

**H+H Engineering Associates, LLC**  
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**Via E-mail**

February 24, 2023

**Town of Simsbury**

Planning and Land Use Department  
933 Hopmeadow Street  
Simsbury, CT 06070

Attn: George K. McGregor, AICP  
Director of Community Planning and Development

RE: Review Comments  
Vessel Multi-family Housing  
Site Plan Application  
446 Hopmeadow Street  
Simsbury, CT 06070

Dear Mr. McGregor:

H+H Engineering Associates, LLC (H+H) is in receipt of the following review comments regarding the Vessel Multi-family Housing Site Plan Application located at 446 Hopmeadow Street in Simsbury, CT 06070:

1. Simsbury Office of Community Planning and Development letter dated February 2, 2023
2. Simsbury Engineering Department letter dated February 10, 2023.
3. Simsbury Water Pollution Control letter dated February 13, 2023
4. Simsbury Fire District letter dated February 14, 2023.

Below please find the original review comments, followed by our team's response in italics:

**Office of Community Planning and Development:**

1. Parking. The site plan shows 94 parking spaces for the 80 units. The Town zoning regulations would require 160 spaces for a non-830g project. The proposed ratio does not seem to account for two residents in a one bedroom or for visitors to the complex. Please provide a justification as to how this ratio was conceived. Inadequate parking could lead to spillover on the shoulder of Hopmeadow St. and other potential conflicts.

Response:

*Peak parking demand rates published in the industry standard ITE Parking Generation manual (5<sup>th</sup> edition) were reviewed to confirm the parking supply provided on the site is adequate. For land use code 221 (multi-family housing, mid rise), the weekday peak parking demand average rate is 0.75 spaces/bedroom which would yield a requirement*

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of 60 spaces for 80 units. The Saturday peak parking demand average rate is 0.77 spaces/bedroom which would yield a requirement of 62 spaces for 80 units.

Additionally, in accordance with Public Act 21-29 adopted by the Connecticut legislature, the maximum parking limitations for multi-family developments are listed below:

- One-bedroom units: A minimum of 1 parking space shall be provided for each one-bedroom unit.
- Two-bedroom units: A minimum of 2 parking spaces shall be provided for each two-bedroom unit.

The supporting parking calculation is provided below:

- One-bedroom units: 77 one-bedroom units x 1 space/unit = 77 spaces.
- Two-bedroom units: 3 two-bedroom units x 2 spaces/unit = 6 spaces.

Minimum required parking spaces = 77 + 6 = 83 parking spaces

A total of 95 parking spaces are provided which includes the 83 minimum required resident parking spaces, and 12 additional overflow/guest parking spaces.

Therefore, the proposed 95 spaces on site well exceeds the rates published by ITE and will provide ample parking supply for the 80-unit development.

Lastly, 6 additional reserve parking spaces have been added to the plan set if the occupancy and use of the building warrants installation of additional parking. See **Exhibit A** (Plan Set revised 2/24/23)

2. Tree Save Opportunities. There are at least four large oak trees of unknown health located on the site planned for removal. Is it possible to identify and protect any of these trees and incorporate them into the site plan?

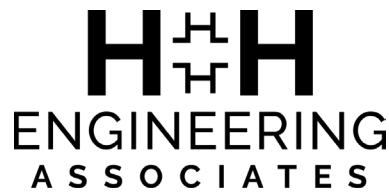
Response:

Mature existing trees within 50' of Hopmeadow Road have been located and are identified on the plan. Trees that are to be protected are identified on the Existing Conditions and Demolition Plan, and include a 24" Oak Tree, 20" Oak Tree, 48" Oak Tree, and 20" Oak Tree, together with trees located in the identified area in the southwest corner of the Site.

3. Sidewalk along Hopmeadow. The project does not include the installation of a sidewalk along the property frontage. We recommend constructing a sidewalk segment across the property frontage to connect to future segments on the east side of Hopmeadow St.

Response:

The Farmington Canal Heritage Trail is located directly to the east of the site and is expected to be the primary means of pedestrian access. Additionally, due to steep topography on the property to the north, a sidewalk extension along Hopmeadow to the north would be costly and/or infeasible. For these reasons, a sidewalk along Hopmeadow Street has not been included.



4. EV Parking/Charging. A recent State law appears to require 10% of all parking spaces to contain EV charging stations. Please provide information related to the project's plan for EV charging stations.

Response:

*A total of 10 parking spaces (10.6% of the parking spaces provided), including 1 accessible parking space, have been designated as EV Parking/Charging stations. These locations have been added to the revised plan set, with the designation "EV".*

5. Traffic Study Recommendations. The Traffic Study recommends restriping areas on Hopmeadow St. in front of and adjacent to the site. We recommend these improvements be in place prior to the issuance of the first certificate of occupancy. (Please note that Town Engineering and the Police Department are reviewing the traffic study and may provide comments under separate cover).

Response:

*Restriping will be completed prior to the issuance of the first certificate of occupancy.*

6. Architecture. The architectural submission should be enhanced with a more complete description of building materials, colors, options, at-scale typical room details, sustainable practices, and technological innovations.

Response:

*As per your request, this information was submitted at the ASDRC Meeting on February 6, 2023. For your convenience, we have also included the information as part of this submission, as **Exhibit B**. If any additional information is required, please let us know.*

7. Housing Assumptions. The Affordability quotient follows the state guidance and a standard formula. We note that for the purposes of determining affordable eligibility that 1.5 persons are assumed for the single bedroom unit and 3.0 for the double. How does this reconcile with the parking assumption that effectively assumes 1 space per unit?

Response:

*Please refer to the response to Comment #1 above regarding the proposed parking, which is supported by the ITE Parking Generation manual (5<sup>th</sup> edition) and Public Act 21-29. Additionally, the 1.5 person per bedroom standard is a state regulatory requirement purely for the purpose of calculating maximum rent allowed and is not related the number of residents living in a unit.*

8. Solar. The application materials suggest that solar arrays are planned for the roof along with a statement that says the building will be "net zero" with savings passed along to the residents. Can you elaborate on how the saving are passed along?

Response:

*The building has solar photovoltaic panels on the roof which will be used to provide energy to the building. Based on the current calculations of our engineers, the building is expected to operate at a "net zero" level over the course of a year. The energy generated from the system will be used to power the units, in addition to any common areas, thus*

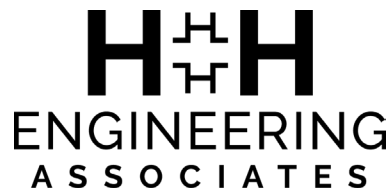
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*passing along the energy savings to tenants. We expect that a tenant who has typical energy usage will not receive a utility bill when living in our units.*

9. Draft Warranty Deed. Please provide a draft warranty deed establishing the affordable units on site for a review by the Town Attorney. Also, please clarify when the deed would be recorded during the process.

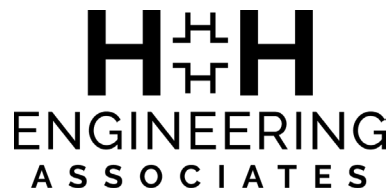
Response:

*The Applicant will use the model deed restriction for a set aside development in Conn. Agencies Regs. §8-30g-9(1), please see attached, **Exhibit C**. The deed restriction will be recorded at or around of the time of the closing from the property owner to the Applicant. The Applicant will provide the Town will proof that the deed restriction has been recorded prior to the issuance of a certificate of occupancy.*

10. POCD Consistency. Please provide a summary addressing how the project is compatible with surrounding land uses and the Town Plan of Conservation and Development.

Response:

*The Application is compatible with the surrounding land uses as it proposes a residential use in a residential zone (R-15 High Density Residential). The Site is surrounded by a residential condominium complex to the north, single family homes to the south and the bike path to the east. The project is consistent with the Town of Simsbury 2017 Plan of Conservation & Development as it proposes affordable housing, which the Town "has been working on increasing the number of affordable housing units in ways and locations appropriate for the community." (p. 12) The project includes both market-rate and affordable rental units and is ideally located on the bike path providing a direct pedestrian path from the Site to amenities in the Town's center (1.25± miles to the north). Telephone survey results included in the POCD, indicated that "participants feel there may be too few affordable housing units for elderly persons and for first-time buyers" (pg. 89) Further the POCD's Future Land Use Plan specifically identifies this parcel for "Moderate Density Residential." (pg. 125) The Application is consistent with the growth management principles, as it both "[c]oncentrate[s] development around transportation nodes and along major transportation corridors to support the viability of transportation options and land reuse" and "[e]xpand[s] housing opportunities and design choices to accommodate a variety of household types and needs." (pg. 126). Additionally, the Application is consistent with the promotion of sustainability found in the POCD by "promoting the installation of residential solar arrays." (pg. 94) The proposed building is a net zero building with a roof solar array. Finally, the proposed stormwater management plan uses LID techniques and infiltrates the Site's stormwater, consistent with the POCD. (pg. 116)*



**Engineering Department:**

1. Please provide the basis for providing 94 parking spaces to support the proposed 80-unit multi-family development. **Applicant responded 2/6/2023 with the basis of the parking calculation.**

Response:

*Comment previously addressed. No further action required.*

2. Two (2) 8-foot wide van accessible spaces are provided, whereas for a total of 76-100 total parking spaces, 4 total (3 standard+ 1 van) accessible parking spaces should be provided. Provide two additional accessible parking spaces for this project to comply with this requirement. **Applicant responded 2/6/2023 and will add accessible parking. However, one less space will be provided.**

Response:

*A total of four accessible parking spaces are now proposed. A total of 95 parking spaces are proposed.*

3. An encroachment permit shall be filed with the State of Connecticut Department of Transportation for any work within the CT Route 10 Right-of-Way. Please provide a copy of all future communications with DOT regarding the development. **Applicant responded 2/6/2023 and concurs.**

Response:

*Comment previously addressed. No further action required.*

4. The stormwater report identifies infiltration rates in monitoring wells MW-1 and MW-2 as 40 in/hr. and 4 in/hr., respectively. The analysis halves these rates to serve as exfiltration design rates, which is consistent with the Connecticut DEEP Stormwater Quality Manual (CTSWQM). However, Engineering respectfully disagrees with the use of an exfiltration rate (20 in/hr.) given that Table 8-3 of CTSWQM states the maximum soil infiltration capacity for an infiltration basin is 5.0 in/hr. In regard to the recommended number of tests and resultant design assumptions, the CTSWQM states;

A minimum of three field tests and test pits or soil borings should be performed at each infiltration basin. The design of the basin should be based on the slowest rate obtained from the field tests performed at the site.

Please revise the analysis to comply with the recommendations of the CTSWQM by utilizing the slowest rate obtained from field tests on this site. Applicant responded 2/6/2023 with the intentions to perform additional field tests. **No additional action has occurred and comment remains unresolved.**

Response:

*Additional test borings, test pits and permeability tests were conducted by the project Geotechnical Engineer on February 14, 2023. Based on a conversation with the Geotechnical Engineer, and the comments received from the Town Engineer, the Stormwater Management System has been revised accordingly. The design utilizes a*

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maximum infiltration rate of 5.0 inches/hour for the practices that allow for subsurface infiltration (Stormwater Management Areas A, C, & D), and a maximum infiltration rate of 2.0 inches/hour for the bioretention basin. Additionally, attached please find the revised Geotechnical Report dated February 24, 2023, as **Exhibit D**.

5. CB-5 has 2-feet of cover whereas Section 5 .2.1.g of the Town of Simsbury Highway Construction and Design Standards states "A minimum cover of 2.5 feet shall be provided for all drain pipes unless special designs, as approved by the Town Engineer, are utilized." Please revise accordingly. **Applicant responded 2/6/2023 and will revise with Class IV RCP.**

Response:

*Comment previously addressed. No further action required.*

6. Provide a detail for the modular block retaining walls. **Applicant responded 2/6/2023 and will add typical details to plan.**

Response:

*The typical modular block retaining wall detail has been added to sheet 10 of 13.*

7. Sanitary sewer main and water main in Hopmeadow Street are not depicted on the plans. Provide location of each and include the invert elevation for the sanitary sewer connection as it is pertinent to the design and feasibility of sewer service.

Response:

*Following the original submission, the project land surveyor obtained additional field data including the approximate locations of the water main and sanitary sewer main in Hopmeadow Street, and the elevations of the sanitary sewer main in Hopmeadow Street. The location of these mains and the sanitary sewer elevations have been added to the plan set.*

8. Stormwater Management Area 'D' includes an emergency spillway that extends into the State right-of-way. We recommend reaching out to District 4 early to determine if this configuration is allowable.

Response:

*The emergency spillway has been relocated accordingly.*

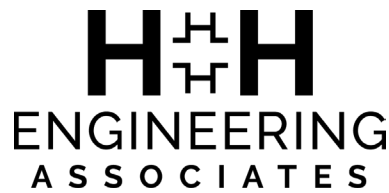
9. Please confirm that a minimum 1 foot of free board is provided in all basins during the 100-year event.

Response:

*The basins have been revised to provide a minimum of 1-foot of freeboard between the top of the berm and 100-year water surface elevation. Enclosed herewith please find Figure 6 from the stormwater management report which has been updated accordingly.*

10. Please provide information regarding the capture of floatables as it pertains to parking lot runoff and stormwater quality.





Response:

*Each catch basin will have a minimum of a 2' sump, and the last catch basin in each catchment system will have a 4' sump and a trap hood installed. Sumps and outlet hoods provide a means of pre-treatment by preventing oil and debris from discharging into the subsurface infiltration system.*

*Per the 2004 Stormwater Quality Manual:*

*"Sumps provide storage volume for coarse sediments, provided that accumulated sediment is removed on a regular basis. Hooded outlets, which are covers over the catch basin outlets that extend below the standing water, can also be used to trap litter and other floatable materials. A recent study conducted in New York City demonstrated that catch basins equipped with hoods increase the capture of floatables by 70 to 80 percent over catch basins without hoods and greatly extend the cleaning interval without degraded capture performance (Pitt, 1999 in NRDC, 1999)."*

*The Drainage Structure Table on the Grading & Drainage plan has been updated to indicate the proposed sump depths of each structure, and the proposed trap hoods.*

11. Is there potential for the calculated southbound queue in Hopmeadow Street to conflict with vehicles exiting the proposed driveway?

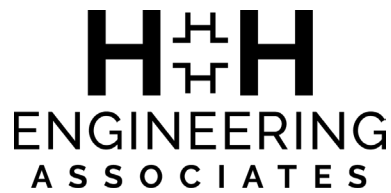
Response:

*The calculated southbound queue on Hopmeadow Street does not conflict with vehicles exiting the proposed driveway. The southbound 95th % queues at the signal do not extend to the Site's driveway location 250 feet north of the signal at Powder Forest drive. Should maximum queues extend to the driveway location in the field, any site driveway blockages would be temporary and restricted to morning and afternoon peak hours of traffic on Hopmeadow Street. The southbound queues on Hopmeadow Street clear every signal cycle when the Hopmeadow mainline goes green enabling vehicles to exit the site driveway.*

12. Please confirm that there will be safe sight distance for vehicles exiting the proposed driveway against vehicles turning left out of Powder Forest Drive and traveling northbound. Please note that the beginning of this movement from Powder Forest Drive will often be obstructed by vehicles queued at the light.

Response:

*Sight lines are sufficient looking in both directions from the site driveway and exceed CTDOT criteria for safe egress. Specific to cars turning out of Powder Forest Drive, the site driveway is located 250 feet north of that intersection and there is clear sight line to the intersection. It is important to note that cars coming out of Powder Forest and turning left out to head northbound are moving very slowly (~15 mph as they turn) and require less intersection sight distance (under 200 feet). 250 feet is sufficient sight distance to see oncoming northbound traffic regardless of the presence of a southbound queue obstruction.*



**Water Pollution Control:**

1. All abandon pipes must be taken out and removed from the job site – it cannot be reused.

Response:

*A note has been added to the Utility Plan.*

2. Any cored openings in manholes not being used must be plugged.

Response:

*A note has been added to the Utility Plan.*

3. Based on information provided, a 6-inch lateral is sufficient for the new apartment building. If it is changed to 8-inch, it must enter into a manhole.

Response:

*The sanitary sewer line has been revised to an 8" line and a manhole has been added.*

4. Town standards require the slope of the 6 inch lateral to be no less than 2%. Current plans show a slope of 1.04%.

Response:

*The sanitary sewer line has been revised to an 8" sanitary sewer line with a slope of 0.0083 ft./ft.. Per the NEIWPCC TR-16 Manual, – a minimum slope of 0.004 ft./ft. is required for 8" gravity sewer lines to maintain a mean velocity of 2.0 ft./second.*

5. Plan elevations do not correlate to existing plans. Elevation of existing manhole on Hopmeadow St is 180.25, new plans show this at 99.44. These elevations should be clarified.

Response:

*The existing conditions survey is based on an assumed vertical datum. Following the original submission, the project land surveyor obtained additional field data including the approximate locations of the water main and sanitary sewer main in Hopmeadow Street, and the elevations of the sanitary sewer main in Hopmeadow Street. The location of these mains and the sanitary sewer elevations have been added to the plan set.*

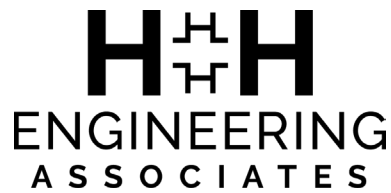
6. Sanitary manhole and trench details are not the Town standard details. These can be provided to the applicant as needed.

Response:

*The appropriate Town of Simsbury sewer details have been provided by the WPCA and have been added accordingly.*

7. Notes for separation distance between utilities states that they only apply in the Town Right of Way or Easement. The separation for water and sewer is required by the Department of Public Health regardless of location.





Response:

*Utility Notes #10 and #11 list the minimum required separating distances between utility services.*

8. The developer will also need to submit a letter from a professional engineer along with a location plan confirming that the proposed sanitary sewer is compliant with NEIWPC TR-16 – Guide for the Development of Wastewater Treatment Works.

Response:

*The developer and design engineer will work with the WPCA to satisfy the noted request.*

9. The developer is advised that a facility connection charge (FCC) of \$230,548.50 will be due prior to the issuance of a Certificate of Occupancy. A separate letter for the FCC will be sent to the applicant.

Response:

*Understood, thank you.*

**Fire District:**

**1. Access**

Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls or any other fixed or moveable object. Access to fire department connections shall be approved by the fire code official.

Exception: Fences, where provided with an access gate equipped with a sign complying with the legend requirements of this section and a means of emergency operation. The gate and the means of emergency operation shall be approved by the fire code official and maintained operational at all times.

Response:

*The location of the Fire Department Connection (FDC) has been added to the revised plan set. Additionally, pavement striping and bollards have been added to the parking space directly in front of the FDC to allow for access.*

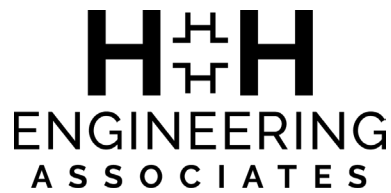
**2. Physical Protection**

Where fire department connections are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with Section 312 of the International Fire Code.

- Assuming fire sprinkler connections will be located in first floor mechanical room will one parking space be removed in front of mechanical room for access to FDC on exterior wall? Also if bollards are installed to prevent vehicle impact will they limit the size of parking space provided.

Response:

*See Response to Comment #1.*



### 3. Fire Access Roads

Fire apparatus access roads shall consist of roadways, fire lanes, parking lot lanes, or a combination thereof.

- No fire lanes identified, with limited access to building fire lanes must be established.

Response:

*Pavement striping and signage have been added to the revised plan in the locations discussed. Please find the Vehicle Turning Demonstration Plan for 100-FT Aerial Fire Truck, as **Exhibit E**.*

### 4. Multiple Access Roads

More than one fire apparatus access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climate conditions, or other factors that could limit access.

- With only a 24 foot wide driveway, one entry way, and limited road access on site plan, fire apparatus will have issues with vehicle congestion throughout the planned parking area and road way. This will be increased in the winter months with snow accumulations narrowing road widths.

Response:

*The dumpster enclosure has been relocated and an emergency fire access path and gate have been added to allow for emergency vehicles to access Farmington Heritage Trail.*

### 5. Fire Hydrants

No Fire Hydrants identified on site plan. 300 feet spacing, one within 100 feet of FDC.

Response:

*A fire hydrant has been added within the island in the northwest corner of the building.*

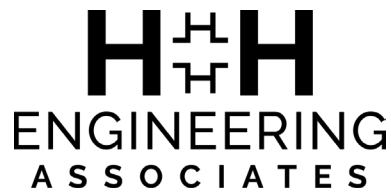
### 6. Access to a Public Way

The exit discharge shall provide a direct and unobstructed access to a public way.

Exception: Where access to a public way cannot be provided, a safe dispersal area shall be provided where all of the following are met:

- The area shall be of a size to accommodate not less than 5 square feet (0.46 m<sup>2</sup>) for each person.
- The area shall be located on the same lot not less than 50 feet (15 240 mm) away from the building requiring egress.
- The area shall be permanently maintained and identified as a safe dispersal area.
- The area shall be provided with a safe and unobstructed path of travel from the building.

- No walks leading to driveway nor area provided in site plan to address public way.



*Response:*

*A concrete pad and a stone dust walk have been added to the rear egress door to provide access to the parking area.*

**7. Roof Access for Fire Department**

Fire department access to roof will be hindered due to access for a 100 foot ladder truck. Solar arrays and mechanicals mounted on roof hinder ventilation points and access for fire department personnel.

*Response:*

*Access to the roof is provided from the proposed stairwells.*

If you have any questions, please feel free to contact me at 860-980-8008 (office) or 413-579-4488 (mobile).

Sincerely,

**H+H Engineering Associates, LLC**

A handwritten signature in black ink, appearing to read 'Seamus Moran'.

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Seamus Moran, P.E.  
Principal

2/24/2023

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Date