



Trinkaus Engineering, LLC

114 Hunters Ridge Road
Southbury, Connecticut 06488
203-264-4558 (office)
+1-203-525-5153 (mobile)
E-mail: strinkaus@earthlink.net
<http://www.trinkausengineering.com>

May 12, 2025

Mr. Paul Shanley, Chairman
Planning and Zoning Commission
Bethel, Connecticut 06801

RE: 72 Reservoir Road
Bethel, Connecticut

Dear Mr. Shanley and Members of the Planning and Zoning Commission,

This is in response to the following staff comment letters found on the google drive for this project.

- a. Health Department of 4/17/25
- b. Public Utilities of 4/21/25
- c. Fire Marshall of 4/21/25
- d. Public Works of 4/16/25
- e. Staff comments of 4/22/25
- f. SLR comments of 5/7/25

Fire Marshall letter:

1. Understand that a blasting permit will be required for the proposed site work.

Public Utilities:

1. No comment required.
2. Understood.
3. Understood.
4. Slope of the lateral to Unit #3 has been revised to 11.1% (standalone lateral)
5. A separate lateral to Unit #2 has been provided as requested.
6. Understood.

Health Department:

1. The site is vacant land with undisturbed soil profiles based on test pits. No Phase I assessment will be provided. It is not standard practice to do a Phase I for vacant land.
2. Blasting will be done under the jurisdiction of the Fire Marshall. Pre-blast surveys will be conducted by the blasting contractor for structures within 250' of the site, which is what the law requires.
3. Removal of earth materials is not under the jurisdiction of the health department.
4. If radon is encountered, an appropriate system will be installed by the builder.
5. Toters will be used on this site and stored in garage.

6. Grading on the site is not under the jurisdiction of the health department. The proposed grading complies with the Connecticut Building Code to direct runoff away from the foundation wall.
7. No comment is required.
8. No comment is required.
9. Storm drainage is not under the jurisdiction of the health department, and they should not be commenting on it at all.
10. Grading is not under the jurisdiction of the health department, and they should not be commenting on it at all.

Public Works:

It is common practice not only in the Town of Bethel but in all towns, where driveways, underground utilities and regrading occur with the right of way of a town road. The property owner is not looking to purchase any of the land in the right of way. All improvements within this area are maintained by the property owner and not the municipality. Here are the responses to specific issues raised in the letter:

- a. A ledge cut, not a retaining wall is proposed within the right of way to the south of Unit #3.
- b. The proposed retaining walls between the units have been pulled back to be outside the limit of the right of way.
- c. The driveway to Unit #1 has been shifted to avoid the existing utility pole.
- d. The trench drains across each of the driveway are located within the town right of way to intercept runoff from a portion of the driveway and direct to the stormwater management system and reduce the runoff which would be directed to the gutter line of Knollwood Drive.
- e. It is well established that curtain drains, footing drains are connected to municipal drainage systems on a town road.
- f. All driveway, whether residential or commercial, must cross land within the town right of way.

Staff Comments:

1. Upon approval, a map showing the merged parcels will be filed with the Town Clerk.
2. If the project is approved, the owner is open to providing an easement for the existing driveway to the owner to the west.
3. The 10' separation meets applicable fire code requirements.
4. A fence is not proposed on the top of the rock cut for safety purposes.
5. Erosion controls are already shown on the submitted site plans.
6. Snow will be plowed between the driveways or removed from the site.

SLR Comments:

1. Road changes to street.
2. An existing conditions survey by New England Land Surveying was provided which is the source of the topographic information.
3. A simple inspection in the field shows that there is ample sight distance for each driveway along Knollwood Drive.
4. Snow plowing on Reservoir Street will not impact the building. I have actually measured the distance that snow is plowed on several residential roads in Southbury and it is plowed no more than six (6) feet beyond the edge of pavement.
5. No comment required.

6. Proposed retaining walls between the units will not end at the property line.
7. Ledge is either at grade or less than 6" below grade so an earth slope will not be required.
8. The rock cut along the southern portion of the site does not pose any safety risk to the Town of Bethel. The entire slope is a rock slope now and is not a safety risk.
9. See comment #3 under Staff Comments.
10. Driveway grades from the edge of Knollwood Drive to the garage doors vary from 5.8% to 9.1% and are similar to the two units directly across Knollwood Drive by this developer. Parking within the town right of way occurs on many sites within the town with no issues. If the project is approved, the owner will provide the town with a legal document removing any liability from the Town of Bethel for any private improvements within the town right of way.
11. Driveway has been shifted to avoid pole.
12. The end of the driveway has been shifted away from the utility structures. Bollard can be placed if requested by the utility companies.
13. No grading is missing from the driveways.
14. Grading has been adjusted to address this comment.
15. The retaining walls between the buildings are four feet or less in height, structural design is not required for walls less than four feet in height.
16. The rock cut will be evaluated by the blasting contractor and the Fire Marshall.
17. The 2:1 slopes to the north of Duplex #1 are adequate and do not have to be 3:1. Each slopes at 2:1 are stable in earth cuts or fills when vegetated which is proposed here.
18. Roof drains will be connected to the stormwater management system in the field and do not have to be shown at this time.
19. Drains are not required at the bottom of the retaining walls.
20. Footing drains are a building department issue and will be connected to the drainage system on Knollwood Drive.
21. Limit of disturbance is defined by the rock cut and the erosion control measures.
22. See response under Staff Comments above.
23. Stormwater piping can be located within the right of way and is commonly done on many other projects.
24. Note changed.
25. There is no conflict between the plans and the stormwater report as both refer to two units for the Isolator Row.
26. Including the 12" HDPE pipe or not in the routing calculations does not change the hydrologic model as the orifices control the discharge. I have modeled systems both ways with no difference in the results.
27. The limits of the pre-development and post-development drainage areas are from the rock cut on the south side of the project then following the property lines toward Reservoir Street. The Time of Concentration is from elevation 414' at the rock cut going northerly perpendicular to the contours to the property line at Reservoir Street.
28. NOAA_D data will not be used.
29. The driveways outside the property line are not required to meet zero increase requirements.
30. Table 10-3 is for stormwater infiltration systems. The proposed underground system is NOT an infiltration system, so the table does not apply. Furthermore, table 10-3 are "Recommendations for setbacks, not requirements".

31. The proposed siltation fence which is no taller than 24" above the ground surface will not affect the sight lines on Reservoir Street and it is a temporary measure, not permanent.
32. A 5" Filtrexx Soxx is now shown around the one catch basin on the west side of Knollwood Drive.
33. This is not necessary as the underlying material will be blasted rock.
34. Areas to be vegetated will be covered with 4" of topsoil which is standard for site stabilization.
35. No landscaping plan is being provided.

Please contact my office if you have any questions on this information.

Respectfully submitted,
Trinkaus Engineering, LLC



Steven D. Trinkaus, PE



TOWN of BETHEL LAND USE DEPARTMENT

Clifford J. Hurgin Municipal Center
1 School Street
Bethel, Connecticut 06801

To: Planning & Zoning Commission
From: David McCollum, *Land Use Coordinator* *DM*
Re: #72 Reservoir Road, Affordable Housing Application – Staff Report
Date: April 22, 2025

To the Planning & Zoning Commission (“Commission”):

I offer the following comments for the Commission’s consideration:

1. As of the date of this Staff Report, the properties that are the subject of this application have not been merged. If the Applicant wishes to merge these lots as shown on the submitted “Property Survey Map” prepared by New England Land Surveying, said map must be filed in the Bethel Town Clerk’s Office.
2. It should be noted that a portion of an existing “paved drive” originating on #74 Reservoir Street encroaches onto the Applicant’s property, in an area of a “rock cut” as shown on the submitted Site Plan Sheet Set. The Applicant shall address this encroachment to prevent any safety issues that may arise from the neighboring property owner’s use of this driveway.
3. The “Grading / Erosion Plan” appears to only show the finished grade of the areas immediately surrounding each building slab, the boulder retaining walls between each, and top and bottom elevations along points of the “rock cut”. How will the area of the property between the “front” face of the proposed duplex units and Knollwood Drive be regraded to accommodate the proposed driveways?
4. Will any additional improvements be made along the “rock cut” as a safety measure for duplex unit occupants and/or abutting property owners?
5. Where will silt fence sections or any other erosion and sedimentation controls be placed on the property?
6. The width of each driveway appears to match the width of the front “face” of the respective building it serves, with the driveway width for “Duplex ‘3’” tapering as it approaches Knollwood Drive. Where will plowed snow be placed?

Staff may provide additional comments as the Commission’s review of this Application progresses.

*1 Pub Head
Staff Respon, Plan 3 hr*



May 7, 2025

Planning and Zoning Commission
Town of Bethel
Clifford J. Hurgin Municipal Center
1 School Street
Bethel, CT 06801

SLR Project No.: 141.14494.00018

RE: Site Plan Application Review Comments
72 Reservoir Street
Bethel, Connecticut

Dear Commission Members,

SLR International Corporation (SLR) has reviewed application documents submitted to the Town of Bethel Planning and Zoning Commission (the "Commission") by One Knollwood Drive, LLC (the "Applicant") for the application to construct a 3-unit multi-family residential (8-30g) development at 72 Reservoir Street in Bethel, Connecticut.

SLR has reviewed the following application documents submitted by the applicant, in accordance with the Town of Bethel Zoning Regulations, the *2024 Connecticut Stormwater Quality Manual*, and the *2024 Connecticut Guidelines for Erosion and Sediment Control*, as well as general best management practices, as applicable:

- Planning & Zoning Commission application forms dated March 6, 2025.
- First Division Map prepared for One Knollwood Drive, LLC by New England Land Surveying, P.C. dated August 15, 2018 (pdf copy).
- Property Survey Map prepared for One Knollwood Drive, LLC by New England Land Surveying, P.C. dated February 21, 2025 (pdf copy).
- Site Plans prepared by Trinkaus Engineering, LLC dated February 11, 2025 (pdf copy not signed/sealed).
- Stormwater Report prepared by Trinkaus Engineering, LLC dated February 11, 2025 (pdf copy).
- Architectural Plans prepared by BBS Design, LLC revised September 27, 2017 (pdf copy).

Based on our review of the application documents received to date, we offer the following comments for consideration by the Commission and the Applicant:

1. The application forms and design documents refer to the applicant's property as 72 Reservoir Road. According to the survey plans provided by the applicant the property is recorded on town land records as 72 Reservoir Street. The application forms and design documents should be revised to reflect the property address as 72 Reservoir Street, as recorded in the town land records.

2. The submitted plans do not reference the source of the topographic survey information and elevations included on the existing conditions plan.
3. Provide field measurements of sight distances from proposed driveways.
4. Duplex building #1 is located only ± 13.5 feet from the edge of roadway pavement at the east side of Reservoir Street and ± 3.5 feet from the right-of-way line. At this distance there is a potential for snow, roadway deicing products and objects in the roadway that are contacted by town snow plows to be thrown onto the side of the building causing damage and/or degradation to the building. The property is located in a R-40 zone which has a 50-foot building setback from the property line along Reservoir Street. If the building was located in accordance with the 50' building setback it would be over 60 feet from the edge of roadway pavement.
5. SLR recommends the Bethel Police Chief review the location of Duplex building #1 relative to the edge of roadway on the east side of Reservoir Street to determine if a vehicle barrier is warranted between the roadway and building due to the close proximity of the building to the edge of the roadway pavement (± 13.5 feet). The property is located in a R-40 zone which has a 50-foot building setback from the property line along Reservoir Street. If the building was located in accordance with the 50' building setback it would be over 60 feet from the edge of roadway pavement.
6. The site plans show significant retaining walls proposed within the town-right-of-way which cannot be permitted without approval from the Town, including associated easement and maintenance agreements.
7. A line is shown on the site plans representing a rock cut as close as 3 feet to the adjacent property line shared with 74 Reservoir Street. Is ledge found to be at the surface in this area? Any overburden (soil) at the top of the ledge must be sloped back from the ledge at maximum of 2' horizontal to 1' vertical and stabilized with erosion control blankets to prevent slopes eroding across the property line.
8. A vertical rock cut up to 20 feet high is proposed within the town's right-of-way and within 1-foot of the property line between the town right-of-way and 1 Knollwood Drive. The rock cut abuts the south side of the proposed driveway for Duplex #3. This poses a significant safety concern and liability for the town.
9. A 10-foot building separation is provided between Duplex #1 and Duplex #2 and a 9' building separation is provided between Duplex #2 and Duplex #3. Both separations also include boulder retaining walls. SLR recommends the Bethel Fire Marshal review these building separations to determine whether minimum building spacing is achieved based on the proposed site conditions and to determine if adequate accessway width is provided between each building and the retaining walls between these buildings.
10. The driveway layouts for the 3 proposed buildings are almost entirely located within the Town of Bethel right-of-way with no parking areas on the applicant's property.



All vehicles parking anywhere in the driveways serving these residences will be parking on town property, not on private property. Will the town be responsible for maintaining and eventually repaving these driveways? Will the town be liable if something happens to these vehicles or if people slip and fall on the proposed steep (6%-12%) driveway grades getting in and out of parked vehicles and walking on the driveways?

11. An existing utility pole (Pole #2465) is located with the proposed driveway for Duplex #1. The site plans should show this pole being relocated.
12. An existing pad mounted electric transformer and communications access structure are shown locate within the proposed driveway to Duplex #3. This equipment should be separated from the driveway by at least 5' and be protected by vehicle bollards, or these structures should be relocated.
13. Proposed elevation contours are missing from the proposed driveways. Proposed elevation contours must be shown connecting to the existing 388, 390 and 392 contours at the west curb line of Knollwood Drive. Similarly, the proposed 390 elevation contour is missing and not connected to the existing contour on the east side of Reservoir Street.
14. The proposed elevation contour 388 and proposed contour 392 are shown joining together between Duplex #1 and Duplex #2 at the same point at the end of the retaining wall, which is not feasible. The proposed retaining wall between these buildings will need to extend further into the town right-of-way to allow for a surface graded transition between the proposed 388 and 392 contours at this location. The same issue applies at the other end of this retaining wall where the proposed 388 and 392 contours are joined at the same point at the end of the wall. Additionally, this issue exists for the proposed retaining wall between Duplex #2 and Duplex #3, where the proposed 392 contour joins the proposed 394 contour both ends of the wall in front of the buildings and behind the buildings.
15. Retaining walls must be designed by a Connecticut licensed structural engineer. Rock cuts including catchment ditches and/or netting must be evaluated by a licensed geotechnical engineer.
16. Fall protection fencing and/or rails should be provided along the top of all rock cut areas and retaining walls in accordance with Building Department requirements during and after completion of construction.
17. The site plan shows proposed steep ground slopes of 2' horizontal to 1' vertical (2:1) within the town's right-of-way. A maximum slope of 3' horizontal to 1' vertical should be provided within the town's right-of-way to minimize the potential for soil erosion and provide a safe slope for maintenance equipment.
18. Show roof drain piping from each building connected to the stormwater management system.



19. Provide drains between the bottom of the retaining walls and Duplex #1 and Duplex #2.
20. Show foundation drain discharge pipe locations for each building.
21. Show limit of disturbance.
22. Will the existing driveway encroachment onto 72 Reservoir Street from 74 Reservoir Street be removed? If not, a vehicle barrier should be placed west of the rock cut at this location.
23. All proposed retaining walls, stormwater drainage piping and drainage structures (except for the outlet pipe P7 and MH C) should be located on the property of 72 Reservoir Street and not within the town's right-of-way unless an easement is acquired for these facilities from the town by the property owner.
24. Note 3 on Sheet 6 of 6 on the site plans should reference the current *2024 Connecticut Guidelines for Erosion and Sediment Control*, which supersedes the *2002 Connecticut Guidelines for Erosion and Sediment Control*.
25. The drainage report calls for a row of 4 Stormtech SC-800s to be used for the isolator row. The plan calls for Cultec R-330 XLHD units, with a row of 5 for the isolator row. Provide revisions to address this discrepancy.
26. The stormwater management system outlet control is modeled incorrectly. The 12" HDPE pipe out of the structure must be included and designated as the primary outlet, while the 2" and 4" orifices must be set to route through the 12" HDPE, since they are not separate outlets of the system.
27. Provide pre-development and post development watershed maps and time of concentration pathways.
28. Revise the pre and post-development hydrographs to be computed based on the NOAA_D storm distribution. According to the *2024 Connecticut Stormwater Quality Manual*, "The NOAA_D rainfall distribution replaces the NRCS Type III distribution, which has historically been used in Connecticut and other Atlantic coastal areas, as well as the Northeast Regional Climate Center (NRCC) regional rainfall distributions developed in 2015."
29. The proposed impervious driveways should be included in the stormwater calculations. These driveway areas total approximately 3,785 square feet and their impact to stormwater runoff rates need to be analyzed.
30. The proposed open bottom underground stormwater detention structures are located within 2 feet of a crawl space and basement. According Table 10-3 of the *2024 Connecticut Stormwater Quality Manual*, stormwater systems that allow for infiltration should be located a minimum of 10 feet of building foundations



(basement or slab). The design should also consider whether stormwater infiltration from the system could adversely impact the foundation.


31. Silt fence should not be used within the town's right-of-way in order to minimize the potential for sight line impacts at the intersection of Reservoir Street and Knollwood Drive.
32. Silt sack erosion control devices with integrated high flow bypass should be installed and maintained within town catch basins (CB #1, CB #2 and CB #3) throughout construction.
33. Separate gravel construction entrances along Knollwood Drive should be installed for the driveway to each building once rough grade is established.
34. Provide a design detail showing how much loam fill and topsoil will be replaced over top of the excavated ledge areas to restore the hydrologic soil group (HSG) classification of these areas to HSG C soils as proposed in the stormwater analysis.
35. Provide a plan for proposed planting and landscaping.

It is SLR's opinion that the above site plan review comments include significant concerns related to the proposed site design. The Commission should require the Applicant to sufficiently address these concerns prior to approval of the application by the Commission.

If you should have any questions, please feel free to contact me directly.

Regards,

SLR International Corporation



Todd D. Ritchie, PE, BCEE, CFM, REHS/RS
Principal Civil Engineer
tritchie@slrconsulting.com

14494.00018.0032.may725.docx

