

**SUBDIVISION FINAL PLAT
& DEVELOPMENT ON A PRIVATE RIGHT-OF-WAY
STAFF REPORT**

Owner & Applicant: Joe Laster 1139 Lanier Boulevard Atlanta, GA 30306	Engineer: Hannah Wingate, P.E., Kevin Worden, P.E. Engineering Ventures: 208 Flynn Avenue, Suite 2A, Burlington, VT 05401
Surveyor: Terry W. Wilson, L.S. Vermont Mapping & Survey Co., LLC 8 Essex Way, Suite 200B Essex Jct., VT 05452	Landscape Architects: Wagner-Hodgson Landscape Architects 7 Marble Avenue, Burlington, VT 05401
Property Location, Tax Map # & Area: East side of Mechanicsville Road between Hawk Lane and the Town Cemetery, 17-22-62.100, 102.05-acres	

BACKGROUND – The Applicant is requesting a final plat approval for an 8-unit subdivision for a 102.05-acre property located on the east side of Mechanicsville Road that is in both the Residential 1 Zoning District (R1) and Rural Residential 1 Zoning District (RR1). The Applicant received sketch plan approval on November 2, 2021 and preliminary plat approval on June 7, 2022. The prior approvals stated that 9 lots were being created. The plans submitted for final plat show 10 lots being created. The Applicant submitted a master plan for the entire property, which would have 54 single family residences to be constructed in multiple phases. This proposed first phase would include 8 new residential units and be entirely in the R1.

The Applicant purchased this undeveloped property from the Quinn family. There was once a Town well and a ski tow on this land, both of which have been abandoned. 4.22-acres of undeveloped land from the original Quinn property was transferred to the Town cemetery, on January 5, 2022 with zoning permit #2022-01, the survey to which is recorded on map slide 249 in the Hinesburg Town Records. Even though the subject property is currently undeveloped, permits 2021-55 and 2021-56 were issued in June 2021 for a 3-bedroom residence and 2-bedroom accessory apartment. The Applicant worked with Staff and licensed professionals prior to these building permits being issued to ensure that the single-family residential development would not interfere with the future development of the property.

During the sketch plan review the Applicant provided a master plan that is required per Section 3.1.1 of the Hinesburg Zoning Regulations (HZR). This master plan shows that development on the overall property is limited by steep slopes, wetlands, wetland buffers, stream setbacks and core wildlife habitat. Development in the proposed master plan avoids many of these areas, with the exception of an impact to the northerly portion of the core wildlife habitat. This impact would occur in a future phase of development. Most of the core wildlife habitat to the south and east will be left undeveloped in the full buildout, except for trail access, in a “forest conservation area”. From the Applicant’s drawing, it seems that a small area of class 3 wetland would be disturbed in the first phase. As shown in the master plan, the Applicant is proposing to preserve most of the RR-1 area, which is mostly forested and/or core wildlife habitat area. The proposed development submitted in this final plat application would require some modification to the master plan, which would be reflected in the next phase of development.

Approximately 35 acres of this property is in the R-1. About 2.2 of these acres are in stream setbacks. With a base density of 2 units per acres, exclusive of stream buffer areas, the base density for the R-1 portion of the property per Section 3.9.3 of the HZR is 65 dwelling units. Since the proposed overall number of units is less than this base density, no density bonuses are required. 38 of the proposed 54 dwelling units shown in the master plan are proposed to be located in the R1. The remaining 67-acres and proposed 16 dwelling units would be in the RR1.

The Applicant has provided a professional survey of the proposed eight building lots and a consistent 50-foot-wide right-of-way as required by Sections 4.4.3 and 5.7.1(2) of the HZR. This survey shows the proposed lots as meeting the dimensional requirements found in Table 1 in Section 2.4 of the HZR. The survey boundaries are locatable and the lots are sequentially numbered, with the exception of the development road and stormwater areas that appear to be on a separate, unnumbered lot. The survey shows each of the proposed eight building lots would have a building envelope based on setbacks and avoidance of the mapped wetland buffers. These envelopes are locatable with ties, setbacks to parallel lines, and/or bearings and distances. The maximum lot coverage for these lots would be as described on Table #1 of Section 2.4 of the HZR, which currently is 60%. The survey and utility plans show the location of the utilities as required by Section 6.9.2 of the Hinesburg Subdivision Regulations (HSR).

Vehicular access to both the first phase and the overall full development would be from Mechanicsville Road using an access roadway in a proposed 50-foot-wide right-of-way. An approval for development on a private right-of-way is required per Sections 5.7.1 and 4.4 of the HZR, and has been integrated in the subdivision process per Section 4.4.5 of the HZR. The future phases shown on the master plan, include three central greens and circular roadways that could be used for emergency vehicle turnarounds. The plans for the first phase show a proposed 22-foot-wide paved access roadway, most of which is on a 10% grade, and an emergency vehicle turnaround, all of which appears to conform to the safe access requirements of Section 4.4.2 of the HZR and Section 5.1.6(2) of the HSR

A traffic study by Corey Mack, P.E. of Wall Consultant Group, dated April 6, 2022, evaluated the traffic produced by the proposed first phase of the development and its effect on traffic on Mechanicsville Road. The study discussed how there is good sight distance at the access location, that there is no history of accidents at the access location, and evaluated the proposed crosswalk. The DRB and the Applicant agreed that a crosswalk connection between the proposed community pedestrian path and the sidewalk on the west side of Mechanicsville Road would be placed and warned with signs. A rectangular rapid flashing beacon may be required in a future phase of this development. This would provide conformance to Sections 5.22.2(5&6) of the HZR for integration with adjoining parcels and adequate pedestrian connectivity. The Applicant has submitted a road cut application to the Town Manager's office for the crossing.

All 8 of the proposed dwelling units in the first phase are in the R1 and the municipal water and sewer district as required per Section 3.9 of the HZR. The Applicant received a water and sewer allocation for this project from the Selectboard on February 16, 2022. Section 3.9 of the HZR also states "development in this district shall be connected and integrated with adjacent growth area districts, so as to complement and enhance the compact, pedestrian-oriented village environment". The Applicant has coordinated with the Town Manager and is proposing a crosswalk with signs, striping and drop-curbs from the sidewalk in the development to the

sidewalk on the west side of Mechanicsville Road. Pedestrian access in the development will be provided through a proposed 6-foot-wide paved sidewalk.

Future community facilities shown on the Hinesburg Official Map, which are located on this property include a crosswalk (facility #7) and a park (facility #36) with an associated access road and sidewalk. These two facilities are described as being linked with sidewalk in the Official Map. The Official Map also shows a future trail connection on this property, connecting the future park with the existing Sullivan trail to the south. The first phase of this development will provide the crosswalk (facility #7). The proposed development will not limit the opportunity for a future park, facility #36, to be developed in the future.

Since only single-family residences are proposed, each residence could have at least the two recommended parking spaces for conformance to Section 5.5 of the HZR. On street parking, though not prohibited, does not seem to be needed.

The Applicant has submitted a road and stormwater maintenance agreement. Part ‘b’ of the agreement states that the agreement is for the proposed eight residences. Part ‘f’ states that the agreement can add additional units. The agreement does not mention the sidewalk or the street trees within the road right of way. It also does not address the drainage swales outside of the road right of way.

There is about 1,083 linear feet of Mechanicsville Road frontage on this property. About 72 feet of this will be part of proposed lot #1. The remainder will be part of the proposed undeveloped lot #9, and the unnumbered lot with the development road and stormwater areas. 50-feet of this frontage will be the right-of-way access.

The public open space requirement of Section 5.22.5 of the HZR and the inclusionary zoning requirement of Section 5.21.1 of the HZR do not apply to this development since there will be less than ten new residential units. For conformance to Sections 5.22.3(5&6) of the HZR there will be conditions requiring that garages be set back at least 10-feet from the front of the principal structure and that these single-family residences will have roof pitches of at least 6 on 12.

The Applicant has provided a stormwater mitigation design, which includes plans, details, a narrative and modeling. The Applicant has calculated the total new impervious to be about 1.43-acres, which includes almost 800-linear feet of 22-foot-wide new roadway, a 6-foot-wide asphalt pedestrian path, two turnarounds and assumed development on the proposed eight residential lots. The Applicant is proposing to place two gravel wetlands, each with its own pretreatment structure.

The proposed roadway would be graded to the south to discharge stormwater to the southern side of the road, where there will be proposed curb and catch basins to collect stormwater. The proposed pedestrian path would be graded towards the roadway to be collected by the same catch basins. These catch basins discharge to a pretreatment structure that discharges to the proposed gravel wetland #1 (GW1). Proposed lots 1 through 5 drain to the north and west. Stormwater runoff from the developed area of these lots is collected and conveyed by a proposed swale on the northern side of lots 1-5, adjacent to the wetland buffer. This swale would discharge to a pipe that drains to the GW1 pretreatment structure. Conceptually this is what is expected. However, there are no details for this swale, grades on the plans for this swale, an easement to maintain the swale, nor a maintenance agreement. In addition, the easement area should not be

part of the building envelope. Stormwater discharging from GW1 would discharge through pipes and a roadside swale on the east side of Mechanicsville Road to the north to a tributary of the Patrick Brook canal. The overflow for GW1 would discharge to a roadside swale on the east side of Mechanicsville Road that would discharge to the south. There is a local high point on Mechanicsville Road between these discharge points.

The proposed development on lots 6, 7 and 8 would discharge to the north and east to a swale that would discharge to a pretreatment structure that would discharge to the proposed gravel wetland #2 (GW2). Plan C2.2 shows proposed locations for driveway culverts, which appear to be appropriate. However, the grading for the proposed swale on sheet C2.2 is not consistent with a swale in that location and the detail on sheet C3.2. Stormwater discharging from GW2 would discharge to the west traveling overland to the road swale located on the east side of Mechanicsville Road. Similar to the swale on the northside of lots 1 through 5, the proposed swale on the north sides of lots 6, 7 and 8 would require a detail, correct grading, an easement, a maintenance agreement, and be outside of the proposed building envelopes.

The Applicant is using pretreatment structures instead of forebays on the gravel wetlands to concentrate the sediment to be removed. On the western end of the proposed development is a catch basin with a deep sump that would not be connected to the pretreatment structure of GW1. The overflow for this catch basin would directly discharge to GW1. From a plan view, these pipes cross. The Applicant should confirm that these pipes do not conflict with each other.

The proposed maintenance of the pretreatment structures and deep sump pretreatment catch basin requires an inspection twice annually, but recommends quarterly inspections. Annual vacuum truck cleanings are also recommended and should the sediment depth approach half the depth of the lowest outlet. Additional removals for floating debris and hydrocarbons, and hood repairs are also recommended.

The Applicant is claiming an exemption from the recharge standard due to the entire project being on HSG 'D' rated soils or 'C/D' rated soils with high water tables. Considering the amount of wetland in this area, this seems reasonable. Treatment for the water quality volume is provided in GW1 in the pretreatment structure, the permanent pool and with extended detention. Treatment for the water quality volume for GW2 is provided in the pretreatment structure and permanent pool.

For conformance to the channel protection standard, GW1 would have a detention time for a 1-year (2.01-inch) storm event of 908.3 minutes, which exceeds the 720-minute (12-hour) requirement. GW2 was designed to provide a detention time of 1,719.4-minutes to exceed 1,440-minutes (24-hours) of detention. It is not clear why the additional time is being provided.

The modeling provided, which appears to adequately show the existing and proposed conditions calculates a pre-development and post-development peak discharges for the 10-year storm event to the north of 10.63cfs and 8.37cfs respectively. Similarly, peak discharges of 6.75cfs and 3.74cfs for discharges to the south. For the 100-year storm event, the pre-development and post development peak discharges to the north are 20.93cfs and 20.81cfs. To the south these are 13.31cfs and 12.98cfs respectively. Conformance to the 10-year storm event requirements are met since the post-development peak discharges are less than the pre-development peak discharges for both discharges to the north and south. Though this development is exempt from the 100-year storm event standards with the five criteria, having a smaller peak discharge from

the 100-year storm event shows conformance to the requirement to not have an adverse effect downstream per Section 6.6.2(3) of the HSR. The modeling shows that both GW1 and GW2 would have the required 1 foot of freeboard (top of berm to peak water elevation) during a 100-year storm event.

The proposed development will disturb more than 1-acre of area, which will require the Applicant to obtain a State construction general permit (CGP) for erosion control. The Applicant provided an erosion control plan, sheet C2.3, and erosion control details, sheet C4.5, to show how erosion control protection will be provided. Proposed treatment includes stabilized construction entrances, inlet protection, silt fencing, sediment traps/basins, construction fence, erosion control blankets, straw rolls, and seeding and mulching. Plan sheet C2.3 also shows the locations where soil would be stockpiled and where equipment would be staged, and the erosion control treatment that would be provided.

The Applicant's landscaping plan proposes a mixture of tree species to be placed about 40-feet apart as required per Section 6.4 of the HSR. The plan also has planting details that appear to be in conformance with this section. The plan provides a construction cost estimate for what appears to be the site work per Section 6.5 of the HSR. The Applicant has estimated the minimum landscaping cost to be about \$54,780 and that provided will be about \$62,300 worth of landscaping.

The only proposed lighting in this first phase of the development is for a downcasting light on one of the existing utility poles in the area of the proposed crosswalk. This would be the same type of street light that already exists on portions of Mechanicsville Road. Cut sheets for these lights should be provided to show conformance to Section 5.29 of the HSR. This light would be maintained by the Town. The proposed residences would be required to conform to the lighting standards for residential use found in Section 5.29 of the HSR.

The Applicants narrative states that the proposed residences will be able to have maximum solar exposure for conformance to Section 5.1.12 of the HSR.

The final plat application was submitted on March 17, 2023 and deemed complete on April 19, 2023. This application included the application form and the following documents, which are contained in the document file (17-22-62.100) in the Hinesburg Planning & Zoning office.

- A submittal letter from the Engineer dated April 19, 2023
- A project narrative from the Engineer dated March 6, 2023
- A plan by Engineering Ventures PC, titled 'Cover Sheet', with project #20542, drawing# C0-0, and dated 03/01/2023.
- A plan by Engineering Ventures PC, titled 'Overall Existing Conditions Plan', with project #20542, drawing# C1-0, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled 'Existing Conditions & Demolition Plan', with project #20542, drawing# C1-1, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled 'Site Layout Plan', with project #20542, drawing# C2-1, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled 'Site Grading & Utility Plan', with project #20542, drawing# C2-2, dated 03/01/2023 and with a revision date of 04/12/2023.

- A plan by Engineering Ventures PC, titled ‘Erosion Prevention & Sediment Control Plan’, with project #20542, drawing# C2-3, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled ‘Roadway Plan & Profile’, with project #20542, drawing# C3-1, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled ‘Typical Roadway Cross Section’, with project #20542, drawing# C3-2, and dated 03/01/2023.
- A plan by Engineering Ventures PC, titled ‘Water Details and Notes’, with project #20542, drawing# C4-0, and dated 03/01/2023.
- A plan by Engineering Ventures PC, titled ‘Sanitary Details and Notes’, with project #20542, drawing# C4-1, and dated 03/01/2023.
- A plan by Engineering Ventures PC, titled ‘Site Details and Notes’, with project #20542, drawing# C4-2, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled ‘Stormwater Details (1 of 2)’, with project #20542, drawing# C4-3, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled ‘Stormwater Details (2 of 2)’, with project #20542, drawing# C4-4, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled ‘Erosion Prevention & Sediment Control Details and Notes’, with project #20542, drawing# C4-5, and dated 03/01/2023.
- A plan by Wagner Hodgson, titled ‘Landscape Plan’, with a job number of 20-121, drawing number L000, dated 03.01.2023 and a revision date of 04.12.2023.
- A survey by Vermont Mapping & Survey Co., LLC with project #19697, drawing#M-697, and dated Jan. 27, 2020.
- A survey by Vermont Mapping & Survey Co., LLC with project #22826, drawing#S-826, and dated April 18, 2023.
- A traffic study by Corey Mack P.E. from Wall Consultant Group, dated April 6, 2022.
- A curb cut application dated 2/2/22
- A plan corresponding to the curb cut application by Engineering Ventures PC, titled ‘Curb Cut Sketch Plan Mechanicsville Road’, with project #20542, drawing# SK-1, and dated 02/01/2022.
- Two letters from Erik Bailey, Hinesburg Director of Utilities and Facilities confirming water and wastewater service availability, dated March 11, 2022 and March 31, 2022.
- A stormwater & erosion control narrative from Engineering Ventures PC. (6-pages)
- A plan by Engineering Ventures PC, titled ‘Pre Development Drainage Area Map’, with project #20542, drawing# DR-2, dated 03/01/2023 and with a revision date of 04/12/2023.
- A plan by Engineering Ventures PC, titled ‘Post Development Drainage Area Map’, with project #20542, drawing# DR-3, dated 03/01/2023 and with a revision date of 04/12/2023.
- Stormwater modeling titled 20542 Laster 8-Lot Subdivision’ with a printed date of 4/13/2023. (62-pages)
- Stormwater Operation & Maintenance Manual for the Laster Subdivision Project by Engineering Ventures, PC., with inspection forms and a ‘plan key’ showing the areas that need to be maintained. (8-pages)
- A draft roadway maintenance agreement. (3-pages)

From Sketch Plan

- A plan showing a prototype residence by Truexcullins.
- A plan titled ‘Laster Subdivision Phase 1 Layout, which shows how the overall property is limited by streams, wetlands, wetland buffers, steep slopes and core wildlife habitat, dated October 14, 2021 by Wagner Hodgson.
- A plan titled ‘Laster Subdivision Master Plan, which shows a proposed full buildout of the overall property, dated October 14, 2021 by Wagner Hodgson. This plan also shows the streams, wetlands, wetland buffers, steep slopes and core wildlife habitat that limit development on the overall property.

Public Comment

- Letter dated April 26, 2023, from Staff to Robert Barrows of 491 Mechanicsville Road acknowledging a conversation, where Mr. Barrows expressed concern that additional stormwater runoff would adversely affect his property.

The May 16, 2023 hearing was warned in The Citizen on April 27, 2023

STAFF COMMENTS

1. The survey plat labels lots 1-9, but the development road and stormwater areas appear to be on their own lot that is separate from the remaining land (lot 9). Either the lot lines separating these areas from lot 9 should be removed, or the road and stormwater area lot should be numbered.
2. The placement of a swale on the north side of the building envelopes of proposed lots 1 through 5 appears to be a good idea. However, we need a detail for the swale, grading on the plans for the swale, an easement to provide maintenance of the swale, and this easement area should not be in the building envelope. Also, is there an agreement on how the swale would be maintained?
3. The pipes in the roadway (per A-76) should be at least 18-inches in diameter. The proposed culvert that discharges stormwater from the northside swale is only 12-inches in diameter.
4. The location of the driveway culverts for proposed lots 6 to 8 should line up with the swale or vice versa. Also, as in comment #1, there needs to be an easement, maintenance, exclusion from the building envelope etc.
5. Please confirm that the 8-inch outlet pipe from the deep sump catch basin will not conflict with the two pipes (the 12-inch and the 18-inch pipes connected to the pretreatment structure) that cross its paths. Please provide the elevations of each as they cross.
6. This comment from the preliminary plat was mentioned in the stormwater narrative as being included, but apparently was not included. Section 6.6.2(5) of the HSR requires that the applicant provide some low impact design (LID) standards.
7. The Applicant should explain the longer retention time for GW2 of 1440 minutes instead of 720-minutes.

8. The shared roadway and stormwater operation and maintenance agreement and covenants should be updated to include other key infrastructure in the road right of way, specifically maintenance of the street trees as well as the maintenance and snowplowing of the pedestrian path/sidewalk. The agreement should also be updated to specifically mention shared maintenance responsibilities for the drainage swales outside of the shared roadway – i.e., swales on the north side of lots 1-5 and the north side of 6-8. Part ‘b’ should reference part ‘f’ or be reworded to include the information in part ‘f’.
9. Sheet C2.2 (utility plan) shows proposed water, sewer, electric, and stormwater drainage lines, but does not show proposed natural gas lines. Proper placement of underground gas lines should be addressed and added to the plan to avoid conflicts with other infrastructure. Section 6.9.2 of the HSR requires a note on the survey that states ‘that the proposed utility locations may be modified slightly when installed, due to unforeseen site constraints such as ledge.’
10. For conformance to Sections 5.22.3(5&6) of the HZR there will be conditions requiring that garages be set back at least 10-feet from the front of the principal structure and that these single-family residences will have roof pitches of at least 6 on 12.
11. Clarify “inspections twice annually, with inspection recommended quarterly” that is stated on the proposed stormwater maintenance plan.
12. The crosswalk striping detail shown on Sheet C4.2 should be horizontal instead of diagonal for consistency with VTrans standards. Stripes should be 8 feet long and 2 feet wide with gaps between stripes also 2 feet wide.
13. The crosswalk sign posts shown on Sheet C4.2 should be revised to show 2-inch square posts (rather than u-shaped posts), in order to accept future flashing beacon equipment. Also, the post anchor detail should be revised to show a 48-inch deep concrete anchor (e.g., 12” diameter sonotube) with a post sleeve at least 18 inches deep, instead of a wood block anchor. Greater anchor stability needed in order to accept future flashing beacon equipment.
14. Pursuant to section 2.5.2 of the HZR, the 75-foot stream buffer area on the north side of lots 1-5 (sheet L000) shall not be converted to lawn, and shall be left in an undisturbed, vegetated condition. Control of non-native species of nuisance plants is allowed, and supplemental planting with native vegetation is encouraged.
15. The landscaping plan (sheet L000) shows tree and shrub plantings on lots 1-8; however, a note indicates that the landscaping on the lots is, “representative and subject to change”. The specific placement of the on-lot landscaping may change, but the number and type of plantings shall be per the plans. Minor revisions of plant species may be reviewed and approved by the Zoning Administrator.

Respectfully submitted,

Mitchel Cypes, P.E.,
Hinesburg Development Review Coordinator