

## Richmond Village Housing Site Plan & Conditional Use Permit Narrative

### PROJECT DESCRIPTION:

Richmond Village Housing Partnership, is proposing to repair some drainage improvements along the southerly and easterly limits of their housing development on Borden Street. A swale was constructed in the spring in an effort to fix a drainage issue and release standing water that was accumulating in the driveway. The swale was extended toward the southerly property line then directed west until it eventually dispersed off property. Unfortunately, a portion of the improvements extended onto the neighbor's property and encroached into the Flood Hazard Area.

This project involves the effort to remove the swale and improve the original permitted design drainage pattern. We are proposing to accomplish this by replacing the grass lined swale with an Infiltration Basin designed to infiltrate the 50-year storm. This will help to greatly reduce the volume of runoff reaching the downslope neighboring properties. The swale restoration will also remove some low areas where runoff "ponds" along the southerly neighbors property. The Infiltration Basin will discharge overflow from storms larger than the 50-year event along the existing southerly edge of the driveway, westerly to where it will flow off property.

The original project was designed with a pyramid shaped soil pile at the southeast corner of the lot. Only a slightly elevated landing exists today but the infiltration basin will require the remaining soil to be excavated approximately 3 feet to the new design finished grades.

The project Site is in the Village Commercial District.

- Lot Area: 1.96 acres.
- Map Parcel Number: RR0123

### Section 4 Regulations Applying to All Lots

- 4.1 Compliance with Public Works Specifications – **No new vehicular access is proposed.**
- 4.2 Required Frontage on, or Access to, Roads or Public Waters – **The project is pre-existing and has the required access.**
- 4.3 Approval for interior lots with no frontage – **Not applicable**
- 4.4 Curb Cuts – **No new curb cut is proposed.**
- 4.5 Multiple Use of Lots – **No change of use is proposed with this application.**
- 4.6 Nonconforming Lots – **The lot size is conforming, with no change proposed.**
- 4.7 Nonconforming Structures – **This project does not include a modification to, or construction of a new structure.**
- 4.8 Nonconforming Uses - **This application is proposing to repair a drainage swale that was modified without a local zoning permit. The proposed repair will infiltrate runoff from the 50 year storm event, which exceeds the Town of Richmond's 25 year stormwater management requirement.**
- 4.9 Noise – **This project will not generate noise.**
- 4.10 Exterior Lighting – **No exterior lighting is proposed.**
- 4.11 Height of Buildings and Structure – **No new buildings are proposed.**
- 4.12 Performance Standards - **The performance standards outlined in section 4.12 (a through h) will be met.**
- 4.13 Vehicle Fueling Stations – **Not applicable.**

### 5.5.3 Conditions of Approval for Site Plan Review

- a) Traffic – **The project will not generate any traffic**

### Section 5.5.3 Conditions of Approval for Site Plan Review

- b) Traffic – **The project will not generate any traffic.**
- c) Landscape and Screening – **Construction of the infiltration basin and earthwork to restore the grades along the property line is estimated to cost \$10,000. The landscaping cost will need to be \$300 based on the 3% fee for project costs less than \$250,000. The project is proposing to install 11 Arborvitae trees and two lilacs placed along the property line. With an estimated installed price of \$120 each the \$1,625 cost exceeds the landscape budget requirement. The landscape maintenance requirements are outlined on plan C1A.**
- d) Renewable Energy Resources – **This earthwork project does not adversely impact energy renewable resources.**
- e) Signs – **No signs are proposed.**

### Section 5.6 Conditional Use Review

- 5.6.1 General Standards – A proposed use shall not result in undue adverse effect upon:
  - a) The capacity of existing or planned community facilities; **The project does not propose an expansion of the existing development. Restoring the site with a new infiltration practice instead of a conveyance swale will improve the stormwater runoff conditions for the site and will not impact the capacity of the existing facilities.**
  - b) The character of the area affected, as defined by the purpose or purposes of the zoning district in which the project is located and with specifically stated policies and standards of the Richmond Town Plan; **The applicant is adding screen trees along their southerly property line to help improve privacy. No new development is otherwise proposed.**
  - c) Traffic on roads and highways in the vicinity; **This project will not impact traffic.**
  - d) Bylaws and ordinances then in effect; and, **The intent of this project is to restore, and improve stormwater conditions from the original drainage design. The portion of the infiltration system that is within the Flood Hazard (AE) Zone will actually remove soil from the Flood Hazard Zone and reduce stormwater runoff from the site.**
  - e) The utilization of renewable energy sources. **By replacing the grass swale with an infiltration basin there will be additional water quality and groundwater recharge which will benefit the environment.**
- 5.6.2 Specific Standards – Conditional uses shall comply with the following specific standards:
  - a) Obnoxious or excessive noise, smoke, vibration, dust, glare, odors, electrical interference or heat that is detectable at the boundaries of the lot shall not be generated. **The improvements will not result in any of these obnoxious or excessive issues.**
  - b) There shall be no outside displays except those that are brought indoors at the end of the business hours and are the actual product of the business. **This is not applicable.**
  - c) Outside storage of goods, parts, supplies, vehicles machinery and other personal property shall be appropriate to the neighborhood and shall not impair safety. **This is not applicable.**

- d) A State Wastewater and Potable Water Supply Permit shall be obtained before the use commences. **A State Wastewater System and Potable Water Supply Permit is not required.**
- e) The development is proposed over a reasonable time period in order that the general and specific standards for conditional uses may be met. **The applicant intends to install the drainage system improvements as soon as possible after zoning approval.**
- f) In determining the appropriateness of the use in the Zoning District, the DRB shall consider the scale of the proposal in relation to the scale of existing uses and structures. **The project is proposing to use an existing lawn area to infiltrate and reduce runoff leaving the site.**
- g) No fire, explosive, or safety hazard shall be permitted that, in the judgment of the DRB, after consideration of the advice of Richmond fire fighting officials, significantly endangers other property owners or emergency personnel. **No fire, explosive or safety hazard is proposed.**
- h) The development shall not result in an Undue Adverse Effect on state- or community-owned and operated institutions and facilities. **The proposed improvements will help to reduce the volume of off-site drainage to the downslope community.**
- i) Existing water supplies and the quality of ground and surface water resources shall not be adversely affected. **According to the Vermont ANR Natural Resources Atlas the project is not located in a groundwater or surface water Source Protection Area.**
- j) The proposed Land Development shall not have an undue adverse effect on an Historic Site or rare or irreplaceable natural areas. Proposed structures should take advantage of existing slopes and vegetation to provide screening for the project. **No structures are proposed. The project is not a Historic Site and there are no mapped rare or irreplaceable natural areas on this site.**
- k) Any other standards, such as natural landscape and “character of the neighborhood” standards, as indicated for specific districts shall also be applied. **The applicant is proposing new plants for screening along their property line with the neighbors.**

#### Applicable Standards for Section 6

- 6.8 Flood Hazard Overlay District
  - a) **A portion of the site is located within the Flood Hazard Area Zone AE. As part of the spring drainage work, a small berm was constructed along the downslope limit of the swale within this zone. This proposal will eliminate this small berm so that there is no fill within the flood zone area. The new infiltration basin encroaches into the Flood Hazard Area but will provide a benefit by removing soil and reducing runoff volumes. The project also proposes some vegetation plantings along the uphill side of the property line but no other encroachments are proposed.**

#### Stormwater

- HydroCAD modeling, an Infiltration Basin Worksheet, and the supporting plan sheet ST1 have been included to show the hydrologic benefits of the proposed Infiltration Basin. A shallow test hole was dug and permeability testing has been completed within the practice to confirm the mapped soil properties are appropriate for infiltration. A design infiltration rate of half the measured rate was used for the system design safety factor.

- An approximate 1.49 acre watershed, which includes on and off-site runoff drains to the proposed practice. The curve number and time of concentration calculations were completed using the runoff calculator worksheet from the ANR Watershed Management Division. Hydrologic modeling was performed, and is attached, for the 25, 50 and 100 year storm events using a Type II rainfall distribution. The 25-year storm is provided as it is specifically described in Section 6.1.6(c) Drainage of the Richmond Zoning Regulations. The 50 year storm modeling shows that the entire runoff event is infiltrated and the 100 year storm event is provided to show that the infiltration practice will reduce the peak discharge rate from 9.91 cfs to 0.44 cfs.