



February 27, 2017

Town of Richmond
Attn: Geoffrey Urbanik, Town Manager
203 Bridge Street
Richmond, VT 05477

RE: Buttermilk LLC Development Plans – Phase 1
Review and Comments

Dear Geoff,

Per the Town's request, I have reviewed the most recent site plan (revision 4 dated 1.27.17) produced by Grenier Engineering, PC (Grenier) for the proposed Buttermilk, LLC development project at the former Richmond Cheese Factory property. The "Public Improvements Standards & Specifications for the Town of Richmond", adopted on September 6, 2016 was utilized for my review as well as a meeting with Town officials on February 21, 2017.

Overall, the latest revision of the site plan is improved from the previous submission (mid-December), however, there are several items that should be resolved prior to proceeding with Town approval. Below are my findings and comments.

General

1. Technical specifications are expected to be submitted and should include materials, testing and installation procedures, quality control measures, etc. Technical specifications shall be compliant with the Public Improvements Standards and Specifications for the Town of Richmond. If Grenier plans to utilize the Town Specifications exactly as written, this should be noted on the plans.
2. The plans currently include several standard details for sidewalks/curbing, roadway construction, and bike racks. It is expected that additional design details will be submitted for review including, but not limited to: Pipe-in-trench detail, sewer/stormwater structures, thrust blocks, valve boxes, water services, etc. If Grenier plans to utilize the Town Specification Figures/Details exactly as shown, this should be referenced on the plans.

Road/Driveway/Sidewalk

1. The plan notes a "paved" sidewalk, however, the detail indicates a concrete sidewalk – this should be clarified. The Town Standard (Section 2.13 - Page 18 and Figure 3) is concrete sidewalks.
2. The plan notes a 24' wide road, however, the detail indicates 22' wide – this should be clarified. The plan shows the road at the intersection with a super-elevation (sloping toward south and to the proposed curb) with a 0.8% cross slope. Typical road cross slope should be approximately 2%, as shown on Town Specification Figures and VTrans standard details.
3. The minimum edge-of-road radius from Jolina Court to Bridge Street should be a minimum of 30' (Section 1.1 - Page 6 and Figure 8).



4. The location of the Jolina Court stop sign and stop bar should be indicated on the drawings.
5. It would be prudent to see a vehicle turning template or "AutoCAD Autoturn" performed for the Town emergency vehicles turning around in the back of the parking lot at the designated area.
6. Grading between the 327', 328', and 329' contours adjacent to the Blue Seal Building parking area seem to indicate a steep transition for cars parking for access to the Blue Seal Building. This should be clarified.

Drainage/Stormwater

1. Storm drainage calculations, assumptions and information should be submitted for the proposed improvements (Section 3.1, Page 23).
2. Water from the roof discharges to south side of building toward cemetery and eventually Bridge Street. The cemetery is only a few feet from the drip edge of the roof. It is recommended that water is captured in a stone lined swale or French drain system. If possible, this should discharge to the stormwater collection system.

Water, Sewer and Other Utilities

1. The 4" AC water main that is to be capped and abandoned should also include concrete thrust blocks (Section 4.5, Page 30) to avoid separation of existing joints. Concrete thrust block sizes and details should be shown on the plans and/or included in specifications.
2. The 10" AC main replacement section should utilize 12" PVC. Per Town Standards (Section 4.2, Page 27), PVC water main pipe shall be C900, DR-14.
3. Fittings for 12" PVC shall utilize restrained mechanical joints (Section 4.5, Page 30). The Town prefers that the ductile iron fittings be polyethylene wrapped due to the corrosive soils.
4. Abandoning the 4" AC water main will result in the Blue Seal Building water service being abandoned. A new water service (saddle, corporation, copper service piping, and curb stop) should be tapped into the new 12" PVC main (Section 4.4, Page 28).
5. The proposed 8" PVC water main should maintain a 10' separation (outside diameter to outside diameter) from sewer infrastructure. It appears that there is less than 10' near the new 4' diameter manhole and at the existing sewer manhole on Bridge Street (Section 5.3, Page 39).
6. Sewer mains for more than one dwelling unit should be a minimum of 8" (Section 5.1, Page 33). The plans note a 4" PVC sewer service to the building.
7. It is understood that the Phase 1 Proposed Building may include a restaurant. If so, a grease trap is required prior to connecting to Town sewer infrastructure. The waste line from the restaurant drains should be separated from domestic sewage. The grease trap sizing calculations should be submitted for Town review.
8. It appears that the plans are missing several utilities at the intersection – gas, underground telephone, etc. It would be beneficial to show these on the plans for future tie-ins, locating proposed infrastructure, and avoiding conflicts during construction.
9. Grenier/Buttermilk LLC should request a water/sewer allocation for Phase 1 as well as estimated flows for future phases. Any peak flow requirements for fire protection (hydrants, sprinklers, etc.) should be included with the allocation request.



10. Grenier/Buttermilk LLC should confirm that Town water/sewer standards shall be met or exceeded (recommended). If not, a meter vault will be required at the Town right-of-way limits.

Foundation

1. On the south side of the property, the face of foundation is 5' from the property line/cemetery. Grenier or the architect/structural engineer should provide a copy of the proposed foundation plans and/or means/methods to limit the construction limits to the Buttermilk property so that the cemetery is not impacted. If there are building foundation drains, the location and daylight locations should be indicated.

Miscellaneous

1. Trees – Buttermilk/Grenier should agree with the Town on planting of trees (Section 2.17, Page 20)
2. Lighting – The parking lot size has significantly increased; however, the number of light poles has remained the same. Grenier should confirm that the lighting is adequate per Town standards (Section 2.21, Page 21).

Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in black ink that reads "Tyler Billingsley". The signature is written in a cursive, flowing style.

Tyler Billingsley, P.E.
Engineer / Owner