

January 12, 2024

Mr. William F. O'Connell, Jr.
Bellingham Planning Board
Municipal Center
10 Mechanic Street
Bellingham, MA 02019

**RE: Zoning/Civil Engineering & Landscape Technical Review
Proposed Condominium Development
North Street and Blackstone Street, Bellingham**

Dear Mr. O'Connell,

This letter is to advise that we have reviewed the materials submitted for the proposed condominium development project located at North Street and Blackstone Street in Bellingham, Massachusetts. The submission includes the following documents:

1. Application package entitled "Amended Submittal – Development Plan and Special Permit, North Street & Blackstone Street," prepared by Guerriere & Halnon, Inc., dated November 16, 2023;
2. Plans entitled "Development Plan and Special Permit, North Street & Blackstone Street, Bellingham, Massachusetts" prepared by Guerriere & Halnon, Inc., revised through November 10, 2023; and
3. Report entitled "Stormwater Report, North Street & Blackstone Street," prepared by Guerriere & Halnon, Inc., revised through November 7, 2023.

These documents have been reviewed for conformance with the following Bylaws and Regulations:

- Bellingham Zoning Bylaws including dimensional requirements and parking requirements;
- Massachusetts Department of Environmental Protection Stormwater Management Standards;
- Town of Bellingham Subdivision Rules and Regulations (§ 245-13 Stormwater Management);
- Town of Bellingham Planning Board Procedural Rules (Section Seven: Post-Construction Stormwater Management Plan for New Developments and Redevelopments); and
- Bellingham Wetland Regulations (§ 247-33 Stormwater Compliance).

Environmental Partners Group, LLC (EP) have prepared a zoning/civil engineering and landscape design review and a traffic review of the project. This letter only includes the zoning/civil engineering and landscape design review of the project. For the traffic review, refer to the traffic review letter prepared by EP.

Background

The proposed project includes the construction of a 15-unit multifamily residential development to be located on a portion of a larger development parcel that fronts along North Street and Blackstone Street. The overall Project site encompasses approximately 20.83± acres of undeveloped land that is bounded by areas of open and wooded space to the north; Blackstone Street and a residential property to the south; areas of open and wooded space and low-lying wetland areas to the east; and North Street and a residential property to the west. The portion of the overall site that will contain the project consists of 5.36± acres of land that fronts along Blackstone Street. Proposed work also includes the construction of site driveways, a stormwater management system, and site utilities (including a private sewer system). A Bordering Vegetated Wetland (BVW) exists in the easterly portion of the property.

Comments

Our comments note missing items and noncompliance with various standards as outlined below.

Bellingham Zoning Bylaws

1. § 240-17. B. (1) (b) requires plans to include proper seals of registration. The Landscaping Plan does not include a stamp by a registered landscape architect.
2. § 240-17. B. (2) requires building floor plans and architectural elevations be submitted. EP has not received any building floor plans and architectural elevations.
3. § 240-17. B. (3) requires a narrative describing the project. The application package did not include a project narrative with the information required in § 240-17. B. (3).
4. § 240-54. A. requires that finished grades slope continuously downward for at least 10 feet in all directions from the foundation of any dwellings that have a basement or cellar. The Applicant should provide more grading detail, such as spot elevations, at each townhouse to ensure conformance to this requirement.
5. § 240-54.5. B. requires that Applicants submit certain technical analyses, including acoustic analysis, air quality modeling, identification of toxic or hazardous materials, etc., as reasonably necessary for the Special Permit Granting Authority to make a decision. EP has not received the above analyses at this time, and defer to the Planning Board whether they are necessary.
6. § 240-63 requires one bicycle parking space for every 20 off-street automobile spaces required. The Site Plans do not show any bicycle parking spaces or bicycle rack construction details.

Massachusetts Stormwater Management Standards

7. Standard 1: No new untreated discharges to wetlands

As stated in the Stormwater Report, the majority of post-development stormwater runoff generated on the property will be conveyed through deep sump hooded catch basins and sediment forebays,

prior to discharge to an infiltration basin. Ultimately, runoff is discharged to the existing wetlands to the east. Stormwater is treated prior to discharge, and all discharges include rip rap pads to prevent erosion.

8. *Standard 2: Peak rate attenuation*

The Stormwater Report provides tables that compare peak rates and volumes of runoff between pre-development and post-development conditions at the design point for the 2-, 10-, 25-, and 100-year storm events. We have the following comments on the stormwater design that may impact this analysis:

- a. The time of concentration (Tc) calculation for section D-E should be identical in the pre-development and post-development HydroCAD analyses since it is outside the limit of proposed work. The Tc for this section is 10.0 minutes in the pre-development analysis, and 14.1 minutes in the post-development analysis.
- b. Time Tc calculation for subcatchment PR3 in the post-development analysis should not be greater than the Tc calculation for subcatchment EX-2 in the pre-development analysis. These two Tc represent the same general flow path, and development should not result in a greater Tc. The flow segment D-E in Subcatchment PR3 should not have a woodland ground cover.
- c. The post-development peak rate of discharge for AP1 is incorrectly listed in Table 1A in the Stormwater Report. The post-development peak rate of discharge for AP1 is 0.02 cfs, which is greater than the pre-development peak rate of discharge (0.00 cfs).
- d. Pond 2P is modeled with an exfiltration rate of 8.41 inches per hour, which is not consistent with the Rawls Rates noted in the Massachusetts Stormwater Management Standards.
- e. Pond 1E, the "Existing Depression" is modeled with an exfiltration rate of 2.41 inches per hour. Based on the test pit logs, this should be modeled with an exfiltration rate of 8.27 inches per hour corresponding to sand.
- f. For some of the time of concentration sheet flow calculations, the Applicant uses "Woods: Dense underbrush" as the surface description in HydroCAD. The woods on-site are not dense, and therefore a more appropriate surface description should be used.

9. *Standard 3: Recharge*

The proposed project and submitted materials comply with Standard 3. The provided recharge volume exceeds the required recharge volume, and the infiltration basin is proposed to drawdown within the 72-hour maximum.

10. *Standard 4: Water Quality*

The proposed project and submitted materials comply with Standard 4. The provided water quality volume exceeds the required water quality volume (1.0" over the impervious area), and proposed best management practices (BMPs) remove total suspended solids (TSS) consistent with the requirements of Standard 4.

11. Standard 5: Land use with higher potential pollutant loads (LUHPPL)

The proposed project is not considered a LUHPPL and therefore Standard 5 does not apply.

12. Standard 6: Critical areas

The project site does not discharge to or near a critical area and therefore Standard 6 does not apply.

13. Standard 7: Redevelopment

The project is a new development project and therefore subject to full compliance with the Stormwater Management Standards.

14. Standard 8: Construction period pollution prevention and erosion and sedimentation control

- a. The proposed project will disturb greater than one (1) acre of land and discharge into a municipal system and is therefore subject to the filing of a National Pollutant Discharge Elimination System (NPDES) Stormwater Construction General Permit (CGP). The Stormwater Report includes a high-level 3-page Storm Water Pollution Prevention Plan (SWPPP), however, a draft SWPPP consistent with the NPDES CGP requirements was not provided. We recommend the Planning Board require the final SWPPP be submitted for review and approval prior to the commencement of construction.
- b. No construction detail was included for the temporary stockpile areas. We recommend surrounding the entire stockpile areas with erosion control barriers.

15. Standard 9: Operation and maintenance plan (O&M plan)

The Stormwater Report contains a Long-term Operation & Maintenance Plan consistent with the requirements of Standard 9.

16. Standard 10: Prohibition of illicit discharges

A signed illicit discharge statement is provided in the Stormwater Report.

[Bellingham Subdivision Regulations \(§ 245-13 Stormwater Management\)](#)

17. Per § 245-13. B. (1), all drains shall have a minimum of three-foot cover, except where reinforced concrete pipe is used and there should be minimum cover of two feet. Some of the proposed pipes have less than two feet of cover. The Stormwater report states that all pipes with less than three feet of cover shall be Class V. We recommend the plans show the locations where Class V pipes will be included.
18. Per § 245-13. C. (4), all drain manholes shall have a one-foot sump below the lowest pipe. The provided construction detail only shows a 6" sump.

19. Per § 245-13. D. (2) (f), The basin side slopes and bottom shall be provided with four inches of loam, seeded at the rate of two pounds Red Top, 15 pounds Creeping Red Fescue and 20 pounds Tall Fescue per acre. The construction detail of the basin in the Site Plans is not consistent with this requirement.
20. Per § 245-13. F. (3), all roadside swales shall be constructed with a geotextile placed on shaped soil, 6" of ½" crushed stone, another layer of geotextile, and four inches of sandy loam. The swale along the site's frontage east of the driveway should be revised to comply with the requirements of § 245-13. F. (3).

[Bellingham Planning Board Procedural Rules \(§ 7.0 Post Construction Stormwater Management Plan for New Development and Redevelopments\)](#)

21. Per § 7.8.1, the Applicant is required to submit a complete copy of the SWPPP per the NPDES General Permit (including the signed Notice of Intent and approval letter). EP has not received a draft SWPPP at this time.
22. Per § 7.8.1 (N), a description of provisions for phasing a project is required where 40,000 square feet of contiguous area or greater is to be disturbed. The project proposes to disturb more than 40,000 square feet of area, and we have not received a description of phased construction.

[Bellingham Wetland Regulations \(§ 247-33 Stormwater Compliance\)](#)

23. Per § 247-33 (B) (6), surface basins shall be sized assuming frozen ground conditions within the basins (no infiltration) during a 25-year storm event. The Applicant provided a HydroCAD report with this analysis, however, the design of the infiltration basin in this analysis is inconsistent with the plans and other HydroCAD reports. While the Applicant correctly removed infiltration as an outlet in the 25-year frozen model, they also changed the elevation of the spillway. The design of the basin in HydroCAD should match the other analyses with the exception of infiltration.

[General Comments](#)

24. The Site Plans do not include any accessible parking spaces. The Applicant should revise the plans to include accessible parking spaces consistent with ADA and AAB requirements.
25. Portions of the proposed swale along the site's frontage east of the proposed driveway is sloped at less than 1%. We recommend maintaining a minimum 1% slope for all swales.
26. The proposed electrical conduit the Utility Plan does not show any connections to existing infrastructure. The Applicant should provide more information regarding the proposed electrical utilities.

27. The project shows a dead end water main. We recommend the applicant coordinate with the Department of Public Works to discuss whether the proposed water main arrangement—and hydrant locations—is acceptable.

Landscape Design

28. Per § 240-17. B. (1) (f) of the Bellingham Zoning Bylaws, the plans shall show "*existing and proposed topography, at a minimum contour interval of two feet, and vegetation, indicating areas of retained vegetation and identifying the location of significant trees, historic features, and unique natural land features.*" Significant trees, historic features, and unique natural land features (or lack thereof) have not been identified on the plan.

29. Per § 240-17. B. (1) (l) of the Bellingham Zoning Bylaws, the plans should include "*location and description of proposed open space and recreation areas.*" A description of proposed open space and recreation areas has not been provided.

30. Per § 240-17. B. (3) of the Bellingham Zoning Bylaws, the following shall be submitted for development plan approval:

"A narrative describing the project, including:

- *B.3.e "Proposed methods of screening the premises and parking from abutting property and the street."*
- *B3.i. "A discussion of how the project conforms with the Bellingham Master Plan."*

The narrative has not been provided.

31. Per § 240-17. B. (7) of the Bellingham Zoning Bylaws, the following shall be submitted for development plan approval: "*Evaluation of impact on landscape. The applicant shall submit an explanation, with sketches as needed, of design features intended to integrate the proposed new buildings, structures and plantings into the existing landscape to preserve and enhance existing aesthetic assets of the site, to screen objectionable features from neighbors and public areas.*" This narrative has not been provided.

32. The quantity, locations, and size of tree plantings along the Blackstone Street frontage complies with the zoning bylaw. No shrubs are proposed. Red Maple and Red Oak and species are native to the area. Green Giant Arbovitae is a hybrid cultivar of Western Redcedar, which is not native to New England. While this tree is fast-growing and an effective screen, we recommend a conifer that is native to the area that is also consistent with the existing vegetation surrounding the site.

33. A mix of deciduous (shade) trees and coniferous (evergreen) trees will achieve a more natural appearance along Blackstone Street as opposed to a monoculture of Arbovitae.

34. A 2.5" caliper tree should be 12-14' height and not 4' height as listed in the plant schedule. For coniferous trees, height (rather than caliper) should be provided.

35. With the exception of areas of tree removal at the southeast corner of the site, and west of the proposed driveway, the extent of removal of existing vegetation is limited to removal of grass areas. Does the proposed work impact any significant trees, historic features, and unique natural land features?
36. Can the large stormwater basin be re-shaped and the surrounding area regraded to avoid tree removal? What is the purpose of small area of tree removal to the west of the driveway?
37. Will the landscaping be irrigated? If so, show limits of irrigation and source of water.
38. What type of vegetation will be provided on the side slopes and at the bottom of the stormwater basins?
39. The proposed pole mounted lights are 18-19' from the ground to top of the fixture. In our opinion, this is a very large scale fixture for a small residential development. We recommend the Applicant explore a fixture more scaled for a residential development.
40. The lighting levels at the ground are appropriate.
41. The Applicant should confirm whether the luminaires are Dark Sky compliant.
42. On Sheet 11 of the submitted Site Plans, there is lack of clarity on the plan symbols and legend symbols, making an evaluation of the plan difficult.
43. On Sheet 11 of the submitted Site Plans, there are large spaces of mulch between plantings. We recommend the Board carefully consider whether the foundation plantings as shown are adequate. In addition, in our opinion, basic landscape design principles are not being followed.
44. Tree planting pits should receive a maximum 3" deep mulch bed, not 4" as shown on the construction detail on Sheet 13 of the Site Plans. Mulch should have a 0" depth where the root ball meets the flare of the tree trunk. Do not mound soil under tree and shrub root balls.

Our review is based on the information that has been provided. As noted above, additional review will be required to verify comments that have been incorporated into the revised submission.

We appreciate the opportunity to be able to assist you with this important project. Please feel free to contact me at (617) 595-5180 or sdt@envpartners.com with any questions or comments.

Very Truly Yours,

A handwritten signature in blue ink, appearing to read "S.D. Turner", with a long horizontal flourish extending to the right.

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A handwritten signature in blue ink, appearing to read "Dylan J. O'Donnell", with a long horizontal flourish extending to the right.

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