

TO: Town Plan & Zoning Commission

FROM: Alter & Pearson, LLC

DATE: March 25, 2022 (*revised April 12, 2022*)

RE: Flood Zone Narrative for Proposed Renovation and Reconstruction of Existing Car Wash
- 2765 Main Street

Section 4.11.6.b.2.a of the Glastonbury Building-Zone Regulations requires that non-residential construction either have the lowest floor elevated above the level of the 500-year flood elevation “*or, together with attendant utility and sanitary facilities, shall: a.) be flood proofed so that below the 500-year recurrence-interval flood level the structure is watertight with walls substantially impermeable to the passage of water.*” The Applicant will be renovating and reconstructing the car wash at the existing finished floor elevation of 24.4 (the 500-year flood elevation is 32). Therefore, the Applicant will be requesting a waiver from §4.11.6.b.2.a for the car wash tunnels from the portion of the regulation that requires that the “structure is watertight with walls substantially impermeable to the passage of water.” The Applicant is proposing to wet floodproof the car wash tunnels so that during a flood event they would be flooded, and dry floodproof the remaining areas of the car wash. This approach has been reviewed and supported by Diane S. Ifkovic, FEMA Representative with DEEP.

The carwash has been in this location at this Site since 1962, pre-dating Glastonbury’s participation in the National Flood Insurance Program and the adoption of the Town’s Flood Zone Regulations. The Applicant is proposing a major renovation of the existing car wash building, that will likely a substantial improvement. This waiver will allow only the car wash bays to be wet-floodproofed utilizing flood vents. Normally vented enclosures are only allowed to be used for parking of vehicles, limited storage or building access (stairs/elevators). All utilities within the bay will be elevated or dry floodproofed. Any other portion of the car wash, such as a finished office, will comply with Glastonbury’s floodplain regulations and be dry floodproofed.

The Applicant will be able to meet the remaining standards in §4.11.6.a (General Requirements), §4.11.6.b (Specific Requirements) and §4.11.7 (Waivers) as noted below:

4.11.6. Flood Zone Area Requirements

a. General Requirements:

- 1. Anchoring.** *The reconstructed and existing portions of the building will be attached to a concrete foundation system designed to resist all lateral loads imposed by flooding, and as otherwise required by State of Connecticut Building Code.*
- 2. Construction Materials and Methods:**
 - a.** *As the finished floor will be 3.5 feet below the Base Flood Elevation (BFE), the Applicant will renovate and reconstruct the building with materials and equipment resistant to flood damage.*
 - b.** *Exterior and interior walls below the 500-year elevation of 32’, will be designed with*

materials that do not absorb water:

- *Exterior Walls: concrete block, stone/brick or cement board*
 - *Interior Walls Car Wash: concrete block*
 - *Interior Walls Office (Including Insulation): concrete block with closed foam insulation*
 - *Interior Floors Car Wash: concrete*
 - *Interior Floors, Office: concrete*
 - *Structural Materials/Framing: concrete or steel*
- c. *Mechanical systems (Heating, Ventilating and Cooling (HVAC), plumbing and electrical systems will be designed to prevent water from entering or accumulating within components during a flood. Main electric panels, disconnects and similar items will be installed completely above Elevation 28.*

3. Utilities:

- a. *The water supply system will be designed to minimize infiltration for flood water into the water system by flood proofing (i.e. shut-off valves to prevent the infiltration of flood water).*
- b. *The building will be connected to the public sanitary sewer system and will have check valves to prevent infiltration of flood water into the system and to prevent the discharge of sewage into the flood waters.*
- c. *Non-applicable as an on-site waste disposal system is not proposed.*

4. Standards for streams without established based flood elevations, floodways or flood mapping. *Subsections (a), (b) and (c) are non-applicable, as the Site has an established base flood elevation (28) and a designated floodway in the non-developed area of the Site.*

5. Compensatory Storage. *The water holding capacity of the floodplain will not be reduced, and the project engineer provided the Commission with these computations in his signed report dated 3/9/2022. All flood storage is accomplished by regrading the Site, and will be accommodated on the Site and will be hydraulically connected. Please see the Certification prepared by Guy Hesketh, PE dated April 11, 2022.*

6. Equal Conveyance. *Non-applicable as there is no increase in footprint of the structure.*

7. Above-ground Storage Tanks. *No above-ground tanks are proposed. The building will be connected to a natural gas public utility line. The gas meter will be located above elevation 28 and is a sealed system.*

8. Portion of Structure in Special Flood Hazard Area. *The entire structure will meet the requirements of the flood zone regulation with the issuance of the waiver.*

9. Structures in Two Flood Zones. *Non-applicable as the proposed structure is only located in one flood zone.*

10. No Structures Entirely or Partially Over Water. *Non-applicable as the proposed building will not be located entirely or partially over water.*

b. Specific Requirements:

1. Residential Construction. *Non-applicable as only non-residential construction is proposed.*

2. Nonresidential Construction:

Elevated to or above the 500-year recurrence-interval or, together with attendant utility and sanitary facilities, shall:

- a. **Be floodproofed so that below the 500-year recurrence-interval flood level the structure is watertight with walls substantially impermeable to the passage of water.** *The Applicant is requesting a waiver only from the “watertight” portion of this subsection for the tunnels. The carwash tunnels are proposed to be wet floodproofed meaning they will be flooded by flood vents. Walls below the 500-year elevation of 32’, will be designed with materials as noted above in Section 4.11.6.a.2. The remaining areas of the carwash will be dry floodproofed.*
- b. **Resist Hydrostatic and Hydrodynamic Loads.** *As automatic flood vents are proposed in the carwash tunnels, the walls will resist the hydrostatic and hydrodynamic loads during a 500-year flood. Additionally, door louvers will be added to the garage doors to allow them to open with or without power during a flooding event.*
- c. **Certification by Professional Engineer or Architect.** *Certification from a licensed architect, Christian C. Carey is provided with this narrative, confirming that the design and methods of construction are in accordance with the Regulation.*

3. Requirements for Buildings with Fully-Enclosed Basements. *Subsection (a)(i)-(v) are non-applicable as the proposed building does not have a basement and will be constructed on a slab foundation.*

4. On-Site Recreational Vehicles. *Non-applicable as no recreational vehicles are proposed.*

4.11.7 Waivers

1. **Waiver Parameters.** *The Applicant is requesting a waiver only from a portion of §4.11.6.b.2.a, which waiver request was noticed as a public hearing.*
2. **Floodway.** *This waiver is not requested for an area within a floodway and therefore there will be no increase in flood levels during the 100-year flood.*
3. **Minimum Necessary.** *The Applicant has only requested a waiver from §4.11.6.b.2.a for the car wash tunnels, which is the minimum necessary to construct the project.*
4. **Requirements for Waivers to be Issued.**
 - a. *There is good and sufficient cause to grant this waiver due to the unique nature of this business as a carwash, where all utilities and elements must be flood-resistant and floodproof. The granting of the waiver allows the property owner to make continued reasonable use of the property as a car wash.*
 - b. *Failure to grant the waiver would result in unusual financial hardship to the Applicant because in order to construct a “watertight” building below elevation 32’, the building would need to be entirely dry floodproofed. The cost of these measures is disproportionate to the potential impact and frequency of a 500-year flood event. In the alternative the Applicant could elevate the building to elevation 32, with the finished floor of the building being about 10 feet above Main Street.*
 - c. *The granting of the waiver will not result in increased flood heights. As the building is anchored, and the business would be closed during a flood, there would be no public safety threat. This waiver is the minimum to afford relief and will not result in any additional threats to public safety or increase public expense. Cost of any repairs after a flood, would be the responsibility of the property owner.*

5. *The Applicant maintained the existing flood storage capacity for the Site with the proposed development and flood heights will not be increased by the proposed development; therefore, there is technical justification that the waiver can be granted for a parcel larger than 0.5 acres.*
6. *The Applicant understands that granting this waiver may result in flood insurance premiums, up to \$25 for \$100 of insurance coverage.*
7. *This section is non-applicable as the Site is not a Historic Place.*

8. Standards for Issuing a Waiver:

- a. *As stated in §4.11.6.a.1, the building will be anchored and not swept away.*
- b. *The Applicant has maintained the flood storage of the Site; therefore, there will be no increased danger to life or property.*
- c. *As stated above, the Applicant designed the building, and will construct the building in such a way, to limit the building's susceptibility to flood damage to the greatest extent possible. The Applicant understands the potential impact of flooding on the proposed building.*
- d. *The use of the Site as a car wash has existed in this location for 60 years, and it continues to provide an important service to the community as only one of three carwashes located in Town.*
- e. *Non-applicable, as the building is not a functionally dependent facility.*
- f. *As the Applicant is reconstructing and renovating the existing carwash there was not another location to place it on the Site.*
- g. *The car wash is very compatible with the Flood Zone as it is a use that is regularly inundated with water.*
- h. *The car wash is a legally non-conforming use and therefore consistent with the comprehensive plan. The Applicant has demonstrated compliance with the Flood Zone Regulation, specifically no loss in flood storage with the redevelopment.*
- i. *During a flood, the car wash would be closed; therefore, there will be no issue with safety of access to the property.*
- j. *Based on the distance of the Site from the Connecticut River, the velocity, duration, rate of rise and sediment transport of the flood waters and effects of waves will not greatly impact this Site.*
- k. *Utilities on the Site that may need to be repaired after a flood, would be the responsibility of the landowner, together with the utility companies.*