ 2% / - 2%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	0	1	+ 1

1% Annual Chance Floodplain: FT1

Legend

- Residential
- Wet-floodproofed
- Filled-in subgrade space
- ① Crawl Space
- ② Elevated MEP



	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	2,500 sf	0	0	0
<b>Zoning Floor Area</b>	1,052 sf	1,102 sf	1,102 sf	+ 50 sf	0	+ 50 sf
<i>Zoning Residential Floor Area</i>	1,052 sf	1,102 sf	1,102 sf	+ 50 sf	0	+ 50 sf
<b>Gross Floor Area</b>	2,204 sf	2,254 sf	2,254 sf	+ 50 sf	0	+ 50 sf
<i>Gross Residential Floor Area</i>	2,204 sf	2,254 sf	2,254 sf	+ 50 sf	0	+ 50 sf
<b>Exempted Floor Area</b>	1,152 sf	1,152 sf	1,152 sf	0	0	0
<b>Provided Perimeter Wall/Baseheight</b>	11 ft	16 ft	19 ft	+ 5 ft	+ 3 ft	+ 8 ft
<b>Provided Overall Height</b>	17 ft	22 ft	25 ft	+ 5 ft	+ 3 ft	+ 8 ft
<b>Provided Number of Stories</b>	1 (+ Cellar)	2 (No Cellar)	2 (No Cellar)	+ 1	0	+ 1
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	46 % / 54 %	+ 2% / - 2%	0	+ 2% / - 2%
<b>Dwelling Units</b>	1	1	1	0	0	0
<b>Parking Spaces</b>	0	0	1	+ 1	0	+ 1

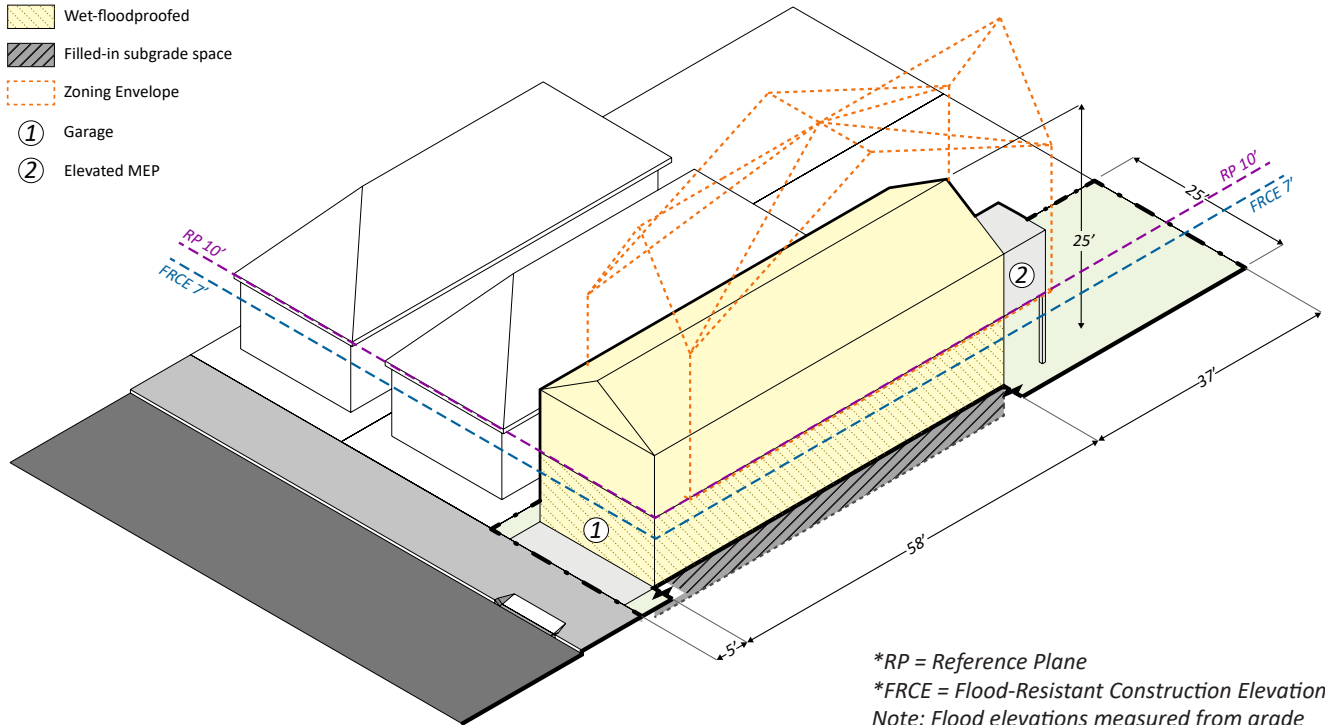
**\*\* FT1 diagrams for illustrative purposes only\*\***



1% Annual Chance Floodplain: With-Action Condition

Legend

- Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① Garage
- ② Elevated MEP



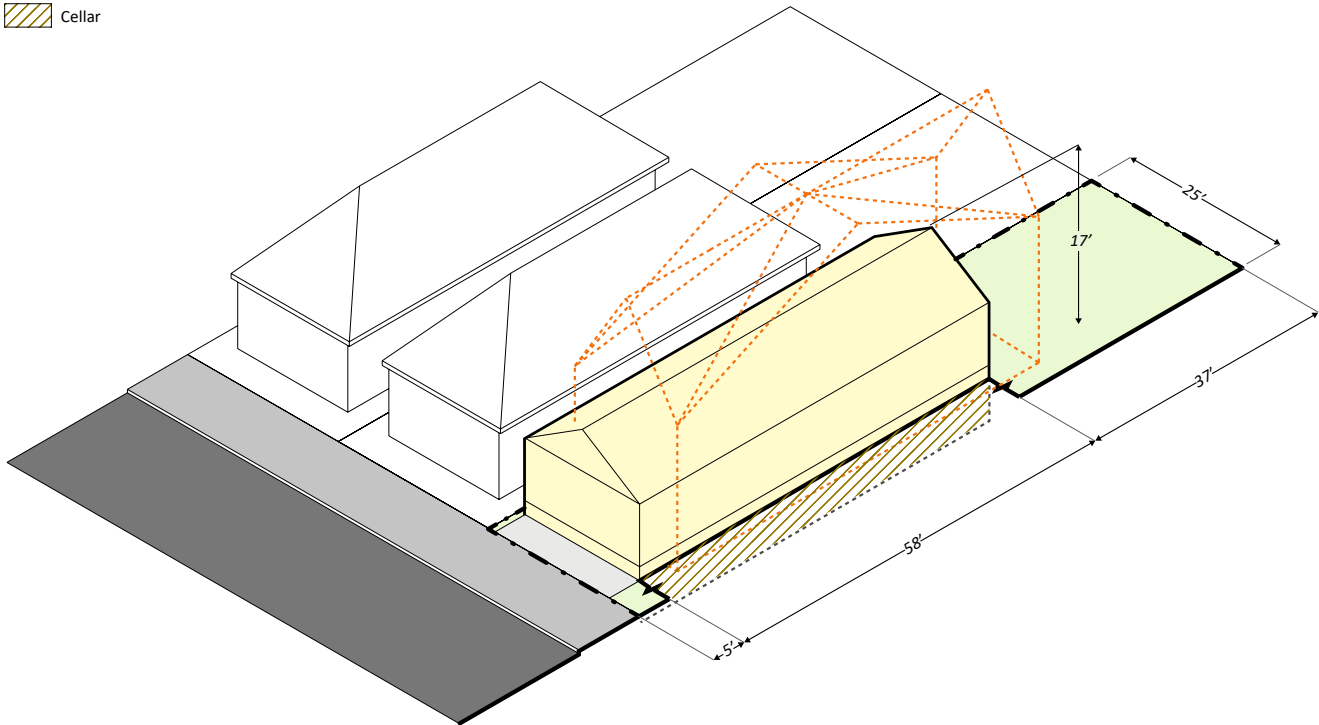
\*RP = Reference Plane  
 \*FRCE = Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	1,052 sf	1,102 sf	+ 50 sf
<i>Zoning Residential Floor Area</i>	1,052 sf	1,102 sf	+ 50 sf
<b>Gross Floor Area</b>	2,204 sf	2,254 sf	+ 50 sf
<i>Gross Residential Floor Area</i>	2,204 sf	2,254 sf	+ 50 sf
<b>Exempted Floor Area</b>	1,152 sf	1,152 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	11 ft	19 ft	+ 8 ft
<b>Provided Overall Height</b>	17 ft	25 ft	+ 8 ft
<b>Provided Number of Stories</b>	1 (+ Cellar)	2 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	+ 2% / - 2%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	0	1	+ 1

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Cellar

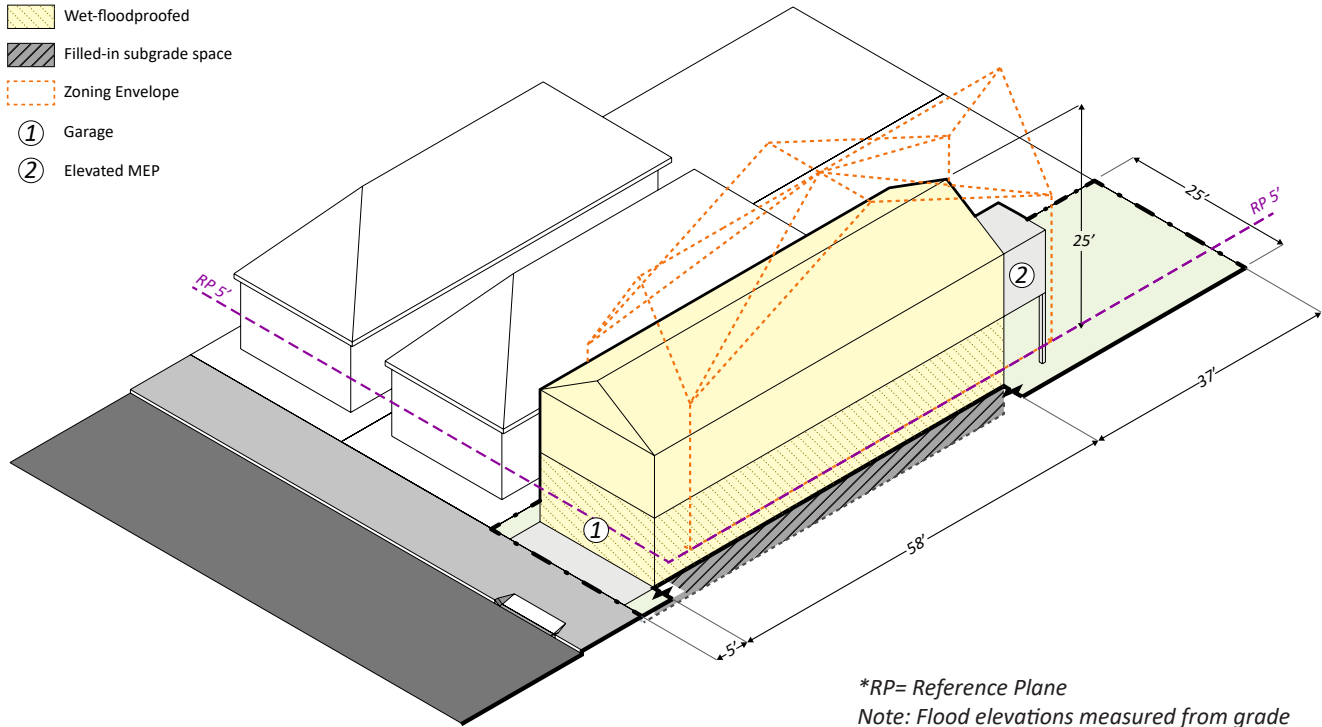


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	1,052 sf	1,102 sf	+ 50 sf
<i>Zoning Residential Floor Area</i>	1,052 sf	1,102 sf	+ 50 sf
<b>Gross Floor Area</b>	2,204 sf	2,254 sf	+ 50 sf
<i>Gross Residential Floor Area</i>	2,204 sf	2,254 sf	+ 50 sf
<b>Exempted Floor Area</b>	1,152 sf	1,152 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	11 ft	19 ft	+ 8 ft
<b>Provided Overall Height</b>	17 ft	25 ft	+ 8 ft
<b>Provided Number of Stories</b>	1 (+ Cellar)	2 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	+ 2% / - 2%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	0	1	+ 1

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① Garage
- ② Elevated MEP



	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,500 sf	2,500 sf	0
<b>Zoning Floor Area</b>	1,052 sf	1,102 sf	+ 50 sf
<i>Zoning Residential Floor Area</i>	1,052 sf	1,102 sf	+ 50 sf
<b>Gross Floor Area</b>	2,204 sf	2,254 sf	+ 50 sf
<i>Gross Residential Floor Area</i>	2,204 sf	2,254 sf	+ 50 sf
<b>Exempted Floor Area</b>	1,152 sf	1,152 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	11 ft	19 ft	+ 8 ft
<b>Provided Overall Height</b>	17 ft	25 ft	+ 8 ft
<b>Provided Number of Stories</b>	1 (+ Cellar)	2 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	44 % / 56 %	46 % / 54 %	+ 2% / - 2%
<b>Dwelling Units</b>	1	1	0
<b>Parking Spaces</b>	0	1	+ 1

## **Prototype 13**

*R3X Residence District, 28-foot x 100-foot Interior Lot  
Two-Family Attached Residence, Retrofit*

### **Introduction**

Prototypical Analysis Site 13 utilizes a generic 28-foot by 100-foot interior lot (2,500 sf) in an R3X contextual residential zoning district. These assumptions were made because they represent typical lot conditions in the 1% and 0.2% annual chance floodplains. Prototypical Analysis Site 13 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on development:

- Up to 10-foot (1% annual chance floodplain) and five-foot (0.2% annual chance floodplain) reference planes;
- Allowances for non-conforming and non-complying buildings; and
- Floor area exemption for wet-floodproofed ground floor.

### **Existing Condition**

In the existing condition, Prototypical Analysis Site 13 contains a non-conforming two-family attached residence with two stories and a cellar. The zoning lot is developed with 1,370 sf of zoning floor area with an FAR of 0.49, close to the maximum permitted FAR of 0.50 in R3X zoning districts (ZR 23-142). The building's gross floor area is 2,100 sf. Floor spaces used for MEP equipment (30 sf) and the cellar (700 sf) are exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

Prototypical Analysis Site 13 is mapped with a BFE of two feet above grade, according to FEMA's flood maps, resulting in a DFE of four feet. The total building height is 20 feet, fitting within the permitted building height of an R3X zoning district as measured from grade, which allows for a maximum building height of 35 feet and a maximum perimeter wall height of 21 feet (ZR 23-631). However, the building does not comply with side yard requirements (ZR 23-46).

Under existing conditions, there are two unenclosed parking spaces in the front yard of Prototypical Analysis Site 13, pursuant to underlying zoning regulations (ZR 25-23); however, the parking spaces do not comply with underlying location requirements (ZR 25-621).

### **1% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

For a conservative analysis, the No-Action scenario would not change from the existing condition because it is unlikely for buildings to retrofit when they are not required to comply with Appendix G requirements. In addition, as the building is non-conforming and non-complying, it would not be able to elevate or retrofit and increase the degree of existing non-compliances or create new non-compliances. The permitted building envelope of an R3X residence district measured from the BFE (ZR 12-10 Definition of a Base Plane) allows for a maximum building height of 37 feet (35 feet plus two feet BFE) and a maximum perimeter wall height of 23 feet (21 feet plus two feet BFE) (ZR 23-631).

### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 13 would be retrofitted to elevate the habitable portions of the existing home above the FRCE. The site would accommodate a total of 1,400 sf of zoning floor area with an FAR of 0.50, the maximum permitted FAR in R3X zoning districts (ZR 23-142). Additionally, the building on Site 13 would have a gross floor area of 2,130 sf in the future with the Proposed Action. Floor spaces used for MEP equipment (30 sf) and the wet-floodproofed ground floor (700 sf) on Site 13 would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

Prototypical Analysis Site 13 is mapped with a BFE of two feet above grade, according to FEMA's flood maps, resulting in a FRCE of four feet. In order to floodproof the building for the long term and exceed the minimum Appendix G requirements, the home is utilizing the "reference plane" allowance of 10 feet in the 1% flood zone, and the FSAFE would be placed at 12 feet above grade to keep the existing building structure. The below-grade cellar would be filled-in, and the MEP equipment would be moved to the rear of the building located at FSAFE. Additionally, the MEP equipment would be attached to the building. In the future with the Proposed Action, the total building height on Site 13 would be 29 feet, fitting within the maximum permitted height measured from a "reference plane" of 10 feet, which allows for a maximum building height of 45 feet (35 feet plus 10 feet) and a maximum perimeter wall height of 31 feet (21 feet plus 10 feet). The Proposed Action would allow the non-conforming building to retrofit and increase its existing non-compliances as it would fit within set parameters. Under With-Action conditions, the first floor of the building on Site 13 would be wet-floodproofed and would include an enclosed garage with one additional parking space, complying with underlying zoning regulations (ZR 25-22).

### ***Increment***

As a result of the Proposed Action, there would be an additional 30 sf of zoning and gross floor area on Prototypical Analysis Site 13 in the 1% annual chance floodplain. The building on Site 13 would increase by nine feet, and an enclosed garage would be included on Prototypical Analysis Site 13, adding one parking space to the zoning lot. No changes to the number of dwelling units or exempted floor area would occur on Site 13 in the future with the Proposed Action. Lot coverage on the site would increase from 25 percent to 26 percent as compared to No-Action conditions.

### **0.2% Annual Chance Floodplain Scenario**

#### ***No-Action Condition***

The No-Action scenario on Prototypical Analysis Site 13 is the same as the existing condition because buildings in the 0.2% annual chance floodplain don't have to meet the minimum Appendix G requirements. The permitted building envelope of an R3X residence district is measured from grade since there is no BFE in the 0.2% floodplain, which allows for a maximum building height of 35 feet and a maximum perimeter wall height of 21 feet (ZR 23-631).

#### ***With-Action Condition***

In the future with the Proposed Action, the building on Prototypical Analysis Site 13 would be retrofitted to elevate the habitable portions of the existing home. The site would accommodate a total of 1,400 sf of zoning floor area with an FAR of 0.50, the maximum permitted FAR in R3X zoning districts (ZR 23-142). Additionally, in the future with the Proposed Action, the building on Site 13 would have a gross floor area of 2,130 sf. Floor spaces used for MEP equipment (30 sf) and the wet-floodproofed ground floor (700 sf) on Site 13 would be exempted from the zoning floor area (ZR 12-10 Definition of Floor Area).

In order to floodproof the building for the long term and exceed the minimum flood-resistant construction standards, the home is utilizing the “reference plane” allowance of five feet in the 0.2% flood zone, and the FSAFE would be placed at 12 feet above grade to keep the existing building structure. The below-grade cellar would be filled-in, and the MEP equipment would be moved to the rear of the building located at FSAFE. Additionally, the MEP equipment would be attached to the building. The total building height on Prototypical Analysis Site 13 would be 29 feet, fitting within the proposed horizontal plane equivalent to the maximum permitted building height measured from a “reference plane” of five feet, which allows for a maximum building height of 40 feet (35 feet plus five feet) and a maximum perimeter wall height of 26 feet (21 feet plus five feet). The Proposed Action would allow the non-conforming building to retrofit and increase its existing non-compliances as it would fit within set parameters. Additionally, the first floor of the building on Site 13 would be wet-floodproofed and would include an enclosed garage with one additional parking space, complying with underlying zoning regulations (ZR 25-22).

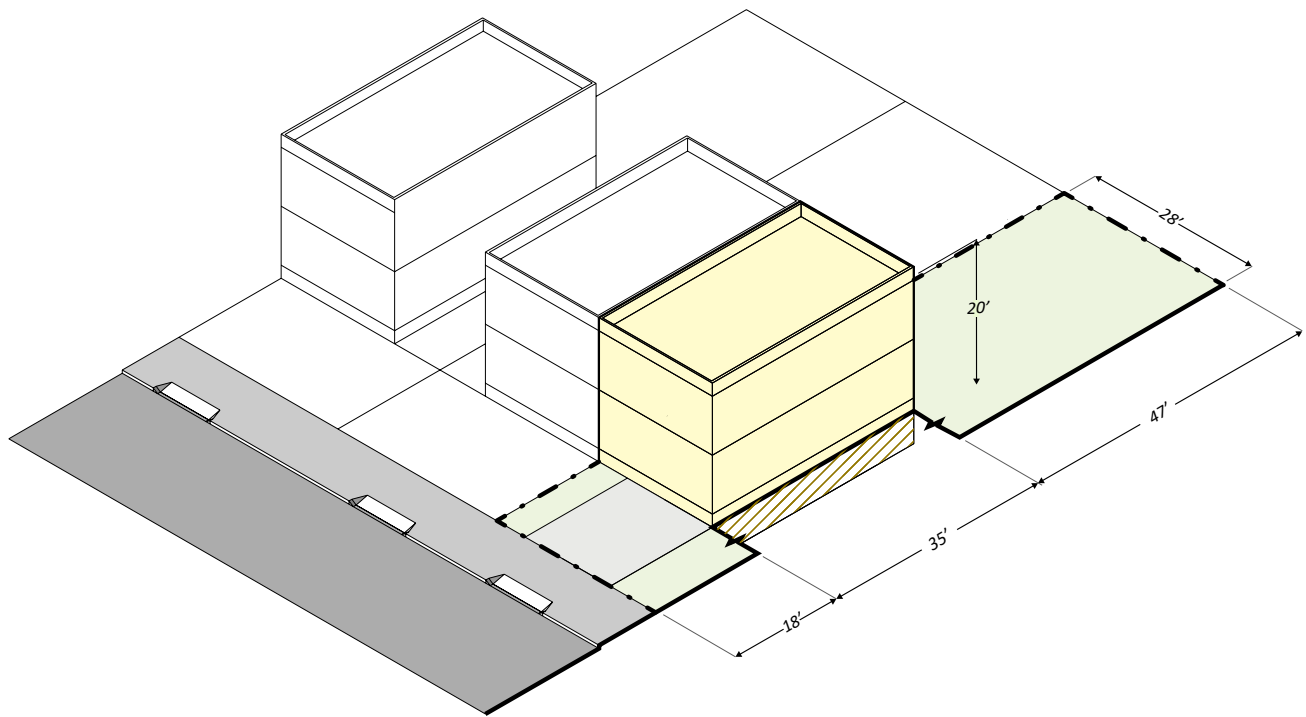
### ***Increment***

As a result of the Proposed Action, there would be an additional 30 sf of zoning and gross floor area on Prototypical Analysis Site 13 in the 0.2% annual chance floodplain. The building on Site 13 would increase by nine feet, and an enclosed garage would be included on Prototypical Analysis Site 13, adding one parking space to the zoning lot. No changes to the number of dwelling units or exempted floor area would occur on Site 13 in the future with the Proposed Action. Lot coverage on the site would increase from 25 percent to 26 percent as compared to No-Action conditions.

Existing Condition

Legend

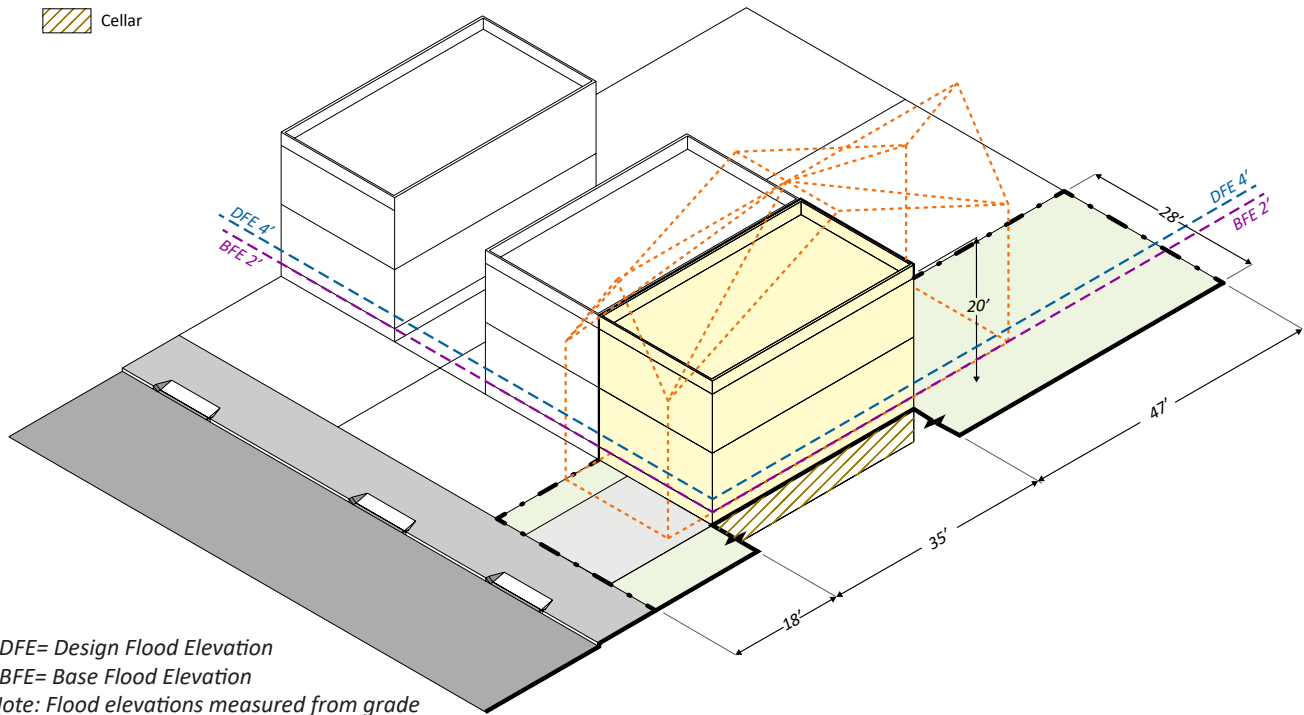
- Residential
- Cellar



1% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Zoning Envelope
- Cellar



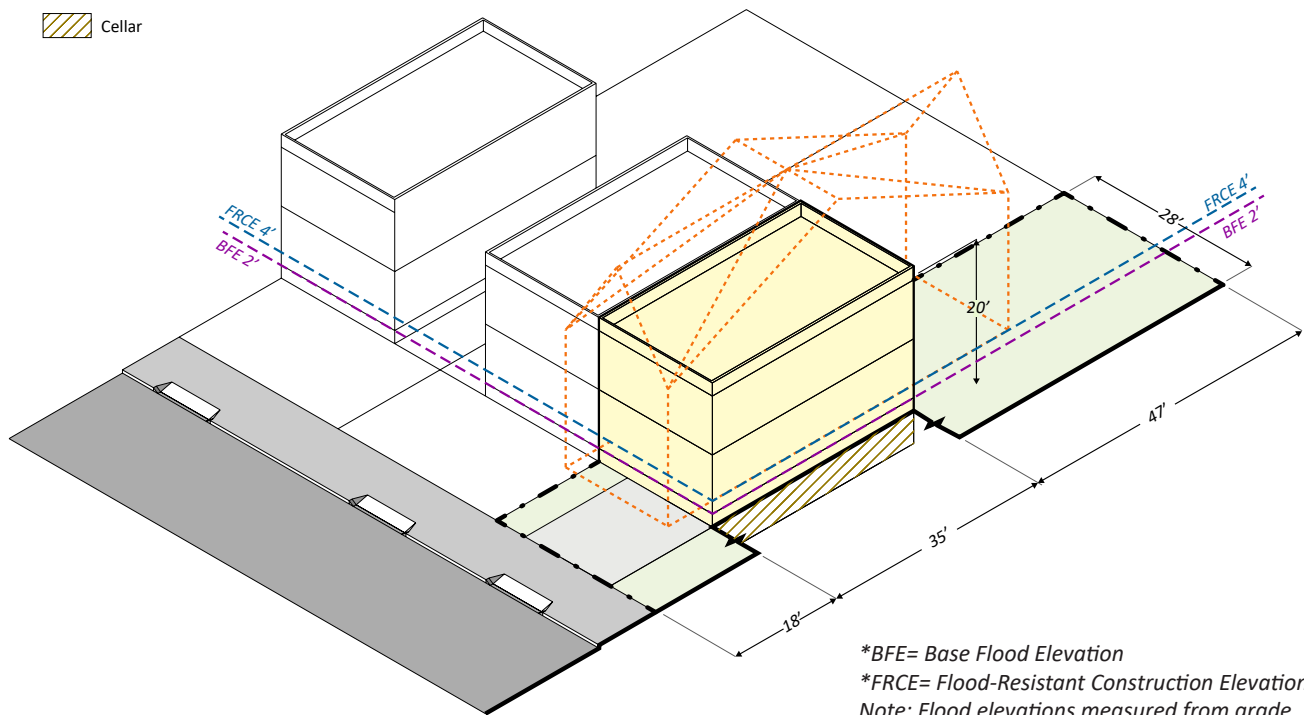
	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,800 sf	2,800 sf	0
<b>Zoning Floor Area</b>	1,370 sf	1,400 sf	+ 30 sf
<i>Zoning Residential Floor Area</i>	1,370 sf	1,400 sf	+ 30 sf
<b>Gross Floor Area</b>	2,100 sf	2,130 sf	+ 30 sf
<i>Gross Residential Floor Area</i>	2,100 sf	2,130 sf	+ 30 sf
<b>Exempted Floor Area</b>	730 sf	730 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	29 ft	+ 9 ft
<b>Provided Overall Height</b>	20 ft	29 ft	+ 9 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	25 % / 75 %	26 % / 74 %	+ 1% / - 1%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	2	3	+ 1



1% Annual Chance Floodplain: FT1

Legend

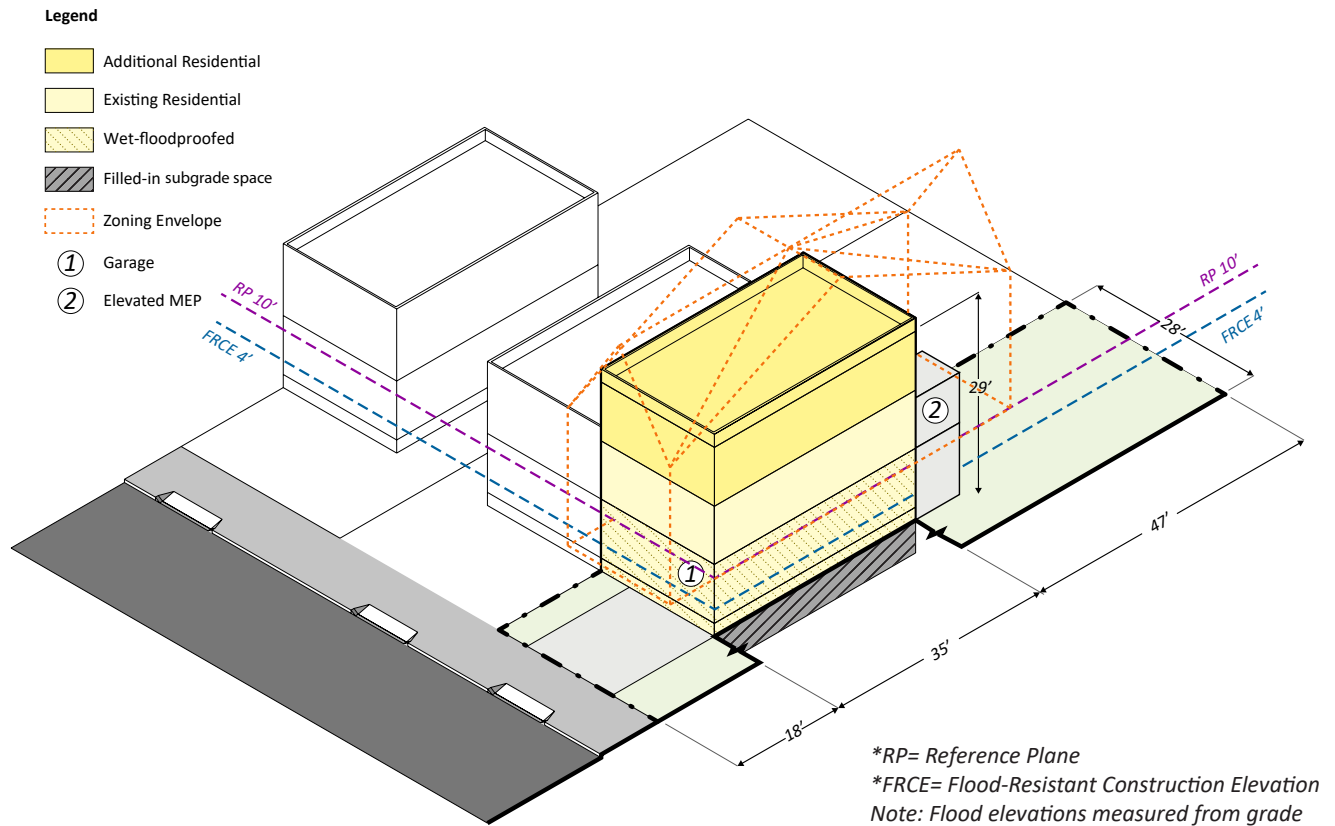
- Residential
- Zoning Envelope
- Cellar



	1% Annual Chance Floodplain: No-Action	1% Annual Chance Floodplain: FT1	1% Annual Chance Floodplain: With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
<b>Lot Area</b>	2,800 sf	2,800 sf	2,800 sf	0	0	0
<b>Zoning Floor Area</b>	1,370 sf	1,370 sf	1,400 sf	0	+ 30 sf	+ 30 sf
<i>Zoning Residential Floor Area</i>	1,370 sf	1,370 sf	1,400 sf	0	+ 30 sf	+ 30 sf
<b>Gross Floor Area</b>	2,100 sf	2,100 sf	2,130 sf	0	+ 30 sf	+ 30 sf
<i>Gross Residential Floor Area</i>	2,100 sf	2,100 sf	2,130 sf	0	+ 30 sf	+ 30 sf
<b>Exempted Floor Area</b>	730 sf	730 sf	730 sf	0	0	0
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	20 ft	29 ft	+ 9 ft	0	+ 9 ft
<b>Provided Overall Height</b>	20 ft	20 ft	29 ft	+ 9 ft	0	+ 9 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	2 (+ Cellar)	3 (No Cellar)	+1	0	+ 1
<b>Lot Coverage / Open Space</b>	25 % / 75 %	26 % / 74 %	26 % / 74 %	+1% / -1%	0	+ 1% / - 1%
<b>Dwelling Units</b>	2	2	2	0	0	0
<b>Parking Spaces</b>	2	3	3	+ 1	0	+ 1

**\*\* FT1 diagrams for illustrative purposes only\*\***

1% Annual Chance Floodplain: With-Action Condition

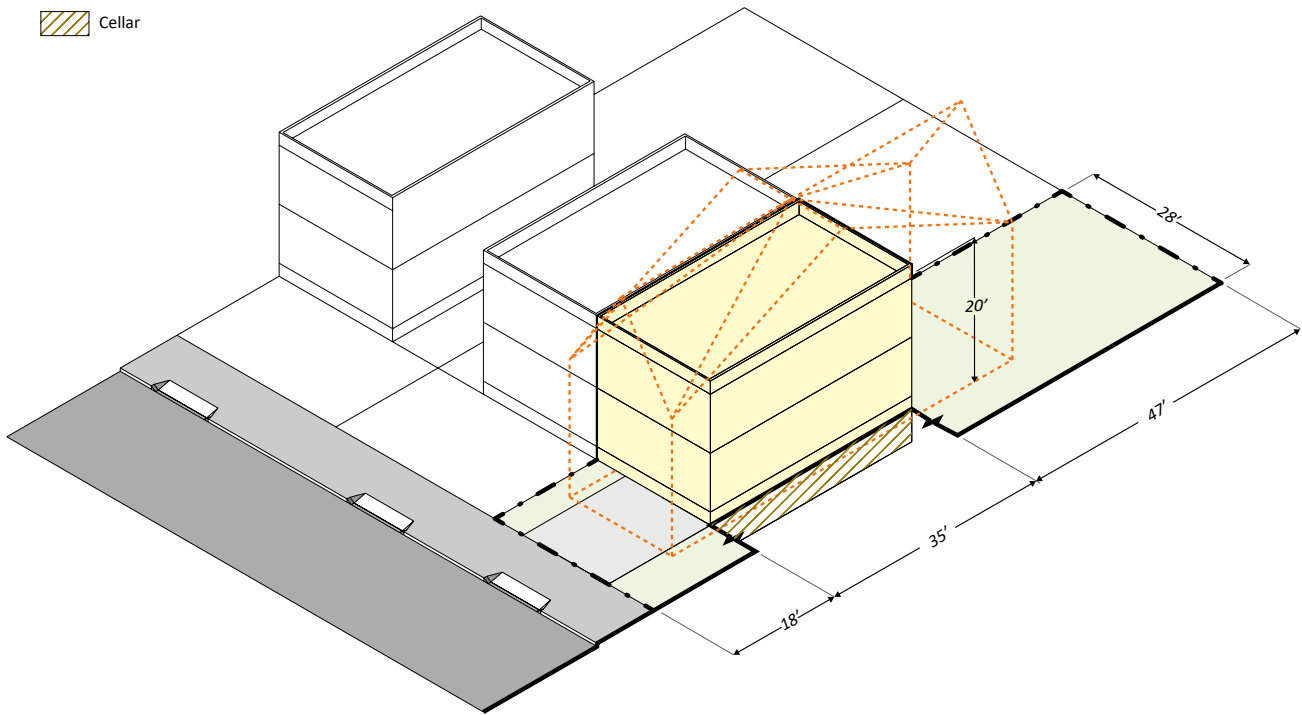


	1% Annual Chance Floodplai: No-Action	1% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,800 sf	2,800 sf	0
<b>Zoning Floor Area</b>	1,370 sf	1,400 sf	+ 30 sf
<i>Zoning Residential Floor Area</i>	1,370 sf	1,400 sf	+ 30 sf
<b>Gross Floor Area</b>	2,100 sf	2,130 sf	+ 30 sf
<i>Gross Residential Floor Area</i>	2,100 sf	2,130 sf	+ 30 sf
<b>Exempted Floor Area</b>	730 sf	730 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	29 ft	+ 9 ft
<b>Provided Overall Height</b>	20 ft	29 ft	+ 9 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	25 % / 75 %	26 % / 74 %	+ 1% / - 1%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	2	3	+ 1

0.2% Annual Chance Floodplain: No-Action Condition

Legend

- Residential
- Zoning Envelope
- Cellar

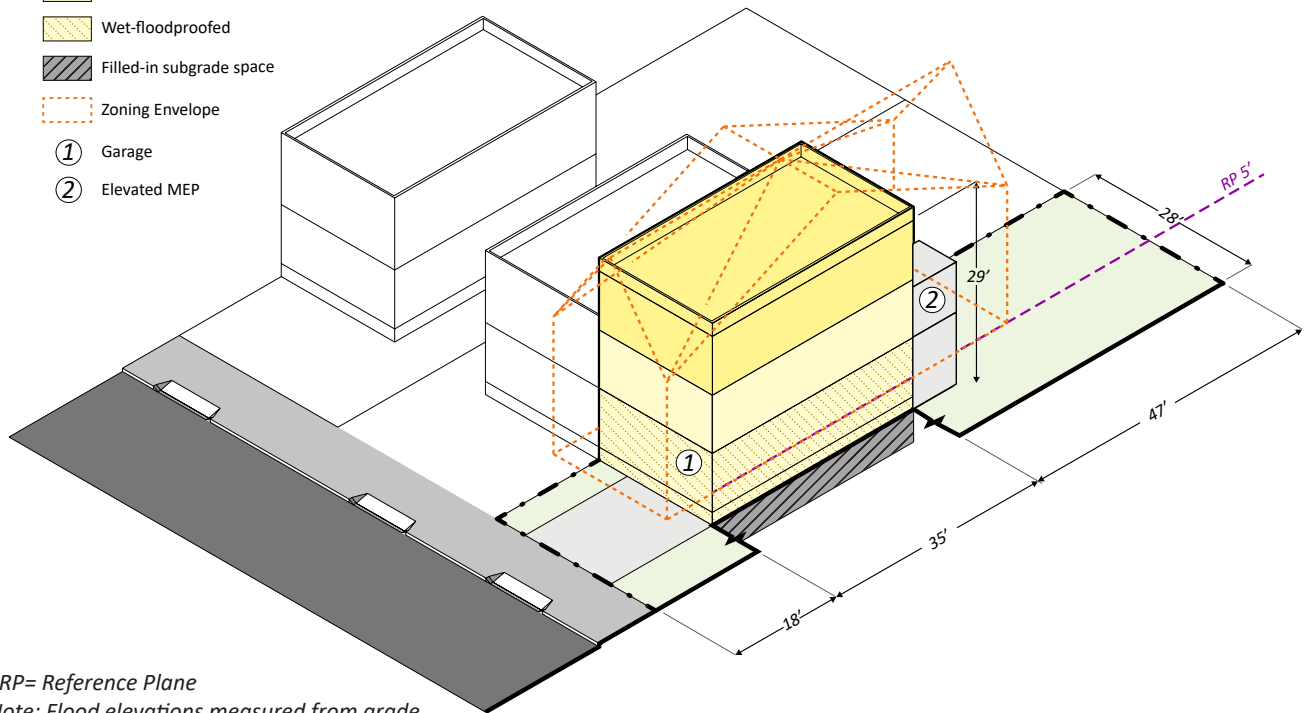


	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,800 sf	2,800 sf	0
<b>Zoning Floor Area</b>	1,370 sf	1,400 sf	+ 30 sf
<i>Zoning Residential Floor Area</i>	1,370 sf	1,400 sf	+ 30 sf
<b>Gross Floor Area</b>	2,100 sf	2,130 sf	+ 30 sf
<i>Gross Residential Floor Area</i>	2,100 sf	2,130 sf	+ 30 sf
<b>Exempted Floor Area</b>	730 sf	730 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	29 ft	+ 9 ft
<b>Provided Overall Height</b>	20 ft	29 ft	+ 9 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Open Space / Lot Coverage</b>	25 % / 75 %	26 % / 74 %	+ 1% / - 1%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	2	3	+ 1

0.2% Annual Chance Floodplain: With-Action Condition

Legend

- Additional Residential
- Existing Residential
- Wet-floodproofed
- Filled-in subgrade space
- Zoning Envelope
- ① Garage
- ② Elevated MEP



\*RP= Reference Plane

Note: Flood elevations measured from grade

	0.2% Annual Chance Floodplain: No-Action	0.2% Annual Chance Floodplain: With-Action	Change N/A to W/A
<b>Lot Area</b>	2,800 sf	2,800 sf	0
<b>Zoning Floor Area</b>	1,370 sf	1,400 sf	+ 30 sf
<i>Zoning Residential Floor Area</i>	1,370 sf	1,400 sf	+ 30 sf
<b>Gross Floor Area</b>	2,100 sf	2,130 sf	+ 30 sf
<i>Gross Residential Floor Area</i>	2,100 sf	2,130 sf	+ 30 sf
<b>Exempted Floor Area</b>	730 sf	730 sf	0
<b>Provided Perimeter Wall/Baseheight</b>	20 ft	29 ft	+ 9 ft
<b>Provided Overall Height</b>	20 ft	29 ft	+ 9 ft
<b>Provided Number of Stories</b>	2 (+ Cellar)	3 (No Cellar)	+ 1
<b>Lot Coverage / Open Space</b>	25 % / 75 %	26 % / 74 %	+ 1% / - 1%
<b>Dwelling Units</b>	2	2	0
<b>Parking Spaces</b>	2	3	+ 1

## **Prototype 14**

### *R8/C2-4 District, 200-foot x 250-foot Waterfront Lot Waterfront Site Modification*

#### **Introduction**

Prototypical Analysis Site 14 utilizes a generic 200-foot by 250-foot waterfront zoning lot (50,000 sf) in an R8/C2-4 zoning district. These assumptions were made because they represent typical waterfront lot conditions. Prototypical Analysis Site 14 illustrates the opportunity to understand the effects of the following portions of the Proposed Action on the development site:

- Reduction in the required widths of the waterfront yard and shore public walkway provided there is a tidal wetland area;
- Reduction in planting requirements;
- Reduction in screening buffer; and
- Increased allowance on the maximum retaining wall height.

For the purposes of illustrating the proposed modifications specific to waterfront regulations for open space, the building remains constant for the No-Action and With-Action scenarios for Site 14.

#### ***Existing Condition***

Under existing conditions, Prototypical Analysis Site 14 is a vacant, 50,000 sf waterfront lot.

#### ***No-Action Condition***

In the No-Action condition, Prototypical Analysis Site 14 would have a mixed-use residential and commercial building with a public access area. The waterfront zoning lot would be developed with 50,000 sf of zoning floor area and the area of the waterfront public access area would be 10,000 sf. The depth of the waterfront yard and the width of the shore public walkway would both be 40 feet (ZR 62-332 and ZR 62-53).

The lot would be mapped with a BFE of four feet above grade, according to FEMA's flood maps, resulting in a FRCE of five feet. In order to meet Appendix G requirements, the building would be elevated five feet above grade however, the level of the waterfront yard and the shore public walkway would be at grade.

The shore public walkway would be planted with a total area of 5,000 sf which is 50 percent of the total area of the shore public walkway (ZR 62-62), and the planted screening buffer would be at a minimum of 10 feet between the building and any pedestrian paths (ZR 62-62). The retaining wall would be at a maximum height of 18 inches (ZR 62-655).

#### ***With-Action Condition***

In the future with the Proposed Action, Prototypical Analysis Site 14 would also contain a mixed-use building with a public access area. The waterfront zoning lot would continue to be developed with 50,000 sf of zoning floor area and the area of the waterfront public access area would continue to be 10,000 sf. The depth of the waterfront yard and the width of the shore public walkway would both continue to be 40 feet (ZR 62-332 and ZR 62-53).

The lot is mapped with a BFE of four feet above grade, according to FEMA's flood maps, resulting in a FRCE of five feet. In order to meet Appendix G requirements, a portion of the site would be filled and elevated five feet above grade, resulting in a bi-level walkway with the remaining level of the waterfront yard and the shore public walkway at grade.

Under With-Action conditions, the shore public walkway on Site 14 would be planted with a total area of 3,500 sf, which is 35 percent of the total area of the shore public walkway, and the planted screening buffer would be at a minimum of 6 feet between the building and any pedestrian circulation paths. The retaining wall would be at a maximum height of 36 inches. In addition, a tidal wetland area would span 75 feet of the length of the waterfront yard and shore public walkway at a depth of seven feet (525 sf). The tidal wetland area would also count toward the planted area requirements.

### ***Increment***

As a result of the Proposed Action, there would be a decrease in the planted area for the shore public walkway on the waterfront yard of Prototypical Analysis Site 14, in order to provide a bi-level walkway. The screening buffer on Site 14 would decrease by four feet and the retaining wall height would increase by 18 inches. Additionally, while the total area of the shore public walkway would remain the same between the No-Action and the With-Action scenarios, 525 sf of the shore public walkway and the waterfront yard would be allowed as a tidal wetland area as a result of the Proposed Action.

Waterfront Zoning Lot: No-Action Condition



\*BFE= Base Flood Elevation

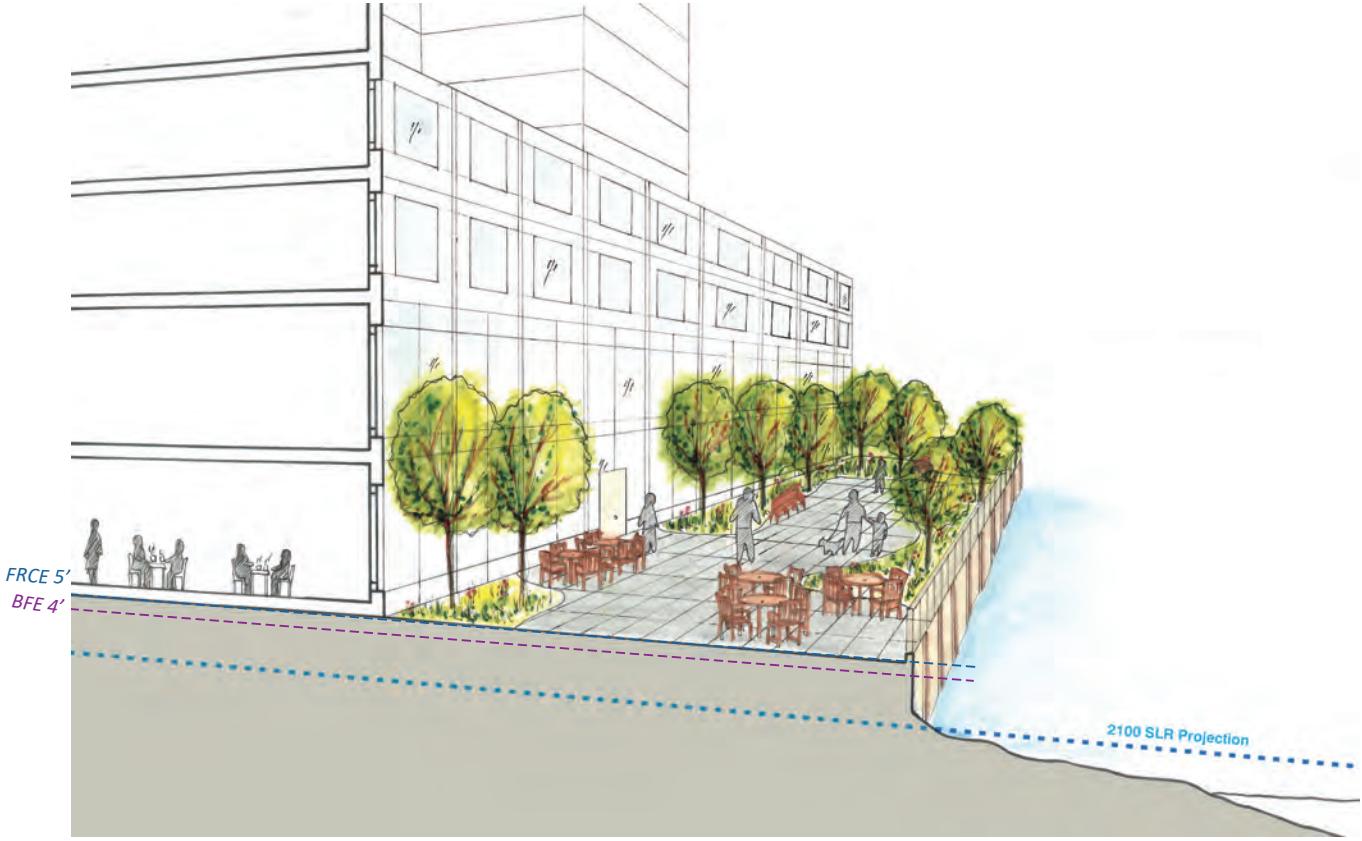
\*DFE= Design Flood Elevation

Note: Flood elevations measured from grade

	No-Action	With-Action	Change
<b>Lot Area</b>	50,000 sf	50,000 sf	0
<b>Waterfront Yard Width</b>	40 ft	40 ft	0
<b>Shore Public Walkway (SPW) Width</b>	40 ft	40 ft	0
<b>Shore Public Walkway (SPW) Area</b>	10,000 sf	10,000 sf	0
<b>Percentage of Planted Area in SPW</b>	50%	35%	- 15%
<b>Intertidal Planted Area</b>	0 sf	525 sf	+525 sf
<b>Retaining Wall Height</b>	18 in	36 in	+18 in
<b>Screening Buffer Width</b>	10 ft	6 ft	- 4 ft

This chart was modified to illustrate the proposed modifications specific to waterfront regulations shown in this prototype.

Waterfront Zoning Lot: FT1



\*BFE= Base Flood Elevation  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

	No-Action	FT1	With-Action	Change N/A to FT1	Change FT1 to W/A	Change N/A to W/A
Lot Area	50,000 sf	50,000 sf	50,000 sf	0	0	0
Waterfront Yard Width	40 ft	40 ft	40 ft	0	0	0
Shore Public Walkway (SPW) Width	40 ft	40 ft	40 ft	0	0	0
Shore Public Walkway (SPW) Area	10,000 sf	10,000 sf	10,000 sf	0	0	0
Percentage of Planted Area in SPW	50%	50%	35%	0	- 15%	- 15%
Intertidal Planted Area	0 sf	0 sf	525 sf	0	+ 525 sf	+ 525 sf
Retaining Wall Height	18 in	18 in	36 in	0	+ 18 in	+ 18 in
Screening Buffer Width	10 ft	10 ft	6 ft	0	- 4 ft	- 4 ft

This chart was modified to illustrate the proposed modifications specific to waterfront regulations shown in this prototype.

**\*\* FT1 diagrams for illustrative purposes only\*\***



Waterfront Zoning Lot: With-Action Condition



\*BFE= Base Flood Elevation  
 \*FRCE= Flood-Resistant Construction Elevation  
 Note: Flood elevations measured from grade

	No-Action	With-Action	Change
<b>Lot Area</b>	50,000 sf	50,000 sf	0
<b>Waterfront Yard Width</b>	40 ft	40 ft	0
<b>Shore Public Walkway (SPW) Width</b>	40 ft	40 ft	0
<b>Shore Public Walkway (SPW) Area</b>	10,000 sf	10,000 sf	0
<b>Percentage of Planted Area in SPW</b>	50%	35%	- 15%
<b>Intertidal Planting Area</b>	0 sf	525 sf	+525 sf
<b>Retaining Wall Height</b>	18 in	36 in	+18 in
<b>Screening Buffer Width</b>	10 ft	6 ft	- 4 ft

This chart was modified to illustrate the proposed modifications specific to waterfront regulations shown in this prototype.