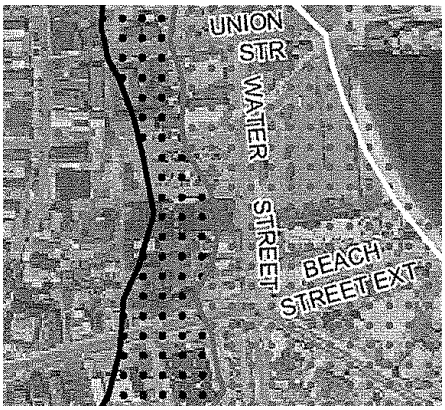
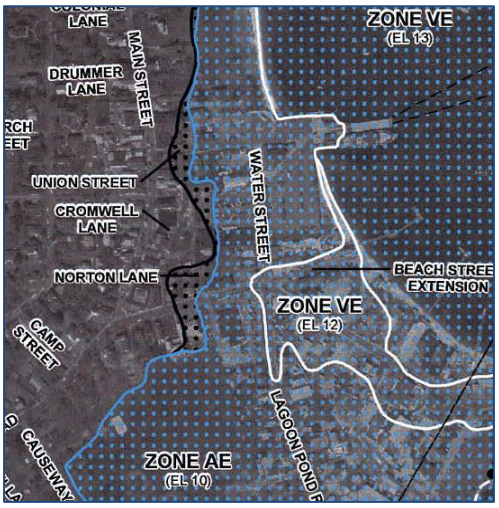
Supplemental Floodplain Notes 2 with analysis – Stop and Shop – DRI 89-M3 – Jo-Ann Taylor April 29, 2014

- Proposal to expand the Stop and Shop supermarket on Water Street, Tisbury, and to utilize the lower elevation for parking. These supplemental notes are provided in further explanation of the Effective and Preliminary versions of the Flood Insurance Rate Maps (FIRM).
- Floodplain regulatory issues fall into two categories: Effective regulations, and pending regulations to utilize updated Preliminary FIRM maps not yet finalized. The process toward finalizing the Preliminary maps has hit a snag, and the newest target date for the towns to adopt the new maps is the 2015 Town Meeting season.



*Effective FIRM map*

Under the effective floodplain regulations, a small part of the front of the property is in Zone AE 7. The Base Flood Elevation is 7 feet. The BFE is 7 feet above the datum NAVD 88. The lowest part of the lowest floor must be above elevation 7. Relief is provided for construction exclusively for building access, parking or storage, so long as there are openings to allow water to move in and out. Inland of Zone AE 7, there is a 500-year flood zone extending to about ¾ of the way across the property. The landward 1/4 of the property is out of the floodplain altogether.




Under the updated Preliminary FIRM maps, approximately half of the property (the seaward half), lies in an AE Zone with a Base Flood Elevation of 10 feet above NAVD 88. This means that the lowest part of the lowest floor must be above this elevation. Relief is provided for construction exclusively for building access, parking or storage, so long as there are openings to allow water to move in and out. There follows inland a small strip of 500-year flood with no BFE referenced. Inland of the 500-year zone, the remainder of the property is out of the floodplain. The AE zone is one which is expected to encounter stillwater flooding or waves less than 3 feet in height.

*Preliminary FIRM map (update), left*

Analysis: The project plans were drawn using an outdated elevation reference known as NGVD 29. To convert NGVD 29 to NAVD 88 in our part of the world, subtract 1 foot; to convert NAVD 88 to NGVD 29, add 1 foot. The plans show the average mean grade of 9 feet (8 feet NAVD 88), with the lower level at elevation 7'6" (6' 6" NAVD 88) and the upper (habitable) level at 18' 6" (17'6" NAVD 88). According to the Preliminary FIRM map, development of the front part of the property must have the lowest part of the lowest floor elevated to 10 feet above NAVD 88. The lower level is drawn at about 3 ½ feet below the requisite elevation for use other than parking, etc. (Preliminary map) and about ½ foot lower than the requisite elevation on the effective map.

A note on velocity zones: Velocity zones are projected for flooding with waves 3 feet in height or greater. There is not and will not be a VE zone *on* the property with either map. If there WERE a VE zone on the property, the Massachusetts building code would not preclude building, but would require an extra 2 feet of freeboard.