

TOWN OF UNDERHILL, VERMONT

Article V, Section 5.3 – Site Plan Review Standards Findings Checklist

Docket #: Property ID: PR025 Hearing Date:

Applicant/Consultant: Peter K Duval

5.3(B)(1)

Existing Site Features

Using an existing building and driveway footprint, the project minimizes impermeable surface, and limits site disturbance. The building site is at the crest of a sandy deposit with a level access from the road, minimizing runoff. The site is distant from surface water. It is a very dry location. Nonetheless, best practices to prevent soil erosion will be used during any excavation.

The site retains a large, old white pine tree and tall red pine trees that are characteristic of the surrounding pine plantation. New tree species will be planted.

a.

i.

The site's cresting topography and sandy soil allow precipitation to infiltrate quickly.

ii.

The site's elevation is approximately 850'.

iii.

Some cutting and filling may occur to integrate the project into the natural topography.

iv.

All soil disturbance will be at least 50' from Crane Brook's north top of slope. The proposed barn and residence are more than 200' from the top of slope.

v.

The building site is more than 200' from surface water and flood zones. Wastewater disposal will be at least 50' from the top of slope.

vi.

The site is within the Jericho Underhill Water District (system VT0005096) recharge area. There is a significant discrepancy between the February 24, 2015 Source Protection Plan (SPP) maps and the Agency of Natural Resources Atlas. According to the SPP, the site is just outside zone 3, while the ANR Atlas shows the site just outside zone 2. Either way, there are no prohibited uses apparent in the Source Protection Plan. An underground storage tank was removed and closed June 17, 2005 by KD Associates. A 550 gallon above ground fuel oil storage tank is located adjacent to the existing residence. It will be removed as part of the project.

vii.

The site is not in any known designated wildlife habitats or corridors;

viii.

The site contains a number of large trees that are part of an extensive tree plantation with a canopy that is much higher than the existing or proposed buildings. There is no evidence of prior settlement or structures at the site.

5.3(B)(2)

Site Layout & Design

The project site is near the center of Underhill Center, its proximity likely generating walking trips within the village. Enhanced by the proposed trail from Pine Ridge Road to Browns River, walking trips would be time competitive with driving a car, which must be done via a less direct route. The proposed trail could connect with a riverside path contemplated by the Town Plan.

A literal reading of the town's 2015 Road, Driveway and Trail Ordinance would set the driveway width at 20', which is about 1/4 of the total length. This is unreasonable for four reasons: it would have the appearance of a parking lot, the ordinance contemplates that such a driveway would normally serve detached houses on separate parcels. In the case of this project, the driveway serves just one residential building. Further, the drive is quite short, and it is unnecessary for more than 1 vehicle to use it at a time. A generous turnaround, well in excess of the Underhill Jericho Fire Department 15'x37.5' minimum, is provide. Finally, the project anticipates a decline in the use of private automobiles; the compact courtyard and driveway calm traffic and favor pedestrians and adaptive reuse of parking space. A 12' wide driveway is proposed.

In the reference design, the wooded front yard and low knoll with stone wall to the north finishes a four-sided courtyard which shields parked vehicles from the surrounding area. Buildings are recessed into the natural landscape and oriented for rooftop photovoltaic arrays and efficient passive solar heating and cooling.

The compact site layout minimizes impervious surface area, supporting the sole purpose of the Water Conservation District to "protect the important gravel aquifer recharge area in Underhill Center." (ULUDR, p.15)

5.3(B)(3)

Vehicle Access

The existing curb cut, at a slight crest on a low volume residential road, provides long sight distances, which could be increased with a small amount of vegetation trimming and earth work. The already mixed environment of pedestrians, cyclists, pets and cars is enhanced by the proposed trail and increased pedestrian activity to be generated by

the project.

5.3(B)(4)

Parking, Loading & Service Areas

In the reference design, covered parking will be incorporated into the structures surrounding the courtyard. The courtyard provides direct access to the buildings, while screening parking and activity from view.

Solid waste collection areas for compost, recycling and trash, will be under shelter, secure from animals.

5.3(B)(5)

Site Circulation.

This project uses an existing curb cut. Monderman design principles will be used in the update of the driveway and parking courtyard, which is shielded from the road by a tree-covered knoll. The driveway meets the minimum curve radius of 35'. The courtyard provides a generous turnaround for emergency vehicles.

A trail is proposed to connect Pine Ridge Road with Browns River.

5.3(B)(6)

Landscaping and Screening.

Existing vegetation will be left in place and additional species, such as balsam and spruce, will be planted. The front yard will remain wooded. Existing tall trees will be preserved to the greatest extent possible.

Permaculture techniques, such as swales, berms and hugelkultur will be used where appropriate to enhance productivity and aid water collection and infiltration.

5.3(B)(7)

Outdoor Lighting

In the interest of designing accessible buildings, low, downward casting lights near doors, stairs and walkways are the only permanent outdoor lighting anticipated. All lighting will exceed the requirements of Section 3.11 of the ULUDR. Existing lights will be replaced with fixtures that meet or exceed the section 3.11 requirements. Interior lighting will be evaluated for its effect outside of the buildings.

5.3(B)(8)

Stormwater Management and Erosion Control

Because of deep sandy soil on the site, water infiltrates almost immediately. Permaculture cross-slope swale and hugelkultur will aid in the retention and infiltration of ground water.

There will be little increase in the already small area of impermeable surface. Techniques for increasing permeability of the driveway and parking surfaces will be considered.