HOWARD STEIN HUDSON

December 20, 2024
Meeting Notes: January 14, 2025
February 26, 2025
Update: August 18, 2025

Lara Davis
ZBA Principal Assistant
Zoning Board of Appeals & Conservation Department
Town of Southborough
9 Cordaville Road
Southborough, MA 01772

Re: 250 Turnpike Road / 0 Parkerville Road, Southborough, MA
Civil Engineering Peer Review – 2

Dear Board Members,

Howard Stein Hudson (HSH) is pleased to provide the Southborough Zoning Board of Appeals and Conservation Department with this review of the Site Plan, Stormwater Management Report, Subsurface Disposal System Design, and the Traffic Impact Study prepared and submitted under MGL Chapter 40B. We have received the following documents as part of this review:

At 11:00 on January 14, 2025, a meeting took place between James Tetreault of Expedited Engineers (Applicant) and Patrick Bogle and Katie Enright of Howard Stein Hudson (HSH) to discuss the submitted peer review letter submitted to the Zoning Board of Appeals on December 20, 2024. The following items which were discussed or skimmed through in general agreement have been added to the comments below in red, however I will defer each of these comments to the applicants engineer to formally respond with the associated, or lack of, plan revisions based on the response given:

- Plan set entitled "Site Plan of Land at 250 Turnpike Road in Southborough, Massachusetts" consisting of 19 sheets, prepared for FD 250 Turnpike, LLC by Expedited Engineering, LLC, dated May 28, 2023, and revised through November 20, 2024.
- Report entitled "Drainage Report for Comprehensive Permit Development at 250 Turnpike Road, Southborough, MA" prepared by Expedited Engineering, LLC, dated April 15, 2024 and revised through November 20, 2024.
- "Predevelopment Drainage Area Plan at 250 Turnpike Road in Southborough, Mass." Prepared for FD 250 Turnpike, LLC by Expedited Engineering, LLC, dated July 16, 2023

- "Postdevelopment Drainage Area Plan at 250 Turnpike Road in Southborough, Mass." Prepared for FD 250 Turnpike, LLC by Expedited Engineering, LLC, dated April 15, 2024, and revised through November 20, 2024.
- Massachusetts Department of Environmental Protection Checklist for Stormwater Report signed and dated November 20, 2024.
- "Sewage Disposal System Plan" Prepared for FD 250 Turnpike, LLC by Expedited Engineering, LLC, dated November 20, 2024.
- "List of Requested Waivers from Applicable Town of Southborough Bylaws and Regulations"

February 26, 2025, update:

Preliminary comments are provided below based on the revised submission material provided and dated on February 12, 2025. The following items were included within this submission:

- Cover letter
- Swept Path Analysis
- Soil Logs
- Revised Site Plans
- Pre- and Post- Drainage Areas
- Drainage Report

August 5, 2025, update:

Over the course of the last several months the applicant and its team have worked with the Conservation Commission and town boards to revise the plans. The following items have been submitted from the February 26th update given by HSH:

- Environmental Analysis, prepared by Goddard Consulting, LLC
- Architectural Package, prepared by Monte French Design Studio
- Compensatory Wetland Replication Plan, prepared by Goddard Consulting
- Cover letter for submittal of revised Site Plans, prepared by Expedited Engineering, LLC.
- Site plan of Land at 250 Turnpike Road, last revised through July 25, 2025, prepared by Expedited Engineering, LLC.
- Form 11 and Form 12 Soil Logs
- Supplemental Drainage Report for Comprehensive Permit Development at 250 Turnpike Road, Southborough, MA, last revised through July 25, 2025, prepared by Expedited Engineering, LLC.
- Swept Path Plan of Land at 250 Turnpike Road Southborough, last revised through July 25, 2025, prepared by Expedited Engineering, LLC.
- List of requested waivers, last revised through August 1, 2025, prepared by Expedited Engineering, LLC.

- Several items reference material from the submittal on February 26, 2025. Refer to that material above.

The applicant has submitted their cover letter (listed above) which details how they have answered or addressed each of the comments within the previous comment letter. The following comments have been provided in red. It is noted that in several instances the cover letter details the comment responses make reference to those markups which have been done or updated on documents which have not been submitted to HSH for review. Since these items cannot be verified, the comments will remain outstanding.

If the previous comment was addressed, a reasonable waiver has been requested, or no response was necessary, then the previous comment has been removed to trim the review down to comments which are still outstanding. HSH provides the following outstanding comments:

Zoning Regulations – Chapter 174

- 174-8.2(D) – RA Residence A District – Development Standards
  - Building unit #1 is located 2 feet from the proposed side property line where 25' is required.
    - Comment still outstanding.
    - A proposed grading and drainage easement is called out the erosion and sediment control plans. This should help to alleviate the constructability concerns with units 1 and 2.
    - Please verify that unit 19 is the closer rear lot dimension vs unit 31 which is called out. If so, please update the waiver request. Unit 2 is still set at a 2 ft offset to property line with a grading and drainage easement only, this is not considered yard area to the side of unit 2 and therefore there is not usable space to the side of this unit.
- 174-12 – Parking and loading regulations
  - 174-12(C)(2) – Dimensional Requirements for parking – Each parking space shall be at least 9 ½ feet wide and 18' long exclusive of aisles and maneuvering space… unobstructed access to and from a street shall be provided and shall not require backing out and into a street.
    - Provide architectural drawings to confirm parking within townhouse units.
      - Drawings provided and the units confirm that the parking spaces are adequate.

- Provide building architectural plans to verify that the internal parking spaces within the garages are a minimum of 9 ½ feet wide and 18' long. Applicant will provide for review.
    - Comment still outstanding.
    - Architectural plans submitted which detail the parking dimensions have resolved this comment.
- Verify that the garages and building entrances are accessible in accordance with the state regulations for accessible units. Applicant to provide.
    - Comment still outstanding.
    - Comment addressed with applicants response.
- Provide electric charging stations into this layout per new state regulations. The applicant will update the location(s) to meet the required standard.
    - Comment still outstanding.
    - The applicant has stated that one parking space will be made ev-ready. Comment addressed.

– 174-12(G)(1) – Egress

- Any Driveway likely to carry more than 200 trips per average business day must comply with the following criteria within this section on Route 9.
    - Confirm and/or provide an unobstructed sight distance at edge of traveled way of 500 feet, driveway centerline separation from other driveways serving 200 plus trips of 300 feet, driveway centerline separation from intersecting street sidelines of 150', maximum driveway width unless greater width justified by engineered design of 24', curb radius of 50', and the additional of an acceleration and deceleration lane. A detail plan will be provided which outlines the revision to the entrance or the current compliance of the existing entrance with this requirement.
    - This plan sheet will be reviewed in detail within the next peer review. A subsequent traffic memo has not been supplied to accompany this.
    - The applicant has stated that a traffic memo was reviewed and signed off by a traffic peer reviewer. HSH has not reviewed the traffic memo and cannot comment on its contents.

- 174-12.1 – Outdoor illumination

- The proposed development is located within the Residence A zone which would be subject to the LZ-1 zoning within 174-12.1(E)(2), however the proposed development does not directly apply to the spirit and intent of the regulations as spelled out within the table of recommended uses. Since the development is a 32-unit rental townhouse development, this is listed within the LZ-2 table of uses within the lighting regulations which would be more applicable for lighting of the proposed development.
    - The lighting plan shows that the proposed lights will leave significant dark spots throughout the site with only 8 proposed lights for over 1,000 feet of road and 32 units. Almost the entirety of the sidewalk is unlit which will significantly decrease pedestrian safety. See below.
    - The plan calls out driveway light fixtures, but each fixture only seems to illuminate a small corner of a single driveway and a small section of the abutting roadway while leaving the majority of the other residential driveways without being lit. See below.
    - As these units will be utilized as rental properties, additional lighting should be incorporated into the design in the form of streetlights for pedestrian safety, front porch lights, etc. See below.
- 174-12.1(F)Provide a total site lumen limit calculation per table 1. See below.
- Provide the appropriate calculations per table 2: Lighting Limits for residential uses. See below.
- Provide information in compliance with 174-12.1(G-R) to verify compliance with these regulations.
    - The applicant agreed that the lighting will need to be revised and improved upon given that the development is fully residential rental property and the sidewalks and roadway should be property lit for safety and security. Special care should be taken to make sure the improved lighting is not shining into the abutting properties.
    - A revised lighting plan sheet has been included within the updated Site Plan however, information in accordance with the regulations has not been provided. Comments still outstanding.
    - Items specifically called out within the lighting regulations Table 2 and 3 have not been provided within the lighting plan.

- Landscape plan comments have been provided under a separate cover by James Emmanuel, RLA LEED AP from James K. Emmanuel Associates. The applicant discussed with our Landscape Architect at a separate time.
  - A revised comment letter will be provided by James K Emmanuel Associates under a separate cover.
  - The landscape plans have not been reviewed under this scope.
- 174-13.3 Lower Impact Development
  - 174-13.3(C) – Applicability. This bylaw shall by applicable to all new development and redevelopment… that will result in an increased amount of stormwater runoff or pollutants flowing from a parcel of land, or any activity that will alter the drainage characteristics of a parcel of land.
    - Provide compliance with criteria spelled out within 174-13.3(E)(2) and detail how each criteria has been met.
    - A revised waiver request has not been provided and plan details not provided.
    - These bylaws focus on non-structural vegetative stormwater treatment for treatment, increasing vegetation, and reducing heat island effects. Please explain how non-structural stormwater practices have been included in this stormwater design and or why they cannot be utilized.
  - A response will be provided by the project attorney, or no response is needed from the applicant at this time.
    - A revised waiver request has not been provided and plan details not provided.
    - The applicant is seeking a waiver from this section. HSH refers to the board on this waiver. It is noted that the stormwater treatment proposed on the site is all structural subsurface, under pavement infiltration systems, however this is primarily due to site constraints given the development program.

Wetland Protection Regulations

- 170-2 – Jurisdiction. The applicant has requested a waiver from this section siting that the proposed development will disturb areas within the 20' no disturb buffer of the resource area. It is also noted within the footnote of this waiver that the applicant has filed a Notice of Intent with the Conservation Commission and intends to comply with other applicability

sections of chapter 170. HSH notes that waiving the jurisdiction section of the bylaw would allow all items spelled out within the jurisdiction section by right. It would be appropriate to alter the language relative to the specific alteration being requested and where it is being altered within the site within the request to avoid a blanket alteration of the 20' no disturb buffer during construction. The applicant should explain why it is necessary to infringe on the local 20 foot no disturb and how the values of the onsite resource areas are protected by this proposal. Individual waivers will be requested instead of the blanket waiver previously requested.

- A revised waiver request has not been provided.
- The existing waiver request has been amended to state the specific units located within the 20' buffer which is to be impacted and offers a compensatory wetland to mitigate the impacts to these buffer areas. Comment resolved.

Subdivision Regulations

- 244-8(B) – Standards of Adequacy. Provide the following information to confirm that the proposed roadway is in compliance with these standards for pavement width, maximum grade, sight distance, etc. The applicant will provide this information within a revised plan set. A revised waiver request has not been provided and plan details not provided.
  - A revised waiver request has not been provided.
  - This information is now depicted within the plans.
- Per 4.1.3.1, all plans submitted shall conform to the requirements of the town subdivision rules and regulations 244-10.
  - 244-10(B)(13) – provide existing and proposed profiles of the proposed private road since over 1,000 of roadway with a complex set of roadway utilities and drainage are being proposed. The applicant will be provide Roadway Profiles within a revised plan set.
    - A Plan and profile sheet has been included within the revised submission. A detailed review of this sheet will be provided within a supplemental submission however the following items were noted initially:
      - The sidewalk which follows the proposed roadway will not meet accessibility requirements given the grade which the road is designed (6.8%)
      - The applicant has provided evidence that states that they do not need to meet the accessibility requirements due to the existing grades on the site exceeding 5%. However, we encourage that the applicant

further reviews the sidewalk grades to try and get as close to ADA requirements as possible. Since this is a new development, it would be helpful for all individuals who may live here to utilize safe pedestrian passage.

- Provide roadway design information (PVC, PVT, PVI, K values, etc.)
- The applicant states that road design standards are not an appropriate measure of a driveway design, however, given that this is a 24' width drive aisle that is 982 feet long serving 32 townhouse units, the design should be reflective of a roadway with appropriate roadway design information mentioned above.

  The profile on sheet P1 identifies items such as a 0.76% roadway slope for approximately 200' which is less than the required 1% slope and not considered easily constructable without paving concerns. Additionally, the applicant states that a 15-mph speed limit will be posted. If this is the case, please design the roadway utilizing the minimum Crest and Sag K values for a 15-mph roadway. Alternatively, the applicant may seek a waiver from all roadway design standards for review and approval by the board.
- The existing roadway that is being utilized for an access easement is being maintained in its existing state. This section of the access for the development is a broken-up parking lot. Please explain if it is the intent to keep the access over this section of unimproved access.
- The waiver list has been updated to include the existing entrance being maintained. The applicant will be resurfacing the existing cracked pavement.

- There are significant utility crossings throughout the roadway for the various water and sewer mains and services. Provide a crossing analysis to verify that 10' horizontal and 18" vertical separation between the outside of the pipes have been achieved throughout the site. Verify that 5' minimum cover has been achieved for the water mains. A crossing analysis will be produced by the applicant in a revised plan set.
  - The profile confirms the above interactions. Provide a revision to the utility layout and provide a crossing analysis.
  - The applicant has added a note on the plan and profile which states that 18" separation shall be maintained for all water and sewer

crossing however this does not address the issue which still exists within the utility design. Due to the water being designed at 5' of cover and the sewer being installed at approximately 6' of cover, almost all of the water and sewer services from the townhouses will not meet the required separation and will require sleeving.

Additionally, it is noted that some services have been removed but the plans still reflect a single service for each building unit. Revise plans to reflect how they will be constructed.

- 244-10(B)(15) – Water mains and drains
  - Confirm the adequacy of the town water system for the 32 units which will require 7,480 GPD of water usage. The applicant will provide a letter from the water department showing or agreeing to adequacy of the water system.
    - Comment is still outstanding.
    - The applicant will forward the response from the town regarding water capacity for this project. HSH recommends that this comment be noted as a condition of approval if not provided prior to the hearing closing. Comment resolved.
  - 244-10(B)(19) – Provide compliant cross sections per town standards. The applicant will provide on a revised plan set.
    - Comment is still outstanding.
    - A standard roadway cross section has been provided on detail sheet D6. Items listed within this detail, such as utility information, will fluctuate throughout the roadway as is depicted on the site plans.
- 244-12(A)(2) – Design criteria. Provide evidence that the criteria spelled out within these sections has been adhered to within the proposed design. Provide a cut-fill analysis for review. A cut-fill calculation will be provided
    - Comment is still outstanding.
    - The cover letter states that there is a net import of 36,000 CF of soil per the design of the site plans. However, it is noted that this is called out on Detail Sheet D1 as note 6 which does not include this figure. Please add this to the notes on the detail sheet as noted on the cover letter.

- 244-13(A)(7) – Provide grading for the revised entrance out to Route 9 and confirm that this requirement has been meet. The applicant states that the existing entrance is not being altered in terms of grading.
  - The applicant states that a waiver will be requested. A revised waiver request has not been provided. Comment outstanding.
  - The applicant has submitted a waiver request. It was noted that the existing entrance is not being altered from the existing grade and just being repaved. HSH to defer to the Zoning Board and the Traffic Peer review.
- 244-16(B) – Drainage System.
  - The HydroCAD modeling is lacking significant level of detail and modeling to verify that the proposed drainage network will work as proposed. Pipe and manhole routing and modeling has not been quantified within the HydroCAD model. Please provide a drainage analysis of the pipes to verify that they can pass the 100-year storm event including the effects of tailwater per this section, 7.6(k)(1) of the Stormwater Regulations and 6.10 of the Comprehensive Permit Regulations. The applicant will provide the HydroCAD modeling to reflect the above information.
    - The applicant has provided a separate HydroCAD model which models only the pipes to provide evidence that the pipes will be able to carry the capacity of the Subcatchments directed to each of them. HSH has the following comments with this model:
      - Provide a Watershed Map for the revised Subcatchments.
      - 8" pipes still do not meet the town minimum requirements of 12". Please upsize pipes to meet this requirement.
      - Reach 118R was input as a 11" pipe. Verify if this is correct.
      - This model does not depict the design as it will operate and is incomplete due to the analysis being truncated prior to the ponds/infiltration areas. For example, reach 109R will outlet into the large under pavement Retain_it units at 324.00 with storage in the pipe detailed at 0.81' for a top of water elevation in the pipe of 324.81'. However, in the same storm the elevation within the Retain_it system modeled with the same watersheds will pond to a total elevation of 327.84'. Therefore, the pipes have not been analyzed to verify that when they back up (tailwater) from hitting the wall of water within the system and that the surcharge can be handled by the pipes currently designed. Converting the culvert reaches to ponds

and associated reach and pond routing to Dyn-Stor-Ind will calculate this effect and allow us to review a more accurate model.

- Please submit the revised HydroCAD with all messages and warnings printed.

– The wetland system between units 29 and 30, and the stream on the eastern side of the access road have been hydraulically disconnected with the proposed road. Provide a cross culvert with supporting calculations to verify that the culvert will pass the 100-year storm event in accordance with this section. Provide a culvert design in compliance with 244-27(D). HSH and the applicant discussed the connection of the western and eastern wetland systems. The applicant discussed that within the field there may be a hydraulic disconnection between the two systems. A stream channel exists within the eastern wetland system which would suggest larger flows or a possible overflow from the western system. It was recommended that significant evidence be provided which shows the topographical and or wildlife disconnection or the comment above should be adhered to.

  - A 4' wide and 2' high with open box culvert has been depicted under the proposed roadway to satisfy this comment. Within the culvert is a 2'x2' grate proposed near the middle of the culvert. Is the grate supposed to be 4' wide and not 2' wide? What is the purpose of this grate? Unless this was a condition detailed by the Conservation Commission, this would appear to serve as a way to disconnect wildlife from one side to another and could potentially cause clogging and maintenance concerns for water passing from west to east.
  - The abutter located at 131 Parkerville Road has submitted a letter detailing some of the water concerns that this property has encountered over the years and supplied photos of a sample storm in December of 2023. Please model the proposed culvert to verify that this size is appropriate given the anticipated flows across the site.

– The pipes as currently proposed appear to be undersized and do not meet the minimum pipe size of 12" per 244-16(B)(2). The applicant will adjust to the appropriate size after revising the calculations per the updated HydroCAD.

  - Refer to comment above.

– The top 8" outlet for the Retain-it structure is noted to be capped within the plan details. If this is the case, remove this out of the HydroCAD model for the system as these are shown to both be flowing full within the 100 year storm event. This was

potentially a system detail callout typographical error. The applicant will provide a detail to better depict how this system works.

- This permanently affixed cap is still depicted in the plans and the calculations have not been updated and provided to HSH which reflect that the outlet is not flowing. Comment outstanding.

- 244-17 – Water Supply and Fire Hydrants.
  - Several hydrant locations do not meet the required separation requirements to the proposed sewer infrastructure. Please adjust. The applicant will update.
    - One of the hydrant still does not comply with this requirement.
    - The Hydrant at station 3+20 still does not comply with this requirement. If this cannot be satisfied, propose sleeving the water line to maintain separation of at least 10'.
  - The waterline is proposed with a "Y" layout and two dead end stubs. This will lead to frequent purging of the waterline. Please provide a water loop to prevent this. The applicant will review the water system with the town departments to determine if the proposed system is adequate and provide HSH will evidence. If building location and layouts are adjusted, it is suggested that the water line placement try and loop the water line to maximum extent practicable.
    - The applicant states that a looped layout is not possible given the sites configuration. HSH refers to the Public Works department or water utility for comment on the water layout as depicted.
    - The applicant states that all water looping alternatives have been exhausted. HSH defers to the Southborough Public Works/water utility for final signoff.
- 244-27 – Special Construction Details. Retaining walls shall be constructed whenever the slope of land adjacent to the street would be too steep for the stability of soil [generally in excess of one (1) foot vertical to two (2) feet horizontal] or would require grading for more than thirty (30) feet back to meet the existing grade at a slope of one to two (1:2).
  - Significant retaining walls are proposed around the exterior of the development adjacent to the bordering vegetated wetlands. Where retaining walls are not proposed, 1:1 slopes are proposed directly adjacent to property lines or local no alteration zones adjacent to BVW. Section 244-20F – maximum slope shall not exceed two (2) horizontal and one (1) vertical in fill. It is advised that the slope be revised to 3:1 which is a mow-able and maintainable slope with exceptions for 2:1 in circumstances where the grade is unavoidable in compliance with the regulations.

Anywhere the slope is equal or greater than 2:1 erosion control blankets or geotextiles shall be used to maintain vegetation. The applicant to review the layout of the buildings to allow for additional space to create less slope between the proposed project and property lines. Where 3:1 is not practicable and slopes continue at 2:1 or greater, erosion control blankets shall be specified and plantings revised to aid in the stability of the slope. Plantings on 2:1 and greater slopes are not maintainable and therefore shall be reviewed for their aesthetic and proximity to units.

- The applicant has regraded several areas to reduce the slope from 1:1 to 1.5:1 or shallower and added a rip rap swale adjacent to the abutters in areas where water previously would have seen overland flow from the site. There are still significant retaining walls of height throughout the site which range from 8-12 feet in height.

– Several of the area drains behind units 11-3 are located within sections of 1:1 slopes. This could lead to undermining of the pipes within this area. It is suggested that these drain lines be adjusted out of this section of steep slopes and the slopes be revised. The applicant clarified that the majority of these drains are cleanouts only and are meant to connect the drain system and not provide surface collection, however the undermining issue of the pipes still remain. The applicant will be adjusting within the following plan revisions.

- The previous stormwater flow path has been converted to a rip-rap swale which runs down the eastern property line. The plan sheet callout for the swale is incorrect. Please revise.

– A retaining wall is proposed approximately 1 foot away from the existing property line which abuts the abutter noted as 5 Sarsen Stone Way. Please provide a guardrail for vehicular safety and detail how this wall will be constructed with allowance for erosion control and room to construct the wall. This guardrail should extend along the section of 1:1 slope and along the wall abutting unit 20.

- Retaining wall and guardrail comment still outstanding.
- Significant discussion was had regarding the site slopes and how to adjust the design to eliminate and or minimize these issues. The applicant will work on the site slopes to try and adjust them as shallow as possible. Possible adjustments to buildings can help to remedy the slopes as well as other layout and grading options discussed.
    - Several buildings have been adjusted or combined to compress the site and help alleviate the steepness of the grading to the abutters.

Steep slopes still exist in several locations throughout the site. An in depth review of the additional drainage measures adjacent to the abutters will need to be further evaluated in a subsequent letter.

- Drainage comments have been detailed above.

– Unit 26 directs water 17.5' down a 1:1 slope directly at units 27 through 29. Please revise to remove the flooding concern for these units. Grading and slope adjustments along with area drains were discussed for these units to help alleviate the concern with these units. The applicant will revise.

  - This problem still exists within revised plans. Comment still outstanding.
  - The applicant has noted that a swale has been added to the south and west of unit 27 to direct water around this unit, however it does not appear to be detailed on the plans. Please revise the plans to include appropriate spot elevations to show flow paths.

Stormwater and Erosion Control Regulations

- 154-3 – Applicability. The applicant has requested a waiver from the entirety of the Stormwater and Erosion Control Regulations. HSH does not believe that this is appropriate as it is the applicant's duty to work with the municipality to determine which of the sections within the bylaw can be complied with and which would pose a significant hardship on the applicant over and above the state regulations. It is requested that the applicant review the regulations and provide individual waivers from sections that would be required to be waived. A blanket waiver is not recommended. The applicant and project attorney will provide individual waivers so that the board may understand items being requested.
  - Revised waiver requests have not been submitted. Comment outstanding.
  - The applicant has submitted two waivers, one from 7.6 - application contents and 7.6(n)(1) – emergency response plans.
- 7.6(i)(viii) - The existing conditions plans list 23 "official deep observation holes", however information associated with the project show only test pits #21, 22, and 23 have been included in the submission package. Please provide the soil logs for the remainder of the test pits performed onsite. The applicant will provide the testing in full to HSH for review.
  - The logs have been provided. We will review and provide comment in subsequest review.
  - Soil logs have been provided with this latest submission.
- 7.6(l)(1) – provide detailed cut and fill calculations. The applicant will be provide.

- Applicant has stated that 36,000 CY of material will need to be imported.
- Refer to previous comment above.

- 7.6(o) – Stormwater and Erosion Control Management Plan. Provide a stormwater and erosion control plan in accordance with 7.6(o)(3-4). The applicant will be provide.
  - HSH will review for compliance with the above sections in a subsequent review.
  - Erosion and Sediment control plans have been submitted within the plan set. The plans show appropriate measures for controlling site runoff and will be required to submit and comply with an EPA NPDES Permit and provide a SWPPP due to the size of disturbance.
- 8.1(g) – Post-Development Stormwater Management Criteria for New Developments. Revise stormwater calculations to comply with this section. The applicant believes that this may already be designed in accordance with these requirements. The updates to the stormwater calculations will incorporate this section.
  - Revised calculations have not been provided.
  - An updated drainage report detailing all of the stormwater standards, removal criteria, etc has not been submitted or reviewed. Only the Supplemental Drainage Report which details the culvert pipes was included within this submission. Comment outstanding.

Comprehensive Permit Regulations

- 4.1.3.8 – Provide electric and/or gas lines through the development. The applicant will provide within the plans.
  - Electric lines have been provided. Provide place holder locations of transformers which will be required for construction.
  - Transformers will need to me all space requirements spelled out within the regulations of that energy provider. Please add a note and include the appropriate providers information for future coordination.
- 4.1.3.13 – A waiver has been requested from the requirement to show the location and results of soil, percolation and water table tests using the Department of Environmental Protection Soil Evaluation procedures under Title V. As previously noted, there as several test pits missing or not displayed within the development which make the review of the stormwater systems and drainage design incomplete. It would provide a better understanding of the soil conditions of the site for the soil logs relative to the 23 test pits to be provided for review. The applicant will be provide.

- Soil logs will be reviewed in a subsequent review.
- Soil logs have been provided with the revised submission. Since an updated septic design has not been submitted as part of this submission, the soil logs will be reviewed within a supplemental review.

- 4.1.6 – Provide this traffic analysis, neighborhood plan, etc.
  - A paragraph has been added to detail sheet 4 of the site plans which gives limited detail regarding the traffic for the site. Please expand upon this traffic information to discuss how the increased traffic along with the potential contractor's yard to the north will interact with the traffic along Route 9. The applicant is currently working on the submission of a traffic study that will provide this information.
  - A complete Traffic Impact Report shall be provided and submitted in accordance with 4.1.14.
  - The applicant is currently working on the submission of a traffic study that will provide this information.
  - Comment still outstanding. Traffic study has not been provided.
  - A separate peer review has been performed on the applicants traffic analysis. HSH defers all comments and review to the traffic peer reviewer. Comment closed.
- 4.1.12 – Prepare and provide an "Environmental Analysis" in accordance with this section for review. The applicant will provide.
  - Comment still outstanding.
  - An environmental analysis was submitted for the project by Goddard Consulting, LLC. HSH refers to Lucas Environmental as they have already produced an in-depth review of the analysis dated June 16, 2025. Any additional comments relative to the updated August 1st, 2025, memo will be addressed in a subsequent comment letter.
- 4.1.15 – Prepare a long term monitoring plan per this section. The applicant will provide.
  - Applicant stated that this will be forthcoming as they work with the Conservation Commission.
  - A revised stormwater checklist and stormwater report has not been submitted.
- 6.5 – Access – To assure reasonable standards of public safety, there shall be adequate means of access to a comprehensive permit development. Typically, this means at least two means of access to the property if eleven (11) or more dwelling units are proposed or otherwise recommended by the fire chief and or other emergency services. Please provide

information on the single entrance and exit provided for this 32-unit development and how this satisfies this requirement.

- Provide a swept path analysis of the largest fire truck for the town through the proposed development to determine the vehicle's ability to access all units. The applicant will provide.
  - A swept path analysis was provided based on input from the fire department. Depict the WB-45 profile within the plans and note that this was per the direction of the fire department.
  - The applicant states that this was the path of the WB-45 however the comment above still stands. The profile of this vehicle, showing what was used, turning radius, wheel to wheel lock etc. is still not provided on the sheet to document what vehicle was used to produce the plan.

Sewage Disposal Regulations

- As a general note for all comments within this section, a revised septic plan has not been supplied to HSH for review therefore HSH has not reviewed any part of the septic design, and all comment remain outstanding.
- 223-6(D)(1-10) – provide elevations and dimensions per this section. Certain items appear to be missing. The applicant will provide. Comment still outstanding.
  - 223-29(E) – Leaching Area Requirements – utilizing a design percolation rate of 20 minutes per inch the factor associated with this rate would be 0.50 sf/gal vs the 0.53 rate that was utilized within the design. Please revise the calculations. A response will be provided from the applicant's attorney regarding a new waiver request.
    - A revised waiver request has not been provided and plan details not provided.
  - 223-29(E) – Leaching Area Requirements – the bottom area of the trench will not be considered without prior approval of the Board of Health. Please provide approval or revise the design calculations. A response will be provided from the applicant's attorney regarding a new waiver request.
    - A revised waiver request has not been provided and plan details not provided.

- Verify that garbage grinders are not allowed within the rental development per note #6 or revise the system in accordance with 310 CMR:15.240(4) and request a waiver per this bylaw. The applicant will provide.
    - Comment still outstanding.

- Per 223-32 and 15.211 Title 5 minimum setback distance requirements, the project is located within the outstanding resource water of the watershed associated with the reservoir which would be subject to a 100' setback from the soil absorption system from wetlands which border or are tributary to a surface water supply. Revise the septic field location to be outside of this setback from the adjacent wetland systems shown approximately 50' away.
    - The applicant has emailed proposed justification as to why they believe that this regulation would not apply to the wetlands within the project site. This comment was also brought up by the conservation commissions peer review engineer. HSH will review and prepare a response based on the information provided.
        - The applicant has not provided sufficient evidence regarding this comment. Comment still outstanding.
    - 15.211 Minimum Setback Distances - Provide a minimum of 20' between the soil absorption system and unit 15 due to basement separation requirements. The applicant will provide.
        - Comment still outstanding.
    - 223-54 – Capacity. A septic tank shall have an effective liquid capacity of not less than 150% of the design flow estimated. The applicant will provide.
        - Comment still outstanding.
    - 223-58 – Tanks in Series. The capacity of the first compartment is at least equal to the requirements in 223-54 or at a minimum the criteria spelled out within 15.224 of the Title 5 regulations. Revise the tank size and/or provide calculations to support the minimum hydraulic detention times required. The applicant will provide.
        - Comment still outstanding.
- Revise outlet tee below flow line per the requirements of 223-62. The applicant will provide.
    - Comment still outstanding.
- 223-70 – Confirm that the invert elevation of the outlet from the septic tanks is at least one foot above the SHWT elevation. The applicant will provide.
    - Comment still outstanding.

- 223-73 – Alternation. Dosing shall alternate when the total volume of waste to be disposed of exceeds 5,000 gallons per day. Alternating siphons and pumps shall discharge to separate disposal areas of equal size. Revise the design to accommodate this. The applicant will provide.
    - Comment still outstanding.
- 223-74 – Capacity. Confirm that the dosing tanks have the capacity to discharge a volume adequate to cover the dosed leaching area to a depth of at least one inch in not over 15 minutes. The applicant will provide.
    - Comment still outstanding.
- 223-87 – Standby power. Provide location and callouts for backup generation, panels, fuel, etc. for when emergency power is needed. The applicant will provide.
    - Comment still outstanding.
- The 2" lateral inverts are noted as being at elevation 309.00. Please confirm this is a typographical error. The applicant will provide.
    - Comment still outstanding.
- The finish grade is called out as 310.50. Please confirm this is a typographical error. The applicant will provide.
    - Comment still outstanding.
- The 1/8" perforations are listed within the notes as 4' spacing but depicted within the diagram as spaced "5' typ" confirm spacing. The applicant will provide.
    - Comment still outstanding.
- Confirm construction and stone standards have been complied with per 223-119 and 223-120. The applicant will provide.
    - Comment still outstanding.
- 223-123 – confirm the grade above and adjacent to the leaching trench slopes at a minimum of 2%. The applicant will provide.
    - Comment still outstanding.
- Provide test pit #11 information as it is located within the proposed septic system. The applicant will provide.
    - The applicant has provided the test pit information which will be reviewed.

- The force main pipe size is called out as two different dimensions between the plans and the septic profiles. Please confirm pipe size and material. The applicant will provide.
    - Comment still outstanding.

310 CMR 15.00 Title 5 Regulations

- A revised septic design has not been included with this submission. All sewer comments remain outstanding.
- Additionally, an existing Septic system is now depicted within the parking lot to the north of the project. Provide further information on this system and if the system is to be impacted by the proposed development activities.

- 15.212(2) - Depth to groundwater. For systems with a design flow of 2,000 gpd or greater, the separation for high groundwater as required by 310 CMR 15.212 (1) shall be calculated after the effects of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3). Please provide a mounding analysis and revise the design of the system accordingly. The applicant will provide.
- 15.220(k) - Provide the location of every water supply, public and private.
    - The abutter at 258 Turnpike Road is noted via the well drillers report as having a domestic well on the property. Please locate and depict on the plan. The applicant will provide.
- 15.221(7) - The top of all systems components, including septic tanks, distribution box, pump chambers, dosing chamber, and soil absorption systems shall be installed no more than 36" below finish grade. The proposed design shows the top of the system approximately 45" below finish grade. Please revise. The applicant will provide.
- Provide sewer service callouts in conformance with 310 CMR:15.222 The applicant will provide.
- 15.231 – Dosing Chambers and Pumps. Per the calculations with sheet 2, it is noted that the volume below the pump on is 3,234 gallons however note 5 calculates the total volume within the system which would need to be held per 15.231 is 3,251 gallons. The emergency gallons calculated is within 10 gallons of the requirement. Please increase the pump chamber to accommodate the additional gallons required. The applicant will provide.
- Confirm venting criteria meets the items spelled out within 15.241 The applicant will provide.

Generic Plan Comments

- Existing Conditions Plan Comments:

- Existing conditions plan does not appear to be printed at the scale shown on the plans. Please review the existing conditions sheets and provide updated plans which reflect the scale listed on the plans. The applicant will provide.
  - The plan is not to scale. Please revise.
  - The plan scale has not been corrected. The existing conditions plan still does not scale correctly.

- Site Layout Plan comments:
  - The development has been greyed out within the site plans. HSH will review the plans and calculations to verify that the design has been separated out.
  - See above comments relative to drainage and stormwater submissions.
- Existing drainage pipe from the industrial parcel outlets to an existing drainage basin and drainage easement on the proposed parcel. Proposed building units #1 and #2 are depicted on top of this drainage system. Please show how this drainage system connection can be maintained. The applicant will provide.
  - HSH will review the updated pipe layout in subsequent review.
  - The revised site plans depict a proposed grading and drainage easement which directs this pipe around units 1 and 2. Comment resolved. Easement documents to be provided as a condition of approval to ensure its creation.

- Grading, Drainage and Erosion Plan Comments:
  - HSH will review the below comments based on the revised material and address within a subsequent review.
  - Upon further review it was identified that there is an existing drainage easement which appears to be utilized as an outlet for the subdivision roadway stormwater to the southwest between 3 and 5 Sarsen Stone Way. The existing grading and roadway layout would appear to bisect this flow path. Please provide evidence that the existing drainage easement can be maintained and the flow redirected around the proposed development.
- Sections of the proposed driveway/sidewalk exceeds ADA running slope maximums of 5%. Please detail the proposed sidewalk in compliance with ADA accessibility standards. The sidewalks will be adjusted by the Applicant to meet this requirement.
  - Refer to above comment.

- The infiltration drywells behind unit 24 and unit 10 show testing in the area but this testing has not been provided to determine SHWT, soil texturing, etc. Please provide soil testing evidence to support this determination. It appears that additional testing has been completed. All logs will be provided to HSH.
    - Soil logs have been provided. Testing for hole #24 confirms the design assumptions.
- The infiltration drywell behind unit 21 does not show testing near the system yet denotes a SHWT elevation within the detail callout. Provide evidence to support this determination. The applicant will provide.
    - HSH recommends as a condition of approval that confirmatory test pits are performed for each of the systems which do not have a deep hole test pit located within the footprint. These should be submitted to the town engineer or peer review consultant as a verification of the design assumptions.
- Provide roof drainage inverts into the infiltration drywells so that the HydroCAD calculations can verify that these systems do not backup the inverts. The applicant will provide.
    - Roof inverts have been added to the site plans. This information has not been quantified per the comment above. At a minimum ,please provide evidence that the roof drain pipe size is sufficient for the area of roof entering the pipe.
- Provide top and bottom of retaining wall elevations. The applicant will provide.
    - The applicant has provided the top and bottom of wall elevations. Is it noted that there is significant wall heights located throughout the site. Additional details are still needed to verify constructability, specifically the 8' high wall approximately 1' off the property line from the abutter at 5 Sarsen Stone Way.

- Detail Plan Comments:
    - Provide test pit information for the drywell infiltration chambers located behind units 10, 24, and 21. Provide a mounding analysis for these systems where less than 4' separation to SHWT and/or ledge is noted from the most restrictive test pit within or near the system. The applicant will provide.
        - A mounding analysis has not been provided. Comment still outstanding.
    - Per the stormwater manual, table IB.1, one soil sample for every 5,000 ft of basin area is recommended with a minimum of three samples are required for each infiltration basin. HSH meant this comment is for the larger systems as discussed.

The infiltration dry well basins would be sufficient with a single pit as they will also be verified in the field by the design engineer with bed bottom inspections prior to the system being installed to verify that the soil meets the design assumptions.

- HSH recommends as a condition of approval that confirmatory test pits are performed for each of the systems which do not have a deep hole test pit located within the footprint. These should be submitted to the town engineer and or peer review consultant as a verification of the design assumptions.

– The most restrictive test pit (TP 23) for the Retain-it infiltration chambers shows 40" down from an elevation of 320 yielding a SHWT elevation of 316.67'. Provide a mounding analysis for this system. The applicant will provide.

- Comment outstanding.

- Drainage Comments:

  – Subcatchment 7, 8 and 9 are analyzing watershed patterns which are external to the project analysis. Each of these watershed areas will have an intricate system of pipes, manholes, and basins which would need to be quantified to verify if any of the water does in fact make its way into the proposed development drainage network. The applicant will review these watershed areas.

    - If the overall drainage catchment includes very large off property areas they would need to be adequately represented in HydroCAD to ensure that the water that you are showing passing through the site and effecting both the pre- and post- calculations, is accurate.

  – The pre-development and post-development watershed maps are difficult to read and hard to understand where the information is coming from. The reaches/analysis points identified within the HydroCAD should be labeled within the Pre- and Post-development watershed maps for clarity. The applicant will provide.

    - Comment outstanding and Subcatchments for the catch basin and pipe analysis not incorporated into the maps.

  – Please provide pre- and post- analysis points for the abutters to the south and east comparing the existing runoff to the proposed runoff from the new untreated grass areas, roof and reduction of woodland per 154-9(A)(6). The applicant will provide.

    - The revised pre- and post- development rates and volumes show and increase in the cumulative volume in all storm events to Parkerville Road. Please provide clarity or revise the drainage design to increase infiltration and

reduce overall site runoff volumes to meet the Massachusetts Stormwater Requirements.

- Revise the soil and cover information for the existing site wetlands to reflect soil group D and water surface.
  - Comment outstanding.

- Massachusetts Stormwater Standards and Stormwater Checklist:
  - A Notice of Intent (NOI) Application was not included within the provided material.
  - It is noted that the project is minimizing disturbance to existing trees and shrubs, however the project appears to be cutting the majority of the upland located within the project site including that which exits within the town no disturbance buffer. Please explain how the resource areas will be protected from erosion and sedimentation control and the interests of the Wetlands Protection Act be protected by this project in close proximity to the resource areas.
    - A NOI which has been completed through the Conservation Commission and peer reviewed by a separate consultant.
  - Standard #1
    - Revise the calculations within the Stormwater Checklist in accordance with Volume 3, Chapter 1, Page 2 of the Massachusetts Stormwater Handbook.
      - Provide updated Rip-Rap calculations for each outlet for the revised drainage design.
      - Comment outstanding.
  - Standard #3
    - In general, the site appears that each system which is being utilized for infiltration is being captured into a Contech CDS Filtration Unit prior to discharging into the system.
    - Provide the required calculations per the Massachusetts Stormwater Handbook to quantify that the site meets the 44% TSS requirement prior to entering an infiltration practice and provide additional calculations to support the additional drywell systems being utilized for recharge within the site. Provide additional drawdown calculations for the other three drywell systems within the site.
      - TSS calculations for pretreatment are still outstanding. It was noted that drawdown calculations have been provided, however an updated

report has not been provided so this comment is also outstanding pending review.

- Standard #4
  - Provide calculations weighted over the site and various treatment trains per the above comments relative to 90% TSS and 60% TP.
  - Provide BMP specific water quality calculations to verify that each system is treating the required amount that is being directed to that system.
  - The CDS flow-based sheets are noted to be attached to the document but cannot be located, only the sheets relating to operation and maintenance. Supply information from the supplier that details the removal efficiency for the given flow rates through the pipes for each unit.
  - The box should be checked within the stormwater checklist to show soils with rapid infiltration rates are being utilized.
    - The above information has not been provided to HSH and is still outstanding.
  - It is noted that the Stormwater Pollution Prevention Plan (SWPPP) was included within the stormwater report. Please provide a draft copy for review.
    - HSH recommends that this could be a condition of approval prior to the signoff on final plans that a copy of the SWPPP be provided to the Zoning Board and Conservation Commission. If so, comment resolved.
- Standard #6
  - Appropriate BMP's have been used within the proposed design to satisfy this criterion.
  - It is noted that through the review process with the conservation commission and through the material submitted from the applicant, that the existing detention basin on the western side of the site is a potential vernal pool (PVP) which is likely to meet or exceed the criteria for a certified vernal pool. HSH to defer to the conservation commission peer review on setback and layout guidance associated with the stormwater BMP's.
- Standard #8
  - The proposed grading and drainage plans depict retaining walls and grading approximately 1' from the side lot lines. The proposed erosion control is proposed at a width of approximately 1.5' with additional space needed to

install these measures. Please detail how these measures can be installed in concert with the proposed site features and grading.

- The applicant is proposing that grading easements are being created on the adjacent lots to install the retaining walls. Please detail and call out within the site plans the easements located on properties not in common ownership such as along Sarsen Stone Way. Provide easement documentation as a condition of approval.

– Standard #9

- Provide all six items listed within the Massachusetts Stormwater handbook Volume 1, Chapter 1, page 23 within the operation and maintenance plan.
- The applicant states that these have been done within the revised stormwater report checklist which has not been provided to HSH.

Thank you for this opportunity to assist the Southborough Zoning Board of Appeals and Conservation Department in their review of this project. Please contact me at (978) 844-5263 or pbogle@hshassoc.com or Katie Enright at (978) 844-5251 or kenright@hshassoc.com, if you have questions or comments

Sincerely,
Howard Stein Hudson

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